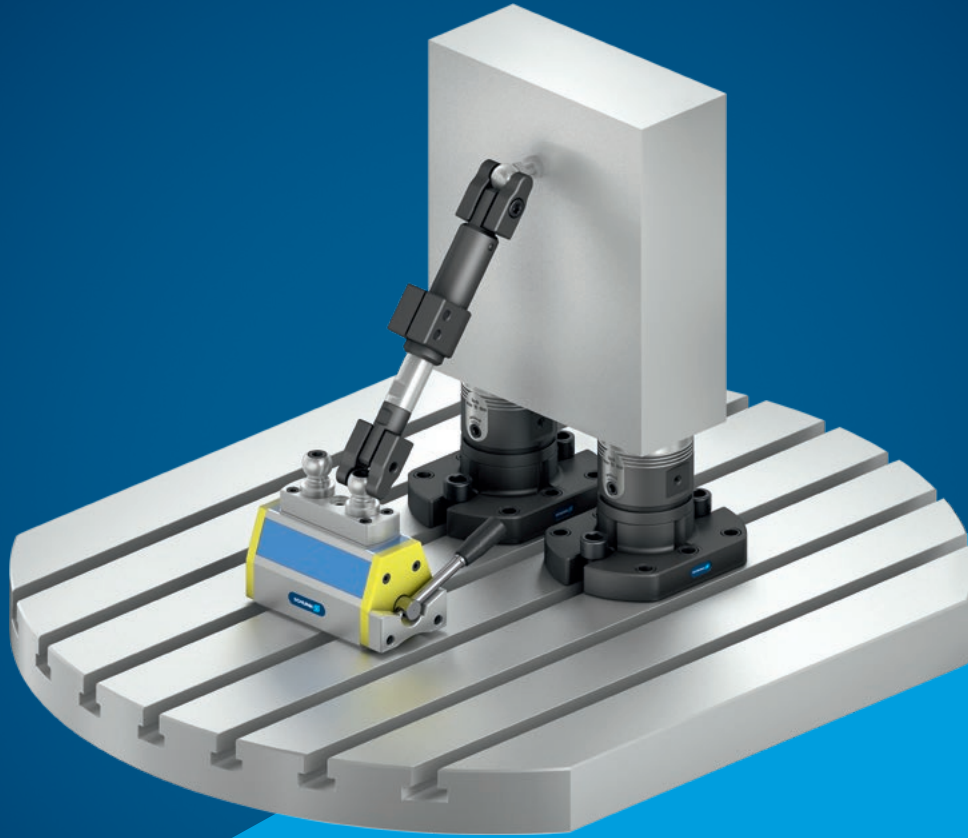


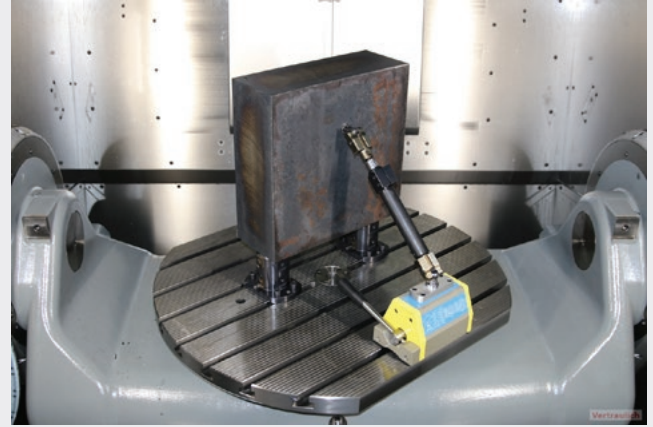


VERO-S WDM-5X

**Collision-free working due to
clamping pillars**

Manually actuated modular system for workpiece direct clamping

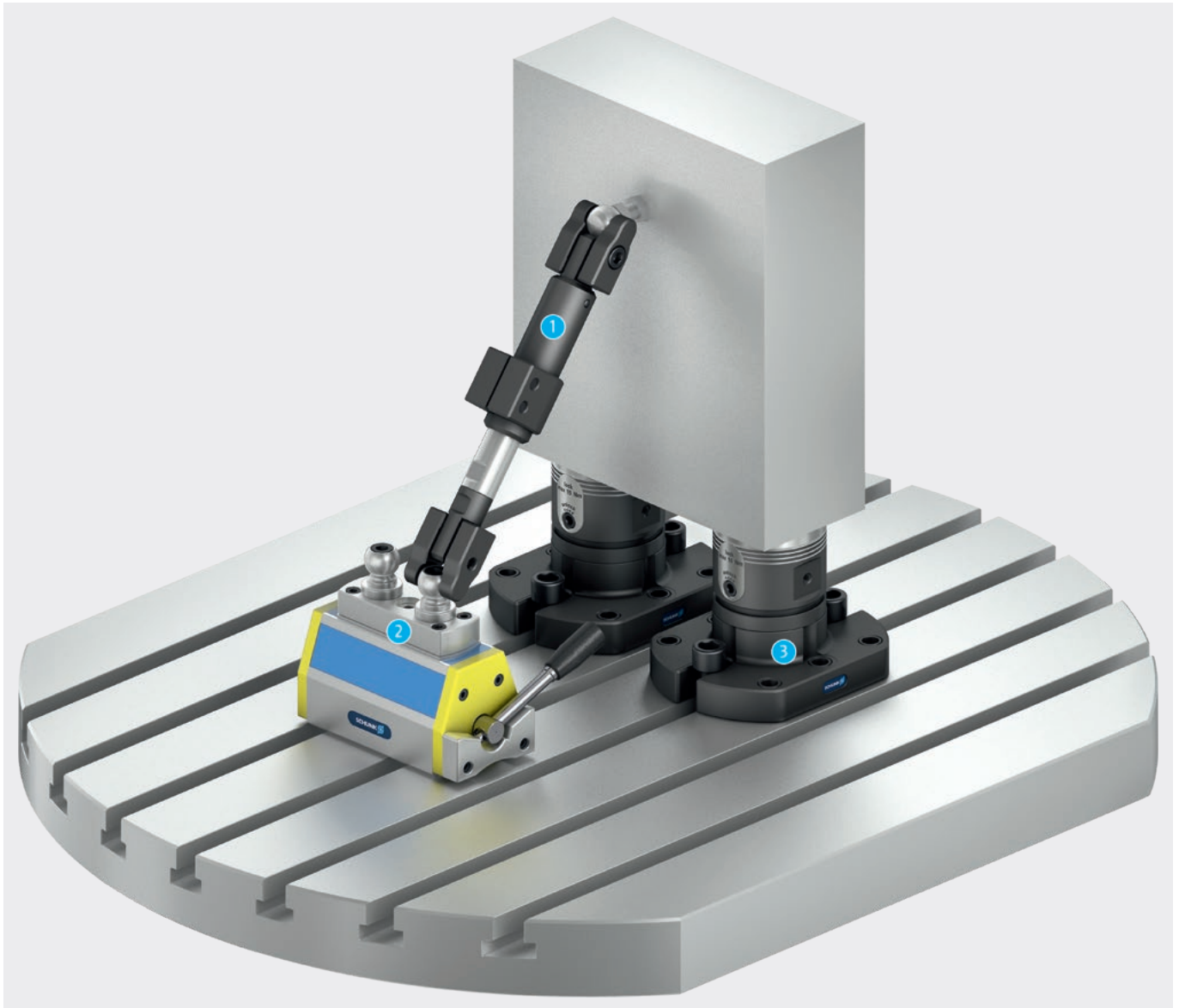
VERO-S WDM-5X is the manual, modular clamping system for workpiece direct clamping. Due to a wide range of basic- and stacking modules, and height extensions the clamping pillars can be customized to any height. The individual components are connected via a clamping wedge and clamping pin connection. Workpieces of all kinds can be lifted off the machine table and directly clamped in seconds without interfering contours due to clamping pillars with a modular structure. Due to specially designed clamping modules and a large range of clamping pins, the clamping pillars can be adapted to suit all customer requirements.



Advantages – Your benefits

- + Modular clamping pillars**
Flexible clamping of large workpieces and free forged parts
- + Scope-free pin centering between components**
High repeat accuracy of < 0.005 mm
- + High pull-down forces**
Up to 15 kN for high cutting parameters and greater production efficiency
- + Set-up by means of clamping pillars**
Ideally suited for 5-sided machining
- + Highest flexibility**
Machining of small, medium-sized and large workpieces, as well as through-holes
- + Form-fit, self-retained locking**
The full pull-down force is available at all times

Maximum Holding Force against Vibrations



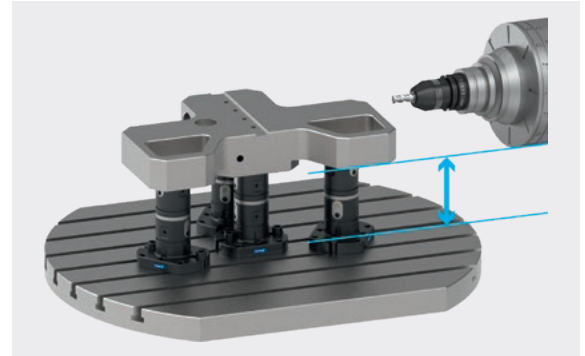
The most effective way to combat vibrations and instability while milling high workpieces – is achieved with a support against the force-acting direction of machining as well as at static weak points. Due to the wide variety of mounting options, the 5-axis stabilizers offer the highest degree of flexibility when fastening and supporting the workpieces.

- 1 3D support**
Via flexibly adjustable telescopic clamping units
- 2 Various mounting options**
Telescopic clamping unit via magnets, clamping balls with screw thread and much more
- 3 Basic modules**

Application examples

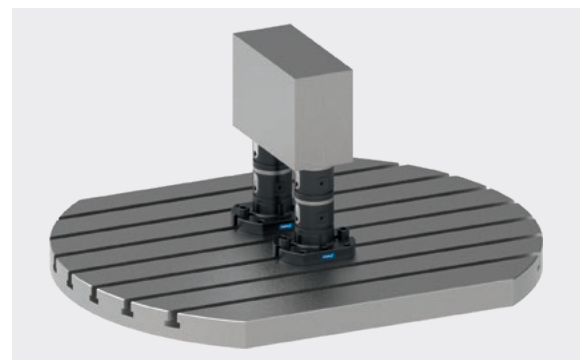
Workpiece elevation for optimum accessibility

The modular elements can be combined as desired. Thus, all types of workpieces can be flexibly clamped and optimally machined.



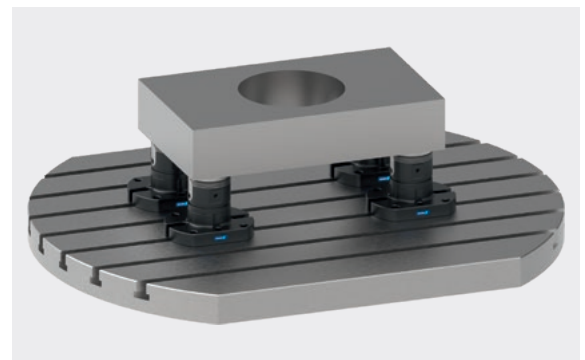
Ideally suited for 5-sided machining

The clamping pillars enable all types of workpieces to be clamped with minimal interfering contour. In addition, the workpieces can be lifted off the machine table if required for making 5-sided machining possible.



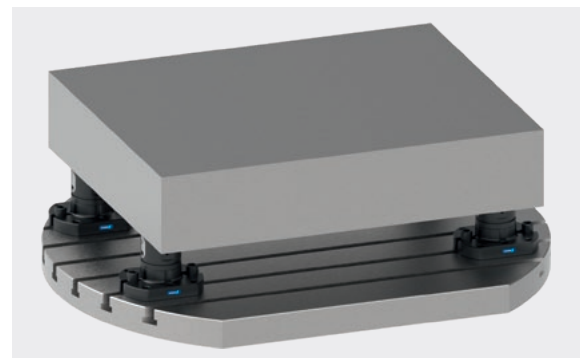
Perfectly suitable for cut-outs

Due to the clamping pillars and their minimal interfering contour, cut-outs can easily be introduced across the entire workpiece. Depending on the position of the cut-outs, the pillars can be placed on the machine table.



Highest flexibility

Small, medium-sized or very large workpieces can be machined with the modular system. Depending on the case of application, the clamping pillars can be precisely positioned on the machine table using a positioning arbor.



Basic Module

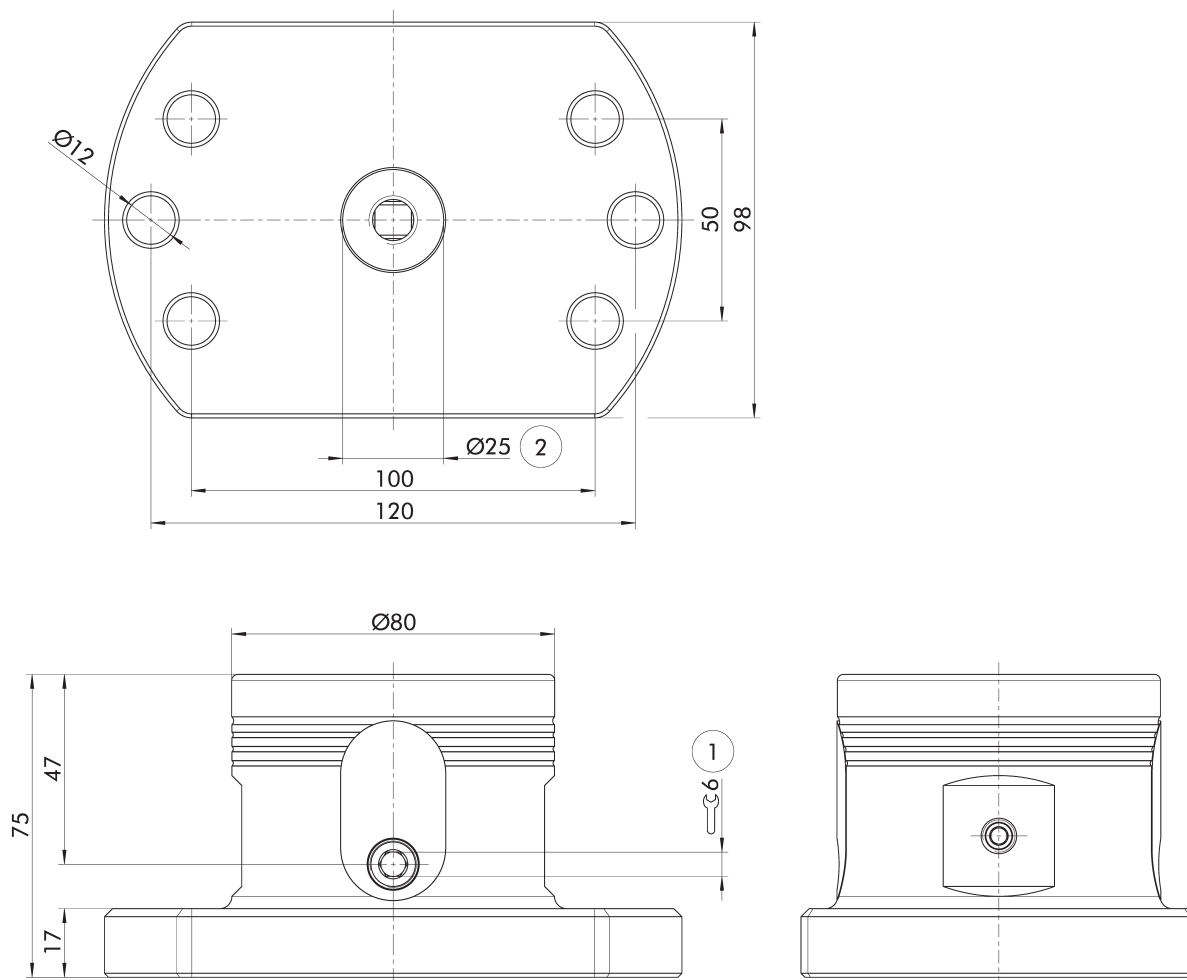
With $\varnothing 12H7$ mounting holes for use on grid plates with 50|40 grid and M12 thread or VERO-S quick-change pallet systems

Scope of delivery

Basic module, operating manual; without mounting screws, without clamping pin

Technical data

Description	ID	Pull-down force [kN]	Actuation torque [Nm]	Repeat accuracy [mm]	Height H [mm]	Weight [kg]
WDM-5X-BM 80-75	1398160	15	15	< 0.005	75	3.55
WDM-5X-BM 80-100	1398161	15	15	< 0.005	100	4.45



Subject to technical changes.

① Locking mechanism AF 6

② Prepared for VERO-S clamping pins

Accessories

Clamping pins SPx

Clamping pin for positive connection with NSE3 clamping modules.



Suitable for	Description	ID
WDM-5X-BM 80	SPA 40	0471151
WDM-5X-BM 80	SPB 40	0471152
WDM-5X-BM 80	SPC 40	0471153

Clamping pins SPx

Standard clamping pins with M16 thread for form-fit connection of workpieces or devices with NSE3 clamping modules.



Suitable for	Description	ID
WDM-5X-BM 80	SPA 40-16	0471064
WDM-5X-BM 80	SPB 40-16	0471065
WDM-5X-BM 80	SPC 40-16	0471066

Compensation pins

Clamping pin for compensating fluctuations of the bore hole gauges.
SPA-X 40 = compensation in one direction of ± 1 mm.
SPA-XY 40 = compensation in all directions of ± 1 mm.



Suitable for	Description	ID
WDM-5X-BM 80	SPA-X 40	0471155
WDM-5X-BM 80	SPA-XY 40	0471156

Dove tail pins

Clamping pins with a mounting depth of 3.5 mm



Suitable for	Description	ID
WDM-5X-BM 80	SPA-S 40	1310630
WDM-5X-BM 80	SPB-S 40	1323856
WDM-5X-BM 80	SPC-S 40	1323857

Heavy duty pins

Clamping pins with integrated mounting threads for high holding forces.



Suitable for	Description	ID
WDM-5X-BM 80	SPA-F 40	0471171
WDM-5X-BM 80	SPC-F 40	0471172

Clamping pin with centering collar Ø 16 h6

Clamping pin with reduced centering diameter for the form-fit connection of workpieces with the clamping modules. Prepared for screw M12.



Suitable for	Description	ID
WDM-5X-BM 80	SPA 40-16h6	1398325
WDM-5X-BM 80	SPB 40-16h6	1398326
WDM-5X-BM 80	SPC 40-16h6	1398327

Clamping pin with centering collar Ø 18 h6

Clamping pin with reduced centering diameter for the form-fit connection of workpieces with the clamping modules. Prepared for screw M12.



Suitable for	Description	ID
WDM-5X-BM 80	SPA 40-18h6	1398330
WDM-5X-BM 80	SPB 40-18h6	1398331
WDM-5X-BM 80	SPC 40-18h6	1398332

Clamping pin with centering collar Ø 20 h6

Clamping pin with reduced centering diameter for the form-fit connection of workpieces with the clamping modules. Prepared for screw M12.



Suitable for	Description	ID
WDM-5X-BM 80	SPA 40-20h6	1398337
WDM-5X-BM 80	SPB 40-20h6	1398338
WDM-5X-BM 80	SPC 40-20h6	1398339

Clamping pin with through-bore, centering collar Ø 25h6

Used for flexible mounting on the workpiece with minimal compensation of thread coax errors. Prepared for adjustment screw M16.



Suitable for	Description	ID
WDM-5X-BM 80	SPA-B 40	1398345
WDM-5X-BM 80	SPB-B 40	1398346
WDM-5X-BM 80	SPC-B 40	1398347

Clamping pins without centering collar

Prepared for fitting screws with the fitting
 $\varnothing 12$ h5 and $\varnothing 16$ h5.



Suitable for	Description	ID
WDM-5X-BM 80	SPA-OB 40-12G6	1398355
WDM-5X-BM 80	SPB-OB 40-12G6	1398356
WDM-5X-BM 80	SPC-OB 40-12G6	1398357
WDM-5X-BM 80	SPA-OB 40-16G6	1398359
WDM-5X-BM 80	SPB-OB 40-16G6	1398360
WDM-5X-BM 80	SPC-OB 40-16G6	1398361

Basic height extension

It functions as a stable substructure for
 building on the basic modules WDM-5X.



Suitable for	Description	ID
WDM-5X-BM 80	WDM-5X-BP 235-235-50	1398172
WDM-5X-BM 80	WDM-5X-BP 270-250-36	1398173

Positioning mandrel

For manual pre-adjustment and subse-
 quent accurate positioning – without
 opening – the modules using the machine
 spindle.



Suitable for	Description	ID
WDM-5X-BM 80	SPA-PDK 40	40108422

Reduction adapter $\varnothing 80/\varnothing 40$

Prepared for fitting screw M16.



Suitable for	Description	ID
WDM-5X-BM 80	SPA-VL-P 50-M16	1398227

Reduction adapter $\varnothing 80/\varnothing 27$

For adjustment via milling rings of milling
 arbors $\varnothing 27/13$.
 Prepared for fitting screw M16.



Suitable for	Description	ID
WDM-5X-BM 80	SPA-VL-PA 50-M16	1398228

Reduction adapter $\varnothing 80/\varnothing 50$, low

Soft version for customized rework.



Suitable for	Description	ID
WDM-5X-BM 80	SPA-VL 25-M12	1398229

Reduction adapter $\varnothing 80/\varnothing 50$, high

Soft version for customized rework.



Suitable for	Description	ID
WDM-5X-BM 80	SPA-VL 50-M12	1398240

Plane grip adapter

They are used for machining small
 components.



Suitable for	Description	ID
WDM-5X-BM 80	SPA-VLK 75-M10	1398308

Collet adapter

For mounting ER50 collets.



Suitable for	Description	ID
WDM-5X-BM 80	SPA-SEZ ER50-100	1398309

Adjustment screw

To be used in combination with the
 clamping pin with enlarged
 through-bore.



Suitable for	Description	ID
SPA-B 40		
SPB-B 40		
SPC-B 40	PDSC M12-60	1398348
SPA-B 40		
SPB-B 40		
SPC-B 40	PDSC M16-65	1398350
SPA-B 40		
SPB-B 40		
SPC-B 40	PDSC M16-70	1398351

Fitting screws

To be used in combination with the clamping pin without collar depending on the fitting.



Suitable for	Description	ID
SPA-OB 40-12G6		
SPB-OB 40-12G6		
SPC-OB 40-12G6	PSC Ø12h6-M12-50	1398388
SPA-OB 40-12G6		
SPB-OB 40-12G6		
SPC-OB 40-12G6	PSC Ø12h6-M12-55	1398389
SPA-OB 40-16G6		
SPB-OB 40-16G6		
SPC-OB 40-16G6	PSC Ø16h6-M12-28	1398390
SPA-OB 40-16G6		
SPB-OB 40-16G6		
SPC-OB 40-16G6	PSC Ø16h6-M12-37.5	1398391
SPA-OB 40-16G6		
SPB-OB 40-16G6		
SPC-OB 40-16G6	PSC Ø16h6-M16-43.5	1398392
SPA-OB 40-16G6		
SPB-OB 40-16G6		
SPC-OB 40-16G6	PSC Ø16h6-M16-55	1398393

Accessory 5-axis Stabilizers

Telescopic clamping unit

Clamping unit can be pulled out and extended through the use of extension elements.



Suitable for	Description	ID
WDM-5X-BM 80	TKE 255-305	1398469
WDM-5X-BM 80	TKE 355-505	1398470

Clamping ball with conical seat

Central connecting element with turning and swiveling function for telescopic clamping units.



Suitable for	Description	ID
WDM-5X-BM 80	SKG Ø25.4	1535214

Extensions

With Ø 25 mm for the extension of telescopic clamping units.



Suitable for	Description	ID
WDM-5X-BM 80	TKE-VL 75	1398480
WDM-5X-BM 80	TKE-VL 100	1398481
WDM-5X-BM 80	TKE-VL 150	1398482
WDM-5X-BM 80	TKE-VL 250	1398483
WDM-5X-BM 80	TKE-VL 500	1398484

Fine adjustment

Used for final and accurate alignment of the workpiece.



Suitable for	Description	ID
WDM-5X-BM 80	TKE-FE	1398490

Magnet including clamping balls

Used for the quick and simple mounting of telescopic clamping units on the machine table or ferromagnetic workpieces.



Suitable for	Description	ID
WDM-5X-BM 80	MHM-ITS 125-2	1398491

Metal sheet clamp

Used for mounting the clamping ball on metal sheets and thin workpieces.



Suitable for	Description	ID
WDM-5X-BM 80	BKW	1398492

Mounting kit

Used for mounting the clamping ball on the clamping modules.



Suitable for	Description	ID
WDM-5X-BM 80	BFS-SPA 40	1398493

Clamping ball without screw thread

Used for mounting the clamping ball by means of threads.



Suitable for	Description	ID
WDM-5X-BM 80	BFS-SC M12-40	1471460
WDM-5X-BM 80	BFS-SC M16-40	1471462
WDM-5X-BM 80	BFS-SC M18-40	1471463
WDM-5X-BM 80	BFS-SC M20-50	1471464
WDM-5X-BM 80	BFS-SC M24-50	1471466

Stabilizer set

Set consisting of telescopic clamping unit TKE 355-505, extension TKE-LV 100/150, mounting kit and case.



Suitable for	Description	ID
WDM-5X-BM 80	TKE Set	1398521



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