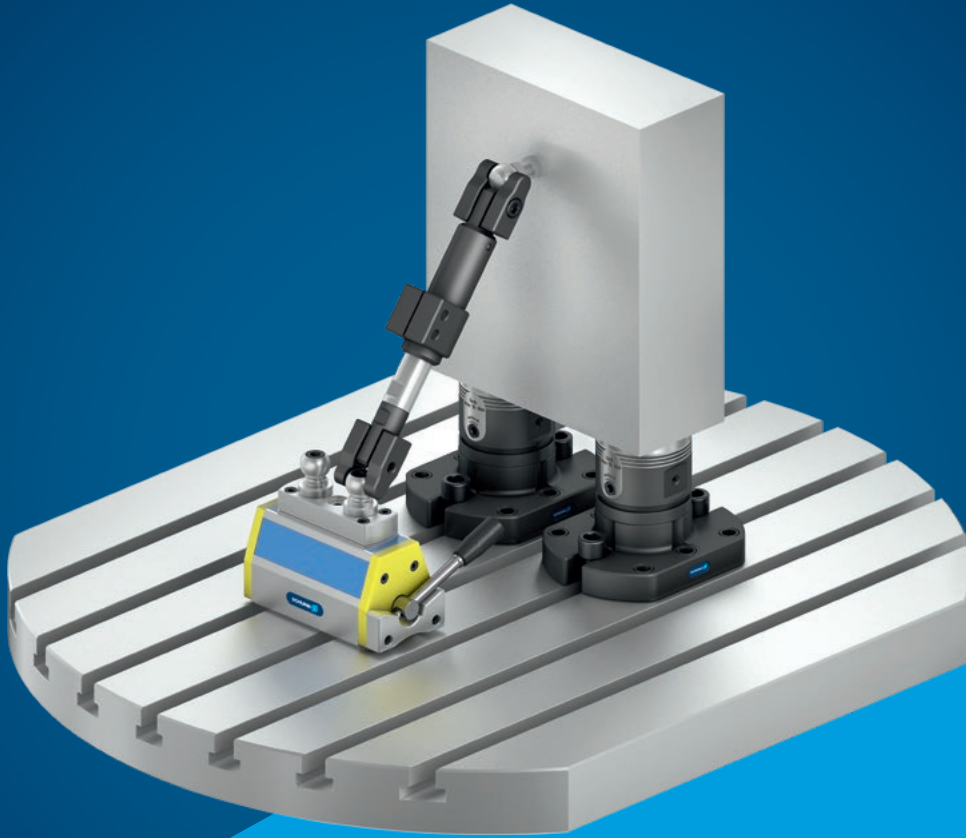


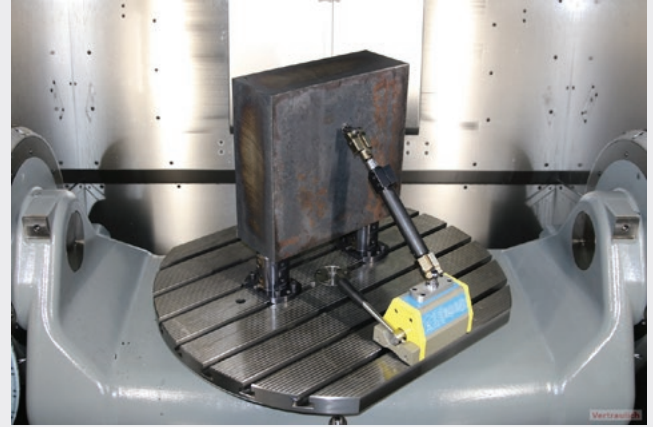


VERO-S WDM-5X

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

Manually actuated modular system for workpiece direct clamping

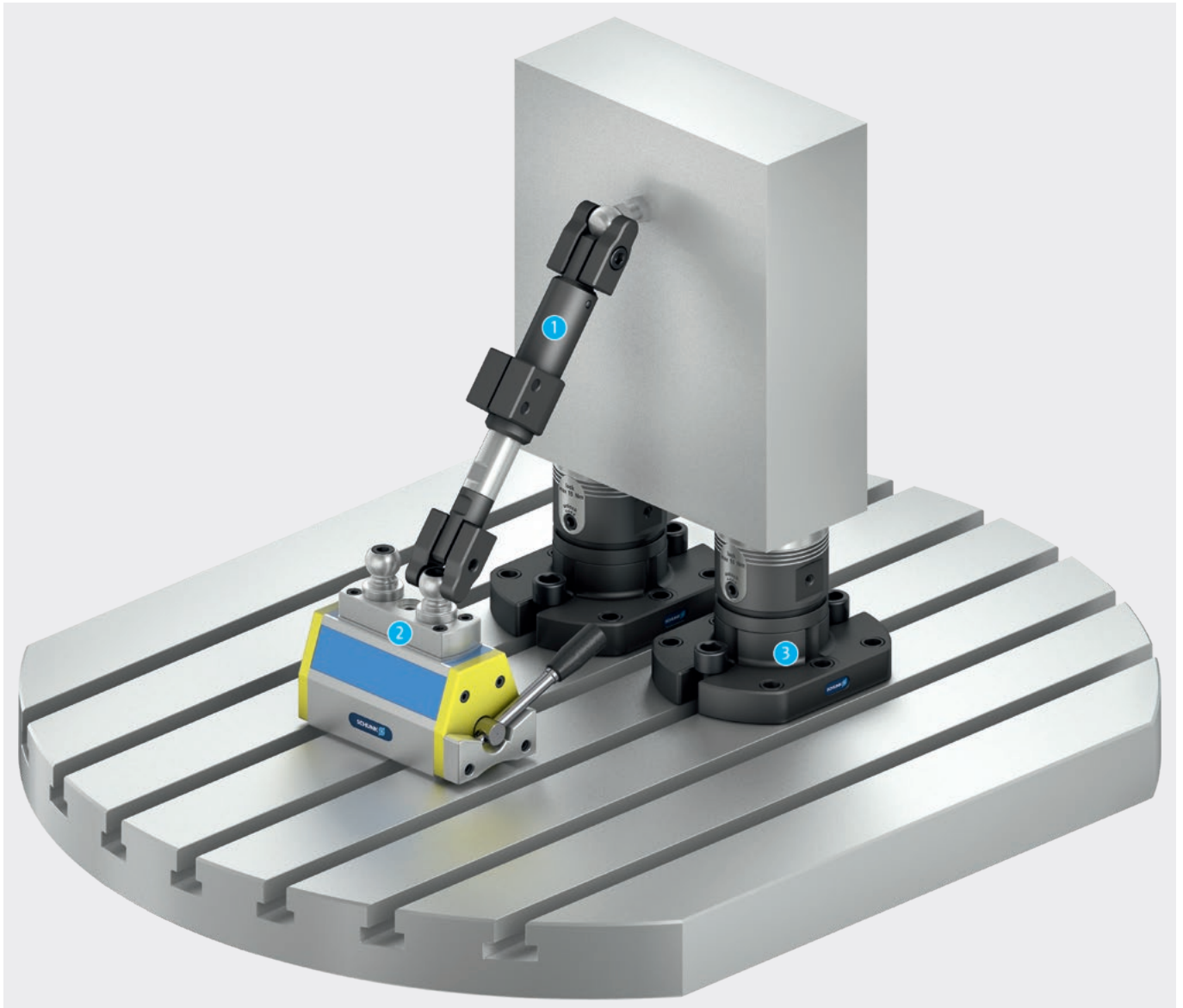
VERO-S WDM-5X is the manual, modular clamping system for workpiece direct clamping. Due to a wide range of basic- and stacking modules, and height extensions the clamping pillars can be customized to any height. The individual components are connected via a clamping wedge and clamping pin connection. 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



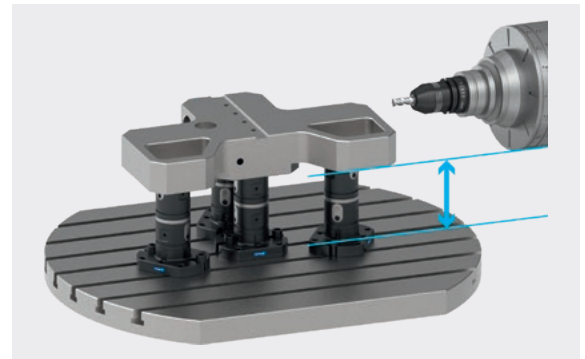
The most effective way to combat vibrations and instability while milling high workpieces – is achieved with a support against the force-acting direction of machining as well as at static weak points. Due to the wide variety of mounting options, the 5-axis stabilizers offer the highest degree of flexibility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

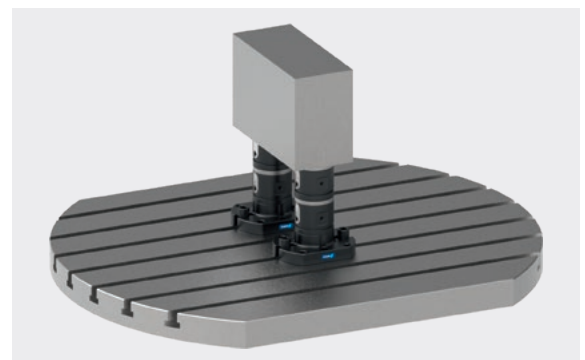
Workpiece elevation for optimum accessibility

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



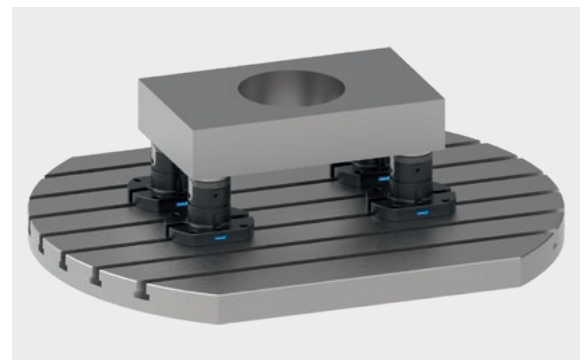
Ideally suited for 5-sided machining

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.



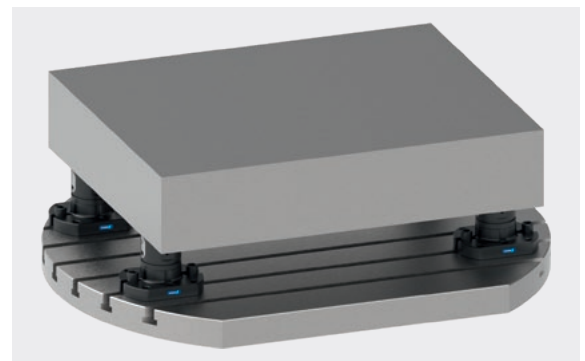
Perfectly suitable for cut-outs

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.



Stacking Module

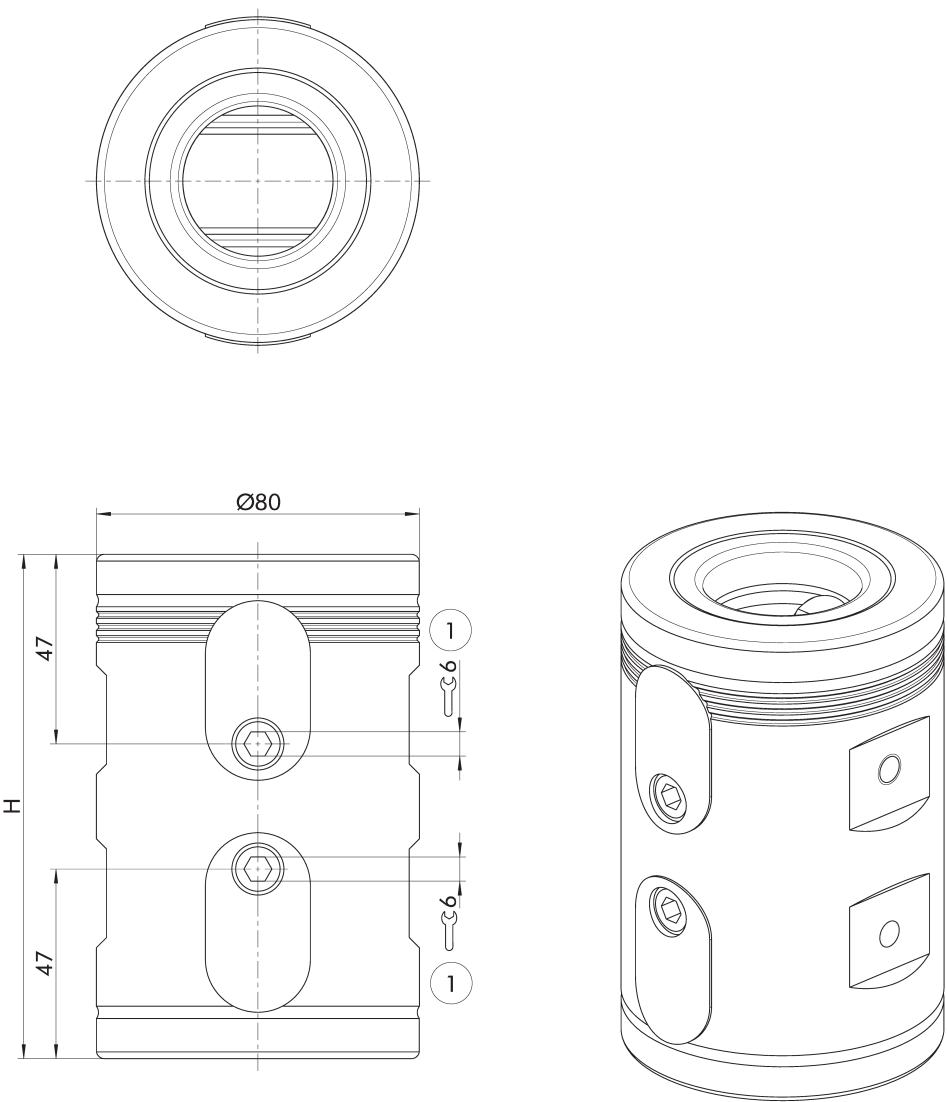
Stacking module for diverse VERO-S WDM-5X elements
These stacking modules can also be used as a basic module for mounting on the machine table.

Scope of delivery

Stacking module, operating manual

Technical data

Description	ID	Pull-down force [kN]	Actuation torque [Nm]	Repeat accuracy [mm]	Height H [mm]	Weight [kg]
WDM-5X-SDM 80-125	1398184	15	15	< 0.005	125	4.5



Subject to technical changes.

① Locking mechanism AF 6

Accessories

Clamping pins SPx

Clamping pin for positive connection with NSE3 clamping modules.



Suitable for	Description	ID
WDM-5X-SDM 80	SPA 40	0471151
WDM-5X-SDM 80	SPB 40	0471152
WDM-5X-SDM 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-SDM 80	SPA 40-16	0471064
WDM-5X-SDM 80	SPB 40-16	0471065
WDM-5X-SDM 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-SDM 80	SPA-X 40	0471155
WDM-5X-SDM 80	SPA-XY 40	0471156

Dove tail pins

Clamping pins with a mounting depth of 3.5 mm



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

Heavy duty pins

Clamping pins with integrated mounting threads for high holding forces.



Suitable for	Description	ID
WDM-5X-SDM 80	SPA-F 40	0471171
WDM-5X-SDM 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-SDM 80	SPA 40-16h6	1398325
WDM-5X-SDM 80	SPB 40-16h6	1398326
WDM-5X-SDM 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-SDM 80	SPA 40-18h6	1398330
WDM-5X-SDM 80	SPB 40-18h6	1398331
WDM-5X-SDM 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-SDM 80	SPA 40-20h6	1398337
WDM-5X-SDM 80	SPB 40-20h6	1398338
WDM-5X-SDM 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-SDM 80	SPA-B 40	1398345
WDM-5X-SDM 80	SPB-B 40	1398346
WDM-5X-SDM 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-SDM 80	SPA-OB 40-12G6	1398355
WDM-5X-SDM 80	SPB-OB 40-12G6	1398356
WDM-5X-SDM 80	SPC-OB 40-12G6	1398357
WDM-5X-SDM 80	SPA-OB 40-16G6	1398359
WDM-5X-SDM 80	SPB-OB 40-16G6	1398360
WDM-5X-SDM 80	SPC-OB 40-16G6	1398361

Clamping pin for groove installation 14g6

Prepared for screw M10.



Suitable for	Description	ID
WDM-5X-SDM 80	SPA-T 40-14g6	1398453
WDM-5X-SDM 80	SPC-T 40-14g6	1398454

Clamping pin for groove installation 16g6

Prepared for screw M12.



Suitable for	Description	ID
WDM-5X-SDM 80	SPA-T 40-16g6	1398455
WDM-5X-SDM 80	SPC-T 40-16g6	1398456

Clamping pin for groove installation 18g6

Prepared for screw M12.



Suitable for	Description	ID
WDM-5X-SDM 80	SPA-T 40-18g6	1398459
WDM-5X-SDM 80	SPC-T 40-18g6	1398460

Clamping pin for groove installation 22g6

Prepared for screw M12.



Suitable for	Description	ID
WDM-5X-SDM 80	SPA-T 40-22g6	1398461
WDM-5X-SDM 80	SPC-T 40-22g6	1398462

Positioning mandrel

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



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

Reduction adapter $\varnothing 80/\varnothing 40$

Prepared for fitting screw M16.



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

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

Soft version for customized rework.



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

Plane grip adapter

They are used for machining small components.



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

Collet adapter

For mounting ER50 collets.



Suitable for	Description	ID
WDM-5X-SDM 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	PDSC M12-60	1398348
SPB-B 40		
SPC-B 40		
SPA-B 40	PDSC M16-65	1398350
SPB-B 40		
SPC-B 40		
SPA-B 40	PDSC M16-70	1398351
SPB-B 40		
SPC-B 40		

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

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-SDM 80	TKE 255-305	1398469
WDM-5X-SDM 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-SDM 80	SKG Ø25.4	1535214

Extensions

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



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

Fine adjustment

Used for final and accurate alignment of the workpiece.



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

Mounting kit

Used for mounting the clamping ball on the clamping modules.



Suitable for	Description	ID
WDM-5X-SDM 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-SDM 80	BFS-SC M12-40	1471460
WDM-5X-SDM 80	BFS-SC M16-40	1471462
WDM-5X-SDM 80	BFS-SC M18-40	1471463
WDM-5X-SDM 80	BFS-SC M20-50	1471464
WDM-5X-SDM 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-SDM 80	TKE Set	1398521



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