

**AVALON**  
finishing systems



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# CATALOGUE

MACHINES FOR SURFACE FINISHING

# 2020

DEBURRING • GRINDING • SMOOTHING • POLISHING



# about us

Reliable company  
with unique experience

Avalon has been founded in year 1990 and since then we have dealt with designing and manufacturing machines for surface finishing. Our devices do such processes as: deburring, grinding, smoothing or polishing of workpieces that are casted, turned, milled, perforated or injected in mass production in various branches of industry. We have mastered the process of polishing jewellery what can be confirmed by many of our regular customers. We have always cared about the highest quality therefore our machines are reliable, accurate and effective. Throughout the years we have remained very open towards the needs of our Clients, that ensured us development and versatility.

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## EXAMPLES OF WORKPIECES BEFORE / AFTER finishing process

Please send the samples to:  
ZMM Avalon Wojciech Gibuła  
ul. Grunwaldzka 38  
84-351 Nowa Wieś Lęborska, POLAND  
adding the note: "SAMPLES"

We encourage you to send us samples of raw workpieces of your production. We offer to prepare a full technological process dedicated to your products without any charge. We will elaborate on an optimum process adjusted to your products. This includes selecting appropriate machines, abrasive media and the compounds. We will inform you about the parameters to set the machine right. Our knowledge will allow you to overcome potential problems with surface finishing, cleaning or drying your workpieces.



# DISC FINISHING

## MACHINES / TABLE-TOP UNITS

Disc finishing machines are the most modern as well as the fastest machines designed for surface processing. Processing time is determined by the centrifugal force, which is created by rotating movement of the bottom disc. Bottom disc puts the media and workpieces into spiral movement. Curved shape of the working bowl eliminates impingement and provides efficient media flow in

the working bowl. It also results in shortening of the process time. Processing times in disc finishing machines are several times shorter than in vibratory machines and up to 20 times shorter than in rotary tumblers. Machines in this series are to replace the initial manual processing and prepare the workpieces for subsequent finishing processes up to the polishing stage. Disc finishing machines are suitable

### DISC FINISHING MACHINE EC6

supply: 230 V; 50 Hz  
 power: 0,3 kW  
 dimensions: 525x486x702 mm (WxDxH)  
 weight: 33 kg  
 working bowl capacity: 6 l.  
 working bowl inside diameter: 210 mm



### DISC FINISHING MACHINE EC10

supply: 230 V; 50 Hz  
 power: 0,4 kW  
 dimensions: 420x520x895 mm (WxDxH)  
 weight: 51 kg  
 working bowl capacity: 10 l.  
 working bowl inside diameter: 265 mm



### DISC FINISHING MACHINE EC18

supply: 230 V; 50 Hz  
 power: 0,65 kW  
 dimensions: 493x606x1024 mm (WxDxH)  
 weight: 66 kg  
 working bowl capacity: 18 l.  
 working bowl inside diameter: 320mm



for deburring; blunting and rounding edge; grinding; degreasing; cleansing; removal of scale, rust, carbon deposit; honing; polishing. Applied dosing system and emptying of working bowl facilitate often cycle changes, what significantly increases efficiency of the process. Our machines are also available as combined versions (e.g. Wet+Wet, Wet+Dry). Disc finishing machines are suitable for wet and dry

processing. Wet processing is supported by chemical compounds, which increase slide properties and accelerate grinding process. In dry process the walnut media are pre-impregnated with grinding or polishing paste and the media is cooled down by means of air blower, which is integrated in the machine.

## disc finishing machines STAND-ALONE UNITS

### DISC FINISHING MACHINE TE10

supply: 230 V; 50 Hz  
power: 0,4 kW  
weight: 101 kg  
dimensions: 460x910x1800 mm (WxDxH)  
working bowl capacity: 10 l.  
working bowl inside diameter: 265 mm



### DISC FINISHING MACHINE TE18

supply: 230 V; 50 Hz  
power: 0,8 kW  
weight: 124 kg  
dimensions: 460x910x1800 (WxDxH)  
working bowl capacity: 18 l.  
working bowl inside diameter: 320 mm



### DISC FINISHING MACHINE TE30

supply: 230 V; 50 Hz  
power: 1,5 kW  
weight: 168 kg  
dimensions: 500x1040x1800 mm (WxDxH)  
working bowl capacity: 30 l.  
working bowl inside diameter: 400 mm



### DISC FINISHING MACHINE TE60

supply: 3x400 V; 50 Hz  
power: 4,0 kW  
weight: 365 kg  
dimensions: 1270x1160x1690 mm (WxDxH)  
working bowl capacity: 60 l.  
working bowl inside diameter: 525 mm



### DISC FINISHING MACHINE TE10x2

supply: 230 V; 50 Hz  
power: 1,2 kW  
weight: 184 kg  
dimensions: 920x910x1800 mm (WxDxH)  
working bowl capacity: 2x10 l.  
working bowl inside diameter: 2x265 mm



### DISC FINISHING MACHINE TE18x3

supply: 230 V; 50 Hz  
power: 1,8 kW  
weight: 340 kg  
dimensions: 1350x910x1800 mm (WxDxH)  
working bowl capacity: 3x18 l.  
working bowl inside diameter: 3x320 mm  
średnica komory roboczej: 3x320 mm



# ROUND VIBRATORY MACHINES



Round vibratory machines have a wide spectrum of applications, what distinguishes them from rotary tumblers and disc finishing machines. By choosing correct media type, compound and appropriate process parameters it is possible to obtain desired results – cleaning, grinding, smoothing and polishing. Interactions between media-workpiece and workpiece-workpiece are much less aggressive than in case of disc polishing machines. This results in efficient grinding or smoothing of fine and fragile workpieces that are prone to mechanical deformation.

Processing in round vibratory machines is up to 5 times faster than in rotary tumblers. During this process, the workpieces and the grinding material are added loosely into a container which is open at the top. The items are oscillated through an imbalance in weight, which forces them into a screwing movement.

Round vibratory machines are especially suitable for CEROFIN process, which helps to obtain a mirror-like finishing. Material loss during this process is relatively small.

This series of machines allow to process workpieces of different shapes, weight or sizes.

## round vibratory machines TABLE-TOP UNITS

### ROUND VIBRATORY MACHINE WE6 eco

supply: 230 V; 50 Hz  
power: 0,14 kW  
weight: 22 kg  
dimensions: 340x350x420 mm (WxDxH)  
working bowl capacity: 6 l.  
working bowl inside diameter: 280 mm



### ROUND VIBRATORY MACHINE WE6

supply: 230 V; 50 Hz  
power: 0,14 kW  
weight: 22 kg  
dimensions: 340x350x420 mm (WxDxH)  
working bowl capacity: 6 l.  
working bowl inside diameter: 280 mm



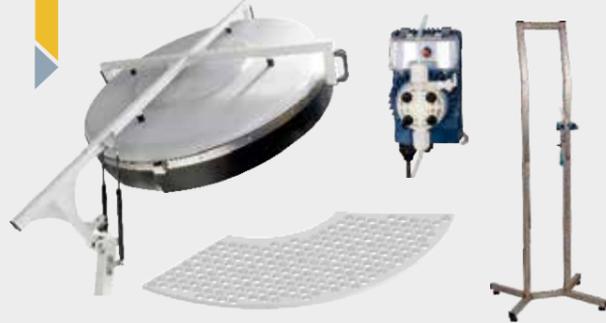
### ROUND VIBRATORY MACHINE WE10

supply: 230 V; 50 Hz  
power: 0,14 kW  
weight: 30 kg  
dimensions: 440x380x440 mm (WxDxH)  
working bowl capacity: 10 l.  
working bowl inside diameter: 310 mm



round vibratory machines  
**STAND-ALONE UNITS**

ACCESSORIES:



**ROUND VIBRATORY MACHINE  
WGS250**

supply: 3x400 V; 50 Hz  
power: 2,75 kW  
weight: 440 kg  
dimensions: 1260x1280x965 mm (WxDxH)  
working bowl capacity: 250 l  
working bowl inside diameter: 1070 mm



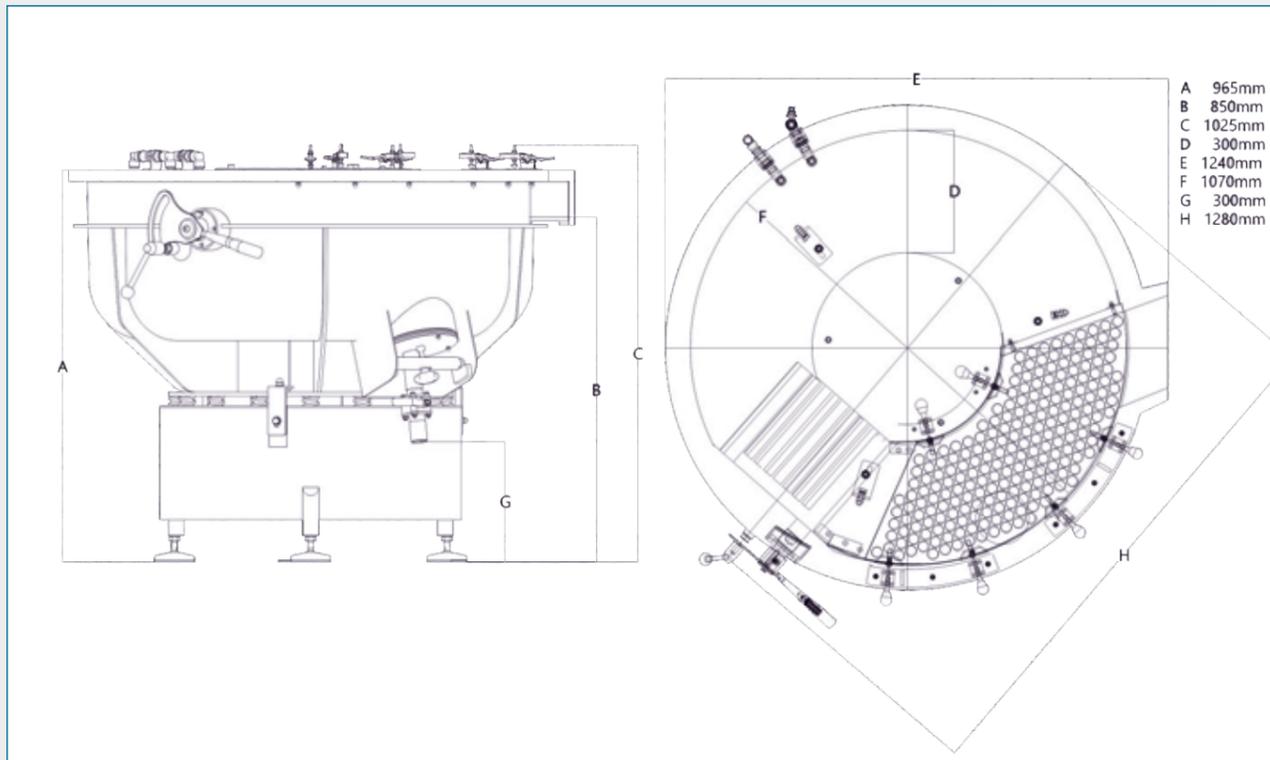
**ROUND VIBRATORY MACHINE W15**

supply: 230 V; 50 Hz  
power: 0,49 kW  
weight: 128 kg  
dimensions: 500x590x890 mm (WxDxH)  
working bowl capacity: 15 l.  
working bowl inside diameter: 360 mm



**ROUND VIBRATORY MACHINE W50**

supply: 230 V; 50 Hz  
power: 0,61 kW  
weight: 202 kg  
dimensions: 770x660x1150 mm (WxDxH)  
working bowl capacity: 50 l.  
working bowl inside diameter: 560 mm



**ROUND VIBRATORY MACHINE W100**

supply: 230 V; 50 Hz  
power: 0,7 kW  
weight: 263 kg  
dimensions: 960x900x1180 mm (WxDxH)  
working bowl capacity: 100 l.  
working bowl inside diameter: 772 mm

**ROUND VIBRATORY MACHINE WG150**

supply: 230 V; 50 Hz  
power: 0,7 kW  
weight: 275 kg  
dimensions: 895x930x1040 mm (WxDxH)  
working bowl capacity: 150 l  
working bowl inside diameter: 800 mm



# DRYERS

Centrifugal dryers are used for drying workpieces after mass finishing. The water evaporates from surface of the workpieces thanks to centrifugal force created by rotating drum. Additionally the machine incorporates hot air blower for faster removal of moisture and an easily removable basket, which facilitates loading/unloading of workpieces. The machine is adapted for drying fine workpieces by use of special protective material lining inside of the rotating drum. Additional protection against damage of the workpieces is provided by gentle start and smooth

engine braking after the process. Centrifugal dryers incorporate a direct drive system fixed to the housing by polyurethane sleeves of large diameter, which provides good damping and promotes uniform distribution of parts in a rotating drum. Air channels are designed to absorb heat from the main engine, which results in long and trouble-free processing. Efficient drying of metal parts occurs within 3-5 minutes with loading weight of 4-5 kg. Centrifugal dryers are designed for continuous work. The design of working chamber and draining system ensures process stability. For safety reasons the



electric door strike prevents the lid from opening during processing. The temperature is programmable in range of 30°C to 80°C.

Vibratory Dryer WD200 allow to automate the process of drying details after they have been previously processed using Wheel Vibrators. Together with Vibratory Machine WGS250, it forms a complete line for processing and drying details. The elements processed in our Vibratory Machine WGS250 can follow directly to the Vibratory Dryer WD200, which is heated by the heaters before drying begins. The

drying medium - corn granulate is used for absorb moisture from details. The drying process takes a few minutes to clean the details and protect them against corrosion. Vibratory Dryer WD200 is equipped with a mechanical separation system that allows quick separation of the drying corns from details. The separation screens are covered with polyurethane protecting the details against unexpected defects.

## vibratory DRYERS



### APPLICATION

- removal of post-treatment slurry from the surface of details with the help of heated corn
- details corrosion protection

### ADVANTAGES

- quick drying of details without leaving stains (corrosion protection)
- the possibility of using various granulations of corn
- working chamber covered with polyurethane protecting against knocking down details
- bottom of the working chamber with a screw driveway
- built-in separation system
- adjustable base height
- temperature range 20-60°C
- timer 1-60 min

### VIBRATORY DRYER WD200

supply: 3x400 V; 50 Hz  
 power: 2,2 kW (motor) + 2,4 kW (heaters)  
 dimensions: 1250x1280x1160 mm (WxDxH)  
 weight: 420 kg  
 temperature range: 20-60 °C  
 RPM range: constant  
 timer range: 1-60 min  
 capacity: 200 l.  
 cover: polyurethane

## centrifugal DRYER



### CENTRIFUGAL DRYER CD10

supply: 230 V; 50 Hz  
 power: 2,75 kW  
 dimensions: 580x430x900 mm (WxDxH)  
 weight: 90kg  
 adjustable temperature range: 35-80°C  
 timer range: 1-60 min  
 working chamber dimensions: fi 280x160 mm

### CENTRIFUGAL DRYER CD25

supply: 3x400 V; 50 Hz  
 power: 5,3 kW  
 dimensions: 710x680x1050 mm (WxDxH)  
 weight: 190kg  
 adjustable temperature range: 20-80°C  
 timer range: 1-60 min  
 working chamber dimensions: fi 380x250 mm





# TROUGH VIBRATORY MACHINES



These devices are perfect for roughing operations, especially with the use of ceramic media of high abrasion. The result is a homogeneous structure free of sharp edges and corners. Dimensions of the working container are suitable for processing of long, irregularly shaped or even flat workpieces. Trough vibrators remove burrs, blunt and round sharp edges, eliminate subsurface layers - oxides formed after laser cutting or grease left on the surface. High amplitude and low frequency of the vibration are especially recommendable for deburring and grinding processes with grey ceramic media. Possible processes to be run in this machine are: deburring, rounding, grinding, cleaning, deoiling, smoothing and polishing.



## TROUGH VIBRATORY MACHINE WR60 MINI

supply: 230 V; 50 Hz  
power: 0,44 kW  
weight: 211 kg  
dimensions: 990x520x810 mm (WxDxH)  
working bowl inner dimensions: 760x290x360 mm  
working bowl capacity: 60 l.



## TROUGH VIBRATORY MACHINE WR60

supply: 230 V; 50 Hz  
power: 0,44 kW  
weight: 266 kg  
dimensions: 1350x520x810 mm (WxDxH)  
working bowl inner dimensions: 760x290x360 mm  
working bowl capacity: 60 l.



## TROUGH VIBRATORY MACHINE WR120

supply: 230 V; 50 Hz  
power: 1,7 kW  
weight: 610 kg  
dimensions: 1510x920x1200 mm (WxDxH)  
working bowl inner dimensions: 1200x350x435 mm  
working bowl capacity: 120 l.



# MECHANICAL SEPARATING UNIT



Separating units facilitate separation of mass finished workpieces. Manual separating is time consuming and reduce the efficiency of the process. Automatic separation integrated into mass finishing machine is a great solution for large scale production of small workpieces, which are difficult to be separated manually.

Workpieces are separated from the media on the vibrating screen. Automatic separating units are suitable for machines with capacities starting from 18 litres.



**MECHANICAL SEPARATING UNIT TESEPA mini**  
supply: 230 V; 50 Hz  
power: 0,12 kW  
dimensions: 530x645x250 mm (WxDxH)  
weight: 28 kg



**MECHANICAL SEPARATING UNIT WRSEPA**  
supply: 230 V; 50 Hz  
power: 0,12 kW  
dimensions: 780x640x920 mm (WxDxH)  
weight: 78 kg



**MECHANICAL SEPARATING UNIT TESEPA**  
supply: 230 V; 50 Hz  
power: 0,36 kW  
dimensions: 1420x890x1150 mm (WxDxH)  
weight: 175 kg



# WASTEWATER TREATMENT SYSTEM

Mass finishing processes are connected with constant producing of technological waste, that needs treatment and utilization due to the presence of harmful substances or metal filings. The Cascade System is a perfect solution for companies and factories that share the problem of wastewater treatment. Our system allows to reuse the processing water for further work.

The wastewater treatment system consists of two modules: of highly effective container for rough water treatment and of vertical cascade system. The role of rough treatment is capturing bigger particles and slime from the wastewater. After the initial filtration process the water is pumped to the cascade, in which water stage by stage slowly falls down to another container. The principle of operation is based on

## CASCADE SYSTEM K6/250

supply: 230 V; 50 Hz  
power: 0,4 kW  
dimensions: 1170x990x1540 mm (WxDxH)  
weight: 114 kg  
total capacity: 250 l

keeping the wastewater in slowed down flow, thanks to which we get a division into two phases: one is water, the other one is suspended particles. The processed water can be used for further production. The durability of the water depends on processing time, chemical composition or the compounds used for processing. Introducing the technology of recycling water is beneficial for ecological, economic and legal reasons.





# MEDIA



## PORCELAIN CHIPS

SYMBOL	SIZE	SHAPE	APPLICATION
2x5 CMG	2x5 mm	pin/ball	smoothing
2x8 CMG	2x8 mm		
3x10 CMG	3x10 mm		
6x15 CMG	6x15 mm		
fi 1,0 CMG	fi 1,0 mm		
fi 1,5 CMG	fi 1,5 mm		
fi 3 CMG	fi 3 mm		
fi 4 CMG	fi 4 mm		
fi 5 CMG	fi 5 mm		
fi 6 CMG	fi 6 mm		
CMG	mix	pin, balls	
2x5 CMP	2x5 mm	pin/ball	polishing
2x8 CMP	2x8 mm		
3x10 CMP	3x10 mm		
6x15 CMP	6x15 mm		
fi 1,0 CMP	fi 1,0 mm		
fi 1,5 CMP	fi 1,5 mm		
fi 3 CMP	fi 3,0 mm		
fi 4 CMP	fi 4,0 mm		
fi 5 CMP	fi 5,0 mm		
fi 6 CMP	fi 6,0 mm		
CMP	mix	pin, balls	



## CERAMIC CHIPS

TYPE	SYMBOL	SIZE	ABRASIVE CLASS
Prism oblique	GP 20x20	20x20 mm	A, BD
	GP 15x10	15x10 mm	A
	GP 15x15	15x15 mm	A
	GP 10x10	10x10 mm	BD
	GP 6x10	6x10 mm	A, BD
	GP 4x4	4x4 mm	BD
	G 15x15	15x15 mm	A, BD
Prism	G 10x10	10x10 mm	A
	G 6x6	6x6 mm	A, BD
	G 4x4	4x4 mm	A
Tristar oblique	STP 15x10	15x10 mm	BD
	STP 6x6	6x6 mm	A, BD
Cone	KC 15	15x15 mm	A, BD
Ellipse oblique	EP 10x5x10	10x5x10 mm	BD
Ellipse	E 10x5x10	10x5x10 mm	A



## PLASTIC CHIPS

TYPE	SYMBOL	SIZE	SHAPE/COLOUR
Plastic chips	O1PS10	10x10 mm	cone black
	O1PP10	10x10 mm	pyramide black
	O2PS10	10x10 mm	cone green
	O2PP10	10x10 mm	pyramide green
	O2PS20	20x20 mm	cone green
	O2PP20	20x20 mm	pyramide green
	O3PS14	14x14 mm	cone pink
	O3PP18	18x18 mm	pyramide pink
	O5PS10	10x10 mm	cone blue
	O5PP10	10x10 mm	pyramide blue
	O6PS10	10x10 mm	cone white
	O6PP10	10x10 mm	pyramide white
	O7PS12	12x12 mm	cone orange
	O7PP10	10x10 mm	pyramide orange
	A1PS10	10x10 mm	cone brown
	A1PS15	15x15 mm	pyramide brown
	A6PS10	10x10 mm	cone pink
	A6PS15	15x15 mm	pyramide pink



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