



Superior Clamping and Gripping



Product Information

Manual change system HWS 050

Flexible. Compact. Productive.

HWS manual change system

Manual tool change system with integrated air feed-through and optional electric feed-through

Field of application

Excellently suitable for flexible production, for products with a large range of variants.

Advantages – Your benefits

Series with six unit sizes for optimal size selection and a broad application range

Integrated pneumatic feed-through for a safe power supply of the handling modules and tools

Mounting option of additional pneumatic and electric units for optimal adaption to your application

Wide range of electric, pneumatic, and fluid modules for universal energy transmission possibilities

ISO mounting pattern for easy assembly to most types of robots without needing additional adapter plates

Easy handling without additional tools quickly and easily removable at any time



Sizes
Quantity: 6



Handling weight
8 .. 54 kg



Moment load M_x
10 .. 320 Nm

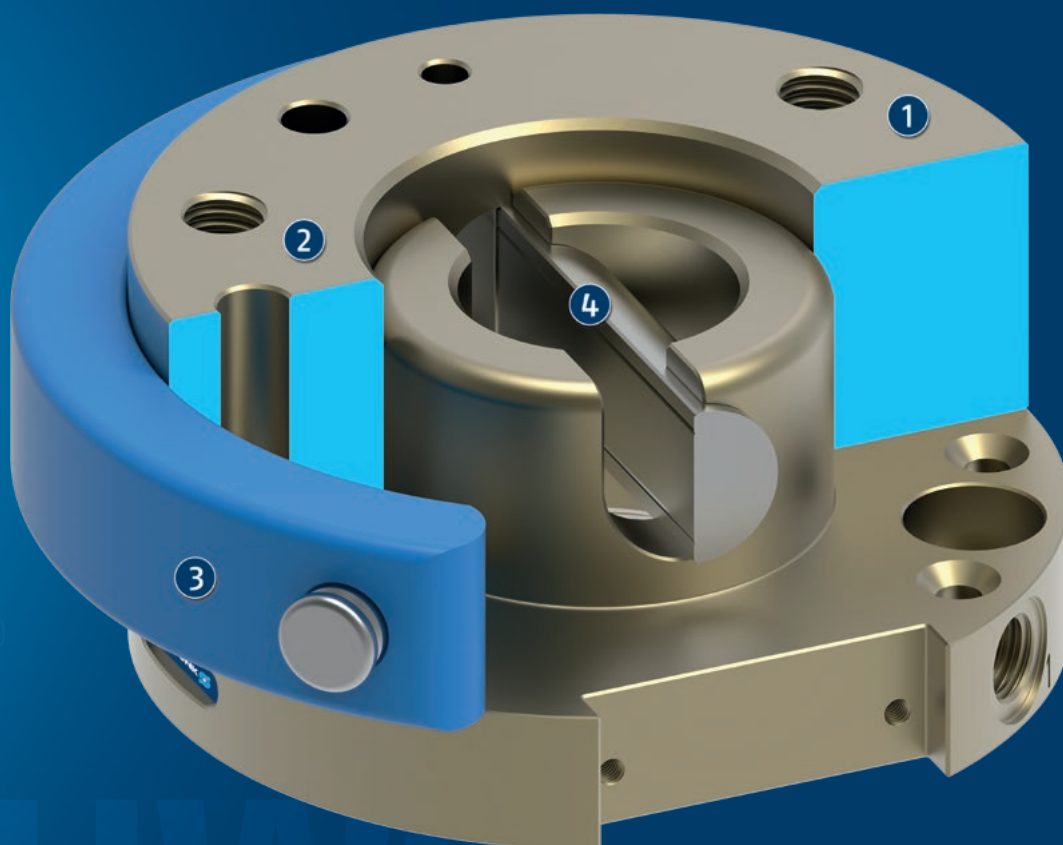


Moment load M_z
15 .. 330 Nm

Functional description

The manual change system (HWS) consists of a manual change head (HWK) and a manual change adapter (HWA). The manual change head (HWK) is form-fit locked with the manual change adapter (HWA), and due to the patented

locking it is free from play. For this purpose, a semi-cylindrical shaft is turned by 180° via a locking lever. Integrated pneumatic feed-throughs safely supply the tool with energy.



- ① **Direct assembly**
by using a standardized ISO 9409 interface for robots
- ② **Housing**
is weight-optimized due to the use of high-strength aluminum alloy

- ③ **Locking lever**
for manual actuation
- ④ **Locking**
patented, easy, and safe

General notes about the series

Actuation: Manual via locking lever

Operating principle: by turning the locking lever, the head and adapter are locked and unlocked.

Energy transmission: Optional via electrical modules and/or fluid modules. Pneumatic feed-through already integrated.

Housing: The housing consists of high-strength, hard-coated aluminum alloy. The functional components are made of hardened steel.

Scope of delivery: without mounting screws

Warranty: 24 months

Harsh environmental conditions: Please note that use under harsh environmental conditions (e.g. in the coolant area, cast and grinding dust) can considerably reduce the service life of the units, and we will not take over any warranty. However, in many cases we can find a solution. Please contact us for assistance.

Handling weight: is the weight of the total load attached to the flange. When designing, the permissible forces and moments have to be paid attention to. Please note that exceeding the recommended handling weight will shorten the lifespan.

Application example

Flexible assembly unit for various product versions. Easy and quick tool change using a quick-change-system.

- ❶ HWS consisting of HWK and HWA
- ❷ 2-finger parallel gripper PGN-plus



SCHUNK offers more ...

The following components make the product HWS even more productive – the suitable addition for the highest functionality, flexibility, reliability, and controlled production.



Electric module



Cable connector



Fittings



Extension Cable



Compensation units



Centric Grippers



Rotary feed-through



Parallel gripper



Angular gripper

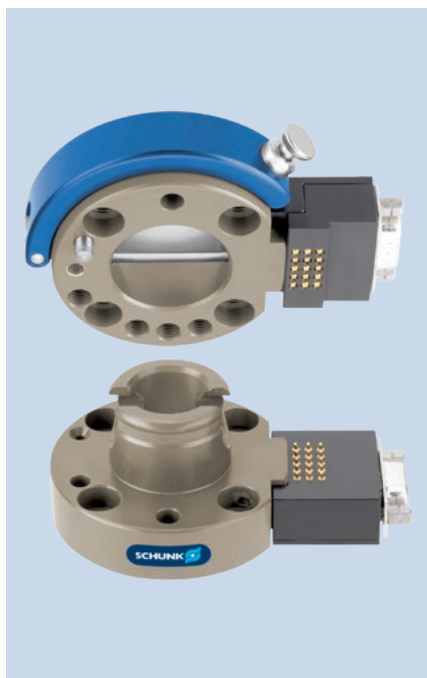


Deburring spindles

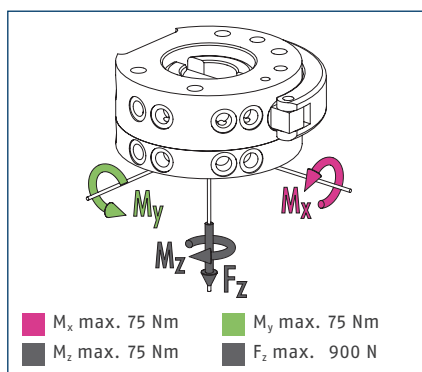


Collision and overload sensors

① For more information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696



Max. loads



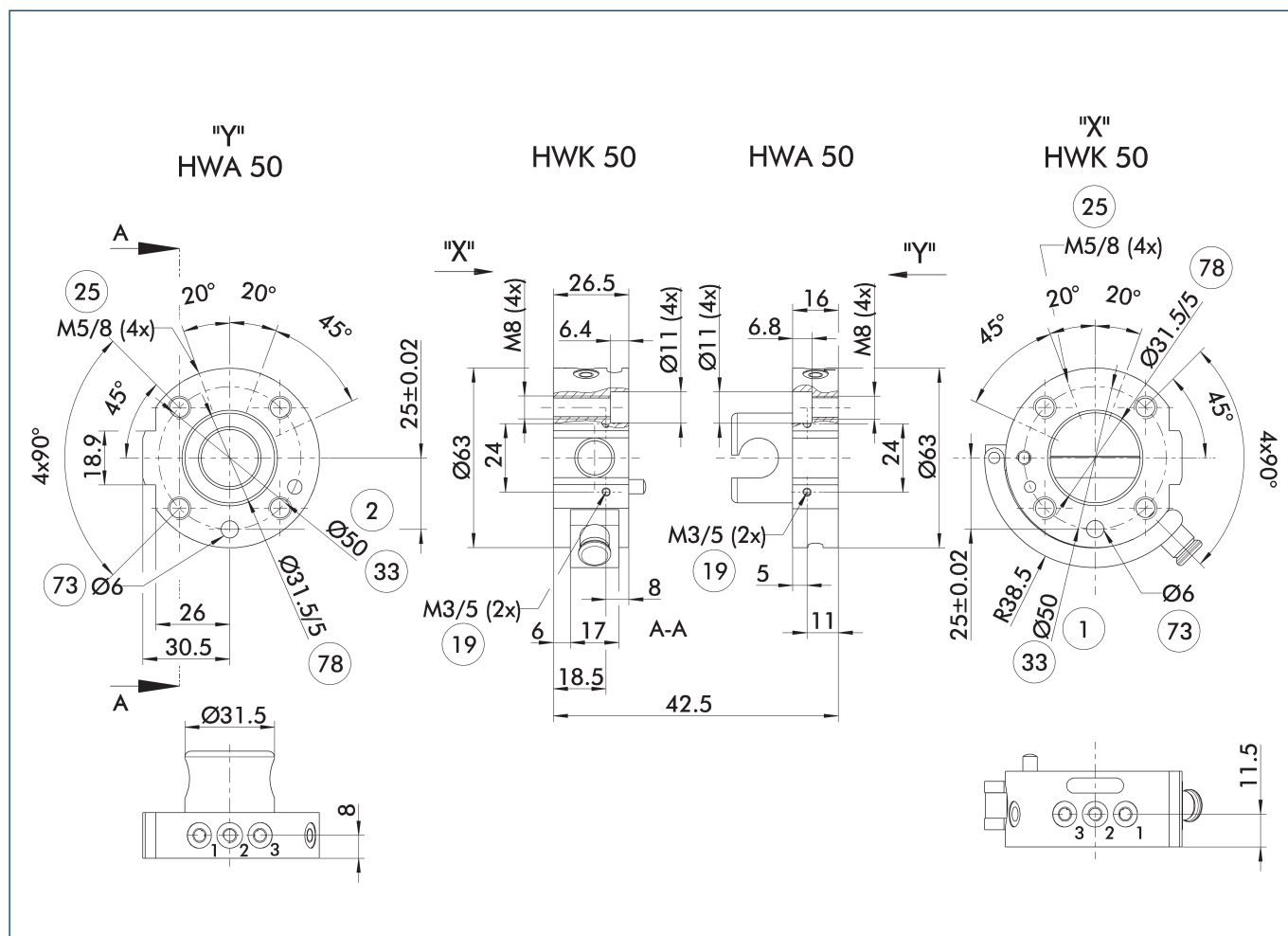
① This is the max. sum of all forces and moments which are permitted to act on the change system for ensuring proper functioning.

Technical data

Description		HWK-050-000-000	HWA-050-000-000
		Manual change head	Manual change adapter
ID		0302750	0302751
Recommended handling weight	[kg]	12	12
Max. dynamisches Biegemoment M_x^*	[Nm]	25	25
Max. dynamic bending moment M_y^*	[Nm]	25	25
Max. dynamic torsional moment M_z^*	[Nm]	25	25
Repeat accuracy	[mm]	0.01	0.01
Weight	[kg]	0.23	0.12
Max. distance when locking	[mm]	6	6
Number of pneumatic feed-throughs		4	4
Connection threads for fluid feed-through		M5	M5
Pitch circle diameter	[mm]	50	50
Robot-side connection		ISO 9409-1-50-4-M6	
Min./max. ambient temperature	[°C]	5/60	5/60

* This is the maximum sum of all dynamic loads (acceleration forces and torques, process forces or moments, emergency stop situations, etc.) which are permitted to act individually on the change system for ensuring proper function.

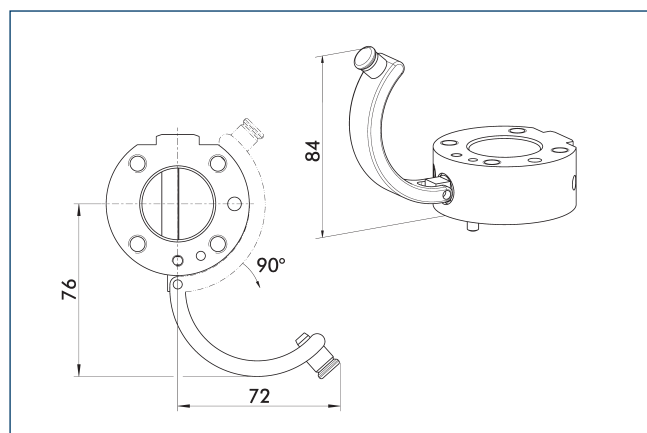
Main view



The main view shows the unit in its basic version.

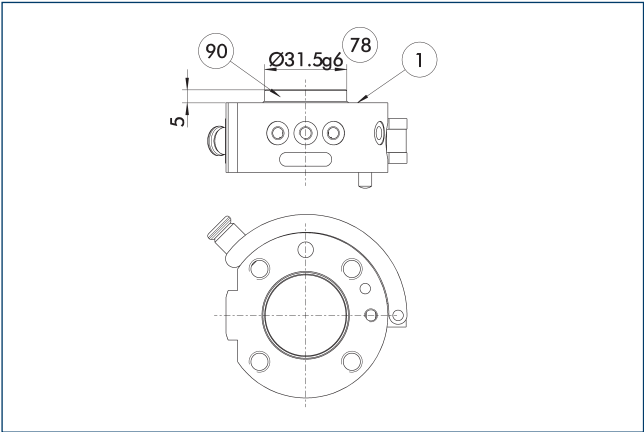
- | | |
|---------------------------------|-----------------------------|
| ① Robot-side connection | ③③ DIN ISO-9409 bolt circle |
| ② Tool-side connection | ⑦③ Fit for centering pins |
| ①⑨ Mounting surface for options | ⑦⑧ Fit for centering |
| ②⑤ Pneumatic feed-throughs | |

Interference Contour when locking/unlocking



The drawing shows the interfering contour when locking and unlocking. The specified values may vary depending on the opening angle of the locking lever.

Centering disc for HWK

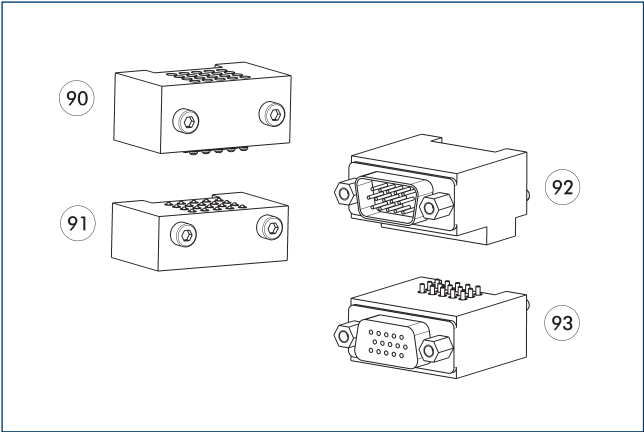


- ① Robot-side connection ⑨⑩ Centring disc
⑦⑧ Fit for centering

Description	ID	
Centering disc		
A-HWK-050-BOSS	0302752	

① Serves as a fitting collar for centering on mechanical interfaces, e. g. on the robot.

Electric feed-through module



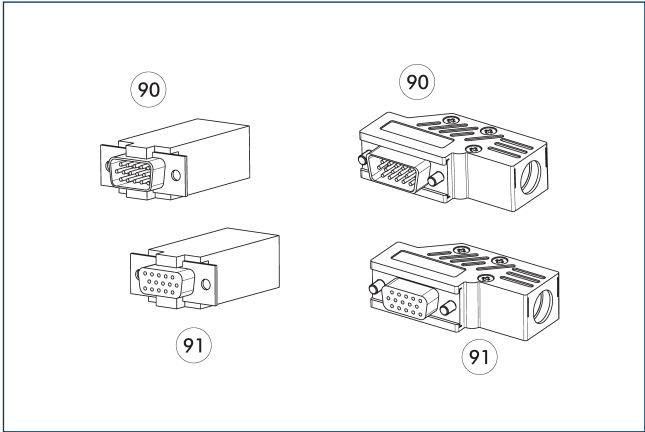
- ⑨⑩ E..., robot-side ⑨② A.../B... robot-side
⑨① E..., tool-side ⑨③ A.../B... tool-side

Modules for transmission of electrical signals.

Description	ID	No. Pins
Feed-through module for signal on the robot side		
SW0-A15-K	9936357	15
SW0-E10-011-K	9935801	10
Feed-through module for signal on the tool side		
SW0-A15-A	9936356	15
SW0-E10-011-A	9935802	10

① For other modules or technical data, see catalog chapter "Options" or visit our website.

Cable connector



- ⑨⑩ D-sub connecting plug ⑨① D-sub connector

Description	ID	
Angled cable connector, robot-side		
KAS-A15-K-90	0301301	
Angled cable connector, tool-side		
KAS-A15-A-90	0301302	
Straight cable connector, robot-side		
KAS-A15-K-0	0301264	
Straight cable connector, tool-side		
KAS-A15-A-0	0301265	

① For more detailed information and other cable connectors, see catalog chapter "Options" or visit our website.

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