

ZSD series

Indexable drills ZSD02/03/04/05

Inserts

- For machining of steel, stainless steel, cast iron and hard-to-cut materials
- Four-edge SPMX inserts with three chip breakers and four different types
- Wiper geometry for improved surface quality
- Wave form geometry provides optimum chip breaking and removal of short chips
- Chip breakers for soft cut produce lower cutting forces

Drilling bodies

- Specially designed drill body with high rigidity
- Large drilling depths up to 5xD with high precision and process reliability
- Diameter ranges 12–63 mm as well as available in common intermediate sizes

ZSD02



Insert grades

YB9320	YBG212	YBS203	YB6338
PVD	PVD	PVD	CVD
P10 – P30	P20 – P35	M15 – M35	P20 – P30
M10 – M25	M10 – M25	S10 – S30	K20 – K30

Chip breakers

- Marking of the cutting edges for optimal positioning
- **Wiper technology:** excellent surface finish and drilling precision

-XM



- All-rounder geometry with good chip control for steel and cast iron

-EM



- Optimised geometry with very good chip control for stainless steel and super alloys

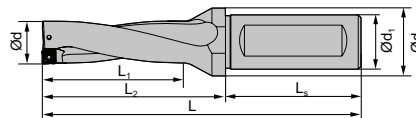
-LM



- Light cutting geometry with very good chip control for soft steels

Indexable drills series

ZSD02



Article	*	Stock	Dimensions [mm]								kg	Inserts
			ØD	ØD1	ØD2	L1	L2	LS	L			
ZSD02-120-XP20-SP04-02	*	•	12.0	20	25	27	44	50	94			SPMX040204**
ZSD02-125-XP20-SP04-02	*	•	12.5	20	25	28	45	50	95			SPMX040204**
ZSD02-130-XP20-SP04-02	*	•	13.0	20	25	29	46	50	96			SPMX040204**
ZSD02-135-XP20-SP04-02	*	•	13.5	20	25	30	47	50	97			SPMX040204**
ZSD02-140-XP20-SP04-02	*	•	14.0	20	25	31	48	50	98			SPMX040204**
ZSD02-145-XP20-SP04-02	*	•	14.5	20	25	32	49	50	99			SPMX040204**
ZSD02-150-XP20-SP05-02	*	•	15.0	20	25	33	50	50	100			SPMX050204**
ZSD02-155-XP20-SP05-02	*	•	15.5	20	25	34	51	50	101			SPMX050204**
ZSD02-160-XP20-SP05-02	*	•	16.0	20	25	35	52	50	102			SPMX050204**
ZSD02-165-XP20-SP05-02	*	•	16.5	20	25	36	53	50	103			SPMX050204**
ZSD02-170-XP20-SP05-02	*	•	17.0	20	25	37	54	50	104			SPMX050204**
ZSD02-175-XP20-SP05-02	*	•	17.5	20	25	38	55	50	105			SPMX050204**
ZSD02-180-XP25-SP06-02	*	•	18.0	25	32	39	57	56	113			SPMX060204**
ZSD02-185-XP25-SP06-02	*	•	18.5	25	32	40	58	56	114			SPMX060204**
ZSD02-190-XP25-SP06-02	*	•	19.0	25	32	41	59	56	115			SPMX060204**
ZSD02-195-XP25-SP06-02	*	•	19.5	25	32	42	60	56	116			SPMX060204**
ZSD02-200-XP25-SP06-02	*	•	20.0	25	32	43	61	56	117			SPMX060204**
ZSD02-205-XP25-SP06-02	*	•	20.5	25	32	44	62	56	118			SPMX060204**
ZSD02-210-XP25-SP06-02	*	•	21.0	25	32	45	63	56	119			SPMX060204**
ZSD02-215-XP25-SP06-02	*	•	21.5	25	32	46	64	56	120			SPMX060204**
ZSD02-220-XP25-SP06-02	*	•	22.0	25	32	47	65	56	121			SPMX060204**
ZSD02-225-XP25-SP07-02	*	•	22.5	25	32	48	66	56	122			SPMX07T308**
ZSD02-230-XP25-SP07-02	*	•	23.0	25	32	49	67	56	123			SPMX07T308**
ZSD02-235-XP25-SP07-02	*	•	23.5	25	32	50	68	56	124			SPMX07T308**
ZSD02-240-XP25-SP07-02	*	•	24.0	25	32	51	69	56	125			SPMX07T308**
ZSD02-245-XP25-SP07-02	*	•	24.5	25	32	52	70	56	126			SPMX07T308**
ZSD02-250-XP25-SP07-02	*	•	25.0	25	32	53	71	56	127			SPMX07T308**
ZSD02-255-XP25-SP07-02	*	•	25.5	25	32	54	72	56	128			SPMX07T308**
ZSD02-260-XP25-SP07-02	*	•	26.0	25	32	55	73	56	129			SPMX07T308**
ZSD02-265-XP25-SP07-02	*	•	26.5	25	32	56	74	56	130			SPMX07T308**
ZSD02-270-XP25-SP07-02	*	•	27.0	25	32	57	75	56	131			SPMX07T308**
ZSD02-275-XP25-SP07-02	*	•	27.5	25	32	58	76	56	132			SPMX07T308**
ZSD02-280-XP32-SP09-02	*	•	28.0	32	37	59	79	60	139			SPMX090408**

• Ex stock ○ On demand

* With internal cooling

Article	*	Stock	Dimensions [mm]							Inserts 
			ØD	ØD1	ØD2	L1	L2	LS	L	
ZSD02-290-XP32-SP09-02	*	•	29.0	32	37	60	81	60	141	SPMX090408**
ZSD02-300-XP32-SP09-02	*	•	30.0	32	37	61	83	60	143	SPMX090408**
ZSD02-310-XP32-SP09-02	*	•	31.0	32	37	65	85	60	145	SPMX090408**
ZSD02-320-XP32-SP09-02	*	•	32.0	32	37	67	87	60	147	SPMX090408**
ZSD02-330-XP32-SP09-02	*	•	33.0	32	37	69	89	60	149	SPMX090408**
ZSD02-340-XP40-SP11-02	*	•	34.0	40	47	71	96	70	166	SPMX110408**
ZSD02-350-XP40-SP11-02	*	•	35.0	40	47	73	98	70	168	SPMX110408**
ZSD02-360-XP40-SP11-02	*	•	36.0	40	47	75	100	70	170	SPMX110408**
ZSD02-370-XP40-SP11-02	*	•	37.0	40	47	77	102	70	172	SPMX110408**
ZSD02-380-XP40-SP11-02	*	•	38.0	40	47	79	104	70	174	SPMX110408**
ZSD02-390-XP40-SP11-02	*	•	39.0	40	47	81	106	70	176	SPMX110408**
ZSD02-400-XP40-SP11-02	*	•	40.0	40	47	83	108	70	178	SPMX110408**
ZSD02-410-XP40-SP11-02	*	•	41.0	40	47	85	110	70	180	SPMX110408**
ZSD02-420-XP40-SP14-02	*	•	42.0	40	52	87	119	70	189	SPMX140512**
ZSD02-430-XP40-SP14-02	*	•	43.0	40	52	89	121	70	191	SPMX140512**
ZSD02-440-XP40-SP14-02	*	•	44.0	40	52	91	123	70	193	SPMX140512**
ZSD02-450-XP40-SP14-02	*	•	45.0	40	52	93	125	70	195	SPMX140512**
ZSD02-460-XP40-SP14-02	*	•	46.0	40	52	95	127	70	197	SPMX140512**
ZSD02-470-XP40-SP14-02	*	•	47.0	40	52	97	129	70	199	SPMX140512**
ZSD02-480-XP40-SP14-02	*	•	48.0	40	52	99	131	70	201	SPMX140512**
ZSD02-490-XP40-SP14-02	*	•	49.0	40	52	102	133	70	203	SPMX140512**
ZSD02-500-XP40-SP14-02	*	•	50.0	40	52	103	135	70	205	SPMX140512**
ZSD02-510-XP50-SP14-02	*	•	51,0	50	57	105	137	80	217	SPMX110408**
ZSD02-520-XP50-SP14-02	*	•	52,0	50	57	107	139	80	219	SPMX140512**
ZSD02-530-XP50-SP14-02	*	•	53,0	50	57	109	141	80	221	SPMX140512**
ZSD02-540-XP50-SP09-04	*	•	54,0	50	57	111	143	80	223	SPMX090408**
ZSD02-550-XP50-SP09-04	*	•	55,0	50	57	113	145	80	225	SPMX090408**
ZSD02-560-XP50-SP09-04	*	•	56,0	50	57	115	147	80	227	SPMX090408**
ZSD02-570-XP50-SP09-04	*	•	57,0	50	57	117	149	80	229	SPMX090408**
ZSD02-580-XP50-SP09-04	*	•	58,0	50	57	119	151	80	231	SPMX090408**
ZSD02-590-XP50-SP09-04	*	•	59,0	50	57	121	153	80	233	SPMX090408**
ZSD02-600-XP50-SP09-04	*	•	60,0	50	57	123	155	80	235	SPMX090408**
ZSD02-610-XP50-SP09-04	*	•	61,0	50	57	125	157	80	237	SPMX090408**
ZSD02-620-XP50-SP09-04	*	•	62,0	50	57	127	159	80	239	SPMX090408**
ZSD02-630-XP50-SP09-04	*	•	63,0	50	57	129	161	80	241	SPMX090408**

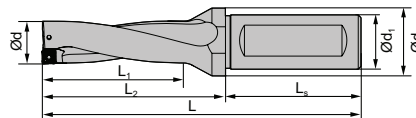
• Ex stock ○ On demand

* With internal cooling

Spare parts		SPMX040204**	SPMX050204**	SPMX060204**	SPMX07T308**	SPMX090408**	SPMX110408**	SPMX140512**
	Insert Screw	I60M2x4.3	I60M2x4.3	I60M2.2x5.5	I60M2.5x6.5	I60M3.5x8	I60M4x10	I60M5x13
	Wrench	WT06IP	WT06IP	WT07IP	WT07IP	WT15IP	WT15IP	WT20IP

Indexable drills series

ZSD03



Article	*	Stock	Dimensions [mm]							kg	Inserts
			ØD	ØD1	ØD2	L1	L2	L3	L		
ZSD03-120-XP20-SP04-02	*	•	12.0	20	25	39	55	50	105		SPMX040204**
ZSD03-125-XP20-SP04-02	*	•	12.5	20	25	41	57	50	107		SPMX040204**
ZSD03-130-XP20-SP04-02	*	•	13.0	20	25	42	58	50	108		SPMX040204**
ZSD03-135-XP20-SP04-02	*	•	13.5	20	25	44	60	50	110		SPMX040204**
ZSD03-140-XP20-SP04-02	*	•	14.0	20	25	45	61	50	111		SPMX040204**
ZSD03-145-XP20-SP04-02	*	•	14.5	20	25	47	63	50	113		SPMX040204**
ZSD03-150-XP20-SP05-02	*	•	15.0	20	25	48	64	50	114		SPMX050204**
ZSD03-155-XP20-SP05-02	*	•	15.5	20	25	50	66	50	116		SPMX050204**
ZSD03-160-XP20-SP05-02	*	•	16.0	20	25	51	67	50	117		SPMX050204**
ZSD03-165-XP20-SP05-02	*	•	16.5	20	25	53	69	50	119		SPMX050204**
ZSD03-170-XP20-SP05-02	*	•	17.0	20	25	54	70	50	120		SPMX050204**
ZSD03-175-XP20-SP05-02	*	•	17.5	20	25	56	72	50	122		SPMX050204**
ZSD03-180-XP25-SP06-02	*	•	18.0	25	32	57	75	56	131		SPMX060204**
ZSD03-185-XP25-SP06-02	*	•	18.5	25	32	59	77	56	133		SPMX060204**
ZSD03-190-XP25-SP06-02	*	•	19.0	25	32	60	78	56	134		SPMX060204**
ZSD03-195-XP25-SP06-02	*	•	19.5	25	32	62	80	56	136		SPMX060204**
ZSD03-200-XP25-SP06-02	*	•	20.0	25	32	63	81	56	137		SPMX060204**
ZSD03-205-XP25-SP06-02	*	•	20.5	25	32	65	83	56	139		SPMX060204**
ZSD03-210-XP25-SP06-02	*	•	21.0	25	32	66	84	56	140		SPMX060204**
ZSD03-215-XP25-SP06-02	*	•	21.5	25	32	68	86	56	142		SPMX060204**
ZSD03-220-XP25-SP06-02	*	•	22.0	25	32	69	87	56	143		SPMX060204**
ZSD03-225-XP25-SP07-02	*	•	22.5	25	32	71	89	56	145		SPMX07T308**
ZSD03-230-XP25-SP07-02	*	•	23.0	25	32	72	91	56	147		SPMX07T308**
ZSD03-235-XP25-SP07-02	*	•	23.5	25	32	74	93	56	149		SPMX07T308**
ZSD03-240-XP25-SP07-02	*	•	24.0	25	32	75	94	56	150		SPMX07T308**
ZSD03-245-XP25-SP07-02	*	•	24.5	25	32	77	96	56	152		SPMX07T308**
ZSD03-250-XP25-SP07-02	*	•	25.0	25	32	78	97	56	153		SPMX07T308**
ZSD03-255-XP25-SP07-02	*	•	25.5	25	32	80	99	56	155		SPMX07T308**
ZSD03-260-XP25-SP07-02	*	•	26.0	25	32	81	100	56	156		SPMX07T308**
ZSD03-265-XP25-SP07-02	*	•	26.5	25	32	83	102	56	158		SPMX07T308**
ZSD03-270-XP25-SP07-02	*	•	27.0	25	32	84	104	56	160		SPMX07T308**
ZSD03-275-XP25-SP07-02	*	•	27.5	25	32	86	106	56	162		SPMX07T308**
ZSD03-280-XP32-SP09-02	*	•	28.0	32	37	87	109	60	169		SPMX090408**

• Ex stock ○ On demand

* With internal cooling

Article	*	Stock	Dimensions [mm]							Inserts 
			ØD	ØD1	ØD2	L1	L2	LS	L	
ZSD03-290-XP32-SP09-02	*	•	29.0	32	37	90	112	60	172	SPMX090408**
ZSD03-300-XP32-SP09-02	*	•	30.0	32	37	93	115	60	175	SPMX090408**
ZSD03-310-XP32-SP09-02	*	•	31.0	32	37	96	118	60	178	SPMX090408**
ZSD03-320-XP32-SP09-02	*	•	32.0	32	37	99	121	60	181	SPMX090408**
ZSD03-330-XP32-SP09-02	*	•	33.0	32	37	102	124	60	184	SPMX090408**
ZSD03-340-XP40-SP11-02	*	•	34.0	40	47	105	130	70	200	SPMX110408**
ZSD03-350-XP40-SP11-02	*	•	35.0	40	47	108	133	70	203	SPMX110408**
ZSD03-360-XP40-SP11-02	*	•	36.0	40	47	111	136	70	206	SPMX110408**
ZSD03-370-XP40-SP11-02	*	•	37.0	40	47	114	139	70	209	SPMX110408**
ZSD03-380-XP40-SP11-02	*	•	38.0	40	47	117	142	70	212	SPMX110408**
ZSD03-390-XP40-SP11-02	*	•	39.0	40	47	120	145	70	215	SPMX110408**
ZSD03-400-XP40-SP11-02	*	•	40.0	40	47	123	148	70	218	SPMX110408**
ZSD03-410-XP40-SP11-02	*	•	41.0	40	47	126	151	70	221	SPMX110408**
ZSD03-420-XP40-SP14-02	*	•	42.0	40	52	129	161	70	231	SPMX140512**
ZSD03-430-XP40-SP14-02	*	•	43.0	40	52	132	164	70	234	SPMX140512**
ZSD03-440-XP40-SP14-02	*	•	44.0	40	52	135	167	70	237	SPMX140512**
ZSD03-450-XP40-SP14-02	*	•	45.0	40	52	138	170	70	240	SPMX140512**
ZSD03-460-XP40-SP14-02	*	•	46.0	40	52	141	173	70	243	SPMX140512**
ZSD03-470-XP40-SP14-02	*	•	47.0	40	52	144	176	70	245	SPMX140512**
ZSD03-480-XP40-SP14-02	*	•	48.0	40	52	147	179	70	249	SPMX140512**
ZSD03-490-XP40-SP14-02	*	•	49.0	40	52	150	182	70	252	SPMX140512**
ZSD03-500-XP40-SP14-02	*	•	50.0	40	52	153	185	70	255	SPMX140512**
ZSD03-510-XP50-SP14-02	*	•	51,0	50	57	156	188	80	268	SPMX110408**
ZSD03-520-XP50-SP14-02	*	•	52,0	50	57	159	191	80	271	SPMX140512**
ZSD03-530-XP50-SP14-02	*	•	53,0	50	57	162	194	80	274	SPMX140512**
ZSD03-540-XP50-SP09-04	*	•	54,0	50	57	165	197	80	277	SPMX090408**
ZSD03-550-XP50-SP09-04	*	•	55,0	50	57	168	200	80	280	SPMX090408**
ZSD03-560-XP50-SP09-04	*	•	56,0	50	57	171	203	80	283	SPMX090408**
ZSD03-570-XP50-SP09-04	*	•	57,0	50	57	174	206	80	286	SPMX090408**
ZSD03-580-XP50-SP09-04	*	•	58,0	50	57	177	209	80	289	SPMX090408**
ZSD03-590-XP50-SP09-04	*	•	59,0	50	57	180	212	80	292	SPMX090408**
ZSD03-600-XP50-SP09-04	*	•	60,0	50	57	183	215	80	295	SPMX090408**
ZSD03-610-XP50-SP09-04	*	•	61,0	50	57	186	218	80	298	SPMX090408**
ZSD03-620-XP50-SP09-04	*	•	62,0	50	57	189	221	80	301	SPMX090408**
ZSD03-630-XP50-SP09-04	*	•	63,0	50	57	192	224	80	304	SPMX090408**

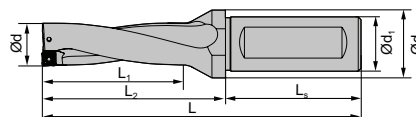
• Ex stock ◯ On demand

* With internal cooling

Spare parts								
	Insert	SPMX040204**	SPMX050204**	SPMX060204**	SPMX07T308**	SPMX090408**	SPMX110408**	SPMX140512**
	Screw	I60M2x4.3	I60M2x4.3	I60M2.2x5.5	I60M2.5x6.5	I60M3.5x8	I60M4x10	I60M5x13
	Wrench	WT06IP	WT06IP	WT07IP	WT07IP	WT15IP	WT15IP	WT20IP

Indexable drills series

ZSD04



Article	*	Stock	Dimensions [mm]							kg	Inserts
			ØD	ØD1	ØD2	L1	L2	LS	L		
ZSD04-120-XP20-SP04-02	*	•	12.0	20	25	51	67	50	117		SPMX040204**
ZSD04-125-XP20-SP04-02	*	•	12.5	20	25	53	69	50	119		SPMX040204**
ZSD04-130-XP20-SP04-02	*	•	13.0	20	25	55	71	50	121		SPMX040204**
ZSD04-135-XP20-SP04-02	*	•	13.5	20	25	57	73	50	123		SPMX040204**
ZSD04-140-XP20-SP04-02	*	•	14.0	20	25	59	75	50	125		SPMX040204**
ZSD04-145-XP20-SP04-02	*	•	14.5	20	25	61	77	50	127		SPMX040204**
ZSD04-150-XP20-SP05-02	*	•	15.0	20	25	63	79	50	129		SPMX050204**
ZSD04-155-XP20-SP05-02	*	•	15.5	20	25	65	81	50	131		SPMX050204**
ZSD04-160-XP20-SP05-02	*	•	16.0	20	25	67	83	50	133		SPMX050204**
ZSD04-165-XP20-SP05-02	*	•	16.5	20	25	69	85	50	135		SPMX050204**
ZSD04-170-XP20-SP05-02	*	•	17.0	20	25	71	87	50	137		SPMX050204**
ZSD04-175-XP20-SP05-02	*	•	17.5	20	25	73	89	50	139		SPMX050204**
ZSD04-180-XP25-SP06-02	*	•	18.0	25	32	75	93	56	149		SPMX060204**
ZSD04-185-XP25-SP06-02	*	•	18.5	25	32	77	95	56	151		SPMX060204**
ZSD04-190-XP25-SP06-02	*	•	19.0	25	32	79	97	56	153		SPMX060204**
ZSD04-195-XP25-SP06-02	*	•	19.5	25	32	81	99	56	155		SPMX060204**
ZSD04-200-XP25-SP06-02	*	•	20.0	25	32	83	101	56	157		SPMX060204**
ZSD04-205-XP25-SP06-02	*	•	20.5	25	32	85	103	56	159		SPMX060204**
ZSD04-210-XP25-SP06-02	*	•	21.0	25	32	87	105	56	161		SPMX060204**
ZSD04-215-XP25-SP06-02	*	•	21.5	25	32	89	107	56	163		SPMX060204**
ZSD04-220-XP25-SP06-02	*	•	22.0	25	32	91	109	56	165		SPMX060204**
ZSD04-225-XP25-SP07-02	*	•	22.5	25	32	93	111	56	167		SPMX07T308**
ZSD04-230-XP25-SP07-02	*	•	23.0	25	32	95	114	56	170		SPMX07T308**
ZSD04-235-XP25-SP07-02	*	•	23.5	25	32	97	116	56	172		SPMX07T308**
ZSD04-240-XP25-SP07-02	*	•	24.0	25	32	99	118	56	174		SPMX07T308**
ZSD04-245-XP25-SP07-02	*	•	24.5	25	32	101	120	56	176		SPMX07T308**
ZSD04-250-XP25-SP07-02	*	•	25.0	25	32	103	122	56	178		SPMX07T308**
ZSD04-255-XP25-SP07-02	*	•	25.5	25	32	105	125	56	181		SPMX07T308**
ZSD04-260-XP25-SP07-02	*	•	26.0	25	32	107	126	56	182		SPMX07T308**
ZSD04-265-XP25-SP07-02	*	•	26.5	25	32	109	128	56	184		SPMX07T308**
ZSD04-270-XP25-SP07-02	*	•	27.0	25	32	111	131	56	187		SPMX07T308**
ZSD04-275-XP25-SP07-02	*	•	27.5	25	32	113	134	56	190		SPMX07T308**
ZSD04-280-XP32-SP09-02	*	•	28.0	32	37	115	139	60	199		SPMX090408**

• Ex stock ○ On demand

* With internal cooling

Article	*	Stock	Dimensions [mm]							Inserts 
			ØD	ØD1	ØD2	L1	L2	LS	L	
ZSD04-290-XP32-SP09-02	*	•	29.0	32	37	119	143	60	203	SPMX090408**
ZSD04-300-XP32-SP09-02	*	•	30.0	32	37	123	147	60	207	SPMX090408**
ZSD04-305-XP32-SP09-02	*	•	30.5	32	37	125	149	60	209	SPMX090408**
ZSD04-310-XP32-SP09-02	*	•	31.0	32	37	127	151	60	211	SPMX090408**
ZSD04-320-XP32-SP09-02	*	•	32.0	32	37	131	155	60	215	SPMX090408**
ZSD04-330-XP32-SP09-02	*	•	33.0	32	37	135	159	60	219	SPMX090408**
ZSD04-340-XP40-SP11-02	*	•	34.0	40	47	139	164	70	234	SPMX110408**
ZSD04-350-XP40-SP11-02	*	•	35.0	40	47	143	168	70	238	SPMX110408**
ZSD04-360-XP40-SP11-02	*	•	36.0	40	47	147	172	70	242	SPMX110408**
ZSD04-370-XP40-SP11-02	*	•	37.0	40	47	151	176	70	246	SPMX110408**
ZSD04-380-XP40-SP11-02	*	•	38.0	40	47	155	180	70	250	SPMX110408**
ZSD04-390-XP40-SP11-02	*	•	39.0	40	47	159	184	70	254	SPMX110408**
ZSD04-400-XP40-SP11-02	*	•	40.0	40	47	163	188	70	258	SPMX110408**
ZSD04-405-XP40-SP11-02	*	•	40.5	40	47	165	190	70	260	SPMX110408**
ZSD04-410-XP40-SP11-02	*	•	41.0	40	47	167	192	70	262	SPMX110408**
ZSD04-420-XP40-SP14-02	*	•	42.0	40	52	171	203	70	273	SPMX140512**
ZSD04-430-XP40-SP14-02	*	•	43.0	40	52	175	207	70	277	SPMX140512**
ZSD04-440-XP40-SP14-02	*	•	44.0	40	52	179	211	70	281	SPMX140512**
ZSD04-450-XP40-SP14-02	*	•	45.0	40	52	183	215	70	285	SPMX140512**
ZSD04-460-XP40-SP14-02	*	•	46.0	40	52	187	219	70	289	SPMX140512**
ZSD04-470-XP40-SP14-02	*	•	47.0	40	52	191	223	70	293	SPMX140512**
ZSD04-480-XP40-SP14-02	*	•	48.0	40	52	195	227	70	297	SPMX140512**
ZSD04-490-XP40-SP14-02	*	•	49.0	40	52	199	231	70	301	SPMX140512**
ZSD04-500-XP40-SP14-02	*	•	50.0	40	52	203	235	70	305	SPMX140512**
ZSD04-510-XP50-SP14-02	*	○	51,0	50	57	207	239	80	319	SPMX110408**
ZSD04-520-XP50-SP14-02	*	○	52,0	50	57	211	243	80	323	SPMX140512**
ZSD04-530-XP50-SP14-02	*	○	53,0	50	57	215	247	80	327	SPMX140512**
ZSD04-540-XP50-SP09-04	*	○	54,0	50	57	219	251	80	331	SPMX090408**
ZSD04-550-XP50-SP09-04	*	○	55,0	50	57	223	255	80	335	SPMX090408**
ZSD04-560-XP50-SP09-04	*	○	56,0	50	57	227	259	80	339	SPMX090408**
ZSD04-570-XP50-SP09-04	*	○	57,0	50	57	231	263	80	343	SPMX090408**
ZSD04-580-XP50-SP09-04	*	○	58,0	50	57	235	267	80	347	SPMX090408**
ZSD04-590-XP50-SP09-04	*	○	59,0	50	57	239	271	80	351	SPMX090408**
ZSD04-600-XP50-SP09-04	*	○	60,0	50	57	243	275	80	355	SPMX090408**
ZSD04-610-XP50-SP09-04	*	○	61,0	50	57	247	279	80	359	SPMX090408**
ZSD04-620-XP50-SP09-04	*	○	62,0	50	57	251	283	80	363	SPMX090408**
ZSD04-630-XP50-SP09-04	*	○	63,0	50	57	255	287	80	367	SPMX090408**

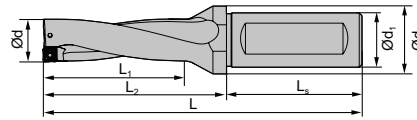
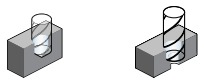
• Ex stock ○ On demand

* With internal cooling

Spare parts								
	Insert	SPMX040204**	SPMX050204**	SPMX060204**	SPMX07T308**	SPMX090408**	SPMX110408**	SPMX140512**
	Screw	I60M2x4.3	I60M2x4.3	I60M2.2x5.5	I60M2.5x6.5	I60M3.5x8	I60M4x10	I60M5x13
	Wrench	WT06IP	WT06IP	WT07IP	WT07IP	WT15IP	WT15IP	WT20IP

Indexable drills series

ZSD05



Article	*	Stock	Dimensions [mm]							kg	Inserts
			ØD	ØD1	ØD2	L1	L2	LS	L		
ZSD05-120-XP20-SP04-02	*	•	12.0	20	25	63	79	50	129		SPMX040204**
ZSD05-125-XP20-SP04-02	*	•	12.5	20	25	66	82	50	132		SPMX040204**
ZSD05-130-XP20-SP04-02	*	•	13.0	20	25	68	84	50	134		SPMX040204**
ZSD05-135-XP20-SP04-02	*	•	13.5	20	25	71	87	50	137		SPMX040204**
ZSD05-140-XP20-SP04-02	*	•	14.0	20	25	73	89	50	139		SPMX040204**
ZSD05-145-XP20-SP04-02	*	•	14.5	20	25	76	91	50	141		SPMX040204**
ZSD05-150-XP20-SP05-02	*	•	15.0	20	25	78	94	50	144		SPMX050204**
ZSD05-155-XP20-SP05-02	*	•	15.5	20	25	81	97	50	147		SPMX050204**
ZSD05-160-XP20-SP05-02	*	•	16.0	20	25	83	99	50	149		SPMX050204**
ZSD05-165-XP20-SP05-02	*	•	16.5	20	25	86	102	50	152		SPMX050204**
ZSD05-170-XP20-SP05-02	*	•	17.0	20	25	88	104	50	154		SPMX050204**
ZSD05-175-XP20-SP05-02	*	•	17.5	20	25	91	107	50	157		SPMX050204**
ZSD05-180-XP25-SP06-02	*	•	18.0	25	32	93	112	56	167		SPMX060204**
ZSD05-185-XP25-SP06-02	*	•	18.5	25	32	96	114	56	170		SPMX060204**
ZSD05-190-XP25-SP06-02	*	•	19.0	25	32	98	116	56	172		SPMX060204**
ZSD05-195-XP25-SP06-02	*	•	19.5	25	32	101	119	56	175		SPMX060204**
ZSD05-200-XP25-SP06-02	*	•	20.0	25	32	103	121	56	177		SPMX060204**
ZSD05-205-XP25-SP06-02	*	•	20.5	25	32	106	124	56	180		SPMX060204**
ZSD05-210-XP25-SP06-02	*	•	21.0	25	32	108	126	56	182		SPMX060204**
ZSD05-215-XP25-SP06-02	*	•	21.5	25	32	111	129	56	185		SPMX060204**
ZSD05-220-XP25-SP06-02	*	•	22.0	25	32	113	131	56	187		SPMX060204**
ZSD05-225-XP25-SP07-02	*	•	22.5	25	32	116	134	56	190		SPMX07T308**
ZSD05-230-XP25-SP07-02	*	•	23.0	25	32	118	138	56	194		SPMX07T308**
ZSD05-235-XP25-SP07-02	*	•	23.5	25	32	121	141	56	197		SPMX07T308**
ZSD05-240-XP25-SP07-02	*	•	24.0	25	32	123	143	56	199		SPMX07T308**
ZSD05-245-XP25-SP07-02	*	•	24.5	25	32	126	146	56	202		SPMX07T308**
ZSD05-250-XP25-SP07-02	*	•	25.0	25	32	128	148	56	204		SPMX07T308**
ZSD05-255-XP25-SP07-02	*	•	25.5	25	32	131	151	56	207		SPMX07T308**
ZSD05-260-XP25-SP07-02	*	•	26.0	25	32	133	153	56	209		SPMX07T308**
ZSD05-265-XP25-SP07-02	*	•	26.5	25	32	136	156	56	212		SPMX07T308**
ZSD05-270-XP25-SP07-02	*	•	27.0	25	32	138	158	56	214		SPMX07T308**
ZSD05-275-XP25-SP07-02	*	•	27.5	25	32	141	161	56	217		SPMX07T308**
ZSD05-280-XP32-SP09-02	*	•	28.0	32	37	143	163	60	223		SPMX090408**

• Ex stock ○ On demand

* With internal cooling

Article	*	Stock	Dimensions [mm]							Inserts 
			ØD	ØD1	ØD2	L1	L2	LS	L	
ZSD05-290-XP32-SP09-02	*	•	29.0	32	37	148	168	60	228	SPMX090408**
ZSD05-300-XP32-SP09-02	*	•	30.0	32	37	153	173	60	233	SPMX090408**
ZSD05-310-XP32-SP09-02	*	•	31.0	32	37	158	178	60	238	SPMX090408**
ZSD05-320-XP32-SP09-02	*	•	32.0	32	37	163	183	60	243	SPMX090408**
ZSD05-330-XP32-SP09-02	*	•	33.0	32	37	168	189	60	249	SPMX090408**
ZSD05-340-XP40-SP11-02	*	•	34.0	40	47	173	198	70	268	SPMX110408**
ZSD05-350-XP40-SP11-02	*	•	35.0	40	47	178	203	70	273	SPMX110408**
ZSD05-360-XP40-SP11-02	*	•	36.0	40	47	183	208	70	278	SPMX110408**
ZSD05-370-XP40-SP11-02	*	•	37.0	40	47	188	213	70	283	SPMX110408**
ZSD05-380-XP40-SP11-02	*	•	38.0	40	47	193	218	70	288	SPMX110408**
ZSD05-390-XP40-SP11-02	*	•	39.0	40	47	198	223	70	293	SPMX110408**
ZSD05-400-XP40-SP11-02	*	•	40.0	40	47	203	228	70	298	SPMX110408**
ZSD05-410-XP40-SP11-02	*	•	41.0	40	47	208	233	70	303	SPMX110408**
ZSD05-420-XP40-SP14-02	*	•	42.0	40	52	213	245	70	315	SPMX140512**
ZSD05-430-XP40-SP14-02	*	•	43.0	40	52	218	250	70	320	SPMX140512**
ZSD05-440-XP40-SP14-02	*	•	44.0	40	52	223	255	70	325	SPMX140512**
ZSD05-450-XP40-SP14-02	*	•	45.0	40	52	228	260	70	330	SPMX140512**
ZSD05-460-XP40-SP14-02	*	•	46.0	40	52	233	265	70	335	SPMX140512**
ZSD05-470-XP40-SP14-02	*	•	47.0	40	52	238	270	70	340	SPMX140512**
ZSD05-480-XP40-SP14-02	*	•	48.0	40	52	243	275	70	345	SPMX140512**
ZSD05-490-XP40-SP14-02	*	•	49.0	40	52	248	280	70	350	SPMX140512**
ZSD05-500-XP40-SP14-02	*	•	50.0	40	52	253	285	70	355	SPMX140512**
ZSD05-510-XP50-SP14-02	*	○	51,0	50	57	258	290	80	370	SPMX110408**
ZSD05-520-XP50-SP14-02	*	○	52,0	50	57	263	295	80	375	SPMX140512**
ZSD05-530-XP50-SP14-02	*	○	53,0	50	57	268	300	80	380	SPMX140512**
ZSD05-540-XP50-SP09-04	*	○	54,0	50	57	273	305	80	385	SPMX090408**
ZSD05-550-XP50-SP09-04	*	○	55,0	50	57	278	310	80	390	SPMX090408**
ZSD05-560-XP50-SP09-04	*	○	56,0	50	57	283	315	80	395	SPMX090408**
ZSD05-570-XP50-SP09-04	*	○	57,0	50	57	288	320	80	400	SPMX090408**
ZSD05-580-XP50-SP09-04	*	○	58,0	50	57	293	325	80	405	SPMX090408**
ZSD05-590-XP50-SP09-04	*	○	59,0	50	57	298	330	80	410	SPMX090408**
ZSD05-600-XP50-SP09-04	*	○	60,0	50	57	303	335	80	415	SPMX090408**
ZSD05-610-XP50-SP09-04	*	○	61,0	50	57	308	340	80	420	SPMX090408**
ZSD05-620-XP50-SP09-04	*	○	62,0	50	57	313	345	80	425	SPMX090408**
ZSD05-630-XP50-SP09-04	*	○	63,0	50	57	318	350	80	430	SPMX090408**

• Ex stock ○ On demand

* With internal cooling

Spare parts		SPMX040204**	SPMX050204**	SPMX060204**	SPMX07T308**	SPMX090408**	SPMX110408**	SPMX140512**
	Insert	I60M2x4.3	I60M2x4.3	I60M2.2x5.5	I60M2.5x6.5	I60M3.5x8	I60M4x10	I60M5x13
	Wrench	WT06IP	WT06IP	WT07IP	WT07IP	WT15IP	WT15IP	WT20IP

A

Turning

B

Milling

C

Drilling

D

Technical
Information

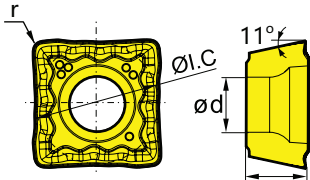
E

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SPMX	L	I.C	S	d
04 02	4	4	2,38	2,2
05 02	5	5	2,38	2,2
06 02	6	6	2,38	2,5
07 T3	7,94	7,94	3,97	2,8
09 04	9,8	9,8	4,30	4,1
11 04	11,5	11,5	4,76	4,4
14 05	14,3	14,3	5,20	5,5

-  Ideal machining conditions
-  Normal machining conditions
-  Unfavourable machining conditions

Drilling inserts

SP** drilling insert				HC ¹ (CVD)	HC ¹ (PVD)					HW	
		P									
		M									
		K									
		N									
		S									
		H									
ISO		r	YB6338		YBG202	YBG205	YBG212	YB9320	YBS203		
 XM	SPMX040203-XM	0,3	•					•			
	SPMX050204-XM	0,4	•				○	•			
	SPMX060204-XM	0,4	•					•			
	SPMX07T308-XM	0,8	•				○	•			
	SPMX090408-XM	0,8	•					•			
	SPMX110408-XM	0,8	•					•			
	SPMX140512-XM	1,2	•					•			
 EM	SPMX040203-EM	0,3					○	○			
	SPMX050204-EM	0,4					○	○			
	SPMX060204-EM	0,4					○	○			
	SPMX07T308-EM	0,8					○	○			
	SPMX090408-EM	0,8					○	○			
	SPMX110408-EM	0,8					○	○			
	SPMX140512-EM	1,2					○	○			
 LM	SPMX040203-LM	0,3					○				
	SPMX050204-LM	0,4					○				
	SPMX060204-LM	0,4					○				
	SPMX07T308-LM	0,8					○				
	SPMX090408-LM	0,8					○				
	SPMX110408-LM	0,8					○				
	SPMX140512-LM	1,2					○				

• Ex stock ○ On demand

HC¹ Coated carbide
HW Uncoated carbide



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Centre.”

Norbert R.
(Manager Test and Demonstration
Centre, Düsseldorf)



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Indexable drills

Material group		Composition / structure / heat treatment		HB	Machining group	ZSD*		ZSD*		
						SPMX04		SPMX05/06		
						v _c [m/min]	f [mm]	v _c [m/min]	f [mm]	
P	Unalloyed steel	approx. 0,15 % C	annealed	125	1	200-300	0,05-0,08	200-300	0,05-0,10	
		approx. 0,45 % C	annealed	190	2	200-300	0,05-0,08	200-300	0,05-0,10	
		approx. 0,45 % C	tempered	250	3	200-300	0,05-0,08	200-300	0,05-0,10	
		approx. 0,75 % C	annealed	270	4	200-300	0,05-0,08	200-300	0,05-0,10	
		approx. 0,75 % C	tempered	300	5	200-300	0,05-0,08	200-300	0,05-0,10	
	Low-alloyed steel		annealed	180	6	140-220	0,05-0,08	140-220	0,05-0,10	
			tempered	275	7	140-220	0,05-0,08	140-220	0,05-0,10	
			tempered	300	8	140-220	0,05-0,08	140-220	0,05-0,10	
			tempered	350	9	140-220	0,05-0,08	140-220	0,05-0,10	
	High-alloyed steel and high-alloyed tool steel		annealed	200	10	120-180	0,05-0,08	120-180	0,05-0,10	
		hardened and tempered	325	11	120-180	0,05-0,08	120-180	0,05-0,10		
M	Stainless steel	ferritic/martensitic	annealed	200	12	110-230	0,05-0,08	110-230	0,05-0,10	
		martensitic	tempered	240	13	110-230	0,05-0,08	110-230	0,05-0,10	
		austenitic	quench hardened	180	14	110-230	0,05-0,08	110-230	0,05-0,10	
		austenitic-ferritic		230	15	110-230	0,05-0,08	110-230	0,05-0,10	
K	Grey cast iron	perlitic/ferritic		180	16	170-240	0,05-0,08	170-240	0,05-0,10	
		perlitic (martensitic)		260	17	170-240	0,05-0,08	170-240	0,05-0,10	
	Cast iron with spheroidal graphite	ferritic		160	18	130-200	0,05-0,08	130-200	0,05-0,10	
		perlitic		250	19	130-200	0,05-0,08	130-200	0,05-0,10	
	Malleable cast iron	ferritic		130	20	120-220	0,05-0,08	120-220	0,05-0,10	
		perlitic		230	21	120-220	0,05-0,08	120-220	0,05-0,10	
N	Aluminium wrought alloys	cannot be hardened		60	22					
		hardenable	hardened	100	23					
	Cast aluminium alloys	≤ 12 % Si, cannot be hardened		75	24					
		≤ 12 % Si, hardenable	hardened	90	25					
		> 12 % Si, cannot be hardened		130	26					
	Copper and copper alloys (bronze/brass)	machining steel, PB> 1%		110	27					
		CuZn, CuSnZn		90	28					
CuSn, Pb-free copper, electrolytic copper		100	29							
S	Heat-resistant alloys	Fe-based alloys	annealed	200	30					
			hardened	280	31					
		Ni or Co bass	annealed	250	32					
			hardened	350	33					
			cast	320	34					
	Titanium alloys	pure titanium		R _m 400	35					
		α and β alloys	hardened	R _m 1050	36					
H	Hardened steel		hardened and tempered	55 HRC	37					
			hardened and tempered	60 HRC	38					
	Hard cast iron		cast	400	39					
	Hardened cast iron		hardened and tempered	55 HRC	40					
X	Non-metallic materials	Thermoplasts			41					
		Thermosetting plastics			42					
		Plastic, glass-fibre reinforced GFRP			43					
		Plastic, carbon fibre reinforced CFRP			44					
		Graphite			45					
		Wood			46					

Note: The given cutting values are guide values, which were determined under ideal conditions.
 The values have to be adapted in individual cases.
 With hole depths of 5xD adjust the cutting data accordingly to the application.
 For examples of material for cutting tool groups view page D22.

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