



VERO-S WDP-5X

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

Pneumatically actuated modular system for workpiece direct clamping

The modular system VERO-S WDB-5X brings the efficiency effects of the SCHUNK VERO-S quick-change pallet system specifically to machining applications for workpiece direct clamping. The modules are clamped via spring force and can be opened simultaneously with compressed air. Depending on the customer request, the pneumatic modules can be replaced by manual modules in order to enable manual actuation. 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
- + Integrated air feed-through to the clamping module**
Easy control of modules and monitoring of workpiece presence
- + Intelligent clamping connection between the stacking modules**
For simple and quick operation
- + High pull-down forces**
Up to 15 kN for high cutting parameters and greater production efficiency
- + Turbo integrated by default**
Pull-down force increased up to 300% for optimal utilization of the machine's performance, hence high efficiency.
- + Form-fit, self-retained locking**
Full pull-down force is maintained even in the event of a pressure drop
- + Corrosion-free stainless steel design**
Long life time and maximum process reliability

Function WDP-5X clamping pillar

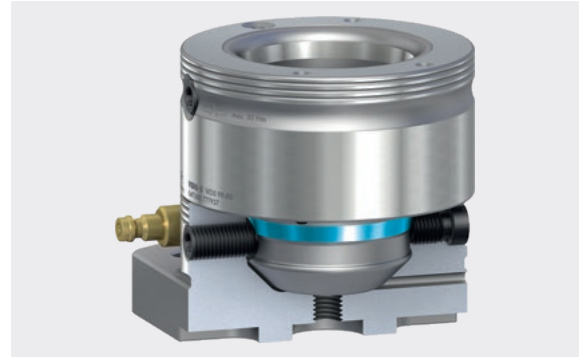
The basic structure of the clamping pillars consists of a basic module, stacking modules, and clamping and compensation modules. The clamping and compensation modules are supplied with compressed air for opening via the basic modules. The clamping procedure itself takes place via an integrated spring assembly and is self-locking. In addition, the pull-down and holding force can be increased by means of an integrated turbo function.



- ❶ **Basic module WDP-5X-BM**
Ensures a rigid connection to the machine table
- ❷ **Pneumatic connections on the basic module**
Eliminates the need for any bothersome cables on the workpiece
- ❸ **Locking drive**
For extremely high pull-down forces
- ❹ **Media transfer via stacking modules**
For controlling the direct clamping module
- ❺ **Stacking module WDP-5X-SM 99-50**
For flexible configuration of the clamping pillars
- ❻ **Stacking module WDP-5X-SM 99-30**
For flexible configuration of the clamping pillars
- ❼ **Clamping module WDP-5X-DSM 99-70**
For a direct connection to the workpiece

Centering via short taper

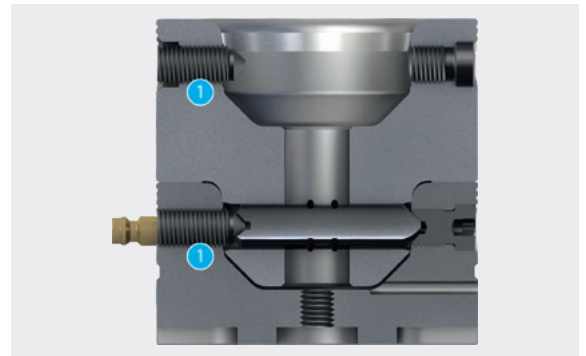
The SCHUNK modular system features a high-precision short-taper centering mechanism in combination with an intelligent, form-fit clamp connection. In this way, clamping pillars can be adjusted to new clamping applications very quickly.



Intelligent drive concept

The drive concept allows for form-fit connection of the modular system components. When the actuating screw is actuated, the connection pin of the upper module is pushed into the mount opposite and clamped in a form-fit fashion.

1 Actuation screw



Integrated media transfer unit as standard

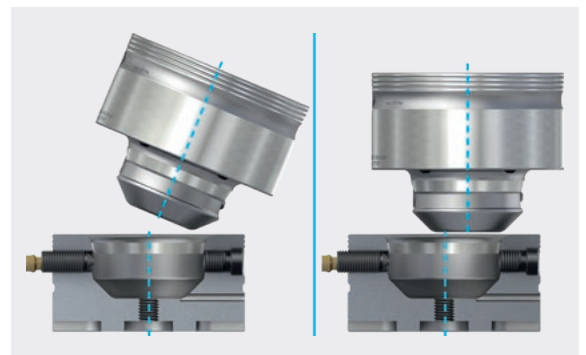
All modules for direct workpiece clamping have an integrated media transfer unit for supplying media to the clamping module. The media supply is thus always provided via the basic module directly on the machine table, irrespective of the height of the clamping pillar. This has the major advantage that the hose lines always lie in a defined manner on the machine table and do not hang freely in the machine's working area.

1 Air feed-through across modules



Simple joining – incredibly user-friendly

Feed chamfers on the clamping pin enable quick and safe joining even with a tilt angle and eccentricity. Advantage: Clamping pillars can be adjusted to new clamping tasks in an extremely user-friendly manner.



Made of stainless steel – long service life

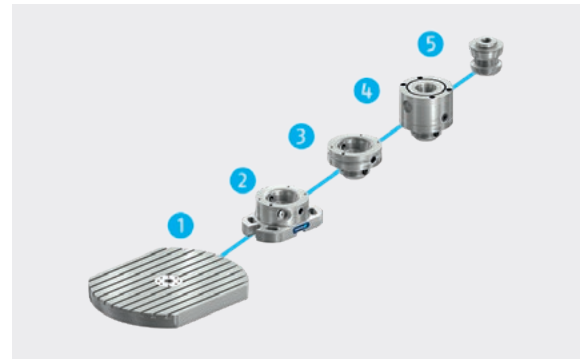
The base bodies are made of hardened stainless steel. This greatly increases life span and process reliability.



Functional Principle of the Modular System

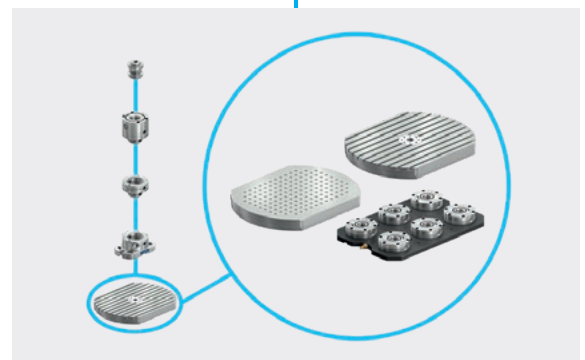
Depending on the machine table, the basic structure of the clamping pillars consists of a basic module, stacking modules (optional), and various clamping modules. A large range of SCHUNK clamping pins forms the interface to the workpiece.

- ❶ Machine table
- ❷ Basic modules
- ❸ Stacking Modules
- ❹ Clamping modules
- ❺ Clamping pins



1. Base plate

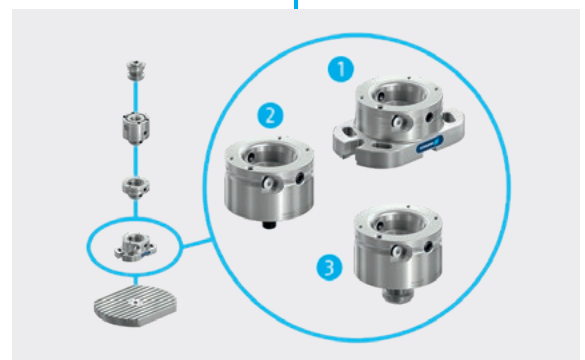
The modular system is compatible with different machine tables. Depending on the requirements, the modules can be mounted on T-slot tables, grid plates, and on existing NSL3 clamping stations.



2. Selection of the basic module

Depending on the machine table interface, different basic modules are available. WDP-5X-BM 99-60 (T-slot tables, grid plates), WDP-5X-BMR 99-60 (grid plates) and WDP-5X-BMR 99-60 (VERO-S clamping stations) are available.

- ❶ WDP-5X-BM 99-60
- ❷ WDP-5X-BMR 99-60
- ❸ WDP-5X-BMG 99-60



3. Stacking modules (optional)

For being able to compensate differences in the clamping heights that change from workpiece to workpiece, so-called stacking modules are available in five standardized heights. These can be expanded as often as desired.



4. Selection of the clamping module

For clamping the workpiece, there are different clamping and compensation modules. With the compensation modules, height differences of up to 11 mm can be continuously compensated. Both versions are available in either pneumatic or manual version.

- ❶ Clamping module
- ❷ Compensation Module



5. Interface to the workpiece

A large range of different SCHUNK VERO-S clamping pins form the interface to the workpiece. The portfolio ranges from standard clamping pins through compensation pins – for height and length compensation – up to clamping pin extensions to reduce the interfering contour to the workpiece.

- ❶ Compensation pins
- ❷ Clamping pin extension
- ❸ Clamping pins

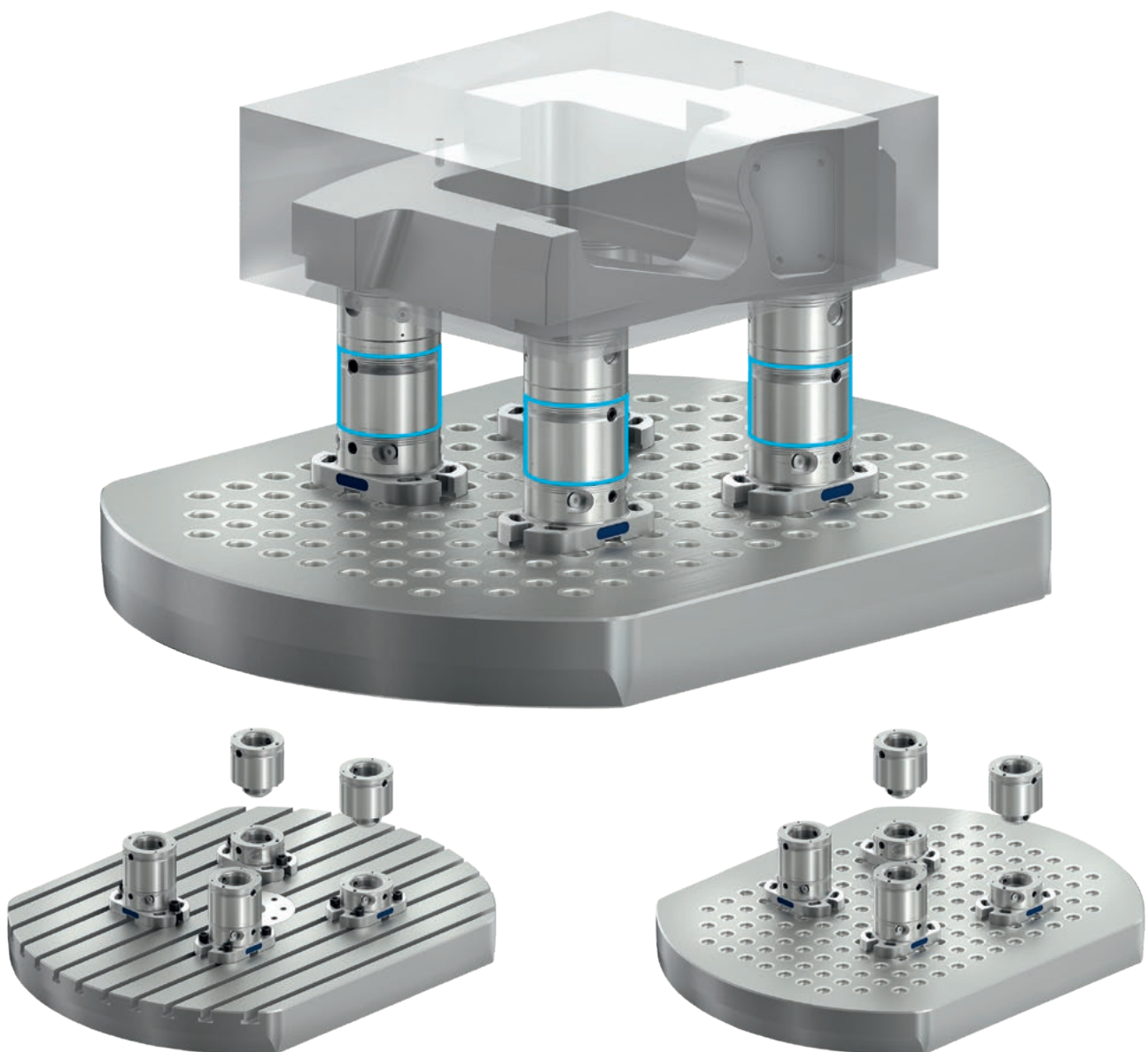


Stacking Modules WDP-5X-SM 99

The stacking modules are used for presetting the height of the clamping pillars.

The modules are available in five standardized heights.

The stacking modules can be quickly integrated into the clamping pillars via a high-precision short taper centering upwards as well as downwards.

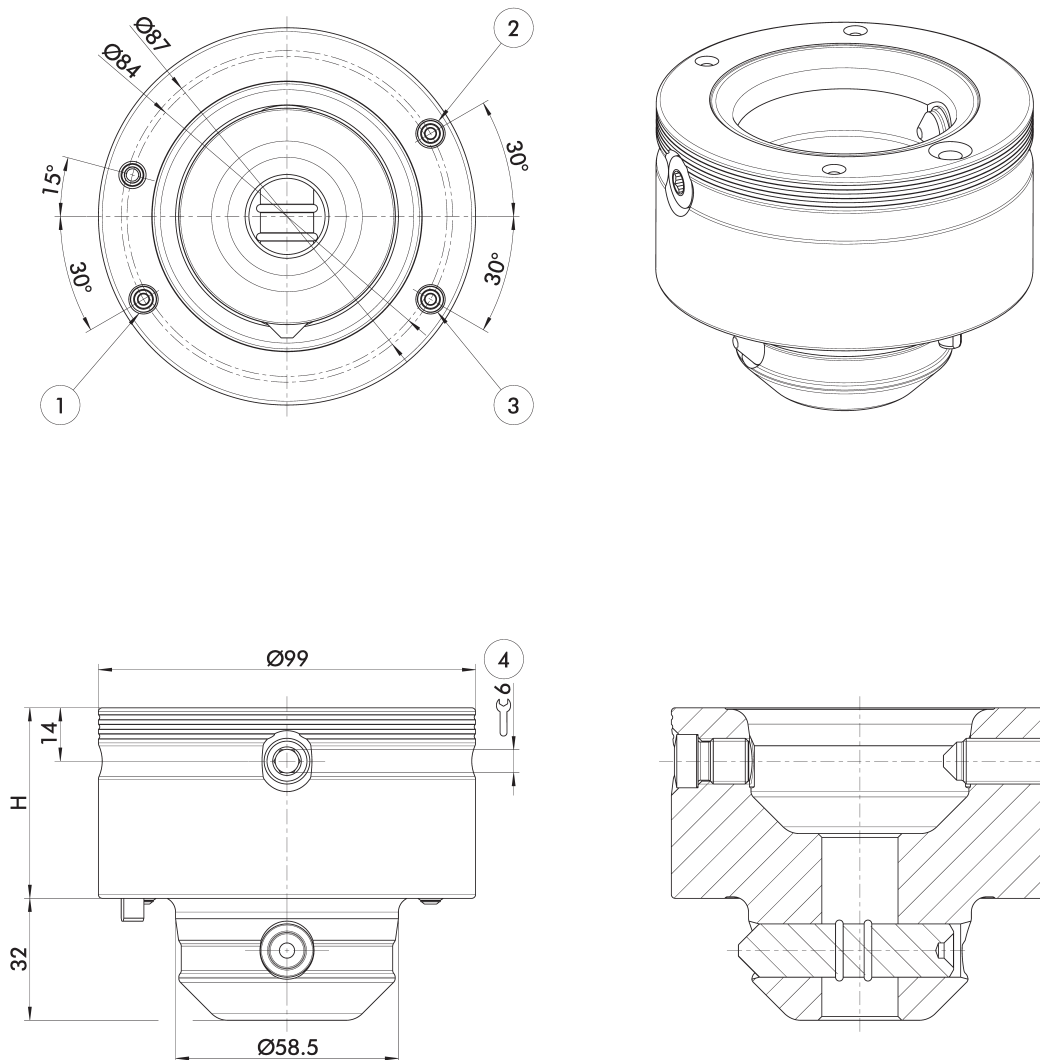


Scope of delivery

Stacking Module

Technical data

Description	ID	Pull-down force module interface [kN]	Holding force module interface [kN]	Max. actuation moment [Nm]	Repeat accuracy [mm]	Height H [mm]	Weight [kg]
WDP-5X-SM 99-30	0471601	10 - 25	50	50	< 0.005	30	1.7
WDP-5X-SM 99-50	0471602	10 - 25	50	50	< 0.005	50	3.3
WDP-5X-SM 99-80	0471607	10 - 25	50	50	< 0.005	80	3.9
WDP-5X-SM 99-120	0471608	10 - 25	50	50	< 0.005	120	5.5
WDP-5X-SM 99-160	0471609	10 - 25	50	50	< 0.005	160	7



Subject to technical changes.

- ① Media transfer for module open
- ③ Media transfer for air purge
- ② Media transfer for turbo function
- ④ Locking mechanism AF 6



**H.-D. SCHUNK GmbH & Co.
Spanntechnik KG**

Lothringer Str. 23
D-88512 Mengen
Tel. +49-7572-7614-1300
Fax +49-7572-7614-1039
CMM@de.schunk.com
schunk.com