

GRIPPERS SERIES P3 - P12

GRIPPER WITH TWO PARALLEL JAWS, SERIES P3

Parallel double-acting two-jaw gripper, with either internal or external clamping.

Body made of surface hardened aluminium alloy; jaws made of wear-resistant coated steel.

The jaw-guiding system and precision in coupling with the body make the gripper extremely stable.

The ceramic-coated body reduces friction and wear, and enhances the movement of the jaws on the body.

It is available in both versions with standard stroke and torque and with a reduced stroke and increased torque.

The gripper is equipped with a magnet and grooves for sensors.

A version designed to house inductive sensors is also available (**the inductive sensors are not supplied by Metal Work**).

Pneumatic supply is available on both sides.



TECHNICAL DATA		P3-80 STANDARD	P3-80 INCREASED FORCE
Operating pressure	bar	2 to 8	3 to 8
	MPa	0.2 to 0.8	0.3 to 0.8
	psi	29 to 116	43 to 116
Temperature range	°C	-10 to 80	
Fluid		20 µm filtered, lubricated or unlubricated air; lubrication if used, it must be continuous	
Clamping force of a single jaw at 6.3 bar, 20 mm from the upper surface, on opening and closing	N	265	445
Maximum movable weight	kg	2.5	5
Stroke of each jaw	mm	8	4
Minimum opening/closing time	s	0.04 / 0.04	
Repeatability	mm	0.01	
Moment of inertia	kg cm ²	4.5	
Max. admissible static loads:			
- Fa	N	1500	
- Mx	Nm	90	
- My	Nm	55	
- Mz	Nm	55	
Weight	kg	0.510	

COMPONENTS

- ① BODY: hard-anodised aluminium
- ② JAWS: nitrided steel
- ③ PISTON ROD + GUIDE: nitrided steel
- ④ PISTON: hard-anodised aluminium
- ⑤ PISTON GASKET: NBR
- ⑥ PISTON ROD GASKET: NBR
- ⑦ BASE GASKET: reinforced SBR
- ⑧ MAGNET: neodymium

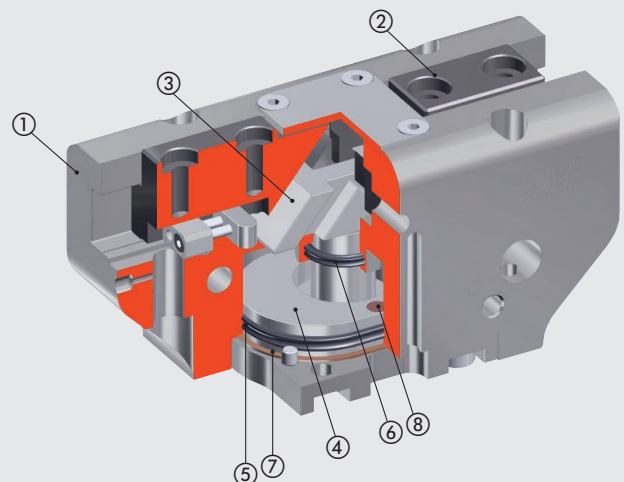
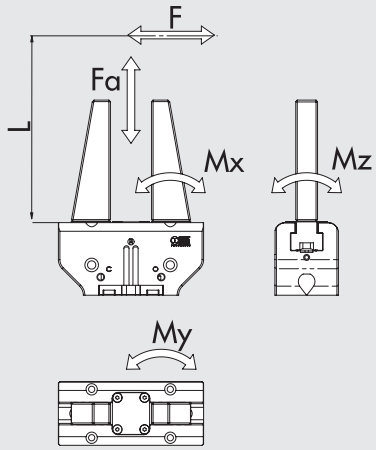
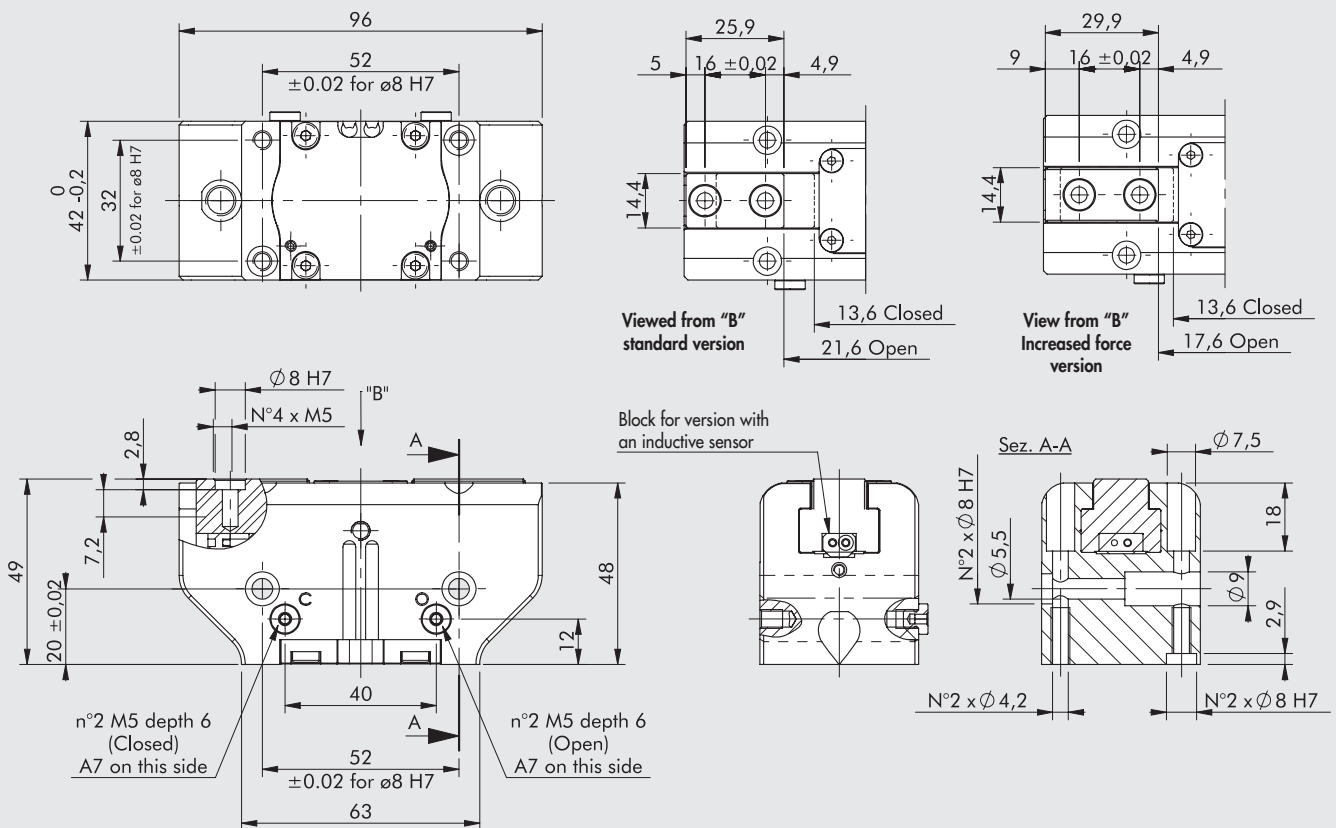


DIAGRAM OF FORCES AND MOMENTS



F Clamping force for each jaw
 Fa Maximum static axial force
 Mx, My, Mz Maximum static moments

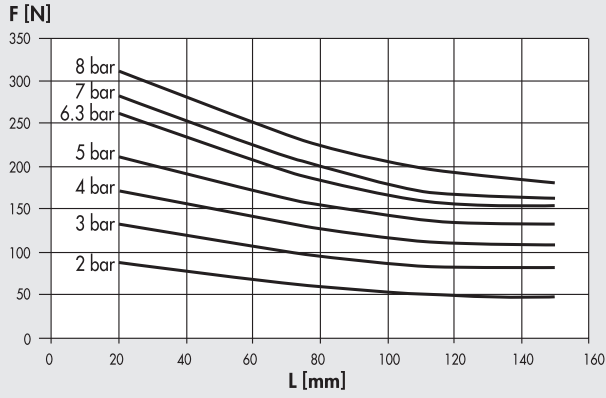
DIMENSIONS OF GRIPPER P3-80



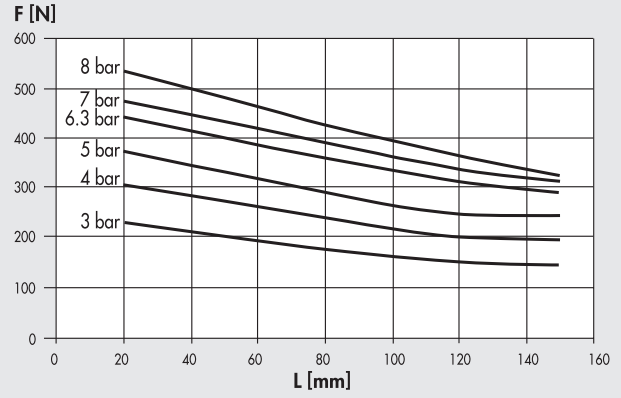
Code	Description
W1560800200	Gripper with 2 parallel jaws P3-80
W1560800201	Gripper with 2 parallel jaws P3-80 for inductive sensors
W1560800220	Gripper with 2 parallel jaws P3-80 increased force
W1560800221	Gripper with 2 parallel jaws P3-80 increased force for inductive sensors

FORCE CHARTS

Standard version

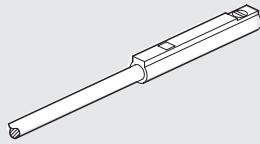


Increased force version



ACCESSORIES

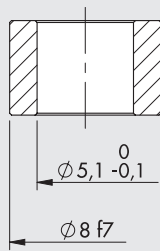
MAGNETIC SENSOR Ø 4



Code	Description
W0950044180	Sensor REED 2 wires 2.5 m robotics
W0950045390	Sensor HALL 3 wires 2.5 m robotics

For technical data see general catalogue.

CENTRING RING



Code	Description
W1560809201	Kit of centring rings

Note: 2-pieces pack

NOTES

GRIPPER WITH THREE PARALLEL JAWS, SERIES P12



Parallel double-acting three-jaw gripper, with either internal or external clamping.

Body made of surface hardened aluminium alloy; jaws made of wear-resistant coated steel.

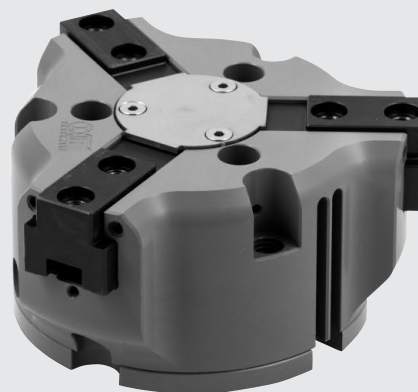
The jaw-guiding system and precision in coupling with the body make the gripper extremely stable.

The ceramic-coated body reduces friction and wear, and enhances the movement of the jaws on the body.

It is available in both versions with standard stroke and torque and with a reduced stroke and increased torque.

The gripper is equipped with a magnet and grooves for sensors.

A version designed to house inductive sensors is also available (**the inductive sensors are not supplied by Metal Work**).



TECHNICAL DATA		P12-80 STANDARD	P12-80 INCREASED FORCE
Operating pressure	bar	2 to 8	3 to 8
	MPa	0.2 to 0.8	0.3 to 0.8
	psi	29 to 116	43 to 116
Temperature range	°C	-10 to 80	
Fluid		20 µm filtered, lubricated or unlubricated air; lubrication if used, it must be continuous	
Clamping force of a single jaw at 6.3 bar, 20 mm from the upper surface, on opening and closing	N	435	860
Maximum movable weight	kg	4.5	9
Stroke of each jaw	mm	8	4
Minimum opening/closing time	s	0.05 / 0.05	
Repeatability	mm	0.01	
Moment of inertia	kg cm ²	6.5	
Max. admissible static loads:			
- Fa	N	1500	
- Mx	Nm	90	
- My	Nm	55	
- Mz	Nm	55	
Weight	kg	0.750	

COMPONENTS

- ① BODY: hard-anodised aluminium
- ② JAWS: nitrided steel
- ③ PISTON ROD + GUIDE: nitrided steel
- ④ PISTON: hard-anodised aluminium
- ⑤ PISTON GASKET: NBR
- ⑥ PISTON ROD GASKET: NBR
- ⑦ BASE GASKET: reinforced SBR
- ⑧ MAGNET: neodymium

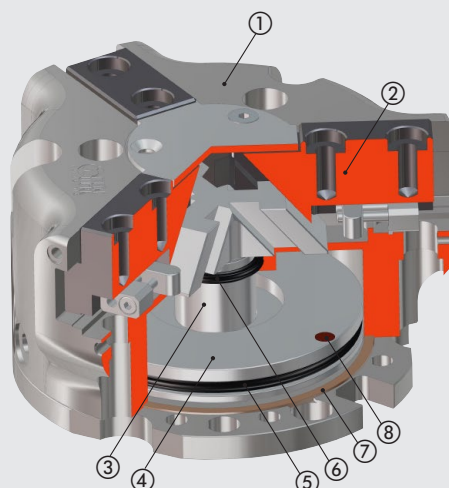
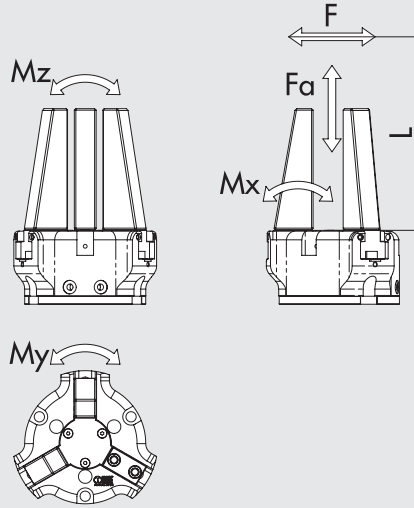
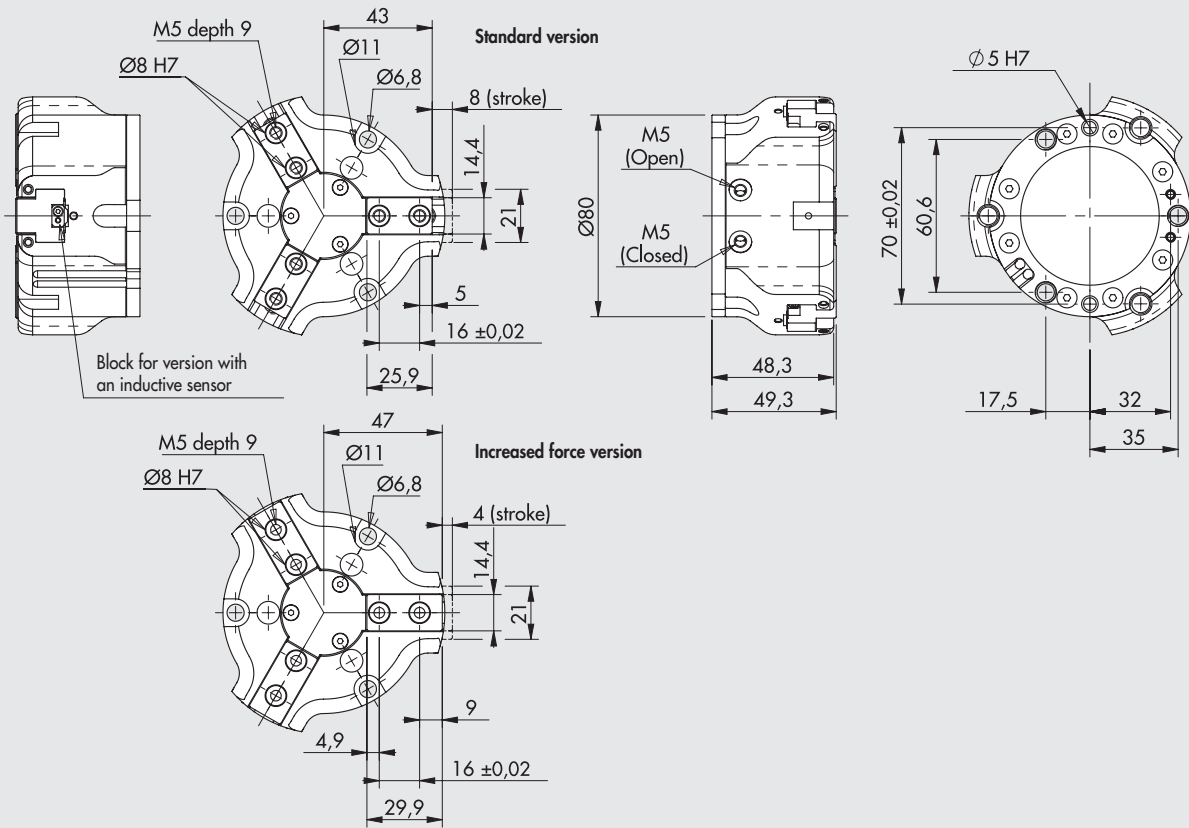


DIAGRAM OF FORCES AND MOMENTS



F Clamping force for each jaw
 Fa Maximum static axial force
 Mx, My, Mz Maximum static moments

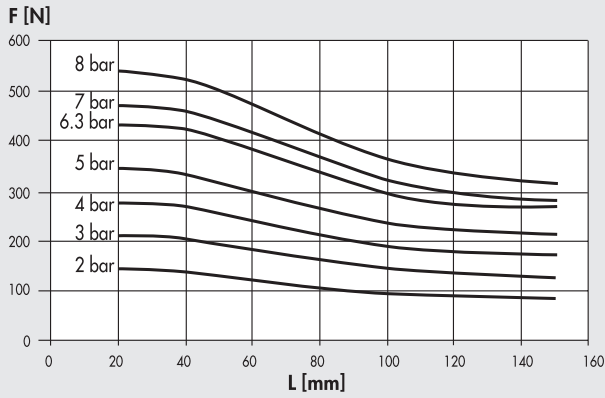
DIMENSIONS OF GRIPPER P12-80



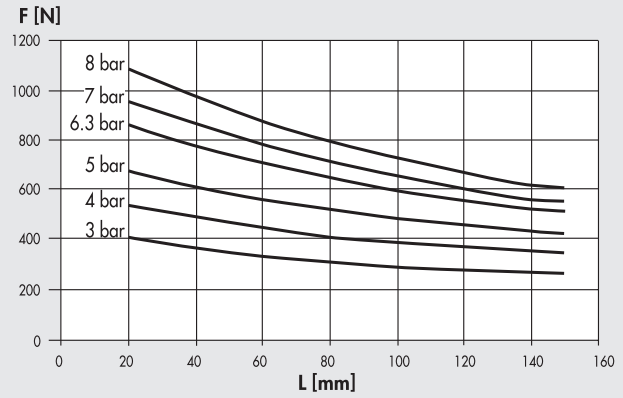
Code	Description
W1560800300	Gripper with 3 jaws P12-80
W1560800301	Gripper with 3 jaws P12-80 for inductive sensors
W1560800320	Gripper with 3 jaws P12-80 increased force
W1560800321	Gripper with 3 jaws P12-80 increased force for inductive sensors

FORCE CHARTS

Standard version

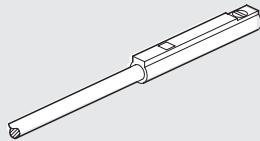


Increased force version



ACCESSORIES

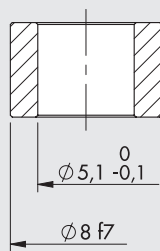
MAGNETIC SENSOR Ø 4



Code	Description
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CENTRING RING



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W1560809201	Kit of centring rings

Note: 2-pieces pack

NOTES