MILLING MACHINES ACCESSORIES



Vises compatibility overview

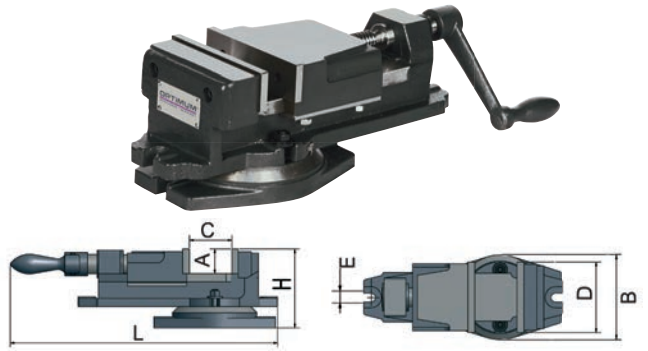
Accessories		Article No.	BF 16V	MH 20	MH 22	MH 25	MB 4	MH 35 /V	MH 50 /V	MB 4P	MB 4PV	MT 50E	MT 50	MT 60	MF 2-B	MF 4-B	MF 2V	MF 4V	MT 130S	MT 100	MT 200	MT 230S	MZ 2S	MZ 4S
Machine vices FMS	100	3354100	●	●	●	●	●			●	●													
	125	3354125					●	●	●	●	●	●	●	●	●		●						●	●
	150	3354150														●		●	●	●			●	●
	200	3354200																			●	●		
Machine vices HMS	100	3355100					●	●		●	●													
	125	3355127													●	●	●	●	●	●	●	●	●	●
	150	3355150																						●
	200	3355200																					●	●
Machine vices FMSN	100	3354110	●	●	●	●																		
	125	3354120					●	●	●	●	●	●	●	●	●		●						●	●
	150	3354130														●		●	●	●			●	●
Machine vices VMQ	80	3354180	●	●	●	●																		
	100	3354181	●	●	●		●	●	●	●	●	●	●	●	●		●						●	●
	125	3354182														●		●	●	●			●	●
	150	3354183																					●	●
Three-axis vices MV3	75	3354175	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	125	3354178											●	●	●	●	●	●	●	●	●	●	●	●
Two-axis vice ZAS	50	3354170	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Three-axis vice DAS	100	3355500					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Machine vice HCV	105	3536210															●	●	●	●	●	●	●	●
	125	3536214															●	●	●	●	●	●	●	●
Machine vice MVSP	150 x 200	3530104																					●	●
	150 x 200	3530108																					●	●

Precision machine vices FMS

- Robust design for milling, drilling and grinding
- Vice body made of premium cast material
- Guide surfaces tempered and polished
- Hardened and ground clamping jaws, replaceable
- With turntable, rotating through 360°

Vice	Article no.
FMS 100	3354100
FMS 125	3354125
FMS 150	3354150
FMS 200	3354200

Prism jaws	Article no.
for FMS 100	3354102
for FMS 125	3354127
for FMS 150	3354152
for FMS 200	3354202



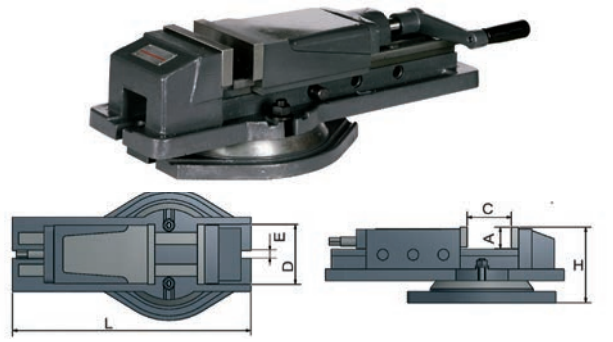
Dimensions		A	C	D	E	L	B	H	kg
FMS 100	mm	30	62	100	13	295	124	100	11
FMS 125	mm	37	85	125	13	370	148	128	17
FMS 150	mm	40	114	150	13	462	180	145	28
FMS 200	mm	58	150	200	16.5	620	237	202	58

Hydraulic Precision machine vices HMS

- Robust design for milling, drilling and grinding
- Vice body made of premium cast material
- Guide surfaces tempered and polished
- Booster system: requires little force, high pressure build-up during clamping
- Large clamping range due to lock bolts with various hole spacings
- With turntable, rotating through 360°. Protected spindle

Vice	Article no.
HMS 100	3355100
HMS 125	3355127
HMS 150	3355150
HMS 200	3355200

Prism jaws	Article no.
for HMS 100	3355102
for HMS 125	3355129
for HMS 150	3355152
for HMS 200	3355202



Dimensions		A	D	E	L	B	H	kg
HMS 100	mm	36	100	15	525	Ø 270	122	27
HMS 125	mm	46	127	16	670	Ø 290	151	46
HMS 150	mm	51	150	17	800	Ø 328	169	64
HMS 200	mm	65	200	19	710	Ø 358	158	100

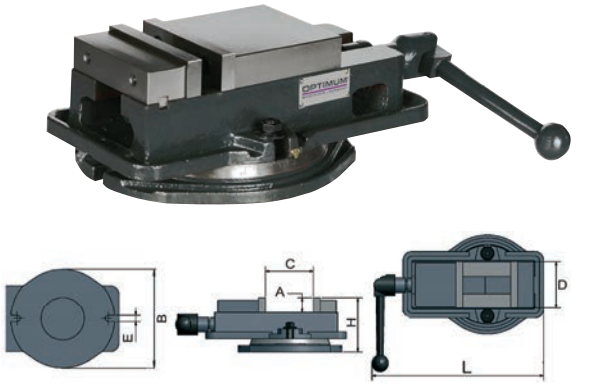
C	Span			Clamping pressure	
HMS 100	0-60 mm	57-115 mm	110-170 mm	2 500 kg	24.5 kN
HMS 125	0-76 mm	72-150 mm	146-224 mm	4 000 kg	39.25 kN
HMS 150	0-100 mm	98-200 mm	195-300 mm	4 500 kg	44.1 kN
HMS 200	0-100 mm	98-200 mm	195-300 mm	7 500 kg	73.6 kN

Precision machine vices FMSN

- Vice body made of premium cast material
- Guide surfaces tempered and polished
- Hardened and ground clamping jaws, replaceable
- Protected spindle
- Clamping outward by repositioning the clamping jaws
- With turntable, rotating through 360°

Vice	Article no.
FMSN 100	3354110
FMSN 125	3354120
FMSN 150	3354130

Prism jaws	Article no.
for **FMSN 100**	3354112
for **FMSN 125**	3354122
for **FMSN 150**	3354132

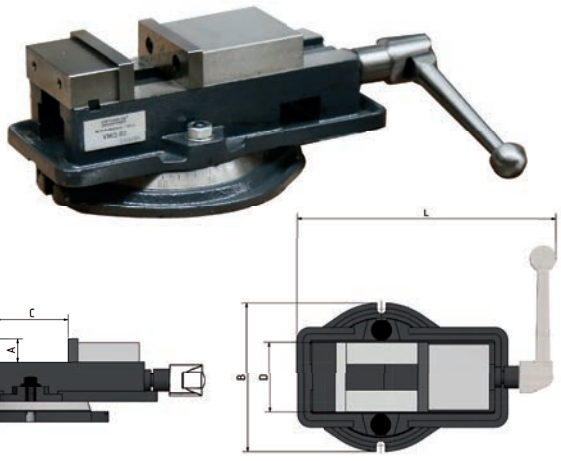


Dimensions		A	C	D	E	L	B	H	kg
FMSN 100	mm	36	101	100	14.5	319	Ø 240	319	19
FMSN 125	mm	36	108	135	16.5	369	Ø 278	369	29
FMSN 150	mm	46	146	155	18.5	425	Ø 332	425	36

Machine vices

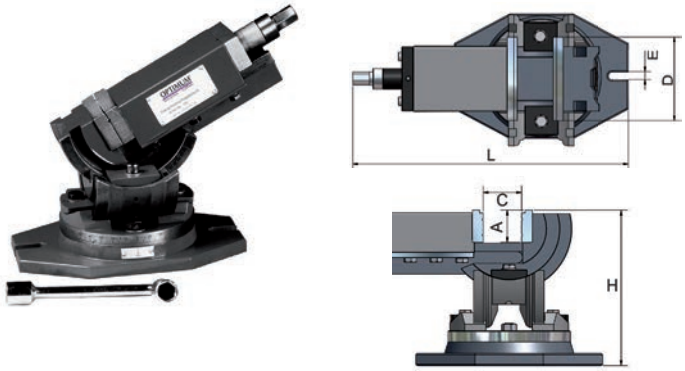
Milling machine vises	Article no.
› Robust design for milling, drilling and grinding	
› Vice body made of premium cast material	
› Guide surfaces tempered and polished	
› Hardened and ground clamping jaws	
› With turntable, rotating through 360°	
VMQ 80	3354180
VMQ 100	3354181
VMQ 125	3354182
VMQ 150	3354183

Technical data		A	C	D	L	B	H	kg
VMQ 80	mm	26	80	80	305	160	100	9.5
VMQ 100	mm	34	105	105	385	222	126	21
VMQ 125	mm	36	130	134	430	247	135	30
VMQ 150	mm	46	145	158	488	290	162	39

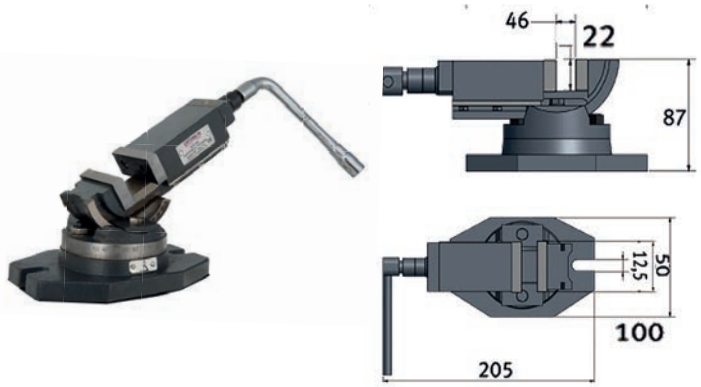


Three-axis vice	Article no.
› Horizontal swivel movement up to 90°	
› Vertical swivel movement up to ± 45°	
› Hardened and ground clamping jaws	
› With turntable, rotating through 360°	
MV3-75	3354175
MV3-125	3354178

Technical data		A	C	D	E	L	B	H	kg
MV3-75	mm	34	82	75.5	12	380	139	150	11
MV3-125	mm	45	97	125	12	290	185	206	26

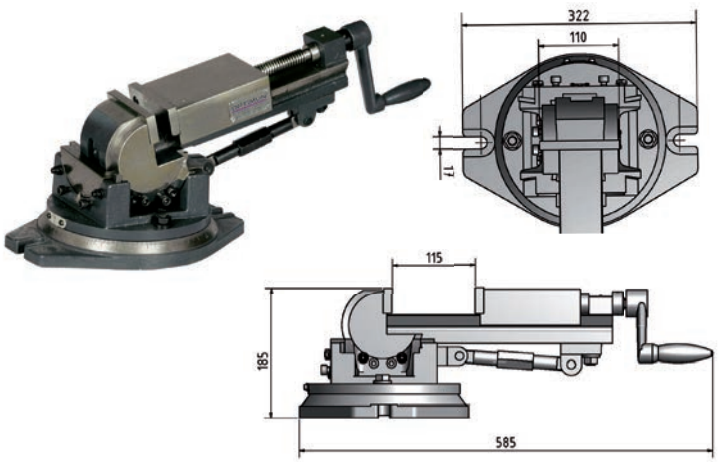


Two-axis vice	Article no.
› Tiltable up to -90°	
› Hardened and ground clamping jaws	
› Easily readable scales for both axes	
› With turntable, rotating through 360°	
› Weight 3.4 kg	
ZAS 50	3354170



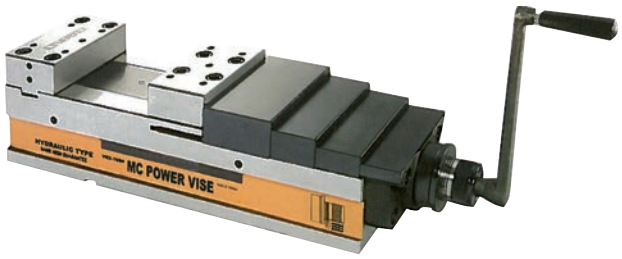
Three-axis vice	Article no.
› Premium cast material	
› Guide surfaces tempered and polished	
› With turntable, rotating through 360°	
› Horizontal swivel movement up to 90°	
› Vertical swivel movement up to ± 45° above thread spindle	
› Net weight 32 kg	
DAS 100	3355500
Prism jaws	3355502

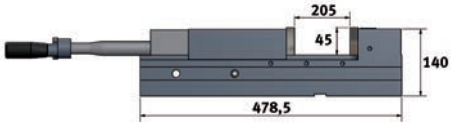




Hydraulic milling machine vise	Article no.
› High precision and repeating accuracy for series production and batch-size-one machining on CNC milling machines	
› Robust design for milling	
› Guide surfaces tempered and polished	
› Booster system: requires little force, high pressure build-up during clamping	
› Large clamping range due to lock bolts with various hole spacings	
› Made of premium grade stainless steel	
HCV 125	3536214
Soft jaws 2 pcs.	3536221
L jaws 2 pcs.	3536222

Span	Clamping pressure		Weight
0 - 205 mm	4 000 kg	39.2 kN	35.4 kg

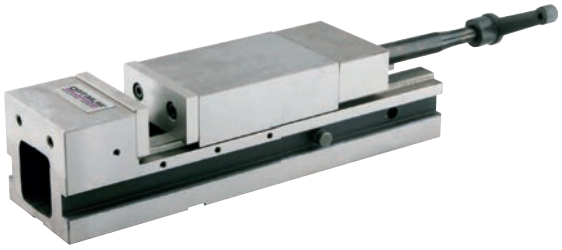


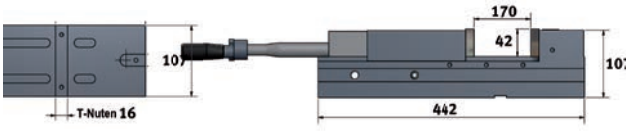




Hydraulic milling machine vise	Article no.
› High precision and repeating accuracy for series production and batch-size-one machining on CNC milling machines and machining centres	
› Robust design for milling	
› Guide surfaces tempered and polished	
› Booster system: requires little force, high pressure build-up during clamping	
› Large clamping range due to lock bolts with various hole spacings	
› Made of premium grade stainless steel	
› Long service life thanks to high quality	
› High clamping force	
HCV 105	3536210

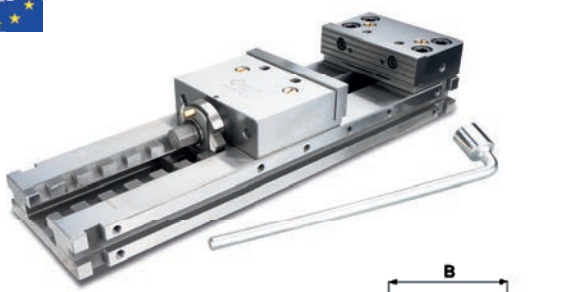
C	Span		Clamping pressure		Weight
	0 - 85 mm	85 - 170 mm	2 500 kg	24.5 kN	22 kg

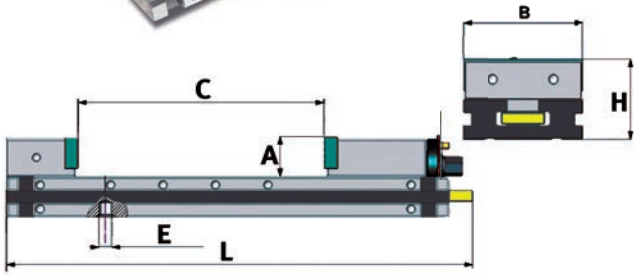




Modular milling machine vise	Article no.
› hydraulic	
› High precision and repeating accuracy for series production and batch-size-one machining on CNC milling machines and machining centres	
› Robust design for milling	
› Completely made of steel NiCrMo with hardness HRC60, tolerance 0.0015 mm	
› Mobile jaws with extra long guides to prevent lift-off and slingshot risk	
› Guide surfaces tempered and polished	
› Large clamping range due to lock bolts with various hole spacings	
› Long service life thanks to high quality	
› Includes spanner	
› Model MVSP with fixed jaws	
MVSP 150 x 200	3530104
MVSP 150 x 200	3530108

Technical data		A	C	E	L	B	H	kg
MVSP 150 x 200	mm	50	205	16	480	149	100	34
MVSP 150 x 300	mm	50	305	16	580	149	100	38.6





Compatibility overview accessories for milling machines

Accessories		Article No.	BF 16	MH 20	MH 22	MH 25	MB 4	MH 35 /V/G	MH 50 /V	MB 4P	MB 4PV	MT 50E	MT 50	MT 60	MF 2-B	MF 4-B	MF 2V	MF 4V	MT 130S	MT 100	MT 200	MT 230S	MZ 2S	MZ 4S
			MK 2	MT 2	BT 20	BT 30	MT 4	BT 30	BT 40	MT 4	MT 4	ISO 40	ISO 40	ISO 40	ISO 40	ISO 40	ISO 40	ISO 40	ISO 40	ISO 40	ISO 40	ISO 50	ISO 50	ISO 40	ISO 40
Horizontal-vertical indexing table	RT 100	3356110	○	○	○	●	●	●	●	●	●	●	●	●	●	●	●	●	○	○	○	○	○	○	○
	RT 150	3356150					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	RT 200	3356200										●	●	●	●	●	●	●	●	●	●	●	●	●	●
Horizontal-vertical indexing table	RTE 165	3356365					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	RTU 165	3354165					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Universal dividing head	TA 125	3356125					○	○	○	○	○	○	●	●	○	○	○	○	●	●	●	●	●	●	●
End mill set HSS	12-part	3352250	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	20-part	3352255	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Twist drill HSS	MT 3	3051003					○	○		○	○						●	●	●	●			●	●
Twist drill set	25-part	3201010	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	51-part	3201020	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	41-part	3201021	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Milling cutter set HM	Hard metal	3352118	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Radius	3352116	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Assortment of clamping tools	SPW 8	3352015	●																						
	SPW 10	3352016		●	●	●		●																	
	SPW 12	3352017					●			●	●	●	●	●					●	●	●		●	●
	SPW 14	3352018													●	●	●	●							
	SPW 16	3352019							●													●			
Edge sensor		3351171	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●
Quick-action drill chuck	1 - 8 mm B16	3050608	●	●	●	○	●	○	●	●	●	●	●	●	●	●	●	●	○	○	○	○	●	●
	1 - 10 mm B16	3050610	●	●	●	○	●	○	●	●	●	●	●	●	●	●	●	●	○	○	○	○	●	●
	0 - 13 mm B16	3050632	●	●	●	○	●	○	●	●	●	●	●	●	●	●	●	●	○	○	○	○	●	●
	0 - 16 mm B16	3050633	●	●	●	○	●	○	●	●	●	●	●	●	●	●	●	●	○	○	○	○	●	●
Morse cone	SK50 B18	3352067																			●	●		
Reduction sleeve	MT3 - MT2	3350313															●	●	●	●			●	●
	MT4 - MT3	3350314					●			●	●													
Arbor for B16 drill chuck	MT 2	3050670	●	●																				
	MT 4	3350304					●			●	●													
	ISO 40	3352070										●	●	●	●	●	●	●	●	●			●	●
Cutter head holder	MT 2	3352102	●	●																				
Copying and facing cutter head	BT 20	3350202			●																			
	BT 30	3350203				●		●																
	MT 2/M10	3350212	●	●																				
	BT 40	3350204							●															
	MT 4/M16	3350214					●			●	●													
	ISO 40	3350216										●	●	●	●	●	●	●	●	●			●	●
Pull stud	BT 20	3352726			●																			
	BT 30	3536302				●		●																
	BT 40	3536332							●															
Precision Bore head set	ISO 40	3352128										●	●	●	●	●	●	●	●	●			●	●
	ISO 50	3352129																			●	●		
Bore head set	MT 4	3352125					●			●	●													

Accessories		Article No.	BF 16	MH 20	MH 22	MH 25	MB 4	MH 35 V/G	MH 50 V	MB 4P	MB 4PV	MT 50E	MT 50	MT 60	MF 2-B	MF 4-B	MF 2V	MF 4V	MT 130S	MT 100	MT 200	MT 230S	MZ 2S	MZ 4S
			MK 2	MT 2	BT 20	BT 30	MT 4	BT 30	BT 40	MT 4	MT 4	ISO 40	ISO 40	ISO 40	ISO 40	ISO 40	ISO 40	ISO 40	ISO 40	ISO 40	ISO 50	ISO 50	ISO 40	ISO 40
Collet chuck holder Set	MT 2/ER25	3352052	●	●																				
	MT 2/ER32	3352053	●	●																				
	MT 4/M16	3352094					●			●	●													
	ISO 30	3352054																						
	ISO 40	3352056										●	●	●	●	●	●	●	●	●			●	●
	ISO 50	3352065																			●	●		
Collet set	ER 16	3440282			●																			
	ER 25	3441109	●	●	●																			
	ER 32	3441122	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Collet chuck set, direct	MT 2	3351980	●	●																				
Levelling platen	SE1	3381012	●	●	●	●	●	●	●	●	●													
	SE2	3381016										○	○	○*	○*	○*	○*	○*	○*	○*	○*	○*		
												*Long threaded rod required (not included in scope of supply!)												
Vibration damping machine base	SE 55	3352981	●	●	●	●	●	●	●	●	●												●	●
	SE 85	3352982										●	●	●	●	●	●	●						
Precision machine shoe	SEU1	3352985										●	●	●	●	●	●	●	●	●	●	●		
Try square	90°	3385052				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Prism elbow	WP 30	3352195	●	●	●	●	●	●	●	●	●													
Table feed	V 99S	3352021					●	●	●															
	Mounting kit required	3352036							●															
		3352035					●	●																
	V 250S	3352025															●	●						
Tool clamping system	ISO 40	3352394															●	●						
Thread tapper	M5-M12	3352042	●	●	●	●	○	○	○	○	○	●	●	●	●	●	●	●	●	●	●	●	●	●
Workpiece support	WPS-1	3354261	●	●	●	●	●	●	●	●	●													
	WPS-2	3354262	●	●	●	●																		
	WPS-3	3354263					●	●	●	●	●													
	WPS-4	3354264					○	○	○	○	○	●	●	●										
T-slot nut	M 8 -10mm	3353020	●																					
	M10 -12mm	3353022		●	●	●		●																
	M12 -14mm	3353025					●			●	●	●	●	●					●	●	●		●	●
	M14 -16mm	3353026													●	●	●	●						
	M16 -18mm	3353028							●													●		
Hold-down clamp	14 mm	3352031					●			●	●	●	●	●										
	18 mm	3352032							●															
Parallel spacer kit		3354001	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Coolant system	230V	3351999	○*	○*	○*	○*	●	●	●															
Coolant hose	KMS 2	3356660	●	●	●	●	●	●	●															
Coolant mist lubricator	MMC 1	3356663	●	●	●	●	●	●	●															
Starter set	BT 20	3353281			●																			
	BT 30	3353282				●		●																
	BT 40	3353284							●															
Chassis	MSM 1	3353000	●	●	●																			
	Chip tray	3352999	●	●	●																			
	MSM 2	3353009				●																		
	MSM 3	3353014					●	●																
	MSM 4	3353015							●															

○* only in combination with substructure (Article No. 3353000) and chip tray (Article No. 3352999)

Horizontal-vertical rotary indexing tables

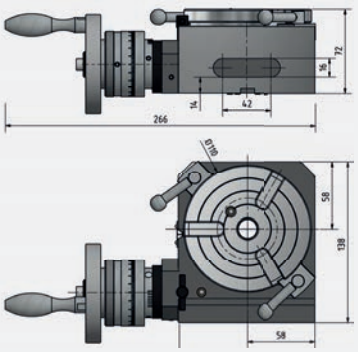
- Quality rotary indexing tables made of premium cast meehanite
- Work table with 360° scale
- Precision bearing
- 1 revolution of handwheel 4° rotation
- Stability also under high load
- Scale division on handwheel 2 °
- Large spindle hole for clamping longer workpieces
- Indexing via handwheel with vernier scale possible
- Worm gear hardened and ground
- 3356110 - RT 100- Angle degree dividing over 360 degree angle scale, slot 11 mm (M10), indirect indexing discs not supported
- 3356150 - RT 150- Angle degree dividing over 360 degree angle scale, slot 11 mm (M10), large number of indirect divisions possible with optional indexing discs
- 3356200 - RT 200- Angle degree dividing over 360 degree angle scale, slot 16 mm (M16), large number of indirect divisions possible with optional indexing discs

Technical data		RT 100	RT 150	RT 200
Centring taper		MT 2	MT 2	MT 3
Transmission ratio		90:1	90:1	90:1
Mounting surface diameter	mm	110	150	200
Height x length x width	mm	72 x 138 x 118	79 x 204 x 156	104 x 265 x 199
Centre height	mm	80	102	133
Slot width/count	mm	11/3	11/3	16/3
Net weight	kg	5	10	25

Horizontal-vertical rotary indexing table RT 100

Article no.





Rotary indexing table RT 100 — 3356110
- 2 clamping blocks
- Centring taper MT 2

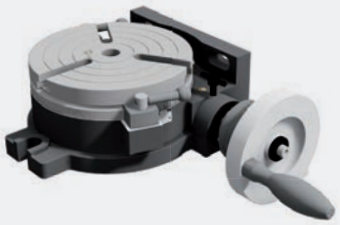
Three-jaw lathe chuck Ø 85 mm — 3356111

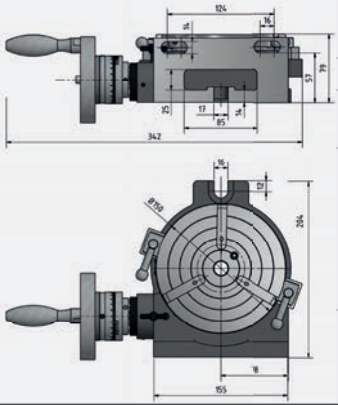
Tailstock Rst 1 — 3356155
- Centre height 72 - 108 mm



Horizontal-vertical rotary indexing table RT 150

Article no.



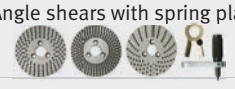


Rotary indexing table RT 150 — 3356150
- 2 clamping blocks
- Centring taper MT 2

Chuck flange — 3356154

Three-jaw lathe chuck Ø 130 mm centrically clamping — 3356100

Indirect indexer IT 150 — 3356152
- 3 Indexing disks
- Sector arm
- Angle shears with spring plate



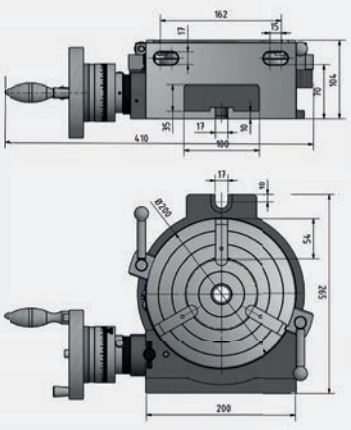
Tailstock Rst 1 — 3356155
- Centre height 72 - 108 mm



Horizontal-vertical rotary indexing table RT 200

Article no.





Rotary indexing table RT 200 — 3356200
- 2 clamping blocks
- Centring taper MT 3

Chuck flange including 3 slot nuts — 3356254

Three-jaw lathe chuck Ø 165 mm — 3356225

Indirect indexer IT 200 — 3356205
- 2 Indexing disks
- Sector arm
- Angle shears with spring plate



Tailstock Rst 2 — 3356157
- Centre height 110 - 145 mm



Horizontal-vertical rotary indexing table with 3-jaw chuck

- Quality rotary indexing tables made of premium cast meehanite
- Precision taper roller bearing
- Stability also under high load
- 24 positions (15° indexing)
- Large spindle hole for clamping longer workpieces
- Three-jaw chuck
- Direct indexing via serrated locking plates for higher production speeds for mass-produced parts
- Including clamping disc with 3 slots
- 3354165 - RTU 165 – 24 divisions with direct indexing disc and angular degree divisions over 360 degree angle scale - no slot, three-jaw chuck mounted, large number of indirect divisions possible with with optional indexing discs
- Degree indexing via 360° scale with crank and vernier scale
- 3356365 - RTE 165- 24 divisions with direct indexing disc and angular degree divisions over 360 degree angle scale - no slot, three-jaw chuck mounted, no indirect
- 7 serrated locking plates for 2/3/4/6/8/12/24x divisions
- Degree divisions via 360° scale

Technical data		RTE 165	RTU 165
Mounting surface diameter	mm	165	165
Closed height x width x length	mm	200 x 260 x 218	250 x 391 x 235
Centre height	mm	130	130
Clamping disc	mm	203	203
Passageway	mm	36	36
Net weight	kg	32.5	48

Technical data		RTE 165	RTU 165
Direct indexing disc		24x division (= 15°)	
Indirect indexing disc		2, 3, 4, 6, 8 and 12x division	
Indexing precision of direct indexer		45‘	
Clamping options		Horizontal and vertical	
Clamping surface		With scale 360°	

Horizontal-vertical rotary indexing table RTE 165

Article no.



Rotary indexing table RTE 165
- 3-jaw chuck (mounted)
- Clamping disc
- Main indexing disk (24x division, mounted)
- 6 Indexing disks

3356365

Tailstock Rst 2
- Centre height 110 - 145 mm

3356157

Horizontal-vertical rotary indexing table RTU 165

Article no.



Rotary indexing table RTU 165
- 3-jaw chuck (mounted)
- Clamping disc
- Main indexing disk (24x division, mounted)
- 6 Indexing disks
- Grips for handwheel

3354165

Indirect indexer IT 200
- 3 Indexing disks
- Sector arm
- Angle shears with spring plate

3356205

Tailstock Rst 2
Centre height 110 - 145 mm 72 - 108 mm

3356157

Universal dividing head TA 125

3356125

- Pivotable from -10° to +90°
- Hardened and ground worm gear
- Precision taper roller bearing
- Hardened and ground main indexing disc (24x division), to index directly at 15°
- Up to 300 indexing options possible with indirect indexing disks



Scope of delivery
- Tailstock Rst1 (centre height 72 - 108 mm)
- Centre point 60 °/ MT 2
- Lathe dog (tang)
- Chuck flange (Ø 140 mm, t = 12 mm) for driving pin or lathe chuck mounting
- 3 pcs. Indirect indexing discs

Technical data	
Transmission ratio	40:1
Overall height x width with centre point x length	175 x 205 x 230 mm
Centre height	100 mm
Bore hole in the pick-up shaft (passage)	18 mm
Slot width	16 mm
Direct indexing disc (Pitch)	15°/ Ø 110 mm
Indirect indexing disc (Bore on reference circle)	15, 16, 17, 18, 19, 20, 21, 23, 27, 29, 31, 33, 37, 39, 41, 43, 47
True running accuracy	0.015 mm
Net weight	12 kg

Accessories	Article no.
End mill set HSS	
› Titanium coated	
› Improved hardness and stability with 2x to 5x service life	
› Twice the machining performance	
› Improved workpiece finish	
› Cylindrical shank and lateral lugs	
› Version with 2 cutting edges for milling keyways/fixing slots and milling out the workpiece centre	
› Vertical or lateral milling possible	
› Version with 4 cutting edges and 30° right-hand twist for good chip removal in normal to hard materials	
12-part	3352250
› 6 end mills, short version · Version with 2 cutting edges. DIN 1835 B (Ø12x73, Ø10 x 63, Ø8 x 61, Ø6 x 52, Ø5 x 52, Ø4 x 51 mm)	
› 6 end mills, short version · Version with 4 cutting edges. DIN 1835 B (Ø12 x 83, Ø10 x 73, Ø8 x 61, Ø6 x 57, Ø5 x 57, Ø4 x 55 mm)	
20-part	3352255
› 10 end mills DIN 327 D · Short version · 2 cutting edges DIN 1835 B, (3/4/5/6/8/10/12/14/18/20 mm)	
› 10 milling cutter DIN 844 B · Short version · 4 cutting edges DIN 1835 B, (3/4/5/6/8/10/12/14/18/20 mm)	



Carbide end mill set	3352118
› 18-part; 3 each in the sizes 3/4/6/8/10 and 12 mm	
› 4-cutting edge version	
› Coated solid carbide end mill (TiALN)	
› Centre cut for plunging	
› Chip angle 35 °	



Radius end mill set	3352116
› 9-part; 3 each in the sizes 4 mm / 6 mm /8 mm	
› 2-cutting edge version	
› Coated solid carbide end mill (TiALN)	
› Face cutting geometry for plunging	
› Chip angle 30 °	



Accessories	Article no.
Twist drill HSS with morse taper	
› 9-part; sizes 14.5/16/18/20/22/24/26/28/30 mm	
› Long service life	
› Good chip removal	
› Right handed	
MT 2	3051002
MT 3	3051003



Twist drill set	
› DIN 338 HSS-CO 5%	
› Tetrahedral 135° cross grinding enables excellent self-centring	
› Improved tool service life thanks to alloyed components	
› High speed/feed properties	
› Strong core design optimises the structural strength of the bit and minimises the risk of bit breakage	
› Practical OPTIMUM plastic case	
25-part	3201010
› 1- 13 mm	
51-part	3201020
› 1 - 6 mm (in 0.1 mm increments)	
41-part	3201021
› 6 - 10 mm (in 0.1 mm increments)	



Edge finder	3351171
› Rotating spindle	
› 10 mm shaft	
› Probe Ø 10 mm	



Accessories	Article no.
Precision quick-action drill chuck	
Concentricity ≤ 0,06 mm	
1 - 8 mm; B16	3050608
1 - 10 mm; B16	3050610
1 - 16 mm; B18	3050630



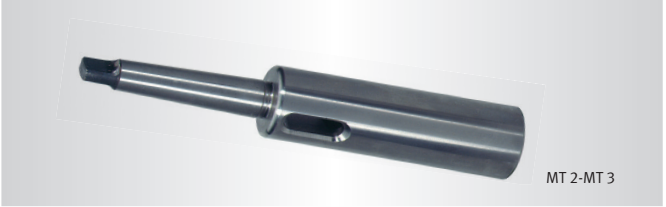
Accessories	Article no.
Optimum Precision quick-action drill chuck	
DKC 13 / 0-13 mm; B16 up to 4 800 rpm	3050632
DKC 16 / 0-16 mm; B16 up to 4 000 rpm	3050633



Accessories	Article no.
OPTIMUM Direct quick-action drill chuck	
MT 2 1 - 16 mm; up to 6 000 rpm	3050571
MT 2 1 - 13 mm; up to 8 000 rpm	3050572
MT 3 1 - 16 mm; up to 6 000 rpm	3050573
MT 4 1 - 16 mm; up to 6 000 rpm	3050574



Accessories	Article no.
Extension sleeves	
MT 2 - MT 3	3050667
MT 3 - MT 4	3050668



Accessories	Article no.
Reduction sleeve	
MT 3 - MT 2 / M12	3350313
MT 4 - MT 3 / M16	3350314



Accessories	Article no.
Milling cutter arbor	
External taper **MT 2 / M10 / B16**	3050670
External taper **MT 3 / M12 / B16**	3350303
External taper **MT 4 / M16 / B16**	3350304



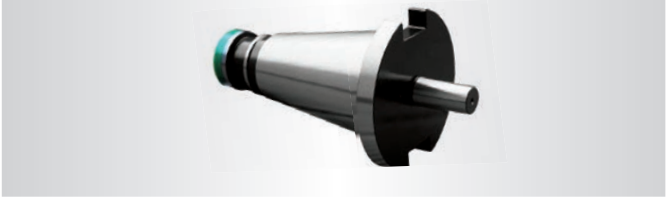
Accessories	Article no.
Drill chuck holder (arbour)	
External taper **ISO 30 / M12 / B16**	3352069
External taper **ISO 40 / M16 / B16**	3352070



Accessories	Article no.
Holder for cutterhead SK50	3352066
› External taper Ø 27 mm DIN2080	



Accessories	Article no.
Morse cone SK50	3352067
B18 DIN2080	



Accessories	Article no.
Holder for cutterhead MT 2	3352102
› External taper MT 2 / milling cutter holder Ø 16 mm	



Accessories	Article no.
Adapter	
ISO 30 / MT 3	3352068
BT 30 / MT 3	3536316



Accessories	Article no.

Copy and face milling cutter

› Universally deployable for machining all steels and NF metals
› For facing and copying
› Made of special steel - highly quenched and hardened
› Excellent planarity and true running accuracy
› Milling body with asymmetrical division for extremely smooth action and uniform cutting
› Body and clamping shank form a unit for a short projection length and stable clamping
› No additional end mill mandrel used
› Special geometry for high-speed milling
› Economical because, in case of a blunt cutting edge, the plate can simply be rotated further (can be used up to twelve times)
› Indexable inserts Ø 10 mm
› Includes five turning plates RDET 1003 MOSN 8026
› Includes Torx TX15

Tool holder shank BT 20	3350202
Pull stud Optimum BT 20	3352726



› External Ø: 52 mm
› ISO designation RD X 1003 D52/R5

Tool holder shank BT 30	3350203
Pull stud BT 30	3536302



› External Ø: 52 mm
› ISO designation: RD X 1003 D52/R5

Tool holder shank BT 40	3350204
Pull stud BT 40	3536332



› External Ø: 63 mm
› ISO designation: RD X 1003 D63/R5

Tool holder shank ISO 30/DIN 2080	3350215
Tool holder shank ISO 40/DIN 2080	3350216



› External Ø:
52 mm (ISO30)
63 mm (ISO 40)
› ISO designation:
RD X 1003 D52/R5 (ISO 30)
RD X 1003 D63/R5 (ISO 40)

Tool holder shank MT 2/M10	3350212
Tool holder shank MT 3/M12	3350213
Tool holder shank MT 4/M16	3350214



› External Ø:
52 mm (MT 2/MT 3)
63 mm (MT 4)
› ISO designation:
RD X 1003 D52/R5 (MT 2/3)
RD X 1003 D63/R5 (MT 4)

HM indexable inserts

RDET 1003 MOSN8026	3350220



› 5 pcs.
› Positive cutting geometry
› PVD coated
› For machining steel up to 900 N/mm², stainless steel, aluminium, non-ferrous metal, cast iron

RDHT 1003 MO-FA HF7	3350221

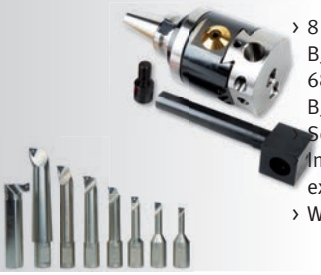


› 5 pcs.
› Extremely positive cutting geometry
› Polished
› For machining AL alloys, copper alloys, plastics

Accessories	Article no.

Precision boring head set

ISO 30/ER32 - M12/BT 30	3352127
ISO 40/ER32 - M16/BT 40	3352128
ISO 50/ER32 - M24/BT 50	3352129



› 8 pcs. boring bars: BJ2008-32L/ BJ2010-40L/BJ2014-53L/BJ2016-68L/BJ2020-83L/BJ2025-96L/ BJ2030-115L/BJ20-L20-100L
Setting range 8 - 280 mm
Including boring bars, studs, circle extension, tools, case
› Without indexable inserts

Indexable inserts set (10 pcs.)

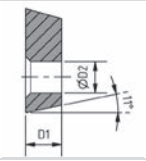


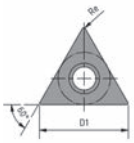
For steel

for boring bar No. 1-4	3352136
for boring bar No. 5, 6	3352137
For drill rod No. 7, 8	3352138

For aluminium

for boring bar No. 1-4	3352141
for boring bar No. 5, 6	3352142
For drill rod No. 7, 8	3352143





Article no.	ISO	D1	D2	S1	right
3352136	**TPGT110304L-FY-EH10**	11	3.4	3.18	0.4
3352141	**TBGT060104L-W-T1200A**	11	3.4	3.18	0.4
3352137	**TPGT090204L-FY-EH10**	9.6	2.8	2.38	0.4
3352142	**TPGT090204L-W-T1200A**	9.6	2.8	2.38	0.4
3352138	**TBGT060104L-W-H1**	6.9	2.2	1.59	0.4
3352143	**TBGT060104L-W-T1200A**	6.9	2.2	1.59	0.4

Cutting depth 0.2 - 0.6 - 1.0 mm, feed 0.05 - 0.15 - 0.25 mm, speed 100 - 250 - 400 mm

Boring head set

› For external and vertical machining
› Scope of delivery: Boring head, 9 pcs. Boring bars with soldered HSS plate, Allen key

Spindle holder **MT 3**	3352124
Spindle holder **MT 4**	3352125



Accessories	Article no.
Collet chuck set	
MT 2/ ER 25 - M10	3352052
› Collet chuck holder	
› 15 collets; sizes Ø 1.5 - Ø 16 mm/DIN ISO 15488	
› Hook wrench Aluminium case	
MT 2/ ER 32 - M10	3352053
› Collet chuck holder	
› 18 collets; sizes Ø 2 - Ø 20 mm/DIN ISO 15488	
› Hook wrench Aluminium case	
MT 3/ ER 32 - M12	3352093
› Collet chuck holder	
› 18 collets; sizes Ø 2 - Ø 20 mm/DIN ISO 15488	
› Hook wrench Aluminium case	
MT 4/ER 32 - M16	3352094
› Collet chuck holder	
› 18 collets; sizes Ø 2 - Ø 20 mm/DIN ISO 15488	
› Hook wrench Aluminium case	
ISO 30/ER32 - M12/BT 30	3352054
› Collet chuck holder	
› 18 collets sizes Ø 2 - Ø 20 mm/ DIN ISO 15488	
› Pull stud M12/M12 and pull stud BT 30	
› Hook wrench Aluminium case	
ISO 40/ER32 - M16/BT40	3352056
› Collet chuck holder	
› 18 collets sizes Ø 2 - Ø 20 mm/ DIN ISO 15488	
› Pull stud M16/M16 and pull stud BT 40	
› Hook wrench Aluminium case	
ISO 50/ER32 - M24/BT50	3352065
› Collet chuck holder	
› 18 collets sizes Ø 2 - Ø 20 mm/ DIN ISO 15488	



Collet chuck ISO 30/ER25	3352046
› Hook wrench	



Accessories	Article no.
Collet ER32 (individual)	
Ø 6 mm	3441126
Ø 8 mm	3441128
Ø 10 mm	3441130
Ø 12 mm	3441132



Collet (individual)	
› MT 3 direct-clamping / M12	
Ø 4 mm	3352004
Ø 6 mm	3352006
Ø 8 mm	3352008
Ø 10 mm	3352010
Ø 12 mm	3352012
Ø 16 mm	3352013



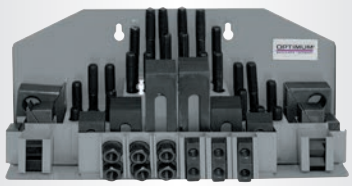
Collet set	
MT 2 direct-clamping / M10	3351980
› 5-part; sizes Ø4 / Ø6 / Ø8 / Ø10 / Ø12 mm	
MT 3 direct-clamping / M12	3352014
› 6-part; sizes Ø4 / Ø6 / Ø8 / Ø10 / Ø12 / Ø16 mm	



Collet set	
ER 16	3440282
› 12 collets sizes Ø 1 - Ø 10 mm	
ER 25	3441109
› 15 collets sizes Ø 1 - Ø 16 mm / DIN ISO 15488	
ER 32	3441122
› 18 collets sizes Ø 3 - Ø 20 mm / DIN ISO 15488	



Accessories	Article no.
Clamping tool assortment SPW	
› 58-part, in practical wall-mount holder	
› Metric thread	
› 24 pcs. pull studs	
› 6 pcs. T-slot nuts	
› 6 pcs. nuts	
› 4 pcs. extension nuts	
› 6 pcs. step blocks	
› 12 pcs. step blocks	
Size 8	3352015
› T-slot nuts 10 mm; locking thread M 8	
SPW 10	3352016
› T-slot nuts 12 mm; locking thread M10	
SPW 12	3352017
› T-slot nuts 14 mm; locking thread M12	
SPW 14	3352018
› T-slot nuts 16 mm; locking thread M 14	
SPW 16	3352019
› T-slot nuts 18 mm; locking thread M16	


SPW12

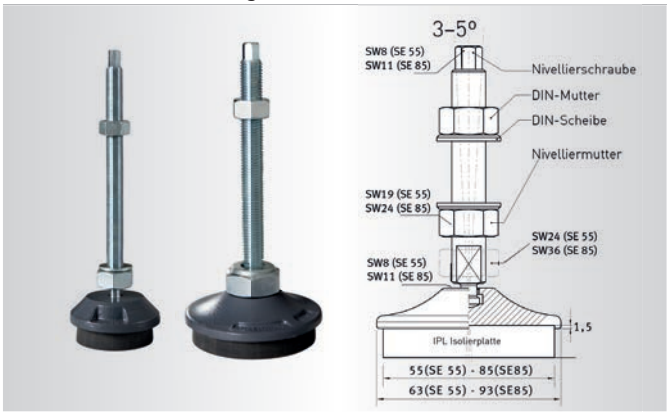
Try square 90°	3385052
› For clamping in case of mechanical processing of workpieces, checking and scribing work	
› Precision: Parallelism and perpendicularity 0.01 to 100 mm	
› Lateral reinforcing ribs	
› Dimensions L x W x H: 202 x 126 x 150 mm . Weight 7 kg	



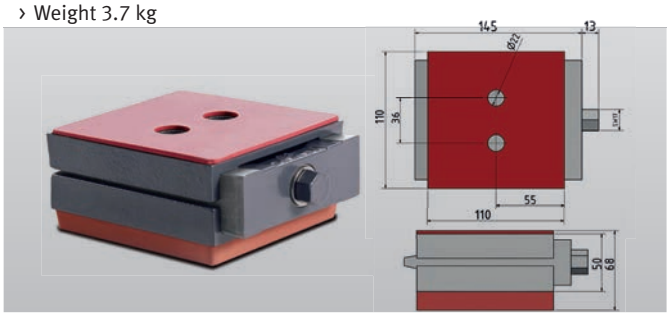
Universal compressed air tool clamping system	
› Including tool clamp, cover cap, maintenance unit, key type, drawbar, control cabinet, operating element	
› High negative pressure achievable	
› Short change times through single-handed operation	
› Low eight thanks to optimised structure	
› Safe locking through toggle lever principle	
› Precise guiding thanks to optimised geometry	
› Low air consumption	
ISO 40	3352394
› for OPTImill MF 2V / MF 4V	
Factory assembly clamping system	9000490


(Note: Adjustment work may be necessary if ordered without factory assembly).

Accessories	Article no.
Vibration damping machine base	
› Effective vibration and structure-borne noise insulation and noise reduction	
› Eliminates floor unevenness up to 5º	
› Fast and technically easy precision levelling by means of a regular threaded screw	
SE 55	3352981
› Jackscrew M12 x 1 x 150	
› Maximum load: 600 kg	
SE 85	3352982
› Levelling screw M16 x 150	
› Maximum load: 1 500 kg	



Precision machine shoe SEU1	3352985
› Patented double spindle bearing	
› With slip-protection plate at top	
› Maximum load 60 kN	
› Suitable for M16 threaded rod	
› Vibration-insulation plate for particularly loads. Good structure-borne noise insulation	
› Adjustment range +5 / -4 mm	
› High-precision, jerk-free levelling even of heavy machines	
› Installation time savings of up to 50 % thanks to precision levelling and freedom of installation.	
› Improves the dynamic behaviour of machines while reducing noise	
› Weight 3.7 kg	



Levelling platen	
› The machines and equipment can be installed without anchors and precisely levelled using the height adjustment system	
› non-slip rubberised	
SE 1	3381012
SE 2	3381016
SE 3	3381018



Load	SE 1	SE 2	SE 3
Milling machines	340 kg	460 kg	1 600 kg
gen. Machine	570 kg	1 460 kg	3 500 kg
Thread	M12	M16	M20
Base Ø/Base height	120/32	160/35	185/39

Accessories	Article no.
Universal milling table feed	
› Emergency stop shutdown, no restart	
› Continuous speed control and rapid motion *	
› Right-/left-hand rotation	
› Overload protection and limit stop switch	
› For self-assembly	
NEW **Milling table feed V 99S**	3352021
› Horizontal assembly	
› Motor: 90 W 230V ~50Hz	
MH 35V assembly kit for the X axis	3352035
MH 50V assembly kit for the X axis	3352036
NEW **Milling table feed V 250S**	3352030
› Vertical assembly	
› Motor: 130 W 230V ~50Hz	
Milling table feed V 250	3352025
› Motor: 130 W 110V ~50Hz	
› For the Y axis of MF 2V / MF 4V	
› Includes assembly kit	



*only possible if the feed is integrated into the emergency stop circuit.

Workpiece support	
› Material S 45C	
WPS-1	3354261
WPS-2	3354262
WPS-3	3354263
WPS-4	3354264



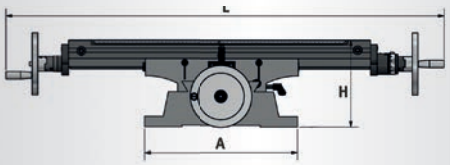
	Min. height (A)	height max. (B)	ØC	ØD	Load	Weight
	mm				KN	kg
WPS-1	40	50	30	40	50	0.3
WPS-2	65	90	28	38	50	0.4
WPS-3	90	140	40	50	50	1.1
WPS-4	140	230	45	55	50	2.3

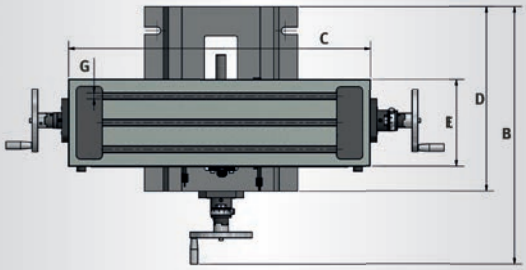
Prism WP 30	3352195
› Robust design for use on tool machines.	
› High-precision design	
› Adjustable from 0° to 60° and from 0° to -30°	
› Hardened and ground carbon steel	
› Precision squareness 0.005 mm	
› Angle tolerance 0.01°	
› Dimensions L x W x H: 75 x 25 x 32 mm	



Accessories	Article no.
KT cross tables	
› Coolant channel	
› Adjustable dovetail guide	
› Adjustable handwheel scaling with 0.05 mm scale	
KT 120	3356595
KT 179	3356596
KT 180	3356591
KT 210	3356600







Technical data	KT120	KT179	KT 180	KT210
A (Base width)	222 mm	274 mm	274 mm	370 mm
D (base length)	280 mm	340 mm	340 mm	445 mm
C (table length)	400 mm	500 mm	700 mm	730 mm
E (table width)	120 mm	180 mm	180 mm	210 mm
G (T-slot size)	10 mm	12 mm	12 mm	14 mm
L x W x H (mm)	506 x 400 x 140	748 x 483 x 155	948 x 483 x 155	1060 x 620 x 210
Weight	22 kg	46 kg	54 kg	84 kg
Traverse paths				
X axis	220 mm	287 mm	480 mm	480 mm
Y axis	165 mm	167 mm	170 mm	210 mm
Max. load	40 kg	55 kg	55 kg	80 kg

Hold-down clamp set of 2	
› Clamping height adjustable	
› Brass plate below the clamping arm protects material against damage	
Table slot **14 mm/M 12**	3352031
› L x W x H: 115 x 42 x 39 mm . Height adjustment: 0 - 89 mm	
Table slot **18 mm/M 16**	3352032
› L x W x H: 133 x 50 x 49 mm . Height adjustment: 0 - 101 mm	



Accessories	Article no.
T-slot nut(individual)	
M 8 / 10 mm	3353020
M 10 / 12 mm	3353022
M 12 / 14 mm	3353025
M 14 / 16 mm	3353026
M 16 / 18 mm	3353028



Universal coolant unit — 3351999

- Connection 230V / 1 Ph
- Max. delivery height 2.5 m / delivery rate 8 l/min
- Tank capacity 11 litres / Size L x W x H: 370 x 245 x 170 mm
- Complete with tank, flexible tube, hose and switch/plug combination
- Magnetic base fastener for coolant hose

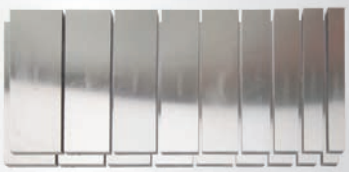


Parallel shim set 18-part — 3536191

- For precision work for parallel mounting of workpieces in machines, vices on scoring boards or tool machines
- Finely ground to an accuracy of 0.01 mm
- Length 150 mm x width 8.5 mm
- 2 pc. each: 14 mm; 16 mm; 20 mm; 24 mm; 30 mm; 32 mm; 36 mm; 40 mm; 44 mm

NEW





Parallel shim set 20-part — 3354001

- For precision work for parallel mounting of workpieces in machines, vices on scoring boards or tool machines
- Finely ground to an accuracy of 0.01 mm
- Length 150 mm x width 3 mm
- 2 pc. each: 8 mm; 13 mm; 16 mm; 19 mm; 22 mm; 25 mm; 31 mm; 35 mm; 38 mm; 41 mm



Accessories	Article no.
Thread cutting device M5 - M12/B16	3352042

- Quick reverse built-in, immediately effective on changing the feed direction
- Slip clutch 4-stage adjustable

Scope of delivery:

- Two flexible collets
- Two open-ended spanners
- Hand grip
- Allen key



Technical data	
Self-release path	4 mm
Freewheel	1.5 mm
Length compensation tensioned	8.5 mm
Max. speed	1 000 rpm
Transmission ratio forward and reverse	1 : 1.75
Cutting range	M5 - M12
Clamping range	3.5 - 10
Length	B16 DIN 238
Length compensation compressed	156 mm
Shank holder	5 mm

AQUACUT C1 — 3530030

- 10 litre cannister
- For mixing emulsions
- Drilling and cooling emulsion
- High-pressure resistant and containing mineral oil, for long tool life and clean surfaces
- Emulsifiable with water, microbe-resistant and kind to the skin



KMS 2 coolant hose — 3356660

- Two flexible and stable coolant hoses made of individual plastic elements
- Not electrically conductive
- Magnetic base holding force up to 50 kg
- Length of coolant hoses each 335 mm
- Insensitive to most solvents and chemicals
- Universally deployable on all tool machines

MMC1 coolant mist lubricator — 3356663

- Magnetic base with a holding force of 75 kg
- Base size L x W x H: 62 x 50 x 55 mm
- Screw connection for external compressed air supply
- Flexible and stable hose with a length of 500 mm



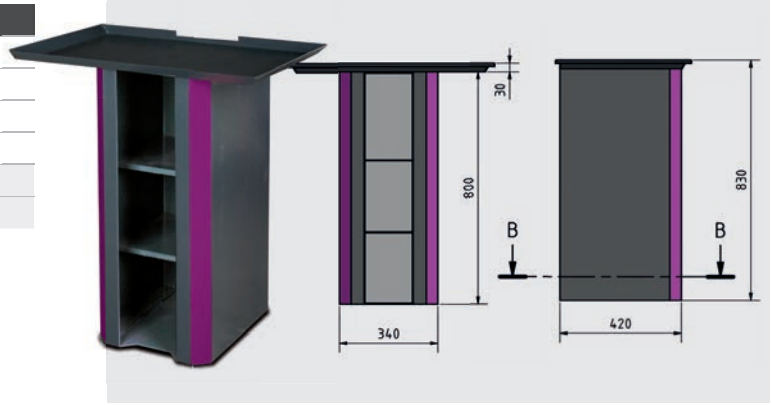
KMS 2



MMC1

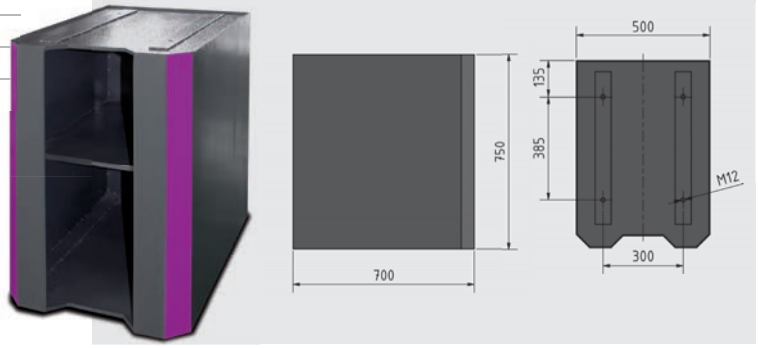
Accessories	Article no.
Universal machine substructure MSM 1 and chip tray	
› for milling machine models BF16 / MH20 / MH22	
› Substructure dimensions 420 x 340 x 800 mm	
› Chip tray dimensions 720 x 470 x 30 mm	
› Substructure net weight 28 kg	
Universal machine substructure MSM 1	3353000
Chip tray	3352999

Dimensions



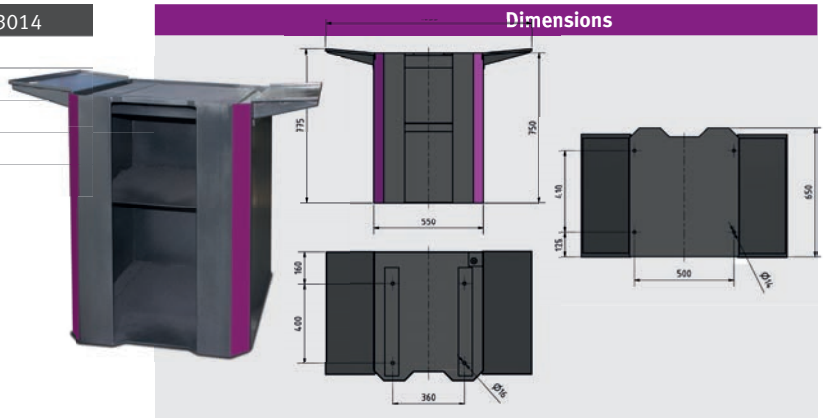
Machine substructure MSM 2	3353009
› for milling machine models MH 25V / MH 25SV	
› Solid design and weight ensure stability	
› Net weight 51 kg	
› Dimensions 500 x 700 x 750 mm	

Dimensions



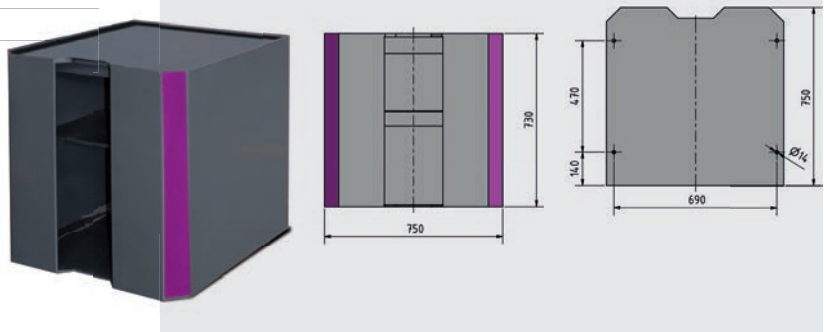
Machine substructure MSM 3	3353014
› for milling machine models MH 35G / MH 35V / MB 4	
› Solid design and weight ensure stability	
› Net weight 86.5 kg	
› Dimensions 680 x 570 x 910 mm	
The rear mounting holes must be drilled by the customer	

Dimensions



Machine substructure MSM 4	3353015
› for the milling machine MH 50G / MH 50V	
› Solid design and weight ensure stability	
› Net weight 134 kg	
› Dimensions 650 x 550 x 750 mm	

Dimensions



Accessories	Article no.
Starter set BT 20	3353281
Comprises:	
1 pc. cutterhead holder Ø 16 mm	
2 pcs. Weldon holder Ø 6 mm	
2 pcs. Weldon holder Ø 8 mm	
1 pcs. Weldon holder Ø 10 mm	
1 pcs. Weldon holder Ø 12 mm	
1 pc. tool holder BT20/B16	
11 units pull studs	
1 pc. quick-action drill chuck 1 - 13 mm	
1 pc. copy and face milling cutter	
2 pcs. collet chuck ER 25	
1 pcs. collet spanner ER 25	
12-part collet set ER 25	

Milling head holder 3352728



› Ø 16 mm seat

Weldon holder

Ø 6 mm	3352732
Ø 8 mm	3352734
Ø 10 mm	3352736
Ø 12 mm	3352738



Tool holder 3352727



› BT 20/B16

Collet chuck spanner

ER 16	3352742



ER 25	3352745



Accessories	Article no.
Optimum Precision quick-action drill chuck	
DKC 13 / 0-13 mm; B16 up to 4 800 rpm	3050632
DKC 16 / 0-16 mm; B16 up to 4 000 rpm	3050633

NEW



Copy and face milling cutter 3350202



› Universally deployable for machining all steels and NF metals
› For facing and copying
› Made of special steel - highly quenched and hardened
› Excellent planarity and true running accuracy
› Includes Torx TX15
› 52 mm outer diameter
› ISO: RD X 1003 D52/R5

Assembly and tool adjustment gauge 3352731

NEW



› For easy and precise adjustment of tools
› Vertical and horizontal collet for tools with a steep-angle taper

Collet chuck holder

ER 16	3352741
ER 25	3352744



Pull stud Optimum 3352726



› Optimum custom build (no standard BT 20 bolts)

Collet chuck set

ER 16, 12-part Ø 1-10 mm	3440282
ER 25, 15-part Ø 1-16 mm	3441109



Accessories	Article no.
Starter set BT 30	3353282
Comprises:	
1 pc. cutterhead holder Ø 22 mm	
1 pc. chuck 1 - 13 mm	
2 pcs. Weldon 6 mm	
1 pc. Weldon 8 mm	
1 pc. Weldon 10 mm	
1 pc. Weldon 12 mm	
1 pc. Weldon 16 mm	
2 pcs. Weldon 20 mm	
1 pc. adapter BT 30 to MT 2	
4 pcs. collet chuck holder ER 32	
1 pc. spring collet spanner ER 32	
18-part spring collet set ER 32	
1 pc. height adjuster	
1 pc. assembly and tool setting aid	
14 pcs. pull studs	
1 pc. taper squeegee	

Milling head holder 3353306



› Ø 22 mm seat

Drill chuck 3536303



› Clamping range 1.5-16 mm

Weldon holder

Ø 6 mm	3353310
Ø 8 mm	3353311
Ø 10 mm	3353312
Ø 12 mm	3353313
Ø 16 mm	3353314
Ø 20 mm	3353315



Adapter

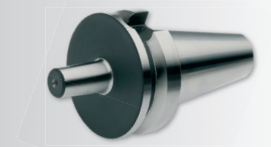
Ø BT 30 to MT 2	3353305
Ø BT 30 to MT 3	3536316



Accessories	Article no.
Collet chuck holder ER 32	3353304



Drill chuck adapter BT 30 - B16 3353308



Collet chuck spanner ER 32 3353307

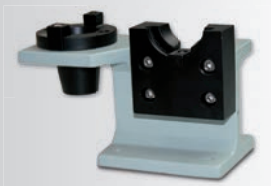


Height-adjuster 3536290



› Analogue version
› For fast and easy determination of the reference point on the Z axis and/or for adjusting tools "to zero" (e.g., for milling or drilling) without damaging the workpiece
› Housing height 50 mm

Assembly and tool adjustment gauge 3536193



› For easy and precise adjustment of tools
› Vertical and horizontal collet for tools with a steep-angle taper

Taper squeegee 3353301



Pull stud

BT 30 3353302



DIN 2080 M12/M12 3536177



Collet set ER 32 3441122



Accessories	Article no.
Starter set BT 40	3353284
Comprises:	
1 pc. cutterhead holder Ø 27 mm	
1 pc. chuck 1 - 13 mm	
2 pcs. Weldon 6 mm	
1 pc. Weldon 8 mm	
1 pc. Weldon 10 mm	
1 pc. Weldon 12 mm	
1 pc. Weldon 16 mm	
2 pcs. Weldon 20 mm	
1 pc. adapter BT 40 to MT 3	
4 pcs. collet chuck holder ER 32	
1 pc. collet spanner ER 32	
18-part spring collet set ER 32	
1 pc. height adjuster	
1 pc. assembly and tool setting aid	
14 pcs. pull studs	
1 pc. taper squeegee	

Milling head holder 3353336



› Ø 27 mm seat

Drill chuck 3536333

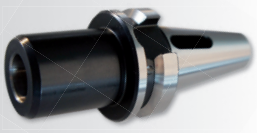


› Clamping range 1.5 - 16 mm

Weldon holder	
Ø 6 mm	3353340
Ø 8 mm	3353341
Ø 10 mm	3353342
Ø 12 mm	3353343
Ø 16 mm	3353344
Ø 20 mm	3353345



Adapter 3353335



› BT 40 to MT 3

Holder BT 40/B16 3353338



Accessories	Article no.
Collet chuck holder ER 32	3353334



Collet chuck spanner ER 32 3353307



Height-adjuster 3536290



› Analogue version
› For fast and easy determination of the reference point on the Z axis and/or for adjusting tools "to zero" (e.g., for milling or drilling) without damaging the workpiece
› Housing height 50 mm

Assembly and tool adjustment gauge 3536204

NEW



› For easy and precise adjustment of tools
› Vertical and horizontal collet for tools with a steep-angle taper

Taper squeegee 3353331



Pull stud

BT 40 3353332



DIN 2080 M16/M16 3536179



Collet set ER 32 3441122

