

DREHSPANNTECHNIK

TURNING CLAMPING TECHNOLOGY

INOLine[®]



HWR

www.hwr.de

QUALITÄT TRIFFT PRÄZISION

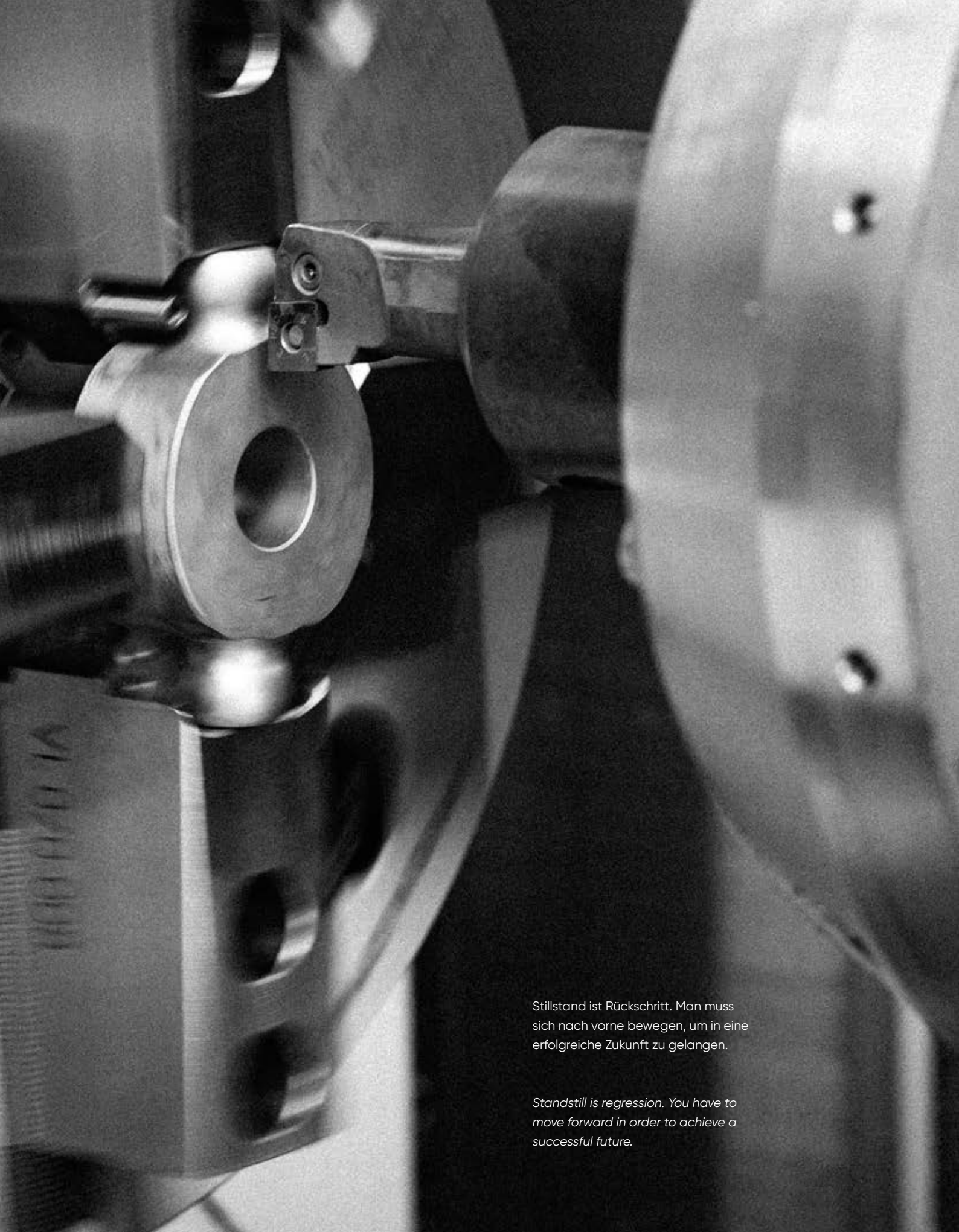
QUALITY MEETS PRECISION



WIR SCHAFFEN NEUE STANDARDS

CREATING NEW STANDARDS





Stillstand ist Rückschritt. Man muss
sich nach vorne bewegen, um in eine
erfolgreiche Zukunft zu gelangen.

*Standstill is regression. You have to
move forward in order to achieve a
successful future.*

INHALT

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INOFlex®

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Ausgleichende
4-Backen-Spannfutter
Compensating 4-jaw chucks

02

INOZet®

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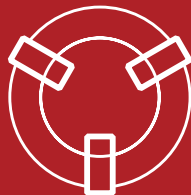


Pendelnd ausgleichendes
Spannen / *Pendulum
compensating clamping*

03

INOTop®

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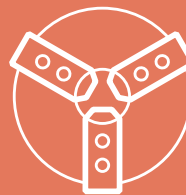


Spannen ohne Druck
Clamping without pressure

04

UNIJaws®

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Spannbacken für alle
gängigen Spannfutter
Jaws for all common chucks

**UND CLEVERE
ZU ENTWICKELN,
ORDERUNG, DIE
AHRUNG UND
SEIN ERFORDERT.**

*clever clamping solutions
activity, experience and*

MADE IN GERMANY

DAS ZEICHNET UNS AUS
THIS DEFINES US



In Oyten, in der Nähe von
Bremen, produziert HWR die
INOLine®- und **SOLIDLine**-
Produktreihen.

*HWR produces the **INOLine®** and
SOLIDLine product series in Oyten
near Bremen, Germany.*

PIONIERGEIST UND ERFAHRUNG – VOM KONSTRUKTIONSBÜRO ZUM INNOVATIVEN MITTELSTANDSUNTERNEHMEN

Durch 30 Jahre Erfahrung und den Mut, neue Wege zu gehen, entstanden die **INO®**-Spannsysteme. In langjähriger kontinuierlicher Weiterentwicklung und unter Berücksichtigung der sich verändernden Aufgabenstellungen unserer Kunden, entstand die einzigartige **INO®**-Produktfamilie zum Spannen von verformungsempfindlichen Bauteilen, sowie zum gleichzeitigen Spannen von runden, kubischen und geometrisch unregelmäßigen Werkstücken.

KNOW-HOW UND TECHNIK – INNOVATIVER MARKTFÜHRER BEIM SPANNEN VON VERFORMUNGS- EMPFINDLICHEN WERKSTÜCKEN

Ständig steigende Anforderungen an die Präzision in der Dreh- und Fräsbearbeitung sowie praktische Aufgabenstellungen durch unsere Kunden haben uns dazu bewegt, beim Spannen neue Wege zu gehen. Unkonventionelle Herangehensweisen und innovatives Denken führten zu effektiven und bezahlbaren Lösungen in der Spanntechnik, die Ihnen das Herstellen ihrer Produkte vereinfachen werden.

ERFAHRUNG IN DER PRÄGESPANNTECHNIK SEIT 2003

Gemeinsam mit der Firma Lang entwickelten wir vor 16 Jahren die Prägespanntechnik für die Drehbearbeitung. In dieser Zeit haben wir in der rotativen und stationären Prägespanntechnik über 1.000 zufriedene Kunden gewinnen können. Diesen Weg möchten wir mit unseren Kunden gemeinsam weitergehen.

PIONEERING SPIRIT AND EXPERIENCE – FROM AN ENGINEERING OFFICE TO AN INNOVATIVE SME COMPANY

*The **INO®** clamping systems are the result of 30 years of experience and the courage to break new ground. Years of continuous development and the awareness of the changing requirements of our customers have led to the unique **INO®** product family for the clamping of deformation sensitive parts as well as the clamping of round, cubic and geometrically irregular parts on one and the same device.*

KNOW-HOW AND TECHNOLOGY – INNOVATIVE MARKET LEADER FOR CLAMPING DEFORMATION-SENSITIVE WORKPIECES

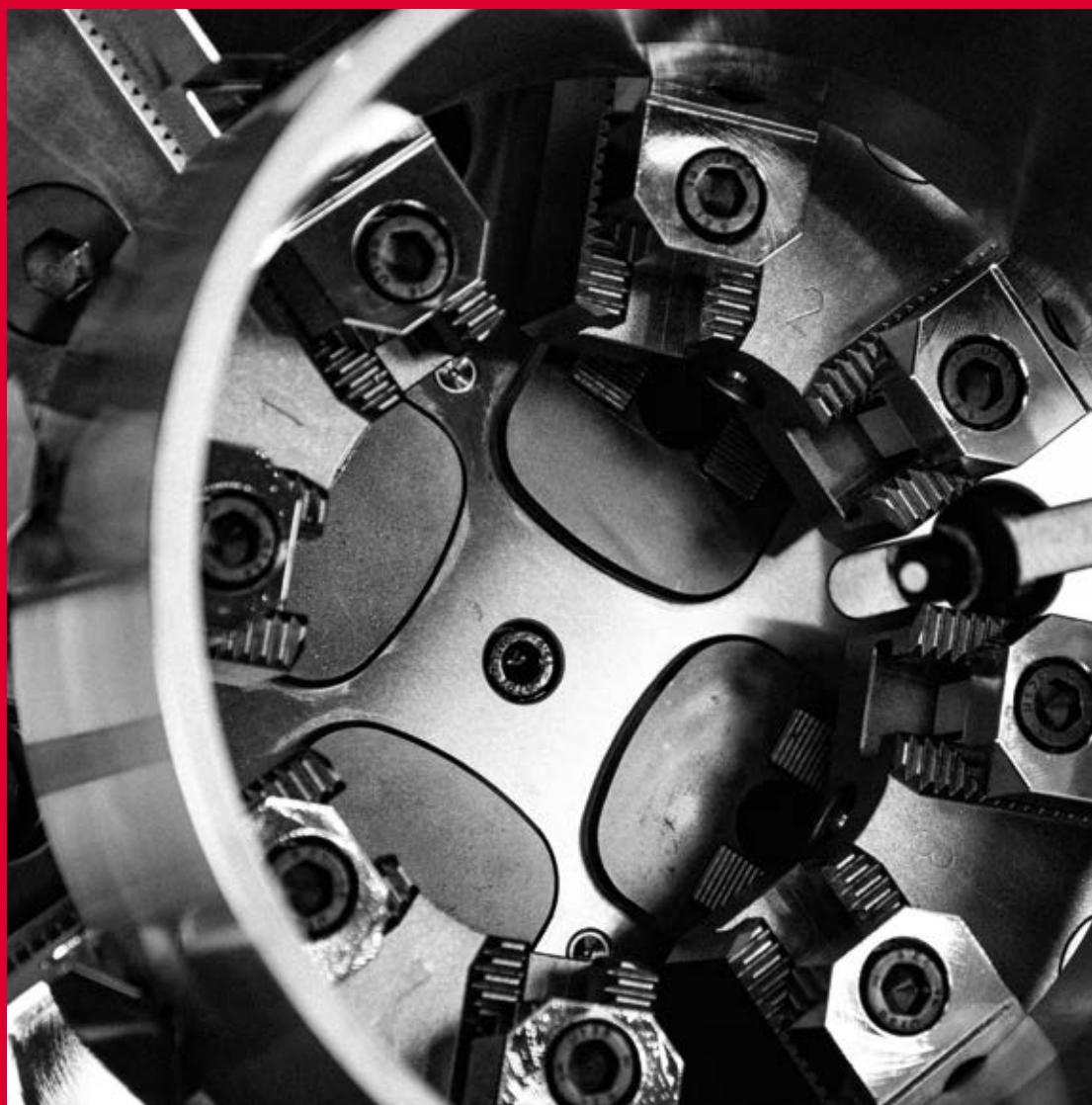
Constantly growing demands for precision in turning and milling, together with practical tasks set by our customers have led us to break new ground in clamping technology. An unconventional approach and innovative mind-set resulted in effective, affordable clamping solutions to make it easier for our customers to manufacture their products.

EXPERIENCE IN STAMPING TECHNOLOGY SINCE 2003

Together with the company Lang Technik GmbH, we developed the stamping technology for turning 16 years ago. During this time we have been able to win more than 1,000 satisfied customers in rotary and stationary stamping technology. Together with our customers we would like to continue on this path.

Ausgleichende 8-Punkt-
spannung durch **INO**Flex® und
INOZet® für beste Rundheits-
ergebnisse bei dünnwandigen
Werkstücken.

*Compensating 8-point
clamping with **INO**Flex® and
INOZet® for best roundness
results with thin-walled parts.*





INOLine® QUALITÄT TRIFFT PRÄZISION.

Den Mut zu haben, Dinge zu wagen, die zunächst unmöglich scheinen, dafür stehen wir als Team von HWR. Getrieben vom ständigen Anspruch der innovativen Weiterentwicklung, haben wir die INOLine®-Produktreihe entwickelt und produzieren diese Innovationen in Qualität und Präzision. Dieser Weg wird uns in Zukunft zu weiteren neuen Produkten führen. Das gesamte HWR-Team freut sich auf diesen spannenden Weg.

**INOLine® QUALITY
MEETS PRECISION.**

Having the courage to try things that seem impossible at first is what we, the team at HWR, stand for. Driven by the constant demand for further innovations, we have developed the INOLine® range and manufacture these innovative products to high standards of quality and precision. This path will lead us to further exciting products in the future and the entire HWR team is looking forward to new achievements.

SOLIDLine

WEITERGEDACHT

AUS ÜBERZEUGUNG.

Ein Produkt weiterzuentwickeln und zu verbessern oder zu vereinfachen ist bei HWR gelebte Praxis. Unsere Mitarbeiter in der Fertigung, der Konstruktion und im Vertrieb sind höchst motiviert und ständig auf der Suche, weitere Ideen, die nicht selten von unseren Kunden kommen, in unsere Produkte einfließen zu lassen. Ständige Weiterentwicklung, sowie mit dem Erreichten noch nicht zufrieden zu sein, ist unser Antrieb, unseren Kunden täglich das Maximale an Qualität und Präzision zu liefern.

SOLIDLine

THINKING AHEAD THROUGH

CONVICTION

To develop a product further and to improve or simplify is normal practice at HWR. Our employees in production, design and sales are highly motivated and are constantly on the lookout for new ideas, which often come from our customers, to incorporate into our product ranges. Constant development, and not being satisfied with what we have already achieved, is our motivation to provide our customers with maximum quality and precision on a daily basis.





AM PULS DER
ZEIT

AT THE PULSE OF TIME

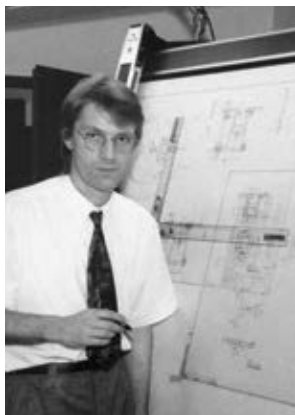
1989

GRÜNDUNG DES KONSTRUKTIONSBÜROS HENKE

Im elterlichen Haus von Volker Henke wurden zu Anfang mechanische Vorrichtungen und kleine konstruktive Lösungen erarbeitet. Schnell wuchs die junge Firma nicht nur an ihren Aufgaben, sondern auch in der Mitarbeiterzahl und bezog größere Räumlichkeiten, um zu expandieren.

HENKE CONSTRUCTION OFFICE FOUNDED

In the early days mechanical equipment and small construction solutions were developed in Volker Henke's parents' house. The young company not only grew by its tasks but also by its employees and so it moved to larger premises to expand.



Volker Henke am Zeichenbrett in Achim nach der Gründung des Unternehmens.

Volker Henke at the drawing board in Achim after the foundation of the company.

1990

EINSTIEG IN DEN SPANNBACKENVERTRIEB

Ende 1990 übernahm HWR die Spannbackenvertretung für ganz Deutschland von der Firma Thame Workholding. Mit der Zeit wuchs der Kundenstamm in ganz Deutschland mit Schwerpunkt in Nord- und Mitteldeutschland.

START OF SALES AND DISTRIBUTION OF CLAMPING JAWS

At the end of 1990 HWR became the nationwide German representative for Thame Workholding clamping jaws. The company's customer base grew over time throughout Germany, but specifically in Northern and Central Germany.

1997

AUSBAU DER PRODUKTIONSSTÄTTE UND DES VERTRIEBS

Kontinuierlicher Ausbau von Vertrieb, Konstruktion und Fertigung. Neubau und Erweiterung des Firmengebäudes in Oyten.

EXPANSION OF THE PRODUCTION FACILITY AND SALES

Continuous expansion of sales, design and manufacturing. New building and expansion of the company's building in Oyten.

1995

ERWEITERUNG DER PRODUKTPALETTE

Sukzessiver Ausbau des Produktprogramms um Hand- und Kraftspannfutter sowie Sonderkonstruktionen. Erste eigene Außendienstmitarbeiter in NRW und Hamburg.

PRODUCT RANGE EXPANDED

Successive expansion of the product range with manual and power chucks and customised designs. First own field sales representatives in NRW and Hamburg.



Erster Neubau in Achim mit 1.000 m² Hallen- und 300 m² Bürofläche.

First new building in Achim with 1,000 m² hall and 300 m² office space.

2003



Gewinner des Turntec Awards 2004.

Winner of Turntec Award 2004.

PARTNERSCHAFT MIT DER FIRMA LANG TECHNIK

Entwicklung des Prägespannsystems **INO**Grip® zusammen mit LANG Technik. Beginn des Vertriebs in Nord- und Mitteldeutschland für die Produkte der Firma LANG Technik. Gewinn des Turntec Awards in Frankfurt auf der EuroMold.

PARTNERSHIP WITH LANG TECHNIK

Development of the **INO**Grip® stamping jaw system in cooperation with LANG Technik. Commencement of sales in Northern and Central Germany for LANG Technik products. Turntec Award presented to the company in Frankfurt at EuroMold.

2011

ENTWICKLUNG DER INO**Top**®-HYBRIDSPANNBACKE

Entwicklung und Einführung des Spannsystems **INO**Top® – eine von HWR entwickelte Hybridspannbacke, die das Bauteil von außen zentriert und von innen spannt.

DEVELOPMENT OF THE INO**Top**® HYBRID CLAMPING JAW

Development and launch of the **INO**Top® clamping system – a hybrid clamping jaw developed by HWR, which centres workpieces from outside and clamps them from inside.

2009



Gewinner des Nortec Awards 2010.

Winner of Nortec Award 2010.

ENTWICKLUNG UND EINFÜHRUNG DES SPANNSYSTEMS INO**Zet**®

Mit **INO**Zet® wird aus einem 3-Backen-Futter ein ausgleichendes 6-Backen-Futter. Das Spannsystem wird im Januar 2010 auf der NORTEC in Hamburg vorgestellt und gewinnt den NORTEC Award.

DEVELOPMENT AND LAUNCH OF THE INO**Zet**® CLAMPING SYSTEM

INOZet® transforms a 3-jaw chuck into a compensating 6-jaw chuck. The clamping system is showcased at NORTEC in Hamburg and wins the NORTEC Award.

2013

ENTWICKLUNG DES INOFlex®-SPANNSYSTEMS

Entwicklung und Einführung des Spannsystems **INO**Flex® – ein von HWR entwickeltes, ausgleichendes 4-Backen-Spannfutter.

DEVELOPMENT OF THE INO**Flex**® CLAMPING SYSTEM

Development and launch of the **INO**Flex® clamping system – a compensating 4-jaw chuck developed by HWR.

2014

ERWEITERUNG DER GESCHÄFTSFÜHRUNG

Henrico Viets
und Matthias Meier
treten in die
Geschäftsführung ein.

EXPANSION OF THE MANAGEMENT

*Henrico Viets and
Matthias Meier
join the management.*

2016

**ENTWICKLUNG DER
GEWICHTSOPTIMIERTEN
INOFlex®-BAUREIHE VL**
Die Produktpalette wurde
durch die gewichtsoptimierte
INOFlex®-Variante VL für Fräs-/
Drehzentren erweitert.

DEVELOPMENT OF THE WEIGHT OPTIMISED INOFlex® TYPE VL

*The product range was
expanded by the weight
optimised **INOFlex®** type VL
for milling-turning centres.*



Matthias Meier, Volker Henke,
Henrico Viets v.l.n.r. / f.l.t.r.

2015

UMZUG INS NEUE FIRMENGEBÄUDE

Das neue und größere Bürogebäude
sowie vergrößerte Produktions-
und Lagerfläche bieten
Möglichkeiten für Produktneu-
und -weiterentwicklungen.

MOVE INTO THE NEW OFFICE BUILDING

*The new and bigger office building
as well as larger production
and storage space offer
possibilities for new product
developments
and enhancements.*

2018

**VORSTELLUNG AUF DER AMB
INOFlex® VFA, DER ERSTE AUTO-
MATIONSSPANNER VON HWR**
Das 1.500ste **INOFlex®** Spannfutter
wurde ausgeliefert. Immer mehr Kunden
setzen auf die ausgleichende
Spanntechnik. 42 Patente
Weltweit wurden erteilt.

INTRODUCING INOFlex® VFA, THE FIRST AUTOMATION CLAMPING DEVICE BY HWR

*The 1,500th **INOFlex®** chuck was
delivered. More and more customers
rely on the compensating clamping
technology. 42 patents
granted worldwide.*

2019

EINFÜHRUNG DER NEUEN VT-S FUTTERREIHE

Vorstellung der neuen Nullpunkt- und
Spanntechnik-Reihe **SOLIDline** auf der
EMO in Hannover. Aufnahme in das
DMQP-Programm von DMG MORI.
INOFlex® Spannfutter können jetzt direkt
mit einer Maschine über DMG Mori be-
stellt werden. Der Standort Oyten wird
um ca. 1.000 m² Fertigung erweitert.

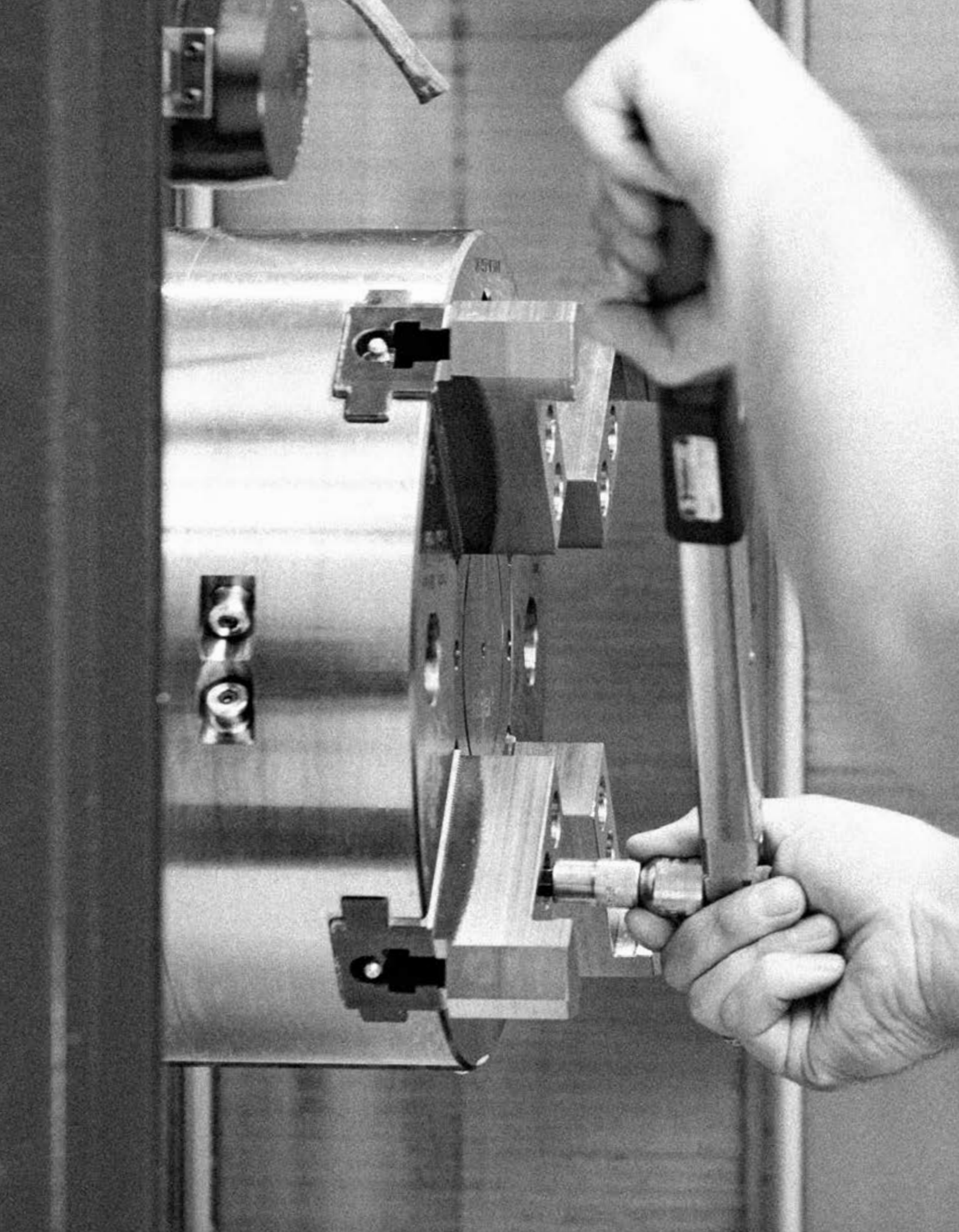
INTRODUCTION OF THE NEW VT-S CHUCK SERIES

*Presentation of the new zero-point and
clamping technology series **SOLIDline**
at the EMO in Hanover. Inclusion in the
DMQP program of DMG MORI. **INOFlex®**
chucks can now be ordered directly
with a machine via DMG Mori. The lo-
cation in Oyten is extended by approx.
1,000 m² production.*

**TECHNOLOGIE IST DIE
EINGUNGUNG,
EINGUNGEN
SPAREN.**



»Technology is the effort to save effort.«





Wir bei HWR packen Dinge an und
verwandeln Visionen in Stahl und Eisen.

*At HWR we get things done and
transform visions into steel and iron.*



INOLine®

EINFACHE, GUTE UND CLEVERE
SPANNLÖSUNGEN ZU ENTWICKELN,
IST EINE HERAUSFORDERUNG, DIE
KREATIVITÄT, ERFAHRUNG UND
SELBSTBEWUSSTSEIN ERFORDERT.

*DEVELOPING SIMPLE, GOOD,
CLEVER CLAMPING SOLUTIONS
IS A CHALLENGE THAT DEMANDS
CREATIVITY, EXPERIENCE AND
SELF-CONFIDENCE.*

INOFlex®, **INOZet®**, **INOTop®** sind Produkte, die den stetig steigenden Anforderungen in der Dreh- und Fräsbearbeitung gerecht werden. Moderne Werkzeugmaschinen benötigen Spannsysteme, die universell eingesetzt werden können und in der Lage sind, höchste Genauigkeiten zu realisieren.

***INOFlex®**, **INOZet®**, **INOTop®** are products that fulfil the constantly increasing requirements in turning and milling. Modern machine tools need clamping systems that can be put to universal use and yet deliver highest precision.*

Mit den **INO®**-Spannsystemen werden sowohl kubische als auch runde Bauteile optimal konzentrisch gespannt. Dies ermöglicht Ihnen eine kostengünstige Herstellung Ihrer Bauteile. Vor allem beim Spannen von verformungsempfindlichen Bauteilen können mit den **INO®**-Spannsystemen hervorragende Ergebnisse erzielt werden.

*The **INO®**-clamping systems provide optimum clamping of both cubic and round parts, permitting low-cost production of your parts. They achieve outstanding results, particularly when clamping deformation-sensitive parts.*



INOFlex®

INOFlex® – die Innovation von HWR setzt neue Standards in der Spanntechnik!

INOFlex® – ausgleichende 4-Backen-Spannung zum Spannen von runden, kubischen und geometrisch unförmigen Bauteilen für den Einsatz auf Dreh- und Fräsmaschinen. Ein kostengünstiger Alleskönner mit hohen Wiederhol- und Rundlaufgenauigkeiten. Lieferbar sind Baugrößen von 160 mm bis 2.000 mm Durchmesser.

INOFlex® – HWR's innovation sets new standards in clamping technology!

INOFlex® – compensating 4-jaw chuck for clamping round, cubic and geometrically irregular parts, for use on turning and milling machines. A low-cost allrounder with high precision and roundness accuracy. Available in sizes from 160 mm to 1,000 mm diameter.



INOTop®

INOTop®-Hybridspannbacke – die innovative Spannbacke setzt neue Maßstäbe!

Durch die Bauweise der **INOTop®**-Hybridspannbacke wird das Bauteil ohne Druck von außen zentriert und von innen gespannt. **INOTop®** eignet sich für das Spannen von dünnwandigen Rohren in der ersten Aufspannung.

INOTop® ist einfach und effektiv in der Anwendung und passt auf fast jedes Spannfutter ab 250 mm.

INOTop® – the innovative hybrid clamping jaw sets new milestones!

With the innovative design of the **INOTop®** hybrid clamping jaw, the part is centred from the outside without pressure and clamped from the inside. **INOTop®** is suitable for clamping thin-walled pipes when clamping for the first operation.

INOTop® is easy and effective to use and fits on almost every standard chuck starting from 250 mm.



INOZet®

INOZet® – herausragende Drehergebnisse und erhebliche Kostenersparnis!

Mit **INOZet®** machen Sie aus Ihrem herkömmlichen 3-Backen-Futter im Handumdrehen ein extrem flexibles, ausgleichendes 6-Backen-Futter. Mit **INOZet®** benötigen Sie weder unzählige Pendelbacken noch spezielle Sonderkonstruktionen – das führt zu einer enormen Kostenersparnis.

INOZet® – outstanding turning results and considerable cost savings!

INOZet® turns your conventional 3-jaw chuck into an extremely flexible, compensating 6-jaw chuck in next-to-no time. **INOZet®** manages without countless pendulum jaws and special constructions, helping you to save considerable costs.



UNIJaws®

HWR Standardspannbacken für alle gängigen Spannfutter

HWR hat als erstes Unternehmen in der Branche 1995 einen Spannbacken-Finder für alle gängigen Spannbacken konzipiert und eingeführt. Mit Hilfe unseres Spannbackenfinders sind Sie in der Lage, schnell und einfach die passende Spannbacke für Ihr Spannfutter auszuwählen.

HWR standard jaws for all common chucks

As far as clamping jaws are concerned, we provide you with a special service. With the help of our clamping jaw finder you are able to find the appropriate clamping jaw for your chuck quickly and easily.



Im Bereich $\varnothing$ 160–2.000 mm vereint **INOFlex®** die Vorteile und Funktionen vom 2-, 3-, 4-Backenfutter und Schraubstock und vermeidet dabei, durch den patentierten Ausgleich, die Nachteile wie z. B. Überbestimmtheit.

*In the range from $\varnothing$ 160–2,000 mm **INOFlex®** combines the advantages of the 2-, 3- and 4-jaw chuck and vice and through its patented compensation feature it avoids disadvantages such as the over-determinedness.*

INOFlex®

Ausgleichendes 4-Backen-Spannfutter *Compensating 4-jaw chuck*

UNSCHLAGBAR FLEXIBEL

HWR hat auf die Entwicklung moderner Werkzeugmaschinen reagiert und das flexible Spannfutter **INOFlex®** entwickelt. Mit **INOFlex®** lassen sich runde, rechteckige und auch geometrisch unregelmäßige Teile ausgleichend zentrisch spannen.

- Für zentrisch ausgleichendes Spannen
- Zum Spannen runder, kubischer und geometrisch unförmiger Teile
- Für verformungsempfindliche Werkstücke geeignet
- Einsetzbar auf allen modernen Werkzeugmaschinen
- Lieferbar als Hand- und Kraftspannung Ø 160–2.000 mm

UNBEATABLE FLEXIBILITY

HWR has responded to the development of modern machine tools and developed the flexible **INOFlex®** chuck. **INOFlex®** permits compensating concentric clamping of round, rectangular and also geometrically irregular parts.

- *For concentric compensating clamping*
- *For clamping round, cubic and geometrically irregular parts*
- *Suitable for deformation sensitive workpieces*
- *Can be used on any modern machine tool*
- *Available as manual and power chuck Ø 160–2,000 mm*

Flexibler Allrounder

Flexible allrounder

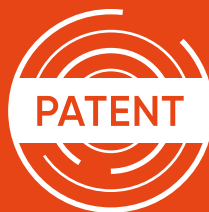
DAS PLUS AN FLEXIBILITÄT

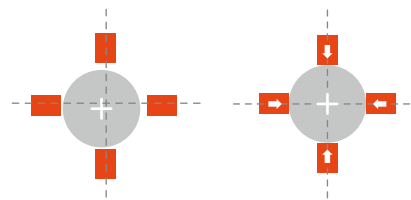
INOFlex® ist das flexible Spannfutter, welches für nahezu jede Spannaufgabe auf modernen Werkzeugmaschinen geeignet ist. Unabhängig von der Werkstückgeometrie, dem zu bearbeitenden Werkstoff oder der Art der Bearbeitung ist **INOFlex®** die Lösung für jedes Spannproblem. Das Konzept der 4-Backen-Anordnung in Verbindung mit dem patentierten Ausgleich, ermöglicht es sowohl rotationssymmetrische als auch kubische Werkstücke, gleichermaßen zentrisch als auch sicher, zu spannen. Dabei wird insbesondere durch den Ausgleich sichergestellt, dass zu jedem Zeitpunkt an allen Spannstellen die gleiche Spannkraft wirkt. Durch die 4-Backen-Anordnung in einer 90° Teilung ergeben sich eine Vielzahl von Kombinationsmöglichkeiten. So können beispielsweise 2 gegenüberliegende Backen als Zentrierspanner verwendet werden. Die beiden nicht benötigten Backen bleiben einfach unbeachtet/demontiert. Für die Zwei-Backen-Zentrierspannung ist demzufolge keine besondere Vorbereitung notwendig. Wird eine eindeutige Bezugskante benötigt, können ergänzend zur ausgleichenden 4-Backen- und zur 2-Backen-Zentrierspannung alternativ bis zu 2 Festanschläge verwendet werden. Jede der beiden Spannnachsen hat so einen definierten Bezug und ist vergleichbar mit einer Spannung in einem Festanschlagspanner mit seitlichem Anschlag. Durch den Einsatz von Backen mit Halteverzahnung, können selbstverständlich auch Bauteile mit der bewährten Prägespanntechnik gespannt und bearbeitet werden.



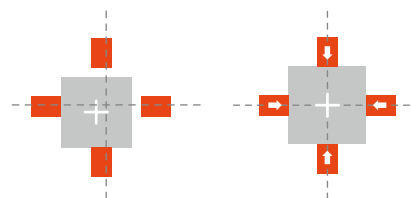
THE SURPLUS OF FLEXIBILITY

INOFlex® is the flexible chuck which is suitable for almost every clamping task on modern machine tools. Regardless of the workpiece geometry, the material to be machined or the type of machining, **INOFlex®** is the solution for every clamping problem. The concept of the 4-jaw arrangement in combination with the patented compensation enables rotationally symmetrical as well as cubic workpieces to be clamped both centrally and safely. In particular, the compensation ensures that the same clamping force is applied at all clamping points at all times. The 4-jaw arrangement of the jaws in a 90° pitch results in a multitude of possible combinations. For example, 2 opposite jaws can be used for centring clamping. The two jaws that are not required simply remain unnoticed/dismantled. Therefore, no special preparation is necessary for the 2-jaw centring clamping. If a clear reference edge is required, up to 2 fixed stops can be used as an alternative to the compensating 4-jaw and 2-jaw centring clamping. Each of the two clamping axes has a defined reference and is comparable to a clamping with a fixed stationary jaw. By using jaws with holding teeth, components can of course also be clamped and machined using the proven stamping technology.

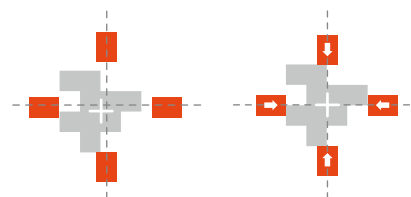




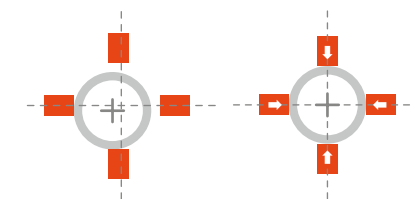
Zentrisch ausgleichende
Spannung von runden Teilen
*Concentric compensating clamping
of round parts*



Zentrisch ausgleichende
Spannung von kubischen Teilen
*Concentric compensating
clamping of cubic parts*



Zentrisch ausgleichende Spannung
von geometrisch unförmigen Teilen
*Concentric compensating clamping
of geometrically irregular shaped parts*



Verformungsarmes zentrisches,
ausgleichendes Spannen von
dünnwandigen Bauteilen
*Concentric compensating
clamping of thin-walled parts*

DAS FUNKTIONSPRINZIP

In einem herkömmlichen Spannfutter bewegen sich alle Bauteile, die für den Antrieb zuständig sind, in gleicher Richtung um das Zentrum (z. B. Keilstange, Keilhaken, Planspirale), auf das Zentrum zu oder vom Zentrum weg. Im Antrieb des **INOFlex®-4-Backen-Futters** (zentrisch ausgleichend) bewegt sich der Antrieb auf zwei parallel angeordneten Achsen aufeinander zu bzw. voneinander weg. Der Ausgleich wird ermöglicht, indem die jeweils diametral angeordneten Schlitten über Hebel bzw. über ein verschiebbares Kulissengetriebe miteinander verbunden sind.

Durch die ausgleichende Technik können runde, kubische, geometrisch unregelmäßige Werkstücke in der Dreh- und Fräsbearbeitung konzentrisch zum Spannmittel / zur Drehachse gespannt werden. Dabei liegt zu jedem Zeitpunkt an allen Spannpunkten die gleiche Spannkraft an.

HOW IT WORKS

*In a conventional chuck, all drive parts move in the same direction around the centre (e.g. wedge bar, wedge hook, scroll) either towards or away from the centre. The drive of the **INOFlex® 4-jaw chuck** (concentric compensation) moves towards or apart on two parallel axes. Compensation is provided by connecting the diametrically opposed slides with levers or a sliding gate-type gear.*

The compensating technology allows round, cubic, geometrically irregular workpieces to be machined concentric to the clamping device / rotary axis in turning and milling operations. The same clamping force is applied at all clamping points at all times.

Ein Spannfutter – unzählige Möglichkeiten

One chuck – countless possibilities



INOFlex® Spannfutter von HWR – einfach in
der Handhabung, eindrucksvoll im Ergebnis.

INOFlex® chucks from HWR –
easy to handle, impressive results.



INOFlex® VT-S
Kraftspannfutter mit Durchgang
through-hole power chuck
S. 32–33



INOFlex® VK-S
Kraftspannfutter ohne Durchgang
closed center power chuck
S. 34–35



INOFlex® VD
Handspannfutter ohne Durchgang
closed center manual chuck
S. 36–37



INOFlex® VF
ausgleichender 4-Backen Zentrierspanner
compensating 4-jaw vice
S. 42–43



INOFlex® VL
gewichtserleichtertes Handspannfutter
weight-reduced manual chuck
S. 38–39



INOFlex® VL Erweitert
gewichtserleichtertes Handspannfutter
mit Erweiterungen bis Ø 2.000 mm
*weight-reduced manual chuck
with extensions up to Ø 2,000mm*
S. 40–41



INOFlex® VT-S

4-Backen-Kraftspannfutter mit Durchgang
4-jaw through hole power chuck

ANWENDUNG

- Spannen von runden, quadratischen/rechteckigen und geometrisch unregelmäßigen Bauteilen
- Für verformungsempfindliche Bauteile geeignet
- Hohl- und Teilhohlspannung möglich
- Innen- und Außenspannung

TECHNISCHE MERKMALE

- Zentrisches ausgleichendes Spannen
- Spannhubkontrolle

APPLICATION

- Clamping of round, square/rectangular and irregular parts
- For deformation sensitive parts
- For open center or partial open center clamping
- Internal and external clamping

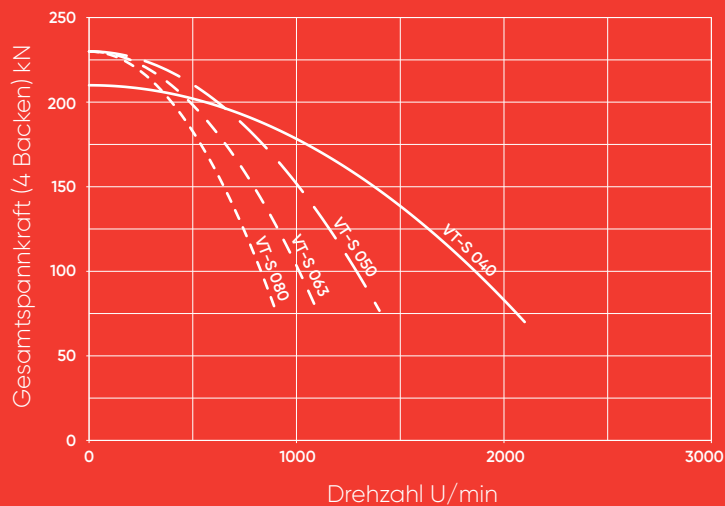
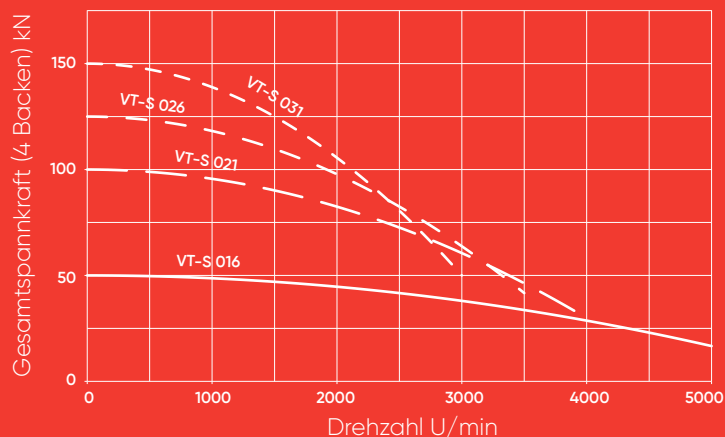
TECHNICAL FEATURES

- Compensating concentric clamping
- Jaw travel control

Technische Daten technical information		VT-S 016	VT-S 021	VT-S 026	VT-S 031	VT-S 040	VT-S 050	VT-S 063	VT-S 080
Ident-Nr. / ident-no.		845116	845121	845126	845131	845140	845150	845163	845180
Durchmesser / diameter	mm	168	218	264	315	400	500	630	800
Durchgang through-hole	mm	46	52	72	91	111	142	165	165
Hub pro Backe radial jaw stroke	mm	3,4	4,3	5	5,5	6,2	6,2	6,2	6,2
Ausgleichshub compensation	mm	2,3	3,3	4	4,4	5	4,5	4,5	4,5
Kolbenhub axial piston stroke	mm	15	19	22	24	27	27	27	27
max. Betätigungskraft max. draw pull	kN	20	40	55	60	85	90	90	90
max. Spannkraft max. gripping force	kN	50	100	125	150	210	230	230	230
max. Drehzahl max. speed	1/min r.p.m.	5000	3900	3500	3000	2100	1400	1100	900
Masse (ohne Backen) weight (without top jaws)	kg	12	26	42	64	119	207	315	498
Massenträgheitsmoment moment of inertia	kg • m ²	0,05	0,19	0,42	0,89	2,69	7,4	17,2	41
Nutenstein / standard t-nut	—	GP05	GP07	GP11	GP11	GP13	GP21	GP21	GP21
Standard weiche Aufsatzbacke standard soft jaw	—	VS11	VS12	VS17	VS17	VS21	VS25	VS25	VS25
Standard harte Aufsatzbacke standard hard jaw	—	VU210	VU212	VU216	VU216	VU221	VU225	VU225	VU225

INOFlex® VT-S

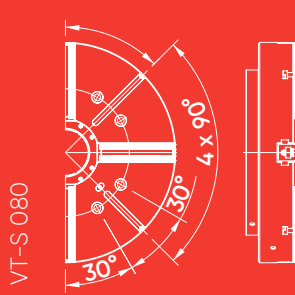
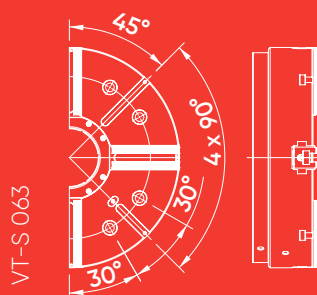
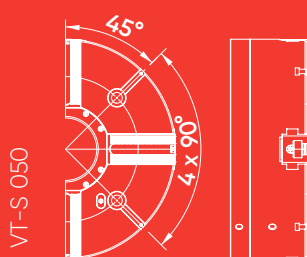
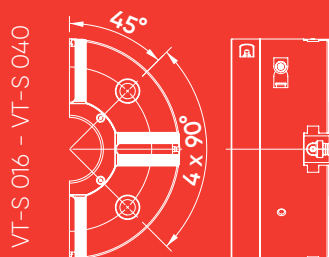
Spannkraft-/Drehzahl-Diagramm
Clamping force - speed diagram



Beim Einsatz der weichen Standardbacke in äußerer Montageposition
When using the soft standard jaw in outer mounting position

* statische Nutmutter
* fixed ring-nut

VT-S 040	VT-S 050	VT-S 063	VT-S 080
0	500	630	800
0	500	600	600
0	380	520	520
0,2	330,2	463,6	463,6
1	142	165	165
2	167	193	193
25 x 2	M155 x 2	M180 x 2	M180 x 2
	30	30	30
4	164,5	164,5	164,5
	8	8	8
6 / 56,6	30 / 57	30 / 57	30 / 57
7	147	192	276
	58	58	58
	10	10	10
x 60°	3,0 x 60°	3,0 x 60°	3,0 x 60°
	6	6	6
5	16,5	16,5	16,5
2,2	249,3	314,3	399,3
	24,5	24,5	24,5
	30	25,5	25,5
	60	60	60
/ 103	70 / 121	70 / 158	70 / 242
	25	25	25
6 x 35	M20 x 55	M20 x 55	M20 x 55
	14	22	22
	23	40	40
	25	38	38
	9	16	16
	66	170	245
	66	110	185





ANWENDUNG

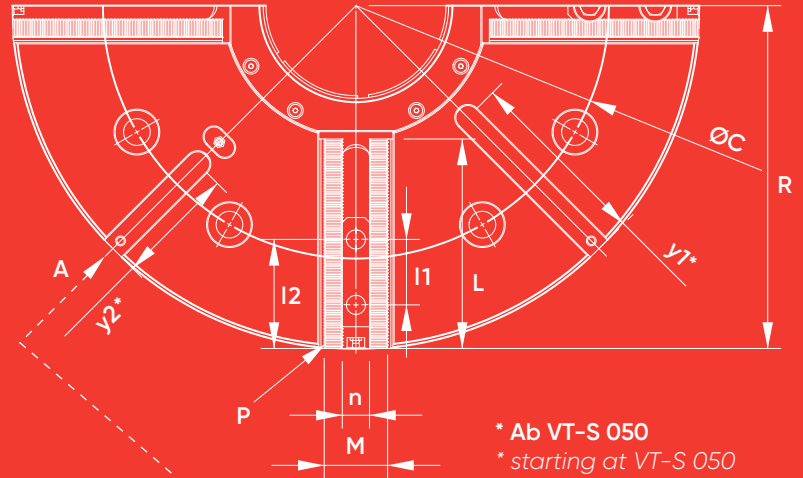
- Spannen von runden, quadratischen/rechteckigen geometrisch unregelmäßigen Bauteilen
- Für verformungsempfindliche Bauteile geeignet
- Hohl- und Teilhohlspannung möglich
- Innen- und Außenspannung

TECHNISCHE MERKMALE

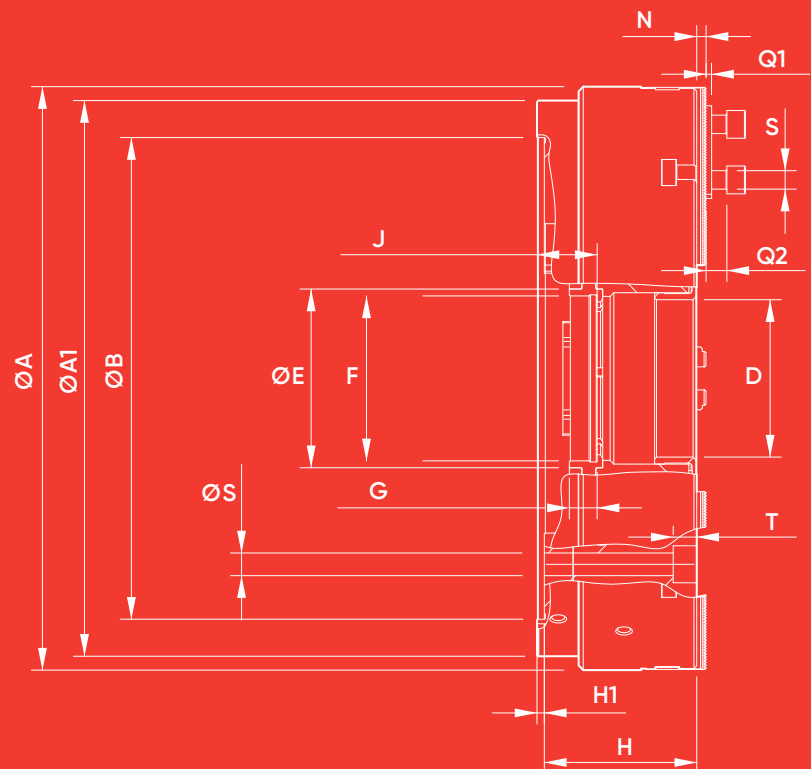
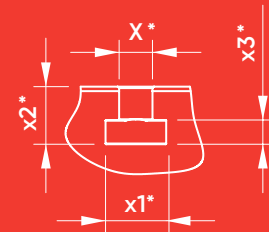
- Zentrisches ausgleichendes Spannen
- Spannhubkontrolle

Technische Daten technical information		VT-S
Ident-Nr. / ident-no.		845
Durchmesser / diameter	mm	168
Durchgang through-hole	mm	46
Hub pro Backe radial jaw stroke	mm	3,4
Ausgleichshub compensation	mm	2,3
Kolbenhub axial piston stroke	mm	15
max. Betätigungskraft max. draw pull	kN	20
max. Spannkraft max. gripping force	kN	50
max. Drehzahl max. speed	1/min r.p.m.	500
Masse (ohne Backen) weight (without top jaws)	kg	12
Massenträgheitsmoment moment of inertia	kg · m ²	0,05
Nutenstein / standard t-nut	—	GPC
Standard weiche Aufsatzbacke standard soft jaw	—	VS1
Standard harte Aufsatzbacke standard hard jaw	—	VU2

INOFlex® VT-S



Ansicht A





* statische Nutmutter
* fixed ring-nut

Abmessungen dimensions		VT-S 016	VT-S 021	VT-S 026	VT-S 031	VT-S 040	VT-S 050	VT-S 063	VT-S 080
A mm		168	218	264	315	400	500	630	800
A1 mm		168	218	264	315	400	500	600	600
B H6 mm		140	170	220	300	380	380	520	520
C mm		104,8	133,4	171,4	235	330,2	330,2	463,6	463,6
D mm		46	52	72	91	111	142	165	165
E mm		—	67	92	112	142	167	193	193
F mm		M56 x 1,5*	M60 x 2	M85 x 2	M100 x 2	M125 x 2	M155 x 2	M180 x 2	M180 x 2
G mm		18	20	20	24	30	30	30	30
H mm		88	109,2	125	134	154	164,5	164,5	164,5
H1 mm		5	5	5	5	6	8	8	8
min./max.	J mm	18 / 33	17 / 36	10 / 32	16 / 40	29,6 / 56,6	30 / 57	30 / 57	30 / 57
	L mm	46,5	61,5	78	88,5	117	147	192	276
	M mm	32	34	42	46	52	58	58	58
	N mm	1,5	2	2	2	5	10	10	10
Verzahnung / serration	P mm	1,5 x 60°	1,5 x 60°	1,5 x 60°	1,5 x 60°	1,5 x 60°	3,0 x 60°	3,0 x 60°	3,0 x 60°
	Q1 mm	2,5	3	3	3	3,5	6	6	6
	Q2 mm	10,5	11,5	11,5	11,5	11,5	16,5	16,5	16,5
Futter geöffnet / chuck open	R mm	84,9	108,9	134,1	160	202,2	249,3	314,3	399,3
	S mm	10,5	12,5	16,5	22	26	24,5	24,5	24,5
	T mm	12	17,2	26	22	26	30	25,5	25,5
	l1 mm	18	20	30	30	30	60	60	60
min./max.	l2 mm	22 / 39,5	25 / 52	35 / 62	35 / 73	40 / 103	70 / 121	70 / 158	70 / 242
	n H8 mm	10	12	16	16	21	25	25	25
	s mm	M8 x 22	M10 x 25	M12 x 30	M12 x 30	M16 x 35	M20 x 55	M20 x 55	M20 x 55
	x H12 mm	—	—	—	—	—	14	22	22
	x1 mm	—	—	—	—	—	23	40	40
	x2 mm	—	—	—	—	—	25	38	38
	x3 mm	—	—	—	—	—	9	16	16
	y mm	—	—	—	—	—	66	170	245
	y1 mm	—	—	—	—	—	66	110	185



INOFlex® VK-S

4-Backen-Kraftspannfutter ohne Durchgang

4-jaw closed center power chuck

ANWENDUNG

- Spannen von runden, quadratischen/rechteckigen und geometrisch unregelmäßigen Bauteilen
- Für verformungsempfindliche Bauteile geeignet
- Innen- und Außenspannung

TECHNISCHE MERKMALE

- Zentrisches ausgleichendes Spannen
- Spannhubkontrolle

APPLICATION

- Clamping of round parts
- Clamping of square/rectangular parts
- Clamping of irregular parts
- For deformation sensitive parts
- Internal and external clamping

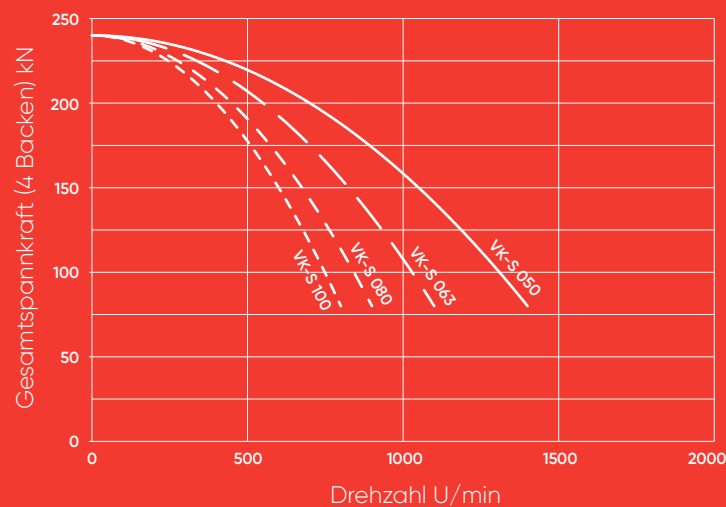
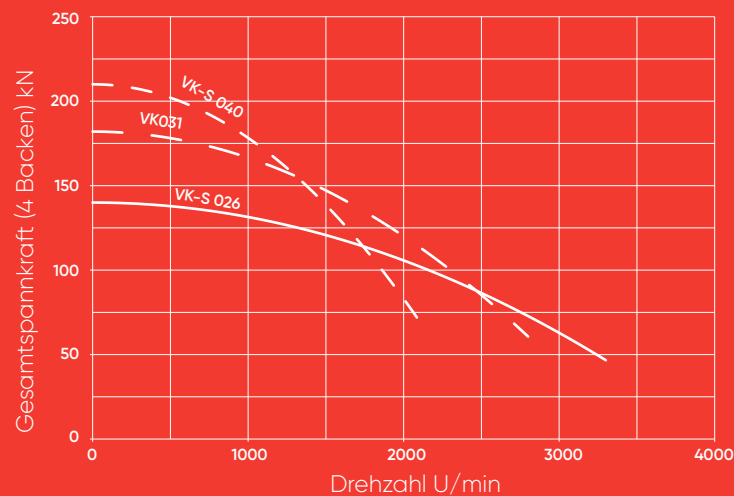
TECHNICAL FEATURES

- Compensating concentric clamping
- Jaw travel control

Technische Daten technical information		VK-S 026	VK 031	VK-S 040	VK-S 050	VK-S 063	VK-S 080	VK-S 100
Ident-Nr. / ident-no.		843126	843031	843140	843150	843163	843180	843100
Durchmesser diameter	mm	264	315	400	500	630	800	990
Hub pro Backe radial jaw stroke	mm	5	4,8	6,1	6,8	8	8	8
Ausgleichshub compensation	mm	4	3,6	5	5,3	6,7	6,7	6,7
Kolbenhub axial piston stroke	mm	22	24	27	30	35	35	35
max. Betätigungskraft max. draw pull	kN	50	70	85	90	90	90	90
max. Spannkraft max. gripping force	kN	140	182	210	240	240	240	240
max. Drehzahl max. speed	1/min r.p.m.	3300	2800	2100	1400	1100	900	800
Masse (ohne Backen) weight (without top jaws)	kg	44,1	68,5	125	223	349	528	812
Massenträgheitsmoment moment of inertia	kg · m ²	0,41	0,88	2,6	7,4	17,7	41,2	97,4
Nutenstein standard t-nut	—	GP11	GP11	GP13	GP21	GP21	GP21	GP21
Standard weiche Aufsatzbacke standard soft jaw	—	VG16	VS16	VS21	VS25	VS25	VS25	VS25
Standard harte Aufsatzbacke standard hard jaw	—	VG16	VG16	VG21	VG25	VG25	VG25	VG25

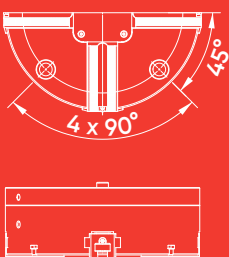
INOFlex® VK-S

Spannkraft-/Drehzahl-Diagramm
Clamping force - speed diagram

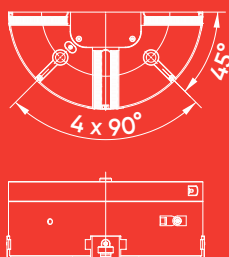


Beim Einsatz der weichen Standardbacke in äußerer Montageposition
When using the soft standard jaw in outer mounting position

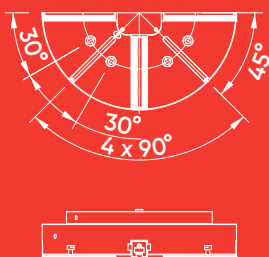
VK-S 026 + VK-S 040



VK-S 050



VK-S 063 – VK-S 100



50	VK-S 063	VK-S 080	VK-S 100
	630	800	990
	600	600	800
	520	520	720
	463,6	463,6	647,6
	64	64	64
	42	42	42
150	M30 x 150	M30 x 150	M30 x 150
	47	47	47
	170,5	170,5	170,5
	8	8	8
	0 / 35	0 / 35	0 / 35
	4	4	4
	213	300	393
	58	58	58
	10	10	10
0°	3,0 x 60°	3,0 x 60°	3,0 x 60°
	6	6	6
	16,5	16,5	16,5
	314,1	399,1	494,1
	24,5	24,5	33
	25	25	31
	60	60	60
5	70 / 188	70 / 272	70 / 367
	25	25	25
55	M20 x 55	M20 x 55	M20 x 55
	22	22	22
	40	40	40
	38	38	38
	16	16	16
	160	245	340
	160	245	340





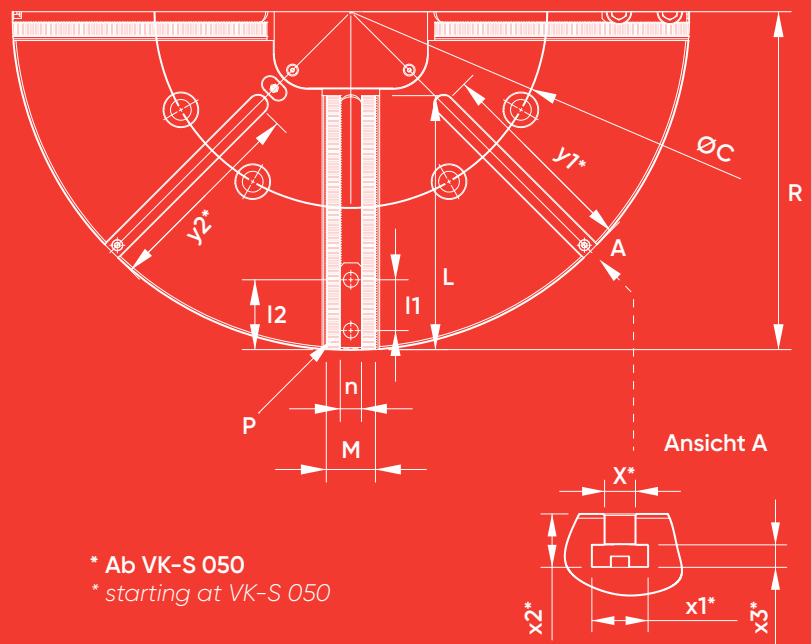
ANWENDUNG

- Spannen von runden, quadratischen/rechteckigen geometrisch unregelmäßigen Bauteilen
- Für verformungsempfindliche Bauteile geeignet
- Innen- und Außenspannung

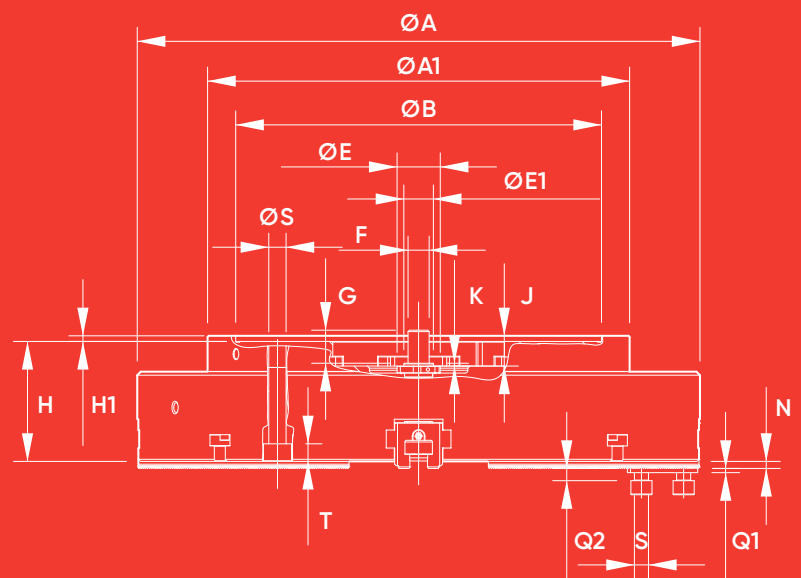
TECHNISCHE MERKMALE

- Zentrisches ausgleichendes Spannen
- Spannhubkontrolle

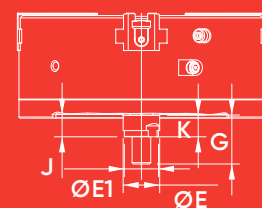
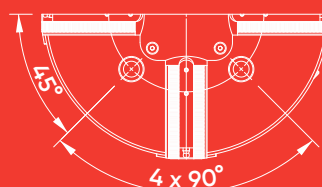
INOFlex® VK-S



Technische Daten technical information		VK-S
Ident-Nr. / ident-no.		843
Durchmesser diameter	mm	264
Hub pro Backe radial jaw stroke	mm	5
Ausgleichshub compensation	mm	4
Kolbenhub axial piston stroke	mm	22
max. Betätigungskraft max. draw pull	kN	50
max. Spannkraft max. gripping force	kN	140
max. Drehzahl max. speed	1/min r.p.m.	330
Masse (ohne Backen) weight (without top jaws)	kg	44,7
Massenträgheitsmoment moment of inertia	kg · m ²	0,47
Nutenstein standard t-nut	—	GP1
Standard weiche Aufsatzbacke standard soft jaw	—	VG1
Standard harte Aufsatzbacke standard hard jaw	—	VG1



VK 031



Abmessungen dimensions		VK-S 026	VK 031	VK-S 040	VK-S 050	VK-S 063	VK-S 080	VK-S 100
	A mm	264	315	400	500	630	800	990
	A1 mm	264	—	400	500	600	600	800
	B H6 mm	220	220	380	380	520	520	720
	C mm	171,4	171,4	330,2	330,2	463,6	463,6	647,6
	E mm	45	48	49	64	64	64	64
	E1 h7 mm	26	44	35	42	42	42	42
	F mm	M20 x 100	M24 x 160	M24 x 130	M30 x 150	M30 x 150	M30 x 150	M30 x 150
	G mm	28	63	36	47	47	47	47
	H mm	122	127	149	165,5	170,5	170,5	170,5
	H1 mm	5	5	6	8	8	8	8
min./max.	J mm	0 / 22	29 / 53	0 / 27	0 / 30	0 / 35	0 / 35	0 / 35
	K mm	4	28	4	4	4	4	4
	L mm	82,5	103,1	135	150	213	300	393
	M mm	42	46	52	58	58	58	58
	N mm	2	3	5	10	10	10	10
Verzahnung / serration	P mm	1,5 x 60°	1,5 x 60°	1,5 x 60°	3,0 x 60°	3,0 x 60°	3,0 x 60°	3,0 x 60°
	Q1 mm	3	3	3,5	6	6	6	6
	Q2 mm	11,5	11,5	11,5	16,5	16,5	16,5	16,5
Futter geöffnet / chuck open	R mm	134,2	159,5	203,3	249,1	314,1	399,1	494,1
	S mm	16,5	17,5	26	24,5	24,5	24,5	33
	T mm	26	18	32	56,7	25	25	31
	l1 mm	30	30	30	60	60	60	60
min./max.	l2 mm	40 / 72,7	40 / 94,5	40 / 122	70 / 125	70 / 188	70 / 272	70 / 367
	n H8 mm	16	16	21	25	25	25	25
	s mm	M12 x 30	M12 x 30	M16 x 35	M20 x 55	M20 x 55	M20 x 55	M20 x 55
	x H12 mm	—	—	—	14	22	22	22
	x1 mm	—	—	—	23	40	40	40
	x2 mm	—	—	—	25	38	38	38
	x3 mm	—	—	—	9	16	16	16
	y1 mm	—	—	—	65	160	245	340
	y2 mm	—	—	—	65	160	245	340



INOFlex® VD

4-Backen-Handspannfutter ohne Durchgang
4-jaw closed center manual chuck

ANWENDUNG

- Spannen von runden, quadratischen/rechteckigen und geometrisch unregelmäßigen Bauteilen
- Für verformungsempfindliche Bauteile geeignet
- Innen- und Außenspannung

TECHNISCHE MERKMALE

- Zentrisches ausgleichendes Spannen
- Spannhubkontrolle

APPLICATION

- Clamping of round parts
- Clamping of square/rectangular parts
- Clamping of irregular parts
- For deformation sensitive parts
- Internal and external clamping

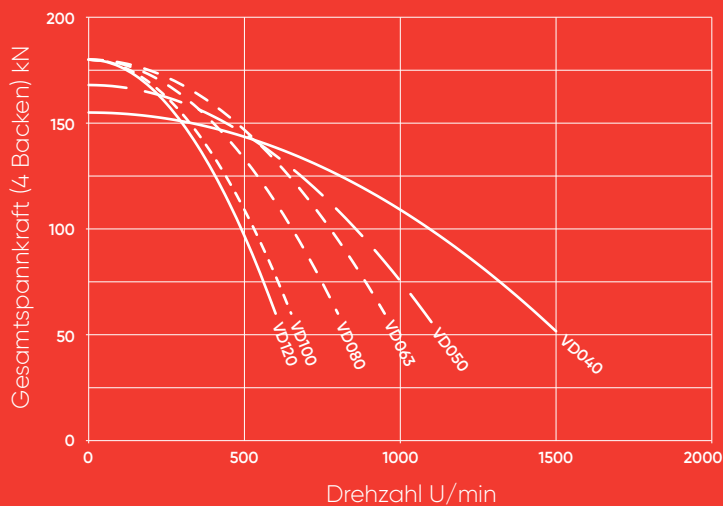
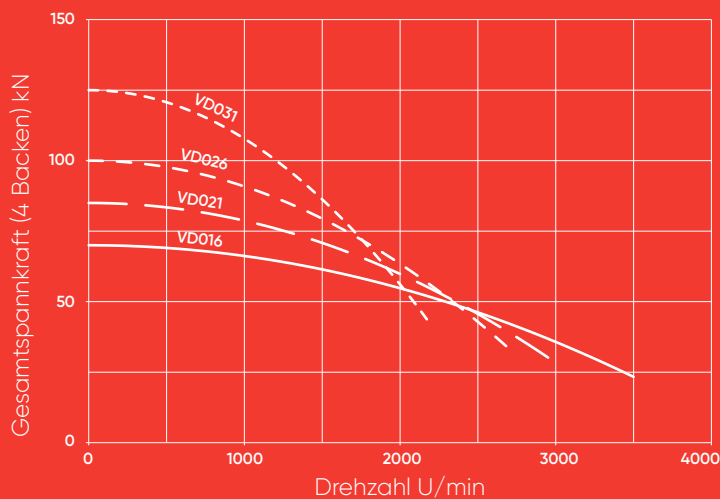
TECHNICAL FEATURES

- Compensating concentric clamping
- Jaw travel control

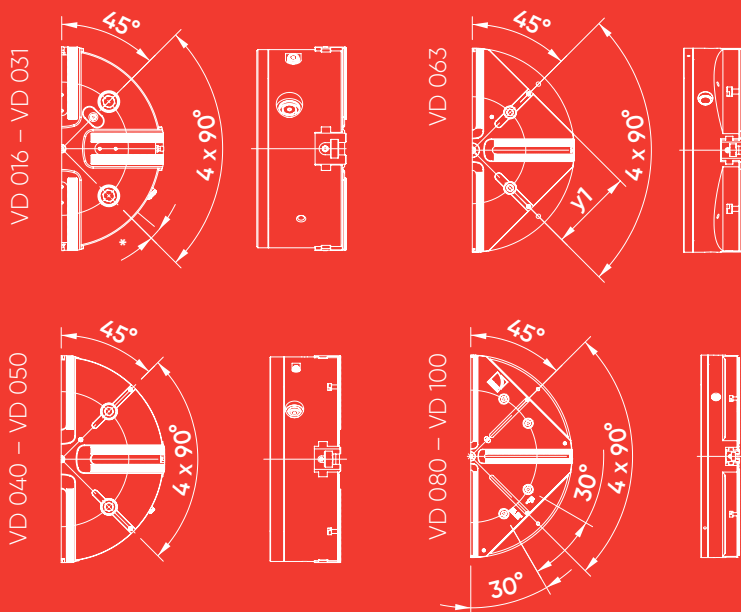
Technische Daten technical information		VD016	VD021	VD026	VD031	VD040	VD050	VD063	VD080	VD100	VD120
Ident-Nr. / ident-no.		841016	841021	841026	841031	841040	841050	841063	841080	841100	841120
Durchmesser diameter	mm	165	210	255	315	400	500	630	800	990	1150
Hub pro Backe radial jaw stroke	mm	4,3	5,2	5,2	6,1	6,9	8,7	11,3	11,3	11,3	11,3
Ausgleichshub compensation	mm	2,5	3,5	3,5	4	4,5	6,1	8	8	8	8
max. Anzugsmoment max. torque	Nm	70	120	160	200	270	300	320	320	320	320
max. Spannkraft max. gripping force	kN	70	85	100	125	155	168	180	180	180	180
max. Drehzahl max. speed	1/min r.p.m.	3500	3000	2700	2200	1500	1100	950	800	650	600
Masse (ohne Backen) weight (without top jaws)	kg	12	22	39	75	127	226	340	545	720	1100
Massenträgheitsmoment moment of inertia	kg · m ²	0,04	0,12	0,32	0,97	2,63	7,39	16,9	24,5	84,5	176,4
Nutenstein standard t-nut	—	GP05	GP07	GP11	GP11	GP13	GP21	GP21	GP21	GP21	GP21
Standard weiche Aufsatzbacke standard soft jaw	—	VS10	VS12	VS16	VS16	VS21	VS25	VS25	VS25	VS25	VS25
Standard harte Aufsatzbacke standard hard jaw	—	VG10	VG12	VG16	VG16	VG21	VG25	VG25	VG25	VG25	VG25

INOFlex® VD

Spannkraft-/Drehzahl-Diagramm
Clamping force - speed diagram



Beim Einsatz der weichen Standardbacke in äußerer Montageposition
When using the soft standard jaw in outer mounting position



* Lochkreis bei VD 016 um 5° nach links versetzt
* Bolt circle in VD 016 displaced by 5° to the left

	VD063	VD080	VD100	VD120
	630	800	990	1150
	380	520	720	720
	330,2	463,6	647,6	647,6
	163,5	163,5	169,5	169,7
	8	8	8	8
	246	315	420	498
	60	60	60	60
	10,5	10,5	10,5	10,3
°	3,0 x 60°	3,0 x 60°	3,0 x 60°	3,0 x 60°
	6	6	6	6
	16,4	16,4	16,4	17,4
	314,3	399,3	504,3	574,3
40,	M24 x 130, 4 x	M24 x 180, 7 x	M30 x 120, 7 x	M30 x 180, 7 x
	34,3	41,5	41,5	41,5
	59	59	65	65
	21	21	21	21
	60	60	60	60
0	80 / 228	80 / 295	80 / 395	80 / 476
	25	25	25	25
55	M20 x 55	M20 x 55	M20 x 55	M20 x 55
	22	22	22	22
	40	40	40	40
	38	38	38	38
	16	16	16	16
	200	285	245	290





INOFlex® VD

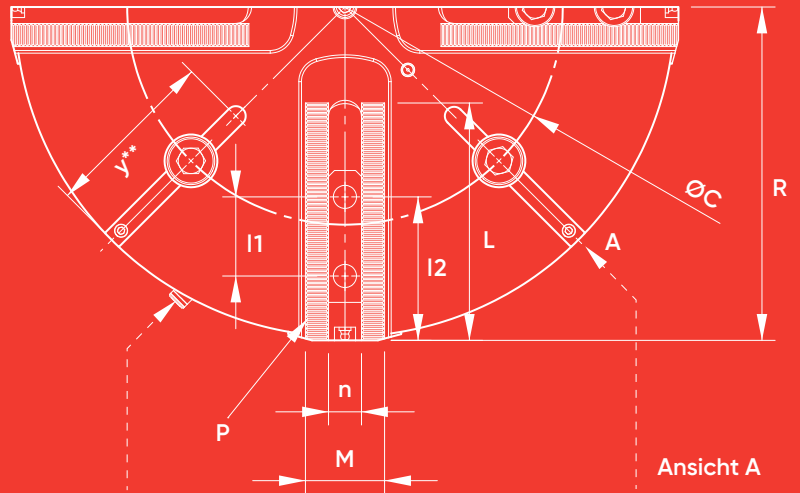
ANWENDUNG

- Spannen von runden, quadratischen/rechteckigen geometrisch unregelmäßigen Bauteilen
- Für verformungsempfindliche Bauteile geeignet
- Innen- und Außenspannung

TECHNISCHE MERKMALE

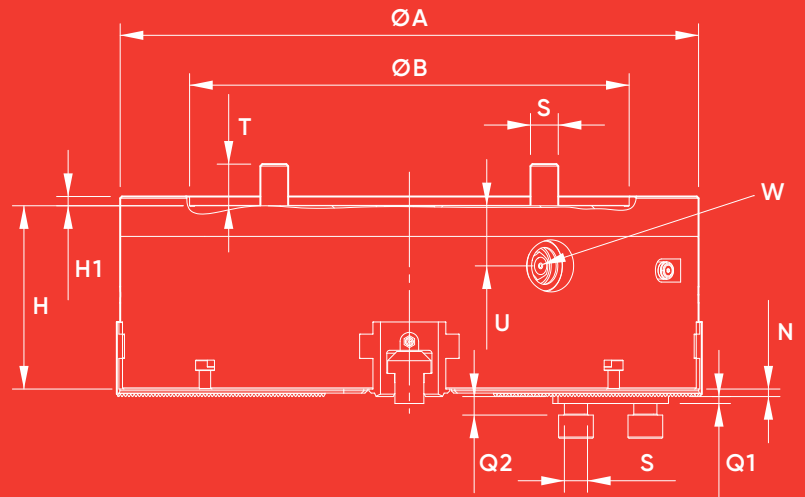
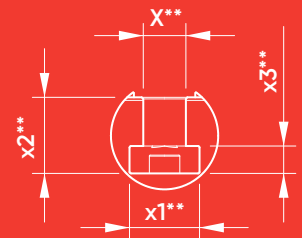
- Zentrisches ausgleichendes Spannen
- Spannhubkontrolle

Technische Daten technical information		VD026
Ident-Nr. / ident-no.		8410
Durchmesser diameter	mm	165
Hub pro Backe radial jaw stroke	mm	4,3
Ausgleichshub compensation	mm	2,5
max. Anzugsmoment max. torque	Nm	70
max. Spannkraft max. gripping force	kN	70
max. Drehzahl max. speed	1/min r.p.m.	3500
Masse (ohne Backen) weight (without top jaws)	kg	12
Massenträgheitsmoment moment of inertia	kg • m ²	0,04
Nutenstein standard t-nut	—	GP05
Standard weiche Aufsatzbacke standard soft jaw	—	VS10
Standard harte Aufsatzbacke standard hard jaw	—	VG10



Hubkontrolle
Stroke control

* Ab VD 040
* starting at VD 040



Abmessungen dimensions		VD016	VD021	VD026	VD031	VD040	VD050	VD063	VD080	VD100	VD120
A mm		165	210	255	315	400	500	630	800	990	1150
B H6 mm		140	170	220	220	300	380	380	520	720	720
C mm		104,8	133,4	171,4	171,4	235	330,2	330,2	463,6	647,6	647,6
H mm		76	85	105	130	136,5	158,5	163,5	163,5	169,5	169,7
H1 mm		5	5	5	5	5	8	8	8	8	8
L mm		60	78	93	111	141	180	246	315	420	498
M mm		31	35,5	40	40	50	60	60	60	60	60
N mm		5	5	5	5	6,5	6,5	10,5	10,5	10,5	10,3
Verzahnung serration	P mm	1,5 x 60°	1,5 x 60°	1,5 x 60°	1,5 x 60°	1,5 x 60°	3,0 x 60°	3,0 x 60°	3,0 x 60°	3,0 x 60°	3,0 x 60°
	Q1 mm	2,5	3	3	3	3,5	6	6	6	6	6
	Q2 mm	10,5	11,5	11,5	11,5	11,5	16,4	16,4	16,4	16,4	17,4
Futter geöffnet chuck open	R mm	84,8	107,9	130,7	161,1	201,9	252,8	314,3	399,3	504,3	574,3
	S mm	M10 x 80, 4 x	M12 x 90, 4 x	M16 x 110, 4 x	M16 x 130, 4 x	M20 x 110, 4 x	M24 x 140, 4 x	M24 x 130, 4 x	M24 x 180, 7 x	M30 x 120, 7 x	M30 x 180, 7 x
	T mm	16	17,6	21,6	22,6	30	36	34,3	41,5	41,5	41,5
	U mm	28	32	37	50	53	52	59	59	65	65
Schlüsselweite wrench width	W mm	12	12	17	17	21	21	21	21	21	21
	l1 mm	18	20	30	30	30	60	60	60	60	60
min./max.	l2 mm	25 / 52	28 / 68	41 / 60	41 / 97	43 / 122	70 / 150	80 / 228	80 / 295	80 / 395	80 / 476
	n H8 mm	10	12	16	16	21	25	25	25	25	25
	s mm	M8 x 25	M10 x 25	M12 x 30	M12 x 30	M16 x 35	M20 x 55	M20 x 55	M20 x 55	M20 x 55	M20 x 55
	x H12 mm	—	—	—	—	14	14	22	22	22	22
	x1 mm	—	—	—	—	23	23	40	40	40	40
	x2 mm	—	—	—	—	25	25	38	38	38	38
	x3 mm	—	—	—	—	9	9	16	16	16	16
	y mm	—	—	—	—	118	133	200	285	245	290



INOFlex[®] VL

4-Backen-Handspannfutter gewichtserleichtert

4-jaw weight reduced manual chuck

ANWENDUNG

- Spannen von runden, quadratischen/rechteckigen und geometrisch unregelmäßigen Bauteilen
- Für den Einsatz auf Fräs-/Drehzentren
- Innen- und Außenspannung

TECHNISCHE MERKMALE

- Zentrisch ausgleichendes Spannen mit 4 Backen
- Zentrisch spannen mit 2 Backen
- Spannung mit Festanschlag
- Gewichtserleichtert

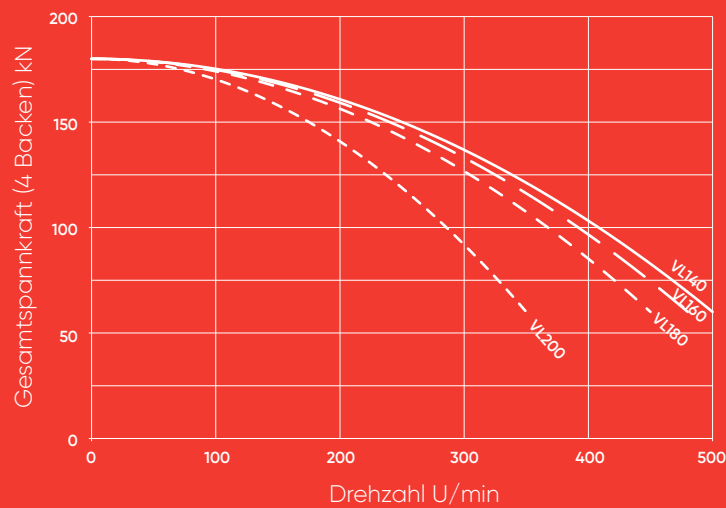
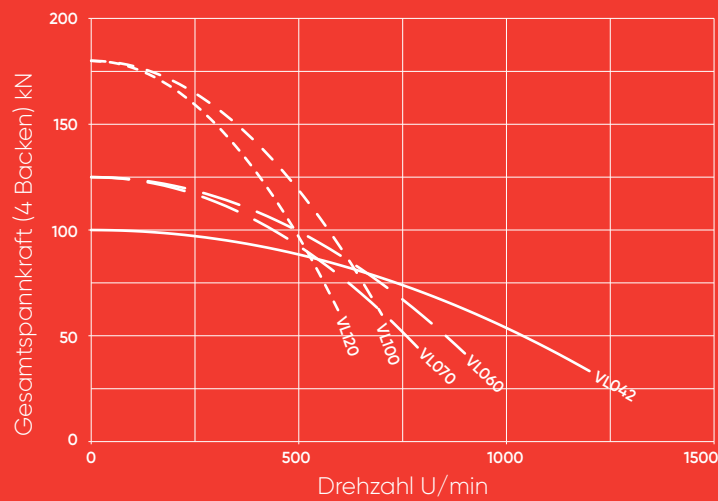
APPLICATION

- Clamping of round, square/rectangular and irregular parts
- For milling/turning centers
- Internal and external clamping

TECHNICAL FEATURES

- Centric compensating clamping with 4 jaws
- Centric clamping with 2 jaws
- Clamping with fixed stop
- Weight reduced

Technische Daten technical information		VL042	VL060	VL070	VL100	VL120
Ident-Nr. / ident-no.		846042	846060	846070	846100	846120
Durchmesser / diameter	mm	420	600	700	990	1150
Hub pro Backe radial jaw stroke	mm	5,2	11,1	11,1	11,3	11,3
Ausgleichshub compensation	mm	3,5	9,1	9,1	9,3	9,3
max. Anzugsmoment max. torque	Nm	160	200	200	320	320
max. Spannkraft bei 4 Backen max. gripping force with 4 jaws	kN	100	125	125	180	180
max. Spannkraft bei 2 Backen max. gripping force with 2 jaws	kN	50	62,5	62,5	90	90
max. Drehzahl max. speed	1/min r.p.m.	1200	900	800	700	600
Masse (ohne Backen) weight extension set (without top jaws)	kg	85	172	209	535	666
Massenträgheitsmoment moment of inertia	kg • m ²	1,6	6,2	9,9	52,4	86,9
Nutenstein standard t-nut	—	GP11	GP11	GP11	GP13	GP13
Standard weiche Aufsatzbacke standard soft jaw	—	VS16	VP16	VP16	VP21	VP21
Standard harte Aufsatzbacke standard hard jaw	—	VG16	VR16	VR16	VR21	VR21



Beim Einsatz der weichen Standardbacke in äußerer Montageposition
When using the soft standard jaw in outer mounting position

Einenspezifisches Befestigungsbohrbild nach Kundenvorgabe
Section: machine specific bore pattern as per customer request

	VL100	VL120
	990	1150
	50	50
tief	M6; 14,3 tief	M6; 14,3 tief
	410	410
	283	282,5
	183	183
	846	—
	886	988
2 tief	M20; 22 tief	M20; 22 tief
	176,5	176,5
	8,6	8,6
	408,7	490,8
	55	55
	9,8	9,8
2	Modul 2	Modul 2
	2,5	2,5
	10	10
	495,5	574,3
	78	78
	21	21
	30	30
9	43 / 399	43 / 482
	21	21
30	M16 x 35	M16 x 35
	22	22
	37	37
	38	38
	16	16
	105	105
	57	57
	390,75	465,75
	24	24
	142,5	142,5
	118,5	118,5
	8	8





ANWENDUNG

- Spannen von runden, quadratischen/rechteckigen und geometrisch unregelmäßigen Bauteilen
- Für den Einsatz auf Fräs-/Drehzentren
- Innen- und Außenspannung

TECHNISCHE MERKMALE

- Zentrisch ausgleichendes Spannen mit 2 Backen
- Zentrisch spannen mit 2 Backen
- Spannung mit Festanschlag
- Gewichtserleichtert

Technische Daten

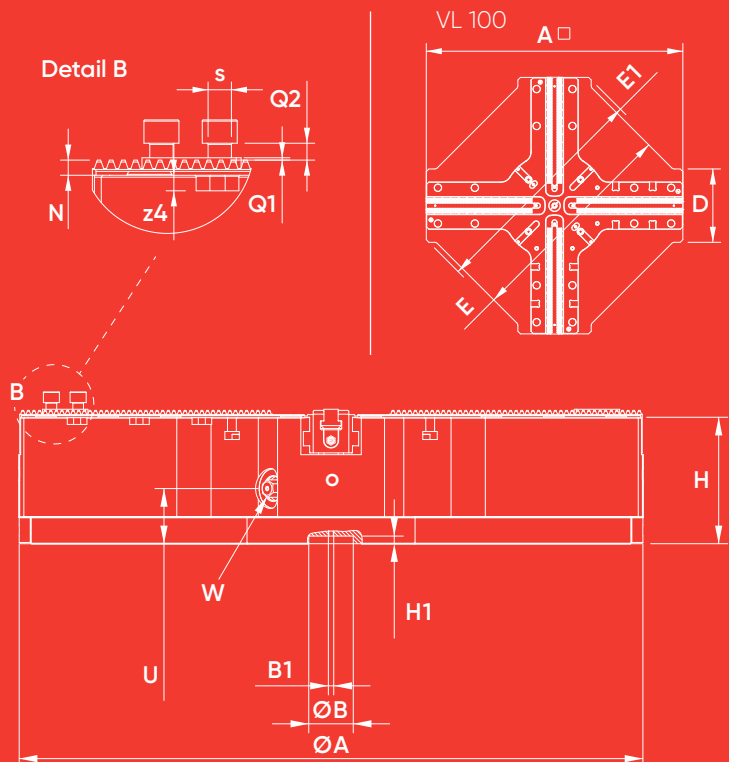
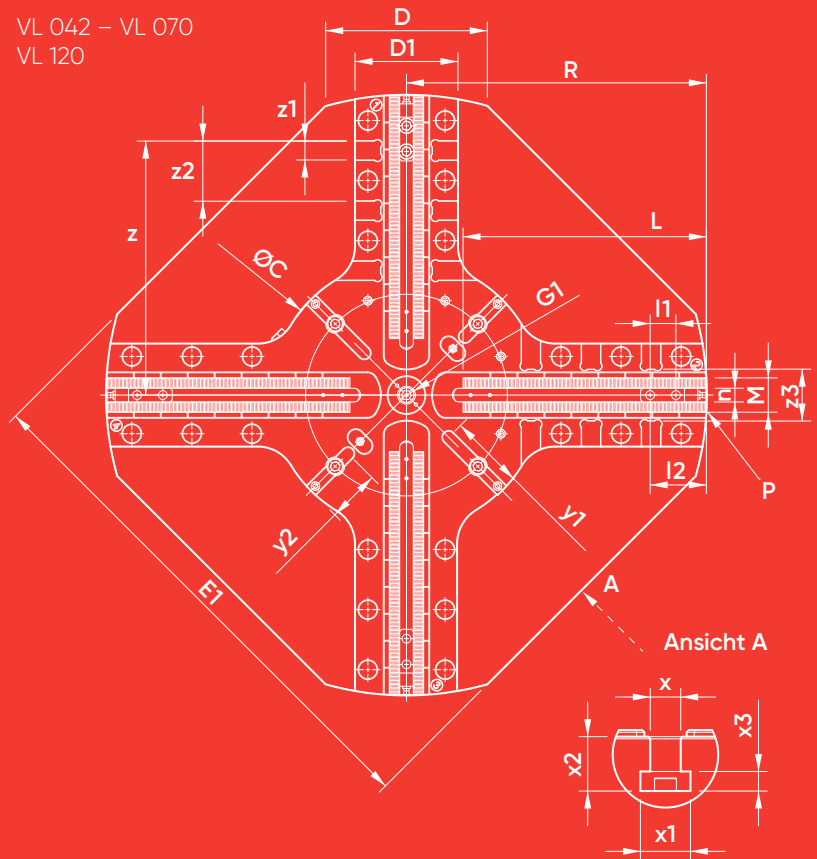
technical information

Ident-Nr. / ident-no.

Durchmesser / diameter	mm
Hub pro Backe radial jaw stroke	mm
Ausgleichshub compensation	mm
max. Anzugsmoment max. torque	Nm
max. Spannkraft bei 4 Backen max. gripping force with 4 jaws	kN
max. Spannkraft bei 2 Backen max. gripping force with 2 jaws	kN
max. Drehzahl max. speed	1/m r.p.m.
Masse (ohne Backen) weight extension set (without top jaws)	kg
Massenträgheitsmoment moment of inertia	kg · m ²
Nutenstein standard t-nut	—
Standard weiche Aufsatzbacke standard soft jaw	—
Standard harte Aufsatzbacke standard hard jaw	—

INOFlex® VL

VL 042 – VL 070
VL 120



Anbindung: maschinenspezifisches Befestigungsbohrbild nach Kundenvorgabe
 Connection: machine specific bore pattern as per customer request

Abmessungen dimensions		VL042	VL060	VL070	VL100	VL120
A mm		420	600	700	990	1150
B G7 mm		50	50	50	50	50
B1 mm		M6; 7,4 tief	M6; 6,2 tief	M6; 6,2 tief	M6; 14,3 tief	M6; 14,3 tief
C mm		250	315	315	410	410
D mm		149	188	188,6	283	282,5
D1 mm		116	120	120	183	183
E mm		—	—	—	846	—
E1 mm		383	535,5	610	886	988
G1 mm		M12; 20 tief	M20; 22 tief	M20; 22 tief	M20; 22 tief	M20; 22 tief
H mm		121	142	142	176,5	176,5
H1 mm		8,6	8,6	8,6	8,6	8,6
L mm		168	233	283,5	408,7	490,8
M mm		40	40	40	55	55
N mm		5	7,8	7,8	9,8	9,8
P mm		1,5 x 60°	Modul 2	Modul 2	Modul 2	Modul 2
Q1 mm		3	1,2	1,2	2,5	2,5
Q2 mm		11,4	10	10	10	10
Futter geöffnet / chuck open	R mm	208,9	299,4	349,4	495,5	574,3
U mm		53	62	62	78	78
Schlüsselweite / wrench width	W mm	17	17	17	21	21
I1 mm		30	30	30	30	30
min./max.	I2 mm	41 / 148	41 / 225	41 / 279	43 / 399	43 / 482
n H8 mm		16	16	16	21	21
s mm		M12 x 30	M12 x 30	M12 x 30	M16 x 35	M16 x 35
x H12 mm		14	14	14	22	22
x1 mm		23	23	23	37	37
x2 mm		25	25	25	38	38
x3 mm		9	9	9	16	16
y1 mm		40	88	88	105	105
y2 mm		40	61	61	57	57
z mm		170	246	296	390,75	465,75
z1 G7 mm		20	22	22	24	24
z2 mm		50	70	70 (2x)	142,5	142,5
z3 mm		71,5	60,5	60,5	118,5	118,5
z4 mm		6	8	8	8	8



INOFlex® VL

VL Verlängerungen zur Erweiterung VL100

VL Extensions for expansion VL100

ANWENDUNG

- Spannen von runden, quadratischen/rechteckigen und geometrisch unregelmäßigen Bauteilen
- Für den Einsatz auf Fräs-/Drehzentren
- Innen- und Außenspannung

TECHNISCHE MERKMALE

- Zentrisch ausgleichendes Spannen mit 4 Backen
- Zentrisch spannen mit 2 Backen
- Spannung mit Festanschlag
- Gewichtserleichtert

APPLICATION

- Clamping of round, square/rectangular and irregular parts
- For milling/turning centers
- Internal and external clamping

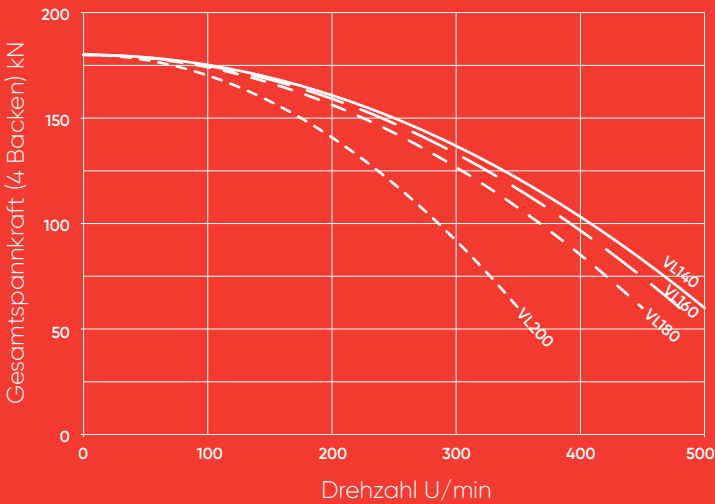
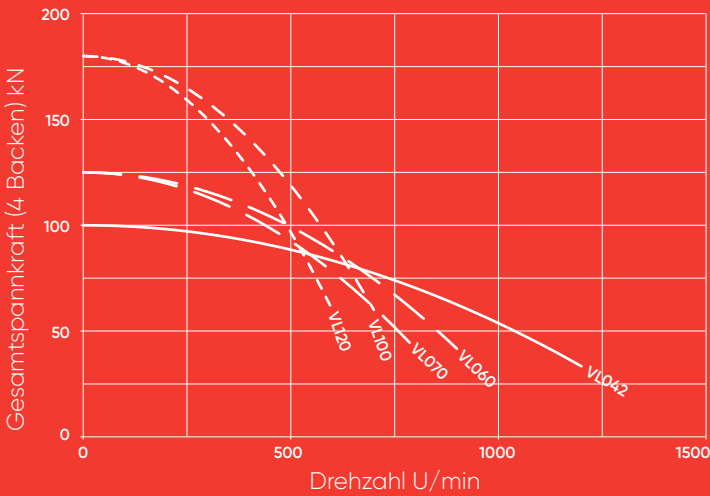
TECHNICAL FEATURES

- Centric compensating clamping with 4 jaws
- Centric clamping with 2 jaws
- Clamping with fixed stop
- Weight reduced

Technische Daten technical information		VL140	VL160	VL180	VL200
Ident-Nr. / ident-no.		846141	846161	846181	846199
Durchmesser / diameter	mm	1400	1600	1800	2000
Hub pro Backe radial jaw stroke	mm	11,3	11,3	11,3	11,3
Ausgleichshub compensation	mm	8,3	8,3	8,3	8,3
max. Anzugsmoment max. torque	Nm	320	320	320	320
max. Spannkraft bei 4 Backen max. gripping force with 4 jaws	kN	180	180	180	180
max. Spannkraft bei 2 Backen max. gripping force with 2 jaws	kN	90	90	90	90
max. Drehzahl max. speed	1/min r.p.m.	500	480	450	350
Masse Erweiterungssatz (ohne Backen) weight extension set (without top jaws)	kg	212	300	394	485
Gesamtmasse (ohne Backen) total weight (without top jaws)	kg	747	835	929	1020
Massenträgheitsmoment moment of inertia	kg · m ²	129,1	180,9	250,5	335,1
Nutenstein / standard t-nut	—	GP13	GP13	GP13	GP13
Standard weiche Aufsatzbacke standard soft jaw	—	VP21	VP21	VP21	VP21
Standard harte Aufsatzbacke standard hard jaw	—	VR21	VR21	VR21	VR21

INOFlex® VL Futter Erweitert

Spannkraft-/Drehzahl-Diagramm
Clamping force - speed diagram



Beim Einsatz der weichen Standardbacke in äußerer Montageposition
When using the soft standard jaw in outer mounting position

Einenspezifisches Befestigungsbohrbild nach Kundenvorgabe
Section: machine specific bore pattern as per customer request

Verzahnung: verzahnung der Grundbacken nicht durchgehend
Serration: serration of the base jaws not continuous

	VL200
	2000
	990
	283
	183
	1586
	176,5
	40
	477
	55
	9,8
2	Modul 2
	2,5
	10
	1000,5
	30
7	40 / 457
	21
35	M16 x 35
	818,25
	24
2x)	142,5 (2x)
	118
	8



INOFlex® VL Futter Erweitert



ANWENDUNG

- Spannen von runden, quadratischen/rechteckigen und geometrisch unregelmäßigen Bauteilen
- Für den Einsatz auf Fräs-/Drehzentren
- Innen- und Außenspannung

TECHNISCHE MERKMALE

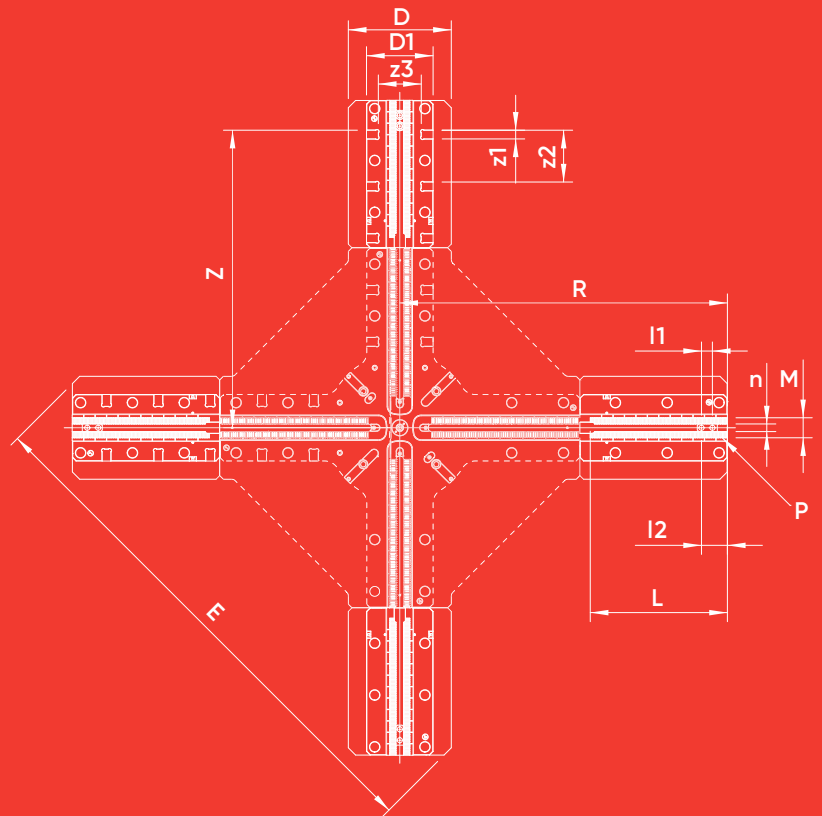
- Zentrisch ausgleichendes Spannen mit 2 Backen
- Zentrisch spannen mit 2 Backen
- Spannung mit Festanschlag
- Gewichtserleichtert

Technische Daten

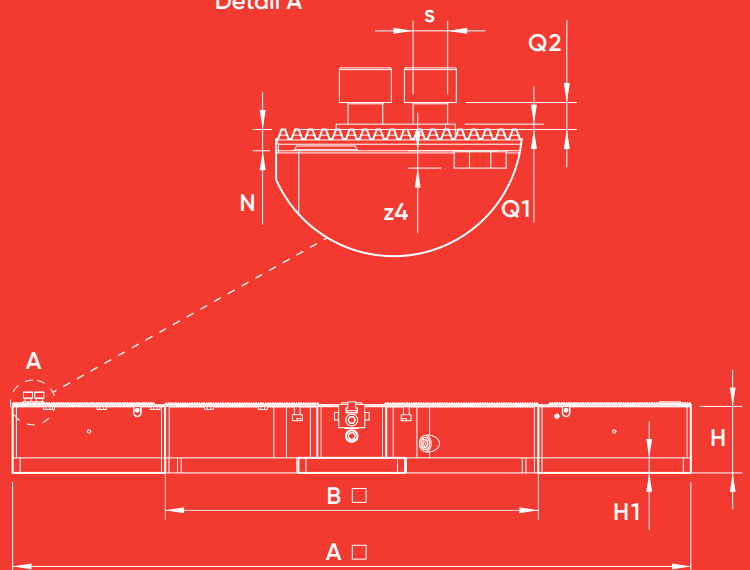
technical information

Ident-Nr. / ident-no.

Durchmesser / diameter	mm
Hub pro Backe radial jaw stroke	mm
Ausgleichshub compensation	mm
max. Anzugsmoment max. torque	Nm
max. Spannkraft bei 4 Backen max. gripping force with 4 jaws	kN
max. Spannkraft bei 2 Backen max. gripping force with 2 jaws	kN
max. Drehzahl max. speed	1/m r.p.m
Masse Erweiterungssatz (ohne Backen) weight extension set (without top jaws)	kg
Gesamtmasse (ohne Backen) total weight (without top jaws)	kg
Massenträgheitsmoment moment of inertia	kg · m ²
Nutenstein / standard t-nut	—
Standard weiche Aufsatzbacke standard soft jaw	—
Standard harte Aufsatzbacke standard hard jaw	—



Detail A



Anbindung: maschinenspezifisches Befestigungsbohrbild nach Kundenvorgabe
 Connection: machine specific bore pattern as per customer request

Verzahnung: verzahnung der Grundbacken nicht durchgehend
 Serration: serration of the base jaws not continuous

Abmessungen dimensions		VL140	VL160	VL180	VL200
	A mm	1400	1600	1800	2000
	B mm	990	990	990	990
	D mm	283	283	283	283
	D1 mm	183	183	183	183
	E mm	1162	1304	1445	1586
	H mm	176,5	176,5	176,5	176,5
	H1 mm	40	40	40	40
	L mm	177	277	377	477
	M mm	55	55	55	55
	N mm	9,8	9,8	9,8	9,8
	P mm	Modul 2	Modul 2	Modul 2	Modul 2
	Q1 mm	2,5	2,5	2,5	2,5
	Q2 mm	10	10	10	10
Futter geöffnet chuck open	R mm	700,5	800,5	900,5	1000,5
	l1 mm	30	30	30	30
min./max.	l2 mm	40 / 157	40 / 257	40 / 357	40 / 457
	n H8 mm	21	21	21	21
	s mm	M16 x 35	M16 x 35	M16 x 35	M16 x 35
	z mm	533,25	675,75	818,25	818,25
	z1 G7 mm	24	24	24	24
	z2 mm	—	142,5	142,5 (2x)	142,5 (2x)
	z3 mm	118	118	118	118
	z4 mm	8	8	8	8



INOFlex® VF

Ausgleichender 4-Backen-Zentrierspanner

Compensating concentric 4-jaw vice

ANWENDUNG

- Spannen von runden, quadratischen/rechteckigen und geometrisch unregelmäßigen Bauteilen
- Für verformungsempfindliche Bauteile geeignet
- Stationäre Anwendung auf Fräsmaschinen
- Innen- und Außenspannung

TECHNISCHE MERKMALE

- Zentrisch ausgleichendes Spannen mit 4 Backen
- Zentrisch spannen mit 2 Backen
- Spannung mit Festanschlag

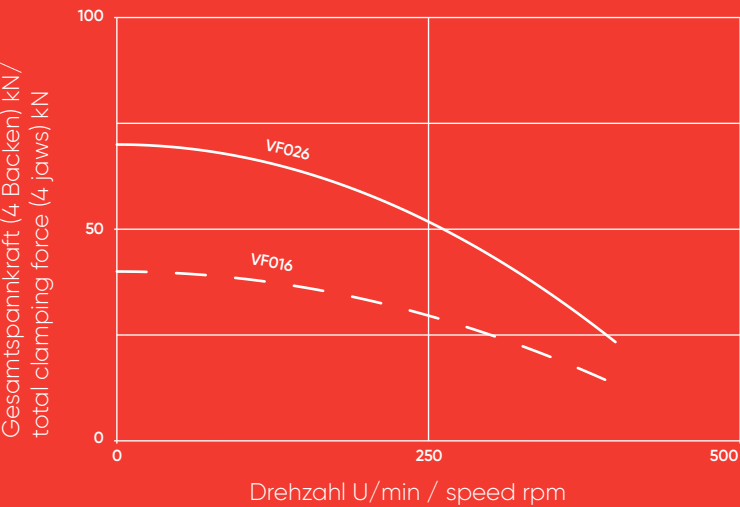
APPLICATION

- Clamping of round, square/rectangular and irregular parts
- For deformation sensitive parts
- Stationary application on milling machines
- Internal and external clamping

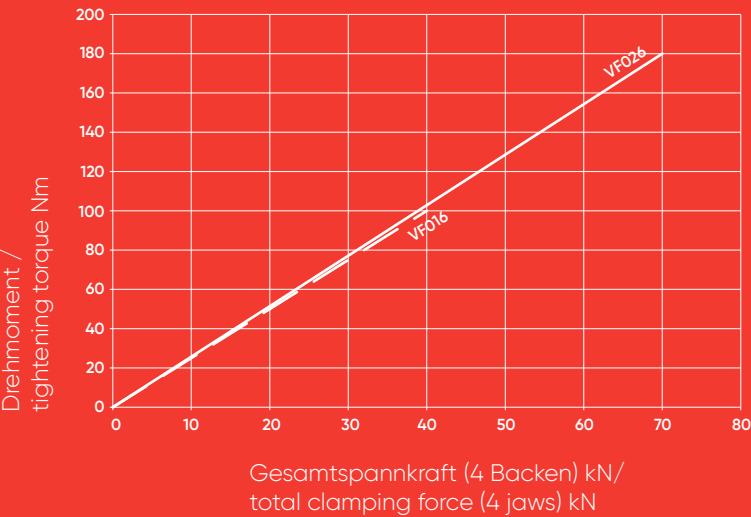
TECHNICAL FEATURES

- Centric compensating clamping with 4 jaws
- Centric clamping with 2 jaws
- Clamping with fixed stop

Technische Daten technical data		VF016	VF026
Ident-Nr. / ident-no.		842016	842026
Futtergröße chuck size	mm	162	235
Hub pro Backe radial jaw stroke	mm	12,6	14
Ausgleichshub compensation stroke per jaw	mm	11,6	13
max. Anzugsmoment max. tightening torque	Nm	100	180
max. Spannkraft bei 4 Backen max. gripping force with 4 jaws	kN	40	70
max. Spannkraft bei 2 Backen max. gripping force with 2 jaws	kN	20	35
max. Drehzahl max. speed	1/min r.p.m.	400	400
Masse (ohne Backen) weight (without top jaws)	kg	13	44,5
Massenträgheitsmoment moment of inertia	kg • m ²	0,05	0,38
Standard weiche Aufsatzbacke standard soft jaw	—	VP10	VP12
Standard harte Greiferbacke standard hard gripper jaw	—	VR10	VR12



Beim Einsatz der weichen Standardbacke in äußerer Montageposition
When using the soft standard jaw in outer mounting position



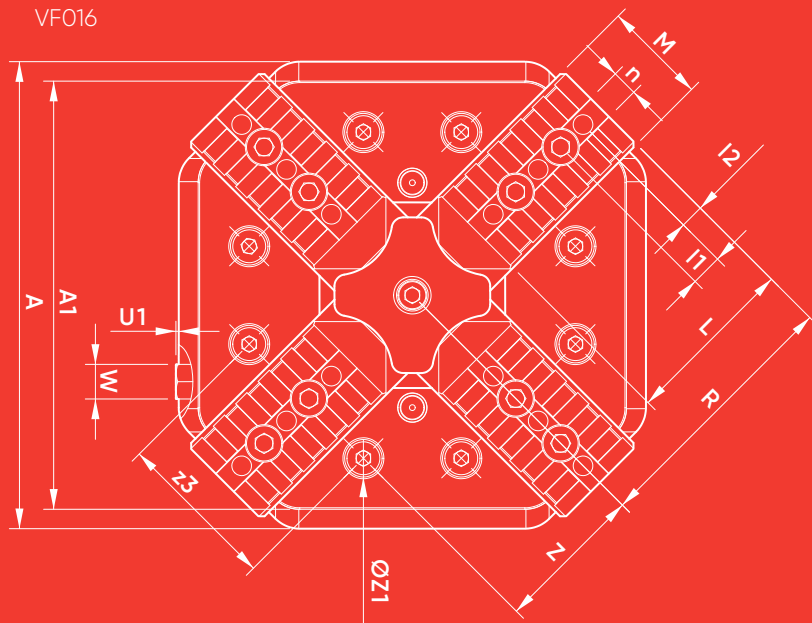
Lang für 96 mm Bolzenabstand / Spannpratzen / Adapterplatte
Lang for 96 mm grid / clamping claws / adaptor plate

VF026
235
235
50
M6; 5 tief
96
200
44
M12; 22 tief
268,7
268,7
125,5
13
93
48
20
5,5
11
3
141,3
16
M10
6
26
50,5
17
11 (7x)
8,25
9
M8 x 30



INOFlex® VF

VF016



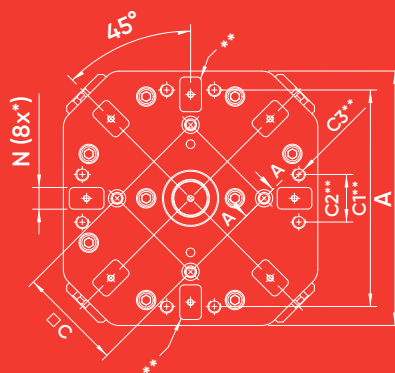
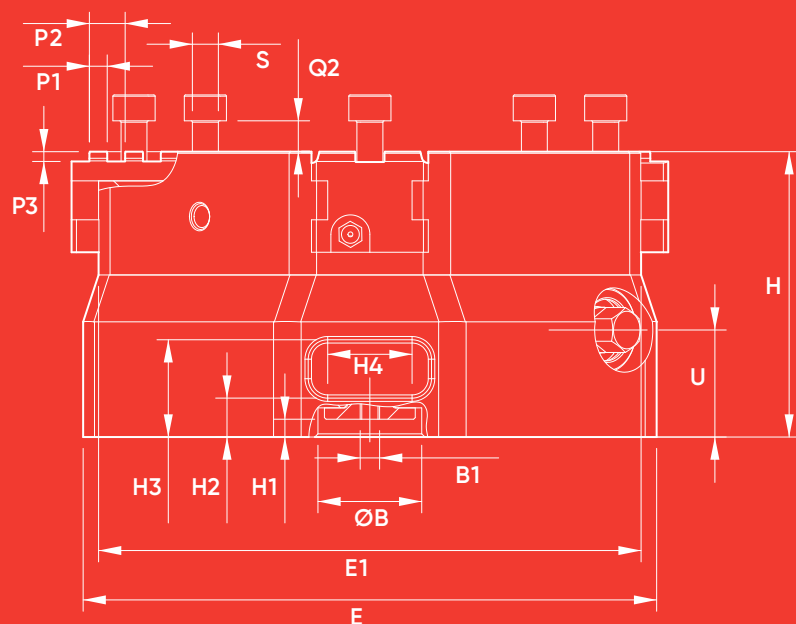
ANWENDUNG

- Spannen von runden, quadratischen/rechteckigen geometrisch unregelmäßigen Bauteilen
- Für verformungsempfindliche Bauteile geeignet
- Stationäre Anwendung auf Fräsmaschinen
- Innen- und Außenspannung

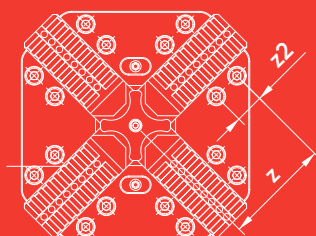
TECHNISCHE MERKMALE

- Zentrisch ausgleichendes Spannen mit 2 Backen
- Zentrisch spannen mit 2 Backen
- Spannung mit Festanschlag

Technische Daten technical data		VF016
Ident-Nr. / ident-no.		8420
Futtergröße chuck size	mm	162
Hub pro Backe radial jaw stroke	mm	12,6
Ausgleichshub compensation stroke per jaw	mm	11,6
max. Anzugsmoment max. tightening torque	Nm	100
max. Spannkraft bei 4 Backen max. gripping force with 4 jaws	kN	40
max. Spannkraft bei 2 Backen max. gripping force with 2 jaws	kN	20
max. Drehzahl max. speed	1/min r.p.m.	400
Masse (ohne Backen) weight (without top jaws)	kg	13
Massenträgheitsmoment moment of inertia	kg · m ²	0,05
Standard weiche Aufsatzbacke standard soft jaw	—	VP10
Standard harte Greiferbacke standard hard gripper jaw	—	VR10



VF026



Anbindung: **SOLIDPoint®**; **SOLIDBolt**; **Quick•Point von Lang** für 96 mm Bolzenabstand / Spannpratzen / Adapterplatte
 Connection: **SOLIDPoint®**; **SOLIDBolt**; **Quick•Point from Lang** for 96 mm grid / clamping claws / adaptor plate

Abmessungen dimensions		VF016	VF026
	A mm	162	235
	A1 mm	148,5	235
	B H7 mm	32	50
	B1 mm	M6; 5 tief	M6; 5 tief
	C ±0,05 mm	96	96
	C1 mm	—	200
	C2 mm	—	44
	C3 mm	—	M12; 22 tief
	E mm	176,8	268,7
	E1 mm	167,3	268,7
	H mm	88	125,5
	H1 mm	5,5	13
	L mm	60,5	93
	M mm	36	48
	N G7 mm	20	20
	P1 mm	5,5	5,5
	P2 mm	11	11
	P3 mm	3	3
Futter geöffnet / chuck open	R mm	92	141,3
	S H6 mm	16	16
	S1 mm	M10	M10
	T mm	6	6
	T1 mm	20	26
	U mm	33	50,5
Schlüsselweite / wrench width	W mm	12	17
	l1 mm	11 (4x)	11 (7x)
	l2 mm	8,25	8,25
	n mm	9	9
	s mm	M8 x 25	M8 x 30

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you crazy!*

Entdecken sie unsere komplette Frässpann-
technik in unserem **SOLIDLine**-Katalog.

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technology in our **SOLIDLine** catalogue.*

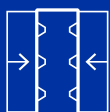
BEIM ICHT *EHEN!*



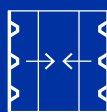
SOLIDPoint®
0-Punkt-Spannsystem
zero-point System



SOLIDBolt
0-Punkt-Spannsystem
zero-point System



SOLIDGrip
Zentrierspanner
center vices



SOLIDStamp
Prägetechnik
stamping technology

INOFlex®

Standardflansche

Standard adaptor-plates

INOFlex®	Kurzkegel Typ A2 spindle nose with short taper (type A2) ISO 702-1 (DIN 55026)							Kurzkegel mit Bajonett spindle nose with short taper Bayonet ISO 702-3 (DIN 55027)							Kurzkegel mit Camlock spindle nose with short taper Camlock ISO 702-2 (DIN 55029)						
	Spindelkopfgröße spindle nose size							Spindelkopfgröße spindle nose size							Spindelkopfgröße spindle nose size						
	5	6	8	11	15	20	28	5	6	8	11	15	20		5	6	8	11	15	20	
VD016	VZ165	VZ166	VZ168					VZ175	VZ176	VZ178					VZ195	VZ196					
VD021	VZ265	VZ266	VZ268					VZ275	VZ276	VZ278					VZ295	VZ296					
VD026		VZ366	VZ368	VZ3611					VZ376	VZ378						VZ396	VZ398				
VD031		VZ366	VZ368	VZ3611					VZ376	VZ378						VZ396	VZ398				
VD040			VZ468	VZ4611						VZ478	VZ4711						VZ498	VZ4911			
VD050			VZ668	VZ6611	VZ6615	VZ6620					VZ6711	VZ6715						VZ6911	VZ6915		
VD063			VZ668	VZ6611	VZ6615	VZ6620					VZ6711	VZ6715						VZ6911	VZ6915		
VD080				VZ8611	VZ8615	VZ8620					VZ8711	VZ8715	VZ8720								VZ8920
VD100						VZ10620	VZ10628							VZ10720							VZ10920
VD120						VZ10620	VZ10628							VZ10720							VZ10920
VK-S 026		VZ366	VZ368	VZ3611					VZ376	VZ378						VZ396	VZ398				
VK031		VZ366	VZ368	VZ3611					VZ376	VZ378						VZ396	VZ398				
VK-S 040			VZ668	VZ6611	VZ6615	VZ6620					VZ6711	VZ6715						VZ6911	VZ6915		
VK-S 050			VZ668	VZ6611	VZ6615	VZ6620					VZ6711	VZ6715						VZ6911	VZ6915		
VK-S 063				VZ8611	VZ8615	VZ8620					VZ8711	VZ8715	VZ8720								VZ8920
VK-S 080				VZ8611	VZ8615	VZ8620					VZ8711	VZ8715	VZ8720								VZ8920
VK-S 100						VZ10620	VZ10628							VZ10720							VZ10920
VT-S 016	VZ165	VZ166	VZ168					VZ175	VZ176	VZ178					VZ195	VZ196					
VT-S 021	VZ265	VZ266	VZ268					VZ275	VZ276	VZ278					VZ295	VZ296					
VT-S 026		VZ366	VZ368	VZ3611					VZ376	VZ378						VZ396	VZ398				
VT-S 031			VZ468	VZ4611						VZ478	VZ4711						VZ498	VZ4911			
VT-S 040			VZ668	VZ6611	VZ6615	VZ6620					VZ6711	VZ6715						VZ6911	VZ6915		
VT-S 050			VZ668	VZ6611	VZ6615	VZ6620					VZ6711	VZ6715						VZ6911	VZ6915		
VT-S 063				VZ8611	VZ8615	VZ8620					VZ8711	VZ8715	VZ8720								VZ8920
VT-S 080				VZ8611	VZ8615	VZ8620					VZ8711	VZ8715	VZ8720								VZ8920



Auf den nachfolgenden Seiten finden Sie eine Reihe von Standard-Zwischenflanschen für die Anbindung der INOFlex® Spannfutter auf Maschinenspindeln. Die am Markt befindlichen Werkzeugmaschinen bieten jedoch eine große Variantenvielfalt der Kombination aus Spindelnase, Ausführung des Zugrohrs sowie dessen min./max. Stellung. Oft ist eine Anbindung mit Standardkomponenten nicht möglich. Aus diesem Grund bieten wir auf Ihre Werkzeugmaschine zugeschnittene Lösungen, bestehend aus Zwischenflansch und ggf. Zugrohradaption an. Zur konstruktiven Auslegung benötigen wir lediglich die Zeichnung der Maschinenspindel aus Ihren Maschinenunterlagen, aus der zudem Stellung und Bemaßung des vorhandenen Zugrohrs oder der vorhandenen Zugstange sowie die Angabe des verbauten Spannzylinders hervorgehen.

On the following pages you will find a range of standard adapter plates for connecting INOFlex® chucks to machine spindles. However, the machine tools available on the market offer a large variety of the combination of spindle nose, design of the draw tube and its min./max. position. Unfortunately, a connection with standard components is often not possible. For this reason, we offer solutions customized to your machine tool, consisting of an adapter plate and, if necessary, a draw tube adaptation. For the constructive design we only need the drawing of the machine spindle from your machine documentation, which also shows the position and dimensions of the existing draw tube or draw bar as well as the specification of the installed clamping cylinder.

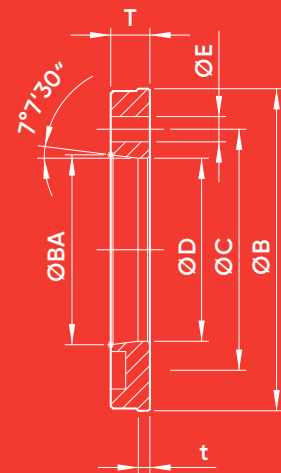
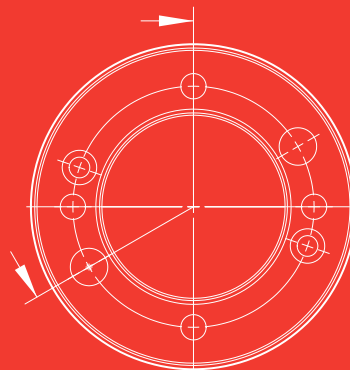
	T	e	t	t1	Gewicht weight kg
mm	mm	mm	mm	mm	
—	17	—	5	—	1,2
65	46	19	5,6	18	4,6
110	35	12,4	5,6	17	5,1
—	25	13	5	25	3,1
—	17	—	5	—	1,7
110	44	21	5,6	19	6,7
—	28	15	5	28	5,8
—	19	—	7	—	3,1
80	47	19	6	26	12,2
—	30	13,4	8	30	11,7
—	30	—	8	—	8,2
—	40	22	8	40	28,7
—	40	18	8	40	23,1
—	31	—	8	—	10,5
20	65	29	10	42	55
—	44	22	8	44	60
—	44	19	8	44	46
—	26	—	8	—	15
—	50	25,2	8	50	101
—	29	—	8	—	29

INOFlex®	Kurzkegel Typ A2 spindle nose with short taper (type A2) ISO 702-1 (DIN 55026)					
	Spindelkopfgröße spindle nose size					
	5	6	8	11	15	20
VD016	VZ165	VZ166	VZ168			
VD021	VZ265	VZ266	VZ268			
VD026		VZ366	VZ368	VZ3611		
VD031		VZ366	VZ368	VZ3611		
VD040			VZ468	VZ4611		
VD050			VZ668	VZ6611	VZ6615	VZ662
VD063			VZ668	VZ6611	VZ6615	VZ662
VD080				VZ8611	VZ8615	VZ862
VD100						VZ1062
VD120						VZ1062
VK-S 026		VZ366	VZ368	VZ3611		
VK031		VZ366	VZ368	VZ3611		
VK-S 040			VZ668	VZ6611	VZ6615	VZ662
VK-S 050			VZ668	VZ6611	VZ6615	VZ662
VK-S 063				VZ8611	VZ8615	VZ862
VK-S 080				VZ8611	VZ8615	VZ862
VK-S 100						VZ1062
VT-S 016	VZ165	VZ166	VZ168			
VT-S 021	VZ265	VZ266	VZ268			
VT-S 026		VZ366	VZ368	VZ3611		
VT-S 031			VZ468	VZ4611		
VT-S 040			VZ668	VZ6611	VZ6615	VZ662
VT-S 050			VZ668	VZ6611	VZ6615	VZ662
VT-S 063				VZ8611	VZ8615	VZ862
VT-S 080				VZ8611	VZ8615	VZ862

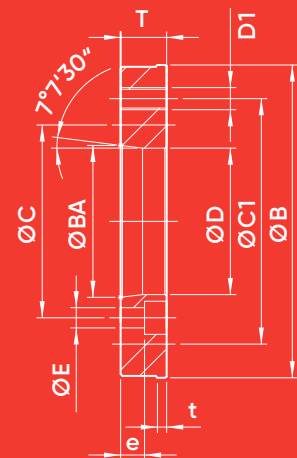
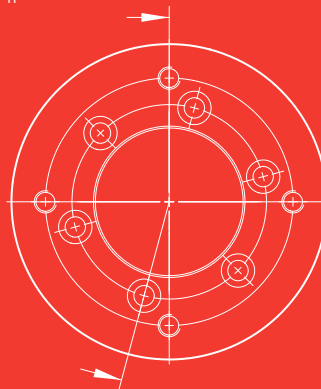
INOFlex® ISO 702-1 [DIN 55026]

Kurzkegel ISO-A2
Short taper ISO-A2

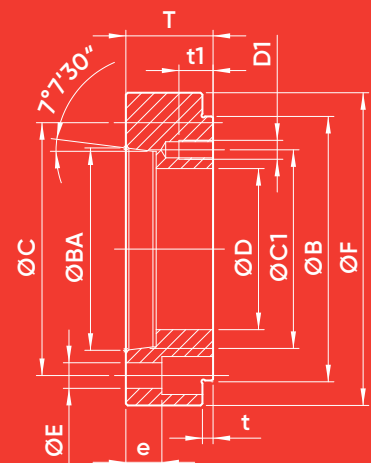
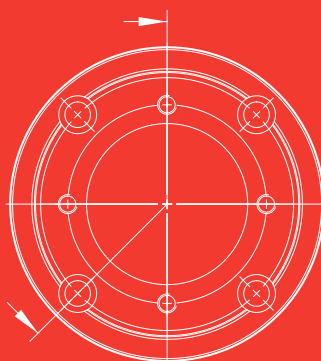
Typ I



Typ II



Typ III





Flansch adaptor- plates	Ident-Nr. ident-no.	Typ type	B mm	BA mm	C mm	C1 mm	D mm	D1	E mm	F mm	T mm	e mm	t mm	t1 mm	Gewicht weight kg
VZ165-17	856165	I	140	82,563	104,8	—	79,6	—	11	—	17	—	5	—	1,2
VZ166-46	856166	III	140	106,375	133,4	104,8	85	M10	13,5	165	46	19	5,6	18	4,6
VZ168-35	856168	III	140	139,719	171,4	104,8	85	M10	17,5	210	35	12,4	5,6	17	5,1
VZ265-25	856265	II	170	82,563	104,8	133,4	79,6	M12	11	—	25	13	5	25	3,1
VZ266-17	856266	I	170	106,375	133,4	—	103,2	—	13,5	—	17	—	5	—	1,7
VZ268-44	856268	III	170	139,719	171,4	133,4	110	M12	17,5	210	44	21	5,6	19	6,7
VZ366-28	856366	II	220	106,375	133,4	171,4	103,2	M16	13,5	—	28	15	5	28	5,8
VZ368-19	856368	I	220	139,719	171,4	—	136	—	17,5	—	19	—	7	—	3,1
VZ3611-47	8563611	III	220	196,869	235	171,4	140	M16	22	280	47	19	6	26	12,2
VZ468-30	856468	II	300	139,719	171,4	235	136	M20	17,5	—	30	13,4	8	30	11,7
VZ4611-30	8564611	I	300	196,869	235	—	192,5	—	22	—	30	—	8	—	8,2
VZ668-40	856668	II	380	139,719	171,4	330,2	136	M24	17,5	—	40	22	8	40	28,7
VZ6611-40	8566611	II	380	196,869	235	330,2	192,9	M24	22	—	40	18	8	40	23,1
VZ6615-31	8566615	I	380	285,775	330,2	—	281,5	—	25	—	31	—	8	—	10,5
VZ6620-65	8566620	III	380	412,775	463,6	330,2	250	M24	26	520	65	29	10	42	55
VZ8611-44	8568611	II	520	196,869	235	463,6	192,5	M24	22	—	44	22	8	44	60
VZ8615-44	8568615	II	520	285,775	330,2	463,6	281,5	M24	26	—	44	19	8	44	46
VZ8620-26	8568620	I	520	412,775	463,6	—	408	—	26	—	26	—	8	—	15
VZ10620-50	85610620	II	720	412,775	463,6	647,6	408	M30	26	—	50	25,2	8	50	101
VZ10628-29	85610628	I	720	584,225	647,6	—	578,5	—	33	—	29	—	8	—	29

INOFlex®

ISO 702-3 [DIN 55027]

Kurzkegel mit Stehbolzen und Bundmutter (Bajonett)

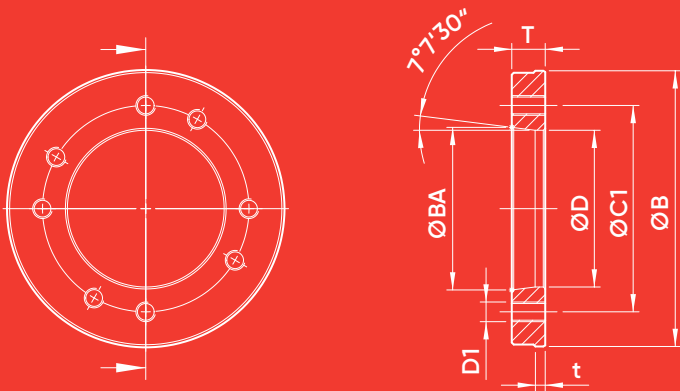
Short taper spindle nose with Bayonet type

Flansch adaptor- plates	Ident-Nr. ident-no.	Typ type	B mm	BA mm	C1 mm	D mm	D1	F mm	T mm	t mm	t1 mm	Gewicht weight kg
VZ175-17	856175	II	140	82,563	104,8	79,6	M10	—	17	5	—	1,3
VZ176-46	856176	III	140	106,375	104,8	85	M10	165	46	5,6	18	4,8
VZ178-34	856178	III	140	139,719	104,8	85	M10	220	34	5,6	15	6
VZ275-19	856275	II	170	82,563	133,4	79,6	M12	—	19	5	—	2,5
VZ276-19	856276	II	170	106,375	133,4	103,2	M12	—	19	5	—	1,9
VZ278-40	856278	III	170	139,719	133,4	100	M12	210	40	5,5	20	6,6
VZ376-28	856376	II	220	106,375	171,4	103,2	M16	—	28	5	—	6,1
VZ378-28	856378	II	220	139,719	171,4	136,2	M16	—	28	5	—	4,6
VZ478-36	856478	II	300	139,719	235	136	M20	—	36	8	—	14,8
VZ4711-36	8564711	II	300	196,869	235	192,5	M20	—	36	8	—	10,5
VZ6711-41	8566711	II	380	196,869	330,2	192,5	M24	—	41	8	—	25,2
VZ6715-41	8566715	II	380	285,775	330,2	281,5	M24	—	41	8	—	14,5
VZ8711-44	8568711	II	520	196,869	463,6	192,5	M24	—	44	8	—	60
VZ8715-44	8568715	II	520	285,775	463,6	281,5	M24	—	44	8	—	48,4
VZ8720-44	8568720	II	520	412,775	463,6	408	M24	—	44	8	—	25
VZ10720-48	85610720	II	720	412,775	647,6	408	M30	—	48	8	—	100

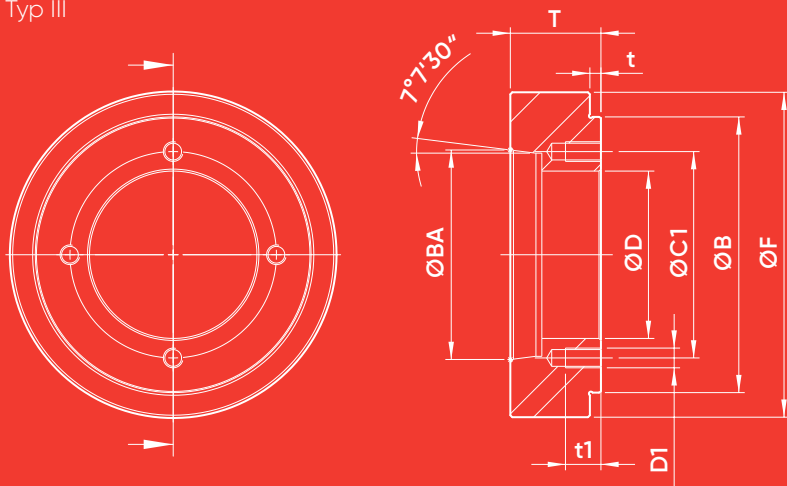
INOFlex® ISO 702-3 [DIN 55027]

Kurzkegel mit Stehbolzen und Bundmutter (Bajonett)
Short taper with bayonet type

Typ II



Typ III



mm	T	t	t1	Gewicht weight kg
70	48	5,6	18	5,9
80	52,5	5,6	18	6,7
—	30	5,6	19	3,7
80	55	5,6	19	7,3
—	34	8	34	7
—	56	8	28	8,8
—	38	8	38	15,3
—	52	8	36	14,9
—	43	8	43	26,2
—	50	8	50	17,5
46	52	8,5	52	37,2
—	55	8	55	113,5



Passend für suitable for
INOFlex® Spannfutter INOFlex® chucks
VD026 - VD120 VF016 - VF026 VK021 - VK080 VK-S 026 - VK-S 100 VL042 - VL200 VT016 - VT040 VT-S 016 - VT-S 080
VD016 - VD021 VD031 - VD080 VF016 VL042 VT016 VT-S 016

INOFlex®

ISO 702-3 [DIN 55027]

Kurzkegel mit Stehbolzen und

Short taper spindle nose with

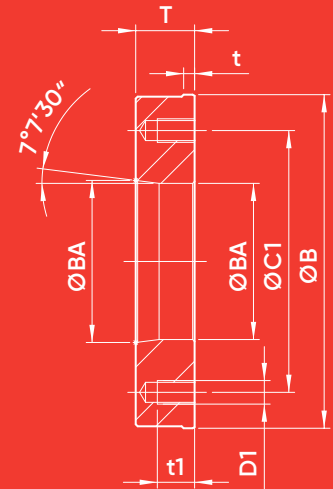
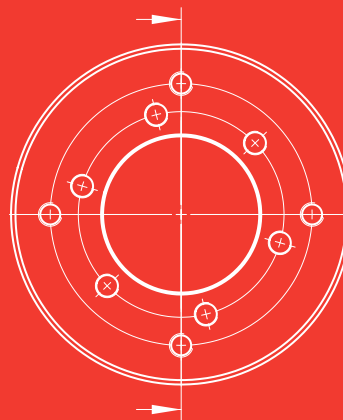
INOFlex® ISO 702-2 [DIN 55029]

Kurzkegel mit Camlock

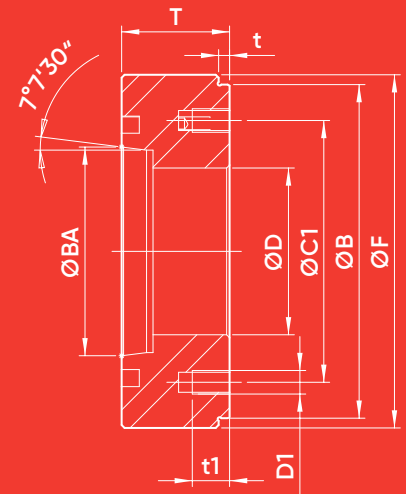
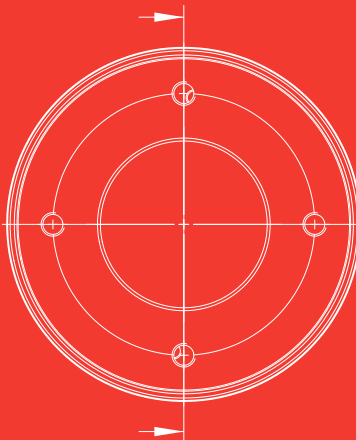
Short taper with camlock type

Flansch adaptor- plates	Ident-Nr. ident-no.	Typ type	B mm	BA mm
VZ175-17	856175	II	140	82
VZ176-46	856176	III	140	10
VZ178-34	856178	III	140	13
VZ275-19	856275	II	170	82
VZ276-19	856276	II	170	10
VZ278-40	856278	III	170	13
VZ376-28	856376	II	220	10
VZ378-28	856378	II	220	13
VZ478-36	856478	II	300	13
VZ4711-36	8564711	II	300	19
VZ6711-41	8566711	II	380	19
VZ6715-41	8566715	II	380	28
VZ8711-44	8568711	II	520	19
VZ8715-44	8568715	II	520	28
VZ8720-44	8568720	II	520	41
VZ10720-48	85610720	II	720	41

Typ II



Typ III





INOFlex®

ISO 702-2 [DIN 55029] Kurzkegel mit Camlock

Short taper spindle nose with Camlock type

Flansch adaptor- plates	Ident-Nr. ident-no.	Type type	B mm	BA mm	C1 mm	D mm	D1	F mm	T mm	t mm	t1 mm	Gewicht weight kg
VZ195-48	856195	III	140	82,563	104,8	79,6	M10	170	48	5,6	18	5,9
VZ196-53	856196	III	140	106,375	104,8	85	M10	180	52,5	5,6	18	6,7
VZ295-30	856295	II	170	82,563	133,4	79,6	M12	—	30	5,6	19	3,7
VZ296-55	856296	III	170	106,375	133,4	85	M12	180	55	5,6	19	7,3
VZ396-34	856396	II	220	106,375	171,4	103,2	M16	—	34	8	34	7
VZ398-56	856398	II	220	139,719	171,4	136,2	M16	—	56	8	28	8,8
VZ498-38	856498	II	300	139,719	235	136,2	M20	—	38	8	38	15,3
VZ4911-52	8564911	II	300	196,869	235	192,9	M20	—	52	8	36	14,9
VZ6911-43	8566911	II	380	196,869	330,2	192,9	M24	—	43	8	43	26,2
VZ6915-50	8566915	II	380	285,775	330,2	281,5	M24	—	50	8	50	17,5
VZ8920-52	8568920	III	520	412,775	463,6	408	M24	546	52	8,5	52	37,2
VZ10920-55	85610920	II	720	412,775	647,6	408	M30	—	55	8	55	113,5

INOFlex®

Spezialfett / Fettpressen

Special grease / grease guns



INOFlex® Zubehör INOFlex® accessories	Ident-Nr. ident-no.	Beschreibung description	Passend für suitable for
OKS 265	800006	INOFlex® Spezialfett, 400 ml Kartusche INOFlex® special grease, 400 ml cartouche	INOFlex® Spannfutter INOFlex® chucks
Handhebel-Fettpresse Lever-type grease gun	800008	für 400 ml Kartusche, DIN 1283, mit Mundstück für Kugelschmiernippel for 400 ml cartouches, DIN 1283, with mouthpiece for ball grease-nipples	VD026 - VD120 VF016 - VF026 VK021 - VK080 VK-S 026 - VK-S 100 VL042 - VL200 VT016 - VT040 VT-S 016 - VT-S 080
Stoß-Fettpresse Push-type grease gun	800009	150 ml, mit Mundstück für Trichterschmiernippel 150 ml, with mouthpiece for taper grease nipples	VD016 - VD021 VD031 - VD080 VF016 VL042 VT016 VT-S 016

DAS HWR BAUKASTEN- SYSTEM

THE HWR MODULAR SYSTEM

Die Philosophie, Dinge einfach zu gestalten, führte zum HWR Baukastensystem. Unser Ziel ist es, unseren Kunden Spannlösungen anzubieten, die aus dem Katalog als Standard bestellt werden können. Keine Sonderlösungen, die zum einen sehr kostenintensiv sind und zum anderen sehr lange Zeit benötigen, bis sie konstruiert und hergestellt sind. Dank der ausgleichenden Spannmechanik, sind wir in der Lage unserem Kunden ein zuvor nicht dagewesenes Baukastensystem anzubieten.

1 Sie spannen Ihre Bauteile, rund oder kubisch, mit **INOFlex®** konzentrisch ausgleichend. Selbst dünnwandige Werkstücke werden mit deutlich weniger Verformungen als im herkömmlichen 3-Backen-Futter gespannt.

2 Rohre und dünne Ringe werden mit **INOTop®** nahezu ohne Spanndruck, sondern über eine Klemmung der Wandstärke fixiert. Dadurch werden die Werkstücke verformungsfrei gespannt.

3 **INOFlex®** im Zusammenspiel mit dem **INOZet®**-Spannsystem ist unseres Wissens nach die erste im Standard erhältliche ausgleichende 8-Punkt-Spannung weltweit. Durch die hohe Zahl der untereinander ausgleichenden Spannstellen wirken die Spannkraften gleichmäßig und mit minimaler Verformung auf das Werkstück.

4 In der maximalen Ausbaustufe durch **INOFlex®** mit **INOZet®** und **INOTop®** werden die verformungsintensiven Werkstücke gleichermaßen durch ausgleichende 8 Spannungspunkte zentriert und über die Innenspannung mit festem Gegenlager verzugsfrei gespannt.

The philosophy of making things simple was leading to the HWR modular system. It is our intention, to offer customers clamping solutions that are based on the catalogue and can be ordered as standard. No special solutions which are very cost-intensive and on the other hand they need a very long time until they are designed and manufactured. Thanks to the compensating clamping mechanism, we are in a position to offer our customers an unprecedented modular system.

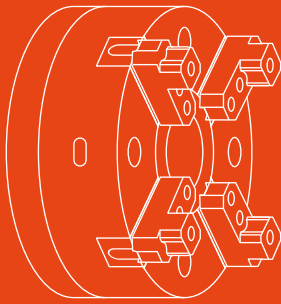
1 You clamp your workpieces, round or cubic, concentrically compensating with **INOFlex®**. Even thin-walled workpieces are clamped with significantly less deformation than in the conventional 3-jaw chuck.

2 Tubes and thin rings are fixed with **INOTop®** almost without clamping pressure but by clamping the wall thickness. Thus the workpieces are clamped without deformation.

3 To our knowledge, the **INOFlex®** in combination with the **INOZet®** clamping system is the first standard compensating 8-point clamping available worldwide. Due to the high number of compensating clamping points, the clamping forces act evenly and with minimal deformation on the workpiece.

4 In the maximum configuration level of **INOFlex®** with **INOZet®** and **INOTop®**, the deformation-sensitive workpieces are centred equally by compensating 8 clamping points and are clamped distortion-free by the internal clamping with fixed stationary jaw.

INOFlex®



geeignet für runde,
kubische, asymmetri-
sche und dünnwandige
Teile



*suitable for round,
cubic, asymmetrical,
and thin-walled parts*



INOFlex®



+

INOTop®



geeignet für
dünnwandige Teile

*suitable for
thin-walled parts*

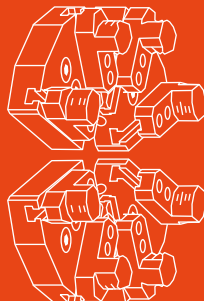


INOFlex®



+

INOZet®



geeignet für
sehr dünnwandige Teile

*suitable for
very thin-walled parts*

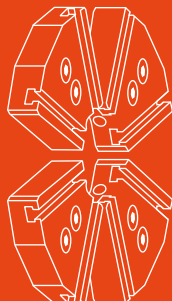


INOFlex®



+

INOZet®



+

INOTop®



geeignet für
extrem dünnwandige Teile

*suitable for
extremely thin-walled parts*





Das **INOZet®** - Pendelsystem kann auf nahezu jedes vorhandene 3-Backen-Futter ab einer Durchmessergröße von 210 mm adaptiert werden.

The **INOZet®** pendulum system can be adapted to almost any existing 3-jaw chuck from a diameter of 210 mm.

INOZet®

Die perfekte Drehung

The perfect turn

SICHER & FLEXIBEL

Herausragende Drehergebnisse und erhebliche Kostenersparnis! Mit **INOZet®** machen Sie aus Ihrem herkömmlichen 3-Backen-Futter im Handumdrehen ein extrem flexibles, ausgleichendes 6-Backen-Futter. Sowie aus einem ausgleichenden **INOFlex®** 4-Backenfutter ein ausgleichendes 8-Backen-Futter.

- Verdoppelung der Spannstellen des vorhandenen Spannfutters
- Ausgleichende sowie starre Spannung
- Ein Satz Spannbacken für den gesamten Futter-Spannbereich
- Ideal zur Bearbeitung von verformungsempfindlichen Bauteilen
- Herausragende Rundheitsergebnisse
- Sehr leichte Handhabung

SAFE & FLEXIBLE

*Outstanding turning results and considerable cost savings! **INOZet®** turns your conventional 3-jaw chuck into an extremely flexible, compensating 6-jaw chuck in next-to-no time. And from a compensating **INOFlex®** 4-jaw chuck a compensating 8-jaw chuck.*

- Doubling of the clamping points of the existing chuck
- Compensating and fixed clamping
- One set of top-jaws for the whole chuck clamping range
- Ideal for machining deformation sensitive parts
- Outstanding roundness results
- Easy to handle



Maximale Flexibilität

Maximum flexibility

AUSGEZEICHNETE TECHNIK

Das innovative Spannsystem **INOZet®** wurde 2010 der Öffentlichkeit vorgestellt und auf der Nortec in Hamburg mit dem NORTEC Award ausgezeichnet.

Seitdem steigt die Zahl der Anwender stetig an. Insbesondere beim Spannen von verformungsempfindlichen Bauteilen, unrunder Rohteilen oder Bauteilen mit Verzug durch thermische Behandlung, bietet das **INOZet®**-Spannsystem entscheidende Vorteile.

Mit **INOZet®** hat HWR es geschafft, einen neuen Stand der Technik zu definieren: Aus einem vorhandenen 3- oder 4-Backen-Futter wird im Handumdrehen ein ausgleichendes 6- bzw. 8-Backen-Futter. Durch die pendelnde Lagerung wirken die Pendelbrücken ausgleichend und ermöglichen so eine verformungsarme 6- bzw. 8-Punkt-Spannung. Durch die Verdopplung der Spannstellen wird der Spanndruck gleichmäßiger in das Werkstück eingeleitet und die Polygonbildung entscheidend verringert.



PATENT

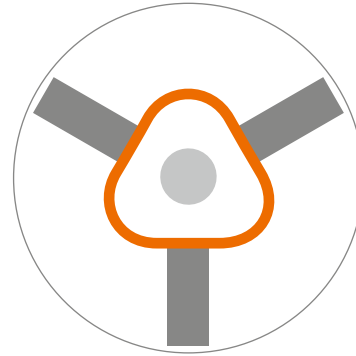
**NORTEC
AWARD**

OUTSTANDING TECHNOLOGY

*The innovative **INOZet®** clamping system was presented to the public in 2010 and honoured with the NORTEC Award at the Nortec in Hamburg.*

*Since then there has been a continuous increase in the number of users. The **INOZet®** clamping system offers crucial advantages particularly when clamping deformation-sensitive parts, out-of round components or parts deformed by thermal treatment.*

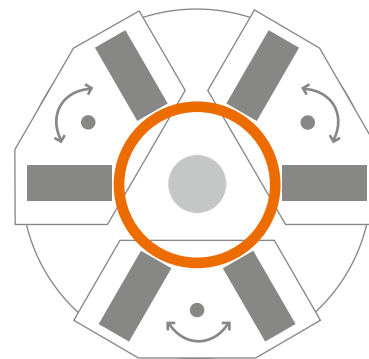
*With **INOZet®**, HWR has redefined the state of the art in technology : an existing 3- or 4-jaw chuck ist turned into a compensating 6- or 8-jaw chuck in next-to-no time. The pendulum mechanism gives the pendulum bridges a compensating effect, thus permitting low-deformation 6- or rather 8-point-clamping. Doubling the number of clamping points ensures that the clamping pressure is introduced more evenly into the workpiece, with a crucial reduction in polygon formation.*



Herkömmliche 3-Punkt-Spannung
Conventional 3-point clamping

DAS FUNKTIONSPRINZIP

Die pendelnde Lagerung ermöglicht einen Ausgleich unter den einzelnen 6 Backen. Dadurch können sich alle Spannungspunkte gleichmäßig und mit gleicher Kraft an das Werkstück anlegen. Spannsysteme mit mehr als drei Spannungspunkten ohne entsprechenden Ausgleich bilden eine überbestimmte Spannsituation und bringen insbesondere Werkstücke mit dünnen Wandstärken in eine Zwangslage mit hohem Verformungsanteil. Dieser Nachteil besteht bei **INOZet®** durch den Einsatz der Pendelmechanik nicht. Durch die Verzahnung auf der Oberseite können mit einem Satz (6 Stück) Aufsatzbacken Werkstücke im gesamten Futterdurchmesser gespannt werden. Der Einsatz von harten Backen für die Rohteilbearbeitung als auch der Einsatz von auge drehten weichen Backen für die zweite Operation ist gleichermaßen möglich.



Die **INOZet®**-6-Punkt-Spannung
6-point clamping with **INOZet®**

HOW IT WORKS

*The oscillating system allows compensation under the 6 jaws while still clamping centrally. The compensation allows all clamping points to contact the workpiece evenly and with the same force to the workpiece. Clamping systems with more than three clamping points without compensation leads to an over-determined clamping situation and particularly bring thinwalled workpieces into a forced position with a high proportion of deformation. This disadvantage does not exist with **INOZet®** by using the compensation technic. Due to the serration on the upper side of the pendulums, workpieces can be clamped in the entire chuck diameter range with one set of top jaws (6 pieces). Only a single set of jaws is required for small and large diameters as well as for internal and external clamping. The use of hard jaws for rough machining as well as the use of turned soft jaws for the second operation is equally possible.*

INOZet®

Futterspezifische Daten

Chuck specific data

Technische Daten siehe Seite 69–71

Technical data see pages 69–71

INOZet® Aufsatzbacken siehe Seite 74–75

INOZet® top-jaws see pages 74 –75

Futterhersteller chuck manufacturer	Futtertyp chuck type	Futtergröße chuck size ø mm	Backenanschluss des Futters jaw-connection of the chuck		INOZet® Bezeichnung INOZet® description	Ident-Nr. ident-no.	** Nutenstein *** Grundbacke ** t-Nut *** base-jaw
			S mm/ V	N mm			
Auto Strong	N-208	210	V = 1,5mm x 60°	N = 14	WT021-WV04	750098	WN12
	V-208		V = 1,5mm x 60°	N = 14	WT021-WV04	750098	WN10
	N-210	254	V = 1,5mm x 60°	N = 16	WT025-WV05	750058	GP11
	V-210		V = 1,5mm x 60°	N = 16	WT025-WV05	750058	GP10
	N-212	304	V = 1,5mm x 60°	N = 21	WT031-WV17	750156	TT65
	V-212		V = 1,5mm x 60°	N = 18	WT031-WV10	750060	GP12
	N-215	381	V = 1,5mm x 60°	N = 22	WT038-WV21	750157	GP15
	V-215		V = 1,5mm x 60°	N = 22	WT038-WV21	750157	GP15
	N-218	450	V = 1,5mm x 60°	N = 22	WT045-WV32	750158	GP15
	V-218		V = 1,5mm x 60°	N = 22	WT045-WV32	750158	X5507
	N-220	510	V = 3mm x 60°	N = 25	WT053-WV40	750072	GP21
	N-224	610	V = 3mm x 60°	N = 25	WT063-WV42	750094	GP21
	V-224		V = 3mm x 60°	N = 25	WT063-WV42	750094	GP21
	V-232	810	V = 3mm x 60°	N = 25	WT080-WV46	750080	GP21
Berg	KH 250	250	V = 1/16" x 90°	N = 16	WT025-WV52	750101	WN25
	KH 315	315	V = 1/16" x 90°	N = 16	WT031-WV67	750160	GB16 / GC16S
	KH 400	400	V = 3/32" x 90°	N = 20	WT040-WV72	750132	**
	KH 500	500	V = 3/32" x 90°	N = 20	WT050-WV86	750150	**
Bison	3200 / 3500 – 200	200	S = 10	N = 16	WT022-WK02	750045	***
	3200 / 3500 – 250	250	S = 12	N = 20	WT025-WK05	750057	***
	3200 / 3500 – 315	315	S = 12	N = 20	WT031-WK10	750054	***
	3200 / 3500 – 400	400	S = 12	N = 26	WT040-WK20	750137	X8936
	3200 / 3500 – 500	500	S = 12,7	N = 19,03	WT050-WK34	705106	
	3200 / 3500 – 630	630	S = 12,7	N = 19,03	WT063-WK38	750116	
	3200 / 3500 – 800	800	S = 12,7	N = 19,05	WT080-WK47	750102	

Futterhersteller chuck manufacturer	Futtermyp chuck type	Futtergröße chuck size ø mm	Backenanschluss des Futters jaw-connection of the chuck		INOZet® Bezeichnung INOZet® description	Ident-Nr. ident-no.	** Nutenstein *** Grundbacke ** t-Nut *** base-jaw
			S mm/ V	N mm			
Forkardt	F+ 200	200	S = 10	N = 20	WT022-WK02	750045	MFI200
	FNC 200		S = 10	N = 20	WT022-WK02	750045	MFI200
	KTG / KTN 200		V = 1/16" x 90°	N = 17	WT021-WV03	750114	GN50
	NH / NHF 200		V = 1/16" x 90°	N = 17	WT021-WV03	750114	GN50
	QLC / QLK 200		V = 1,5mm x 60°	N = 14	WT021-WV04	750098	GF17
	QLC-KS / QLK-KS 200		V = 1/16" x 90°	N = 17	WT021-WV03	750114	GN50
	F+ 250	250	S = 12	N = 20	WT025-WK05	750057	
	FNC 250		S = 12	N = 20	WT025-WK05	750057	
	KTG / KTN 250		V = 1/16" x 90°	N = 21	WT025-WV57	750162	GN25
	KTNC 250		S = 12	N = 20	WT025-WK05	750057	
	NH / NHF 250		V = 1/16" x 90°	N = 21	WT025-WV57	750162	GN25
	QLC / QLK 250		V = 1,5mm x 60°	N = 16	WT025-WV05	750058	GP11
	QLC / QLK 250		V = 1/16" x 90°	N = 21	WT025-WV57	750162	GN25
	QLC-KS / QLK-KS 250		V = 1,5mm x 60°	N = 16	WT025-WV05	750058	
	QLC-KS / QLK-KS 250		V = 1/16" x 90°	N = 17	WT025-WV50	750059	GN16
	F+ 315	315	S = 12	N = 26	WT031-21-WK15	750091	
	FNC 315		S = 12	N = 20	WT031-WK10	750054	
	KTG / KTN 315		V = 1/16" x 90°	N = 21	WT031-WV62	750159	GN25
	KTNC 315		S = 12	N = 20	WT031-WK10	750054	
	NH / NHF 315		V = 1/16" x 90°	N = 21	WT031-WV62	750159	GN25
	QLC / QLK 315		V = 1,5mm x 60°	N = 21	WT031-WV17	750156	TT65
	QLC / QLK 315		V = 1/16" x 90°	N = 21	WT031-WV62	750159	GN25
	F+ 400	400	S = 18	N = 30	WT040-20-WK25	750138	
	FNC 400		S = 12	N = 26	WT040-WK20	750137	
	KTG / KTN 400		V = 3/32" x 90°	N = 25,5	WT040-WV77	750161	GN40
	KTNC 400		S = 12	N = 26	WT040-WK20	750137	
	NHF 400		V = 1/16" x 90°	N = 21	WT040-WV71	750140	**
	NHF 400		V = 3/32" x 90°	N = 25,5	WT040-WV77	750161	GN40
	QLC / QLK 400		V = 1,5mm x 60°	N = 21	WT040-WV27	750139	GN25
	QLC / QLK 400		V = 1/16" x 90°	N = 21	WT040-WV71	750140	GN25
	QLC / QLK 400		V = 3/32" x 90°	N = 25,5	WT040-WV77	750161	GN40
	QLC-KS / QLK-KS 400		V = 1,5mm x 60°	N = 21	WT040-WV27	750139	GN25
	QLC-KS / QLK-KS 400		V = 1/16" x 90°	N = 21	WT040-WV71	750140	GN25
	F+ 500	500	S = 18	N = 30	WT050-WK30	750070	
	FNC 500		S = 18	N = 30	WT050-WK30	750070	
	KTG / KTN 500		V = 3/32" x 90°	N = 25,5	WT050-WV85	750056	GN40

INOZet®

Futterspezifische Daten

Chuck specific data

Technische Daten siehe Seite 69–71

Technical data see pages 69–71

INOZet® Aufsatzbacken siehe Seite 74–75

INOZet® top-jaws see pages 74 –75

Futterhersteller chuck manufacturer	Futtertyp chuck type	Futtergröße chuck size ø mm	Backenanschluss des Futters jaw-connection of the chuck		INOZet® Bezeichnung INOZet® description	Ident-Nr. ident-no.	** Nutenstein *** Grundbacke ** t-Nut *** base-jaw
			S mm/ V	N mm			
Forkardt	KTNC 500	500	S = 18	N = 30	WT050-WK30	750070	
	NHF 500		V = 3/32" x 90°	N = 25,5	WT050-WV85	750056	GN40
	F+ 630	630	S = 24	N = 40	WT063-WK40	750077	
	FNC 630		S = 18	N = 30	WT063-WK35	750075	
	KTG / KTN 630		V = 3/32" x 90°	N = 25,5	WT063-WV90	750051	GN40
	NHF 630		V = 3/32" x 90°	N = 25,5	WT063-WV90	750051	GN40
HWR	VD026	260	V = 1,5mm x 60°	N = 16	WT025-4-WV02	750163	WN26
	VK026		V = 1,5mm x 60°	N = 16	WT025-4-WV02	750163	WN26
	VK-S 026		V = 1,5mm x 60°	N = 16	WT025-4-WV02	750163	WN26
	VT026		V = 1,5mm x 60°	N = 16	WT025-4-WV02	750163	WN26
	VT-S 026		V = 1,5mm x 60°	N = 16	WT025-4-WV02	750163	WN26
	VD031	315	V = 1,5mm x 60°	N = 16	WT031-4-WV05	750164	GP11
	VK031		V = 1,5mm x 60°	N = 16	WT031-4-WV05	750164	GP11
	VT031		V = 1,5mm x 60°	N = 16	WT031-4-WV05	750164	GP11
	VT-S 031		V = 1,5mm x 60°	N = 16	WT031-4-WV05	750164	GP11
	VD040	400	V = 1,5mm x 60°	N = 21	WT040-4-WV17	750169	TT65
	VK040		V = 1,5mm x 60°	N = 21	WT040-4-WV17	750169	TT65
	VK-S 040		V = 1,5mm x 60°	N = 21	WT040-4-WV17	750169	TT65
	VT040		V = 1,5mm x 60°	N = 21	WT040-4-WV17	750169	TT65
	VT-S 040		V = 1,5mm x 60°	N = 21	WT040-4-WV17	750169	TT65
	VL042	420	V = 1,5mm x 60°	N = 16	WT040-4-WV07	750177	GP11
	VD050	500	V = 3mm x 60°	N = 25	WT050-4-WV19	750170	WN50
	VK050		V = 3mm x 60°	N = 25	WT050-4-WV19	750170	WN50
	VT050		V = 3mm x 60°	N = 25	WT050-4-WV19	750170	WN50
	VK-S 050		V = 3mm x 60°	N = 25	WT050-4-WV19	750170	WN50
	VT-S 050		V = 3mm x 60°	N = 25	WT050-4-WV19	750170	WN50
	VL060	600	V = Modul 2	N = 16	WT063-4-WV24	750179	TT70

Futterhersteller chuck manufacturer	Futtertyp chuck type	Futtergröße chuck size ø mm	Backenanschluss des Futters jaw-connection of the chuck		INOZet® Bezeichnung INOZet® description	Ident-Nr. ident-no.	** Nutenstein *** Grundbacke ** t-Nut *** base-jaw
			S mm/ V	N mm			
HWR	VD063	630	V = 3mm x 60°	N = 25	WT063-4-WV23	750152	WN50
	VK063		V = 3mm x 60°	N = 25	WT063-4-WV23	750152	WN50
	VK-S 063		V = 3mm x 60°	N = 25	WT063-4-WV23	750152	WN50
	VT063		V = 3mm x 60°	N = 25	WT063-4-WV23	750152	WN50
	VT-S 063		V = 3mm x 60°	N = 25	WT063-4-WV23	750152	WN50
	VL070	700	V = Modul 2	N = 16	WT070-4-WV89	750173	TT70
	VD080	800	V = 3mm x 60°	N = 25	WT080-4-WV42	750165	GP21
	VK080		V = 3mm x 60°	N = 25	WT080-4-WV42	750165	GP21
	VK-S 080		V = 3mm x 60°	N = 25	WT080-4-WV42	750165	GP21
	VT-S 080		V = 3mm x 60°	N = 25	WT080-4-WV42	750165	GP21
	VD100	990	V = 3mm x 60°	N = 25	WT100-4-WV48	750182	GP21
	VK-S 100		V = 3mm x 60°	N = 25	WT100-4-WV48	750182	GP21
	VL100		V = Modul 2	N = 21	WT100-4-WV83	750178	TT65
	VD120	1150	V = 3mm x 60°	N = 25	WT120-4-WV48	750183	GP21
	VL120		V = Modul 2	N = 21	WT120-4-WV83	750181	TT65
Kitagawa	B-08	210	V = 1,5mm x 60°	N = 14	WT021-WV04	750098	WN10
	B-208		V = 1,5mm x 60°	N = 14	WT021-WV04	750098	WN12
	BB-208 / BB-08		V = 1,5mm x 60°	N = 14	WT021-WV04	750098	WN12
	N-08 / NL-08		V = 1,5mm x 60°	N = 14	WT021-WV04	750098	WN10
	B-10	254	V = 1,5mm x 60°	N = 16	WT025-WV05	750058	GP10
	B-210		V = 1,5mm x 60°	N = 16	WT025-WV05	750058	GP11
	BB-210		V = 1,5mm x 60°	N = 16	WT025-WV05	750058	GP11
	N-10		V = 1,5mm x 60°	N = 16	WT025-WV05	750058	GP10
	B-12	304	V = 1,5mm x 60°	N = 18	WT031-WV10	750060	GP12
	B-212		V = 1,5mm x 60°	N = 21	WT031-WV17	750156	TT65
	N-12		V = 1,5mm x 60°	N = 18	WT031-WV10	750060	GP12
	BB-212	315	V = 1,5mm x 60°	N = 21	WT031-WV17	750156	WN32
	B-15	381	V = 1,5mm x 60°	N = 22	WT038-WV21	750157	GP15
	B-215		V = 1,5mm x 60°	N = 22	WT038-WV21	750157	X5507
	N-15		V = 1,5mm x 60°	N = 22	WT038-WV21	750157	X5507
	B-18	450	V = 1,5mm x 60°	N = 22	WT045-WV32	750158	GP15
	BB-218		V = 1,5mm x 60°	N = 22	WT045-WV32	750158	X5507
	N-18		V = 1,5mm x 60°	N = 22	WT045-WV32	750158	X5507
	NV-18		V = 1,5mm x 60°	N = 22	WT045-WV32	750158	X5507
	B-21	530	V = 3mm x 60°	N = 25	WT053-WV40	750072	GP21
	N-21		V = 3mm x 60°	N = 25	WT053-WV40	750072	GP21



INOZet®

Futterspezifische Daten

Chuck specific data

Technische Daten siehe Seite 69–71

Technical data see pages 69–71

INOZet® Aufsatzbacken siehe Seite 74–75

INOZet® top-jaws see pages 74 –75

Futterhersteller chuck manufacturer	Futtertyp chuck type	Futtergröße chuck size ø mm	Backenanschluss des Futters jaw-connection of the chuck		INOZet® Bezeichnung INOZet® description	Ident-Nr. ident-no.	** Nutenstein *** Grundbacke ** t-Nut *** base-jaw
			S mm/ V	N mm			
Kitagawa	B-24	610	V = 3mm x 60°	N = 25	WT063-WV42	750094	GP21
	N-24		V = 3mm x 60°	N = 25	WT063-WV42	750094	GP21
	NV-24		V = 3mm x 60°	N = 25	WT063-WV42	750094	GP21
	NV-28	700	V = 3mm x 60°	N = 25	WT063-WV42	750094	GP21
Röhm	DURO 200	200	S = 10	N = 20	WT022-WK02	750045	MFI200
	DURO-NC 200		S = 10	N = 20	WT022-WK02	750045	MFI200
	DURO-NCSE 200		S = 10	N = 20	WT022-WK02	750045	GBI20
	DURO-T 200		S = 10	N = 20	WT022-WK02	750045	MFI200
	KFD 200		V = 1/16" x 90°	N = 17	WT021-WV03	750114	GE30
	KFD-HS 200		V = 1/16" x 90°	N = 17	WT021-WV03	750114	GE30
	LVE 200		V = 1/16" x 90°	N = 17	WT021-WV03	750114	GF30
	ZG / ZS 200		S = 10	N = 16	WT022-WK02	750045	X8754
	DURO-NCSE 210	210	S = 10	N = 20	WT022-WK02	750045	GBI20
	KFD-HE 210		V = 1/16" x 90°	N = 17	WT021-WV03	750114	GE30
	KFD-HE 210		V = 1,5mm x 60°	N = 14	WT021-WV04	750098	**
	DURO-NCSE 225	225	S = 10	N = 20	WT022-WK02	750045	GBI20
	DURO 250	250	S = 12	N = 20	WT025-WK05	750057	
	DURO-NC 250		S = 12	N = 20	WT025-WK05	750057	
	DURO-NCES 250		S = 12	N = 20	WT025-WK05	750057	
	DURO-T 250		S = 12	N = 20	WT025-WK05	750057	
	KFD 250		V = 1/16" x 90°	N = 21	WT025-WV57	750162	GE25
	KFD-HE 250		V = 1,5mm x 60°	N = 16	WT025-WV05	750058	GP11
	KFD-HE 250		V = 1/16" x 90°	N = 21	WT025-WV57	750162	GE25
	KFD-HS 250		V = 1/16" x 90°	N = 17	WT025-WV50	750059	GE21/17
	LVE 250		V = 1/16" x 90°	N = 21	WT025-WV57	750162	GE25
	ZG / ZS 250		S = 12	N = 20	WT025-WK05	750057	X8751
	DURO-NCSE 260	260	S = 12	N = 20	WT025-WK05	750057	
	DURO-NCSE 265	265	S = 12	N = 20	WT025-WK05	750057	

Futterhersteller <i>chuck manufacturer</i>	Futtertyp <i>chuck type</i>	Futtergröße <i>chuck size</i>	Backenanschluss des Futters <i>jaw-connection of the chuck</i>		INOZet® Bezeichnung <i>INOZet® description</i>	Ident-Nr. <i>ident-no.</i>	** Nutenstein *** Grundbacke ** t-Nut *** base-jaw
			S mm/ V	N mm			
Röhmm	DURO 315	315	S = 12	N = 26	WT031-21-WK15	750091	
	DURO-NC 315		S = 12	N = 26	WT031-21-WK15	750091	
	DURO-NCSE 315		S = 12	N = 20	WT031-WK10	750054	
	DURO-NCSE 315		S = 12	N = 26	WT031-WK10	750054	
	DURO-T 315		S = 12	N = 26	WT031-21-WK15	750091	
	KFD 315		V = 1/16" x 90°	N = 21	WT031-WV62	750159	GE25
	KFD-HE 315		V = 1,5mm x 60°	N = 21	WT031-WV17	750156	GE25
	KFD-HE 315		V = 1/16" x 90°	N = 21	WT031-WV62	750159	GE25
	KFD-HS 315		V = 1/16" x 90°	N = 21	WT031-WV62	750159	GE25
	LVE 315		V = 1/16" x 90°	N = 21	WT031-WV62	750159	GE25
	ZG / ZS 315		S = 12	N = 20	WT031-WK10	750054	X8603
	ZG / ZS 350	350	S = 12	N = 20	WT031-WK10	750054	***
	ZG / ZS 350		S = 12	N = 26	WT040-WK20	750137	***
	DURO 400	400	S = 18	N = 30	WT040-20-WK25	750138	
	DURO-NC 400		S = 18	N = 30	WT040-20-WK25	750138	
	DURO-NCSE 400		S = 12	N = 26	WT040-WK20	750137	
	DURO-NCSE 400		S = 12	N = 26	WT040-WK20	750137	
	DURO-T 400		S = 18	N = 30	WT040-20-WK25	750138	
	KFD 400		V = 3/32" x 90°	N = 25,5	WT040-WV77	750161	GE40
	KFD-HE 400		V = 3/32" x 90°	N = 25,5	WT040-WV77	750161	GE40
	KFD-HS 400		V = 3/32" x 90°	N = 25,5	WT040-WV77	750161	GE40
	ZG / ZS 400		S = 12	N = 26	WT040-WK20	750137	***
	DURO 500	500	S = 18	N = 30	WT050-WK30	750070	
	DURO-NC 500		S = 18	N = 30	WT050-WK30	750070	
	DURO-NCSE 500		S = 18	N = 30	WT050-WK30	750070	
	DURO-T 500		S = 18	N = 30	WT050-WK30	750070	
	KFD 500		V = 3/32" x 90°	N = 25,5	WT050-WV85	750056	GE40
	KFD-HE 500		V = 3/32" x 90°	N = 25,5	WT050-WV85	750056	**
	KFD-HS 500		V = 3/32" x 90°	N = 25,5	WT050-WV85	750056	GE40
	LVE 570		V = 3/32" x 90°	N = 25,5	WT063-WV90	750051	GE40
	ZG / ZS 500		S = 12,7	N = 19,03	WT050-WK34	705106	
	DURO 630	630	S = 24	N = 40	WT063-WK40	750077	
	DURO-NC 630		S = 24	N = 40	WT063-WK40	750077	
	DURO-NCSE 630		S = 18	N = 30	WT063-WK35	750075	
	DURO-T 630		S = 24	N = 40	WT063-WK40	750077	
	KFD 630		V = 3/32" x 90°	N = 25,5	WT063-WV90	750051	GE40
	ZG / ZS 630		S = 12,7	N = 19,03	WT063-WK38	750116	

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Futterhersteller chuck manufacturer	Futtertyp chuck type	Futtergröße chuck size ø mm	Backenanschluss des Futters jaw-connection of the chuck		INOZet® Bezeichnung INOZet® description	Ident-Nr. ident-no.	** Nutenstein *** Grundbacke ** t-Nut *** base-jaw
			S mm / V	N mm			
Röhm	DURO 800	800	S = 24	N = 40	WT080-WK50	750050	
	KFD 800		V = 3/32" x 90°	N = 25,5	WT080-WV95	750078	GE40
	LVE 800		V = 3/32" x 90°	N = 30	WT080-WV94	750079	**
	ZG / ZS 800		S = 12,7	N = 19,05	WT080-WK47	750102	
	DURO 1000	1000	S = 24	N = 40	WT100-WK65	750087	
	KFD 1000		V = Modul 2	N = 30	WT100-WV97	750084	
	ZG / ZS 1000		S = 12,7	N = 19,03	WT100-WK59	750126	
	DURO 1250	1250	S = 24	N = 40	WT125-WK65	750030	
	KFD 1250		V = Modul 2	N = 30	WT125-WV97	750089	
	ZG / ZS 1250		S = 12,7	N = 19,03	WT125-WK64	750128	
Samchully	HC-08	210	V = 1,5mm x 60°	N = 14	WT021-WV04	750098	WN10
	HCH-08		V = 1,5mm x 60°	N = 14	WT021-WV04	750098	WN10
	HS-08		V = 1,5mm x 60°	N = 14	WT021-WV04	750098	WN12
	HH-208 / MH-208		V = 1,5mm x 60°	N = 14	WT021-WV04	750098	WN12
	HC-10	254	V = 1,5mm x 60°	N = 16	WT025-WV05	750058	GP10
	HCH-10		V = 1,5mm x 60°	N = 16	WT025-WV05	750058	GP10
	HH-210 / MH-210		V = 1,5mm x 60°	N = 16	WT025-WV05	750058	GP11
	HS-10		V = 1,5mm x 60°	N = 16	WT025-WV05	750058	GP11
	HC-12	304	V = 1,5mm x 60°	N = 18	WT031-WV10	750060	GP12
	HCH-12		V = 1,5mm x 60°	N = 18	WT031-WV10	750060	GP12
	HS-12		V = 1,5mm x 60°	N = 21	WT031-WV17	750156	TT65
	HH-212 / MH-212	315	V = 1,5mm x 60°	N = 21	WT031-WV17	750156	TT65
	HC-15	381	V = 1,5mm x 60°	N = 22	WT038-WV21	750157	X5507
	HCH-15		V = 1,5mm x 60°	N = 22	WT038-WV21	750157	GP15
	HC-18	450	V = 1,5mm x 60°	N = 22	WT045-WV32	750158	X5507
	HCH-18		V = 1,5mm x 60°	N = 22	WT045-WV32	750158	GP15
	HCH-18B		V = 1,5mm x 60°	N = 22	WT045-WV32	750158	GP15
	MH-218	457	V = 3mm x 60°	N = 22	WT045-WV35	750143	GP15

Futterhersteller <i>chuck manufacturer</i>	Futtermyp <i>chuck type</i>	Futtergröße <i>chuck size</i>	Backenanschluss des Futters <i>jaw-connection of the chuck</i>		INOZet® Bezeichnung <i>INOZet® description</i>	Ident-Nr. <i>ident-no.</i>	** Nutenstein *** Grundbacke ** t-Nut *** base-jaw
			S mm/ V	N mm			
Samchully	HC-21	530	V = 3mm x 60°	N = 25	WT053-WV40	750072	GP21
	HCH-21		V = 3mm x 60°	N = 25	WT053-WV40	750072	GP21
	HCH-21B		V = 3mm x 60°	N = 25	WT053-WV40	750072	GP21
	MH-221		V = 3mm x 60°	N = 25	WT053-WV40	750072	GP21
	HC-24	610	V = 3mm x 60°	N = 25	WT063-WV42	750094	GP21
	HCH-24		V = 3mm x 60°	N = 25	WT063-WV42	750094	GP21
	HC-32	800	S = 19,025	N = 12,7	WT080-WK55	750083	
	HC-32		V = 3mm x 60°	N = 25,5	WT080-WV45	750081	
	HCH-32		V = 3mm x 60°	N = 25,5	WT080-WV45	750081	
Schunk	ROTA G 200	200	S = 10	N = 20	WT022-WK02	750045	GBI20
	ROTA S plus 200		S = 10	N = 20	WT022-WK02	750045	MFI200
	ROTA NC 210	210	V = 1,5mm x 60°	N = 14	WT021-WV04	750098	WN10
	ROTA NC 210		V = 1/16" x 90°	N = 17	WT021-WV03	750114	GF30
	ROTA NCD 210		V = 1/16" x 90°	N = 17	WT021-WV03	750114	GN50
	ROTA NCF 210		V = 1,5mm x 60°	N = 14	WT021-WV04	750098	WN10
	ROTA NCF 210		V = 1/16" x 90°	N = 17	WT021-WV03	750114	GF30
	ROTA NCF plus 210		V = 1,5mm x 60°	N = 14	WT021-WV04	750098	WN12
	ROTA NCK 210		V = 1,5mm x 60°	N = 14	WT021-WV04	750098	WN12
	ROTA NCK plus 210		V = 1,5mm x 60°	N = 14	WT021-WV04	750098	WN12
	ROTA NCK plus 210		V = 1/16" x 90°	N = 17	WT021-WV03	750114	GF30
	ROTA NCO 210		V = 1/16" x 90°	N = 17	WT021-WV03	750114	GF30
	ROTA THW 210		S = 10	N = 20	WT022-WK02	750045	GBI20
	ROTA NC plus 215	215	V = 1,5mm x 60°	N = 14	WT021-WV04	750098	WN12
	ROTA NC plus 215		V = 1/16" x 90°	N = 17	WT021-WV03	750114	GF30
	ROTA NCD 215		V = 1,5mm x 60°	N = 14	WT021-WV04	750098	WN12
	ROTA NCD 215		V = 1/16" x 90°	N = 17	WT021-WV03	750114	GF30
	ROTA NCF plus 215		V = 1/16" x 90°	N = 17	WT021-WV03	750114	GF30
	ROTA THW plus 215		S = 10	N = 20	WT022-WK02	750045	GBI20
	ROTA NCW 225	225	S = 10	N = 20	WT022-WK02	750045	GBI20
	ROTA G 250	250	S = 12	N = 20	WT025-WK05	750057	
	ROTA NC 250		V = 1/16" x 90°	N = 21	WT025-WV57	750162	GF261
	ROTA NCD 250		V = 1,5mm x 60°	N = 16	WT025-WV05	750058	GP10
	ROTA NCD 250		V = 1/16" x 90°	N = 21	WT025-WV57	750162	GN25
	ROTA NCF 250		V = 1,5mm x 60°	N = 16	WT025-WV05	750058	GP10
	ROTA NCF 250		V = 1/16" x 90°	N = 21	WT025-WV57	750162	GF261
	ROTA NCK 250		V = 1,5mm x 60°	N = 16	WT025-WV05	750058	GP11
	ROTA NCK plus 250		V = 1,5mm x 60°	N = 16	WT025-WV05	750058	GP11
	ROTA NCK plus 250		V = 1/16" x 90°	N = 17	WT025-WV50	750059	GF211

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Futterhersteller chuck manufacturer	Futtertyp chuck type	Futtergröße chuck size ø mm	Backenanschluss des Futters jaw-connection of the chuck		INOZet® Bezeichnung INOZet® description	Ident-Nr. ident-no.	** Nutenstein *** Grundbacke ** t-Nut *** base-jaw
			S mm / V	N mm			
Schunk	ROTA ROTA NC 250	250	V = 1,5mm x 60°	N = 16	WT025-WV05	750058	GP10
	ROTA S plus 250		S = 12	N = 20	WT025-WK05	750057	
	ROTA THW 250-65		S = 12	N = 20	WT025-WK05	750057	
	ROTA NCD 255	255	V = 1,5mm x 60°	N = 16	WT025-WV05	750058	GP11
	ROTA NCD 255		V = 1/16" x 90°	N = 21	WT025-WV57	750162	GN25
	ROTA NC plus 260	260	V = 1,5mm x 60°	N = 16	WT025-WV05	750058	GP11
	ROTA NC plus 260		V = 1/16" x 90°	N = 21	WT025-WV57	750162	GF261
	ROTA NCF plus 260		V = 1,5mm x 60°	N = 16	WT025-WV05	750058	GP11
	ROTA NCF plus 260		V = 1/16" x 90°	N = 21	WT025-WV57	750162	GF261
	ROTA NCO 260		V = 1/16" x 90°	N = 21	WT025-WV57	750162	GF261
	ROTA THW plus 260		S = 12	N = 20	WT025-WK05	750057	
	ROTA NCW 265	265	S = 12	N = 20	WT025-WK05	750057	
	ROTA G 315	315	S = 12	N = 20	WT031-WK10	750054	
	ROTA NC 315-86		V = 1,5mm x 60°	N = 18	WT031-WV10	750060	GP12
	ROTA NC 315-86		V = 1/16" x 90°	N = 21	WT031-WV62	750159	GN25
	ROTA NC plus 315		V = 1,5mm x 60°	N = 21	WT031-WV17	750156	GF261
	ROTA NC plus 315		V = 1/16" x 90°	N = 21	WT031-WV62	750159	GF261
	ROTA NCD 315	315	V = 1/16" x 90°	N = 21	WT031-WV62	750159	GN25
	ROTA NCD 315		V = 1,5mm x 60°	N = 21	WT031-WV17	750156	TT65
	ROTA NCF 315		V = 1,5mm x 60°	N = 18	WT031-WV10	750060	GP12
	ROTA NCF 315		V = 1/16" x 90°	N = 21	WT031-WV62	750159	GN25
	ROTA NCF plus 2 315		V = 1/16" x 90°	N = 21	WT031-WV62	750159	GF261
	ROTA NCF plus 315		V = 1,5mm x 60°	N = 21	WT031-WV17	750156	TT65
	ROTA NCF plus 315		V = 1/16" x 90°	N = 21	WT031-WV62	750159	GF261
	ROTA NCK plus 315		V = 1,5mm x 60°	N = 21	WT031-WV17	750156	TT65
	ROTA NCK plus 315		V = 1/16" x 90°	N = 21	WT031-WV62	750159	GF261
	ROTA NCO 315		V = 1/16" x 90°	N = 21	WT031-WV62	750159	GF261
	ROTA NCW 315		S = 12	N = 20	WT031-WK10	750054	
	ROTA S plus 315		S = 12	N = 26	WT031-21-WK15	750091	

Futterhersteller <i>chuck manufacturer</i>	Futtyp <i>chuck type</i>	Futtergröße <i>chuck size</i>	Backenanschluss des Futters <i>jaw-connection of the chuck</i>		INOZet® Bezeichnung <i>INOZet® description</i>	Ident-Nr. <i>ident-no.</i>	** Nutenstein *** Grundbacke ** t-Nut *** base-jaw
			S mm/ V	N mm			
Schunk	ROTA THW 315	315	S = 12	N = 20	WT031-WK10	750054	
	ROTA THW plus 315		S = 12	N = 20	WT031-WK10	750054	
	ROTA G 400	400	S = 12	N = 26	WT040-WK20	750137	
	ROTA NC 400		V = 1,5mm x 60°	N = 21	WT040-WV27	750139	WN34
	ROTA NC 400		V = 3/32" x 90°	N = 25,5	WT040-WV77	750161	GN40
	ROTA NCD 400		V = 3/32" x 90°	N = 25,5	WT040-WV77	750161	GN40
	ROTA NCF 400		V = 1,5mm x 60°	N = 21	WT040-WV27	750139	WN34
	ROTA NCF 400		V = 3/32" x 90°	N = 25,5	WT040-WV77	750161	GN40
	ROTA NCO 400		V = 3/32" x 90°	N = 25,5	WT040-WV77	750161	GE40
	ROTA S plus 400		S = 18	N = 30	WT040-20-WK25	750138	
	ROTA THW 400		S = 12	N = 26	WT040-WK20	750137	
	ROTA THW plus 400		S = 12	N = 26	WT040-WK20	750137	
	ROTA G 500	500	S = 18	N = 30	WT050-WK30	750070	
	ROTA NC 500		V = 3/32" x 90°	N = 25,5	WT050-WV85	750056	GN40
	ROTA NCD 500		V = 3/32" x 90°	N = 25,5	WT050-WV85	750056	GN40
	ROTA NCF 500		V = 3/32" x 90°	N = 25,5	WT050-WV85	750056	GN40
	ROTA NCO 500		V = 3/32" x 90°	N = 25,5	WT050-WV85	750056	GE40
	ROTA S plus 500		S = 18	N = 30	WT050-WK30	750070	
	ROTA THW 500		S = 18	N = 30	WT050-WK30	750070	
	ROTA G 630	630	S = 18	N = 30	WT063-WK35	750075	
	ROTA NC 630		V = 3/32" x 90°	N = 30	WT063-WV92	750074	GN80
	ROTA S plus 630		S = 24	N = 40	WT063-WK40	750077	
	ROTA THW 630		S = 18	N = 30	WT063-WK35	750075	
	ROTA THW plus 630		S = 18	N = 30	WT063-WK35	750075	
	ROTA NC 800	800	V = 3/32" x 90°	N = 30	WT080-WV94	750079	GN80
	ROTA NCO 800		V = 3/32" x 90°	N = 25,5	WT080-WV95	750078	GN40
	ROTA S plus 800		S = 24	N = 40	WT080-WK50	750050	
	ROTA NC 1000	1000	V = Modul 2	N = 30	WT100-WV97	750084	
	ROTA NCO 1000		V = Modul 2	N = 30	WT100-WV97	750084	
	ROTA S plus 1000		S = 24	N = 40	WT100-WK65	750087	
SMW Autoblok	HFK / HFKS 200-48	200	V = 1/16" x 90°	N = 17	WT021-WV03	750114	GN50
	HFK / HFKS 200-66		V = 1/16" x 90°	N = 17	WT021-WV03	750114	GN50
	AL-D 210	210	V = 1/16" x 90°	N = 17	WT021-WV03	750114	GF30
	AL-M 210		V = 1,5mm x 60°	N = 14	WT021-WV04	750098	WN14
	AN-D 210		V = 1/16" x 90°	N = 17	WT021-WV03	750114	GF30
	AN-M 210		V = 1,5mm x 60°	N = 14	WT021-WV04	750098	WN14
	BB-D 210		V = 1/16" x 90°	N = 17	WT021-WV03	750114	GF30
	BB-M 210		V = 1,5mm x 60°	N = 14	WT021-WV04	750098	WN14

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Futterhersteller chuck manufacturer	Futtertyp chuck type	Futtergröße chuck size ø mm	Backenanschluss des Futters jaw-connection of the chuck		INOZet® Bezeichnung INOZet® description	Ident-Nr. ident-no.	** Nutenstein *** Grundbacke ** t-Nut *** base-jaw
			S mm/ V	N mm			
SMW Autoblok	BH-D 210	210	V = 1/16" x 90°	N = 17	WT021-WV03	750114	GF30
	BHD-FC 210		V = 1/16" x 90°	N = 17	WT021-WV03	750114	GF30
	BH-M 210		V = 1,5mm x 60°	N = 14	WT021-WV04	750098	WN14
	BHM-FC 210		V = 1,5mm x 60°	N = 14	WT021-WV04	750098	WN14
	HFKN-D 210		V = 1/16" x 90°	N = 17	WT021-WV03	750114	GF30
	HFKN-M 210		V = 1,5mm x 60°	N = 14	WT021-WV04	750098	WN14
	HG-F 210		S = 10	N = 20	WT022-WK02	750045	MF1200
	HG-N 210		S = 10	N = 20	WT022-WK02	750045	GBI20
	KNCS-N 210		S = 10	N = 20	WT022-WK02	750045	GBI20
	KNCS-N 225	225	S = 10	N = 20	WT022-WK02	750045	GBI20
	AL-D 250	250	V = 1/16" x 90°	N = 21	WT025-WV57	750162	GF261
	AL-M 250		V = 1,5mm x 60°	N = 16	WT025-WV05	750058	GF263
	AN-D 250		V = 1/16" x 90°	N = 21	WT025-WV57	750162	GF261
	AN-M 250		V = 1,5mm x 60°	N = 16	WT025-WV05	750058	GF263
	BB-D 250		V = 1/16" x 90°	N = 21	WT025-WV57	750162	GF261
	BB-M 250		V = 1,5mm x 60°	N = 16	WT025-WV05	750058	GF263
	BH-D 250		V = 1/16" x 90°	N = 21	WT025-WV57	750162	GF261
	BHD-FC 250		V = 1/16" x 90°	N = 21	WT025-WV57	750162	GF261
	BH-M 250		V = 1,5mm x 60°	N = 16	WT025-WV05	750058	GF263
	BHM-FC 250		V = 1,5mm x 60°	N = 16	WT025-WV05	750058	GF263
	HFK / HFKS 250		V = 1/16" x 90°	N = 21	WT025-WV57	750162	GN25
	HFKN-D 260	260	V = 1/16" x 90°	N = 21	WT025-WV57	750162	GF261
	HFKN-M 260		V = 1,5mm x 60°	N = 16	WT025-WV05	750058	**
	HG-F 260		S = 12	N = 20	WT025-WK05	750057	
	HG-N 260		S = 12	N = 20	WT025-WK05	750057	
	KNCS-N 260		S = 12	N = 20	WT025-WK05	750057	
	HFK / HFKS 270	270	V = 1/16" x 90°	N = 21	WT025-WV57	750162	GN25
	KNCS-N 275	275	S = 12	N = 20	WT025-WK05	750057	

Futterhersteller chuck manufacturer	Futtertyp chuck type	Futtergröße chuck size ø mm	Backenanschluss des Futters jaw-connection of the chuck		INOZet® Bezeichnung INOZet® description	Ident-Nr. ident-no.	** Nutenstein *** Grundbacke ** t-Nut *** base-jaw
			S mm/ V	N mm			
SMW Autoblok	AL-D 315	315	V = 1/16" x 90°	N = 21	WT031-WV62	750159	GF261
	AL-M 315		V = 1,5mm x 60°	N = 21	WT031-WV17	750156	GF261
	AN-D 315		V = 1/16" x 90°	N = 21	WT031-WV62	750159	GF261
	AN-M 315		V = 1,5mm x 60°	N = 21	WT031-WV17	750156	GF261
	BB-D 315		V = 1/16" x 90°	N = 21	WT031-WV62	750159	GF261
	BB-M 315		V = 1,5mm x 60°	N = 21	WT031-WV17	750156	GF261
	BH-D 315		V = 1/16" x 90°	N = 21	WT031-WV62	750159	GF261
	BHD-FC 315		V = 1/16" x 90°	N = 21	WT031-WV62	750159	GF261
	BH-M 315		V = 1,5mm x 60°	N = 21	WT031-WV17	750156	GF261
	BHM-FC 315		V = 1,5mm x 60°	N = 21	WT031-WV17	750156	GF261
	HFK / HFKS 315		V = 1/16" x 90°	N = 21	WT031-WV62	750159	GN25
	HFKN-D 315		V = 1/16" x 90°	N = 21	WT031-WV62	750159	GF261
	HFKN-M 315		V = 1,5mm x 60°	N = 21	WT031-WV17	750156	GF261
	HG-F 315		S = 12	N = 26	WT031-21-WK15	750091	
	HG-N 315		S = 12	N = 20	WT031-WK10	750054	
	KNCS-N 315		S = 12	N = 20	WT031-WK10	750054	
	KNCS-N 325	325	S = 12	N = 20	WT031-WK10	750054	
	KNCS-N 340	340	S = 12	N = 20	WT031-WK10	750054	
	AN-D 400	400	V = 3/32" x 90°	N = 25,5	WT040-WV77	750161	GE40
	AN-M 400		V = 1,5mm x 60°	N = 22	WT038-WV21	750157	X7960
	BH-D 400		V = 3/32" x 90°	N = 25,5	WT040-WV77	750161	GE40
	BHD-FC 400		V = 3/32" x 90°	N = 25,5	WT040-WV77	750161	GE40
	BH-M 400		V = 1,5mm x 60°	N = 22	WT038-WV21	750157	X7960
	HFK / HFKS 400		V = 3/32" x 90°	N = 25,5	WT040-WV77	750161	GN40
	HFKN-D 400		V = 3/32" x 90°	N = 25,5	WT040-WV77	750161	GN40
	HG-F 400		S = 18	N = 30	WT040-20-WK25	750138	
	HG-N 400		S = 12	N = 26	WT040-WK20	750137	
	KNCS-N 400		S = 12	N = 26	WT040-WK20	750137	
	BH-D 450	450	V = 3/32" x 90°	N = 25,5	WT045-WV80	750144	GE40
	BH-M 450		V = 1,5mm x 60°	N = 22	WT045-WV32	750158	X7960
	BH-D 500	500	V = 3/32" x 90°	N = 25,5	WT050-WV85	750056	GE40
	BHD-FC 500		V = 3/32" x 90°	N = 25,5	WT050-WV85	750056	GE40
	HFKN-D 500		V = 3/32" x 90°	N = 25,5	WT050-WV85	750145	GN40
	HFKN-M 500		V = 3mm x 60°	N = 25,5	WT050-WV39	750127	**
	HG-N 500		S = 18	N = 30	WT050-WK30	750070	
	IL-C 500 Langschieberbacke		S = 19,03	N = 12,7	WT050-WK32	750071	
	IL-D 500		V = 3/32" x 90°	N = 25,5	WT050-WV85	750056	X6836



INOZet®

Futterspezifische Daten

Chuck specific data

Technische Daten siehe Seite 69–71

Technical data see pages 69–71

INOZet® Aufsatzbacken siehe Seite 74–75

INOZet® top-jaws see pages 74 –75

Futterhersteller chuck manufacturer	Futtertyp chuck type	Futtergröße chuck size ø mm	Backenanschluss des Futters jaw-connection of the chuck		INOZet® Bezeichnung INOZet® description	Ident-Nr. ident-no.	** Nutenstein *** Grundbacke ** t-Nut *** base-jaw
			S mm / V	N mm			
SMW Autoblok	IN-C 500 Langschieberbacke	500	S = 19,03	N = 12,7	WT050-WK32	750071	
	IN-D 500		V = 3/32" x 90°	N = 25,5	WT050-WV85	750056	X6836
	KNCS-N 500		S = 18	N = 30	WT050-WK30	750070	
	BH-D 630	630	V = 3/32" x 90°	N = 25,5	WT063-WV90	750051	GE40
	BHD-FC 630		V = 3/32" x 90°	N = 25,5	WT063-WV90	750051	GE40
	HG-N 630		S = 18	N = 30	WT063-WK35	750075	
	IL-C 630 Langschieberbacke		S = 19,03	N = 12,7	WT063-WK37	750076	
	IL-D 630		V = 3/32" x 90°	N = 25,5	WT063-WV90	750051	X6836
	IN-C 630 Langschieberbacke		S = 19,03	N = 12,7	WT063-WK37	750076	
	IN-D 630		V = 3/32" x 90°	N = 25,5	WT063-WV90	750051	X6836
	KNCS-N 630		S = 18	N = 30	WT063-WK35	750075	
	BH-D 800	800	V = 3/32" x 90°	N = 25,5	WT080-WV95	750078	GE40
	IL-D 800		V = 3/32" x 90°	N = 25,5	WT080-WV95	750078	X6836
	IN-D 800		V = 3/32" x 90°	N = 25,5	WT080-WV95	750078	X6836
	IN-D 1000	1000	V = Modul 2	N = 30	WT100-WV96	750052	
	IR-C 1000 Langschieberbacke		S = 19,03	N = 30	WT100-WK67	750145	
	IN-D 1250	1250	V = Modul 2	N = 30	WT125-WV96	750088	
	IR-C 1250 Langschieberbacke		S = 19,03	N = 30	WT125-WK67	750146	

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*siehe Bedienungsanleitung
*see Operating Manual

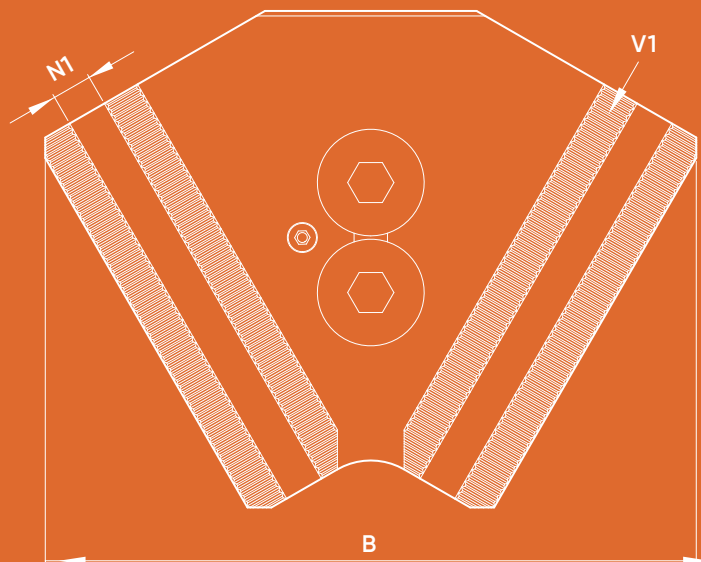
Länge length	Gewicht/ Satz weight / set	Aufsatzbacken- anschluss top-jaw connection	
		Spitzver- zahnung serration	Nutbreite slot width
L mm	kg	V1 mm	N1 mm
95	6,3	2 x 60°	10
95	6,3	2 x 60°	10
105	6,3	2 x 60°	10
128	9,9	2 x 60°	12
128	9,9	2 x 60°	12
128	9,9	2 x 60°	12
128	9,9	2 x 60°	12
128	9,9	2 x 60°	12
95	8	2 x 60°	10
149	15,6	2 x 60°	12
162	17,7	2 x 60°	12
149	15,6	2 x 60°	12
149	15,6	2 x 60°	12
149	15,6	2 x 60°	12
149	15,6	2 x 60°	12
123	14,8	2 x 60°	12
182	28,2	3,5 x 60°	16
182	28,2	3,5 x 60°	16
182	28,2	3,5 x 60°	16
204	29,4	3,5 x 60°	16
202	33,9	3,5 x 60°	16
194	29,4	3,5 x 60°	16
194	29,4	3,5 x 60°	16
194	29,4	3,5 x 60°	16
194	29,4	3,5 x 60°	16
194	30,9	3,5 x 60°	16



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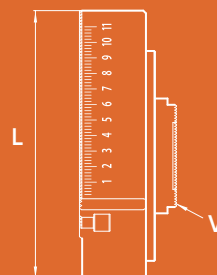
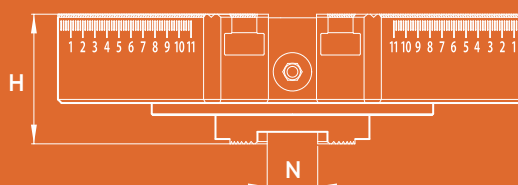
Futterspezifische Daten
Chuck specific data

INOZet®

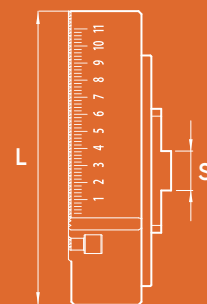
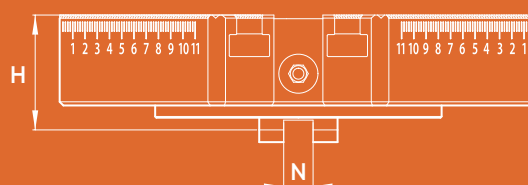


Futterhersteller chuck manufacturer	Futtertyp chuck type	F
SMW Autoblok	IN-C 500 Langschieberbacke	5
	IN-D 500	
	KNCS-N 500	
	BH-D 630	6
	BHD-FC 630	
	HG-N 630	
	IL-C 630 Langschieberbacke	
	IL-D 630	
	IN-C 630 Langschieberbacke	
	IN-D 630	
	KNCS-N 630	
	BH-D 800	8
	IL-D 800	
	IN-D 800	
	IN-D 1000	1
	IR-C 1000 Langschieberbacke	
	IN-D 1250	1
	IR-C 1250 Langschieberbacke	

Spitzverzahnung
Serration



Kreuzversatz
Tongue and groove



*siehe Bedienungsanleitung

*see Operating Manual

INOZet®	Ident-Nr. ident-no.	max. Drehzahl max. r.p.m.	Spannbereich grip range		Schwing- kreis ohne Backen swing with- out jaws	Breite width	Höhe ohne Backen height without jaws	Länge length	Gewicht/ Satz weight / set	Aufsatzbacken- anschluss top-jaw connection	
			Außenspannung external clamping	Innenspannung internal clamping						Spitzver- zahnung serration	Nutbreite slot width
		1/min	min. – max./mm	min. – max./mm	Ø mm	B mm	H mm	L mm	kg	V1 mm	N1 mm
WT021-WV03	750114	2200	50 – 210	110 – 210	228	123	37,5	95	6,3	2 x 60°	10
WT021-WV04	750098	2500	50 – 210	110 – 210	228	123	37,5	95	6,3	2 x 60°	10
WT022-WK02	750045	2200	50 – 225	110 – 225	270	140	37,5	105	6,3	2 x 60°	10
WT025-WK05	750057	2000	60 – 250	134 – 250	320	170	40	128	9,9	2 x 60°	12
WT025-WV05	750058	2000	60 – 250	134 – 250	320	170	40	128	9,9	2 x 60°	12
WT025-WV50	750059	2000	60 – 250	134 – 250	320	170	40	128	9,9	2 x 60°	12
WT025-WV52	750101	2000	60 – 250	134 – 250	320	170	40	128	9,9	2 x 60°	12
WT025-WV57	750162	2000	60 – 250	134 – 250	320	170	45	128	9,9	2 x 60°	12
WT025-4-WV02	750163	*	63 – 260	123 – 260	262	120	44	95	8	2 x 60°	10
WT031-WK10	750054	1300	65 – 315	139 – 315	380	195	47	149	15,6	2 x 60°	12
WT031-21-WK15	750091	1300	65 – 315	139 – 315	390	200	47	162	17,7	2 x 60°	12
WT031-WV10	750060	1300	65 – 315	139 – 315	380	195	49	149	15,6	2 x 60°	12
WT031-WV17	750156	1300	65 – 315	139 – 315	380	195	54	149	15,6	2 x 60°	12
WT031-WV62	750159	1300	65 – 315	139 – 315	380	195	54	149	15,6	2 x 60°	12
WT031-WV67	750160	1300	65 – 315	139 – 315	380	195	56	149	15,6	2 x 60°	12
WT031-4-WV05	750164	*	82 – 315	156 – 315	336	154	51	123	14,8	2 x 60°	12
WT038-WV21	750157	1100	70 – 380	158 – 380	455	239	61	182	28,2	3,5 x 60°	16
WT038-WV22	750131	1100	70 – 380	158 – 380	455	239	56	182	28,2	3,5 x 60°	16
WT038-WV77	750130	1100	70 – 380	158 – 380	455	239	61	182	28,2	3,5 x 60°	16
WT040-WK20	750137	1100	70 – 400	158 – 400	490	249	55	204	29,4	3,5 x 60°	16
WT040-20-WK25	750138	1100	80 – 400	168 – 400	510	270	55	202	33,9	3,5 x 60°	16
WT040-WV27	750139	1100	70 – 400	158 – 400	490	249	64	194	29,4	3,5 x 60°	16
WT040-WV71	750140	1100	70 – 400	158 – 400	490	249	64	194	29,4	3,5 x 60°	16
WT040-WV72	750132	1100	70 – 400	158 – 400	490	249	66	194	29,4	3,5 x 60°	16
WT040-WV74	750133	1100	70 – 400	158 – 400	490	249	59	194	29,4	3,5 x 60°	16
WT040-WV77	750161	1100	70 – 400	158 – 400	490	249	64	194	30,9	3,5 x 60°	16

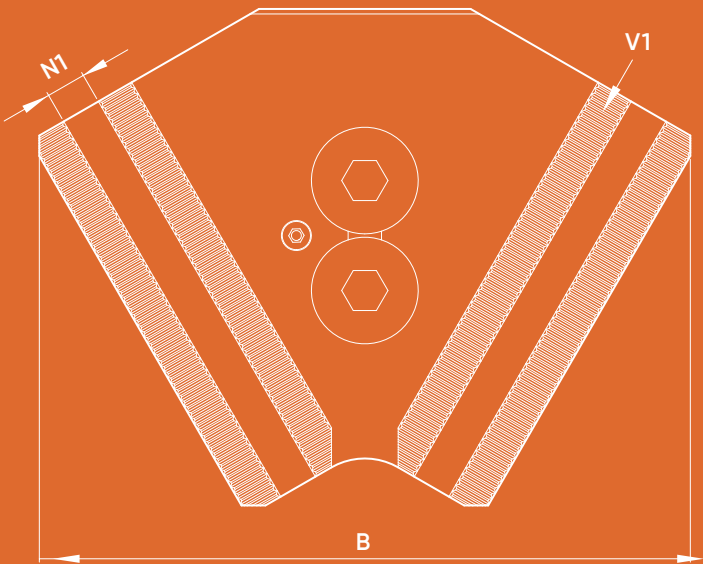


INOZet®

Allgemeine technische Daten

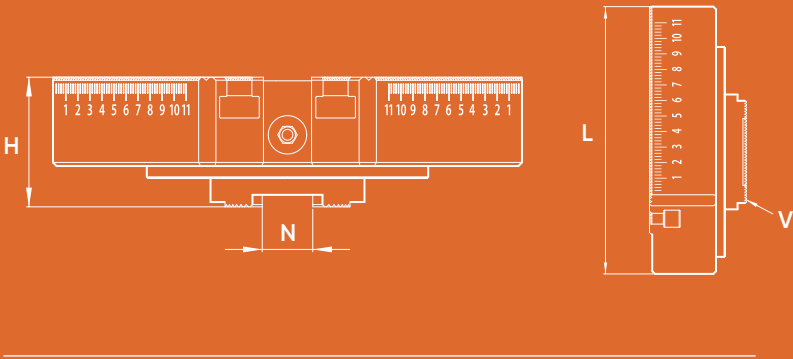
General technical data

INOZet®	Ident-Nr. ident-no.	max. Drehzahl max. r.p.m.	Spannbereich grip range		Schwing- kreis ohne Backen swing with- out jaws	Breite width	Höhe ohne Backen height without jaws	Länge length	Gewicht/ Satz weight / set	Aufsatzbacken- anschluss top-jaw connection	
		1/min	Außenspannung external clamping	Innenspannung internal clamping	Ø mm	B mm	H mm	L mm	kg	Spitzver- zahnung serration	Nutbreite slot width
			min. – max./mm	min. – max./mm						V1 mm	N1 mm
WT040-4-WV07	750177	*	90 – 400	178 – 400	440	196	56	161	23,6	3,5 x 60°	16
WT040-4-WV17	750169	*	90 – 400	178 – 400	440	196	50	161	22,8	3,5 x 60°	16
WT040-4-WV88	750176	*	90 – 400	178 – 400	440	196	56	161	23,6	3,5 x 60°	16
WT045-WK25	750138	1000	80 – 450	168 – 450	510	249	55	204	29,4	3,5 x 60°	16
WT045-WV32	750158	1000	80 – 450	168 – 450	510	270	59	202	32,7	3,5 x 60°	16
WT045-WV35	750143	1000	80 – 450	168 – 450	510	270	64	202	32,7	3,5 x 60°	16
WT045-WV80	750144	1000	80 – 450	168 – 450	510	270	64	202	32,7	3,5 x 60°	16
WT050-WK30	750070	800	85 – 500	179 – 500	580	302	89	223	52,8	3,5 x 60°	21
WT050-WK32	750071	800	85 – 500	179 – 500	580	302	89	223	52,8	3,5 x 60°	21
WT050-WK34	705106	800	85 – 500	179 – 500	580	302	89	223	52,8	3,5 x 60°	21
WT050-4-WV19	750170	*	115 – 500	203 – 500	540	230	56	178	31,2	3,5 x 60°	16
WT050-WV39	750127	800	85 – 500	179 – 500	580	302	89	223	52,8	3,5 x 60°	21
WT050-WV85	750056	800	85 – 500	179 – 500	580	302	68	223	52,8	3,5 x 60°	21
WT050-WV86	750150	800	85 – 500	179 – 500	580	302	68	223	52,8	3,5 x 60°	21
WT053-WV40	750072	780	100 – 530	194 – 530	595	318	71	225	57,9	3,5 x 60°	21
WT053-WV41	750125	780	100 – 530	194 – 530	595	318	71	225	57,9	3,5 x 60°	21
WT063-WK35	750075	650	170 – 630	264 – 630	700	373	70	249	72	3,5 x 60°	21
WT063-WK37	750076	650	170 – 630	264 – 630	700	373	70	249	72	3,5 x 60°	21
WT063-WK38	750116	650	170 – 630	264 – 630	700	373	70	249	72	3,5 x 60°	21
WT063-WK40	750077	650	170 – 630	264 – 630	700	373	70	249	72	3,5 x 60°	21
WT063-WV42	750094	650	170 – 630	264 – 630	700	373	74	249	72	3,5 x 60°	21
WT063-WV90	750051	650	170 – 630	264 – 630	700	373	74	249	72	3,5 x 60°	21
WT063-WV92	750074	650	170 – 630	264 – 630	700	373	74	249	72	3,5 x 60°	21
WT063-4-WV23	750152	650	182 – 630	270 – 630	670	280	61	205	54,8	3,5 x 60°	16

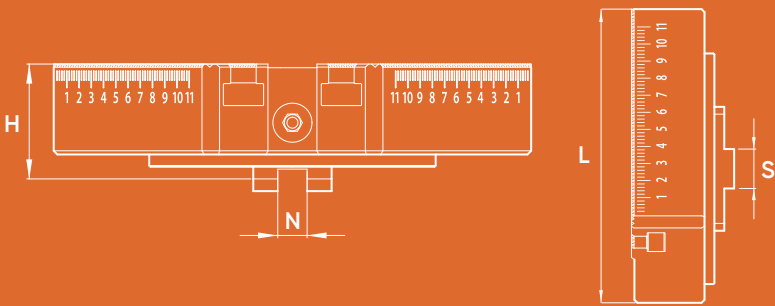


*siehe Bedienungsanleitung
*see Operating Manual

Spitzverzahnung
Serration



Kreuzversatz
Tongue and groove



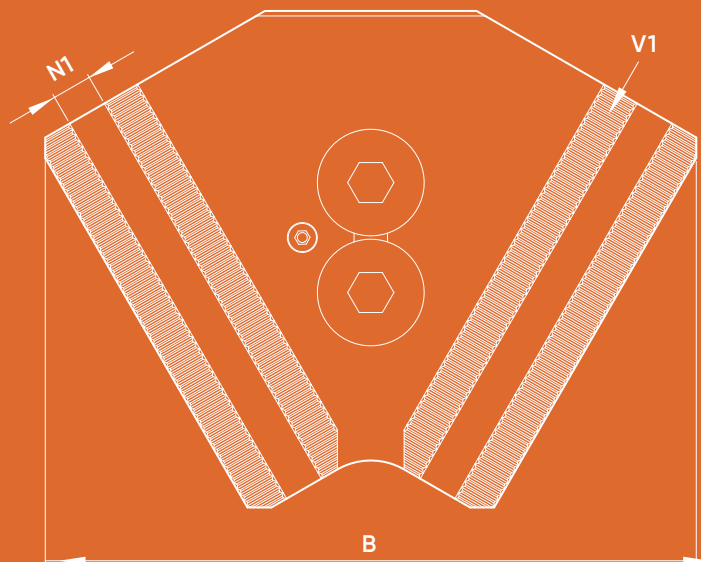
ohne Backen height without s	Länge length L mm	Gewicht/ Satz weight / set kg	Aufsatzbacken- anschluss top-jaw connection	
			Spitzver- zahnung serration V1 mm	Nutbreite slot width N1 mm
	205	54,8	3,5 x 60°	16
	280	54	3,5 x 60°	16
	234	86	3,5 x 60°	16
	288	108,6	3,5 x 60°	25
	288	108,6	3,5 x 60°	25
	288	108,6	3,5 x 60°	25
	288	108,6	3,5 x 60°	25
	288	108,6	3,5 x 60°	25
	288	108,6	3,5 x 60°	25
	288	108,6	3,5 x 60°	25
	288	108,6	3,5 x 60°	25
	268	103,6	3,5 x 60°	21
	286	138	3,5 x 60°	25
	286	138	3,5 x 60°	25
	286	138	3,5 x 60°	25
	286	138	3,5 x 60°	25
	286	138	3,5 x 60°	25
	270	146,4	3,5 x 60°	25
	270	146,4	3,5 x 60°	25
	281	172	3,5 x 60°	25
	281	172	3,5 x 60°	25
	287	177	3,5 x 60°	25
	287	177	3,5 x 60°	25
	287	177	3,5 x 60°	25
	287	177	3,5 x 60°	25
	287	177	3,5 x 60°	25

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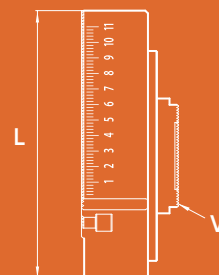
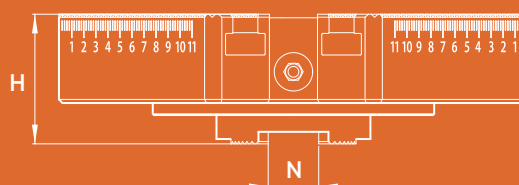
Allgemeine technische Daten
General technical data

INOZet®	Ident-Nr. ident-no.	max. Drehzahl max. r.p.m.	Außenspann- external clamping min. – max.
		1/min	
WT040-4-WV07	750177	*	90 – 4
WT040-4-WV17	750169	*	90 – 4
WT040-4-WV88	750176	*	90 – 4
WT045-WK25	750138	1000	80 – 4
WT045-WV32	750158	1000	80 – 4
WT045-WV35	750143	1000	80 – 4
WT045-WV80	750144	1000	80 – 4
WT050-WK30	750070	800	85 – 5
WT050-WK32	750071	800	85 – 5
WT050-WK34	705106	800	85 – 5
WT050-4-WV19	750170	*	115 – 5
WT050-WV39	750127	800	85 – 5
WT050-WV85	750056	800	85 – 5
WT050-WV86	750150	800	85 – 5
WT053-WV40	750072	780	100 – 5
WT053-WV41	750125	780	100 – 5
WT063-WK35	750075	650	170 – 6
WT063-WK37	750076	650	170 – 6
WT063-WK38	750116	650	170 – 6
WT063-WK40	750077	650	170 – 6
WT063-WV42	750094	650	170 – 6
WT063-WV90	750051	650	170 – 6
WT063-WV92	750074	650	170 – 6
WT063-4-WV23	750152	650	182 – 6

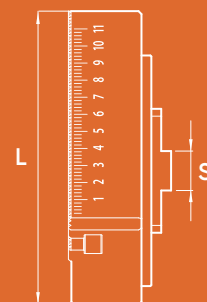
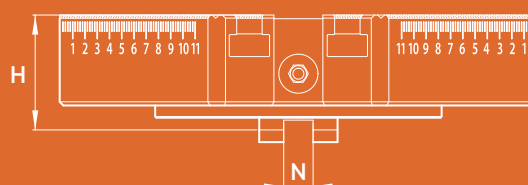
INOZet®



Spitzverzahnung
Serration



Kreuzversatz
Tongue and groove



*siehe Bedienungsanleitung
*see Operating Manual

INOZet®	Ident-Nr. ident-no.	max. Drehzahl max. r.p.m.	Spannbereich grip range		Schwing- kreis ohne Backen swing with- out jaws	Breite width	Höhe ohne Backen height without jaws	Länge length	Gewicht/ Satz weight / set	Aufsatzbacken- anschluss top-jaw connection	
		1/min	Außenspannung external clamping	Innenspannung internal clamping						Spitzver- zahnung serration	Nutbreite slot width
			min. – max./mm	min. – max./mm	Ø mm	B mm	H mm	L mm	kg	V1 mm	N1 mm
WT063-4-WV24	750179	*	182 – 630	270 – 630	670	280	61	205	54,8	3,5 x 60°	16
WT063-4-WV25	750180	*	182 – 630	270 – 630	670	280	61	280	54	3,5 x 60°	16
WT070-4-WV89	750173	*	250 – 700	294 – 700	745	314	68	234	86	3,5 x 60°	16
WT080-WK45	750082	450	250 – 800	362 – 800	880	458	74	288	108,6	3,5 x 60°	25
WT080-WK47	750102	450	250 – 800	362 – 800	880	458	74	288	108,6	3,5 x 60°	25
WT080-WK50	750050	450	250 – 800	362 – 800	880	458	74	288	108,6	3,5 x 60°	25
WT080-WK55	750083	450	250 – 800	362 – 800	880	458	74	288	108,6	3,5 x 60°	25
WT080-WV45	750081	450	250 – 800	362 – 800	880	458	77	288	108,6	3,5 x 60°	25
WT080-WV46	750080	450	250 – 800	362 – 800	880	458	77	288	108,6	3,5 x 60°	25
WT080-WV91	750135	450	250 – 800	362 – 800	880	458	77	288	108,6	3,5 x 60°	25
WT080-WV94	750079	450	250 – 800	362 – 800	880	458	77	288	108,6	3,5 x 60°	25
WT080-WV95	750078	450	250 – 800	362 – 800	880	458	77	288	108,6	3,5 x 60°	25
WT080-4-WV42	750165	*	250 – 800	344 – 800	830	345	74	268	103,6	3,5 x 60°	21
WT100-WK59	750126	450	470 – 1000	582 – 1000	1055	558	74	286	138	3,5 x 60°	25
WT100-WK65	750087	450	470 – 1000	582 – 1000	1055	558	74	286	138	3,5 x 60°	25
WT100-WK67	750145	450	470 – 1000	582 – 1000	1055	558	78	286	138	3,5 x 60°	25
WT100-WV96	750052	450	470 – 1000	582 – 1000	1055	558	82	286	138	3,5 x 60°	25
WT100-WV97	750084	450	470 – 1000	582 – 1000	1055	558	82	286	138	3,5 x 60°	25
WT100-4-WV48	750182	*	470 – 1000	582 – 1000	1055	442	77	270	146,4	3,5 x 60°	25
WT100-4-WV83	750178	*	470 – 1000	582 – 1000	1155	442	80	270	146,4	3,5 x 60°	25
WT120-4-WV48	750183	*	500 – 1150	612 – 1150	1200	500	80	281	172	3,5 x 60°	25
WT120-4-WV83	750181	*	500 – 1200	612 – 1200	1300	500	80	281	172	3,5 x 60°	25
WT125-WK64	750128	300	700 – 1250	812 – 1250	1300	695	74	287	177	3,5 x 60°	25
WT125-WK65	750030	300	700 – 1250	812 – 1250	1300	695	74	287	177	3,5 x 60°	25
WT125-WK67	750146	300	700 – 1250	812 – 1250	1300	695	74	287	177	3,5 x 60°	25
WT125-WV96	750088	300	700 – 1250	812 – 1250	1300	695	82	287	177	3,5 x 60°	25
WT125-WV97	750089	300	700 – 1250	812 – 1250	1300	695	82	287	177	3,5 x 60°	25



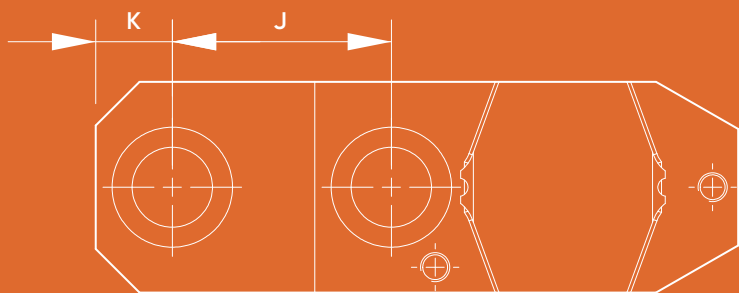
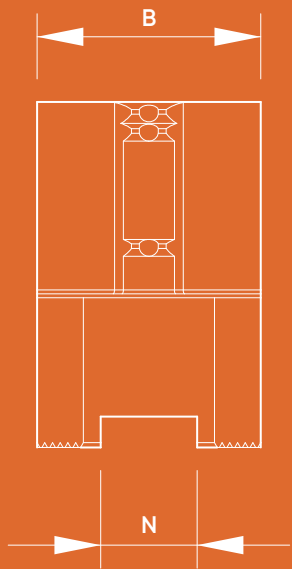
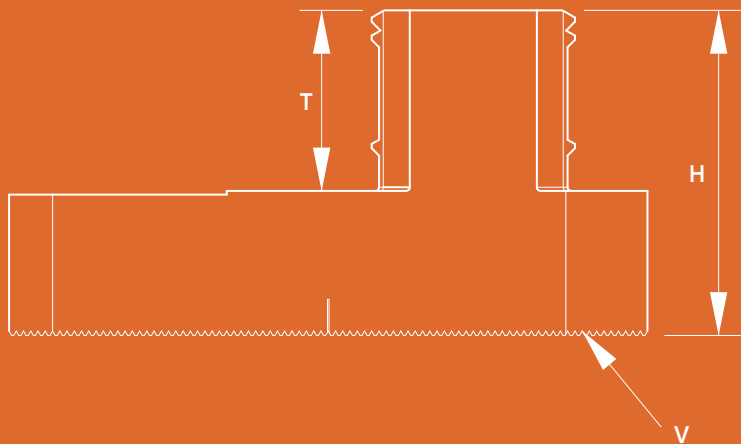
INOZet®

Greiferbacken, hart
Hard adjustagrip-jaws

UNIJaws® Nutensteine siehe Seite 298–309 und Auflagebolzen siehe Seite 312

UNIJaws® t-Nuts see pages 298–309 and height pins see page 312

Passend für compatible to	Backentyp jaw type	Ident-Nr. ident-no.	Abmaße dimensions		Bohrungsabstände hole spacing		Spannbereich grip range	
			Breite width B mm	Höhe height H mm	K mm	J mm	Außenspannung external clamping min. – max./ mm	Innenspannung internal clamping min. – max./ mm
WT021	WU10	760010	27	35	10	18	50 – 210	110 – 210
WT022							50 – 225	110 – 225
WT025-4	WU10-8	760011	27	35	10	18	63 – 260	123 – 260
WT025	WU12	760012	35	48	12	20	60 – 250	134 – 250
WT031							65 – 315	139 – 315
WT031-21							65 – 315	139 – 315
WT031-4	WU12-8	760013	35	48	12	20	82 – 315	156 – 315
WT038	WU16*	760016	38	50	13	30	70 – 380	158 – 380
WT040							70 – 400	158 – 400
WT040-20							80 – 400	168 – 400
WT045							80 – 450	168 – 450
WT038	WR16	760161	38	50	13	30	70 – 380	158 – 380
WT040							70 – 400	158 – 400
WT040-20							80 – 400	168 – 400
WT045							80 – 450	168 – 450
WT040-4	WR16-8	760162	38	50	13	30	90 – 400	178 – 400
WT050-4							115 – 500	203 – 500
WT063-4							182 – 630	270 – 630
WT070-4							250 – 700	294 – 700
WT050	WR21	760121	48	60	18	30	85 – 500	179 – 500
WT053							100 – 530	194 – 530
WT063							170 – 630	264 – 630
WT080-4	WR21-8	760122	48	60	18	30	250 – 800	344 – 800
WT080	WR25	760125	58	90	21	60	250 – 800	362 – 800
WT100							470 – 1000	582 – 1000
WT125							700 – 1250	812 – 1250
WT100-4	WR25-8	760126	58	90	21	60	470 – 1000	582 – 1000
WT120-4							500 – 1150/1200	612 – 1150/1200



* bis 2012
* until 2012

Typ type	Gewicht pro Satz weight per set kg	Nutenstein t-nut
I	1,8	GP05
I	2,4	GP05
I	5,3	GP07
I	7,0	GP07
I	7,7	GP11
I	7,7	GP11
I	10,3	GP11
II	12,6	GP13
II	16,9	GP13
II	19,6	GP21
II	26,1	GP21

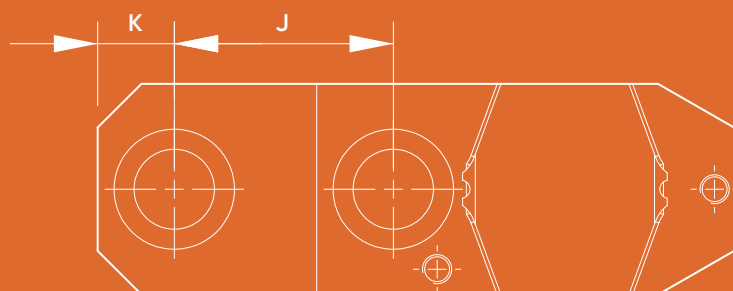
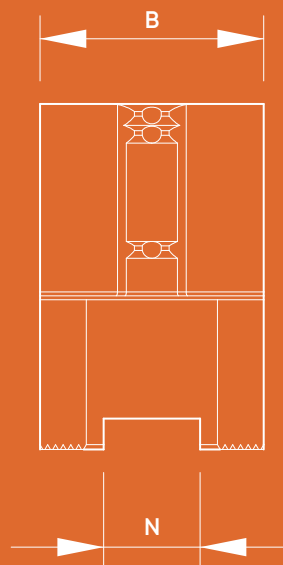
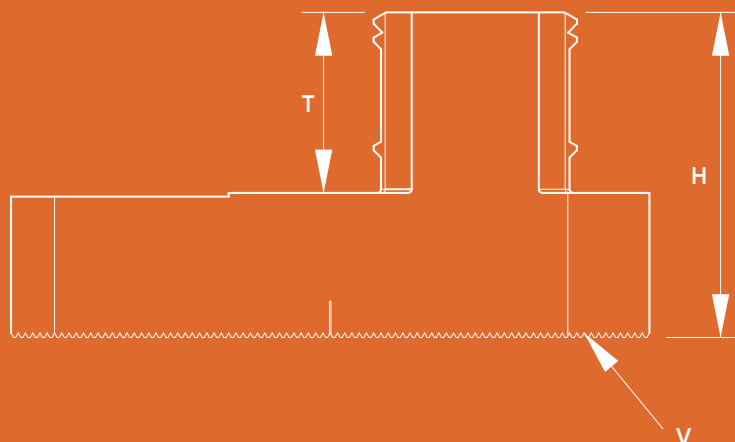
INOZet®

Greiferbacken, hart
Hard adjustagrip-jaws

Passend für compatible to	Backentyp jaw type	Ident- ident-identification
WT021	WU10	760010
WT022		
WT025-4		
WT025		
WT031		
WT031-21	WU10-8	760011
WT031-4		
WT038		
WT040		
WT040-20		
WT045	WU12	760012
WT038		
WT040		
WT040-20		
WT045		
WT038	WU12-8	760013
WT040		
WT040-20		
WT045		
WT040-4		
WT050-4	WU16*	760016
WT063-4		
WT070-4		
WT050		
WT053		
WT063	WR16	760161
WT080-4		
WT080		
WT100		
WT125		
WT100-4	WR16-8	760162
WT120-4		
WT080-4		
WT080		
WT100		
WT125	WR21	760121
WT100-4		
WT120-4		
WT080-4		
WT080		
WT100	WR21-8	760122
WT125		
WT100-4		
WT120-4		
WT080-4		
WT080	WR25	760125
WT100		
WT125		
WT100-4		
WT120-4		
WT080-4	WR25-8	760126
WT080		
WT100		
WT125		
WT100-4		

INOZet®

Greiferbacken
Adjustagrip-jaws



* bis 2012
* until 2012

Spitzverzahnung serration	Nutbreite slot width	Einspanntiefe clamping depth	Schwingkreis swing diameter	Werkstoff material	Typ type	Gewicht pro Satz weight per set	Nutenstein t-nut
V mm	N mm	T mm	Ø mm			kg	
2.0mm x 60°	10	15	295	16MnCr5	I	1,8	GP05
			310				
2.0mm x 60°	10	15	355	16MnCr5	I	2,4	GP05
2.0mm x 60°	12	25	355	16MnCr5	I	5,3	GP07
			420				
			420				
2.0mm x 60°	12	25	420	16MnCr5	I	7,0	GP07
2.0mm x 60°	16	25	490	16MnCr5	I	7,7	GP11
			510				
			560				
			560				
3.5mm x 60°	16	25	490	16MnCr5	I	7,7	GP11
			510				
			560				
			560				
3.5mm x 60°	16	25	510	16MnCr5	I	10,3	GP11
			610				
			740				
			810				
3.5mm x 60°	21	30	635	16MnCr5	II	12,6	GP13
			665				
			765				
3.5mm x 60°	21	30	935	16MnCr5	II	16,9	GP13
3.5mm x 60°	25	30	955	16MnCr5	II	19,6	GP21
			1155				
			1405				
3.5mm x 60°	25	30	1155	16MnCr5	II	26,1	GP21
			1355				

INOZet®

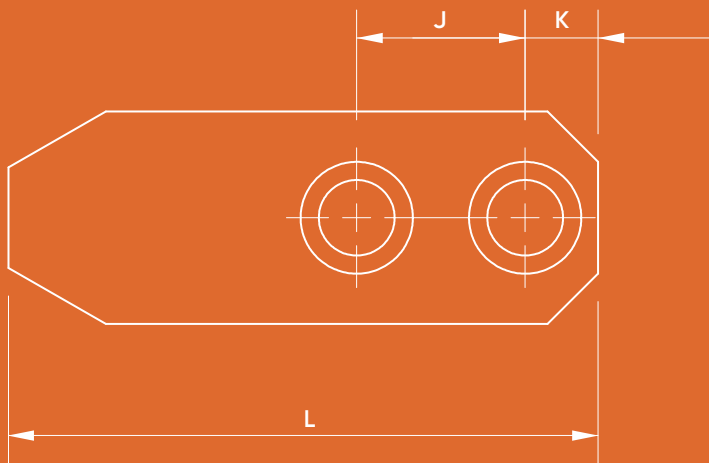
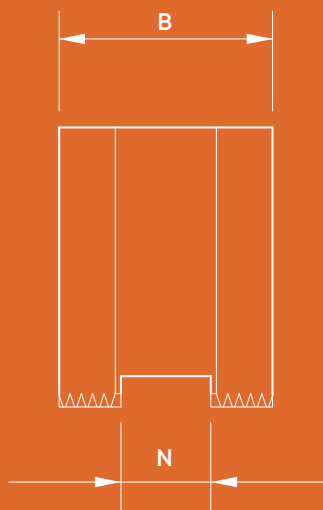
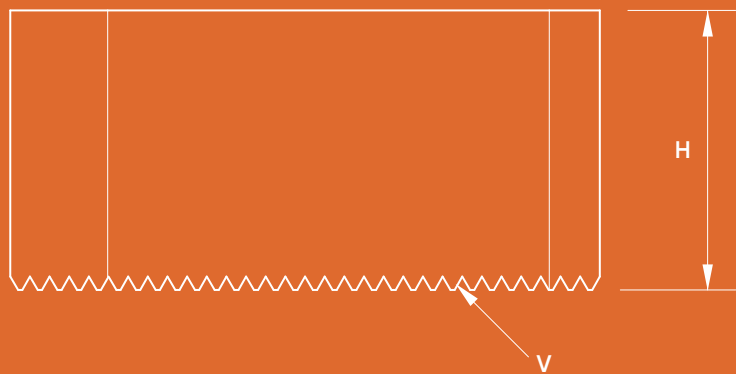
Weiche Aufsatzbacken

Soft top-jaws

* bis 2012

* until 2012

Passend für compatible to	Backen- typ jaw type	Ident-Nr. ident-no.	Abmaße dimensions			Bohrungsabstände hole spacing		Spitzverzäh- nung serration	Nutbreite slot width	Nutenstein t-nut	Werkstoff material	Typ type	Gewicht pro Satz weight per set kg
			Breite width B mm	Höhe height H mm	Länge length L mm	K mm	J mm						
WT022	WI10	770010	27	35	80	10	18	2,0mm x 60°	10	GP05	16MnCr5	I	2,6
	WI30	770030	27	35	80	10	18	2,0mm x 60°	10	GP05	Aluminium	I	0,9
	WI31	770031	27	35	80	31	18	2,0mm x 60°	10	GP05	16MnCr5	I	2,5
	WI32	770032	40	35	80	10	18	2,0mm x 60°	10	GP05	Aluminium	I	1,5
	WI33	770033	27	50	80	10	18	2,0mm x 60°	10	GP05	Aluminium	I	1,4
WT025-4	WI10-8	770011	27	35	80	10	18	2,0mm x 60°	10	GP05	16MnCr5	I	3,4
WT025 WT031	WI12	770012	35	48	90	12	20	2,0mm x 60°	12	GP07	16MnCr5	I	5,3
	WI40	770040	35	48	90	12	20	2,0mm x 60°	12	GP07	Aluminium	I	1,8
	WI41	770041	35	48	90	35	20	2,0mm x 60°	12	GP07	16MnCr5	I	5,1
	WI42	770042	50	48	90	12	20	2,0mm x 60°	12	GP07	Aluminium	I	2,9
	WI43	770043	35	70	90	12	20	2,0mm x 60°	12	GP07	Aluminium	I	2,8
WT031-4	WI12-8	770013	35	48	90	12	20	2,0mm x 60°	12	GP07	16MnCr5	I	7,0
WT038 WT040 WT045	WI16 *	770016	38	50	106	13	30	2,0mm x 60°	16	GP11	16MnCr5	I	7,8
	WI50 *	770050	38	50	106	13	30	2,0mm x 60°	16	GP11	Aluminium	I	2,5
	WI51 *	770051	38	50	106	38	30	2,0mm x 60°	16	GP11	16MnCr5	I	6,8
	WI52 *	770052	60	50	106	13	30	2,0mm x 60°	16	GP11	16MnCr5	I	12,4
	WI53 *	770053	38	75	106	13	30	2,0mm x 60°	16	GP11	16MnCr5	I	10,7
WT038 WT040 WT045	WP16	770116	38	50	105	13	30	3,5mm x 60°	16	GP11	16MnCr5	I	7,7
	WP50	770150	38	50	105	13	30	3,5mm x 60°	16	GP11	Aluminium	I	2,5
	WP51	770151	38	50	105	38	30	3,5mm x 60°	16	GP11	16MnCr5	I	6,9
	WP52	770152	60	50	105	13	30	3,5mm x 60°	16	GP11	16MnCr5	I	12,3
	WP53	770153	38	75	105	13	30	3,5mm x 60°	16	GP11	16MnCr5	I	10,6
WT040-4 WT050-4 WT063-4 WT070-4	WP16-8	770117	38	50	105	13	30	3,5mm x 60°	16	GP11	16MnCr5	I	10,3



steine siehe Seite 298–309 und Auflagebolzen siehe Seite 312
ws® t-Nuts see pages 298–309 and height pins see page 312

Seite width	Nutenstein t-nut	Werkstoff material	Typ type	Gewicht pro Satz weight per set kg
	GP13	16MnCr5	II	12,6
	GP13	Aluminium	II	4,4
	GP13	16MnCr5	II	12,6
	GP13	16MnCr5	I	19,0
	GP13	16MnCr5	I	19,2
	GP13	16MnCr5	II	16,9
	GP21	16MnCr5	II	32,5
	GP21	Aluminium	II	11,4
	GP21	16MnCr5	I	32,3
	GP21	16MnCr5	I	51,9
	GP21	16MnCr5	II	47,3
	GP21	16MnCr5	II	43,3

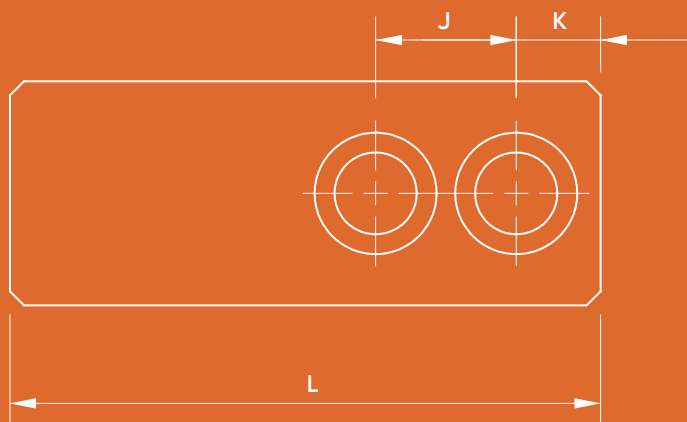
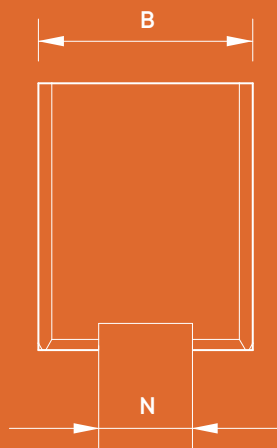
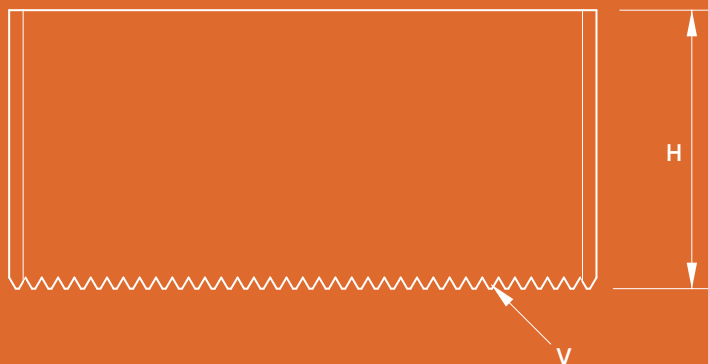
INOZet®

Weiche Aufsatzbacken
Soft top-jaws

INOZet®

Weiche Aufsatzbacken - Typ II
Soft top-jaws - type II

Passend für compatible to	Backen- typ jaw type	Ident-Nr. ident-no.	Abmaße dimensions		
			Breite width B mm	Höhe height H mm	Länge length L mm
WT022	WI10	770010	27	35	80
	WI30	770030	27	35	80
	WI31	770031	27	35	80
	WI32	770032	40	35	80
	WI33	770033	27	50	80
WT025-4	WI10-8	770011	27	35	80
WT025 WT031	WI12	770012	35	48	90
	WI40	770040	35	48	90
	WI41	770041	35	48	90
	WI42	770042	50	48	90
	WI43	770043	35	70	90
WT031-4	WI12-8	770013	35	48	90
WT038 WT040 WT045	WI16 *	770016	38	50	100
	WI50 *	770050	38	50	100
	WI51 *	770051	38	50	100
	WI52 *	770052	60	50	100
	WI53 *	770053	38	75	100
WT038 WT040 WT045	WP16	770116	38	50	100
	WP50	770150	38	50	100
	WP51	770151	38	50	100
	WP52	770152	60	50	100
	WP53	770153	38	75	100
WT040-4 WT050-4 WT063-4 WT070-4	WP16-8	770117	38	50	100



INOZet®

Weiche Aufsatzbacken

Soft top-jaws



UNI-Jaws® Nutensteine siehe Seite 298–309 und Auflagebolzen siehe Seite 312

UNI-Jaws® t-Nuts see pages 298–309 and height pins see page 312

Passend für compatible to	Backen- typ jaw type	Ident-Nr. ident-no.	Abmaße dimensions			Bohrungsabstände hole spacing		Spitzverzahn- ung serration	Nutbreite slot width	Nutenstein t-nut	Werkstoff material	Typ type	Gewicht pro Satz weight per set
			Breite width	Höhe height	Länge lenght	K mm	J mm						V mm
			B mm	H mm	L mm			K mm	J mm				
WT050	WP21	770121	48	60	126	18	30	3,5mm x 60°	21	GP13	16MnCr5	II	12,6
WT053	WP60	770160	48	60	126	18	30	3,5mm x 60°	21	GP13	Aluminium	II	4,4
WT063	WP61	770161	48	60	126	48	30	3,5mm x 60°	21	GP13	16MnCr5	II	12,6
	WP62	770162	70	60	126	18	30	3,5mm x 60°	21	GP13	16MnCr5	I	19,0
	WP63	770163	48	90	126	18	30	3,5mm x 60°	21	GP13	16MnCr5	I	19,2
WT080-4	WP21-8	770122	48	60	126	18	30	3,5mm x 60°	21	GP13	16MnCr5	II	16,9
WT080	WP25	770125	58	90	175	21	60	3,5mm x 60°	25	GP21	16MnCr5	II	32,5
WT100	WP70	775025	58	90	175	21	60	3,5mm x 60°	25	GP21	Aluminium	II	11,4
WT125	WP71	770128	58	90	175	57,5	60	3,5mm x 60°	25	GP21	16MnCr5	I	32,3
	WP72	770172	85	90	175	21	60	3,5mm x 60°	25	GP21	16MnCr5	I	51,9
	WP73	770173	58	130	175	21	60	3,5mm x 60°	25	GP21	16MnCr5	II	47,3
WT100-4 WT120-4	WP25-8	770126	58	90	175	21	60	3,5mm x 60°	25	GP21	16MnCr5	II	43,3



Das **INOTop®** Spannsystem kann auf nahezu jedem vorhandenen Spannfutter ab einer Durchmessergröße von 260 mm, unabhängig vom Backenanschluss verwendet werden. Verformungen durch den Spannprozess sind damit kein Thema mehr.

The **INOTop®** clamping system can be used on almost any existing chuck from a diameter of 260 mm, no matter which jaw connection is used. Deformations caused by the clamping process are therefore no longer an issue.

INOTop®

Spannen ohne Druck
Clamping without pressure

OPTIMALE RUNDHEIT DURCH GEGENLAGER

Mit **INOTop®** erreichen Sie höchste Rundheiten durch das Prinzip des „festen Gegenlagers“. Speziell dünnwandige Bauteile können mit **INOTop®** polygonfrei gespannt werden.

- Zentrieren des Bauteils ohne Druck von außen
- Für polygonfreies Spannen
- Perfekte Rundheitsergebnisse
- Definierte Krafteinleitung durch die bewegliche Spannbacke
- Kostengünstig in der Anschaffung
- Keine teuren Sonderspannlösungen notwendig

OPTIMAL ROUNDNESS DUE TO COUNTER BEARINGS

INOTop® produces best roundness results thanks to the fixed counter bearing principle. By using **INOTop®**, thin-walled parts in particular can be clamped without polygon formation.

- Part is centred without pressure from outside for clamping
- Without polygon formation
- Perfect roundness results
- Defined clamping force by the moveable jaw
- Low-costs
- No expensive special clamping solutions needed

Verformungsarm Spannen

Low deformation clamping

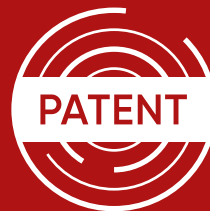
SPANNEN OHNE DRUCK

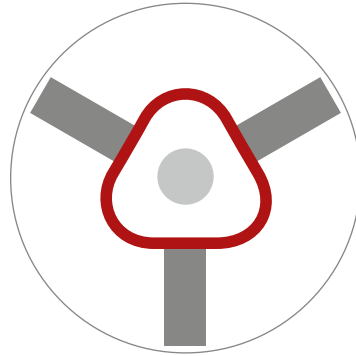
Die innovative **INO^{Top}**-Hybridspannbacke von HWR wurde speziell für verformungsempfindliche Bauteile in der Drehbearbeitung konzipiert. Verformungsempfindliche Bauteile werden im herkömmlichen Spannfutter mit **INO^{Top}** ohne Druck von außen über die Futterfunktion nur zentriert und dann von innen gespannt. Damit verhindert **INO^{Top}** unerwünschte Polygonbildungen im Spannprozess. Drehergebnisse, die zuvor nur mit kostenintensiven Sonderspannlösungen zu realisieren waren, können nun ganz einfach mit der **INO^{Top}**-Hybridspannbacke von HWR günstig erreicht werden. Mit **INO^{Top}** erreichen Sie höchste Rundheiten durch das Prinzip des festen Gegenlagers.



CLAMPING WITHOUT PRESSURE

*The innovative **INO^{Top}** hybrid clamping jaw by HWR was designed specifically for turning deformation-sensitive parts. In conventional chucks with **INO^{Top}**, components that are sensitive to deformation are simply centred without external pressure via the chuck function and then clamped from the inside. **INO^{Top}** thus prevents unwanted polygon formation. Turning results that were previously only possible with costly special clamping solutions can now be achieved at low cost quite easily. With the innovative **INO^{Top}** hybrid clamping jaws by HWR, **INO^{Top}** produces best roundness results thanks to the fixed counter bearing principle.*



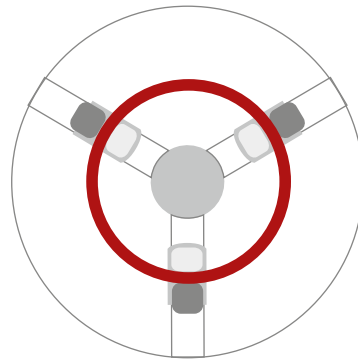


Herkömmliche 3-Punkt-Spannung
Conventional 3-point clamping

DAS FUNKTIONSPRINZIP

Beim herkömmlichen Spannen wird der Spanndruck über die Spannpunkte in das Werkstück eingeleitet. Bei dünnwandigen Werkstücken nimmt dieser Spanndruck erheblichen Einfluss auf die Geometrie des Werkstücks. Die Folge ist eine Verformung durch den Spannprozess, welche sich negativ auf die Rundheitsergebnisse auswirkt.

Bei der Verwendung von **INOTop®** wird die Funktion des Spannfutters nur zum Zentrieren des Werkstücks und nicht für den Spannprozess selbst verwendet. Das bedeutet, dass der Spanndruck so weit reduziert werden kann, dass nach dem Zentrieren des Werkstücks kein weiterer Spanndruck ins Werkstück eingeleitet wird. Im Anschluss an den Zentriervorgang wird nun über die manuelle Betätigung der Spindel in der **INOTop®**-Backe die bewegliche Greiferbacke von innen gegen die Zentrierung, das feste Gegenlager, gezogen. Die Spannung findet ohne Einfluss auf die Werkstückgeometrie statt.



Das **INOTop®**-Gegenlagerprinzip
The **INOTop®** counter bearing principle

HOW IT WORKS

In conventional clamping, the clamping pressure is introduced into the workpiece via the clamping points. With thin-walled workpieces, this clamping pressure has a considerable influence on the geometry of the workpiece. The result is a deformation due to the clamping process, which has a negative effect on the roundness results.

*When **INOTop®** is used, the function of the chuck is only used for centering the workpiece and not for the clamping process itself. This means that the clamping pressure can be reduced to such an extent that no further clamping pressure is applied to the workpiece after the workpiece has been centered. Following the centering process, the moving gripper jaw is now pulled from the inside against the centering, the fixed counter support, by manually actuating the spindle in the **INOTop®** jaw. The clamping has no influence on the workpiece geometry.*

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Futterspezifische Daten

Chuck specific data

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Futterhersteller chuck manufacturer	Futtertyp chuck type	Futter- größe chuck size	Backenanschluss des Futters jaw-connection of the chuck		Type- zeichnung type de- signation	Ident-Nr. ident-no.	Spannbereich [aussen] clamping range [external] min.–max./mm	Bauteilwand- stärke wall thickness of workpiece min.–max./mm	Schwing- kreis swing Ø mm	* Benötigter Nutenstein * needed t-nut
			ø mm	S mm / V						
Auto Strong	N-208	210	V = 1,5mm x 60°	N = 14	TM030	813030	150 – 210	3 – 25	290	GP09
	V-208		V = 1,5mm x 60°	N = 14	TM030	813030	150 – 210	3 – 25	290	GP08
	N-210	254	V = 1,5mm x 60°	N = 16	TM040	813040	165 – 254	3 – 25	335	TT70
	V-210		V = 1,5mm x 60°	N = 16	TM040	813040	160 – 254	3 – 25	335	TT22
	N-212	304	V = 1,5mm x 60°	N = 21	TM052	813052	195 – 304	3 – 25	385	TT40
	V-212		V = 1,5mm x 60°	N = 18	TM050	813050	185 – 304	3 – 25	385	GN78
	N-215	381	V = 1,5mm x 60°	N = 22	TM060	813060	275 – 381	6 – 50	490	GP15
	V-215		V = 1,5mm x 60°	N = 25,5	TM060	813060	275 – 381	6 – 50	490	X5507
	N-218	450	V = 3,0mm x 60°	N = 25,5	TM060	813060	275 – 450	6 – 50	560	GP15
	V-218		V = 3,0mm x 60°	N = 25,5	TM060	813060	335 – 450	6 – 50	560	X5507
	N-220	510	V = 3,0mm x 60°	N = 25,5	TM080	813080	345 – 510	6 – 50	620	GP15
	N-221	530	V = 3,0mm x 60°	N = 25,5	TM080	813080	295 – 530	6 – 50	640	X5507
	V-221		V = 3,0mm x 60°	N = 25,5	TM080	813080	295 – 530	6 – 50	640	
	N-224	610	V = 3,0mm x 60°	N = 25,5	TM080	813080	405 – 610	6 – 50	720	
	V-224		V = 3,0mm x 60°	N = 25,5	TM080	813080	375 – 610	6 – 50	720	
	V-232	810	V = 3,0mm x 60°	N = 25,5	TM080	813080	335 – 810	6 – 50	920	
Bison	3200 / 3500 – 200	200	S = 7,94	N = 12,69	TZ031	814031	150 – 200	3 – 25	280	
	3200 / 3500 – 250	250	S = 12,7	N = 19,04	TZ040	814040	150 – 250	3 – 25	330	
	3200 / 3500 – 315	315	S = 12,7	N = 19,04	TZ043	814043	185 – 315	3 – 25	395	
	3200 / 3500 – 400	400	S = 12,7	N = 19,04	TZ060	814060	250 – 400	6 – 50	510	
	3200 / 3500 – 500	500	S = 12,7	N = 19,04	TZ063	814063	250 – 500	6 – 50	610	
Forkardt	F+ 200	200	S = 10	N = 20	TK030	811030	150 – 206	3 – 25	290	
	FNC 200		S = 10	N = 20	TK030	811030	150 – 206	3 – 25	290	
	KTG / KTN 200		V = 1/16" x 90°	N = 17	TD040	812040	150 – 200	3 – 25	280	GG20
	NH / NHF 200		V = 1/16" x 90°	N = 17	TD040	812040	150 – 200	3 – 25	280	GG20
	QLC / QLK 200		V = 1,5mm x 60°	N = 14	TM030	813030	155 – 210	3 – 25	290	*
	QLC / QLK 200		V = 1/16" x 90°	N = 17	TD040	812040	150 – 210	3 – 25	290	GG20
	QLC-KS / QLK-KS 200		V = 1/16" x 90°	N = 17	TD040	812040	155 – 200	3 – 25	280	GG20

* Sondernutenstein
* special t-nut

Futterhersteller chuck manufacturer	Futtertyp chuck type	Futter- größe chuck size ø mm	Backenanschluss des Futters jaw-connection of the chuck		Type- zeichnung type de- signation	Ident-Nr. ident-no.	Spannbereich [ausßen] clamping range [external] min.-max./mm	Bauteilwand- stärke wall thickness of workpiece min.-max./mm	Schwing- kreis swing Ø mm	* Benötigter Nutenstein * needed t-nut
			S mm / V	N mm						
Forkardt	F+ 250	250	S = 12	N = 20	TK040	811040	150 - 255	3 - 25	335	
	FNC 250		S = 12	N = 20	TK040	811040	150 - 250	3 - 25	330	
	KTG / KTN 250		V = 1/16" x 90°	N = 21	TD046	812046	150 - 250	3 - 25	330	TT35
	KTNC 250		S = 12	N = 20	TK040	811040	150 - 225	3 - 25	305	
	NH / NHF 250		V = 1/16" x 90°	N = 21	TD046	812046	155 - 250	3 - 25	330	TT35
	QLC / QLK 250		V = 1,5mm x 60°	N = 16	TM040	813040	165 - 257	3 - 25	340	TT70
	QLC / QLK 250		V = 1/16" x 90°	N = 21	TD046	812046	160 - 257	3 - 25	340	TT35
	QLC-KS / QLK-KS 250		V = 1,5mm x 60°	N = 16	TM040	813040	200 - 257	3 - 25	340	GN16
	QLC-KS / QLK-KS 250		V = 1/16" x 90°	N = 17	TD040	812040	185 - 257	3 - 25	340	GG20
	F+ 315	315	S = 12	N = 26	TK050	811050	150 - 318	3 - 25	400	
	FNC 315		S = 12	N = 20	TK040	811040	150 - 315	3 - 25	395	
	KTG / KTN 315		V = 1/16" x 90°	N = 21	TD046	812046	150 - 315	3 - 25	395	TT35
	KTNC 315		S = 12	N = 20	TK040	811040	150 - 285	3 - 25	365	
	NH / NHF 315		V = 1/16" x 90°	N = 21	TD046	812046	165 - 315	3 - 25	395	TT35
	QLC / QLK 315		V = 1,5mm x 60°	N = 21	TM052	813052	195 - 320	3 - 25	400	TT35
	QLC / QLK 315		V = 1/16" x 90°	N = 21	TD046	812046	175 - 320	3 - 25	400	TT35
	QLC-KS / QLK-KS 315		V = 1,5mm x 60°	N = 21	TM052	813052	245 - 320	3 - 25	400	TT35
	QLC-KS / QLK-KS 315		V = 1/16" x 90°	N = 21	TD046	812046	225 - 320	3 - 25	400	TT35
	F+ 400	400	S = 18	N = 30	TK080	811080	250 - 400	6 - 50	510	
	FNC 400		S = 12	N = 26	TK060	811060	250 - 388	6 - 50	495	
	KTG / KTN 400		V = 3/32" x 90°	N = 25,5	TD066	812066	250 - 400	6 - 50	510	GN40
	KTNC 400		S = 12	N = 26	TK060	811060	250 - 374	6 - 50	480	
	KTNC 400		S = 12	N = 26	TK060	811060	250 - 374	6 - 50	480	
	NHF 400		V = 1/16" x 90°	N = 21	TD060	812060	260 - 400	6 - 50	510	*
	NHF 400		V = 3/32" x 90°	N = 25,5	TD066	812066	260 - 400	6 - 50	510	GN40
	QLC / QLK 400		V = 1,5mm x 60°	N = 21	TM062	813062	280 - 400	6 - 50	510	TT35
	QLC / QLK 400		V = 1/16" x 90°	N = 21	TD060	812060	270 - 400	6 - 50	510	*
	QLC / QLK 400		V = 3/32" x 90°	N = 25,5	TD066	812066	270 - 400	6 - 50	510	GN40
	QLC-KS / QLK-KS 400		V = 1,5mm x 60°	N = 21	TM062	813062	310 - 400	6 - 50	510	TT35
	QLC-KS / QLK-KS 400		V = 1/16" x 90°	N = 21	TD060	812060	295 - 400	6 - 50	510	GN25
	F+ 500	500	S = 18	N = 30	TK080	811080	250 - 500	6 - 50	610	
	FNC 500		S = 18	N = 30	TK080	811080	250 - 500	6 - 50	610	
	KTNC 500		S = 18	N = 30	TK080	811080	250 - 459	6 - 50	565	

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Futterspezifische Daten

Chuck specific data

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Futterhersteller chuck manufacturer	Futtertyp chuck type	Futter- größe chuck size	Backenanschluss des Futters jaw-connection of the chuck		Typbe- zeichnung type de- signation	Ident-Nr. ident-no.	Spannbereich [ausßen] clamping range [external] min.-max./mm	Bauteilwand- stärke wall thickness of workpiece min.-max./mm	Schwing- kreis swing Ø mm	* Benötigter Nutenstein * needed t-nut
			S mm / V	N mm						
HWR	VD026	260	V = 1,5mm x 60°	N = 16	TM040-4	813141	170 – 255	3 – 25	371	TT70
	VK026		V = 1,5mm x 60°	N = 16	TM040-4	813141	170 – 255	3 – 25	371	TT70
	VK-S 026		V = 1,5mm x 60°	N = 16	TM040-4	813141	170 – 255	3 – 25	371	TT70
	VT026		V = 1,5mm x 60°	N = 16	TM040-4	813141	190 – 264	3 – 25	371	TT70
	VT-S 026		V = 1,5mm x 60°	N = 16	TM040-4	813141	190 – 264	3 – 25	371	TT70
	VD031	315	V = 1,5mm x 60°	N = 16	TM040-4	813141	170 – 315	3 – 25	425	TT70
	VK031		V = 1,5mm x 60°	N = 16	TM040-4	813141	170 – 315	3 – 25	425	TT70
	VT031		V = 1,5mm x 60°	N = 16	TM040-4	813141	215 – 315	3 – 25	425	TT70
	VT-S 031		V = 1,5mm x 60°	N = 16	TM040-4	813141	215 – 315	3 – 25	425	TT70
	VD040	400	V = 1,5mm x 60°	N = 21	TM062-4	813162	280 – 400	6 – 50	566	TT65
	VK040		V = 1,5mm x 60°	N = 21	TM062-4	813162	280 – 400	6 – 50	566	TT65
	VK-S 040		V = 1,5mm x 60°	N = 21	TM062-4	813162	280 – 400	6 – 50	566	TT65
	VT040		V = 1,5mm x 60°	N = 21	TM062-4	813162	280 – 400	6 – 50	566	TT65
	VT-S 040		V = 1,5mm x 60°	N = 21	TM062-4	813162	280 – 400	6 – 50	566	TT65
	VL042	420	V = 1,5mm x 60°	N = 16	TM040-4	813141	170 – 420	3 – 25	525	TT70
	VD050	500	V = 3,0mm x 60°	N = 25	TM080-4	813180	280 – 500	6 – 50	660	TT55
	VK050		V = 3,0mm x 60°	N = 25	TM080-4	813180	295 – 500	6 – 50	660	TT55
	VK-S 050		V = 3,0mm x 60°	N = 25	TM080-4	813180	330 – 500	6 – 50	660	TT55
	VT050		V = 3,0mm x 60°	N = 25	TM080-4	813180	335 – 500	6 – 50	660	TT55
	VT-S 050		V = 3,0mm x 60°	N = 25	TM080-4	813180	335 – 500	6 – 50	660	TT55
	VL060	600	V = Modul 2	N = 16	TR060-4	816160	280 – 600	6 – 50	740	GP11
	VD063	630	V = 3,0mm x 60°	N = 25	TM080-4	813180	280 – 630	6 – 50	792	TT55
	VK063		V = 3,0mm x 60°	N = 25	TM080-4	813180	320 – 630	6 – 50	792	TT55
	VK-S 063		V = 3,0mm x 60°	N = 25	TM080-4	813180	320 – 630	6 – 50	792	TT55
	VT-S 063		V = 3,0mm x 60°	N = 25	TM080-4	813180	320 – 630	6 – 50	792	TT55
	VL070	700	V = Modul 2	N = 16	TR060-4	816160	280 – 700	6 – 50	840	GP11
	VD080	800	V = 3,0mm x 60°	N = 25	TM080-4	813180	290 – 800	6 – 50	961	TT55
	VK080		V = 3,0mm x 60°	N = 25	TM080-4	813180	295 – 800	6 – 50	961	TT55

Futterhersteller chuck manufacturer	Futtertyp chuck type	Futter- größe chuck size	Backenanschluss des Futters jaw-connection of the chuck		Type- zeichnung type de- signation	Ident-Nr. ident-no.	Spannbereich [ausßen] clamping range [external]	Bauteilwand- stärke wall thickness of workpiece	Schwing- kreis swing	* Benötigter Nutenstein * needed t-nut
			S mm / V	N mm			min.–max./mm	min.–max./mm	Ø mm	
HWR	VK-S 080	800	V = 3,0mm x 60°	N = 25	TM080-4	813180	295 - 800	6 - 50	961	TT55
	VT-S 080		V = 3,0mm x 60°	N = 25	TM080-4	813180	295 - 800	6 - 50	961	TT55
	VD100	990	V = 3,0mm x 60°	N = 25	TM080-4	813180	290 - 990	6 - 50	1161	TT55
	VK-S 100		V = 3,0mm x 60°	N = 25	TM080-4	813180	335 - 990	6 - 50	1161	TT55
	VL100		V= Modul 2	N = 21	TR080-4	816180	280 - 990	6 - 50	1135	GP13
	VL120	1150	V= Modul 2	N = 21	TR080-4	816180	280 - 1150	6 - 50	1295	GP13
	VL140		V= Modul 2	N = 21	TR080-4	816180	280 - 1400	6 - 50	1545	GP13
	VL160	1600	V= Modul 2	N = 21	TR080-4	816180	280 - 1600	6 - 50	1745	GP13
	VL180	1800	V= Modul 2	N = 21	TR080-4	816180	280 - 1800	6 - 50	1945	GP13
	VL200	2000	V= Modul 2	N = 21	TR080-4	816180	280 - 2000	6 - 50	2145	GP13
HWR INOZet®	WT025	250	V = 2,0mm x 60°	N = 12	TW020	815020	205 - 250	3 - 25	328	GP07
	WT031	315	V = 2,0mm x 60°	N = 12	TW020	815020	205 - 315	3 - 25	393	GP07
	WT031-4		V = 2,0mm x 60°	N = 12	TW020-8	815121	240 - 315	3 - 25	393	GP07
	WT038	380	V = 3,5mm x 60°	N = 16	TW030	815030	325 - 380	6 - 50	484	GP11
	WT040	400	V = 3,5mm x 60°	N = 16	TW030	815030	325 - 400	6 - 50	504	GP11
	WT045	450	V = 3,5mm x 60°	N = 16	TW030	815030	325 - 450	6 - 50	554	GP11
	WT050	500	V = 3,5mm x 60°	N = 21	TW040	815040	325 - 500	6 - 50	604	GP13
	WT050-4		V = 3,5mm x 60°	N = 16	TW030-8	815131	380 - 500	6 - 50	604	GP11
	WT053	530	V = 3,5mm x 60°	N = 21	TW040	815040	325 - 530	6 - 50	634	GP13
	WT063	630	V = 3,5mm x 60°	N = 21	TW040	815040	325 - 630	6 - 50	734	GP13
	WT063-4		V = 3,5mm x 60°	N =16	TW030-8	815131	380 - 630	6 - 50	734	GP11
	WT070-4	700	V = 3,5mm x 60°	N =16	TW030-8	815131	390 700	6 - 50	804	GP11
	WT080-4	800	V = 3,5mm x 60°	N =21	TW040-8	815141	390 800	6 - 50	904	GP13
	Kitagawa	B-208	210	V = 1,5mm x 60°	N = 14	TM030	813030	150 - 210	3 - 25	290
BB-208		V = 1,5mm x 60°		N = 14	TM030	813030	150 - 210	3 - 25	290	GP09
B-10		254	V = 1,5mm x 60°	N = 16	TM040	813040	165 - 254	3 - 25	335	TT22
B-210			V = 1,5mm x 60°	N = 16	TM040	813040	170 - 254	3 - 25	335	TT70
BB-210			V = 1,5mm x 60°	N = 16	TM040	813040	170 - 254	3 - 25	335	TT70
N-10			V = 1,5mm x 60°	N = 16	TM040	813040	165 - 254	3 - 25	335	TT22
B-12			V = 1,5mm x 60°	N = 18	TM050	813050	180 - 304	3 - 25	385	GN78
B-212		304	V = 1,5mm x 60°	N = 21	TM052	813052	195 - 304	3 - 25	385	TT40
N-12			V = 1,5mm x 60°	N = 18	TM050	813050	185 - 304	3 - 25	385	GN78
BB-212			V = 1,5mm x 60°	N = 21	TM052	813052	195 - 315	3 - 25	395	TT36
B-15		381	V = 1,5mm x 60°	N = 22	TM060	813060	275 - 381	6 - 50	490	GP15
B-215			V = 1,5mm x 60°	N = 25,5	TM060	813064	255 - 381	6 - 50	490	X5507
N-15			V = 1,5mm x 60°	N = 25,5	TM060	813064	275 - 381	6 - 50	490	X5507

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Futterspezifische Daten

Chuck specific data

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* Sondernutenstein

* special t-nut

Futterhersteller chuck manufacturer	Futtertyp chuck type	Futter- größe chuck size ø mm	Backenanschluss des Futters jaw-connection of the chuck		Typbe- zeichnung type de- signation	Ident-Nr. ident-no.	Spannbereich [ausßen] clamping range [external] min.-max./mm	Bauteilwand- stärke wall thickness of workpiece min.-max./mm	Schwing- kreis swing Ø mm	* Benötigter Nutenstein * needed t-nut
			S mm / V	N mm						
Kitagawa	B-18	450	V = 1,5mm x 60°	N = 22	TM060	813060	275 – 450	6 – 50	490	GP15
	BB-218		V = 1,5mm x 60°	N = 25,5	TM060	813060	275 – 450	6 – 50	560	X5507
	N-21	530	V = 3,0mm x 60°	N = 25	TM080	813080	330 – 450	6 – 50	560	
	B-21		V = 3,0mm x 60°	N = 25	TM080	813080	285 – 530	6 – 50	640	
	N-24	610	V = 3,0mm x 60°	N = 25	TM080	813080	315 – 530	6 – 50	720	
	B-24		V = 3,0mm x 60°	N = 25	TM080	813080	335 – 610	6 – 50	720	
	NV-24		V = 3,0mm x 60°	N = 25	TM080	813080	380 – 610	6 – 50	720	
	NV-28	700	V = 3,0mm x 60°	N = 25	TM080	813080	380 – 700	6 – 50	810	
Röhm	DURO 200	200	S = 10	N = 20	TK030	811030	150 – 206	3 – 25	290	
	DURO-A 200		S = 10	N = 20	TK030	811030	150 – 206	3 – 25	290	
	DURO-NC 200		S = 10	N = 20	TK030	811030	150 – 215	3 – 25	295	
	DURO-NCES 200		S = 10	N = 20	TK030	811030	150 – 215	3 – 25	295	
	DURO-T 200		S = 10	N = 20	TK030	811030	150 – 206	3 – 25	290	
	KFD 200		V = 1/16" x 90°	N = 17	TD040	812040	150 – 200	3 – 25	280	GE16
	KFD-HE 200		V = 1/16" x 90°	N = 17	TD040	812040	150 – 210	3 – 25	290	GE16
	KFD-HF 200		V = 1/16" x 90°	N = 21	TD046	812046	165 – 200	3 – 25	280	*
	KFD-HS 200		V = 1/16" x 90°	N = 17	TD040	812040	150 – 200	3 – 25	280	GE16
	LVE 200		V = 1/16" x 90°	N = 17	TD040	812040	150 – 200	3 – 25	280	GE16
	ZG / ZS 200		S = 7,96	N = 12,69	TZ030	814030	150 – 200	3 – 25	280	
	DURO-NCSE 210	210	S = 10	N = 20	TK030	811030	150 – 209	3 – 25	290	
	KFD-HE 210		V = 1,5mm x 60°	N = 14	TM030	813030	150 – 210	3 – 25	290	*
	DURO-NCSE 225	225	S = 10	N = 20	TK030	811030	150 – 225	3 – 25	305	
	DURO-NCSE 225		S = 10	N = 20	TK030	811030	150 – 225	3 – 25	305	
	DURO 250	250	S = 12	N = 20	TK040	811040	150 – 255	3 – 25	335	
	DURO-A 250		S = 12	N = 20	TK040	811040	150 – 249	3 – 25	330	
	DURO-NC 250		S = 12	N = 20	TK040	811040	150 – 260	3 – 25	340	
	DURO-NCES 250		S = 12	N = 20	TK040	811040	150 – 260	3 – 25	340	
	DURO-T 250		S = 12	N = 20	TK040	811040	150 – 256	3 – 25	340	

Futterhersteller chuck manufacturer	Futtyp chuck type	Futter- größe chuck size	Backenanschluss des Futters jaw-connection of the chuck		Typbe- zeichnung type de- signation	Ident-Nr. ident-no.	Spannbereich [aussen] clamping range [external]	Bauteilwand- stärke wall thickness of workpiece	Schwing- kreis swing	* Benötigter Nutenstein * needed t-nut
			ø mm	S mm / V			min.-max./mm	min.-max./mm	Ø mm	
Röh ^m	KFD 250	250	V = 1/16" x 90°	N = 21	TD046	812046	160 - 250	3 - 25	330	TT34
	KFD-HE 250		V = 1,5mm x 60°	N = 16	TM040	813040	170 - 254	3 - 25	335	TT70
	KFD-HE 250		V = 1/16" x 90°	N = 21	TD046	812046	165 - 254	3 - 25	335	TT34
	KFD-HS 250		V = 1/16" x 90°	N = 17	TD040	812040	150 - 250	3 - 25	330	GE21/17
	LVE 250		V = 1/16" x 90°	N = 21	TD046	812046	175 - 250	3 - 25	330	TT34
	ZG / ZS 250		S = 12,72	N = 19,03	TZ040	814040	150 - 250	3 - 25	330	
	DURO-NCSE 265	265	S = 12	N = 20	TK040	811040	150 - 261	3 - 25	345	
	DURO 315	315	S = 12	N = 26	TK050	811050	152 - 318	3 - 25	400	
	DURO-NC 315		S = 12	N = 26	TK050	811050	154 - 320	3 - 25	400	
	DURO-NCES 315		S = 12	N = 20	TK040	811040	150 - 315	3 - 25	395	
	DURO-NCSE 315		S = 12	N = 26	TK050	811050	150 - 315	3 - 25	395	
	DURO-T 315		S = 12	N = 26	TK050	811050	150 - 322	3 - 25	405	
	KFD 315		V = 1/16" x 90°	N = 21	TD046	812046	175 - 290	3 - 25	370	TT34
	KFD-HE 315		V = 1,5mm x 60°	N = 21	TM052	813052	220 - 315	3 - 25	395	X6115
	KFD-HE 315		V = 1/16" x 90°	N = 21	TD046	812046	210 - 315	3 - 25	395	TT34
	KFD-HS 315		V = 1/16" x 90°	N = 21	TD046	812046	175 - 315	3 - 25	395	TT34
	LVE 315		V = 1/16" x 90°	N = 21	TD046	812046	190 - 315	3 - 25	395	TT34
	ZG / ZS 315		S = 12,72	N = 19,03	TZ043	814043	185 - 315	3 - 25	395	
	ZG / ZS 350	350	S = 12,72	N = 19,03	TZ060	814060	250 - 350	6 - 50	460	
	DURO 400	400	S = 18	N = 30	TK080	811080	250 - 400	6 - 50	510	
	DURO-NC 400		S = 18	N = 30	TK080	811080	250 - 400	6 - 50	510	
	DURO-NCES 400		S = 12	N = 26	TK060	811060	250 - 375	6 - 50	485	
	DURO-T 400		S = 18	N = 30	TK080	811080	250 - 407	6 - 50	515	
	KFD 400		V = 3/32" x 90°	N = 25,5	TD066	812066	265 - 400	6 - 50	510	GE40
	KFD-HE 400		V = 3/32" x 90°	N = 25,5	TD066	812066	285 - 400	6 - 50	510	GE40
	KFD-HS 400		V = 3/32" x 90°	N = 25,5	TD066	812066	280 - 400	6 - 50	510	GE40
	LVE 420		V = 3/32" x 90°	N = 25,5	TD066	812066	315 - 400	6 - 50	510	GE40
	LVE 480		V = 3/32" x 90°	N = 25,5	TD066	812066	365 - 400	6 - 50	510	GE40
	ZG / ZS 350		S = 12,72	N = 19,03	TZ060	814060	250 - 400	6 - 50	510	
	ZG / ZS 350		S = 12,72	N = 19,03	TZ060	814060	250 - 400	6 - 50	510	
	ZG / ZS 400		S = 12,72	N = 19,03	TZ060	814060	250 - 350	6 - 50	460	
	ZG / ZS 400		S = 12,72	N = 19,03	TZ060	814060	250 - 400	6 - 50	510	
	DURO 500	500	S = 18	N = 30	TK080	811080	250 - 500	6 - 50	610	
	DURO-NC 500		S = 18	N = 30	TK080	811080	250 - 500	6 - 50	610	
	DURO-T 500		S = 18	N = 30	TK080	811080	250 - 507	6 - 50	615	
	ZG / ZS 500		S = 12,72	N = 19,03	TZ063	814063	250 - 500	6 - 50	610	
	DURO-NCSE 630	630	S = 18	N = 30	TK080	811080	250 - 583	6 - 50	690	

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Futterspezifische Daten

Chuck specific data

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Futterhersteller chuck manufacturer	Futtertyp chuck type	Futter- größe chuck size	Backenanschluss des Futters jaw-connection of the chuck		Typbe- zeichnung type de- signation	Ident-Nr. ident-no.	Spannbereich [aussen] clamping range [external] min.-max./mm	Bauteilwand- stärke wall thickness of workpiece min.-max./mm	Schwing- kreis swing Ø mm	* Benötigter Nutenstein * needed t-nut
			S mm / V	N mm						
Samchully	HC-08	210	V = 1,5mm x 60°	N = 14	TM030	813030	155 – 210	3 – 25	290	GP08
	HCH-08		V = 1,5mm x 60°	N = 14	TM030	813030	150 – 210	3 – 25	290	GP08
	HH-208 / MH-208		V = 1,5mm x 60°	N = 14	TM030	813030	155 – 210	3 – 25	290	GP09
	HS-08		V = 1,5mm x 60°	N = 14	TM030	813030	150 – 210	3 – 25	290	GP09
	HC-10	254	V = 1,5mm x 60°	N = 16	TM040	813040	165 – 254	3 – 25	335	TT22
	HCH-10		V = 1,5mm x 60°	N = 16	TM040	813040	165 – 254	3 – 25	335	TT22
	HH-210 / MH-210		V = 1,5mm x 60°	N = 16	TM040	813040	195 – 254	3 – 25	335	TT70
	HS-10		V = 1,5mm x 60°	N = 16	TM040	813040	160 – 254	3 – 25	335	TT70
	HC-12	304	V = 1,5mm x 60°	N = 18	TM050	813050	185 – 304	3 – 25	385	GN78
	HCH-12		V = 1,5mm x 60°	N = 18	TM050	813050	180 – 304	3 – 25	385	GN78
	HS-12		V = 1,5mm x 60°	N = 21	TM052	813052	185 – 304	3 – 25	385	TT40
	HH-212 / MH-212	315	V = 1,5mm x 60°	N = 21	TM052	813052	205 – 315	3 – 25	395	TT40
	HC-15	381	V = 1,5mm x 60°	N = 25,5	TM060	813060	275 – 381	6 – 50	490	X5507
	HCH-15 / HCH-18		V = 1,5mm x 60°	N = 22	TM060	813060	275 – 381	6 – 50	490	GP15
Schunk	ROTA G 200	200	S = 10	N = 20	TK030	811030	153 – 206	3 – 25	290	
	ROTA S plus 200		S = 10	N = 20	TK030	811030	150 – 206	3 – 25	290	
	ROTA NC 210	210	V = 1,5mm x 60°	N = 14	TM030	813030	150 – 210	3 – 25	290	GP08
	ROTA NC 210		V = 1/16" x 90°	N = 17	TD040	812040	150 – 210	3 – 25	290	GF212
	ROTA NCF 210		V = 1,5mm x 60°	N = 14	TM030	813030	150 – 210	3 – 25	290	GP08
	ROTA NCF 210		V = 1/16" x 90°	N = 17	TD040	812040	150 – 210	3 – 25	290	GF212
	ROTA NCK 210		V = 1,5mm x 60°	N = 14	TM030	813030	150 – 210	3 – 25	290	GP09
	ROTA NCK plus 210		V = 1,5mm x 60°	N = 14	TM030	813030	150 – 210	3 – 25	290	GP09
	ROTA NCK plus 210		V = 1/16" x 90°	N = 17	TD040	812040	150 – 210	3 – 25	290	GF212
	ROTA NCO 210		V = 1/16" x 90°	N = 17	TD040	812040	150 – 210	3 – 25	290	GF212
	ROTA THW 210		S = 10	N = 20	TK030	811030	150 – 210	3 – 25	290	

Futterhersteller <i>chuck manufacturer</i>	Futtertyp <i>chuck type</i>	Futter- größe <i>chuck size</i>	Backenanschluss des Futters <i>jaw-connection of the chuck</i>		Typebe- zeichnung <i>type de- signation</i>	Ident-Nr. <i>ident-no.</i>	Spannbereich [aussein] <i>clamping range [external]</i>	Bauteilwand- stärke <i>wall thickness of workpiece</i>	Schwing- kreis <i>swing</i>	* Benötigter Nutenstein <i>* needed t-nut</i>
			ø mm	S mm / V			N mm	min.–max./mm	min.–max./mm	
Schunk	ROTA NC plus 215	215	V = 1/16“ x 90°	N = 17	TD040	812040	160 – 215	3 – 25	295	GF212
	ROTA NC plus 215		V = 1,5mm x 60°	N = 14	TM030	813030	165 – 215	3 – 25	295	GP09
	ROTA NCD 215		V = 1/16“ x 90°	N = 17	TD040	812040	150 – 215	3 – 25	295	GG20
	ROTA NCD 215		V = 1,5mm x 60°	N = 14	TM030	813030	150 – 215	3 – 25	295	GP09
	ROTA NCF plus 215		V = 1/16“ x 90°	N = 17	TD040	812040	160 – 215	3 – 25	295	GF212
	ROTA NCF plus 215		V = 1,5mm x 60°	N = 14	TM030	813030	165 – 215	3 – 25	295	GP09
	ROTA THW plus 215		S = 10	N = 20	TK030	811030	150 – 215	3 – 25	295	
	ROTA NCW 225	225	S = 10	N = 20	TK030	811030	150 – 225	3 – 25	305	
	ROTA G 250	250	S = 12	N = 20	TK040	811040	150 – 256	3 – 25	340	
	ROTA NC 250		V = 1,5mm x 60°	N = 16	TM040	813040	170 – 254	3 – 25	335	TT22
	ROTA NC 250		V = 1/16“ x 90°	N = 21	TD046	812046	165 – 254	3 – 25	335	TT46
	ROTA NCD 250		V = 1,5mm x 60°	N = 21	TM040	813040	165 – 250	3 – 25	330	TT22
	ROTA NCD 250		V = 1/16“ x 90°	N = 21	TD046	812046	155 – 250	3 – 25	330	TT35
	ROTA NCF 250		V = 1,5mm x 60°	N = 16	TM040	813040	170 – 254	3 – 25	335	TT22
	ROTA NCF 250		V = 1/16“ x 90°	N = 21	TD046	812046	165 – 254	3 – 25	335	TT46
	ROTA NCK 250		V = 1,5mm x 60°	N = 16	TM040	813040	150 – 254	3 – 25	335	TT70
	ROTA NCK plus 250		V = 1/16“ x 90°	N = 17	TD040	812040	160 – 254	3 – 25	335	GF212
	ROTA NCK plus 250		V = 1,5mm x 60°	N = 16	TM040	813040	165 – 254	3 – 25	335	TT70
	ROTA S plus 250		S = 12	N = 20	TK040	811040	150 – 256	3 – 25	340	
	ROTA THW 250		S = 12	N = 20	TK040	811040	150 – 250	3 – 25	330	
	ROTA NCD 255	255	V = 1,5mm x 60°	N = 21	TM040	813040	160 – 255	3 – 25	335	TT70
	ROTA NCD 255		V = 1/16“ x 90°	N = 21	TD046	812046	155 – 255	3 – 25	335	TT35
	ROTA NC plus 260	260	V = 1,5mm x 60°	N = 16	TM040	813040	180 – 260	3 – 25	340	TT70
	ROTA NC plus 260		V = 1/16“ x 90°	N = 21	TD046	812046	180 – 254	3 – 25	335	TT46
	ROTA NCF plus 260		V = 1,5mm x 60°	N = 16	TM040	813040	180 – 260	3 – 25	340	TT70
	ROTA NCF plus 260		V = 1/16“ x 90°	N = 21	TD046	812046	170 – 260	3 – 25	340	TT46
	ROTA NCO 260		V = 1/16“ x 90°	N = 21	TD046	812046	175 – 254	3 – 25	335	TT46
	ROTA THW plus 260		S = 12	N = 20	TK040	811040	150 – 260	3 – 25	340	
	ROTA NCW 265	265	S = 12	N = 20	TK040	811040	150 – 256	3 – 25	340	
	ROTA G 315	315	S = 12	N = 20	TK040	811040	150 – 322	3 – 25	405	
	ROTA NC 315-86		V = 1,5mm x 60°	N = 18	TM050	813050	200 – 315	3 – 25	395	GN78
	ROTA NC 315-86		V = 1/16“ x 90°	N = 21	TD046	812046	195 – 315	3 – 25	395	TT35
	ROTA NC plus 315		V = 1,5mm x 60°	N = 21	TM052	813052	195 – 315	3 – 25	395	GF34
	ROTA NC plus 315		V = 1/16“ x 90°	N = 21	TD046	812046	195 – 315	3 – 25	395	TT46

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Futterspezifische Daten

Chuck specific data

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Futterhersteller chuck manufacturer	Futtertyp chuck type	Futter- größe chuck size ø mm	Backenanschluss des Futters jaw-connection of the chuck		Typbe- zeichnung type de- signation	Ident-Nr. ident-no.	Spannbereich [aussein] clamping range [external] min.-max./mm	Bauteilwand- stärke wall thickness of workpiece min.-max./mm	Schwing- kreis swing Ø mm	* Benötigter Nutenstein * needed t-nut
			S mm / V	N mm						
Schunk	ROTA NCD 315	315	V = 1/16" x 90°	N = 21	TD046	812046	180 – 315	3 – 25	395	TT35
	ROTA NCD 315		V = 1,5mm x 60°	N = 21	TM052	813052	195 – 315	3 – 25	395	TT35
	ROTA NCF 315		V = 1,5mm x 60°	N = 18	TM050	813050	195 – 315	3 – 25	395	GN78
	ROTA NCF 315		V = 1/16" x 90°	N = 21	TD046	812046	190 – 315	3 – 25	395	TT35
	ROTA NCF plus 315		V = 1,5mm x 60°	N = 21	TM052	813052	195 – 315	3 – 25	395	TT40
	ROTA NCF plus 315		V = 1/16" x 90°	N = 21	TD046	812046	195 – 315	3 – 25	395	TT46
	ROTA NCK plus 315		V = 1,5mm x 60°	N = 21	TM052	813052	190 – 304	3 – 25	385	TT40
	ROTA NCK plus 315		V = 1/16" x 90°	N = 21	TD046	812046	185 – 304	3 – 25	385	TT46
	ROTA NCO 315		V = 1/16" x 90°	N = 21	TD046	812046	185 – 315	3 – 25	395	TT46
	ROTA NCW 315		S = 12	N = 20	TK040	811040	150 – 303	3 – 25	385	
	ROTA S plus 315		S = 12	N = 26	TK050	811050	150 – 323	3 – 25	405	
	ROTA THW 315		S = 12	N = 20	TK040	811040	150 – 303	3 – 25	385	
	ROTA THW plus 315		S = 12	N = 20	TK040	811040	150 – 315	3 – 25	395	
	ROTA G 400	400	S = 12	N = 26	TK060	811060	250 – 394	6 – 50	500	
	ROTA NC 400		V = 1,5mm x 60°	N = 22	TM060	813060	265 – 400	6 – 50	510	GP15
	ROTA NC 400		V = 3/32" x 90°	N = 25,5	TD066	812066	285 – 400	6 – 50	510	GN40
	ROTA NCD 400		V = 3/32" x 90°	N = 25,5	TD066	812066	270 – 400	6 – 50	510	GN40
	ROTA NCF 400		V = 1,5mm x 60°	N = 22	TM060	813060	265 – 400	6 – 50	510	GP15
	ROTA NCF 400		V = 3/32" x 90°	N = 25,5	TD066	812066	285 – 390	6 – 50	500	GN40
	ROTA NCO 400		V = 3/32" x 90°	N = 25,5	TD066	812066	260 – 400	6 – 50	510	GE40
	ROTA S plus 400		S = 18	N = 30	TK080	811080	250 – 408	6 – 50	515	
	ROTA THW 400		S = 12	N = 26	TK060	811060	250 – 376	6 – 50	485	
	ROTA THW plus 400		S = 12	N = 26	TK060	811060	250 – 376	6 – 50	485	
	ROTA G 500	500	S = 18	N = 30	TK080	811080	250 – 507	6 – 50	615	
	ROTA S plus 500		S = 18	N = 30	TK080	811080	250 – 507	6 – 50	615	
	ROTA THW plus 500		S = 18	N = 30	TK080	811080	250 – 463	6 – 50	570	

Futterhersteller chuck manufacturer	Futtertyp chuck type	Futter- größe chuck size ø mm	Backenanschluss des Futters jaw-connection of the chuck		Type- zeichnung type de- signation	Ident-Nr. ident-no.	Spannbereich [ausßen] clamping range [external] min.-max./mm	Bauteilwand- stärke wall thickness of workpiece min.-max./mm	Schwing- kreis swing Ø mm	* Benötigter Nutenstein * needed t-nut
			S mm / V	N mm						
Schunk	ROTA G 630	630	S = 18	N = 30	TK080	811080	250 - 639	6 - 50	745	
	ROTA THW 630		S = 18	N = 30	TK080	811080	250 - 586	6 - 50	695	
	ROTA THW plus 630		S = 18	N = 30	TK080	811080	250 - 583	6 - 50	690	
	ROTA NCO 800	800	V = 3/32" x 90°	N = 25,5	TD066	812066	365 - 800	6 - 50	910	GN40
SMW Autoblok	HFK / HFKS 200-48	200	V = 1/16" x 90°	N = 17	TD040	812040	150 - 200	3 - 25	280	GG20
	HFK / HFKS 200-66		V = 1/16" x 90°	N = 17	TD040	812040	150 - 200	3 - 25	280	GG20
	AL-D 210	210	V = 1/16" x 90°	N = 17	TD040	812040	150 - 210	3 - 25	290	GF212
	AL-M 210		V = 1,5mm x 60°	N = 14	TM030	813030	155 - 210	3 - 25	290	GF213
	AN-D 210		V = 1/16" x 90°	N = 17	TD040	812040	150 - 210	3 - 25	290	GF212
	AN-M 210		V = 1,5mm x 60°	N = 14	TM030	813030	150 - 210	3 - 25	290	GF213
	BB-D 210		V = 1/16" x 90°	N = 17	TD040	812040	150 - 210	3 - 25	290	GF212
	BB-M 210		V = 1,5mm x 60°	N = 14	TM030	813030	155 - 210	3 - 25	290	GF213
	BH-D 210		V = 1/16" x 90°	N = 17	TD040	812040	150 - 210	3 - 25	290	GF212
	BHD-FC 210		V = 1/16" x 90°	N = 17	TD040	812040	150 - 210	3 - 25	290	GF212
	BH-M 210		V = 1,5mm x 60°	N = 14	TM030	813030	150 - 210	3 - 25	290	GF213
	BHM-FC 210		V = 1,5mm x 60°	N = 14	TM030	813030	150 - 210	3 - 25	290	GF213
	HFKN-D 210		V = 1/16" x 90°	N = 17	TD040	812040	150 - 210	3 - 25	290	GF212
	HFKN-M 210		V = 1,5mm x 60°	N = 14	TM030	813030	150 - 210	3 - 25	290	GF213
	HG-F 210		S = 10	N = 20	TK030	811030	150 - 198	3 - 25	280	
	HG-N 210		S = 10	N = 20	TK030	811030	150 - 201	3 - 25	285	
	KNCS-N 210		S = 10	N = 20	TK030	811030	150 - 215	3 - 25	295	
	KNCS-N 225	225	S = 10	N = 20	TK030	811030	150 - 225	3 - 25	310	
	AL-D 250	250	V = 1/16" x 90°	N = 21	TD046	812046	170 - 254	3 - 25	335	TT46
	AL-M 250		V = 1,5mm x 60°	N = 16	TM040	813040	175 - 254	3 - 25	335	TT24
	AN-D 250		V = 1/16" x 90°	N = 21	TD046	812046	165 - 254	3 - 25	335	TT46
	AN-M 250		V = 1,5mm x 60°	N = 16	TM040	813040	170 - 254	3 - 25	335	TT24
	BB-D 250		V = 1/16" x 90°	N = 21	TD046	812046	175 - 254	3 - 25	335	TT46
	BB-M 250		V = 1,5mm x 60°	N = 16	TM040	813040	180 - 254	3 - 25	335	TT24
	BH-D 250		V = 1/16" x 90°	N = 21	TD046	812046	165 - 254	3 - 25	335	TT46
	BHD-FC 250		V = 1/16" x 90°	N = 21	TD046	812046	165 - 250	3 - 25	330	TT46
	BH-M 250		V = 1,5mm x 60°	N = 16	TM040	813040	170 - 254	3 - 25	335	TT24
	BHM-FC 250		V = 1,5mm x 60°	N = 16	TM040	813040	170 - 250	3 - 25	330	TT24
	HFK / HFKS 250		V = 1/16" x 90°	N = 21	TD046	812046	165 - 250	3 - 25	330	TT35

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Futterspezifische Daten

Chuck specific data

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Futterhersteller chuck manufacturer	Futtertyp chuck type	Futter- größe chuck size ø mm	Backenanschluss des Futters jaw-connection of the chuck		Type- zeichnung type de- signation	Ident-Nr. ident-no.	Spannbereich [aussen] clamping range [external] min.-max./mm	Bauteilwand- stärke wall thickness of workpiece min.-max./mm	Schwing- kreis swing Ø mm	* Benötigter Nutenstein * needed t-nut
			S mm / V	N mm						
SMW Autoblok	HFKN-D 260	260	V = 1/16" x 90°	N = 21	TD046	812046	165 – 254	3 – 25	335	TT46
	HFKN-M 260		V = 1,5mm x 60°	N = 21	TM040	813040	170 – 260	3 – 25	340	*
	HG-F 260		S = 12	N = 20	TK040	811040	150 – 249	3 – 25	330	
	HG-N 260		S = 12	N = 20	TK040	811040	150 – 249	3 – 25	330	
	KNCS-N 260		S = 12	N = 20	TK040	811040	150 – 258	3 – 25	340	
	HFK / HFKS 270	270	V = 1/16" x 90°	N = 21	TD046	812046	175 – 270	3 – 25	350	TT35
	KNCS-N 275	275	S = 12	N = 20	TK040	811040	150 – 273	3 – 25	355	
	AL-D 315	315	V = 1/16" x 90°	N = 21	TD046	812046	185 – 315	3 – 25	395	TT46
	AL-M 315		V = 1,5mm x 60°	N = 21	TM052	813052	190 – 315	3 – 25	395	GF34
	AN-D 315		V = 1/16" x 90°	N = 21	TD046	812046	180 – 315	3 – 25	395	TT46
	AN-M 315		V = 1,5mm x 60°	N = 21	TM052	813052	185 – 315	3 – 25	395	GF34
	BB-D 315		V = 1/16" x 90°	N = 21	TD046	812046	225 – 315	3 – 25	395	TT46
	BB-M 315		V = 1,5mm x 60°	N = 21	TM052	813052	230 – 315	3 – 25	395	GF34
	BHD-FC 315		V = 1/16" x 90°	N = 21	TD046	812046	195 – 315	3 – 25	395	TT46
	BH-M 315		V = 1,5mm x 60°	N = 21	TM052	813052	200 – 315	3 – 25	395	GF34

* Sondernutenstein
* special t-nut

Futterhersteller chuck manufacturer	Futtertyp chuck type	Futter- größe chuck size	Backenanschluss des Futters jaw-connection of the chuck		Type- zeichnung type de- signation	Ident-Nr. ident-no.	Spannbereich [aussen] clamping range [external] min.-max./mm	Bauteilwand- stärke wall thickness of workpiece min.-max./mm	Schwing- kreis swing Ø mm	* Benötigter Nutenstein * needed t-nut
			Ø mm	S mm / V	N mm					
SMW Autoblok	BHM-FC 315	315	V = 1,5mm x 60°	N = 21	TM052	813052	200 - 315	3 - 25	395	GF34
	HB-D 315		V = 1/16" x 90°	N = 21	TD046	812046	190 - 315	3 - 25	395	*
	HFK / HFKS 315		V = 1/16" x 90°	N = 21	TD046	812046	185 - 315	3 - 25	395	TT35
	HFKN-D 315		V = 1/16" x 90°	N = 21	TD046	812046	205 - 315	3 - 25	395	TT46
	HFKN-M 315		V = 1,5mm x 60°	N = 21	TM052	813052	210 - 315	3 - 25	395	GF34
	HG-F 315		S = 12	N = 26	TK050	811050	150 - 315	3 - 25	395	
	HG-N 315		S = 12	N = 20	TK040	811040	150 - 305	3 - 25	385	
	KNCS-N 315	325	S = 12	N = 20	TK040	811040	150 - 315	3 - 25	395	
	KNCS-N 325		S = 12	N = 20	TK040	811040	150 - 324	3 - 25	405	
	KNCS-N 340	340	S = 12	N = 20	TK040	811040	165 - 340	3 - 25	420	
	KNCS-N 340		S = 12	N = 20	TK040	811040	165 - 340	3 - 25	420	
	AN-D 400	400	V = 3/32" x 90°	N = 25,5	TD066	812066	285 - 390	6 - 50	500	GE40
	AN-M 400		V = 1,5mm x 60°	N = 22	TM060	813060	285 - 390	6 - 50	500	X7960
	BH-D 400		V = 3/32" x 90°	N = 25,5	TD066	812066	285 - 390	6 - 50	500	GE40
	BHD-FC 400		V = 3/32" x 90°	N = 25,5	TD066	812066	285 - 390	6 - 50	500	GE40
	BH-M 400		V = 1,5mm x 60°	N = 22	TM060	813060	285 - 390	6 - 50	500	X7960
	HFK / HFKS 400		V = 3/32" x 90°	N = 25,5	TD066	812066	285 - 400	6 - 50	510	GN40
	HFKN-D 400		V = 3/32" x 90°	N = 25,5	TD066	812066	250 - 400	6 - 50	510	GN40
	HG-F 400		S = 18	N = 30	TK080	811080	250 - 400	6 - 50	510	
	HG-N 400		S = 12	N = 26	TK060	811060	250 - 372	6 - 50	480	
	KNCS-N 400		S = 12	N = 26	TK060	811060	250 - 400	6 - 50	510	
	KNCS-N 400		S = 12	N = 26	TK060	811060	250 - 400	6 - 50	510	
	HG-N 500	500	S = 18	N = 30	TK080	811080	250 - 462	6 - 50	570	
	KNCS-N 500		S = 18	N = 30	TK080	811080	250 - 492	6 - 50	600	
	HG-N 630	630	S = 18	N = 30	TK080	811080	262 - 622	6 - 50	730	
	KNCS-N 630		S = 18	N = 30	TK080	811080	250 - 583	6 - 50	690	

INOTop®

Allgemeine technische Daten

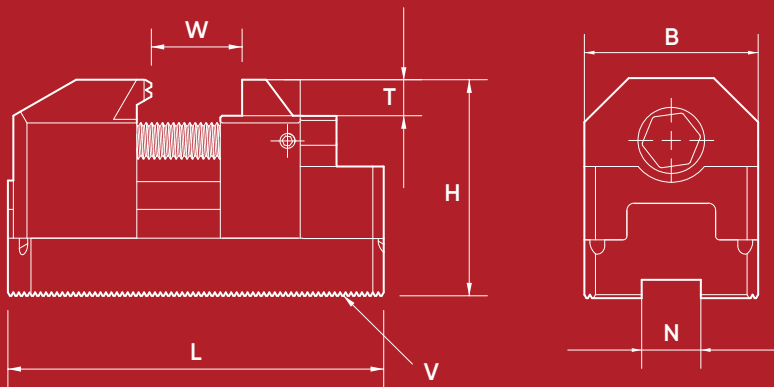
General technical data

INOTop®	Ident-Nr. ident-no.	Bauteilwandstärke wall thickness of workpiece	Einspanntiefe clamping depth	Breite width	Höhe height	Länge length	max. Anzugs- moment max. tightening torque	max. Spannkraft/ Backe max clamping force/jaw	Backenanschluss jaw-connection		Gewicht/ Satz weight/ set
		W min.-max./mm	T mm	B mm	H mm	L mm	Nm	kN	S mm / V	N mm	kg
TM030	813030	3 - 25	10	47	60	103,5	30	25	V = 1,5mm x 60°	N = 14	4,3
TM040	813040	3 - 25	10	47	60	103,5	30	25	V = 1,5mm x 60°	N = 16	4,3
TM050	813050	3 - 25	10	47	60	103,5	30	25	V = 1,5mm x 60°	N = 18	4,2
TM052	813052	3 - 25	10	47	60	103,5	30	25	V = 1,5mm x 60°	N = 21	4,2
TM060	813060	6 - 50	20	66	84	160	40	30	V = 1,5mm x 60°	N = 22	12
TM062	813062	6 - 50	20	66	84	160	40	30	V = 1,5mm x 60°	N = 21	12
TM080	813080	6 - 50	20	66	84	160	40	30	V = 3,0mm x 60°	N = 25	12

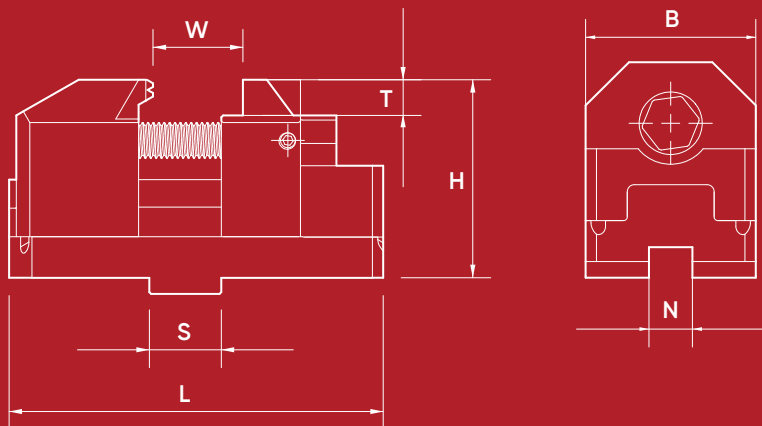
TD040	812040	3 - 25	10	47	60	103	30	25	V = 1/16" x 90°	N = 17	4,3
TD046	812046	3 - 25	10	47	60	103	30	25	V = 1/16" x 90°	N = 21	4,2
TD060	812060	6 - 50	20	66	84	160	40	30	V = 1/16" x 90°	N = 21	12,3
TD063	812063	6 - 50	20	66	84	160	40	30	V = 3/32" x 90°	N = 20	12,3
TD066	812066	6 - 50	20	66	84	160	40	30	V = 3/32" x 90°	N = 25,5	12,4

TK030	811030	3 - 25	10	47	55,5	104	30	25	S = 20	N = 10	4,2
TK040	811040	3 - 25	10	47	55,5	104	30	25	S = 20	N = 12	4,1
TK050	811050	3 - 25	10	47	55,5	104	30	25	S = 26	N = 12	4,1
TK060	811060	6 - 50	20	66	79,5	160	40	30	S = 26	N = 12	12,9
TK080	811080	6 - 50	20	66	79,5	160	40	30	S = 30	N = 18	12,5

Spitzverzahnung
Serration



Kreuzversatz
Tongue and groove



Anschlusskraft/ Clamping force/jaw force	Backenanschluss jaw-connection		Gewicht/ Satz weight/ set kg
	S mm / V	N mm	
1000 N	S = 12,68	N = 7,94	4,2
	S = 12,68	N = 7,94	4,2
	S = 19,03	N = 12,7	4,1
	S = 19,03	N = 12,7	4,5
	S = 19,03	N = 12,7	12,7
	S = 19,03	N = 12,7	12,2
1500 N	V = 2,0mm x 60°	N = 12	4,4
	V = 3,5mm x 60°	N = 16	13
	V = 3,5mm x 60°	N = 21	12,8
2000 N	V = 1,5mm x 60°	N = 16	5,7
	V = 1,5mm x 60°	N = 21	5,6
	V = 1,5mm x 60°	N = 21	16,1
	V = 1,5mm x 60°	N = 16	18
	V = 3,0mm x 60°	N = 25	16
	V = Modul 2	N = 16	17,6
2500 N	V = Modul 2	N = 21	16,8
	V = 2,0mm x 60°	N = 12	5,9
	V = 3,5mm x 60°	N = 16	17,4
3000 N	V = 3,5mm x 60°	N = 21	17,1

INO^{Top}®

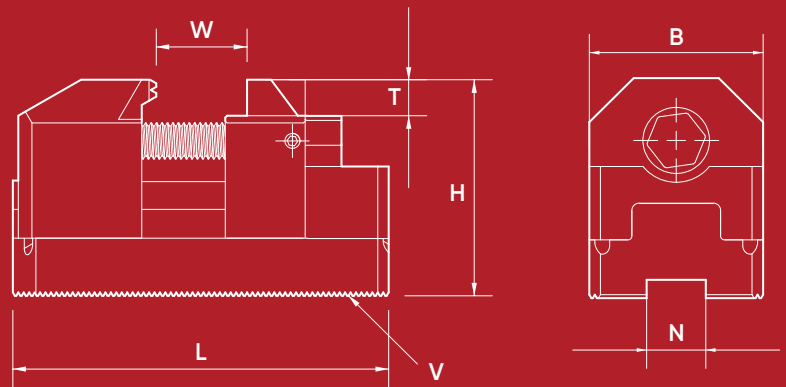
Allgemeine technische Daten
General technical data

INO ^{Top} ®	Ident-Nr. ident-no.	Bauteilwandstärke wall thickness of workpiece W min.-max./mm	Einspann- clamping depth T mm
TM030	813030	3 - 25	10
TM040	813040	3 - 25	10
TM050	813050	3 - 25	10
TM052	813052	3 - 25	10
TM060	813060	6 - 50	20
TM062	813062	6 - 50	20
TM080	813080	6 - 50	20

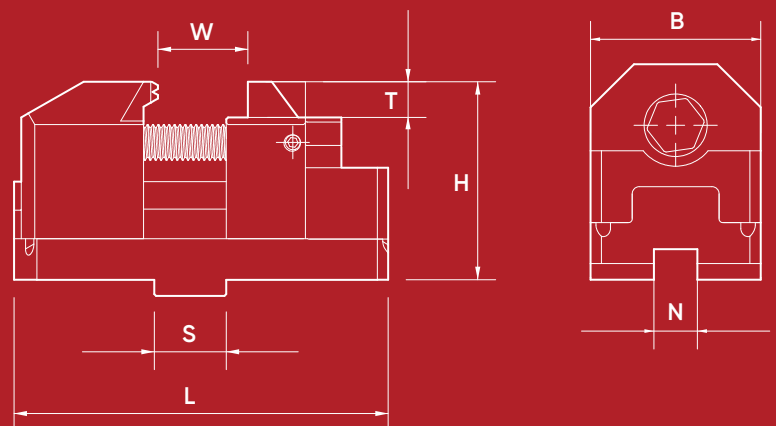
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TD046	812046	3 - 25	10
TD060	812060	6 - 50	20
TD063	812063	6 - 50	20
TD066	812066	6 - 50	20

TK030	811030	3 - 25	10
TK040	811040	3 - 25	10
TK050	811050	3 - 25	10
TK060	811060	6 - 50	20
TK080	811080	6 - 50	20

Spitzverzahnung Serration

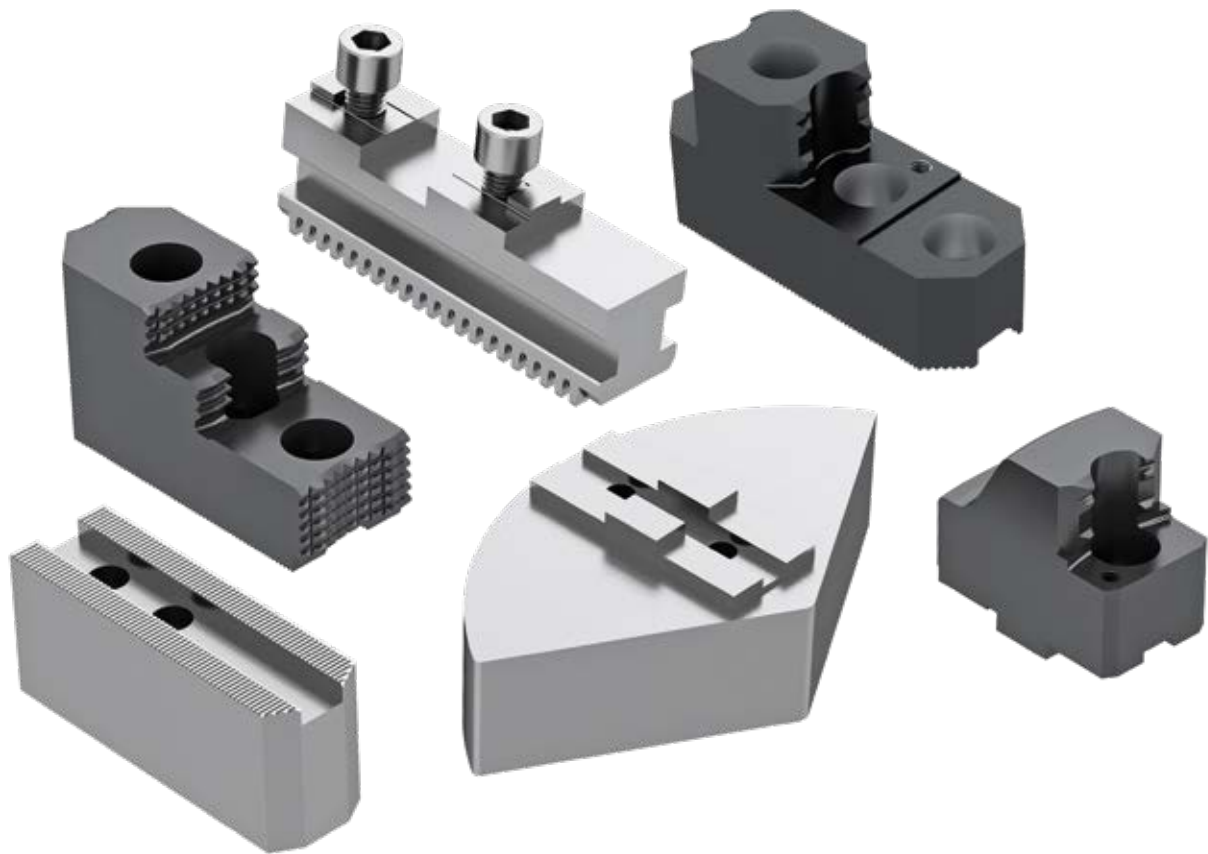


Kreuzversatz Tongue and groove



INOTop®	Ident-Nr. ident-no.	Bauteilwandstärke wall thickness of workpiece	Einspanntiefe clamping depth	Breite width	Höhe height	Länge length	max. Anzugs- moment max. tightening torque	max. Spannkraft/ Backe max clamping force/jaw	Backenanschluss jaw-connection		Gewicht/ Satz weight/ set
		W min.-max./mm	T mm	B mm	H mm	L mm	Nm	kN	S mm / V	N mm	kg
TZ030	814030	3 - 25	10	47	55,5	104	30	25	S = 12,68	N = 7,94	4,2
TZ031	814031	3 - 25	10	47	55,5	104	30	25	S = 12,68	N = 7,94	4,2
TZ040	814040	3 - 25	10	47	55,5	104	30	25	S = 19,03	N = 12,7	4,1
TZ043	814043	3 - 25	10	47	55,5	122	30	25	S = 19,03	N = 12,7	4,5
TZ060	814060	6 - 50	20	66	79,5	160	40	30	S = 19,03	N = 12,7	12,7
TZ063	814063	6 - 50	20	66	79,5	160	40	30	S = 19,03	N = 12,7	12,2
TW020	815020	3 - 25	10	47	60	160	30	25	V = 2,0mm x 60°	N = 12	4,4
TW030	815030	6 - 50	20	66	84	160	40	30	V = 3,5mm x 60°	N = 16	13
TW040	815040	6 - 50	20	66	84	160	40	30	V = 3,5mm x 60°	N = 21	12,8
TM040-4	813141	3 - 25	10	47	60	103,5	30	25	V = 1,5mm x 60°	N = 16	5,7
TM052-4	813053	3 - 25	10	47	60	103,5	30	25	V = 1,5mm x 60°	N = 21	5,6
TM062-4	813162	6 - 50	20	66	84	160	40	30	V = 1,5mm x 60°	N = 21	16,1
TM066-4	813166	6 - 50	20	66	84	160	40	30	V = 1,5mm x 60°	N = 16	18
TM080-4	813180	6 - 50	20	66	84	160	40	30	V = 3,0mm x 60°	N = 25	16
TR060-4	816160	6 - 50	20	66	84	160	40	30	V = Modul 2	N = 16	17,6
TR080-4	816180	6 - 50	20	66	84	160	40	30	V = Modul 2	N = 21	16,8
TW020-8	815121	3 - 25	10	47	60	160	30	25	V = 2,0mm x 60°	N = 12	5,9
TW030-8	815131	6 - 50	20	66	84	160	40	30	V = 3,5mm x 60°	N = 16	17,4
TW040-8	815141	6 - 50	20	66	84	160	40	30	V = 3,5mm x 60°	N = 21	17,1





Seit Jahrzehnten sind wir bei unseren Kunden als Lieferant für Standardspannbacken bekannt. Durch kontinuierliche Weiterentwicklung haben wir unser Spannbackenprogramm so weit ausgebaut, dass wir seit langem ein Komplettprogramm für nahezu alle Standard-Spannfutter anbieten. Qualität sowie das Preis-Leistungs-Verhältnis stehen hierbei für uns im Vordergrund.

For decades our customers have known us as a supplier of standard clamping jaws. Through continuous further development, we have expanded our range of clamping jaws to such an extent that we have been offering a complete range for almost all standard chucks for a long time. Quality as well as the price-performance ratio are our top priorities.

UNIJaws®

Standard- und Sonderspannbacken

Standard and special jaws

SPANNBACKEN VON HWR

Wir bieten unseren Kunden Standardspannbacken für alle gängigen Spannfutter an. Sie erhalten bei uns ein Komplettprogramm mit harten und weichen Spannbacken sowie Grundbacken, Nutensteinen und Zubehör. Auch kundenspezifische Aufgabenstellungen, die im Standard nicht abbildbar sind, werden durch unsere Konstruktion umgesetzt und in unserem Hause gefertigt. Hier kommt unseren Kunden unsere Kreativität und jahrzehntelange Erfahrung sowie unser Kosten- und Qualitätsbewusstsein zu Gute. Wir möchten unsere Kunden stets mit dem größtmöglichen Service und technischer Beratung unterstützen. Im Bereich der Standardspannbacken haben wir aus diesem Grund unseren Spannbacken-Finder auf unserer Website für Sie bereitgestellt.

- Standardspannbacken für alle gängigen Spannfutter
- Kundenspezifische Sonderspannlösungen
- Modern ausgestattete Konstruktion mit langjähriger Erfahrung in der Spanntechnik

CLAMPING JAWS BY HWR

We offer our customers standard clamping jaws for all standard chucks. Our product portfolio consists of hard and soft clamping jaws, base jaws, t-nuts and accessories. Customer specific problems which cannot be handled with standard products will be solved by our engineering department and produced in-house. Our customers benefit from our creativity and wealth of knowledge as well as our cost and quality awareness. We always want to support our customers with the greatest possible service and technical support. This is why we provide our clamping jaw finder on our website to help you finding the right clamping jaws.

- Standard clamping jaws for all standard chucks
- Customised special clamping solutions
- State-of-the-art design department with a wealth of experience in clamping technology

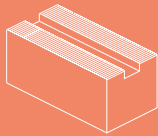
UNIJaws®

STANDARD- UND SONDER- SPANNBACKEN.

STANDARD AND SPECIAL JAWS

WEICHE AUFSATZBACKEN, SPITZVERZÄHNUNG

SOFT TOP-JAWS, SERRATION

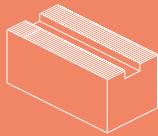


Backenrohlinge

Spitzverzahnung, Stahl und Aluminium

*jaw-blanks
serration, steel and aluminium*

1/16" x 90° | 3/32" x 90°
Seite/page 106–107

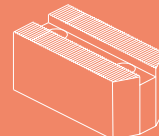


Backenrohlinge

Spitzverzahnung, Stahl und Aluminium

*jaw-blanks
serration, steel and aluminium*

1,5mm x 60°
Seite/page 108–109

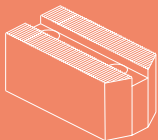


Aufsatzbacken weich

Spitzverzahnung, Stahl und Aluminium

*soft top-jaws
serration, steel and aluminium*

1/16" x 90° | 3/32" x 90°
Seite/page 110–117

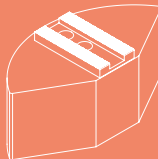


Aufsatzbacken weich

Spitzverzahnung, Stahl

*soft top-jaws
serration, steel*

1,5mm x 60° | 3,0mm x 60°
Seite/page 118–125

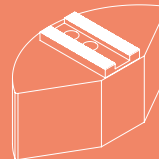


Segmentbacken weich

Spitzverzahnung, Stahl und Aluminium

*soft segment-jaws
serration, steel and aluminium*

1/16" x 90° | 3/32" x 90°
Seite/page 126–129



Segmentbacken weich

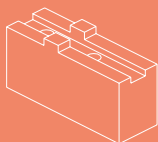
Spitzverzahnung, Stahl und Aluminium

*soft segment-jaws
serration, steel and aluminium*

1,5mm x 60° | 3,0mm x 60°
Seite/page 130–133

WEICHE AUFSATZBACKEN, KREUZVERSATZ

SOFT TOP-JAWS, TONGUE AND GROOVE

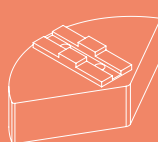


Aufsatzbacken weich

Kreuzversatz metrisch, Stahl und Aluminium

*soft top-jaws
metric tongue and groove,
steel and aluminium*

Seite/page 136–139

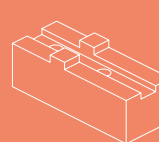


Segmentbacken weich

Kreuzversatz metrisch, Stahl und Aluminium

*soft top-jaws
metric tongue and groove,
steel and aluminium*

Seite/page 140–141



Aufsatzbacken weich

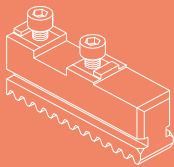
amerikanischer Kreuzversatz, Stahl

*soft top-jaws
American standard tongue and groove,
steel*

Seite/page 143

SPANNBACKEN FÜR BACKENSCHNELLWECHSELFUTTER

JAWS FOR QUICKCHANGE-CHUCKS



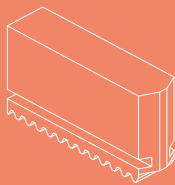
**Grundbacken,
Modulschrägverzahnung**
für Backenschnellwechselfutter

*base-jaws, angled serration
for quickchange-chucks*

Seite/page 288

Modulgeradverzahnung
straight serration

Seite/page 289



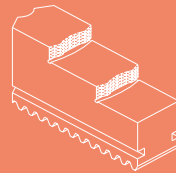
**Blockbacken weich,
Modulschrägverzahnung**
für Backenschnellwechselfutter

*soft monoblock-jaws, angled serration
for quickchange-chucks*

Seite/page 290

Modulgeradverzahnung
straight serration

Seite/page 291



**Stufenblockbacken hart,
Modulschrägverzahnung**
für Backenschnellwechselfutter

*hard stepped monoblock-jaws, angled serration
for quickchange-chucks*

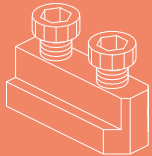
Seite/page 292

Modulgeradverzahnung
straight serration

Seite/page 293

NUTENSTEINE UND ZUBEHÖR

T-NUTS AND ACCESORIES



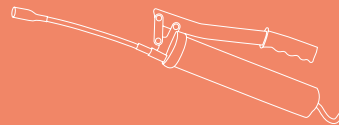
T-Nutensteine
t-nuts

Seite/page 298–310



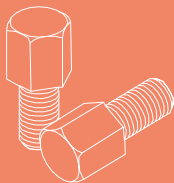
Spanneinsätze
clamping inserts

Seite/page 311



Spezialfett/Fettpressen
special grease/grease guns

Seite/page 312



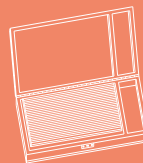
Auflagebolzen
height-pins

Seite/page 312



Ausdrehvorrichtungen
jaw turning fixture

Seite/page 313



Reinigungsplatten
cleaning plates

Seite/page 313

UNSER ONLINE SPANNBACKENFINDER

OUR ONLINE JAW FINDER

HWR SPANNBACKENFINDER
DREI AUSWAHLSCHRITTE ZUR RICHTIGEN SPANNBACKE
Und schon können Sie das Datenblatt als PDF-Dokument herunterladen!

*HWR JAW FINDER
JUST THREE STEPS TO THE JAWS YOU NEED
And now you can download the data sheet as PDF document!*

1 Futterhersteller — **2** Futtertyp — **3** Durchmesser
Chuck manufacturer — Chuck type — Diameter

*Vom Erfinder des Spannbackenfinders!
From the creator of the jaw finder!*

Unseren Spannbackenfinder und Downloadbereich finden Sie auf **hwr.de**.
*Our jaw finder and download area can be found on **hwr.de**.*



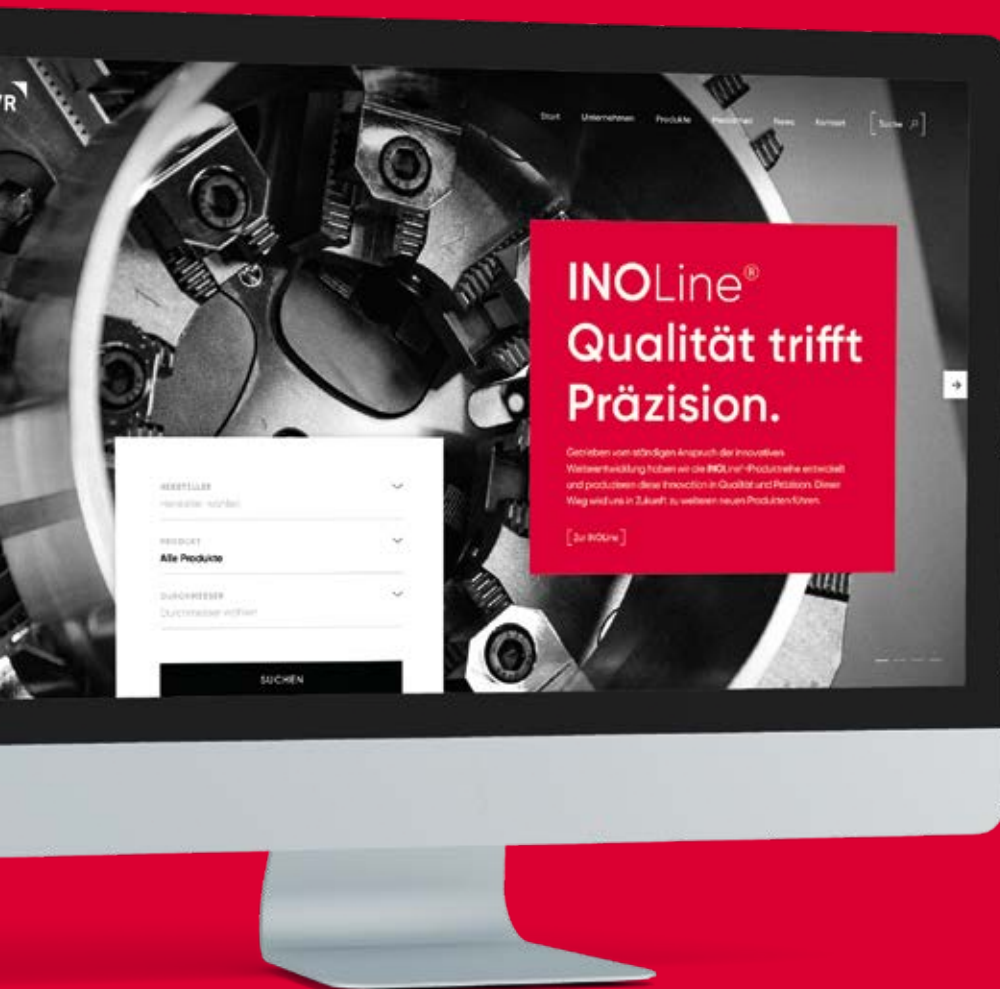
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Auf unserer Website stellen wir Ihnen im Downloadbereich eine Vielzahl technischer Daten zu unseren Produkten, wie 3D-Modelle, Bedienungsanleitungen, Einstellblätter und Zeichnungen zur Verfügung.

On our website you will find many technical data of our products, such as 3D-models, operating manuals, adjustment sheets and drawings in the download area.



AUSDREHANLEITUNG FÜR WEICHE BACKEN

TURNING INSTRUCTIONS FOR SOFT JAWS

Um das beste Ergebnis zu erhalten sollte das Einlegen der Ausdrehvorrichtung / Ausdrehkerne und Werkstücke immer in derselben Futterposition erfolgen. Die C-Achsposition ist hierbei besonders zu beachten, beispielsweise Backe 1 nach oben stehend ($C = 0^\circ$).

Um einen höchst genauen ausgedrehten Spanndurchmesser herzustellen, sind folgende Arbeitsschritte vorzunehmen:

To obtain the best result, the insertion of the turning fixture / masterpiece and machining part should always take place in the same chuck position. Particular attention should be paid to the C-axis position, for example, jaw 1 standing upwards ($C = 0^\circ$).

In order to produce a highly accurate turned clamping diameter, the following work steps must be carried out:

1 Ein Ausdrehkern (siehe Abb. 1) ist mittels der weichen Backen einzuspannen, siehe dazu Abb. 2.

1 A masterpiece (see Fig. 1) must be clamped within soft jaws, see Fig. 2.

2 Das Ausdrehen ist nach Möglichkeit wie folgt auszuführen, siehe dazu Abb. 3.

2 If possible, turning as follows, see Fig.3.

- Scharfe, neue Werkzeuge verwenden
- Ausdrehen auf Nenn Durchmesser des Bauteils und um $0,1^\circ$ konisch hinter-schneiden (Abb. 4)
- Freistich im Übergang Spannfläche zur Plananlage und Überdrehen
- Absatz der Plananlage zur Futtermitte
- Möglichst große Einspanntiefe

- Use sharp new tools
- Nominal diameter of the component $0,1^\circ$ conical undercutting and undercut in the transition from the clamping (Fig. 4) surface to the plane surface area
- Turn over the plane surface area and turn an overhang from the plane surface area to the middle of the chuck
- Greatest possible clamping depth

3 Anschließend kann die Spannstelle gereinigt und überprüft werden.

3 After that the clamping points must be cleaned and checked.

SÄUBERN

- Lösen der Spannung
- Entgraten der Backen
- Säubern der Spannflächen

PRÜFEN

- Prüfling einlegen
- Spannen bei unverändertem Spanndruck
- Messen des Rundlaufs möglichst nahe der Spannstelle / Backen
- Messung des Planlaufs

CLEANING

- Release the clamping force
- Deburring of the jaws
- Cleaning the clamping surfaces

CHECKING

- Insert very high accurate master piece
- Clamping with unchanged clamping pressure
- Measuring the circular runout as close as possible to the clamping point / jaws
- Measuring the axial runout

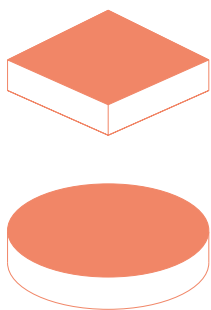


Abb. 1
Quadratischer oder
runder Ausdrehkern
Fig. 1 Square or round
masterpiece

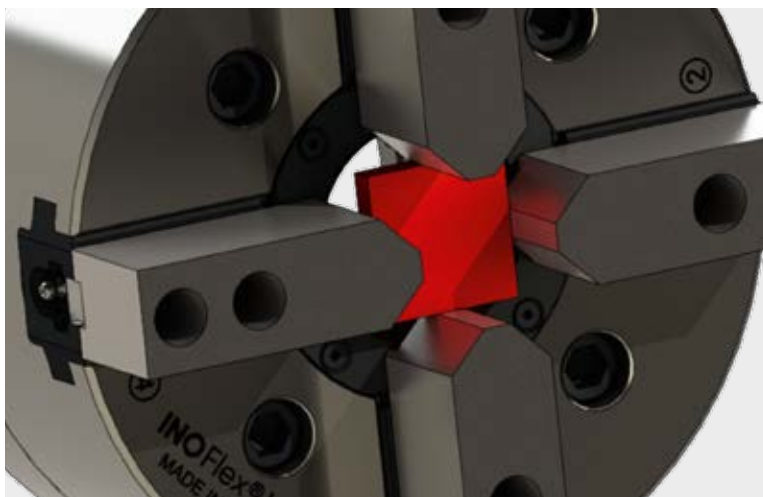


Abb. 2 gespannter Ausdrehkern / Fig. 2 Clamped masterpiece

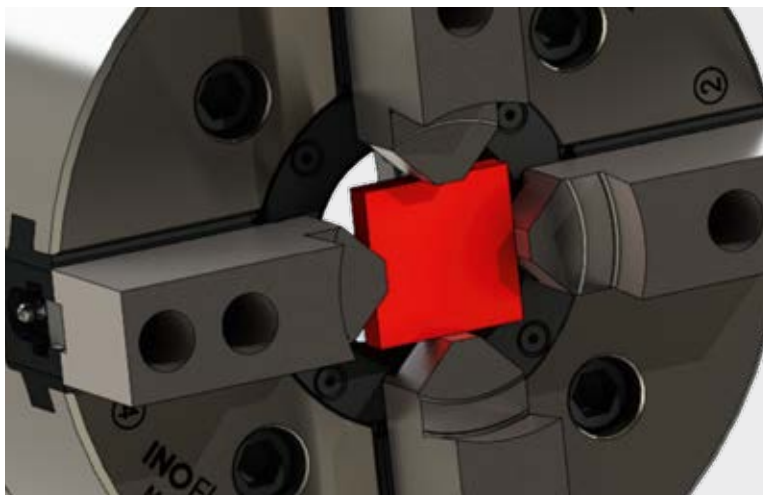


Abb. 3 Ausgedrehte weiche Backe / Fig. 3 Turned soft jaws

Es ist zu beachten, dass ein unerwartetes Anlaufen der Maschinenspindel das Unfallrisiko erhöht. Beachten Sie die zum Spannmittel gehörige Betriebsanleitung, sowie die Betriebsanleitung der Maschine!

It is important to note that an unexpected start-up of the machine spindle increases the risk of an accident. Observe the operating instructions for the clamping device as well as the operating instructions for the machine!

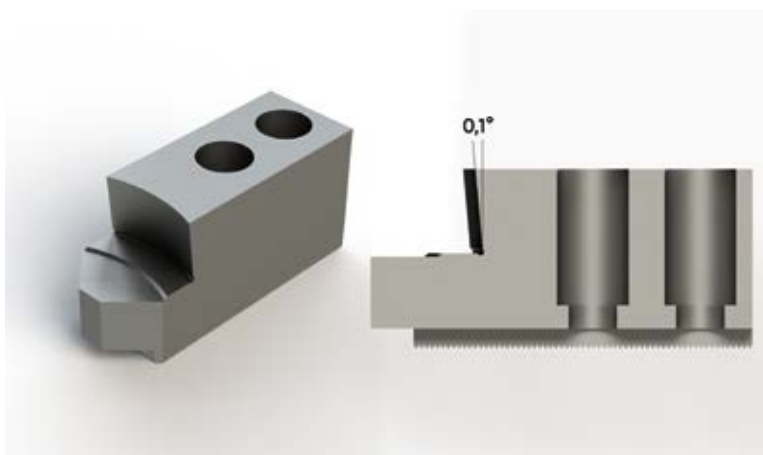


Abb. 4 Konischer Hinterschnitt / Fig. 4 Conical undercut



Wir bieten Ihnen ein umfassendes
Standardprogramm an weichen
Aufsatzbacken und Segmentbacken
für alle gängigen Spannfutter.

*We offer you a comprehensive
standard range of soft top jaws and
segment jaws for all common chucks.*

Übersicht / Overview

Backenrohlinge weich, Spitzverzahnung zoll

Jaw blanks soft, inch serration



**Backenrohlinge weich,
Spitzverzahnung
Stahl und Aluminium**

*jaw blanks soft,
serration
steel and aluminium*

1/16" x 90° | 3/32" x 90°
Seite/page 106–107

1,5mm x 60°
Seite/page 108–109



**Aufsatzbacken weich, Ausführung
gerade, Spitzverzahnung
Stahl und Aluminium**

*soft top jaws,
design straight, serration
steel and aluminium*

1/16" x 90° | 3/32" x 90°
Seite/page 110–117

1,5mm x 60° | 3,0mm x 60°
Seite/page 118–125



**Aufsatzbacken weich, Ausführung
angeschrägt, Spitzverzahnung
Stahl und Aluminium**

*soft top jaws,
design pointed, serration
steel and aluminium*

1/16" x 90° | 3/32" x 90°
Seite/page 110–117

1,5mm x 60° | 3,0mm x 60°
Seite/page 118–125



**Segmentbacken weich, Ausführung
rund Spitzverzahnung
Stahl und Aluminium**

*soft top jaws,
design round, serration
steel and aluminium*

1/16" x 90° | 3/32" x 90°
Seite/page 126–129

1,5mm x 60° | 3,0mm x 60°
Seite/page 130–133

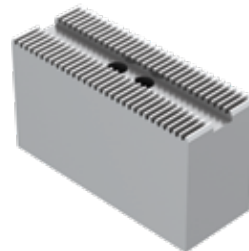


**Segmentbacken weich, Ausführung
umkehrbar Spitzverzahnung
Stahl und Aluminium**

*soft top jaws,
design reversible, serration
steel and aluminium*

1/16" x 90° | 3/32" x 90°
Seite/page 126–129

1,5mm x 60° | 3,0mm x 60°
Seite/page 130–133



**Aufsatzbacken weich, Ausführung
angeschrägt und gerade,
Modul 2 Stahl**

*soft top-jaws,
design pointed and straight,
modul 2 steel*

Modul 2
Seite/page 124–125

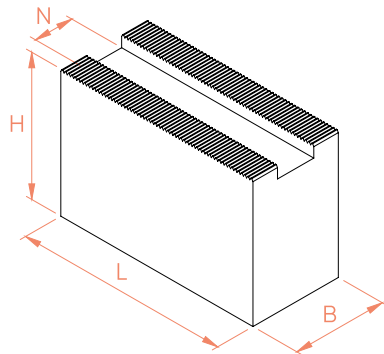
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Backenrohlinge weich, Spitzverzahnung zoll

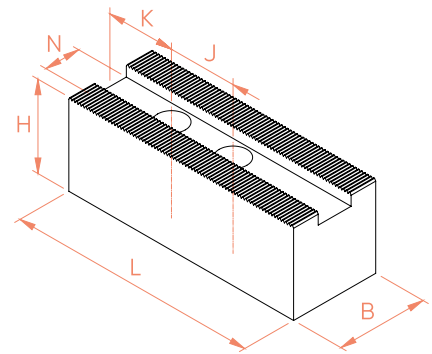
Jaw blanks soft, inch serration

B	H	L	N	V	K	J	Werkstoff material	Masse pro Satz weight pro set	Backentyp jaw type	Ident-Nr. ungebohrt ident-no. undrilled	Ident-Nr. gebohrt ident-no. drilled
mm	mm	mm	mm		mm	mm		kg			
35	50	70	17	1/16" x 90°	Für gebohrte Ausführung bei Bestellung bitte angeben For drilled version please specify dimensions at order		16MnCr5	0,90	RA05	200001	200401
40	40	70					16MnCr5	0,83	RA10	200002	200402
40	40	90					16MnCr5	1,07	RA15	200003	200403
40	40	105					16MnCr5	1,20	RA20	200004	200404
40	60	70					16MnCr5	1,27	RA25	200005	200405
40	60	90					16MnCr5	1,63	RA30	200006	200406
40	60	105					16MnCr5	1,80	RA31	200019	200419
40	60	120					16MnCr5	1,90	RA35	200007	200107
40	80	90					C15	2,13	RA40	200008	200408
40	100	90					C15	2,70	RA45	200009	200409
40	120	90					C15	3,30	RA50	200010	200410
50	80	90					16MnCr5	2,70	RA55	200011	200411
50	80	105					16MnCr5	3,10	RA60	200012	200412
60	60	70					16MnCr5	1,90	RA65	200013	200413
60	60	90					16MnCr5	2,40	RA70	200014	200414
60	60	120					16MnCr5	2,80	RA75	200015	200415
60	80	90					16MnCr5	3,15	RA80	200016	200416
60	100	90					16MnCr5	4,20	RA85	200017	200417
80	60	90					16MnCr5	3,15	RA90	200018	200418
38	51	70					Aluminium	1,10	HR01	200200	200600
38	76	90					Aluminium	2,10	HR02	200201	200601
38	102	90					Aluminium	2,80	HR03	200202	200602
45	60	90	21	1/16" x 90°			16MnCr5	2,03	RB05	200051	200451
45	60	105					16MnCr5	2,33	RB10	200052	200452
50	50	90					16MnCr5	1,70	RB15	200053	200453
50	50	120					16MnCr5	2,00	RB20	200054	200454
50	80	90					16MnCr5	2,77	RB25	200055	200455
50	80	120					16MnCr5	3,63	RB30	200056	200456

Backenrohling ungebohrt
Blank jaws undrilled



Backenrohling gebohrt
Blank jaws drilled



B	H	L	N	V	K	J	Werkstoff material	Masse pro Satz weight pro set	Backentyp jaw type	Ident-Nr. ungebohrt ident-no. undrilled	Ident-Nr. gebohrt ident-no. drilled
mm	mm	mm	mm		mm	mm		kg			
50	150	120	21	1/16" x 90°			16MnCr5	6,87	RB80	200645	200646
60	60	90					16MnCr5	2,40	RB35	200057	200457
60	60	105					16MnCr5	2,83	RB40	200058	200458
60	80	90					16MnCr5	3,30	RB45	200059	200459
60	80	105					16MnCr5	3,87	RB50	200060	200460
60	80	120					16MnCr5	4,40	RB55	200061	200461
60	125	120					C15	6,80	RB65	200063	200463
80	60	120					16MnCr5	4,40	RB70	200064	200464
80	80	120					16MnCr5	5,90	RB75	200065	200466
51	51	120					Aluminium	2,50	HR06	200250	200650
51	76	120					Aluminium	3,80	HR07	200251	200651
51	120	120					Aluminium	5,00	HR08	200252	200652
60	60	140	25,5	3/32" x 90°			16MnCr5	3,80	RC05	200101	200501
60	80	140					16MnCr5	5,07	RC10	200102	200502
64	102	155					C15	7,07	RC15	200103	200503
60	125	155					C15	8,60	RC20	200104	200504
64	152	155					C15	10,20	RC25	200105	200505
80	60	140					16MnCr5	5,10	RC30	200106	200506
80	80	140					C15	7,00	RC35	200107	200507
102	64	140					C15	6,50	RC40	200108	200508
100	100	155					C15	11,75	RC85	200117	200517
64	76	150					Aluminium	5,80	HR11	200280	200680
64	102	150					Aluminium	7,80	HR12	200281	200681

Für gebohrte Ausführung bei Bestellung bitte angeben
For drilled version please specify dimensions at order

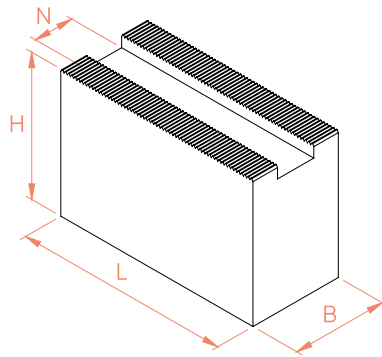
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Backenrohlinge weich, Spitzverzahnung zoll

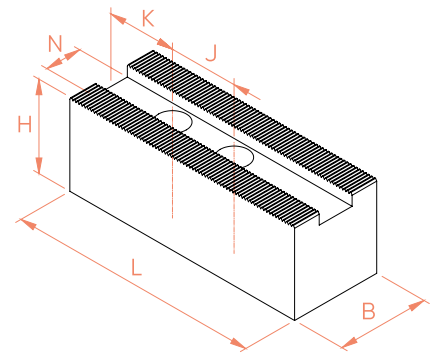
Jaw blanks soft, inch serration

B	H	L	N	V	K	J	Werkstoff material	Masse pro Satz weight pro set	Backentyp jaw type	Ident-Nr. ungebohrt ident-no. undrilled	Ident-Nr. gebohrt ident-no. drilled
mm	mm	mm	mm		mm	mm		kg			
35	30	72	12	1,5mm x 60°	Für gebohrte Ausführung bei Bestellung bitte angeben For drilled version please specify dimensions at order		C15	1,90	HJ02	200801	200802
60	30	72					C15	3,00	HJ03	200803	200804
80	30	72					C15	4,00	HJ04	200805	200806
50	50	60					C15	3,40	HJ05	200807	200808
32	38	72					Aluminium	0,70	HP01	200300	200700
32	76	72					Aluminium	1,40	HP02	200301	200701
35	35	90	14	1,5mm x 60°			C15	2,50	HK01	200809	200810
60	35	90					C15	3,70	HK02	200811	200812
80	35	95					C15	4,90	HK03	200813	200814
100	35	95					C15	7,20	HK04	200815	200816
40	35	102					C15	3,30	HK06	200817	200818
50	65	75					C15	5,60	HK07	200819	200820
32	44	95					Aluminium	1,10	HP05	200310	200710
32	76	95					Aluminium	1,90	HP06	200311	200711
32	102	95					Aluminium	2,50	HP07	200312	200712
40	40	84					16	1,5mm x 60°	C15	3,10	HM02
40	40	110	C15	4,10					HM03	200825	200826
60	40	90	C15	5,00					HM04	200827	200828
60	40	110	C15	6,20					HM05	200829	200830
80	40	110	C15	7,80					HM06	200831	200832
100	40	110	C15	10,30					HM07	200833	200834
125	40	110	C15	12,90					HM08	200835	200836

Backenrohling ungebohrt
Blank jaws undrilled



Backenrohling gebohrt
Blank jaws drilled



B	H	L	N	V	K	J	Werkstoff material	Masse pro Satz weight pro set	Backentyp jaw type	Ident-Nr. ungebohrt ident-no. undrilled	Ident-Nr. gebohrt ident-no. drilled
mm	mm	mm	mm		mm	mm		kg			
50	80	90	16	1,5mm x 60°	Für gebohrte Ausführung bei Bestellung bitte angeben For drilled version please specify dimensions at order		C15	8,20	HM09	200837	200838
38	51	110					Aluminium	1,70	HP11	200320	200720
38	76	110					Aluminium	2,50	HP12	200321	200721
38	102	110					Aluminium	3,30	HP13	200322	200722
50	50	130	18	1,5mm x 60°			C15	7,80	HO02	200839	200840
80	50	130					C15	11,80	HO03	200841	200842
100	50	130					C15	15,70	HO05	200843	200844
125	50	130					C15	19,70	HO06	200845	200846
51	51	130					Aluminium	2,70	HP17	200330	200730
51	76	130					Aluminium	4,10	HP18	200311	200731
50	50	130	21	1,5mm x 60°			C15	7,60	HS01	200847	200848
80	50	130					C15	11,50	HS02	200849	200850
100	50	130					C15	15,50	HS03	200851	200852
125	50	130					C15	19,50	HS04	200853	200854
51	51	130					Aluminium	2,50	HP25	200350	200750
51	76	130					Aluminium	4,00	HP26	200315	200751
51	102	130					Aluminium	5,20	HP27	200352	200752

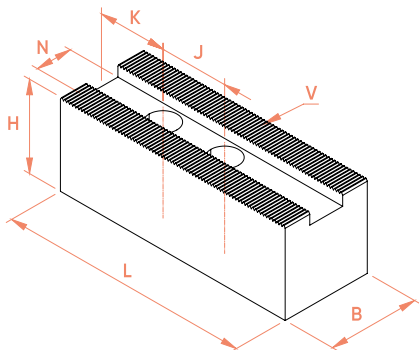
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Aufsatzbacken weich, Spitzverzahnung zoll

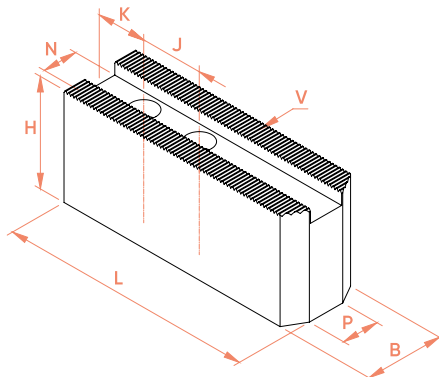
Soft top jaws, inch serration

B	H	L	N	V	K	J	E	P	Masse pro Satz mass pro set	Werkstoff material	Typ type	Schraube bolt	Backentyp jaw type	Ident-Nr. ident-no.
mm	mm	mm	mm		mm	mm	mm	mm	kg					
20	40	55	8	1/16" x 90°	11	14	—	—	0,80	C15	I	M9x1	CS11	204020
25	30	53	10	1/16" x 90°	9	12	12	3	0,80	C15	IV	M6	BI13	206007
25	50	53	10		11	12	12	—	0,40	Aluminium	IV	M6	HF13	206100
25	50	53	10		9	12	12	3	1,10	C15	IV	M6	BI14	206001
25	50	70	10	1/16" x 90°	13	19	—	—	1,40	C15	I	M10	CS16	204001
25	60	70	10		13	19	—	—	1,75	C15	I	M10	CS17	204021
30	40	68	11	1/16" x 90°	21	18	—	—	1,60	C15	I	M8	CO13	211001
30	40	55	12	1/16" x 90°	9	15	—	—	1,20	C15	I	M8	BI16	206008
32	57	70	12		9	15	—	—	0,80	Aluminium	I	M8	HF16	206101
30	60	55	12		9	15	—	—	1,90	C15	I	M8	BI17	206002
30	30	60	12	1/16" x 90°	15	16	—	—	1,00	C15	I	M8	CH13	207100
30	40	55	12		10	16	—	—	1,20	C15	I	M8	RD13	200005
30	60	80	12	1/16" x 90°	15	21	—	—	3,60	C15	I	M12	CS18	204002
30	60	90	12		15	21	—	—	3,80	C15	I	M12	CS20	204003
30	40	70	14	1/16" x 90°	16	16,5	—	—	1,30	C15	I	M10	CH17	207101
35	60	68	14		15	20	—	—	3,40	16MnCr5	I	M10	RD165	201165
35	40	80	14		15	20	—	4	3,20	16MnCr5	II	M10	X1725	9901725
40	60	111	16	1/16" x 90°	18	29	—	—	4,70	C15	I	M16	CS25	204004
40	80	113	16		18	29	—	—	6,50	C15	I	M16	CS26	204022

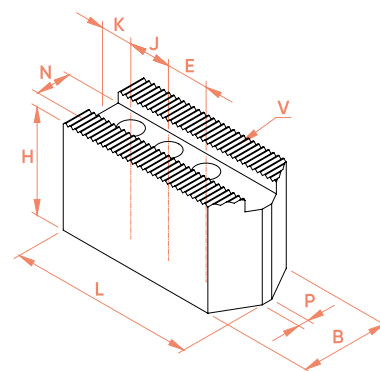
Typ I



Typ II



Typ IV



Berg	Forkardt	Röhm	Schunk	SMW-Autoblok
KH 110				
		KFD 110 KFD 125 KFD 140 KFD-HS 13 KFD-HS 140		
KH 140 KH 160 KHL 160				
			ROTA TP 125	HFKS 130 SP 125
		KFD-HE 170 KFD-HS 160 KFD-HS 175 LVE 160	ROTA NCD 160	
KF 130		KFD 130 KFH 140 LVE 125 LVE 160		AL-D 125 AN-D 125 BB-D 140 BH-D 130 GHDN 125 SP 125
KH 175 KH 200 KHL 200				
			ROTA NCK plus 165 ROTA NCK plus 185 ROTA TP 160	AL-D 165 AN-D 165 AP-D 170 BB-D 175 BH-D 165 BHD-FC 165 GHD-FC 165 GHDN 165 HFKN-D 165 NT-D 170 SP 160
KH 250 KH 315 KHL 250 KHL 315				

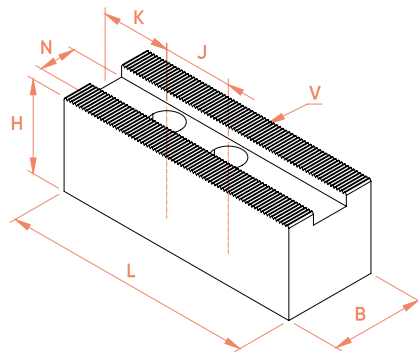
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Aufsatzbacken weich, Spitzverzahnung zoll

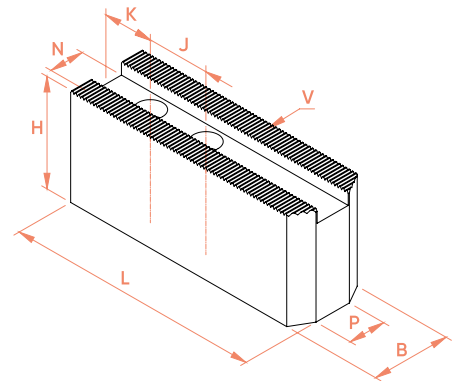
Soft top jaws, inch serration

B	H	L	N	V	K	J	E	P	Masse pro Satz mass pro set	Werkstoff material	Typ type	Schraube bolt	Backentyp jaw type	Ident-Nr. ident-no.
mm	mm	mm	mm		mm	mm	mm	mm	kg					
40	60	70	17	1/16" x 90°	15	22	—	—	3,10	16MnCr5	I	M12	RD16	201010
40	60	70	17		15	22	—	—	3,10	Aluminium	I	M12	RD16A	209001
40	40	80	17		15	22	—	—	2,00	16MnCr5	I	M12	RE16	202001
40	40	80	17		15	22	—	6	2,00	16MnCr5	II	M12	RH16	203001
40	60	70	17	1/16" x 90°	12	19	—	—	3,10	C15	I	M12	BI20	206003
40	60	90	17		12	19	—	—	4,20	C15	I	M12	BI25	206004
40	60	90	17		12	19	—	—	1,50	Aluminium	I	M12	HF20	206102
40	60	90	17	1/16" x 90°	25	22	—	—	4,20	16MnCr5	I	M12	RD20	201015
40	60	90	17		25	22	—	—	1,50	Aluminium	I	M12	RD20A	209002
40	40	90	17		15	22	—	—	2,70	16MnCr5	I	M12	RE20	202005
35	40	98	17		15	22	—	4	2,70	16MnCr5	II	M12	RH20	203005
40	40	90	17		20	23	—	—	2,80	C15	I	M12	CH21	207102
50	60	105	21	1/16" x 90°	15	25	—	—	6,00	C15	I	M16	BI32	206005
50	80	105	21		15	25	—	—	2,80	Aluminium	I	M16	HF32	206103

Typ I



Typ II



Berg	Forkardt	Röhm	Schunk	SMW-Autoblok
HES 160 HES 200 HESF 160 HESF 200 KF 160 KF 200 KHFF 200	KG 200 KGH 160 KGH 175 KGH 200 KGHF 160 KGHF 175 KGHF 200 KL 160 KL 200 KLNC 200 KP 200 KS 160 KS 200 KS 250 KSF 175 KSF 200 KSH 160 KSH 200 KSHF 200 KT 160 KT 200 KTG 160 KTG 200 KTH 160 KTH 175 KTH 200 KTN 160 KTN 200 NH 160 NH 175 NH 200 NHF 160 NHF 175 NHF 200 QLC 160 QLC 175 QLC 200 QLC-KS 200 QLK 160 QLK 175 QLK 200 QLK-KS 200	KFD 160 KFD 200 KFD-AF 160 KFD-HE 210 KFD-HF 160 KFD-HF 200 KFD-HS 200 KFD-HS 250 KFH 160 KFH 200 KFH-F 160 KFH-F 200 KFH-G 160 KFH-G 200 KFH-HC 160 KFH-NC 160 KFH-NC 200 LVE 200	ROTA NC 165 ROTA NC 210 ROTA NCD 210 ROTA NCD 215 ROTA NCF 165 ROTA NCF 210 ROTA NCK plus 210 ROTA NCK plus 250 ROTA NCO 165 ROTA NCO 210	AL-D 210 AN-D 210 AP-D 215 AP-D 260 APL-D 215 APL-D 260 BB-D 210 BH-D 210 BHD-FC 210 GHD 210 GHD-FC 210 GHDN 210 HD-B 220 HDL 200 HDN 200 HDN 220 HFK 160 HFK 200 HFKN-D 210 HFKS 160 HFKS 200 LP 205 NT-D 215 NT-D 260 SP 200 SP 240
		KFD-HS 200 KFD-HS 250		
HES 200 HESF 200 KF 200 KHFF 200	KG 200 KGH 200 KGHF 200 KL 200 KLNC 200 KP 200 KS 200 KS 250 KSF 200 KSH 200 KSHF 200 KT 200 KTG 200 KTH 200 KTN 200 NH 200 NHF 200 QLC 200 QLC-KS 200 QLC-KS 250 QLK 200 QLK-KS 200 QLK-KS 250	KFD 200 KFD-AF 200 KFD-HE 200 KFD-HE 210 KFD-HF 200 KFD-HS 250 KFH 200 KFH-F 200 KFH-G 200 KFH-NC 200 KFL 250 LVE 200	ROTA NC 210 ROTA NCD 210 ROTA NCD 215 ROTA NCF 210 ROTA NCK 210 ROTA NCK 250 ROTA NCK plus 210 ROTA NCK plus 250 ROTA NCO 210	AL-D 210 AN-D 210 AP-D 215 AP-D 260 APL-D 215 APL-D 260 BB-D 210 BH-D 210 BHD-FC 210 GHD 210 GHD-FC 210 GHDN 210 HD-B 220 HDL 200 HDN 200 HDN 220 HFK 160 HFK 200 HFKN-D 210 HFKS 160 HFKS 200 LP 205 NT-D 215 NT-D 260 SP 200 SP 240
		KFD-HS 315		

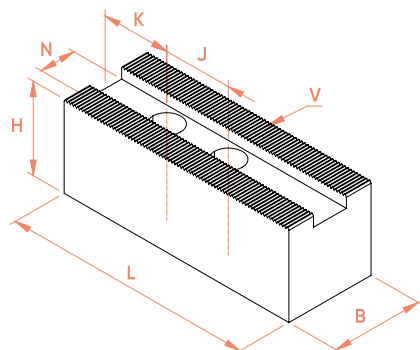
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Aufsatzbacken weich, Spitzverzahnung zoll

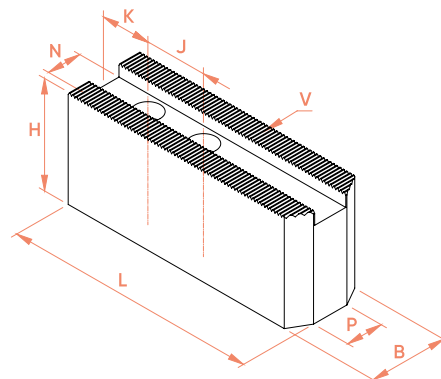
Soft top jaws, inch serration

B	H	L	N	V	K	J	E	P	Masse pro Satz mass pro set	Werkstoff material	Type type	Schraube bolt	Backentyp jaw type	Ident-Nr. ident-no.
mm	mm	mm	mm		mm	mm	mm	mm	kg					
50	80	120	21	1/16" x 90°	30	28	—	—	9,30	16MnCr5	I	M16	RD25	201020
50	80	120	21		30	28	—	—	9,30	Aluminium	I	M16	RD25A	209003
50	50	120	21		20	28	—	—	5,10	16MnCr5	I	M16	RE25	202010
50	50	120	21		20	28	—	8	5,10	16MnCr5	II	M16	RH25	203010
50	50	110	21		20	30	—	—	3,80	C15	I	M16	CH25	207103
50	70	108	21	1/16" x 90°	28	30	—	—	8,00	C15	I	M14	CO25	211005
50	50	125	21	1/16" x 90°	20	30	—	—	5,50	C15	I	M16	CH32	207104
50	50	140	21	1/16" x 90°	30	28	—	8	6,70	16MnCr5	II	M16	RH32	203015

Typ I



Typ II



Berg	Forkardt	Röhm	Schunk	SMW-Autoblok
HES 250 HES 315 HESF 250 HESF 315 KF 250 KF 315 KHFF 250 KHFF 315	KG 250 KG 315 KL 250 KLNC 250 KLNC 315 KP 250 KP 315 KS 315 KS 400 KSH 250 KSH 315 KSH 400 KSHF 250 KSHF 315 KSHF 400 KT 250 KT 315 KTG 250 KTG 315 KTN 250 KTN 315 NH 250 NH 315 NHF 250 NHF 315 QLC 250 QLC 315 QLC-KS 315 QLC-KS 400 QLK 250 QLK 315 QLK-KS 315 QLK-KS 400	KFD 250 KFD 315 KFD-AF 250 KFD-AF 315 KFD-HF 315 KFD-HF 250 KFD-HF 315 KFD-HS 315 KFH 250 KFH 315 KFH-F 250 KFH-F 315 KFH-G 250 KFH-G 315 KFH-NC 250 KFH-NC 315 KFL 315 KFL 400 LVE 250 LVE 305 LVE 315	ROTA NC 250 ROTA NC 315 ROTA NC plus 260 ROTA NC plus 315 ROTA NCD 250 ROTA NCD 255 ROTA NCD 315 ROTA NCF 250 ROTA NCF 315 ROTA NCF plus 260 ROTA NCF plus 315 ROTA NCK plus 315 ROTA NCO 260 ROTA NCO 315 ROTA TP 250 ROTA TP 315 ROTA TP 350	AL-D 250 AL-D 315 AN-D 250 AN-D 315 AP-D 315 APL-D 315 BB-D 250 BB-D 315 BH-D 250 BH-D 315 BHD-FC 250 BHD-FC 315 GHD 250 GHD 305 GHD 400 GH-D 400 GHD-FC 250 GHD-FC 305 GHD-FC 315 GHD-FC 400 GHDN 250 GHDN 305 GHDN 315 GHDN 400 HD-B 300 HDL 250 HDL 315 HDL 400 HDN 250 HDN 315 HDN 400 HFK 250 HFK 270 HFK 315 HFKN-D 260 HFKN-D 315 HFKS 250 HFKS 270 HFKS 315 LP 250 NT-D 315 SP 250 SP 280 SP 315 SP 350 LP 250 LP 305
				LP 250 LP 305 SP 250 SP 315
HES 315 HESF 315 KF 315 KHFF 315	KG 315 KLNC 315 KP 315 KS 315 KS 400 KSH 315 KSH 400 KSHF 315 KSHF 400 KT 315 KTG 315 KTN 315 NH 315 NHF 315 QLC 315 QLC-KS 315 QLC-KS 400 QLK 315 QLK-KS 315 QLK-KS 400	KFD 315 KFD-AF 315 KFD-HF 315 KFD-HF 315 KFD-HS 315 KFH 315 KFH-F 315 KFH-G 315 KFH-NC 315 KFL 315 KFL 400 LVE 305 LVE 315	ROTA NC 315 ROTA NC plus 315 ROTA NCD 315 ROTA NCF 315 ROTA NCF plus 315 ROTA NCK plus 315 ROTA NCO 315 ROTA TP 315 ROTA TP 350	AL-D 315 AN-D 315 AP-D 315 APL-D 315 BB-D 315 BH-D 315 BHD-FC 315 GHD 305 GHD 400 GH-D 400 GHD-FC 305 GHD-FC 315 GHD-FC 400 GHDN 305 GHDN 315 GHDN 400 HD-B 300 HDL 315 HDL 400 HDN 315 HDN 400 HFK 315 HFKN-D 315 HFKS 315 NT-D 315 SP 315 SP 350
HES 315 HESF 315 KF 315 KHFF 315	KG 315 KLNC 315 KP 315 KS 315 KS 400 KSH 315 KSH 400 KSHF 315 KSHF 400 KT 315 KTG 315 KTN 315 NH 315 NHF 315 QLC 315 QLC-KS 315 QLC-KS 400 QLK 315 QLK-KS 315 QLK-KS 400	KFD 315 KFD-AF 315 KFD-HF 315 KFD-HS 315 KFH 315 KFH-F 315 KFH-G 315 KFH-NC 315 KFL 315 KFL 400 LVE 305 LVE 315	ROTA NC 315 ROTA NC plus 315 ROTA NCD 315 ROTA NCF 315 ROTA NCF plus 315 ROTA NCK plus 315 ROTA NCO 315 ROTA TP 315 ROTA TP 350	AL-D 315 AN-D 315 AP-D 315 APL-D 315 BB-D 315 BH-D 315 BHD-FC 315 GHD 305 GHD 400 GH-D 400 GHD-FC 305 GHD-FC 315 GHD-FC 400 GHDN 305 GHDN 315 GHDN 400 HD-B 300 HDL 315 HDL 400 HDN 315 HDN 400 HFK 315 HFKN-D 315 HFKS 315

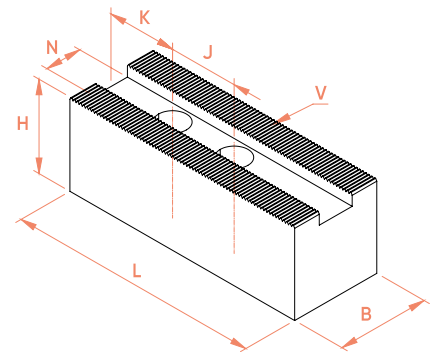
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Aufsatzbacken weich, Spitzverzahnung zoll

Soft top jaws, inch serration

B	H	L	N	V	K	J	E	P	Masse pro Satz mass pro set	Werkstoff material	Type type	Schraube bolt	Backentyp jaw type	Ident-Nr. ident-no.
mm	mm	mm	mm		mm	mm	mm	mm	kg					
50	80	150	20	3/32" x 90°	31	38	—	—	8,40	C15	I	M20	CS40	204023
50	100	150	20		31	38	—	—	13,60	C15	I	M20	CS41	204024
60	90	140	25,5	3/32" x 90°	20	31	—	—	14,50	C15	I	M20	BI40	206006
60	90	155	25,5	3/32" x 90°	30	35	—	—	16,30	16MnCr5	I	M20	RD40	201025
60	102	155	25,5		30	35	—	—	16,30	Aluminium	I	M20	RD40A	209004
60	60	140	25,5		30	35	—	—	9,40	16MnCr5	I	M20	RE40	202015
60	80	155	25,5	3/32" x 90°	35	40	—	—	15,00	C15	I	M18	CP40	211007
60	80	185	25,5	3/32" x 90°	35	40	—	—	18,00	C15	I	M18	CP50	211006
76	102	240	30	3/32" x 90°	40	64	—	—	35,00	C15	I	M24	CP63	211008
76	102	300	30	3/32" x 90°	40	64	—	—	43,00	C15	I	M24	CP80	211010

Typ I



Berg	Forkardt	Röhms	Schunk	SMW-Autoblok
KH 400 KH 500 KH 630 KHL 400				
		KFD-HS 400 KFD-HS 500		
HES 400 HES 500 HES 630 HESF 400 HESF 500 HESF 630 KF 400 KF 500 KF 630 KHFF 400 KHFF 500 KHFF 630	KG 400 KG 500 KL 400 KL 500 KLNC 400 KLNC 500 KP 400 KP 500 KS 500 KS 630 KSH 500 KSHF 630 KT 400 KT 500 KT 630 KTG 400 KTG 500 KTG 630 KTN 400 KTN 500 KTN 630 NH 400 NH 500 NH 630 NHF 400 NHF 500 NHF 630 QLC 400 QLK 400	KFD 400 KFD 500 KFD 630 KFD 800 KFD-HE 400 KFD-HF 400 KFD-HF 500 KFD-HF 630 KFD-HS 400 KFD-HS 500 KFH 400 KFH 500 KFH-F 400 KFH-F 500 KFH-G 400 KFH-G 500 KFH-NC 400 KFH-NC 500 KFL 500 KFL 600 LVE 400 LVE 500 LVE 630 LVE 800	ROTA NC 400 ROTA NC 500 ROTA NCD 400 ROTA NCD 500 ROTA NCD 630 ROTA NCF 400 ROTA NCF 500 ROTA NCO 400 ROTA NCO 500 ROTA NCO 630 ROTA NCO 800	AL-D 400 AN-D 400 AP-D 400 APL-D 400 BB-N 400 BB-N 460 BB-N 470 BB-N 500 BB-N 600 BB-N ES 400 BB-N ES 460 BB-N ES 470 BB-N ES 500 BB-N ES 600 BH-D 400 BH-D 450 BH-D 500 BH-D 630 BH-D 800 BHD-FC 400 BHD-FC 500 BHD-FC 630 GHD 500 GH-D 500 GHD 610 GH-D 610 GHD 640 GHD 800 GH-D 800 GHDN 500 GHDN 610 GHDN 640 GHDN 800 HFK 400 HFK 500 HFKN-D 400 HFKN-D 500 HFKS 400 HFKS 500 IL-D 500 IL-D 630 IL-D 800 IN-D 500 IN-D 630 IN-D 800 NT-D 400
			ROTA TB 400	LP 380 LP 460
			ROTA TB 500 ROTA TB 610 ROTA TB-LH 630	LP 500
			ROTA NC 630 ROTA NC 800 ROTA NCF 630 ROTA TB-LH 630	BB-N 630
			ROTA NC 800	BB-N 800 BB-N 1000

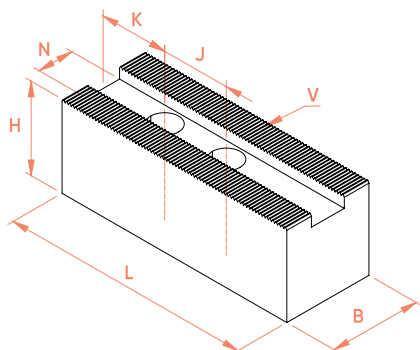
UNIJaws®

Aufsatzbacken weich, Spitzverzahnung metrisch

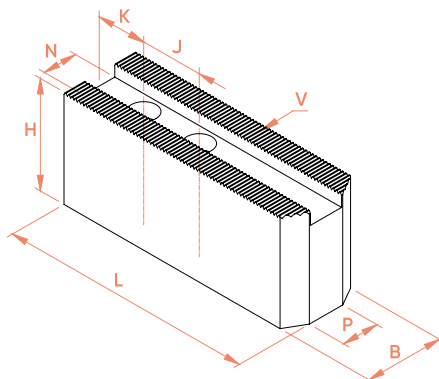
Soft top jaws, metric serration

B	H	L	N	V	K	J	E	P	Masse pro Satz mass pro set	Werkstoff material	Typ type	Schraube bolt	Backentyp jaw type	Ident-Nr. ident-no.
mm	mm	mm	mm	mm	mm	mm	mm	mm	kg					
20	25	48	8	1,5mm x 60°	8	15	—	—	0,50	C15	I	M6	BO04	215104
25	25	54	10	1,5mm x 60°	13	14	—	4	0,60	C15	II	M8	BR05	215205
25	50	55	10		13	14	—	—	1,10	C15	I	M8	DK05	215206
25	32	57	10	1,5mm x 60°	10	18	—	4	0,80	C15	I	M8	BO05	215105
25	50	57	10		10	18	—	—	1,30	C15	I	M8	DJ05	215207
32	35	66	10	1,5mm x 60°	10	18	—	4	2,00	16MnCr5	III	M8	VS10	853110
24	26	67	10		9	18	—	3	0,90	16MnCr5	III	M8	VS11	853111
25	32	57	10		10	18	—	4	1,20	C15	II	M8	BO05-4	215107
25	25	57	10		10	18	—	—	1,10	C15	I	M8	BQ05-4	215306
25	50	57	10		10	18	—	—	1,80	C15	I	M8	DJ05-4	215227
25	25	62	10	1,5mm x 60°	8	19	—	4	0,90	C15	II	M8	CK05	215208
25	25	48	11	1,5mm x 60°	9,5	16	—	—	0,70	C15	I	M8	DU05	215043
30	35	80	11	1,5mm x 60°	14	25	—	8	1,70	C15	III	M8	CK06	215209
30	35	72	12	1,5mm x 60°	15	20	—	—	1,60	C15	I	M10	BO06	215106
30	30	72	12		15	20	—	—	1,10	C15	I	M10	BQ06	215006
30	60	72	12		15	20	—	—	3,50	C15	I	M10	DJ06	215506
32	32	82	12		15	20	—	5	1,30	C15	II	M10	PT06	215016
35	48	90	12	1,5mm x 60°	12	20	—	4	3,60	16MnCr5	III	M10	VS12	853112
30	35	72	12		15	20	—	—	2,20	C15	I	M10	BO06-4	9904079
30	30	72	12		15	20	—	—	1,50	C15	I	M10	BQ06-4	215307

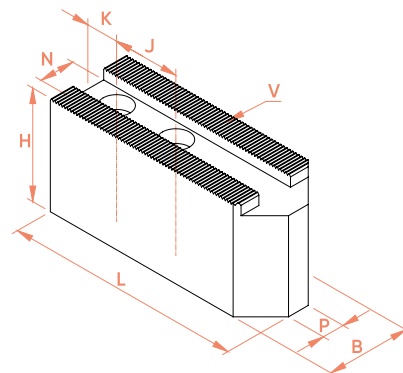
Typ I



Typ II



Typ III



Auto Strong	Forkardt	HOWA	HWR	Kitagawa	mmk / Matsumoto	Röhm	Samchully	Schunk	SMW-Autoblok
				B-04 HOB-04			HCH-04		
N-204 N-205		HO1MA4		B-204 B-205 N-04 NL-04	ZA5-5-34	KFD-HE 130	HC-04 HCL-04 HS-04 HS-05		
				B-05 HOB-05					
			VD016 VT016 VT-S 016						
		HO1MA5		N-05	ZA5-6-40		HC-05		
		HO27M4 HO27M5							
					ZA5-6-42 ZA5-6-46				
N-206 NB-206 V-206	QLC 160 QLC 175 QLK 160 QLK 175	HO15M6 HO15MA6 HO22M6 HO27M6 HO37M6 HO7MA6		B-06 B-07 B-206 BB-06 BB-206 BL-206 HOB-06 HOH-06 HOH-106 HOH-206 ML-06 N-06 NL-06		KFD-HE 170	HC-06 HCH-06 HCL-06 HH-206 HS-06 MH-206	ROTA NC 165 ROTA NC plus 185 ROTA NCD 165 ROTA NCD 185 ROTA NCF 165 ROTA NCF 185 ROTA NCF plus 185 ROTA NCK 165	AL-M 165 AN-M 165 AP-M 170 BB-M 165 BB-M 175 BH-M 165 BHM-FC 165 HFKN-M 165 NT-M 170
			VD021 VK021 VT021 VT-S 021						

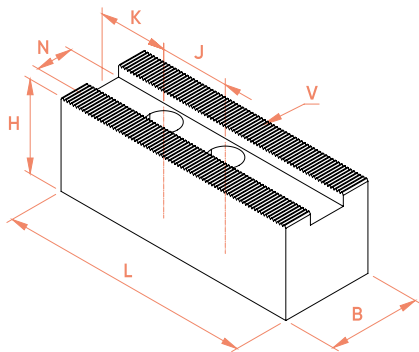
UNIJaws®

Aufsatzbacken weich, Spitzverzahnung metrisch

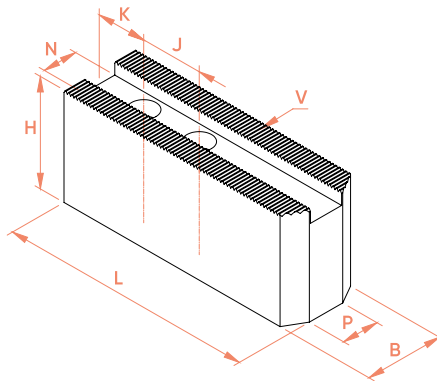
Soft top jaws, metric serration

B	H	L	N	V	K	J	E	P	Masse pro Satz mass pro set	Werkstoff material	Typ type	Schraube bolt	Backentyp jaw type	Ident-Nr. ident-no.
mm	mm	mm	mm	mm	mm	mm	mm	mm	kg					
35	40	95	14	1,5mm x 60°	25	25	—	—	2,70	C15	I	M12	BO08	215108
35	35	90	14		25	25	—	—	2,20	C15	I	M12	BQ08	215101
35	40	85	14		25	25	—	15	2,20	C15	III	M12	CK08	215212
35	80	95	14		25	25	—	—	4,00	C15	I	M12	DJ08	215508
35	40	102	14		25	25	—	5	2,90	C15	II	M12	PT08	215008
35	40	95	14		25	25	—	15	2,70	C15	III	M12	CK09	215079
40	40	85	16	1,5mm x 60°	20	25	—	—	2,80	C15	I	M12	DU08	215088
40	60	85	16		20	25	—	—	4,00	C15	I	M12	DU09	214215
40	40	110	16	1,5mm x 60°	30	30	—	—	3,40	C15	I	M12	BO10	215110
40	80	110	16		30	30	—	—	6,50	C15	I	M12	DJ10	215510
40	60	90	16		21	30	—	—	4,20	C15	I	M12	DK10	215003
40	40	125	16		30	30	—	5	4,50	C15	II	M12	PT10	215010
40	60	110	16		21	30	—	10	5,20	C15	III	M12	DK11	215004
38	50	106,5	16	1,5mm x 60°	14,5	30	—	10	4,80	16MnCr5	III	M12	VS16	853116
37	45	97	16		14,5	30	—	27	4,00	16MnCr5	III	M12	VS17	853117
40	40	110	16		21	30	—	—	4,60	C15	I	M12	BO10-4	215119
40	80	110	16		30	30	—	—	8,70	C15	I	M12	DJ10-4	215514
40	60	90	16		21	30	—	—	5,60	C15	I	M12	DK10-4	215019
40	40	105	18	1,5mm x 60°	24	30	—	—	4,40	C15	I	M14	DU10	215001
40	60	105	18		24	30	—	—	6,60	C15	I	M14	DU11	215214

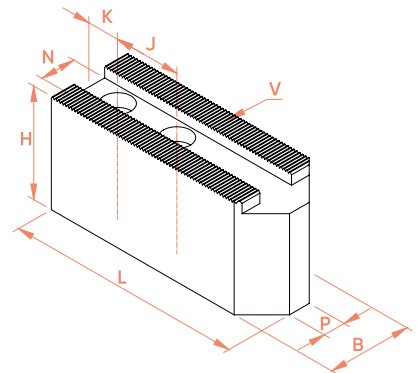
Typ I



Typ II



Typ III



Auto Strong	Forkardt	HOWA	HWR	Kitagawa	mmk / Matsumoto	Röhm	Samchully	Schunk	SMW-Autoblok
N-208 NB-208 V-208	QLC 200 QLK 200	HO15M8 HO7MA8		B-08 B-208 BB-08 BB-208 BL-208 HOB-08 HOH-08 HOH-108 HOH-208 ML-08 N-08 NL-08 QJR08	ZA6-8-52 ZA6-8-66	KFD-HE 210	HC-08 HCH-08 HCL-08 HH-208 HS-08 MH-208	ROTA NC 210 ROTA NC plus 215 ROTA NCD 210 ROTA NCF 210 ROTA NCF plus 215 ROTA NCK 210	AL-M 210 AN-M 210 APL-M 215 AP-M 215 BB-M 210 BH-M 210 BHM-FC 210 HFKN-M 210 NT-M 215
		HO15M10 HO22M8 HO27M8 HO37M8 HO7MA10							
N-210 NB-210 V-210	QLC 250 QLK 250			B-10 B-210 BB-10 BB-210 BL-210 HOB-10 HOH-10 HOH-10K HOH-210 N-10 NL-10 QJR10	ZA6-10-75 ZA6-10-78	KFD-HE 254	HC-10 HCH-10 HCL-10 HH-210 HS-10 MH-210	ROTA NC 250 ROTA NC plus 260 ROTA NCD 250 ROTA NCF 250 ROTA NCF plus 260 ROTA NCK 250	AL-M 250 AN-M 250 APL-M 260 AP-M 260 BB-M 250 BH-M 250 BHM-FC 250 HFKN-M 260 NT-M 260
			VD026 VD031 VK026 VK031 VK-S 026 VK-S 031 VL042 VT026 VT031 VT-S 026 VT-S 031						
		HO15M12 HO22M10 HO27M10 HO37M10 HO7MA12							

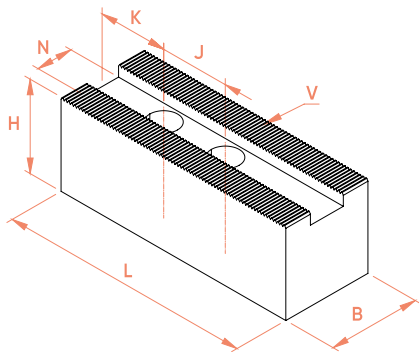
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Aufsatzbacken weich, Spitzverzahnung metrisch

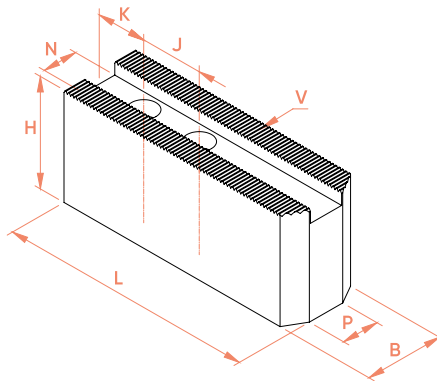
Soft top jaws, metric serration

B	H	L	N	V	K	J	E	P	Masse pro Satz mass pro set	Werkstoff material	Typ type	Schraube bolt	Backentyp jaw type	Ident-Nr. ident-no.
mm	mm	mm	mm	mm	mm	mm	mm	mm	kg					
50	50	130	18	1,5mm x 60°	40	30	—	—	6,80	C15	I	M14	BO12	215112
50	80	130	18		40	30	—	—	10,90	C15	I	M14	DJ12	215512
50	50	145	18		40	30	—	10	7,30	C15	II	M14	PT12	215216
50	100	130	18		40	30	—	—	13,60	C15	I	M14	DJ14	215215
50	65	111	21	1,5mm x 60°	25	35	—	—	7,10	C15	I	M16	DU12	215612
50	50	130	21	1,5mm x 60°	40	30	—	—	6,50	C15	I	M16	BR13	215213
50	80	130	21		40	30	—	—	10,90	C15	I	M16	DJ13	215513
50	50	145	21		40	30	—	10	7,30	C15	II	M16	PT13	215219
48	60	126	21	1,5mm x 60°	18	30	—	10	8,50	16MnCr5	III	M16	VS21	853121
50	50	130	21		40	30	—	—	10,10	C15	I	M16	BR13-4	215223
50	80	130	21		40	30	—	—	15,40	C15	I	M16	DJ13-4	215515
64	76	165	22	1,5mm x 60°	37	43	—	—	15,20	C15	I	M20	BO15	215115
64	127	165	22		37	43	—	—	25,00	C15	I	M20	DJ15	215217

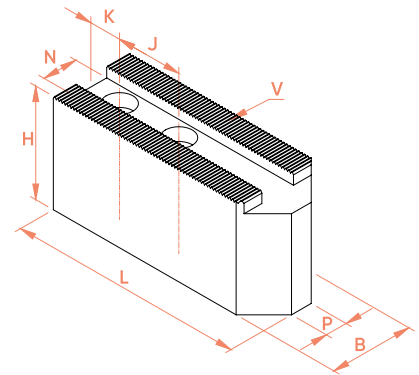
Typ I



Typ II



Typ III



Auto Strong	Forkardt	HOWA	HWR	Kitagawa	mmk / Matsumoto	Röhmm	Samchully	Schunk	SMW-Autoblok
V-212				B-12 HOB-12 HOH-12 HOH-12K N-12 NL-12	ZA6-12-78 ZA8-12-85 ZA8-12-93		HC-12 HCH-12 HCL-12	ROTA NC 315 ROTA NCF 315 ROTA NCK 315	
		HO27M12 HO37M12							
N-212 NB-212	QLC 315 QLC 400 QLK 315 QLK 400			B-212 BB-212 BL-212 QJR12		KFD-HE 315		ROTA NC plus 315 ROTA NCD 315 ROTA NCF plus 315 ROTA NCK 315 ROTA NCK plus 315	AL-M 315 AN-M 315 APL-M 315 AP-M 315 BB-M 305 BB-M 315 BH-M 315 BHM-FC 315 GH-M 400 HFKN-M 315 NT-M 315
			VD040 VK040 VK-S 040 VT040 VT-S 040						
N-215				B-15 B-18 HOB-15 HOB-18 HOH-15 HOH-15K HOH-18 N-15 N-18 NL-18 NV-15 NV-18			HC-15 HCH-15 HCH-18	ROTA NC 400 ROTA NCF 400	AL-M 400 AN-M 400 APL-M 400 AP-M 400 BH-M 400 BH-M 450 BHM-FC 400 NT-M 400

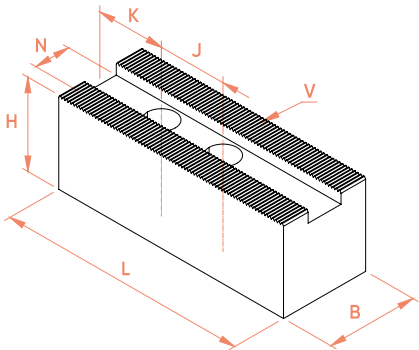
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Aufsatzbacken weich, Spitzverzahnung metrisch / Modul 2

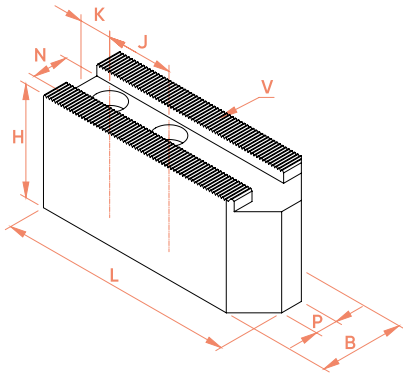
Soft top jaws, metric serration / modul 2

B	H	L	N	V	K	J	E	P	Masse pro Satz mass pro set	Werkstoff material	Typ type	Schraube bolt	Backentyp jaw type	Ident-Nr. ident-no.
mm	mm	mm	mm	mm	mm	mm	mm	mm	kg					
32	32	72	12	3,0mm x 60°	15	20	—	—	1,60	C15	I	M10	BP06	215211
32	44	95	14	3,0mm x 60°	25	25	—	—	2,70	C15	I	M12	BP08	215408
40	40	110	16	3,0mm x 60°	30	30	—	—	3,40	C15	I	M12	BP10	215410
50	50	130	18	3,0mm x 60°	40	30	—	—	6,80	C15	I	M14	BP12	215412
64	76	150	22	3,0mm x 60°	30	50	—	—	13,80	C15	I	M20	CK15	215015
60	80	180	25	3,0mm x 60°	40	60	—	—	16,50	C15	I	M20	BO18	215118
60	125	180	25		40	60	—	—	32,00	C15	I	M20	DJ18	215220
58	90	175	25	3,0mm x 60°	21	60	—	10	22,00	16MnCr5	III	M20	VS25	853125
60	80	180	25		40	60	—	—	22,20	C15	I	M20	BO18-4	215120
60	125	180	25		40	60	—	—	34,70	C15	I	M20	DJ18-4	215224
38	50	106,5	16	Modul 2	14,5	30	—	10	4,80	16MnCr5	III	M12	VP16	851016
58	90	175	16		14,5	30	—	—	25,40	16MnCr5	I	M12	VP17	851017
58	90	250	16		—	—	—	—	38,9	16MnCr5	I	—	VP18U	851018
55	60	126	21	Modul 2	40	30	—	10	23,20	16MnCr5	III	M16	VP21	851021
76	110	200	21		40	30	—	—	46,80	16MnCr5	I	M16	VP22	851022
110	115	246	21		—	—	—	—	91,8	16MnCr5	I	—	VP23U	851023

Typ I



Typ III



Auto Strong	Forkardt	HOWA	HWR	Kitagawa	mmk / Matsumoto	Röhm	Samchully	Schunk	SMW-Autoblok
		HO1MA6							
		HO1MA8							
		HO1MA10							
		HO1MA12							
					ZA8-15-120				
V-221 V-224				B-21 B-24 HOB-21 HOB-24 N-21 N-24 NV-21 NV-24 NV-28 NV-32 NV-36 NV-40			HC-21 HC-24 HCH-21 HCH-24 HH-221 HH-224 MH-221 MH-224		
			VD050 VD063 VD080 VD100 VD120 VK050 VK063 VK080 VK-S 050 VK-S 063 VK-S 080 VK-S 100 VT-S 050 VT-S 063 VT-S 080 VT-S 100						
			VL060 VL070						
			VL100 VL120 VL140 VL160 VL180 VL200						

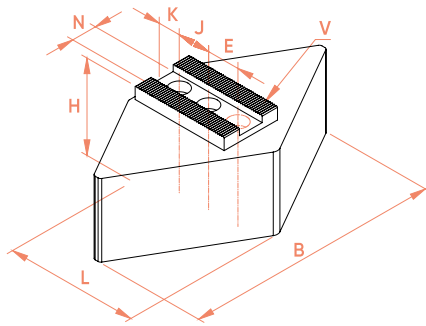
UNIJaws®

Segmentbacken weich, Spitzverzahnung zoll

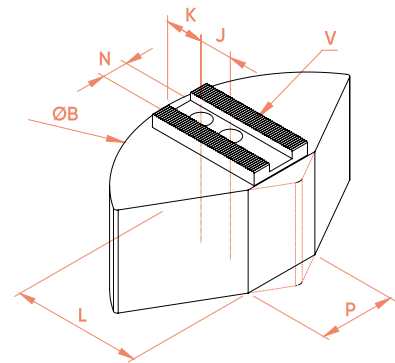
Segment jaws, inch serration

B	H	L	N	V	K	J	E	P	Masse pro Satz mass pro set	Werkstoff material	Typ type	Schraube bolt	Backentyp jaw type	Ident-Nr. ident-no.
mm	mm	mm	mm		mm	mm	mm	mm	kg					
92	40	50	10	1/16" x 90°	15	12	12	—	2,40	C15	I	M6	CX13	206104
92	50	50	10		15	12	12	—	1,10	Aluminium	I	M6	HV13	206107
120	60	60	12	1/16" x 90°	20	15	15	—	5,50	C15	I	M8	CX16	206105
120	64	64	12		20	15	15	—	2,10	Aluminium	I	M8	HV16	206108
150	64	76	17	1/16" x 90°	36	19	—	—	8,50	C15	I	M12	CX20	206106
150	64	76	17		41	19	—	—	3,10	Aluminium	I	M12	HV20	206109
120	60	60	17	1/16" x 90°	15	22	—	—	9,00	C15	I	M12	CM16	208001
120	64	64	17		15	22	—	—	3,20	Aluminium	I	M12	HL16	210001
Ø169	76	76	17		21,5	22	—	—	13,00	C15	II	M12	BN77	211101
Ø169	76	76	17		21,5	22	—	—	4,00	Aluminium	II	M12	BN79	211201
170	64	89	17	1/16" x 90°	15	22	—	—	14,00	C15	I	M12	CM20	208002
170	64	89	17		15	22	—	—	5,00	Aluminium	I	M12	HL20	210003
Ø210	76	95	17		25	22	—	—	21,00	C15	II	M12	BN87	211102
Ø210	76	95	17		25	22	—	—	7,00	Aluminium	II	M12	BN89	211202
190	64	89	17	1/16" x 90°	20	22	—	—	20,00	C15	I	M12	CM25	208003
190	64	89	17		20	22	—	—	7,00	Aluminium	I	M12	HL25	210005

Typ I



Typ II



Berg	Forkardt	Röhrlm	Schunk	SMW-Autoblok
		KFD 140 KFD-HS 130 KFD-HS 140		
		KFD-HE 170 KFD-HS 160 KFD-HS 175 LVE 160	ROTA NCD 160	
		KFD-HS 200 KFD-HS 250		
HES 160 HES 200 HESF 160 HESF 200 KF 160 KF 200 KHFF 200	KG 200 KGH 160 KGH 175 KGH 200 KGHF 160 KGHF 175 KGHF 200 KL 160 KLNC 200 KP 200 KS 160 KS 200 KS 250 KSF 175 KSF 200 KSH 160 KSH 200 KSHF 200 KT 160 KTG 160 KTG 200 KTH 160 KTH 175 KTH 200 KTN 160 KTN 200 NH 160 NH 175 NH 200 NHF 160 NHF 175 NHF 200 QLC 160 QLC 175 QLC 200 QLC-KS 200 QLK 160 QLK 175 QLK 200 QLK-KS 200	KFD 160 KFD-AF 160 KFD-HF 160 KFD-HS 200 KFH 160 KFH-F 160 KFH-G 160 KFH-HC 160 KFH-NC 160	ROTA NC 165 ROTA NCD 185 ROTA NCF 165 ROTA NCO 165	AL-D 210 AN-D 210 BB-D 210 BH-D 210 GHD-FC 210 GHDN 210 HDL 200 HDN 200 HDN 220 HFK 160 HFKS 160
HES 200 HESF 200 KF 200 KHFF 200	KG 200 KGH 200 KGHF 200 KL 200 KLNC 200 KP 200 KS 200 KS 250 KSF 200 KSH 200 KSHF 200 KT 200 KTG 200 KTH 200 KTN 200 NH 200 NHF 200 QLC 200 QLC-KS 200 QLC-KS 250 QLK 200 QLK-KS 200 QLK-KS 250	KFD 200 KFD-AF 200 KFD-HE 200 KFD-HE 210 KFD-HF 200 KFD-HS 200 KFD-HS 250 KFH 200 KFH-F 200 KFH-G 200 KFH-NC 200 KFL 250 LVE 200	ROTA NC 210 ROTA NC plus 215 ROTA NCD 210 ROTA NCD 215 ROTA NCF 210 ROTA NCF plus 215 ROTA NCK 210 ROTA NCK 250 ROTA NCK plus 210 ROTA NCK plus 250 ROTA NCO 210 ROTA TP 200	AL-D 210 AN-D 210 AP-D 215 AP-D 260 APL-D 215 APL-D 260 BB-D 210 BH-D 210 BHD-FC 210 GHD 210 GHD-FC 210 GHDN 210 HD-B 220 HDL 200 HDN 200 HDN 220 HFK 200 HFKN-D 210 HFKS 200 LP 205 NT-D 215 SP 200 SP 240
	KS 250 QLC-KS 250 QLK-KS 250	KFD-HS 250 KFL 250	ROTA NCK 250 ROTA NCK plus 250	

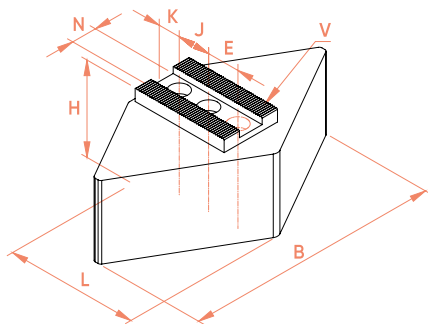
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Segmentbacken weich, Spitzverzahnung zoll

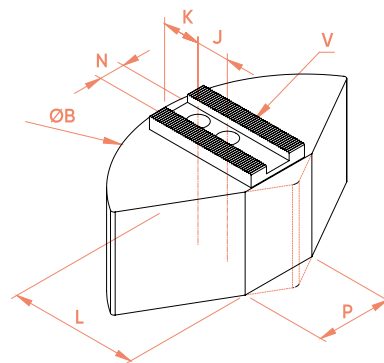
Segment jaws, inch serration

B	H	L	N	V	K	J	E	P	Masse pro Satz mass pro set	Werkstoff material	Typ type	Schraube bolt	Backentyp jaw type	Ident-Nr. ident-no.
mm	mm	mm	mm		mm	mm	mm	mm	kg					
190	64	89	21	1/16" x 90°	20	28	—	—	20,00	C15	I	M16	CM26	208004
190	64	89	21		20	28	—	—	7,00	Aluminium	I	M16	HL26	210004
Ø254	76	111	21		28	28	—	—	29,00	C15	II	M16	BN17	211103
Ø254	76	111	21		28	28	—	—	10,00	Aluminium	II	M16	BN19	211203
240	76	118	21	1/16" x 90°	30	28	—	—	28,00	C15	I	M16	CM32	208005
240	76	118	21		30	28	—	—	10,00	Aluminium	I	M16	HL32	210006
Ø304	76	133	21		38	28	—	—	41,00	C15	II	M16	BN24	211104
Ø304	76	133	21		38	28	—	—	14,00	Aluminium	II	M16	BN26	211204
280	76	152	25,5	3/32" x 90°	32	35	—	—	40,00	C15	I	M20	CM40	208006
280	76	152	25,5		32	35	—	—	13,00	Aluminium	I	M20	HL40	210007
Ø400	76	177	25,5		53	35	—	—	64,00	C15	II	M20	BN27	211105
Ø400	76	177	25,5		53	35	—	—	21,00	Aluminium	II	M20	BN29	211205

Typ I



Typ II



Berg	Forkardt	Röhm	Schunk	SMW-Autoblok
HES 250 HES 315 HESF 250 HESF 315 KF 250 KF 315 KHFF 250 KHFF 315	KG 250 KL 250 KLNC 250 KP 250 KSH 250 KSHF 250 KT 250 KTG 250 KTN 250 NH 250 NHF 250 QLC 250 QLK 250	KFD 250 KFD-AF 250 KFD-HE 254 KFD-HF 250 KFH 250 KFH-F 250 KFH-G 250 KFH-NC 250 KFL 250 LVE 250	ROTA NC 250 ROTA NC plus 260 ROTA NCD 250 ROTA NCF 250 ROTA NCF plus 260 ROTA NCO 260 ROTA TP 250	AL-D 250 AL-D 315 AN-D 250 AN-D 315 BB-D 250 BB-D 315 BH-D 250 BH-D 315 BHD-FC 250 GHD 250 GH-D 400 GHD-FC 250 GHD-FC 305 GHD-FC 400 GHDN 250 GHDN 315 GHDN 400 HDL 250 HDL 315 HDL 400 HDN 250 HDN 315 HDN 400 HFK 250 HFK 270 HFKN-D 260 HFKS 250 HFKS 270 LP 250 SP 250 SP 280
HES 315 HESF 315 KF 315 KHFF 315	KG 315 KLNC 315 KP 315 KS 315 KS 400 KSH 315 KSH 400 KSHF 315 KSHF 400 KT 315 KTG 315 KTN 315 NH 315 NHF 315 QLC 315 QLC-KS 315 QLC-KS 400 QLK 315 QLK-KS 315 QLK-KS 400	KFD 315 KFD-AF 315 KFD-HE 315 KFD-HF 315 KFD-HS 315 KFH 315 KFH-F 315 KFH-G 315 KFH-NC 315 KFL 315 KFL 400 LVE 305 LVE 315	ROTA NC 315 ROTA NC plus 315 ROTA NCD 315 ROTA NCF 315 ROTA NCF plus 315 ROTA NCK plus 315 ROTA NCO 315 ROTA TP 315 ROTA TP 350	SP 280 SP 350 AL-D 315 AN-D 315 AP-D 315 APL-D 315 BB-D 315 BH-D 315 BHD-FC 315 GHD 305 GHD 400 GH-D 400 GHD-FC 305 GHD-FC 315 GHD-FC 400 GHDN 305 GHDN 315 GHDN 400 HD-B 300 HDL 315 HDL 400 HDN 315 HDN 400 HFK 315 HFKN-D 315 HFKS 315 NT-D 315 SP 315
HES 400 HES 500 HES 630 HESF 400 HESF 500 HESF 630 KF 400 KF 500 KF 630 KHFF 400 KHFF 500 KHFF 630	KG 400 KG 500 KL 400 KL 500 KLNC 400 KLNC 500 KP 400 KP 500 KS 500 KS 630 KSH 500 KSHF 630 KT 400 KT 500 KTG 400 KTG 500 KTG 630 KTN 400 KTN 500 KTN 630 NH 400 NH 500 NH 630 NHF 400 NHF 500 NHF 630 QLC 400 QLK 400	KFD 400 KFD 500 KFD 630 KFD 800 KFD-HE 400 KFD-HF 400 KFD-HF 500 KFD-HF 630 KFD-HS 400 KFD-HS 500 KFH 400 KFH 500 KFH-F 400 KFH-F 500 KFH-G 400 KFH-G 500 KFH-NC 400 KFH-NC 500 KFL 500 KFL 600 LVE 400 LVE 500 LVE 630 LVE 800	ROTA NC 400 ROTA NC 500 ROTA NCD 400 ROTA NCD 500 ROTA NCD 630 ROTA NCF 400 ROTA NCF 500 ROTA NCO 400 ROTA NCO 500	AL-D 400 AN-D 400 AP-D 400 APL-D 400 BB-N 400 BB-N 460 BB-N 470 BB-N 500 BB-N 600 BB-N ES 400 BB-N ES 460 BB-N ES 470 BB-N ES 500 BB-N ES 600 BH-D 400 BH-D 450 BH-D 500 BH-D 630 BH-D 800 BHD-FC 400 BHD-FC 500 BHD-FC 630 GHD 500 GH-D 500 GH-D 610 GH-D 800 GHDN 500 GHDN 610 GHDN 640 GHDN 800 HFK 400 HFK 500 HFKN-D 400 HFKN-D 500 HFKS 400 HFKS 500 IL-D 500 IL-D 630 IN-D 500 IN-D 630 IN-D 800 NT-D 400

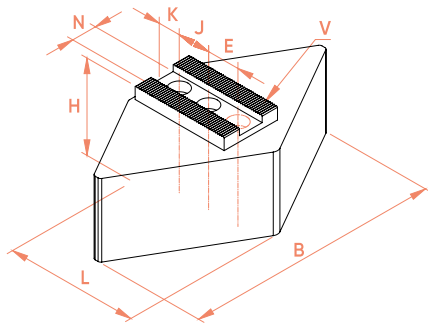
UNIJaws®

Segmentbacken weich, Spitzverzahnung metrisch

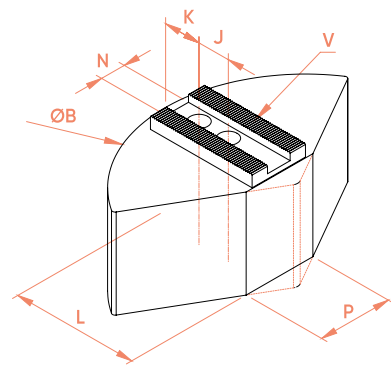
Segment jaws, metric serration

B	H	L	N	V	K	J	E	P	Masse pro Satz mass pro set	Werkstoff material	Typ type	Schraube bolt	Backentyp jaw type	Ident-Nr. ident-no.
mm	mm	mm	mm	mm	mm	mm	mm	mm	kg					
Ø165	66	70	10	1,5mm x 60°	14,5	18	—	19,3	8,70	16MnCr5	II	M8	VQ10	853210
Ø165	66	70	10		14,5	18	—	19,3	3,10	Aluminium	II	M8	VQA10	853410
Ø210	66	86	12	1,5mm x 60°	22	20	—	34,3	14,00	16MnCr5	II	M10	VQ12	853212
Ø210	66	86	12		22	20	—	34,3	4,90	Aluminium	II	M10	VQA12	853412
120	60	60	12	1,5mm x 60°	15	20	—	—	9,00	C15	I	M10	CN16	217001
120	64	64	12		15	20	—	—	3,20	Aluminium	I	M10	HN16	219002
Ø169	76	76	12		20	20	—	—	13,00	C15	II	M10	SG06	218101
Ø169	76	76	12		20	20	—	—	6,00	Aluminium	II	M10	AG06	218201
150	64	89	14	1,5mm x 60°	15	25	—	—	14,00	C15	I	M12	CN20	217002
150	64	76	14		15	25	—	—	5,00	Aluminium	I	M12	HN20	219001
Ø210	76	99	14		25	25	—	—	20,00	C15	II	M12	SG08	218102
Ø210	76	99	14		25	25	—	—	9,80	Aluminium	II	M12	AG08	218202
170	64	102	16	1,5mm x 60°	20	30	—	—	20,00	C15	I	M12	CN25	217003
170	64	102	16		20	30	—	—	7,00	Aluminium	I	M12	HN25	219003
Ø254	76	122	16		27	30	—	—	29,00	C15	II	M12	SG10	218103
Ø254	76	122	16		27	30	—	—	13,00	Aluminium	II	M12	AG10	218203

Typ I



Typ II



Auto Strong	Forkardt	HOWA	HWR	Kitagawa	mmk / Matsumoto	Röhm	Samchully	Schunk	SMW-Autoblok
			VD016 VT016 VT-S 016						
			VD021 VK021 VT021 VT-S 021						
N-206 NB-206 V-206	QLC 160 QLC 175 QLK 160 QLK 175	HO15MA6 HO22M6 HO27M6 HO37M6 HO7MA6		B-06 B-07 B-206 BB-06 BB-206 BL-206 HOB-06 HOH-06 HOH-106 HOH-206 ML-06 N-06 NL-06		KFD-HE 170	HC-06 HCH-06 HCL-06 HH-206 HS-06 MH-206	ROTA NC 165 ROTA NC plus 185-52 ROTA NCD 165 ROTA NCD 185 ROTA NCF 165 ROTA NCF 185 ROTA NCF plus 185 ROTA NCK 165 ROTA NCK plus 165-45	AL-M 165 AN-M 165 AP-M 170 BB-M 165 BB-M 175 BH-M 165 BHM-FC 165 HFKN-M 165 NT-M 170
N-208 NB-208 V-208	QLC 200 QLK 200	HO15M8 HO7MA8		B-08 B-208 BB-08 BB-208 BL-208 HOB-08 HOH-08 HOH-108 HOH-208 ML-08 N-08 NL-08 QJR08	ZA6-8-52 ZA6-8-66	KFD-HE 210	HC-08 HCH-08 HCL-08 HH-208 HS-08 MH-208	ROTA NC 210 ROTA NC plus 215 ROTA NCD 210 ROTA NCF 210 ROTA NCF plus 215 ROTA NCK 210 ROTA NCK plus 210-52	AL-M 210 AN-M 210 APL-M 215 AP-M 215 BB-M 210 BH-M 210 BHM-FC 210 HFKN-M 210 NT-M 215
N-210 NB-210 V-210	QLC 250 QLK 250			B-10 B-210 BB-10 BB-210 BL-210 HOB-10 HOH-10 HOH-10K HOH-210 N-10 NL-10 QJR10	ZA6-10-75 ZA8-10-78	KFD-HE 254	HC-10 HCH-10 HCL-10 HH-210 HS-10 MH-210	ROTA NC 250 ROTA NC plus 260 ROTA NCD 250 ROTA NCF 250 ROTA NCF plus 260 ROTA NCK 250 ROTA NCK plus 250-75	AL-M 250 AN-M 250 APL-M 260 AP-M 260 BB-M 250 BH-M 250 BHM-FC 250 HFKN-M 260 NT-M 260

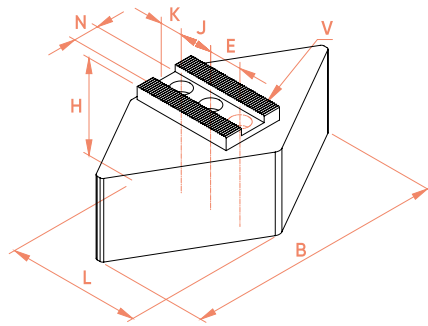
UNIJaws®

Segmentbacken weich, Spitzverzahnung metrisch

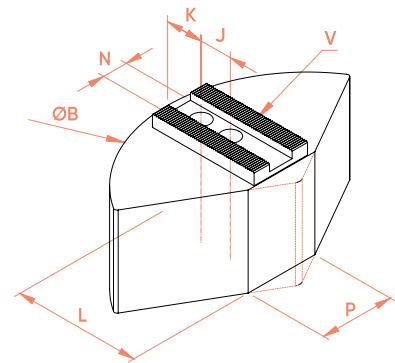
Segment jaws, metric serration

B	H	L	N	V	K	J	E	P	Masse pro Satz mass pro set	Werkstoff material	Typ type	Schraube bolt	Backentyp jaw type	Ident-Nr. ident-no.
mm	mm	mm	mm	mm	mm	mm	mm	mm	kg					
Ø255	76	106	16	1,5mm x 60°	14,5	30	—	35,9	24,40	16MnCr5	II	M12	VQ16	853216
Ø255	76	106	16		14,5	30	—	35,9	8,50	Aluminium	II	M12	VQA16	853416
Ø315	76	135	16	1,5mm x 60°	27,5	30	—	38	38,40	16MnCr5	II	M12	VQ18	853218
Ø315	76	135	16	1,5mm x 60°	27,5	30	—	38	13,40	Aluminium	II	M12	VQA18	853418
240	76	132	18	1,5mm x 60°	30	30	—	—	28,00	C15	I	M14	CN32	217004
240	76	132	18		30	30	—	—	10,00	Aluminium	I	M14	HN32	219004
Ø304	76	146	18		34	30	—	—	41,00	C15	II	M14	SG12	218104
Ø304	76	146	18		34	30	—	—	15,00	Aluminium	II	M14	AG12	218204
240	76	132	21	1,5mm x 60°	30	30	—	—	28,00	C15	I	M16	CN33	217005
240	76	132	21		30	30	—	—	10,00	Aluminium	I	M16	HN33	219005
Ø304	76	133	21		34	30	—	—	41,00	C15	II	M16	NG12	218105
Ø304	76	133	21		34	30	—	—	15,00	Aluminium	II	M16	OG12	218205
Ø400	76	157	21	1,5mm x 60°	27,5	30	—	76	59,20	16MnCr5	II	M16	VQ21	853221
Ø400	76	157	21		27,5	30	—	76	20,80	Aluminium	II	M16	VQA21	853421
280	76	152	22	1,5mm x 60°	37	43	—	—	48,00	C15	I	M20	CN38	217007
280	76	152	22		37	43	—	—	16,00	Aluminium	I	M20	HN38	219006
Ø381	76	171	22		37	43	—	—	56,00	C15	II	M20	SF15	218304
Ø381	76	171	22		37	43	—	—	19,00	Aluminium	II	M20	AF15	218404

Typ I



Typ II



Auto Strong	Forkardt	HOWA	HWR	Kitagawa	mmk / Matsumoto	Röhm	Samchully	Schunk	SMW-Autoblok
			VD026 VK026 VK-S 026 VT026 VT-S 026						
			VD031 VK031 VT031 VT-S 031						
V-212				B-12 HOB-12 HOH-12 HOH-12K N-12 NL-12	ZA6-12-78 ZA8-12-78 ZA8-12-85 ZA8-12-93		HC-12 HCH-12 HCL-12	ROTA NC 315 ROTA NCF 315 ROTA NCK 315	
N-212 NB-212						KFD-HE 315	HH-212 HS-12 MH-212	ROTA NC plus 315 ROTA NCD 315 ROTA NCF plus 315 ROTA NCK 315 ROTA NCK plus 315-91	AL-M 315 AN-M 315 APL-M 315 AP-M 315 BB-M 305 BB-M 315 BH-M 315 BHM-FC 315 GH-M 400 HFKN-M 315 NT-M 315
			VD040 VK040 VK-S 040 VT040 VT-S 040						
N-215				B-15 B-18 HOB-15 HOB-18 HOH-15 HOH-15K HOH-18			HCH-15 HCH-18	ROTA NC 400 ROTA NCF 400	



Weiche Standard-Aufsatzbacken
mit Kreuzversatz für alle gängigen
Backenschnellwechselfutter, Plan-
spiralfutter sowie HWR INOFlex®
VF-Futter.

*Soft standard top jaws with tongue
and groove for all common quick-
change chucks, scroll chucks and
HWR INOFlex® VF chucks.*

Übersicht / Overview

Weiche Aufsatzbacken, Kreuzversatz

Soft top jaws, tongue and groove

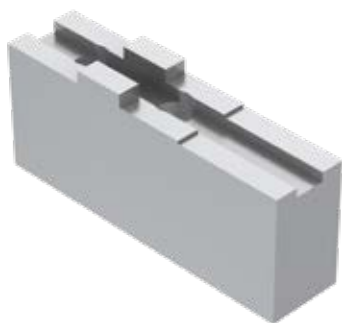


**Aufsatzbacken weich,
Kreuzversatz**

für INOFlex® VF-Futter

*soft top-jaws,
tongue and groove
for INOFlex® VF chucks*

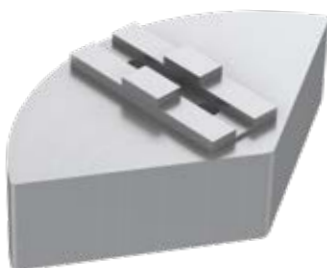
Seite/page 136–137



**Aufsatzbacken weich,
Kreuzversatz metrisch**

*soft top-jaws,
tongue and groove metric*

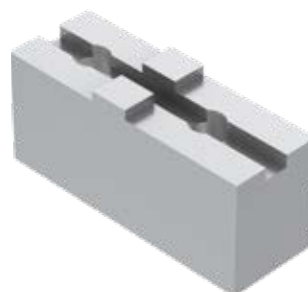
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**Segmentbacken weich,
Kreuzversatz metrisch**

*segment jaws,
tongue and groove metric*

Seite/page 140–141



**Aufsatzbacken weich,
Kreuzversatz (amerik. Standard)**

*soft top-jaws, tongue and
groove (American standard)*

Seite/page 143

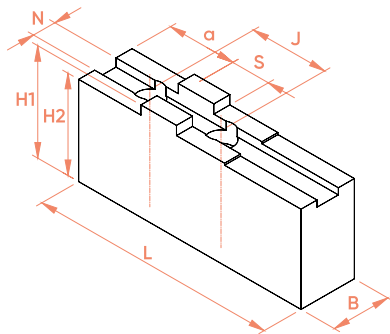
UNIJaws®

Aufsatzbacken weich, Kreuzversatz metrisch

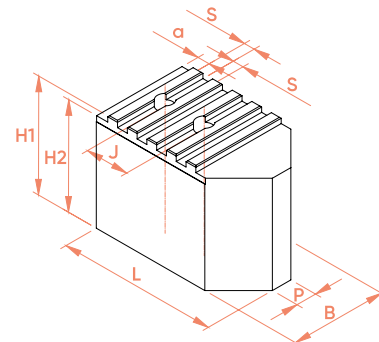
Soft top jaws metric, tongue and groove

B	H1	H2	L	N	S	J	a	P	Masse pro Satz mass pro set	Ident-Nr. ident-no.	Backentyp jaw type	Werkstoff material	Typ type	Schraube bolt
mm	mm	mm	mm	mm	mm	mm	mm	mm	kg					
20	40	35,5	69	8	18	32	25	—	0,9	236003	CU14	C15	I	M8
30	45	41	63	8	18	32	19	—	1,7	237141	CU141	C15	I	M8
20	40	35,5	85	8	18	32	25	—	1,1	236004	CU16	C15	I	M8
30	55	51	85	8	18	32	19	—	2,6	237161	CU161	C15	I	M8
40	40	36	60	8	18	32	17	—	1,8	236005	DP16	C15	I	M8
40	60	56	70	8	18	32	19	—	3,3	237163	CU163	C15	I	M8
25	51	47	85	8	18	32	25	—	0,7	238001	CW16	Aluminium	I	M8
36	38	34,9	63	—	5,5	22	9,75	6	2,10	851010	VP10	16MnCr5	II	M10
22	51	47	105	10	20	40	34	—	2,2	236006	CU20	C15	I	M8
30	55	51	100	10	20	40	23	—	2,9	237201	CU201	C15	I	M8
40	40	36	70	10	20	40	22	—	2,2	236007	DP20	C15	I	M8
40	60	56	85	10	20	40	23	—	4,0	237204	CU204	C15	I	M8
40	80	76	95	10	20	40	23	—	5,8	237205	CU205	C15	I	M8
25	51	47	105	10	20	40	34	—	0,9	238002	CW20	Aluminium	I	M8
30	55	50	125	12	20	40	36	—	3,6	236008	CU25	C15	I	M12
40	60	55	90	12	20	40	26	—	3,9	237251	CU251	C15	I	M12
40	60	55	125	12	20	40	26	—	5,8	237252	CU252	C15	I	M12
40	80	75	125	12	20	40	26	—	7,5	237253	CU253	C15	I	M12
40	100	95	125	12	20	40	26	—	9,6	237254	CU254	C15	I	M12
40	125	120	125	12	20	40	26	—	12	237255	CU255	C15	I	M12
60	60	55	90	12	20	40	26	—	6,2	236009	DP25	C15	I	M12
80	60	55	90	12	20	40	26	—	8,5	237257	CU257	C15	I	M12
40	60	55	125	12	20	40	36	—	2	238003	CW25	Aluminium	I	M12
48	58	54,9	80	—	5,5	22	6,25	10	5,70	851012	VP12	16MnCr5	II	M10

Typ I



Typ II



Berg	Forkardt	HWR	Röhml	Samchully	Schunk	SMW-Autoblok
KHNC 140			DURO-NC 140 DURO-NC 168			KNCS 140 KNCS-N 140
KHNC 160 KHNC 185	F 160 F+ 160 FNC 175 KTNC 160 KTNCV 160 KTNCV 175		DURO 160 DURO-NC 160 DURO-NC 175 DURO-NCE 160 DURO-NCE 175 DURO-NCES 175 DURO-T 160	QJC-206	ROTA NC-W 185 ROTA THW 165 ROTA THW plus 165 ROTA THW plus 185 ROTA-G 160 ROTA-S 160 ROTA-S plus 160 ROTA-S plus 2.0 160	HG-F 160 HG-N 160 KNCS 160 KNCS 170 KNCS 175 KNCS-N 170 KNSP 160 RMG 160
		VF016				
KHNC 200	F 200 F+ 200 FNC 200 KTNC 200 KTNCV 200		DURO 200 DURO-NC 200 DURO-NC 225 DURO-NCE 200 DURO-NCES 200 DURO-T 200	QJC-208	ROTA NC-W 225 ROTA NC-WF 210 ROTA THW 210 ROTA THW plus 215 ROTA THWB 210 ROTA-G 200 ROTA-S 200 ROTA-S plus 200 ROTA-S plus 2.0 200	HG-F 210 HG-N 210 KNCS 200 KNCS 210 KNCS 225 KNCS-N 210 KNCS-N 225 KNCS-NB 210 KNCS-NB 225 KNSP 200 RMG 200
KHNC 250 KHNC 315	F 250 F+ 250 FNC 250 FNC 315 KTNC 250 KTNC 265 KTNC 280 KTNC 315 KTNCV 250 KTNCV 270 KTNCV 315		DURO 250 DURO-NC 250 DURO-NCE 250 DURO-NCE 315 DURO-NCES 250 DURO-NCES 315 DURO-T 250	QJC-210 QJC-212	ROTA NC-W 265 ROTA NC-W 315 ROTA NC-WF 250 ROTA NC-WF 315 ROTA THW 250 ROTA THW 265 ROTA THW 315 ROTA THW plus 260 ROTA THW plus 315 ROTA THWB 265 ROTA-G 250 ROTA-G 315 ROTA-S 250 ROTA-S plus 250 ROTA-S plus 2.0 250	HG-F 260 HG-N 260 HG-N 315 KNCS 250 KNCS 260 KNCS 315 KNCS 340 KNCS-N 260 KNCS-N 275 KNCS-N 315 KNCS-NB 260 KNCS-NB 275 KNCS-NB 315 RMG 250
		VF026				

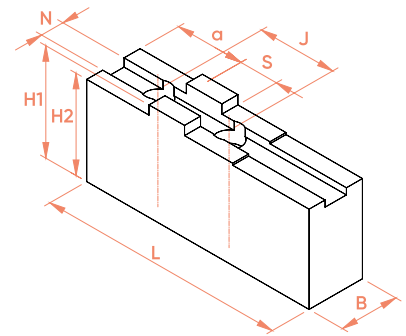
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Aufsatzbacken weich, Kreuzversatz metrisch

Soft top jaws metric, tongue and groove

B	H1	H2	L	N	S	J	a	P	Masse pro Satz <i>mass pro set</i>	Ident-Nr. <i>ident-no.</i>	Backentyp <i>jaw type</i>	Werkstoff <i>material</i>	Typ <i>type</i>	Schraube <i>bolt</i>
mm	mm	mm	mm	mm	mm	mm	mm	mm	kg					
40	60	54	145	12	26	54	45	—	6,8	236010	CU32	C15	I	M12
40	60	54	110	12	26	54	30	—	4,9	237321	CU321	C15	I	M12
40	100	94	145	12	26	54	30	—	11,1	237322	CU323	C15	I	M12
40	125	119	145	12	26	54	30	—	13,9	237324	CU324	C15	I	M12
40	150	144	145	12	26	54	30	—	16,9	237325	CU325	C15	I	M12
60	60	54	110	12	26	54	30	—	7,6	237326	CU326	C15	I	M12
80	60	54	100	12	26	54	30	—	8,4	236011	DP32	C15	I	M12
80	80	74	110	12	26	54	30	—	14,1	237328	CU328	C15	I	M12
50	80	74	145	12	26	54	30	—	11,6	237329	CU329	C15	I	M12
40	60	54	145	12	26	54	45	—	2,4	238004	CW32	Aluminium	I	M12
50	80	73	180	18	30	60	50	—	11,2	236012	CU40	C15	I	M16
60	80	73	130	18	30	60	35	—	11,9	237401	CU401	C15	I	M16
60	80	73	180	18	30	60	35	—	16,5	237402	CU402	C15	I	M16
60	100	93	155	18	30	60	35	—	15,3	237403	CU403	C15	I	M16
60	125	118	155	18	30	60	35	—	18,7	237404	CU404	C15	I	M16
80	80	73	130	18	30	60	35	—	16,2	237405	DP40	C15	I	M16
50	160	152	155	18	30	60	35	—	25,2	237406	CU406	C15	I	M16
51	100	93	180	18	30	60	50	—	6,3	238005	CW40	Aluminium	I	M16
60	100	92	220	18	40	76	58	—	28,5	236014	CU50	C15	I	M16
60	125	119	260	24	40	82	70	—	42	236015	CU63	C15	I	M20

Typ I



Berg	Forkardt	HWR	Röhm	Samchully	Schunk	SMW-Autoblok
KHNC 400	F 315 F+ 315 FNC 400 KTNC 360 KTNC 400 KTNCV 400		DURO 315 DURO-NC 315 DURO-NC 340 DURO-NCE 400 DURO-NCES 400 DURO-T 315	QJC-215	ROTA NC-W 400 ROTA THW 400 ROTA THWB 315 ROTA-G 400 ROTA-S 315 ROTA-S plus 315 ROTA-S plus 2.0 315	HG-F 315 HG-N 400 KNCS 400 KNCS-N 400 KNCS-NB 325 KNCS-NB 340 KNCS-NB 400 KNCS-NBX 425 RMG 315
KHNC 500	F 400 F 500 F 500L F+ 400 F+ 500 F+ 500L FNC 500 FNC 630 KTNC 500 KTNC 630 KTNCV 500 KTNCV 630		DURO 400 DURO 500 DURO-NC 400 DURO-NC 500 DURO-NCE 500 DURO-T 400 DURO-T 500		ROTA-S 400 ROTA-S 500 ROTA THW 500 ROTA THW 630 ROTA THW 800 ROTA THWB 400 ROTA THWB 500 ROTA-G 500 ROTA-S plus 400 ROTA-S plus 500	HG-F 400 HG-F 500 HG-N 500 HG-N 600 HG-N 630 KNCS 500 KNCS 630 KNCS 800 KNCS-N 500 KNCS-N 630 KNCS-NB 500 KNCS-NB 630 KNCS-NB 800 KNCS-NBX 530 KNCS-NBX 630 KNCS-NBX 800 KNCS-NBX 1000
	F 500 S					
	F 630 F+ 630		DURO 630 DURO-NC 630 DURO-T 630		ROTA THWB 630 ROTA-G 630 ROTA-S 630 ROTA-S 800 ROTA-S plus 630 ROTA-S plus 800	HG-F 630

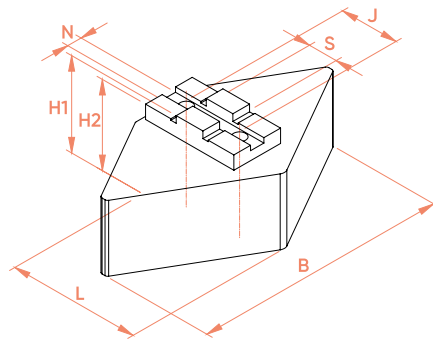
UNIJaws®

Segmentbacken weich, Kreuzversatz metrisch

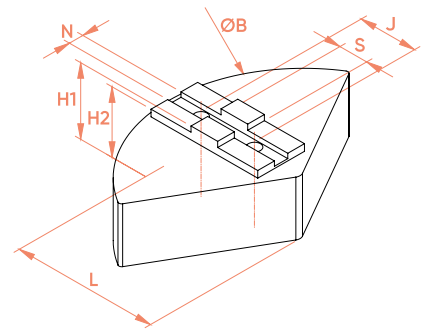
Segment jaws metric, tongue and groove

B	H1	H2	L	N	S	J	a	Masse pro Satz mass pro set	Ident-Nr. ident-no.	Backentyp jaw type	Werkstoff material	Type type	Schraube bolt
mm	mm	mm	mm	mm	mm	mm	mm	kg					
120	60	56	60	8	18	32	—	9,0	239001	CQ16	C15	I	M8
120	64	60	62	8	18	32	—	3,8	240007	HT16	Aluminium	I	M8
Ø152	51	47	73	8	18	32	—	7,0	239101	CF16	C15	II	M8
150	64	60	89	10	20	40	—	14,0	239002	CQ20	C15	I	M8
150	64	60	75	10	20	40	—	5,9	240001	HT20	Aluminium	I	M8
Ø203	51	46	90	10	20	40	—	11,0	239102	CF20	C15	II	M8
170	64	59	102	12	20	40	—	20,0	239003	CQ25	C15	I	M12
170	64	59	102	12	20	40	—	8,4	240002	HT25	Aluminium	I	M12
Ø254	51	46	123	12	20	40	—	17,0	239103	CF25	C15	II	M12
240	76	70	132	12	26	54	—	28	239004	CQ32	C15	I	M12
240	76	70	133	12	26	54	—	10,5	240003	HT32	Aluminium	I	M12
Ø305	51	45	148	12	26	54	—	23	239104	CF32	C15	II	M12

Typ I



Typ II



Berg	Forkardt	Röhm	Samchully	Schunk	SMW-Autoblok
KHNC 160 KHNC 185	F 160 F+ 160 FNC 175 KTNC 160 KTNCV 160 KTNCV 175	DURO 160 DURO-NC 160 DURO-NC 175 DURO-NCE 160 DURO-NCE 175 DURO-NCES 175 DURO-T 160	QJC-206	ROTA NC-W 185 ROTA THW 165 ROTA THW plus 165 ROTA THW plus 185 ROTA-G 160 ROTA-S 160 ROTA-S plus 160 ROTA-S plus 2.0 160	HG-F 160 HG-N 160 KNCS 160 KNCS 170 KNCS 175 KNCS-N 170 KNSP 160 RMG 160
KHNC 200	F 200 F+ 200 FNC 200 KTNC 200 KTNCV 200	DURO 200 DURO-NC 200 DURO-NC 225 DURO-NCE 200 DURO-NCES 200 DURO-T 200	QJC-208	ROTA NC-W 225 ROTA NC-WF 210 ROTA THW 210 ROTA THW plus 215 ROTA THWB 210 ROTA-G 200 ROTA-S 200 ROTA-S plus 200 ROTA-S plus 2.0 200	HG-F 210 HG-N 210 KNCS 200 KNCS 210 KNCS 225 KNCS-N 210 KNCS-N 225 KNCS-NB 210 KNCS-NB 225 KNSP 200 RMG 200
KHNC 250 KHNC 315	F 250 F+ 250 FNC 250 FNC 315 KTNC 250 KTNC 265 KTNC 280 KTNC 315 KTNCV 250 KTNCV 270 KTNCV 315	DURO 250 DURO-NC 250 DURO-NCE 250 DURO-NCE 315 DURO-NCES 250 DURO-NCES 315 DURO-T 250	QJC-210 QJC-212	ROTA NC-W 265 ROTA NC-W 315 ROTA NC-WF 250 ROTA NC-WF 315 ROTA THW 250 ROTA THW 265 ROTA THW 315 ROTA THW plus 260 ROTA THW plus 315 ROTA THWB 265 ROTA-G 250 ROTA-G 315 ROTA-S 250 ROTA-S plus 250 ROTA-S plus 2.0 250	HG-F 260 HG-N 260 HG-N 315 KNCS 250 KNCS 260 KNCS 315 KNCS 340 KNCS-N 260 KNCS-N 275 KNCS-N 315 KNCS-N 325 KNCS-N 340 KNCS-NB 260 KNCS-NB 275 KNCS-NB 315 KNCS-NB 325 KNCS-NB 340 RMG 250
KHNC 400	F 315 F+ 315 FNC 400 KTNC 360 KTNC 400 KTNCV 400	DURO 315 DURO-NC 315 DURO-NC 340 DURO-NCE 400 DURO-NCES 400 DURO-T 315	QJC-215	ROTA NC-W 400 ROTA THW 400 ROTA THWB 315 ROTA-G 400 ROTA-S 315 ROTA-S plus 315 ROTA-S plus 2.0 315	HG-F 315 HG-N 400 KNCS 400 KNCS-N 400 KNCS-NB 400 KNCS-NBX 425 RMG 315



Weiche Standard-Aufsatzbacken
mit Kreuzversatz für alle gängigen
Backenschnellwechselfutter,
Planspiralfutter.

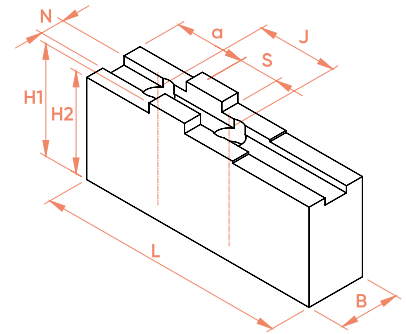
*Soft standard top jaws with tongue
and groove for all common quick-
change chucks, scroll chucks.*

UNIJaws®

Aufsatzbacken weich, Kreuzversatz
(amerik. Standard)

Soft top jaws, tongue and groove
(American standard)

Typ I



B	H1	H2	L	N	S	J	a	Masse pro Satz mass pro set kg	Ident-Nr. ident-no.	Backentyp jaw type	Werkstoff material	Typ type	Schraube bolt	Bison (3200-3700)	Röhm
mm	mm	mm	mm	mm	mm	mm	mm								
22	39	36,7	64	7,94	12,7	32	23,8	0,9	245007	DM13	C15	I	M8	Ø125	ZG 125 ZS 125
25	40	37,7	74	7,94	12,7	38,1	23,8	1,6	245001	DM16	C15	I	M8		ZG 140 ZS 140 ZG 160 ZS 160
25	40	37,7	74	7,94	12,7	38,1	23,8	1,6	245021	DM17	C15	I	M10	Ø160	
30	40	36,8	87	7,94	12,7	44,5	33,3	2,2	245002	DM20	C15	I	M8		ZG 200 ZS 200
30	40	36,8	87	7,94	12,7	44,5	33,3	2,7	245022	DM21	C15	I	M10	Ø200	
35	50	46,8	103	12,7	19	54	37,3	3,9	245003	DM25	C15	I	M12	Ø250	ZG 250 ZS 250
40	60	56,8	120	12,7	19	63,5	44,5	6,0	245004	DM32	C15	I	M12	Ø315	ZG 315 ZS 315
40	70	66,8	137	12,7	19	76,2	54	8,1	245005	DM38	C15	I	M16	Ø400	ZG 350 ZG 400 ZS 350 ZS 400
50	80	76,8	140	12,7	19	76,2	54	12,5	245006	DM46	C15	I	M20	Ø500	ZG 500 ZG 630 ZS 500 ZS 630
60	100	96,8	210	12,7	19	76,2	70	16	9906083	DM52	C15	I	M20		ZG 500 ZG 630 ZG 800 ZS 500 ZS 630 ZS 800



Mit den harten Greiferbacken von HWR
haben sie ihre Bauteile fest im Griff.

*With the hard gripper jaws from HWR
your workpieces are under control.*

Übersicht / Overview

Harte Aufsatzbacken – Spitzverzahnung

Hard top-jaws – serration



**Greiferbacken hart
für Außenspannung
Spitzverzahnung**

*adjustagrip hard jaws for
external clamping, serration*

zoll/inch
Seite/page 146–193

metrisch/metric
Seite/page 194–251



**Greiferbacken hart
für Innenspannung
Spitzverzahnung**

*adjustagrip hard jaws for
internal clamping, serration*

zoll/inch
Seite/page 146–193

metrisch/metric
Seite/page 194–251



**Umkehrbare Greiferbacken hart
für Außen- und Innenspannung
auf HWR INOFlex® Spannfuttern
Spitzverzahnung**

*hard reversible adjustagrip jaws
for external and internal clamping
on HWR INOFlex® chucks, serration*

metrisch/metric
Seite/page 204–206



**Harte umkehrbare
Aufsatzbacken
Spitzverzahnung**

*hard reversible top-jaws
serration*

zoll/inch
Seite/page 252–255

metrisch/metric
Seite/page 256–261



**Greiferbacken hart
für Stangenspannung
Spitzverzahnung**

*adjustagrip hard jaws
for bar clamping, serration*

zoll/inch
Seite/page 146–193

metrisch/metric
Seite/page 194–251

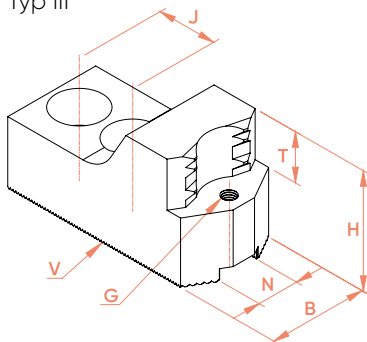
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Greiferbacken hart, Spitzverzahnung Zoll

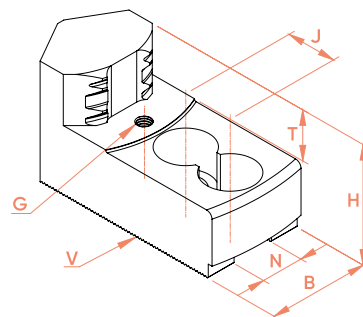
Adjustagrip hard jaws, inch serration

Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Berg	KH 140	140	IF01	233106	III	36 – 58		180	0,8	1/16" x 90°	10	30	37	13	17,5	M6
			IF02	233107		59 – 83		180	0,8							
			IF03	233108		83 – 105		178	0,8							
			IF04	233109		103 – 126		195	0,8							
			JF01	233206	IV		37 – 59	181	0,8	1/16" x 90°	10	30	37	13	17,5	M6
			JF02	233207			61 – 83	181	0,8							
			JF03	233208			85 – 108	181	0,8							
			JF04	233209			109 – 132	215	0,8							
Berg	KH 160	160	IF01	233106	III	45 – 77		200	0,8	1/16" x 90°	10	30	37	13	17,5	M6
			IF02	233107		70 – 102		200	0,8							
			IF03	233108		93 – 126		200	0,8							
			IF04	233109		113 – 146		216	0,8							
			JF01	233206	IV		47 – 80	203	0,8	1/16" x 90°	10	30	37	13	17,5	M6
			JF02	233207			71 – 104	203	0,8							
			JF03	233208			95 – 128	202	0,8							
			JF04	233209			119 – 153	237	0,8							
Berg	KH 175	175	IG01	233001	III	41 – 60		225	1,5	1/16" x 90°	12	35	50	20	21	M6
			IG02	233002		58 – 79		223	1,4							
			IG03	233003		78 – 98		221	1,4							
			IG04	233004		97 – 118		221	1,4							
			IG05	233005		117 – 138		220	1,4							
			IG06	233006		136 – 158		243	1,7							
			IG07	233007		156 – 177		271	1,5							
			JG01	233013	IV		59 – 79	224	1,8	1/16" x 90°	12	35	50	20	21	M6
			JG02	233015			80 – 101	223	1,6							
			JG03	233017			100 – 121	222	1,6							
			JG04	233019			122 – 144	221	1,6							
			JG05	233021			144 – 166	244	1,6							

Typ III



Typ IV



Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø	Innen Ø internal Ø									
						min-max./mm	min-max./mm									
Berg	KH 200	200	IG01	233001	III	52 - 83		249	1,5	1/16" x 90°	12	35	50	20	21	M6
			IG02	233002		72 - 102		248	1,4							
			IG03	233003		91 - 122		247	1,4							
			IG04	233004		110 - 141		246	1,4							
			IG05	233005		130 - 161		246	1,4							
			IG06	233006		150 - 181		269	1,7							
			IG07	233007		170 - 201		298	1,5							
			JG01	233013	IV		72 - 103	250	1,8	1/16" x 90°	12	35	50	20	21	M6
			JG02	233015			93 - 125	249	1,6							
			JG03	233017			113 - 145	248	1,6							
			JG04	233019			136 - 168	248	1,6							
			JG05	233021			158 - 190	270	1,6							
Berg	KH 250	250	IH01	233110	III	53 - 83		305	4,2	1/16" x 90°	16	45	60	22	29	M6
			IH02	233111		83 - 110		305	2,9							
			IH03	233112		109 - 137		304	2,7							
			IH04	233113		136 - 164		302	2,8							
			IH05	233114		163 - 192		300	2,8							
			IP01	233116	IV		94 - 123	304	3,6	1/16" x 90°	16	45	60	22	29	M6
			IP02	233119			129 - 158	303	3,0							
			IP03	233117			163 - 193	302	2,4							
Berg	KH 315	315	IH01	233110	III	79 - 144		372	4,2	1/16" x 90°	16	45	60	22	29	M6
			IH02	233111		108 - 173		374	2,9							
			IH03	233112		135 - 201		374	2,7							
			IH04	233113		162 - 229		374	2,8							
			IH05	233114		190 - 256		370	2,8							
			IP01	233116	IV		120 - 187	375	3,6	1/16" x 90°	16	45	60	22	29	M6
			IP03	233117			190 - 257	373	2,4							
			IP04	233118			224 - 292	391	2,8							

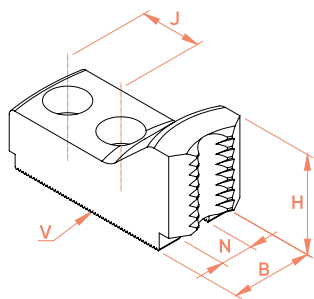
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Greiferbacken hart, Spitzverzahnung Zoll

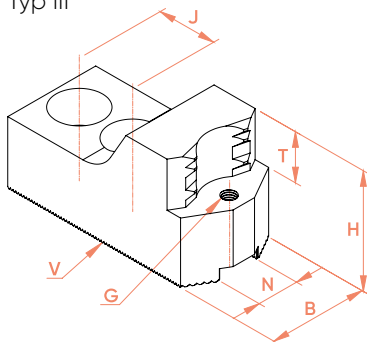
Adjustagrip hard jaws, inch serration

Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Berg	KHL 160	160	IF01	233106	III	46 - 73		196	0,8	1/16" x 90°	10	30	37	13	17,5	M6
			IF02	233107		70 - 98		196	0,8							
			IF03	233108		94 - 122		196	0,8							
			IF04	233109		114 - 142		212	0,8							
			JF01	233206	IV		47 - 75	198	0,8	1/16" x 90°	10	30	37	13	17,5	M6
			JF02	233207			71 - 99	198	0,8							
			JF03	233208			96 - 124	198	0,8							
			JF04	233209			120 - 149	233	0,8							
Berg	KHL 200	200	IG01	233001	III	55 - 78		245	1,5	1/16" x 90°	12	35	50	20	21	M6
			IG02	233002		74 - 97		243	1,4							
			IG03	233003		93 - 117		243	1,4							
			IG04	233004		113 - 136		241	1,4							
			IG05	233005		132 - 156		241	1,4							
			IG06	233006		152 - 176		264	1,7							
			IG07	233007		172 - 196		293	1,5							
			JG01	233013	IV		74 - 97	244	1,8	1/16" x 90°	12	35	50	20	21	M6
			JG02	233015			96 - 119	243	1,6							
			JG03	233017			116 - 139	242	1,6							
			JG04	233019			138 - 162	242	1,6							
			JG05	233021			160 - 184	265	1,6							
Berg	KHL 250	250	IH01	233110	III	56 - 75		298	4,2	1/16" x 90°	16	45	60	22	29	M6
			IH02	233111		85 - 104		300	2,9							
			IH03	233112		112 - 131		298	2,7							
			IH04	233113		139 - 158		296	2,8							
			IH05	233114		168 - 188		296	2,8							
			IP01	233116	IV		97 - 117	299	3,6	1/16" x 90°	16	45	60	22	29	M6
			IP02	233119			132 - 152	297	3,0							
			IP03	233117			166 - 186	296	2,4							
			IP04	233118			201 - 220	312	2,8							

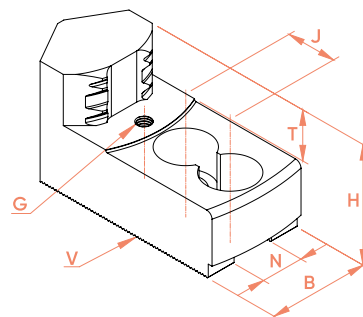
Typ II



Typ III



Typ IV



Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N mm	B mm	H mm	T mm	J mm	G mm
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Berg	KHL 315	315	IH01	233110	III	81 - 138		366	4,2	1/16" x 90°	16	45	60	22	29	M6
			IH02	233111		111 - 167		368	2,9							
			IH03	233112		138 - 195		368	2,7							
			IH04	233113		165 - 222		367	2,8							
			IH05	233114		195 - 252		367	2,8							
			IP01	233116	IV		123 - 180	368	3,6							
			IP02	233119			158 - 216	367	3,0							
			IP03	233117			193 - 250	366	2,4							
			IP04	233118			227 - 285	384	2,8							
Forkardt	KG 200	200	KJ20	227101	II	30 - 76		239	2,0	1/16" x 90°	17	40	49	—	22	—
			IB04	228007	III	34 - 56		242	2,3							
			IB05	228008		42 - 84		244	2,1							
			IB08	228009		67 - 112		242	2,1							
			IB11	228010		95 - 141		240	2,0							
			IB14	228011		124 - 171		259	1,9							
			JB06	230005	IV		52 - 88	241	1,8	1/16" x 90°	17	40	49	20	22	M6
			JB09	230006			83 - 120	241	1,8							
			JB12	230007			105 - 151	240	1,7							
Forkardt	KG 250	250	KJ26	227102	II	22 - 61		298	2,5	1/16" x 90°	21	50	49	—	25	—
			IC04	228012	III	34 - 52		302	3,9							
			IC05	228013		40 - 86		298	3,3							
			IC08	228014		70 - 131		300	2,7							
			IC13	228015		117 - 181		297	2,4							
			IC18	228016		168 - 232		326	2,8							
			JC08	230008	IV		81 - 104	294	3,9	1/16" x 90°	21	50	59	25	25	M8
			JC10	230010			95 - 158	297	2,8							
			JC15	230015			144 - 209	310	2,6							

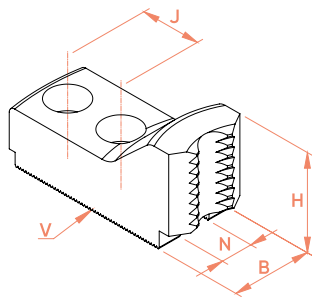
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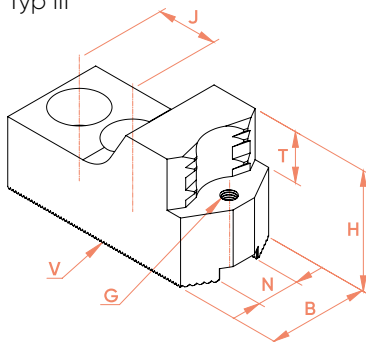
Adjustagrip hard jaws, inch serration

Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Forkardt	KG 315	315	KJ32	227103	II	29 - 115		368	3,0	1/16" x 90°	21	50	49	—	25	—
			IC04	228012	III	34 - 114		368	3,9	1/16" x 90°	21	50	59	25	25	M8
			IC05	228013		44 - 149		366	3,3							
			IC08	228014		87 - 194		368	2,7							
			IC13	228015		136 - 245		367	2,4							
			IC18	228016		187 - 297		397	2,8							
			JC08	230008	IV		81 - 168	363	3,9	1/16" x 90°	21	50	59	25	25	M8
			JC10	230010			113 - 222	367	2,8							
			JC15	230015			164 - 273	381	2,6							
Forkardt	KG 400	400	KJ40	227104	II	40 - 95		452	6,0	3/32" x 90°	25,5	60	59	—	35	—
			ID06	228017	III	54 - 139		451	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID13	228018		99 - 227		451	6,3							
			ID21	228019		182 - 313		448	4,8							
			ID30	228020		270 - 403		511	6,6							
			JD10	230011	IV		96 - 185	449	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			133 - 264	449	6,7							
			JD25	230013			210 - 343	447	4,0							
			JD33	230014			289 - 410	509	6,0							
Forkardt	KG 500	500	KJ40	227104	II	40 - 192		546	6,0	3/32" x 90°	25,5	60	59	—	35	—
			ID06	228017	III	54 - 237		546	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID13	228018		132 - 325		546	6,3							
			ID21	228019		217 - 412		545	4,8							
			ID30	228020		305 - 502		609	6,6							
			JD10	230011	IV		96 - 283	544	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			168 - 363	546	6,7							
			JD25	230013			246 - 442	544	4,0							
			JD33	230014			325 - 510	608	6,0							

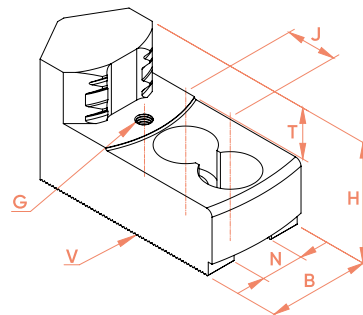
Typ II



Typ III



Typ IV



Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N mm	B mm	H mm	T mm	J mm	G mm
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Forkardt	KT 160	160	KJ16	227100	II	15 - 29		202	1,6	1/16" x 90°	17	40	39	—	19	—
			IA03	228001	III	34 - 50		207	1,8							
			IA05	228002		50 - 70		210	1,4							
			IA07	228003		70 - 92		210	1,5							
			IA09	228004		92 - 114		208	1,6							
			IA11	228005		114 - 132		210	1,5							
			JA05	230001	IV		55 - 68	206	1,7	1/16" x 90°	17	40	49	20	19	M6
			JA07	230002			75 - 90	206	1,6							
			JA09	230003			95 - 110	203	1,5							
			JA11	230004			117 - 132	203	1,5							
Forkardt	KT 200	200	KJ20	227101	II	19 - 42		209	2,0	1/16" x 90°	17	40	49	—	22	—
			IB04	228007	III	34 - 59		244	2,3							
			IB05	228008		53 - 86		246	2,1							
			IB08	228009		80 - 115		244	2,1							
			IB11	228010		109 - 144		243	2,0							
			IB14	228011		138 - 174		262	1,9							
			JB06	230005	IV		57 - 91	244	1,8	1/16" x 90°	17	40	49	20	22	M6
			JB09	230006			88 - 123	244	1,8							
			JB12	230007			119 - 154	242	1,7							
Forkardt	KT 250	250	KJ26	227102	II	22 - 63		300	2,5	1/16" x 90°	21	50	49	—	25	—
			IC05	228013	III	40 - 88		300	3,3							
			IC08	228014		80 - 133		302	2,7							
			IC13	228015		129 - 184		300	2,4							
			IC18	228016		180 - 235		328	2,8							
			JC08	230008	IV		81 - 106	296	3,9	1/16" x 90°	21	50	59	25	25	M8
			JC10	230010			106 - 160	299	2,8							
			JC15	230015			156 - 211	312	2,6							

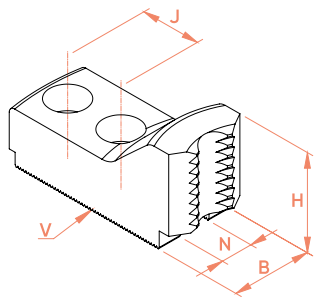
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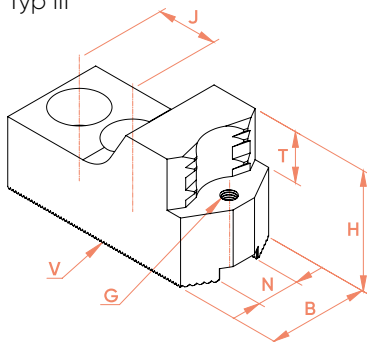
Adjustagrip hard jaws, inch serration

Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Forkardt	KT 315	315	KJ32	227103	II	29 - 110		364	3,0	1/16" x 90°	21	50	49	—	25	—
			IC05	228013	III	40 - 150		367	3,3	1/16" x 90°	21	50	59	25	25	M8
			IC08	228014		80 - 195		369	2,7							
			IC13	228015		129 - 247		368	2,4							
			IC18	228016		180 - 298		398	2,8							
			JC08	230008	IV		81 - 169	364	3,9	1/16" x 90°	21	50	59	25	25	M8
			JC10	230010			106 - 223	368	2,8							
			JC15	230015			156 - 274	382	2,6							
Forkardt	KT 400	400	KJ40	227104	II	40 - 95		452	6,0	3/32" x 90°	25,5	60	59	—	35	—
			ID06	228017	III	54 - 141		453	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID13	228018		102 - 228		452	6,3							
			ID21	228019		186 - 315		450	4,8							
			ID30	228020		274 - 405		513	6,6							
			JD10	230011	IV		96 - 187	451	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			137 - 266	451	6,7							
			JD25	230013			214 - 345	449	4,0							
Forkardt	KT 500	500	ID06	228017	III	54 - 239		548	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID13	228018		102 - 327		548	6,3							
			ID21	228019		186 - 414		547	4,8							
			ID30	228020		274 - 504		611	6,6							
			JD10	230011	IV		96 - 285	546	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			137 - 365	548	6,7							
			JD25	230013			214 - 444	546	4,0							
			JD33	230014			293 - 510	610	6,0							
Forkardt	NH 160 NHF160	160	KJ16	227100	II	25 - 40		211	1,6	1/16" x 90°	17	40	39	—	19	—
			IA03	228001	III	36 - 58		214	1,8	1/16" x 90°	17	40	49	20	19	M6
			IA05	228002		54 - 77		216	1,4							
			IA07	228003		76 - 99		216	1,5							
			IA09	228004		98 - 121		214	1,6							
			IA11	228005		120 - 144		221	1,5							
			JA05	230001	IV		56 - 79	216	1,7	1/16" x 90°	17	40	49	20	19	M6
			JA07	230002			78 - 101	216	1,6							
			JA09	230003			98 - 122	214	1,5							
			JA11	230004			120 - 144	214	1,5							

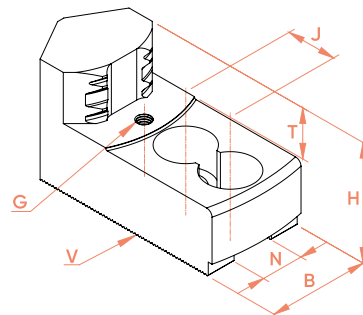
Typ II



Typ III



Typ IV



Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Forkardt	NH 175 NHF 175	175	KJ16	227100	II	25 - 40		213	1,6	1/16" x 90°	17	40	39	—	19	—
			IA03	228001	III	44 - 73		229	1,8							
			IA05	228002		62 - 92		231	1,4							
			IA07	228003		84 - 114		231	1,5							
			IA09	228004		106 - 136		230	1,6							
			IA11	228005		128 - 159		237	1,5							
			JA05	230001	IV		64 - 93	230	1,7	1/16" x 90°	17	40	49	20	19	M6
			JA07	230002			86 - 116	231	1,6							
			JA09	230003			107 - 137	230	1,5							
			JA11	230004			128 - 159	229	1,5							
Forkardt	NH 200 NHF 200	200	KJ20	227101	II	19 - 55		220	2,0	1/16" x 90°	17	40	49	—	22	—
			IB04	228007	III	34 - 72		256	2,3							
			IB05	228008		55 - 99		258	2,1							
			IB08	228009		82 - 128		256	2,1							
			IB11	228010		110 - 157		255	2,0							
			IB14	228011		140 - 187		274	1,9							
			JB06	230005	IV		58 - 104	256	1,8	1/16" x 90°	17	40	49	20	22	M6
			JB09	230006			89 - 136	256	1,8							
			JB12	230007			120 - 167	254	1,7							
Forkardt	NH 250 NHF 250	250	KJ26	227102	II	22 - 63		300	2,5	1/16" x 90°	21	50	49	—	25	—
			IC05	228013	III	40 - 88		300	3,3							
			IC08	228014		80 - 133		302	2,7							
			IC13	228015		129 - 183		299	2,4							
			IC18	228016		179 - 234		327	2,8							
			JC08	230008	IV		81 - 106	296	3,9	1/16" x 90°	21	50	59	25	25	M8
			JC10	230010			106 - 160	299	2,8							
			JC15	230015			156 - 211	312	2,6							

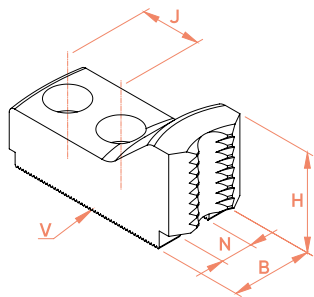
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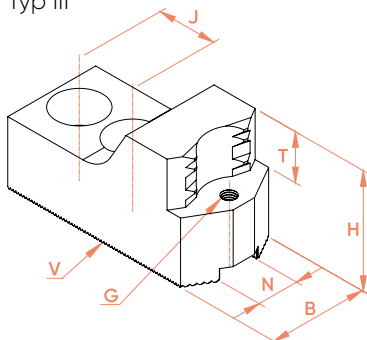
Adjustagrip hard jaws, inch serration

Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Forkardt	NH 315 NHF 315	315	KJ32	227103	II	31 – 110		364	3,0	1/16" x 90°	21	50	49	—	25	—
			IC05	228013	III	34 – 122		341	3,3	1/16" x 90°	21	50	59	25	25	M8
			IC05	228013		60 – 158		375	3,3							
			IC08	228014		104 – 203		377	2,7							
			IC13	228015		154 – 254		375	2,4							
			IC18	228016		205 – 306		406	2,8							
			JC08	230008	IV		81 – 177	372	3,9	1/16" x 90°	21	50	59	25	25	M8
			JC10	230010			131 – 231	375	2,8							
			JC15	230015			181 – 282	389	2,6							
Forkardt	NH 400 NHF 400	400	KJ40	227104	II	40 – 100		457	6,0	3/32" x 90°	25,5	60	59	—	35	—
			ID06	228017	III	54 – 143		455	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID13	228018		128 – 230		454	6,3							
			ID21	228019		213 – 317		451	4,8							
			ID30	228020		301 – 406		514	6,6							
			JD10	230011	IV		96 – 189	452	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			164 – 267	452	6,7							
			JD25	230013			242 – 347	451	4,0							
			JD33	230014			321 – 410	512	6,0							
Forkardt	NH 500 NHF 500	500	ID06	228017	III	76 – 239		548	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID13	228018		160 – 327		548	6,3							
			ID21	228019		246 – 414		547	4,8							
			ID30	228020		335 – 504		611	6,6							
			JD10	230011	IV		120 – 285	546	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			197 – 365	548	6,7							
			JD25	230013			275 – 444	546	4,0							
			JD33	230014			355 – 510	610	6,0							
Forkardt	NH 630 NHF 630	630	ID06	228017	III	98 – 346		658	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID13	228018		184 – 453		677	6,3							
			ID21	228019		270 – 540		676	4,8							
			ID30	228020		359 – 630		740	6,6							
			JD10	230011	IV		143 – 411	674	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			221 – 490	676	6,7							
			JD25	230013			300 – 570	675	4,0							
			JD33	230014			382 – 640	742	6,0							

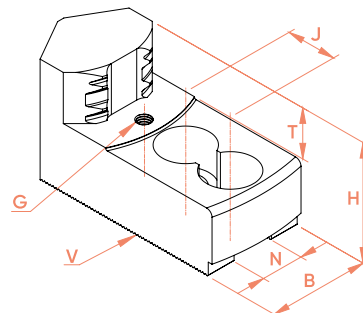
Typ II



Typ III



Typ IV



Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Forkardt	QLC 160 QLK 160	160	KJ16	227100	II	18 - 55		225	1,6	1/16" x 90°	17	40	39	—	19	—
			IA03	228001	III	37 - 72		226	1,8	1/16" x 90°	17	40	49	20	19	M6
			IA05	228002		55 - 91		228	1,4							
			IA07	228003		77 - 114		229	1,5							
			IA09	228004		98 - 136		228	1,6							
			IA11	228005		120 - 158		234	1,5							
			JA05	230001	IV		57 - 93	228	1,7	1/16" x 90°	17	40	49	20	19	M6
			JA07	230002			79 - 115	228	1,6							
			JA09	230003			99 - 137	228	1,5							
			JA11	230004			120 - 158	226	1,5							
Forkardt	QLC 175 QLK 175	175	KJ16	227100	II	23 - 45		218	1,6	1/16" x 90°	17	40	39	—	19	—
			IA03	228001	III	41 - 63		220	1,8	1/16" x 90°	17	40	49	20	19	M6
			IA05	228002		60 - 82		222	1,4							
			IA07	228003		82 - 104		222	1,5							
			IA09	228004		103 - 127		222	1,6							
			IA11	228005		126 - 149		228	1,5							
			JA05	230001	IV		62 - 84	222	1,7	1/16" x 90°	17	40	49	20	19	M6
			JA07	230002			84 - 106	222	1,6							
			JA09	230003			104 - 128	221	1,5							
			JA11	230004			126 - 149	220	1,5							
Forkardt	QLC 200 QLK 200	200	KJ20	227101	II	33 - 89		251	2,0	1/16" x 90°	17	40	49	—	22	—
			IA03	228001	III	51 - 106		263	1,8	1/16" x 90°	17	40	49	20	19	M6
			IA05	228002		70 - 125		265	1,4							
			IA07	228003		92 - 147		265	1,5							
			IA09	228004		114 - 170		265	1,6							
			IA11	228005		137 - 193		272	1,5							
			JA05	230001	IV		72 - 127	265	1,7	1/16" x 90°	17	40	49	20	19	M6
			JA07	230002			94 - 149	265	1,6							
			JA09	230003			115 - 171	265	1,5							
			JA11	230004			137 - 193	265	1,5							

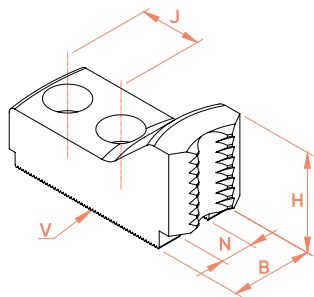
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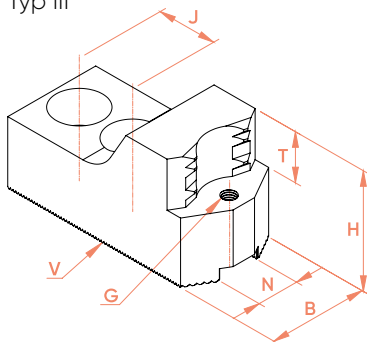
Adjustagrip hard jaws, inch serration

Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Forkardt	QLC 250 QLK 250	250	KJ26	227102	II	28 – 76		312	2,5	1/16" x 90°	21	50	49	—	25	—
			IC04	228012	III	35 – 66		314	3,9	1/16" x 90°	21	50	59	25	25	M8
			IC05	228013		51 – 101		312	3,3							
			IC08	228014		95 – 146		314	2,7							
			IC13	228015		145 – 197		312	2,4							
			IC18	228016		196 – 248		341	2,8							
			JC08	230008	IV		81 – 120	309	3,9	1/16" x 90°	21	50	59	25	25	M8
			JC10	230010			120 – 173	311	2,8							
			JC15	230015			172 – 224	325	2,6							
Forkardt	QLC 315 QLK 315	315	KJ32	227103	II	33 – 128		381	3,0	1/16" x 90°	21	50	49	—	25	—
			IC04	228012	III	35 – 127		380	3,9	1/16" x 90°	21	50	59	25	25	M8
			IC05	228013		63 – 162		379	3,3							
			IC08	228014		107 – 207		381	2,7							
			IC13	228015		157 – 259		380	2,4							
			IC18	228016		209 – 310		410	2,8							
			JC08	230008	IV		81 – 181	376	3,9	1/16" x 90°	21	50	59	25	25	M8
			JC10	230010			134 – 235	379	2,8							
			JC15	230015			185 – 286	393	2,6							
Forkardt	QLC 400 QLK 400	400	KJ40	227104	II	40 – 96		453	6,0	3/32" x 90°	25,5	60	59	—	35	—
			ID06	228017	III	55 – 140		452	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID13	228018		131 – 228		452	6,3							
			ID21	228019		215 – 315		450	4,8							
			ID30	228020		304 – 404		512	6,6							
			JD10	230011	IV		97 – 187	451	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			166 – 265	450	6,7							
			JD25	230013			244 – 344	448	4,0							
			JD33	230014			343 – 410	511	6,0							
Forkardt	QLC-KS / QLK-KS 200	200	KJ16	227100	II	58 – 86		259	1,6	1/16" x 90°	17	40	39	—	19	—
			IA03	228001	III	76 – 103		261	1,8	1/16" x 90°	17	40	49	20	19	M6
			IA05	228002		95 – 122		262	1,4							
			IA07	228003		117 – 144		263	1,5							
			IA09	228004		139 – 167		262	1,6							
			IA11	228005		162 – 189		269	1,5							

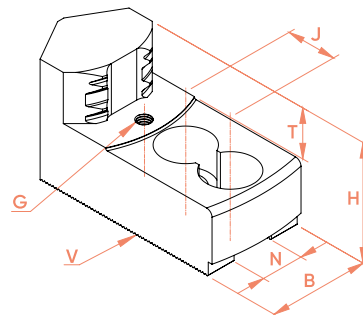
Typ II



Typ III



Typ IV



Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Forkardt	QLC-KS / QLK-KS 200	200	JA05	230001	IV		97 - 124	262	1,7	1/16" x 90°	17	40	49	20	19	M6
			JA07	230002			119 - 146	263	1,6							
			JA09	230003			140 - 168	262	1,5							
			JA11	230004			162 - 189	261	1,5							
Forkardt	QLC-KS / QLK-KS 250	250	KJ16	227100	II	86 - 132		303	1,6	1/16" x 90°	17	40	39	—	19	—
			IA03	228001	III	104 - 149		304	1,8							
			IA05	228002		122 - 168		306	1,4	1/16" x 90°	17	40	49	20	19	M6
			IA07	228003		145 - 190		306	1,5							
			IA09	228004		167 - 213		306	1,6							
			IA11	228005		190 - 236		313	1,5							
			JA05	230001	IV		124 - 170	306	1,7	1/16" x 90°	17	40	49	20	19	M6
			JA07	230002			147 - 192	306	1,6							
			JA09	230003			168 - 214	306	1,5							
			JA11	230004			190 - 236	306	1,5							
Forkardt	QLC-KS / QLK-KS 315	315	KJ32	227103	II	84 - 133		385	3,0	1/16" x 90°	21	50	49	—	25	—
			IC04	228012	III	83 - 131		384	3,9							
			IC05	228013		118 - 167		383	3,3	1/16" x 90°	21	50	59	25	25	M8
			IC08	228014		163 - 212		385	2,7							
			IC13	228015		214 - 263		384	2,4							
			IC18	228016		265 - 315		414	2,8							
			JC08	230008	IV		136 - 186	381	3,9	1/16" x 90°	21	50	59	25	25	M8
			JC10	230010			190 - 239	383	2,8							
			JC15	230015			241 - 291	398	2,6							

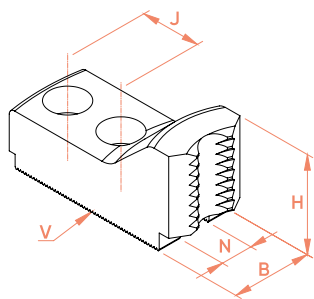
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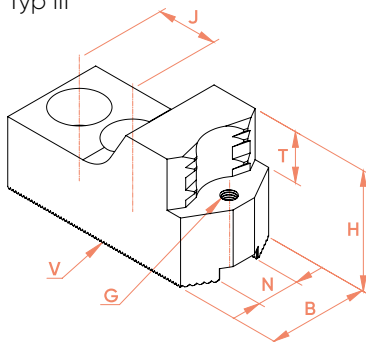
Adjustagrip hard jaws, inch serration

Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Forkardt	QLC-KS / QLK-KS 400	400	KJ32	227103	II	115 – 212		455	3,0	1/16" x 90°	21	50	49	—	25	—
			IC04	228012	III	114 – 210		454	3,9	1/16" x 90°	21	50	59	25	25	M8
			IC05	228013		149 – 246		454	3,3							
			IC08	228014		194 – 291		455	2,7							
			IC13	228015		245 – 343		455	2,4							
			IC18	228016		297 – 394		485	2,8							
			JC08	230008	IV		168 – 266	452	3,9	1/16" x 90°	21	50	59	25	25	M8
			JC10	230010			222 – 319	454	2,8							
			JC15	230015			273 – 370	468	2,6							
Röhm	KFD 160	160	KJ16	227100	II	14 – 40		211	1,6	1/16" x 90°	17	40	39	—	19	—
			IA03	228001	III	34 – 61		217	1,8	1/16" x 90°	17	40	49	20	19	M6
			IA05	228002		48 – 80		218	1,4							
			IA07	228003		70 – 102		219	1,5							
			IA09	228004		91 – 124		217	1,6							
			IA11	228005		113 – 147		224	1,5							
			JA05	230001	IV		55 – 82	218	1,7	1/16" x 90°	17	40	49	20	19	M6
			JA07	230002			71 – 104	218	1,6							
			JA09	230003			92 – 125	217	1,5							
			JA11	230004			113 – 147	216	1,5							
Röhm	KFD 200	200	KJ20	227101	II	19 – 56		221	2,0	1/16" x 90°	17	40	49	—	22	—
			IB04	228007	III	34 – 73		257	2,3	1/16" x 90°	17	40	49	20	22	M6
			IB05	228008		58 – 100		259	2,1							
			IB08	228009		86 – 129		257	2,1							
			IB11	228010		115 – 159		257	2,0							
			IB14	228011		144 – 188		275	1,9							
			JB06	230005	IV		62 – 105	257	1,8	1/16" x 90°	17	40	49	20	22	M6
			JB09	230006			93 – 137	257	1,8							
			JB12	230007			124 – 169	256	1,7							
Röhm	KFD 250	250	KJ26	227102	II	24 – 80		316	2,5	1/16" x 90°	21	50	49	—	25	—
			IC05	228013	III	47 – 109		319	3,3	1/16" x 90°	21	50	59	25	25	M8
			IC08	228014		91 – 155		322	2,7							
			IC13	228015		140 – 205		319	2,4							
			IC18	228016		191 – 257		349	2,8							

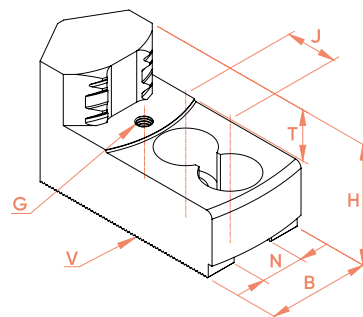
Typ II



Typ III



Typ IV



Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N mm	B mm	H mm	T mm	J mm	G mm
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Röhm	KFD 250	250	JC08	230008	IV		81 - 128	316	3,9	1/16" x 90°	21	50	59	25	25	M8
			JC10	230010			117 - 182	320	2,8							
			JC15	230015			167 - 233	333	2,6							
Röhm	KFD 315	315	KJ32	227103	II	30 - 110		364	3,0	1/16" x 90°	21	50	49	—	25	—
			IC05	228013	III	58 - 167		383	3,3							
			IC13	228015		152 - 263		384	2,4	1/16" x 90°	21	50	59	25	25	M8
			IC18	228016		203 - 315		414	2,8							
			JC08	230008	IV		81 - 186	381	3,9	1/16" x 90°	21	50	59	25	25	M8
			JC10	230010			129 - 240	384	2,8							
			JC15	230015			180 - 291	398	2,6							
Röhm	KFD 400	400	KJ40	227104	II	40 - 110		466	6,0	3/32" x 90°	25,5	60	59	—	35	—
			ID06	228017	III	54 - 157		468	9,0							
			ID13	228018		123 - 245		468	6,3	3/32" x 90°	25,5	60	79	33	35	M8
			ID21	228019		208 - 332		466	4,8							
			ID30	228020		296 - 410		528	6,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD10	230011	IV		96 - 203	466	8,6							
			JD17	230012			159 - 282	466	6,7							
			JD25	230013			237 - 361	464	4,0							
			JD33	230014			316 - 410	527	6,0							
Röhm	KFD 500	500	ID06	228017	III	54 - 259		567	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID13	228018		134 - 348		569	6,3							
			ID21	228019		219 - 435		567	4,8							
			ID30	228020		308 - 510		631	6,6							
			JD10	230011	IV		96 - 306	566	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			170 - 385	567	6,7							
			JD25	230013			248 - 465	567	4,0							
			JD33	230014			316 - 510	625	6,0							

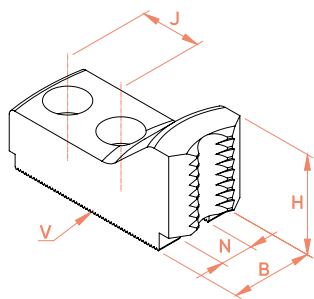
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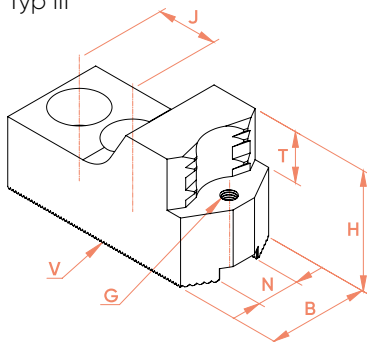
Adjustagrip hard jaws, inch serration

Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Röhm	KFD 630	630	ID06	228017	III	71 – 387		698	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID13	228018		156 – 475		699	6,3							
			ID21	228019		241 – 563		698	4,8							
			ID30	228020		330 – 610		762	6,6							
			JD10	230011	IV		115 – 433	696	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			192 – 513	698	6,7							
			JD25	230013			270 – 592	697	4,0							
			JD33	230014			350 – 610	761	6,0							
Röhm	KFD 800	800	ID06	228017	III	70 – 555		864	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID13	228018		154 – 643		864	6,3							
			ID21	228019		240 – 731		864	4,8							
			ID30	228020		329 – 810		929	6,6							
			JD10	230011	IV		114 – 601	861	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			190 – 681	864	6,7							
			JD25	230013			269 – 761	864	4,0							
			JD33	230014			348 – 810	928	6,0							
Röhm	KFD-HE 170	170	KA10	228022	III	62 – 95		240	1,0	1/16" x 90°	12	32	39	20	15	M6
			KA11	228023		95 – 128		240	1,0							
			KA12	228024		123 – 156		240	1,0							
Röhm	KFD-HE 210	210	KJ20	227101	II	48 – 90		252	2,0	1/16" x 90°	17	40	49	—	22	—
			IB04	228007	III	34 – 70		254	2,3	1/16" x 90°	17	40	49	20	22	M6
			IB05	228008		57 – 97		256	2,1							
			IB08	228009		84 – 126		254	2,1							
			IB11	228010		113 – 155		253	2,0							
			IB14	228011		142 – 185		272	1,9							
			JB06	230005	IV		61 – 102	254	1,8	1/16" x 90°	17	40	49	20	22	M6
			JB09	230006			92 – 134	254	1,8							
			JB12	230007			123 – 165	253	1,7							
Röhm	KFD-HE 254	254	KJ26	227102	II	27 – 67		304	2,5	1/16" x 90°	21	50	49	—	25	—
			IC04	228012	III	34 – 58		307	3,9	1/16" x 90°	21	50	59	25	25	M8
			IC05	228013		50 – 92		304	3,3							
			IC08	228014		94 – 137		306	2,7							
			IC13	228015		143 – 187		303	2,4							
			IC18	228016		194 – 239		332	2,8							

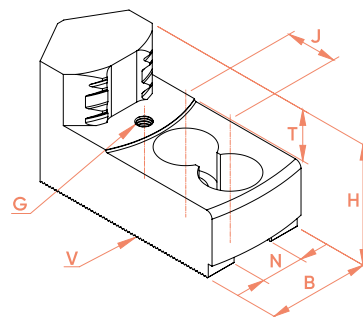
Typ II



Typ III



Typ IV



Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N mm	B mm	H mm	T mm	J mm	G mm
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Röhm	KFD-HE 254	254	JC08	230008	IV		81 - 110	299	3,9	1/16" x 90°	21	50	59	25	25	M8
			JC10	230010			120 - 164	303	2,8							
			JC15	230015			171 - 215	316	2,6							
Röhm	KFD-HE 315	315	KJ32	227103	II	61 - 117		370	3,0	1/16" x 90°	21	50	49	—	25	—
			IC04	228012	III	60 - 116		370	3,9							
			IC05	228013		93 - 151		368	3,3							
			IC08	228014		138 - 196		370	2,7							
			IC13	228015		189 - 247		368	2,4							
			IC18	228016		240 - 299		399	2,8							
			JC08	230008	IV		112 - 170	365	3,9	1/16" x 90°	21	50	59	25	25	M8
			JC10	230010			166 - 224	369	2,8							
			JC15	230015			217 - 275	382	2,6							
Röhm	KFD-HE 400	400	ID06	228017	III	61 - 137		449	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID13	228018		143 - 225		449	6,3							
			ID21	228019		228 - 311		446	4,8							
			ID30	228020		317 - 401		509	6,6							
			JD10	230011	IV		103 - 183	447	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			179 - 262	447	6,7							
			JD25	230013			258 - 341	445	4,0							
			JD33	230014			337 - 410	507	6,0							
Röhm	KFD-HS 160	160	KA10	228022	III	29 - 78		209	1,0	1/16" x 90°	12	32	39	20	15	M6
			KA11	228023		60 - 111		208	1,0							
			KA12	228024		88 - 139		208	1,0							
Röhm	KFD-HS 175	175	KA10	228022	III	38 - 93		223	1,0	1/16" x 90°	12	32	39	20	15	M6
			KA11	228023		70 - 126		222	1,0							
			KA12	228024		98 - 154		222	1,0							

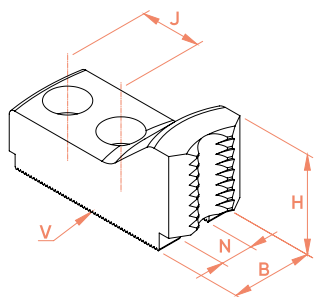
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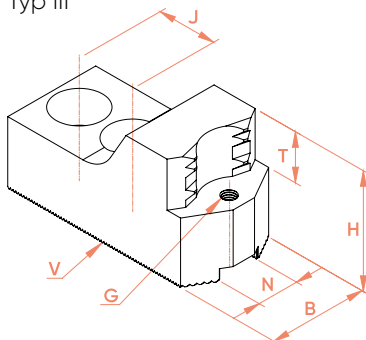
Adjustagrip hard jaws, inch serration

Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Röhm	KFD-HS 200	200	KJ16	227100	II	25 - 71		245	1,6	1/16" x 90°	17	40	39	—	19	—
			IA03	228001	III	43 - 88		247	1,8	1/16" x 90°	17	40	49	20	19	M6
			IA05	228002		62 - 107		248	1,4							
			IA09	228004		106 - 152		248	1,6							
			IA11	228005		128 - 174		255	1,5							
			JA05	230001	IV		64 - 109	248	1,7	1/16" x 90°	17	40	49	20	19	M6
			JA07	230002			86 - 131	249	1,6							
			JA09	230003			106 - 153	248	1,5							
			JA11	230004			128 - 174	247	1,5							
Röhm	KFD-HF 250	250	KJ20	227101	II	21 - 94		256	2,0	1/16" x 90°	17	40	49	—	22	—
			IB04	228007	III	38 - 111		292	2,3	1/16" x 90°	17	40	49	20	22	M6
			IB05	228008		64 - 138		294	2,1							
			IB11	228010		121 - 197		293	2,0							
			IB14	228011		150 - 227		312	1,9							
			JB06	230005	IV		68 - 143	292	1,8	1/16" x 90°	17	40	49	20	22	M6
			JB09	230006			100 - 175	293	1,8							
			JB12	230007			131 - 207	292	1,7							
Röhm	KFD-HS 315	315	KJ32	227103	II	30 - 110		364	3,0	1/16" x 90°	21	50	49	—	25	—
			IC05	228013	III	40 - 156		373	3,3	1/16" x 90°	21	50	59	25	25	M8
			IC08	228014		83 - 201		375	2,7							
			IC18	228016		182 - 304		404	2,8							
			JC08	230008	IV		81 - 175	370	3,9	1/16" x 90°	21	50	59	25	25	M8
			JC10	230010			109 - 229	373	2,8							
			JC15	230015			159 - 280	387	2,6							
Röhm	KFD-HS 400	400	KJ40	227104	II	40 - 110		466	6,0	3/32" x 90°	25,5	60	59	—	35	—
			ID06	228017	III	56 - 142		454	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID13	228018		137 - 230		454	6,3							
			ID21	228019		222 - 317		451	4,8							
			ID30	228020		311 - 406		514	6,6							
			JD10	230011	IV		97 - 188	452	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			173 - 267	452	6,7							
			JD25	230013			251 - 346	450	4,0							
			JD33	230014			330 - 410	510	6,0							

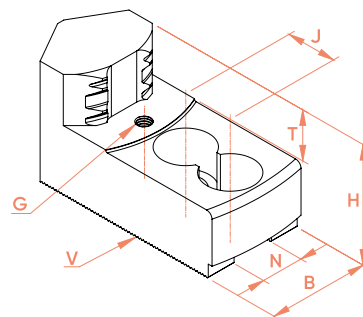
Typ II



Typ III



Typ IV



Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Schunk	ROTA NC 165	165	KJ16	227100	II	18 - 47		218	1,6	1/16" x 90°	17	40	39	—	19	—
			IA03	228001	III	36 - 64		219	1,8	1/16" x 90°	17	40	49	20	19	M6
			IA05	228002		55 - 83		221	1,4							
			IA07	228003		76 - 106		222	1,5							
			IA09	228004		98 - 128		221	1,6							
			IA11	228005		120 - 150		227	1,5							
Schunk	ROTA NC 165	165	JA05	230001	IV		57 - 85	221	1,7	1/16" x 90°	17	40	49	20	19	M6
			JA07	230002			78 - 107	221	1,6							
			JA09	230003			99 - 129	221	1,5							
			JA11	230004			120 - 150	219	1,5							
Schunk	ROTA NC 210	210	KJ20	227101	II	27 - 64		228	2,0	1/16" x 90°	17	40	49	—	22	—
			IB03	228006	III	35 - 69		265	2,7	1/16" x 90°	17	40	49	20	22	M6
			IB04	228007		44 - 81		264	2,3							
			IB05	228008		71 - 108		266	2,1							
			IB08	228009		99 - 137		265	2,1							
			IB11	228010		128 - 166		263	2,0							
			IB14	228011		158 - 196		283	1,9							
			JB06	230005	IV		75 - 113	264	1,8	1/16" x 90°	17	40	49	20	22	M6
			JB09	230006			107 - 145	264	1,8							
			JB12	230007			138 - 176	263	1,7							
Schunk	ROTA NC 250	254	KJ26	227102	II	26 - 85		320	2,5	1/16" x 90°	21	50	49	—	25	—
			IC04	228012	III	35 - 75		322	3,9	1/16" x 90°	21	50	59	25	25	M8
			IC05	228013		49 - 110		320	3,3							
			IC08	228014		93 - 155		322	2,7							
			IC13	228015		142 - 206		320	2,4							
			IC18	228016		193 - 257		349	2,8							
			JC08	230008	IV		81 - 128	316	3,9	1/16" x 90°	21	50	59	25	25	M8
			JC10	230010			119 - 182	320	2,8							
			JC15	230015			169 - 233	333	2,6							

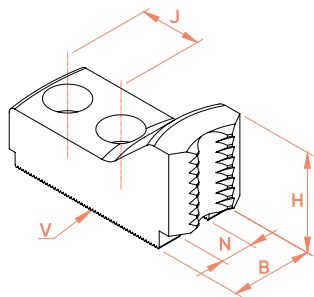
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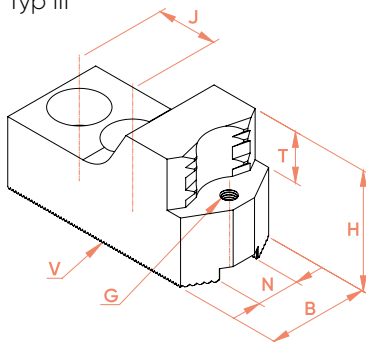
Adjustagrip hard jaws, inch serration

Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Schunk	ROTA NC 315	315	KJ32	227103	II	41 - 137		389	3,0	1/16" x 90°	21	50	49	—	25	—
			IC04	228012	III	41 - 135		388	3,9	1/16" x 90°	21	50	59	25	25	M8
			IC05	228013		72 - 170		386	3,3							
			IC08	228014		117 - 215		388	2,7							
			IC13	228015		167 - 267		388	2,4							
			IC18	228016		218 - 318		417	2,8							
			JC08	230008	IV		90 - 190	384	3,9	1/16" x 90°	21	50	59	25	25	M8
			JC10	230010			144 - 243	387	2,8							
			JC15	230015			195 - 295	402	2,6							
Schunk	ROTA NC 400	400	KJ40	227104	II	41 - 117		473	6,0	3/32" x 90°	25,5	60	59	—	35	—
			ID06	228017	III	60 - 162		473	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID13	228018		143 - 249		472	6,3							
			ID21	228019		228 - 336		470	4,8							
			ID30	228020		317 - 410		533	6,6							
			JD10	230011	IV		103 - 208	470	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			179 - 287	471	6,7							
			JD25	230013			257 - 366	469	4,0							
			JD33	230014			336 - 410	531	6,0							
Schunk	ROTA NC 500	500	ID06	228017	III	111 - 259		567	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID13	228018		198 - 347		568	6,3							
			ID21	228019		284 - 435		567	4,8							
			ID30	228020		373 - 510		630	6,6							
			JD10	230011	IV		157 - 306	566	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			234 - 385	567	6,7							
			JD25	230013			313 - 464	566	4,0							
			JD33	230014			393 - 510	629	6,0							
Schunk	ROTA NC 630	630	ID06	228017	III	139 - 378		689	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID13	228018		226 - 466		690	6,3							
			ID21	228019		313 - 554		689	4,8							
			ID30	228020		402 - 640		753	6,6							
			JD10	230011	IV		185 - 424	687	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			263 - 504	689	6,7							
			JD25	230013			343 - 583	688	4,0							
			JD33	230014			422 - 640	752	6,0							

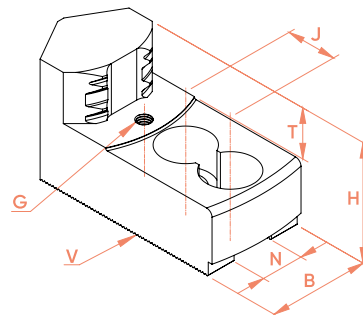
Typ II



Typ III



Typ IV



Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Schunk	ROTA NC 800	800	ID06	228017	III	181 - 496		805	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID13	228018		269 - 584		806	6,3							
			ID21	228019		356 - 672		806	4,8							
			ID30	228020		445 - 762		871	6,6							
			JD10	230011	IV		227 - 542	803	8,6							
			JD17	230012			306 - 622	805	6,7							
			JD25	230013			385 - 702	805	4,0							
			JD33	230014			465 - 782	870	6,0							
Schunk	ROTA NC plus (2) 215	215	KJ20	227101	II	69 - 104		266	2,0	1/16" x 90°	17	40	49	—	22	—
			IB03	228006	III	39 - 72		267	2,7							
			IB04	228007		50 - 83		266	2,3							
			IB05	228008		77 - 110		268	2,1							
			IB08	228009		105 - 140		267	2,1							
			IB11	228010		134 - 169		266	2,0							
			IB14	228011		164 - 199		286	1,9							
			JB06	230005	IV		81 - 115	266	1,8	1/16" x 90°	17	40	49	20	22	M6
			JB09	230006			113 - 147	266	1,8							
			JB12	230007			144 - 179	266	1,7							
Schunk	ROTA NC plus (2) 260	260	KJ26	227102	II	40 - 81		316	2,5	1/16" x 90°	21	50	49	—	25	—
			IC04	228012	III	35 - 72		320	3,9							
			IC05	228013		64 - 106		316	3,3							
			IC08	228014		109 - 151		318	2,7	1/16" x 90°	21	50	59	25	25	M8
			IC13	228015		159 - 202		316	2,4							
			IC18	228016		210 - 253		345	2,8							
			JC08	230008	IV		82 - 124	312	3,9	1/16" x 90°	21	50	59	25	25	M8
			JC10	230010			136 - 178	316	2,8							
			JC15	230015			186 - 230	330	2,6							

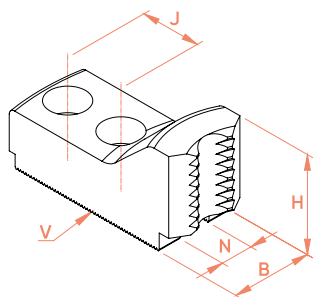
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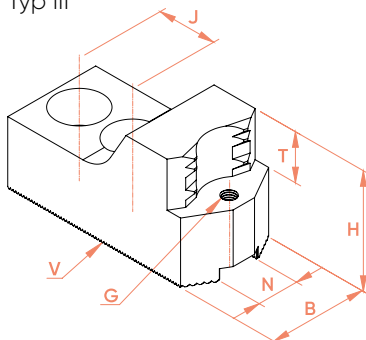
Adjustagrip hard jaws, inch serration

Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Schunk	ROTA NC plus (2) 315	315	KJ32	227103	II	52 – 125		378	3,0	1/16" x 90°	21	50	49	—	25	—
			IC05	228013	III	84 – 159		376	3,3	1/16" x 90°	21	50	59	25	25	M8
			IC08	228014		129 – 204		378	2,7							
			IC13	228015		180 – 256		377	2,4							
			IC18	228016		231 – 307		407	2,8							
			JC08	230008	IV		102 – 178	373	3,9	1/16" x 90°	21	50	59	25	25	M8
			JC10	230010			156 – 232	376	2,8							
			JC15	230015			207 – 283	390	2,6							
Schunk	ROTA NCD 160	160	KA10	228022	III	33 – 65		197	1,0	1/16" x 90°	12	32	39	20	15	M6
			KA11	228023		64 – 98		196	1,0							
			KA12	228024		93 – 126		196	1,0							
Schunk	ROTA NCD 165	165	KA10	228022	III	39 – 66		198	1,0	1/16" x 90°	12	32	39	20	15	M6
			KA11	228023		71 – 99		197	1,0							
			KA12	228024		100 – 127		197	1,0							
Schunk	ROTA NCD 185	185	KJ20	227101	II	27 – 72		232	2,0	1/16" x 90°	17	40	49	—	22	—
			IB04	228007	III	34 – 53		235	2,3	1/16" x 90°	17	40	49	20	22	M6
			IB05	228008		40 – 80		237	2,1							
			IB08	228009		63 – 108		234	2,1							
			IB11	228010		91 – 138		233	2,0							
			IB14	228011		120 – 167		252	1,9							
			JB06	230005	IV		52 – 84	234	1,8	1/16" x 90°	17	40	49	20	22	M6
			JB09	230006			83 – 116	234	1,8							
Schunk	ROTA NCD 210	210	JB12	230007			101 – 147	232	1,7							
			KJ20	227101	II	43 – 101		263	2,0	1/16" x 90°	17	40	49	—	22	—
			IB04	228007	III	34 – 81		264	2,3	1/16" x 90°	17	40	49	20	22	M6
			IB05	228008		52 – 108		266	2,1							
			IB08	228009		79 – 137		265	2,1							
			IB11	228010		108 – 167		264	2,0							
			IB14	228011		137 – 196		283	1,9							
			JB06	230005	IV		56 – 113	264	1,8	1/16" x 90°	17	40	49	20	22	M6
			JB09	230006			87 – 145	264	1,8							
			JB12	230007			117 – 177	264	1,7							

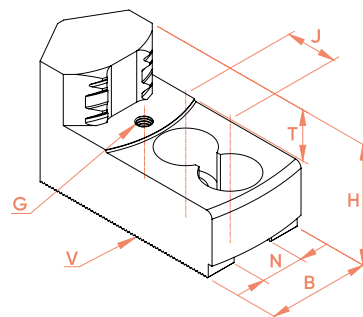
Typ II



Typ III



Typ IV



Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Schunk	ROTA NCD 215	215	KJ20	227101	II	43 - 95		257	2,0	1/16" x 90°	17	40	49	—	22	—
			IB04	228007	III	34 - 75		259	2,3	1/16" x 90°	17	40	49	20	22	M6
			IB05	228008		52 - 102		261	2,1							
			IB08	228009		79 - 131		259	2,1							
			IB11	228010		108 - 161		259	2,0							
			IB14	228011		137 - 190		277	1,9							
			JB06	230005	IV		56 - 107	259	1,8	1/16" x 90°	17	40	49	20	22	M6
			JB09	230006			87 - 139	259	1,8							
			JB12	230007			117 - 170	257	1,7							
Schunk	ROTA NCD 250	254	KJ26	227102	II	22 - 71		307	2,5	1/16" x 90°	21	50	49	—	25	—
			IC04	228012	III	34 - 63		312	3,9	1/16" x 90°	21	50	59	25	25	M8
			IC05	228013		43 - 96		307	3,3							
			IC08	228014		86 - 142		310	2,7							
			IC13	228015		135 - 192		307	2,4							
			IC18	228016		185 - 244		337	2,8							
			JC08	230008	IV		81 - 115	304	3,9	1/16" x 90°	21	50	59	25	25	M8
			JC10	230010			112 - 169	308	2,8							
			JC15	230015			162 - 220	321	2,6							
Schunk	ROTA NCD 255	255	KJ26	227102	II	22 - 75		311	2,5	1/16" x 90°	21	50	49	—	25	—
			IC04	228012	III	34 - 66		314	3,9	1/16" x 90°	21	50	59	25	25	M8
			IC05	228013		44 - 100		311	3,3							
			IC08	228014		87 - 145		313	2,7							
			IC13	228015		136 - 196		311	2,4							
			IC18	228016		186 - 248		341	2,8							
			JC08	230008	IV		81 - 119	308	3,9	1/16" x 90°	21	50	59	25	25	M8
			JC10	230010			113 - 173	311	2,8							
			JC15	230015			163 - 224	325	2,6							

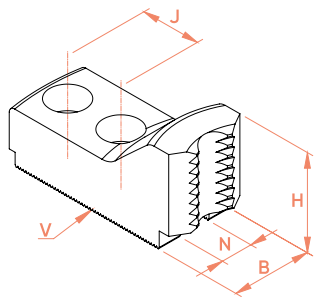
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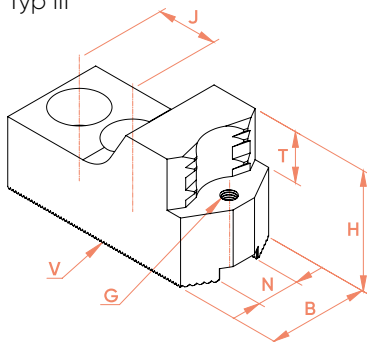
Adjustagrip hard jaws, inch serration

Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Schunk	ROTA NCD 315	315	KJ32	227103	II	41 – 126		379	3,0	1/16" x 90°	21	50	49	—	25	—
			IC05	228013	III	72 – 159		376	3,3	1/16" x 90°	21	50	59	25	25	M8
			IC08	228014		117 – 204		378	2,7							
			IC13	228015		167 – 256		377	2,4							
			IC18	228016		218 – 307		407	2,8							
			JC08	230008	IV		89 – 178	373	3,9	1/16" x 90°	21	50	59	25	25	M8
			JC10	230010			144 – 232	376	2,8							
			JC15	230015			194 – 283	390	2,6							
Schunk	ROTA NCD 400	400	KJ40	227104	II	40 – 100		457	6,0	3/32" x 90°	25,5	60	59	—	35	—
			ID06	228017	III	54 – 145		457	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID13	228018		130 – 232		455	6,3							
			ID21	228019		214 – 319		453	4,8							
			ID30	228020		303 – 408		516	6,6							
			JD10	230011	IV		96 – 191	454	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			165 – 269	454	6,7							
			JD25	230013			244 – 348	452	4,0							
Schunk	ROTA NCD 500	500	JD33	230014			323 – 410	514	6,0							
			ID06	228017	III	54 – 243		552	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID13	228018		130 – 331		552	6,3							
			ID21	228019		214 – 418		551	4,8							
			ID30	228020		303 – 508		615	6,6							
			JD10	230011	IV		96 – 289	550	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			165 – 368	551	6,7							
			JD25	230013			244 – 448	550	4,0							
Schunk	ROTA NCD 630	630	JD33	230014			323 – 510	613	6,0							
			ID06	228017	III	54 – 372		683	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID13	228018		130 – 460		684	6,3							
			ID21	228019		214 – 548		683	4,8							
			ID30	228020		303 – 637		747	6,6							
			JD10	230011	IV		96 – 418	681	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			165 – 498	683	6,7							
			JD25	230013			244 – 577	682	4,0							
			JD33	230014			323 – 640	746	6,0							

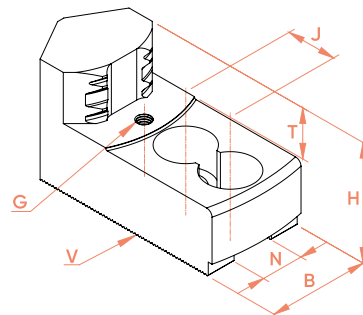
Typ II



Typ III



Typ IV



Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max./mm	Innen Ø internal Ø min-max./mm									
Schunk	ROTA NCF 165	165	KJ16	227100	II	18 - 47		218	1,6	1/16" x 90°	17	40	39	—	19	—
			IA03	228001	III	36 - 64		219	1,8	1/16" x 90°	17	40	49	20	19	M6
			IA05	228002		55 - 83		221	1,4							
			IA07	228003		76 - 106		222	1,5							
			IA09	228004		98 - 128		221	1,6							
			IA11	228005		120 - 150		227	1,5							
			JA05	230001	IV		57 - 85	221	1,7	1/16" x 90°	17	40	49	20	19	M6
			JA07	230002			78 - 107	221	1,6							
			JA09	230003			99 - 129	221	1,5							
			JA11	230004			120 - 150	219	1,5							
Schunk	ROTA NCF 210	210	KJ20	227101	II	27 - 64		228	2,0	1/16" x 90°	17	40	49	—	22	—
			IB03	228006	III	35 - 69		265	2,7	1/16" x 90°	17	40	49	20	22	M6
			IB04	228007		44 - 81		264	2,3							
			IB05	228008		71 - 108		266	2,1							
			IB08	228009		99 - 137		265	2,1							
			IB11	228010		128 - 166		263	2,0							
			IB14	228011		158 - 196		283	1,9							
			JB06	230005	IV		75 - 113	264	1,8	1/16" x 90°	17	40	49	20	22	M6
			JB09	230006			107 - 145	264	1,8							
			JB12	230007			138 - 176	263	1,7							
Schunk	ROTA NCF 250	254	KJ26	227102	II	26 - 85		320	2,5	1/16" x 90°	21	50	49	—	25	—
			IC04	228012	III	35 - 75		322	3,9	1/16" x 90°	21	50	59	25	25	M8
			IC05	228013		49 - 110		320	3,3							
			IC08	228014		93 - 155		322	2,7							
			IC13	228015		142 - 206		320	2,4							
			IC18	228016		193 - 257		349	2,8							
			JC08	230008	IV		81 - 128	316	3,9	1/16" x 90°	21	50	59	25	25	M8
			JC10	230010			119 - 182	320	2,8							
			JC15	230015			169 - 233	333	2,6							

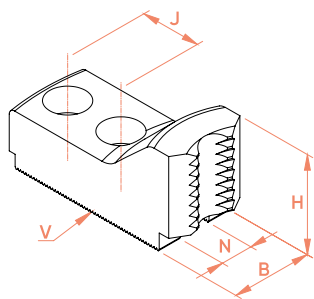
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Greiferbacken hart, Spitzverzahnung Zoll

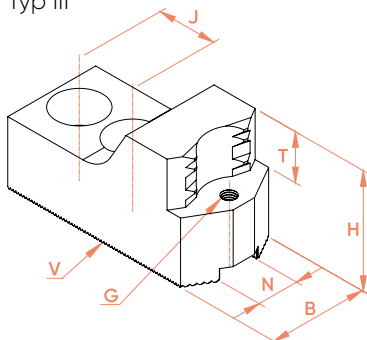
Adjustagrip hard jaws, inch serration

Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Schunk	ROTA NCF 315	315	KJ32	227103	II	41 - 137		389	3,0	1/16" x 90°	21	50	49	—	25	—
			IC04	228012	III	41 - 135		388	3,9	1/16" x 90°	21	50	59	25	25	M8
			IC05	228013		72 - 170		386	3,3							
			IC08	228014		117 - 215		388	2,7							
			IC13	228015		167 - 267		388	2,4							
			IC18	228016		218 - 318		417	2,8							
			JC08	230008	IV		90 - 190	384	3,9	1/16" x 90°	21	50	59	25	25	M8
			JC10	230010			144 - 243	387	2,8							
			JC15	230015			195 - 295	402	2,6							
Schunk	ROTA NCF 400	400	KJ40	227104	II	41 - 117		473	6,0	3/32" x 90°	25,5	60	59	—	35	—
			ID06	228017	III	60 - 162		473	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID13	228018		143 - 249		472	6,3							
			ID21	228019		228 - 336		470	4,8							
			ID30	228020		317 - 410		533	6,6							
			JD10	230011	IV		103 - 208	470	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			179 - 287	471	6,7							
			JD25	230013			257 - 366	469	4,0							
			JD33	230014			336 - 410	531	6,0							
Schunk	ROTA NCF 500	500	ID06	228017	III	111 - 259		567	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID13	228018		198 - 347		568	6,3							
			ID21	228019		284 - 435		567	4,8							
			ID30	228020		373 - 510		630	6,6							
			JD10	230011	IV		157 - 306	566	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			234 - 385	567	6,7							
			JD25	230013			313 - 464	566	4,0							
			JD33	230014			393 - 510	629	6,0							
Schunk	ROTA NCF plus (2) 215	215	KJ20	227101	II	69 - 104		266	2,0	1/16" x 90°	17	40	49	—	22	—
			IB03	228006	III	39 - 72		267	2,7	1/16" x 90°	17	40	49	20	22	M6
			IB04	228007		50 - 83		266	2,3							
			IB05	228008		77 - 110		268	2,1							
			IB08	228009		105 - 140		267	2,1							
			IB11	228010		134 - 169		266	2,0							
			IB14	228011		164 - 199		286	1,9							

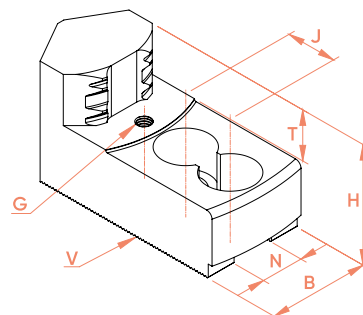
Typ II



Typ III



Typ IV



Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Schunk	ROTA NCF plus (2) 215	215	JB06	230005	IV		81 - 115	266	1,8	1/16" x 90°	17	40	49	20	22	M6
			JB09	230006			113 - 147	266	1,8							
			JB12	230007			144 - 179	266	1,7							
Schunk	ROTA NCF plus (2) 260	260	KJ26	227102	II	40 - 81		316	2,5	1/16" x 90°	21	50	49	—	25	—
			IC04	228012	III	35 - 72		320	3,9							
			IC05	228013		64 - 106		316	3,3							
			IC08	228014		109 - 151		318	2,7	1/16" x 90°	21	50	59	25	25	M8
			IC13	228015		159 - 202		316	2,4							
			IC18	228016		210 - 253		345	2,8							
			JC08	230008	IV		82 - 124	312	3,9							
			JC10	230010			136 - 178	316	2,8							
			JC15	230015			186 - 230	330	2,6							
Schunk	ROTA NCF plus (2) 315	315	KJ32	227103	II	52 - 125		378	3,0	1/16" x 90°	21	50	49	—	25	—
			IC04	228012	III	51 - 124		377	3,9							
			IC05	228013		84 - 159		376	3,3							
			IC08	228014		129 - 204		378	2,7	1/16" x 90°	21	50	59	25	25	M8
			IC13	228015		180 - 256		377	2,4							
			IC18	228016		231 - 307		407	2,8							
			JC08	230008	IV		102 - 178	373	3,9							
			JC10	230010			156 - 232	376	2,8							
			JC15	230015			207 - 283	390	2,6							
Schunk	ROTA NCK plus 165	169	IW03	228051	III	25 - 49		202	1,3	1/16" x 90°	14	30	47	20	20	M6
			IW06	228052		47 - 74		203	1,2							
			IW09	228053		72 - 104		186	1,1							
			IW12	228054		100 - 133		201	1,4	1/16" x 90°	14	30	47	20	20	M6
			IW15	228055		133 - 167		224	1,1							
			JW06	230051	IV		50 - 67	210	1,5							
			JW09	230052			67 - 96	205	1,4							
			JW11	230053			96 - 129	207	1,4							
			JW14	230054			125 - 159	234	1,6							

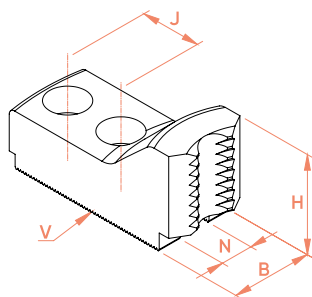
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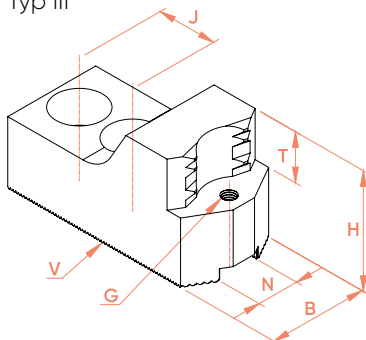
Adjustagrip hard jaws, inch serration

Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Schunk	ROTA NCK plus 210	210	KJ20	227101	II	47 – 98		260	2,0	1/16" x 90°	17	40	49	—	22	—
			IB04	228007	III	34 – 78		262	2,3	1/16" x 90°	17	40	49	20	22	M6
			IB05	228008		56 – 105		264	2,1							
			IB08	228009		83 – 134		262	2,1							
			IB11	228010		112 – 164		261	2,0							
			IB14	228011		141 – 193		280	1,9							
			JB06	230005	IV		60 – 110	261	1,8	1/16" x 90°	17	40	49	20	22	M6
			JB09	230006			91 – 142	262	1,8							
			JB12	230007			122 – 174	261	1,7							
Schunk	ROTA NCK plus 250	254	KJ20	227101	II	71 – 141		301	2,0	1/16" x 90°	17	40	49	—	22	—
			IB03	228006	III	41 – 108		301	2,7	1/16" x 90°	17	40	49	20	22	M6
			IB04	228007		52 – 120		301	2,3							
			IB05	228008		79 – 147		303	2,1							
			IB08	228009		108 – 176		301	2,1							
			IB11	228010		137 – 206		301	2,0							
			IB14	228011		166 – 236		321	1,9							
			JB06	230005	IV		84 – 152	301	1,8	1/16" x 90°	17	40	49	20	22	M6
			JB09	230006			115 – 184	301	1,8							
			JB12	230007			147 – 216	301	1,7							
Schunk	ROTA NCK plus 315	304	KJ32	227103	II	43 – 115		368	3,0	1/16" x 90°	21	50	49	—	25	—
			IC04	228012	III	42 – 114		368	3,9	1/16" x 90°	21	50	59	25	25	M8
			IC05	228013		74 – 149		366	3,3							
			IC08	228014		119 – 194		368	2,7							
			IC13	228015		169 – 245		367	2,4							
			IC18	228016		220 – 297		397	2,8							
			JC08	230008	IV		92 – 168	363	3,9	1/16" x 90°	21	50	59	25	25	M8
			JC10	230010			146 – 222	367	2,8							
			JC15	230015			197 – 273	381	2,6							
Schunk	ROTA NCO 165	165	KJ20	227101	II	43 – 59		218	2,0	1/16" x 90°	17	40	49	—	22	—
			IB04	228007	III	34 – 40		222	2,3	1/16" x 90°	17	40	49	20	22	M6
			IB05	228008		53 – 67		224	2,1							
			IB08	228009		80 – 95		221	2,1							
			IB11	228010		108 – 124		219	2,0							
			IB14	228011		137 – 154		238	1,9							

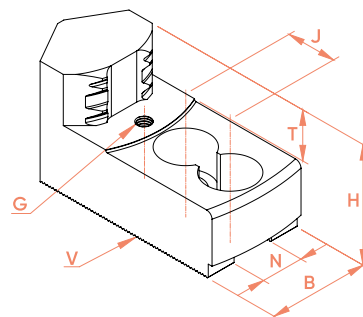
Typ II



Typ III



Typ IV



Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max./mm	Innen Ø internal Ø min-max./mm									
Schunk	ROTA NCO 165	165	JB06	230005	IV		56 - 71	220	1,8	1/16" x 90°	17	40	49	20	22	M6
			JB09	230006			87 - 103	220	1,8							
			JB12	230007			118 - 134	218	1,7							
Schunk	ROTA NCO 210	210	KJ20	227101	II	59 - 103		265	2,0	1/16" x 90°	17	40	49	—	22	—
			IB04	228007	III	40 - 82		265	2,3							
			IB05	228008		67 - 109		267	2,1							
			IB08	228009		95 - 139		267	2,1	1/16" x 90°	17	40	49	20	22	M6
			IB11	228010		124 - 168		265	2,0							
			IB14	228011		153 - 198		285	1,9							
			JB06	230005	IV		71 - 114	265	1,8							
			JB09	230006			103 - 147	266	1,8							
			JB12	230007			134 - 178	265	1,7							
Schunk	ROTA NCO 260	260	KJ26	227102	II	34 - 85		320	2,5	1/16" x 90°	21	50	49	—	25	—
			IC05	228013	III	58 - 110		320	3,3							
			IC08	228014		103 - 155		322	2,7							
			IC13	228015		153 - 206		320	2,4	1/16" x 90°	21	50	59	25	25	M8
			IC18	228016		204 - 258		350	2,8							
			JC08	230008	IV		81 - 129	317	3,9							
			JC10	230010			130 - 183	321	2,8							
			JC15	230015			180 - 234	334	2,6							
Schunk	ROTA NCO 315	315	KJ32	227103	II	37 - 129		382	3,0	1/16" x 90°	21	50	49	—	25	—
			IC04	228012	III	37 - 127		380	3,9							
			IC08	228014		112 - 208		381	2,7							
			IC13	228015		162 - 259		380	2,4	1/16" x 90°	21	50	59	25	25	M8
			IC18	228016		213 - 311		410	2,8							
			JC08	230008	IV		85 - 182	377	3,9							
			JC10	230010			139 - 236	380	2,8							
			JC15	230015			190 - 287	394	2,6							

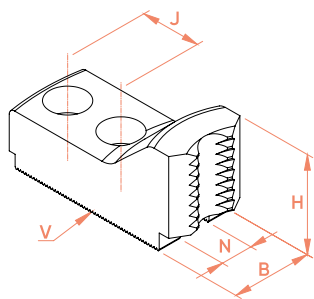
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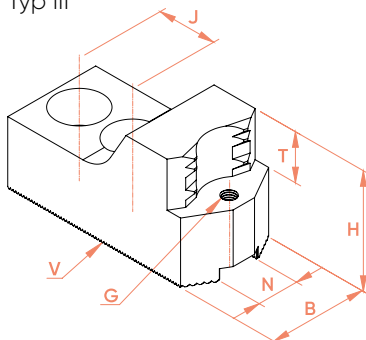
Adjustagrip hard jaws, inch serration

Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Schunk	ROTA NCO 400	400	KJ40	227104	II	40 – 114		470	6,0	3/32" x 90°	25,5	60	59	—	35	—
			ID06	228017	III	54 – 158		469	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID13	228018		120 – 246		469	6,3							
			ID21	228019		205 – 333		467	4,8							
			ID30	228020		293 – 410		529	6,6							
			JD10	230011	IV		96 – 204	467	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			156 – 283	467	6,7							
			JD25	230013			234 – 362	465	4,0							
			JD33	230014			313 – 410	528	6,0							
Schunk	ROTA NCO 500	500	ID06	228017	III	54 – 254		563	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID13	228018		120 – 343		564	6,3							
			ID21	228019		205 – 430		562	4,8							
			ID30	228020		293 – 510		627	6,6							
			JD10	230011	IV		96 – 301	561	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			156 – 380	562	6,7							
			JD25	230013			234 – 460	562	4,0							
			JD33	230014			313 – 510	624	6,0							
Schunk	ROTA NCO 630	630	ID06	228017	III	54 – 383		694	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID13	228018		116 – 471		695	6,3							
			ID21	228019		200 – 559		694	4,8							
			ID30	228020		289 – 640		759	6,6							
			JD10	230011	IV		96 – 429	692	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			151 – 509	694	6,7							
			JD25	230013			229 – 589	694	4,0							
			JD33	230014			308 – 640	758	6,0							
Schunk	ROTA NCO 800	800	ID06	228017	III	133 – 544		853	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID13	228018		221 – 632		853	6,3							
			ID21	228019		307 – 720		853	4,8							
			ID30	228020		397 – 810		918	6,6							
			JD10	230011	IV		179 – 590	850	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			258 – 670	853	6,7							
			JD25	230013			337 – 750	853	4,0							
			JD33	230014			416 – 810	917	6,0							

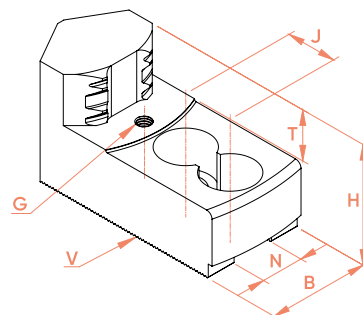
Typ II



Typ III



Typ IV



Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
SMW- Autoblok	AL-D 165	165	IW03	228051	III	25 - 49		202	1,3	1/16" x 90°	14	30	47	20	20	M6
			IW06	228052		47 - 74		203	1,2							
			IW09	228053		72 - 104		186	1,1							
			IW12	228054		100 - 133		201	1,4							
			IW15	228055		133 - 167		224	1,1							
			JW06	230051	IV		50 - 67	210	1,5							
			JW09	230052			67 - 96	205	1,4							
			JW11	230053			96 - 129	207	1,4							
			JW14	230054			125 - 159	234	1,6							
SMW- Autoblok	AL-D 210	210	IB04	228007	III	41 - 72		256	2,3	1/16" x 90°	17	40	49	20	22	M6
			IB05	228008		68 - 100		259	2,1							
			IB08	228009		96 - 129		257	2,1							
			IB11	228010		125 - 158		256	2,0							
			IB14	228011		154 - 188		275	1,9							
			JB06	230005	IV		72 - 104	256	1,8	1/16" x 90°	17	40	49	20	22	M6
			JB09	230006			103 - 136	256	1,8							
			JB12	230007			134 - 168	255	1,7							
SMW- Autoblok	AL-D 250	254	IC05	228013	III	55 - 90		302	3,3	1/16" x 90°	21	50	59	25	25	M8
			IC08	228014		99 - 135		304	2,7							
			IC13	228015		148 - 186		302	2,4							
			IC18	228016		199 - 237		330	2,8							
			JC08	230008	IV		81 - 108	297	3,9	1/16" x 90°	21	50	59	25	25	M8
			JC10	230010			125 - 162	301	2,8							
			JC15	230015			176 - 213	314	2,6							
SMW- Autoblok	AL-D 315	315	IC04	228012	III	69 - 148		400	3,9	1/16" x 90°	21	50	59	25	25	M8
			IC08	228014		114 - 193		367	2,7							
			IC13	228015		164 - 245		367	2,4							
			IC18	228016		215 - 296		396	2,8							
			JC08	230008	IV		87 - 167	362	3,9	1/16" x 90°	21	50	59	25	25	M8
			JC10	230010			141 - 221	366	2,8							
			JC15	230015			191 - 272	380	2,6							

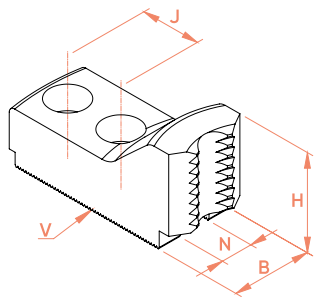
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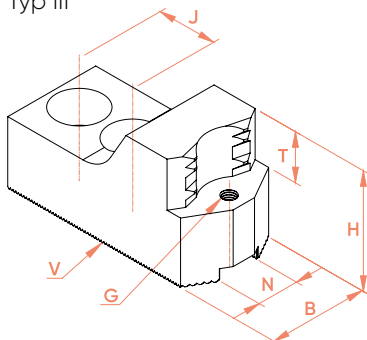
Adjustagrip hard jaws, inch serration

Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
SMW- Autoblok	AL-D 400	390	ID06	228017	III	66 - 142		450	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID13	228018		150 - 229		449	6,3							
			ID21	228019		235 - 316		447	4,8							
			ID30	228020		324 - 400		510	6,6							
			JD10	230011	IV		110 - 188	448	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			186 - 266	447	6,7							
			JD25	230013			265 - 346	446	4,0							
			JD33	230014			344 - 400	508	6,0							
SMW- Autoblok	AN-D 165	165	IW03	228051	III	25 - 49		202	1,3	1/16" x 90°	14	30	47	20	20	M6
			IW06	228052		47 - 74		203	1,2							
			IW09	228053		72 - 104		186	1,1							
			IW12	228054		100 - 133		201	1,4							
			IW15	228055		133 - 167		224	1,1							
			JW06	230051	IV		50 - 67	210	1,5	1/16" x 90°	14	30	47	20	20	M6
			JW09	230052			67 - 96	205	1,4							
			JW11	230053			96 - 129	207	1,4							
SMW- Autoblok	AN-D 210	210	JB04	228007	III	37 - 69		253	2,3	1/16" x 90°	17	40	49	20	22	M6
			JB05	228008		64 - 96		255	2,1							
			JB08	228009		92 - 125		254	2,1							
			JB11	228010		121 - 154		252	2,0							
			JB14	228011		150 - 184		271	1,9							
			JB06	230005	IV		68 - 101	253	1,8	1/16" x 90°	17	40	49	20	22	M6
			JB09	230006			100 - 133	253	1,8							
			JB12	230007			131 - 164	252	1,7							

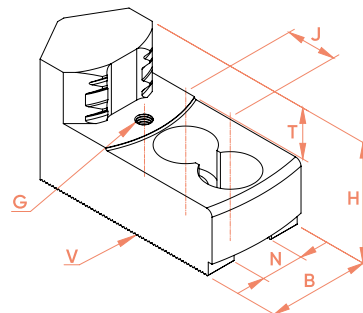
Typ II



Typ III



Typ IV



Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
SMW- Autoblok	AN-D 250	254	IC04	228012	III	34 - 52		302	3,9	1/16" x 90°	21	50	59	25	25	M8
			IC05	228013		50 - 85		297	3,3							
			IC08	228014		94 - 130		299	2,7							
			IC13	228015		144 - 181		297	2,4							
			IC18	228016		194 - 232		326	2,8							
			JC08	230008	IV		81 - 103	293	3,9							
			JC10	230010			121 - 157	297	2,8							
			JC15	230015			171 - 208	310	2,6							
SMW- Autoblok	AN-D 315	315	IC04	228012	III	34 - 107		361	3,9	1/16" x 90°	21	50	59	25	25	M8
			IC08	228014		108 - 187		362	2,7							
			IC13	228015		158 - 238		360	2,4							
			IC18	228016		209 - 290		390	2,8							
			JC08	230008	IV		81 - 161	357	3,9							
			JC10	230010			135 - 215	360	2,8							
			JC15	230015			185 - 266	374	2,6							
SMW- Autoblok	AN-D 400	390	ID06	228017	III	61 - 136		444	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID08	228030		103 - 181		446	8,5							
			ID13	228018		144 - 224		444	6,3							
			ID18	228031		187 - 267		442	5,5							
			ID21	228019		229 - 310		441	4,8							
			ID30	228020		318 - 400		504	6,6							
			JD10	230011	IV		104 - 182	442	8,6							
			JD17	230012			180 - 261	442	6,7							
			JD25	230013			259 - 340	440	4,0							
SMW- Autoblok	BB-D 175	175	IW03	228051	III	25 - 47		202	1,3	1/16" x 90°	14	30	47	20	20	M6
			IW06	228052		47 - 72		203	1,2							
			IW09	228053		72 - 102		187	1,1							
			IW12	228054		100 - 131		201	1,4							
			IW15	228055		133 - 165		224	1,1							

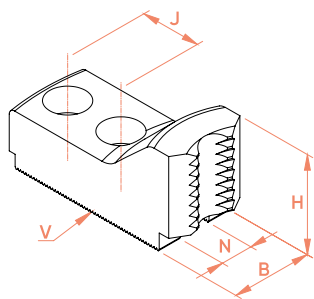
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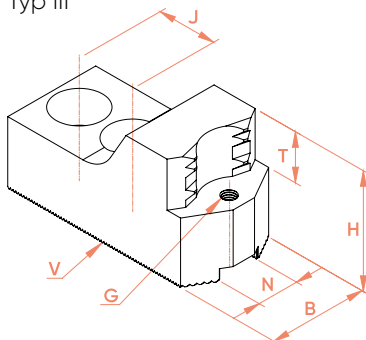
Adjustagrip hard jaws, inch serration

Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
SMW- Autoblok	BB-D 175	175	JW06	230051	IV		50 – 67	212	1,5	1/16" x 90°	14	30	47	20	20	M6
			JW09	230052			67 – 96	207	1,4							
			JW11	230053			96 – 129	209	1,4							
			JW14	230054			125 – 159	235	1,6							
SMW- Autoblok	BB-D 210	210	KJ20	227101	II	19 – 53		218	2,0	1/16" x 90°	17	40	49	—	22	—
			IB04	228007	III	41 – 73		257	2,3							
			IB05	228008		68 – 100		259	2,1	1/16" x 90°	17	40	49	20	22	M6
			IB08	228009		96 – 129		257	2,1							
			IB11	228010		125 – 158		256	2,0							
			IB14	228011		155 – 188		275	1,9							
			JB06	230005	IV		72 – 105	257	1,8	1/16" x 90°	17	40	49	20	22	M6
			JB09	230006			104 – 137	257	1,8							
			JB12	230007			135 – 168	255	1,7							
SMW- Autoblok	BB-D 250	254	KJ26	227102	II	23 – 69		305	2,5	1/16" x 90°	21	50	49	—	25	—
			IC05	228013	III	54 – 98		309	3,3	1/16" x 90°	21	50	59	25	25	M8
			IC08	228014		98 – 140		308	2,7							
			IC13	228015		147 – 190		305	2,4							
			IC18	228016		198 – 242		335	2,8							
			JC08	230008	IV		81 – 113	302	3,9	1/16" x 90°	21	50	59	25	25	M8
			JC10	230010			124 – 167	306	2,8							
			JC15	230015			175 – 218	319	2,6							
SMW- Autoblok	BB-D 315	315	KJ32	227103	II	41 – 110		364	3,0	1/16" x 90°	21	50	49	—	25	—
			IC04	228012	III	66 – 117		371	3,9	1/16" x 90°	21	50	59	25	25	M8
			IC05	228013		100 – 152		369	3,3							
			IC08	228014		146 – 197		371	2,7							
			IC13	228015		196 – 249		370	2,4							
			IC18	228016		248 – 300		400	2,8	1/16" x 90°	21	50	59	25	25	M8
			JC08	230008	IV		119 – 173	368	3,9							
			JC10	230010			173 – 225	370	2,8							
			JC15	230015			224 – 276	383	2,6							
SMW- Autoblok	BH-D 165	165	IW03	228051	III	25 – 49		202	1,3	1/16" x 90°	14	30	47	20	20	M6
			IW06	228052		47 – 74		203	1,2							
			IW09	228053		72 – 104		186	1,1							
			IW12	228054		100 – 133		201	1,4							
			IW15	228055		133 – 167		224	1,1							

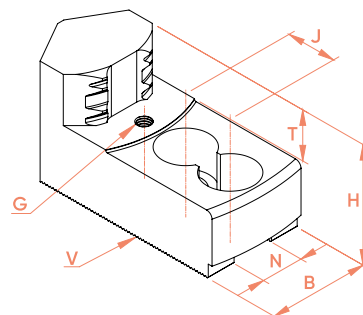
Typ II



Typ III



Typ IV



Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max./mm	Innen Ø internal Ø min-max./mm									
SMW- Autoblok	BH-D 165	165	JW06	230051	IV		50 - 67	210	1,5	1/16" x 90°	14	30	47	20	20	M6
			JW09	230052			67 - 96	205	1,4							
			JW11	230053			96 - 129	207	1,4							
			JW14	230054			125 - 159	234	1,6							
SMW- Autoblok	BH-D 210	210	KJ20	227101	II	25 - 56		221	2,0	1/16" x 90°	17	40	49	—	22	—
			IB04	228007	III	34 - 70		254	2,3							
			IB05	228008		55 - 97		256	2,1							
			IB08	228009		82 - 126		254	2,1							
			IB11	228010		111 - 156		254	2,0							
			IB14	228011		140 - 185		272	1,9							
			JB06	230005	IV		58 - 102	254	1,8	1/16" x 90°	17	40	49	20	22	M6
			JB09	230006			89 - 134	254	1,8							
			JB12	230007			120 - 165	253	1,7							
SMW- Autoblok	BH-D 250	254	KJ26	227102	II	30 - 70		306	2,5	1/16" x 90°	21	50	49	—	25	—
			IC05	228013	III	45 - 94		305	3,3							
			IC08	228014		89 - 139		307	2,7	1/16" x 90°	21	50	59	25	25	M8
			IC13	228015		138 - 189		304	2,4							
			IC18	228016		188 - 241		334	2,8							
			JC08	230008	IV		81 - 114	303	3,9	1/16" x 90°	21	50	59	25	25	M8
			JC10	230010			114 - 166	305	2,8							
			JC15	230015			165 - 217	318	2,6							
SMW- Autoblok	BH-D 315	315	KJ32	227103	II	67 - 110		364	3,0	1/16" x 90°	21	50	49	—	25	—
			IC04	228012	III	50 - 118		372	3,9							
			IC08	228014		117 - 198		372	2,7	1/16" x 90°	21	50	59	25	25	M8
			IC13	228015		167 - 250		371	2,4							
			IC18	228016		218 - 301		401	2,8							
			JC08	230008	IV		89 - 172	367	3,9	1/16" x 90°	21	50	59	25	25	M8
			JC10	230010			144 - 226	371	2,8							
			JC15	230015			194 - 277	384	2,6							

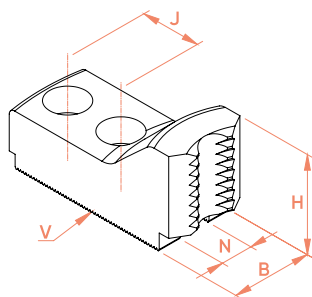
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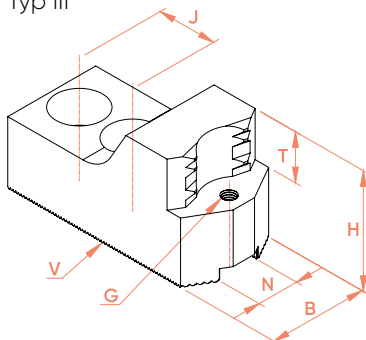
Adjustagrip hard jaws, inch serration

Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
SMW- Autoblok	BH-D 400	390	KJ40	227104	II	40 – 89		443	6,0	3/32" x 90°	25,5	60	59	—	35	—
			ID06	228017	III	60 – 133		442	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID08	228030		102 – 177		442	8,5							
			ID13	228018		143 – 220		440	6,3							
			ID18	228031		185 – 263		439	5,5							
			ID21	228019		228 – 307		438	4,8							
			ID30	228020		317 – 396		500	6,6							
			JD10	230011	IV		103 – 179	439	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			179 – 257	438	6,7							
			JD25	230013			257 – 336	437	4,0							
			JD33	230014			336 – 400	499	6,0							
SMW- Autoblok	BH-D 450	450	KJ40	227104	II	40 – 146		500	6,0	3/32" x 90°	25,5	60	59	—	35	—
			ID06	228017	III	60 – 191		500	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID13	228018		143 – 279		500	6,3							
			ID21	228019		228 – 366		498	4,8							
			ID30	228020		317 – 456		562	6,6							
			JD10	230011	IV		103 – 237	498	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			179 – 316	499	6,7							
			JD25	230013			257 – 396	498	4,0							
			JD33	230014			336 – 460	560	6,0							
SMW- Autoblok	BH-D 500	510	KJ40	227104	II	73 – 204		557	6,0	3/32" x 90°	25,5	60	59	—	35	—
			ID06	228017	III	117 – 249		558	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID08	228030		161 – 294		559	8,5							
			ID13	228018		204 – 338		559	6,3							
			ID18	228031		247 – 381		558	5,5							
			ID21	228019		290 – 425		557	4,8							
			ID30	228020		379 – 514		621	6,6							
			JD10	230011	IV		162 – 296	557	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			240 – 375	558	6,7							
			JD25	230013			319 – 455	557	4,0							
			JD33	230014			399 – 520	619	6,0							

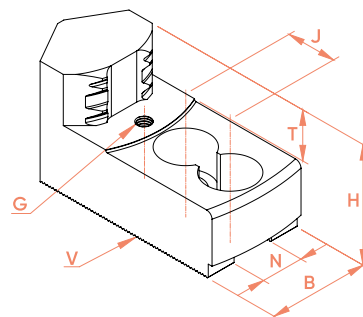
Typ II



Typ III



Typ IV



Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N mm	B mm	H mm	T mm	J mm	G mm
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
SMW- Autoblok	BH-D 630	630	ID06	228017	III	212 - 359		671	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID08	228030		257 - 404		672	8,5							
			ID13	228018		300 - 447		671	6,3							
			ID18	228031		344 - 491		671	5,5							
			ID21	228019		388 - 535		671	4,8							
			ID30	228020		477 - 625		735	6,6							
			JD10	230011	IV		259 - 405	669	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			338 - 485	671	6,7							
			JD25	230013			417 - 565	670	4,0							
			JD33	230014			497 - 640	733	6,0							
SMW- Autoblok	BH-D 800	800	ID06	228017	III	212 - 528		837	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID13	228018		300 - 617		838	6,3							
			ID21	228019		388 - 704		837	4,8							
			ID30	228020		477 - 794		902	6,6							
			JD10	230011	IV		259 - 575	836	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			338 - 654	837	6,7							
			JD25	230013			417 - 734	837	4,0							
			JD33	230014			497 - 810	901	6,0							
SMW- Autoblok	BHD-FC 165	165	IW03	228051	III	26 - 51		204	1,3	1/16" x 90°	14	30	47	20	20	M6
			IW06	228052		46 - 73		202	1,2							
			IW09	228053		90 - 118		200	1,1							
			IW12	228054		102 - 131		199	1,4							
			IW15	228055		133 - 162		220	1,1							
			JW06	230051	IV		49 - 60	203	1,5	1/16" x 90°	14	30	47	20	20	M6
			JW09	230052			65 - 93	202	1,4							
			JW11	230053			95 - 123	201	1,4							
			JW14	230054			124 - 153	228	1,6							

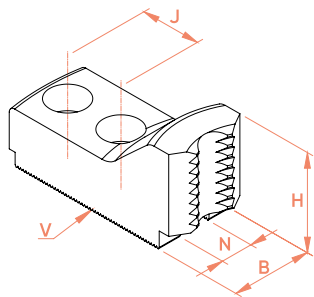
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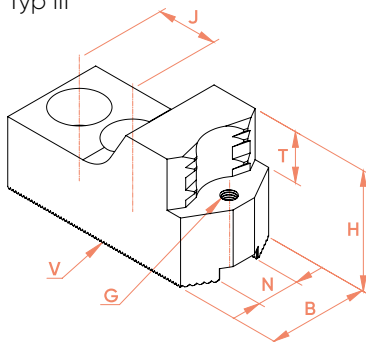
Adjustagrip hard jaws, inch serration

Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
SMW- Autoblok	BHD-FC 210	210	KJ20	227101	II	45 – 90		252	2,0	1/16" x 90°	17	40	49	—	22	—
			IB04	228007	III	34 – 70		254	2,3	1/16" x 90°	17	40	49	20	22	M6
			IB05	228008		55 – 97		256	2,1							
			IB08	228009		82 – 126		254	2,1							
			IB11	228010		111 – 156		254	2,0							
			IB14	228011		140 – 185		272	1,9							
			JB06	230005	IV		58 – 102	254	1,8	1/16" x 90°	17	40	49	20	22	M6
			JB09	230006			89 – 134	254	1,8							
			JB12	230007			120 – 165	253	1,7							
SMW- Autoblok	BHD-FC 250	254	KJ26	227102	II	26 – 59		296	2,5	1/16" x 90°	21	50	49	—	25	—
			IC05	228013	III	49 – 84		296	3,3	1/16" x 90°	21	50	59	25	25	M8
			IC08	228014		93 – 129		298	2,7							
			IC13	228015		143 – 180		296	2,4							
			IC18	228016		193 – 231		325	2,8							
			JC08	230008	IV		81 – 102	292	3,9	1/16" x 90°	21	50	59	25	25	M8
			JC10	230010			120 – 156	296	2,8							
			JC15	230015			170 – 207	309	2,6							
SMW- Autoblok	BHD-FC 315	315	KJ32	227103	II	44 – 110		364	3,0	1/16" x 90°	21	50	49	—	25	—
			IC04	228012	III	44 – 108		362	3,9	1/16" x 90°	21	50	59	25	25	M8
			IC05	228013		76 – 143		361	3,3							
			IC08	228014		121 – 188		363	2,7							
			IC13	228015		171 – 240		362	2,4							
			IC18	228016		222 – 291		391	2,8							
			JC08	230008	IV		93 – 162	358	3,9	1/16" x 90°	21	50	59	25	25	M8
			JC10	230010			147 – 216	361	2,8							
			JC15	230015			198 – 267	375	2,6							
SMW- Autoblok	BHD-FC 400	390	KJ40	227104	II	40 – 89		443	6,0	3/32" x 90°	25,5	60	59	—	35	—
			ID06	228017	III	60 – 133		442	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID08	228030		102 – 177		442	8,5							
			ID13	228018		143 – 220		440	6,3							
			ID18	228031		185 – 263		439	5,5							
			ID21	228019		228 – 307		438	4,8							
			ID30	228020		317 – 396		500	6,6							

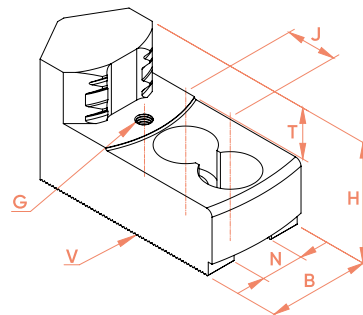
Typ II



Typ III



Typ IV



Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
SMW- Autoblok	BHD-FC 400	390	JD10	230011	IV		103 - 179	439	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			179 - 257	438	6,7							
			JD25	230013			257 - 336	437	4,0							
			JD33	230014			336 - 400	499	6,0							
SMW- Autoblok	BHD-FC 500	510	KJ40	227104	II	53 - 197		551	6,0	3/32" x 90°	25,5	60	59	—	35	—
			ID06	228017	III	95 - 242		551	9,0							
			ID08	228030		139 - 287		553	8,5	3/32" x 90°	25,5	60	79	33	35	M8
			ID13	228018		181 - 330		551	6,3							
			ID18	228031		224 - 374		551	5,5							
			ID21	228019		267 - 417		550	4,8							
			ID30	228020		356 - 507		614	6,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD10	230011	IV		140 - 288	549	8,6							
			JD17	230012			217 - 368	551	6,7							
			JD25	230013			296 - 447	549	4,0							
			JD33	230014			375 - 520	613	6,0							
SMW- Autoblok	BHD-FC 630	630	ID06	228017	III	136 - 361		673	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID08	228030		181 - 406		674	8,5							
			ID13	228018		224 - 449		673	6,3							
			ID18	228031		267 - 493		673	5,5							
			ID21	228019		310 - 537		673	4,8							
			ID30	228020		400 - 627		737	6,6							
			JD10	230011	IV		182 - 407	671	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			261 - 487	673	6,7							
			JD25	230013			340 - 567	672	4,0							
			JD33	230014			419 - 640	735	6,0							

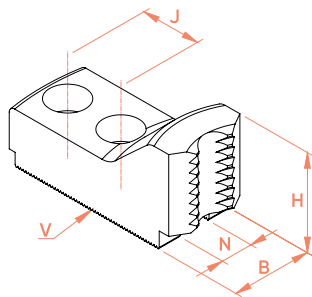
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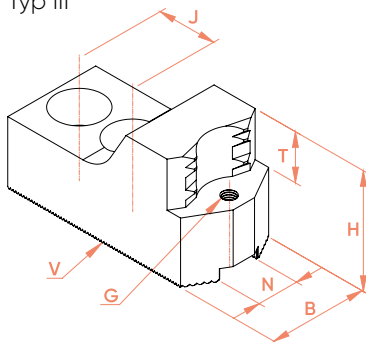
Adjustagrip hard jaws, inch serration

Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
SMW- Autoblok	HFK 160	165	KJ16	227100	II	21 - 45		216	1,6	1/16" x 90°	17	40	39	—	19	—
			IA03	228001	III	39 - 63		218	1,8	1/16" x 90°	17	40	49	20	19	M6
			IA05	228002		58 - 82		220	1,4							
			IA07	228003		79 - 104		220	1,5							
			IA09	228004		101 - 126		219	1,6							
			IA11	228005		123 - 149		226	1,5							
			JA05	230001	IV		59 - 84	220	1,7	1/16" x 90°	17	40	49	20	19	M6
			JA07	230002			81 - 106	220	1,6							
			JA09	230003			102 - 127	219	1,5							
			JA11	230004			123 - 149	218	1,5							
SMW- Autoblok	HFK 200-48	204	KJ20	227101	II	47 - 96		258	2,0	1/16" x 90°	17	40	49	—	22	—
			IB03	228006	III	34 - 64		260	2,7	1/16" x 90°	17	40	49	20	22	M6
			IB04	228007		34 - 75		259	2,3							
			IB05	228008		56 - 103		262	2,1							
			IB08	228009		84 - 132		260	2,1							
			IB11	228010		112 - 161		259	2,0							
			IB14	228011		141 - 191		278	1,9							
			JB06	230005	IV		60 - 107	259	1,8	1/16" x 90°	17	40	49	20	22	M6
			JB09	230006			91 - 140	260	1,8							
			JB12	230007			122 - 171	258	1,7							
SMW- Autoblok	HFK 200-66	204	KJ20	227101	II	61 - 95		257	2,0	1/16" x 90°	17	40	49	—	22	—
			IB03	228006	III	34 - 63		259	2,7	1/16" x 90°	17	40	49	20	22	M6
			IB04	228007		43 - 74		258	2,3							
			IB05	228008		70 - 102		261	2,1							
			IB08	228009		98 - 131		259	2,1							
			IB11	228010		127 - 160		258	2,0							
			IB14	228011		156 - 190		277	1,9							
			JB06	230005	IV		74 - 106	258	1,8	1/16" x 90°	17	40	49	20	22	M6
			JB09	230006			105 - 139	259	1,8							
			JB12	230007			137 - 170	257	1,7							

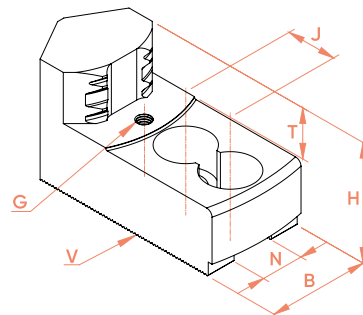
Typ II



Typ III



Typ IV



Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N mm	B mm	H mm	T mm	J mm	G mm
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
SMW- Autoblok	HFK 250	250	KJ26	227102	II	27 - 76		312	2,5	1/16" x 90°	21	50	49	—	25	—
			IC04	228012	III	34 - 67		315	3,9	1/16" x 90°	21	50	59	25	25	M8
			IC05	228013		51 - 101		312	3,3							
			IC08	228014		95 - 146		314	2,7							
			IC13	228015		144 - 197		312	2,4							
			IC18	228016		195 - 248		341	2,8							
			JC08	230008	IV		81 - 120	309	3,9	1/16" x 90°	21	50	59	25	25	M8
			JC10	230010			121 - 173	311	2,8							
			JC15	230015			172 - 225	325	2,6							
SMW- Autoblok	HFK 270	270	KJ26	227102	II	34 - 92		330	2,5	1/16" x 90°	21	50	49	—	25	—
			IC04	228012	III	34 - 82		332	3,9	1/16" x 90°	21	50	59	25	25	M8
			IC05	228013		59 - 117		330	3,3							
			IC08	228014		103 - 162		332	2,7							
			IC13	228015		153 - 213		331	2,4							
			IC18	228016		204 - 264		360	2,8							
			JC08	230008	IV		81 - 135	326	3,9	1/16" x 90°	21	50	59	25	25	M8
			JC10	230010			130 - 189	330	2,8							
			JC15	230015			180 - 240	343	2,6							
SMW- Autoblok	HFK 315	315	KJ32	227103	II	37 - 131		383	3,0	1/16" x 90°	21	50	49	—	25	—
			IC04	228012	III	37 - 129		382	3,9	1/16" x 90°	21	50	59	25	25	M8
			IC05	228013		68 - 165		381	3,3							
			IC08	228014		113 - 210		383	2,7							
			IC13	228015		163 - 261		382	2,4							
			IC18	228016		214 - 313		412	2,8							
			JC08	230008	IV		85 - 184	379	3,9	1/16" x 90°	21	50	59	25	25	M8
			JC10	230010			139 - 237	381	2,8							
			JC15	230015			190 - 289	396	2,6							

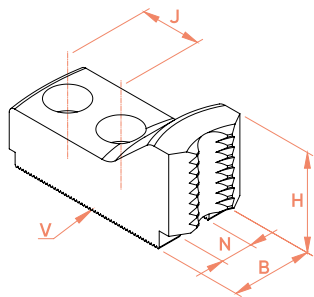
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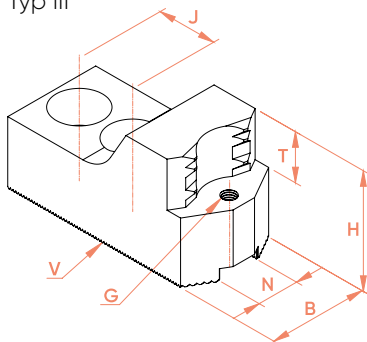
Adjustagrip hard jaws, inch serration

Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
SMW- Autoblok	HFK / HFKN-D 400	400	KJ40	227104	II	40 – 111		470	6,0	3/32" x 90°	25,5	60	59	—	35	—
			ID06	228017	III	61 – 155		469	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID13	228018		144 – 243		469	6,3							
			ID21	228019		229 – 330		467	4,8							
			ID30	228020		318 – 410		529	6,6							
			JD10	230011	IV		104 – 202	468	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			180 – 280	467	6,7							
			JD25	230013			259 – 360	466	4,0							
			JD33	230014			338 – 410	528	6,0							
SMW- Autoblok	HFK / HFKN-D 500	500	KJ40	227104	II	57 – 204		565	6,0	3/32" x 90°	25,5	60	59	—	35	—
			ID06	228017	III	98 – 249		566	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID13	228018		185 – 337		566	6,3							
			ID21	228019		271 – 424		564	4,8							
			ID30	228020		360 – 510		629	6,6							
			JD10	230011	IV		144 – 295	563	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			221 – 374	564	6,7							
			JD25	230013			300 – 454	564	4,0							
			JD33	230014			379 – 510	627	6,0							
SMW- Autoblok	HFKN-D 165	165	IW03	228051	III	25 – 49		202	1,3	1/16" x 90°	14	30	47	20	20	M6
			IW06	228052		47 – 74		203	1,2							
			IW09	228053		72 – 104		186	1,1							
			IW12	228054		100 – 133		201	1,4							
			IW15	228055		133 – 167		224	1,1							
			JW06	230051	IV		50 – 67	210	1,5	1/16" x 90°	14	30	47	20	20	M6
			JW09	230052			67 – 96	205	1,4							
			JW11	230053			96 – 129	207	1,4							
			JW14	230054			125 – 159	234	1,6							
SMW- Autoblok	HFKN-D 210	215	KJ20	227101	II	47 – 107		268	2,0	1/16" x 90°	17	40	49	—	22	—
			IB04	228007	III	34 – 86		269	2,3	1/16" x 90°	17	40	49	20	22	M6
			IB05	228008		56 – 114		272	2,1							
			IB08	228009		84 – 143		270	2,1							
			IB11	228010		113 – 172		269	2,0							
			IB14	228011		142 – 202		288	1,9							

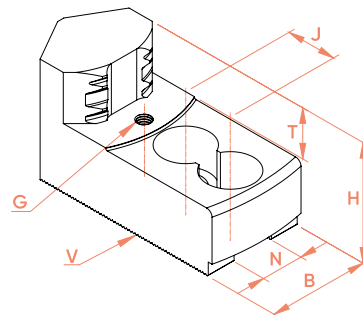
Typ II



Typ III



Typ IV



Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
SMW- Autoblok	HFKN-D 210	215	JB06	230005	IV		60 - 118	269	1,8	1/16" x 90°	17	40	49	20	22	M6
			JB09	230006			91 - 151	270	1,8							
			JB12	230007			122 - 182	269	1,7							
SMW- Autoblok	HFKN-D 260	260	KJ26	227102	II	27 - 80		316	2,5	1/16" x 90°	21	50	49	—	25	—
			IC04	228012	III	34 - 71		319	3,9	1/16" x 90°	21	50	59	25	25	M8
			IC05	228013		50 - 105		315	3,3	1/16" x 90°	21	50	59	25	25	M8
			IC08	228014		94 - 150		317	2,7							
			IC13	228015		143 - 201		316	2,4							
			IC18	228016		194 - 252		344	2,8							
			JC08	230008	IV		81 - 124	312	3,9	1/16" x 90°	21	50	59	25	25	M8
			JC10	230010			120 - 178	316	2,8	1/16" x 90°	21	50	59	25	25	M8
			JC15	230015			171 - 229	329	2,6							
SMW- Autoblok	HFKN-D 315	315	KJ32	227103	II	53 - 121		374	3,0	1/16" x 90°	21	50	49	—	25	—
			IC04	228012	III	52 - 120		373	3,9	1/16" x 90°	21	50	59	25	25	M8
			IC05	228013		85 - 155		372	3,3	1/16" x 90°	21	50	59	25	25	M8
			IC08	228014		130 - 200		374	2,7							
			IC13	228015		181 - 251		372	2,4							
			IC18	228016		232 - 303		403	2,8							
			JC08	230008	IV		103 - 174	369	3,9	1/16" x 90°	21	50	59	25	25	M8
			JC10	230010			157 - 228	373	2,8	1/16" x 90°	21	50	59	25	25	M8
			JC15	230015			208 - 279	386	2,6							
SMW- Autoblok	HFKS 160	165	KJ16	227100	II	21 - 45		216	1,6	1/16" x 90°	17	40	39	—	19	—
			IA03	228001	III	39 - 63		218	1,8	1/16" x 90°	17	40	49	20	19	M6
			IA05	228002		58 - 82		220	1,4	1/16" x 90°	17	40	49	20	19	M6
			IA07	228003		79 - 104		220	1,5							
			IA09	228004		101 - 126		219	1,6							
			IA11	228005		123 - 149		226	1,5							
			JA05	230001	IV		59 - 84	220	1,7	1/16" x 90°	17	40	49	20	19	M6
			JA07	230002			81 - 106	220	1,6	1/16" x 90°	17	40	49	20	19	M6
			JA09	230003			102 - 127	219	1,5							
			JA11	230004			123 - 149	218	1,5							

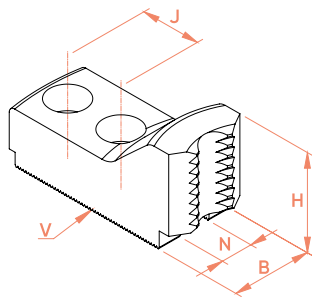
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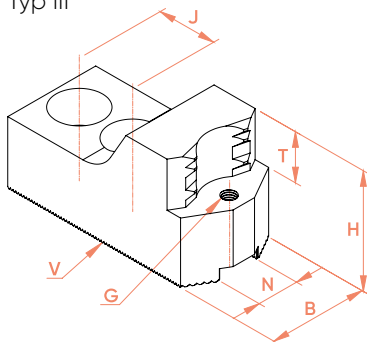
Adjustagrip hard jaws, inch serration

Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
SMW- Autoblok	HFKS 200-48	204	KJ20	227101	II	47 – 96		258	2,0	1/16" x 90°	17	40	49	—	22	—
			IB04	228007	III	34 – 75		259	2,3	1/16" x 90°	17	40	49	20	22	M6
			IB05	228008		56 – 103		262	2,1							
			IB08	228009		84 – 132		260	2,1							
			IB11	228010		112 – 161		259	2,0							
			IB14	228011		141 – 191		278	1,9							
			JB06	230005	IV		60 – 107	259	1,8	1/16" x 90°	17	40	49	20	22	M6
			JB09	230006			91 – 140	260	1,8							
			JB12	230007			122 – 171	258	1,7							
SMW- Autoblok	HFKS 200-66	204	KJ20	227101	II	61 – 95		257	2,0	1/16" x 90°	17	40	49	—	22	—
			IB03	228006	III	34 – 63		259	2,7	1/16" x 90°	17	40	49	20	22	M6
			IB04	228007		43 – 74		258	2,3							
			IB05	228008		70 – 102		261	2,1							
			IB08	228009		98 – 131		259	2,1							
			IB11	228010		127 – 160		258	2,0							
			IB14	228011		156 – 190		277	1,9							
			JB06	230005	IV		74 – 106	258	1,8	1/16" x 90°	17	40	49	20	22	M6
			JB09	230006			105 – 139	259	1,8							
			JB12	230007			137 – 170	257	1,7							
SMW- Autoblok	HFKS 250	250	KJ26	227102	II	27 – 76		312	2,5	1/16" x 90°	21	50	49	—	25	—
			IC04	228012	III	34 – 67		315	3,9	1/16" x 90°	21	50	59	25	25	M8
			IC05	228013		51 – 101		312	3,3							
			IC08	228014		95 – 146		314	2,7							
			IC13	228015		144 – 197		312	2,4							
			IC18	228016		195 – 248		341	2,8							
			JC08	230008	IV		81 – 120	309	3,9	1/16" x 90°	21	50	59	25	25	M8
			JC10	230010			121 – 173	311	2,8							
			JC15	230015			172 – 225	325	2,6							
SMW- Autoblok	HFKS 270	270	KJ32	227103	II	30 – 83		333	3,0	1/16" x 90°	21	50	49	—	25	—
			IC04	228012	III	34 – 82		332	3,9	1/16" x 90°	21	50	59	25	25	M8
			IC05	228013		59 – 117		330	3,3							
			IC08	228014		103 – 162		332	2,7							
			IC13	228015		153 – 213		331	2,4							
			IC18	228016		204 – 264		360	2,8							

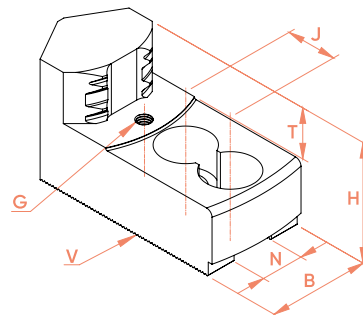
Typ II



Typ III



Typ IV



Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
SMW- Autoblok	HFKS 270	270	JC08	230008	IV		81 - 135	326	3,9	1/16" x 90°	21	50	59	25	25	M8
			JC10	230010			130 - 189	330	2,8							
			JC15	230015			180 - 240	343	2,6							
SMW- Autoblok	HFKS 315	315	KJ32	227103	II	37 - 131		383	3,0	1/16" x 90°	21	50	49	—	25	—
			IC04	228012		37 - 129		382	3,9							
			IC05	228013		68 - 165		381	3,3							
			IC08	228014	III	113 - 210		383	2,7	1/16" x 90°	21	50	59	25	25	M8
			IC13	228015		163 - 261		382	2,4							
			IC18	228016		214 - 313		412	2,8							
			JC08	230008	IV		85 - 184	379	3,9	1/16" x 90°	21	50	59	25	25	M8
			JC10	230010			139 - 237	381	2,8							
			JC15	230015			190 - 289	396	2,6							
SMW- Autoblok	HFKS 400	400	KJ40	227104	II	40 - 111		467	6,0	3/32" x 90°	25,5	60	59	—	35	—
			ID06	228017		61 - 155		466	9,0							
			ID13	228018		144 - 243		466	6,3							
			ID21	228019	III	229 - 330		464	4,8	3/32" x 90°	25,5	60	79	33	35	M8
			ID30	228020		318 - 410		526	6,6							
			JD10	230011			104 - 202	465	8,6							
			JD17	230012	IV		180 - 280	464	6,7	3/32" x 90°	25,5	60	79	33	35	M8
			JD25	230013			259 - 360	463	4,0							
			JD33	230014			338 - 410	525	6,0							
SMW- Autoblok	HFKS 500	500	KJ40	227104	II	57 - 204		557	6,0	3/32" x 90°	25,5	60	59	—	35	—
			ID06	228017		98 - 249		558	9,0							
			ID13	228018		185 - 337		558	6,3							
			ID21	228019	III	271 - 424		556	4,8	3/32" x 90°	25,5	60	79	33	35	M8
			ID30	228020		360 - 510		621	6,6							
			JD10	230011			144 - 295	556	8,6							
			JD17	230012	IV		221 - 374	557	6,7	3/32" x 90°	25,5	60	79	33	35	M8
			JD25	230013			300 - 454	556	4,0							
			JD33	230014			379 - 510	619	6,0							

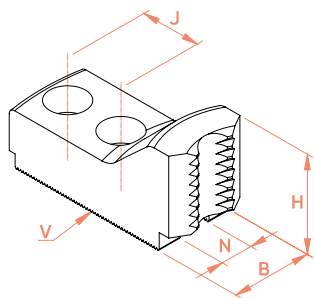
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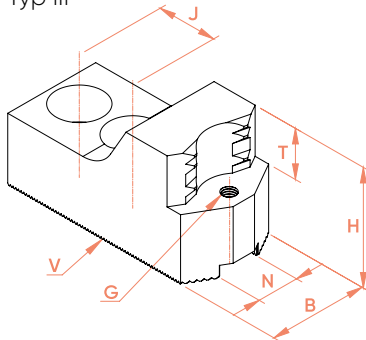
Adjustagrip hard jaws, inch serration

Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
SMW- Autoblok	IL-D 500	510	ID06	228017	III	98 – 268		576	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID13	228018		185 – 356		576	6,3							
			ID21	228019		271 – 443		575	4,8							
			ID30	228020		360 – 510		639	6,6							
			JD10	230011	IV		144 – 314	574	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			221 – 393	575	6,7							
			JD25	230013			300 – 473	575	4,0							
			JD33	230014			379 – 510	638	6,0							
SMW- Autoblok	IL-D 630	630	ID06	228017	III	98 – 377		688	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID13	228018		185 – 465		689	6,3							
			ID21	228019		271 – 553		688	4,8							
			ID30	228020		360 – 640		753	6,6							
			JD10	230011	IV		144 – 423	686	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			221 – 503	688	6,7							
			JD25	230013			300 – 583	688	4,0							
			JD33	230014			379 – 640	751	6,0							
SMW- Autoblok	IL-D 800	800	ID06	228017	III	98 – 550		859	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID13	228018		185 – 639		860	6,3							
			ID21	228019		271 – 726		859	4,8							
			ID30	228020		360 – 810		924	6,6							
			JD10	230011	IV		144 – 597	857	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			221 – 676	859	6,7							
			JD25	230013			300 – 756	859	4,0							
			JD33	230014			379 – 810	923	6,0							
SMW- Autoblok	IN-D 500	510	KJ40	227104	II	57 – 223		576	6,0	3/32" x 90°	25,5	60	59	—	35	—
			ID06	228017	III	99 – 268		576	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID13	228018		185 – 356		576	6,3							
			ID21	228019		271 – 444		576	4,8							
			ID30	228020		360 – 520		639	6,6							
			JD10	230011	IV		144 – 314	574	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			222 – 394	576	6,7							
			JD25	230013			301 – 473	575	4,0							
			JD33	230014			380 – 520	638	6,0							

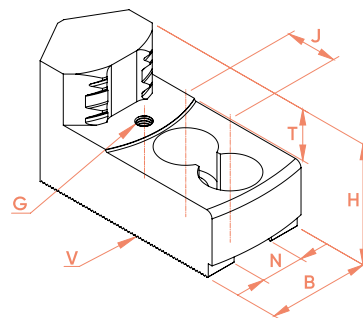
Typ II



Typ III



Typ IV



Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N mm	B mm	H mm	T mm	J mm	G mm
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
SMW- Autoblok	IN-D 630	630	KJ40	227104	II	56 - 331		687	6,0	3/32" x 90°	25,5	60	59	—	35	—
			ID06	228017	III	97 - 376		687	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID13	228018		184 - 464		688	6,3							
			ID21	228019		270 - 552		687	4,8							
			ID30	228020		359 - 640		752	6,6							
			JD10	230011	IV		143 - 422	685	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			220 - 502	687	6,7							
			JD25	230013			299 - 582	687	4,0							
			JD33	230014			378 - 640	750	6,0							
SMW- Autoblok	IN-D 800	800	KJ40	227104	II	56 - 504		857	6,0	3/32" x 90°	25,5	60	59	—	35	—
			ID06	228017	III	97 - 549		858	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID13	228018		184 - 638		859	6,3							
			ID21	228019		270 - 725		858	4,8							
			ID30	228020		359 - 810		923	6,6							
			JD10	230011	IV		143 - 596	856	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			220 - 675	858	6,7							
			JD25	230013			299 - 755	858	4,0							
			JD33	230014			378 - 810	922	6,0							
SMW- Autoblok	NT-D 170	172	IW03	228051	III	27 - 53		208	1,3	1/16" x 90°	14	30	47	20	20	M6
			IW06	228052		46 - 75		205	1,2							
			IW09	228053		90 - 121		204	1,1							
			IW12	228054		103 - 133		203	1,4							
			IW15	228055		134 - 164		223	1,1							
			JW06	230051	IV		49 - 62	207	1,5	1/16" x 90°	14	30	47	20	20	M6
			JW09	230052			66 - 96	207	1,4							
			JW11	230053			95 - 126	206	1,4							
			JW14	230054			125 - 155	232	1,6							

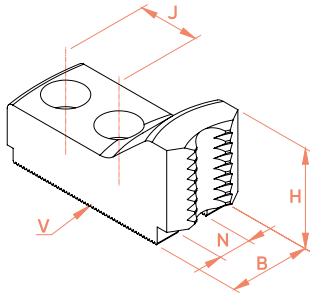
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Greiferbacken hart, Spitzverzahnung Zoll

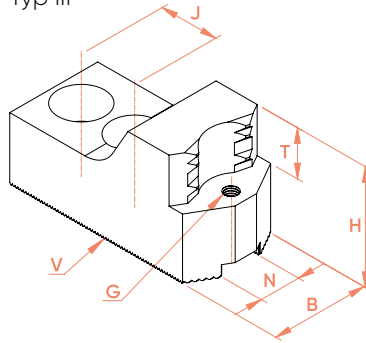
Adjustagrip hard jaws, inch serration

Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
SMW- Autoblok	NT-D 215	216	KJ20	227101	II	55 – 95		257	2,0	1/16" x 90°	17	40	49	—	22	—
			IB03	228006	III	34 – 63		259	2,7	1/16" x 90°	17	40	49	20	22	M6
			IB04	228007		37 – 74		258	2,3							
			IB05	228008		64 – 101		260	2,1							
			IB08	228009		92 – 130		258	2,1							
			IB11	228010		121 – 160		258	2,0							
			IB14	228011		150 – 189		276	1,9							
			JB06	230005	IV		68 – 106	258	1,8	1/16" x 90°	17	40	49	20	22	M6
			JB09	230006			99 – 138	258	1,8							
			JB12	230007			130 – 170	257	1,7							
SMW- Autoblok	NT-D 260	262	KJ20	227101	II	67 – 124		285	2,0	1/16" x 90°	17	40	49	—	22	—
			IB03	228006	III	37 – 91		285	2,7	1/16" x 90°	17	40	49	20	22	M6
			IB04	228007		47 – 103		285	2,3							
			IB05	228008		74 – 130		287	2,1							
			IB08	228009		103 – 159		285	2,1							
			IB11	228010		132 – 189		285	2,0							
			IB14	228011		161 – 219		305	1,9							
			JB06	230005	IV		79 – 135	285	1,8	1/16" x 90°	17	40	49	20	22	M6
			JB09	230006			111 – 167	285	1,8							
			JB12	230007			142 – 199	285	1,7							

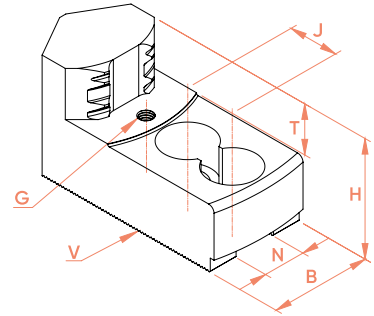
Typ II



Typ III



Typ IV



Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
SMW- Autoblok	NT-D 315	315	KJ32	227103	II	33 - 107		361	3,0	1/16" x 90°	21	50	49	—	25	—
			IC04	228012	III	34 - 106		360	3,9	1/16" x 90°	21	50	59	25	25	M8
			IC08	228014		107 - 186		361	2,7							
			IC13	228015		157 - 237		359	2,4							
			IC18	228016		208 - 289		389	2,8							
			JC08	230008	IV		81 - 160	356	3,9	1/16" x 90°	21	50	59	25	25	M8
			JC10	230010			134 - 214	359	2,8							
			JC15	230015			184 - 265	373	2,6							
SMW- Autoblok	NT-D 400	390	KJ40	227104	II	40 - 81		436	6,0	3/32" x 90°	25,5	60	59	—	35	—
			ID06	228017	III	54 - 125		434	9,0	3/32" x 90°	25,5	60	79	33	35	M8
			ID13	228018		127 - 212		433	6,3							
			ID21	228019		212 - 298		430	4,8							
			ID30	228020		300 - 388		492	6,6							
			JD10	230011	IV		96 - 171	432	8,6	3/32" x 90°	25,5	60	79	33	35	M8
			JD17	230012			163 - 249	431	6,7							
			JD25	230013			241 - 328	429	4,0							
			JD33	230014			320 - 400	490	6,0							

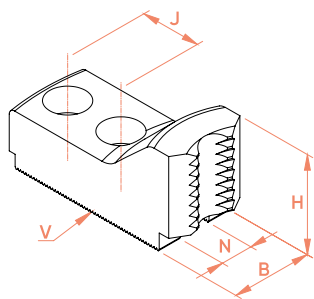
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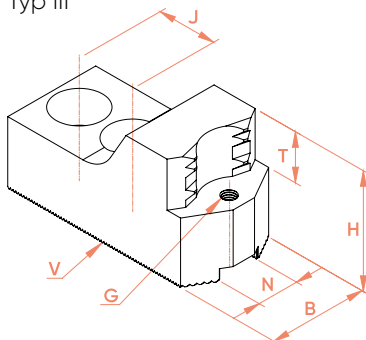
Adjustagrip hard jaws, metric serration

Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Auto Strong	N-204	110	LW03	234030	III	30 - 43		141	1,0	1,5mm x 60°	10	25	34	15	14	M6
			LW04	234031		39 - 52		139	1,0							
			LW05	234032		49 - 62		143	1,0							
			LW06	234033		57 - 70		141	1,0							
			LW07	234036		63 - 76		141	1,1							
			LW08	234037		70 - 84		141	1,1							
Auto Strong	N-205	135	LW03	234030	III	38 - 60		160	1,0	1,5mm x 60°	10	25	34	15	14	M6
			LW04	234031		47 - 70		160	1,0							
			LW05	234032		57 - 79		162	1,0							
			LW06	234033		65 - 88		162	1,0							
			LW07	234036		71 - 94		162	1,1							
			LW08	234037		79 - 102		161	1,1							
Auto Strong	N-206	169	KK16	227110	II	14 - 31		206	1,5	1,5mm x 60°	12	35	39	—	20	—
			LA03	234001	III	27 - 44		209	1,7							
			LA04	234002		40 - 64		212	1,4							
			LA06	234003		54 - 78		211	1,4							
			LA07	234004		68 - 93		210	1,4							
			LA09	234005		84 - 109		211	1,2							
			MA05	235001	IV		46 - 66	212	1,5	1,5mm x 60°	12	40	49	20	20	M6
			MA06	235002			53 - 77	211	1,4							
			MA07	235003			71 - 97	210	1,3							
			MA09	235004			94 - 119	210	1,1							
Auto Strong	N-208	210	KK20	227111	II	18 - 44		248	2,2	1,5mm x 60°	14	40	49	—	25	—
			LB03	234006	III	39 - 67		246	1,9							
			LB06	234007		67 - 95		251	1,8							
			LB09	234008		95 - 124		249	1,7							
			LB12	234009		123 - 151		248	1,7							
			LB15	234028		147 - 186		279	1,8							
			MB06	235005	IV		57 - 85	250	1,9	1,5mm x 60°	14	40	49	20	25	M6
			MB08	235006			85 - 118	253	1,8							
			MB11	235007			118 - 150	251	1,7							
			MB14	235008			148 - 178	257	1,7							

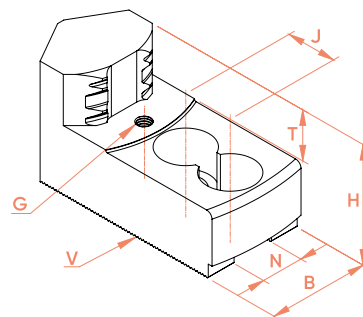
Typ II



Typ III



Typ IV



Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Auto Strong	N-210	254	KK25	227112	II	29 - 63		292	2,3	1,5mm x 60°	16	40	49	—	30	—
			LC04	234010	III	48 - 86		296	2,9	1,5mm x 60°	16	40	59	25	30	M8
			LC08	234011		86 - 129		297	2,7							
			LC13	234012		129 - 172		304	2,6							
			LC17	234013		172 - 215		303	2,6							
			LC20	234029		204 - 248		333	2,8							
			MC06	235009	IV		65 - 104	293	2,7	1,5mm x 60°	16	40	59	25	30	M6
			MC10	235010			104 - 145	294	2,5							
			MC14	235011			145 - 185	291	2,3							
			MC18	235012			185 - 222	288	2,2							
Auto Strong	N-212	304	KK40	227114	II	33 - 86		354	3,7	1,5mm x 60°	21	50	49	—	30	—
			LE05	234018	III	55 - 110		355	4,4	1,5mm x 60°	21	50	59	25	30	M8
			LE10	234019		109 - 172		361	3,4							
			LE16	234020		172 - 237		359	3,0							
			LE23	234021		239 - 300		405	3,4							
			ME08	235017	IV		86 - 149	359	3,9	1,5mm x 60°	21	50	59	25	30	M8
			ME14	235018			149 - 207	354	3,0							
			ME20	235019			207 - 270	357	3,0							
			ME26	235020			269 - 310	406	3,2							
Auto Strong	N-215	381	LF05	234022	III	52 - 105		430	9,3	1,5mm x 60°	22	60	79	33	43	M8
			LF10	234023		102 - 159		431	8,3							
			LF16	234034		163 - 221		427	6,0							
			LF22	234035		223 - 282		425	5,6							
			LF28	234026		282 - 342		447	6,0							
			LF34	234027		342 - 390		505	7,8							
			MF10	235021	IV		102 - 159	430	8,8	1,5mm x 60°	22	60	79	33	43	M8
			MF16	235022			163 - 221	426	7,1							
			MF22	235023			225 - 284	425	4,1							
			MF28	235024			282 - 342	424	4,1							
			MF34	235025			342 - 390	476	7,1							

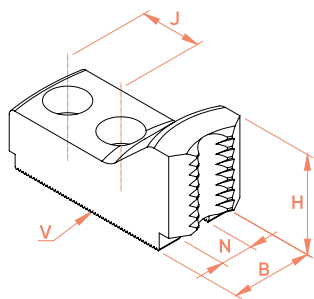
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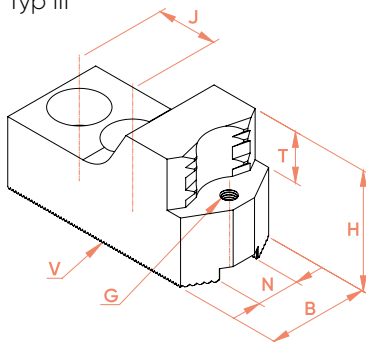
Adjustagrip hard jaws, metric serration

Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Auto Strong	NB-206	170	KK16	227110	II	14 - 26		203	1,5	1,5mm x 60°	12	35	39	—	20	—
			LA03	234001	III	27 - 44		211	1,7	1,5mm x 60°	12	40	49	20	20	M6
			LA04	234002		44 - 60		210	1,4							
			LA06	234003		58 - 74		209	1,4							
			LA07	234004		72 - 89		208	1,4							
			LA09	234005		89 - 105		209	1,2							
			MA05	235001	IV		46 - 62	210	1,5	1,5mm x 60°	12	40	49	20	20	M6
			MA06	235002			57 - 76	212	1,4							
			MA07	235003			76 - 95	210	1,3							
			MA09	235004			98 - 115	209	1,1							
Auto Strong	NB-208	210	KK20	227111	II	25 - 46		250	2,2	1,5mm x 60°	14	40	49	—	25	—
			LB03	234006	III	47 - 75		253	1,9	1,5mm x 60°	14	40	49	20	25	M6
			LB06	234007		75 - 103		258	1,8							
			LB09	234008		103 - 131		256	1,7							
			LB12	234009		130 - 156		253	1,7							
			LB15	234028		156 - 180		273	1,8							
			MB06	235005	IV		64 - 93	258	1,9	1,5mm x 60°	14	40	49	20	25	M6
			MB08	235006			93 - 123	258	1,8							
			MB11	235007			126 - 155	255	1,7							
			MB14	235008			155 - 184	263	1,7							
Auto Strong	NB-210	254	KK25	227112	II	32 - 67		295	2,3	1,5mm x 60°	16	40	49	—	30	—
			LC04	234010	III	52 - 90		300	2,9	1,5mm x 60°	16	40	59	25	30	M8
			LC06	234024		77 - 104		293	2,9							
			LC08	234011		90 - 133		301	2,7							
			LC10	230025		118 - 145		290	2,7							
			LC13	234012		133 - 176		308	2,6							
			LC17	234013		176 - 216		304	2,6							
			LC20	234029		218 - 246		331	2,8							
			MC06	235009	IV		69 - 108	297	2,7	1,5mm x 60°	16	40	59	25	30	M6
			MC10	235010			108 - 148	297	2,5							
			MC14	235011			149 - 190	296	2,3							
			MC18	235012			188 - 230	296	2,2							

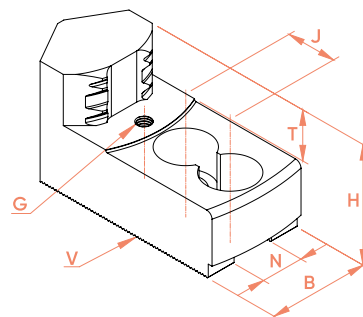
Typ II



Typ III



Typ IV



Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Auto Strong	NB-212	315	KK40	227114	II	59 - 103		370	3,7	1,5mm x 60°	21	50	49	—	30	—
			LE05	234018	III	83 - 130		374	4,4	1,5mm x 60°	21	50	59	25	30	M8
			LE10	234019		137 - 187		375	3,4							
			LE16	234020		202 - 252		373	3,0							
			LE23	234021		269 - 320		424	3,4							
			ME08	235017	IV		115 - 164	373	3,9	1,5mm x 60°	21	50	59	25	30	M8
			ME14	235018			178 - 229	374	3,0							
			ME20	235019			237 - 288	374	3,0							
			ME26	235020			299 - 320	425	3,2							
Auto Strong	V-206	165	LA03	234001	III	31 - 45		210	1,7	1,5mm x 60°	12	40	49	20	20	M6
			LA04	234002		50 - 65		213	1,4							
			LA06	234003		64 - 79		212	1,4							
			LA07	234004		79 - 94		211	1,4							
			LA09	234005		94 - 110		212	1,2							
			MA05	235001	IV		52 - 63	209	1,5	1,5mm x 60°	12	40	49	20	20	M6
			MA06	235002			63 - 78	212	1,4							
			MA07	235003			82 - 98	211	1,3							
			MA09	235004			104 - 116	208	1,1							
Auto Strong	V-208	210	LB03	234006	III	48 - 72		251	1,9	1,5mm x 60°	14	40	49	20	25	M6
			LB06	234007		75 - 100		256	1,8							
			LB09	234008		104 - 130		255	1,7							
			LB12	234009		131 - 155		252	1,7							
			LB15	234028		157 - 181		274	1,8							
			MB06	235005	IV		65 - 90	255	1,9	1,5mm x 60°	14	40	49	20	25	M6
			MB08	235006			94 - 120	255	1,8							
			MB11	235007			127 - 153	254	1,7							
			MB14	235008			156 - 180	259	1,7							
Auto Strong	V-210	254	LC04	234010	III	44 - 80		290	2,9	1,5mm x 60°	16	40	59	25	30	M8
			LC08	234011		80 - 123		291	2,7							
			LC13	234012		123 - 166		298	2,6							
			LC17	234013		166 - 205		293	2,6							

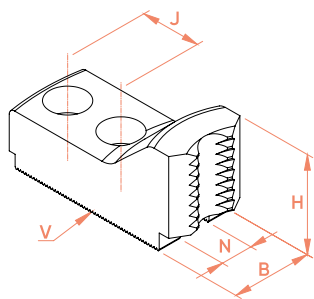
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Greiferbacken hart, Spitzverzahnung metrisch

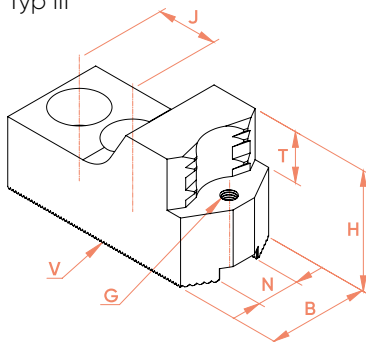
Adjustagrip hard jaws, metric serration

Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Auto Strong	V-210	254	MC06	235009	IV		60 - 99	288	2,7	1,5mm x 60°	16	40	59	25	30	M6
			MC10	235010			99 - 139	288	2,5							
			MC14	235011			139 - 180	287	2,3							
			MC18	235012			179 - 220	286	2,2							
Auto Strong	V-212	304	LD05	234014	III	54 - 120		361	4,5	1,5mm x 60°	18	50	59	25	30	M8
			LD11	234015		111 - 179		360	3,5							
			LD17	234016		175 - 244		358	3,1							
			LD23	234017		237 - 308		408	3,5							
			MD08	235013	IV		82 - 151	359	3,9	1,5mm x 60°	18	50	59	25	30	M8
			MD14	235014			143 - 213	359	3,0							
			MD20	235015			204 - 274	358	3,0							
			MD26	235016			261 - 310	409	3,2							
Auto Strong	V-215	381	LF05	234022	III	55 - 103		429	9,3	1,5mm x 60°	22	60	79	33	43	M8
			LF10	234023		106 - 157		429	8,3							
			LF16	234034		167 - 219		425	6,0							
			LF22	234035		228 - 281		424	5,6							
			LF28	234026		287 - 340		445	6,0							
			LF34	234027		346 - 390		504	7,8							
			MF10	235021	IV		106 - 157	428	8,8	1,5mm x 60°	22	60	79	33	43	M8
			MF16	235022			167 - 220	425	7,1							
			MF22	235023			230 - 283	424	4,1							
			MF28	235024			287 - 340	422	4,1							
			MF34	235025			346 - 390	475	7,1							
Auto Strong	V-218	450	LF05	234022	III	110 - 162		488	9,3	1,5mm x 60°	22	60	79	33	43	M8
			LF10	234023		164 - 217		489	8,3							
			LF16	234034		227 - 280		487	6,0							
			LF22	234035		288 - 341		486	5,6							
			LF28	234026		347 - 401		508	6,0							
			LF34	234027		407 - 460		566	7,8							
			MF10	235021	IV		164 - 217	488	8,8	1,5mm x 60°	22	60	79	33	43	M8
			MF16	235022			227 - 280	486	7,1							
			MF22	235023			290 - 343	485	4,1							
			MF28	235024			347 - 401	484	4,1							
			MF34	235025			407 - 460	537	7,1							

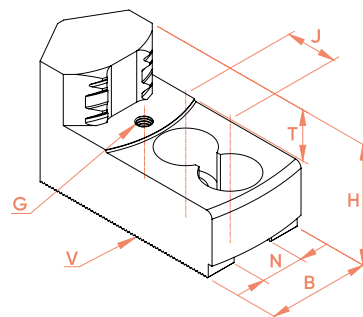
Typ II



Typ III



Typ IV



Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Auto Strong	V-221	530	X6339	9906339	III	86 - 217		585	11,4	3,0mm x 60°	25	60	79	33	60	M8
			X6395	9906395		211 - 348		582	7,8							
			X2797	9902797		350 - 487		604	7,5							
			X2798	9902798	IV		131 - 265	565	9,9							
			X2799	9902799			261 - 398	565	6,0							
Auto Strong	V-224	610	X5595	9905595	III	129 - 264		651	11,4	3,0mm x 60°	25	60	79	33	60	M8
			X5596	9905596		229 - 365		649	7,5							
			X5597	9905597		403 - 540		674	7,2							
			X5598	9905598	IV	481 - 618		745	9,3	3,0mm x 60°	25	60	79	33	60	M8
			X2798	9902798			206 - 342	645	9,9							
			X2799	9902799			338 - 475	645	6,0							
Forkardt	QLC 160 QLK 160	162	KK16	227110	II	13 - 29		204	1,5	1,5mm x 60°	12	35	39	—	20	—
			LA03	234001	III	26 - 44		209	1,7	1,5mm x 60°	12	40	49	20	20	M6
			LA04	234002		44 - 63		211	1,4							
			LA06	234003		57 - 77		210	1,4							
			LA07	234004	IV	72 - 92		209	1,4	1,5mm x 60°	12	40	49	20	20	M6
			LA09	234005		88 - 108		210	1,2							
			MA05	235001		46 - 65		211	1,5							
			MA06	235002		57 - 76		210	1,4							
			MA07	235003		75 - 96		209	1,3							
			MA09	235004		98 - 118		210	1,1							
Forkardt	QLC 175 QLK 175	175	KK16	227110	II	16 - 41		217	1,5	1,5mm x 60°	12	35	39	—	20	—
			LA03	234001	III	30 - 56		222	1,7	1,5mm x 60°	12	40	49	20	20	M6
			LA04	234002		49 - 75		224	1,4							
			LA06	234003		63 - 89		222	1,4							
			LA07	234004	IV	77 - 104		222	1,4	1,5mm x 60°	12	40	49	20	20	M6
			LA09	234005		93 - 121		223	1,2							
			MA05	235001		51 - 77		224	1,5							
			MA06	235002		62 - 89		223	1,4							
			MA07	235003		81 - 108		222	1,3							
			MA09	235004		103 - 130		222	1,1							

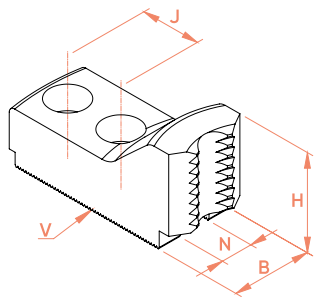
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Greiferbacken hart, Spitzverzahnung metrisch

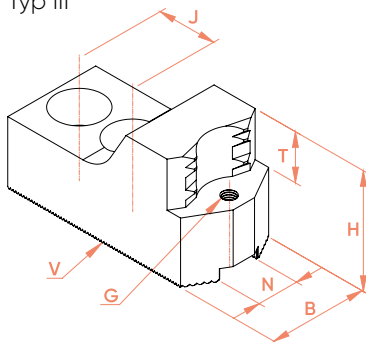
Adjustagrip hard jaws, metric serration

Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Forkardt	QLC 200 QLK 200	210	KK20	227111	II	24 - 53		256	2,2	1,5mm x 60°	14	40	49	—	25	—
			LB03	234006	III	47 - 77		255	1,9	1,5mm x 60°	14	40	49	20	25	M6
			LB06	234007		75 - 104		259	1,8							
			LB09	234008		103 - 134		259	1,7							
			LB12	234009		131 - 161		257	1,7							
			LB15	234028		164 - 195		287	1,8							
			MB06	235005	IV		64 - 94	259	1,9	1,5mm x 60°	14	40	49	20	25	M6
			MB08	235006			94 - 124	259	1,8							
			MB11	235007			127 - 157	257	1,7							
			MB14	235008			156 - 187	265	1,7							
Forkardt	QLC 250 QLK 250	257	KK25	227112	II	36 - 74		302	2,3	1,5mm x 60°	16	40	49	—	30	—
			LC04	234010	III	56 - 93		302	2,9	1,5mm x 60°	16	40	59	25	30	M8
			LC08	234011		95 - 134		302	2,7							
			LC13	234012		138 - 178		310	2,6							
			LC17	234013		182 - 221		308	2,6							
			LC20	234029		217 - 257		341	2,8							
			MC06	235009	IV		74 - 112	300	2,7	1,5mm x 60°	16	40	59	25	30	M6
			MC10	235010			113 - 152	300	2,5							
			MC14	235011			154 - 194	300	2,3							
			MC18	235012			194 - 233	299	2,2							
Forkardt	QLC 315 QLK 315	320	KK40	227114	II	34 - 116		382	3,7	1,5mm x 60°	21	50	49	—	30	—
			LE05	234018	III	56 - 139		382	4,4	1,5mm x 60°	21	50	59	25	30	M8
			LE10	234019		111 - 196		384	3,4							
			LE16	234020		174 - 261		382	3,0							
			LE23	234021		239 - 327		431	3,4							
			ME08	235017	IV		87 - 173	382	3,9	1,5mm x 60°	21	50	59	25	30	M8
			ME14	235018			151 - 237	382	3,0							
			ME20	235019			210 - 297	383	3,0							
			ME26	235020			271 - 330	433	3,2							

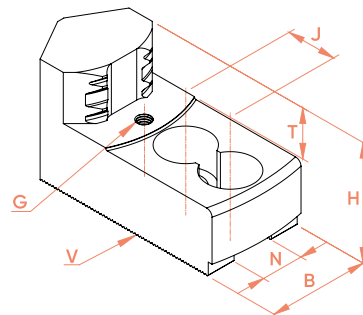
Typ II



Typ III



Typ IV



Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Forkardt	QLC 400 QLK 400	400	KK40	227114	II	79 - 184		442	3,7	1,5mm x 60°	21	50	49	—	30	—
			LE05	234018	III	103 - 208		442	4,4	1,5mm x 60°	21	50	59	25	30	M8
			LE10	234019		159 - 264		443	3,4							
			LE16	234020		224 - 330		442	3,0							
			LE23	234021		289 - 396		492	3,4							
			ME08	235017	IV		136 - 242	442	3,9	1,5mm x 60°	21	50	59	25	30	M8
			ME14	235018			200 - 306	443	3,0							
			ME20	235019			260 - 366	443	3,0							
			ME26	235020			321 - 410	495	3,2							
HOWA	HO27M6	165	KK16	227110	II	13 - 29		204	1,5	1,5mm x 60°	12	35	39	—	20	—
			LA03	234001	III	26 - 44		209	1,7	1,5mm x 60°	12	40	49	20	20	M6
			LA04	234002		32 - 63		211	1,4							
			LA06	234003		50 - 77		210	1,4							
			LA07	234004		64 - 92		209	1,4							
			LA09	234005		74 - 108		210	1,2							
			MA06	235002	IV		47 - 76	210	1,4	1,5mm x 60°	12	40	49	20	20	M6
			MA07	235003			67 - 96	209	1,3							
			MA09	235004			83 - 118	210	1,1							
HOWA	HO27M8	210	KK20	227111	II	16 - 48		252	2,2	1,5mm x 60°	14	40	49	—	25	—
			LB03	234006	III	26 - 71		250	1,9	1,5mm x 60°	14	40	49	20	25	M6
			LB06	234007		55 - 99		255	1,8							
			LB09	234008		82 - 128		253	1,7							
			LB12	234009		108 - 155		252	1,7							
			LB15	234028		142 - 189		282	1,8							
			MB06	235005	IV		50 - 88	253	1,9	1,5mm x 60°	14	40	49	20	25	M6
			MB08	235006			72 - 118	253	1,8							
			MB11	235007			105 - 151	252	1,7							
			MB14	235008			134 - 181	260	1,7							

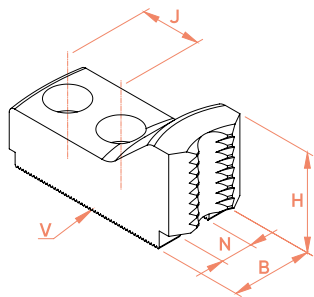
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Greiferbacken hart, Spitzverzahnung metrisch

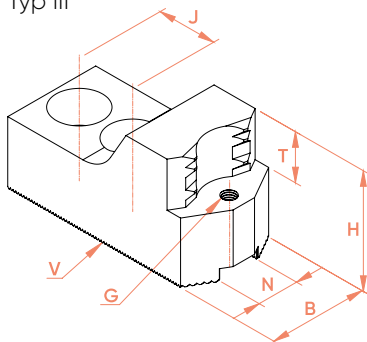
Adjustagrip hard jaws, metric serration

Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
HOWA	HO27M10	254	KK25	227112	II	23 - 70		298	2,3	1,5mm x 60°	16	40	49	—	30	—
			LC04	234010	III	41 - 90		300	2,9	1,5mm x 60°	16	40	59	25	30	M8
			LC08	234011		78 - 130		298	2,7							
			LC13	234012		121 - 174		306	2,6							
			LC17	234013		164 - 218		305	2,6							
			MC06	235009	IV		57 - 109	298	2,7	1,5mm x 60°	16	40	59	25	30	M6
			MC10	235010			96 - 149	298	2,5							
			MC14	235011			137 - 190	296	2,3							
HOWA	HO27M12	304	MC18	235012			176 - 230	296	2,2							
			KK32	227113	II	27 - 81		350	3,7	1,5mm x 60°	18	50	49	—	30	—
			LD05	234014	III	44 - 110		352	4,5	1,5mm x 60°	18	50	59	25	30	M8
			LD11	234015		97 - 169		350	3,5							
			LD17	234016		160 - 234		348	3,1							
			LD23	234017		223 - 298		398	3,5							
			MD08	235013	IV		74 - 141	350	3,9	1,5mm x 60°	18	50	59	25	30	M8
			MD14	235014			129 - 203	350	3,0							
HOWA	HO37M6	168	MD20	235015			189 - 264	348	3,0							
			MD26	235016			247 - 320	399	3,2							
			KK16	227110	II	13 - 29		204	1,5	1,5mm x 60°	12	35	39	—	20	—
			LA03	234001	III	26 - 44		209	1,7	1,5mm x 60°	12	40	49	20	20	M6
			LA04	234002		41 - 63		211	1,4							
			LA06	234003		55 - 77		210	1,4							
			LA07	234004		69 - 92		209	1,4							
			LA09	234005		85 - 108		210	1,2							
HOWA	HO37M8	210	MA05	235001	IV		45 - 65	211	1,5	1,5mm x 60°	12	40	49	20	20	M6
			MA06	235002			54 - 76	210	1,4							
			MA07	235003			72 - 96	209	1,3							
			MA09	235004			95 - 118	210	1,1							
			KK20	227111	II	16 - 48		252	2,2	1,5mm x 60°	14	40	49	—	25	—
			LB03	234006	III	28 - 71		250	1,9	1,5mm x 60°	14	40	49	20	25	M6
			LB06	234007		57 - 99		255	1,8							
			LB09	234008		85 - 128		253	1,7							
HOWA	HO37M8	210	LB12	234009		111 - 155		252	1,7							
			LB15	234028		145 - 189		282	1,8							

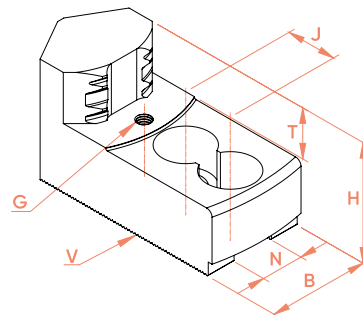
Typ II



Typ III



Typ IV



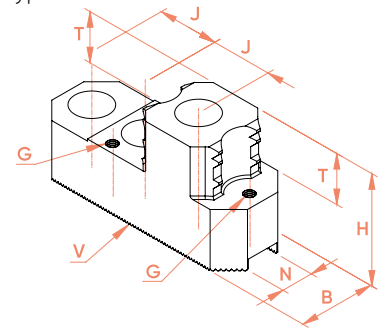
Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
HOWA	HO37M8	210	MB06	235005	IV		50 - 88	253	1,9	1,5mm x 60°	14	40	49	20	25	M6
			MB08	235006			75 - 118	253	1,8							
			MB11	235007			108 - 151	252	1,7							
			MB14	235008			137 - 181	260	1,7							
HOWA	HO37M10	254	KK25	227112	II	28 - 66		295	2,3	1,5mm x 60°	16	40	49	—	30	—
			LC04	234010	III	48 - 86		296	2,9							
			LC08	234011		86 - 126		294	2,7							
			LC13	234012		129 - 170		302	2,6							
			LC17	234013	IV	172 - 214		302	2,6	1,5mm x 60°	16	40	59	25	30	M6
			MC06	235009			65 - 105	294	2,7							
			MC10	235010			104 - 145	294	2,5							
			MC14	235011			145 - 186	292	2,3							
			MC18	235012			184 - 226	292	2,2							
HOWA	HO37M12	304	KK32	227113	II	29 - 81		350	3,7	1,5mm x 60°	18	50	49	—	30	—
			LD05	234014	III	54 - 109		351	4,5							
			LD11	234015		111 - 169		350	3,5							
			LD17	234016		175 - 234		348	3,1							
			LD23	234017	IV	238 - 297		397	3,5	1,5mm x 60°	18	50	59	25	30	M8
			MD08	235013			83 - 141	350	3,9							
			MD14	235014			144 - 203	350	3,0							
			MD20	235015			204 - 264	348	3,0							
			MD26	235016			262 - 320	399	3,2							
HOWA	HO37M12	304	KK40	227114	II	29 - 81		350	3,7	1,5mm x 60°	21	50	49	—	30	—
			LE05	234018	III	50 - 105		350	4,4							
			LE10	234019		104 - 161		351	3,4							
			LE16	234020		167 - 226		349	3,0							
			LE23	234021	IV	232 - 292		397	3,4	1,5mm x 60°	21	50	59	25	30	M8
			ME08	235017			80 - 138	349	3,9							
			ME14	235018			144 - 203	350	3,0							
			ME20	235019			203 - 262	349	3,0							
			ME26	235020			264 - 320	399	3,2							

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Greiferbacken hart, Spitzverzahnung metrisch

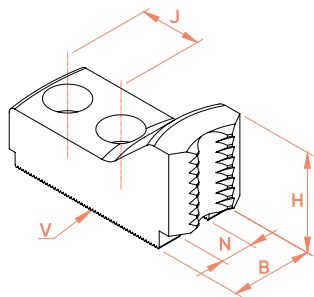
Adjustagrip hard jaws, metric serration

Typ I

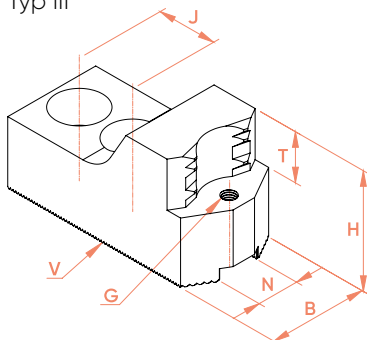


Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max./mm	Innen Ø internal Ø min-max./mm									
HWR	VD016	165	VG10	852110	I	30 - 165	85 - 165	243,0	1,2	1,5mm x 60°	10	32	35	15	18	M5
HWR	VD021	210	VG12	852112	I	42 - 210	115 - 210	306,6	1,9	1,5mm x 60°	12	35	48	25	20	M5
HWR	VD026	255	VG16	852116	I	52 - 255	137 - 255	372,4	2,3	1,5mm x 60°	16	38	55	25	30	M6
HWR	VD031	315	VG16	852116	I	52 - 315	137 - 315	432,4	2,3	1,5mm x 60°	16	38	55	25	30	M6
HWR	VD040	400	VG21	852121	I	68 - 400	158 - 400	532,8	4,8	1,5mm x 60°	21	60	60	30	30	M8
HWR	VD050	500	VG25	852125	I	74 - 500	224 - 500	693,0	14,4	3,0mm x 60°	25	58	90	50	60	M8
HWR	VD063	630	VG25	852125	I	74 - 630	224 - 630	823,0	14,4	3,0mm x 60°	25	58	90	50	60	M8
HWR	VD080	800	VG25	852125	I	74 - 800	224 - 800	993,0	14,4	3,0mm x 60°	25	58	90	50	60	M8
HWR	VD100	990	VG25	852125	I	74 - 990	224 - 990	1183,0	14,4	3,0mm x 60°	25	58	90	50	60	M8
HWR	VD120	1150	VG25	852125	I	74 - 1150	224 - 1150	1343,0	14,4	3,0mm x 60°	25	58	90	50	60	M8
HWR	VK021	212	VG12	852112	I	42 - 212	115 - 212	308,6	1,9	1,5mm x 60°	12	35	48	25	20	M5
HWR	VK026	255	VG16	852116	I	52 - 255	137 - 255	372,4	2,3	1,5mm x 60°	16	38	55	25	30	M6
HWR	VK031	315	VG16	852116	I	52 - 315	137 - 315	432,4	2,3	1,5mm x 60°	16	38	55	25	30	M6
HWR	VK040	400	VG21	852121	I	68 - 400	158 - 400	532,8	4,8	1,5mm x 60°	21	60	60	30	30	M8
HWR	VK050	500	VG25	852125	I	74 - 500	224 - 500	693,0	14,4	3,0mm x 60°	25	58	90	50	60	M8
HWR	VK063	630	VG25	852125	I	74 - 630	224 - 630	823,0	14,4	3,0mm x 60°	25	58	90	50	60	M8
HWR	VK080	800	VG25	852125	I	74 - 800	224 - 800	993,0	14,4	3,0mm x 60°	25	58	90	50	60	M8
HWR	VK-S 026	264	VG16	852116	I	52 - 264	137 - 264	375,7	2,3	1,5mm x 60°	16	38	55	25	30	M6
HWR	VK-S 040	400	VG21	852121	I	73 - 400	158 - 400	532,8	4,8	1,5mm x 60°	21	60	60	30	30	M8
HWR	VK-S 050	500	VG25	852125	I	86 - 500	224 - 500	693,0	14,4	3,0mm x 60°	25	58	90	50	60	M8
HWR	VK-S 063	630	VG25	852125	I	86 - 630	224 - 630	823,0	14,4	3,0mm x 60°	25	58	90	50	60	M8
HWR	VK-S 080	800	VG25	852125	I	99 - 800	224 - 800	993,0	14,4	3,0mm x 60°	25	58	90	50	60	M8
HWR	VK-S 100	990	VG25	852125	I	99 - 990	224 - 990	1183,0	14,4	3,0mm x 60°	25	58	90	50	60	M8
HWR	VL042	420	VG16	852116	I	68 - 420	158 - 420	537,4	2,3	1,5mm x 60°	16	38	55	25	30	M6
HWR	VL060	600	VR16	850016	I	75 - 600	160 - 600	679,0	4,4	Modul 2	16	38	55	25	30	M6
HWR	VL070	700	VR16	850016	I	75 - 700	160 - 700	779,0	4,4	Modul 2	16	38	55	25	30	M6

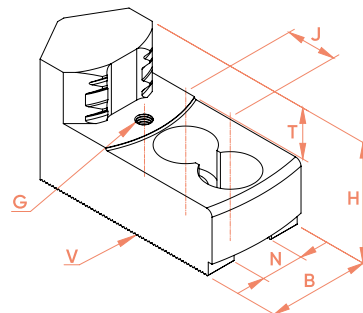
Typ II



Typ III



Typ IV

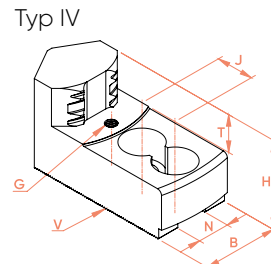
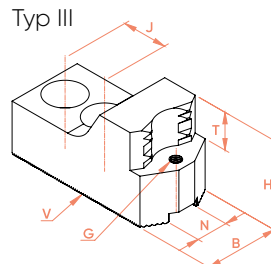
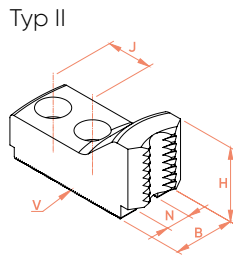
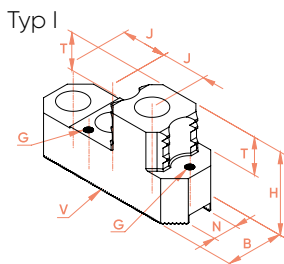


Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max/mm	m/ Satz m/ set kg	V	N mm	B mm	H mm	T mm	J mm	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
HWR	VL100	990	VR21	850021	I	84 – 990	220 – 990	1187,6	14,1	Modul 2	21	56	90	50	30	M8
HWR	VL120	1150	VR21	850021	I	84 – 1150	220 – 1150	1347,6	14,1	Modul 2	21	56	90	50	30	M8
HWR	VL140	1400	VR21	850021	I	84 – 1400	220 – 1400	1597,6	14,1	Modul 2	21	56	90	50	30	M8
HWR	VL160	1600	VR21	850021	I	84 – 1600	220 – 1600	1797,6	14,1	Modul 2	21	56	90	50	30	M8
HWR	VL180	1800	VR21	850021	I	84 – 1800	220 – 1800	1997,6	14,1	Modul 2	21	56	90	50	30	M8
HWR	VL200	2000	VR21	850021	I	84 – 2000	220 – 2000	2197,6	14,1	Modul 2	21	56	90	50	30	M8
HWR	VT016	168	VG10	852110	I	30 – 168	85 – 168	246,0	1,2	1,5mm x 60°	10	32	35	15	18	M5
HWR	VT021	210	VG12	852112	I	42 – 205	110 – 210	306,6	1,9	1,5mm x 60°	12	35	48	25	20	M5
			KK16-4	227115	I	37 – 80		235,0	2,0				39	—	—	
HWR	VT026	264	KK25-4	227116	II	47 – 88		289,0	3,1	1,5mm x 60°	16	40	49	—	30	—
			LC02-4	234054	III	26 – 68		288,0	4,1	1,5mm x 60°	16	40	59	24	30	M6
			LC04-4	234045	III	67 – 109		291,2	3,9					25		M8
			LC08-4	234043	III	109 – 151		290,0	3,6							
			LC13-4	234046	III	150 – 192		299,0	3,5							
			LC17-4	234047	III	192 – 236		299,4	3,5							
			LC20-4	234048	III	227 – 264		326,0	3,4							
			MC06-4	235032	IV		85 – 128	291,0	3,6	1,5mm x 60°	16	40	59	25	30	M6
			MC10-4	235033	IV		126 – 168	289,0	3,4							
			MC14-4	235034	IV		166 – 209	290,4	3,1							
			MC18-4	235035	IV		206 – 249	290,6	3,0							
HWR	VT031	315	VG16	852116	I	65 – 315	149 – 315	432,4	2,3	1,5mm x 60°	16	38	55	25	30	M6
			KK25-4	227116	I	66 – 139	66 – 139	340,0	3,1			40	49	—	—	
HWR	VT040	400	VG21	852121	I	88 – 400	179 – 400	532,8	4,8	1,5mm x 60°	21	60	60	30	30	M8
			KK33-4	227117	I	77 – 195	77 – 195	422,8	5,0			50	49	—	—	
HWR	VT050	500	VG25	852125	I	74 – 500	224 – 500	693,0	14,4	3,0mm x 60°	25	58	90	50	60	M8
HWR	VT063	630	VG25	852125	I	74 – 630	224 – 630	823,0	14,4	3,0mm x 60°	25	58	90	50	60	M8

UNIJaws®

Greiferbacken hart, Spitzverzahnung metrisch

Adjustagrip hard jaws, metric serration



Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max/mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
HWR	VT-S 016	168	VG10	852110	I	30 - 168	85 - 168	246,0	1,2	1,5mm x 60°	10	32	35	15	18	M5
HWR	VT-S 021	210	VG12	852112	I	42 - 213	110 - 218	314,6	1,9	1,5mm x 60°	12	35	48	25	20	M5
			KK16-4	227115	I	37 - 88		243,0	2,0							
HWR	VT-S 026	264	KK25-4	227116	II	47 - 88		289,0	3,1	1,5mm x 60°	16	40	49	—	30	—
			LC02-4	234054	III	26 - 68		288,0	4,1							
			LC04-4	234045	III	67 - 109		291,2	3,9							
			LC08-4	234043	III	109 - 151		290,0	3,6							
			LC13-4	234046	III	150 - 192		299,0	3,5							
			LC17-4	234047	III	192 - 236		299,4	3,5							
			LC20-4	234048	III	227 - 264		326,0	3,4							
			MC06-4	235032	IV		85 - 128	291,0	3,6							
			MC10-4	235033	IV		126 - 168	289,0	3,4							
			MC14-4	235034	IV		166 - 209	290,4	3,1							
HWR	VT-S 031	315	VG16	852116	I	65 - 315	149 - 315	432,4	2,3	1,5mm x 60°	16	38	55	25	30	M6
			KK25-4	227116	I	66 - 139	66 - 139	340,0	3,1							
HWR	VT-S 040	400	VG21	852121	I	88 - 400	179 - 400	532,8	4,8	1,5mm x 60°	21	60	60	30	30	M8
			KK33-4	227117	I	77 - 195	77 - 195	422,8	5,0							
HWR	VT-S 050	500	VG25	852125	I	74 - 150	224 - 308	693,0	14,4	3,0mm x 60°	25	58	90	50	60	M8
						173 - 276	323 - 428									
						296 - 398	446 - 500									
						415 - 500										
HWR	VT-S 063	630	VG25	852125	I	110 - 630	259 - 630	823,0	14,4	3,0mm x 60°	25	58	90	50	60	M8
HWR	VT-S 080	800	VG25	852125	I	110 - 800	259 - 800	993,0	14,4	3,0mm x 60°	25	58	90	50	60	M8

**WACHSEN, ABER NICHT
UM DES WACHSENS
WILLEN, SONDERN IMMER
MIT AUGENMASS, MUTIG
UND INNOVATIONSFREUDIG.
NIEMALS LEICHTSINNIG,
GIERIG ODER ÜBERTRIEBEN.**

*Grow, but not for the sake of growth, always
with a sense of proportion instead, courage
and a willingness to innovate. Never careless,
greedy or exaggerated.*

[Volker Henke]

1989

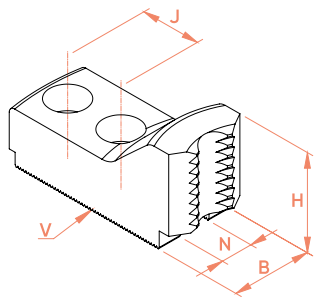
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Greiferbacken hart, Spitzverzahnung metrisch

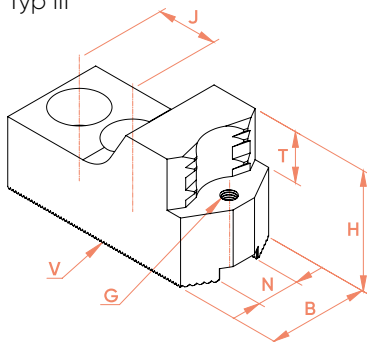
Adjustagrip hard jaws, metric serration

Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Kitagawa	B-06	169	KK16	227110	II	13 - 29		204	1,5	1,5mm x 60°	12	35	39	—	20	—
			LA03	234001	III	26 - 43		208	1,7	1,5mm x 60°	12	40	49	20	20	M6
			LA04	234002		31 - 62		210	1,4							
			LA06	234003		50 - 77		210	1,4							
			LA07	234004		64 - 91		208	1,4							
			LA09	234005		73 - 108		210	1,2							
			MA05	235001	IV		45 - 64	210	1,5	1,5mm x 60°	12	40	49	20	20	M6
			MA06	235002			47 - 76	210	1,4							
			MA07	235003			67 - 95	208	1,3							
			MA09	235004			83 - 117	209	1,1							
Kitagawa	B-07	189	KK16	227110	II	13 - 38		214	1,5	1,5mm x 60°	12	35	39	—	20	—
			LA03	234001	III	26 - 52		218	1,7	1,5mm x 60°	12	40	49	20	20	M6
			LA04	234002		38 - 72		221	1,4							
			LA06	234003		52 - 86		220	1,4							
			LA07	234004		65 - 101		219	1,4							
			LA09	234005		82 - 117		220	1,2							
			MA05	235001	IV		45 - 74	221	1,5	1,5mm x 60°	12	40	49	20	20	M6
			MA06	235002			51 - 85	220	1,4							
			MA07	235003			69 - 105	219	1,3							
			MA09	235004			92 - 127	220	1,1							
Kitagawa	B-08	210	KK20	227111	II	16 - 41		245	2,2	1,5mm x 60°	14	40	49	—	25	—
			LB03	234006	III	25 - 65		244	1,9	1,5mm x 60°	14	40	49	20	25	M6
			LB06	234007		54 - 93		249	1,8							
			LB09	234008		81 - 121		247	1,7							
			LB12	234009		108 - 149		246	1,7							
			LB15	234028		141 - 182		275	1,8							
			MB06	235005	IV		50 - 82	248	1,9	1,5mm x 60°	14	40	49	20	25	M6
			MB08	235006			72 - 112	248	1,8							
			MB11	235007			104 - 145	246	1,7							
			MB14	235008			133 - 174	253	1,7							

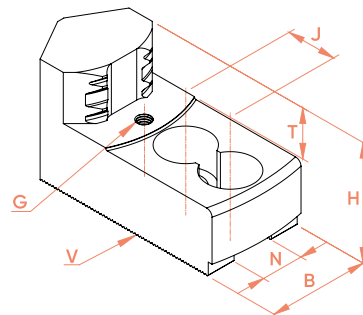
Typ II



Typ III



Typ IV



Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Kitagawa	B-10	254	KK25	227112	II	23 - 62		291	2,3	1,5mm x 60°	16	40	49	—	30	—
			LC04	234010	III	41 - 81		291	2,9	1,5mm x 60°	16	40	59	25	30	M8
			LC08	234011		78 - 121		290	2,7							
			LC13	234012		121 - 165		297	2,6							
			LC17	234013		164 - 209		297	2,6							
			LC20	234029		200 - 245		330	2,8							
			MC06	235009	IV		57 - 100	289	2,7	1,5mm x 60°	16	40	59	25	30	M6
			MC10	235010			96 - 140	289	2,5							
			MC14	235011			137 - 181	288	2,3							
			MC18	235012			176 - 221	287	2,2							
Kitagawa	B-12	304	KK32	227113	II	27 - 86		354	3,7	1,5mm x 60°	18	50	49	—	30	—
			LD05	234014	III	46 - 114		355	4,5	1,5mm x 60°	18	50	59	25	30	M8
			LD11	234015		102 - 174		355	3,5							
			LD17	234016		165 - 239		353	3,1							
			LD23	234017		228 - 302		402	3,5							
			MD08	235013	IV		74 - 145	354	3,9	1,5mm x 60°	18	50	59	25	30	M8
			MD14	235014			134 - 207	354	3,0							
			MD20	235015			195 - 296	379	3,0							
Kitagawa	B-15	381	LF05	234022	III	50 - 108		433	9,3	1,5mm x 60°	22	60	79	33	43	M8
			LF10	234023		99 - 162		433	8,3							
			LF16	234034		160 - 224		430	6,0							
			LF22	234035		220 - 285		428	5,6							
			LF28	234026		279 - 345		450	6,0							
			LF34	234027		339 - 390		508	7,8							
			MF10	235021	IV		100 - 162	433	8,8	1,5mm x 60°	22	60	79	33	43	M8
			MF16	235022			160 - 224	429	7,1							
			MF22	235023			222 - 287	427	4,1							
			MF28	235024			280 - 345	427	4,1							
			MF34	235025			339 - 390	479	7,1							

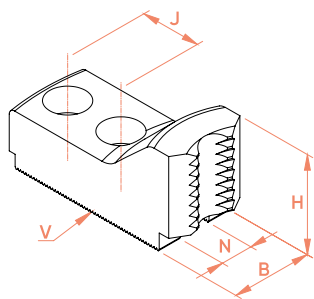
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Greiferbacken hart, Spitzverzahnung metrisch

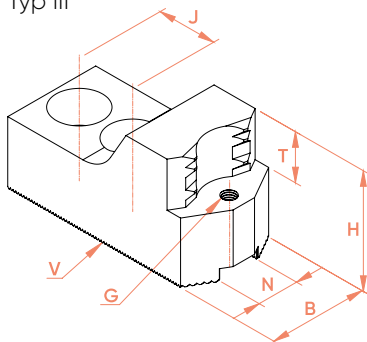
Adjustagrip hard jaws, metric serration

Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Kitagawa	B-18	450	LF05	234022	III	50 - 170		495	9,3	1,5mm x 60°	22	60	79	33	43	M8
			LF10	234023		100 - 225		497	8,3							
			LF16	234034		160 - 288		495	6,0							
			LF22	234035		221 - 349		493	5,6							
			LF28	234026		280 - 409		515	6,0							
			LF34	234027		339 - 460		575	7,8							
			MF10	235021	IV		100 - 225	496	8,8	1,5mm x 60°	22	60	79	33	43	M8
			MF16	235022			160 - 288	494	7,1							
			MF22	235023			222 - 351	492	4,1							
			MF28	235024			279 - 409	492	4,1							
			MF34	235025			338 - 460	545	7,1							
Kitagawa	B-21	530	X6339	9906339	III	105 - 230		598	11,4	3,0mm x 60°	25	60	79	33	60	M8
			X5596	9905596		174 - 301		581	7,5							
			X6395	9906395		233 - 361		595	7,8							
			X5597	9905597		347 - 476		605	7,2							
			X2797	9902797		372 - 501		618	7,5							
			X2798	9902798	IV		152 - 279	578	9,9	3,0mm x 60°	25	60	79	33	60	M8
			X2799	9902799			283 - 411	577	6,0							
Kitagawa	B-24	610	X5595	9905595	III	100 - 279		666	11,4	3,0mm x 60°	25	60	80	33	60	M8
			X5596	9905596		198 - 381		665	7,5							
			X5597	9905597		372 - 556		689	7,2							
			X5598	9905598		450 - 620		761	9,3							
			X2798	9902798	IV		176 - 358	661	9,9	3,0mm x 60°	25	60	79	33	60	M8
			X2799	9902799			307 - 491	661	6,0							
Kitagawa	B-204	110	LW03	234030	III	29 - 38		136	1,0	1,5mm x 60°	10	25	34	15	14	M6
			LW04	234031		38 - 47		135	1,0							
			LW05	234032		48 - 57		139	1,0							
			LW06	234033		57 - 65		137	1,0							
			LW07	234036		62 - 71		137	1,1							
			LW08	234037		70 - 79		137	1,1							

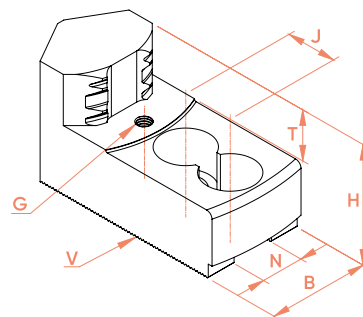
Typ II



Typ III



Typ IV



Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Kitagawa	B-205	135	LW03	234030	III	34 - 60		160	1,0	1,5mm x 60°	10	25	34	15	14	M6
			LW04	234031		44 - 70		160	1,0							
			LW05	234032		53 - 79		162	1,0							
			LW06	234033		62 - 88		162	1,0							
			LW07	234036		68 - 94		162	1,1							
			LW08	234037		75 - 101		160	1,1							
Kitagawa	B-206	169	KK16	227110	II	13 - 33		208	1,5	1,5mm x 60°	12	35	39	—	20	—
			LA03	234001	III	26 - 47		212	1,7							
			LA04	234002		37 - 67		215	1,4							
			LA06	234003		50 - 81		213	1,4							
			LA07	234004		64 - 96		213	1,4							
			LA09	234005		80 - 112		213	1,2							
			MA05	235001	IV		45 - 69	215	1,5	1,5mm x 60°	12	40	49	20	20	M6
			MA06	235002			49 - 80	213	1,4							
			MA07	235003			68 - 99	212	1,3							
			MA09	235004			90 - 122	213	1,1							
Kitagawa	B-208	210	KK20	227111	II	16 - 45		249	2,2	1,5mm x 60°	14	40	49	—	25	—
			LB03	234006	III	31 - 68		247	1,9							
			LB06	234007		60 - 96		252	1,8							
			LB09	234008		87 - 125		250	1,7							
			LB12	234009		114 - 152		249	1,7							
			LB15	234028		147 - 186		279	1,8							
			MB06	235005	IV		50 - 85	250	1,9	1,5mm x 60°	14	40	49	20	25	M6
			MB08	235006			78 - 115	251	1,8							
			MB11	235007			110 - 148	249	1,7							
			MB14	235008			139 - 178	257	1,7							

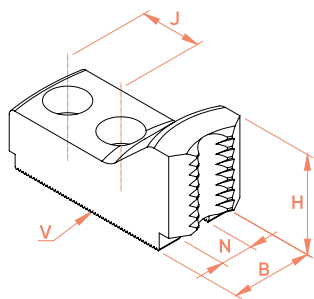
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Greiferbacken hart, Spitzverzahnung metrisch

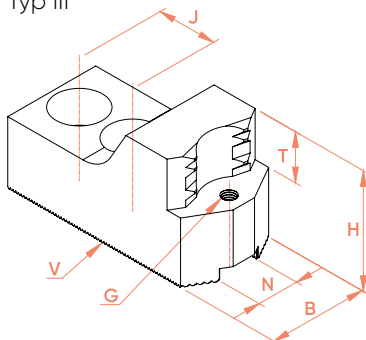
Adjustagrip hard jaws, metric serration

Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Kitagawa	B-210	254	KK25	227112	II	25 - 65		294	2,3	1,5mm x 60°	16	40	49	—	30	—
			LC04	234010	III	44 - 85		295	2,9	1,5mm x 60°	16	40	59	25	30	M8
			LC08	234011		82 - 125		293	2,7							
			LC13	234012		125 - 169		301	2,6							
			LC17	234013		168 - 212		300	2,6							
			LC20	234029		204 - 248		333	2,8							
			MC06	235009	IV		61 - 103	292	2,7	1,5mm x 60°	16	40	59	25	30	M6
			MC10	235010			100 - 143	292	2,5							
			MC14	235011			140 - 185	291	2,3							
			MC18	235012			180 - 224	290	2,2							
Kitagawa	B-212	304	KK40	227114	II	27 - 88		356	3,7	1,5mm x 60°	21	50	49	—	30	—
			LE05	234018	III	48 - 112		357	4,4	1,5mm x 60°	21	50	59	25	30	M8
			LE10	234019		102 - 168		357	3,4							
			LE16	234020		165 - 233		355	3,0							
			LE23	234021		232 - 300		405	3,4							
			ME08	235017	IV		78 - 145	355	3,9	1,5mm x 60°	21	50	59	25	30	M8
			ME14	235018			142 - 209	355	3,0							
			ME20	235019			201 - 269	356	3,0							
Kitagawa	BB-06	170	KK16	227110	II	16 - 34		211	1,5	1,5mm x 60°	12	35	39	—	20	—
			LA03	234001	III	29 - 49		215	1,7	1,5mm x 60°	12	40	49	20	20	M6
			LA04	234002		49 - 68		217	1,4							
			LA06	234003		62 - 82		216	1,4							
			LA07	234004		77 - 97		216	1,4							
			LA09	234005		93 - 113		216	1,2							
			MA05	235001	IV		50 - 70	217	1,5	1,5mm x 60°	12	40	49	20	20	M6
			MA06	235002			61 - 81	216	1,4							
			MA07	235003			81 - 101	216	1,3							
			MA09	235004			103 - 123	216	1,1							
Kitagawa	BB-08	210	KK20	227111	II	22 - 45		249	2,2	1,5mm x 60°	14	40	49	—	25	—
			LB03	234006	III	44 - 68		247	1,9	1,5mm x 60°	14	40	49	20	25	M6
			LB06	234007		72 - 96		252	1,8							
			LB09	234008		101 - 125		250	1,7							
			LB12	234009		128 - 152		249	1,7							
			LB15	234028		161 - 186		279	1,8							

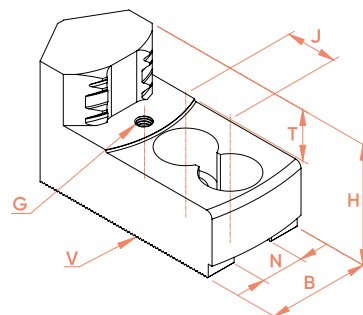
Typ II



Typ III



Typ IV



Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Kitagawa	BB-08	210	MB06	235005	IV		61 - 85	250	1,9	1,5mm x 60°	14	40	49	20	25	M6
			MB08	235006			91 - 115	251	1,8							
			MB11	235007			124 - 148	249	1,7							
			MB14	235008			153 - 178	257	1,7							
Kitagawa	BB-10	254	KK25	227112	II	26 - 68		296	2,3	1,5mm x 60°	16	40	49	—	30	—
			LC04	234010	III	45 - 87		297	2,9							
			LC08	234011		83 - 127		295	2,7							
			LC13	234012		126 - 172		304	2,6							
			LC17	234013		169 - 215		303	2,6							
			LC20	234029		205 - 251		336	2,8							
			MC06	235009	IV		62 - 106	295	2,7	1,5mm x 60°	16	40	59	25	30	M6
			MC10	235010			101 - 146	295	2,5							
			MC14	235011			141 - 187	293	2,3							
			MC18	235012			181 - 227	293	2,2							
Kitagawa	BB-206	170	KK16	227110	II	16 - 35		211	1,5	1,5mm x 60°	12	35	39	—	20	—
			LA03	234001	III	30 - 49		215	1,7							
			LA04	234002		49 - 69		218	1,4							
			LA06	234003		63 - 83		217	1,4							
			LA07	234004		77 - 98		217	1,4							
			LA09	234005		94 - 114		217	1,2							
			MA05	235001	IV		51 - 71	218	1,5	1,5mm x 60°	12	40	49	20	20	M6
			MA06	235002			62 - 82	217	1,4							
			MA07	235003			81 - 102	217	1,3							
			MA09	235004			103 - 124	217	1,1							
Kitagawa	BB-208	210	KK20	227111	II	24 - 49		253	2,2	1,5mm x 60°	14	40	49	—	25	—
			LB03	234006	III	46 - 73		251	1,9							
			LB06	234007		73 - 101		257	1,8							
			LB09	234008		101 - 130		255	1,7							
			LB12	234009		130 - 157		253	1,7							
			LB15	234028		164 - 187		280	1,8							

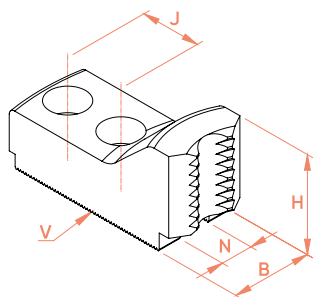
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Greiferbacken hart, Spitzverzahnung metrisch

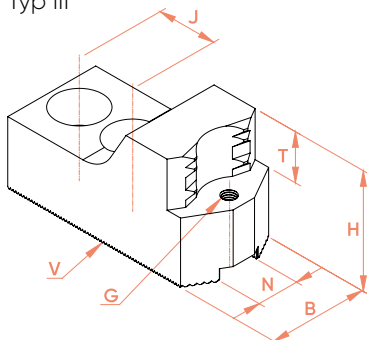
Adjustagrip hard jaws, metric serration

Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Kitagawa	BB-208	210	MB06	235005	IV		63 - 92	257	1,9	1,5mm x 60°	14	40	49	20	25	M6
			MB08	235006			92 - 125	260	1,8							
			MB11	235007			125 - 154	254	1,7							
			MB14	235008			154 - 183	262	1,7							
Kitagawa	BB-210	254	KK25	227112	II	33 - 72		300	2,3	1,5mm x 60°	16	40	49	—	30	—
			LC04	234010	III	52 - 91		301	2,9							
			LC06	234024		73 - 107		296	2,9	1,5mm x 60°	16	40	59	25	30	M8
			LC08	234011		91 - 133		301	2,7							
			LC10	230025		114 - 149		294	2,7							
			LC13	234012		133 - 177		309	2,6							
			LC17	234013		177 - 219		306	2,6							
			LC20	234029		212 - 254		339	2,8							
		315	MC06	235009	IV		70 - 110	299	2,7	1,5mm x 60°	16	40	59	25	30	M6
			MC10	235010			109 - 150	299	2,5							
			MC14	235011			150 - 192	298	2,3							
			MC18	235012			190 - 231	297	2,2							
Kitagawa	BB-212	315	KK40	227114	II	42 - 103		370	3,7	1,5mm x 60°	21	50	49	—	30	—
			LE05	234018	III	65 - 127		371	4,4							
			LE10	234019		120 - 183		371	3,4	1,5mm x 60°	21	50	59	25	30	M8
			LE16	234020		183 - 250		371	3,0							
		450	LE23	234021		250 - 316		420	3,4	1,5mm x 60°	21	50	59	25	30	M8
			ME08	235017	IV		97 - 160	369	3,9							
			ME14	235018			160 - 224	370	3,0							
			ME20	235019			219 - 284	370	3,0							
Kitagawa	BB-218	450	ME26	235020			281 - 320	420	3,2							
			LF05	234022	III	105 - 175		500	9,3	1,5mm x 60°	22	60	79	33	43	M8
			LF10	234023		159 - 229		500	8,3							
			LF16	234034		222 - 293		500	6,0							
			LF22	234035		283 - 354		498	5,6							
			LF28	234026		342 - 414		520	6,0							
			LF34	234027		402 - 460		578	7,8							

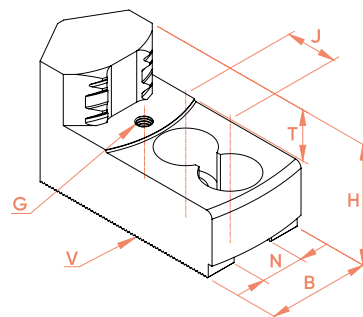
Typ II



Typ III



Typ IV



Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Kitagawa	BB-218	450	MF10	235021	IV		159 - 230	501	8,8	1,5mm x 60°	22	60	79	33	43	M8
			MF16	235022			222 - 293	499	7,1							
			MF22	235023			285 - 356	497	4,1							
			MF28	235024			342 - 414	497	4,1							
			MF34	235025			402 - 460	550	7,1							
Kitagawa	BL-206	169	KK16	227110	II	14 - 30		205	1,5	1,5mm x 60°	12	35	39	—	20	—
			LA03	234001	III	27 - 45		210	1,7							
			LA04	234002		42 - 64		212	1,4							
			LA06	234003		56 - 78		211	1,4							
			LA07	234004		70 - 93		210	1,4							
			LA09	234005		86 - 109		211	1,2							
			MA05	235001	IV		46 - 66	212	1,5	1,5mm x 60°	12	40	49	20	20	M6
			MA06	235002			55 - 77	211	1,4							
			MA07	235003			74 - 97	210	1,3							
			MA09	235004			96 - 119	210	1,1							
Kitagawa	BL-208	215	KK20	227111	II	24 - 52		256	2,2	1,5mm x 60°	14	40	49	—	25	—
			LB03	234006	III	46 - 76		254	1,9							
			LB06	234007		74 - 103		258	1,8							
			LB09	234008		102 - 132		257	1,7							
			LB12	234009		130 - 160		256	1,7							
			LB15	234028		169 - 187		280	1,8							
			MB06	235005	IV		63 - 93	258	1,9	1,5mm x 60°	14	40	49	20	25	M6
			MB08	235006			93 - 125	260	1,8							
			MB11	235007			125 - 156	256	1,7							
			MB14	235008			155 - 186	265	1,7							
Kitagawa	BL-210	254	KK25	227112	II	27 - 70		298	2,3	1,5mm x 60°	16	40	59	25	30	—
			LC04	234010	III	47 - 89		299	2,9							
			LC08	234011		84 - 130		298	2,7							
			LC13	234012		128 - 174		306	2,6							
			LC17	234013		171 - 217		305	2,6							
			LC20	234029		205 - 252		337	2,8							

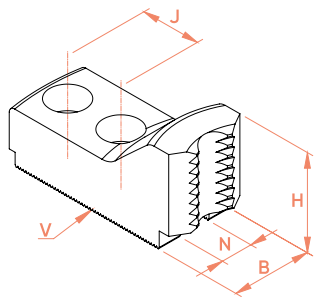
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Greiferbacken hart, Spitzverzahnung metrisch

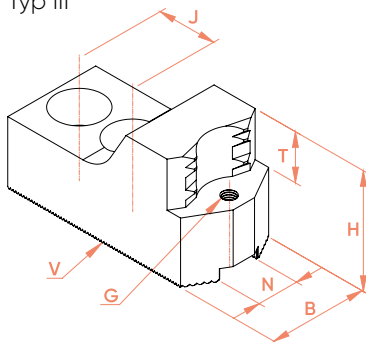
Adjustagrip hard jaws, metric serration

Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Kitagawa	BL-210	254	MC06	235009	IV		63 - 108	297	2,7	1,5mm x 60°	16	40	59	25	30	M6
			MC10	235010			102 - 148	297	2,5							
			MC14	235011			143 - 190	296	2,3							
			MC18	235012			183 - 229	295	2,2							
Kitagawa	BL-212	304	KK40	227114	II	32 - 97		364	3,7	1,5mm x 60°	21	50	49	—	30	—
			LE05	234018	III	54 - 121		365	4,4	1,5mm x 60°	21	50	59	25	30	M8
			LE10	234019		109 - 177		366	3,4	1,5mm x 60°	21	50	59	25	30	M8
			LE16	234020		172 - 242		364	3,0							
			LE23	234021	IV	239 - 310		414	3,4							
			ME08	235017			85 - 154	364	3,9							
			ME14	235018			149 - 218	364	3,0							
			ME20	235019			208 - 278	364	3,0							
Kitagawa	ML-06	165	KK16	227110	II	32 - 41		215	1,5	1,5mm x 60°	12	35	39	—	20	—
			LA03	234001	III	47 - 55		219	1,7	1,5mm x 60°	12	40	49	20	20	M6
			LA04	234002		66 - 75		222	1,4	1,5mm x 60°	12	40	49	20	20	M6
			LA06	234003		80 - 89		221	1,4							
			LA07	234004	IV	95 - 104		220	1,4							
			LA09	234005		111 - 120		221	1,2							
			MA05	235001			68 - 76	221	1,5	1,5mm x 60°	12	40	49	20	20	M6
			MA06	235002			79 - 88	221	1,4							
			MA07	235003			99 - 108	220	1,3							
			MA09	235004			121 - 130	220	1,1							
Kitagawa	ML-08	210	KK20	227111	II	41 - 52		256	2,2	1,5mm x 60°	14	40	49	—	25	—
			LB03	234006	III	64 - 76		254	1,9	1,5mm x 60°	14	40	49	20	25	M6
			LB06	234007		92 - 104		259	1,8	1,5mm x 60°	14	40	49	20	25	M6
			LB09	234008		121 - 133		258	1,7							
			LB12	234009	IV	148 - 160		256	1,7							
			LB15	234028		182 - 194		286	1,8							
			MB06	235005			81 - 93	258	1,9	1,5mm x 60°	14	40	49	20	25	M6
			MB08	235006			111 - 123	258	1,8							
			MB11	235007			144 - 156	256	1,7							
			MB14	235008			174 - 186	265	1,7							

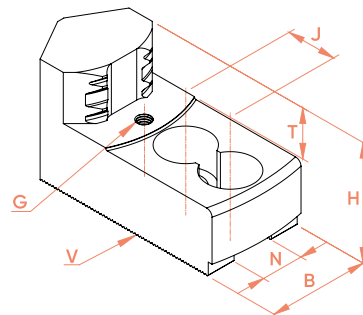
Typ II



Typ III



Typ IV



Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Kitagawa	N-04	110	LW03	234030	III	32 - 38		136	1,0	1,5mm x 60°	10	25	34	15	14	M6
			LW04	234031		41 - 47		135	1,0							
			LW05	234032		51 - 57		139	1,0							
			LW06	234033		60 - 65		137	1,0							
			LW07	234036		65 - 71		137	1,1							
			LW08	234037		73 - 79		137	1,1							
Kitagawa	N-05	135	LW03	234030	III	42 - 51		148	1,0	1,5mm x 60°	10	25	34	15	14	M6
			LW04	234031		52 - 61		148	1,0							
			LW05	234032		62 - 70		150	1,0							
			LW06	234033		70 - 79		150	1,0							
			LW07	234036		76 - 85		149	1,1							
			LW08	234037		84 - 93		149	1,1							
Kitagawa	N-06	165	KK16	227110	II	13 - 31		206	1,5	1,5mm x 60°	12	35	39	—	20	—
			LA03	234001		26 - 46		211	1,7							
			LA04	234002	III	45 - 65		213	1,4	1,5mm x 60°	12	40	49	20	20	M6
			LA06	234003		59 - 79		212	1,4							
			LA07	234004		73 - 94		211	1,4							
			LA09	234005		90 - 110		212	1,2							
			MA05	235001	IV		47 - 67	213	1,5	1,5mm x 60°	12	40	49	20	20	M6
			MA06	235002			58 - 78	212	1,4							
			MA07	235003			77 - 98	211	1,3							
			MA09	235004			99 - 120	211	1,1							
Kitagawa	N-08	210	KK20	227111	II	20 - 44		248	2,2	1,5mm x 60°	14	40	49	—	25	—
			LB03	234006		42 - 68		247	1,9							
			LB06	234007	III	70 - 95		251	1,8	1,5mm x 60°	14	40	49	20	25	M6
			LB09	234008		98 - 124		249	1,7							
			LB12	234009		125 - 152		249	1,7							
			LB15	234028		159 - 185		278	1,8							
			MB06	235005	IV		59 - 85	250	1,9	1,5mm x 60°	14	40	49	20	25	M6
			MB08	235006			89 - 115	251	1,8							
			MB11	235007			121 - 148	249	1,7							
			MB14	235008			151 - 177	256	1,7							

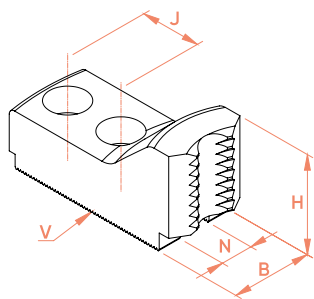
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Greiferbacken hart, Spitzverzahnung metrisch

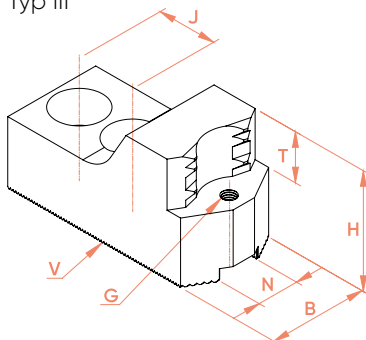
Adjustagrip hard jaws, metric serration

Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N mm	B mm	H mm	T mm	J mm	G mm
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Kitagawa	N-10	254	KK25	227112	II	23 - 71		299	2,3	1,5mm x 60°	16	40	49	—	30	—
			LC04	234010	III	42 - 91		301	2,9	1,5mm x 60°	16	40	59	25	30	M8
			LC08	234011		79 - 131		299	2,7							
			LC13	234012		122 - 175		307	2,6							
			LC17	234013		165 - 219		306	2,6							
			LC20	234029		201 - 254		339	2,8							
			MC06	235009	IV		58 - 109	298	2,7	1,5mm x 60°	16	40	59	25	30	M6
			MC10	235010			97 - 149	298	2,5							
			MC14	235011			138 - 191	297	2,3							
			MC18	235012			177 - 231	297	2,2							
Kitagawa	N-12	304	KK32	227113	II	27 - 89		357	3,7	1,5mm x 60°	18	50	49	—	30	—
			LD05	234014	III	51 - 117		358	4,5	1,5mm x 60°	18	50	59	25	30	M8
			LD11	234015		107 - 177		358	3,5							
			LD17	234016		171 - 241		355	3,1							
			LD23	234017		234 - 305		405	3,5							
			MD08	235013	IV		51 - 117	327	3,9	1,5mm x 60°	18	50	59	25	30	M8
			MD14	235014			107 - 177	325	3,0							
			MD20	235015			171 - 241	326	3,0							
Kitagawa	N-15	381	LF05	234022	III	56 - 103		429	9,3	1,5mm x 60°	22	60	79	33	43	M8
			LF10	234023		107 - 157		429	8,3							
			LF16	234034		167 - 220		426	6,0							
			LF22	234035		228 - 281		424	5,6							
			LF28	234026		287 - 340		445	6,0							
			LF34	234027		347 - 390		504	7,8							
			MF10	235021	IV		107 - 157	428	8,8	1,5mm x 60°	22	60	79	33	43	M8
			MF16	235022			167 - 220	425	7,1							
			MF22	235023			230 - 283	424	4,1							
			MF28	235024			287 - 340	422	4,1							
Kitagawa	N-18	450	LF05	234022	III	56 - 103		432	9,3	1,5mm x 60°	22	60	79	33	43	M8
			LF10	234023		107 - 157		433	8,3							
			LF16	234034		167 - 220		430	6,0							
			LF22	234035		228 - 281		428	5,6							
			LF28	234026		287 - 340		449	6,0							
			LF34	234027		347 - 400		508	7,8							

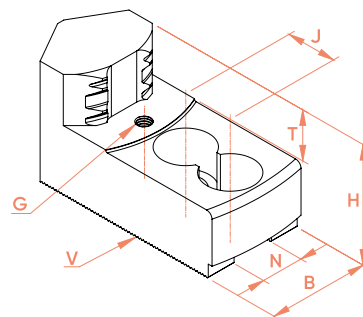
Typ II



Typ III



Typ IV



Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Kitagawa	N-18	450	MF10	235021	IV		107 - 157	432	8,8	1,5mm x 60°	22	60	79	33	43	M8
			MF16	235022			167 - 220	429	7,1							
			MF22	235023			230 - 283	427	4,1							
			MF28	235024			287 - 340	426	4,1							
			MF34	235025			347 - 400	479	7,1							
Kitagawa	N-21	530	X6339	9906339	III	91 - 217		585	11,4	3,0mm x 60°	25	60	79	33	60	M8
			X6395	9906395		217 - 348		582	7,8							
			X5597	9905597		332 - 463		592	7,2							
			X2797	9902797		356 - 487		604	7,5							
			X2798	9902798	IV		137 - 265	565	9,9	3,0mm x 60°	25	60	79	33	60	M8
			X2799	9902799			267 - 398	565	6,0							
Kitagawa	N-24	610	X6339	9906339	III	164 - 293		665	11,4	3,0mm x 60°	25	60	79	33	60	M8
			X6395	9906395		294 - 425		663	7,8							
			X5597	9905597		409 - 540		674	7,2							
			X2797	9902797		433 - 565		686	7,5							
			X5598	9905598		487 - 618		745	9,3							
			X2798	9902798	IV		212 - 342	645	9,9	3,0mm x 60°	25	60	79	33	60	M8
			X2799	9902799			344 - 475	645	6,0							
mmk Matsumoto	ZA5-5-34	135	LW03	234030	III	43 - 61		161	1,0	1,5mm x 60°	10	25	34	15	14	M6
			LW04	234031		53 - 71		161	1,0							
			LW05	234032		62 - 80		163	1,0							
			LW06	234033		71 - 89		163	1,0							
			LW07	234036		77 - 95		162	1,1							
			LW08	234037		85 - 102		161	1,1							
mmk Matsumoto	ZA5-6-46	135	LW03	234030	III	46 - 58		158	1,0	1,5mm x 60°	10	25	34	15	14	M6
			LW04	234031		56 - 67		157	1,0							
			LW05	234032		66 - 77		160	1,0							
			LW06	234033		74 - 86		160	1,0							
			LW07	234036		80 - 91		159	1,1							
			LW08	234037		88 - 99		159	1,1							

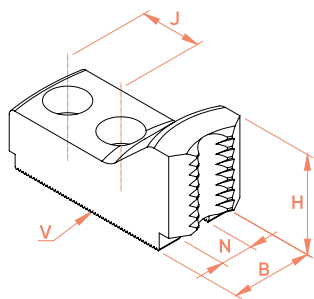
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Greiferbacken hart, Spitzverzahnung metrisch

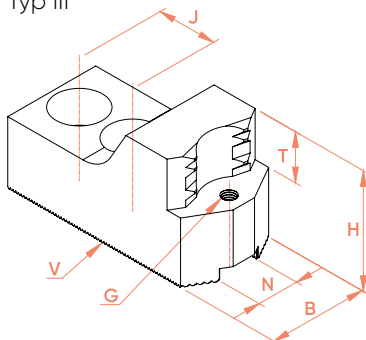
Adjustagrip hard jaws, metric serration

Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
mmk Matsumoto	ZA6-8-52	210	KK20	227111	II	16 - 45		249	2,2	1,5mm x 60°	14	40	49	—	25	—
			LB03	234006	III	32 - 68		247	1,9	1,5mm x 60°	14	40	49	20	25	M6
			LB06	234007		61 - 96		252	1,8							
			LB09	234008		88 - 125		250	1,7							
			LB12	234009		115 - 152		249	1,7							
			MB06	235005	IV		51 - 85	250	1,9	1,5mm x 60°	14	40	49	20	25	M6
			MB08	235006			79 - 115	251	1,8							
			MB11	235007			111 - 148	249	1,7							
			MB14	235008			141 - 178	257	1,7							
mmk Matsumoto	ZA6-8-66B	215	KK20	227111	II	23 - 58		261	2,2	1,5mm x 60°	14	40	49	—	25	—
			LB03	234006	III	45 - 82		260	1,9	1,5mm x 60°	14	40	49	20	25	M6
			LB06	234007		73 - 109		264	1,8							
			LB09	234008		102 - 139		263	1,7							
			LB12	234009		129 - 166		262	1,7							
			MB06	235005	IV		63 - 99	263	1,9	1,5mm x 60°	14	40	49	20	25	M6
			MB08	235006			92 - 129	263	1,8							
			MB11	235007			125 - 162	262	1,7							
			MB14	235008			154 - 192	270	1,7							
mmk Matsumoto	ZA6-10-75	254	KK25	227112	II	25 - 66		295	2,3	1,5mm x 60°	16	40	49	—	30	—
			LC04	234010	III	44 - 85		295	2,9	1,5mm x 60°	16	40	59	25	30	M8
			LC08	234011		82 - 125		293	2,7							
			LC13	234012		125 - 170		302	2,6							
			LC17	234013		168 - 213		301	2,6							
			LC20	234029		204 - 249		334	2,8							
			MC06	235009	IV		61 - 104	293	2,7	1,5mm x 60°	16	40	59	25	30	M6
			MC10	235010			100 - 144	293	2,5							
			MC14	235011			141 - 185	291	2,3							
			MC18	235012			180 - 225	291	2,2							
mmk Matsumoto	ZA6-10-78	254	KK25	227112	II	28 - 69		297	2,3	1,5mm x 60°	16	40	49	—	30	—
			LC04	234010	III	47 - 88		298	2,9	1,5mm x 60°	16	40	59	25	30	M8
			LC08	234011		85 - 128		296	2,7							
			LC13	234012		128 - 173		305	2,6							
			LC17	234013		171 - 216		304	2,6							
			LC20	234029		207 - 252		337	2,8							

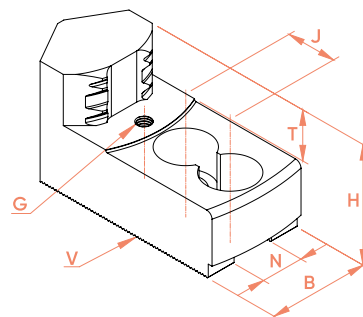
Typ II



Typ III



Typ IV



Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
mmk Matsumoto	ZA6-10-78	254	MC06	235009	IV		64 - 107	296	2,7	1,5mm x 60°	16	40	59	25	30	M6
			MC10	235010			103 - 147	296	2,5							
			MC14	235011			144 - 188	294	2,3							
			MC18	235012			183 - 228	294	2,2							
mmk Matsumoto	ZA8-10-66	254	KK25	227112	II	25 - 63		292	2,3	1,5mm x 60°	16	40	49	—	30	—
			LC04	234010	III	43 - 82		292	2,9							
			LC08	234011		81 - 123		291	2,7							
			LC13	234012		123 - 167		299	2,6							
			LC17	234013		167 - 210		298	2,6							
			MC06	235009	IV		60 - 101	290	2,7	1,5mm x 60°	16	40	59	25	30	M6
			MC10	235010			99 - 141	290	2,5							
			MC14	235011			140 - 182	288	2,3							
			MC18	235012			179 - 222	288	2,2							
mmk Matsumoto	ZA8-10-75	254	KK25	227112	II	25 - 63		292	2,3	1,5mm x 60°	16	40	49	—	30	—
			LC04	234010	III	43 - 82		292	2,9							
			LC08	234011		81 - 123		291	2,7							
			LC13	234012		123 - 166		298	2,6							
			LC17	234013		166 - 210		298	2,6							
			MC06	235009	IV		60 - 101	290	2,7	1,5mm x 60°	16	40	59	25	30	M6
			MC10	235010			99 - 141	290	2,5							
			MC14	235011			140 - 182	288	2,3							
			MC18	235012			179 - 222	288	2,2							
mmk Matsumoto	ZA8-10-80B	254	KK25	227112	II	28 - 63		292	2,3	1,5mm x 60°	16	40	49	—	30	—
			LC04	234010	III	48 - 85		295	2,9							
			LC08	234011		85 - 128		296	2,7							
			LC13	234012		128 - 171		303	2,6							
			LC17	234013		171 - 212		300	2,6							

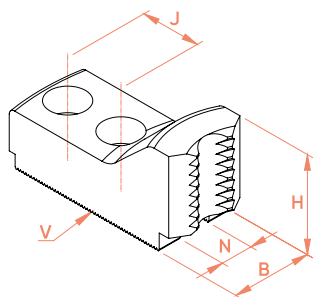
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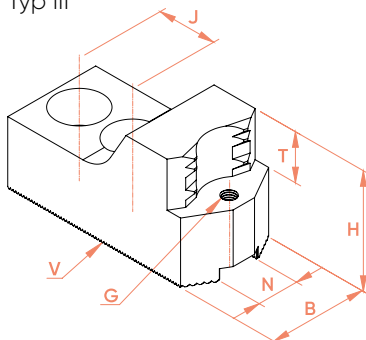
Adjustagrip hard jaws, metric serration

Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
mmk Matsumoto	ZA8-10- 80B	254	MC06	235009	IV		64 - 103	292	2,7	1,5mm x 60°	16	40	59	25	30	M6
			MC10	235010			103 - 144	293	2,5							
			MC14	235011			144 - 183	289	2,3							
			MC18	235012			183 - 223	289	2,2							
mmk Matsumoto	ZA8-12-85	305	KK32	227113	II	33 - 64		334	3,7	1,5mm x 60°	18	50	49	—	30	—
			LD05	234014	III	60 - 92		335	4,5							
			LD11	234015		118 - 151		334	3,5							
			LD17	234016		182 - 216		331	3,1							
			LD23	234017		245 - 279		380	3,5							
			MD08	235013	IV		89 - 123	333	3,9	1,5mm x 60°	18	50	59	25	30	M8
			MD14	235014			150 - 185	333	3,0							
			MD20	235015			211 - 246	331	3,0							
			MD26	235016			269 - 303	382	3,2							
mmk Matsumoto	ZA8-12- 93B	305	KK32	227113	II	41 - 73		342	3,7	1,5mm x 60°	18	50	49	—	30	—
			LD05	234014	III	69 - 102		344	4,5							
			LD11	234015		127 - 161		343	3,5							
			LD17	234016		192 - 226		341	3,1							
			LD23	234017		255 - 289		389	3,5							
			MD08	235013	IV		99 - 133	342	3,9	1,5mm x 60°	18	50	59	25	30	M8
			MD14	235014			160 - 194	341	3,0							
			MD20	235015			221 - 256	341	3,0							
			MD26	235016			278 - 310	391	3,2							
Röhm	KFD-HE 110	110	LW03	234030	III	30 - 35		134	1,0	1,5mm x 60°	10	25	34	15	14	M6
			LW04	234031		39 - 45		133	1,0							
			LW05	234032		49 - 54		136	1,0							
			LW06	234033		57 - 63		135	1,0							
			LW07	234036		63 - 69		135	1,1							
			LW08	234037		71 - 76		134	1,1							
Röhm	KFD-HE 130	130	LW03	234030	III	36 - 54		154	1,0	1,5mm x 60°	10	25	34	15	14	M6
			LW04	234031		46 - 64		154	1,0							
			LW05	234032		55 - 73		157	1,0							
			LW06	234033		64 - 82		156	1,0							
			LW07	234036		70 - 88		156	1,1							
			LW08	234037		77 - 96		156	1,1							

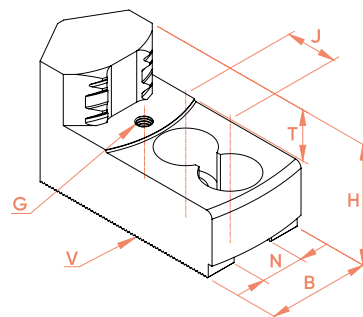
Typ II



Typ III



Typ IV



Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Röhm	KFD-HE 170	170	KK16	227110	II	13 - 31		208	1,5	1,5mm x 60°	12	35	39	—	20	—
			LA03	234001	III	26 - 46		213	1,7	1,5mm x 60°	12	40	49	20	20	M6
			LA04	234002		41 - 65		215	1,4							
			LA06	234003		55 - 79		213	1,4							
			LA07	234004		69 - 94		213	1,4							
			LA09	234005		85 - 110		213	1,2							
			MA05	235001	IV		45 - 67	215	1,5	1,5mm x 60°	12	40	49	20	20	M6
			MA06	235002			54 - 78	213	1,4							
			MA07	235003			73 - 98	213	1,3							
			MA09	235004			95 - 120	213	1,1							
Röhm	KFD-HE 210	210	KK20	227111	II	16 - 46		250	2,2	1,5mm x 60°	14	40	49	—	25	—
			LB03	234006	III	34 - 69		248	1,9	1,5mm x 60°	14	40	49	20	25	M6
			LB06	234007		62 - 97		253	1,8							
			LB09	234008		90 - 126		251	1,7							
			LB12	234009		117 - 153		250	1,7							
			LB15	234028		150 - 187		280	1,8							
			MB06	235005	IV		52 - 86	251	1,9	1,5mm x 60°	14	40	49	20	25	M6
			MB08	235006			81 - 116	251	1,8							
			MB11	235007			113 - 149	250	1,7							
			MB14	235008			142 - 179	258	1,7							
Röhm	KFD-HE 254	254	KK25	227112	II	26 - 66		295	2,3	1,5mm x 60°	16	40	49	—	30	—
			LC04	234010	III	45 - 86		296	2,9	1,5mm x 60°	16	40	59	25	30	M8
			LC08	234011		83 - 126		294	2,7							
			LC13	234012		126 - 170		302	2,6							
			LC17	234013		169 - 214		302	2,6							
			LC20	234029		205 - 249		334	2,8							
			MC06	235009	IV		62 - 105	294	2,7	1,5mm x 60°	16	40	59	25	30	M6
			MC10	235010			101 - 145	294	2,5							
			MC14	235011			142 - 186	292	2,3							
			MC18	235012			181 - 226	292	2,2							

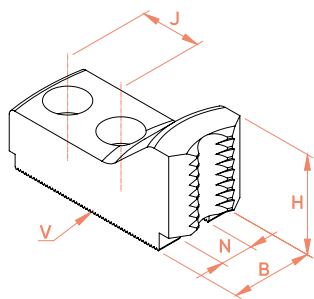
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Greiferbacken hart, Spitzverzahnung metrisch

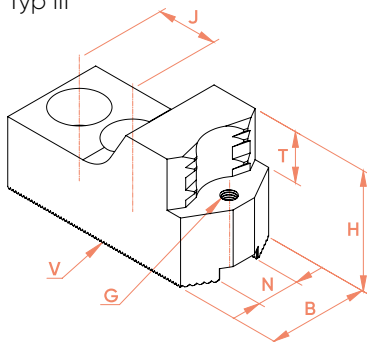
Adjustagrip hard jaws, metric serration

Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Röhm	KFD-HE 315-91	315	KK40	227114	II	27 - 100		367	3,7	1,5mm x 60°	21	50	49	—	30	—
			LE05	234018	III	48 - 124		368	4,4	1,5mm x 60°	21	50	59	25	30	M8
			LE10	234019		102 - 180		368	3,4							
			LE16	234020		165 - 245		367	3,0							
			LE23	234021		230 - 310		414	3,4							
			ME08	235017	IV		78 - 157	366	3,9	1,5mm x 60°	21	50	59	25	30	M8
			ME14	235018			142 - 221	367	3,0							
			ME20	235019			201 - 281	367	3,0							
Röhm	KFD-HE 315-121	315	KK40	227114	II	53 - 100		367	3,7	1,5mm x 60°	21	50	49	—	30	—
			LE05	234018	III	77 - 124		368	4,4	1,5mm x 60°	21	50	59	25	30	M8
			LE10	234019		133 - 180		368	3,4							
			LE16	234020		197 - 245		367	3,0							
			LE23	234021		262 - 311		415	3,4							
			ME08	235017	IV		109 - 157	366	3,9	1,5mm x 60°	21	50	59	25	30	M8
			ME14	235018			173 - 222	368	3,0							
			ME20	235019			233 - 281	367	3,0							
Samchully	HC-04	110	LW03	234030	III	32 - 38		136	1,0	1,5mm x 60°	10	25	34	15	14	M6
			LW04	234031		41 - 47		135	1,0							
			LW05	234032		51 - 57		139	1,0							
			LW06	234033		60 - 65		137	1,0							
			LW07	234036		65 - 71		137	1,1							
			LW08	234037		73 - 79		137	1,1							
Samchully	HC-05	135	LW03	234030	III	42 - 51		152	1,0	1,5mm x 60°	10	25	34	15	14	M6
			LW04	234031		52 - 61		151	1,0							
			LW05	234032		62 - 70		154	1,0							
			LW06	234033		70 - 79		153	1,0							
			LW07	234036		76 - 85		153	1,1							
			LW08	234037		84 - 93		153	1,1							
Samchully	HC-06	165	KK16	227110	II	14 - 23		199	1,5	1,5mm x 60°	12	35	39	—	20	—
			LA03	234001	III	27 - 38		204	1,7	1,5mm x 60°	12	40	49	20	20	M6
			LA04	234002		46 - 57		206	1,4							
			LA06	234003		60 - 71		204	1,4							
			LA07	234004		74 - 85		203	1,4							
			LA09	234005		90 - 102		204	1,2							

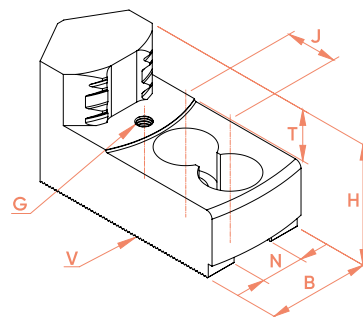
Typ II



Typ III



Typ IV



Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Samchully	HC-06	165	MA05	235001	IV		48 - 59	206	1,5	1,5mm x 60°	12	40	49	20	20	M6
			MA06	235002			59 - 70	204	1,4							
			MA07	235003			78 - 89	203	1,3							
			MA09	235004			100 - 112	204	1,1							
Samchully	HC-08	210	KK20	227111	II	24 - 44		248	2,2	1,5mm x 60°	14	40	49	—	25	—
			LB03	234006	III	47 - 67		246	1,9							
			LB06	234007		75 - 95		251	1,8							
			LB09	234008		104 - 124		249	1,7							
			LB12	234009		131 - 151		248	1,7							
			LB15	234028		164 - 185		278	1,8							
			MB06	235005	IV		64 - 84	250	1,9	1,5mm x 60°	14	40	49	20	25	M6
			MB08	235006			94 - 114	250	1,8							
			MB11	235007			127 - 147	248	1,7							
			MB14	235008			156 - 177	256	1,7							
Samchully	HC-10	254	KK25	227112	II	24 - 58		287	2,3	1,5mm x 60°	16	40	49	—	30	—
			LC04	234010	III	43 - 78		289	2,9							
			LC08	234011		80 - 118		287	2,7							
			LC13	234012		124 - 162		295	2,6							
			LC17	234013		167 - 205		293	2,6							
			MC06	235009	IV		59 - 96	285	2,7	1,5mm x 60°	16	40	59	25	30	M6
			MC10	235010			98 - 136	285	2,5							
			MC14	235011			139 - 178	285	2,3							
Samchully	HC-12	304	MC18	235012			179 - 217	283	2,2							
			KK32	227113	II	28 - 92		360	3,7	1,5mm x 60°	18	50	49	—	30	—
			LD05	234014	III	53 - 120		361	4,5							
			LD11	234015		110 - 180		361	3,5							
			LD17	234016		174 - 245		359	3,1							
			LD23	234017		237 - 308		408	3,5							
			MD08	235013	IV		82 - 151	359	3,9	1,5mm x 60°	18	50	59	25	30	M8
			MD14	235014			143 - 213	359	3,0							
			MD20	235015			203 - 275	359	3,0							
			MD26	235016			261 - 320	409	3,2							

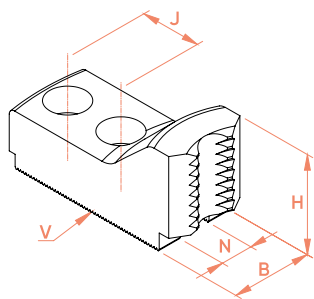
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Greiferbacken hart, Spitzverzahnung metrisch

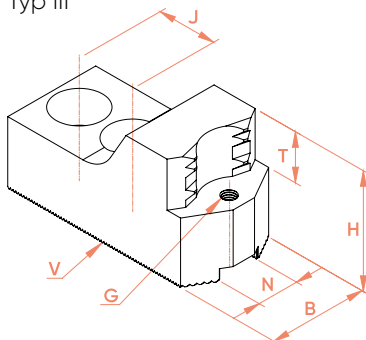
Adjustagrip hard jaws, metric serration

Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Samchully	HC-15	381	LF05	234022	III	55 - 100		426	9,3	1,5mm x 60°	22	60	79	33	43	M8
			LF10	234023		106 - 154		426	8,3							
			LF16	234034		167 - 217		423	6,0							
			LF22	234035		227 - 278		422	5,6							
			LF28	234026		287 - 337		442	6,0							
			LF34	234027		346 - 390		501	7,8							
			MF10	235021	IV		106 - 154	425	8,8	1,5mm x 60°	22	60	79	33	43	M8
			MF16	235022			167 - 217	423	7,1							
			MF22	235023			229 - 280	421	4,1							
			MF28	235024			287 - 337	419	4,1							
			MF34	235025			346 - 390	472	7,1							
Samchully	HC-18	450	LF05	234022	III	110 - 159		485	9,3	1,5mm x 60°	22	60	79	33	43	M8
			LF10	234023		164 - 214		486	8,3							
			LF16	234034		226 - 277		484	6,0							
			LF22	234035		288 - 338		483	5,6							
			LF28	234026		347 - 398		505	6,0							
			LF34	234027		407 - 457		563	7,8							
			MF10	235021	IV		164 - 214	485	8,8	1,5mm x 60°	22	60	79	33	43	M8
			MF16	235022			227 - 277	483	7,1							
			MF22	235023			290 - 340	482	4,1							
			MF28	235024			347 - 398	481	4,1							
			MF34	235025			407 - 457	534	7,1							
Samchully	HC-21	530	X6339	9906339	III	91 - 217		585	11,4	3,0mm x 60°	25	60	79	33	60	M8
			X6395	9906395		217 - 348		582	7,8							
			X5597	9905597		332 - 463		592	7,2							
			X2797	9902797		356 - 487		604	7,5							
			X2798	9902798	IV		137 - 265	565	9,9	3,0mm x 60°	25	60	79	33	60	M8
			X2799	9902799			267 - 398	565	6,0							
Samchully	HC-24	610	X6339	9906339	III	164 - 293		665	11,4	3,0mm x 60°	25	60	79	33	60	M8
			X6395	9906395		294 - 425		663	7,8							
			X5597	9905597		409 - 540		674	7,2							
			X2797	9902797		433 - 565		686	7,5							
			X5598	9905598		487 - 618		745	9,3							
			X2798	9902798	IV		212 - 342	645	9,9	3,0mm x 60°	25	60	79	33	60	M8
			X2799	9902799			344 - 475	645	6,0							

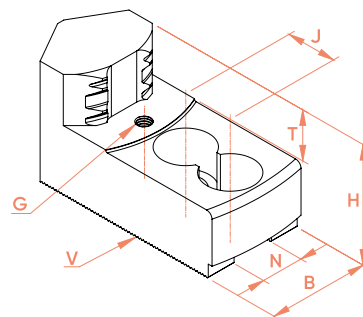
Typ II



Typ III



Typ IV



Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Samchully	HCH-06	165	KK16	227110	II	14 - 28		203	1,5	1,5mm x 60°	12	35	39	—	20	—
			LA03	234001	III	27 - 42		207	1,7	1,5mm x 60°	12	40	49	20	20	M6
			LA04	234002		35 - 61		209	1,4							
			LA06	234003		50 - 75		208	1,4							
			LA07	234004		64 - 90		208	1,4							
			LA09	234005		78 - 106		208	1,2							
			MA05	235001	IV		46 - 63	209	1,5	1,5mm x 60°	12	40	49	20	20	M6
			MA06	235002			47 - 74	208	1,4							
			MA07	235003			68 - 94	207	1,3							
			MA09	235004			88 - 161	249	1,1							
Samchully	HCH-08	210	KK20	227111	II	16 - 41		245	2,2	1,5mm x 60°	14	40	49	—	25	—
			LB03	234006	III	31 - 64		243	1,9	1,5mm x 60°	14	40	49	20	25	M6
			LB06	234007		60 - 92		248	1,8							
			LB09	234008		87 - 121		247	1,7							
			LB12	234009		114 - 148		245	1,7							
			LB15	234028		147 - 182		275	1,8							
			MB06	235005	IV		51 - 81	247	1,9	1,5mm x 60°	14	40	49	20	25	M6
			MB08	235006			78 - 111	247	1,8							
			MB11	235007			110 - 144	245	1,7							
			MB14	235008			140 - 174	253	1,7							
Samchully	HCH-10	254	KK25	227112	II	25 - 58		287	2,3	1,5mm x 60°	16	40	49	—	30	—
			LC04	234010	III	44 - 81		291	2,9	1,5mm x 60°	16	40	59	25	30	M8
			LC08	234011		81 - 123		291	2,7							
			LC13	234012		123 - 166		298	2,6							
			LC17	234013		166 - 206		294	2,6							
			LC20	234029		203 - 245		330	2,8							
			MC06	235009	IV		61 - 97	286	2,7	1,5mm x 60°	16	40	59	25	30	M6
			MC10	235010			100 - 136	285	2,5							
			MC14	235011			140 - 178	285	2,3							
			MC18	235012			180 - 217	283	2,2							

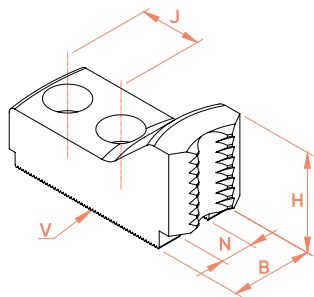
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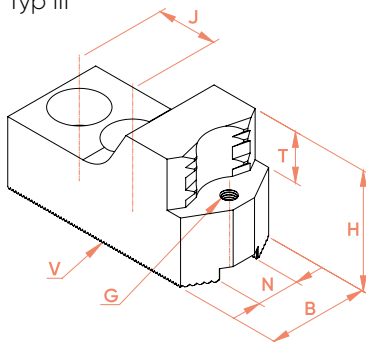
Adjustagrip hard jaws, metric serration

Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Samchully	HCH-12	304	KK32	227113	II	27 - 86		354	3,7	1,5mm x 60°	18	50	49	—	30	—
			LD05	234014	III	49 - 114		355	4,5	1,5mm x 60°	18	50	59	25	30	M8
			LD11	234015		105 - 173		354	3,5							
			LD17	234016		169 - 238		352	3,1							
			LD23	234017		231 - 302		402	3,5							
			MD08	235013	IV		77 - 145	354	3,9	1,5mm x 60°	18	50	59	25	30	M8
			MD14	235014			138 - 207	354	3,0							
			MD20	235015			198 - 268	352	3,0							
			MD26	235016			254 - 320	404	3,2							
Samchully	HCH-15	381	LF05	234022	III	57 - 107		432	9,3	1,5mm x 60°	22	60	79	33	43	M8
			LF10	234023		107 - 170		441	8,3							
			LF16	234034		167 - 233		439	6,0							
			LF22	234035		228 - 295		438	5,6							
			LF28	234026		287 - 354		459	6,0							
			LF34	234027		346 - 390		504	7,8							
			MF10	235021	IV		108 - 166	436	8,8	1,5mm x 60°	22	60	79	33	43	M8
			MF16	235022			166 - 233	438	7,1							
			MF22	235023			230 - 298	438	4,1							
			MF28	235024			287 - 344	426	4,1							
			MF34	235025			344 - 390	475	7,1							
Samchully	HCH-18	450	LF05	234022	III	57 - 168		493	9,3	1,5mm x 60°	22	60	79	33	43	M8
			LF10	234023		108 - 223		495	8,3							
			LF16	234034		169 - 286		493	6,0							
			LF22	234035	III	230 - 347		491	5,6	1,5mm x 60°	22	60	79	33	43	M8
			LF28	234026		289 - 407		513	6,0							
			LF34	234027		348 - 460		573	7,8							
			MF10	235021	IV		108 - 223	494	8,8	1,5mm x 60°	22	60	79	33	43	M8
			MF16	235022			169 - 286	492	7,1							
			MF22	235023			232 - 349	491	4,1							
			MF28	235024			289 - 407	490	4,1							
			MF34	235025			348 - 460	543	7,1							

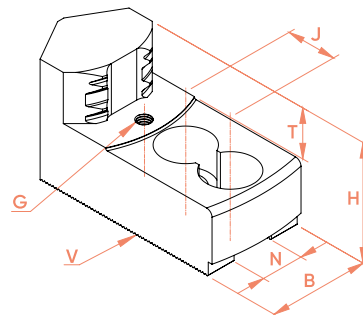
Typ II



Typ III



Typ IV



Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Samchully	HCH-21	530	X6339	9906339	III	105 - 232		600	11,4	3,0mm x 60°	25	60	79	33	60	M8
			X6395	9906395		233 - 363		597	7,8							
			X5597	9905597		347 - 478		607	7,2							
			X2797	9902797		372 - 503		620	7,5							
			X2798	9902798	IV		152 - 280	579	9,9	3,0mm x 60°	25	60	79	33	60	M8
			X2799	9902799			282 - 413	579	6,0							
Samchully	HCH-24	610	X5595	9905595	III	95 - 280		667	11,4	3,0mm x 60°	25	60	79	33	60	M8
			X5596	9905596		192 - 382		666	7,5							
			X5597	9905597		366 - 557		690	7,2							
			X5598	9905598		444 - 630		762	9,3							
			X2798	9902798	IV		170 - 359	662	9,9	3,0mm x 60°	25	60	79	33	60	M8
			X2799	9902799			301 - 492	662	6,0							
Samchully	HH-206 MH-206	175	KK16	227110	II	19 - 40		216	1,5	1,5mm x 60°	12	35	39	—	20	—
			LA03	234001	III	33 - 55		221	1,7	1,5mm x 60°	12	40	49	20	20	M6
			LA04	234002		52 - 74		223	1,4							
			LA06	234003		66 - 89		222	1,4							
			LA07	234004		81 - 103		221	1,4							
			LA09	234005		97 - 119		222	1,2	1,5mm x 60°	12	40	49	20	20	M6
			MA05	235001	IV		54 - 75	222	1,5							
			MA06	235002			65 - 86	221	1,4							
			MA07	235003			84 - 106	220	1,3							
			MA09	235004			107 - 128	221	1,1							
Samchully	HH-208 MH-208	210	KK20	227111	II	25 - 46		250	2,2	1,5mm x 60°	14	40	49	—	25	—
			LB03	234006	III	47 - 74		252	1,9	1,5mm x 60°	14	40	49	20	25	M6
			LB06	234007		74 - 103		258	1,8							
			LB09	234008		103 - 130		255	1,7							
			LB12	234009		130 - 154		251	1,7							
			LB15	234028		164 - 187		280	1,8							

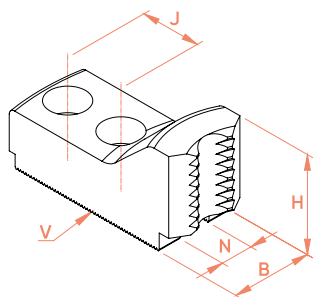
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Greiferbacken hart, Spitzverzahnung metrisch

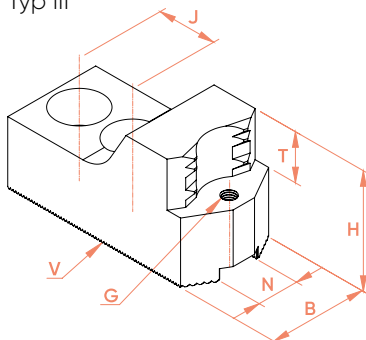
Adjustagrip hard jaws, metric serration

Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Samchully	HH-208 MH-208	210	MB06	235005	IV		64 - 93	258	1,9	1,5mm x 60°	14	40	49	20	25	M6
			MB08	235006			93 - 123	258	1,8							
			MB11	235007			126 - 155	255	1,7							
			MB14	235008			155 - 179	258	1,7							
Samchully	HH-210 MH-210	254	KK25	227112	II	34 - 67		295	2,3	1,5mm x 60°	16	40	49	—	30	—
			LC04	234010	III	54 - 87		297	2,9							
			LC06	234024		74 - 108		297	2,9	1,5mm x 60°	16	40	59	25	30	M8
			LC08	234011		92 - 127		295	2,7							
			LC10	230025		115 - 150		295	2,7							
			LC13	234012		136 - 171		303	2,6							
			LC17	234013		179 - 215		303	2,6							
			LC20	234029		215 - 251		336	2,8							
			MC06	235009	IV		71 - 108	297	2,7	1,5mm x 60°	16	40	59	25	30	M6
			MC10	235010			108 - 149	298	2,5							
			MC14	235011			149 - 190	296	2,3							
			MC18	235012			190 - 226	292	2,2							
Samchully	HH-212 MH-212	315	KK40	227114	II	43 - 98		365	3,7	1,5mm x 60°	21	50	49	—	30	—
			LE05	234018	III	66 - 122		366	4,4							
			LE10	234019		121 - 184		372	3,4	1,5mm x 60°	21	50	59	25	30	M8
			LE16	234020		184 - 251		372	3,0							
			LE23	234021		251 - 310		414	3,4							
			ME08	235017	IV		97 - 160	369	3,9	1,5mm x 60°	21	50	59	25	30	M8
			ME14	235018			160 - 219	365	3,0							
			ME20	235019			219 - 281	367	3,0							
			ME26	235020			281 - 320	415	3,2							
Samchully	HH-221 MH-221	530	X5595	9905595	III	102 - 199		583	11,4	3,0mm x 60°	25	60	79	33	60	M8
			X5596	9905596		199 - 300		580	7,5							
			X6395	9906395		259 - 360		594	7,8							
			X5597	9905597		373 - 475		604	7,2							
			X2797	9902797		398 - 499		616	7,5							
			X2798	9902798	IV		177 - 277	576	9,9	3,0mm x 60°	25	60	79	33	60	M8
			X2799	9902799			309 - 410	576	6,0							

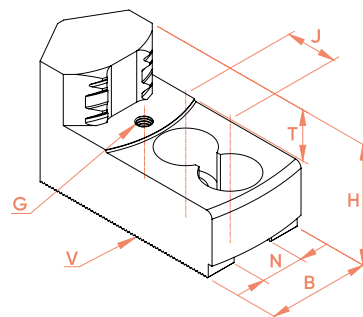
Typ II



Typ III



Typ IV



Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Samchully	HH-224 MH-224	610	X5595	9905595	III	116 - 279		666	11,4	3,0mm x 60°	25	60	79	33	60	M8
			X5596	9905596		215 - 381		665	7,5							
			X6395	9906395		274 - 441		679	7,8							
			X5597	9905597		389 - 556		689	7,2							
			X5598	9905598		466 - 620		761	9,3							
			X2798	9902798	IV		192 - 358	661	9,9	3,0mm x 60°	25	60	79	33	60	M8
			X2799	9902799			324 - 491	661	6,0							
Samchully	HS-05	135	LW03	234030	III	38 - 60		160	1,0	1,5mm x 60°	10	25	34	15	14	M6
			LW05	234032		57 - 79		162	1,0							
			LW08	234037		79 - 102		161	1,1							
Samchully	HS-06	169	KK16	227110	II	14 - 29		204	1,5	1,5mm x 60°	12	35	39	—	20	—
			LA03	234001	III	27 - 44		209	1,7							
			LA04	234002		40 - 63		211	1,4							
			LA06	234003		54 - 77		210	1,4							
			LA07	234004		68 - 92		209	1,4							
			LA09	234005		84 - 108		210	1,2							
			MA05	235001	IV		45 - 65	211	1,5	1,5mm x 60°	12	40	49	20	20	M6
			MA06	235002			52 - 76	210	1,4							
			MA07	235003			70 - 96	209	1,3							
			MA09	235004			93 - 118	210	1,1							
Samchully	HS-08	210	KK20	227111	II	18 - 44		248	2,2	1,5mm x 60°	14	40	49	—	25	—
			LB03	234006	III	39 - 68		247	1,9							
			LB06	234007		68 - 96		252	1,8							
			LB09	234008		96 - 124		249	1,7							
			LB12	234009		123 - 151		248	1,7							
			LB15	234028		156 - 185		278	1,8							
			MB06	235005	IV		56 - 85	250	1,9	1,5mm x 60°	14	40	49	20	25	M6
			MB08	235006			85 - 118	253	1,8							
			MB11	235007			118 - 148	249	1,7							
			MB14	235008			147 - 177	256	1,7							

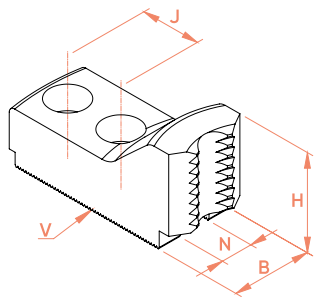
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Greiferbacken hart, Spitzverzahnung metrisch

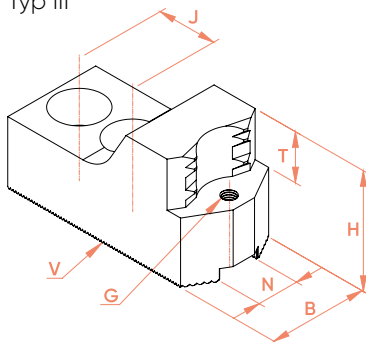
Adjustagrip hard jaws, metric serration

Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Samchully	HS-10	254	KK25	227112	II	29 - 64		293	2,3	1,5mm x 60°	16	40	49	—	30	—
			LC04	234010	III	48 - 85		295	2,9	1,5mm x 60°	16	40	59	25	30	M8
			LC08	234011		85 - 129		297	2,7							
			LC13	234012		129 - 172		304	2,6							
			LC17	234013		172 - 211		299	2,6							
			LC20	234029		208 - 247		332	2,8							
			MC06	235009	IV		64 - 103	292	2,7	1,5mm x 60°	16	40	59	25	30	M6
			MC10	235010			103 - 144	293	2,5							
			MC14	235011			144 - 184	290	2,3							
			MC18	235012			184 - 224	290	2,2							
Samchully	HS-12	304	KK40	227114	II	33 - 87		355	3,7	1,5mm x 60°	21	50	49	—	30	—
			LE05	234018	III	55 - 111		356	4,4	1,5mm x 60°	21	50	59	25	30	M8
			LE10	234019		110 - 172		361	3,4							
			LE16	234020		172 - 239		361	3,0							
			LE23	234021		239 - 299		404	3,4							
			ME08	235017	IV		85 - 149	359	3,9	1,5mm x 60°	21	50	59	25	30	M8
			ME14	235018			149 - 208	355	3,0							
			ME20	235019			207 - 269	356	3,0							
			ME26	235020			269 - 310	406	3,2							
Schunk	ROTA NC 165	165	KK16	227110	II	14 - 40		214	1,5	1,5mm x 60°	12	35	39	—	20	—
			LA03	234001	III	27 - 54		218	1,7	1,5mm x 60°	12	40	49	20	20	M6
			LA04	234002		44 - 73		220	1,4							
			LA06	234003		57 - 88		220	1,4							
			LA07	234004		71 - 102		218	1,4							
			LA09	234005		88 - 119		220	1,2							
			MA05	235001	IV		45 - 74	219	1,5	1,5mm x 60°	12	40	49	20	20	M6
			MA06	235002			55 - 86	219	1,4							
			MA07	235003			74 - 105	217	1,3							
			MA09	235004			96 - 128	219	1,1							

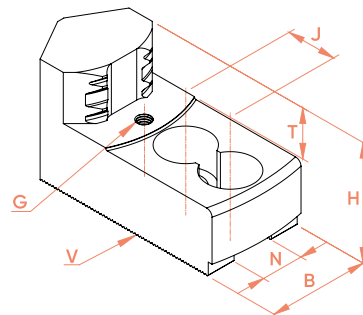
Typ II



Typ III



Typ IV



Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Schunk	ROTA NC 210	210	KK20	227111	II	16 - 57		260	2,2	1,5mm x 60°	14	40	49	—	25	—
			LB03	234006	III	26 - 81		259	1,9	1,5mm x 60°	14	40	49	20	25	M6
			LB06	234007		51 - 109		264	1,8							
			LB09	234008		77 - 138		262	1,7							
			LB12	234009		104 - 165		261	1,7							
			LB15	234028		165 - 210		302	1,8							
			MB06	235005	IV		50 - 97	262	1,9	1,5mm x 60°	14	40	49	20	25	M6
			MB08	235006			68 - 127	262	1,8							
			MB11	235007			99 - 160	260	1,7							
			MB14	235008			128 - 190	268	1,7							
Schunk	ROTA NC 250	254	KK25	227112	II	28 - 80		308	2,3	1,5mm x 60°	16	40	49	—	30	—
			LC04	234010	III	47 - 99		308	2,9	1,5mm x 60°	16	40	59	25	30	M8
			LC08	234011		85 - 139		306	2,7							
			LC13	234012		129 - 184		315	2,6							
			LC17	234013		172 - 227		314	2,6							
			LC20	234029		207 - 275		359	2,8							
			MC06	235009	IV		63 - 117	305	2,7	1,5mm x 60°	16	40	59	25	30	M6
			MC10	235010			102 - 157	305	2,5							
			MC14	235011			143 - 199	305	2,3							
			MC18	235012			183 - 238	303	2,2							
Schunk	ROTA NC 315	315	KK32	227113	II	34 - 118		384	3,7	1,5mm x 60°	18	50	49	—	30	—
			LD05	234014	III	61 - 146		385	4,5	1,5mm x 60°	18	50	59	25	30	M8
			LD11	234015		119 - 206		385	3,5							
			LD17	234016		183 - 271		384	3,1							
			LD23	234017		246 - 320		433	3,5							
			MD08	235013	IV		90 - 177	384	3,9	1,5mm x 60°	18	50	59	25	30	M8
			MD14	235014			151 - 239	384	3,0							
			MD20	235015			211 - 301	383	3,0							
			MD26	235016			269 - 320	434	3,2							

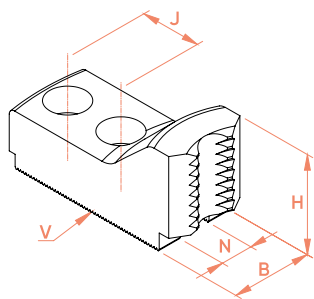
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Greiferbacken hart, Spitzverzahnung metrisch

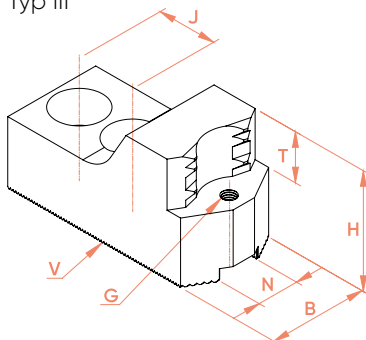
Adjustagrip hard jaws, metric serration

Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Schunk	ROTA NC 400	400	LF05	234022	III	63 - 152		478	9,3	1,5mm x 60°	22	60	79	33	43	M8
			LF10	234023		115 - 206		479	8,3							
			LF16	234034		176 - 269		477	6,0							
			LF22	234035		237 - 330		475	5,6							
			LF28	234026		296 - 390		497	6,0							
			LF34	234027		355 - 410		556	7,8							
			MF10	235021	IV		114 - 206	478	8,8	1,5mm x 60°	22	60	79	33	43	M8
			MF16	235022			176 - 269	476	7,1							
			MF22	235023			238 - 332	474	4,1							
			MF28	235024			295 - 390	474	4,1							
			MF34	235025			355 - 410	526	7,1							
Schunk	ROTA NC plus (2) 185	185	KK16	227110	II	23 - 54		229	1,5	1,5mm x 60°	12	35	39	—	20	—
			LA03	234001	III	37 - 68		233	1,7							
			LA04	234002		57 - 87		235	1,4							
			LA06	234003		71 - 102		234	1,4							
			LA07	234004		85 - 117		234	1,4							
			LA09	234005		102 - 133		234	1,2							
			MA05	235001	IV		59 - 89	235	1,5	1,5mm x 60°	12	40	49	20	20	M6
			MA06	235002			70 - 101	234	1,4							
			MA07	235003			89 - 121	234	1,3							
			MA09	235004			112 - 143	234	1,1							
Schunk	ROTA NC plus (2) 215	215	KK20	227111	II	31 - 59		262	2,2	1,5mm x 60°	14	40	49	—	25	—
			LB03	234006	III	54 - 83		261	1,9							
			LB06	234007		82 - 110		265	1,8							
			LB09	234008		110 - 140		264	1,7							
			LB12	234009		138 - 167		263	1,7							
			LB15	234028		171 - 201		293	1,8							
			MB06	235005	IV		71 - 100	264	1,9	1,5mm x 60°	14	40	49	20	25	M6
			MB08	235006			101 - 130	264	1,8							
			MB11	235007			134 - 163	263	1,7							
			MB14	235008			163 - 193	271	1,7							

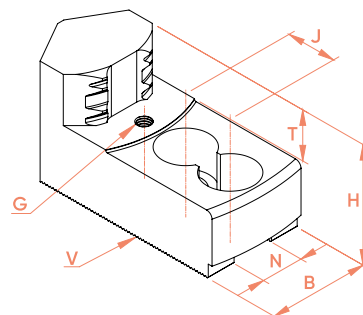
Typ II



Typ III



Typ IV



Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Schunk	ROTA NC plus (2) 260	260	KK25	227112	II	37 - 83		310	2,3	1,5mm x 60°	16	40	49	—	30	—
			LC04	234010	III	57 - 102		311	2,9	1,5mm x 60°	16	40	59	25	30	M8
			LC08	234011		96 - 142		309	2,7							
			LC13	234012		140 - 187		318	2,6							
			LC17	234013		183 - 230		317	2,6							
			LC20	234029		219 - 266		350	2,8							
			MC06	235009	IV		75 - 121	309	2,7	1,5mm x 60°	16	40	59	25	30	M6
			MC10	235010			114 - 161	309	2,5							
			MC14	235011			155 - 203	309	2,3							
			MC18	235012			195 - 242	307	2,2							
Schunk	ROTA NC plus (2) 315	315	KK40	227114	II	42 - 110		377	3,7	1,5mm x 60°	21	50	49	—	30	—
			LE05	234018	III	65 - 134		377	4,4	1,5mm x 60°	21	50	59	25	30	M8
			LE10	234019		121 - 191		379	3,4							
			LE16	234020		185 - 256		377	3,0							
			LE23	234021		250 - 320		425	3,4							
			ME08	235017	IV		97 - 167	376	3,9	1,5mm x 60°	21	50	59	25	30	M8
			ME14	235018			161 - 232	377	3,0							
			ME20	235019			220 - 291	377	3,0							
			ME26	235020			281 - 320	428	3,2							
Schunk	ROTA NCD 185	185	KK16	227110	II	13 - 50		225	1,5	1,5mm x 60°	12	35	39	—	20	—
			LA03	234001	III	26 - 64		229	1,7	1,5mm x 60°	12	40	49	20	20	M6
			LA04	234002		36 - 83		231	1,4							
			LA06	234003		50 - 98		231	1,4							
			LA07	234004		64 - 113		230	1,4							
			LA09	234005		79 - 129		231	1,2							
			MA05	235001	IV		45 - 85	231	1,5	1,5mm x 60°	12	40	49	20	20	M6
			MA06	235002			48 - 97	231	1,4							
			MA07	235003			67 - 117	230	1,3							
			MA09	235004			89 - 139	231	1,1							

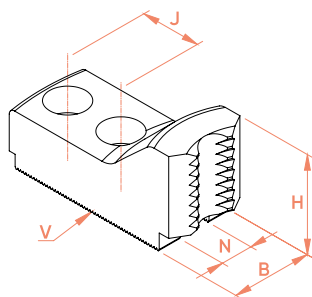
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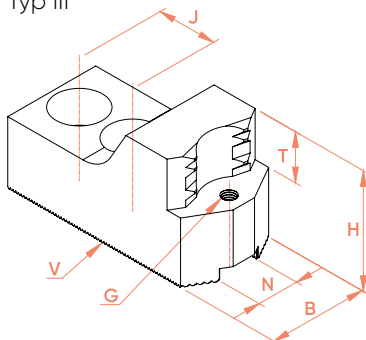
Adjustagrip hard jaws, metric serration

Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Schunk	ROTA NCD 215	210	KK20	227111	II	16 - 51		255	2,2	1,5mm x 60°	14	40	49	—	25	—
			LB03	234006	III	29 - 74		252	1,9	1,5mm x 60°	14	40	49	20	25	M6
			LB06	234007		57 - 102		258	1,8							
			LB09	234008		85 - 131		256	1,7							
			LB12	234009		112 - 159		255	1,7							
			LB15	234028		145 - 192		285	1,8							
			MB06	235005	IV		50 - 91	256	1,9	1,5mm x 60°	14	40	49	20	25	M6
			MB08	235006			75 - 121	256	1,8							
			MB11	235007			108 - 155	255	1,7							
			MB14	235008			137 - 184	263	1,7							
Schunk	ROTA NCD 255	250	KK25	227112	II	23 - 74		302	2,3	1,5mm x 60°	16	40	49	—	30	—
			LC04	234010	III	39 - 93		302	2,9	1,5mm x 60°	16	40	59	25	30	M8
			LC08	234011		76 - 134		302	2,7							
			LC13	234012		119 - 178		310	2,6							
			LC17	234013		162 - 221		308	2,6							
			LC20	234029		198 - 257		341	2,8							
			MC06	235009	IV		55 - 112	300	2,7	1,5mm x 60°	16	40	59	25	30	M6
			MC10	235010			94 - 152	300	2,5							
			MC14	235011			135 - 194	300	2,3							
			MC18	235012			174 - 233	299	2,2							
Schunk	ROTA NCF 165	165	KK16	227110	II	14 - 40		214	1,5	1,5mm x 60°	12	35	39	—	20	—
			LA03	234001	III	27 - 54		218	1,7	1,5mm x 60°	12	40	49	20	20	M6
			LA04	234002		44 - 73		220	1,4							
			LA06	234003		57 - 88		220	1,4							
			LA07	234004		71 - 102		218	1,4							
			LA09	234005		88 - 119		220	1,2							
			MA05	235001	IV		45 - 74	219	1,5	1,5mm x 60°	12	40	49	20	20	M6
			MA06	235002			55 - 86	219	1,4							
			MA07	235003			74 - 105	217	1,3							
			MA09	235004			96 - 128	219	1,1							

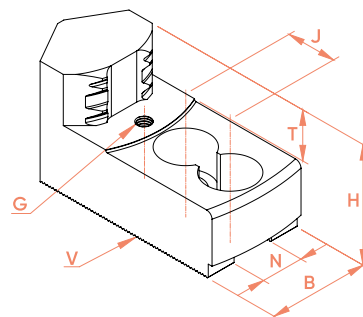
Typ II



Typ III



Typ IV



Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Schunk	ROTA NCF 210	210	KK20	227111	II	16 - 57		260	2,2	1,5mm x 60°	14	40	49	—	25	—
			LB03	234006	III	26 - 81		259	1,9	1,5mm x 60°	14	40	49	20	25	M6
			LB06	234007		51 - 109		264	1,8							
			LB09	234008		77 - 138		262	1,7							
			LB12	234009		104 - 165		261	1,7							
			LB15	234028		165 - 210		302	1,8							
			MB06	235005	IV		50 - 97	262	1,9	1,5mm x 60°	14	40	49	20	25	M6
			MB08	235006			68 - 127	262	1,8							
			MB11	235007			99 - 160	260	1,7							
			MB14	235008			128 - 190	268	1,7							
Schunk	ROTA NCF 250	254	KK25	227112	II	28 - 80		308	2,3	1,5mm x 60°	16	40	49	—	30	—
			LC04	234010	III	47 - 99		308	2,9	1,5mm x 60°	16	40	59	25	30	M8
			LC08	234011		85 - 139		306	2,7							
			LC13	234012		129 - 184		315	2,6							
			LC17	234013		172 - 227		314	2,6							
			LC20	234029		207 - 260		359	2,8							
			MC06	235009	IV		63 - 117	305	2,7	1,5mm x 60°	16	40	59	25	30	M6
			MC10	235010			102 - 157	305	2,5							
			MC14	235011			143 - 199	305	2,3							
			MC18	235012			183 - 238	303	2,2							
Schunk	ROTA NCF 315	315	KK32	227113	II	34 - 118		384	3,7	1,5mm x 60°	18	50	49	—	30	—
			LD05	234014	III	61 - 146		385	4,5	1,5mm x 60°	18	50	59	25	30	M8
			LD11	234015		119 - 206		385	3,5							
			LD17	234016		183 - 271		384	3,1							
			LD23	234017		246 - 320		433	3,5							
			MD08	235013	IV		90 - 177	384	3,9	1,5mm x 60°	18	50	59	25	30	M8
			MD14	235014			151 - 239	384	3,0							
			MD20	235015			211 - 301	383	3,0							
			MD26	235016			269 - 320	434	3,2							

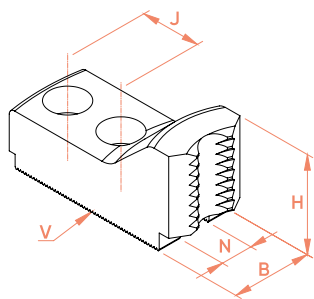
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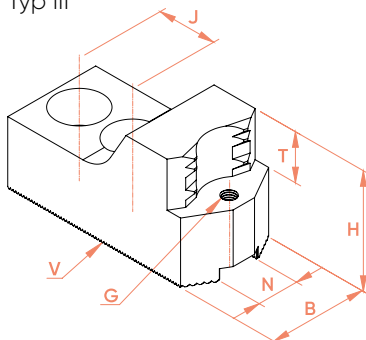
Adjustagrip hard jaws, metric serration

Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Schunk	ROTA NCF 400	400	LF05	234022	III	63 - 152		478	9,3	1,5mm x 60°	22	60	79	33	43	M8
			LF10	234023		115 - 206		479	8,3							
			LF16	234034		176 - 269		477	6,0							
			LF22	234035		237 - 330		475	5,6							
			LF28	234026		296 - 390		497	6,0							
			LF34	234027		355 - 420		556	7,8							
			MF10	235021	IV		114 - 206	478	8,8	1,5mm x 60°	22	60	79	33	43	M8
			MF16	235022			176 - 269	476	7,1							
			MF22	235023			238 - 332	474	4,1							
			MF28	235024			295 - 390	474	4,1							
			MF34	235025			355 - 420	526	7,1							
Schunk	ROTA NCF plus (2) 185	185	KK16	227110	II	23 - 54		229	1,5	1,5mm x 60°	12	35	39	—	20	—
			LA03	234001	III	37 - 68		233	1,7							
			LA04	234002		57 - 87		235	1,4							
			LA06	234003		71 - 102		234	1,4							
			LA07	234004		85 - 117		234	1,4							
			LA09	234005		102 - 133		234	1,2							
			MA05	235001	IV		59 - 89	235	1,5	1,5mm x 60°	12	40	49	20	20	M6
			MA06	235002			70 - 101	234	1,4							
			MA07	235003			89 - 121	234	1,3							
			MA09	235004			112 - 143	234	1,1							
Schunk	ROTA NCF plus (2) 215	215	KK20	227111	II	31 - 59		262	2,2	1,5mm x 60°	14	40	49	—	25	—
			LB03	234006	III	54 - 83		261	1,9							
			LB06	234007		82 - 110		265	1,8							
			LB09	234008		110 - 140		264	1,7							
			LB12	234009		138 - 167		263	1,7							
			LB15	234028		171 - 201		293	1,8							
			MB06	235005	IV		71 - 100	264	1,9	1,5mm x 60°	14	40	49	20	25	M6
			MB08	235006			101 - 130	264	1,8							
			MB11	235007			134 - 163	263	1,7							
			MB14	235008			163 - 193	271	1,7							

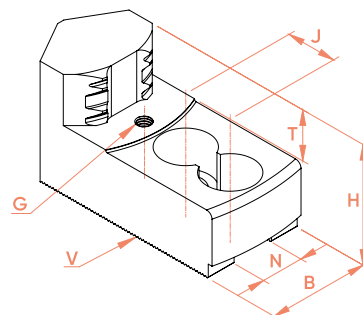
Typ II



Typ III



Typ IV



Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Schunk	ROTA NCF plus (2) 260	260	KK25	227112	II	37 - 83		310	2,3	1,5mm x 60°	16	40	49	—	30	—
			LC04	234010	III	57 - 102		311	2,9	1,5mm x 60°	16	40	59	25	30	M8
			LC08	234011		96 - 142		309	2,7							
			LC13	234012		140 - 187		318	2,6							
			LC17	234013		183 - 230		317	2,6							
			LC20	234029		219 - 266		350	2,8							
			MC06	235009	IV		75 - 121	309	2,7	1,5mm x 60°	16	40	59	25	30	M6
			MC10	235010			114 - 161	309	2,5							
			MC14	235011			155 - 203	309	2,3							
			MC18	235012			195 - 242	307	2,2							
Schunk	ROTA NCF plus (2) 315	315	KK40	227114	II	42 - 110		377	3,7	1,5mm x 60°	21	50	49	—	30	—
			LE05	234018	III	65 - 134		377	4,4	1,5mm x 60°	21	50	59	25	30	M8
			LE10	234019		121 - 191		379	3,4							
			LE16	234020		185 - 256		377	3,0							
			LE23	234021		250 - 320		425	3,4							
			ME08	235017	IV		97 - 167	376	3,9	1,5mm x 60°	21	50	59	25	30	M8
			ME14	235018			161 - 232	377	3,0							
			ME20	235019			220 - 291	377	3,0							
			ME26	235020			281 - 320	428	3,2							
Schunk	ROTA NCK 165	169	KK16	227110	II	14 - 30		205	1,5	1,5mm x 60°	12	35	39	—	20	—
			LA03	234001	III	26 - 45		210	1,7	1,5mm x 60°	12	40	49	20	20	M6
			LA04	234002		40 - 64		212	1,4							
			LA06	234003		53 - 78		211	1,4							
			LA07	234004		68 - 93		210	1,4							
			LA09	234005		84 - 109		211	1,2							
			MA05	235001	IV		46 - 66	212	1,5	1,5mm x 60°	12	40	49	20	20	M6
			MA06	235002			53 - 77	211	1,4							
			MA07	235003			71 - 97	210	1,3							
			MA09	235004			94 - 119	210	1,1							

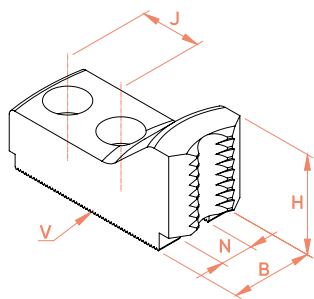
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Greiferbacken hart, Spitzverzahnung metrisch

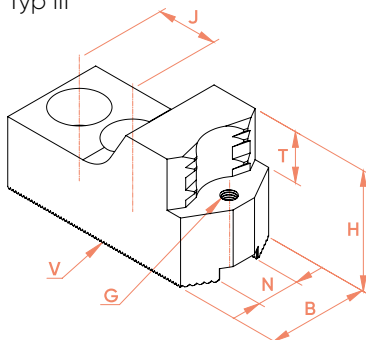
Adjustagrip hard jaws, metric serration

Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Schunk	ROTA NCK 210	210	KK20	227111	II	18 - 44		248	2,2	1,5mm x 60°	14	40	49	—	25	—
			LB03	234006	III	39 - 67		246	1,9	1,5mm x 60°	14	40	49	20	25	M6
			LB06	234007		67 - 96		252	1,8							
			LB09	234008		96 - 124		249	1,7							
			LB12	234009		123 - 152		249	1,7							
			LB15	234028		156 - 186		279	1,8							
			MB06	235005	IV		57 - 86	251	1,9	1,5mm x 60°	14	40	49	20	25	M6
			MB08	235006			86 - 118	253	1,8							
			MB11	235007			118 - 148	249	1,7							
			MB14	235008			148 - 178	257	1,7							
Schunk	ROTA NCK 250	254	KK25	227112	II	29 - 63		292	2,3	1,5mm x 60°	16	40	49	—	30	—
			LC04	234010	III	48 - 55		268	2,9	1,5mm x 60°	16	40	59	25	30	M8
			LC08	234011		85 - 129		297	2,7							
			LC13	234012		129 - 172		304	2,6							
			LC17	234013		172 - 212		300	2,6							
			LC20	234029		209 - 249		334	2,8							
			MC06	235009	IV		65 - 104	293	2,7	1,5mm x 60°	16	40	59	25	30	M6
			MC10	235010			104 - 144	293	2,5							
			MC14	235011			144 - 184	290	2,3							
			MC18	235012			184 - 223	289	2,2							
Schunk	ROTA NCK 315	304	KK40	227114	II	33 - 86		354	3,7	1,5mm x 60°	21	50	49	—	30	—
			LE05	234018	III	55 - 110		355	4,4	1,5mm x 60°	21	50	59	25	30	M8
			LE10	234019		109 - 172		361	3,4							
			LE16	234020		172 - 239		361	3,0							
			LE23	234021		239 - 300		405	3,4							
			ME08	235017	IV		86 - 149	359	3,9	1,5mm x 60°	21	50	59	25	30	M8
			ME14	235018			149 - 208	355	3,0							
			ME20	235019			208 - 269	356	3,0							
Schunk	ROTA NCK plus 165	165	KK16	227110	II	14 - 43		217	1,5	1,5mm x 60°	12	35	39	—	20	—
			LA03	234001	III	27 - 57		221	1,7	1,5mm x 60°	12	40	49	20	20	M6
			LA04	234002		40 - 76		223	1,4							
			LA06	234003		53 - 91		222	1,4							
			LA07	234004		67 - 105		221	1,4							
			LA09	234005		84 - 122		222	1,2							

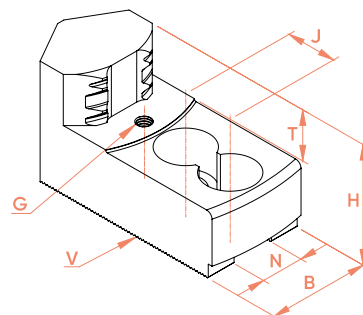
Typ II



Typ III



Typ IV



Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Schunk	ROTA NCK plus 165	165	MA05	235001	IV		46 - 78	223	1,5	1,5mm x 60°	12	40	49	20	20	M6
			MA06	235002			53 - 90	222	1,4							
			MA07	235003			71 - 109	221	1,3							
			MA09	235004			94 - 132	222	1,1							
Schunk	ROTA NCK plus 210	210	KK20	227111	II	16 - 52		256	2,2	1,5mm x 60°	14	40	49	—	25	—
			LB03	234006	III	32 - 76		254	1,9							
			LB06	234007		61 - 103		258	1,8							
			LB09	234008		89 - 132		257	1,7							
			LB12	234009		116 - 160		256	1,7							
			LB15	234028		148 - 195		287	1,8							
			MB06	235005	IV		51 - 93	258	1,9	1,5mm x 60°	14	40	49	20	25	M6
			MB08	235006			79 - 123	258	1,8							
			MB11	235007			112 - 156	256	1,7							
			MB14	235008			141 - 186	265	1,7							
Schunk	ROTA NCK plus 250	254	KK25	227112	II	25 - 75		303	2,3	1,5mm x 60°	16	40	49	—	30	—
			LC04	234010	III	44 - 95		304	2,9							
			LC08	234011		81 - 135		303	2,7	1,5mm x 60°	16	40	59	25	30	M8
			LC13	234012		124 - 179		311	2,6							
			LC17	234013		167 - 223		310	2,6							
			LC20	234029		202 - 257		341	2,8							
			MC06	235009	IV		60 - 113	301	2,7							
			MC10	235010			99 - 153	301	2,5							
			MC14	235011			140 - 195	301	2,3							
			MC18	235012			179 - 235	301	2,2							
Schunk	ROTA NCK plus 315	304	KK40	227114	II	31 - 97		364	3,7	1,5mm x 60°	21	50	49	—	30	—
			LE05	234018	III	52 - 121		365	4,4							
			LE10	234019		107 - 177		366	3,4	1,5mm x 60°	21	50	59	25	30	M8
			LE16	234020		170 - 242		364	3,0							
			LE23	234021		237 - 310		414	3,4							

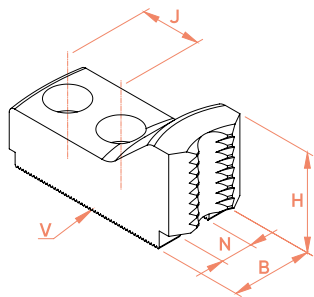
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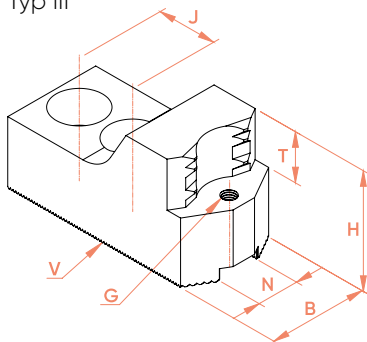
Adjustagrip hard jaws, metric serration

Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
Schunk	ROTA NCK plus 315	304	ME08	235017	IV		83 - 154	364	3,9	1,5mm x 60°	21	50	59	25	30	M8
			ME14	235018			147 - 219	365	3,0							
			ME20	235019			205 - 278	364	3,0							
			ME26	235020			267 - 310	415	3,2							
SMW- Autoblok	AL-M 165	165	KK16	227110	II	13 - 40		214	1,5	1,5mm x 60°	12	35	39	—	20	—
			LA03	234001	III	27 - 54		218	1,7							
			LA04	234002		45 - 79		225	1,4	1,5mm x 60°	12	40	49	20	20	M6
			LA06	234003		58 - 88		220	1,4							
			LA07	234004		73 - 103		219	1,4							
			LA09	234005		89 - 119		220	1,2							
			MA05	235001	IV		47 - 75	220	1,5	1,5mm x 60°	12	40	49	20	20	M6
			MA06	235002			58 - 87	220	1,4							
			MA07	235003			76 - 107	219	1,3							
			MA09	235004			99 - 129	220	1,1							
SMW- Autoblok	AL-M 210	210	KK20	227111	II	23 - 54		257	2,2	1,5mm x 60°	14	40	49	—	25	—
			LB03	234006	III	45 - 77		255	1,9							
			LB06	234007		74 - 105		260	1,8	1,5mm x 60°	14	40	49	20	25	M6
			LB09	234008		102 - 134		259	1,7							
			LB12	234009		129 - 162		258	1,7							
			LB15	234028		162 - 196		288	1,8							
			MB06	235005	IV		63 - 94	259	1,9	1,5mm x 60°	14	40	49	20	25	M6
			MB08	235006			92 - 125	260	1,8							
			MB11	235007			125 - 158	258	1,7							
			MB14	235008			155 - 187	265	1,7							
SMW- Autoblok	AL-M 250	254	KK25	227112	II	34 - 68		296	2,3	1,5mm x 60°	16	40	49	—	30	—
			LC04	234010	III	53 - 87		297	2,9							
			LC06	234024		73 - 107		296	2,9	1,5mm x 60°	16	40	59	25	30	M8
			LC08	234011		92 - 128		296	2,7							
			LC10	230025		112 - 148		293	2,7							
			LC13	234012		135 - 172		304	2,6							
			LC17	234013		155 - 192		281	2,6							
			LC20	234029		179 - 215		301	2,8							

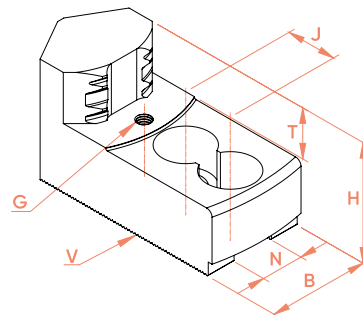
Typ II



Typ III



Typ IV



Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
SMW- Autoblok	AL-M 250	254	MC06	235009	IV		71 - 106	295	2,7	1,5mm x 60°	16	40	59	25	30	M6
			MC10	235010			110 - 146	295	2,5							
			MC14	235011			151 - 188	294	2,3							
			MC18	235012			191 - 227	293	2,2							
SMW- Autoblok	AL-M 315	315	KK40	227114	II	32 - 107		374	3,7	1,5mm x 60°	21	50	49	—	30	—
			LE05	234018	III	54 - 131		375	4,4							
			LE10	234019		109 - 187		375	3,4							
			LE16	234020		172 - 252		373	3,0							
			LE23	234021		239 - 320		424	3,4							
			ME08	235017	IV		85 - 164	373	3,9	1,5mm x 60°	21	50	59	25	30	M8
			ME14	235018			149 - 228	373	3,0							
			ME20	235019			208 - 288	374	3,0							
			ME26	235020			268 - 320	425	3,2							
SMW- Autoblok	AL-M 400	400	LF05	234022	III	70 - 137		464	9,3	1,5mm x 60°	22	60	79	33	43	M8
			LF10	234023		122 - 192		465	8,3							
			LF16	234034		184 - 254		462	6,0							
			LF22	234035		245 - 316		462	5,6							
			LF28	234026		304 - 375		483	6,0							
			LF34	234027		363 - 410		542	7,8							
			MF10	235021	IV		123 - 192	464	8,8	1,5mm x 60°	22	60	79	33	43	M8
			MF16	235022			184 - 255	462	7,1							
			MF22	235023			247 - 318	461	4,1							
			MF28	235024			304 - 375	459	4,1							
			MF34	235025			363 - 410	512	7,1							
SMW- Autoblok	AN-M 165	165	KK16	227110	II	13 - 37		211	1,5	1,5mm x 60°	12	35	39	—	20	—
			LA03	234001	III	27 - 52		216	1,7							
			LA04	234002		43 - 71		218	1,4	1,5mm x 60°	12	40	49	20	20	M6
			LA06	234003		56 - 86		218	1,4							
			LA07	234004		70 - 100		217	1,4							
			LA09	234005		87 - 117		218	1,2							

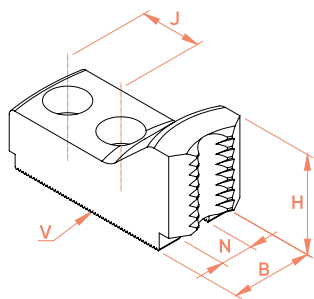
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Greiferbacken hart, Spitzverzahnung metrisch

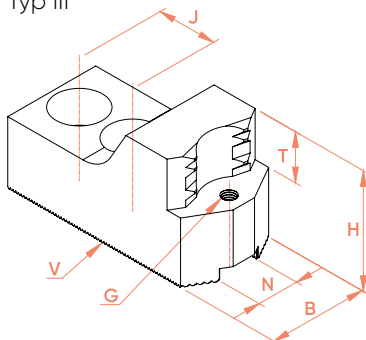
Adjustagrip hard jaws, metric serration

Futterher- steller <i>manufacturer</i>	Futter- type <i>chuck type</i>	Drm. dia. mm	Backen- typ <i>jaw type</i>	Ident- Nr. <i>ident- no.</i>	Typ <i>type</i>	Spannbereich <i>grip range</i>		Schwing- kreis Ø <i>swing Ø</i> max./mm	m/ Satz <i>m/ set</i> kg	V	N	B	H	T	J	G
						Außen Ø <i>external Ø</i> min-max/mm	Innen Ø <i>internal Ø</i> min-max/mm									
SMW- Autoblok	AN-M 165	165	MA05	235001	IV		46 - 73	218	1,5	1,5mm x 60°	12	40	49	20	20	M6
			MA06	235002			55 - 85	218	1,4							
			MA07	235003			74 - 104	216	1,3							
			MA09	235004			96 - 126	217	1,1							
SMW- Autoblok	AN-M 210	210	KK20	227111	II	20 - 50		254	2,2	1,5mm x 60°	14	40	49	—	25	—
			LB03	234006	III	45 - 78		256	1,9							
			LB06	234007		73 - 105		260	1,8							
			LB09	234008		101 - 134		259	1,7							
			LB12	234009		129 - 162		258	1,7	1,5mm x 60°	14	40	49	20	25	M6
			LB15	234028		162 - 196		288	1,8							
			MB06	235005	IV		59 - 90	255	1,9							
			MB08	235006			89 - 121	256	1,8							
			MB11	235007			121 - 154	254	1,7							
			MB14	235008			151 - 183	262	1,7							
SMW- Autoblok	AN-M 250	254	KK25	227112	II	30 - 63		292	2,3	1,5mm x 60°	16	40	49	—	30	—
			LC04	234010	III	49 - 83		293	2,9							
			LC06	234024		69 - 103		292	2,9							
			LC08	234011		87 - 123		291	2,7							
			LC10	230025		107 - 143		288	2,7	1,5mm x 60°	16	40	59	25	30	M6
			LC13	234012		131 - 167		299	2,6							
			LC17	234013		151 - 187		276	2,6							
			LC20	234029		174 - 210		296	2,8							
			MC06	235009	IV		66 - 101	290	2,7							
			MC10	235010			105 - 141	290	2,5							
			MC14	235011			146 - 183	289	2,3							
			MC18	235012			186 - 222	288	2,2							
SMW- Autoblok	AN-M 315	315	KK40	227114	II	32 - 107		374	3,7	1,5mm x 60°	21	50	49	—	30	—
			LE05	234018	III	54 - 131		375	4,4							
			LE10	234019		108 - 187		375	3,4	1,5mm x 60°	21	50	59	25	30	M8
			LE16	234020		172 - 253		374	3,0							
			LE23	234021		237 - 318		422	3,4							

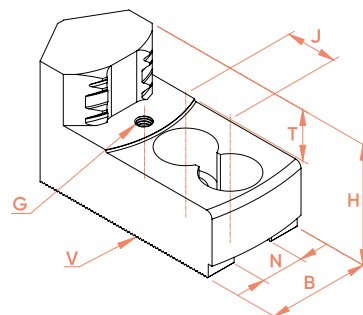
Typ II



Typ III



Typ IV



Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
SMW- Autoblok	AN-M 315	315	ME08	235017	IV		85 - 164	373	3,9	1,5mm x 60°	21	50	59	25	30	M8
			ME14	235018			148 - 229	374	3,0							
			ME20	235019			207 - 288	374	3,0							
			ME26	235020			268 - 320	425	3,2							
SMW- Autoblok	AN-M 400	400	LF05	234022	III	70 - 137		464	9,3	1,5mm x 60°	22	60	79	33	43	M8
			LF10	234023		122 - 192		465	8,3							
			LF16	234034		184 - 254		462	6,0							
			LF22	234035		245 - 316		462	5,6							
			LF28	234026		304 - 375		483	6,0							
			LF34	234027		363 - 410		542	7,8							
			MF10	235021	IV		123 - 192	464	8,8	1,5mm x 60°	22	60	79	33	43	M8
			MF16	235022			184 - 255	462	7,1							
			MF22	235023			247 - 318	461	4,1							
			MF28	235024			304 - 375	459	4,1							
SMW- Autoblok	BB-M 175	175	LA03	234001	III	33 - 64		229	1,7	1,5mm x 60°	12	40	49	20	20	M6
			LA04	234002		52 - 83		231	1,4							
			LA06	234003		66 - 98		231	1,4							
			LA07	234004		80 - 112		229	1,4							
			LA09	234005		97 - 129		231	1,2							
			MA05	235001	IV		54 - 85	231	1,5	1,5mm x 60°	12	40	49	20	20	M6
			MA06	235002			65 - 97	231	1,4							
			MA07	235003			84 - 116	229	1,3							
			MA09	235004			104 - 139	231	1,1							
SMW- Autoblok	BB-M 210	210	KK20	227111	II	23 - 52		256	2,2	1,5mm x 60°	14	40	49	—	25	—
			LB03	234006	III	46 - 76		254	1,9	1,5mm x 60°	14	40	49	20	25	M6
			LB06	234007		74 - 103		258	1,8							
			LB09	234008		102 - 132		257	1,7							
			LB12	234009		130 - 160		256	1,7							
			LB15	234028		162 - 194		286	1,8							

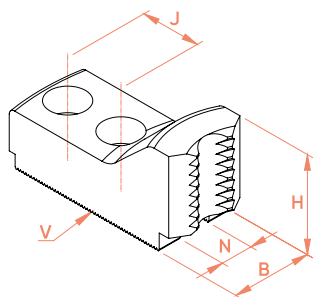
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Greiferbacken hart, Spitzverzahnung metrisch

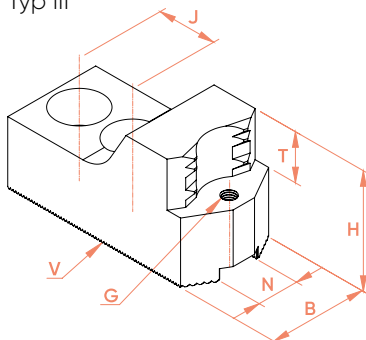
Adjustagrip hard jaws, metric serration

Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N mm	B mm	H mm	T mm	J mm	G mm
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
SMW- Autoblok	BB-M 210	210	MB06	235005	IV		63 - 93	258	1,9	1,5mm x 60°	14	40	49	20	25	M6
			MB08	235006			93 - 123	258	1,8							
			MB11	235007			126 - 155	255	1,7							
			MB14	235008			155 - 186	265	1,7							
SMW- Autoblok	BB-M 250	254	KK25	227112	II	38 - 63		292	2,3	1,5mm x 60°	16	40	49	—	30	—
			LC04	234010	III	58 - 83		293	2,9							
			LC06	234024		78 - 103		292	2,9							
			LC08	234011		97 - 123		291	2,7							
			LC10	230025		117 - 143		288	2,7	1,5mm x 60°	16	40	59	25	30	M8
			LC13	234012		140 - 167		299	2,6							
			LC17	234013		183 - 211		299	2,6							
			LC20	234029		219 - 247		332	2,8							
			MC06	235009	IV	75 - 101		290	2,7	1,5mm x 60°	16	40	59	25	30	M6
			MC10	235010		115 - 141		290	2,5							
			MC14	235011		155 - 183		289	2,3							
			MC18	235012		196 - 222		288	2,2							
SMW- Autoblok	BB-M 255	255	KK25	227112	II	42 - 68		296	2,3	1,5mm x 60°	16	40	49	—	30	—
			LC04	234010	III	62 - 88		298	2,9							
			LC06	234024		82 - 109		298	2,9							
			LC08	234011		101 - 128		296	2,7	1,5mm x 60°	16	40	59	25	30	M6
			LC10	230025		123 - 151		296	2,7							
			LC13	234012		145 - 172		304	2,6							
			LC17	234013		188 - 216		304	2,6							
			LC20	234029		224 - 252		337	2,8	1,5mm x 60°	16	40	59	25	30	M6
			MC06	235009	IV	80 - 107		296	2,7							
			MC10	235010		119 - 147		296	2,5							
			MC14	235011		160 - 188		294	2,3							
			MC18	235012		200 - 228		294	2,2							
SMW- Autoblok	BB-M 315	315	KK40	227114	II	65 - 101		368	3,7	1,5mm x 60°	21	50	49	—	30	—
			LE05	234018	III	89 - 125		369	4,4	1,5mm x 60°	21	50	59	25	30	M8
			LE10	234019		145 - 181		369	3,4							
			LE16	234020		210 - 246		368	3,0							
			LE23	234021		277 - 314		418	3,4							

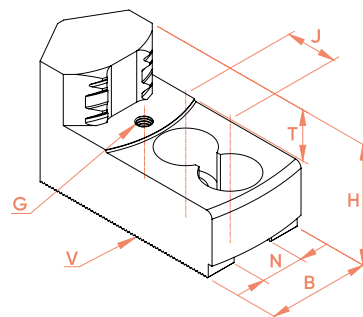
Typ II



Typ III



Typ IV



Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
SMW- Autoblok	BB-M 315	315	ME08	235017	IV		122 - 158	367	3,9	1,5mm x 60°	21	50	59	25	30	M8
			ME14	235018			186 - 222	368	3,0							
			ME20	235019			245 - 282	368	3,0							
SMW- Autoblok	BH-M / BHM-FC 165	165	KK16	227110	II	15 - 38		214	1,5	1,5mm x 60°	12	35	39	—	20	—
			LA03	234001	III	29 - 52		218	1,7							
			LA04	234002		43 - 71		220	1,4							
			LA06	234003		57 - 86		220	1,4							
			LA07	234004		71 - 101		219	1,4							
			LA09	234005		87 - 117		220	1,2							
			MA05	235001	IV		48 - 73	220	1,5	1,5mm x 60°	12	40	49	20	20	M6
			MA06	235002			56 - 85	220	1,4							
			MA07	235003			74 - 104	218	1,3							
			MA09	235004			97 - 127	220	1,1							
SMW- Autoblok	BH-M / BHM-FC 210	210	KK20	227111	II	16 - 51		255	2,2	1,5mm x 60°	14	40	49	—	25	—
			LB03	234006	III	32 - 75		253	1,9							
			LB06	234007		60 - 102		258	1,8							
			LB09	234008		88 - 132		257	1,7							
			LB12	234009		115 - 159		255	1,7							
			LB15	234028		148 - 185		285	1,8							
			MB06	235005	IV		51 - 92	257	1,9	1,5mm x 60°	14	40	49	20	25	M6
			MB08	235006			79 - 122	257	1,8							
			MB11	235007			111 - 155	255	1,7							
			MB14	235008			140 - 185	264	1,7							
SMW- Autoblok	BH-M / BHM-FC 250	254	KK25	227112	II	29 - 62		291	2,3	1,5mm x 60°	16	40	59	25	30	—
			LC04	234010	III	48 - 82		292	2,9							
			LC06	234024		68 - 102		291	2,9							
			LC08	234011		86 - 122		290	2,7							
			LC10	230025		106 - 142		287	2,7							
			LC13	234012		130 - 166		298	2,6							
			LC17	234013		173 - 209		297	2,6							

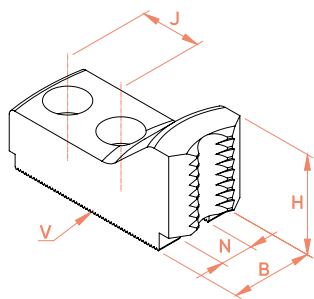
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Greiferbacken hart, Spitzverzahnung metrisch

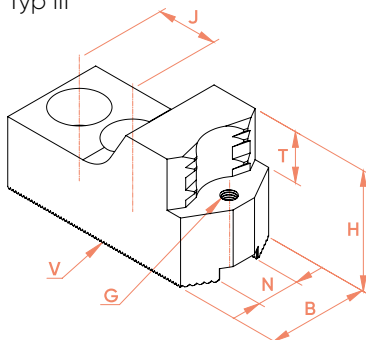
Adjustagrip hard jaws, metric serration

Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
SMW- Autoblok	BH-M / BHM-FC 250	254	MC06	235009	IV		65 - 100	289	2,7	1,5mm x 60°	16	40	59	25	30	M6
			MC10	235010			104 - 140	289	2,5							
			MC14	235011			145 - 182	288	2,3							
			MC18	235012			185 - 221	287	2,2							
SMW- Autoblok	BH-M / BHM-FC 315	315	KK40	227114	II	37 - 102		369	3,7	1,5mm x 60°	21	50	49	—	30	—
			LE05	234018	III	60 - 126		370	4,4							
			LE10	234019		115 - 182		370	3,4	1,5mm x 60°	21	50	59	25	30	M8
			LE16	234020		179 - 246		368	3,0							
			LE23	234021		246 - 315		419	3,4							
			ME08	235017	IV		92 - 159	368	3,9	1,5mm x 60°	21	50	59	25	30	M8
			ME14	235018			156 - 223	369	3,0							
			ME20	235019			215 - 283	369	3,0							
			ME26	235020			275 - 320	420	3,2							
SMW- Autoblok	BH-M / BHM-FC 400	390	LF05	234022	III	63 - 122		446	9,3	1,5mm x 60°	22	60	79	33	43	M8
			LF10	234023		115 - 177		447	8,3							
			LF16	234034		177 - 239		444	6,0							
			LF22	234035		237 - 300		443	5,6							
			LF28	234026		296 - 360		464	6,0							
			LF34	234027		356 - 400		523	7,8							
			MF10	235021	IV		116 - 177	446	8,8	1,5mm x 60°	22	60	79	33	43	M8
			MF16	235022			177 - 239	443	7,1							
			MF22	235023			239 - 303	443	4,1							
			MF28	235024			297 - 360	441	4,1							
			MF34	235025			356 - 400	494	7,1							
SMW- Autoblok	BH-M 450	450	LF05	234022	III	63 - 181		506	9,3	1,5mm x 60°	22	60	79	33	43	M8
			LF10	234023		115 - 235		506	8,3							
			LF16	234034		177 - 298		504	6,0							
			LF22	234035		237 - 360		504	5,6							
			LF28	234026		296 - 420		526	6,0							
			LF34	234027		356 - 460		584	7,8							

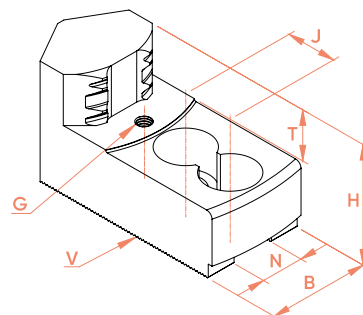
Typ II



Typ III



Typ IV



Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
SMW- Autoblok	BH-M 450	450	MF10	235021	IV		116 - 235	505	8,8	1,5mm x 60°	22	60	79	33	43	M8
			MF16	235022			177 - 299	505	7,1							
			MF22	235023			239 - 362	503	4,1							
			MF28	235024			297 - 420	503	4,1							
			MF34	235025			356 - 460	555	7,1							
SMW- Autoblok	HFKN-M 165	165	KK16	227110	II	13 - 34		209	1,5	1,5mm x 60°	12	35	39	—	20	—
			LA03	234001	III	26 - 48		213	1,7							
			LA04	234002		29 - 67		215	1,4							
			LA06	234003		50 - 82		214	1,4							
			LA07	234004		64 - 96		213	1,4							
			LA09	234005		62 - 113		214	1,2							
			MA05	235001	IV		45 - 69	215	1,5	1,5mm x 60°	12	40	49	20	20	M6
			MA06	235002			47 - 81	214	1,4							
			MA07	235003			67 - 100	213	1,3							
			MA09	235004			72 - 123	214	1,1							
SMW- Autoblok	HFKN-M 210	215	KK20	227111	II	16 - 68		270	2,2	1,5mm x 60°	14	40	49	—	25	—
			LB03	234006	III	33 - 92		269	1,9							
			LB06	234007		62 - 119		273	1,8							
			LB09	234008		89 - 149		273	1,7							
			LB12	234009		116 - 176		271	1,7							
			LB15	234028		150 - 210		302	1,8							
			MB06	235005	IV		51 - 109	273	1,9	1,5mm x 60°	14	40	49	20	25	M6
			MB08	235006			80 - 139	273	1,8							
			MB11	235007			113 - 172	271	1,7							
			MB14	235008			142 - 202	280	1,7							
SMW- Autoblok	HFKN-M 260	260	KK25	227112	II	29 - 84		311	2,3	1,5mm x 60°	16	40	49	—	30	—
			LC04	234010	III	48 - 103		312	2,9							
			LC10	230025		109 - 166		310	2,7							
			LC17	234013		173 - 232		319	2,6							
			LC20	234029		209 - 267		351	2,8							

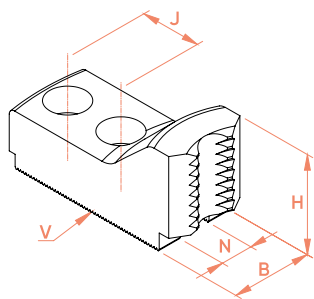
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Greiferbacken hart, Spitzverzahnung metrisch

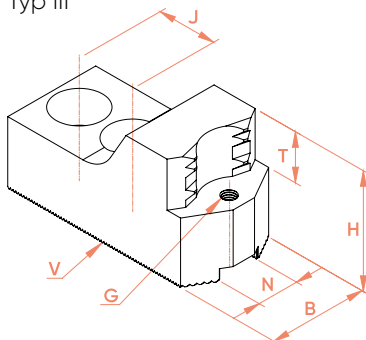
Adjustagrip hard jaws, metric serration

Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
SMW- Autoblok	HFKN-M 260	260	MC06	235009	IV		65 - 122	310	2,7	1,5mm x 60°	16	40	59	25	30	M6
			MC10	235010			105 - 162	310	2,5							
			MC14	235011			146 - 204	309	2,3							
			MC18	235012			185 - 244	309	2,2							
SMW- Autoblok	HFKN-M 315	315	KK40	227114	II	46 - 114		381	3,7	1,5mm x 60°	21	50	49	—	30	—
			LE05	234018	III	69 - 138		381	4,4	1,5mm x 60°	21	50	59	25	30	M8
			LE10	234019		124 - 194		382	3,4	1,5mm x 60°	21	50	59	25	30	M8
			LE16	234020		188 - 259		380	3,0							
			LE23	234021		253 - 320		429	3,4							
			ME08	235017	IV		101 - 171	380	3,9							
			ME14	235018			165 - 236	381	3,0	1,5mm x 60°	21	50	59	25	30	M8
			ME20	235019			224 - 295	381	3,0							
SMW- Autoblok	NT-M 170	172	ME26	235020			285 - 320	432	3,2	1,5mm x 60°	12	35	39	—	20	—
			KK16	227110	II	13 - 45		221	1,5							
			LA03	234001	III	26 - 59		224	1,7							
			LA04	234002		43 - 78		226	1,4							
			LA06	234003		56 - 93		226	1,4	1,5mm x 60°	12	40	49	20	20	M6
			LA07	234004		71 - 107		225	1,4							
			LA09	234005		87 - 124		226	1,2							
			MA05	235001	IV		45 - 80	226	1,5							
SMW- Autoblok	NT-M 215	216	MA06	235002			56 - 92	226	1,4	1,5mm x 60°	14	40	49	—	25	—
			MA07	235003			74 - 111	225	1,3							
			MA09	235004			97 - 134	226	1,1							
			KK20	227111	II	19 - 56		259	2,2							
			LB03	234006	III	41 - 80		258	1,9	1,5mm x 60°	14	40	49	20	25	M6
			LB06	234007		69 - 107		262	1,8							
			LB09	234008		98 - 136		260	1,7							
			LB12	234009		125 - 164		260	1,7	1,5mm x 60°	14	40	49	20	25	M6
			LB15	234028		158 - 197		289	1,8							
			MB06	235005	IV		59 - 96	261	1,9							
			MB08	235006			88 - 127	262	1,8	1,5mm x 60°	14	40	49	20	25	M6
			MB11	235007			121 - 160	260	1,7							
			MB14	235008			150 - 189	267	1,7							

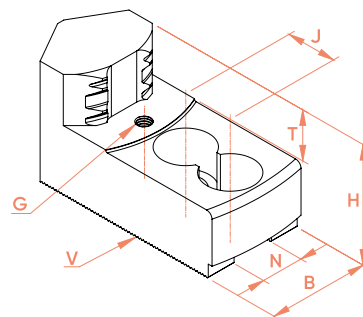
Typ II



Typ III



Typ IV



Futterher- steller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	V	N	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm									
SMW- Autoblok	NT-M 260	262	KK25	227112	II	23 - 73		301	2,3	1,5mm x 60°	16	40	49	—	30	—
			LC04	234010	III	40 - 93		302	2,9	1,5mm x 60°	16	40	59	25	30	M8
			LC08	234011		77 - 133		301	2,7							
			LC13	234012		120 - 177		309	2,6							
			LC17	234013		163 - 221		308	2,6							
			LC20	234029		199 - 257		341	2,8							
			MC06	235009	IV		56 - 112	300	2,7	1,5mm x 60°	16	40	59	25	30	M6
			MC10	235010			95 - 152	300	2,5							
			MC14	235011			136 - 193	299	2,3							
			MC18	235012			175 - 233	299	2,2							
SMW- Autoblok	NT-M 315	315	KK40	227114	II	27 - 100		367	3,7	1,5mm x 60°	21	50	49	—	30	—
			LE05	234018	III	48 - 124		368	4,4	1,5mm x 60°	21	50	59	25	30	M8
			LE10	234019		101 - 180		368	3,4							
			LE16	234020		165 - 245		367	3,0							
			LE23	234021		230 - 311		415	3,4							
			ME08	235017	IV		78 - 157	366	3,9	1,5mm x 60°	21	50	59	25	30	M8
			ME14	235018			141 - 222	368	3,0							
			ME20	235019			200 - 281	367	3,0							
			ME26	235020			261 - 320	418	3,2							
SMW- Autoblok	NT-M 400	390	LF05	234022	III	50 - 120		444	9,3	1,5mm x 60°	22	60	79	33	43	M8
			LF10	234023		100 - 174		445	8,3							
			LF16	234034		161 - 237		442	6,0							
			LF22	234035		221 - 298		441	5,6							
			LF28	234026		280 - 357		461	6,0							
			LF34	234027		340 - 400		520	7,8							
			MF10	235021	IV		100 - 174	444	8,8	1,5mm x 60°	22	60	79	33	43	M8
			MF16	235022			161 - 237	441	7,1							
			MF22	235023			223 - 300	440	4,1							
			MF28	235024			280 - 358	439	4,1							
			MF34	235025			340 - 400	491	7,1							

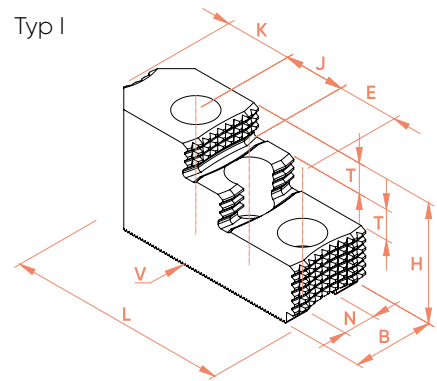
UNIJaws®

Umkehrbare Aufsatzbacken hart, Spitzverzahnung zoll

Hard reversible jaws, inch serration

B	H	L	T	N	V	K	J	E	Masse pro Satz mass pro set	Backentyp jaw type	Ident-Nr. ident-no.	Werkstoff material	Type type	Schraube bolt
mm	mm	mm	mm	mm		mm	mm	mm	kg					
24	34	50	6,5	8	1/16" x 90°	9,7	14,3	14,3	0,45	HB211	224001	16MnCr5	I	M9x1
25	38	66,5	6,5	10	1/16" x 90°	13	19	17	0,63	HB232	224002	16MnCr5	I	M10
30	38	57	10	12	1/16" x 90°	16	15	15	0,7	GY13	221001	16MnCr5	I	M8
30	44	79	8	12	1/16" x 90°	14	21	21	1,0	HB237	224003	16MnCr5	I	M12
32	46	68	11	14	1/16" x 90°	0	22	22	1,5	GV16	227301	16MnCr5	I	M10
40	60	112	12	16	1/16" x 90°	21	29	29	2,9	HB240	224004	16MnCr5	I	M16
35	44	67	10	17	1/16" x 90°	18	19	—	1,3	GY16	221005	16MnCr5	I	M12
40	49	74	12	17	1/16" x 90°	18	19	19	1,3	GY20	221010	16MnCr5	I	M12

Typ I



Berg	Forkardt	Röhm	Schunk	SMW-Autoblok
KH 110				
KH 140 KH 160 KHL 160				
KF 130		KFD 130 KFH 140 LVE 125 LVE 160		AL-D 125 AN-D 125 BB-D 140 BH-D 130 GHDN 125 SP 125
KH 175 KH 200 KHL 200				
			ROTA NCK plus 165 ROTA NCK plus 185 ROTA NCR 250 ROTA NCR 315 ROTA TP 160	AL-D 165 AN-D 165 AP-D 170 BB-D 175 BH-D 165 BHD-FC 165 GHD-FC 165 GHDN 165 HFKN-D 165 HYND-S 180 NT-D 170 SP 160
KH 250 KH 315 KHL 250 KHL 315				
HES 160 HES 200 HESF 160 HESF 200 KF 160 KF 200 KHFF 200	KG 200 KGH 160 KGH 175 KGH 200 KGHF 160 KGHF 175 KGHF 200 KL 160 KL 200 KLNC 200 KP 200 KS 160 KS 200 KS 250 KSF 175 KSF 200 KSH 160 KSH 200 KSHF 200 KT 160 KT 200 KTG 160 KTG 200 KTH 160 KTH 175 KTH 200 KTN 160 KTN 200 NH 160 NH 175 NH 200 NHF 160 NHF 175 NHF 200 QLC 160 QLC 175 QLC 200 QLC-KS 200 QLK 160 QLK 175 QLK 200 QLK-KS 200 UVE 160 UVE 200 UVE 250	KFD 160 KFD 200 KFD-AF 160 KFD-HE 210 KFD-HF 160 KFD-HF 200 KFD-HS 200 KFD-HS 250 KFH 160 KFH 200 KFH-F 160 KFH-F 200 KFH-G 160 KFH-G 200 KFH-HC 160 KFH-NC 160 KFH-NC 200 LVE 200	ROTA NC 165 ROTA NC 210 ROTA NCD 210 ROTA NCD 215 ROTA NCF 165 ROTA NCF 210 ROTA NCK plus 210 ROTA NCK plus 250 ROTA NCO 165 ROTA NCO 210	AL-D 210 AN-D 210 AP-D 215 AP-D 260 APL-D 215 APL-D 260 BB-D 210 BH-D 210 BHD-FC 210 GHD 210 GHD-FC 210 GHDN 210 HD-B 220 HDL 200 HDN 200 HDN 220 HFK 160 HFK 200 HFKN-D 210 HFKS 160 HFKS 200 LP 205 NT-D 215 NT-D 260 SP 200 SP 240
HES 200 HESF 200 KF 200 KHFF 200	KG 200 KGH 200 KGHF 200 KL 200 KLNC 200 KP 200 KS 200 KS 250 KSF 200 KSH 200 KSHF 200 KT 200 KTG 200 KTH 200 KTN 200 NH 200 NHF 200 QLC 200 QLC-KS 200 QLC-KS 250 QLK 200 QLK-KS 200 QLK-KS 250 UVE 200 UVE 250	KFD 200 KFD-AF 200 KFD-HE 200 KFD-HE 210 KFD-HF 200 KFD-HS 250 KFH 200 KFH-F 200 KFH-G 200 KFH-NC 200 KFL 250 LVE 200	ROTA NC 210 ROTA NCD 210 ROTA NCD 215 ROTA NCF 210 ROTA NCK 210 ROTA NCK 250 ROTA NCK plus 210 ROTA NCK plus 250 ROTA NCO 210	AL-D 210 AN-D 210 AP-D 215 AP-D 260 APL-D 215 APL-D 260 BB-D 210 BH-D 210 BHD-FC 210 GHD 210 GHD-FC 210 GHDN 210 HD-B 220 HDL 200 HDN 200 HDN 220 HFK 160 HFK 200 HFKN-D 210 HFKS 160 HFKS 200 LP 205 NT-D 215 NT-D 260 SP 200 SP 240

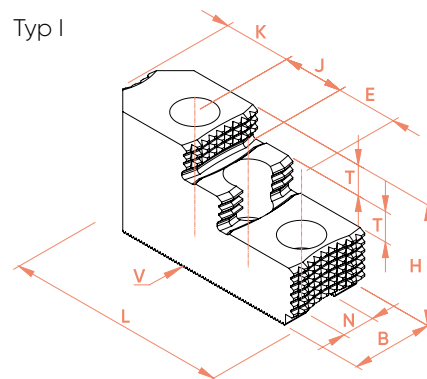
UNIJaws®

Umkehrbare Aufsatzbacken hart, Spitzverzahnung zoll

Hard reversible jaws, inch serration

B	H	L	T	N	V	K	J	E	Masse pro Satz <i>mass pro set</i>	Backentyp <i>jaw type</i>	Ident-Nr. <i>ident-no.</i>	Werkstoff <i>material</i>	Typ <i>type</i>	Schraube <i>bolt</i>
mm	mm	mm	mm	mm		mm	mm	mm	kg					
50	75	144	15	20	1/16" x 90°	29	38	38	5,9	HB228	224005	16MnCr5	I	M20
50	59	104	14	21	1/16" x 90°	34	25	25	3,4	GY25	221015	16MnCr5	I	M16
60	75	126	18	25,5	3/32" x 90°	38	31	31	6,4	GY40	221025	16MnCr5	I	M20

Typ I



Berg	Forkardt	Röhm	Schunk	SMW-Autoblok
KH 400 KH 500 KH 630 KHL 400				
HES 250 HES 315 HESF 250 HESF 315 KF 250 KF 315 KHFF 250 KHFF 315	KG 250 KG 315 KL 250 KLNC 250 KLNC 315 KP 250 KP 315 KS 315 KS 400 KSH 250 KSH 315 KSH 400 KSHF 250 KSHF 315 KSHF 400 KT 250 KT 315 KTG 250 KTG 315 KTN 250 KTN 315 NH 250 NH 315 NHF 250 NHF 315 QLC 250 QLC 315 QLC-KS 315 QLC-KS 400 QLK 250 QLK 315 QLK-KS 315 QLK-KS 400 UVE 315	KFD 250 KFD 315 KFD-AF 250 KFD-AF 315 KFD-HE 254 KFD-HE 315 KFD-HF 250 KFD-HF 315 KFD-HS 315 KFH 250 KFH 315 KFH-F 250 KFH-F 315 KFH-G 250 KFH-G 315 KFH-NC 250 KFH-NC 315 KFL 315 KFL 400 LVE 250 LVE 305 LVE 315	ROTA NC 250 ROTA NC 315 ROTA NC plus 260 ROTA NC plus 315 ROTA NCD 250 ROTA NCD 255 ROTA NCD 315 ROTA NCF 250 ROTA NCF 315 ROTA NCF plus 260 ROTA NCF plus 315 ROTA NCK plus 315 ROTA NCO 260 ROTA NCO 315 ROTA NCR 400 ROTA NCR 500 ROTA NCR 630 ROTA NCR 800 ROTA TP 250 ROTA TP 315 ROTA TP 350	AL-D 250 AL-D 315 AN-D 250 AN-D 315 AP-D 315 APL-D 315 BB-D 250 BB-D 315 BH-D 250 BH-D 315 BHD-FC 250 BHD-FC 315 GHD 250 GHD 305 GHD 400 GH-D 400 GHD-FC 250 GHD-FC 305 GHD-FC 315 GHD-FC 400 GHDN 250 GHDN 305 GHDN 315 GHDN 400 HD-B 300 HDL 250 HDL 315 HDL 400 HDN 250 HDN 315 HDN 400 HFK 250 HFK 270 HFK 315 HFKN-D 260 HFKN-D 315 HFKS 250 HFKS 270 HFKS 315 LP 250 NT-D 315 SP 250 SP 280 SP 315 SP 350
HES 400 HES 500 HES 630 HESF 400 HESF 500 HESF 630 KF 400 KF 500 KF 630 KHFF 400 KHFF 500 KHFF 630	KG 400 KG 500 KL 400 KL 500 KLNC 400 KLNC 500 KP 400 KP 500 KS 500 KS 630 KSH 500 KSHF 630 KT 400 KT 500 KT 630 KTG 400 KTG 500 KTG 630 KTN 400 KTN 500 KTN 630 NH 400 NH 500 NH 630 NHF 400 NHF 500 NHF 630 QLC 400 QLK 400 UVE 400 UVE 500 UVE 630 UVE 800	KFD 400 KFD 500 KFD 630 KFD 800 KFD-HE 400 KFD-HF 400 KFD-HF 500 KFD-HF 630 KFD-HS 400 KFD-HS 500 KFH 400 KFH 500 KFH-F 400 KFH-F 500 KFH-G 400 KFH-G 500 KFH-NC 400 KFH-NC 500 KFL 500 KFL 600 LVE 400 LVE 500 LVE 630 LVE 800	ROTA NC 400 ROTA NC 500 ROTA NC 630 ROTA NC 800 ROTA NCD 400 ROTA NCD 500 ROTA NCD 630 ROTA NCF 400 ROTA NCF 500 ROTA NCF 630 ROTA NCO 400 ROTA NCO 500 ROTA NCO 630 ROTA NCO 800 ROTA NCR 1000 ROTA TB 400-115 ROTA TB 400-140 ROTA TB 470-185 ROTA TB 500-160 ROTA TB 500-205 ROTA TB 500-230 ROTA TB 600-275 ROTA TB 610-260 ROTA TB-LH 400-140 ROTA TB-LH 470-185 ROTA TB-LH 500-205 ROTA TB-LH 500-230 ROTA TB-LH 600-275 ROTA TB-LH 610-260	AL-D 400 AN-D 400 AP-D 400 APL-D 400 BB-N 400 BB-N 460 BB-N 470 BB-N 500 BB-N 600 BB-N ES 400 BB-N ES 460 BB-N ES 470 BB-N ES 500 BB-N ES 600 BH-D 400 BH-D 450 BH-D 500 BH-D 630 BH-D 800 BHD-FC 400 BHD-FC 500 BHD-FC 630 GHD 500 GH-D 500 GHD 610 GH-D 610 GHD 640 GHD 800 GH-D 800 GHDN 500 GHDN 610 GHDN 640 GHDN 800 HFK 400 HFK 500 HFKN-D 400 HFKN-D 500 HFKS 400 HFKS 500 IL-D 500 IL-D 630 IL-D 800 IN-D 500 IN-D 630 IN-D 800 NT-D 400

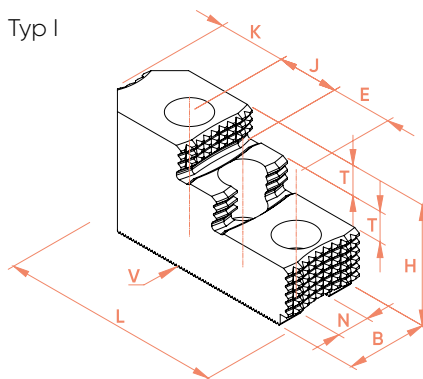
UNIJaws®

Umkehrbare Aufsatzbacken hart, Spitzverzahnung metrisch

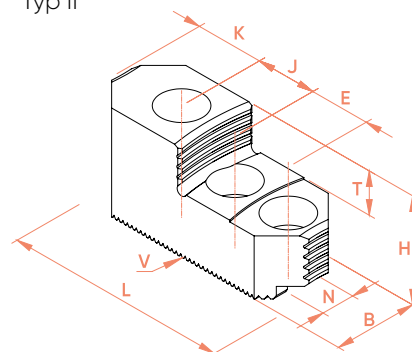
Hard reversible jaws, metric serration

B	H	L	T	N	V	K	J	E	Masse pro Satz mass pro set	Backentyp jaw type	Ident-Nr. ident-no.	Werkstoff material	Typ type	Schraube bolt
mm	mm	mm	mm	mm	mm	mm	mm	mm	kg					
25	30	53	10	10	1,5 x 60°	13	14	—	0,8	GT04	227008	16MnCr5	II	M8
25	32	57	13	10	1,5 x 60°	10,8	18	—	0,8	GT05	227001	16MnCr5	II	M8
25	32	57	13	10	1,5 x 60°	20,3	18	18	0,9	VU210	852210	16MnCr5	II	M8
35	38	66	14	12	1,5 x 60°	17,3	20	—	1,0	GT06	227002	16MnCr5	II	M10
35	50	68	11	12	1,5 x 60°	28,5	20	20	2,5	VU212	852212	16MnCr5	I	M10
35	50	86	11	14	1,5 x 60°	15,9	25	25	1,5	GT08	227003	16MnCr5	I	M12
40	60	99	15	16	1,5 x 60°	21	30	30	2,9	GT10	227004	16MnCr5	I	M12

Typ I



Typ II



	Auto Strong	Forkardt	HOWA	HWR	Kitagawa	mmk / Matsumoto	Röhm	Samchully	Schunk	SMW-Autoblok
	N-204 N-205		HO1MA4		B-204 B-205 HJ-4 N-04 NL-04		KFD-HE 130	HC-04 HCL-04 HS-04 HS-05		
					B-05 HOB-05					
				VD016 VT016 VT-S 016						
	N-206 NB-206 V-206	QLC 160 QLC 175 QLK 160 QLK 175	HO15M6 HO15MA6 HO22M6 HO27M6 HO37M6 HO7MA6		B-06 B-07 B-206 BB-06 BB-206 BL-206 HOB-06 HOH-06 HOH-106 HOH-206 ML-06 N-06 NL-06		KFD-HE 170	HC-06 HCH-06 HCL-06 HH-206 HS-06 MH-206	ROTA NC 165 ROTA NC plus 185 ROTA NCD 165 ROTA NCD 185 ROTA NCF 165 ROTA NCF 185 ROTA NCF plus 185 ROTA NCK 165	AL-M 165 AN-M 165 AP-M 170 BB-M 165 BB-M 175 BH-M 165 BHM-FC 165 HFKN-M 165 NT-M 170
				VD021 VK021 VT021 VT-S 021						
	N-208 NB-208 V-208	QLC 200 QLK 200	HO15M8 HO7MA8		B-08 B-208 BB-08 BB-208 BL-208 HOB-08 HOH-08 HOH-108 HOH-208 ML-08 N-08 NL-08 QJR08	ZA6-8-52 ZA6-8-66	KFD-HE 210	HC-08 HCH-08 HCL-08 HH-208 HS-08 MH-208	ROTA NC 210 ROTA NC plus 215 ROTA NCD 210 ROTA NCF 210 ROTA NCF plus 215 ROTA NCK 210	AL-M 210 AN-M 210 APL-M 215 AP-M 215 BB-M 210 BH-M 210 BHM-FC 210 HFKN-M 210 NT-M 215
	N-210 NB-210 V-210	QLC 250 QLK 250			B-10 B-210 BB-10 BB-210 BL-210 HOB-10 HOH-10 HOH-210 N-10 NL-10 QJR10	ZA6-10-75 ZA6-10-78	KFD-HE 254	HC-10 HCH-10 HCL-10 HH-210 HS-10 MH-210	ROTA NC 250 ROTA NC plus 260 ROTA NCD 250 ROTA NCF 250 ROTA NCF plus 260 ROTA NCK 250	AL-M 250 AN-M 250 APL-M 260 AP-M 260 BB-M 250 BH-M 250 BHM-FC 250 HFKN-M 260 NT-M 260

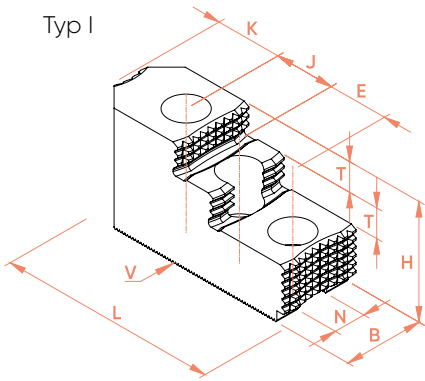
UNIJaws®

Umkehrbare Aufsatzbacken hart, Spitzverzahnung metrisch

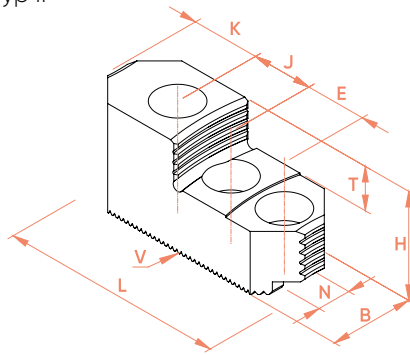
Hard reversible jaws, metric serration

B	H	L	T	N	V	K	J	E	Masse pro Satz mass pro set	Backentyp jaw type	Ident-Nr. ident-no.	Werkstoff material	Typ type	Schraube bolt
mm	mm	mm	mm	mm	mm	mm	mm	mm	kg					
40	50	99	15	16	1,5 x 60°	33,1	30	30	4,5	VU216	852216	16MnCr5	I	M12
50	60	98	22	18	1,5 x 60°	20,3	30	—	3,6	GT12	227005	16MnCr5	II	M14
50	60	98	22	21	1,5 x 60°	22	30	—	3,6	GT13	227006	16MnCr5	III	M16
50	60	98	22	21	1,5 x 60°	48,5	30	30	7,0	VU221	852221	16MnCr5	III	M16
64	89	140	22	22	1,5 x 60°	26,3	43	43	9,0	GT15	227007	16MnCr5	I	M20

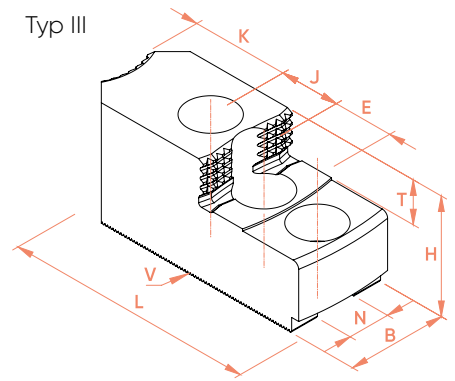
Typ I



Typ II



Typ III



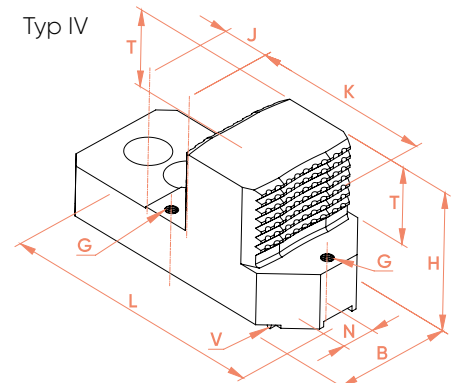
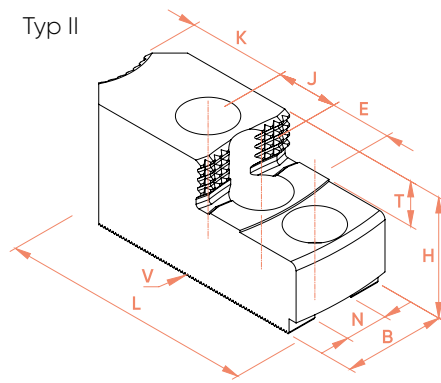
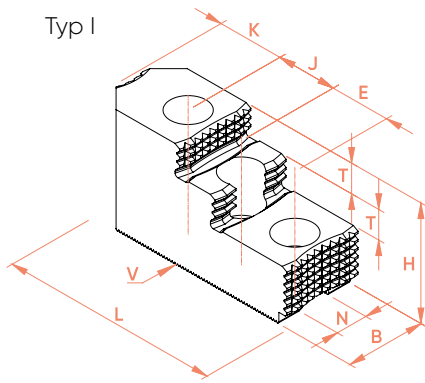
	Auto Strong	Forkardt	HOWA	HWR	Kitagawa	mmk / Matsumoto	Röhm	Samchully	Schunk	SMW- Autoblok
				VD026 VD031 VK026 VK031 VK-S 026 VL042 VT026 VT031 VT-S 026 VT-S 031						
	V-212				B-12 HOB-12 HOH-12 N-12 NL-12	ZA6-12-78 ZA8-12-85 ZA8-12-93		HC-12 HCH-12 HCL-12	ROTA NC 315 ROTA NCF 315 ROTA NCK 315	
	N-212 NB-212	QLC 315 QLC 400 QLK 315 QLK 400			B-212 BB-212 BL-212 QJR12		KFD-HE 315		ROTA NC plus 315 ROTA NCD 315 ROTA NCF plus 315 ROTA NCK 315 ROTA NCK plus 315	AL-M 315 AN-M 315 APL-M 315 AP-M 315 BB-M 305 BB-M 315 BH-M 315 BHM-FC 315 GH-M 400 HFKN-M 315 NT-M 315
				VD040 VK040 VK-S 040 VT040 VT-S 040						
	N-215				B-15 B-18 B-215 BB-218 BB-221 HJA-11-15 HJA-8-18 HJA-8-21 HLA-8-18 HLA-8-21 HOB-15 HOB-18 HOH-15 HOH-18 N-15 N-18 NL-18 NV-15 NV-18		HC-15 HC-18 HCH-15 HCH-18	ROTA NC 400 ROTA NCF 400	AL-M 400 AN-M 400 APL-M 400 AP-M 400 BB-M 400 BH-M 400 BH-M 450 BHM-FC 400 NT-M 400	

UNIJaws®

Umkehrbare Aufsatzbacken hart, Spitzverzahnung metrisch

Hard reversible jaws, metric serration

B	H	L	T	N	V	K	J	E	Masse pro Satz <i>mass pro set</i>	Backentyp <i>jaw type</i>	Ident-Nr. <i>ident-no.</i>	Werkstoff <i>material</i>	Typ <i>type</i>	Schraube <i>bolt</i>
mm	mm	mm	mm	mm	mm	mm	mm	mm	kg					
63	90	178	40	25	3 x 60°	29	60	60	11,4	GT21	227021	16MnCr5	II	M20
60	90	178	30	25	3 x 60°	39,5	60	60	22,0	VU225	852225	16MnCr5	I	M20
48	55	124,5	25	16	Modul 2	79,5	30	—	5,6	VU416	852416	16MnCr5	IV	M12
75	90	169	50	21	Modul 2	114,5	30	—	18,2	VU421	852421	16MnCr5	IV	M16



	Auto Strong	Forkardt	HOWA	HWR	Kitagawa	mmk / Matsumoto	Röhm	Samchully	Schunk	SMW- Autoblok
	V-221 V-224				B-21 B-24 HJ-18 HJ-21 HJ-24 HOB-21 HOB-24 N-21 N-24 NV-21 NV-24 NV-28 NV-32 NV-36 NV-40			HC-21 HC-24 HCH-21 HCH-24 HH-221 HH-224 MH-221 MH-224		
				VD050 VD063 VD080 VD100 VD120 VK050 VK063 VK080 VK-S 050 VK-S 063 VK-S 080 VK-S 100 VT-S 050 VT-S 063 VT-S 080 VT-S 100						
				VL060 VL070						
				VL100 VL120 VL140 VL160 VL180 VL200						



Greiferbacken und harte umkehrbare
Aufsatzbacken von HWR für alle
gängigen Backenschnellwechselfutter.

*Adjustagrip jaws and hard reversible
top jaws from HWR for all common
quick-change jaw chucks.*

Übersicht / Overview

Harte Aufsatzbacken, Kreuzversatz

Hard top jaws, tongue and groove



**Greiferbacken hart,
Kreuzversatz metrisch**

*adjustagrip hard jaws, metric
tongue and groove*

S. 264–283



**Greiferbacken hart,
Kreuzversatz für INOFlex® VF-Futter**

*adjustagrip hard jaws,
tongue and groove for
INOFlex® VF chucks*

S. 266–267



**Umkehrbare Aufsatzbacken hart,
Kreuzversatz metrisch**

*hard reversible top-jaws
metric tongue and groove*

S. 284–285

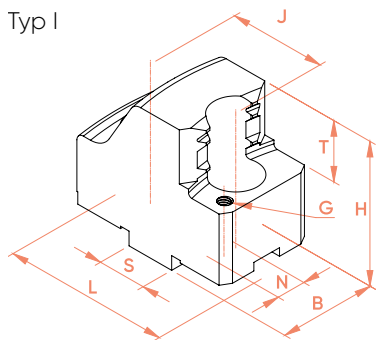
UNIJaws®

Greiferbacken hart, Kreuzversatz

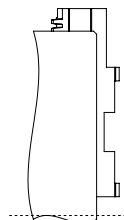
Adjustagrip hard jaws, tongue and groove

Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Pos	Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	N mm	S mm	B mm	H mm	T mm	J mm	G mm
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm										
Berg	KHNC 160	160	LY10	250101	I	27 — 62	— — —	1	212	1,3	8	18	30	49	20	32	M6
						47 — 90	— — —	2	241								
			LY14	250105	I	81 — 125	— — —	1	212	1,1	8	18	30	49	20	32	M6
						110 — 154	— — —	2	241								
			LY17	250108	I	124 — 168	— — —	1	212	1,4	8	18	30	49	20	32	M6
						153 — 197	— — —	2	241								
Berg	KHNC 185	185	LY10	250101	I	27 — 75	— — —	1	232	1,3	8	18	30	49	20	32	M6
						52 — 103	— — —	2	229								
			LY14	250105	I	87 — 139	— — —	1	232	1,1	8	18	30	49	20	32	M6
						116 — 168	— — —	2	228								
			LY17	250108	I	130 — 182	— — —	1	232	1,4	8	18	30	49	20	32	M6
						159 — 211	— — —	2	260								
Berg	KHNC 200	200	LY20	250110	I	27 — 65	— — —	1	250	1,3	10	20	30	49	20	40	M6
						65 — 118	— — —	2	303								
			LY22	250112	I	46 — 97	— — —	1	250	1,3	10	20	30	49	20	40	M6
						97 — 150	— — —	2	303								
			LY25	250115	I	81 — 133	— — —	1	250	1,2	10	20	30	49	20	40	M6
						133 — 187	— — —	2	303								
Berg	KHNC 250	250	LY30	250120	I	33 — 100	— — —	1	320	2,4	12	20	40	59	25	40	M6
						93 — 172	— — —	2	392								
			LY32	250122	I	60 — 137	— — —	1	320	2,3	12	20	40	59	25	40	M6
						130 — 209	— — —	2	392								
			LY35	250125	I	111 — 190	— — —	1	320	2,0	12	20	40	59	25	40	M6
						183 — 263	— — —	2	392								
Berg	KHNC 315	315	LY30	250120	I	33 — 172	— — —	1	392	2,4	12	20	40	59	25	40	M6
						93 — 243	— — —	2	404								
			LY32	250122	I	61 — 209	— — —	1	392	2,3	12	20	40	59	25	40	M6
						130 — 281	— — —	2	404								
			LY35	250125	I	112 — 263	— — —	1	392	2,0	12	20	40	59	25	40	M6
						183 — 334	— — —	2	404								

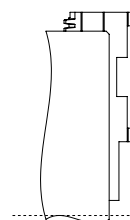
Typ I



Pos. I



Pos. II



Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Pos	Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	N	S	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm										
Berg	KHNC 400	400	LY40	250130	I	51 — 215	— — —	1	469	4,0	12	26	50	59	25	54	M8
					I	102 — 290	— — —	2	545								
			LY43	250133	I	152 — 342	— — —	1	469	3,2	12	26	50	59	25	54	M8
					I	227 — 417	— — —	2	545								
Berg	KHNC 500	500	LY50	9901053	I	78 — 296	— — —	1	612	5,6	18	30	50	78	33	60	M8
					I	149 — 410	— — —	2	607								
			LY54	250134	I	156 — 400	— — —	1	612	4,8	18	30	50	78	33	60	M8
					I	252 — 515	— — —	2	607								
Forkardt	F+ 160 F 160	160	LY10	250101	I	27 — 57	— — —	1	212	1,3	8	18	30	49	20	32	M6
					I	50 — 92	— — —	2	217								
			LY15	250106	I	92 — 125	— — —	1	212	1,1	8	18	30	49	20	32	M6
					I	118 — 160	— — —	2	217								
Forkardt	F+ 200 F 200	200	LY20	250110	I	28 — 76	— — —	1	267	1,3	10	20	30	49	20	40	M6
					I	62 — 123	— — —	2	267								
			LY25	250115	I	84 — 145	— — —	1	267	1,2	10	20	30	49	20	40	M6
					I	129 — 192	— — —	2	267								
Forkardt	F+ 250 F 250	250	LY30	250120	I	37 — 97	— — —	1	324	2,4	12	20	40	59	25	40	M6
					I	96 — 172	— — —	2	325								
			LY35	250125	I	111 — 188	— — —	1	324	2,0	12	20	40	59	25	40	M6
					I	186 — 263	— — —	2	325								
Forkardt	F+ 315 F 315	318	LY40	250130	I	55 — 126	— — —	1	388	4,0	12	26	50	59	25	54	M8
					I	100 — 203	— — —	2	394								
			LY43	250133	I	154 — 252	— — —	1	388	3,2	12	26	50	59	25	54	M8
					I	225 — 330	— — —	2	394								
Forkardt	F+ 400 F 400	400	LY50	9901053	I	86 — 193	— — —	1	509	5,6	18	30	50	78	33	60	M8
					I	169 — 312	— — —	2	509								
			LY53	9902735	I	117 — 259	— — —	1	509	4,9	18	30	50	78	33	60	M8
					I	235 — 379	— — —	2	509								
Forkardt	F+ 500 F 500 (S/N >1193650)	500	LY50	9901053	I	86 — 277	— — —	1	594	5,6	18	30	50	78	33	60	M8
					I	202 — 397	— — —	2	594								
			LY54	250134	I	187 — 381	— — —	1	594	4,8	18	30	50	78	33	60	M8
					I	306 — 501	— — —	2	594								

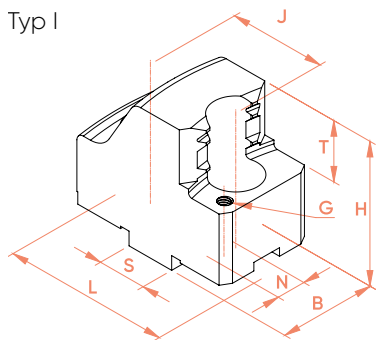
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Greiferbacken hart, Kreuzversatz

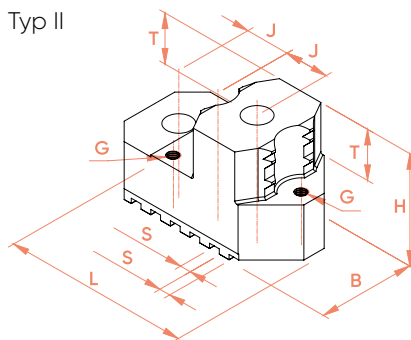
Adjustagrip hard jaws, tongue and groove

Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Pos	Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	N mm	S mm	B mm	H mm	T mm	J mm	G mm
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm										
Forkardt	FNC 175	175	LY10	250101	I	28 — 70	— — —	1	220	1,3	8	18	30	49	20	32	M6
						60 — 105	— — —	2	221								
			LY14	250105	I	88 — 134	— — —	1	220	1,1	8	18	30	49	20	32	M6
						124 — 169	— — —	2	221								
			LY17	250108	I	131 — 177	— — —	1	220	1,4	8	18	30	49	20	32	M6
						167 — 213	— — —	2	251								
Forkardt	FNC 200	200	LY20	250110	I	27 — 31	— — —	1	262	1,3	10	20	30	49	20	40	M6
						60 — 125	— — —	2	262								
			LY22	250112	I	46 — 52	— — —	1	262	1,3	10	20	30	49	20	40	M6
						92 — 157	— — —	2	262								
			LY25	250115	I	81 — 146	— — —	1	262	1,2	10	20	30	49	20	40	M6
						128 — 193	— — —	2	262								
Forkardt	FNC 250	250	LY30	250120	I	33 — 112	— — —	1	332	2,4	12	20	40	59	25	40	M6
						92 — 183	— — —	2	332								
			LY32	250122	I	59 — 149	— — —	1	332	2,3	12	20	40	59	25	40	M6
						129 — 221	— — —	2	332								
			LY35	250125	I	111 — 202	— — —	1	332	2,0	12	20	40	59	25	40	M6
						182 — 274	— — —	2	332								
Forkardt	FNC 315	315	LY30	250120	I	36 — 147	— — —	1	368	2,4	12	20	40	59	25	40	M6
						92 — 219	— — —	2	368								
			LY32	250122	I	59 — 185	— — —	1	368	2,3	12	20	40	59	25	40	M6
						129 — 257	— — —	2	368								
			LY35	250125	I	111 — 238	— — —	1	368	2,0	12	20	40	59	25	40	M6
						182 — 310	— — —	2	368								
Forkardt	FNC 400	400	LY40	250130	I	51 — 179	— — —	1	433	4,0	12	26	50	59	25	54	M8
						107 — 256	— — —	2	436								
			LY43	250133	I	156 — 305	— — —	1	433	3,2	12	26	50	59	25	54	M8
						233 — 383	— — —	2	436								
Forkardt	FNC 500	500	LY50	9901053	I	82 — 256	— — —	1	572	5,6	18	30	50	78	33	60	M8
						164 — 376	— — —	2	572								
			LY55	250135	I	161 — 373	— — —	1	572	5,1	18	30	50	78	33	60	M8
						280 — 492	— — —	2	581								

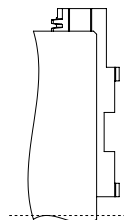
Typ I



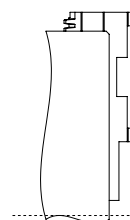
Typ II



Pos. I



Pos. II



Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Pos	Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	N	S	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm										
Forkardt	FNC 630	630	LY50	9901053	I	82 — 359	— — —	1	675	5,6	18	30	50	78	33	60	M8
					I	181 — 478	— — —	2	675								
			LY55	250135	I	179 — 475	— — —	1	675	5,1	18	30	50	78	33	60	M8
					I	297 — 595	— — —	2	683								
HWR	VF016	160	VR10	850010	II	30 — 180	87 — 180	—	260	1,7	—	5,5	36,4	38	15	22	M5
HWR	VF026	260	VR12	850012	II	52 — 255	137 — 255	—	380	4,4	—	5,5	48,4	55	25	22	M6
Röhm	DURO 160 DURO-T 160	160	LY10	250101	I	31 — 52	— — —	1	207	1,3	8	18	30	49	20	32	M6
					I	55 — 87	— — —	2	212								
			LY13	250104	I	52 — 84	— — —	1	207	1,2	8	18	30	49	20	32	M6
					I	87 — 120	— — —	2	211								
			LY14	250105	I	85 — 115	— — —	1	207	1,1	8	18	30	49	20	32	M6
					I	118 — 151	— — —	2	211								
Röhm	DURO 200 DURO-T 200	206	LY20	250110	I	29 — 69	— — —	1	259	1,3	10	20	30	49	20	40	M6
					I	64 — 116	— — —	2	259								
			LY25	250115	I	85 — 137	— — —	1	259	1,2	10	20	30	49	20	40	M6
					I	132 — 185	— — —	2	259								
Röhm	DURO 250 DURO-T 250	255	LY30	250120	I	33 — 101	— — —	1	328	2,4	12	20	40	59	25	40	M6
					I	99 — 176	— — —	2	329								
			LY34	250124	I	109 — 186	— — —	1	328	2,0	12	20	40	59	25	40	M6
					I	184 — 262	— — —	2	329								
Röhm	DURO 315 DURO-T 315	318	LY40	250130	I	52 — 132	— — —	1	394	40	12	26	50	59	25	54	M8
					I	105 — 208	— — —	2	400								
			LY42	250132	I	147 — 251	— — —	1	394	3,2	12	26	50	59	25	54	M8
					I	224 — 329	— — —	2	400								
Röhm	DURO 400 DURO-T 400	400	LY50	9901053	I	80 — 187	— — —	1	503	5,6	18	30	50	78	33	60	M8
					I	162 — 306	— — —	2	503								
			LY54	250134	I	151 — 290	— — —	1	503	4,8	18	30	50	78	33	60	M8
					I	265 — 410	— — —	2	503								

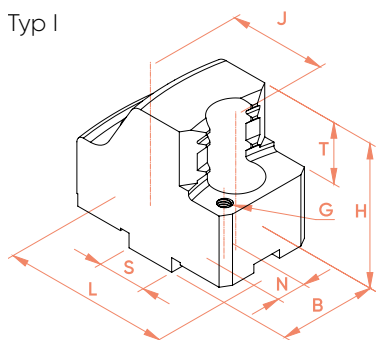
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Greiferbacken hart, Kreuzversatz

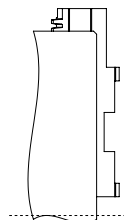
Adjustagrip hard jaws, tongue and groove

Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Pos	Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	N mm	S mm	B mm	H mm	T mm	J mm	G mm
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm										
Röhm	DURO 500 DURO-T 500	500	LY50	9901053	I	82 — 274	— — —	1	590	5,6	18	30	50	78	33	60	M8
						198 — 393	— — —	2	590								
			LY55	250135	I	195 — 390	— — —	1	590	5,1	18	30	50	78	33	60	M8
						314 — 510	— — —	2	599								
Röhm	DURO-NC 140	145	LY10	250101	I	27 — 63	— — —	1	187	1,3	8	18	30	49	20	32	M6
						53 — 98	— — —	2	223								
			LY13	250104	I	52 — 95	— — —	1	186	1,2	8	18	30	49	20	32	M6
						85 — 131	— — —	2	221								
Röhm	DURO-NC 160	160	LY10	250101	I	27 — 59	— — —	1	209	1,3	8	18	30	49	20	32	M6
						51 — 95	— — —	2	211								
			LY14	250105	I	78 — 123	— — —	1	209	1,1	8	18	30	49	20	32	M6
						114 — 159	— — —	2	211								
			LY17	250108	I	121 — 166	— — —	1	209	1,4	8	18	30	49	20	32	M6
						157 — 202	— — —	2	241								
Röhm	DURO-NC 175	175	LY10	250101	I	30 — 72	— — —	1	223	1,3	8	18	30	49	20	32	M6
						65 — 109	— — —	2	226								
			LY14	250105	I	91 — 136	— — —	1	223	1,1	8	18	30	49	20	32	M6
						128 — 174	— — —	2	226								
			LY17	250108	I	134 — 179	— — —	1	223	1,4	8	18	30	49	20	32	M6
						172 — 217	— — —	2	255								
Röhm	DURO-NC 200	200	LY20	250110	I	30 — 72	— — —	1	263	1,3	10	20	30	49	20	40	M6
						65 — 109	— — —	2	279								
			LY22	250112	I	91 — 136	— — —	1	263	1,3	10	20	30	49	20	40	M6
						128 — 174	— — —	2	279								
			LY25	250115	I	134 — 179	— — —	1	263	1,2	10	20	30	49	20	40	M6
						172 — 217	— — —	2	279								
Röhm	DURO-NC 225	225	LY20	250110	I	29 — 117	— — —	1	308	1,3	10	20	30	49	20	40	M6
						73 — 165	— — —	2	308								
			LY24	250114	I	89 — 181	— — —	1	308	1,2	10	20	30	49	20	40	M6
						137 — 229	— — —	2	308								

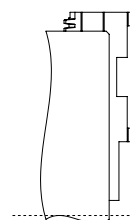
Typ I



Pos. I



Pos. II



Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Pos	Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	N	S	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm										
Röhm	DURO-NC 250	260	LY30	250120	I	33 — 113	— — —	1	332	2,4	12	20	40	59	25	40	M6
					I	92 — 196	— — —	2	340								
			LY32	250122	I	55 — 150	— — —	1	332	2,3	12	20	40	59	25	40	M6
					I	129 — 233	— — —	2	340								
			LY35	250125	I	106 — 203	— — —	1	332	2,0	12	20	40	59	25	40	M6
					I	182 — 287	— — —	2	340								
Röhm	DURO-NC 315	320	LY40	250130	I	51 — 146	— — —	1	400	4,0	12	26	50	59	25	54	M8
					I	96 — 230	— — —	2	410								
			LY43	250133	I	152 — 273	— — —	1	400	3,2	12	26	50	59	25	54	M8
					I	221 — 357	— — —	2	410								
Röhm	DURO-NC 400	400	LY50	9901053	I	74 — 221	— — —	1	528	5,6	18	30	50	78	33	60	M8
					I	101 — 280	— — —	2	588								
			LY55	250135	I	160 — 340	— — —	1	528	5,1	18	30	50	78	33	60	M8
					I	208 — 389	— — —	2	588								
Röhm	DURO-NC 500	500	LY50	9901053	I	149 — 326	— — —	1	642	5,6	18	30	50	78	33	60	M8
					I	268 — 446	— — —	2	642								
			LY52	9902736	I	208 — 386	— — —	1	642	5,1	18	30	50	78	33	60	M8
					I	327 — 505	— — —	2	642								
Röhm	DURO-NCES 175	175	LY10	250101	I	29 — 41	— — —	1	178	1,3	8	18	30	49	20	32	M6
					I	35 — 75	— — —	2	200								
			LY13	250104	I	52 — 72	— — —	1	178	1,2	8	18	30	49	20	32	M6
					I	66 — 108	— — —	2	199								
			LY15	250106	I	94 — 108	— — —	1	178	1,1	8	18	30	49	20	32	M6
					I	102 — 143	— — —	2	200								
Röhm	DURO-NCES 200	215	LY16	250107	I	127 — 141	— — —	1	191	1,4	8	18	30	49	20	32	M6
					I	135 — 177	— — —	2	227								
			LY20	250110	I	31 — 79	— — —	1	260	1,3	10	20	30	49	20	40	M6
					I	58 — 127	— — —	2	270								
			LY25	250115	I	87 — 148	— — —	1	260	1,2	10	20	30	49	20	40	M6
					I	125 — 196	— — —	2	270								

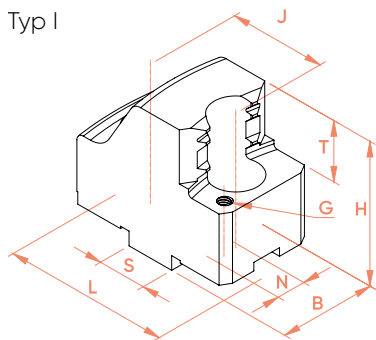
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Greiferbacken hart, Kreuzversatz

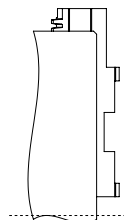
Adjustagrip hard jaws, tongue and groove

Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Pos	Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	N mm	S mm	B mm	H mm	T mm	J mm	G mm
						Außen Ø external Ø min-max./mm	Innen Ø internal Ø min-max./mm										
Röhm	DURO-NCES 250	260	LY30	250120	I	36 — 91	— — —	1	306	2,4	12	20	40	59	25	40	M6
						85 — 166	— — —	2	319								
			LY35	250125	I	111 — 182	— — —	1	306	2,0	12	20	40	59	25	40	M6
						175 — 257	— — —	2	319								
Röhm	DURO-NCES 315	315	LY30	250120	I	44 — 145	— — —	1	382	2,4	12	20	40	59	25	40	M6
						119 — 222	— — —	2	375								
			LY35	250125	I	132 — 235	— — —	1	382	2,0	12	20	40	59	25	40	M6
						209 — 313	— — —	2	375								
Röhm	DURO-NCES 400	400	LY40	250130	I	52 — 149	— — —	1	410	4,0	12	26	50	59	25	54	M8
						143 — 268	— — —	2	458								
			LY43	250133	I	154 — 276	— — —	1	410	3,2	12	26	50	59	25	54	M8
						270 — 395	— — —	2	458								
Schunk	ROTA THW 165	165	LY10	250101	I	29 — 50	— — —	1	182	1,3	8	18	30	49	20	32	M6
						37 — 67	— — —	2	200								
			LY13	250104	I	51 — 82	— — —	1	182	1,2	8	18	30	49	20	32	M6
						68 — 100	— — —	2	200								
			LY14	250105	I	81 — 113	— — —	1	182	1,1	8	18	30	49	20	32	M6
						98 — 131	— — —	2	200								
Schunk	ROTA THW 210	210	LY17	250108	I	124 — 156	— — —	1	194	1,4	8	18	30	49	20	32	M6
						141 — 169	— — —	2	212								
			LY20	250110	I	27 — 73	— — —	1	247	1,3	10	20	30	49	20	40	M6
						58 — 110	— — —	2	285								
			LY22	250112	I	53 — 105	— — —	1	247	1,3	10	20	30	49	20	40	M6
						90 — 142	— — —	2	285								
Schunk	ROTA THW 250	250	LY25	250115	I	88 — 141	— — —	1	247	1,2	10	20	30	49	20	40	M6
						126 — 179	— — —	2	285								
			LY30	250120	I	33 — 88	— — —	1	296	2,4	12	20	40	59	25	40	M6
						91 — 151	— — —	2	360								
			LY32	250122	I	66 — 126	— — —	1	296	2,3	12	20	40	59	25	40	M6
						128 — 189	— — —	2	360								
Schunk	ROTA THW 250	250	LY35	250125	I	117 — 178	— — —	1	296	2,0	12	20	40	59	25	40	M6
						181 — 242	— — —	2	360								

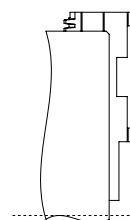
Typ I



Pos. I



Pos. II



Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Pos	Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	N	S	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm										
Schunk	ROTA THW 265	265	LY30	250120	I	33 — 99	— — —	1	307	2,4	12	20	40	59	25	40	M6
					I	91 — 162	— — —	2	371								
			LY32	250122	I	66 — 136	— — —	1	307	2,3	12	20	40	59	25	40	M6
					I	128 — 200	— — —	2	371								
			LY35	250125	I	117 — 189	— — —	1	307	2,0	12	20	40	59	25	40	M6
					I	181 — 253	— — —	2	371								
Schunk	ROTA THW 315	315	LY30	250120	I	36 — 115	— — —	1	345	2,4	12	20	40	59	25	40	M6
					I	119 — 202	— — —	2	433								
			LY32	250122	I	71 — 152	— — —	1	345	2,3	12	20	40	59	25	40	M6
					I	157 — 240	— — —	2	433								
			LY35	250125	I	122 — 205	— — —	1	345	2,0	12	20	40	59	25	40	M6
					I	210 — 293	— — —	2	433								
Schunk	ROTA THW 400	400	LY40	250130	I	55 — 166	— — —	1	420	4,0	12	26	50	59	25	54	M8
					I	117 — 243	— — —	2	498								
			LY43	250133	I	166 — 292	— — —	1	420	3,2	12	26	50	59	25	54	M8
					I	243 — 370	— — —	2	498								
Schunk	ROTA THW 500	500	LY50	9901053	I	80 — 221	— — —	1	535	5,6	18	30	50	78	33	60	M8
					I	170 — 328	— — —	2	523								
			LY55	250135	I	179 — 337	— — —	1	535	5,1	18	30	50	78	33	60	M8
					I	286 — 445	— — —	2	531								
Schunk	ROTA THW 630	630	LY50	9901053	I	178 — 267	— — —	1	662	5,6	18	30	50	78	33	60	M8
					I	376 — 466	— — —	2	662								
			LY55	250135	I	294 — 384	— — —	1	662	5,1	18	30	50	78	33	60	M8
					I	493 — 583	— — —	2	670								
Schunk	ROTA THW plus 165	165	LY10	250101	I	27 — 64	— — —	1	201	1,3	8	18	30	49	20	32	M6
					I	27 — 81	— — —	2	206								
			LY13	250104	I	56 — 96	— — —	1	201	1,2	8	18	30	49	20	32	M6
					I	55 — 114	— — —	2	205								
			LY15	250106	I	91 — 132	— — —	1	201	1,1	8	18	30	49	20	32	M6
					I	90 — 150	— — —	2	206								

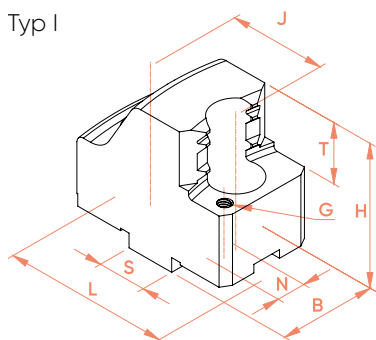
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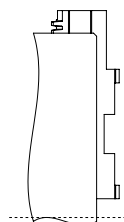
Adjustagrip hard jaws, tongue and groove

Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Pos	Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	N mm	S mm	B mm	H mm	T mm	J mm	G mm
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm										
Schunk	ROTA THW plus 185	185	LY10	250101	I	28 — 85	— — —	1	224	1,3	8	18	30	49	20	32	M6
						28 — 103	— — —	2	228								
			LY15	250106	I	93 — 154	— — —	1	224	1,1	8	18	30	49	20	32	M6
						93 — 172	— — —	2	228								
Schunk	ROTA THW plus 215	215	LY20	250110	I	28 — 85	— — —	1	266	1,3	10	20	30	49	20	40	M6
						37 — 123	— — —	2	266								
			LY25	250115	I	84 — 153	— — —	1	266	1,2	10	20	30	49	20	40	M6
						103 — 192	— — —	2	266								
Schunk	ROTA THW plus 260	260	LY30	250120	I	35 — 111	— — —	1	326	2,4	12	20	40	59	25	40	M6
						72 — 175	— — —	2	328								
			LY34	250124	I	104 — 197	— — —	1	326	2,0	12	20	40	59	25	40	M6
						156 — 260	— — —	2	328								
Schunk	ROTA THW plus 315	315	LY30	250120	I	33 — 149	— — —	1	387	2,4	12	20	40	59	25	40	M6
						96 — 232	— — —	2	385								
			LY34	250124	I	103 — 234	— — —	1	387	2,0	12	20	40	59	25	40	M6
						181 — 318	— — —	2	385								
Schunk	ROTA THWB 210	210	LY20	250110	I	33 — 72	— — —	1	255	1,3	10	20	30	49	20	40	M6
						69 — 109	— — —	2	255								
			LY25	250115	I	99 — 140	— — —	1	255	1,2	10	20	30	49	20	40	M6
						137 — 178	— — —	2	255								
Schunk	ROTA THWB 265	265	LY30	250120	I	42 — 98	— — —	1	314	2,4	12	20	40	59	25	40	M6
						102 — 161	— — —	2	314								
			LY32	250122	I	77 — 135	— — —	1	314	2,3	12	20	40	59	25	40	M6
						140 — 199	— — —	2	314								
			LY35	250125	I	129 — 188	— — —	1	314	2,0	12	20	40	59	25	40	M6
						193 — 252	— — —	2	314								
Schunk	ROTA THWB 315	315	LY40	250130	I	57 — 112	— — —	1	373	4,0	12	26	50	59	25	54	M8
						89 — 168	— — —	2	357								
			LY43	250133	I	157 — 237	— — —	1	373	3,2	12	26	50	59	25	54	M8
						214 — 295	— — —	2	357								

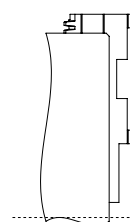
Typ I



Pos. I



Pos. II



Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Pos	Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	N mm	S mm	B mm	H mm	T mm	J mm	G mm
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm										
Schunk	ROTA THWB 400	400	LY50	9901053	I	84 — 184	— — —	1	440	5,6	18	30	50	78	33	60	M8
					I	121 — 233	— — —	2	425								
			LY55	250135	I	186 — 300	— — —	1	440	5,1	18	30	50	78	33	60	M8
					I	236 — 349	— — —	2	434								
Schunk	ROTA THWB 500	500	LY50	9901053	I	80 — 207	— — —	1	522	5,6	18	30	50	78	33	60	M8
					I	197 — 328	— — —	2	524								
			LY55	250135	I	192 — 323	— — —	1	522	5,1	18	30	50	78	33	60	M8
					I	313 — 445	— — —	2	531								
Schunk	ROTA-G 160	160	LY10	250101	I	27 — 73	— — —	1	190	1,3	8	18	30	49	20	32	M6
					I	40 — 91	— — —	2	242								
			LY14	250105	I	84 — 137	— — —	1	190	1,1	8	18	30	49	20	32	M6
					I	102 — 155	— — —	2	242								
			LY17	250108	I	127 — 180	— — —	1	219	1,4	8	18	30	49	20	32	M6
					I	145 — 198	— — —	2	242								
Schunk	ROTA-G 200	200	LY20	250110	I	30 — 100	— — —	1	236	1,3	10	20	30	49	20	40	M6
					I	66 — 137	— — —	2	322								
			LY22	250112	I	61 — 132	— — —	1	236	1,3	10	20	30	49	20	40	M6
					I	97 — 169	— — —	2	322								
			LY25	250115	I	87 — 147	— — —	1	259	1,2	10	20	30	49	20	40	M6
					I	134 — 206	— — —	2	322								
Schunk	ROTA-G 250	250	LY30	250120	I	33 — 121	— — —	1	264	2,4	12	20	40	59	25	40	M6
					I	90 — 184	— — —	2	404								
			LY31	250121	I	65 — 158	— — —	1	266	2,4	12	20	40	59	25	40	M6
					I	127 — 221	— — —	2	404								
			LY35	250125	I	117 — 211	— — —	1	264	2,0	12	20	40	59	25	40	M6
					I	180 — 274	— — —	2	404								
Schunk	ROTA-G 315	315	LY30	250120	I	35 — 144	— — —	1	382	2,4	12	20	40	59	25	40	M6
					I	96 — 232	— — —	2	385								
			LY34	250124	I	105 — 230	— — —	1	382	2,0	12	20	40	59	25	40	M6
					I	181 — 318	— — —	2	385								

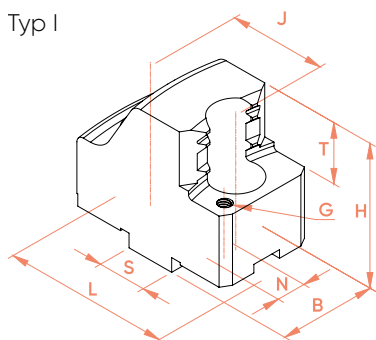
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Greiferbacken hart, Kreuzversatz

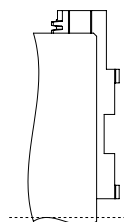
Adjustagrip hard jaws, tongue and groove

Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Pos	Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	N mm	S mm	B mm	H mm	T mm	J mm	G mm
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm										
Schunk	ROTA-G 400	400	LY40	250130	I	68 — 186	— — —	1	400	4,0	12	26	50	59	25	54	M8
						142 — 263	— — —	2	519								
			LY43	250133	I	192 — 313	— — —	1	400	3,2	12	26	50	59	25	54	M8
						269 — 391	— — —	2	519								
Schunk	ROTA-G 500	500	LY50	9901053	I	113 — 286	— — —	1	602	5,6	18	30	50	78	33	60	M8
						210 — 385	— — —	2	582								
			LY55	250135	I	227 — 402	— — —	1	602	5,1	18	30	50	78	33	60	M8
						326 — 502	— — —	2	591								
Schunk	ROTA-G 630	630	LY50	9901053	I	162 — 435	— — —	1	832	5,6	18	30	50	78	33	60	M8
						286 — 560	— — —	2	758								
			LY53	9902735	I	228 — 501	— — —	1	832	4,9	18	30	50	78	33	60	M8
						353 — 627	— — —	2	758								
Schunk	ROTA-S 160	160	LY10	250101	I	27 — 64	— — —	1	221	1,3	8	18	30	49	20	32	M6
						49 — 99	— — —	2	225								
			LY14	250105	I	86 — 128	— — —	1	221	1,1	8	18	30	49	20	32	M6
						112 — 164	— — —	2	224								
Schunk	ROTA-S 200	200	LY20	250110	I	30 — 80	— — —	1	270	1,3	10	20	30	49	20	40	M6
						65 — 127	— — —	2	270								
			LY25	250115	I	86 — 148	— — —	1	270	1,2	10	20	30	49	20	40	M6
						133 — 196	— — —	2	270								
Schunk	ROTA-S 250	250	LY30	250120	I	38 — 99	— — —	1	326	2,4	12	20	40	59	25	40	M6
						98 — 174	— — —	2	327								
			LY34	250124	I	108 — 184	— — —	1	326	2,0	12	20	40	59	25	40	M6
						183 — 260	— — —	2	327								
Schunk	ROTA-S 315	315	LY40	250130	I	56 — 141	— — —	1	403	4,0	12	26	50	59	25	54	M8
						101 — 218	— — —	2	409								
			LY42	250132	I	147 — 261	— — —	1	403	3,2	12	26	50	59	25	54	M8
						220 — 338	— — —	2	409								

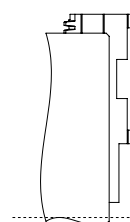
Typ I



Pos. I



Pos. II



Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Pos	Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	N mm	S mm	B mm	H mm	T mm	J mm	G mm
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm										
Schunk	ROTA-S plus 160	160	LY10	250101	I	27 — 63	— — —	1	180	1,3	8	18	30	49	20	32	M6
					I	46 — 98	— — —	2	250								
			LY14	250105	I	73 — 127	— — —	1	180	1,1	8	18	30	49	20	32	M6
					I	109 — 163	— — —	2	250								
			LY17	250108	I	116 — 170	— — —	1	209	1,4	8	18	30	49	20	32	M6
					I	152 — 206	— — —	2	250								
Schunk	ROTA-S plus 200	200	LY20	250110	I	28 — 80	— — —	1	216	1,3	10	20	30	49	20	40	M6
					I	64 — 127	— — —	2	312								
			LY22	250112	I	49 — 112	— — —	1	216	1,3	10	20	30	49	20	40	M6
					I	96 — 159	— — —	2	312								
			LY25	250115	I	84 — 148	— — —	1	216	1,2	10	20	30	49	20	40	M6
					I	132 — 196	— — —	2	312								
Schunk	ROTA-S plus 250	250	LY30	250120	I	33 — 101	— — —	1	250	2,4	12	20	40	59	25	40	M6
					I	97 — 176	— — —	2	396								
			LY32	250122	I	61 — 138	— — —	1	250	2,3	12	20	40	59	25	40	M6
					I	135 — 213	— — —	2	396								
			LY35	250125	I	112 — 191	— — —	1	250	2,0	12	20	40	59	25	40	M6
					I	187 — 267	— — —	2	396								
Schunk	ROTA-S plus 315	315	LY40	250130	I	54 — 142	— — —	1	322	4,0	12	26	50	59	25	54	M8
					I	100 — 219	— — —	2	458								
			LY43	250133	I	152 — 269	— — —	1	322	3,2	12	26	50	59	25	54	M8
					I	225 — 347	— — —	2	458								
Schunk	ROTA-S plus 400	400	LY50	9901053	I	74 — 195	— — —	1	499	5,6	18	30	50	78	33	60	M8
					I	167 — 314	— — —	2	505								
			LY55	250135	I	168 — 314	— — —	1	499	5,1	18	30	50	78	33	60	M8
					I	286 — 433	— — —	2	515								
Schunk	ROTA-S plus 500	500	LY50	9901053	I	89 — 266	— — —	1	588	5,6	18	30	50	78	33	60	M8
					I	198 — 396	— — —	2	588								
			LY55	250135	I	205 — 402	— — —	1	588	5,1	18	30	50	78	33	60	M8
					I	317 — 515	— — —	2	597								

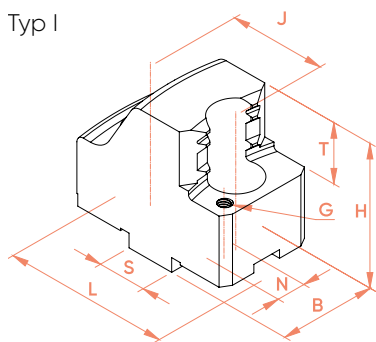
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Greiferbacken hart, Kreuzversatz

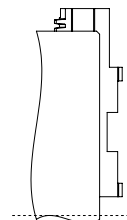
Adjustagrip hard jaws, tongue and groove

Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Pos	Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	N mm	S mm	B mm	H mm	T mm	J mm	G mm
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm										
Schunk	ROTA-S plus 2.0 160	160	LY10	250101	I	27 — 54	— — —	1	209	1,3	8	18	30	49	20	32	M6
						38 — 88	— — —	2	214								
			LY12	250103	I	50 — 82	— — —	1	209	1,2	8	18	30	49	20	32	M6
						66 — 117	— — —	2	213								
			LY15	250106	I	89 — 121	— — —	1	209	1,1	8	18	30	49	20	32	M6
						105 — 157	— — —	2	214								
Schunk	ROTA-S plus 2.0 200	200	LY20	250110	I	32 — 72	— — —	1	263	1,3	10	20	30	49	20	40	M6
						49 — 120	— — —	2	263								
			LY25	250115	I	88 — 141	— — —	1	263	1,2	10	20	30	49	20	40	M6
						116 — 189	— — —	2	263								
Schunk	ROTA-S plus 2.0 250	250	LY30	250120	I	33 — 101	— — —	1	328	2,4	12	20	40	59	25	40	M6
						82 — 170	— — —	2	323								
			LY34	250124	I	110 — 186	— — —	1	328	2,0	12	20	40	59	25	40	M6
						167 — 256	— — —	2	323								
Schunk	ROTA-S plus 2.0 315	315	LY40	250130	I	53 — 124	— — —	1	386	4,0	12	26	50	59	25	54	M8
						86 — 203	— — —	2	394								
			LY42	250132	I	153 — 243	— — —	1	386	3,2	12	26	50	59	25	54	M8
						204 — 323	— — —	2	394								
SMW-Autoblok	HG-F 160	165	LY10	250101	I	30 — 42	— — —	1	197	1,3	8	18	30	49	20	32	M6
						45 — 76	— — —	2	201								
			LY13	250104	I	52 — 74	— — —	1	197	1,2	8	18	30	49	20	32	M6
						77 — 109	— — —	2	200								
			LY15	250106	I	89 — 109	— — —	1	197	1,1	8	18	30	49	20	32	M6
						112 — 145	— — —	2	201								
			LY17	250108	I	127 — 148	— — —	1	197	1,4	8	18	30	49	20	32	M6
						151 — 183	— — —	2	232								
SMW-Autoblok	HG-F 210	210	LY20	250110	I	30 — 61	— — —	1	250	1,3	10	20	30	49	20	40	M6
						47 — 98	— — —	2	241								
			LY25	250115	I	86 — 129	— — —	1	250	1,2	10	20	30	49	20	40	M6
						114 — 167	— — —	2	241								

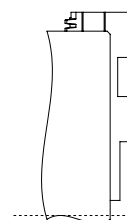
Typ I



Pos. I



Pos. II



Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Pos	Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	N	S	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm										
SMW-Autoblok	HG-F 260	260	LY30	250120	I	36 — 73	— — —	1	298	2,4	12	20	40	59	25	40	M6
					I	83 — 147	— — —	2	300								
			LY32	250122	I	59 — 110	— — —	1	298	2,3	12	20	40	59	25	40	M6
					I	120 — 185	— — —	2	300								
			LY35	250125	I	110 — 163	— — —	1	298	2,0	12	20	40	59	25	40	M6
					I	173 — 238	— — —	2	300								
SMW-Autoblok	HG-F 315	315	LY40	250130	I	53 — 111	— — —	1	372	4,0	12	26	50	59	25	54	M8
					I	85 — 201	— — —	2	392								
			LY42	250132	I	160 — 236	— — —	1	372	3,2	12	26	50	59	25	54	M8
					I	210 — 328	— — —	2	392								
SMW-Autoblok	HG-F 400	400	LY50	9901053	I	87 — 176	— — —	1	491	5,6	18	30	50	78	33	60	M8
					I	151 — 294	— — —	2	490								
			LY54	250134	I	154 — 280	— — —	1	491	4,8	18	30	50	78	33	60	M8
					I	254 — 398	— — —	2	490								
SMW-Autoblok	HG-F 500	500	LY50	9901053	I	86 — 210	— — —	1	525	5,6	18	30	50	78	33	60	M8
					I	168 — 328	— — —	2	524								
			LY55	250135	I	166 — 326	— — —	1	525	5,1	18	30	50	78	33	60	M8
					I	284 — 445	— — —	2	533								
SMW-Autoblok	HG-N 160	165	LY10	250101	I	28 — 57	— — —	1	194	1,3	8	18	30	49	20	32	M6
					I	36 — 75	— — —	2	200								
			LY13	250104	I	52 — 89	— — —	1	194	1,2	8	18	30	49	20	32	M6
					I	67 — 108	— — —	2	199								
			LY15	250106	I	93 — 125	— — —	1	194	1,1	8	18	30	49	20	32	M6
					I	103 — 144	— — —	2	200								
			LY16	250107	I	126 — 158	— — —	1	208	1,4	8	18	30	49	20	32	M6
					I	136 — 177	— — —	2	227								
SMW-Autoblok	HG-N 210	210	LY20	250110	I	28 — 64	— — —	1	243	1,3	10	20	30	49	20	40	M6
					I	51 — 101	— — —	2	243								
			LY25	250115	I	84 — 132	— — —	1	243	1,2	10	20	30	49	20	40	M6
					I	118 — 169	— — —	2	243								

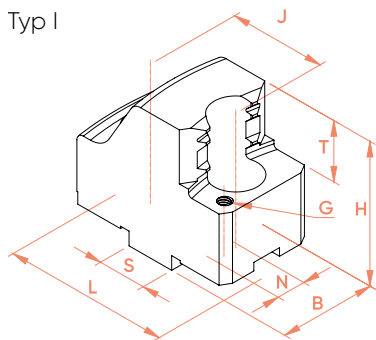
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Greiferbacken hart, Kreuzversatz

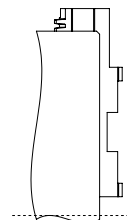
Adjustagrip hard jaws, tongue and groove

Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Pos	Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	N	S	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm										
SMW-Autoblok	HG-N 260	260	LY30	250120	I	33 — 85	— — —	1	299	2,4	12	20	40	59	25	40	M6
						78 — 147	— — —	2	300								
			LY35	250125	I	107 — 175	— — —	1	299	2,0	12	20	40	59	25	40	M6
						168 — 238	— — —	2	300								
SMW-Autoblok	HG-N 315	315	LY30	250120	I	38 — 116	— — —	1	355	2,4	12	20	40	59	25	40	M6
						121 — 203	— — —	2	357								
			LY35	250125	I	124 — 207	— — —	1	355	2,0	12	20	40	59	25	40	M6
						211 — 294	— — —	2	357								
SMW-Autoblok	HG-N 400	400	LY40	250130	I	52 — 162	— — —	1	425	4,0	12	26	50	59	25	54	M8
						123 — 239	— — —	2	431								
			LY43	250133	I	172 — 289	— — —	1	425	3,2	12	26	50	59	25	54	M8
						249 — 366	— — —	2	431								
SMW-Autoblok	HG-N 500	500	LY50	9901053	I	78 — 207	— — —	1	522	5,6	18	30	50	78	33	60	M8
						182 — 328	— — —	2	524								
			LY55	250135	I	177 — 323	— — —	1	522	5,1	18	30	50	78	33	60	M8
						298 — 445	— — —	2	533								
SMW-Autoblok	HG-N 630	630	LY50	9901053	I	142 — 288	— — —	1	685	5,6	18	30	50	78	33	60	M8
						339 — 488	— — —	2	685								
			LY55	250135	I	257 — 405	— — —	1	685	5,1	18	30	50	78	33	60	M8
						456 — 604	— — —	2	693								
SMW-Autoblok	KNCS 140	140	LY10	250101	I	28 — 45	— — —	2	180	1,3	8	18	30	49	20	32	M6
			LY11	250102	I	39 — 49	— — —	2	180	1,3	8	18	30	49	20	32	M6
			LY12	250103	I	53 — 73	— — —	2	180	1,2	8	18	30	49	20	32	M6
			LY13	250104	I	57 — 77	— — —	2	180	1,2	8	18	30	49	20	32	M6
			LY14	250105	I	88 — 108	— — —	2	180	1,1	8	18	30	49	20	32	M6
			LY15	250106	I	92 — 113	— — —	2	180	1,1	8	18	30	49	20	32	M6
			LY16	250107	I	125 — 146	— — —	2	194	1,4	8	18	30	49	20	32	M6
			LY17	250108	I	130 — 151	— — —	2	198	1,4	8	18	30	49	20	32	M6

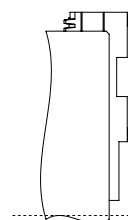
Typ I



Pos. I



Pos. II



Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Pos	Schwing- kreis Ø swing Ø	m/ Satz m/ set	N	S	B	H	T	J	G
						Außen Ø external Ø	Innen Ø internal Ø										
						min-max/mm	min-max/mm		max./mm	kg	mm	mm	mm	mm	mm	mm	mm
SMW-Autoblok	KNCS 160	160	LY10	250101	I	27 — 46	— — —	1	177	1,3	8	18	30	49	20	32	M6
					I	34 — 63	— — —	2	195								
			LY13	250104	I	57 — 78	— — —	1	177	1,2	8	18	30	49	20	32	M6
					I	65 — 96	— — —	2	195								
			LY14	250105	I	78 — 109	— — —	1	177	1,1	8	18	30	49	20	32	M6
					I	96 — 127	— — —	2	195								
SMW-Autoblok	KNCS 170	170	LY10	250101	I	27 — 54	— — —	1	186	1,3	8	18	30	49	20	32	M6
					I	40 — 72	— — —	2	204								
			LY13	250104	I	54 — 87	— — —	1	186	1,2	8	18	30	49	20	32	M6
					I	72 — 104	— — —	2	204								
			LY14	250105	I	85 — 118	— — —	1	186	1,1	8	18	30	49	20	32	M6
					I	102 — 135	— — —	2	204								
SMW-Autoblok	KNCS 175	175	LY10	250101	I	27 — 53	— — —	1	190	1,3	8	18	30	49	20	32	M6
					I	41 — 71	— — —	2	195								
			LY13	250104	I	55 — 86	— — —	1	190	1,2	8	18	30	49	20	32	M6
					I	72 — 103	— — —	2	194								
			LY15	250106	I	90 — 121	— — —	1	190	1,1	8	18	30	49	20	32	M6
					I	108 — 139	— — —	2	195								
SMW-Autoblok	KNCS 200	204	LY16	250107	I	123 — 155	— — —	1	204	1,4	8	18	30	49	20	32	M6
					I	141 — 173	— — —	2	222								
			LY20	250110	I	27 — 61	— — —	1	235	1,3	10	20	30	49	20	40	M6
					I	56 — 98	— — —	2	273								
			LY22	250112	I	51 — 93	— — —	1	235	1,3	10	20	30	49	20	40	M6
					I	88 — 130	— — —	2	273								
SMW-Autoblok	KNCS 200	204	LY25	250115	I	86 — 129	— — —	1	235	1,2	10	20	30	49	20	40	M6
					I	124 — 167	— — —	2	273								

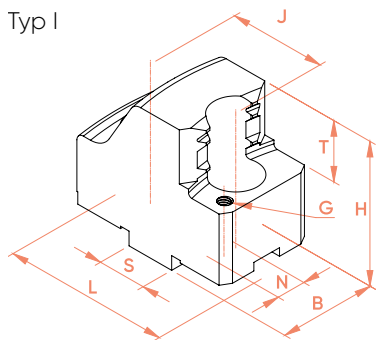
UNIJaws®

Greiferbacken hart, Kreuzversatz

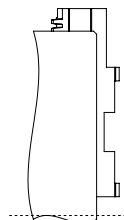
Adjustagrip hard jaws, tongue and groove

Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Pos	Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	N mm	S mm	B mm	H mm	T mm	J mm	G mm
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm										
SMW-Autoblok	KNCS 210	208	LY20	250110	I	28 — 65	— — —	1	245	1,3	10	20	30	49	20	40	M6
					I	61 — 102	— — —	2	245								
			LY25	250115	I	92 — 133	— — —	1	245	1,2	10	20	30	49	20	40	M6
					I	129 — 171	— — —	2	245								
SMW-Autoblok	KNCS 250	250	LY30	250120	I	33 — 84	— — —	1	291	2,4	12	20	40	59	25	40	M6
					I	86 — 147	— — —	2	355								
			LY32	250122	I	61 — 121	— — —	1	291	2,3	12	20	40	59	25	40	M6
					I	123 — 184	— — —	2	355								
			LY35	250125	I	113 — 174	— — —	1	291	2	12	20	40	59	25	40	M6
					I	176 — 237	— — —	2	355								
SMW-Autoblok	KNCS 260	260	LY30	250120	I	33 — 95	— — —	1	302	2,4	12	20	40	59	25	40	M6
					I	86 — 158	— — —	2	366								
			LY32	250122	I	61 — 132	— — —	1	302	2,3	12	20	40	59	25	40	M6
					I	123 — 195	— — —	2	366								
			LY35	250125	I	113 — 185	— — —	1	302	2	12	20	40	59	25	40	M6
					I	176 — 248	— — —	2	366								
SMW-Autoblok	KNCS 315-77	315	LY30	250120	I	36 — 115	— — —	1	344	2,4	12	20	40	59	25	40	M6
					I	119 — 202	— — —	2	432								
			LY32	250122	I	70 — 152	— — —	1	344	2,3	12	20	40	59	25	40	M6
					I	156 — 239	— — —	2	432								
			LY35	250125	I	122 — 205	— — —	1	344	2	12	20	40	59	25	40	M6
					I	209 — 293	— — —	2	432								
SMW-Autoblok	KNCS 315-91	315	LY30	250120	I	46 — 126	— — —	1	356	2,4	12	20	40	59	25	40	M6
					I	130 — 213	— — —	2	444								
			LY32	250122	I	82 — 164	— — —	1	356	2,3	12	20	40	59	25	40	M6
					I	168 — 251	— — —	2	444								
			LY35	250125	I	134 — 217	— — —	1	356	2	12	20	40	59	25	40	M6
					I	221 — 304	— — —	2	444								
SMW-Autoblok	KNCS 400	400	LY40	250130	I	51 — 165	— — —	1	419	4	12	26	50	59	25	54	M8
					I	116 — 242	— — —	2	497								
			LY43	250133	I	165 — 292	— — —	1	419	3,2	12	26	50	59	25	54	M8
					I	242 — 369	— — —	2	497								

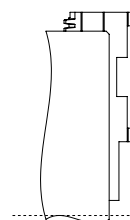
Typ I



Pos. I



Pos. II



Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Pos	Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	N	S	B	H	T	J	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm										
SMW-Autoblok	KNCS 500	500	LY50	9901053	I	74 — 208	— — —	1	515	5,6	18	30	50	78	33	60	M8
					I	178 — 327	— — —	2	515								
			LY55	250135	I	177 — 326	— — —	1	515	5,1	18	30	50	78	33	60	M8
					I	296 — 445	— — —	2	555								
SMW-Autoblok	KNCS 630	630	LY50	9901053	I	80 — 250	— — —	1	645	5,6	18	30	50	78	33	60	M8
					I	261 — 449	— — —	2	645								
			LY55	250135	I	179 — 366	— — —	1	645	5,1	18	30	50	78	33	60	M8
					I	378 — 566	— — —	2	653								
SMW-Autoblok	KNCS-N 140	145	LY10	250101	I	28 — 47	— — —	1 / 2	184	1,3	8	18	30	49	20	32	M6
			LY11	250102	I	32 — 51	— — —	1 / 2	184	1,3	8	18	30	49	20	32	M6
			LY12	250103	I	54 — 75	— — —	1 / 2	184	1,2	8	18	30	49	20	32	M6
			LY13	250104	I	58 — 79	— — —	1 / 2	184	1,2	8	18	30	49	20	32	M6
			LY14	250105	I	88 — 110	— — —	1 / 2	184	1,1	8	18	30	49	20	32	M6
			LY15	250106	I	93 — 115	— — —	1 / 2	184	1,1	8	18	30	49	20	32	M6
			LY16	250107	I	126 — 148	— — —	1 / 2	197	1,4	8	18	30	49	20	32	M6
			LY17	250108	I	131 — 153	— — —	1 / 2	201	1,4	8	18	30	49	20	32	M6
SMW-Autoblok	KNCS-N 170	170	LY10	250101	I	29 — 60	— — —	1	191	1,3	8	18	30	49	20	32	M6
					I	45 — 77	— — —	2	209								
			LY13	250104	I	60 — 92	— — —	1	191	1,2	8	18	30	49	20	32	M6
					I	77 — 109	— — —	2	209								
			LY14	250105	I	90 — 123	— — —	1	191	1,1	8	18	30	49	20	32	M6
					I	108 — 141	— — —	2	209								
			LY17	250108	I	133 — 166	— — —	1	204	1,4	8	18	30	49	20	32	M6
					I	151 — 154	— — —	2	222								
SMW-Autoblok	KNCS-N 210	210	LY20	250110	I	27 — 91	— — —	1	266	1,3	10	20	30	49	20	40	M6
					I	58 — 128	— — —	2	303								
			LY22	250112	I	54 — 113	— — —	1	266	1,3	10	20	30	49	20	40	M6
					I	89 — 160	— — —	2	303								
			LY24	250114	I	84 — 144	— — —	1	266	1,2	10	20	30	49	20	40	M6
					I	125 — 197	— — —	2	303								

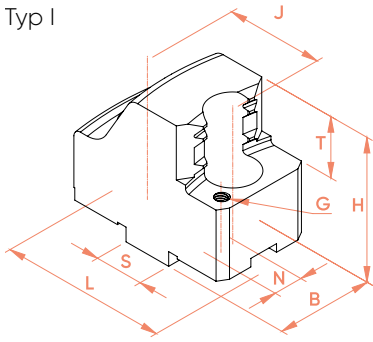
UNIJaws®

Greiferbacken hart, Kreuzversatz

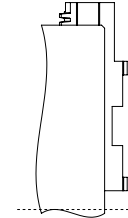
Adjustagrip hard jaws, tongue and groove

Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Pos	Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	N mm	S mm	B mm	H mm	T mm	J mm	G mm
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm										
SMW-Autoblok	KNCS-N 225	225	LY20	250110	I	27 — 92	— — —	1	267	1,3	10	20	30	49	20	40	M6
						59 — 130	— — —	2	305								
			LY22	250112	I	55 — 124	— — —	1	271	1,3	10	20	30	49	20	40	M6
						91 — 162	— — —	2	305								
			LY25	250115	I	91 — 160	— — —	1	271	1,2	10	20	30	49	20	40	M6
						127 — 198	— — —	2	305								
SMW-Autoblok	KNCS-N 260	260	LY30	250120	I	33 — 105	— — —	1	313	2,4	12	20	40	59	25	40	M6
						86 — 168	— — —	2	377								
			LY32	250122	I	61 — 143	— — —	1	313	2,3	12	20	40	59	25	40	M6
						123 — 206	— — —	2	377								
			LY35	250125	I	112 — 195	— — —	1	313	2,0	12	20	40	59	25	40	M6
						176 — 259	— — —	2	377								
SMW-Autoblok	KNCS-N 275	275	LY30	250120	I	33 — 107	— — —	1	322	2,4	12	20	40	59	25	40	M6
						90 — 171	— — —	2	323								
			LY35	250125	I	117 — 198	— — —	1	322	2,0	12	20	40	59	25	40	M6
						180 — 262	— — —	2	323								
SMW-Autoblok	KNCS-N 315	315	LY30	250120	I	46 — 126	— — —	1	356	2,4	12	20	40	59	25	40	M6
						130 — 213	— — —	2	444								
			LY32	250122	I	81 — 163	— — —	1	356	2,3	12	20	40	59	25	40	M6
						167 — 251	— — —	2	444								
			LY35	250125	I	123 — 226	— — —	1	372	2,0	12	20	40	59	25	40	M6
						221 — 304	— — —	2	444								

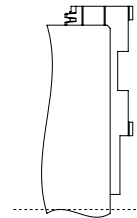
Typ I



Pos. I



Pos. II



Futterhersteller manufacturer	Futter- type chuck type	Drm. dia. mm	Backen- typ jaw type	Ident- Nr. ident- no.	Typ type	Spannbereich grip range		Pos	Schwing- kreis Ø swing Ø max./mm	m/ Satz m/ set kg	N mm	S mm	B mm	H mm	T mm	J mm	G
						Außen Ø external Ø min-max/mm	Innen Ø internal Ø min-max/mm										
SMW-Autoblok	KNCS-N 325	324	LY30	250120	I	46 — 146	— — —	1	383	2,4	12	20	40	59	25	40	M6
					2	131 — 234	— — —	2	386								
			LY35	250125	I	134 — 237	— — —	1	383	2,0	12	20	40	59	25	40	M6
					2	222 — 325	— — —	2	386								
SMW-Autoblok	KNCS-N 340	340	LY30	250120	I	60 — 161	— — —	1	398	2,4	12	20	40	59	25	40	M6
					2	146 — 248	— — —	2	401								
			LY35	250125	I	149 — 252	— — —	1	398	2,0	12	20	40	59	25	40	M6
					2	237 — 340	— — —	2	401								
SMW-Autoblok	KNCS-N 400	400	LY40	250130	I	67 — 191	— — —	1	446	4,0	12	26	50	59	25	54	M8
					2	143 — 269	— — —	2	525								
			LY43	250133	I	191 — 318	— — —	1	446	3,2	12	26	50	59	25	54	M8
					2	269 — 397	— — —	2	525								
SMW-Autoblok	KNCS-N 500	500	LY50	9901053	I	74 — 235	— — —	1	543	5,6	18	30	50	78	33	60	M8
					2	180 — 357	— — —	2	545								
			LY55	250135	I	177 — 354	— — —	1	543	5,1	18	30	50	78	33	60	M8
					2	298 — 475	— — —	2	585								
SMW-Autoblok	KNCS-N 630	630	LY50	9901053	I	79 — 249	— — —	1	643	5,6	18	30	50	78	33	60	M8
					2	260 — 448	— — —	2	643								
			LY55	250135	I	178 — 365	— — —	1	643	5,1	18	30	50	78	33	60	M8
					2	376 — 564	— — —	2	651								

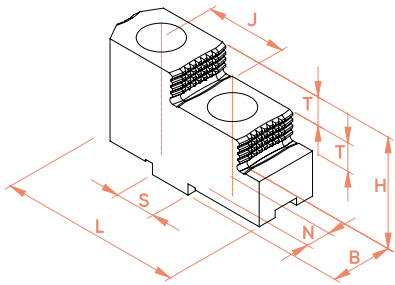
UNIJaws®

Umkehrbare Aufsatzbacken hart, Kreuzversatz metrisch

Hard reversible jaws, metric tongue and groove

B	H1	H2	L	J	T	N	S	Masse pro Satz <i>mass pro set</i>	Backentyp <i>jaw type</i>	Ident-Nr. <i>ident-no.</i>	Werkstoff <i>material</i>	Schraube <i>bolt</i>
mm	mm	mm	mm	mm	mm	mm	mm	kg				
20	36,5	32,5	63	32	7,5	8	18	0,6	GX16	249001	16MnCr5	M8
22	42	38	72	40	10	10	20	0,8	GX20	249002	16MnCr5	M8
30	55	50	90	40	14	12	20	1,9	GX25	249003	16MnCr5	M12
36	62	56	105	54	15	12	26	3,2	GX32	249004	16MnCr5	M12
45	75	70	130	60	20	18	30	10,8	GX40	249005	16MnCr5	M16

Typ I



Berg	Forkardt	Röhm	Samchully	Schunk	SMW-Autoblok
KHNC 160 KHNC 185	F 160 F+ 160 FNC 175 KTNC 160 KTNCV 160 KTNCV 175	DURO 160 DURO-NC 160 DURO-NC 175 DURO-NCE 160 DURO-NCE 175 DURO-NCES 175 DURO-T 160	QJC-206	ROTA NC-W 185 ROTA THW 165 ROTA THW plus 165 ROTA THW plus 185 ROTA-G 160 ROTA-S 160 ROTA-S plus 160 ROTA-S plus 2.0 160	HG-F 160 HG-N 160 KNCS 160 KNCS 170 KNCS 175 KNCS-N 170 KNSP 160 RMG 160
KHNC 200	F 200 F+ 200 FNC 200 KTNC 200 KTNCV 200	DURO 200 DURO-NC 200 DURO-NC 225 DURO-NCE 200 DURO-NCES 200 DURO-T 200	QJC-208	ROTA NC-W 225 ROTA NC-WF 210 ROTA THW 210 ROTA THW plus 215 ROTA THWB 210 ROTA-G 200 ROTA-S 200 ROTA-S plus 200 ROTA-S plus 2.0 200	HG-F 210 HG-N 210 KNCS 200 KNCS 210 KNCS 225 KNCS-N 210 KNCS-N 225 KNCS-NB 210 KNCS-NB 225 KNSP 200 RMG 200
KHNC 250 KHNC 315	F 250 F+ 250 FNC 250 FNC 315 KTNC 250 KTNC 265 KTNC 280 KTNC 315 KTNCV 250 KTNCV 270 KTNCV 315	DURO 250 DURO-NC 250 DURO-NCE 250 DURO-NCE 315 DURO-NCES 250 DURO-NCES 315 DURO-T 250	QJC-210 QJC-212	ROTA NC-W 265 ROTA NC-W 315 ROTA NC-WF 250 ROTA NC-WF 315 ROTA THW 250 ROTA THW 265 ROTA THW 315 ROTA THW plus 260 ROTA THW plus 315 ROTA THWB 265 ROTA-G 250 ROTA-G 315 ROTA-S 250 ROTA-S plus 250 ROTA-S plus 2.0 250	HG-F 260 HG-N 260 HG-N 315 KNCS 250 KNCS 260 KNCS 315 KNCS 340 KNCS-N 260 KNCS-N 275 KNCS-N 315 KNCS-NB 260 KNCS-NB 275 KNCS-NB 315 RMG 250
KHNC 400	F 315 F+ 315 FNC 400 KTNC 360 KTNC 400 KTNCV 400	DURO 315 DURO-NC 315 DURO-NC 340 DURO-NCE 400 DURO-NCES 400 DURO-T 315	QJC-215	ROTA NC-W 400 ROTA THW 400 ROTA THWB 315 ROTA-G 400 ROTA-S 315 ROTA-S plus 315 ROTA-S plus 2.0 315	HG-F 315 HG-N 400 KNCS 400 KNCS-N 400 KNCS-NB 325 KNCS-NB 340 KNCS-NB 400 KNCS-NBX 425 RMG 315
KHNC 500	F 400 F 500 F 500L F+ 400 F+ 500 F+ 500L FNC 500 FNC 630 KTNC 500 KTNC 630 KTNCV 500 KTNCV 630	DURO 400 DURO 500 DURO-NC 400 DURO-NC 500 DURO-NCE 500 DURO-T 400 DURO-T 500		ROTA-S 400 ROTA-S 500 ROTA THW 500 ROTA THW 630 ROTA THW 800 ROTA THWB 400 ROTA THWB 500 ROTA-G 500 ROTA-S plus 400 ROTA-S plus 500	HG-F 400 HG-F 500 HG-N 500 HG-N 600 HG-N 630 KNCS 500 KNCS 630 KNCS 800 KNCS-N 500 KNCS-N 630 KNCS-NB 500 KNCS-NB 630 KNCS-NB 800 KNCS-NBX 530 KNCS-NBX 630 KNCS-NBX 800 KNCS-NBX 1000



Bei uns erhalten Sie Grund-, Mono-
block- und harte umkehrbare Stufen-
blockbacken für die gängigsten
Backenschnellwechselfutter.

*We supply base-jaws, monoblock and
hard reversible stepped jaws for the
most common quick-change chucks.*

Übersicht / Overview

Spannbacken mit Modulverzahnung für Backenschnellwechselfutter

Jaws with angled and straight serration for quick-change chucks



**Grundbacken hart,
Modulgeradverzahnung /
Modulschrägverzahnung**

*Hard base jaws
Straight serration /
Angled serration*

S. 288–289



**Blockbacken weich,
Modulgeradverzahnung /
Modulschrägverzahnung**

*Soft monoblock jaws
Straight serration /
Angled serration*

S. 290–291



**Stufenblockbacken hart,
Modulgeradverzahnung /
Modulschrägverzahnung**

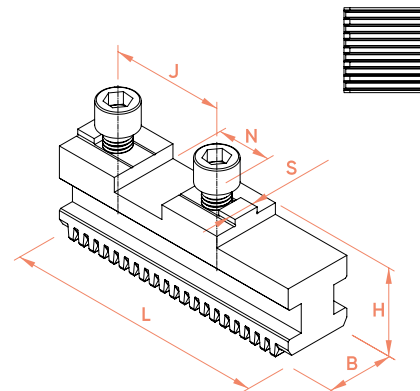
*Hard stepped monoblock jaws
Straight serration /
Angled serration*

S. 292–293

UNIJaws®

Grundbacken hart, Modulgeradverzahnung

Hard base jaws, module straight serration

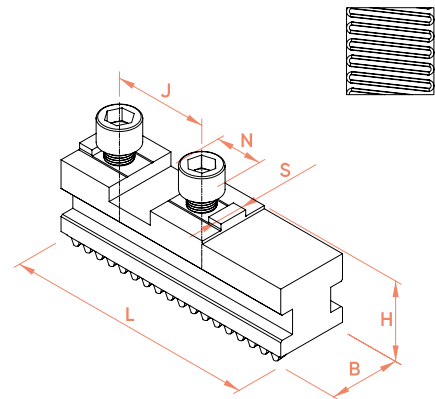


B	H	L	N	S	J	Schraube bolt	Masse/Sz mass/set	Backentyp jaw type	Ident-Nr. ident-no.	Röhm	Schunk	SMW- Autoblok
mm	mm	mm	mm	mm	mm		kg					
20	27	65	18	8	32	M8 x 20	0,7	GBS16	263016	DURO-NCES 175	ROTA THW 165 ROTA THW plus 165 ROTA THW plus 185 ROTA-G 160	HG-N 160 KNCS 160 KNCS 175 KNCS-N 170 KNSP 160 RMG 160
22	29,5	85	20	10	40	M8 x 20	1,0	GBS20	263020	DURO-NCES 200	ROTA THW 210 ROTA THW plus 215 ROTA THW vario 215 ROTA-G 200	HG-N 210 KNCS 200 KNCS 210 KNCS-N 210 KNCS-N 225 KNSP 200 RMG 200
26	37	104	20	12	40	M12 x 35	1,8	GBS25	263025	DURO-NCES 250	ROTA THW 250 ROTA THW 265 ROTA THW plus 260 ROTA-G 250	HG-N 260 KNCS 250 KNCS 260 KNCS-N 260 KNCS-N 275 RMG 250
32	42	115	20	12	40	M12 x 25	2,7	GBS31	263031	DURO-NCES 315	ROTA THW 315 ROTA THW plus 315 ROTA-G 315	HG-N 315 KNCS 315 KNCS-N 315 KNCS-N 325 KNCS-N 340
32	42	125	26	12	54	M12 x 30	3,0	GBS40	263040	DURO-NCES 400	ROTA THW 400	HG-N 400 KNCS 400 KNCS-N 400 RMG 315
45	57	160	30	18	60	M16 x 45	7,1	GBS50	263050		ROTA THW 500	HG-N 500 KNCS 500 KNCS-N 500
45	57	200	30	18	60	M16 x 45	9,0	GBS63	263063		ROTA THW 630 ROTA THW 800	HG-N 630 KNCS 630 KNCS-N 630

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Grundbacken hart, Modulschrägverzahnung

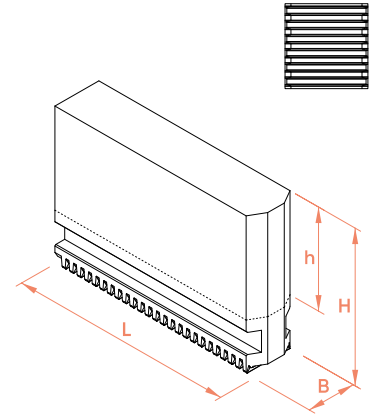
Hard base jaws, module angled serration



B	H	L	N	S	J	Schraube bolt	Masse/Sz mass/set	Backentyp jaw type	Ident-Nr. ident-no.	Forkardt	Röhm	Schunk	SMW- Autoblok
mm	mm	mm	mm	mm	mm		kg						
20	29,5	74	18	8	32	M8x1 x 20	0,8	MFG160	265001	F 160 F+ 160 FNC 175 KTNC 160 KTNCV 160 KTNCV 175	DURO 160 DURO-NC 160 DURO-NC 175 DURO-NCE 160 DURO-T 160	ROTA-S 160 ROTA-S plus 160 ROTA-S plus 2.0 160	HG-F 160
22	35	90	20	10	40	M8x1 x 20	1,2	MFG200	265002	F 200 F+ 200 FNC 200 KTNC 200 KTNCV 200	DURO 200 DURO-NC 200 DURO-NC 225 DURO-NCE 200 DURO-T 200	ROTA-S 200 ROTA-S plus 2.0 200 ROTA-S plus 200	HG-F 210
26	40	110	20	12	40	M12x1,5 x 30	2,0	MFG250	265003	F 250 F+ 250 FNC 250 FNC 315 KTNC 250 KTNC 280 KTNC 315 KTNCV 250 KTNCV 315	DURO 250 DURO-NC 250 DURO-NCE 250 DURO-NCE 315 DURO-T 250	ROTA-S 250 ROTA-S plus 2.0 250 ROTA-S plus 250	HG-F 260
32	46	125	26	12	54	M12x1,5 x 35	3,3	MFG315	265004	F 315 F+ 315 FNC 400 KTNC 360 KTNC 400 KTNCV 400	DURO 315 DURO-NC 315 DURO-NCE 400 DURO-T 315	ROTA-S 315 ROTA-S plus 2.0 315 ROTA-S plus 315	HG-F 315
45	55	160	30	18	60	M16x1,5 x 40	7,3	MFG400	265005	F 400 F 500 F 500 L F+ 400 F+ 500 FNC 500 FNC 630 KTNC 500 KTNC 630 KTNCV 500 KTNCV 630	DURO 400 DURO 500 DURO-NC 400 DURO-C 500 DURO-NCE 500 DURO-T 400 DURO-T 500	ROTA-S 400 ROTA-S 500 ROTA-S plus 400 ROTA-S plus 500	HG-F 400 HG-F 500
65	58	230	40	24	82	M20 x 40	17,1	MFG630	265006	F 630 F+ 630	DURO 630 DURO-NC 630 DURO-T 630	ROTA-S 630 ROTA-S plus 630	HG-F 630

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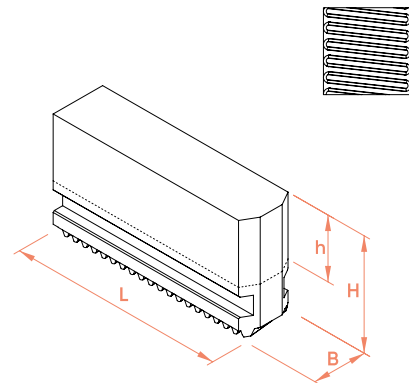
Blockbacken weich, Modulgeradverzahnt
Soft monoblock jaws, module straight serration



B	H	h	L	Masse/Sz mass/set	Werkstoff material	Backentyp jaw type	Ident-Nr. ident-no.	Röhm	Schunk	SMW-Autoblok
mm	mm	mm	mm	kg						
20	55	39	65	1,3	C45	UVB160	255016	DURO-NCES 175	ROTA THW 165 ROTA THW plus 165 ROTA THW plus 185 ROTA-G 160	KNCS 140 KNCS-N 140 HG-N 160 KNCS 160 KNCS 175 KNCS-N 170 KNSP 160 RMG 160
22	70	45	84	2,0	C45	UVB200	255020	DURO-NCES 200	ROTA THW 210 ROTA THW plus 215 ROTA THW vario 215 ROTA-G 200	HG-N 210 KNCS 200 KNCS 210 KNCS-N 210 KNCS-N 225 KNSP 200 RMG 200
26	84	55	99	4,2	C45	UVB250	255025	DURO-NCES 250	ROTA THW 250 ROTA THW 265 ROTA THW plus 260 ROTA-G 250	HG-N 260 KNCS 250 KNCS 260 KNCS-N 260 KNCS-N 275 RMG 250
32	100	66	118	6,6	C45	UVB315	255031	DURO-NCES 315	ROTA THW 315 ROTA THW plus 315 ROTA-G 315	HG-N 315 KNCS 315 KNCS-N 315 KNCS-N 325 KNCS-N 340
32	100	66	145	9,0	C45	UVB400	255040	DURO-NCES 400	ROTA THW 400	HG-N 400 KNCS 400 KNCS-N 400 RMG 315
45	134	87	175	19,5	C45	UVB500	255050		ROTA THW 500	HG-N 500 KNCS 500 KNCS-N 500
45	134	87	230	27,5	C45	UVB630	255063		ROTA THW 630 ROTA THW 800	HG-N 630 KNCS 630 KNCS-N 630

UNIJaws®

Blockbacken weich, Modulschrägverzahnt
Soft monoblock jaws, module angled serration

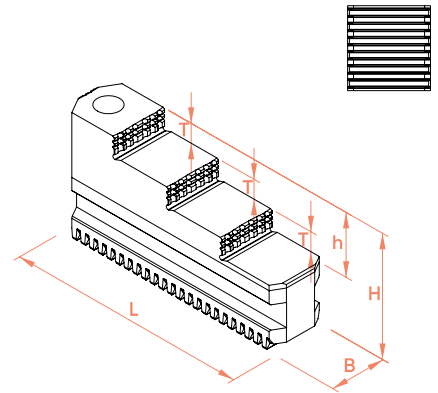


B	H	h	L	Masse/Sz mass/set	Werkstoff material	Backentyp jaw type	Ident-Nr. ident-no.	Forkardt	Röhm	Schunk	SMW- Autoblok
mm	mm	mm	mm	kg							
20	45	24	79	1,4	C45	BL16	257016	F 160 F+ 160 FNC 175 KTNC 160 KTNCV 160 KTNCV 175	DURO 160 DURO-NC 160 DURO-NC 175 DURO-NCE 160 DURO-T 160	ROTA-S 160 ROTA-S plus 160 ROTA-S plus 2.0 160	HG-F 160
22	60	35	94	2,5	C45	BL20	257020	F 200	DURO 200	ROTA-S 200	HG-F 210
22	80	55	94	2,8	C45	BL20H	257021	F+ 200 FNC 200 KTNC 200 KTNCV 200	DURO-NC 200 DURO-NC 225 DURO-NCE 200 DURO-T 200	ROTA-S plus 2.0 200 ROTA-S plus 200	
26	70	40	115	4,3	C45	BL25	257025	F 250	DURO 250	ROTA-S 250	HG-F 260
26	100	70	115	4,8	C45	BL25H	257026	F+ 250 FNC 250 FNC 315 KTNC 250 KTNC 280 KTNC 315 KTNCV 250 KTNCV 315	DURO-NC 250 DURO-NCE 250 DURO-NCE 315 DURO-T 250	ROTA-S plus 2.0 250 ROTA-S plus 250	
32	81	46	140	7,3	C45	BL31	257031	F 315	DURO 315	ROTA-S 315	HG-F 315
32	135	100	140	13,2	C45	BL31H	257032	F+ 315 FNC 400 KTNC 360 KTNC 400 KTNCV 400	DURO-NC 315 DURO-NCE 400 DURO-T 315	ROTA-S plus 2.0 315 ROTA-S plus 315	
45	93	53	176	15,8	C45	BL40	257040	F 400 F 500 F 500 L F+ 400 F+ 500 FNC 500 FNC 630 KTNC 500 KTNC 630 KTNCV 500 KTNCV 630	DURO 400 DURO 500 DURO-NC 400 DURO-NC 500 DURO-NCE 500 DURO-T 400 DURO-T 500	ROTA-S 400 ROTA-S 500 ROTA-S plus 400 ROTA-S plus 500	HG-F 400 HG-F 500
65	120	78	230	28,0	C45	BL63	257063	F 630 F+ 630	DURO 630 DURO-NC 630 DURO-T 630	ROTA-S 630 ROTA-S plus 630	HG-F 630

UNIJaws®

Stufenblockbacken hart,
Modulgeradverzahnung

Hard stepped monoblock jaws,
module straight serration

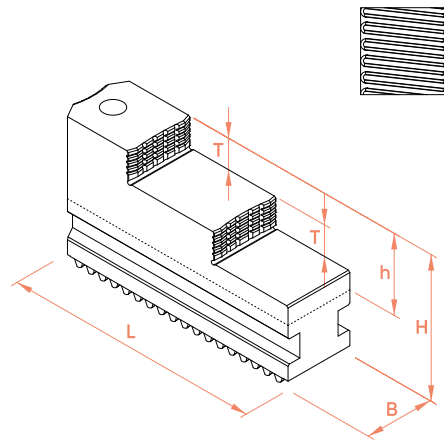


B	H	h	L	T	Masse/Sz mass/set	Werkstoff material	Backentyp jaw type	Ident-Nr. ident-no.	Röhm	Schunk	SMW-Autoblok
mm	mm	mm	mm	mm	kg						
20	43,5	23	58	7	0,6	16MnCr5	GST160-1	260160		ROTA THW 165	KNCS 140
20	43,5	23	58	7	0,6	16MnCr5	GST160-2	260162		ROTA THW plus 165 ROTA THW plus 185	KNCS-N 140 HG-N 160 KNCS 160 KNSP 160 RMG 160
20	43,5	23	67	7	0,7	16MnCr5	GST175	260175	DURO-NCES 175	ROTA-G 160	KNCS 175 KNCS-N 170
22	51	26	84	8	1,3	16MnCr5	GST210	260200	DURO-NCES 200	ROTA THW 210 ROTA THW plus 215 ROTA THW vario 215 ROTA-G 200	HG-N 210 KNCS 200 KNCS 210 KNCS-N 210 KNCS-N 225 KNSP 200 RMG 200
26	60	31	100	10	2,0	16MnCr5	GST260	260250	DURO-NCES 250	ROTA THW 250 ROTA THW 265 ROTA THW plus 260 ROTA-G 250	HG-N 260 KNCS 250 KNCS 260 KNCS-N 260 KNCS-N 275 RMG 250
32	66	32	117	10	3,4	16MnCr5	GST315	260315	DURO-NCES 315	ROTA THW 315 ROTA THW plus 315 ROTA-G 315	HG-N 315 KNCS 315 KNCS-N 315 KNCS-N 325 KNCS-N 340
32	70	36	137	11	4,4	16MnCr5	GST400	260400	DURO-NCES 400	ROTA THW 400	HG-N 400 KNCS 400 KNCS-N 400 RMG 315
45	93	46	175	20	11,7	16MnCr5	GST500	260500		ROTA THW 500 ROTA THW 630 ROTA THW 800	HG-N 500 KNCS 500 KNCS-N 500 HG 630 HG-N 630 KNCS 630 KNCS-N 630

UNIJaws®

Stufenblockbacken hart,
Modulschrägverzahnung

Hard stepped monoblock jaws,
module angled serration



B	H	h	L	T	Masse/Sz mass/set	Werkstoff material	Backentyp jaw type	Ident-Nr. ident-no.	Forkardt	Röhm	Schunk	SMW- Autoblok
mm	mm	mm	mm	mm	kg							
20	45	24	79	7,5	1,1	16MnCr5	FST16	260016	F 160 F+ 160 FNC 175 KTNC 160 KTNCV 160 KTNCV 175	DURO 160 DURO-NC 160 DURO-NC 175 DURO-NCE 160 DURO-T 160	ROTA-S 160 ROTA-S plus 160 ROTA-S plus 2.0 160	HG-F 160
22	60	35	94	10	1,9	16MnCr5	FST20	260020	F 200 F+ 200 FNC 200 KTNC 200 KTNCV 200	DURO 200 DURO-NC 200 DURO-NC 225 DURO- NCE 200 DURO- T 200	ROTA-S 200 ROTA-S plus 2.0 200 ROTA-S plus 200	HG-F 210
26	70	40	114	14	3,4	16MnCr5	FST25	260025	F 250 F+ 250 FNC 250 FNC 315 KTNC 250 KTNC 280 KTNC 315 KTNCV 250 KTNCV 315	DURO 250 DURO-NC 250 DURO-NCE 250 DURO-NCE 315 DURO T 250	ROTA-S 250 ROTA-S plus 2.0 250 ROTA-S plus 250	HG-F 260
32	81	46	130	15	5,4	16MnCr5	FST31	260031	F 315 F+ 315 FNC 400 KTNC 360 KTNC 400 KTNCV 400	DURO 315 DURO-NC 315 DURO-NCE 400 DURO-T 315	ROTA-S 315 ROTA-S plus 2.0 315 ROTA-S plus 315	HG-F 315
45	93	52	167	20	11,0	16MnCr5	FST40	260040	F 400 F 500 F 500 L F+ 400 F+ 500 FNC 500 FNC 630 KTNC 500 KTNC 630 KTNCV 500 KTNCV 630	DURO 400 DURO 500 DURO-NC 400 DURO-NC 500 DURO-NCE 500 DURO-T 400 DURO-T 500	ROTA-S 400 ROTA-S 500 ROTA-S plus 400 ROTA-S plus 500	HG-F 400 HG-F 500

Übersicht / Overview

Blockbacken weich für Bison und Röhm 3-Backen Planspiralfutter

Soft scroll jaws for Bison and Röhm 3-jaw scroll-chucks

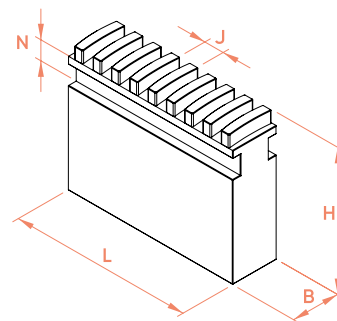


**Blockbacken weich,
Planspiralfutter**

*soft scroll jaws,
manual scroll chucks*

UNIJaws®

Blockbacken weich, Planspiralfutter
Soft scroll jaws, manual scroll chucks



B	H	L	N	J	Masse pro Satz mass pro set	Backentyp jaw type	Ident-Nr. ident-no.	Werkstoff material	Bison (3200-3700)	Röhm
mm	mm	mm	mm	mm	kg					
20	38	51	8	7	0,8	EN13	293101	C15	Ø125	
20	51	70	8	8	1,3	EN16	293102	C15	Ø160	
25	57	85	10	8	2,5	EN20	293103	C15	Ø200	
28	70	105	12	9	4,2	EN25	293104	C15	Ø250	
32	76	127	12	10	6,3	EN32	293105	C15	Ø315	
36	92	145	14	12	10,0	EN40	293112	C15	Ø400	
40	100	180	14	14,2	16,0	EN50	293113	C15	Ø500	
50	110	225	14	14,2	16,0	EN63	293145	C15	Ø630	
18	41,5	52	7	6	0,8	EH12	293125	C15		ZG 125/3 ZS 125/3
18	41,5	61	7	6	1,0	EH14	293140	C15		ZG 140/3 ZS 140/3
18	51	61	7	8	1,1	EH16	293016	C15		ZG 160/3 ZS 160/3
20	57	69	8	8	1,6	EH20	293020	C15		ZG 200/3 ZS 200/3
24	70	90	10	10	3,0	EH25	293025	C15		ZG 250/3 ZS 250/3
34	76	130	15	10	7,2	EH32	293032	C15		ZG 315/3 ZS 315/3 ZG 350/3 ZS 350/3 ZG 400/3 ZS 400/3
42	95	190	15	10	15,6	EH50	293034	C15		ZG 500/3 ZS 500/3 ZG 630/3 ZS 630/3



T-Nutensteine für alle gängigen
Spannfutter sowie Zubehör für Ihre
Spannaufgaben .

*T-nuts for all common chucks and
accessories for your clamping tasks .*

Übersicht / Overview

Nutensteine und Zubehör
T-Nuts and accessories



Nutensteine

t-nuts

S. 298–310



Spanneinsätze

clamping inserts

S. 311



Auflagebolzen

height pins

S. 312



Spezialfett/Fettpressen

special grease/grease guns

S. 312



Reinigungsplatten

serration cleaning plates

S. 313



Ausdrehvorrichtungen

jaw turning fixtures

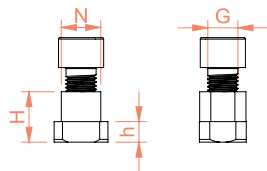
S. 313

UNIJaws®

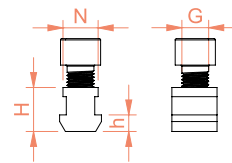
Nutensteine

T-nuts

Typ I

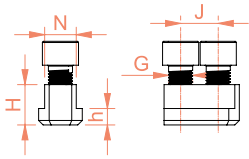


Typ III

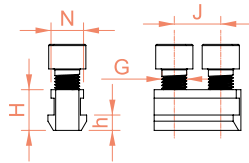


H	h	N / N1	J	G	Zyl.-Schraube cap screw	Typ type	Nutensteintyp t-nut type	Ident-Nr. ident-no.	Berg
mm	mm	mm	mm	mm	12.9				
13,7	5,5	10	12	M6	M6 x 18	IV	X5819	9905819	
21,5	7,5	11	—	M8	M8 x 30	I	GH13	287500	
17	7	12	—	M8	M8 x 20	I	GN13	287001	KF 130
17,2	7	12	15	M8	M8 x 20	VIII	X3720	9903720	
21,5	7,5	12	—	M8	M8 x 25	I	GF12	287532	
15	6,5	12	16	M8	M8 x 20	IV	GF13	287521	
17,7	7,5	12	—	M8	M8 x 25	I	GE13	291001	
20	7,5	14	—	M10	M10 x 25	I	GF17	287510	
18,5	6,5	14	16,5	M10	M10 x 20	VI	GF18	287511	
18,5	6,5	14	—	M10	M10 x 25	III	GF181	287522	
18,5	6,5	14	20	M10	M10 x 25	VI	GF182	287523	
18,5	6,5	14 / 12	20	M10	M10 x 25	VII	GF183	287524	
18,5	6,5	14 / 12	—	M8	M8 x 25	III	GF31	537031	
26,5	9,5	14	—	M10	M10 x 35	I	GH16	287501	
26,7	12	16	30	M12	M12 x 35	IV	WN25	780025	KH 250 KH 315 KHL 250 KHL 315 KV3 250 KV3 315
21,5	9	17	19	M12	M12 x 25	IV	GD16	289002	
21,5	9	17	—	M12	M12 x 25	I	GE16	291002	
21	8,8	17	—	M10	M10 x 30	I	GE30	537130	

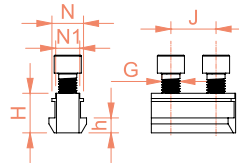
Typ IV



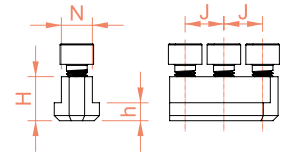
Typ VI



Typ VII



Typ VIII



* bis Baujahr 1997

* up to year of construction 1997

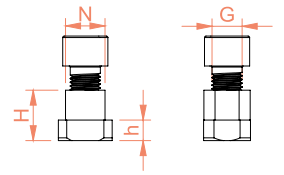
Forkardt	Röhm	Schunk	SMW-Autoblok
	KFD 110 KFD 125 KFD 140 KFD-HS 125 KFD-HS 130 KFD-HS 140	ROTA NCD 130 ROTA NCD 132	
		ROTA TP 125	SP 125 STP 125 STWP 125 *
	KFD 130 KFD-HS 160 KFD-HS 175 KFH 140 LVE 125 LVE 160	ROTA NCD 160 ROTA NCD 165	KDV 130
	KFD-HE 170 KFD-HS 160 KFD-HS 175	ROTA NCD 160 ROTA NCD 165	
			SP 125
			GHDN 125 ODN 125
	KFD 130 KFD-HE 130 KFH 140		
			GHD-FC 165 GHDN 165 GHDN 170 HDB 170 HDL 170 HDN 170 IDL 170 IDN 170 ODN 170
		ROTA NC plus 185 ROTA NCF plus 185 ROTA NCK plus 165	AL-D 165 AN-D 165 AP-D 170 BB-D 165 BB-D 175 BH-D 165 BHD-FC 165 HFKN-D 165 HYND-S 180 NT-D 170
			AL-M 165 AN-M 165 AP-M 170 BB-M 175 BH-M 165 BHM-FC 165 HFKN-M 165 NT-M 170
		ROTA TP 160	SP 160 STP 160 STWP 160
	KFD 160 KFD 200 KFD-AF 160 KFD-AF 200 KFD-HE 160 KFD-HE 200 KFD-HE 210 KFD-HF 160 KFD-HF 200 KFD-HS 200 KFH 160 KFH 200 KFH-F 160 KFH-F 200 KFH-G 160 KFH-G 200 KFH-NC 160 KFH-NC 200 KFL 250 LVE 200 SPD 160 SPD 215 SPO 160 SPO 215		

UNIJaws®

Nutensteine

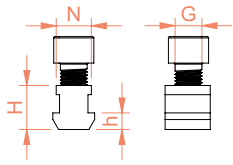
T-nuts

Typ I

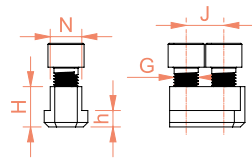


H	h	N / N1	J	G	Zyl.-Schraube cap screw	Typ type	Nutensteintyp t-nut type	Ident-Nr. ident-no.	Berg
mm	mm	mm	mm	mm	12.9				
22	8	17	—	M12	M12 x 30	I	GF20	287512	
20,5	7,5	17	23	M12	M12 x 25	VI	GF21	287513	
20,5	7,5	17	—	M12	M12 x 25	III	GF211	287525	
20,5	7,5	17	22	M12	M12 x 25	VI	GF212	287526	
20,5	7,5	17	—	M10	M10 x 25	III	GF30	537030	
20,5	7,5	17 / 14	—	M10	M10 x 30	III	GF32	537032	
20,5	7,5	17 / 14	25	M12	M12 x 30	VII	GF213	287527	
20	7,5	17 / 14	26	M10	M10 x 30	VII	WN14	780014	
23	9	17	—	M12	M12 x 30	I	GN16	287002	
23	9	17	19	M12	M12 x 30	IV	GG16	288002	
23	9	17	22	M12	M12 x 30	IV	GG20	288001	
23	9	17	—	M10	M10 x 30	I	GN50	537050	
27,5	9,5	17	—	M12	M12 x 35	I	GH20	287502	
25	11	21	—	M16	M16 x 35	I	GF25	287514	

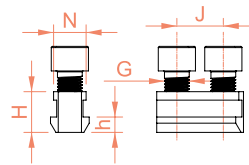
Typ III



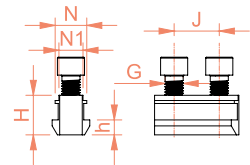
Typ IV



Typ VI



Typ VII



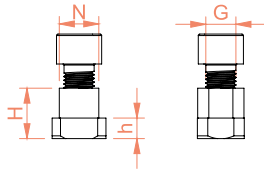
Forkardt	Röhm	Schunk	SMW-Autoblok
			GHD-FC 210 GHDN 210 HD-B 220 HDL 200 HDN 200 HDN 220 IDL 200 IDN 200 ODL 200 ODL 220 ODN 200 ODN 220
		ROTA NC 165 ROTA NC 210 ROTA NC plus 215 ROTA NCD 185 ROTA NCF 165 ROTA NCF 210 ROTA NCF plus 215 ROTA NCK plus 210 ROTA NCK plus 250 ROTA NCO 165 ROTA NCO 21	AL-D 210 AN-D 210 AP-D 215 AP-D 260 APL-D 215 APL-D 260 BB-D 210 BH-D 210 BHD-FC 210 HFKN-D 210 HYND-S 210 HYND-S 226 NT-D 215 NT-D 260
			AL-M 210 AN-M 210 APL-M 215 AP-M 215 BB-M 210 BH-M 210 BHM-FC 210 NT-M 215
KG 200 KGH 160 KGH 175 KGH 200 KGHF 160 KGHF 175 KGHF 200 KL 160 KL 200 KLNC 200 KP 200 KS 160 KS 200 KS 250 KSF 175 KSF 200 KSH 160 KSH 200 KSHF 200 KSHF 250 KSPS 160 KSPS 200 KT 160 KT 200 KTG 160 KTG 200 KTGF 200 KTH 160 KTH 175 KTH 200 KTN 160 KTN 200 NH 160 NH 175 NH 200 NHF 160 NHF 175 NHF 200 QLC 160		ROTA NC 165 ROTA NC 210 ROTA NCD 210 ROTA NCD 215 ROTA NCF 165 ROTA NCF 210	HFK 160 HFK 200 HFKS 160 HFKS 200 KDV 160 KDV 200 KDV 250 KDVG 160 KDVG 200 KDVG 250 KFMF 160 KFMF 200 KFV 160 KFV 200
		ROTA TP 200	LP 205 SP 200 SP 240 STP 200 STWP 200
			GHD-FC 250 GHD-FC 305 GHD-FC 400 GHDN 250 GHDN 315 GHDN 400 HDB 300 HDL 250 HDL 315 HDL 400 HDN 250 HDN 315 HDN 400 IDL 250 IDL 315 IDL 400 IDN 250 IDN 315 IDN 400 ODN 250 ODN 315 ODN 400

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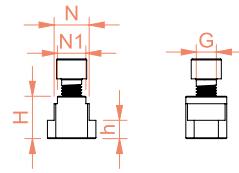
Nutensteine

T-nuts

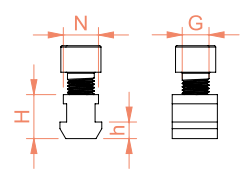
Typ I



Typ II

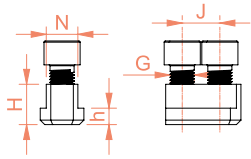


Typ III

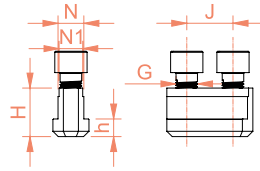


H	h	N / N1	J	G	Zyl.-Schraube cap screw	Typ type	Nutensteintyp t-nut type	Ident-Nr. ident-no.	Berg
mm	mm	mm	mm	mm	12.9				
26,5	10	21	30	M16	M16 x 35	VI	GF26	287515	
26,5	10	21	28	M16	M16 x 35	VI	GF262	287529	
26,5	10	21 / 16	30	M12	M12 x 35	VII	GF263	287530	
26,5	10	21 / 16	25	M12	M12 x 30	VII	TT24	820024	
26,5	10	21 / 14	22	M12	M12 x 35	VII	TT46	820046	
26,5	10	21	—	M16	M16 x 35	III	GF261	287528	
26,5	10	21	—	M14	M14 x 35	III	GF35	537035	
25,5	11	21 / 17	—	M12	M12 x 30	II	GE21/17	291007	
25,5	11	21 / 17	19	M12	M16 x 35	V	X2970	9902970	
25	11	21 / 17	—	M10	M10 x 35	II	GE36	537136	
27	11	21	—	M16	M16 x 35	I	GN25	287003	
27	11	21	—	M14	M14 x 35	I	GN70	538110	
27	11	21 / 16	—	M12	M12 x 35	II	GN77	538212	
27	11	21 / 17	—	M12	M12 x 30	II	GN21/17	287007	
27	11	21	22	M12	M12 x 40	IV	TT35	820035	
27	11	21	25	M16	M16 x 35	IV	GG25	288004	
27	11	21	28	M16	M16 x 35	IV	GG32	288003	

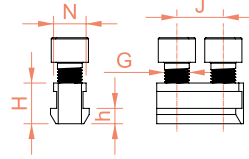
Typ IV



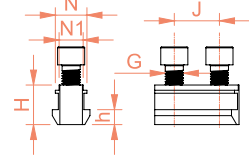
Typ V



Typ VI



Typ VII



Forkardt	Röhm	Schunk	SMW-Autoblok
		ROTA NC 250 ROTA NC plus 260 ROTA NC plus 315 ROTA NCF plus 260 ROTA NCF plus 315 ROTA NCK 250 ROTA NCK plus 315 ROTA NCO 260 ROTA NCO 315	AL-D 250 AL-D 260 AL-D 315 AN-D 250 AN-D 260 AN-D 315 AN-M 250 AP-D 315 APL-D 315 APL-M 260 AP-M 260 BB-D 250 BB-D 315 BH-D 250 BH-D 315 BHD-FC 250 BHD-FC 315 HFKN-D 260 HFKN-D 315 HYND-S 250 HYND-S 315 NT-D 315
		ROTA NC 250 ROTA NC plus 260 ROTA NC plus 315 ROTA NCF 250 ROTA NCF plus 260 ROTA NCF plus 315 ROTA NCK plus 315 ROTA NCO 260 ROTA NCO 315	AL-D 250 AL-D 260 AL-D 315 AL-M 315 AN-D 250 AN-D 260 AN-D 315 AN-M 250 AN-M 315 AP-D 315 APL-D 315 APL-M 260 APL-M 315 AP-M 260 AP-M 315 BB-D 250 BB-D 315 BB-M 315 BH-D 250 BH-D 315 BHD-FC 250 BHD-FC 315 BH-M 315 BHM-FC 315 HFKN-D 260 HFKN-D 315 HFKN-M 315 HYND-S 250 HYND-S 315 NT-D 315 NT-M 260 NT-M 315
	KFD-HS 250		HDN 250S
KG 250 KG 315 KL 250 KLNC 250 KLNC 315 KP 250 KP 315 KS 315 KS 400 KSH 250 KSH 315 KSH 400 KSHF 250 KSHF 315 KSHF 400 KSPS 250 KSPS 300 KT 250 KT 315 KTG 250 KTG 315 KTGf 250 KTGf 315 KTN 250 KTN 315 NH 250 KSHF 315 KSHF 400 KSPS 250 KSPS 300 KT 250 KT 315 KTG 250 KTG 315 KTGf 250 KTGf 315 KTN 250 KTN 315 NH 250 NH 257 NH 260 NH 290 NH 315 NHF 250 NHF 315 QLC 250 QLC 315 QLC-KS 315 QLC-KS 400 QLK 250 QLK 315 QLK-KS 315		ROTA NC 250 ROTA NC 315 ROTA NCD 250 ROTA NCD 255 ROTA NCD 315 ROTA NCF 250 ROTA NCF 315	HFK 250 HFK 270 HFK 315 HFKS 250 HFKS 315 KDV 315 KDV 400 KDVG 315 KDVG 400 KFMF 250 KFMF 315 KFV 250 KFV 315 KZF 200 KZF-ES 200

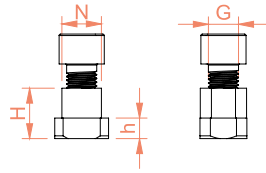
UNIJaws®

Nutensteine

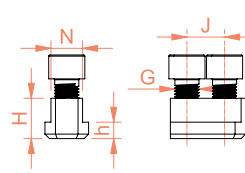
T-nuts

H	h	N / N1	J	G	Zyl.-Schraube cap screw	Typ type	Nutensteintyp t-nut type	Ident-Nr. ident-no.	Berg
mm	mm	mm	mm	mm	12.9				
25	11	21	—	M16	M16 x 35	I	GE25	291003	
25	11	21	—	M14	M14 x 35	I	GE35	537135	
25,5	11	21	22	M12	M12 x 35	IV	TT34	820034	
30	11	21	—	M16	M16 x 35	I	GH26	287504	
29	11	25,5	—	M20	M20 x 40	I	GN40	287004	
29	11	25,5	35	M20	M20 x 40	IV	GG40	288005	
33,7	15,5	25,5	—	M20	M20 x 45	I	GE40	291004	
34,5	15	25,5 / 22	—	M20	M20 x 40	V	X7960	9907960	
36	15	30	—	M24	M24 x 50	I	GN60	287006	
41	15	30	—	M24	M24 x 50	I	GN80	287005	

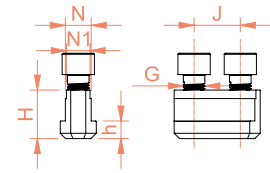
Typ I



Typ IV



Typ V



Forkardt	Röhmm	Schunk	SMW-Autoblok
	KFD 250 KFD 315 KFD-AF 250 KFD-AF 315 KFD-G 200K FD-HE 254 KFD-HE 315 KFD-HF 250 KFD-HF 315 KFD-HS 250 KFD-HS 315 KFH 250 KFH 315 KFH-F 250 KFH-F 315 KFH-G 250 KFH-G 315 KFH-NC 250 KFH-NC 315 KFL 315 KFL 400 LVE 250 LVE 315 SPD 300 SPO 300		GHD 400 GHD-FC 250 GHD-FC 305 GHD-FC 315 GHD-FC 400 GHDN 250 GHDN 305 GHDN 315 GHDN 400 GH-M 400 HD-B 300 HDL 250 HDL 315 HDL 400 HDN 250 HDN 315 HDN 400 LP 250
		ROTA TP 250 ROTA TP 315	SP 250 SP 280 SP 315 SP 350 STP 250 STP 315 STWP 250 STWP 315
KG 400 KG 500 KL 300 KL 400 KL 500 KLNC 400 KLNC 500 KP 400 KP 500 KS 500 KS 630 KSH 500 KSHF 560 KSHF 630 KSL 630 KSPS 400 KT 400 KT 500 KT 630 KTG 400 KTG 500 KTG 630 KTGF 400 KTGF 500 KTGF 630 KTN 400 KSHF 630 KSL 630 KSPS 400 KT 400 KT 500 KT 630 KTG 400 KTG 500 KTG 630 KTGF 400 KTGF 500 KTGF 630 KTN 400 KTN 500 KTN 630 NH 400 NH 500 NH 630 NHF 400 NHF 500 NHF 630 QLC 400 QLK 400 UVE 400 UVE 500 UVE 630		ROTA NC 400 ROTA NC 500 ROTA NCD 400 ROTA NCD 500 ROTA NCD 630 ROTA NCF 400 ROTA NCF 500 ROTA NCO 800	HFK 400 HFK 500 HFKN-D 400 HFKN-D 500 HFKS 400 HFKS 500 KDV 500 KDVG 500 KJV 400 KJV 500 KJV 630 KJV 800 KZF 250 KZF 315 KZF 400 KZF-ES 250 KZF-ES 315 KZF-ES 400
	KFD 400 KFD 500 KFD 630 KFD 800 KFD-G 250 KFD-G 315 KFD-G 400 KFD-HE 400 KFD-HE 500 KFD-HE 630 KFD-HE 800 KFD-HF 400 KFD-HF 500 KFD-HF 630 KFD-HS 400 KFD-HS 500 KFH 400 KFH 500 KFH-F 400 KFH-F 500 KFH-G 400 KFH-G 500 KFH-NC 400 KFH-NC 500 KFL 500 KFL 600 LVE 400 LVE 500 LVE 630 LVE 800	ROTA NCO 400 ROTA NCO 500 ROTA NCO 630	AL-D 400 AL-M 400 AN-D 400 AN-M 400 BH-D 400 BH-D 450 BH-D 500 BH-D 630 BH-D 800 BH-FC 500 BH-FC 630
			AL-M 400 AN-M 400 BH-M 400 BH-M 450
			HFKS 630 HFKS 800
KS 1000 KS 1250 KS 1400 KS 800 KSF 1000	KFD 1000 KFD 1200 KFD 1250		

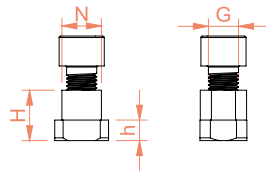
UNIJaws®

Nutensteine

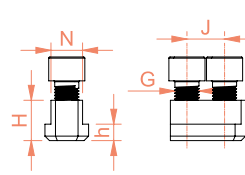
T-nuts

H	h	N/N1	J	G	Zyl.-Schraube cap screw	Typ type	Nutensteintyp t-nut type	Ident-Nr. ident-no.
mm	mm	mm	mm	mm	12.9			
13,5	4,5	8	15	M6	M8 x 16	IV	GP04	290020
18	5,5	10	14	M8	M8 x 22	IV	GP01	292031
15	5,5	10	14	M8	M8 x 20	IV	GP03	292005
15,5	5,5	10	18	M8	M8 x 22	IV	GP05	292021
18	5,5	10	19	M8	M8 x 22	IV	GP02	292032
16,5	6,5	11	16	M8	M8 x 20	IV	GR04	292015
21	7	12	20	M10	M10 x 25	IV	GP06	292002
18,5	7,5	12	20	M10	M10 x 25	IV	GP07	292003
18,5	7,5	12	16	M8	M8 x 25	IV	GP45	538045
18,5	7,5	12	26	M8	M8 x 25	IV	GP47	538047
23	8	14	25	M12	M12 x 30	IV	GP08	292004
23	8	14	26	M10	M10 x 30	IV	WN10	780010
20,5	8,5	14	25	M12	M12 x 30	IV	GP09	292001
20,5	8,5	14	18	M10	M10 x 25	IV	GP55	538055
20,5	8,5	14	27	M10	M10 x 25	IV	GP56	538056
20	7,5	14	26	M10	M10 x 30	IV	WN12	780012
23	8	16	30	M12	M12 x 30	IV	GP10	292006
23	8	16	25	M12	M12 x 30	IV	TT22	820022
21,5	8,5	16	30	M12	M12 x 30	IV	GP11	292007
21,5	8,5	16	22	M12	M12 x 25	IV	GP60	538060
21,5	8,5	16	—	M12	M12 x 30	I	TT70	820070
21,5	8,5	16	50	M12	M12 x 35	IV	WN70	780070
21,5	8,5	16 / 14	26	M10	M10 x 30	V	WN26	780026
26,5	8,5	16	25	M12	M12 x 35	IV	GR10	292011
26,5	8,5	16 / 14	25	M12	M12 x 35	V	GA08	292017

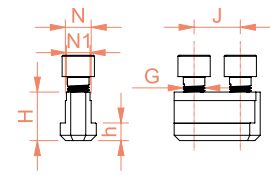
Typ I



Typ IV



Typ V



HOWA	HWR	Kitagawa	Röhm	Samchully	Schunk
		B-04 HOB-04		HCH-04	
		HJ-4 N-04 NL-04		HC-04 HCL-04	
HO1MA4 HO24M5		B-204 B-205		HS-04 HS-05	
	VD016 VT016 VT-S 016	B-05 HOB-05			
		HJ-5 N-05		HC-05	
HO27M4 HO27M5					
HO15M6 HO1MA6 HO22M6 HO24M6 HO27M6 HO37M6 HO47M6 HO7MA6		HOB-06 N-06 NL-06		HC-06 HCL-06	ROTA NC 165 ROTA NCF 165
	VD021 VK021 VT021 VT-S 021	B-06 B-07 B-106 B-206 BB-06 BB-206 BL-206 HOH-06 HOH-106 HOH-206	KFD-HE 170	HCH-06 HH-206 HS-06 MH-206	ROTA NC plus 185 ROTA NCD 165 ROTA NCD 185 ROTA NCF plus 185 ROTA NCK 165 ROTA NCK plus 165
HO15M8 HO1MA8 HO7MA8		B-08 B-108 HOB-08 HOH-08 ML-08 N-08 NL-08		HC-08 HCH-08 HCL-08	ROTA NC 210 ROTA NCF 210
		B-108 B-208 BB-08 BB-208 BL-208 HOH-108 HOH-208	KFD-HE 210	HH-208 HS-08 MH-208	ROTA NCD 215 ROTA NCK 210 ROTA NCK plus 210
HO1MA10		B-10 HOB-10 HOH-10 N-10 NL-10		HC-10 HCH-10 HCL-10	ROTA NC 250 ROTA NCF 250
	VD026 VD031 VK026 VK031 VK-S 026 VK-S 031 VL042 VL060 VL070 VT026 VT031 VT-S 026 VT-S 031	B-110 B-210 BB-10 BB-210 BL-210 HOH-10K HOH-210	KFD-HE 254	HH-210 HS-10 MH-210	ROTA NC plus 260 ROTA NCD 255 ROTA NCF plus 260 ROTA NCK 250 ROTA NCK plus 250
HO15M10 HO22M8 HO24M8 HO27M8 HO37M8 HO47M8 HO7MA10					

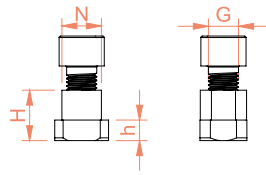
UNIJaws®

Nutensteine

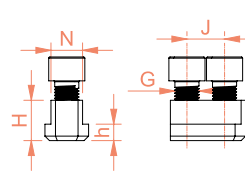
T-nuts

H	h	N/N1	J	G	Zyl.-Schraube cap screw	Typ type	Nutensteintyp t-nut type	Ident-Nr. ident-no.
mm	mm	mm	mm	mm	12.9			
33	13,5	18	30	M14	M14 x 45	IV	GP12	292008
33	13,5	18	25	M14	M14 x 40	IV	GP70	538070
33	13,5	18	34	M14	M14 x 40	IV	GP75	538075
33	1305	18	—	M12	M12 x 35	I	GN78	538213
27,5	9,5	18	30	M14	M14 x 35	IV	GR12	292012
27,6	9,3	18 / 16	30	M12	M12 x 35	V	GA10	292019
28	11,5	21	30	M16	M16 x 35	IV	GP13	292009
28	11,5	21	25	M14	M14 x 35	IV	GP80	538080
28	11,5	21	34	M14	M14 x 35	IV	GP85	538085
28	11,5	21	—	M12	M12 x 35	I	TT40	820040
28	11,5	21	—	M16	M 16 x 35	I	TT65	820065
29	10,5	21	35	M16	M16 x 35	IV	GR13	292013
29	10,5	21 / 18	30	M14	M14 x 35	V	GA12	292020
22,8	11,5	21	30	M16	M16 x 30	IV	GP14	292016
23	11,5	21	33	M16	M16 x 35	IV	WN32	780032
22,8	11,5	21	25	M12	M12 x 35	IV	TT36	820036
45,5	16,5	24 / 22	43	M20	M20 x 55	V	GP15	292010
45,5	16,5	24 / 21	33	M16	M16 x 55	V	WN34	780034
45	19	25	60	M20	M20 x 55	IV	GP21	292022
42	19	25	43	M16	M16 x 60	IV	WN50	780050
42	19	25	43	M20	M20 x 55	IV	TT55	820055
42	19	25,5 / 22	43	M20	M20 x 50	V	X5507	9905507

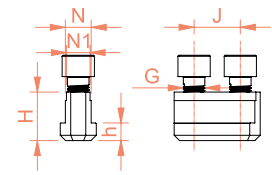
Typ I



Typ IV



Typ V

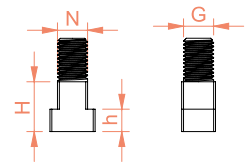


HOWA	HWR	Kitagawa	Röhm	Samchully	Schunk
HO1MA12		B-12 HOB-12 HOH-12 N-12 NL-12		HC-12 HCH-12 HCL-12	ROTA NC 315 ROTA NCF 315
HO15M12 HO22M10 HO24M10 HO27M10 HO37M10 HO47M10 HO7MA12					
	VD040 VK040 VK-S 040 VL100 VL120 VL140 VL160 VL180 VL200 VT040 VT-S 040	B-112 B-212 BL-212 HOH-112 HOH-12K HOH-212	KFD-HE 315	HH-212 HS-12 MH-212	ROTA NC plus 315 ROTA NCD 315 ROTA NCF plus 315 ROTA NCK 315 ROTA NCK plus 315
HO27M12 HO37M12 HO47M12					
		BB-212			
		B-15 B-18 HOB-15 HOB-18 HOH-15		HCH-15 HCH-18	ROTA NC 400 ROTA NCF 400
	VD050 VD063 VD080 VD100 VD120 VK050 VK063 VK080 VK-S 050 VK-S 063 VK-S 080 VK-S 100 VT-S 054 VT-S 063 VT-S 080 VT-S 100	B-21 B-24 HJ-18 HJ-21 HJ-24 HOB-21 HOB-24 N-21 N-24 NV-21 NV-24 NV-28 NV-32 NV-36 NV-40		HC-21 HC-24 HCH-21 HCH-24 MH-221 MH-224	
		B-215			

UNIJaws®

T-Nutenschrauben

T-slot bolt

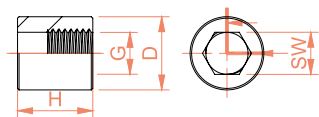


H	h	N / N1	G	Typ type	Ident-Nr. ident-no.	Berg
mm	mm	mm	mm			
17,3	7	8	M9	GB08	285002	KH 110
20,3	9,3	10	M10	GB10	285011	KH 140 KH 160 KHL 160 KV3 160
23,2	9	12	M12	GB12	285013	KH 175 KH 200 KHL 200 KV3 200
26,7	12	16	M16	GB16	285014	KH 250 KH 315 KHL 250 KHL 315 KV3 250 KV3 315
32,7	16	20	M20	GB20	285015	KH 400 KH 500 KH 630 KHL 400 KV3 400

UNIJaws®

T-Nutenmuttern

T-slot cap nut



H	h	N / N1	G	Typ type	Ident-Nr. ident-no.	Berg
mm	mm	mm	mm			
13	M9	13	6	GC08	285001	KH 110
16	M10	16	8	GC10	285100	KH 140 KH 160 KHL 160 KV3 160
19	M12	17,8	10	GC12	285120	KH 175 KH 200 KHL 200 KV3 200
25	M16	24,5	14	GC16S	285160	KH 250 KH 315 KHL 250 KHL 315 KV3 250 KV3 315
32	M20	32	22	GC20	285200	KH 400 KH 500 KH 630 KHL 400 KV3 400

UNIJaws®

Spanneinsätze
Clamping inserts

Typ I



Typ II



Typ III



Typ IV



Typ V



WF05



Spanneinsatztyp clamping insert	Ident-Nr. ident-no.	D	H	C	F	E	M	G	Typ type
		mm	mm	mm	mm	mm	mm	mm	mm
EU2A	294001	12,7	9,5	9,5	8,7	6,3	6,7	M6	I
EU2B	294002	12,7	12,7	9,5	11,9	6,3	8,3	M6	I
EU2C	294003	12,7	16,5	9,5	15,9	9,5	9,9	M6	I
EU5A	294004	15,9	9,5	12,7	8,7	4,7	6,7	M6	I
EU6A	294005	19	9,5	15,9	8,7	4,7	6,7	M6	I

Spanneinsatztyp clamping insert	Ident-Nr. ident-no.	A	H	C	G				
		mm	mm	mm	mm				
EU7A	294010	12,7	9,5	10,3	M6				II

Spanneinsatztyp clamping insert	Ident-Nr. ident-no.	D	H	E	M	G			
		mm	mm	mm	mm	mm			
EW10	294015	12	10	4,7	4,5	M6			III
EW15	294016	12	12	4,7	6	M6			III
EW20	294017	16	10	4,7	4,5	M6			III
EW25	294018	20	10	4,7	4,5	M6			III
EW30	294019	25	10	4,7	4,5	M6			III

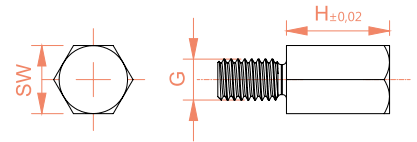
Spanneinsatztyp clamping insert	Ident-Nr. ident-no.	A	H	G					
		mm	mm	mm					
EW40	294020	12	10	M6					IV

Typ type	Ident-Nr. ident-no.	Bezeichnung denomination	H	ø	Schaft ø shank ø	Schneiden-ø blade dia.	Schneidenhöhe blade height		
			mm	mm	mm	mm	mm		
EZ05	087414	Spanneinsatz gripp-Insert	10	16					V
WF05	033611	Winkelstirnfräser angle end milling tool			12	16	12		WF05

UNIJaws®

Auflagebolzen

Height pins



Type type	Identnummer ident-no.	G	H	SW
IR05	229014	M5	5	8
IR10	229015		10	
IR15	229016		15	
IR20	229017		20	
IT05	229004	M6	5	10
IT10	229005		10	
IT15	229006		15	
IT20	229007		20	
IT25	229003		25	
IU05	229008	M8	5	13
IU10	229009		10	
IU15	229010		15	
IU20	229011		20	
IU25	229012		25	
IU30	229013		30	

Spezialfett und Fettpressen

Special grease and grease guns



INOFlex® Zubehör INOFlex® accessories	Ident-Nr. ident no.	Beschreibung description	Passend für suitable for
OKS 265	800006	INOFlex® Spezialfett, 400 ml Kartusche INOFlex® special grease, 400 ml cartouche	INOFlex® Spannfutter und SOLIDChuck INOFlex® Chucks and SOLIDChuck
EP01	800001	INOZet® Spezialfett, 400 ml Kartusche INOZet® special grease, 400 ml cartouche	INOZet® Pendelbrücken INOZet® pendulum bridge
Handhebel-Fettpresse lever-type grease gun	800008	für 400 ml Kartusche, DIN 1283, mit Mundstück für Kugelschmiernippel for 400 ml cartouches, DIN 1283, with mouthpiece for ball grease-nipples	VD026 - VD120 VF016 - VF026 VK021 - VK080 VK-S 021 - VK-S 100 VL042 - VL200 VT016 - VT040 VT-S 021 - VT-S 080 INOZet®
Stoß-Fettpresse push-type grease gun	800009	150 ml, mit Mundstück für Trichterschmiernippel 150 ml, with mouthpiece for taper grease nipples	FG16 VD016 - VD021 VD031 - VD080 VF016 VL042 VT016 VT-S 016

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Ausdrehvorrichtungen

Jaw-turnig fixtures



Ausdreh- vorrichtung trueborer	Ident-Nr. ident-no.	für Spannfutter-Ø best suited chuck-Ø	Backenanzahl number of jaws	Ring Innen-Ø ring internal-Ø	Ring Außen-Ø ring external-Ø	Spannbereiche Schraubenköpfe jaw bolt-Ø- range	Schrauben- kopf-Ø bolt head-Ø	max. Spannkraft max. clamping force
		mm	mm	mm	mm	mm	mm	kN
ES16	298001	125 – 210	3	100	180	30 – 250	13 + 16	80
ES16-4	298008	160 – 210	4	100	180	30 – 250	13 + 16	80
ES25	298002	250 – 315	3	195	295	100 – 340	16	100
ES25-4	298009	250 – 315	4	195	295	100 – 340	16	100
ES42	298003	400 – 600	3	310	420	180 – 550	18,5	130
ES42-4	298010	400 — 630	4	310	420	180 — 550	18,5	130

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Reinigungsplatten

Serration cleaning plates



Reinigungsplatte serration cleaning plate	Ident-Nr. ident-no.	Verzahnung Seite 1 serration typ on first side	Verzahnung Seite 2 serration typ on secound side	Masse mass
				kg
ES96	299001	1/16" x 90°	1,5mm x 60°	5
ES99	299002	1/16" x 90°	3/32" x 90°	6
ES66	299003	1,5mm x 60°	3,0mm x 60°	5
ES65	299004	2,0mm x 60°	3,5mm x 60°	5