GRIPPER WITH TWO PARALLEL JAWS SERIES P3K

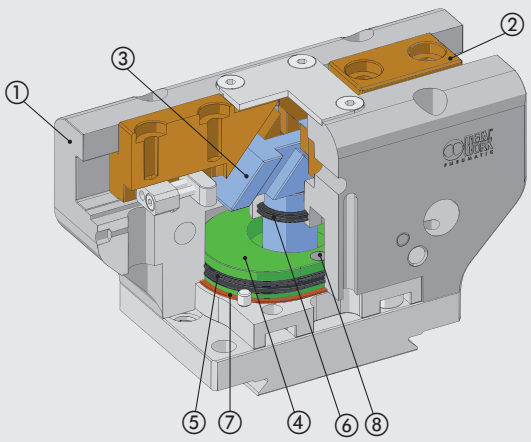
Parallel double-acting two-jaw gripper, with either internal or external clamping. Also available in the double-acting with spring version, normally open (NO) for internal grip and normally closed (NC) for external grip.
Aluminum alloy body coated with surface hardening treatment; jaws made of wear-resistant 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.
All sizes are available in the version with standard stroke and clamping force, while only some in the version with reduced stroke but with higher clamping 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. There are different mounting options, including that with V-Lock interfacing plates on the bottom or on the side.

TECHNICAL DATA			P3K-64			P3K-80						P3K-100					
						Standard			Increased force			Standard			Increased force		
			DA	NO	NC	DA	NO	NC	DA	NO	NC	DA	NO	NC	DA	NO	NC
Minimum operating pressure		bar	2			2						2					
		MPa	0.2			0.2						0.2					
		psi	29			29						29					
Maximum operating pressure		bar	8			8						8					
		MPa	0.8			0.8						0.8					
		psi	116			116						116					
Temperature range		°C	-10 to 80			-10 to 80						-10 to 80					
Fluid			20 µm filtered, lubricated or unlubricated air; lubrification if used, it must be continuous														
Gripping force at 6.3 bar *	opening	N	125	157	-	265	322	-	445	560	-	360	444	-	790	958	-
	closing	N	113	-	145	239	-	296	401	-	516	324	-	408	711	-	879
Minimum gripping force produced by the spring *		N	-	32	32	-	57	57	-	115	115	-	84	84	-	168	168
Recommended workpiece weight		kg	1.3			2.5			5			3.5			7		
Stroke of each jaw		mm	6			8			4			10			5		
Minimum time	opening	s	0.05	0.05	0.1	0.05	0.05	0.1	0.05	0.05	0.1	0.05	0.05	0.1	0.05	0.05	0.1
	closing	s	0.05	0.1	0.05	0.05	0.1	0.05	0.05	0.1	0.05	0.05	0.1	0.05	0.05	0.1	0.05
Repeatability		mm	0.01			0.01						0.01					
Moment of inertia as regards the piston axis		kg cm²	1	1.9	1.9	4.5	5.3	5.3	4.5	5.3	5.3	12	14.5	14.5	12	14.5	14.5
Weight		kg	0.21	0.38	0.38	0.6	0.7	0.7	0.6	0.7	0.7	1	1.2	1.2	1	1.2	1.2

DA: Double-acting; NO: Double acting with spring, normally open; NC: Double acting with spring, normally closed.
* Referred to a single jaw 20 mm from the upper surface. The total force is obtained by multiplying the reported value by 2.

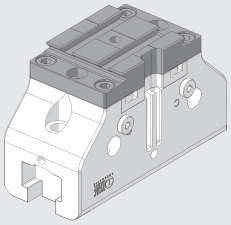
COMPONENTS

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



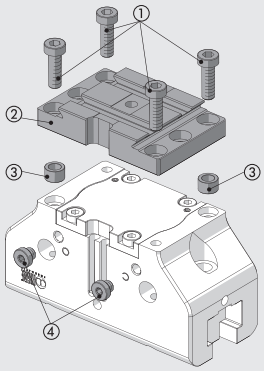
V-Lock MOUNTING OPTIONS FOR P3K-80 AND P3K-100 GRIPPERS

Standard

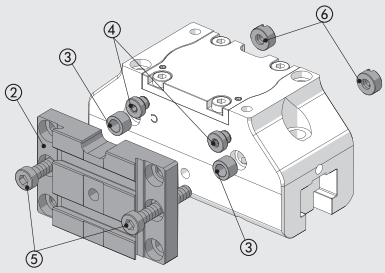


The gripper as supplied.

Lateral

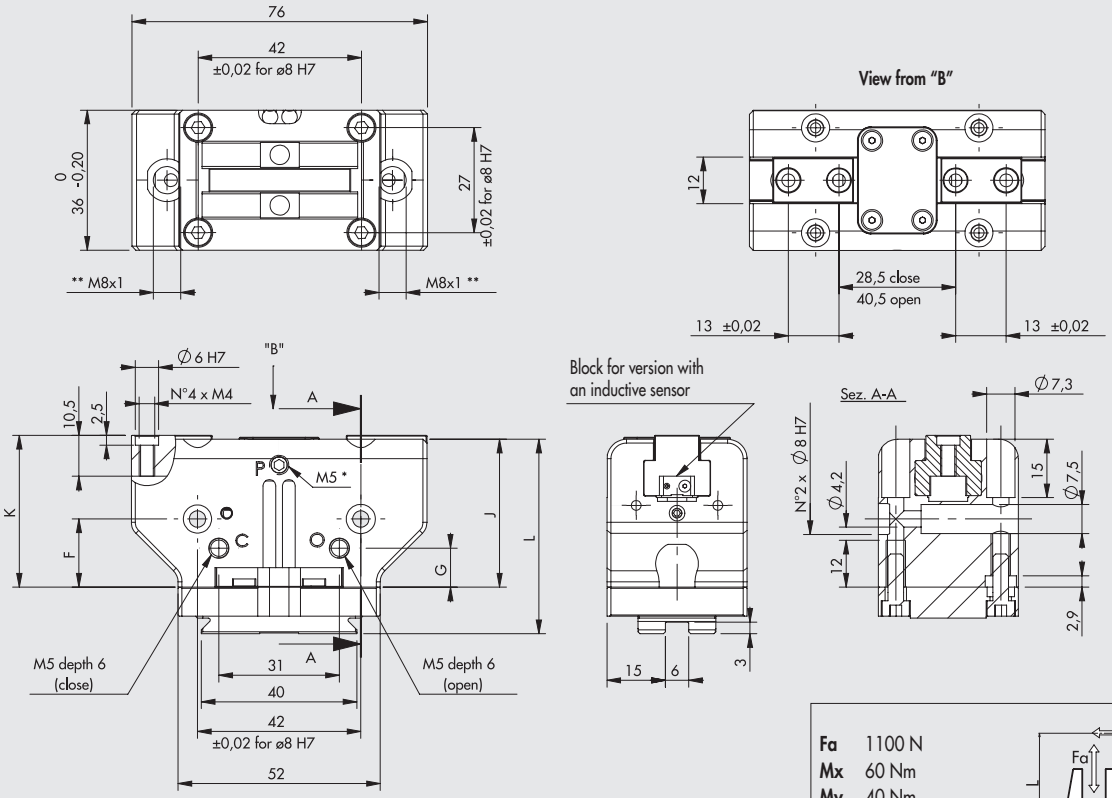


Unscrew the 4 screws ①, remove the plate ② and pull out the centring rings ③. Then unscrew the 2 plugs ④.



Replace the 2 plugs ④ on the opposite side of the gripper and insert the 2 centring rings ③.
Position the plate ② and the two long screws ⑤ (supplied with the gripper). On the opposite side of the plate, insert the two nuts with a screwdriver slot ⑥ (supplied with the gripper) and tighten them against the screws ⑤.

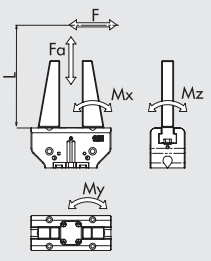
GRIPPER P3K-64



	K	J	F ±0.02	G	L
DA	39	38	17.5	10	50
NO /NC	57	56	35.5	29	68

* Discharge pressurization connection, present on both sides
** Inductive sensor slot
NOTE: For standard dovetail dimensions, see **chapter V-Lock adaptors**.

Fa	1100 N
Mx	60 Nm
My	40 Nm
Mz	40 Nm

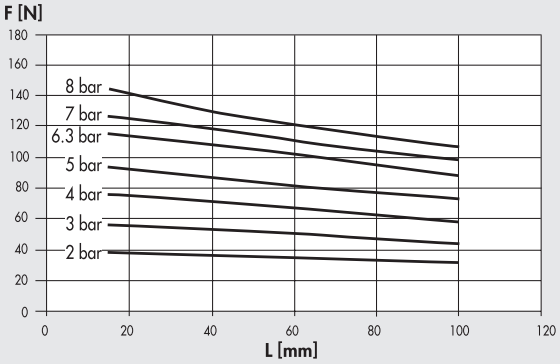


F	gripping force for each jaw
Fa	maximum admissible static axial force
Mx, My, Mz	maximum admissible static moments

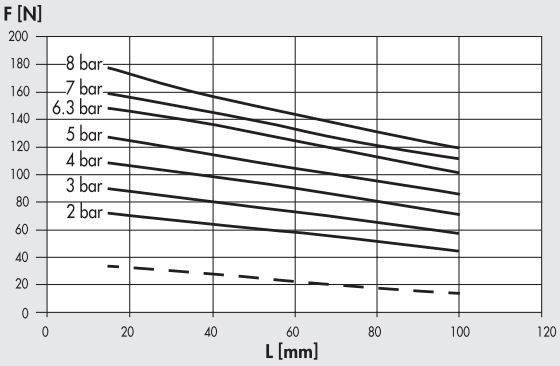
GRAPHS OF GRIPPING FORCE AS A FUNCTION OF DISTANCE "L"

External grip*** (closing jaws)

Version DA

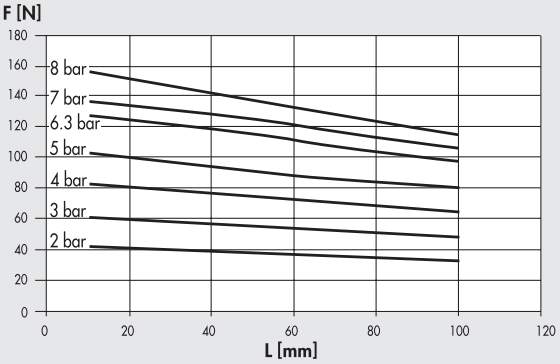


Version NC

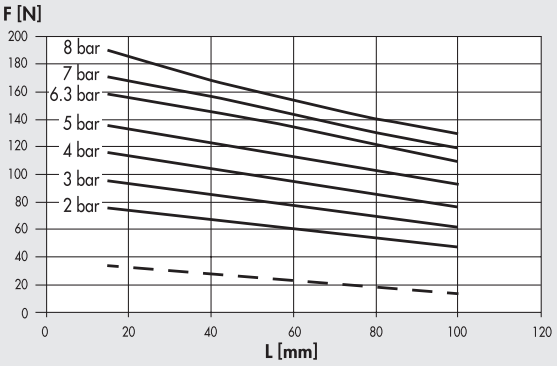


Internal grip*** (opening jaws)

Version DA



Version NO

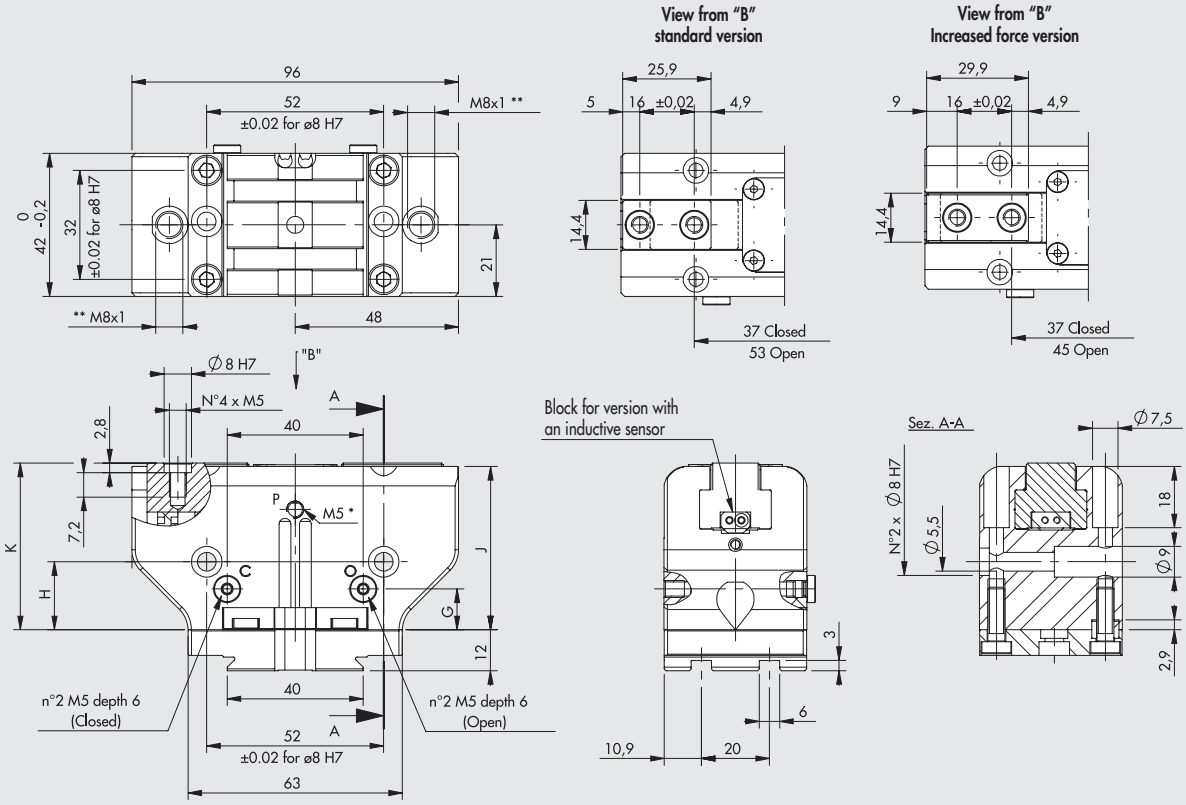


*** Referred to a single jaw. The total force is obtained by multiplying the value by 2.

— — — Minimum gripping force generated by the spring alone (NO and NC versions only). Actual force varies with stroke.

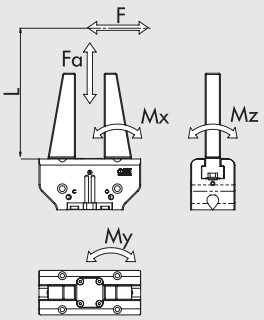
Code	Description
W1560640200K	Gripper with 2 parallel jaws P3K-64
W1560640201K	Gripper with 2 parallel jaws P3K-64 for inductive sensors
W1560642200K	Gripper with 2 parallel jaws P3K-64 NO
W1560642201K	Gripper with 2 parallel jaws P3K-64 NO for inductive sensors
W1560643200K	Gripper with 2 parallel jaws P3K-64 NC
W1560643201K	Gripper with 2 parallel jaws P3K-64 NC for inductive sensors

GRIPPER P3K-80



* Discharge pressurization connection, present on both sides
** Inductive sensor slot
Note: For standard dovetail dimensions, **see chapter V-Lock adaptors**.

	K	J	H ±0.02	G
DA	49	48	20	12
NO /NC	67	66	38	30



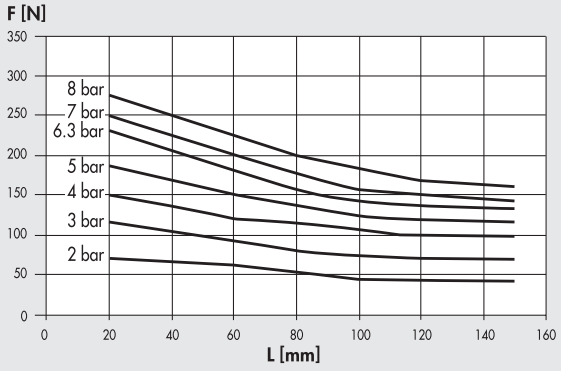
Fa	1500 N
Mx	90 Nm
My	55 Nm
Mz	55 Nm

F	gripping force for each jaw
Fa	maximum admissible static axial force
Mx, My, Mz	maximum admissible static moments

P3K-80 GRAPHS OF GRIPPING FORCE AS A FUNCTION OF DISTANCE "L"

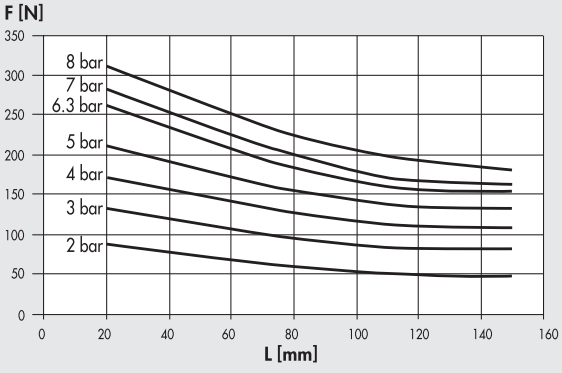
External grip*** (closing jaws)

Version DA



Internal grip*** (opening jaws)

Version DA

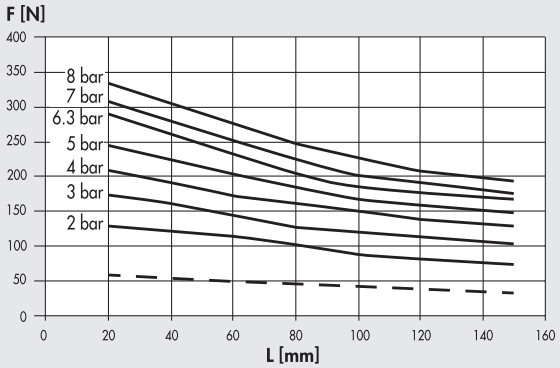


*** Referred to a single jaw. The total force is obtained by multiplying the value by 2.

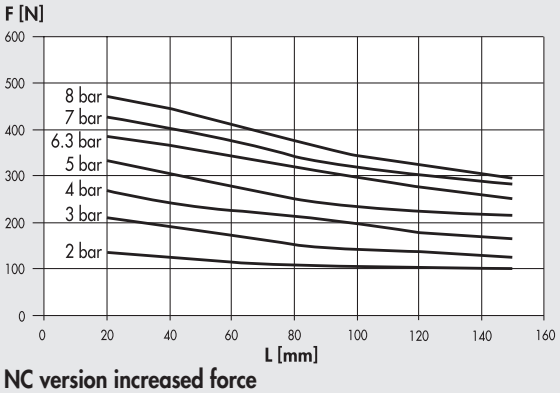
P3K-80 GRAPHS OF GRIPPING FORCE AS A FUNCTION OF DISTANCE "L"

External grip*** (closing jaws)

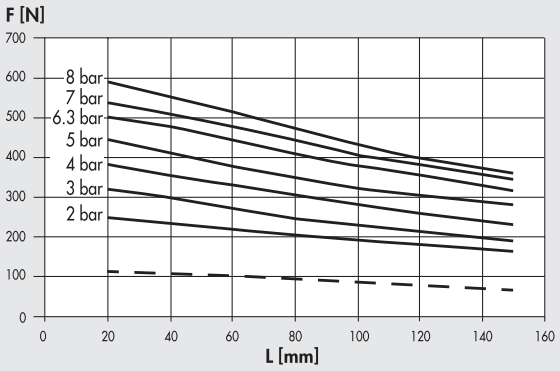
Version NC



DA version increased force

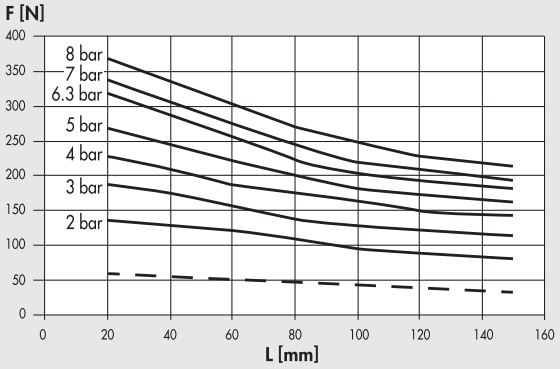


NC version increased force

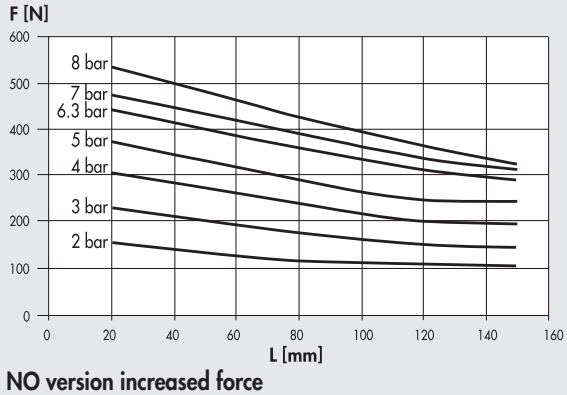


Internal grip*** (opening jaws)

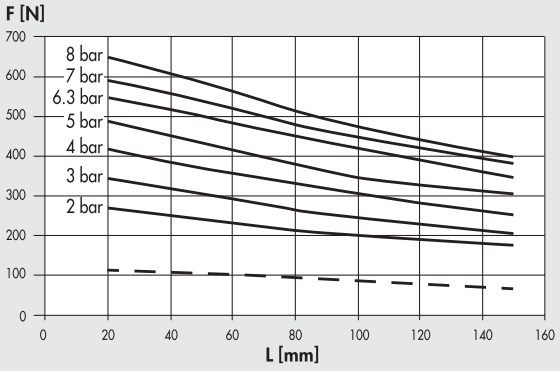
Version NO



DA version increased force



NO version increased force

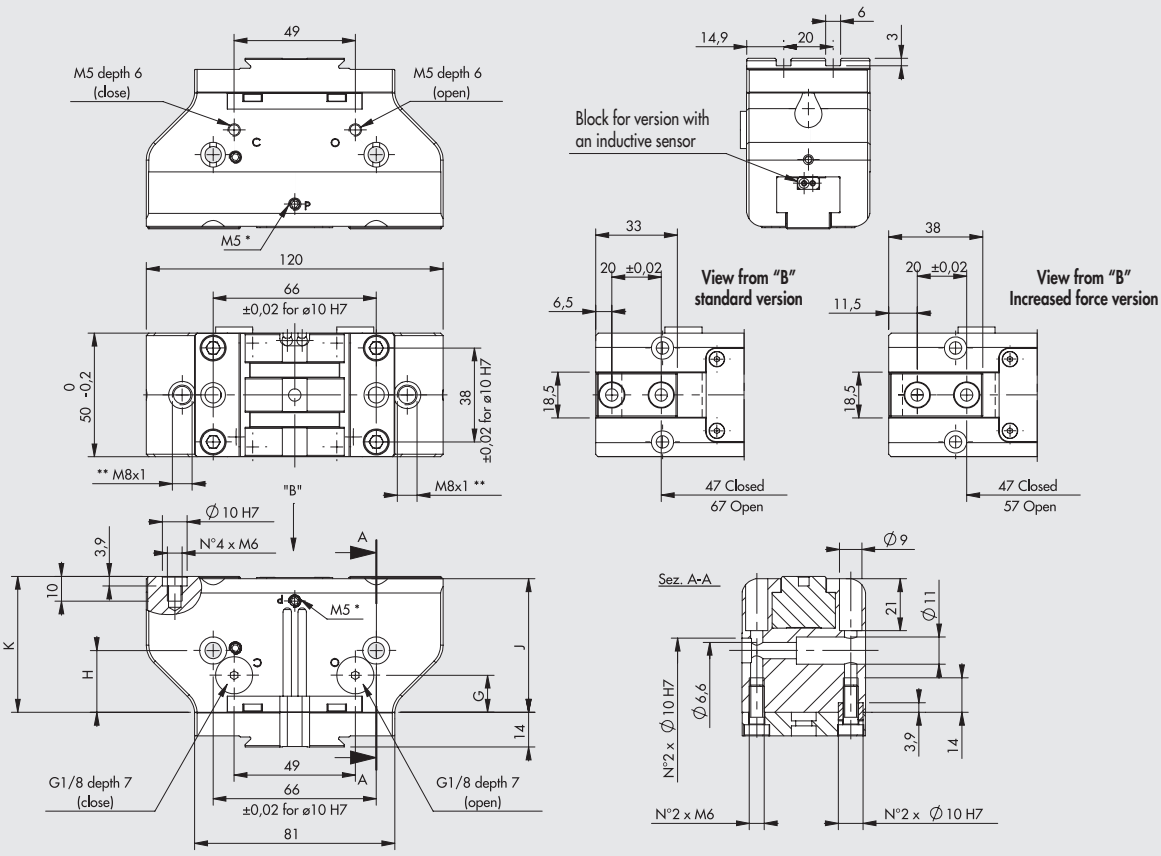


*** Referred to a single jaw. The total force is obtained by multiplying the value by 2.

— — — Minimum gripping force generated by the spring alone (NO and NC versions only). Actual force varies with stroke.

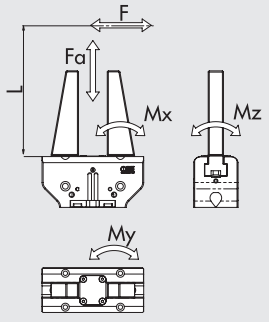
Code	Description
W1560800200K	Gripper with 2 parallel jaws P3K-80
W1560800201K	Gripper with 2 parallel jaws P3K-80 for inductive sensors
W1560800220K	Gripper with 2 parallel jaws P3K-80 increased force
W1560800221K	Gripper with 2 parallel jaws P3K-80 increased force for inductive sensors
W1560802200K	Gripper with 2 parallel jaws P3K-80 NO
W1560802201K	Gripper with 2 parallel jaws P3K-80 NO for inductive sensors
W1560802220K	Gripper with 2 parallel jaws P3K-80 NO increased force
W1560802221K	Gripper with 2 parallel jaws P3K-80 NO increased force for inductive sensors
W1560803200K	Gripper with 2 parallel jaws P3K-80 NC
W1560803201K	Gripper with 2 parallel jaws P3K-80 NC for inductive sensors
W1560803220K	Gripper with 2 parallel jaws P3K-80 NC increased force
W1560803221K	Gripper with 2 parallel jaws P3K-80 NC increased force for inductive sensors

GRIPPER P3K-100



* Discharge pressurization connection, present on both sides
** Inductive sensor slot
NOTE: For standard dovetail dimensions, see **chapter V-Lock adaptors**.

	K	J	H ±0.02	G
DA	55	54	25	15
NO /NC	81	80	51	41



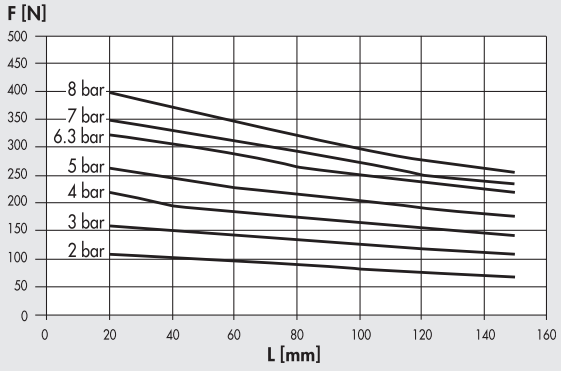
Fa	2000 N
Mx	115 Nm
My	70 Nm
Mz	80 Nm

F	gripping force for each jaw
Fa	maximum admissible static axial force
Mx, My, Mz	maximum admissible static moments

P3K-100 GRAPHS OF GRIPPING FORCE AS A FUNCTION OF DISTANCE "L"

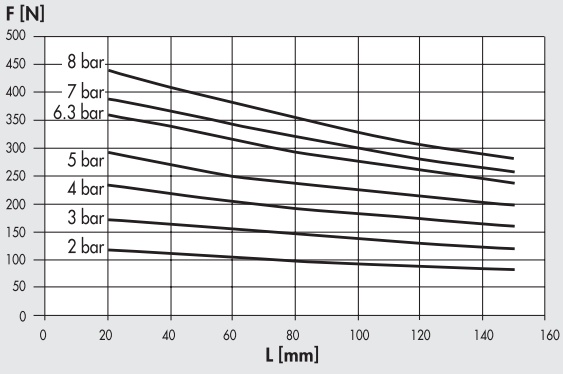
External grip*** (closing jaws)

Version DA



Internal grip*** (opening jaws)

Version DA

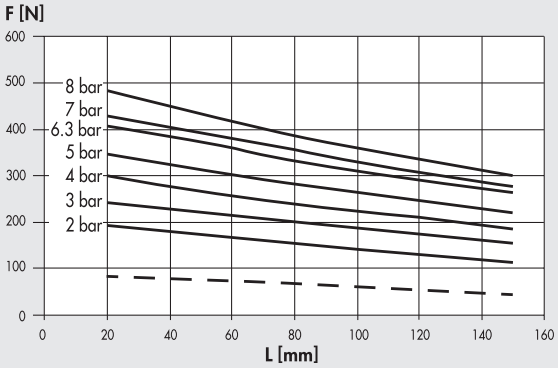


*** Referred to a single jaw. The total force is obtained by multiplying the value by 2.

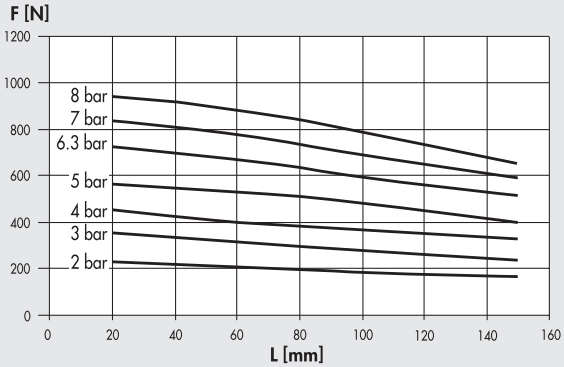
P3K-100 GRAPHS OF GRIPPING FORCE AS A FUNCTION OF DISTANCE "L"

External grip*** (closing jaws)

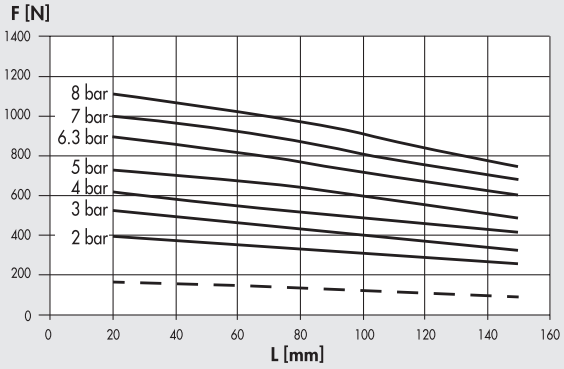
Version NC



DA version increased force

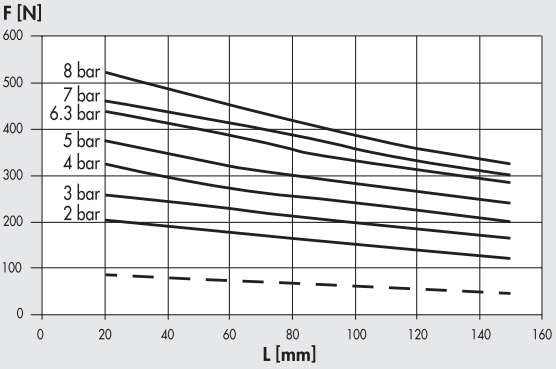


NC version increased force

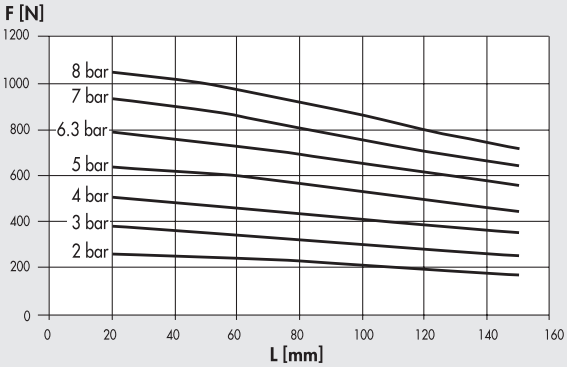


Internal grip*** (opening jaws)

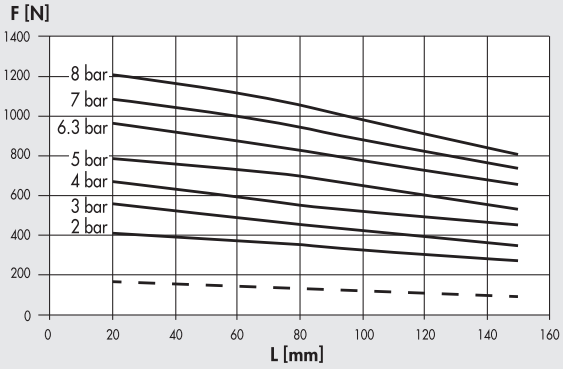
Version NO



DA version increased force



NO version increased force



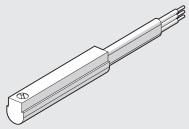
*** Referred to a single jaw. The total force is obtained by multiplying the value by 2.

— — — Minimum gripping force generated by the spring alone (NO and NC versions only). Actual force varies with stroke.

Code	Description
W1561000200K	Gripper with 2 parallel jaws P3K-100
W1561000201K	Gripper with 2 parallel jaws P3K-100 for inductive sensors
W1561000220K	Gripper with 2 parallel jaws P3K-100 increased force
W1561000221K	Gripper with 2 parallel jaws P3K-100 increased force for inductive sensors
W1561002200K	Gripper with 2 parallel jaws P3K-100 NO
W1561002201K	Gripper with 2 parallel jaws P3K-100 NO for inductive sensors
W1561002220K	Gripper with 2 parallel jaws P3K-100 NO increased force
W1561002221K	Gripper with 2 parallel jaws P3K-100 NO increased force for inductive sensors
W1561003200K	Gripper with 2 parallel jaws P3K-100 NC
W1561003201K	Gripper with 2 parallel jaws P3K-100 NC for inductive sensors
W1561003220K	Gripper with 2 parallel jaws P3K-100 NC increased force
W1561003221K	Gripper with 2 parallel jaws P3K-100 NC increased force for inductive sensors

ACCESSORIES

SENSOR Ø 4



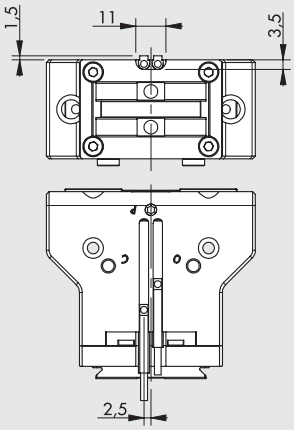
For codes and technical data, see **chapter A6**.

Note: For the NO and NC versions, use only the Hall effect sensor

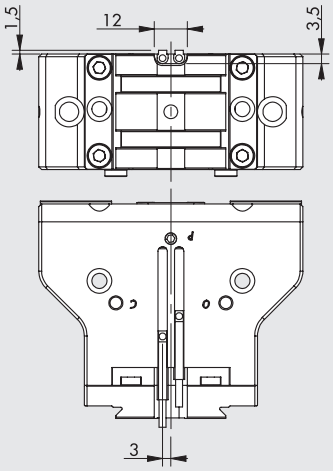
SENSOR MOUNTING IN THE NO AND NC GRIPPERS SLOTS

To accommodate the sensor, a recess may be required in the base on which the gripper will be fixed.

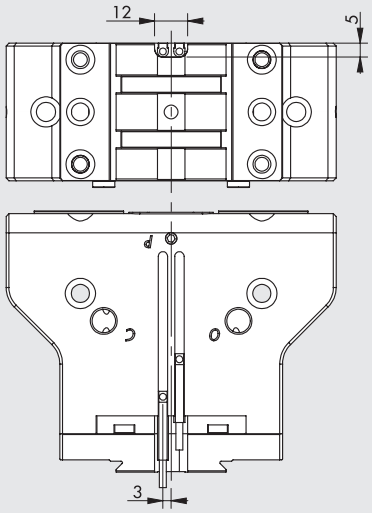
P3K-64



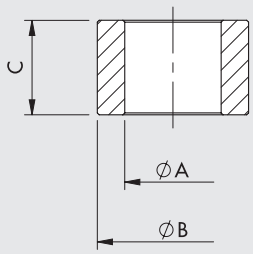
P3K-80



P3K-100

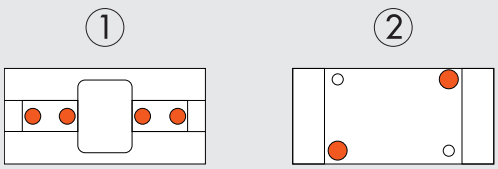


CENTRING RING



Code	ØA	ØB f7	C
W1560649201	$4.5^{0}_{-0.1}$	6	$5^{0}_{-0.1}$
W1560809201	$5.1^{0}_{-0.1}$	8	$5^{0}_{-0.05}$
W1561009201	$6.2^{\pm 0.1}$	10	$6.9^{0}_{-0.1}$

Nota: n. 2 pezzi per confezione



QUANTITY OF KITS NEEDED

Sizer gripper	① - Use with jaws	② - Body use
64	**2** code W1560649201	**1** code W1560809201
80	**2** code W156080920	**1** code W1560809201
100	**2** code W1561009201	**1** code W1561009201

NOTES