

Precision gripper PG

PG 12 - PG 20

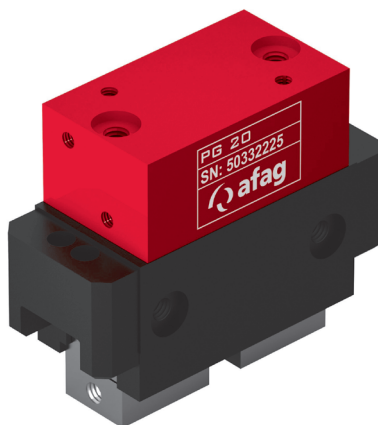
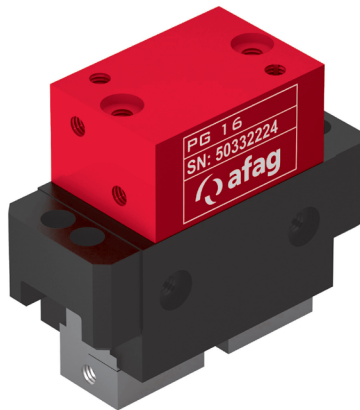
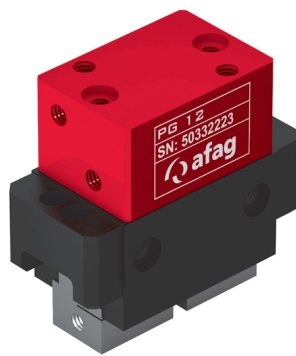
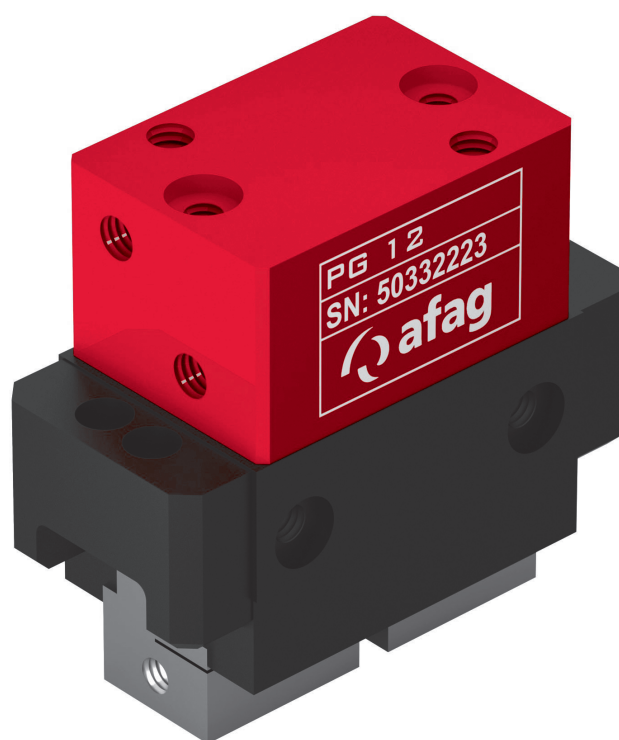


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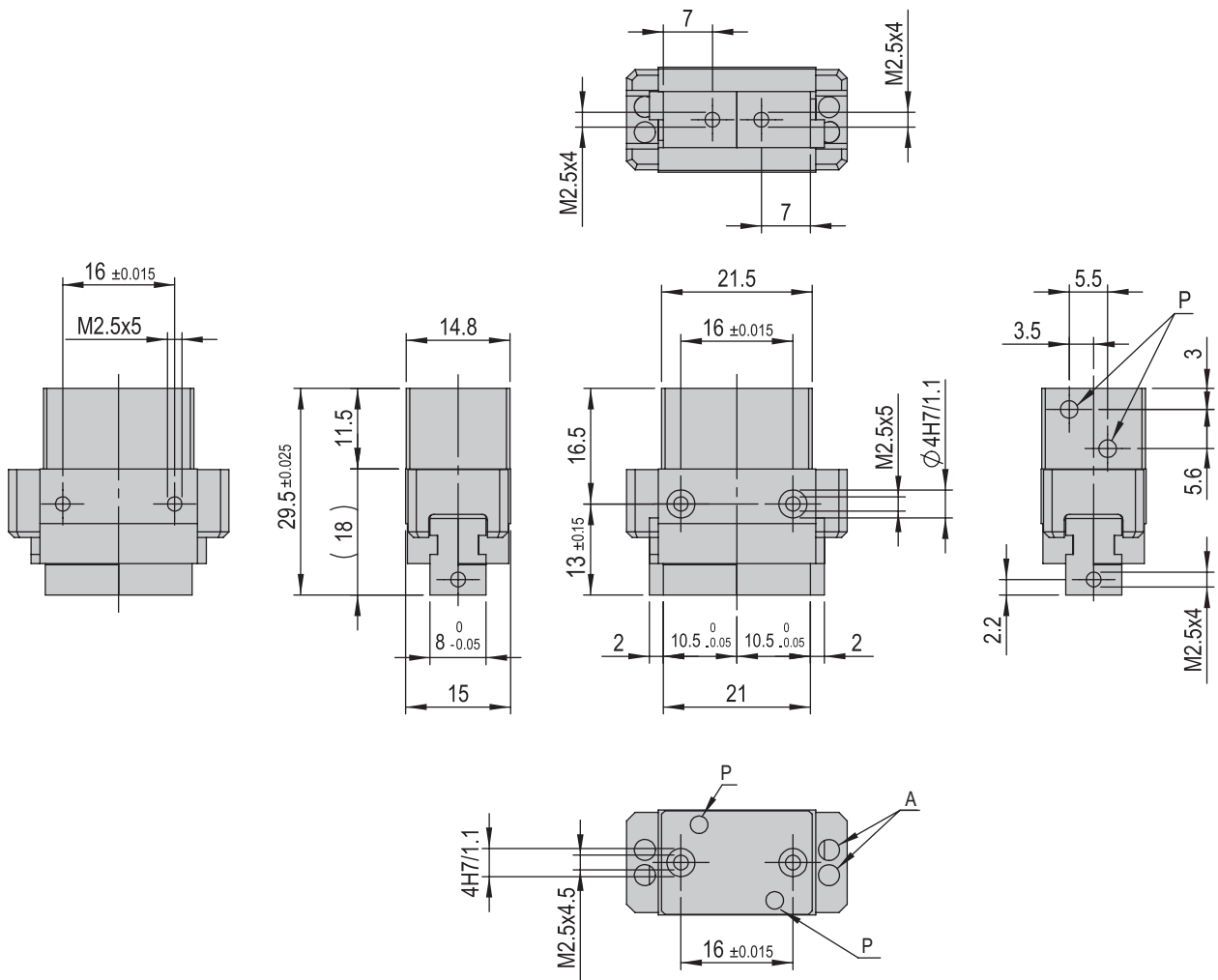
Precision gripper PG

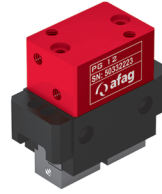
PG 12



- Highly precise jaw guidance
- Miniature design
- Simplest operation

Type	PG 12
A	Sensor \varnothing 3 mm
P	M3





PG 12	
Attachment grid	16 mm
Attachment grid alternative	M2.5
Operating pressure	6 +/- 2 bar
Air connection P	M3
Cylinder Ø	11 mm
Operating temperature	0 - 50 °C
Storage temperature	0 - 50 °C

Type	PG 12
Order number	50332223
Net weight	0.035 kg
Air consumption/cycle	0.005 NL
Closing time	**Closing time = Finger weight 50 ms = 30 g 30 ms = 20 g 20 ms = 15 g 10 ms = 10 g
Gripping force, opening	*46 N
Gripping force, closing	*36 N
Opening stroke	2 x 2 mm
Repeat accuracy	+/- 0.01 mm
Handling accuracy	+/- 0.05 mm
Positions	2
Mounting position	✚

The technical data refer to a nominal pressure of 6 bar under Afag standard test conditions.
The module can be operated with lubricated or dry air.
Cleanroom class ISO 14644-1, class ISO 7

- *Observe gripping force diagrams
- Measurements for slowly closing fingers
- All module measurements carried out via outer clamping
- **Closing times in unthrottled operation Observe gripping force diagrams
- Measurements for slowly closing fingers
- All module measurements carried out via outer clamping

Included in the delivery (Catalogue HT accessories)

- 2x Centering bushing Ø4x2

Accessories (Catalogue HT accessories)

- Compressed air connection straight M3 x 0.5
- Compressed air connection angled M3 x 0.5
- INI d3x22-Sn0.8-PNP-NO-M8x1
- INI d3x12-Sn0.8-PNP-NO

Warranty: 24 months following commissioning, but a maximum of 27 months following delivery

CS 6	1 3	VS 514 VP 153	1,2 1,2
CS 8	1,3 1,3	VP 153 VP 152	1 2
CR 12	3 3	VP 153 VP 152	1 2
RM 12	3	VF 400	1,2
ES8	1,3 3	VP 152 VP 153	2 1
SA-1	1,2 1,2	VP 153 VP 152	1 2

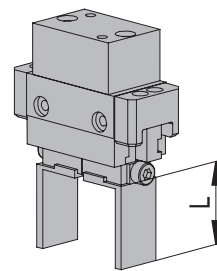
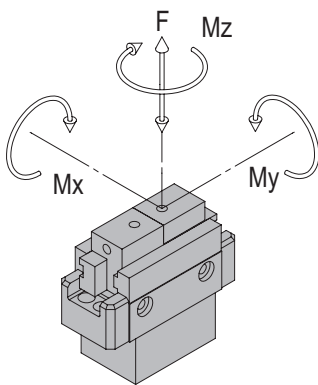
Mounting areas

CS, ES 	PS 	LM, LE 	HM 	SA 	OZ
PMP, PMP-c 	PEZ, PDZ 	PEL, PDL 	CR, RM 32, RE 	RM, RE 	UG, GM, GE, SG, DG, PG, GM RE

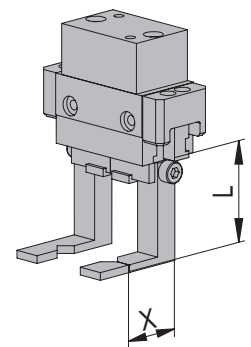
Note that there might be different mounting positions from one module to another one.

The required connection elements and the range of support columns are depicted in the catalogue HT accessories.

Type	PG 12
Max. static torque M_x	1 Nm
Max. static torque M_y	1 Nm
Max. static torque M_z	1 Nm
Max. dynamic torque M_x	0.01 Nm
Max. dynamic torque M_y	0.01 Nm
Max. dynamic torque M_z	0.01 Nm
Max. static force F	30 N
Max. dynamic force F	0.3 N



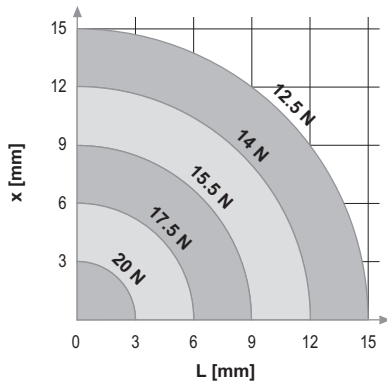
Finger length centric



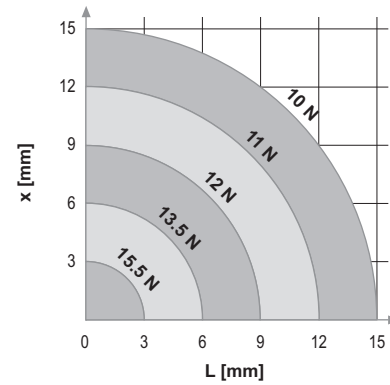
Finger length eccentric

Gripping force diagrams per jaw

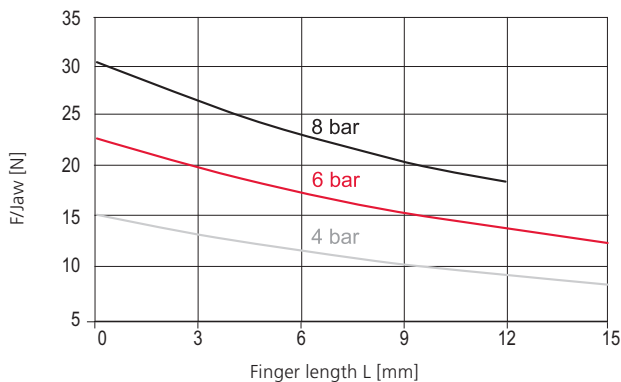
Centric gripping force, opening



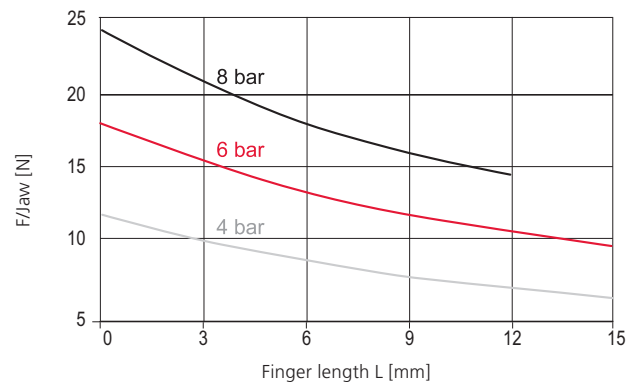
Centric gripping force, closing



Centric gripping force, opening

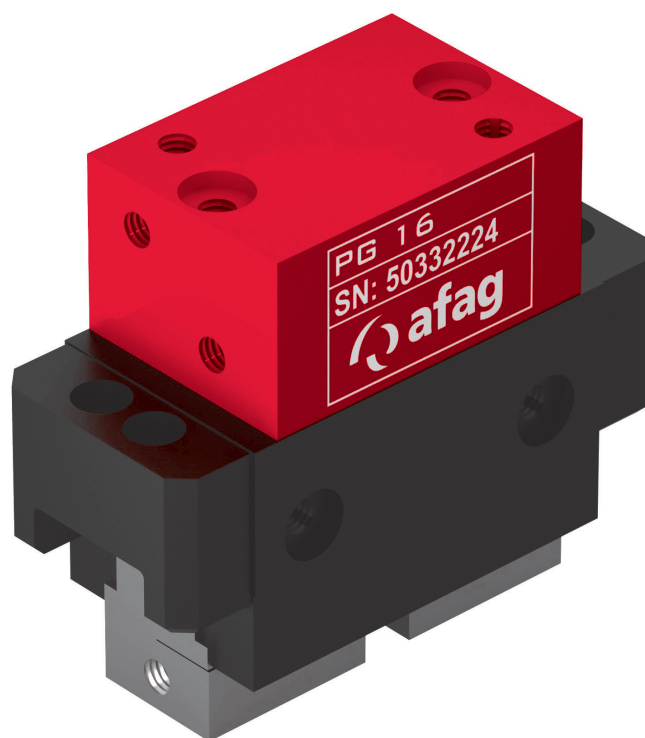


Centric gripping force, closing



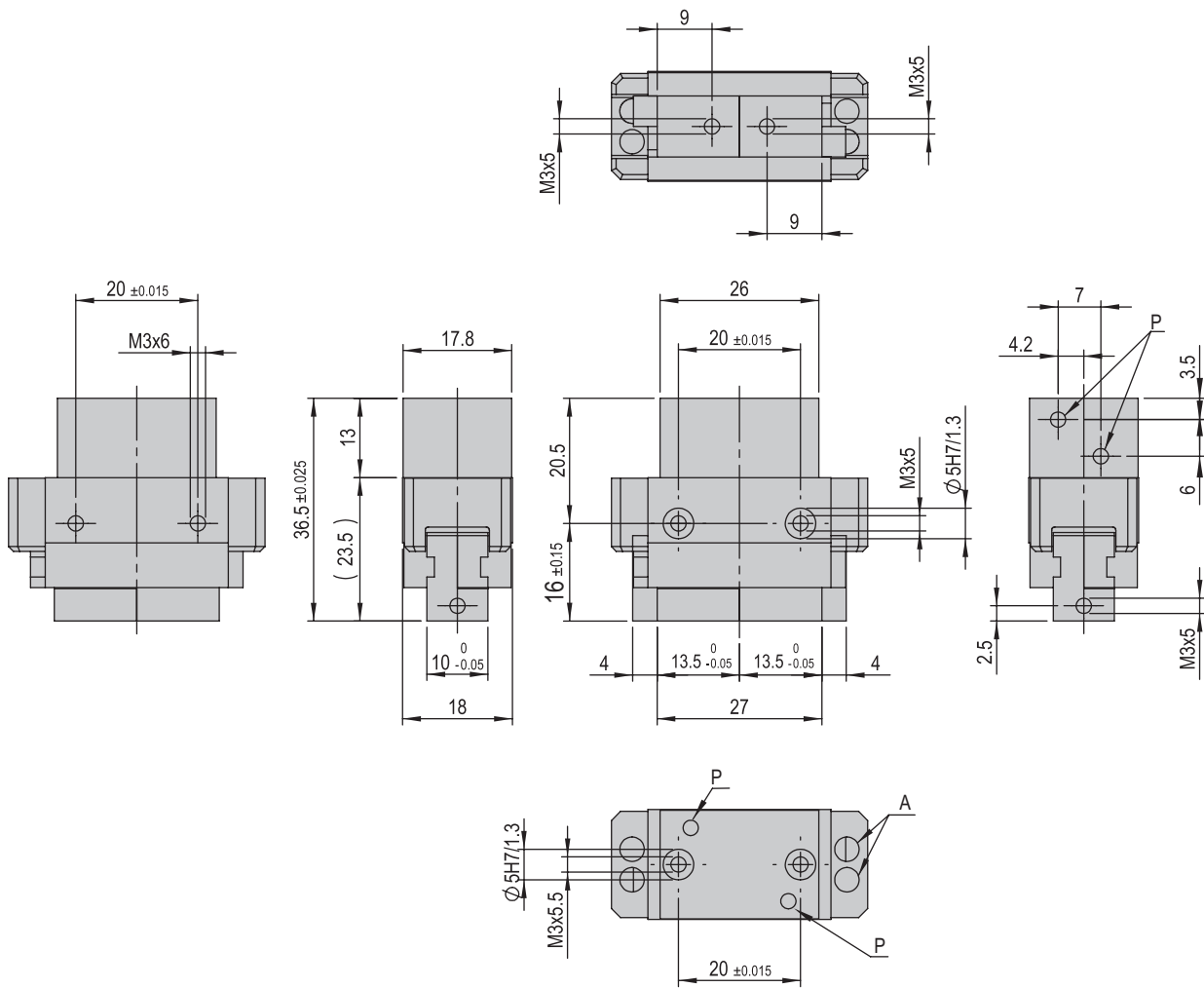
Precision gripper PG

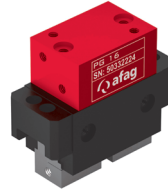
PG 16



- Highly precise jaw guidance
- Miniature design
- Gripping force maintenance

Type	PG 16 NN
A	Sensor Ø 4 mm
P	M3





PG 16	
Attachment grid	20 mm
Attachment grid alternative	M3
Operating pressure	6 +/- 2 bar
Air connection P	M3
Cylinder Ø	16 mm
Operating temperature	0 - 50 °C
Storage temperature	0 - 50 °C
Type	
	PG 16 NN
Order number	50332224
Net weight	0.066 kg
Air consumption/cycle	0.0064 NL
Closing time	**Closing time = Finger weight 50 ms = 60 g 30 ms = 40 g 20 ms = 30 g 10 ms = -
Gripping force, opening	*78 N
Gripping force, closing	*66 N
Opening stroke	2 x 4 mm
Repeat accuracy	+/- 0.01 mm
Handling accuracy	+/- 0.05 mm
Positions	2
Mounting position	✦

The technical data refer to a nominal pressure of 6 bar under Afag standard test conditions.
The module can be operated with lubricated or dry air.
Cleanroom class ISO 14644-1, class ISO 7

- *Observe gripping force diagrams
- Measurements for slowly closing fingers
- All module measurements carried out via outer clamping
- **Closing times in unthrottled operation Observe gripping force diagrams
- Measurements for slowly closing fingers
- All module measurements carried out via outer clamping

Included in the delivery
(Catalogue HT accessories)

- 2x Centering bushing Ø5x2.5

Accessories
(Catalogue HT accessories)

- Compressed air connection straight M3 x 0.5
- Compressed air connection angled M3 x 0.5
- INI d4x25-Sn1.0-PNP-NC-M8x1

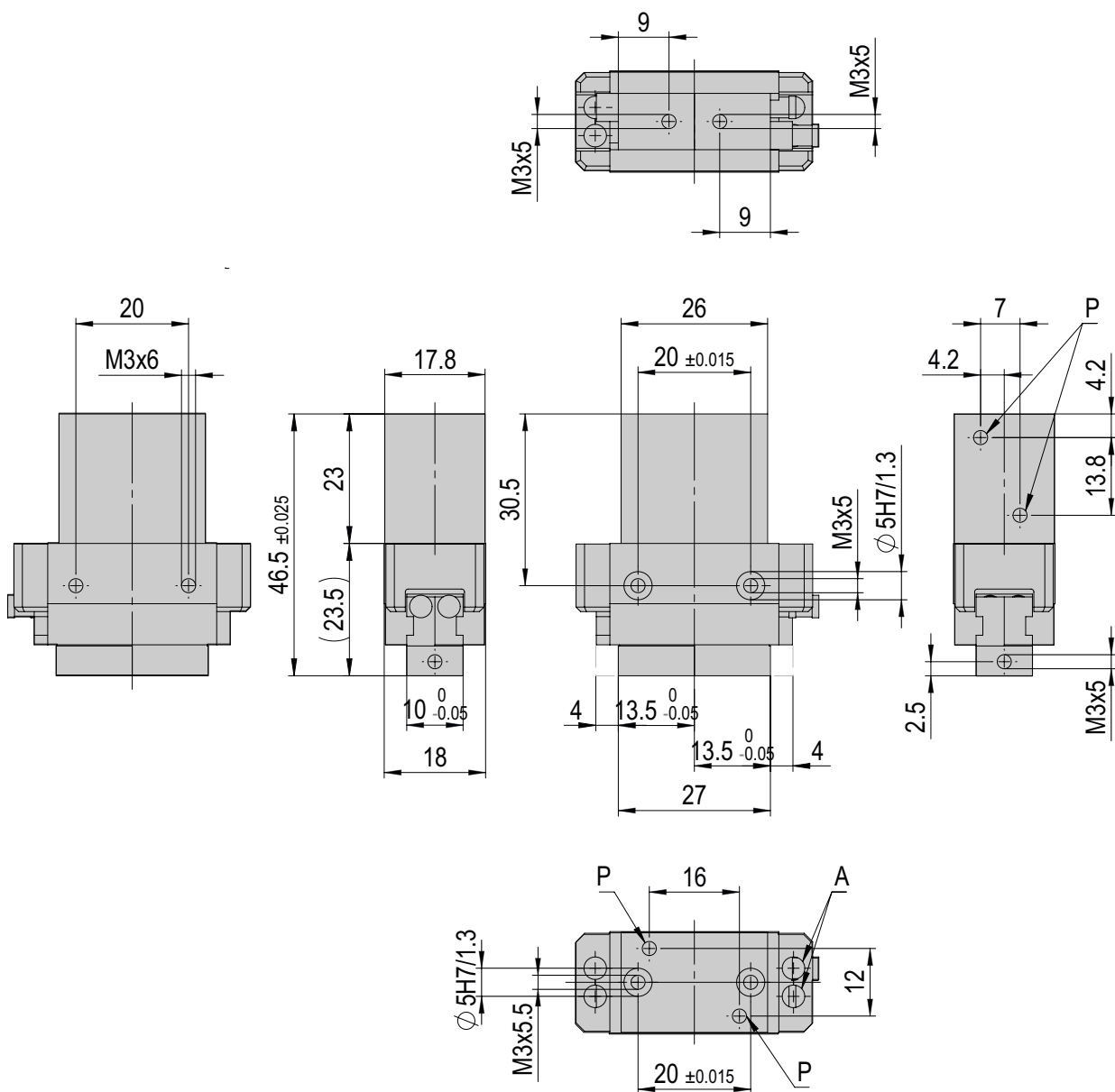
Alternative accessories
(Catalogue HT accessories)

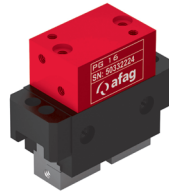
- INI M4x12-Sn0.8-PNP-NO

Warranty: 24 months following commissioning, but a maximum of 27 months following delivery

Dimensions and dimension drawings PG 16 NC & PG 16 NO

Type	PG 16 NC	PG 16 NO
A	Sensor Ø 4 mm	Sensor Ø 4 mm
P	M3	M3





PG 16	
Attachment grid	20 mm
Attachment grid alternative	M3
Operating pressure	6 +/- 2 bar
Air connection P	M3
Cylinder Ø	16 mm
Operating temperature	0 - 50 °C
Storage temperature	0 - 50 °C

Type	PG 16 NO	PG 16 NC
Order number	50531661	50531662
Net weight	0.074 kg	0.073 kg
Air consumption/cycle	0.0064 NL	0.0064 NL
Gripping time	0.01 s	0.01 s
Closing time	**Closing time = Finger weight 50 ms = 60 g 30 ms = 40 g 20 ms = 30 g 10 ms = -	
Gripping force, opening	*52 N	*100 N
Gripping force, closing	*92 N	*44 N
Spring force	13 N	11 N
Opening stroke	2 x 4 mm	2 x 4 mm
Repeat accuracy	+/- 0.01 mm	+/- 0.01 mm
Handling accuracy	+/- 0.05 mm	+/- 0.05 mm
Positions	2	2
Mounting position	↕	↕

The technical data refer to a nominal pressure of 6 bar under Afag standard test conditions.
The module can be operated with lubricated or dry air.
Cleanroom class ISO 14644-1, class ISO 7

- *Observe gripping force diagrams
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- All module measurements carried out via outer clamping
- **Closing times in unthrottled operation Observe gripping force diagrams
- Measurements for slowly closing fingers
- All module measurements carried out via outer clamping

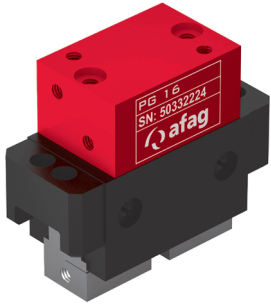
Included in the delivery
(Catalogue HT accessories)
■ 2x Centering bushing Ø5x2.5

Accessories
(Catalogue HT accessories)
■ Compressed air connection straight M3 x 0.5
■ Compressed air connection angled M3 x 0.5
■ INI d4x25-Sn1.0-PNP-NC-M8x1

Alternative accessories
(Catalogue HT accessories)
■ INI M4x12-Sn0.8-PNP-NO








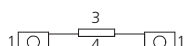




Warranty: 24 months following commissioning, but a maximum of 27 months following delivery

CS 6	1	VP 152	1,2
	3	VP 153	1,2
CS 8	1	< direct >	1,2
	3	VP 101	1,2
CS 12	1,3	VP 111	1,2
LM 12	1	VW 305	1,2
LM 16	1	VW 305	1,2
CR 12	3	VP 101	1,2
CR 16	3	VP 101	1,2
RM 12	3	VF 400	1,2
RM 16	3	VF 403	1,2
ES12	1,3	VP 111	1
	1,3	VP 151	2
SA-1	1	VS 503	1,2
	2	VP 101	1
	2	VP 100	2
SA-3	1	VP 111	1,2
	2	VP 111	1
	2	VP 151	2
RE-50	3	VP 111	1
	3	VP 151	2



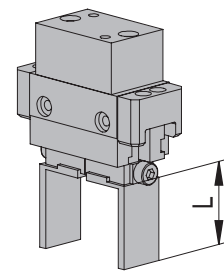
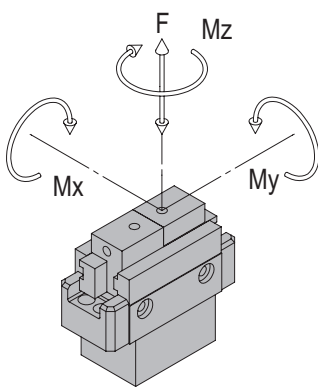
↑ ↑

Mounting areas

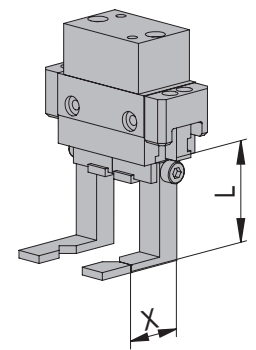
CS, ES	PS	LM, LE	HM	SA	OZ
					
PMP, PMP-c	PEZ, PDZ	PEL, PDL	CR, RM 32, RE	RM, RE	UG, GM, GE, SG, DG, PG, GM RE
					

Note that there might be different mounting positions from one module to another one.
 The required connection elements and the range of support columns are depicted in the catalogue HT accessories.

Type	PG 16 NN
Max. static torque M_x	3 Nm
Max. static torque M_y	3 Nm
Max. static torque M_z	3 Nm
Max. dynamic torque M_x	0.03 Nm
Max. dynamic torque M_y	0.03 Nm
Max. dynamic torque M_z	0.03 Nm
Max. static force F	60 N
Max. dynamic force F	0.6 N



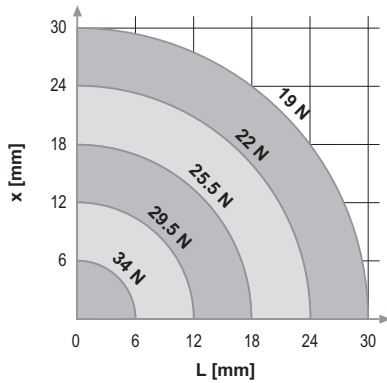
Finger length centric



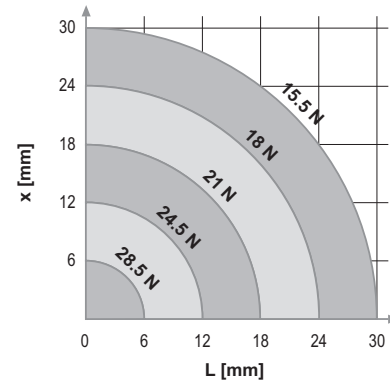
Finger length eccentric

Gripping force diagrams per jaw

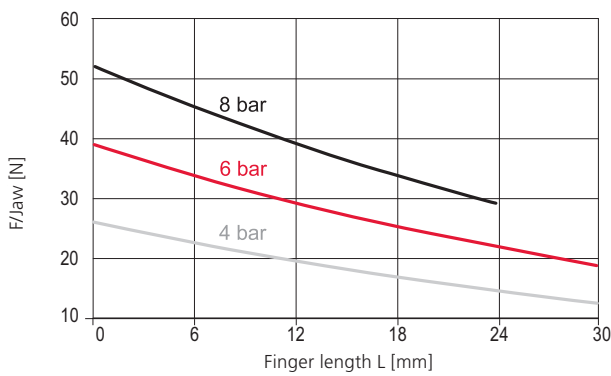
Centric gripping force - PG 16 NN opening



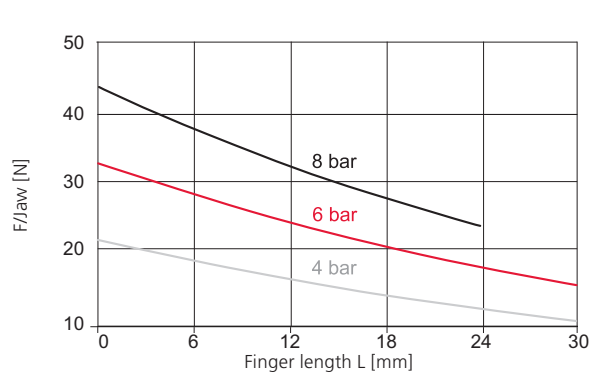
Centric gripping force - PG 16 NN closing



Centric gripping force - PG 16 NN opening

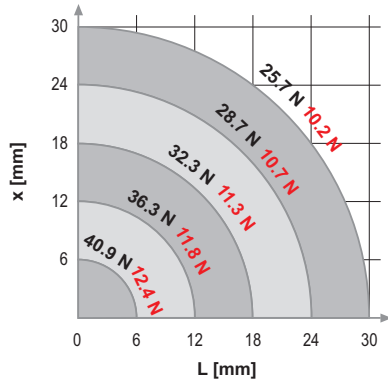


Centric gripping force - PG 16 NN closing

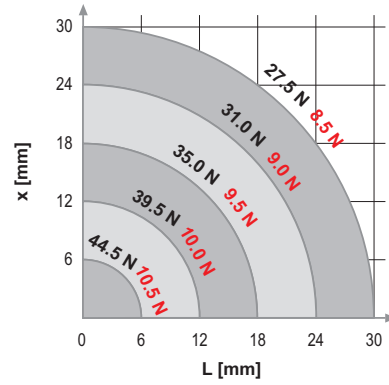


Gripping force diagrams per jaw

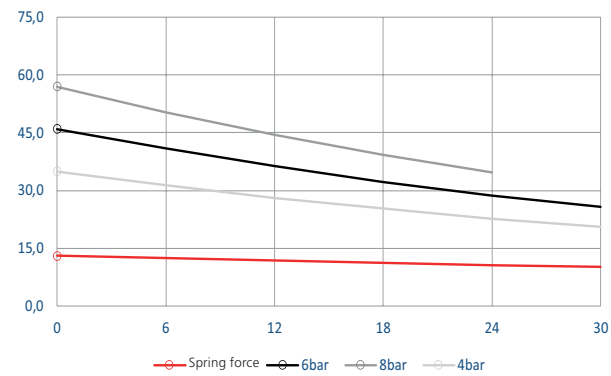
Centric gripping force - PG 16 NC closing



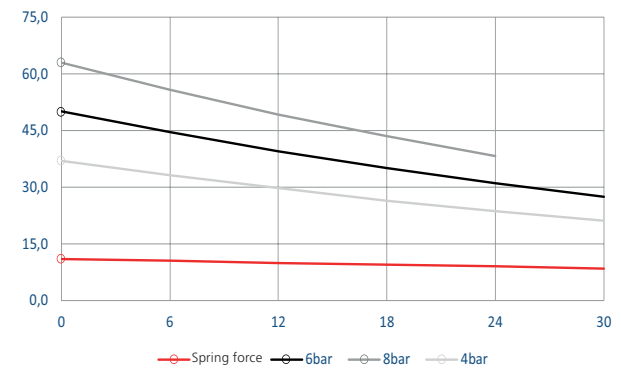
Centric gripping force - PG 16 NO opening



Centric gripping force - PG 16 NC closing

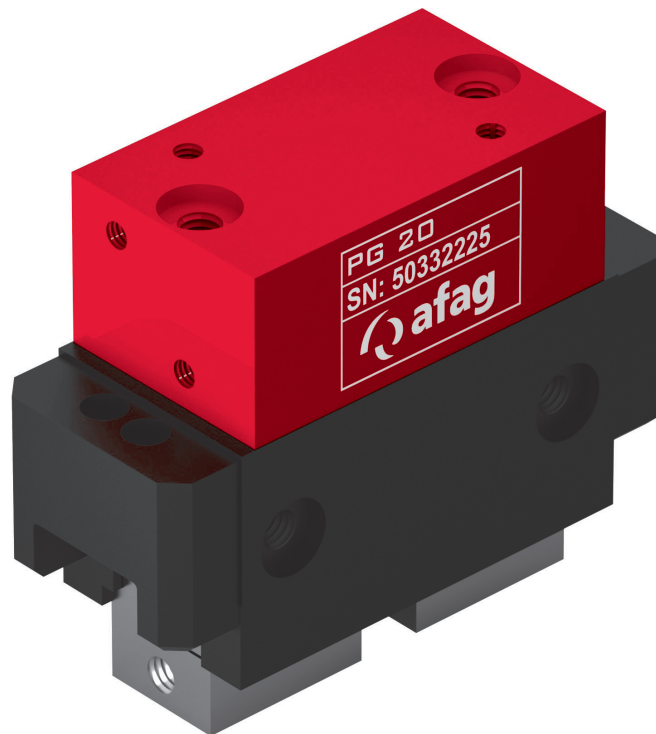


Centric gripping force - PG 16 NO opening



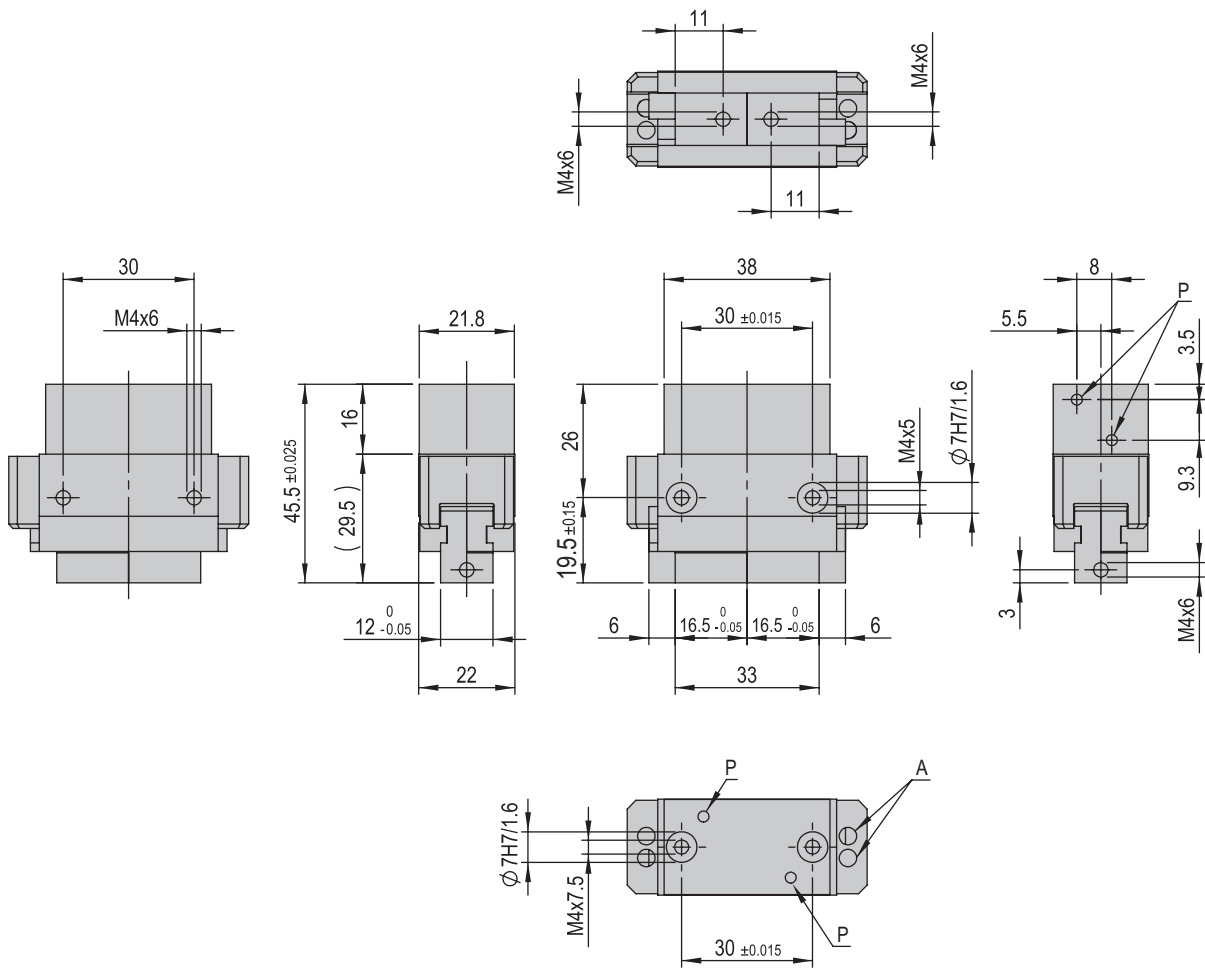
Precision gripper PG

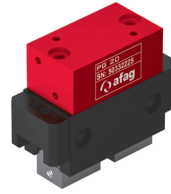
PG 20



- Highly precise jaw guidance
- Miniature design
- Simplest operation

Type	PG 20
A	Sensor Ø 4 mm
P	M3





PG 20	
Attachment grid	30 mm
Attachment grid alternative	M4
Operating pressure	6 +/- 2 bar
Air connection P	M3
Cylinder Ø	20 mm
Operating temperature	0 - 50 °C
Storage temperature	0 - 50 °C

Type	PG 20
Order number	50332225
Net weight	0.132 kg
Air consumption/cycle	0.01 NL
Closing time	**Closing time = Finger weight 50 ms = 100 g 30 ms = 60 g 20 ms = - 10 ms = -
Gripping force, opening	*136 N
Gripping force, closing	*108 N
Opening stroke	2 x 6 mm
Repeat accuracy	+/- 0.01 mm
Handling accuracy	+/- 0.05 mm
Positions	2
Mounting position	✚

The technical data refer to a nominal pressure of 6 bar under Afag standard test conditions.
The module can be operated with lubricated or dry air.
Cleanroom class ISO 14644-1, class ISO 7

- *Observe gripping force diagrams
- Measurements for slowly closing fingers
- All module measurements carried out via outer clamping
- **Closing times in unthrottled operation Observe gripping force diagrams
- Measurements for slowly closing fingers
- All module measurements carried out via outer clamping

Included in the delivery
(Catalogue HT accessories)

- 2x Centering bushing Ø7x3

Accessories
(Catalogue HT accessories)

- Compressed air connection straight M3 x 0.5
- Compressed air connection angled M3 x 0.5
- INI d4x25-Sn1.0-PNP-NC-M8x1

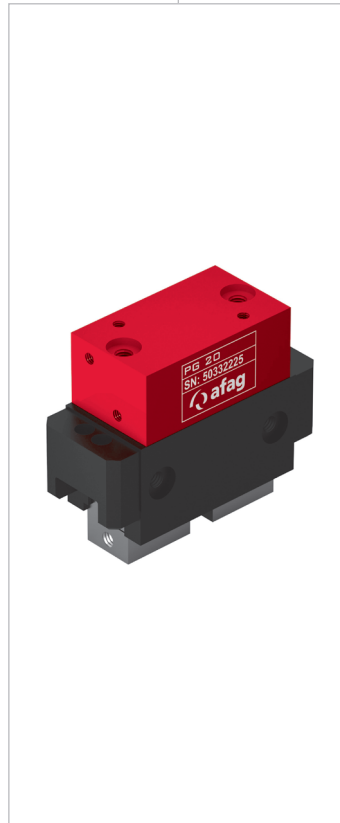
Alternative accessories
(Catalogue HT accessories)

- INI M4x12-Sn0.8-PNP-NO

Warranty: 24 months following commissioning, but a maximum of 27 months following delivery



CS 12	1 2	VS 512 VP 139	1,2 1,2
CS 16	1 3	VS 512 VP 139	1,2 1,2
LM 16	1 1	VP 112 VP 108	1 2
LM 20	1	VP 105	1,2
PS 16	1,3 1,3	VP 137 VP 151	1 2
HM 10	1	VP 139	1,2
CR 16	3	VP 151	1,2
CR 20	3	VP 151	1,2
RM 16	3	VF 403	1,2
RM 25	3	VF 403	1,2
ES20	1,3	VP 139	1,2
SA-3	1 2 2	< direct > VP 137 VP 151	1,2 1 2
SA-6	1 2 2	< direct > VP 137 VP 151	1,2 1 2
LE-50	1	< direct >	1,2
RE-50	3 3	VP 137 VP 151	1 2

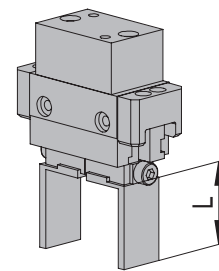
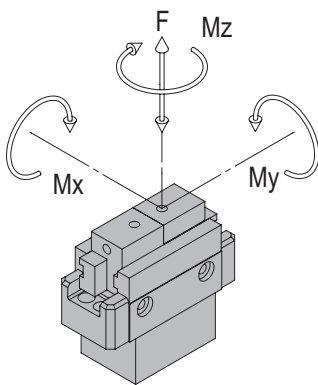


Mounting areas

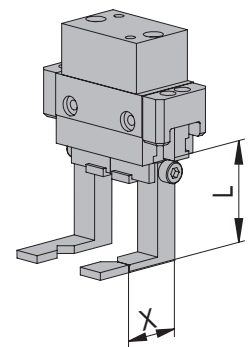
CS, ES 	PS 	LM, LE 	HM 	SA 	OZ
PMP, PMP-c 	PEZ, PDZ 	PEL, PDL 	CR, RM 32, RE 	RM, RE 	UG, GM, GE, SG, DG, PG, GM RE

Note that there might be different mounting positions from one module to another one.
The required connection elements and the range of support columns are depicted in the catalogue HT accessories.

Type	PG 20
Max. static torque M_x	10 Nm
Max. static torque M_y	10 Nm
Max. static torque M_z	10 Nm
Max. dynamic torque M_x	0.1 Nm
Max. dynamic torque M_y	0.1 Nm
Max. dynamic torque M_z	0.1 Nm
Max. static force F	100 N
Max. dynamic force F	1 N



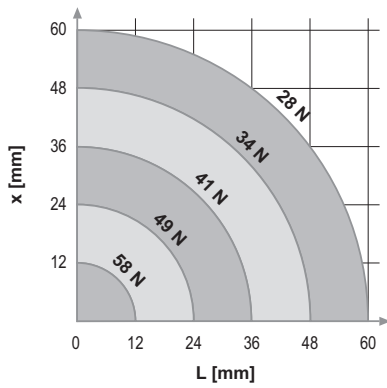
Finger length centric



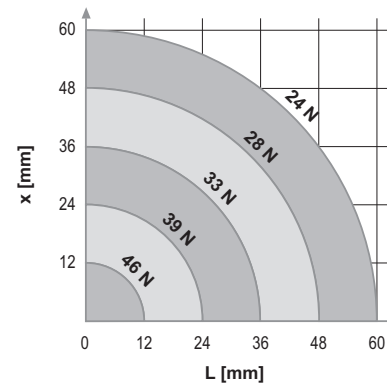
Finger length eccentric

Gripping force diagrams per jaw

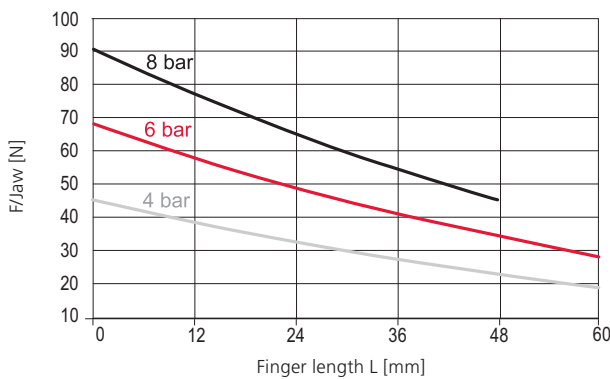
Centric gripping force, opening



Centric gripping force, closing



Centric gripping force, opening



Centric gripping force, closing

