

Superior Clamping and Gripping



## Product Information

Application kit MTB

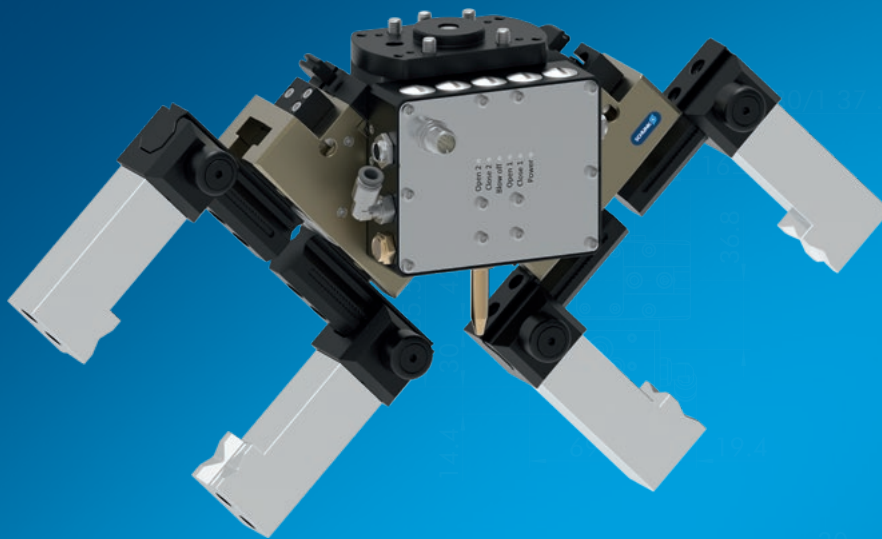
## Modular. Flexible. Easy.

### MTB

The MTB application kits enable quick and easy implementation of automated machine loading. The specific application kits take on the important key role of workpiece handling and workpiece clamping. They seamlessly fit into the machine environment.

### Field of application

Handling tasks in the environment of cutting machines with harsh ambient conditions and contamination by chips, coolant and oil.



### Advantages – Your benefits

**The perfect match.** Due to the high application specialization of the application kits, you do not have to search long for a suitable solution. Use your time for more important things.

**Increased productivity.** You don't have an employee available for a third shift? Let the robot work for you.

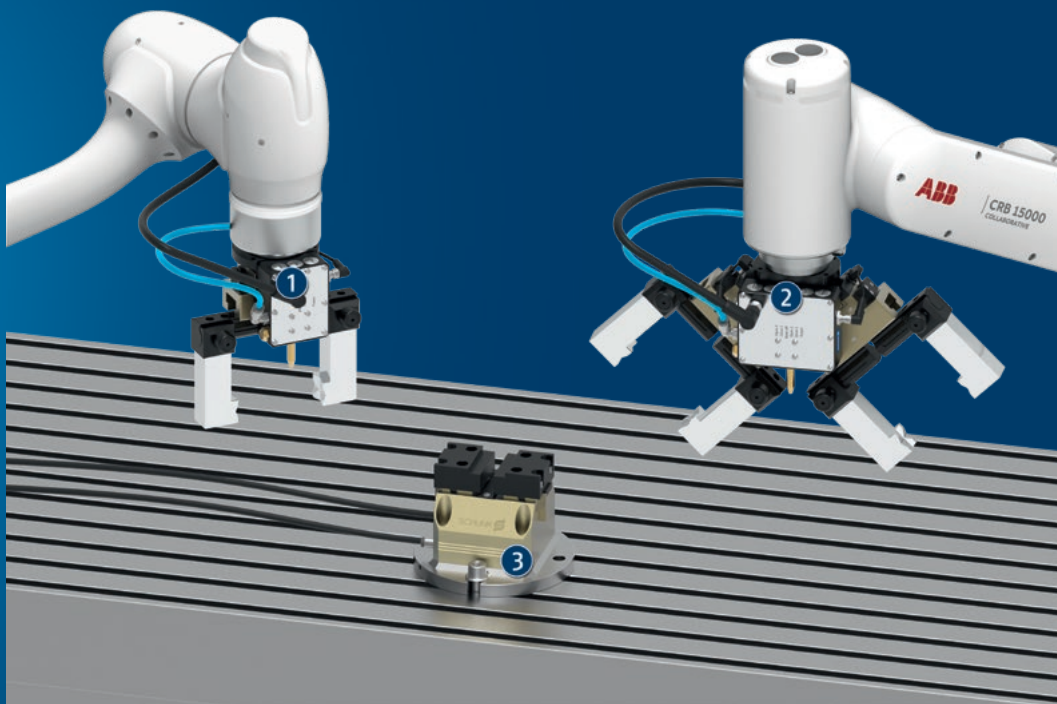
**Relieve employees.** Protect your employees from dirty, dangerous and tedious tasks such as manual loading and cleaning operations.

**Plug & work.** The seamless integration of the components into the robot control system saves you from having to carry out extensive integration work.

## Functional description

The robot is an important key element in automated machine loading. It is used for feeding raw parts and also removes the finish-machined products. The MTB application kits combine the SCHUNK SYNERGY from gripping and

clamping technology and provide support both when clamping the workpieces within the machine and when handling them with the robot.



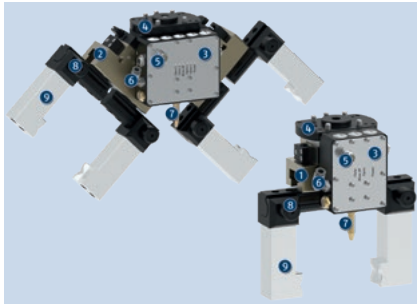
- ① **Single gripper**  
Perfect for use in confined spaces

- ② **Double gripper**  
Loading and unloading in just one cycle. Increase in machine productivity.

- ③ **Clamping force block**  
Reliable holding of the workpiece during machining

## Detailed functional description

### Single grippers and double grippers



Single grippers (1) are perfect for confined spaces and allow easy entry into automated machine loading. Double grippers (2) can increase machine productivity as the machine is loaded and unloaded in just one cycle.

- ❶ Single gripper
- ❷ Double gripper
- ❸ Sealed valve box with status LED
- ❹ Mechanical adapter for robot connection
- ❺ M12 connector for electrical connection
- ❻ Push-in fitting for compressed air connection
- ❼ Pre-assembled blow-off nozzle
- ❽ Universal intermediate jaw UZB (available as an accessory)
- ❾ Universal top jaw AUB JGP-P (available as an accessory)

### Automated clamping force block with valve clusters



The interplay of the grippers and automated clamping force block PGS3 (1) increases the productivity of the metal cutting machine. The integration time is minimized by the valve block included in the scope of delivery.

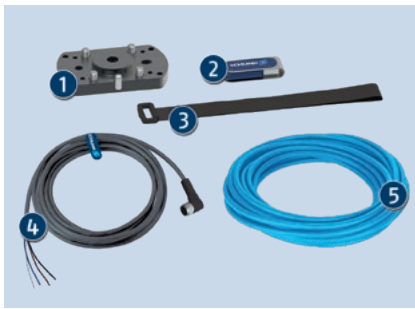
- ❶ TANDEM PGS3 clamping force block
- ❷ Integrated flange for direct mounting on the machine table
- ❸ Sealed valve box with status LED prepared for field mounting
- ❹ Push-in fitting for compressed air connection
- ❺ M12 connector for electrical connection
- ❻ Top jaw blanks KTR-H for individual reworking (available as accessories)

### Supported robots



The MTB application kits are available as standard for a wide range of robots from different manufacturers. These include robots from the manufacturers Universal Robots, FANUC, Doosan Robotics, Techman Robot, OMRON and ABB. A detailed list of compatible robots can be found in the accessories section. Your robot is not included? Please contact us for details!

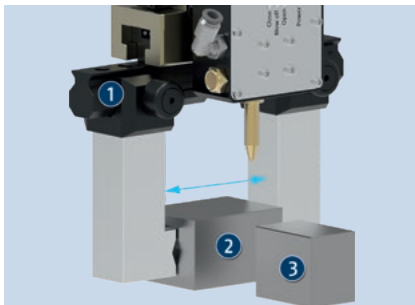
## Robot connection packages



Combining a suitable connection package with the used robot is the only way to enable seamless interaction between the component and the robot. The scope of delivery can be taken from the list. The robot connection kit for the clamping force block PGS3 does not include an adapter plate. Metal protection hoses are also included to provide extra protection for the plastic hoses in the machine room.

- ❶ Adapter plate matching the drilling pattern of the respective robot
- ❷ USB stick for robot software
- ❸ Velcro tapes for fastening cables and hoses to the robot
- ❹ Connection cables
- ❺ Plastic hose

## Stroke adjustment via universal intermediate jaw UZB



The universal intermediate jaw UZB (1) allows fast, tool-free, safe moving of top jaws on the gripper. This means that a gripper can be adjusted to a new workpiece size in just a few seconds.

- ❶ UZB universal intermediate jaw
- ❷ Long workpiece
- ❸ Short workpiece

## Tool-free jaw quick-change system BSWS-M



The tool-free jaw quick-change system BSWS-M allows top jaws to be exchanged on the gripper manually, rapidly and without tools. If the geometry of the workpiece or the gripping process changes, the gripper can be converted to new top jaws at the push of a button, thereby increasing the variety of workpieces that can be handled.

- ❶ Base BSWS-BM
- ❷ Adapter pin BSWS-A

## General notes about the series

**Housing material:** Aluminum

**Base jaw material:** Steel

**Actuation:** pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4].

**Warranty:** 24 months

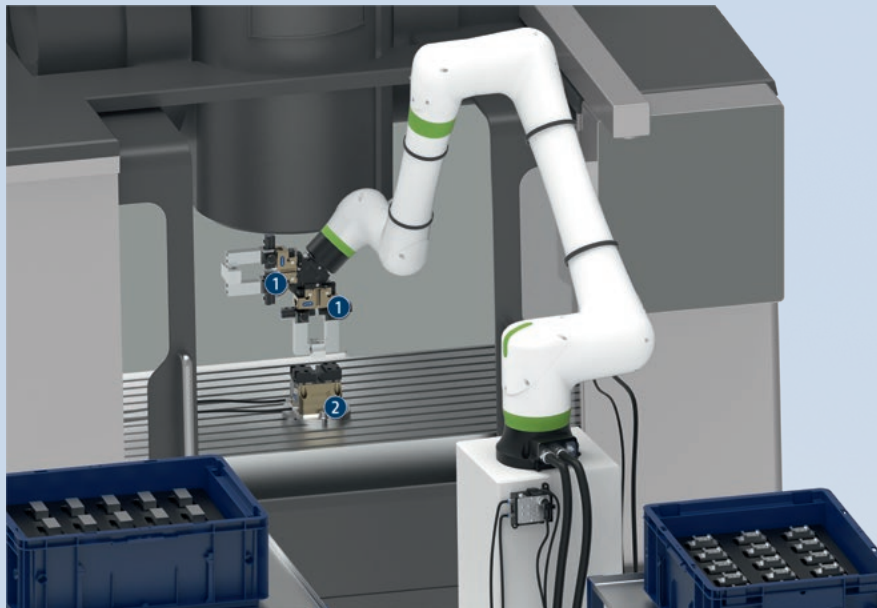
**Gripping force:** is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration).

**Finger length:** is measured from the reference surface as the distance P in direction to the main axis. The maximum permissible finger length applies until the nominal operating pressure is achieved. With higher pressures, the finger length must be reduced proportionally to the nominal operating pressure.

**Repeat accuracy:** is defined as a distribution of the end Position for 100 consecutive strokes.

**Workpiece weight:** is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity  $g$ . For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

**Closing and opening times:** are purely the times that the base jaws or fingers are in motion, including valve switching times. PLC reaction times are not included in the above-mentioned times and must be taken into consideration when determining cycle times.



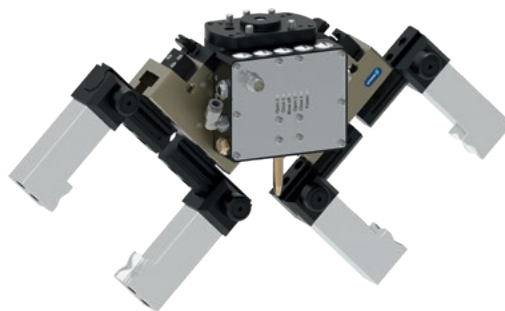
## Application example

Loading and unloading of a machine tool optimized for the cycle time. By using two grippers on the robot, the machine tool can be loaded automatically in a way that is optimized for the cycle time, and productivity can be increased. After the finished part has been removed from the first gripper, the automated clamping force block is cleaned of coolant and chips via the integrated blow-off nozzle of the double gripper. After that, the second gripper can directly insert the unmachined part and the machining process can be started. The finished part is then deposited and the next unmachined part is picked up again in parallel with the machining of the workpiece.

- ❶ 2-finger parallel gripper JGP-P
- ❷ TANDEM PGS3 clamping force block

## SCHUNK offers more ...

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



Universal intermediate jaw



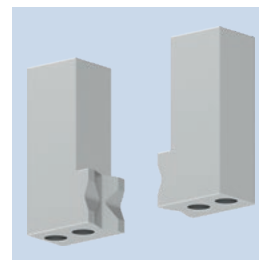
Jaw quick-change system



Finger blank



Finger blank with jaw quick-change system



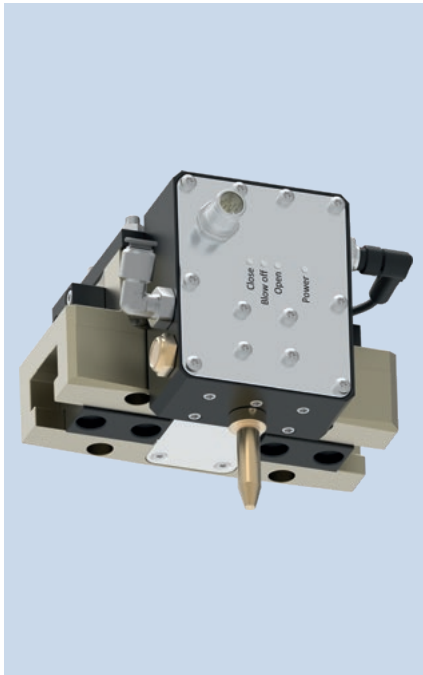
Attachment fingers

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

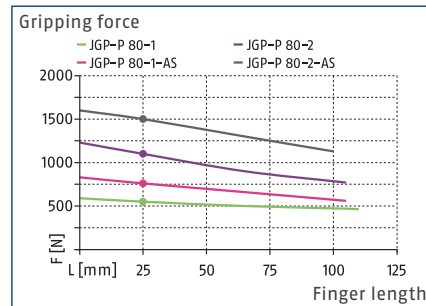


# MTB Single Gripper JGP-P 80

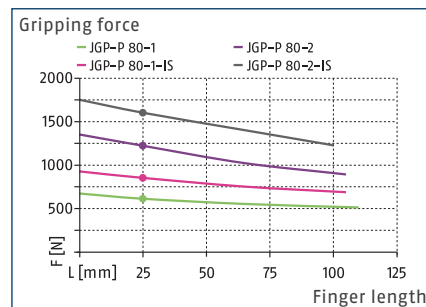
Application kit



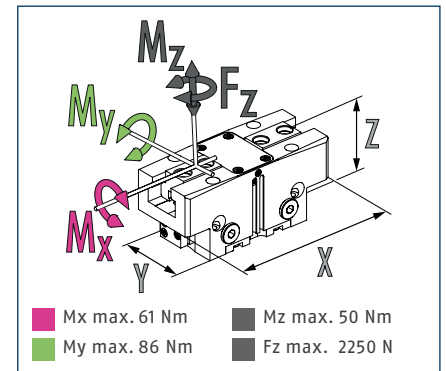
## Gripping force O.D. gripping



## Gripping force I.D. gripping



## Dimensions and maximum loads



① The indicated moments and forces are statical values, apply for each base jaw and may appear simultaneously. Loads may additionally occur to the moment produced by the gripping force itself.

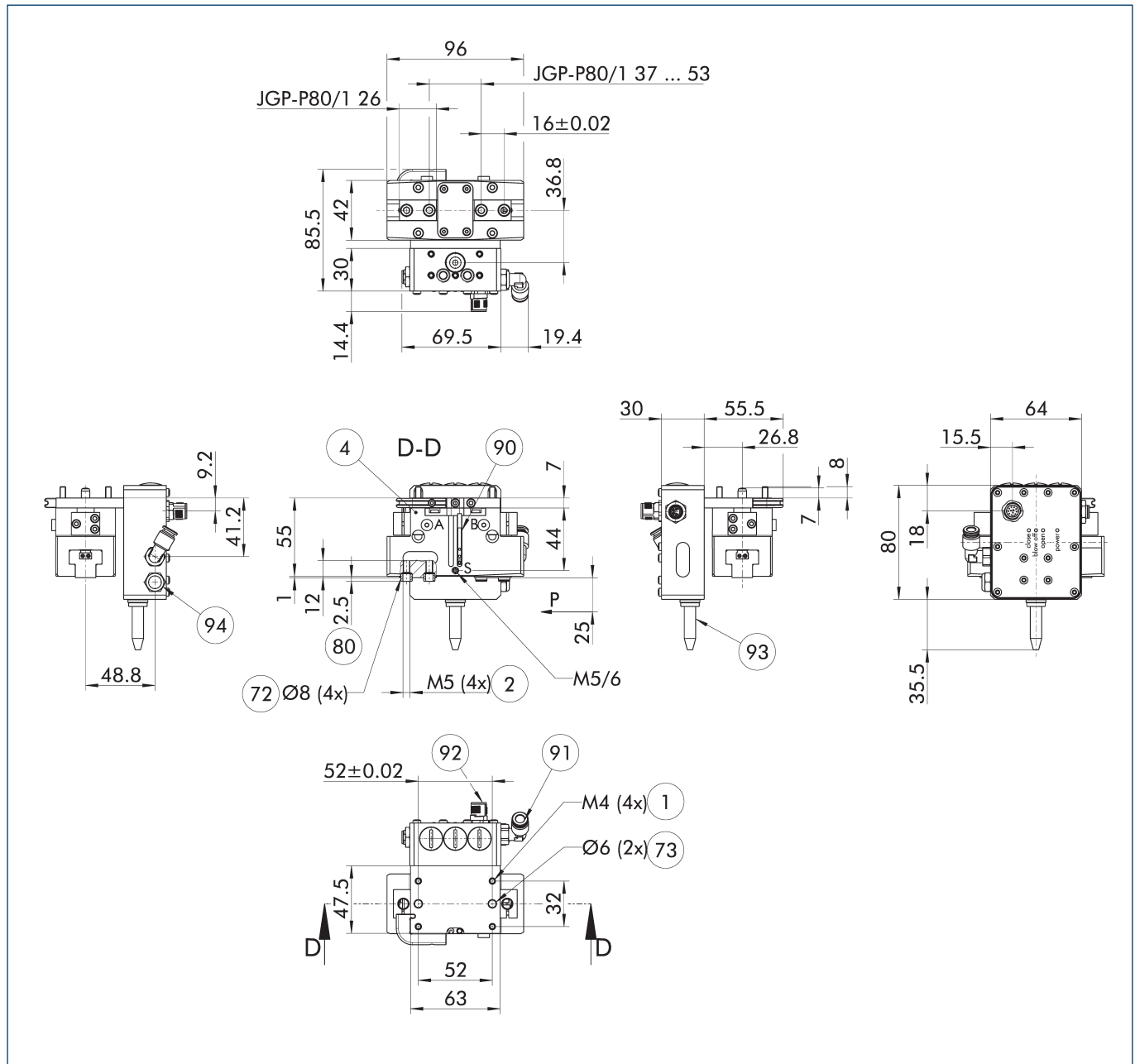
## Technical data

Description		MTB SG-JGP-P 80-1
ID		1490825
<b>General operating data</b>		
Sensor system		pre-assembled, 2-way magnetically adjustable
Dimensions X x Y x Z	[mm]	96 x 100 x 116
Weight	[kg]	0.99
<b>Mechanical operating data</b>		
Stroke per jaw	[mm]	8
Closing/opening force	[N]	550/610
Recommended workpiece weight	[kg]	2.75
Max. permissible finger length	[mm]	110
Max. permissible mass per finger	[kg]	0.6
IP protection class of gripper		40
IP protection class of valve box		67
Min./max. ambient temperature	[°C]	5/50
Min./nom./max. operating pressure	[bar]	2.5/6/7
Min./max. air purge pressure	[bar]	0.5/1
Closing/opening time	[s]	0.07/0.07
Fluid consumption double stroke	[cm³]	29
Fluid consumption blow-off nozzle	[cm³/s]	3000
Repeat accuracy	[mm]	0.01
Cable connector		M12, A-coded
<b>Electrical operating data</b>		
Nominal voltage	[V DC]	24
Nominal current	[mA]	170
Max. current	[mA]	500
Communication interface		digital I/O
Number of digital I/O		4/2

① The full gripping force as per the data table will possibly become effective after a few hundred gripping cycles. Compatibility with a robot is only given in conjunction with a corresponding connection package.



## Main view



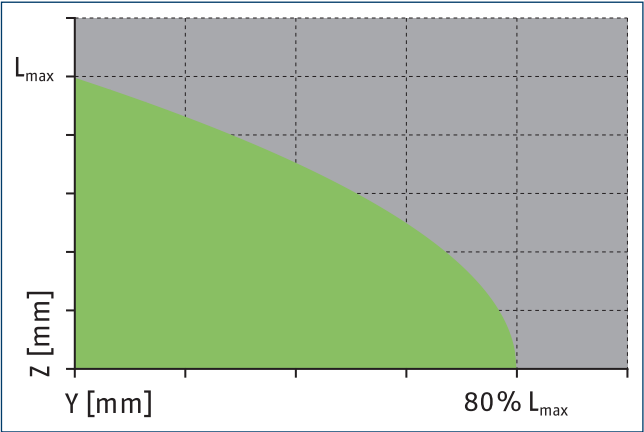
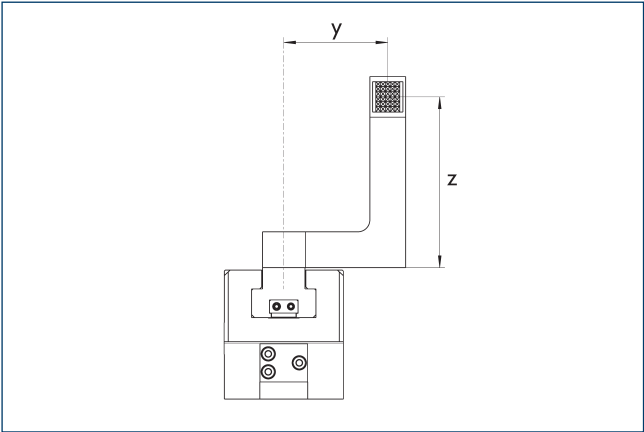
The drawing shows the gripper in the basic version with closed jaws, without dimensional consideration of the options described below.

- |    |  |    |  |
|----|--|----|--|
| S  | Air purge connection                                   | 90 | Sensor MMS 22..                                |
| 1  | Gripper connection                                     | 91 | Plug-in connection Ø 6 mm (air connection)     |
| 2  | Finger connection                                      | 92 | M12 connector, A-coded (electrical connection) |
| 4  | Grippers   | 93 | Blow-off nozzle                                |
| 72 | Fit for centering sleeves                              | 94 | Exhaust / silencer                             |
| 73 | Fit for centering pins                                 |    |  |
| 80 | Depth of the centering sleeve hole in the counter part |    |  |

# MTB Single Gripper JGP-P 80

Application kit

## Maximum permitted finger projection



■ Permitted range

■ Inadmissible range

$L_{max}$  is equivalent to the maximum permitted finger length, see the technical data table.

## Robot connection package

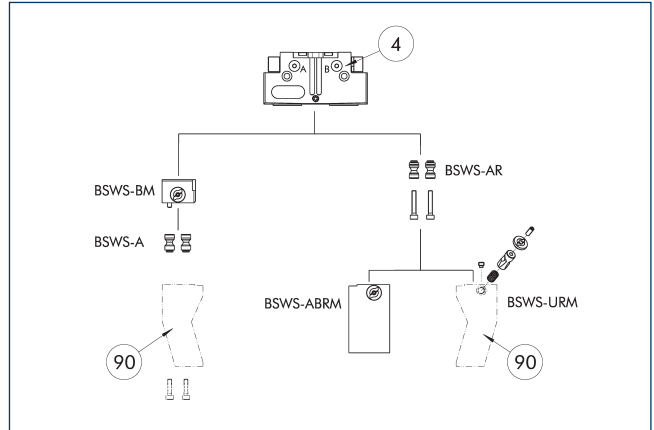


Robot connection packages contain all the necessary components to successfully adapt the gripper to the robot and to put it into operation.

Description	ID	Manufacturer	Series	Model
Robot connection package				
MTB CNK-SG/DG-RF1	1490834	Universal Robots	e-Series	UR5e, UR10e, UR16e
MTB CNK-SG/DG-RF1	1490834	FANUC	CRX	CRX-10iA, CRX-10iA/L
MTB CNK-SG/DG-RF1	1490834	ABB	GoFa	CRB 15000
MTB CNK-SG/DG-RF1	1490834	Techman Robot	TM	TM5, TM12, TM14
MTB CNK-SG/DG-RF1	1490834	OMRON	TM	TM5, TM12, TM14
MTB CNK-SG/DG-RF1	1490834	Doosan Robotics	A-Series, M-Series, H-Series	M609, M1509, M1013, M0617, A0509, A0509s, A0912, A0912s, H2017, H2515
MTB CNK-SG/DG-RF1	1490834		UR 3/5/10/16 (e-series only), TM 5/12/14, OMRON TM 5/12/14, Doosan Robotics M-series/A-series/H-series, FANUC CRX-10iA/CRX-10iA/L, ABB GoFa (CRB 15000)	

① The scope of delivery of the robot connection package includes the following contents: mechanical adapter incl. fastening material, connection cable, compressed air hose, Velcro straps for fastening cables and hoses to the robot, USB flash drive. The instructions in the robot-specific commissioning instructions must be observed. You will find the robot-specific software and commissioning instructions at [www.schunk.com/mtb-downloads](http://www.schunk.com/mtb-downloads).

## Jaw quick-change system BSWS-M



④ Grippers      ⑨ Customized gripper fingers

There are various jaw quick-change systems available for the gripper. For detailed information, please refer to the corresponding product.

Description	ID	Scope of delivery
Jaw quick-change system adapter pin		
BSWS-A 80	0303024	2
BSWS-AR 80	0300093	2
Quick-change jaw system base		
BSWS-BM 80	1313901	1
Jaw quick-change system finger blank		
BSWS-ABRM-PGZN-plus 80	1420852	1
Jaw quick-change system locking mechanism		
BSWS-URM 80	1398402	1

① Only systems that are listed in the table, can be used.

## Fields of application

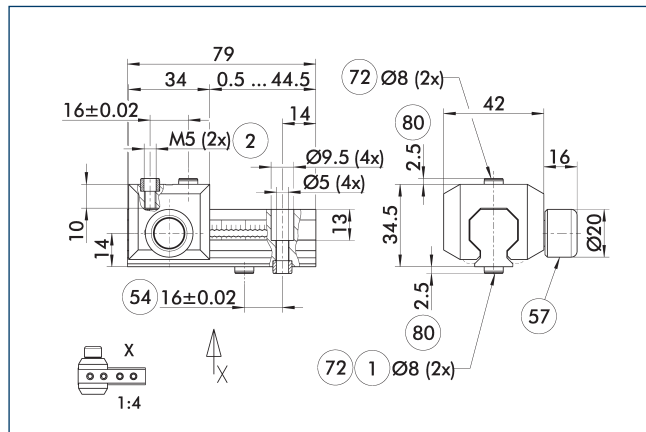
Series	Size	Variant	Suitability
MTB	Single Gripper JGP-P 80	-1 (6 bar)	■■■■
Legend			
■■■■		Can be combined without restrictions	
■■□□		Use with restrictions (see loading limits)	
□□□□		cannot be combined	

The load limits for describing the application limits can be found in the catalog chapter of the corresponding accessories. If the operating pressure is higher than 6 bar, suitability for use above the application limits must be checked.

# MTB Single Gripper JGP-P 80

Application kit

## UZB 80 universal intermediate jaw



- ① Gripper connection
- ② Finger connection
- ⑤④ Optional right or left connection
- ⑤⑦ Locking
- ⑦② Fit for centering sleeves
- ⑧① Depth of the centering sleeve hole in the counter part

The drawing shows the UZB universal intermediate jaw. The fully removable UZB-S slide (can also be ordered separately) allows for a quick jaw change.

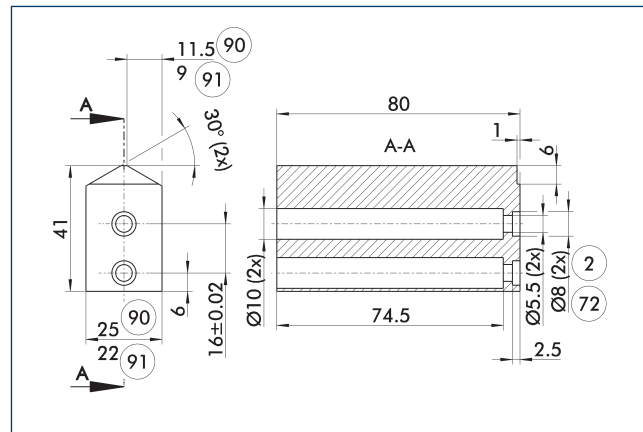
Description	ID	Grid dimension
		[mm]
Slide for universal intermediate jaw		
UZB-S 80	5518271	2
Universal intermediate jaw		
UZB 80	0300043	2
Finger blank		
ABR-PGZN-plus 80	0300011	
SBR-PGZN-plus 80	0300021	

## Fields of application

Series	Size	Variant	Suitability
MTB	Single Gripper JGP-P 80	-1 (6 bar)	■■■■
Legend			
■■■■	Can be combined without restrictions		
■■□□	Use with restrictions (see loading limits)		
□□□□	cannot be combined		

The load limits for describing the application limits can be found in the catalog chapter of the corresponding accessories.  
If the operating pressure is higher than 6 bar, suitability for use above the application limits must be checked.

## Finger blanks ABR- / SBR-PGZN-plus 80

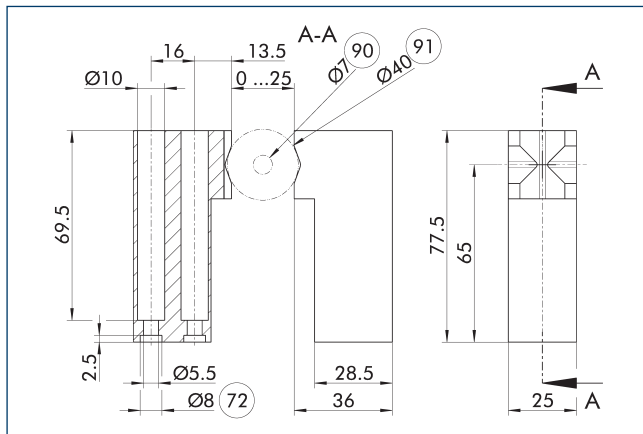


- ② Finger connection
- ⑦② Fit for centering sleeves
- ⑨① ABR-PGZN-plus
- ⑨① SBR-PGZN-plus

The drawing shows the finger blank which can be reworked by the customer.

Description	ID	Material	Scope of delivery
Finger blank			
ABR-PGZN-plus 80	0300011	Aluminum (3.4365)	1
SBR-PGZN-plus 80	0300021	Steel (1.7131)	1

## Universal top jaw AUB JGP-P



- 72 Fit for centering sleeves  
 90 min. grippable diameter  
 91 max. grippable diameter

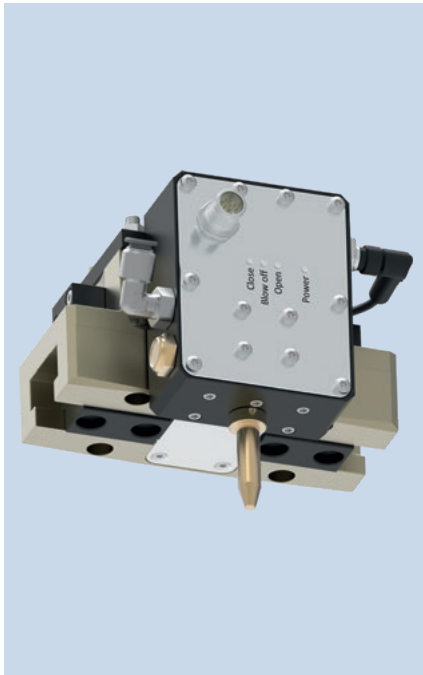
The top jaws are specifically designed for the JGP-P gripper. Depending on the size, they are available with varying clamping ranges. Depending on the application, the top jaws can be used for gripping cylindrical or square workpieces.

Description	ID	Material	Scope of delivery
Universal top jaw			
MTB AUB-JGP-P 80/25	1490846	Aluminum	2

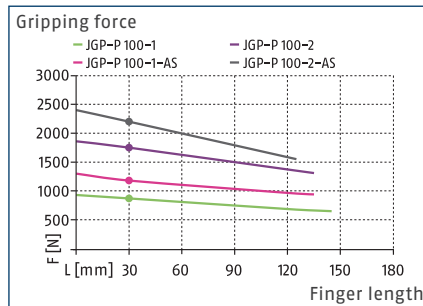
- ① The scope of delivery includes two top jaws including fastening material. Observe the notes in the Assembly and Operating Manual of the JGP-P gripper.

# MTB Single Gripper JGP-P 100

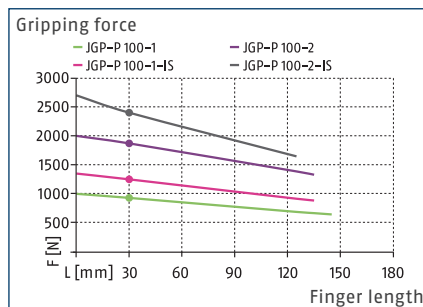
Application kit



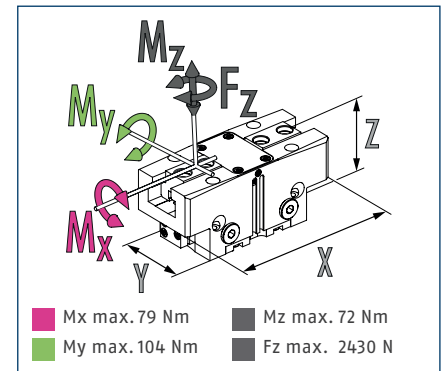
## Gripping force O.D. gripping



## Gripping force I.D. gripping



## Dimensions and maximum loads



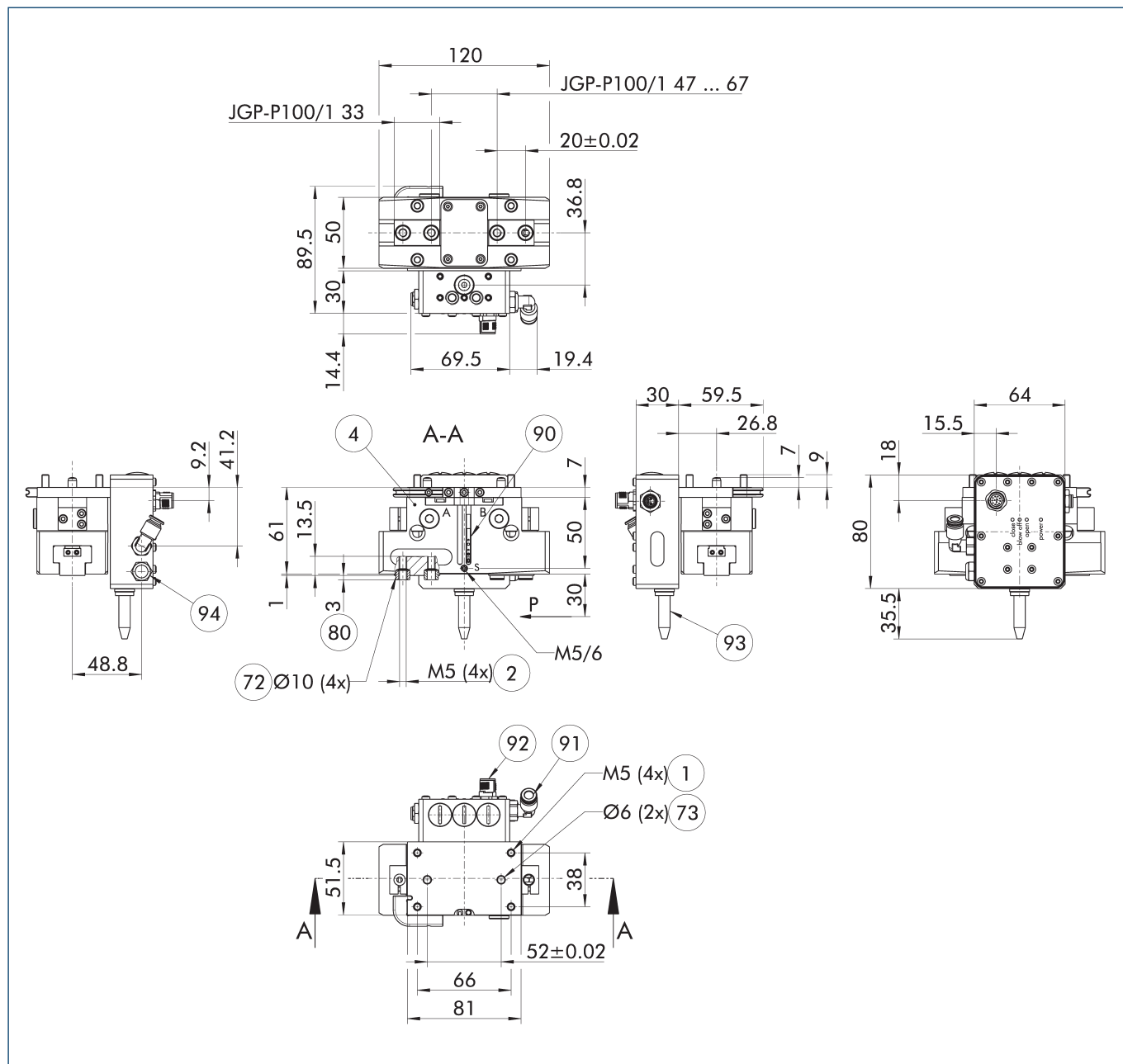
① The indicated moments and forces are statical values, apply for each base jaw and may appear simultaneously. Loads may additionally occur to the moment produced by the gripping force itself.

## Technical data

Description		MTB SG-JGP-P 100-1
ID		1490827
<b>General operating data</b>		
Sensor system		pre-assembled, 2-way magnetically adjustable
Dimensions X x Y x Z	[mm]	120 x 104 x 116
Weight	[kg]	1.38
<b>Mechanical operating data</b>		
Stroke per jaw	[mm]	10
Closing/opening force	[N]	870/930
Recommended workpiece weight	[kg]	4.35
Max. permissible finger length	[mm]	145
Max. permissible mass per finger	[kg]	1.1
IP protection class of gripper		40
IP protection class of valve box		67
Min./max. ambient temperature	[°C]	5/50
Min./nom./max. operating pressure	[bar]	2.5/6/7
Min./max. air purge pressure	[bar]	0.5/1
Closing/opening time	[s]	0.09/0.09
Fluid consumption double stroke	[cm³]	29
Fluid consumption blow-off nozzle	[cm³/s]	3000
Repeat accuracy	[mm]	0.01
Cable connector		M12, A-coded
<b>Electrical operating data</b>		
Nominal voltage	[V DC]	24
Nominal current	[mA]	170
Max. current	[mA]	500
Communication interface		digital I/O
Number of digital I/O		4/2

① The full gripping force as per the data table will possibly become effective after a few hundred gripping cycles. Compatibility with a robot is only given in conjunction with a corresponding connection package.

## Main view



The drawing shows the gripper in the basic version with closed jaws, without dimensional consideration of the options described below.

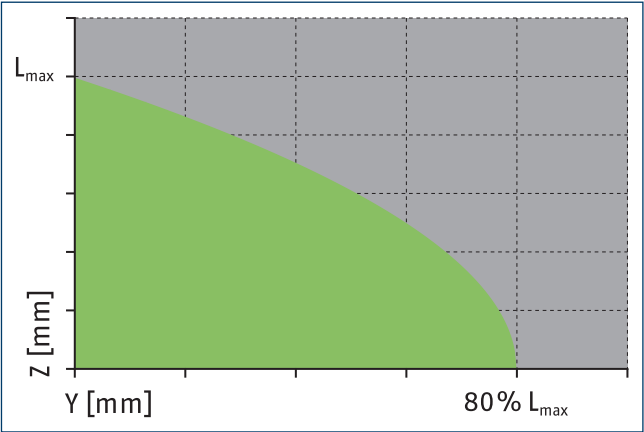
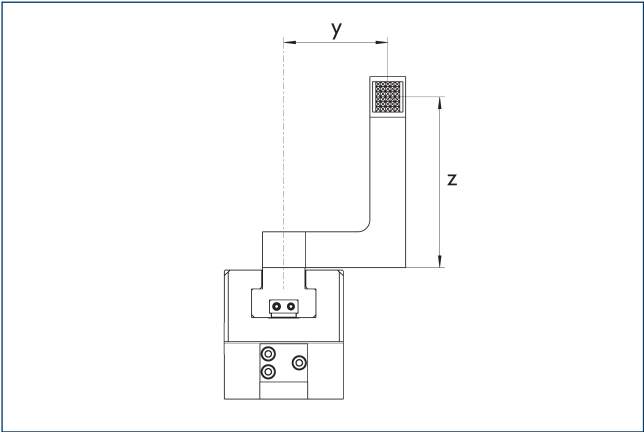
- |    |  |    |  |
|----|--|----|--|
| S  | Air purge connection                                   | 90 | Sensor MMS 22..                                |
| 1  | Gripper connection                                     | 91 | Plug-in connection Ø 6 mm (air connection)     |
| 2  | Finger connection                                      | 92 | M12 connector, A-coded (electrical connection) |
| 4  | Grippers   | 93 | Blow-off nozzle                                |
| 72 | Fit for centering sleeves                              | 94 | Exhaust / silencer                             |
| 73 | Fit for centering pins                                 |    |  |
| 80 | Depth of the centering sleeve hole in the counter part |    |  |



# MTB Single Gripper JGP-P 100

Application kit

## Maximum permitted finger projection



■ Permitted range

■ Inadmissible range

$L_{max}$  is equivalent to the maximum permitted finger length, see the technical data table.

## Robot connection package

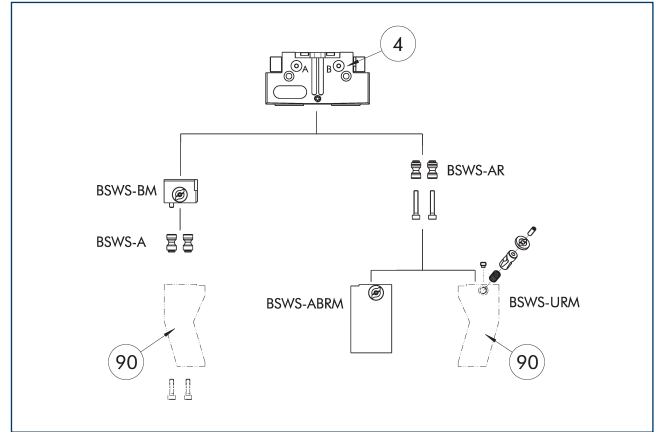


Robot connection packages contain all the necessary components to successfully adapt the gripper to the robot and to put it into operation.

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Robot connection package				
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MTB CNK-SG/DG-RF1	1490834	FANUC	CRX	CRX-10iA, CRX-10iA/L
MTB CNK-SG/DG-RF1	1490834	ABB	GoFa	CRB 15000
MTB CNK-SG/DG-RF1	1490834	Techman Robot	TM	TM5, TM12, TM14
MTB CNK-SG/DG-RF1	1490834	OMRON	TM	TM5, TM12, TM14
MTB CNK-SG/DG-RF1	1490834	Doosan Robotics	A-Series, M-Series, H-Series	M609, M1509, M1013, M0617, A0509, A0509s, A0912, A0912s, H2017, H2515
MTB CNK-SG/DG-RF1	1490834		UR 3/5/10/16 (e-series only), TM 5/12/14, OMRON TM 5/12/14, Doosan Robotics M-series/A-series/H-series, FANUC CRX-10iA/CRX-10iA/L, ABB GoFa (CRB 15000)	

① The scope of delivery of the robot connection package includes the following contents: mechanical adapter incl. fastening material, connection cable, compressed air hose, Velcro straps for fastening cables and hoses to the robot, USB flash drive. The instructions in the robot-specific commissioning instructions must be observed. You will find the robot-specific software and commissioning instructions at [www.schunk.com/mtb-downloads](http://www.schunk.com/mtb-downloads).

## Jaw quick-change system BSWS-M



④ Grippers      ⑨ Customized gripper fingers

There are various jaw quick-change systems available for the gripper. For detailed information, please refer to the corresponding product.

Description	ID	Scope of delivery
Jaw quick-change system adapter pin		
BSWS-A 100	0303026	2
BSWS-AR 100	0300094	2
Quick-change jaw system base		
BSWS-BM 100	1313902	1
Jaw quick-change system finger blank		
BSWS-ABRM-PGZN-plus 100	1420853	1
Jaw quick-change system locking mechanism		
BSWS-URM 100	1398403	1

① Only systems that are listed in the table, can be used.

## Fields of application

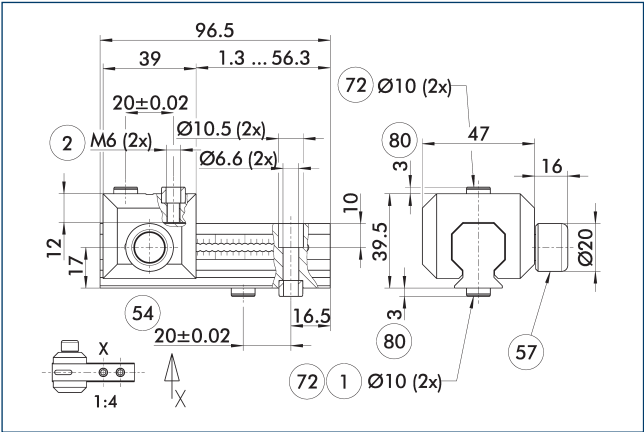
Series	Size	Variant	Suitability
MTB	Single Gripper JGP-P 100	-1 (6 bar)	■■■■
Legend			
■■■■		Can be combined without restrictions	
■■□□		Use with restrictions (see loading limits)	
□□□□		cannot be combined	

The load limits for describing the application limits can be found in the catalog chapter of the corresponding accessories. If the operating pressure is higher than 6 bar, suitability for use above the application limits must be checked.

# MTB Single Gripper JGP-P 100

Application kit

## UZB 100 universal intermediate jaw



- ① Gripper connection
- ② Finger connection
- ⑤④ Optional right or left connection
- ⑤⑦ Locking
- ⑦② Fit for centering sleeves
- ⑧① Depth of the centering sleeve hole in the counter part

The drawing shows the UZB universal intermediate jaw. The fully removable UZB-S slide (can also be ordered separately) allows for a quick jaw change.

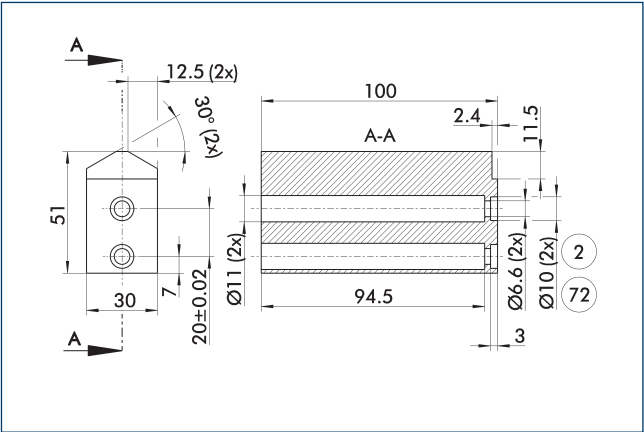
Description	ID	Grid dimension
		[mm]
Slide for universal intermediate jaw		
UZB-S 100	5518272	2.5
Universal intermediate jaw		
UZB 100	0300044	2.5
Finger blank		
ABR-PGZN-plus 100	0300012	
SBR-PGZN-plus 100	0300022	

### Fields of application

Series	Size	Variant	Suitability
MTB	Single Gripper JGP-P 100	-1 (6 bar)	■■■■
Legend			
■■■■	Can be combined without restrictions		
■■■□	Use with restrictions (see loading limits)		
□□□□	cannot be combined		

The load limits for describing the application limits can be found in the catalog chapter of the corresponding accessories.  
If the operating pressure is higher than 6 bar, suitability for use above the application limits must be checked.

## Finger blanks ABR- / SBR-PGZN-plus 100

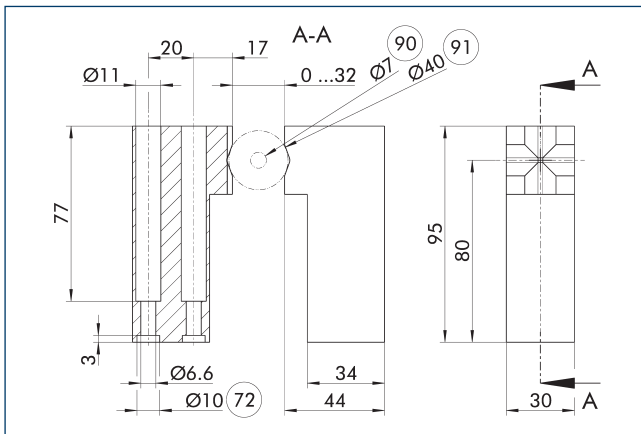


- ② Finger connection
- ⑦② Fit for centering sleeves

The drawing shows the finger blank which can be reworked by the customer.

Description	ID	Material	Scope of delivery
Finger blank			
ABR-PGZN-plus 100	0300012	Aluminum (3.4365)	1
SBR-PGZN-plus 100	0300022	Steel (1.7131)	1

## Universal top jaw AUB JGP-P



- 72 Fit for centering sleeves  
 90 min. grippable diameter  
 91 max. grippable diameter

The top jaws are specifically designed for the JGP-P gripper. Depending on the size, they are available with varying clamping ranges. Depending on the application, the top jaws can be used for gripping cylindrical or square workpieces.

Description	ID	Material	Scope of delivery
Universal top jaw			
MTB AUB-JGP-P 100/32	1490854	Aluminum	2

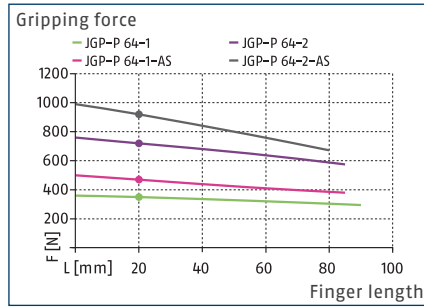
- ① The scope of delivery includes two top jaws including fastening material. Observe the notes in the Assembly and Operating Manual of the JGP-P gripper.

# MTB Double Gripper JGP-P 64

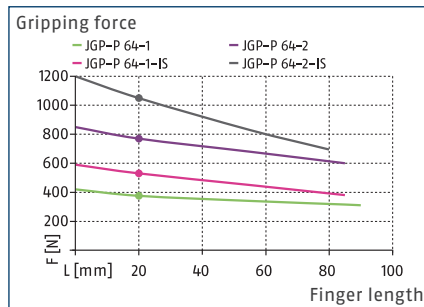
Application kit



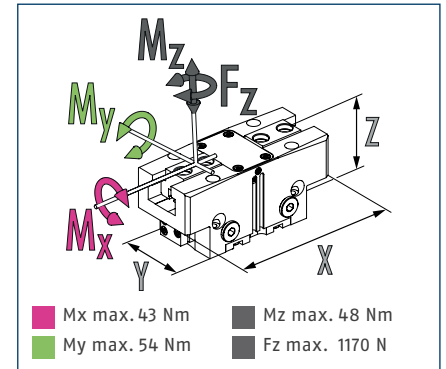
## Gripping force O.D. gripping



## Gripping force I.D. gripping



## Dimensions and maximum loads



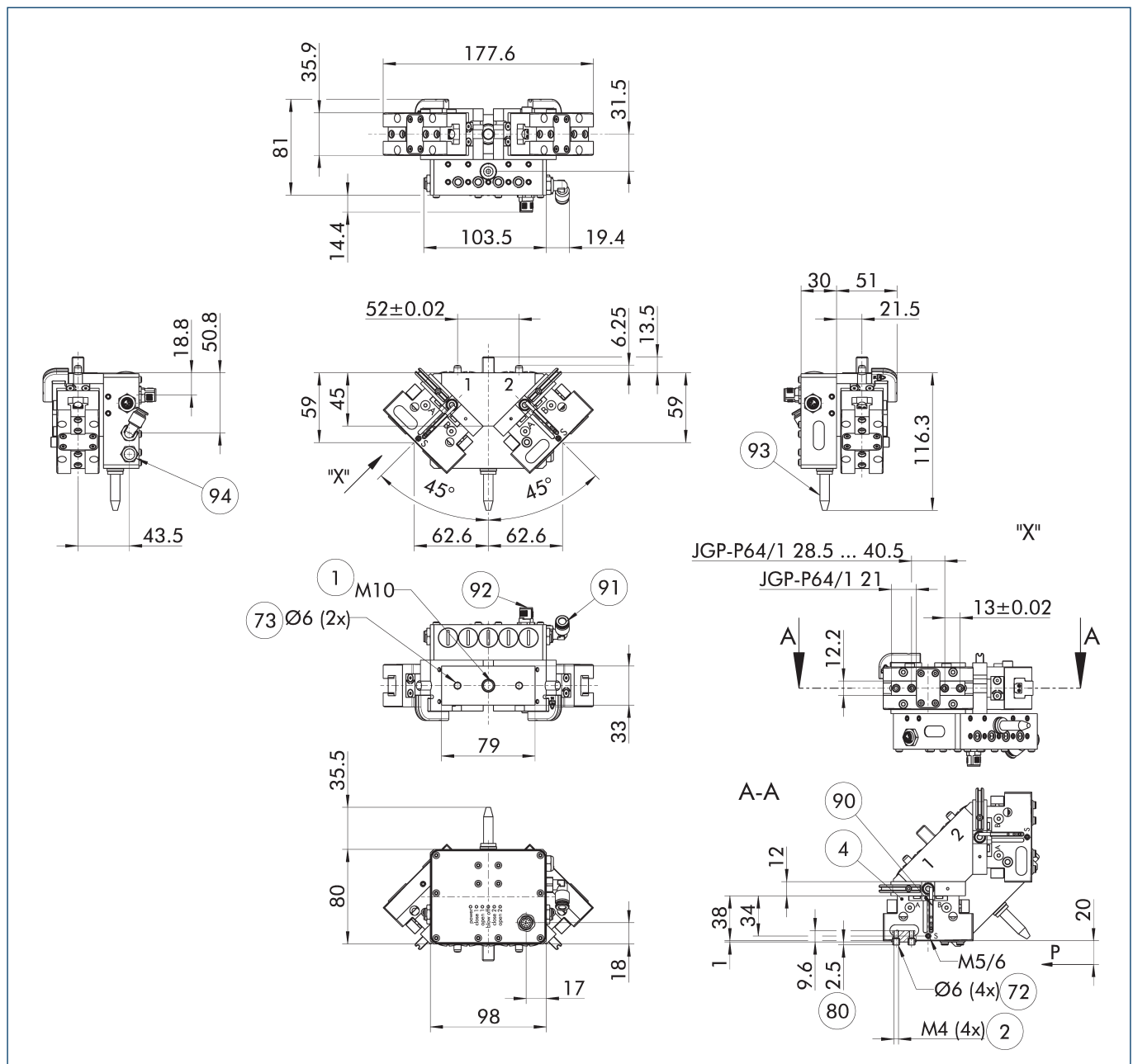
① The indicated moments and forces are static values, apply for each base jaw and may appear simultaneously. Loads may additionally occur to the moment produced by the gripping force itself.

## Technical data

Description		MTB DG-JGP-P 64-1
ID		1490830
<b>General operating data</b>		
Sensor system		pre-assembled, 2-way magnetically adjustable
Dimensions X x Y x Z	[mm]	178 x 96 x 117
Weight	[kg]	1.62
<b>Mechanical operating data</b>		
Stroke per jaw	[mm]	6
Closing/opening force	[N]	350/375
Recommended workpiece weight	[kg]	1.75
Max. permissible finger length	[mm]	90
Max. permissible mass per finger	[kg]	0.4
IP protection class of gripper		40
IP protection class of valve box		67
Min./max. ambient temperature	[°C]	5/50
Min./nom./max. operating pressure	[bar]	2.5/6/7
Min./max. air purge pressure	[bar]	0.5/1
Closing/opening time	[s]	0.05/0.05
Fluid consumption double stroke	[cm³]	15
Fluid consumption blow-off nozzle	[cm³/s]	3000
Repeat accuracy	[mm]	0.01
Cable connector		M12, A-coded
<b>Electrical operating data</b>		
Nominal voltage	[V DC]	24
Nominal current	[mA]	170
Max. current	[mA]	500
Communication interface		digital I/O
Number of digital I/O		6/4

① The full gripping force as per the data table will possibly become effective after a few hundred gripping cycles. Compatibility with a robot is only given in conjunction with a corresponding connection package.

## Main view



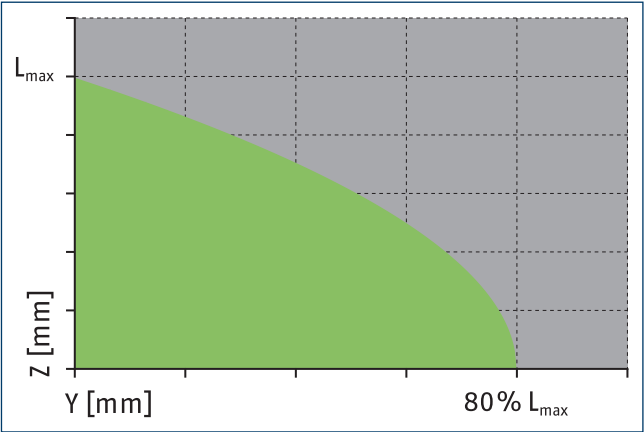
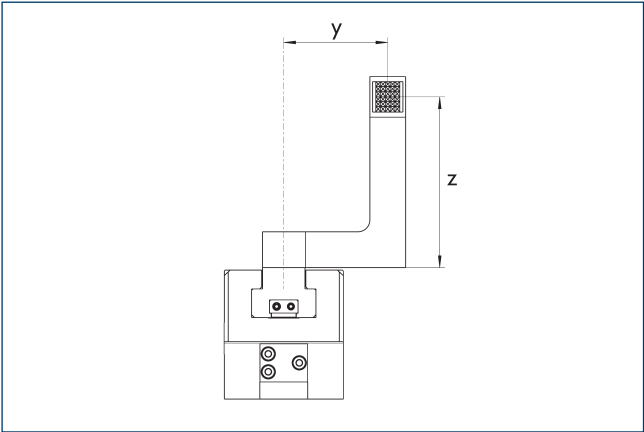
The drawing shows the gripper in the basic version with closed jaws, without dimensional consideration of the options described below.

- |    |  |    |  |
|----|--|----|--|
| S  | Air purge connection                                   | 90 | Sensor MMS 22..                                |
| 1  | Gripper connection                                     | 91 | Plug-in connection Ø 6 mm (air connection)     |
| 2  | Finger connection                                      | 92 | M12 connector, A-coded (electrical connection) |
| 4  | Grippers   | 93 | Blow-off nozzle                                |
| 72 | Fit for centering sleeves                              | 94 | Exhaust / silencer                             |
| 73 | Fit for centering pins                                 |    |  |
| 80 | Depth of the centering sleeve hole in the counter part |    |  |

# MTB Double Gripper JGP-P 64

Application kit

## Maximum permitted finger projection



■ Permitted range      ■ Inadmissible range

$L_{max}$  is equivalent to the maximum permitted finger length, see the technical data table.



## Robot connection package

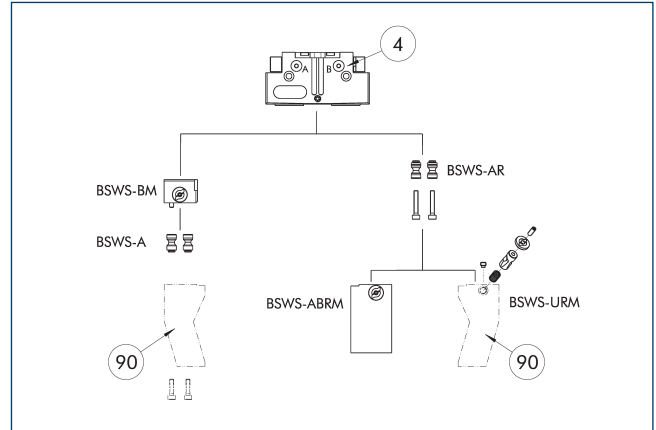


Robot connection packages contain all the necessary components to successfully adapt the gripper to the robot and to put it into operation.

Description	ID	Manufacturer	Series	Model
Robot connection package				
MTB CNK-SG/DG-RF1	1490834	Universal Robots	e-Series	UR5e, UR10e, UR16e
MTB CNK-SG/DG-RF1	1490834	FANUC	CRX	CRX-10iA, CRX-10iA/L
MTB CNK-SG/DG-RF1	1490834	ABB	GoFa	CRB 15000
MTB CNK-SG/DG-RF1	1490834	Techman Robot	TM	TM5, TM12, TM14
MTB CNK-SG/DG-RF1	1490834	OMRON	TM	TM5, TM12, TM14
MTB CNK-SG/DG-RF1	1490834	Doosan Robotics	A-Series, M-Series, H-Series	M609, M1509, M1013, M0617, A0509, A0509s, A0912, A0912s, H2017, H2515
MTB CNK-SG/DG-RF1	1490834		UR 3/5/10/16 (e-series only), TM 5/12/14, OMRON TM 5/12/14, Doosan Robotics M-series/A-series/H-series, FANUC CRX-10iA/CRX-10iA/L, ABB GoFa (CRB 15000)	

① The scope of delivery of the robot connection package includes the following contents: mechanical adapter incl. fastening material, connection cable, compressed air hose, Velcro straps for fastening cables and hoses to the robot, USB flash drive. The instructions in the robot-specific commissioning instructions must be observed. You will find the robot-specific software and commissioning instructions at [www.schunk.com/mtb-downloads](http://www.schunk.com/mtb-downloads).

## Jaw quick-change system BSWS-M



④ Grippers

⑨ Customized gripper fingers

There are various jaw quick-change systems available for the gripper. For detailed information, please refer to the corresponding product.

Description	ID	Scope of delivery
Jaw quick-change system adapter pin		
BSWS-A 64	0303022	2
BSWS-AR 64	0300092	2
Quick-change jaw system base		
BSWS-BM 64	1313900	1
Jaw quick-change system finger blank		
BSWS-ABRM-PGZN-plus 64	1420851	1
Jaw quick-change system locking mechanism		
BSWS-URM 64	1398401	1

① Only systems that are listed in the table, can be used.

## Fields of application

Series	Size	Variant	Suitability
MTB	Double Gripper JGP-P 64	-1 (6 bar)	■■■■
Legend			
■■■■		Can be combined without restrictions	
■■□□		Use with restrictions (see loading limits)	
□□□□		cannot be combined	

The load limits for describing the application limits can be found in the catalog chapter of the corresponding accessories. If the operating pressure is higher than 6 bar, suitability for use above the application limits must be checked.

## Application kit

- | Description                | ID      | Grid dimension |
|----------------------------|---------|----------------|
|                            |         | [mm]           |
| Universal intermediate jaw |         |                |
| UZH 64                     | 0300042 | 1.5            |
| Finger blank               |         |                |
| ABR-PGZN-plus 64           | 0300010 |                |
| SBR-PGZN-plus 64           | 0300020 |                |

Series	Size	Variant	Suitability
MTB	Double Gripper JGP-P 64	-1 (6 bar)	■■■■
Legend			
■■■■		Can be combined without restrictions	
■■□□		Use with restrictions (see loading limits)	
□□□□		cannot be combined	

Technical drawing of a mechanical part, showing front and side views with dimensions.

**Front View (Left):**

- Overall height: 32
- Overall width: 20
- Bottom flange thickness: 5
- Bottom flange diameter:  $\varnothing 13 \pm 0.02$
- Top flange thickness: 8.5 (2x)
- Top flange diameter:  $\varnothing 30$  (2x)
- Section line A-A is indicated.

**Side View (Right):**

- Overall length: 64
- Overall diameter:  $\varnothing 8$  (2x)
- Internal hole diameter:  $\varnothing 4.5$  (2x)
- Internal hole length: 59.5
- Section line A-A is indicated.
- Dimensions 1, 6, and 2.5 are shown for the rightmost section.

**Annotations:**

- Two circles containing the numbers 2 and 72 are located at the bottom right.

- | Description      | ID      | Material          | Scope of delivery |
|------------------|---------|-------------------|-------------------|
| Finger blank     |         |                   |                   |
| ABR-PGZN-plus 64 | 0300010 | Aluminum (3.4365) | 1                 |
| SBR-PGZN-plus 64 | 0300020 | Steel (1.7131)    | 1                 |

Technical drawing of a mechanical part, showing a cross-section A-A. The drawing includes the following dimensions and features:

- Overall height: 53.5
- Top flange thickness: 13
- Top flange outer diameter:  $\varnothing 8$
- Top flange inner diameter: 12.5
- Top flange hole diameter:  $\varnothing 7$
- Top flange hole position: 0 ... 15
- Top flange hole diameter:  $\varnothing 40$
- Top flange hole position: 90, 91
- Bottom flange thickness: 2.5
- Bottom flange outer diameter:  $\varnothing 4.5$
- Bottom flange inner diameter:  $\varnothing 6$
- Bottom flange hole diameter: 72
- Bottom flange hole position: 23
- Bottom flange hole position: 30.5
- Section A-A: 59, 49
- Section A-A: 20

- | Description         | ID      | Material | Scope of delivery |
|---------------------|---------|----------|-------------------|
| Universal top jaw   |         |          |                   |
| MTB AUB-JGP-P 64/15 | 1490841 | Aluminum | 2                 |

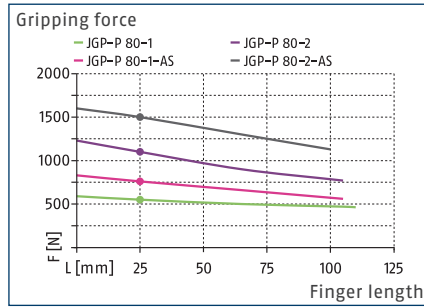
- 

# MTB Double Gripper JGP-P 80

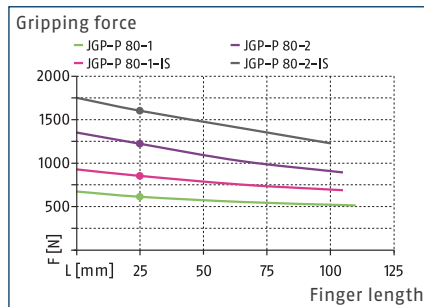
Application kit



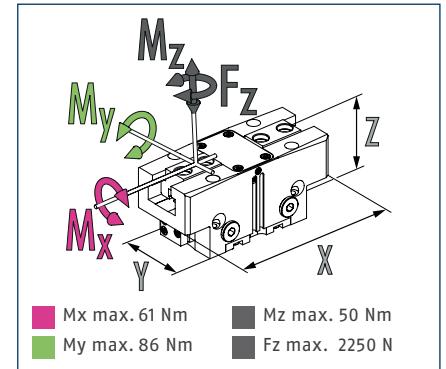
## Gripping force O.D. gripping



## Gripping force I.D. gripping



## Dimensions and maximum loads



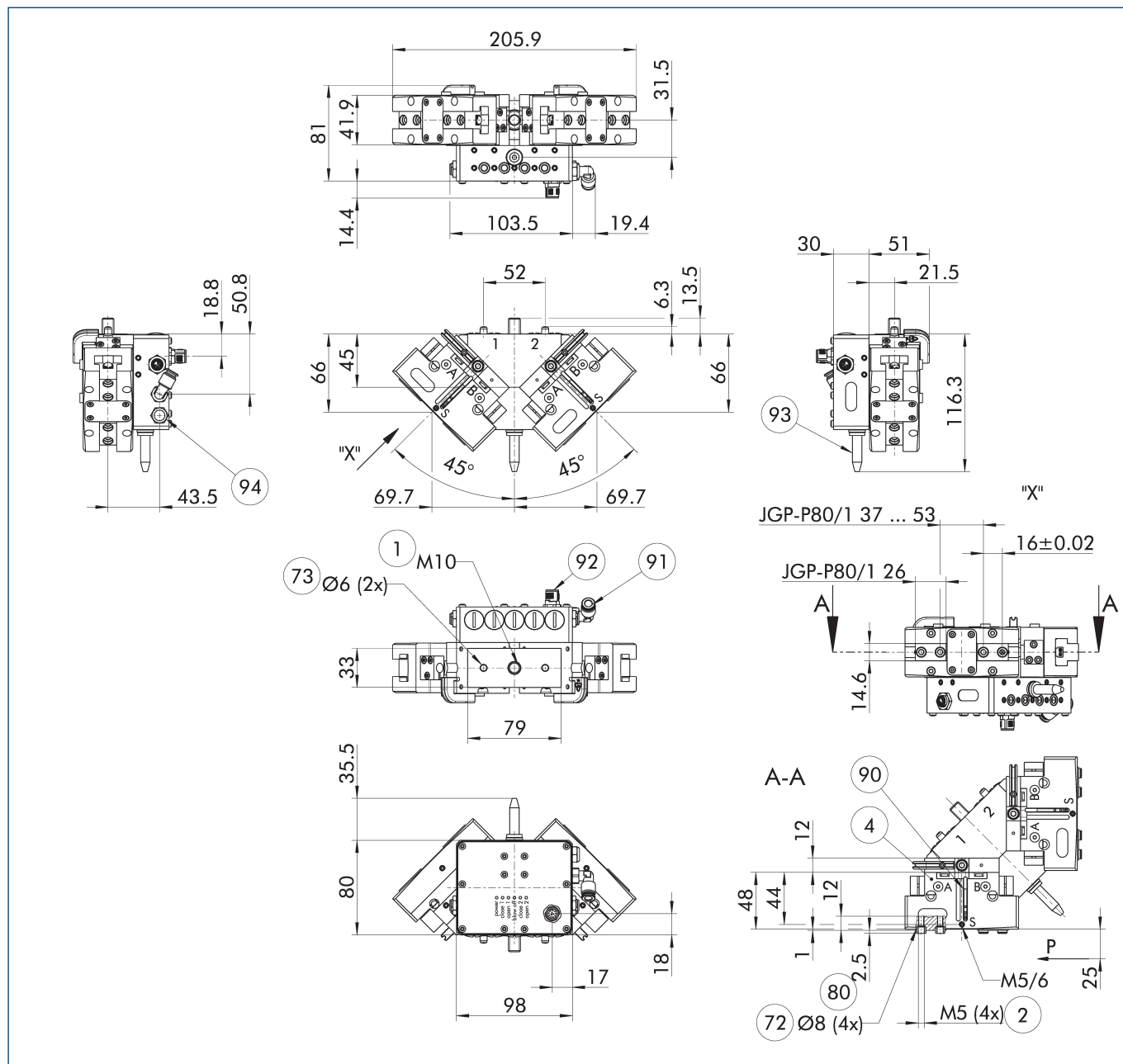
① The indicated moments and forces are statical values, apply for each base jaw and may appear simultaneously. Loads may additionally occur to the moment produced by the gripping force itself.

## Technical data

Description		MTB DG-JGP-P 80-1
ID		1490832
<b>General operating data</b>		
Sensor system		pre-assembled, 2-way magnetically adjustable
Dimensions X x Y x Z	[mm]	206 x 96 x 117
Weight	[kg]	2.1
<b>Mechanical operating data</b>		
Stroke per jaw	[mm]	8
Closing/opening force	[N]	550/610
Recommended workpiece weight	[kg]	2.75
Max. permissible finger length	[mm]	110
Max. permissible mass per finger	[kg]	0.6
IP protection class of gripper		40
IP protection class of valve box		67
Min./max. ambient temperature	[°C]	5/50
Min./nom./max. operating pressure	[bar]	2.5/6/7
Min./max. air purge pressure	[bar]	0.5/1
Closing/opening time	[s]	0.07/0.07
Fluid consumption double stroke	[cm³]	29
Fluid consumption blow-off nozzle	[cm³/s]	3000
Repeat accuracy	[mm]	0.01
Cable connector		M12, A-coded
<b>Electrical operating data</b>		
Nominal voltage	[V DC]	24
Nominal current	[mA]	170
Max. current	[mA]	500
Communication interface		digital I/O
Number of digital I/O		6/4

① The full gripping force as per the data table will possibly become effective after a few hundred gripping cycles. Compatibility with a robot is only given in conjunction with a corresponding connection package.

## Main view



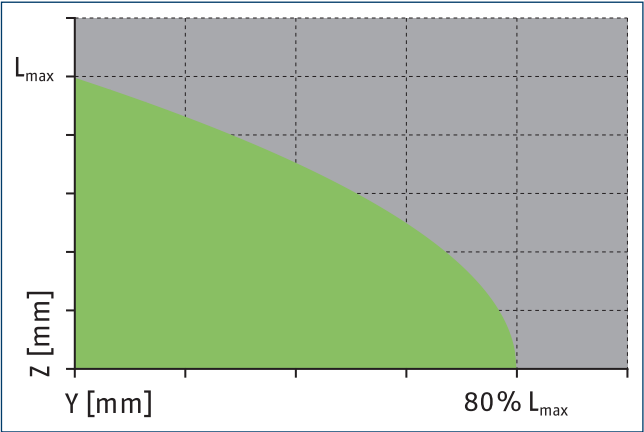
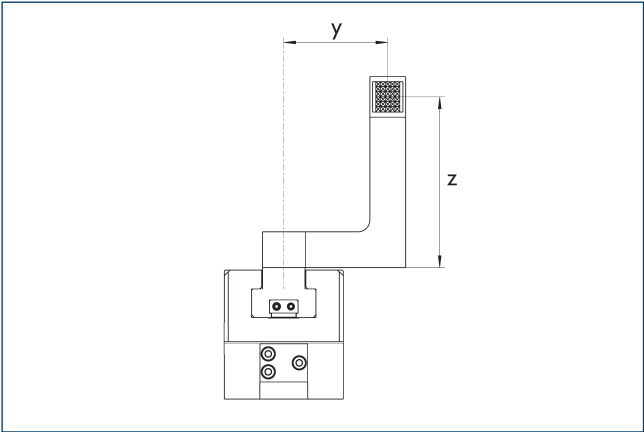
The drawing shows the gripper in the basic version with closed jaws, without dimensional consideration of the options described below.

- |    |  |    |  |
|----|--|----|--|
| S  | Air purge connection                                   | 90 | Sensor MMS 22..                                |
| 1  | Gripper connection                                     | 91 | Plug-in connection Ø 6 mm (air connection)     |
| 2  | Finger connection                                      | 92 | M12 connector, A-coded (electrical connection) |
| 4  | Grippers   | 93 | Blow-off nozzle                                |
| 72 | Fit for centering sleeves                              | 94 | Exhaust / silencer                             |
| 73 | Fit for centering pins                                 |    |  |
| 80 | Depth of the centering sleeve hole in the counter part |    |  |

# MTB Double Gripper JGP-P 80

Application kit

## Maximum permitted finger projection



■ Permitted range      ■ Inadmissible range

$L_{max}$  is equivalent to the maximum permitted finger length, see the technical data table.

## Robot connection package

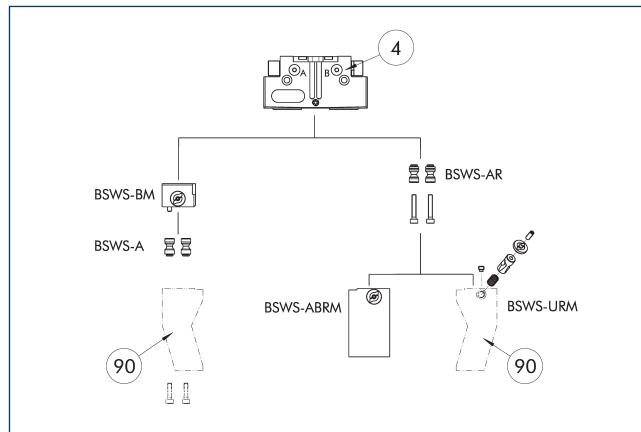


Robot connection packages contain all the necessary components to successfully adapt the gripper to the robot and to put it into operation.

Description	ID	Manufacturer	Series	Model
Robot connection package				
MTB CNK-SG/DG-RF1	1490834	Universal Robots	e-Series	UR5e, UR10e, UR16e
MTB CNK-SG/DG-RF1	1490834	FANUC	CRX	CRX-10iA, CRX-10iA/L
MTB CNK-SG/DG-RF1	1490834	ABB	GoFa	CRB 15000
MTB CNK-SG/DG-RF1	1490834	Techman Robot	TM	TM5, TM12, TM14
MTB CNK-SG/DG-RF1	1490834	OMRON	TM	TM5, TM12, TM14
MTB CNK-SG/DG-RF1	1490834	Doosan Robotics	A-Series, M-Series, H-Series	M609, M1509, M1013, M0617, A0509, A0509s, A0912, A0912s, H2017, H2515
MTB CNK-SG/DG-RF1	1490834		UR 3/5/10/16 (e-series only), TM 5/12/14, OMRON TM 5/12/14, Doosan Robotics M-series/A-series/H-series, FANUC CRX-10iA/CRX-10iA/L, ABB GoFa (CRB 15000)	

① The scope of delivery of the robot connection package includes the following contents: mechanical adapter incl. fastening material, connection cable, compressed air hose, Velcro straps for fastening cables and hoses to the robot, USB flash drive. The instructions in the robot-specific commissioning instructions must be observed. You will find the robot-specific software and commissioning instructions at [www.schunk.com/mtb-downloads](http://www.schunk.com/mtb-downloads).

## Jaw quick-change system BSWS-M



④ Grippers      ⑨ Customized gripper fingers

There are various jaw quick-change systems available for the gripper. For detailed information, please refer to the corresponding product.

Description	ID	Scope of delivery
Jaw quick-change system adapter pin		
BSWS-A 80	0303024	2
BSWS-AR 80	0300093	2
Quick-change jaw system base		
BSWS-BM 80	1313901	1
Jaw quick-change system finger blank		
BSWS-ABRM-PGZN-plus 80	1420852	1
Jaw quick-change system locking mechanism		
BSWS-URM 80	1398402	1

① Only systems that are listed in the table, can be used.

## Fields of application

Series	Size	Variant	Suitability
MTB	Double Gripper JGP-P 80	-1 (6 bar)	■■■■
Legend			
■■■■		Can be combined without restrictions	
■■□□		Use with restrictions (see loading limits)	
□□□□		cannot be combined	

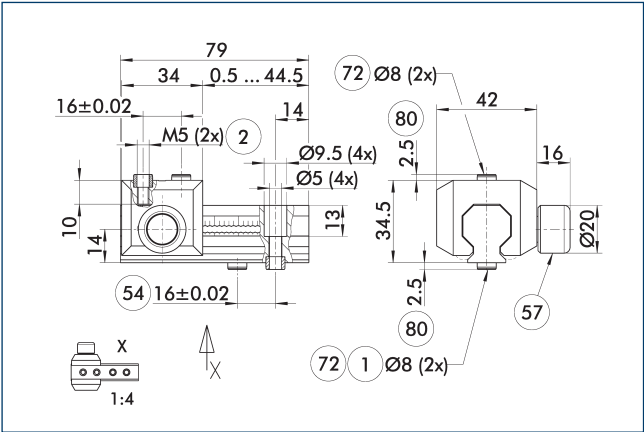
The load limits for describing the application limits can be found in the catalog chapter of the corresponding accessories. If the operating pressure is higher than 6 bar, suitability for use above the application limits must be checked.



# MTB Double Gripper JGP-P 80

Application kit

## UZB 80 universal intermediate jaw



- ① Gripper connection
- ② Finger connection
- ⑤4 Optional right or left connection
- ⑤7 Locking
- ⑦2 Fit for centering sleeves
- ⑧0 Depth of the centering sleeve hole in the counter part

The drawing shows the UZB universal intermediate jaw. The fully removable UZB-S slide (can also be ordered separately) allows for a quick jaw change.

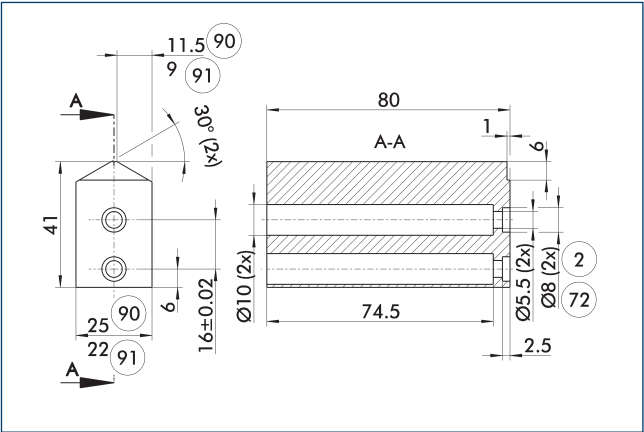
Description	ID	Grid dimension
		[mm]
Slide for universal intermediate jaw		
UZB-S 80	5518271	2
Universal intermediate jaw		
UZB 80	0300043	2
Finger blank		
ABR-PGZN-plus 80	0300011	
SBR-PGZN-plus 80	0300021	

### Fields of application

Series	Size	Variant	Suitability
MTB	Double Gripper JGP-P 80	-1 (6 bar)	■■■■
Legend			
■■■■	Can be combined without restrictions		
■■□□	Use with restrictions (see loading limits)		
□□□□	cannot be combined		

The load limits for describing the application limits can be found in the catalog chapter of the corresponding accessories.  
If the operating pressure is higher than 6 bar, suitability for use above the application limits must be checked.

## Finger blanks ABR- / SBR-PGZN-plus 80

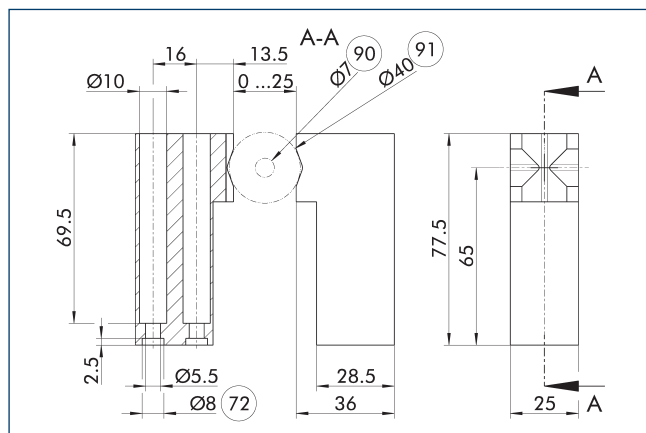


- ② Finger connection
- ⑦2 Fit for centering sleeves
- ⑨0 ABR-PGZN-plus
- ⑨1 SBR-PGZN-plus

The drawing shows the finger blank which can be reworked by the customer.

Description	ID	Material	Scope of delivery
Finger blank			
ABR-PGZN-plus 80	0300011	Aluminum (3.4365)	1
SBR-PGZN-plus 80	0300021	Steel (1.7131)	1

## Universal top jaw AUB JGP-P



- 72 Fit for centering sleeves  
 90 min. grippable diameter  
 91 max. grippable diameter

The top jaws are specifically designed for the JGP-P gripper. Depending on the size, they are available with varying clamping ranges. Depending on the application, the top jaws can be used for gripping cylindrical or square workpieces.

Description	ID	Material	Scope of delivery
Universal top jaw			
MTB AUB-JGP-P 80/25	1490846	Aluminum	2

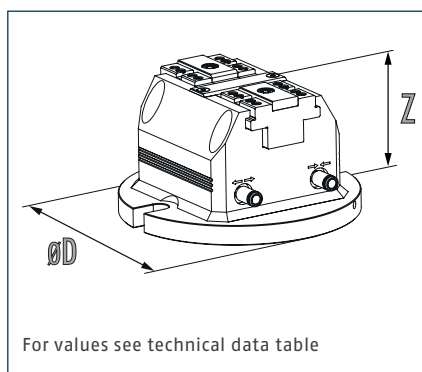
- ① The scope of delivery includes two top jaws including fastening material. Observe the notes in the Assembly and Operating Manual of the JGP-P gripper.

# MTB Vise PGS3 100

Application kit



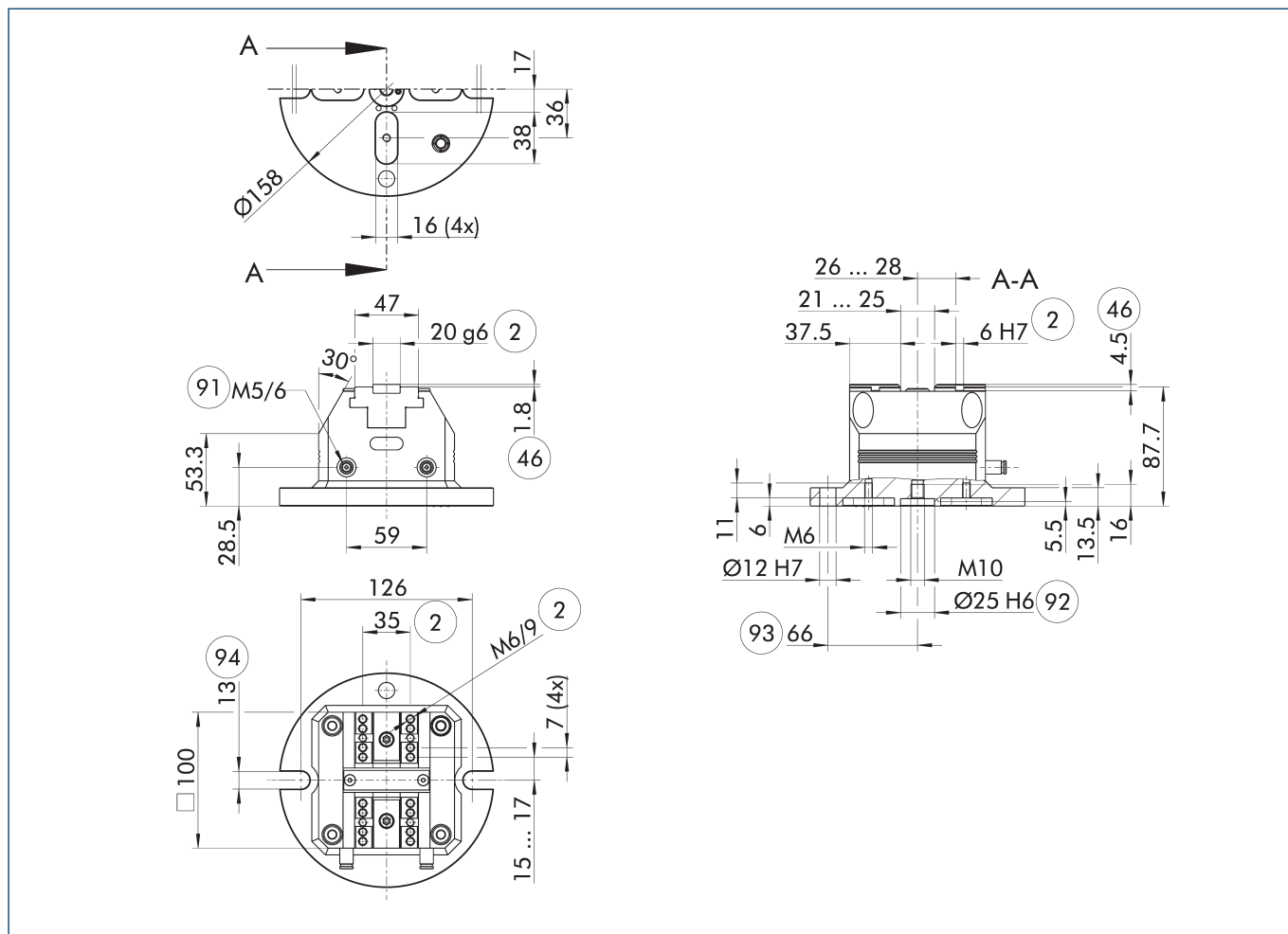
## Dimensions



## Technical data

Description		MTB KS-PGS3 100
ID		1490833
<b>General operating data</b>		
Sensor system		none
Power vise dimensions Ø D x Z	[mm]	158 x 87.7
Weight	[kg]	5
Valve box dimensions X x Y x Z	[mm]	100 x 90 x 34
Weight of valve box	[kg]	0.46
<b>Mechanical operating data</b>		
Stroke per jaw	[mm]	2
Min./nom./max. operating pressure	[bar]	2/6/6
Repeat accuracy	[mm]	0.02
Max. jaw height	[mm]	30
<b>Electrical operating data</b>		
Nominal voltage	[V DC]	24
Nominal current	[mA]	170
Max. current	[mA]	500
Communication interface		digital I/O
Number of digital I/O		3/0

## Main view pneumatic clamping force block PGS3 100



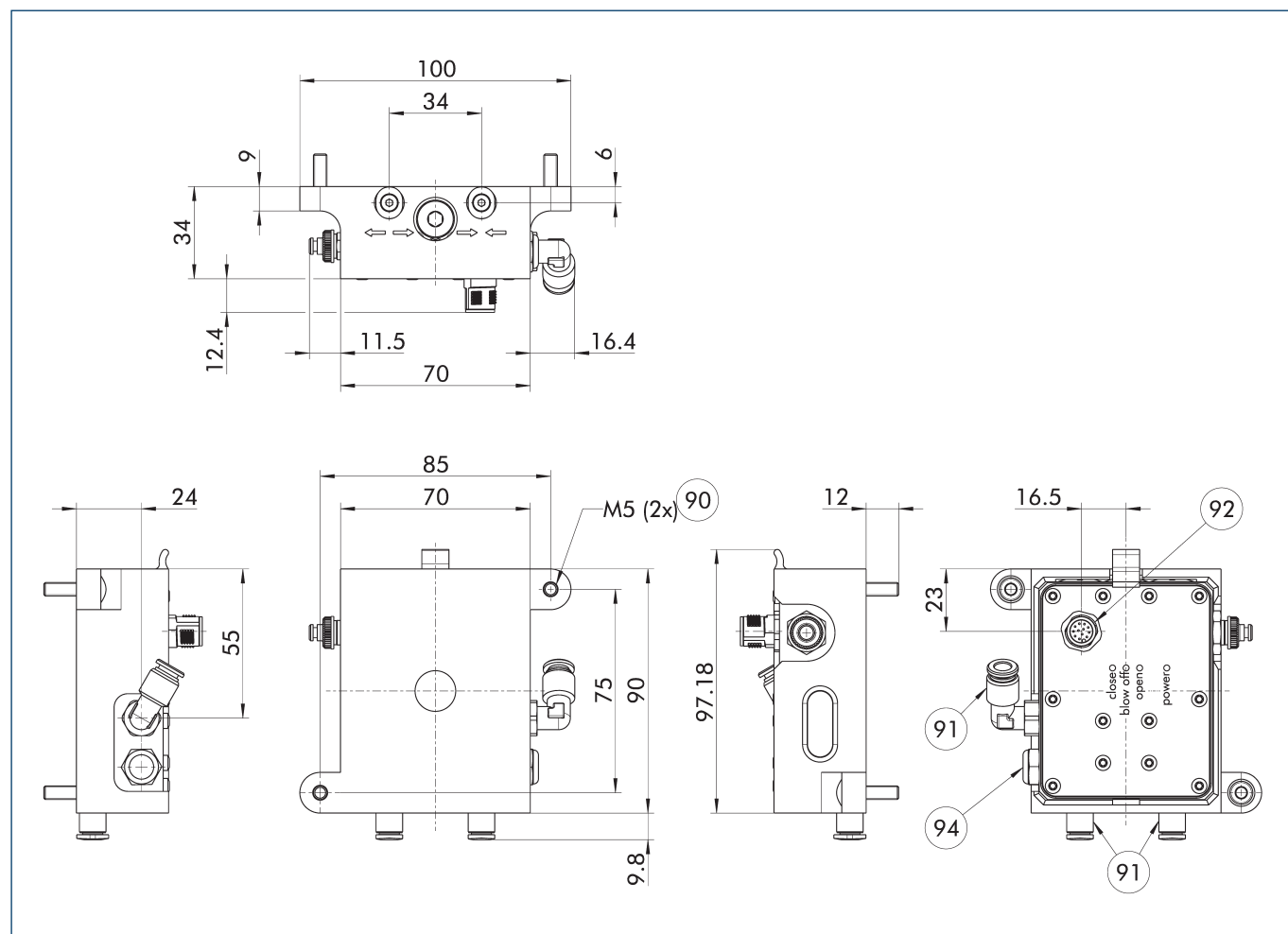
The drawing shows the basic version of the clamping force block.

- |   |                                      |
|---|--------------------------------------|
| ② Finger connection                           | ⑨② Prepared for VERO-S clamping pins |
| ④⑥ Fitting depth                              | ⑨③ Prepared for indexing pin IXB V1  |
| ⑨① Plug-in connection Ø 6 mm (air connection) | ⑨④ Prepared for M12 screws           |

# MTB Vise PGS3 100

Application kit

## Main view valve box for PGS3 100



The drawing shows the valve box with mounting frame for field mounting.

- 90 Fastening screws
- 91 Plug-in connection  $\varnothing$  6 mm (air connection)
- 92 M12 connector, A-coded (electrical connection)
- 94 Exhaust / silencer

## Robot connection package

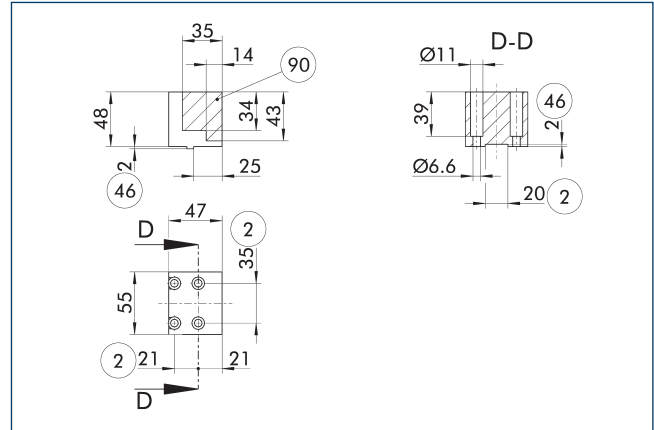


Robot connection packages contain all the necessary components to successfully adapt the gripper to the robot and to put it into operation.

Description	ID	Manufacturer	Series	Model
Robot connection package				
MTB CNK-KS-RF1	1490839	Universal Robots	e-Series	UR5e, UR10e, UR16e
MTB CNK-KS-RF1	1490839	FANUC	CRX	CRX-10iA, CRX-10iA/L
MTB CNK-KS-RF1	1490839	ABB	GoFa	CRB 15000
MTB CNK-KS-RF1	1490839	Techman Robot	TM	TM5, TM12, TM14
MTB CNK-KS-RF1	1490839	OMRON	TM	TM5, TM12, TM14
MTB CNK-KS-RF1	1490839	Doosan Robotics	A-Series, M-Series, H-Series	M609, M1509, M1013, M0617, A0509, A0509s, A0912, A0912s, H2017, H2515
MTB CNK-KS-RF1	1490839		UR 3/5/10/16 (e-series only), TM 5/12/14, OMRON TM 5/12/14, Doosan Robotics M-series/A-series/H-series, FANUC CRX-10iA/ CRX-10iA/L, ABB GoFa (CRB 15000)	

① The scope of delivery of the robot connection package includes the following contents: mechanical adapter incl. fastening material, connection cable, compressed air hose, Velcro straps for fastening cables and hoses to the robot, USB flash drive. The instructions in the robot-specific commissioning instructions must be observed. You will find the robot-specific software and commissioning instructions at [www.schunk.com/mtb-downloads](http://www.schunk.com/mtb-downloads).

## Drilled top jaw blanks KTR-H



② Finger connection

⑨⑩ Work surface

④⑥ Fitting depth

Top jaw blanks with tongue and groove and preassembled mounting holes for customer rework.

Description	ID	Scope of delivery
Top jaw blanks drilled		
KTR-H 100	0402221	2



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