

## Compact. Flat. Productive.

### Compact Change System CWS

Compact manual change system with integrated air feed-through for the most important SCHUNK gripping and compensating modules.

#### Field of Application

Ideally suited for use in laboratory technology and assembly automation.

#### Advantages – Your benefit

**High productivity** through fast manual gripper change, especially with small and medium-sized lot sizes

**Flat and weight-reduced** through direct assembly of the gripper onto the change system without adapter plate

**Series with five different sizes** for optimal size selection and a broad application range

**Integrated pneumatic feed-through** for secure energy supply of the gripping modules

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



Sizes  
Quantity: 5



Handling weight  
10 .. 28 kg



Moment load  $M_x$   
20 .. 110 Nm

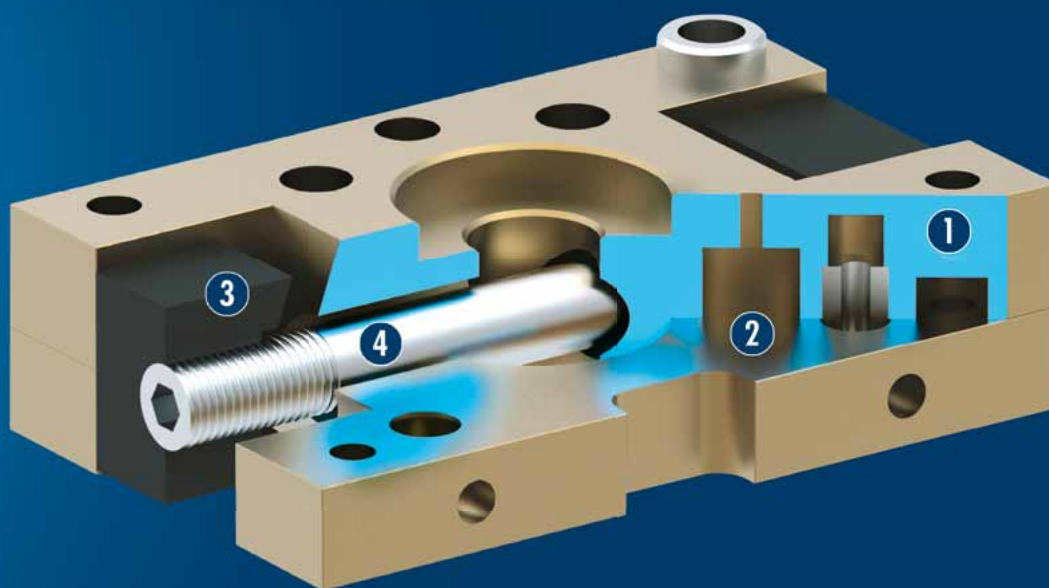


Moment load  $M_y$   
3.3 .. 66.7 Nm

## Functional Description

The compact change system CWS consists of a change head CWK and a change adapter CWA. A form-fit connection is established between the change head CWK and the change adapter with two clamping jaws connected via a

thread spindle. Four integrated pneumatic feed-throughs reliably supply the gripper with pneumatic and optionally leave room for two additional pneumatic uses.



- ① **Housing**  
weight-optimized through application of high-strength aluminum alloy
- ② **Air feed-through**  
integration into housing means no interfering contours

- ③ **Clamping jaw**  
For a form-fit safe hold
- ④ **Drive spindle**  
For locking and unlocking the change system

## General Notes to the Series

**Actuation:** manually via Allen key, provided by the customer

**Operating Principle:** by turning the threaded spindle, the clamping jaws are clamped or unclamped

**Pass through:** Integrated pneumatic feed-through

**Housing:** The housing is made of high-tensile, hard-coated aluminum alloy. The functional parts are made of hardened steel.

**Scope of delivery:** Centering sleeves for mounting and direct connection

**Warranty:** 24 months (details, general terms and conditions and operation manuals can be downloaded at [www.schunk.com](http://www.schunk.com))

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

**Handling weight:** the weight of the total load attached to the flange. The design must take into account the permissible forces and moments. Please note that the life span will be reduced if the maximum handling weight is exceeded.

## Application example

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

- ❶ Compact Change System CWS
- ❷ Universal Gripper PGN-plus
- ❸ Linear Module LM



## SCHUNK offers more ...

The following components make the CWS even more productive – the perfect complement for highest functionality, flexibility and process reliability.



Centering Sleeves



Fittings



Universal Gripper PGN-plus

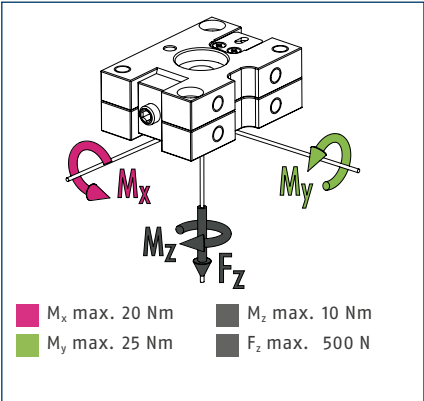


Angular Gripper PWG

① Further information regarding the products can be found on the following products pages or at [www.schunk.com](http://www.schunk.com). Please contact us for further information: SCHUNK technical hotline +49-7133-103-2696



Forces and Moments

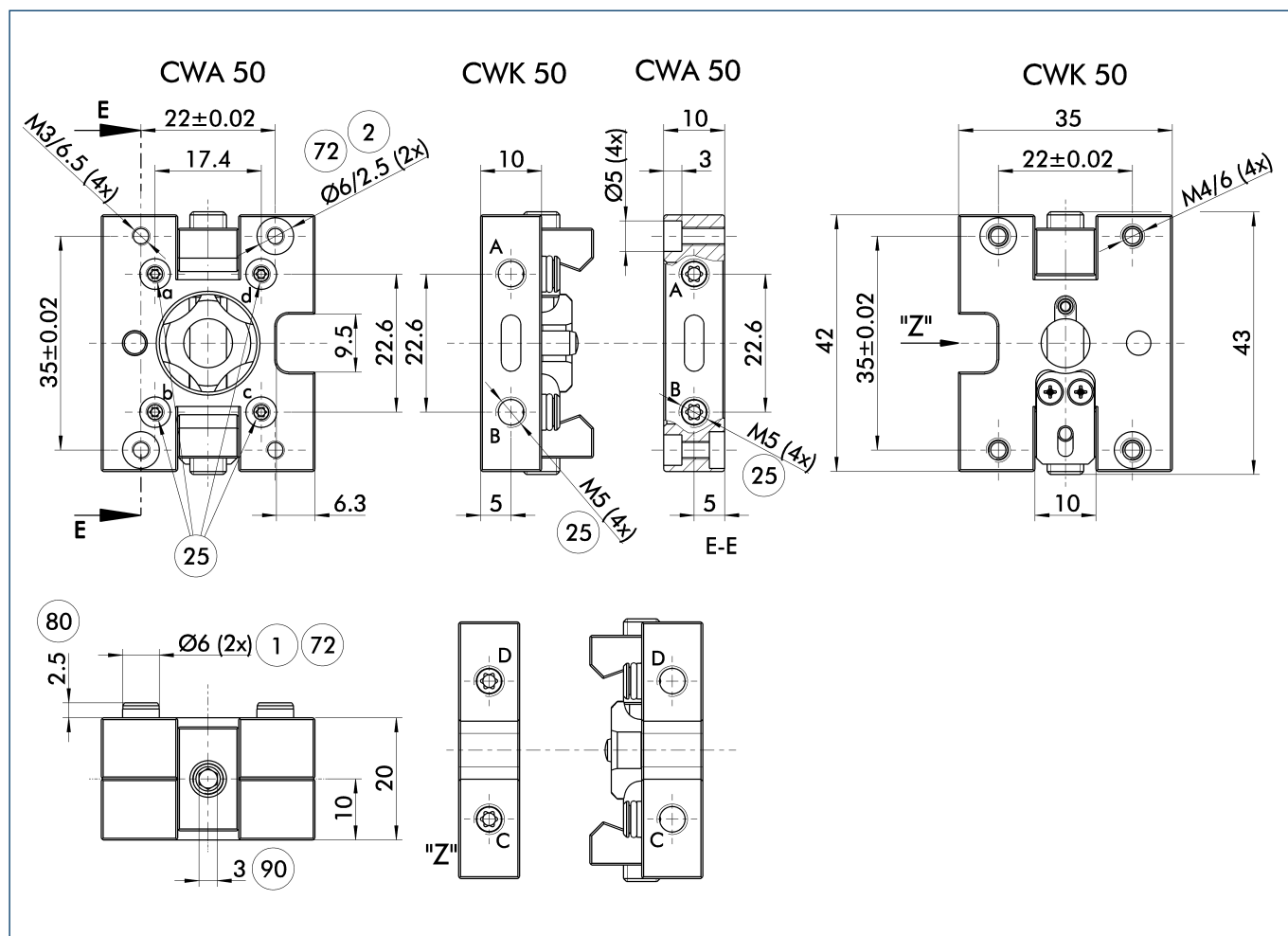


① This is the max. sum of all torques (acceleration torques, process forces, acceleration forces etc.) that are permitted to act on the change system in order to ensure error-free functioning.

Technical data

Description		CWK-050-P	CWA-050-P
		Compact change head	Compact change adapter
ID		0305750	0305751
max. payload	[kg]	10	10
max. static moment $M_x$	[Nm]	6.7	6.7
max. static moment $M_y$	[Nm]	8.3	8.3
max. static moment $M_z$	[Nm]	3.3	3.3
Repeat accuracy	[mm]	0.01	0.01
Weight	[g]	50	20
Number of pneumatic feed-throughs		4	4
min. / max. ambient temperature	[°C]	5/60	5/60

## Main view



The drawing shows the basic design of the gripper change system without dimensional consideration of the options described below.

A, a Air connection locked

B, b Air connection unlocked

① Robot side connection

② Tool side connection

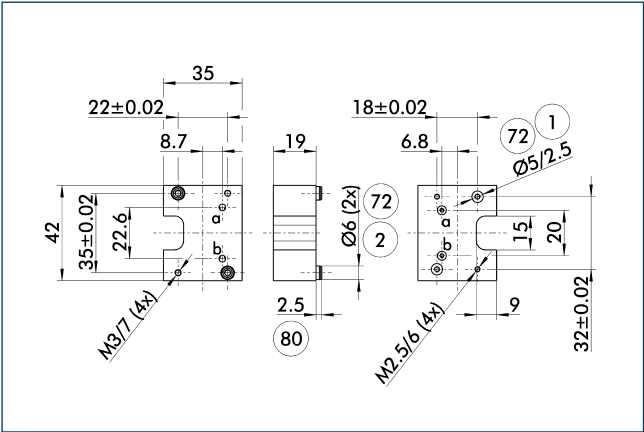
②⑤ Pneumatic feed-through

⑦② Fitting for centering sleeve

⑧① Depth of the centering sleeve hole in the mating part

⑨① Wrench size

Adapter plate CWA-050-040-P

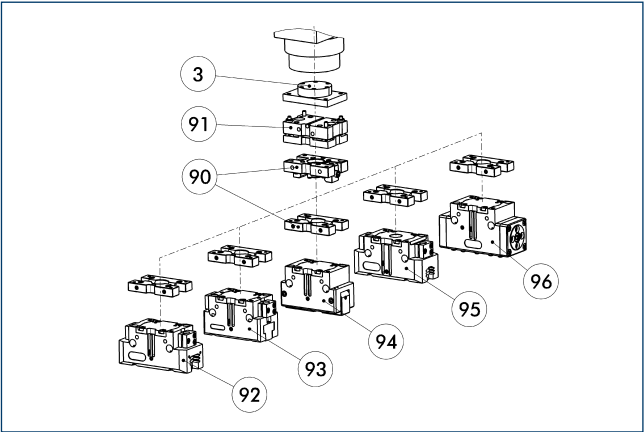


- ① Robot side connection
- ② Tool side connection
- ⑦② Fitting for centering sleeve
- ⑧② Depth of the centering sleeve hole in the mating part

Air feed-throughs are integrated in the adapter plate. Therefore the matching gripper can be directly connected without using hoses.

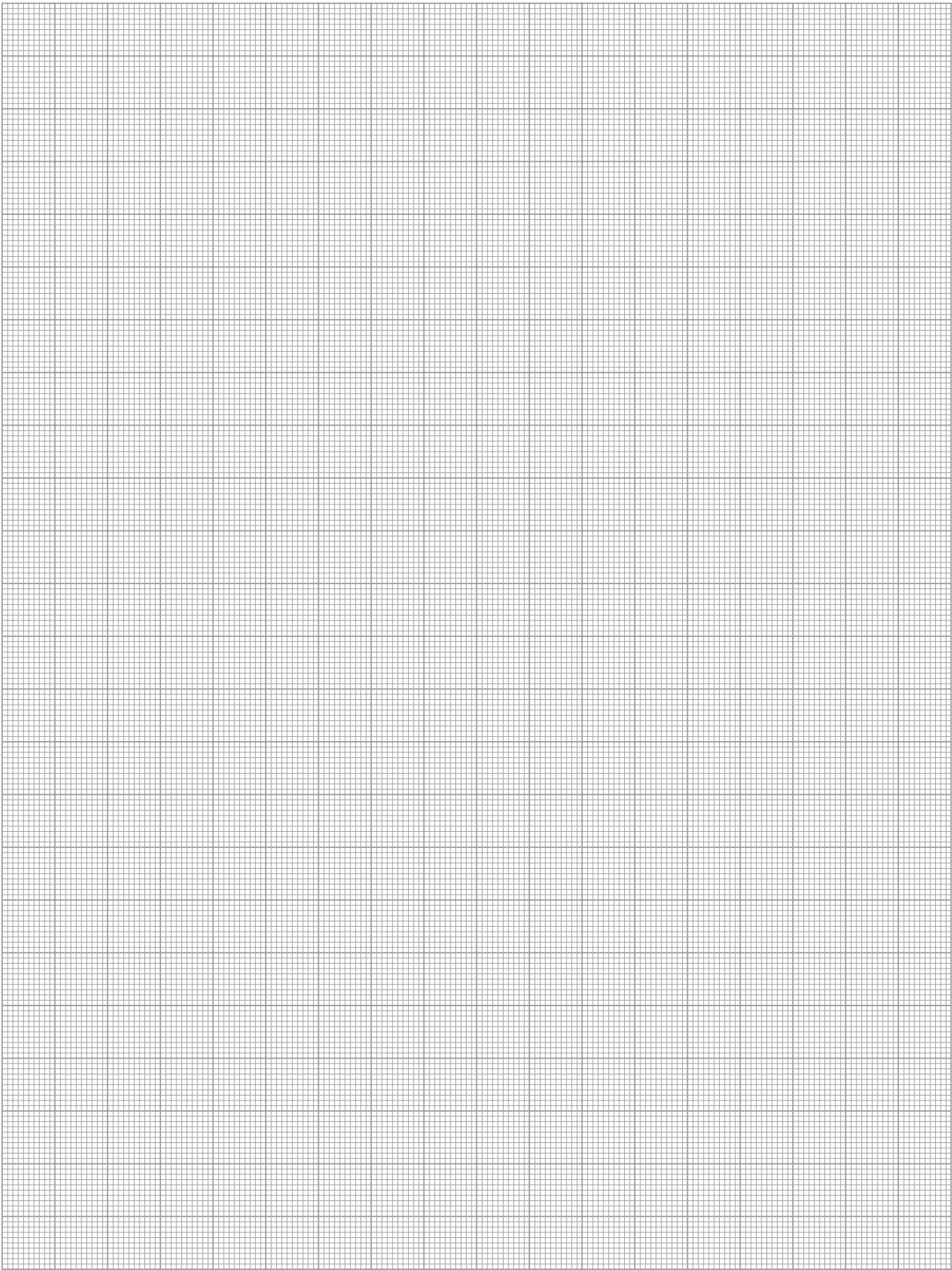
Description	ID	Height
Tool-side		
A-CWA-050-040-P	0305754	19 mm

Modular system



- ③ Adapter plate
- ⑨② Compact change system CWS
- ⑨① Tolerance compensation unit TCU
- ⑨② 2-Finger Parallel Gripper PGN-plus
- ⑨③ 2-Finger Parallel Gripper JGP
- ⑨④ 2-Finger Angular Gripper PWG-plus
- ⑨⑤ 2-Finger Parallel Gripper PGB
- ⑨⑥ Sealed Gripper DPG-plus

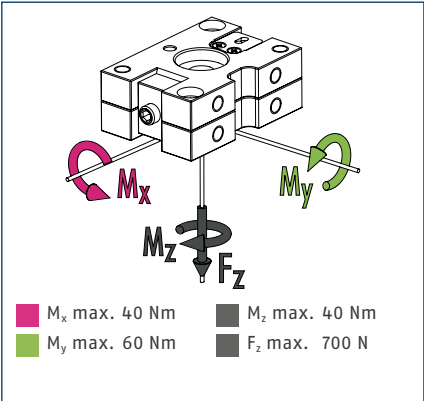
The unit is part of a modular system in which various components such as grippers or compliant devices can be threaded to one another directly.







Forces and Moments

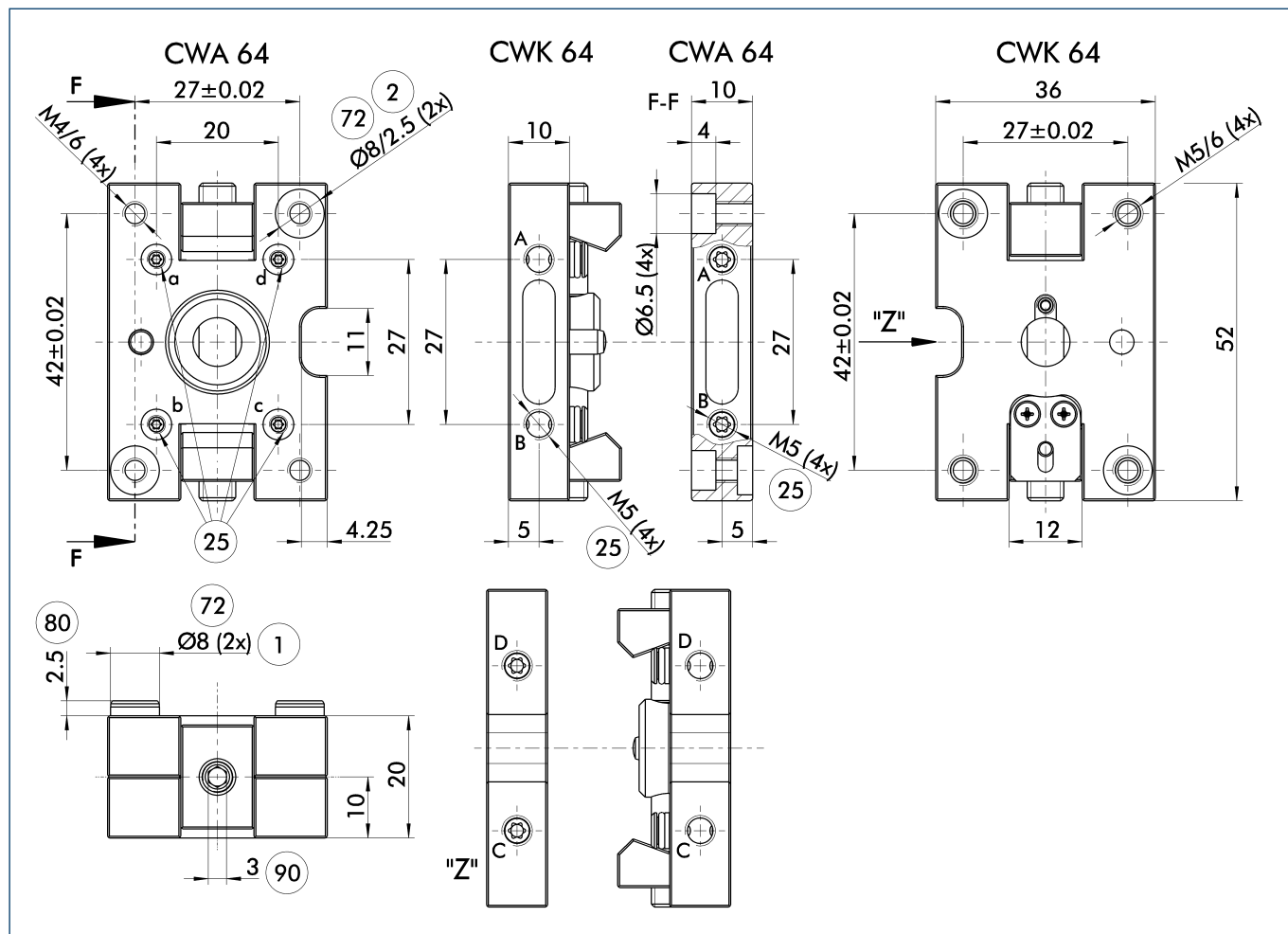


① This is the max. sum of all torques (acceleration torques, process forces, acceleration forces etc.) that are permitted to act on the change system in order to ensure error-free functioning.

Technical data

Description		CWK-064-P	CWA-064-P
		Compact change head	Compact change adapter
ID		0305764	0305765
max. payload	[kg]	16	16
max. static moment $M_x$	[Nm]	13.3	13.3
max. static moment $M_y$	[Nm]	20	20
max. static moment $M_z$	[Nm]	13.3	13.3
Repeat accuracy	[mm]	0.01	0.01
Weight	[g]	75	32
Number of pneumatic feed-throughs		4	4
min. / max. ambient temperature	[°C]	5/60	5/60

## Main view



The drawing shows the basic design of the gripper change system without dimensional consideration of the options described below.

A, a Air connection locked

B, b Air connection unlocked

① Robot side connection

② Tool side connection

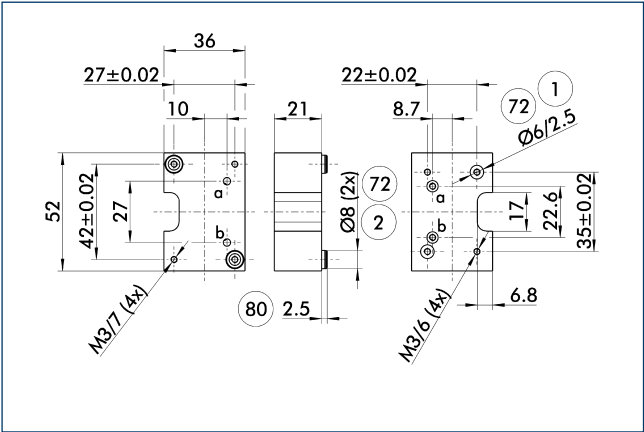
②⑤ Pneumatic feed-through

⑦② Fitting for centering sleeve

⑧① Depth of the centering sleeve hole in the mating part

⑨① Wrench size

Adapter plate CWA-064-050-P

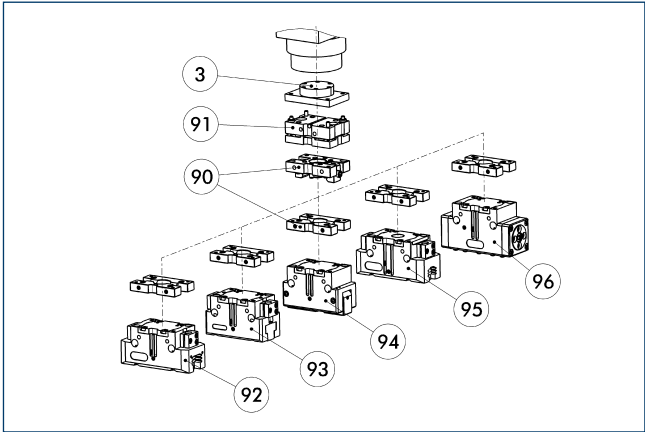


- 1 Robot side connection
- 2 Tool side connection
- 72 Fitting for centering sleeve
- 80 Depth of the centering sleeve hole in the mating part

Air feed-throughs are integrated in the adapter plate. Therefore the matching gripper can be directly connected without using hoses.

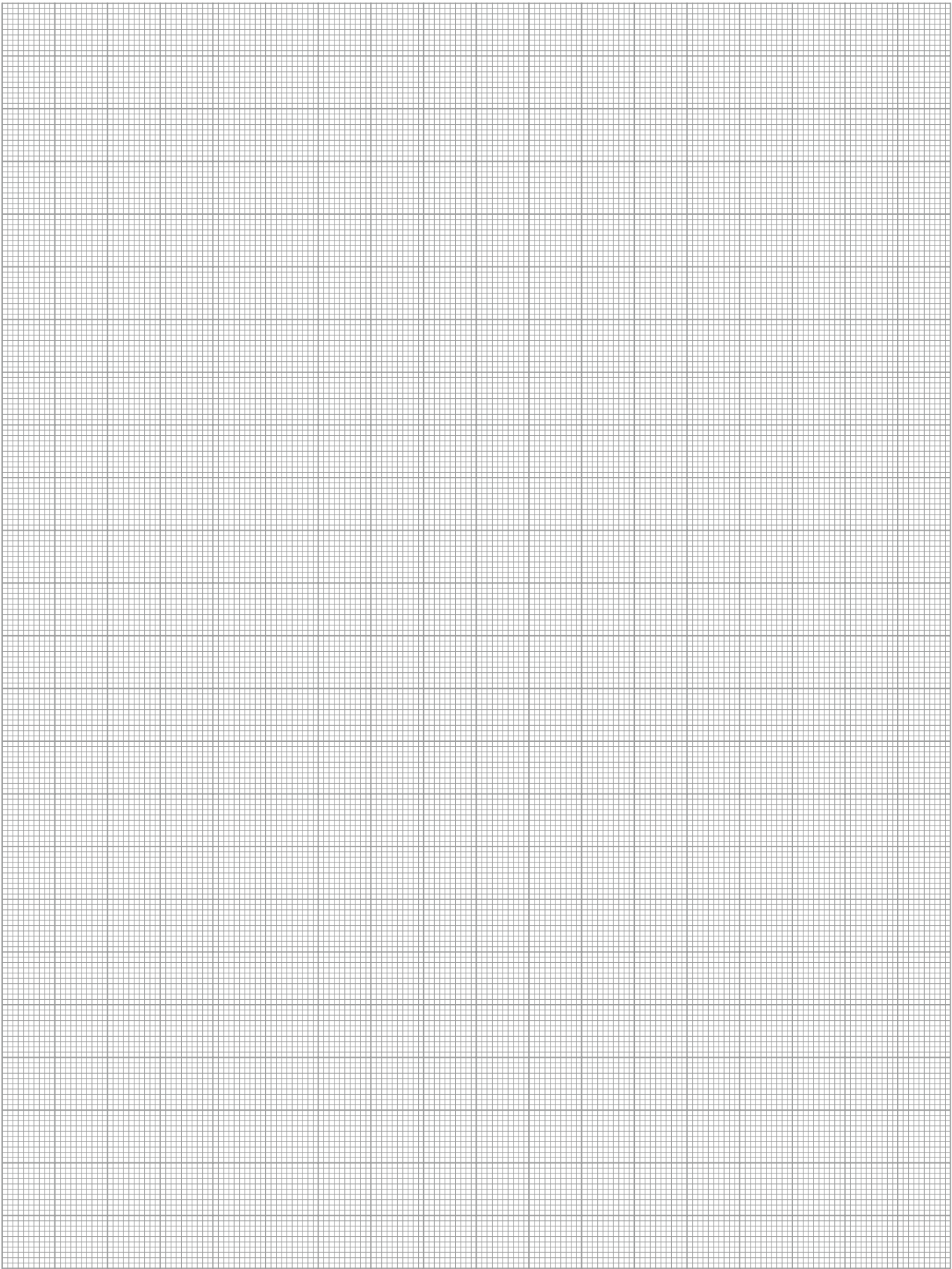
Description	ID	Height
Tool-side		
A-CWA-064-050-P	0305768	21 mm

Modular system



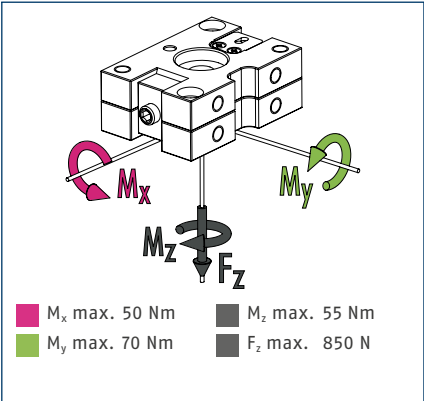
- 3 Adapter plate
- 90 Compact change system CWS
- 91 Tolerance compensation unit TCU
- 92 2-Finger Parallel Gripper PGN-plus
- 93 2-Finger Parallel Gripper JGP
- 94 2-Finger Angular Gripper PWG-plus
- 95 2-Finger Parallel Gripper PGB
- 96 Sealed Gripper DPG-plus

The unit is part of a modular system in which various components such as grippers or compliant devices can be threaded to one another directly.





Forces and Moments

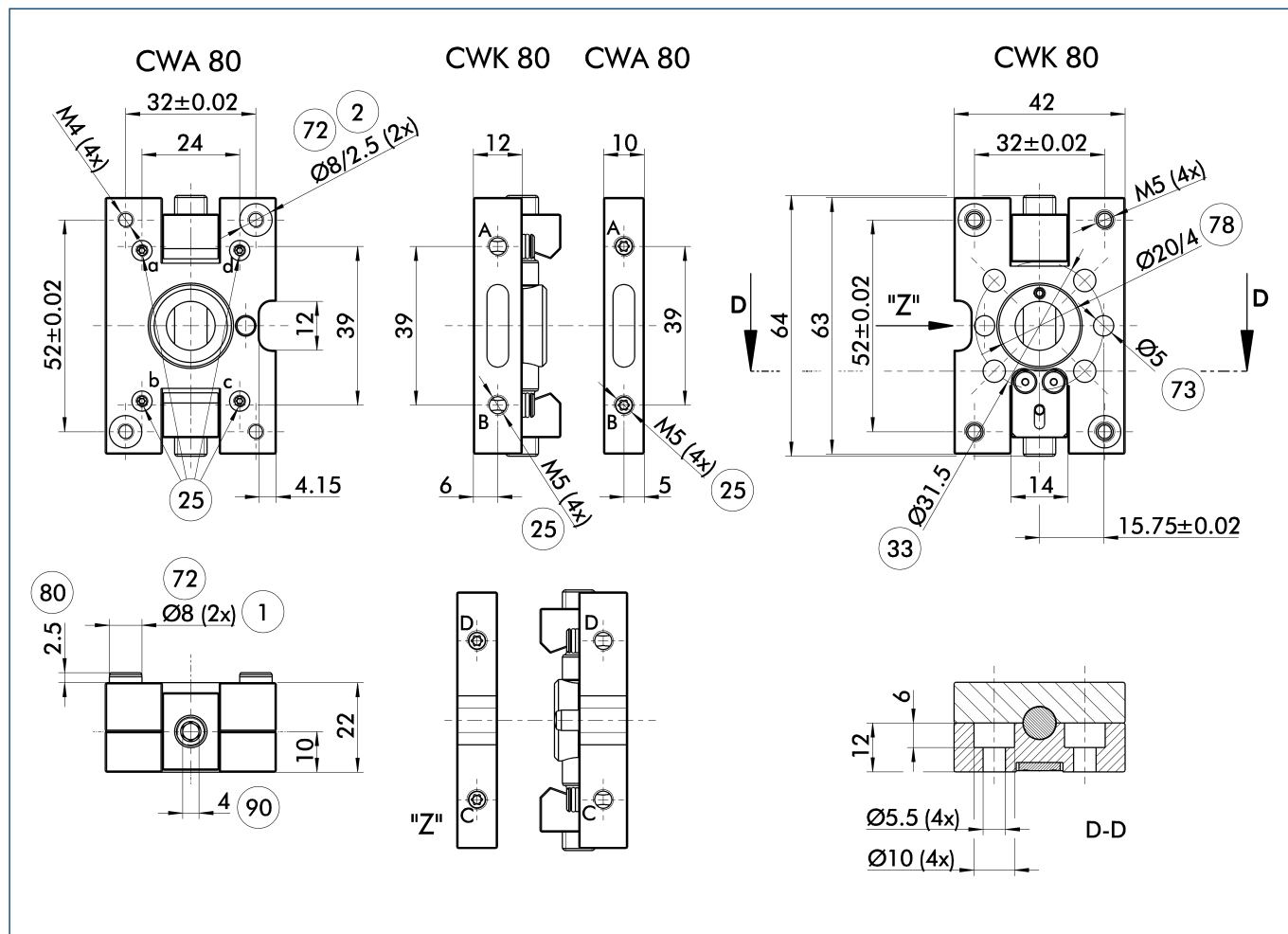


① This is the max. sum of all torques (acceleration torques, process forces, acceleration forces etc.) that are permitted to act on the change system in order to ensure error-free functioning.

Technical data

Description		CWK-080-P	CWA-080-P
		Compact change head	Compact change adapter
ID		0305780	0305781
max. payload	[kg]	20	20
max. static moment $M_x$	[Nm]	16.7	16.7
max. static moment $M_y$	[Nm]	23.3	23.3
max. static moment $M_z$	[Nm]	18.3	18.3
Repeat accuracy	[mm]	0.01	0.01
Weight	[g]	115	45
Number of pneumatic feed-throughs		4	4
min. / max. ambient temperature	[°C]	5/60	5/60

## Main view



The drawing shows the basic design of the gripper change system without dimensional consideration of the options described below.

A, a Air connection locked

B, b Air connection unlocked

- ① Robot side connection
- ② Tool side connection
- ②⑤ Pneumatic feed-through

③③ DIN ISO-9409 bolt-hole circle diameter

⑦② Fitting for centering sleeve

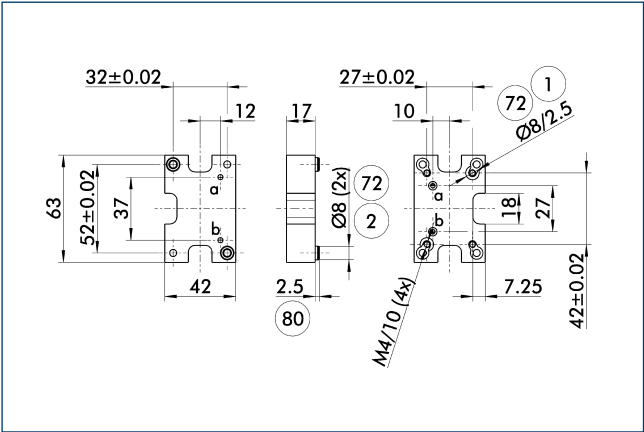
⑦③ Fit for a centering pin

⑦⑧ Fitting for centering

⑧① Depth of the centering sleeve hole in the mating part

⑨① Wrench size

Adapter plate CWA-080-064-P

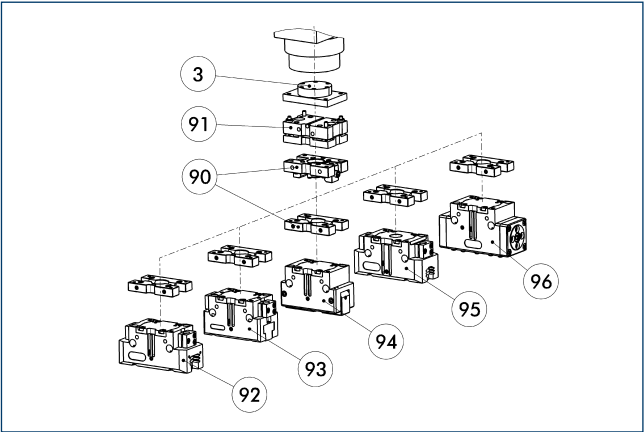


- 1 Robot side connection
- 2 Tool side connection
- 72 Fitting for centering sleeve
- 80 Depth of the centering sleeve hole in the mating part

Air feed-throughs are integrated in the adapter plate. Therefore the matching gripper can be directly connected without using hoses.

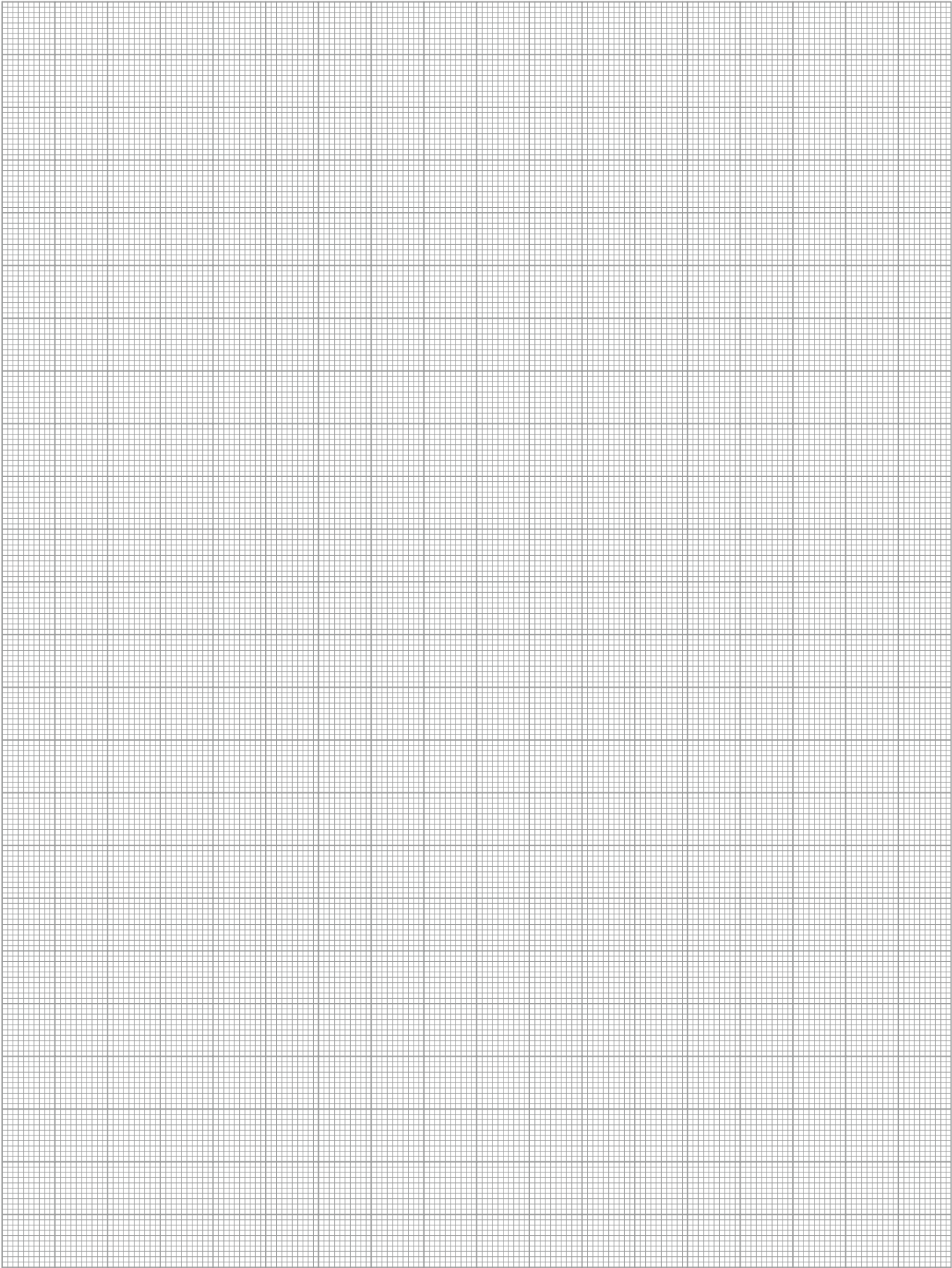
Description	ID	Height
Tool-side		
A-CWA-080-064-P	0305784	17 mm

Modular system



- 3 Adapter plate
- 90 Compact change system CWS
- 91 Tolerance compensation unit TCU
- 92 2-Finger Parallel Gripper PGN-plus
- 93 2-Finger Parallel Gripper JGP
- 94 2-Finger Angular Gripper PWG-plus
- 95 2-Finger Parallel Gripper PGB
- 96 Sealed Gripper DPG-plus

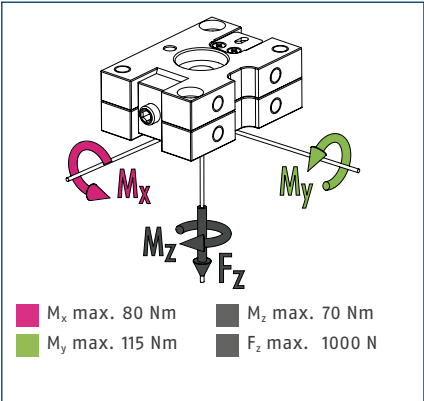
The unit is part of a modular system in which various components such as grippers or compliant devices can be threaded to one another directly.







Forces and Moments

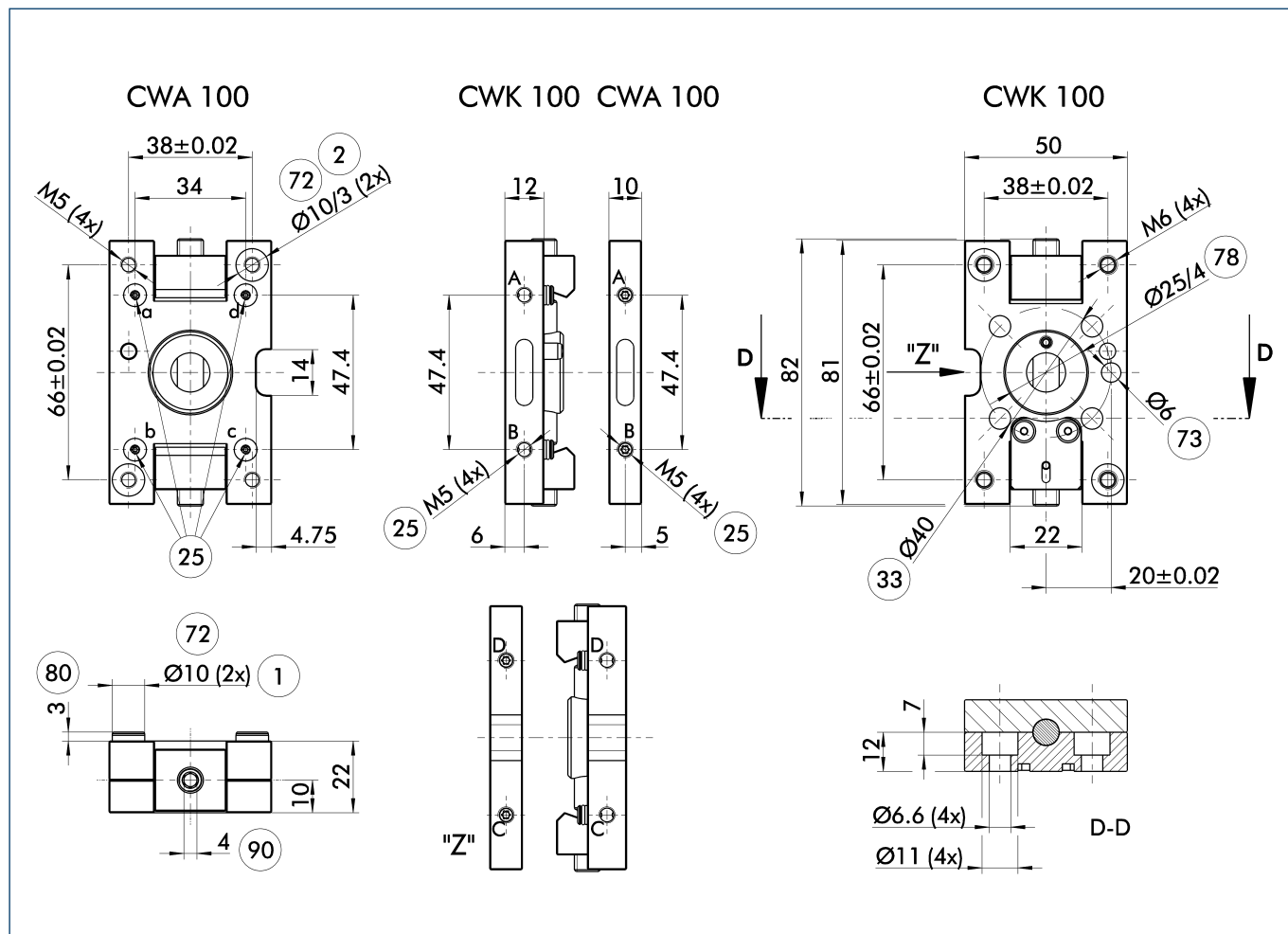


ⓘ This is the max. sum of all torques (acceleration torques, process forces, acceleration forces etc.) that are permitted to act on the change system in order to ensure error-free functioning.

Technical data

Description		CWK-100-P	CWA-100-P
		Compact change head	Compact change adapter
ID		0305800	0305801
max. payload	[kg]	24	24
max. static moment $M_x$	[Nm]	26.7	26.7
max. static moment $M_y$	[Nm]	38.3	38.3
max. static moment $M_z$	[Nm]	23.3	23.3
Repeat accuracy	[mm]	0.01	0.01
Weight	[g]	185	70
Number of pneumatic feed-throughs		4	4
min. / max. ambient temperature	[°C]	5/60	5/60

## Main view



The drawing shows the basic design of the gripper change system without dimensional consideration of the options described below.

A, a Air connection locked

B, b Air connection unlocked

① Robot side connection

② Tool side connection

②⑤ Pneumatic feed-through

③③ DIN ISO-9409 bolt-hole circle diameter

⑦② Fitting for centering sleeve

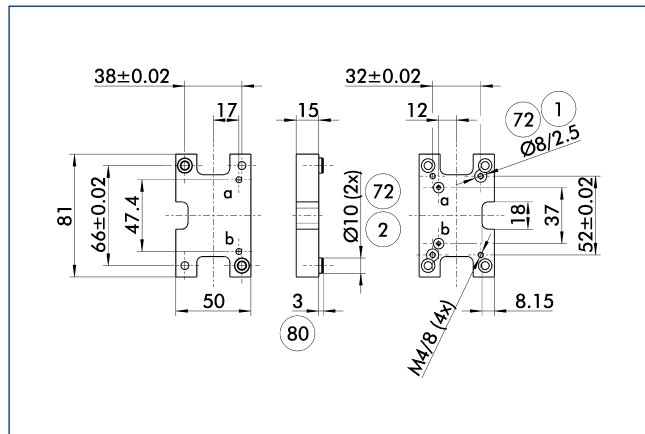
⑦③ Fit for a centering pin

⑦⑧ Fitting for centering

⑧① Depth of the centering sleeve hole in the mating part

⑨① Wrench size

## Adapter plate CWA-100-080-P

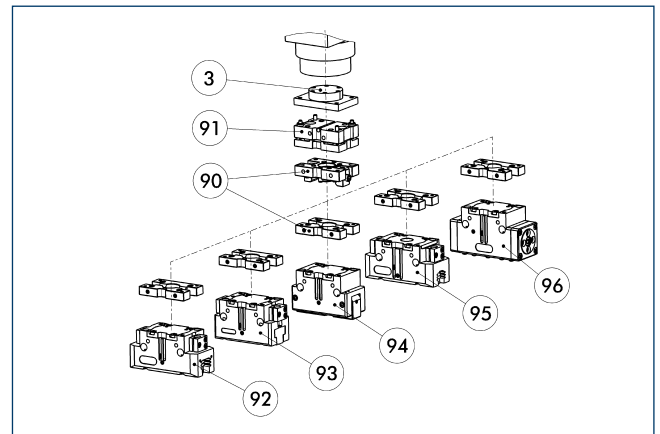


- |                         |                                                          |
|-------------------------|----------------------------------------------------------|
| ① Robot side connection | ⑦② Fitting for centering sleeve                          |
| ② Tool side connection  | ⑧① Depth of the centering sleeve hole in the mating part |

Air feed-throughs are integrated in the adapter plate. Therefore the matching gripper can be directly connected without using hoses.

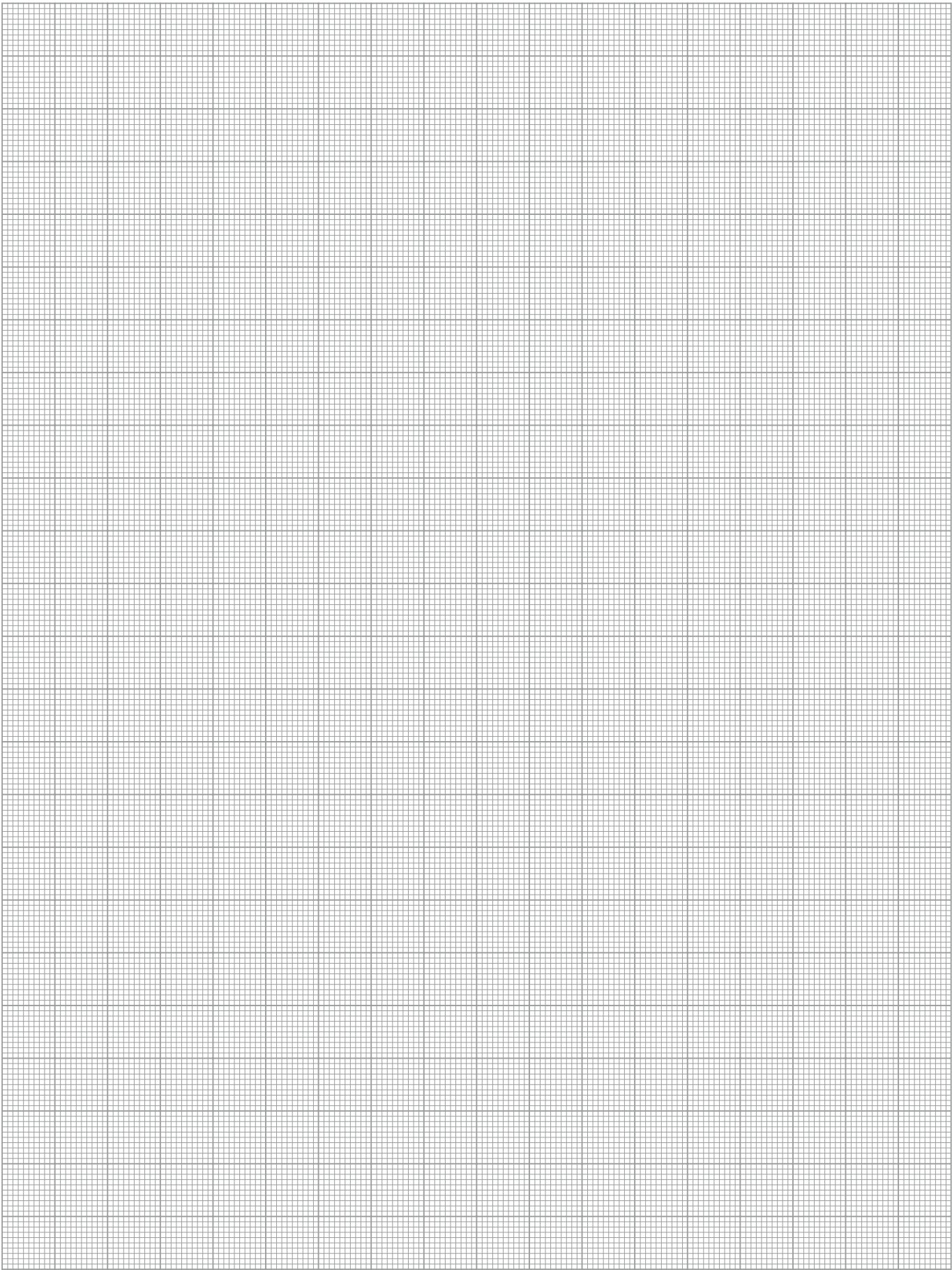
Description	ID	Height
Tool-side		
A-CWA-100-080-P	0305804	15 mm

## Modular system



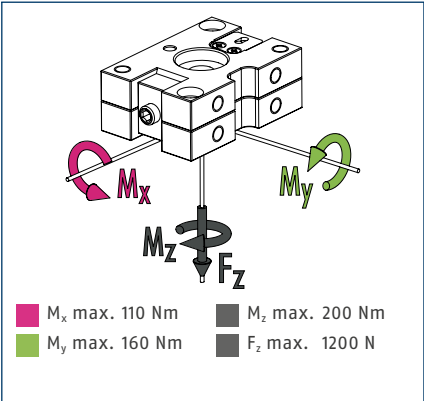
- |                                          |                                         |
|------------------------------------------|-----------------------------------------|
| ③ Adapter plate                          | ⑨3 2-Finger Parallel Gripper JGP        |
| ⑨0 Compact change system CWS             | ⑨4 2-Finger Angular Gripper<br>PWG-plus |
| ⑨1 Tolerance compensation unit<br>TCU    | ⑨5 2-Finger Parallel Gripper PGB        |
| ⑨2 2-Finger Parallel Gripper<br>PGN-plus | ⑨6 Sealed Gripper DPG-plus              |

The unit is part of a modular system in which various components such as grippers or compliant devices can be threaded to one another directly.





Forces and Moments

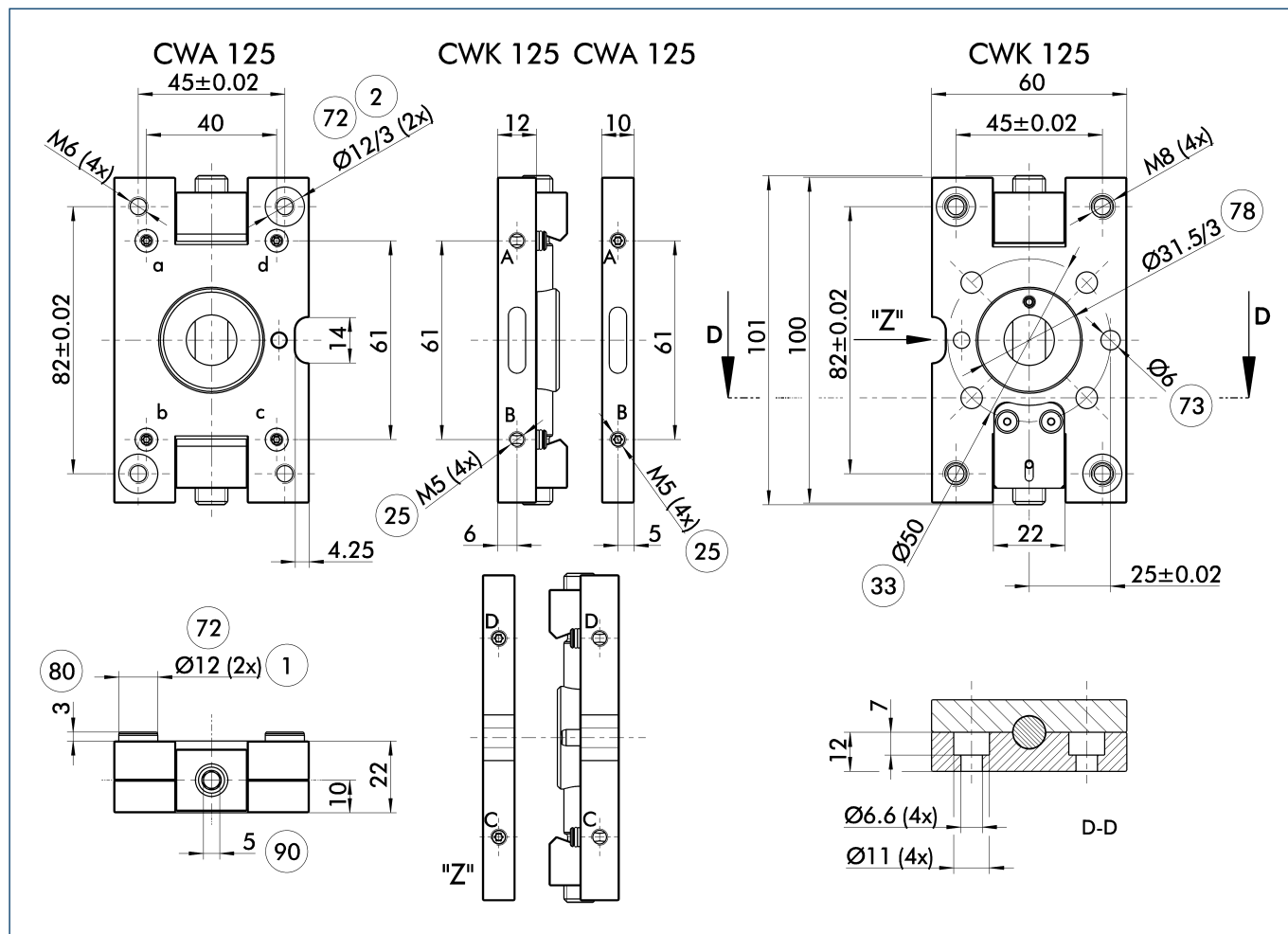


① This is the max. sum of all torques (acceleration torques, process forces, acceleration forces etc.) that are permitted to act on the change system in order to ensure error-free functioning.

Technical data

Description		CWK-125-P	CWA-125-P
		Compact change head	Compact change adapter
ID		0305825	0305826
max. payload	[kg]	28	28
max. static moment $M_x$	[Nm]	36.7	36.7
max. static moment $M_y$	[Nm]	53.3	53.3
max. static moment $M_z$	[Nm]	66.7	66.7
Repeat accuracy	[mm]	0.01	0.01
Weight	[g]	320	125
Number of pneumatic feed-throughs		4	4
min. / max. ambient temperature	[°C]	5/60	5/60

## Main view



The drawing shows the basic design of the gripper change system without dimensional consideration of the options described below.

A, a Air connection locked

B, b Air connection unlocked

① Robot side connection

② Tool side connection

②⑤ Pneumatic feed-through

③③ DIN ISO-9409 bolt-hole circle diameter

⑦② Fitting for centering sleeve

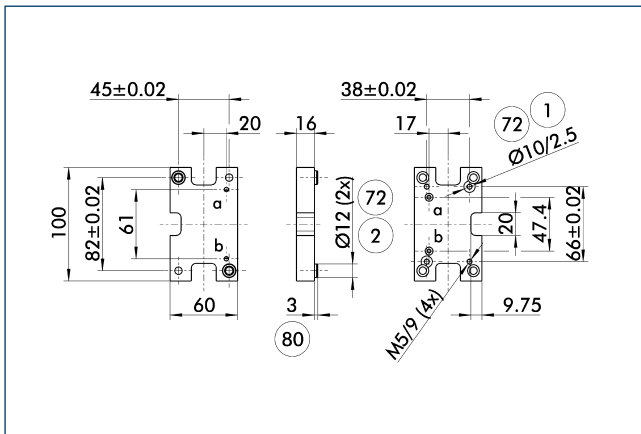
⑦③ Fit for a centering pin

⑦⑧ Fitting for centering

⑧① Depth of the centering sleeve hole in the mating part

⑨① Wrench size

### Adapter plate CWA-125-100-P

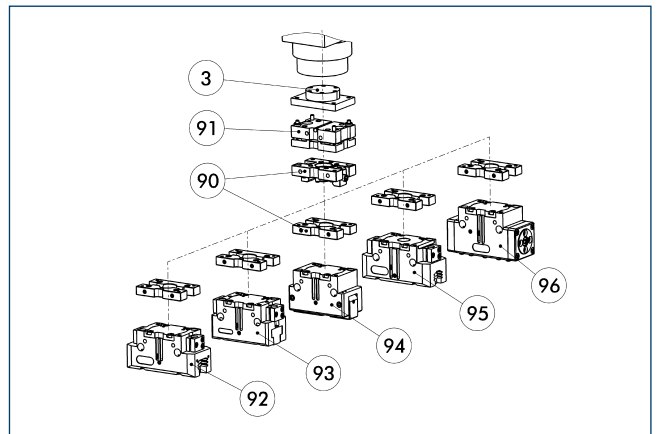


- |                         |                                                          |
|-------------------------|----------------------------------------------------------|
| ① Robot side connection | ⑦② Fitting for centering sleeve                          |
| ② Tool side connection  | ⑧① Depth of the centering sleeve hole in the mating part |

Air feed-throughs are integrated in the adapter plate. Therefore the matching gripper can be directly connected without using hoses.

Description	ID	Height
Tool-side		
A-CWA-125-100-P	0305829	16 mm

## Modular system



- |                                                 |                                                |
|-------------------------------------------------|------------------------------------------------|
| <b>3</b> Adapter plate                          | <b>93</b> 2-Finger Parallel Gripper JGP        |
| <b>90</b> Compact change system CWS             | <b>94</b> 2-Finger Angular Gripper<br>PWG-plus |
| <b>91</b> Tolerance compensation unit<br>TCU    | <b>95</b> 2-Finger Parallel Gripper PGB        |
| <b>92</b> 2-Finger Parallel Gripper<br>PGN-plus | <b>96</b> Sealed Gripper DPG-plus              |

The unit is part of a modular system in which various components such as grippers or compliant devices can be threaded to one another directly.