



Hand in hand for tomorrow



Product data sheet

Miniature change system MWS 020

Modular. Compact. Flexible.

Miniature change system MWS

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

Field of application

Ideally suitable for the use in micro-systems technology and particularly for handling tiny components.

Advantages – Your benefits

Extremely flat design for less interfering contours

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

Center bore for feed-through of parts, camera, laser beams, etc.

Integrated feed-through for six pneumatic or four electrical signals

Suitable storage rack to ensure the optimum adaption to each application

ISO mounting pattern for simple assembly; in compliance with DIN 32565 level 4



Sizes
Quantity: 2



Handling weight
0.5 .. 1 kg



Moment load Mx
0.5 .. 1 Nm



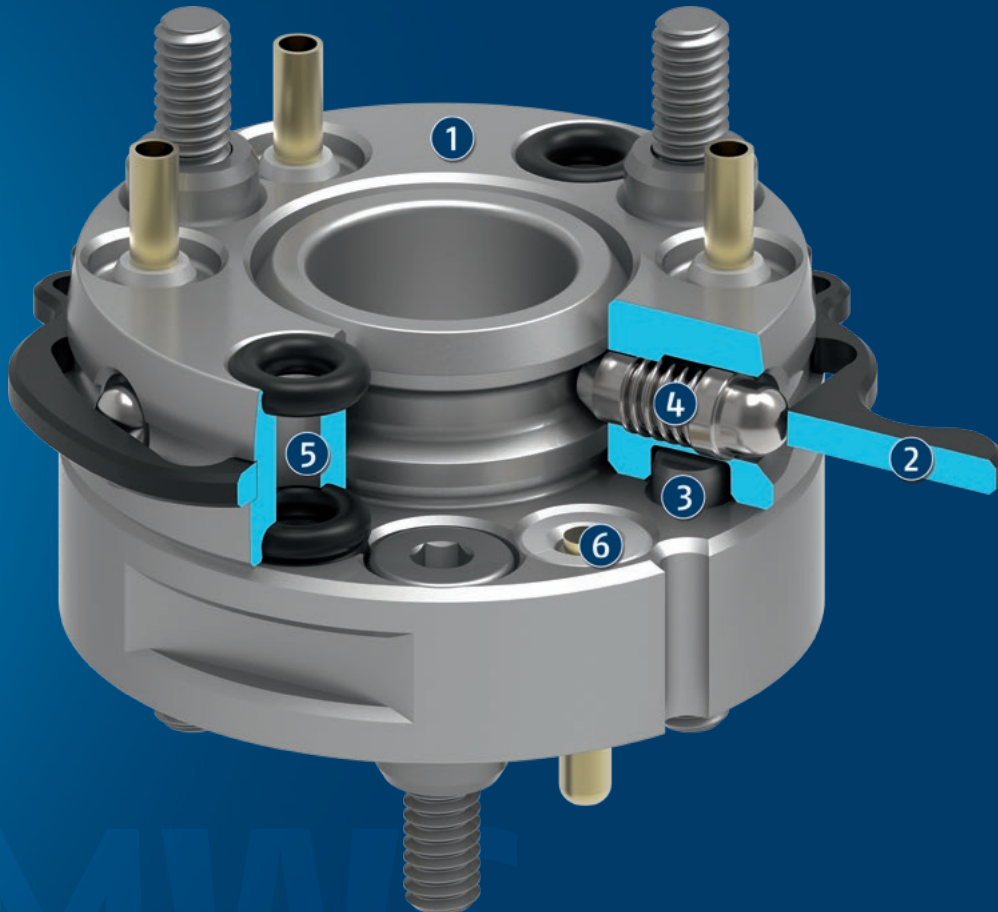
Moment load Mz
0.2 .. 0.75 Nm

Functional description

The miniature change system (MWS) consists of a miniature change master (MWK) and a miniature change adapter (MWA).

A form-fit connection is established between the

miniature change master (MWK) and the miniature change adapter (MWA) by actuating the locking ring. An integrated pneumatic feed-through safely provides the tool with electricity.



① **Screw surface**
compliant with DIN 32565 level 4

② **Drive ring**
for safe locking and unlocking

③ **Anti-rotation protection**
for exact coupling and maximum precision

④ **Locking mechanism**
fail-safe and robust

⑤ **Pneumatic feed-through**
no interfering contour, as integrated in the housing

⑥ **Electric feed-through**
for electrical energy and signal transmission

General notes about the series

Actuation: manual

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

Media transmission: Integrated pneumatic and electric feed-throughs

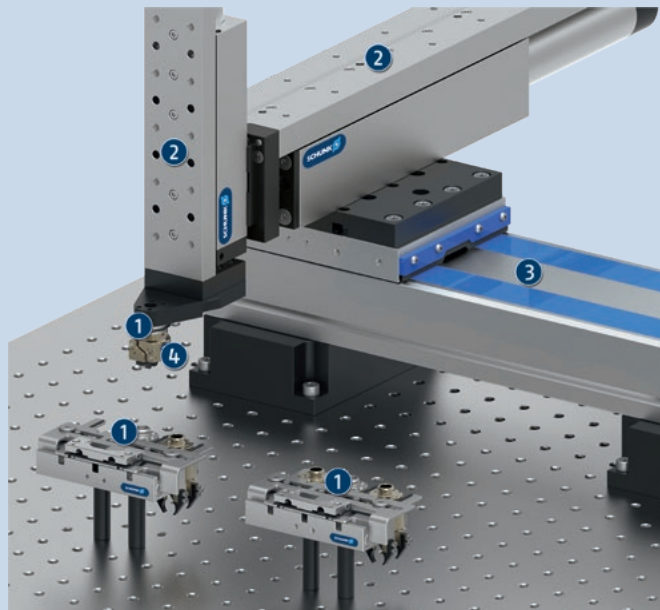
Housing: stainless steel

Scope of delivery: Electrical feed-throughs, O-rings for pneumatic feed-throughs, and small components for mounting

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

Automated assembly of writing utensils: Lead refills are inserted into mechanical pencils. The MWS ensures fast exchange of the grippers and tools.

- ① Miniature change system MWS
- ② Electric linear module ELM

- ③ Delta flat linear module
- ④ MWPG miniature gripper

SCHUNK offers more ...

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



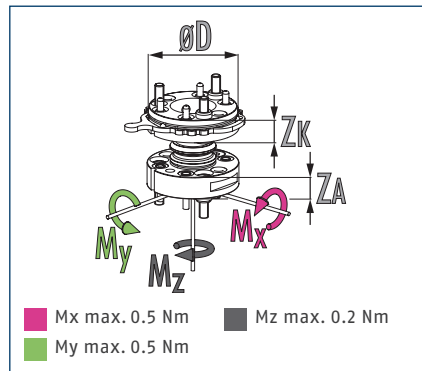
Gripper for small components



Gripper for small components

① For more information on these products can be found on the following product pages or at [schunk.com](https://www.schunk.com).

Dimensions and maximum loads



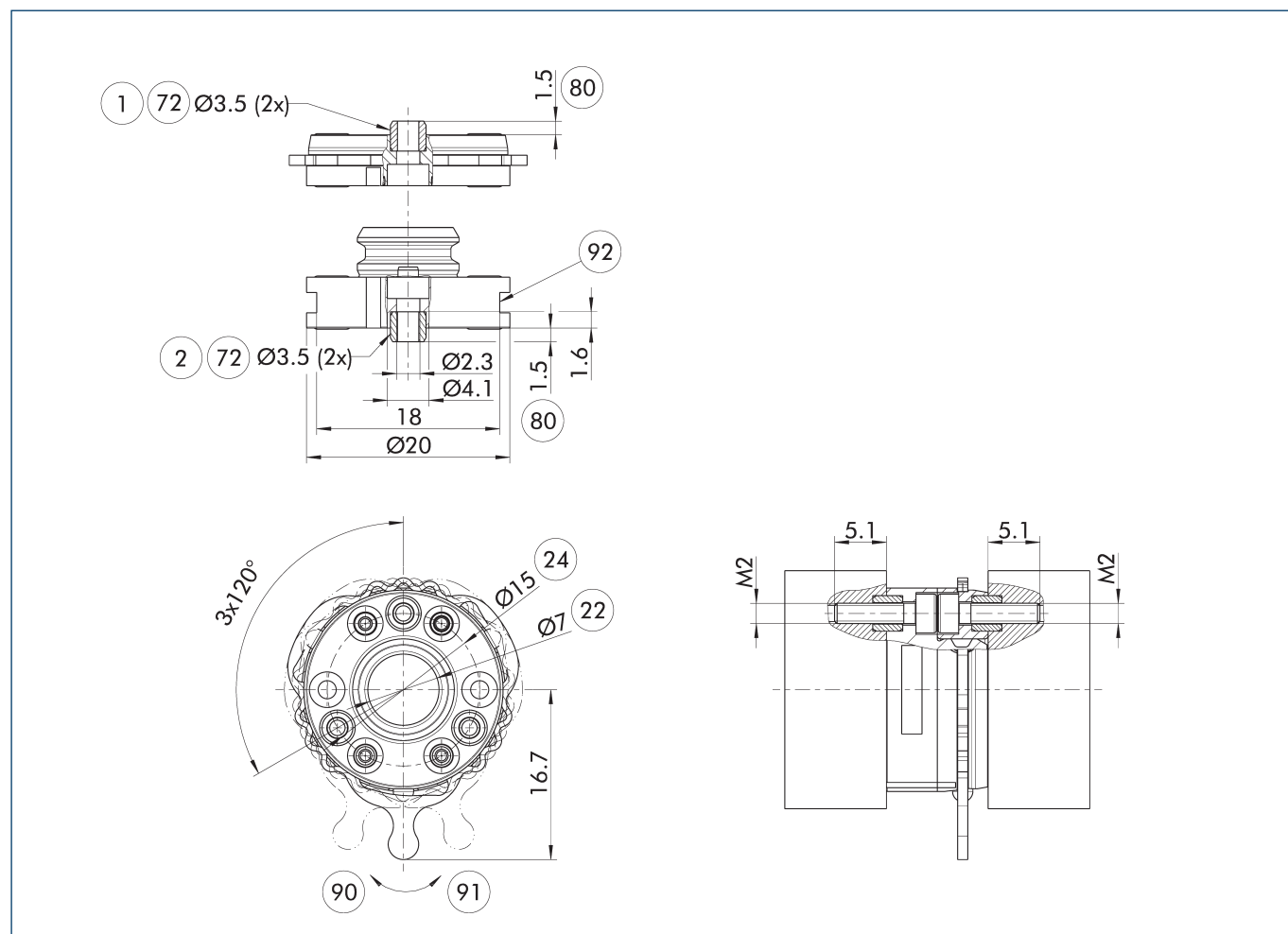
① This is the max. sum of all forces and moments which are permitted to act on the change system for ensuring proper functioning.

Technical data

Description		MWK-020-2P-0E	MWA-020-2P-0E	MWK-020-2P-4E	MWA-020-2P-4E
		Miniature change head	Miniature change adapter	Miniature change head	Miniature change adapter
ID		0305623	0305624	0305611	0305612
Recommended handling weight	[kg]	0.5	0.5	0.5	0.5
Repeat accuracy	[mm]	0.1	0.1	0.1	0.1
Weight	[g]	7	9	7	9
Min./max. distance when locking	[mm]	0.25	0.25	0.25	0.25
No. of fluid feed-throughs		2	2	2	2
Number of electrical feed-throughs				4	4
Voltage	[V]			24	24
Max. current	[A]			1	1
Max. permissible XY axis offset	[mm]	±0.3	±0.3	±0.3	±0.3
Max. permissible angular offset	[°]	±0.8	±0.8	±0.8	±0.8
Dimensions Ø D x Z*	[mm]	20 x 5	20 x 5	20 x 5	20 x 5

* *Please note that the heights of the change master (ZK) and change adapter (ZA) differ. The sum represents the total height of a coupled change system.

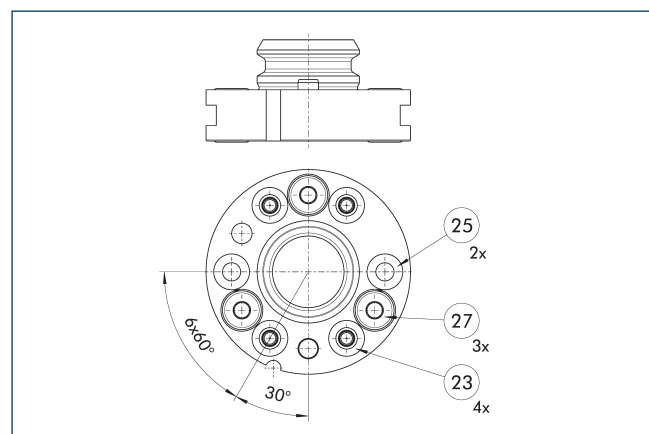
Main view



The main view shows the unit in its basic version.

- | | |
|-----------------------------|--|
| ① Robot-side connection | ⑧ Depth of the centering sleeve hole in the counter part |
| ② Tool-side connection | ⑨ Unit unlocked |
| ② Center bore | ⑩ Unit locked |
| ② Bolt circle | ⑪ Groove for tool rack |
| ② Fit for centering sleeves | |

Mounting and feed-throughs



- | | |
|----------------------------------|---------------------------------------|
| ② Electrical signal feed-through | ② Through holes for screw connections |
| ② Pneumatic feed-throughs | |



SCHUNK SE & Co. KG

Spanntechnik

Greiftechnik

Automatisierungstechnik

Bahnhofstr. 106 - 134

D-74348 Lauffen/Neckar

Tel. +49-7133-103-0

Fax +49-7133-103-2399

info@de.schunk.com

schunk.com

Folgen Sie uns | *Follow us*

