CATALOGUE

CAMOZZI
Automation

HANDLING

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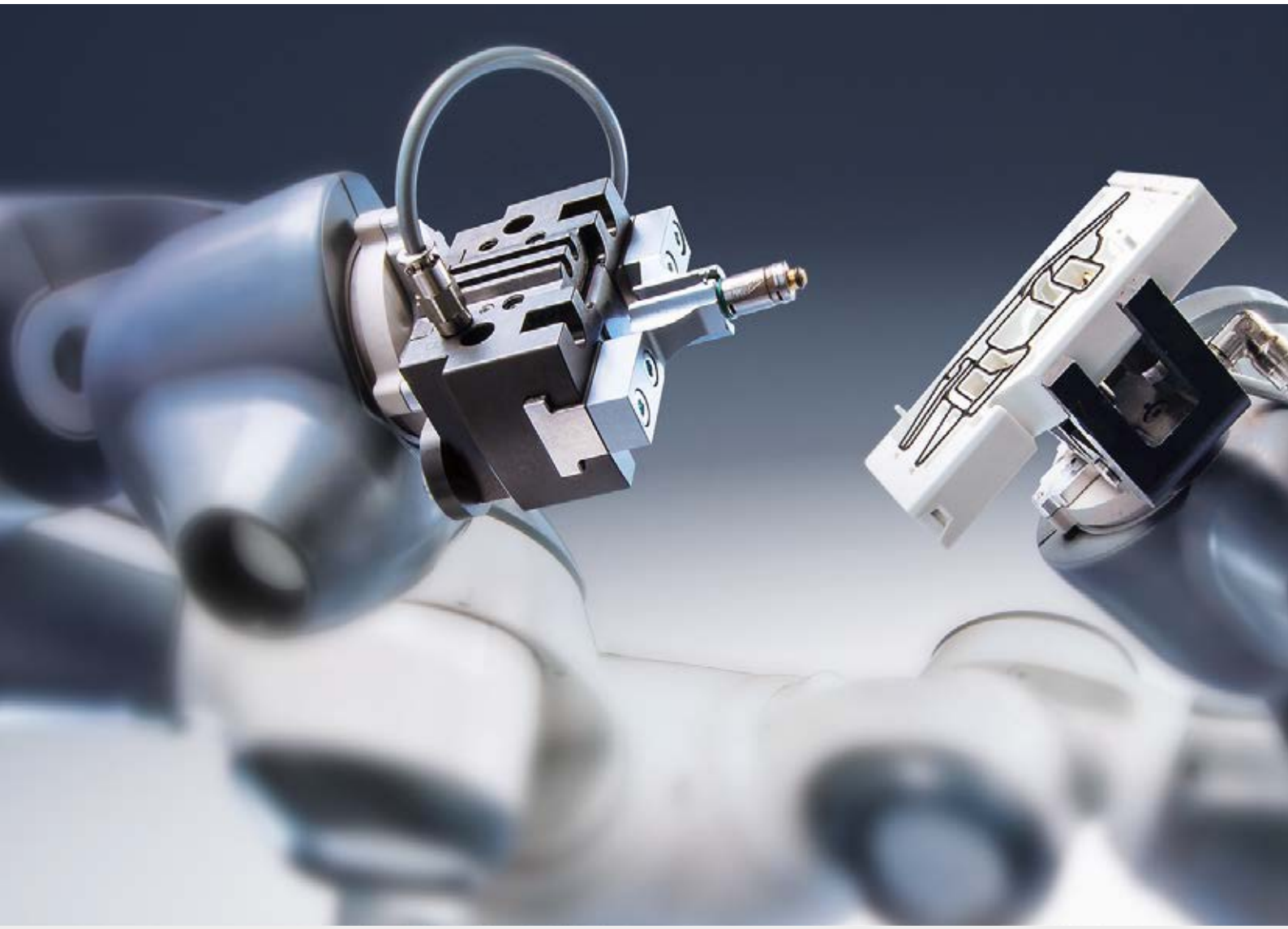
Camozzi Automation is a global leader in the design and production of motion and fluid control components, systems and technologies for Industrial automation, Transportation and Life science industries.



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CAMOZZI
Automation

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3 Stainless steel cylinders
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5 Cylinders not according standards
6 Rotary cylinders
7 Rodless cylinders
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9 Hydrochecks, Rod lock, Shock absorbers

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2 Electromechanical axes
3 Drives
4 Motors and gearboxes

3 Handling

1 Grippers

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1 Suction pads
2 Ejectors
3 Vacuum accessories
4 Vacuum filters

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1 Direct and indirect acting 2/2, 3/2 solenoid valves
2 Solenoid, pneumatic and manifold valves
3 Mechanical and manual valves
4 Logic valves
5 Automatic valves
6 Flow control valves
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6 Fieldbus and multipole systems

1 Valve islands
2 Multi-serial modules

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1 Proportional valves
2 Proportional regulators

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1 Series MX Modular FRL Units
2 Series MC Modular FRL Units
3 Series MD Modular FRL Units
4 Series N FRL Units
5 Pressure regulators
6 Pressure switches and vacuum switches
7 Accessories for air treatment

9 Fittings, connectors, tubing and accessories

1 Super-rapid fittings
2 Rapid fittings
3 Universal fittings
4 Fittings accessories
5 Quick-release couplings
6 Tubing, spirals and accessories
7 Fittings and accessories for applications of medical gases
8 Mini ball valves

General index

1 Grippers

Series CGAN angular grippers with opening angle of 30°

New

Double acting, magnetic, self centering
Sizes: 10, 16, 20, 25, 32

- Compact and light design
- Flexible mounting
- Fixing on 3 sides
- High closing and opening speed
- Position detection thanks to the use of Series CSD magnetic proximity switches

Series CGAN angular grippers are available in 5 different sizes. Thanks to an opening angle of between -10° and 30°, the Series CGAN angular grippers guarantee a fast and efficient grip even in reduced workspaces.
Its compact design and the materials used, make this gripper particularly suitable for all those applications requiring high precision and position repeatability such as Transferring, Pick & Place or Pick & Hold.

Fixing points on three different sides of the gripper body and its easy mounting by means of an optional adaptor, guarantee highly flexible installation, even in industrial sectors that demand high levels of production efficiency such as the assembly, packaging and Food & Beverage sectors.

GENERAL DATA

Type of construction	Self centering angular gripper
Operation	Double-acting
Sizes	10; 16; 20; 25; 32
Force transmission	Lever system
Opening torque at 6 bar	14 - 280 (Ncm)
Closing torque at 6 bar	10 - 230 (Ncm)
Opening/closing angle	2x15°
Air connections	M3 - M5
Operating pressure	2 ÷ 8 bar
Operating temperature	5°C ÷ 60°C
Store temperature	-10°C ÷ 80°C
Maximum use frequency	3 Hz
Repeatability	0.05°
Medium	Filtered air in class 7.4.4 according to ISO 8573-1. In case lubricated air is used, we recommend ISOVG32 oil and to never interrupt lubrication.
Compatibility	ROHS Directive
Certifications	ATEX (II 2GD c IIC 120°C(T4)-20°C≤Ta≤80)
Materials	PTFE, Silicone and Copper free
Compatible magnetic proximity switches	Series CSD

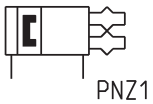
CODING EXAMPLE

CGAN	-	20	-	EX

CGAN	SERIES	PNEUMATIC SYMBOL PNZ1
20	SIZES: 10 16 20 25 32	
EX	Add EX to order the certified ATEX version	

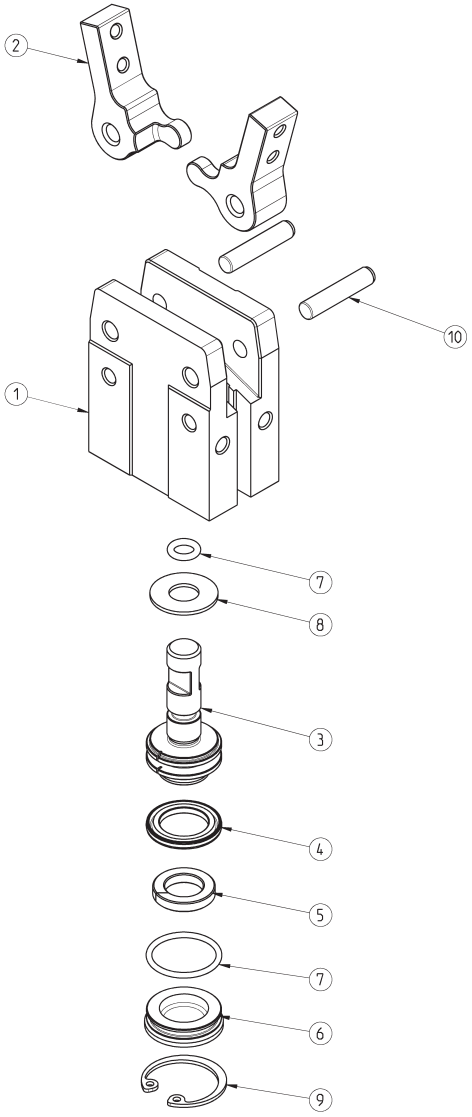
PNEUMATIC SYMBOLS

The pneumatic symbol indicated in the CODING EXAMPLE is shown below.



PNZ1

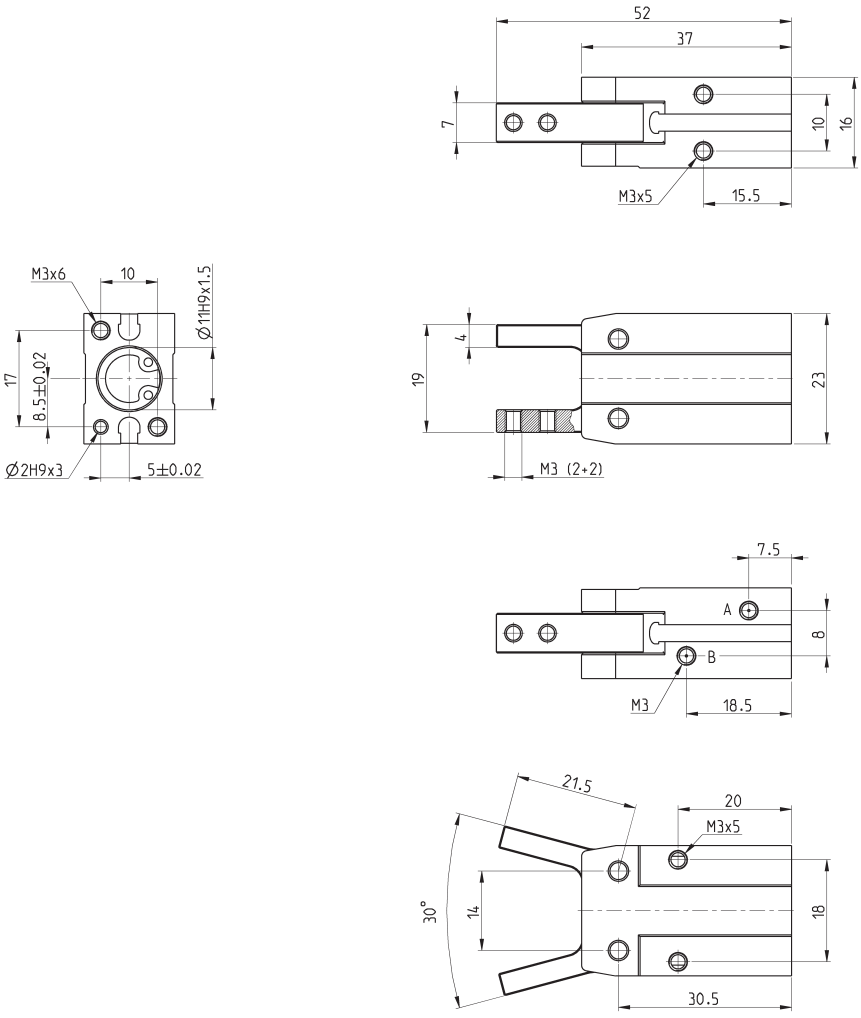
Series CGAN grippers - construction



LIST OF COMPONENTS	
PARTS	MATERIALS
1 - Body	Aluminium alloy
2 - Jaw	Stainless steel
3 - Piston	Stainless steel
4 - Seal	NBR
5 - Magnet	Plastoferrite
6 - Rear end cap	Acetal POM
7 - O-ring	NBR - HNBR
8 - Cushioning	PU Polyurethane
9 - Seeger	Stainless steel
10 - Pin	Steel

Series CGAN gripper, size 10 - dimensions

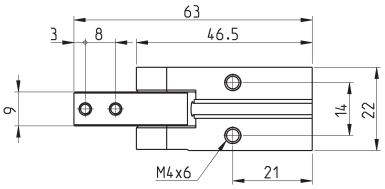
DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection

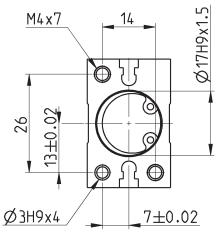


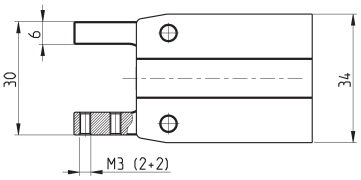
Mod.	Total closing gripping force at 6 bar (N)	Closing gripping force per jaw at 6 bar (N)	Total opening gripping force at 6 bar (N)	Opening gripping force per jaw at 6 bar (N)	Stroke per jaw (°)	Working pressure (bar)	Working temperature (°C)	Repeatability (°)	Max use frequency (Hz)	Weight (Kg)
CGAN-10	10.5	5.25	14	7	15°	2 ÷ 8	5 ÷ 60	0.05	3	0.045

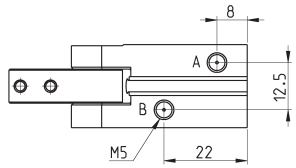
Series CGAN gripper, size 16 - dimensions

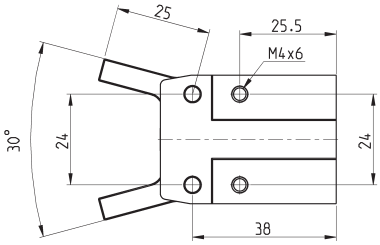
DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection







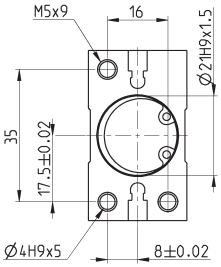


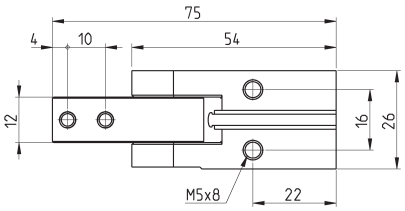


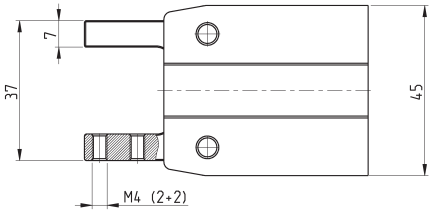
Mod.	Total closing gripping force at 6 bar (N)	Closing gripping force per jaw at 6 bar (N)	Total opening gripping force at 6 bar (N)	Opening gripping force per jaw at 6 bar (N)	Stroke per jaw (°)	Working pressure (bar)	Working temperature (°C)	Repeatability (°)	Max use frequency (Hz)	Weight (Kg)
CGAN-16	50	25	62	31	15°	2 ÷ 8	5 ÷ 60	0.05	3	0.112

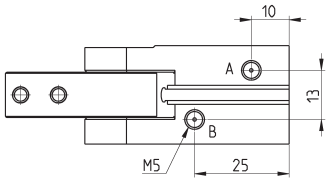
Series CGAN gripper, size 20 - dimensions

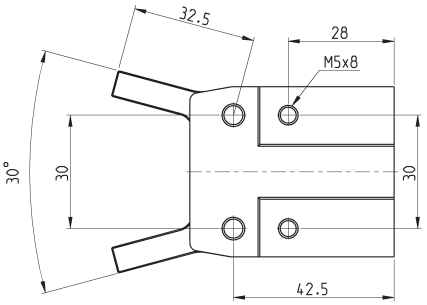
DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection









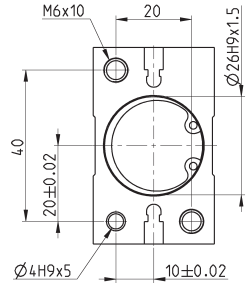


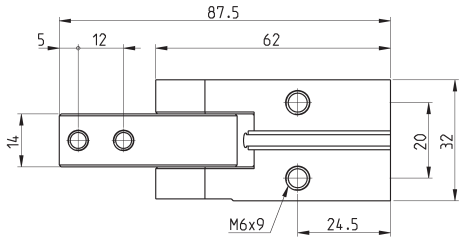
Mod.	Total closing gripping force at 6 bar (N)	Closing gripping force per jaw at 6 bar (N)	Total opening gripping force at 6 bar (N)	Opening gripping force per jaw at 6 bar (N)	Stroke per jaw (°)	Working pressure (bar)	Working temperature (°C)	Repeatability (°)	Max use frequency (Hz)	Weight (Kg)
CGAN-20	97	48.5	120	60	15°	2 ÷ 8	5 ÷ 60	0.05	3	0.213

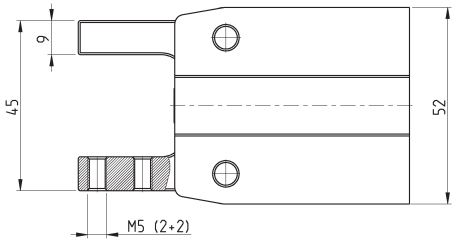
Products designed for industrial applications.
General terms and conditions for sale are available on www.camozzi.com.

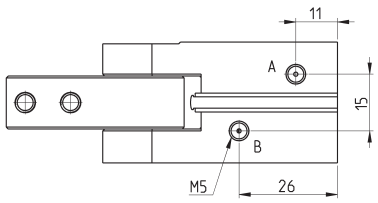
Series CGAN gripper, size 25 - dimensions

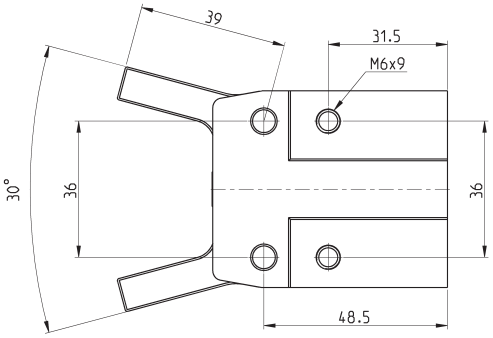
DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection







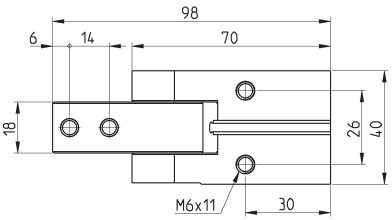


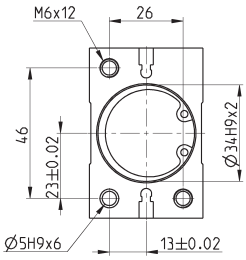


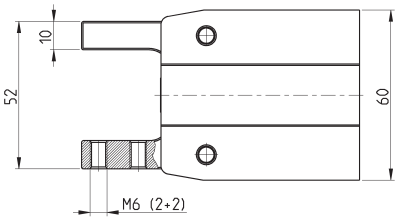
Mod.	Total closing gripping force at 6 bar (N)	Closing gripping force per jaw at 6 bar (N)	Total opening gripping force at 6 bar (N)	Opening gripping force per jaw at 6 bar (N)	Stroke per jaw (°)	Working pressure (bar)	Working temperature (°C)	Repeatability (°)	Max use frequency (Hz)	Weight (Kg)
CGAN-25	185	92.5	232	116	15°	2 ÷ 8	5 ÷ 60	0.05	3	0.355

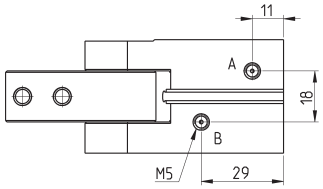
Series CGAN gripper, size 32 - dimensions

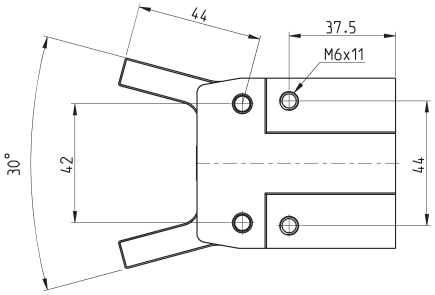
DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection





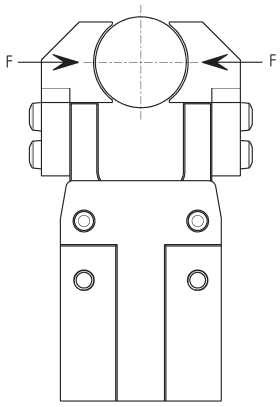


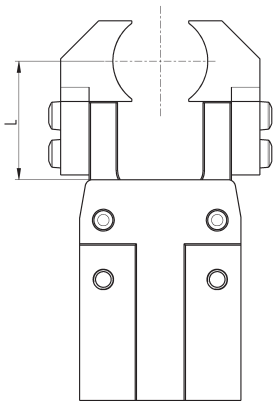




Mod.	Total closing gripping force at 6 bar (N)	Closing gripping force per jaw at 6 bar (N)	Total opening gripping force at 6 bar (N)	Opening gripping force per jaw at 6 bar (N)	Stroke per jaw (°)	Working pressure (bar)	Working temperature (°C)	Repeatability (°)	Max use frequency (Hz)	Weight (Kg)
CGAN-32	235	117.5	292	146	15°	2 ÷ 8	5 ÷ 60	0.05	3	0.585

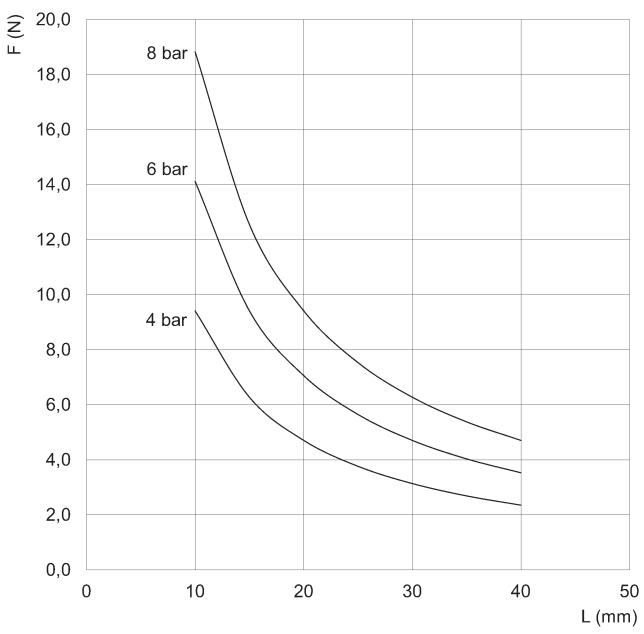
GRIPPING POINT





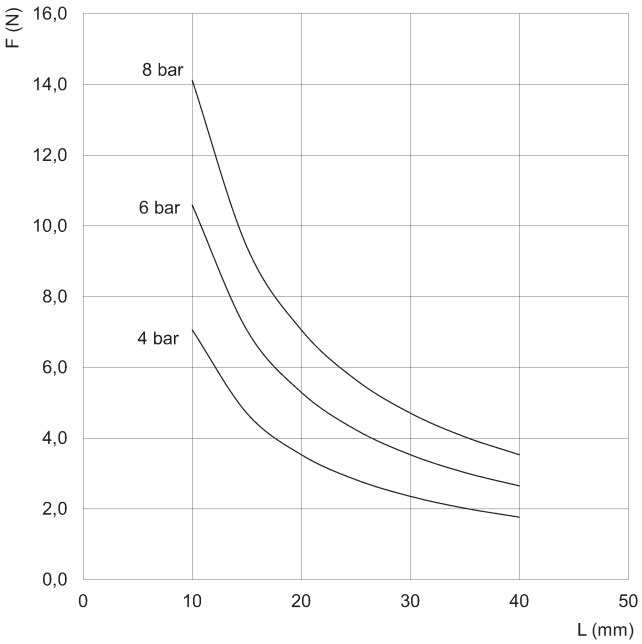
L = Arm
F = Gripping force

TIGHTENING FORCE PER SINGLE JAW



CGAN-10

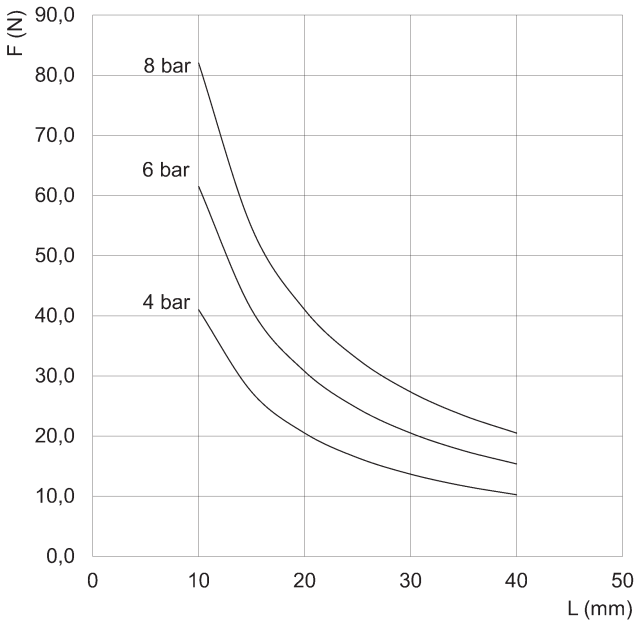
Opening gripping force
L = Arm
F = Gripping force



CGAN-10

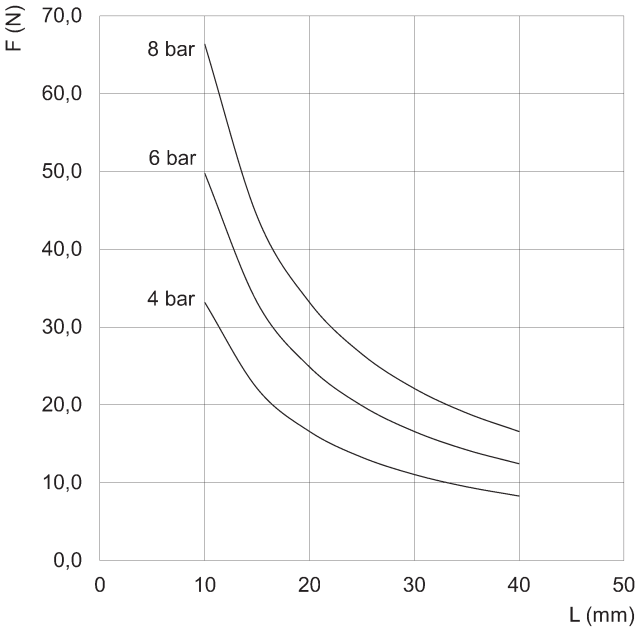
Closing gripping force
L = Arm
F = Gripping force

TIGHTENING FORCE PER SINGLE JAW



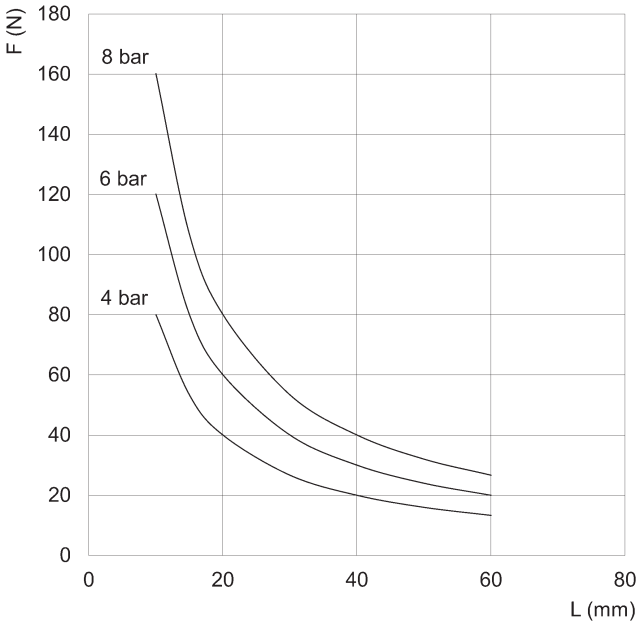
CGAN-16

Opening gripping force
L = Arm
F = Gripping force



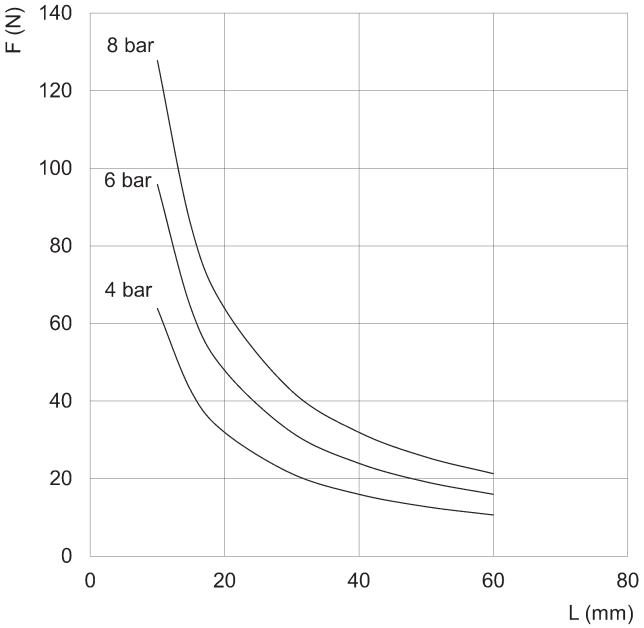
CGAN-16

Closing gripping force
L = Arm
F = Gripping force



CGAN-20

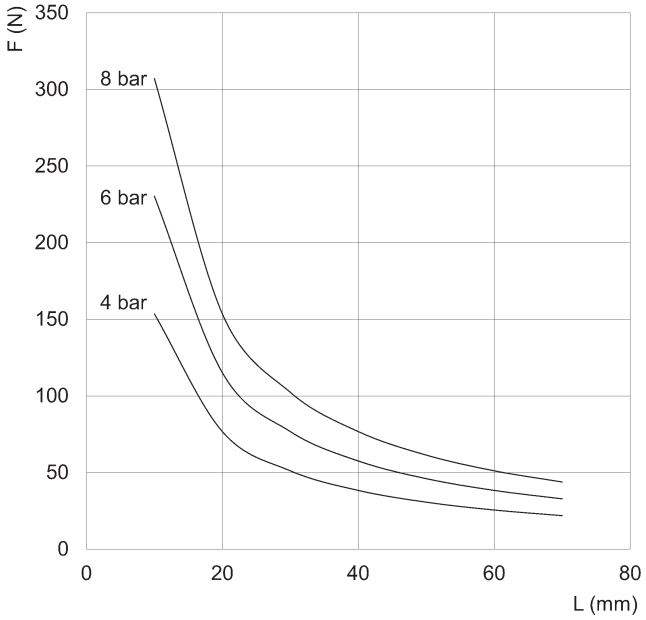
Opening gripping force
L = Arm
F = Gripping force



CGAN-20

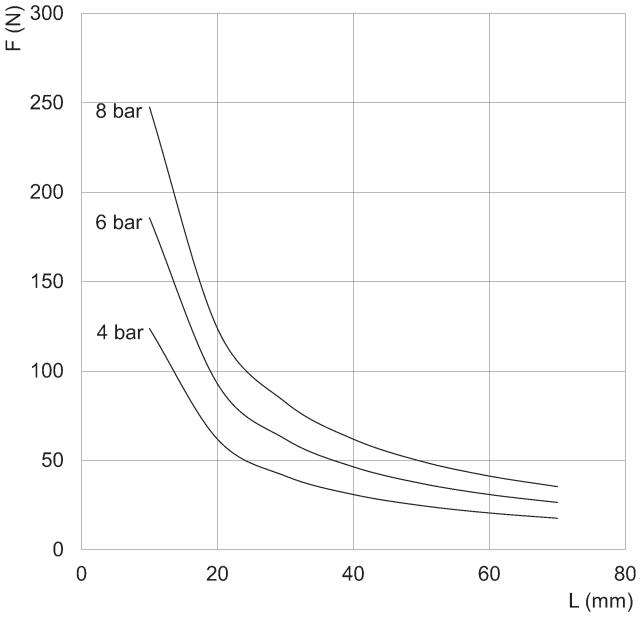
Closing gripping force
L = Arm
F = Gripping force

TIGHTENING FORCE PER SINGLE JAW



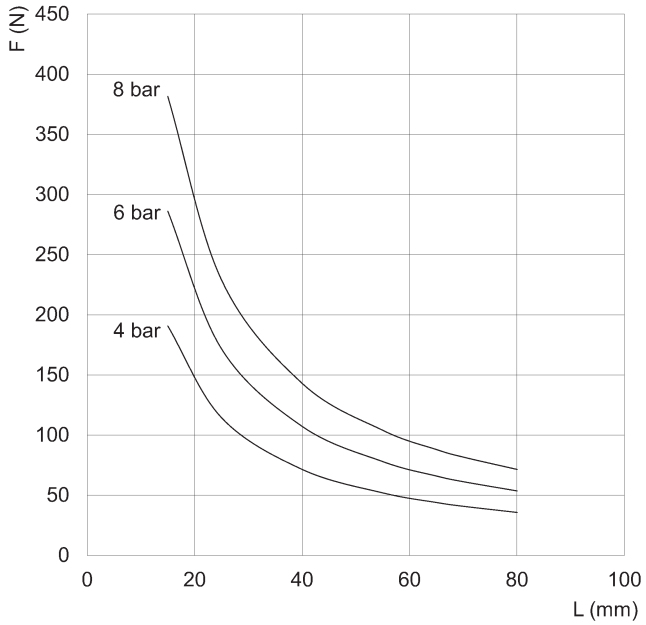
CGAN-25

Opening gripping force
L = Arm
F = Gripping force



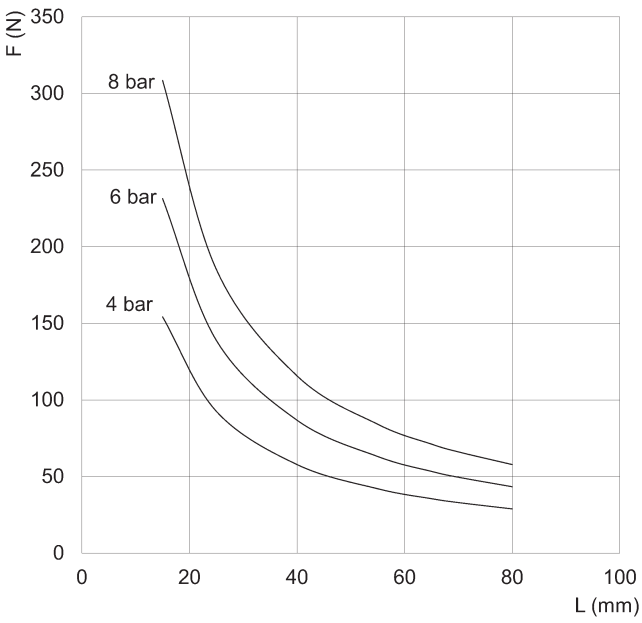
CGAN-25

Closing gripping force
L = Arm
F = Gripping force



CGAN-32

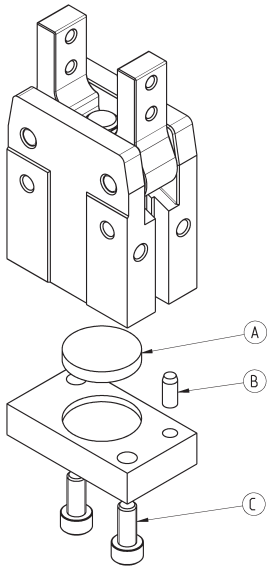
Opening gripping force
L = Arm
F = Gripping force

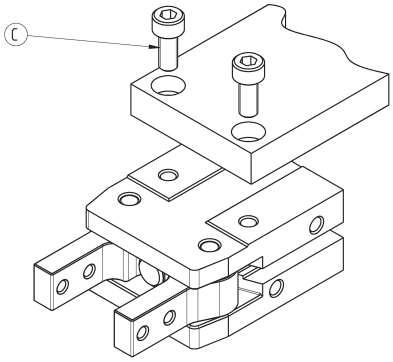


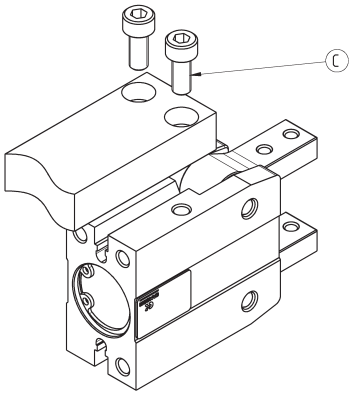
CGAN-32

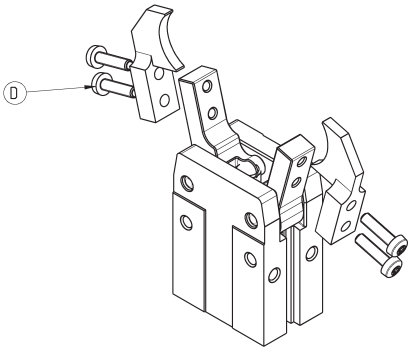
Closing gripping force
L = Arm
F = Gripping force

Examples of mounting



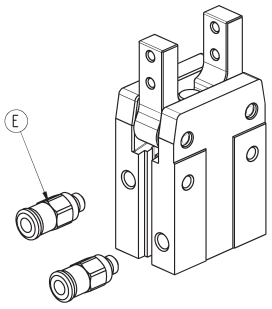






Mod.	A	B	C	D
CGAN-10	Ø11	Ø2	M3	M3
CGAN-16	Ø17	Ø3	M4	M3
CGAN-20	Ø21	Ø4	M5	M4
CGAN-25	Ø26	Ø4	M6	M5
CGAN-32	Ø34	Ø5	M6	M6

Air supply ports

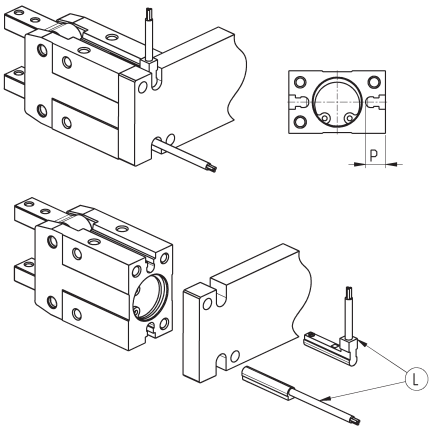


Mod.	E
CGAN-10	M3
CGAN-16	M5
CGAN-20	M5
CGAN-25	M5
CGAN-32	M5

Example of mounting: proximity switches

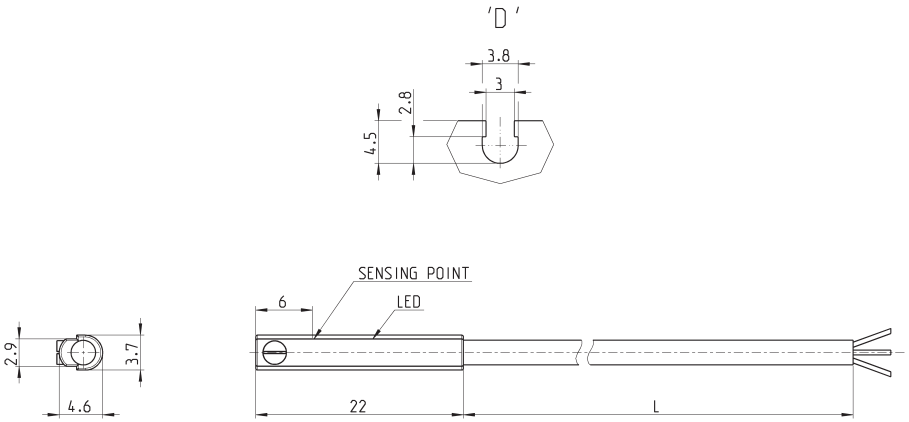
L = proximity switch mod. CSD-D-334/CSD-H-334 or mod. CSD-D-364/CSD-H-364

In order to position the proximity switch correctly, a channel must be created in the base.



Mod.	P
CGAN-10	5
CGAN-16	7
CGAN-20	10
CGAN-25	10.5
CGAN-32	10.5

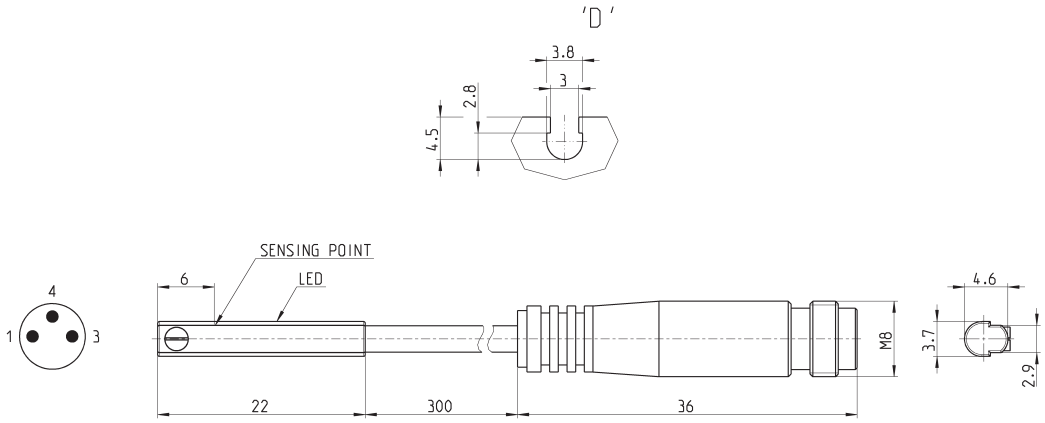
Series CSD magnetic proximity switches, 3-wire cable, D-slot



Mod.	Operation	Connections	Voltage	Output	Max. current	Max Load	Protection	L = length cable
CSD-D-334	Magnetoresistive	3 wires	10 ÷ 27 V DC	PNP	200 mA	6W	Against polarity reversing and overvoltage	2 m

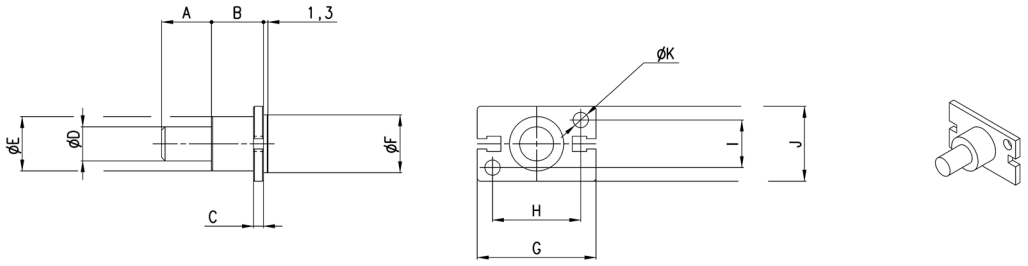
Series CSD magnetic proximity switches, M8 3-pin male conn., D-slot, straight

Length of cable 0.3 metres



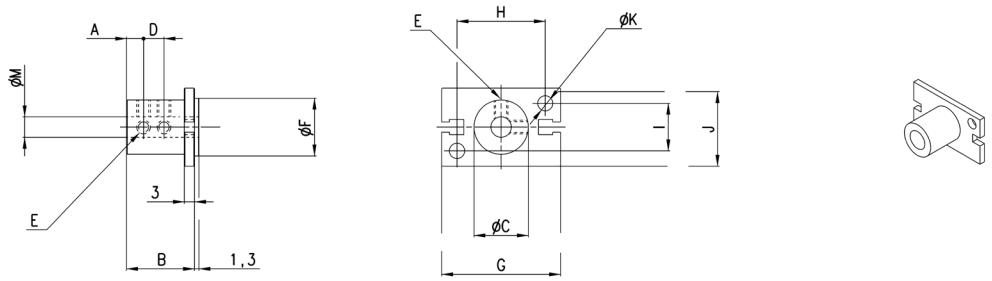
Mod.	Operation	Connection	Voltage	Output	Max. current	Max load	Protection
CSD-D-364	Magnetoresistive	3 wires with M8 connector	10 ÷ 27 V DC	PNP	200 mA	6W	Against polarity reversing and overvoltage

Mounting brackets Mod. L-CGP



Mod.	A	B	C	D	E	F	G	H	I	J	K
L-CGP-16	15	15	3	10	16	17	35	26	14	22	4,5
L-CGP-20	15	15	3	10	18	21	46	35	16	26	5,5
L-CGP-25	25	17	5	14	26	26	53	40	20	32	6,6
L-CGP-32	25	20	6	16	30	34	61	46	26	40	6,6

Mounting brackets Mod. C-CGP



Mod.	A	B	C	D	E	F	G	H	I	J	K	M
C-CGP-16	5	20,5	16	7	M4	17	35	26	14	23	4,5	6
C-CGP-20	7	25,5	20	9	M4	21	46	35	16	27	5,5	8
C-CGP-25	8	30,5	25	10	M4	26	53	40	20	33	6,6	10
C-CGP-32	10	40,5	32	15	M4	34	61	46	26	41	6,6	12

Series CGPT Parallel grippers with T-guide

Single and double acting, magnetic, self-centering
Bores: ø 16, 20, 25, 32, 40 mm

Thanks to the use of a high performing and precise force transmission system, the Series CGPT grippers are able to provide high gripping forces while guaranteeing a very high repeatability.

The wide range of sizes available allows you to find the best solution for any need of movement. The grippers are supplied with centering bushes (tolerance H8) which, once positioned on the body and/or on the jaws, are able to guarantee, during maintenance, a high interchangeability of the gripper and of the extensions.

- Robust, compact and light design
- High closing/opening forces
- Fixing from the top, from below and from the side
- Supply on the side or on the bottom (even without using tubes)
- Self-centering jaws
- High closing and opening repeatability
- High interchangeability (centering bushes)
- Position detection thanks to the use of magnetic proximity switches.
- In compliance with ROHS directive
- PTFE, Silicone and Copper free
- High reliability
- High resistance to external loads thanks to the T-guide
- Variants available for use in ATEX zones and for high temperatures

GENERAL DATA

Type of construction	Self-centering parallel gripper with T-guide
Operation	Single acting (NO, NC), double acting
Bores	Ø16, 20, 25, 32, 40 mm
Force transmission	Lever
Air connections	M3 (Ø16), M5 (Ø20, 25, 32), G1/8 (Ø40)
Working pressure	2 ÷ 8 bar (double acting), 4 ÷ 8 bar (single acting)
Working temperature	5°C ÷ 60°C (standard) - 5°C ÷ 150°C (high temperature version)
Store temperature	-10°C ÷ 80°C
Maximum use frequency	3 Hz (ø 16, 20, 25, 32), 2 Hz (ø 40)
Repeatability	0.02 mm
Interchangeability	0.1 mm
Medium	Filtered air in class 7.4.4 according to ISO 8573-1. In case lubricated air is used, we recommend ISOVG32 oil and to never interrupt lubrication.
Lubrication	After 10 million cycles, grease the sliding zones using Molykote DX grease.
Protection class	IP 40
Compatibility	ROHS Directive
Certifications	ATEX (II 2GD c IIC 120°C(T4)-20°C≤Ta≤80)
Materials	PTFE, Silicone and Copper free

N.B. Pressurize the pneumatic system gradually in order to avoid uncontrolled movements

CODING EXAMPLE

CGPT	-	16	-	NC	-	W	EX

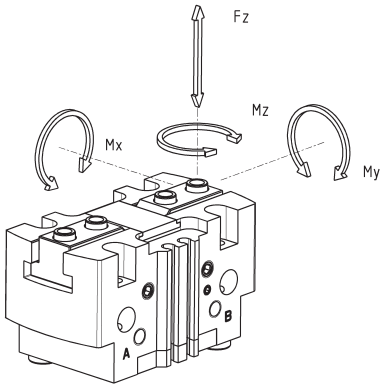
CGPT	SERIES	
16	BORES: 10 16 20 25 32 40	
NC	FUNCTIONING: = double acting NO = single acting, normally open NC = single acting, normally closed	PNEUMATIC SYMBOLS PNZ1 PNZ3 PNZ2
W	VERSION: = standard W = high temperatures (150 °C) - not magnetic	
EX	Add EX to order the certified ATEX version	

PNEUMATIC SYMBOLS

The pneumatic symbols which have been indicated in the CODING EXAMPLE are shown below.

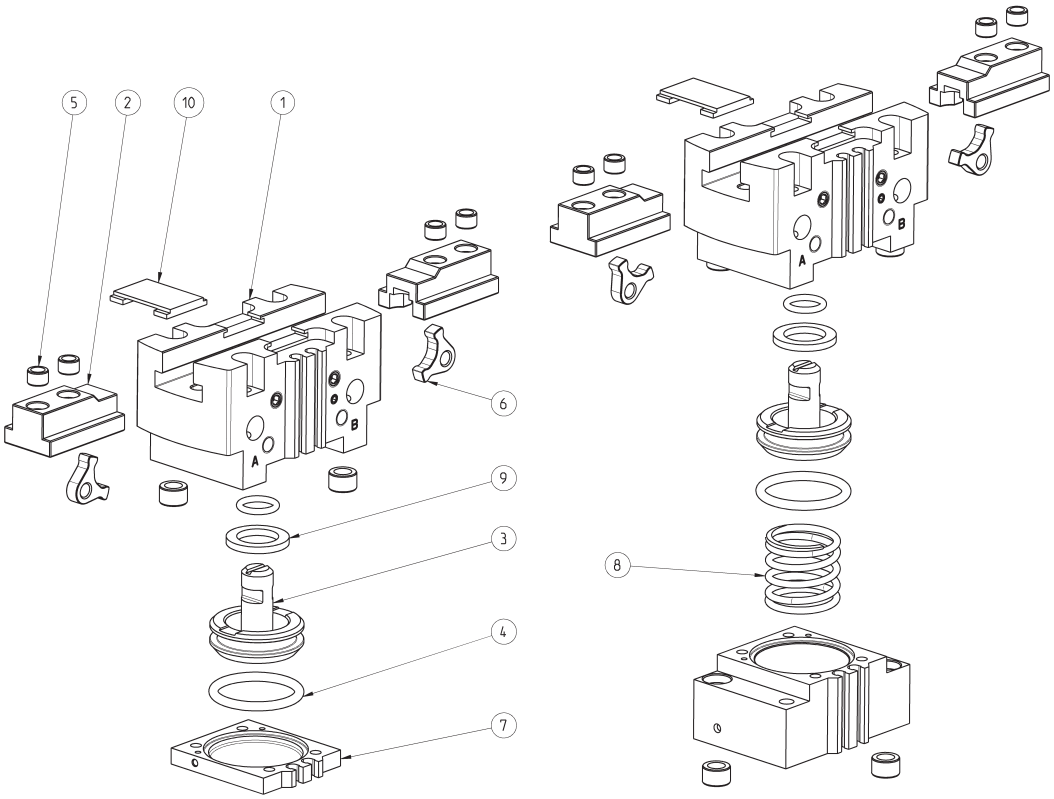
Maximum admissible loads and torques

Fz s, Mx s, My s, Mz s =
maximum admissible loads and
torques in static conditions
Fz d, Mx d, My d, Mz d =
maximum admissible loads and
torques in dynamic conditions



Mod.	Fz s (N)	Mx s (Nm)	My s (Nm)	Mz s (Nm)	Fz d (N)	Mx d (Nm)	My d (Nm)	Mz d (Nm)
CGPT-16	200	2.5	2.5	2	2	0.06	0.06	0.06
CGPT-20	350	5	7.5	4	4	0.12	0.12	0.12
CGPT-25	600	8	13	6.5	6	0.25	0.25	0.25
CGPT-32	900	18	30	15	9	0.5	0.5	0.5
CGPT-40	1500	40	60	30	15	1	1	1

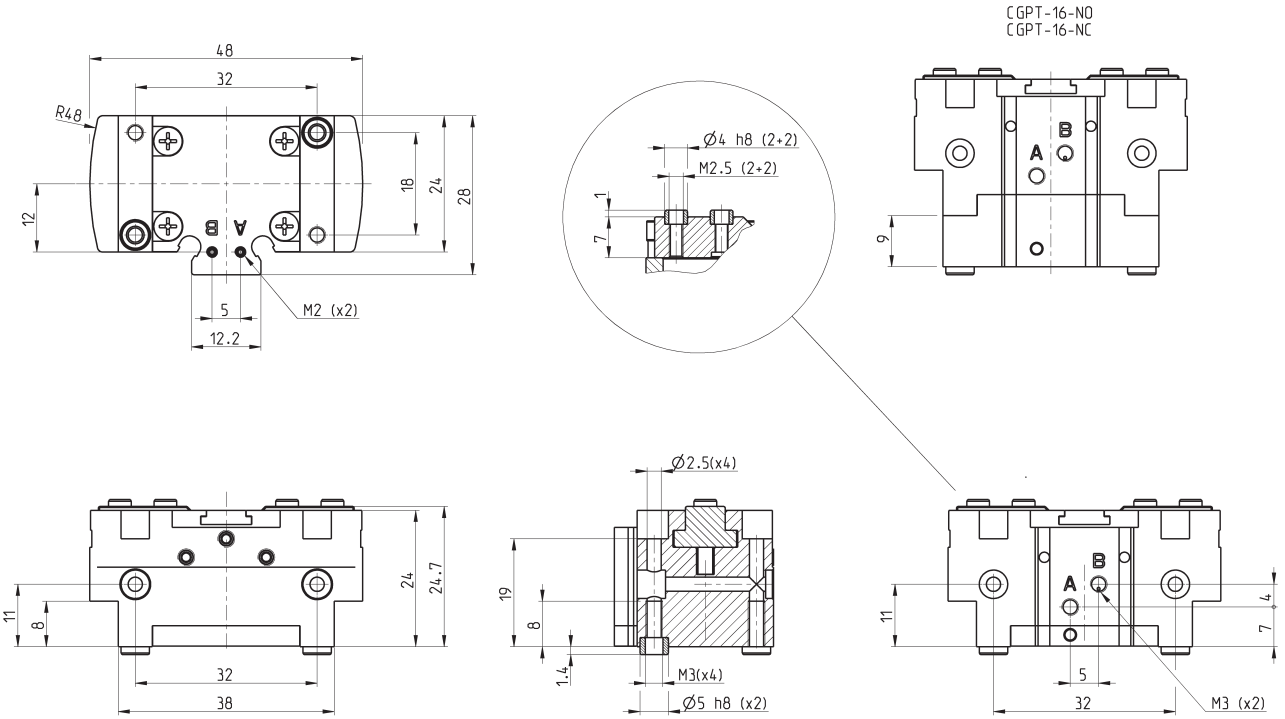
Series CGPT grippers - construction

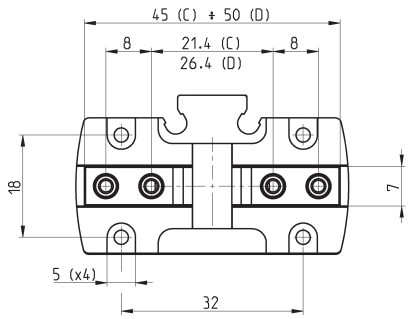


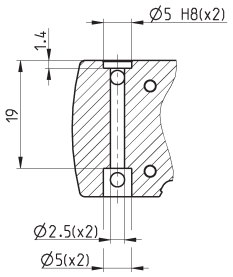
LIST OF COMPONENTS	
PARTS	MATERIALS
1 - Body	Aluminium
2 - Jaw	Stainless steel
3 - Piston	Stainless steel
4 - Seals	HNBR / FKM
5 - Centering bushes	Stainless steel
6 - Levers	Steel
7 - End cover	Aluminium
8 - Spring	Stainless steel
9 - Magnet	Neodymium
10 - Cover	Stainless steel

CGPT gripper, size 16 mm - dimensions

DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection
C = Closed gripper
D = Open gripper



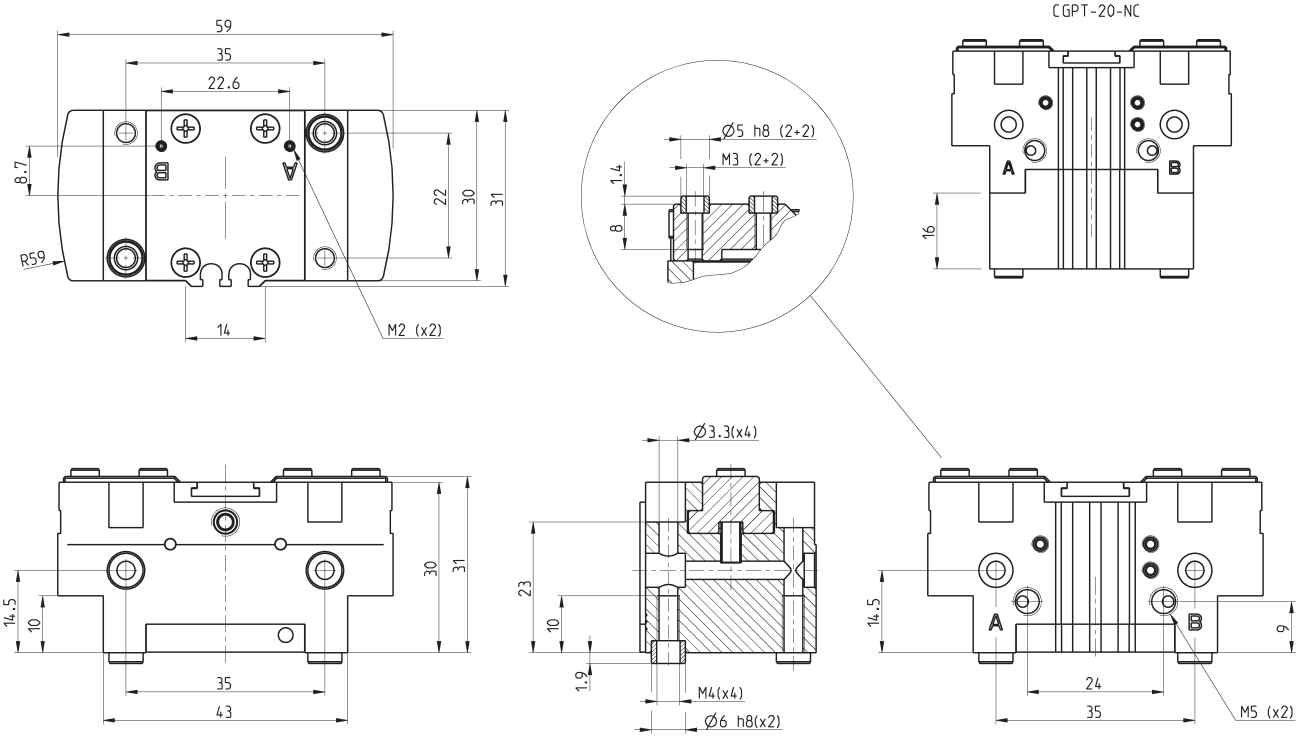




Mod.	Total closing gripping force at 6 bar (N)	Closing gripping force each jaw at 6 bar (N)	Total opening gripping force at 6 bar (N)	Opening gripping force each jaw at 6 bar (N)	Stroke per jaw (mm)	Working pressure (bar)	Working temperature (°C)	Repeatability (mm)	Max use frequency (Hz)	Weight (Kg)
CGPT-16	114	57	130	65	2.5	2 ÷ 8	5 ÷ 60	0.02	3	0.09
CGPT-16-NC	142	71	90	45	2.5	4 ÷ 8	5 ÷ 60	0.02	3	0.11
CGPT-16-NO	74	37	160	80	2.5	4 ÷ 8	5 ÷ 60	0.02	3	0.1

CGPT gripper, size 20 mm - dimensions

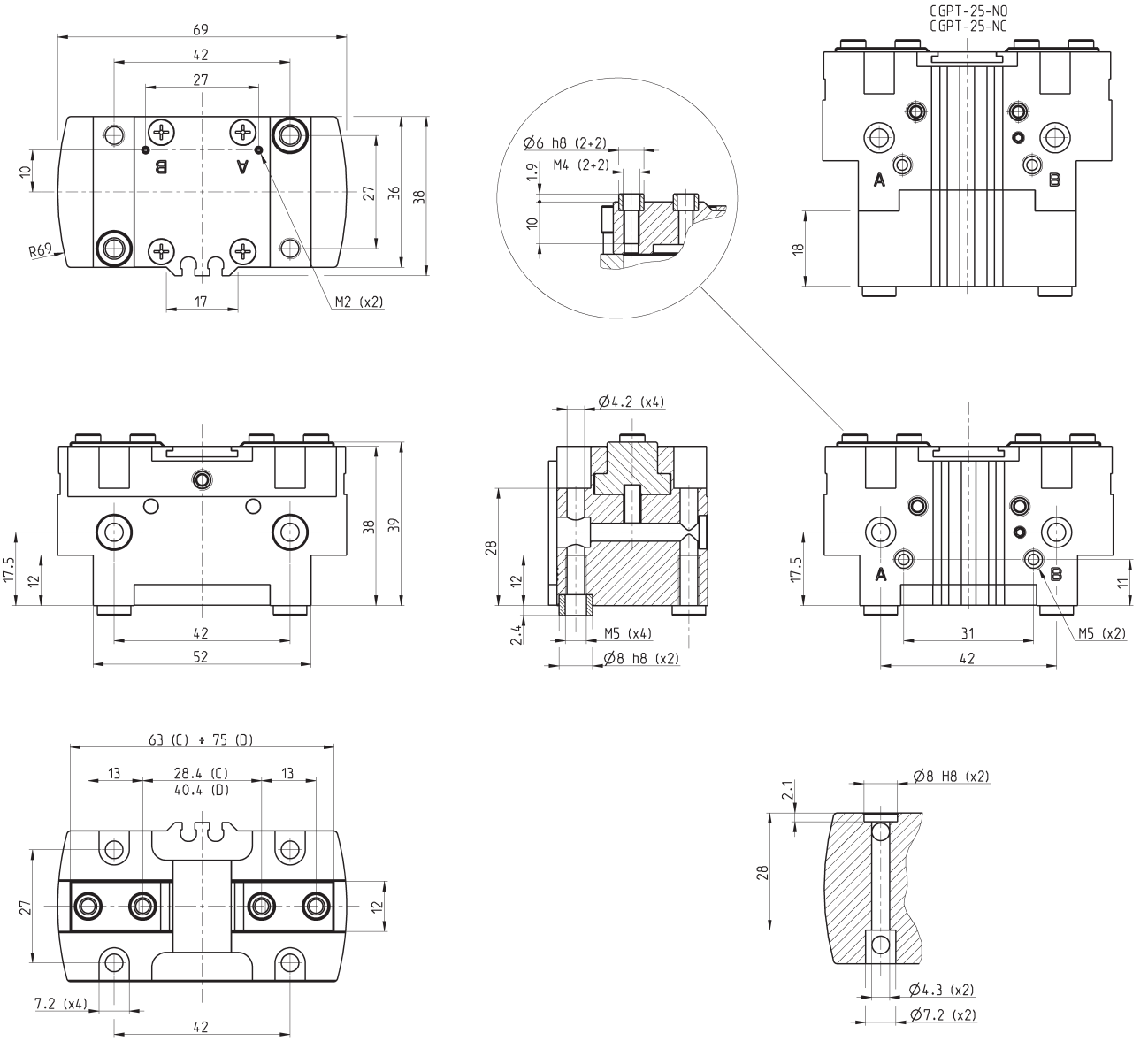
DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection
C = Closed gripper
D = Open gripper



Mod.	Total closing gripping force at 6 bar (N)	Closing gripping force each jaw at 6 bar (N)	Total opening gripping force at 6 bar (N)	Opening gripping force each jaw at 6 bar (N)	Stroke per jaw (mm)	Working pressure (bar)	Working temperature (°C)	Repeatability (mm)	Max use frequency (Hz)	Weight (Kg)
CGPT-20	166	83	188	94	4	2 ÷ 8	5 ÷ 60	0.02	3	0.15
CGPT-20-NC	208	104	102	51	4	4 ÷ 8	5 ÷ 60	0.02	3	0.2
CGPT-20-NO	102	51	246	123	4	4 ÷ 8	5 ÷ 60	0.02	3	0.18

CGPT gripper, size 25 mm - dimensions

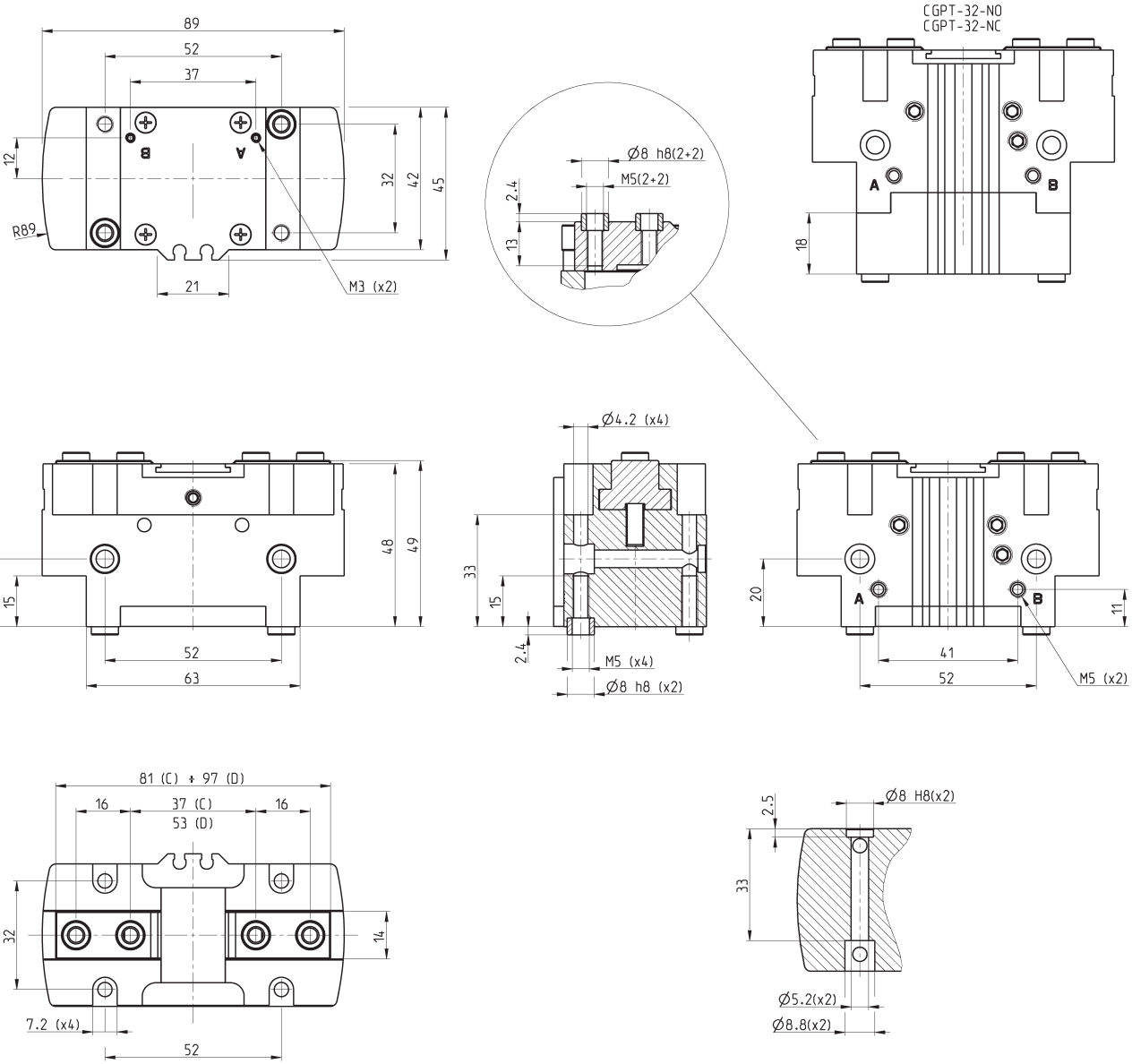
DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection
C = Closed gripper
D = Open gripper



Mod.	Total closing gripping force at 6 bar (N)	Closing gripping force each jaw at 6 bar (N)	Total opening gripping force at 6 bar (N)	Opening gripping force each jaw at 6 bar (N)	Stroke per jaw (mm)	Working pressure (bar)	Working temperature (°C)	Repeatability (mm)	Max use frequency (Hz)	Weight (Kg)
CGPT-25	236	118	280	140	6	2 ÷ 8	5 ÷ 60	0.02	3	0.27
CGPT-25-NC	286	143	206	103	6	4 ÷ 8	5 ÷ 60	0.02	3	0.35
CGPT-25-NO	166	83	330	165	6	4 ÷ 8	5 ÷ 60	0.02	3	0.33

CGPT gripper, size 32 mm - dimensions

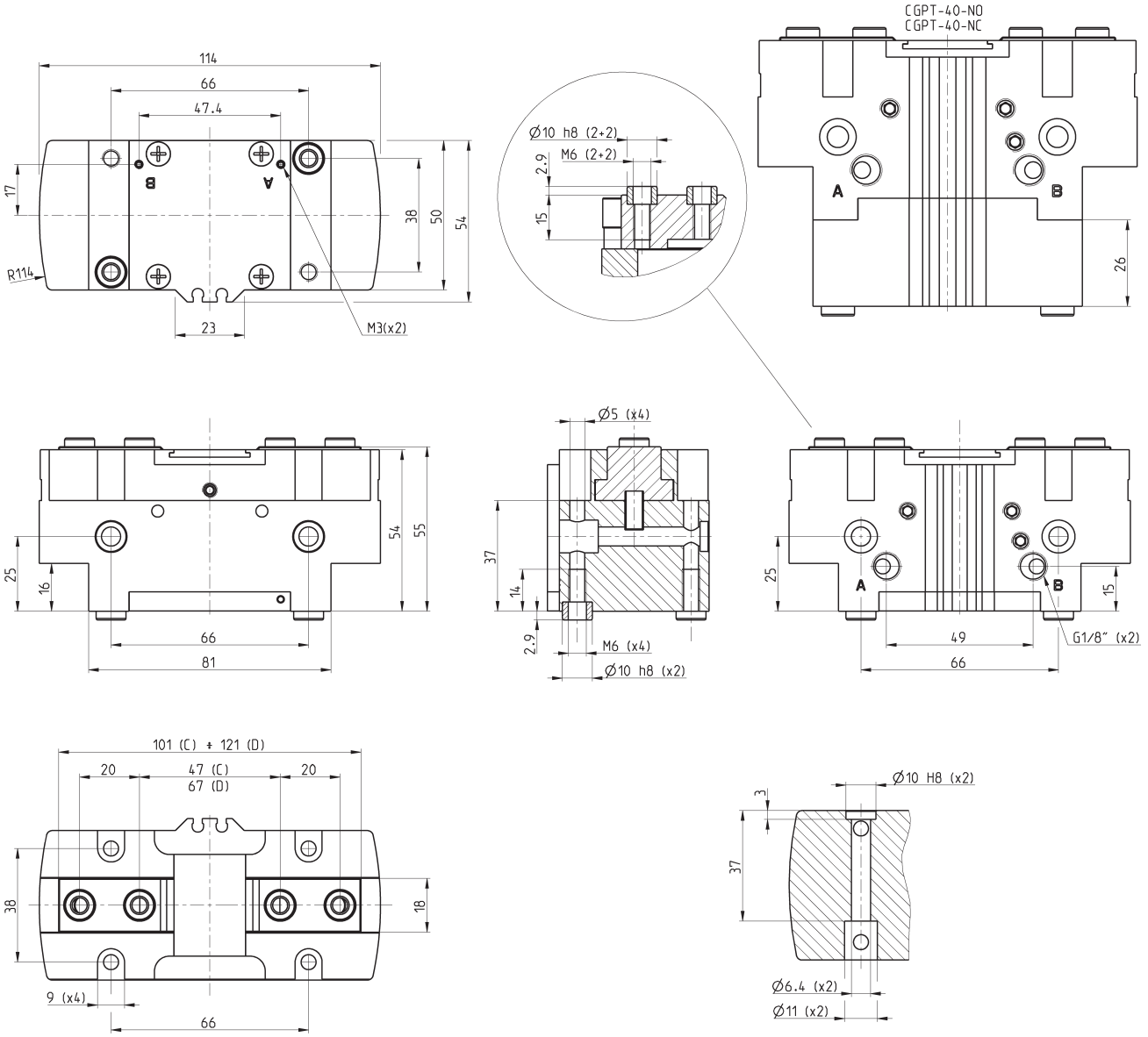
DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection
C = Closed gripper
D = Open gripper



Mod.	Total closing gripping force at 6 bar (N)	Closing gripping force each jaw at 6 bar (N)	Total opening gripping force at 6 bar (N)	Opening gripping force each jaw at 6 bar (N)	Stroke per jaw (mm)	Working pressure (bar)	Working temperature (°C)	Repeatability (mm)	Max use frequency (Hz)	Weight (Kg)
CGPT-32	386	193	450	225	8	2 ÷ 8	5 ÷ 60	0.02	3	0.5
CGPT-32-NC	454	227	354	177	8	4 ÷ 8	5 ÷ 60	0.02	3	0.61
CGPT-32-NO	294	147	520	260	8	4 ÷ 8	5 ÷ 60	0.02	3	0.59

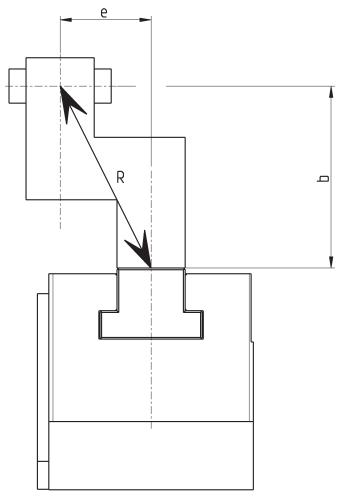
CGPT gripper, size 40 mm - dimensions

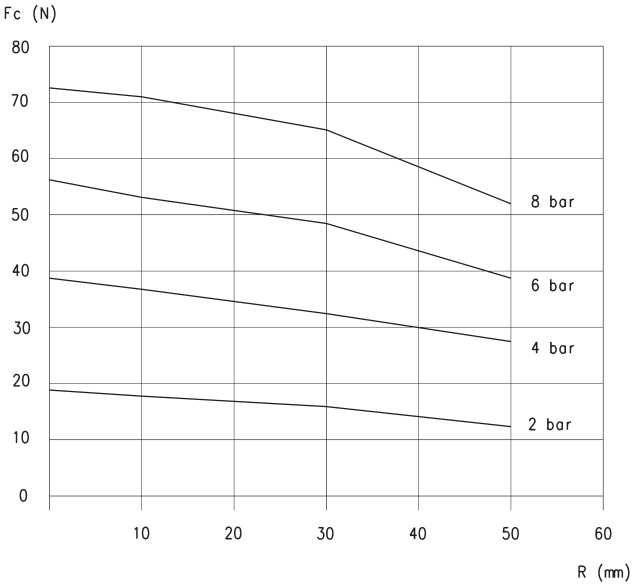
DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection
C = Closed gripper
D = Open gripper



Mod.	Total closing gripping force at 6 bar (N)	Closing gripping force each jaw at 6 bar (N)	Total opening gripping force at 6 bar (N)	Opening gripping force each jaw at 6 bar (N)	Stroke per jaw (mm)	Working pressure (bar)	Working temperature (°C)	Repeatability (mm)	Max use frequency (Hz)	Weight (Kg)
CGPT-40	670	335	720	360	10	2 ÷ 8	5 ÷ 60	0.02	2	0.83
CGPT-40-NC	780	390	504	252	10	4 ÷ 8	5 ÷ 60	0.02	2	1.2
CGPT-40-NO	446	223	826	413	10	4 ÷ 8	5 ÷ 60	0.02	2	1.1

GRIPPING FORCE (Fc) PER SINGLE JAW





The total gripping force has to be calculated as follows:
Total Fc = Fc x 2

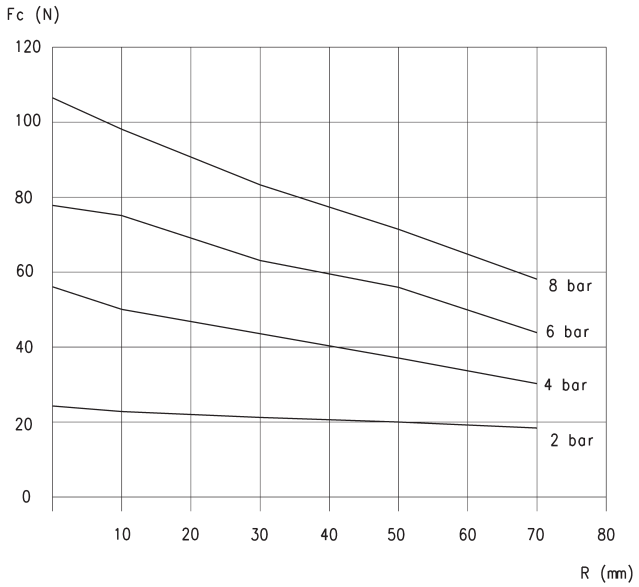
Gripping force in relation to the lever arm (R)
and the eccentricity (b, e)

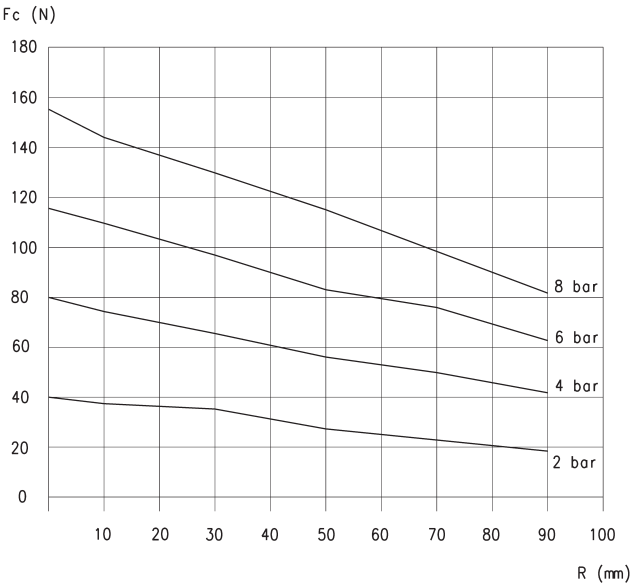
$R = \sqrt{(b^2 + e^2)}$

CGPT-16

R = lever arm
Fc = closing gripping force

Fa (opening gripping force) = Fc + 10%





CGPT-20

R = lever arm
Fc = closing gripping force

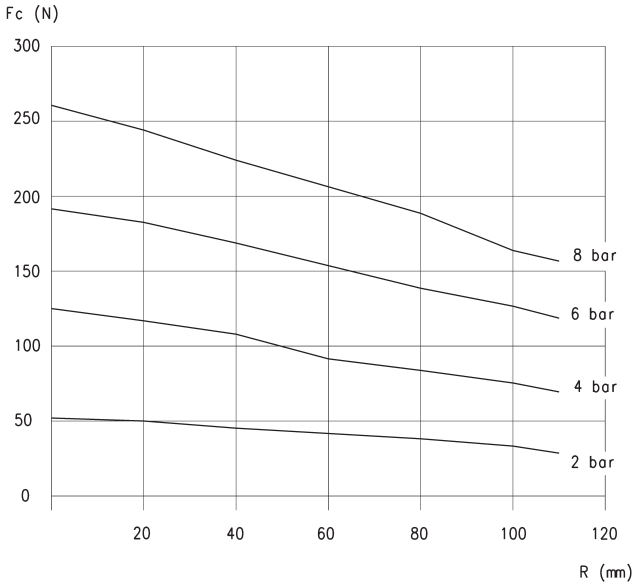
Fa (opening gripping force) = Fc + 10%

CGPT-25

R = lever arm
Fc = closing gripping force

Fa (opening gripping force) = Fc + 10%

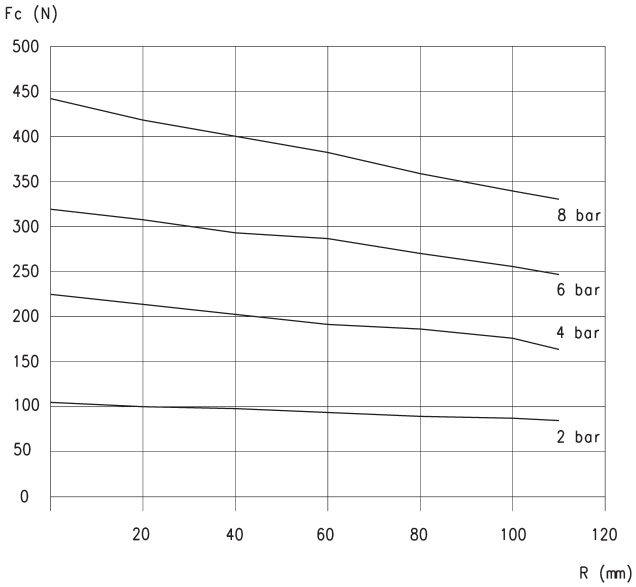
GRIPPING FORCE (Fc) PER SINGLE JAW



CGPT-32

R = lever arm
Fc = closing gripping force

Fa (opening gripping force) = Fc + 10%

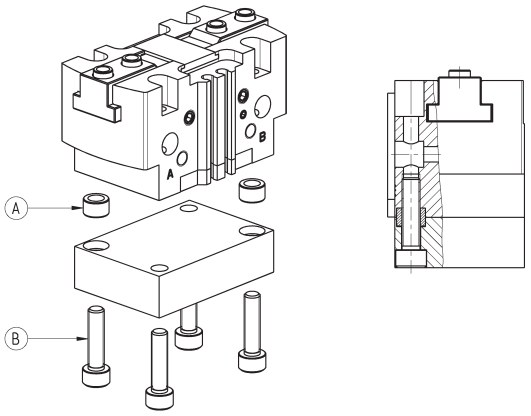


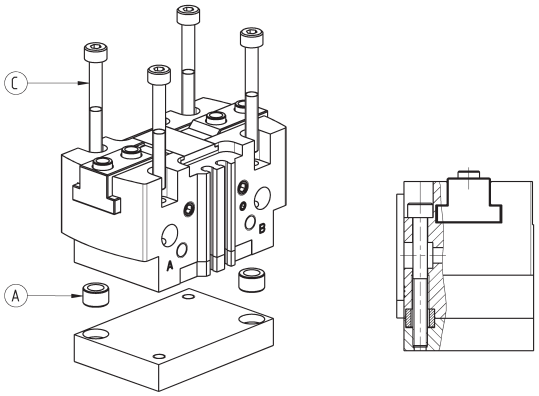
CGPT-40

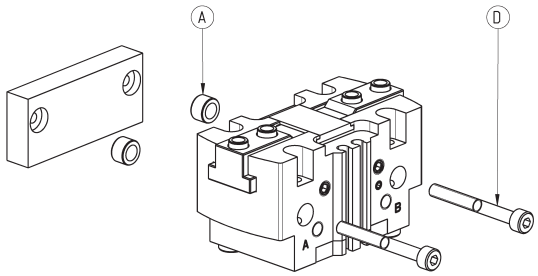
R = lever arm
Fc = closing gripping force

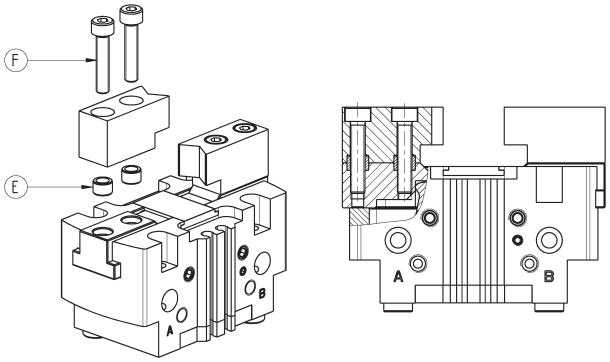
Fa (opening gripping force) = Fc + 10%

Examples of mounting



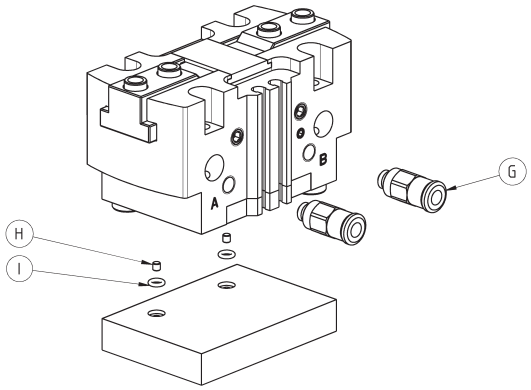






Mod.	A	B	C	D	E	F
CGPT-16	Ø5	M3	M2.5	M2.5	Ø4	M2.5
CGPT-20	Ø6	M4	M3	M3	Ø5	M3
CGPT-25	Ø8	M5	M4	M4	Ø6	M4
CGPT-32	Ø8	M5	M4	M5	Ø8	M5
CGPT-40	Ø10	M6	M5	M6	Ø10	M6

Air supply ports

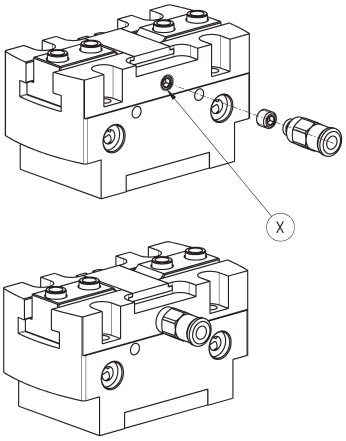


Mod.	G	H	I
CGPT-16	M3	M2	OR 1x2.5
CGPT-20	M5	M2	OR 1x2.5
CGPT-25	M5	M2	OR 1x2.5
CGPT-32	M5	M3	OR 1x3.5
CGPT-40	G1/8	M3	OR 1x3.5

Example of use of the pressurization/lubrication hole

Example of use of the lubrication (greasing) or pressurization hole of the zone with moving items

NOTE 1: grease the sliding zones using Molykote DX grease.
NOTE 2: supply a pressure of max. 3 bar in order to avoid the sudden ejection of grease.

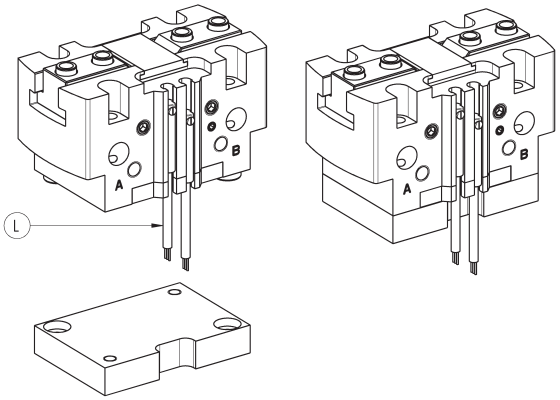


Mod.	X
CGPT-16	M3
CGPT-20	M5
CGPT-25	M5
CGPT-32	M5
CGPT-40	M5

Example of mounting: sensors

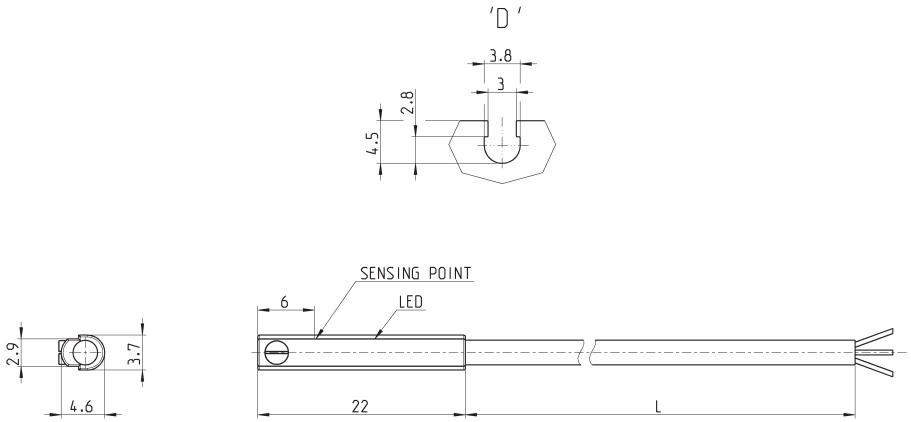
L = sensor mod. CSD-D-334 or mod. CSD-D-364

In order to position the sensor correctly, a channel must be created in the base.



Mod.
CGPT-16
CGPT-20
CGPT-25
CGPT-32
CGPT-40

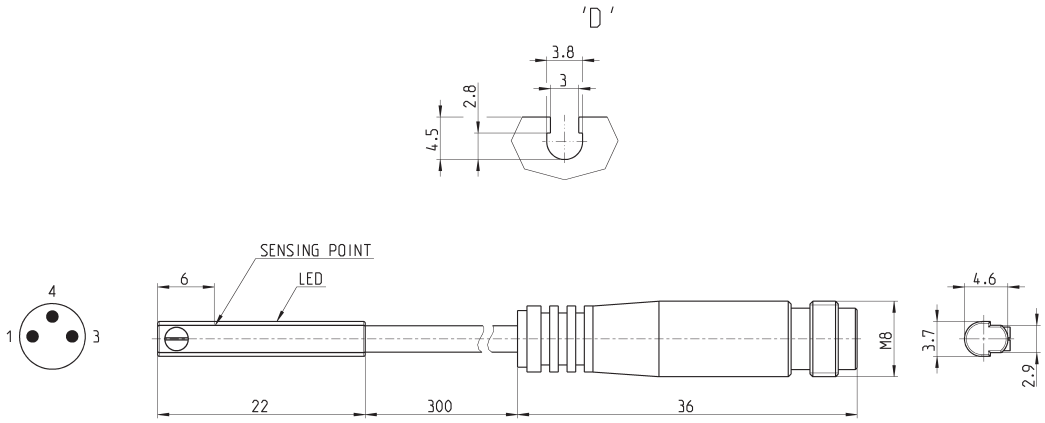
Series CSD magnetic proximity switches, 3-wire cable, D-slot



Mod.	Operation	Connections	Voltage	Output	Max. current	Max Load	Protection	L = length cable
CSD-D-334	Magnetoresistive	3 wires	10 ÷ 27 V DC	PNP	200 mA	6W	Against polarity reversing and overvoltage	2 m

Series CSD magnetic switches, male M8 3-pin conn., D-slot, right

Length of cable 0.3 metres



Mod.	Operation	Connection	Voltage	Output	Max. current	Max load	Protection
CSD-D-364	Magnetoresistive	3 wires with M8 connector	10 ÷ 27 V DC	PNP	200 mA	6W	Against polarity reversing and overvoltage

Series CGPS Parallel grippers with double ball bearing guide

Single and double acting, magnetic, self-centering
Bores: Ø 10, 16, 20, 25, 32 mm

- Robust, compact and light design
- High closing/opening forces
- Fixing from below and from the side
- Supply on the side
- Self-centering jaws
- High closing and opening repeatability
- High interchangeability (bushes and centering plugs)
- Position detection (front and side) thanks to the use of Series CSD magnetic proximity switches
- Protection against dust (IP40)
- Finger types available: long with through-holes and flat with threaded holes
- High resistance to external loads thanks to the double ball bearing guide
- Variants available: for use in ATEX zones and for high temperatures

Thanks to the use of a high performing and precise force transmission system and to the double ball bearing guide, the Series CGPS grippers are able to provide high gripping forces while guaranteeing a very high repeatability and robustness (resistance to external static and dynamic loads).

The wide range of sizes available allows you to find the best solution for any handling need. The grippers can be supplied with bushes and centering plugs (tolerance H8) which, once positioned on the body and/or on the jaws, are able to guarantee, during maintenance, a high interchangeability of the gripper and of the extensions.

GENERAL DATA

Type of construction	Self-centering parallel gripper with double ball bearing guide
Operation	Single acting (NO, NC), double acting
Bores	Ø 10, 16, 20, 25, 32 mm
Force transmission	Lever
Air connections	M3-M5 (M3 for size 10 only)
Working pressure	2 ÷ 8 bar (double acting), 4 ÷ 8 bar (single acting)
Working temperature	5°C ÷ 60°C (standard); 5°C ÷ 150°C (high temperature version)
Store temperature	-10°C ÷ 80°C
Maximum use frequency	3 Hz
Repeatability	0.02 mm
Interchangeability	0.1 mm
Medium	Filtered air in class 7.4.4 according to ISO 8573-1. In case lubricated air is used, we recommend ISOVG32 oil and to never interrupt lubrication.
Compatibility	ROHS Directive
Certifications	ATEX (II 2GD c IIC 120°C(T4)-20°C≤Ta≤80)
Materials	PTFE, Silicone and Copper free
Suitable magnetic proximity switches	Series CSD

NOTE: Pressurize the pneumatic system gradually in order to avoid uncontrolled movements

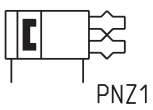
CODING EXAMPLE

CGPS	-	L	-	16	-	NO	-	W	EX

CGPS	SERIES	
L	DESIGN TYPE: L = Long finger F = Flat finger	
16	BORES: 10 = ø 10 mm 16 = ø 16 mm 20 = ø 20 mm 25 = ø 25 mm 32 = ø 32 mm	
NO	FUNCTIONING: = double acting NO = single acting, normally open NC = single acting, normally closed	PNEUMATIC SYMBOLS PNZ1 PNZ3 PNZ2
W	VERSION: = standard W = high temperatures (150°C) non magnetic	
EX	Add EX to order the certified ATEX version	

PNEUMATIC SYMBOLS

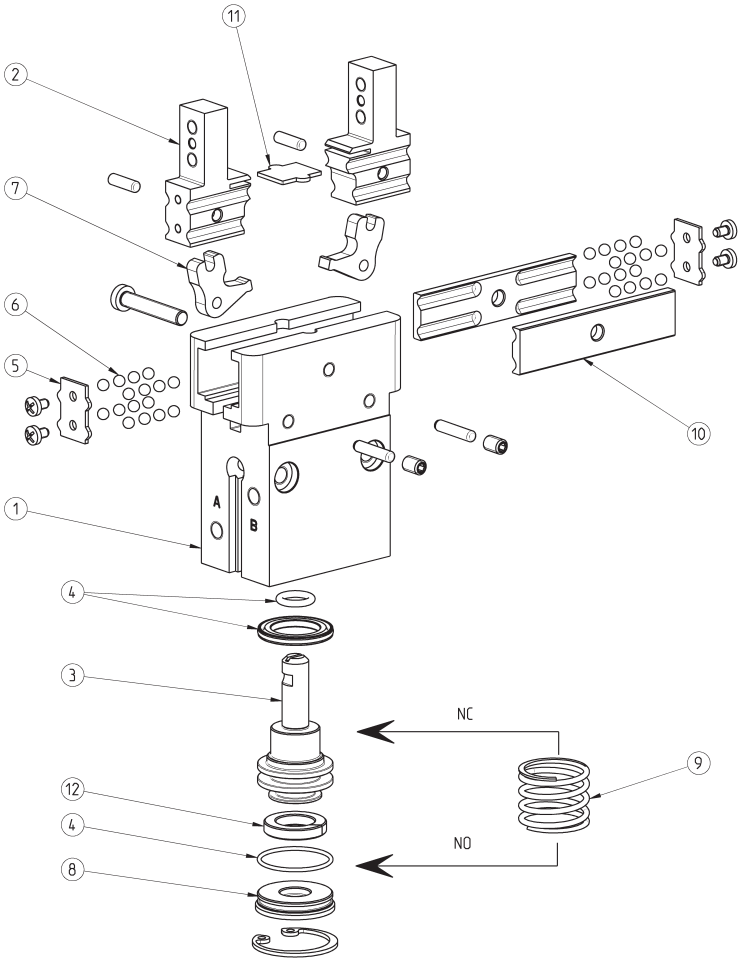
The pneumatic symbols which have been indicated in the CODING EXAMPLE are shown below.


PNZ1


PNZ2


PNZ3

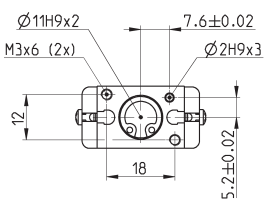
Series CGPS grippers - construction

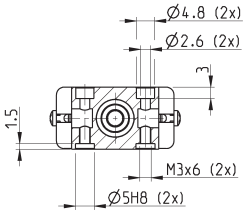


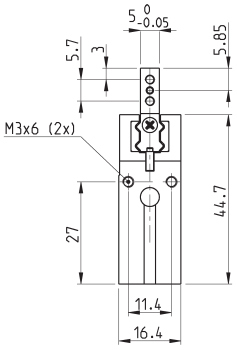
LIST OF COMPONENTS	
PARTS	MATERIALS
1 - Body	Aluminium
2 - Jaw	Stainless steel
3 - Piston	Stainless steel
4 - Seals	HNBR / FKM
5 - Ball bearings end cap	Stainless steel
6 - Slide ball bearings	Steel
7 - Levers	Steel
8 - Rear end-stroke	Pom (Acetal)
9 - Spring	Stainless steel
10 - Ball bearings guide	Stainless steel
11 - Jaws end cap	Steel
12 - Magnet	Plastoferrite

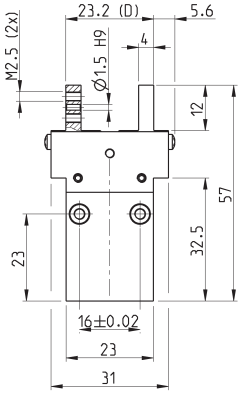
CGPS gripper, size 10 mm - dimensions

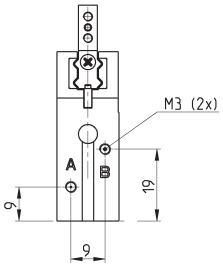
DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection
C = Closed gripper
D = Open gripper

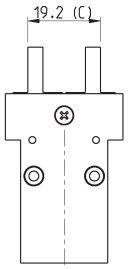


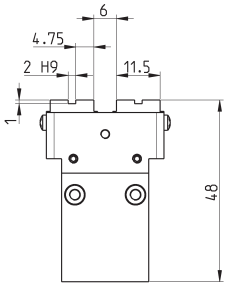


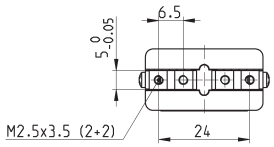








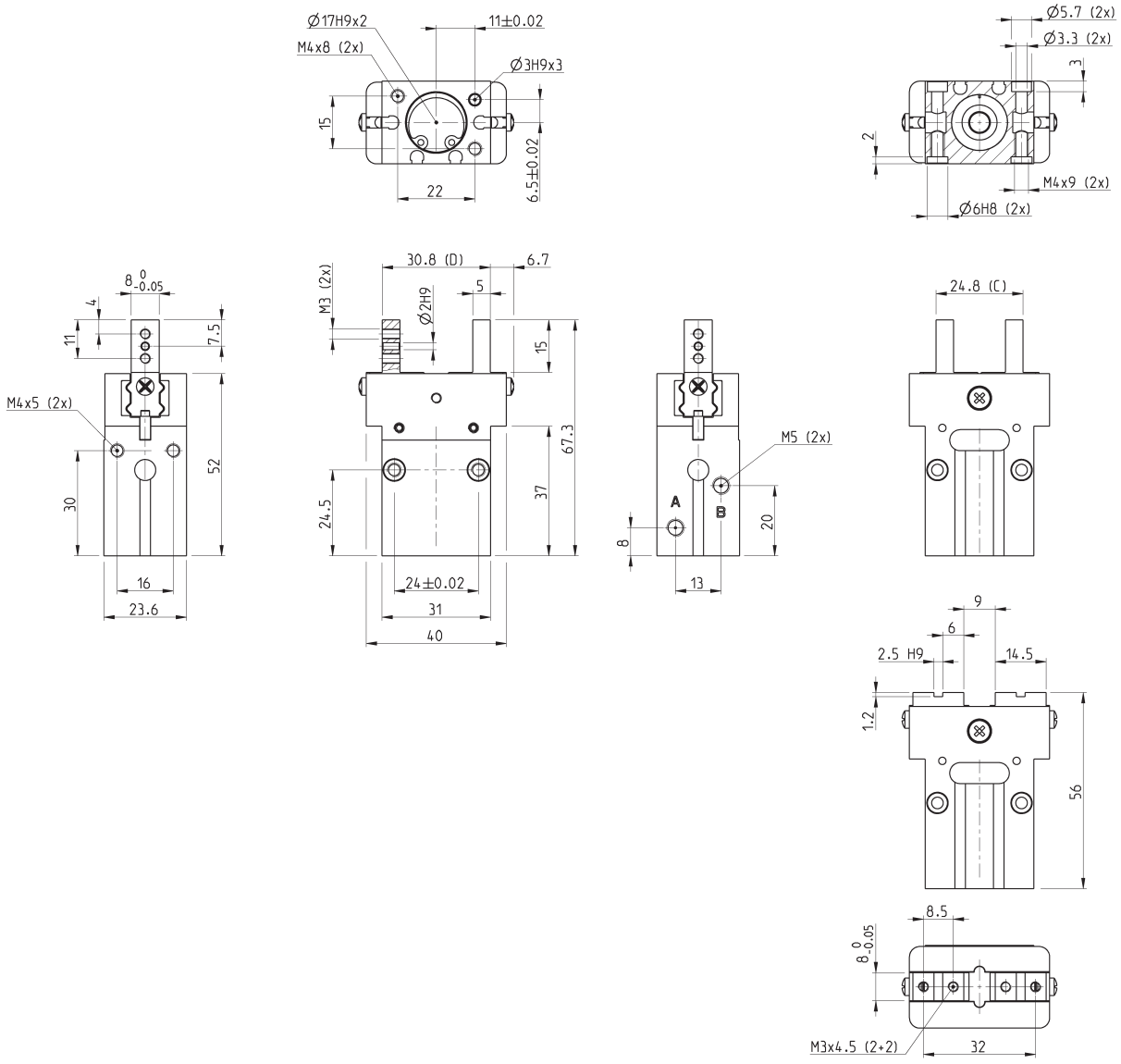




Mod.	Total closing gripping force at 6 bar (N)	Closing gripping force each jaw at 6 bar (N)	Total opening gripping force at 6 bar (N)	Opening gripping force each jaw at 6 bar (N)	Stroke per jaw (mm)	Working pressure (bar)	Working temperature (°C)	Repeatability (mm)	Max use frequency (Hz)	Weight (Kg)
CGPS-L-10	34	17	46	23	2	2 ÷ 8	5 ÷ 60	+/- 0.02	3	0.057
CGPS-F-10	34	17	46	23	2	2 ÷ 8	5 ÷ 60	+/- 0.02	3	0.058
CGPS-L-10-NC	42	21	32	16	2	4 ÷ 8	5 ÷ 60	+/- 0.02	3	0.058
CGPS-F-10-NC	42	21	32	16	2	4 ÷ 8	5 ÷ 60	+/- 0.02	3	0.059
CGPS-L-10-NO	20	10	55	27.5	2	4 ÷ 8	5 ÷ 60	+/- 0.02	3	0.058
CGPS-F-10-NO	20	10	55	27.5	2	4 ÷ 8	5 ÷ 60	+/- 0.02	3	0.059

CGPS gripper, size 16 mm - dimensions

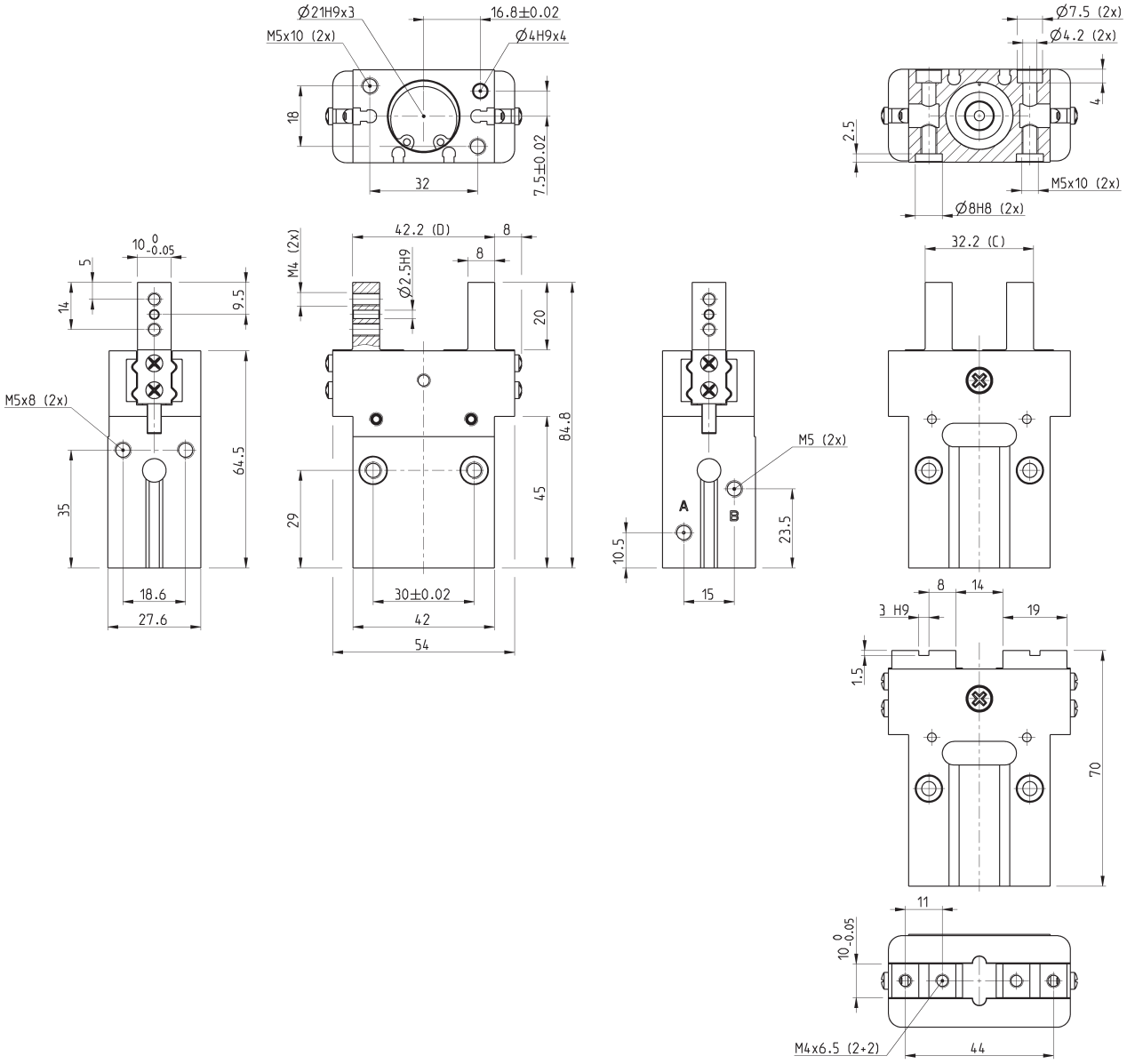
DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection
C = Closed gripper
D = Open gripper



Mod.	Total closing gripping force at 6 bar (N)	Closing gripping force each jaw at 6 bar (N)	Total opening gripping force at 6 bar (N)	Opening gripping force each jaw at 6 bar (N)	Stroke per jaw (mm)	Working pressure (bar)	Working temperature (°C)	Repeatability (mm)	Max use frequency (Hz)	Weight (Kg)
CGPS-L-16	98	49	120	60	3	2 ÷ 8	5 ÷ 60	+/- 0.02	3	0.127
CGPS-F-16	98	49	120	60	3	2 ÷ 8	5 ÷ 60	+/- 0.02	3	0.130
CGPS-L-16-NC	115.4	57.7	95	47.5	3	4 ÷ 8	5 ÷ 60	+/- 0.02	3	0.129
CGPS-F-16-NC	115.4	57.7	95	47.5	3	4 ÷ 8	5 ÷ 60	+/- 0.02	3	0.133
CGPS-L-16-NO	71	35.5	133	68.5	3	4 ÷ 8	5 ÷ 60	+/- 0.02	3	0.129
CGPS-F-16-NO	71	35.5	133	68.5	3	4 ÷ 8	5 ÷ 60	+/- 0.02	3	0.133

CGPS gripper, size 20 mm - dimensions

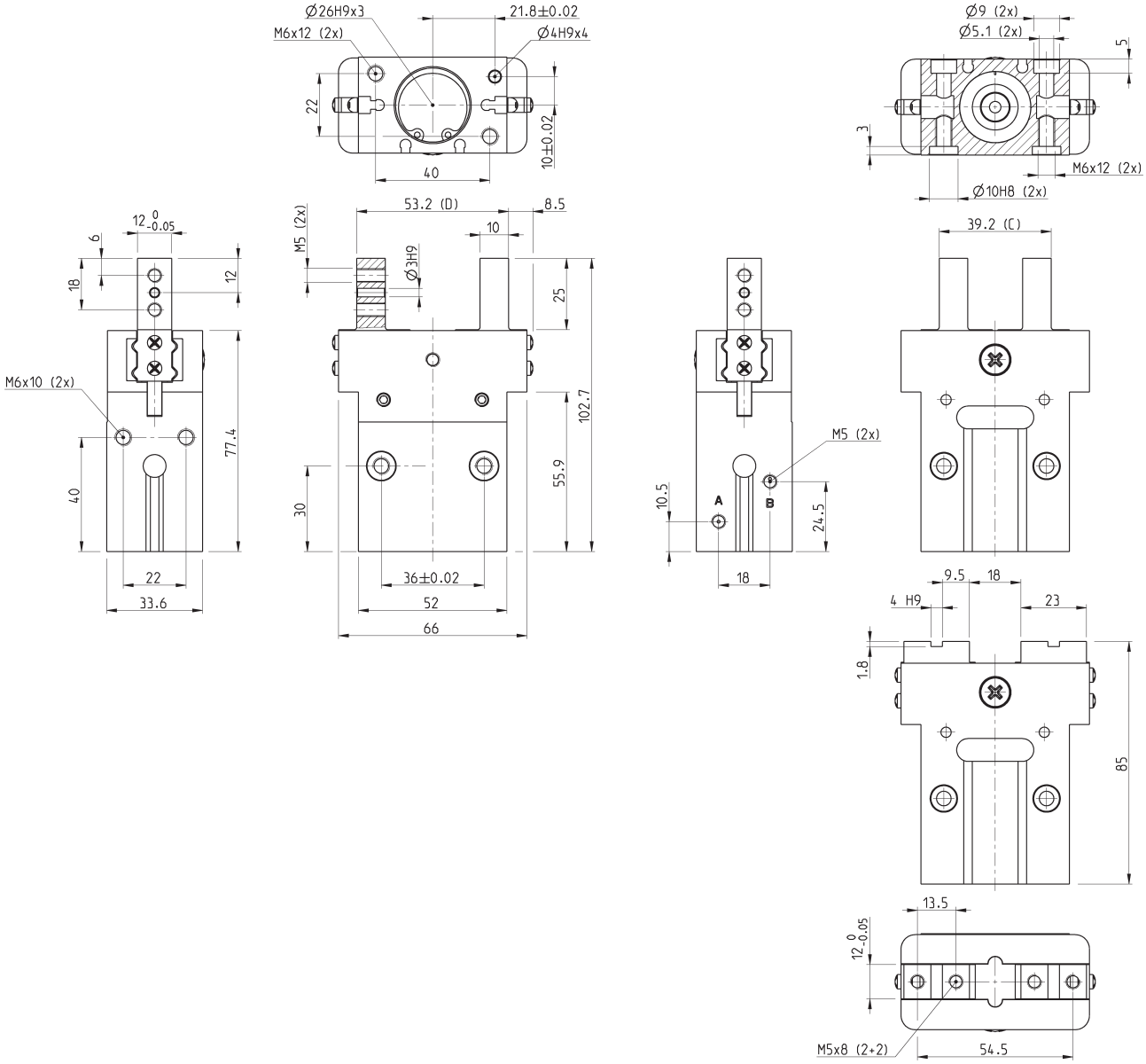
DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection
C = Closed gripper
D = Open gripper



Mod.	Total closing gripping force at 6 bar (N)	Closing gripping force each jaw at 6 bar (N)	Total opening gripping force at 6 bar (N)	Opening gripping force each jaw at 6 bar (N)	Stroke per jaw (mm)	Working pressure (bar)	Working temperature (°C)	Repeatability (mm)	Max use frequency (Hz)	Weight (Kg)
CGPS-L-20	142	71	178	89	5	2 ÷ 8	5 ÷ 60	+/- 0.02	3	0.248
CGPS-F-20	142	71	178	89	5	2 ÷ 8	5 ÷ 60	+/- 0.02	3	0.258
CGPS-L-20-NC	169	84.5	141	70.5	5	4 ÷ 8	5 ÷ 60	+/- 0.02	3	0.252
CGPS-F-20-NC	169	84.5	141	70.5	5	4 ÷ 8	5 ÷ 60	+/- 0.02	3	0.262
CGPS-L-20-NO	103	51.5	205	102.5	5	4 ÷ 8	5 ÷ 60	+/- 0.02	3	0.252
CGPS-F-20-NO	103	51.5	205	102.5	5	4 ÷ 8	5 ÷ 60	+/- 0.02	3	0.262

CGPS gripper, size 25 mm - dimensions

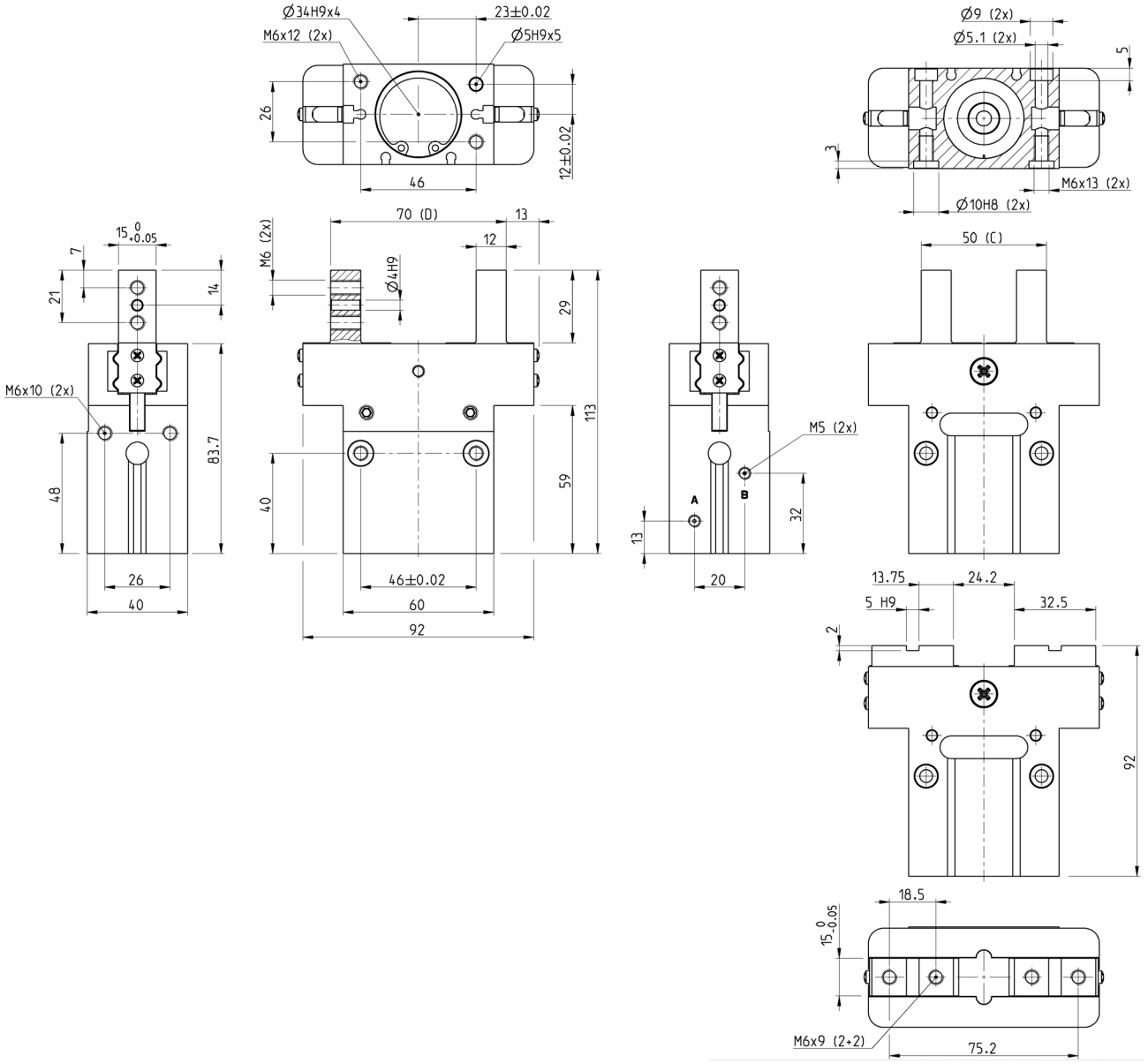
DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection
C = Closed gripper
D = Open gripper



Mod.	Total closing gripping force at 6 bar (N)	Closing gripping force each jaw at 6 bar (N)	Total opening gripping force at 6 bar (N)	Opening gripping force each jaw at 6 bar (N)	Stroke per jaw (mm)	Working pressure (bar)	Working temperature (°C)	Repeatability (mm)	Max use frequency (Hz)	Weight (Kg)
CGPS-L-25	250	125	274	137	7	2 ÷ 8	5 ÷ 60	+/- 0.02	3	0.447
CGPS-F-25	250	125	274	137	7	2 ÷ 8	5 ÷ 60	+/- 0.02	3	0.464
CGPS-L-25-NC	286.4	143.2	222	111	7	4 ÷ 8	5 ÷ 60	+/- 0.02	3	0.456
CGPS-F-25-NC	286.4	143.2	222	111	7	4 ÷ 8	5 ÷ 60	+/- 0.02	3	0.471
CGPS-L-25-NO	200	100	304	152	7	4 ÷ 8	5 ÷ 60	+/- 0.02	3	0.456
CGPS-F-25-NO	200	100	304	152	7	4 ÷ 8	5 ÷ 60	+/- 0.02	3	0.471

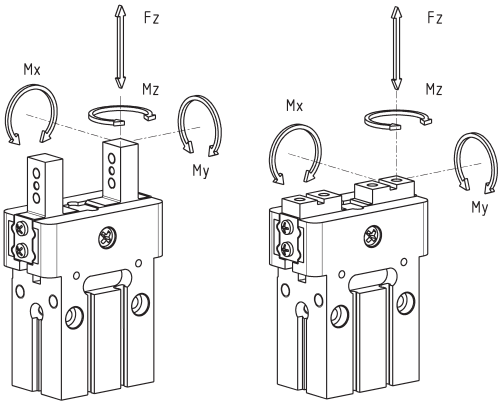
CGPS gripper, size 32 mm - dimensions

DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection
C = Closed gripper
D = Open gripper



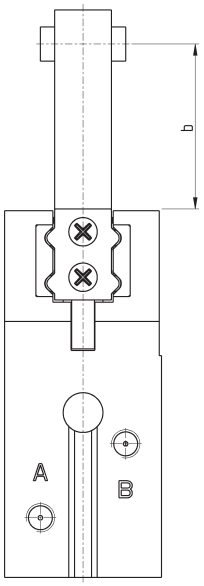
Mod.	Total closing gripping force at 6 bar (N)	Closing gripping force each jaw at 6 bar (N)	Total opening gripping force at 6 bar (N)	Opening gripping force each jaw at 6 bar (N)	Stroke per jaw (mm)	Working pressure (bar)	Working temperature (°C)	Repeatability (mm)	Max use frequency (Hz)	Weight (Kg)
CGPS-L-32	390	195	474	237	10	2 ÷ 8	5 ÷ 60	+/-0.02	2	0.729
CGPS-F-32	390	195	474	237	10	2 ÷ 8	5 ÷ 60	+/-0.02	2	0.753
CGPS-L-32-NC	424	212	420	210	10	4 ÷ 8	5 ÷ 60	+/-0.02	2	0.742
CGPS-F-32-NC	424	212	420	210	10	4 ÷ 8	5 ÷ 60	+/-0.02	2	0.768
CGPS-L-32-NO	334	167	512	256	10	4 ÷ 8	5 ÷ 60	+/-0.02	2	0.742
CGPS-F-32-NO	334	167	512	256	10	4 ÷ 8	5 ÷ 60	+/-0.02	2	0.768

Maximum admissible loads and torques on the gripper

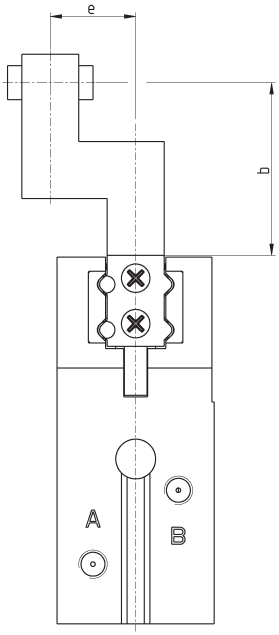


Maximum admissible loads and torques in static conditions				
Mod.	Fz (N)	Mx (Nm)	My (Nm)	Mz (Nm)
CGPS-10	90	0.53	2	0.21
CGPS-16	160	1.2	3	0.6
CGPS-20	170	2.4	3.5	1.0
CGPS-25	190	3.5	4.5	1.4
CGPS-32	360	5.5	6	2.5

GRIPPING POINT POSITION

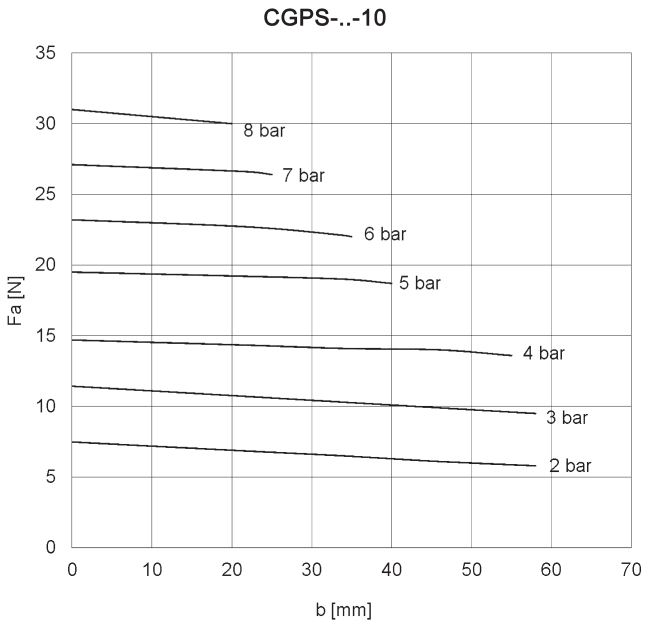


b = gripping point

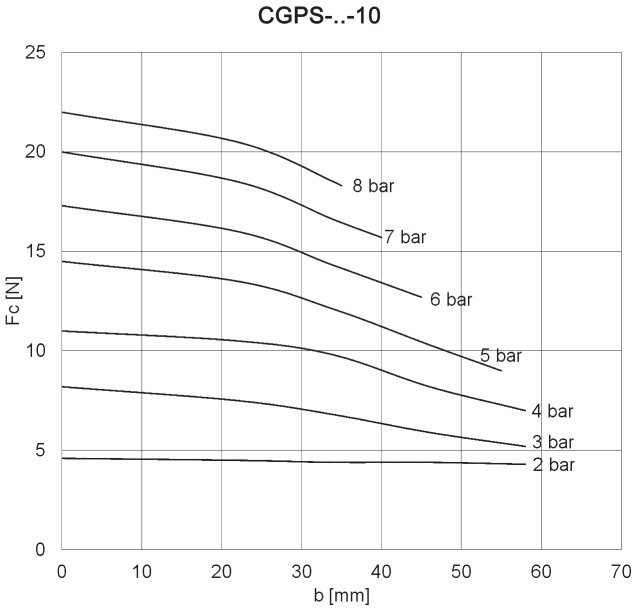


b = gripping point
e = arm

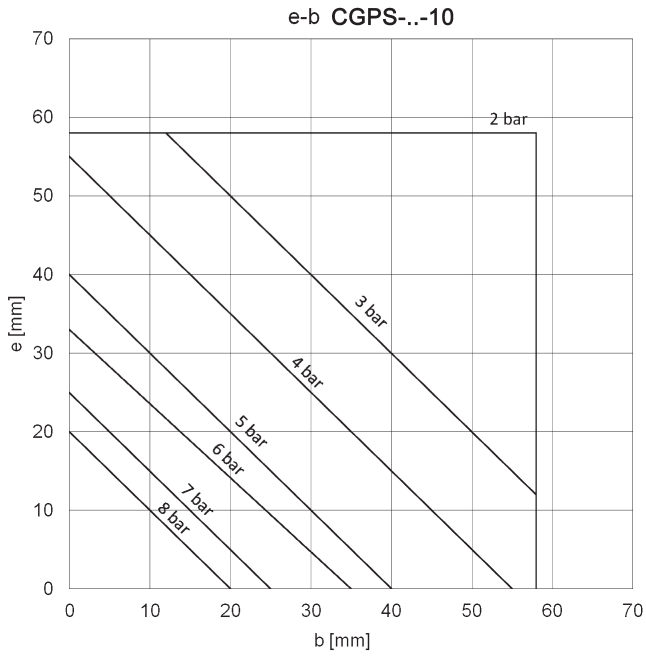
GRIPPING FORCES Mod. CGPS-..-10



b = gripping point (mm)
Fa = opening gripping force (N)

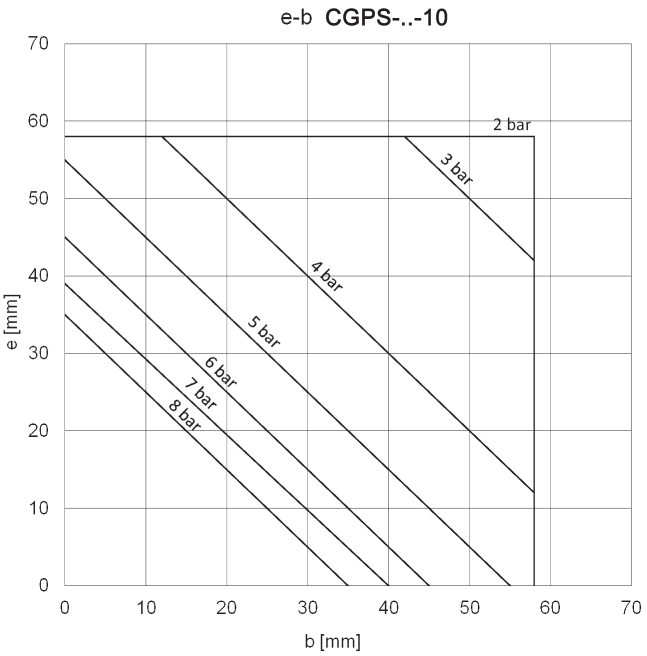


b = gripping point (mm)
Fc = Closing gripping force (N)



Opening gripping force

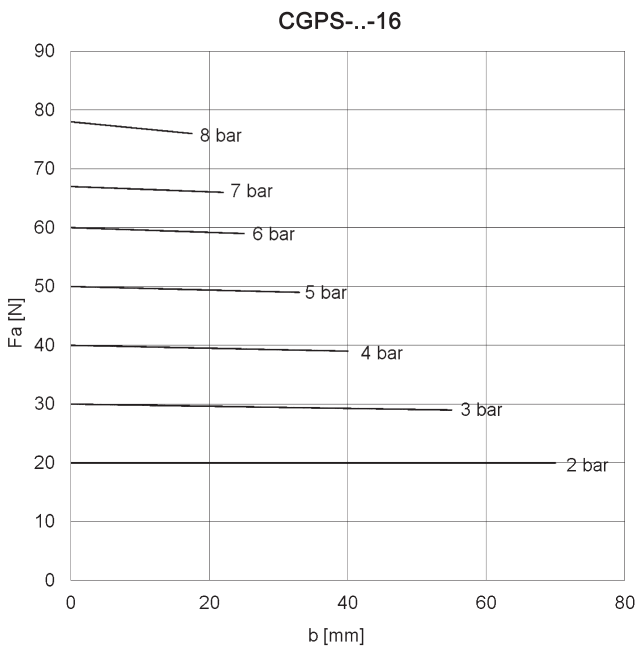
b = gripping point (mm)
e = arm (mm)



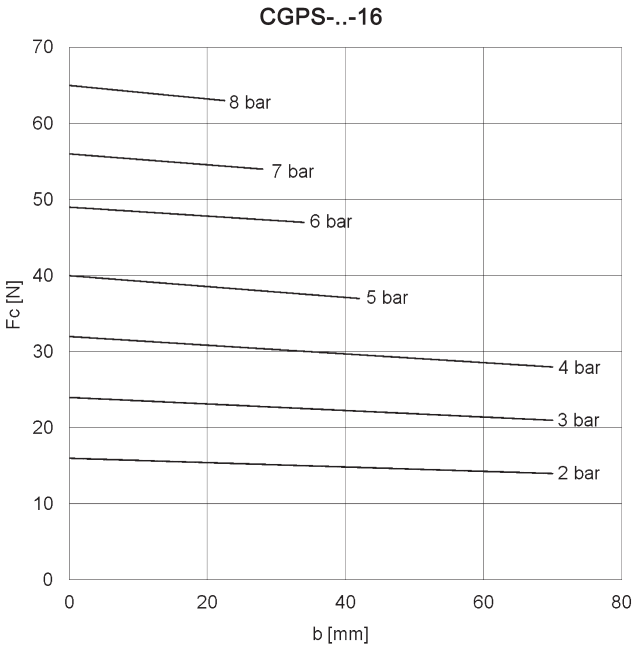
Closing gripping force

b = gripping point (mm)
e = arm (mm)

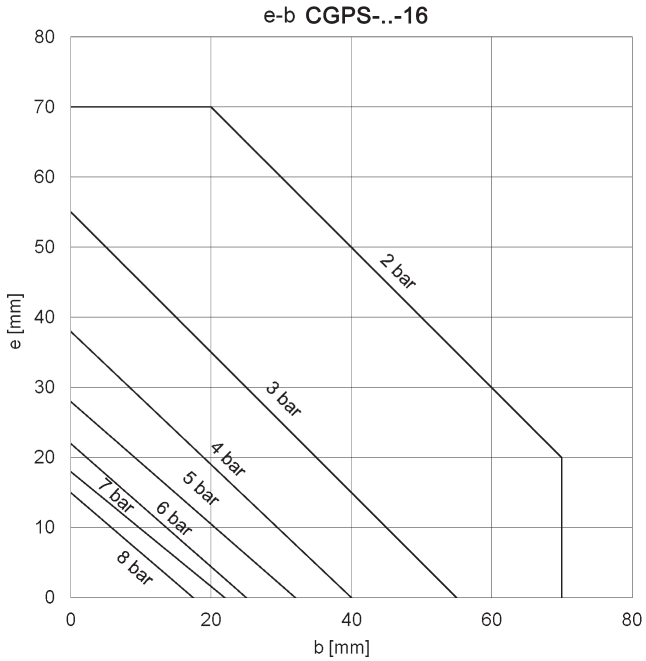
GRIPPING FORCES Mod. CGPS-..-16



b = gripping point (mm)
Fa = opening gripping force (N)

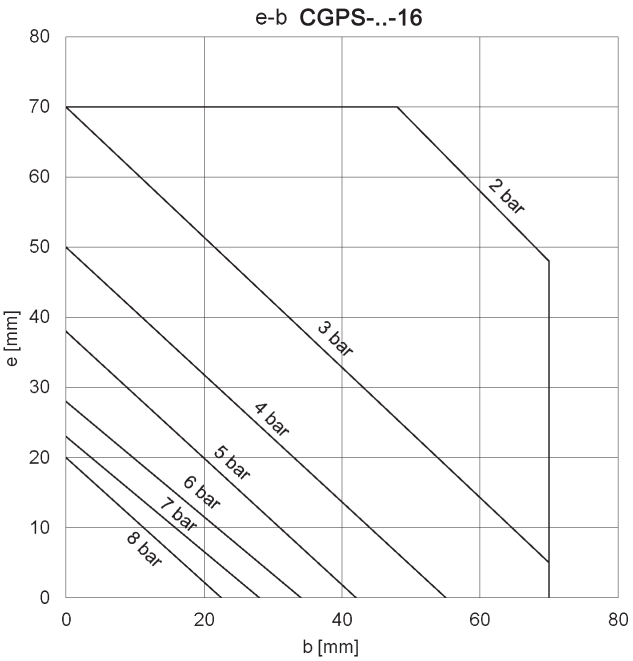


b = gripping point (mm)
Fc = closing gripping force (N)



Opening gripping force

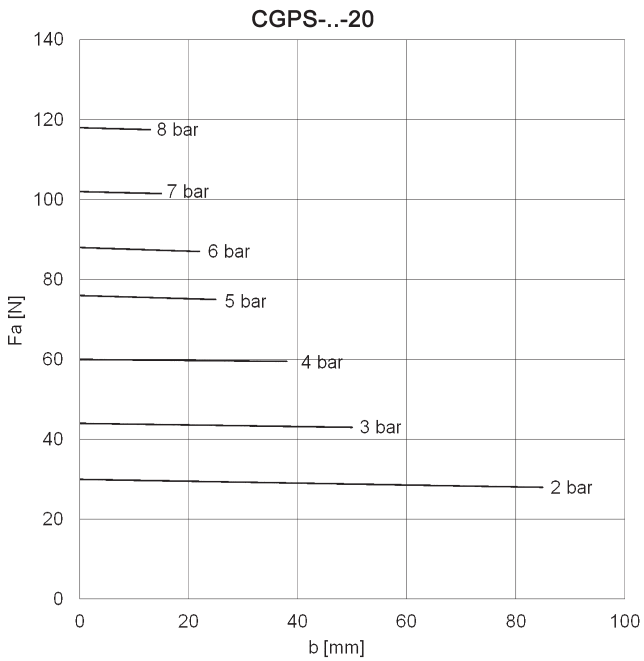
b = gripping point (mm)
e = arm (mm)



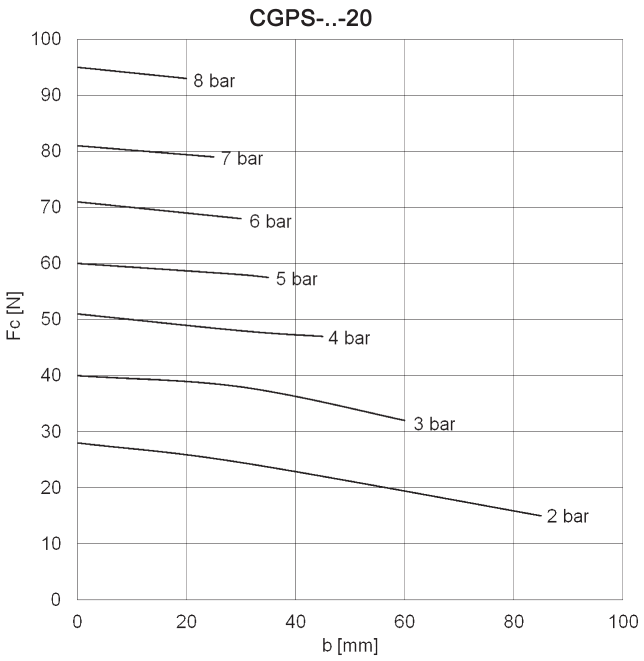
Closing gripping force

b = gripping point (mm)
e = arm (mm)

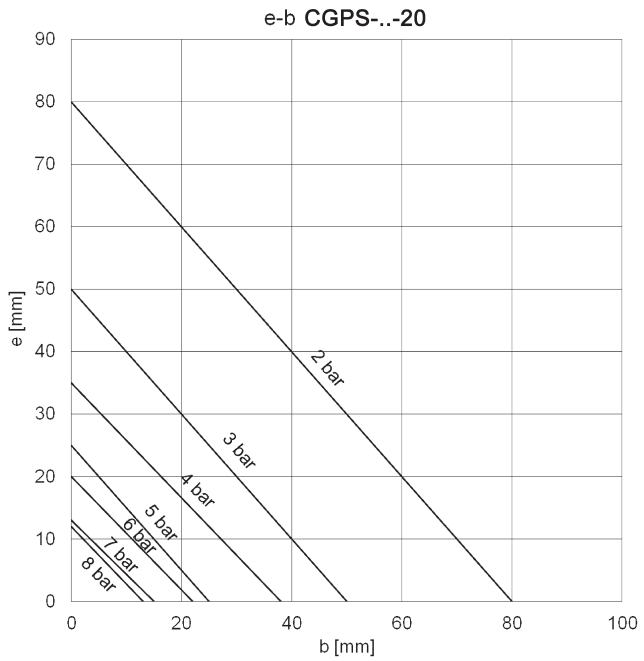
GRIPPING FORCES Mod. CGPS-..-20



b = gripping point (mm)
Fa = opening gripping force (N)

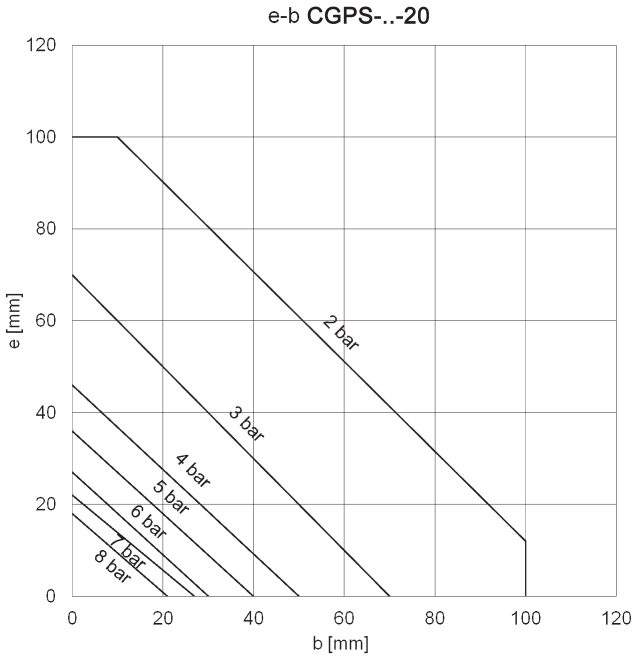


b = gripping point (mm)
Fc = closing gripping force (N)



Opening gripping force

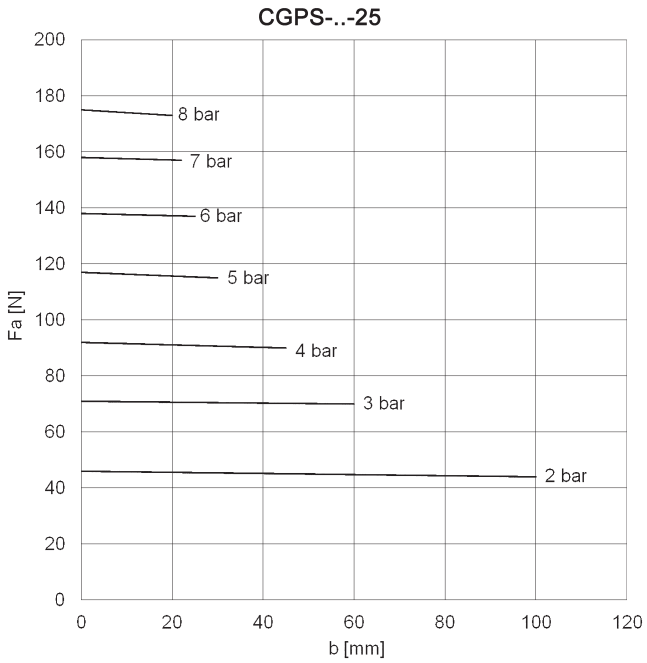
b = gripping point (mm)
e = arm (mm)



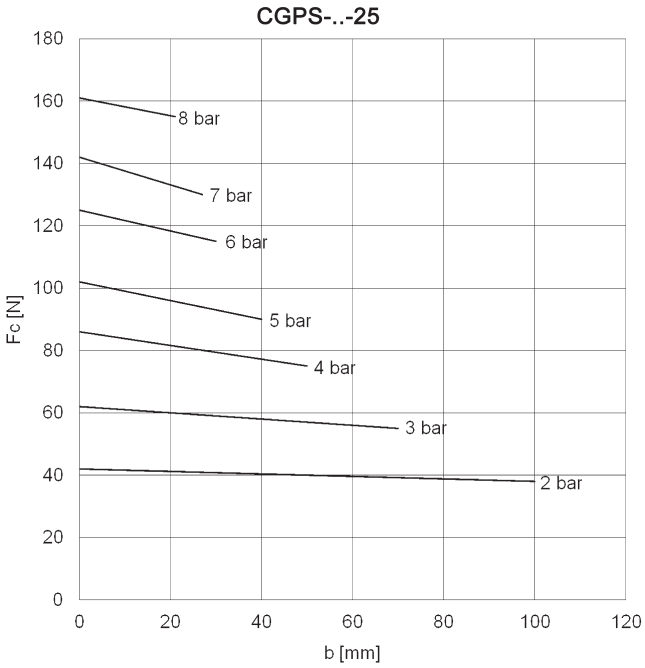
Closing gripping force

b = gripping point (mm)
e = arm (mm)

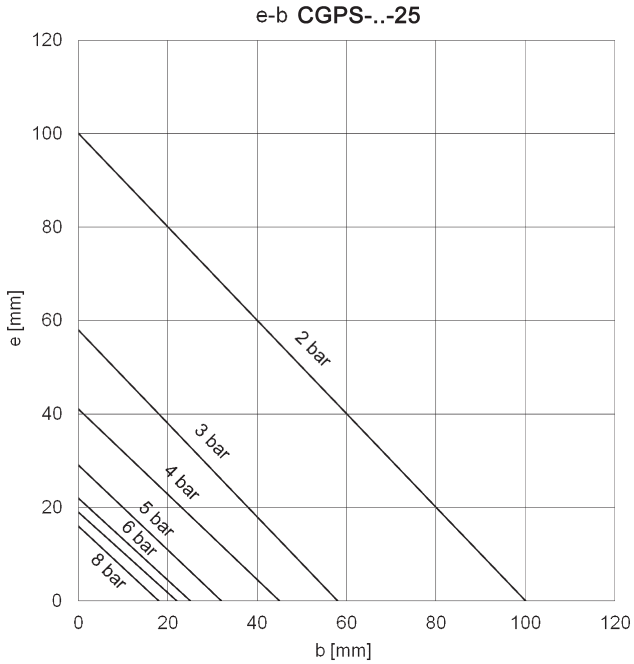
GRIPPING FORCES Mod. CGPS-..-25



b = gripping point (mm)
Fa = opening gripping force (N)

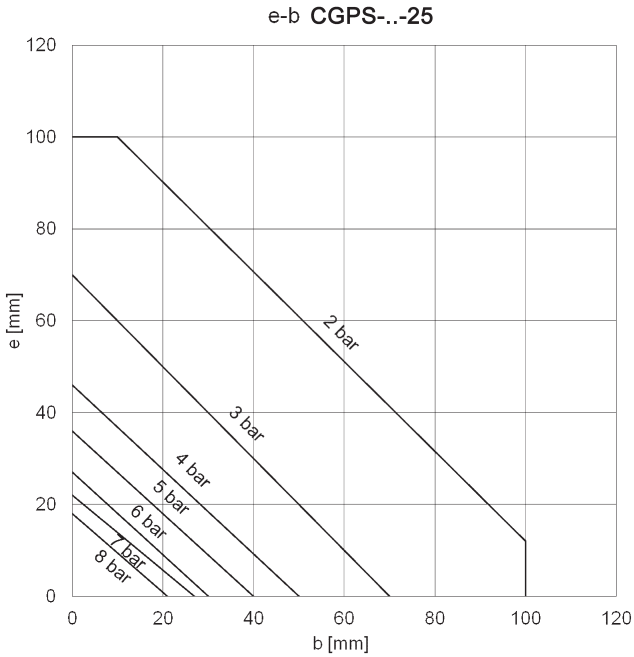


b = gripping point (mm)
Fc = closing gripping force (N)



Opening gripping force

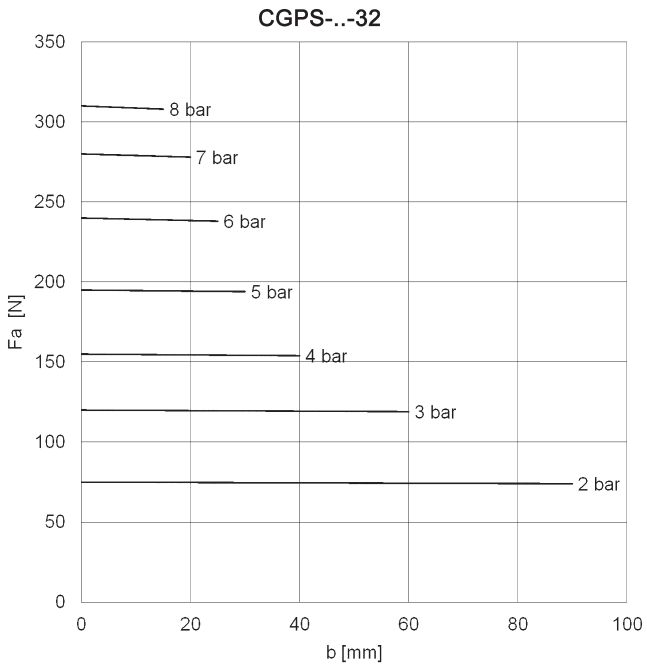
b = gripping point (mm)
e = arm (mm)



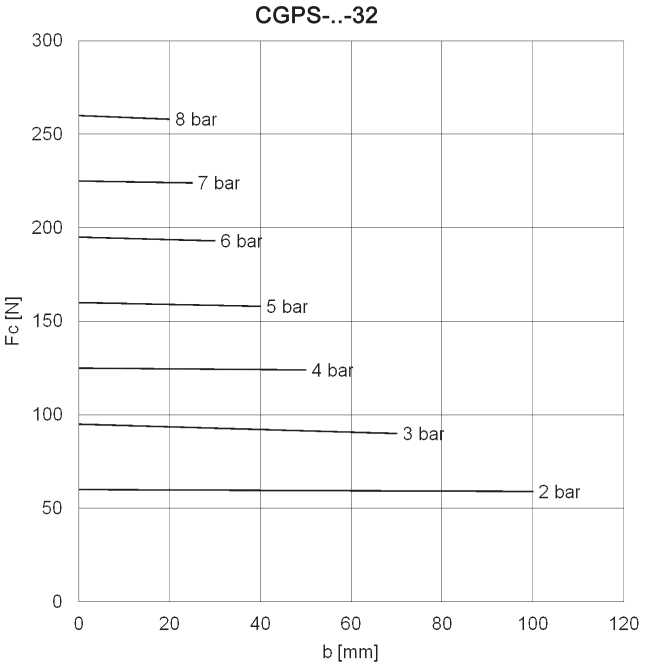
Closing gripping force

b = gripping point (mm)
e = arm (mm)

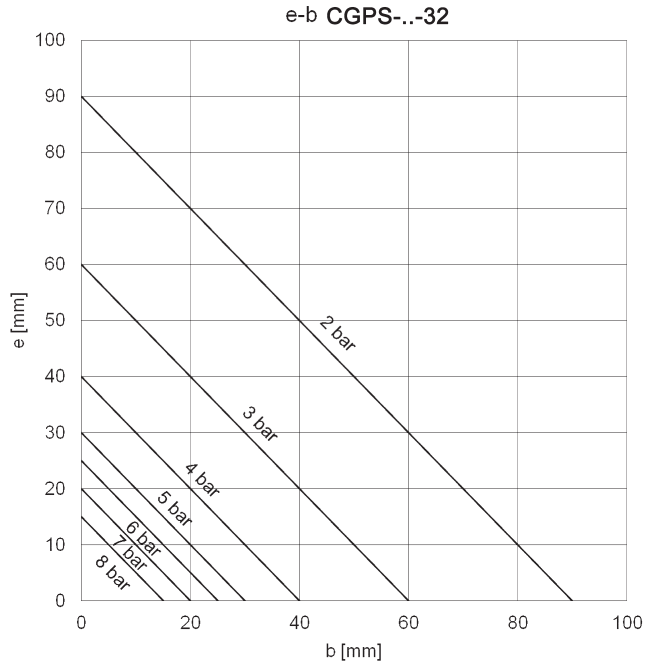
GRIPPING FORCES Mod. CGPS-..-32



b = gripping point (mm)
Fa = opening gripping force (N)

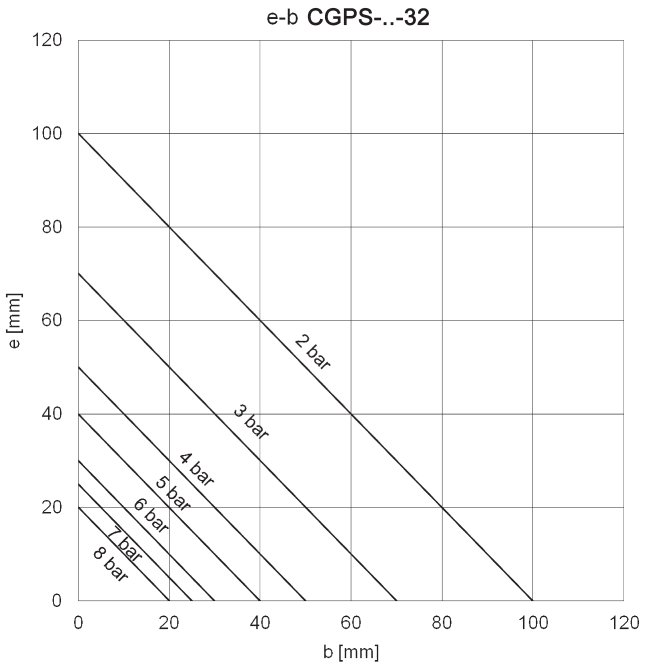


b = gripping point (mm)
Fc = closing gripping force (N)



Opening gripping force

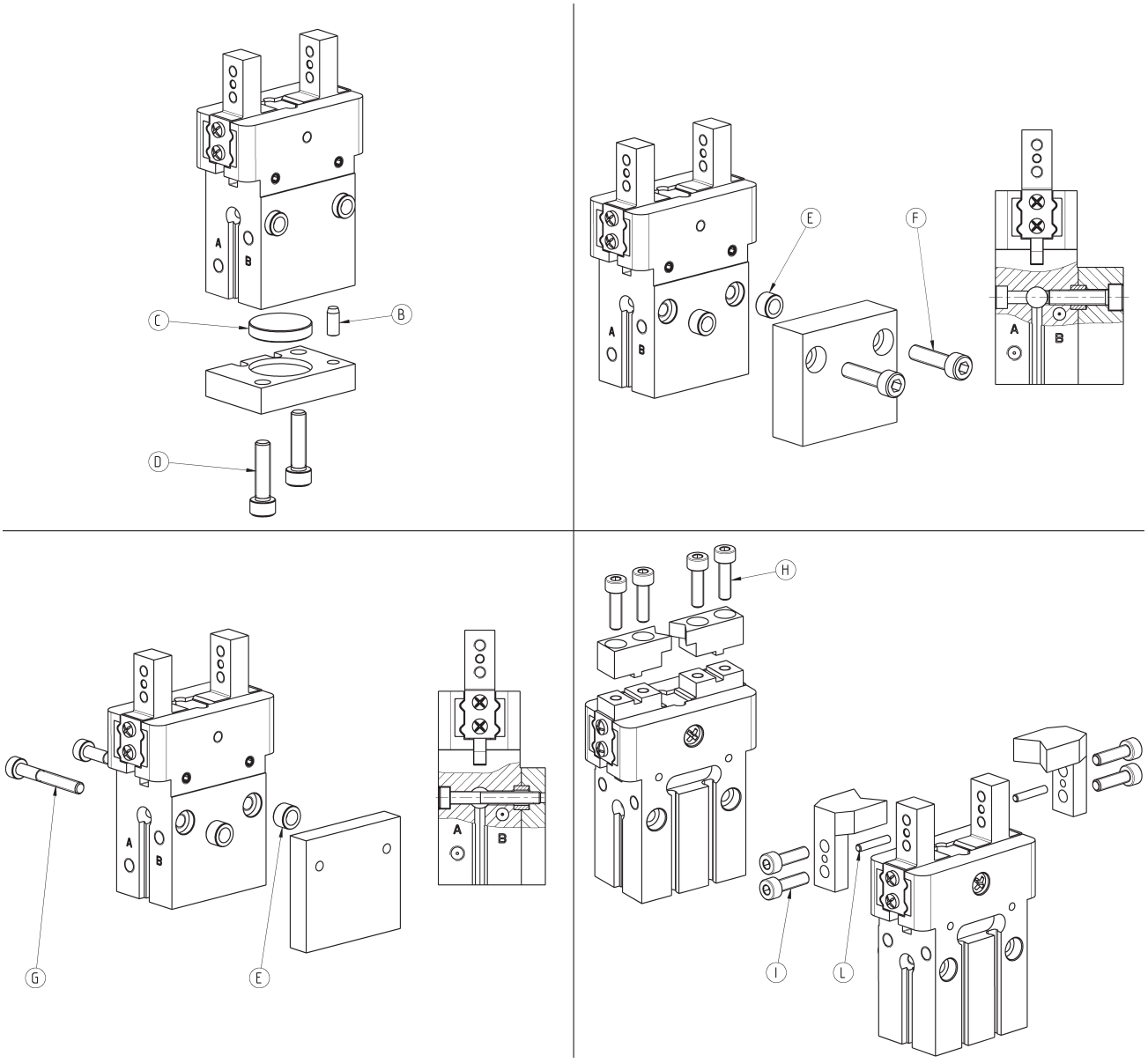
b = gripping point (mm)
e = arm (mm)



Closing gripping force

b = gripping point (mm)
e = arm (mm)

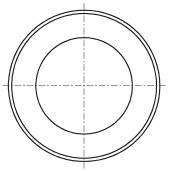
Examples of mounting

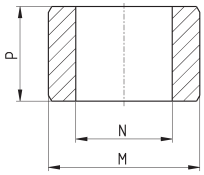


Mod.	B	C	D	E	Centering ring	F	G	H	I	L
CGPS-..-10	Ø2	Ø11	M3	Ø5	TR-CG-05	M3	M2.5	M2.5	M2.5	Ø1.5
CGPS-..-16	Ø3	Ø17	M4	Ø6	TR-CG-06	M4	M3	M3	M3	Ø2
CGPS-..-20	Ø4	Ø21	M5	Ø8	TR-CG-08	M5	M4	M4	M4	Ø2.5
CGPS-..-25	Ø4	Ø26	M6	Ø10	TR-CG-10	M6	M5	M5	M5	Ø3
CGPS-..-32	Ø5	Ø34	M6	Ø10	TR-CG-10	M6	M5	M6	M6	Ø4

Centering ring Mod. TR-CG

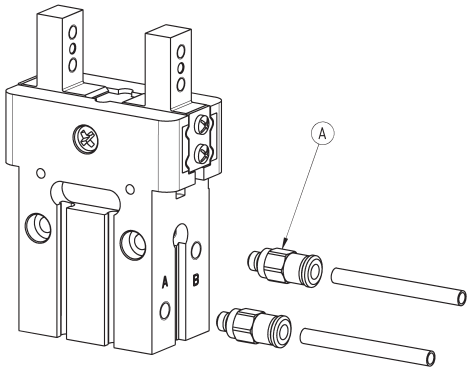
Supplied with:
2x centering rings in steel





Mod.	M (h8)	N	P
TR-CG-04	Ø4	Ø2.6	2.5
TR-CG-05	Ø5	Ø3.1	3
TR-CG-06	Ø6	Ø4.1	4
TR-CG-08	Ø8	Ø5.1	5
TR-CG-10	Ø10	Ø6.1	6

Air supply ports

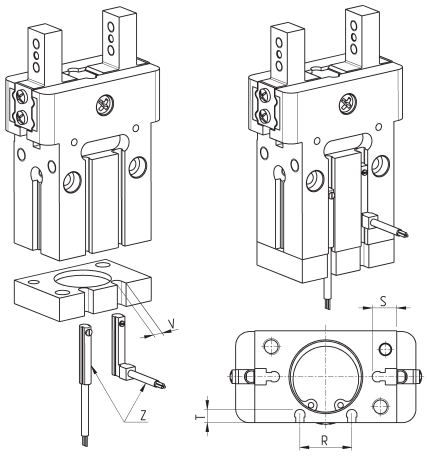


Mod.	A
CGPS-..-10	M3
CGPS-..-16	M5
CGPS-..-20	M5
CGPS-..-25	M5
CGPS-..-32	M5

Example of mounting: sensors

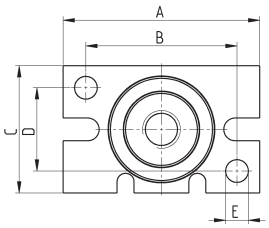
Z = sensor mod. CSD-D-334 or mod. CSD-D-364

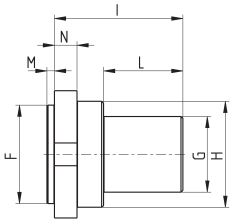
In order to position the sensor correctly, a channel must be created in the base.

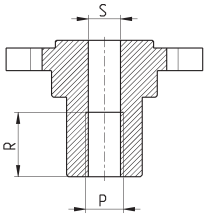


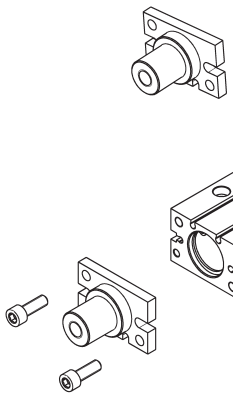
Mod.	R	S	T	V
CGPS-..-10	-	4.6	-	5
CGPS-..-16	11	4.8	3.8	5
CGPS-..-20	15	7	4.6	5
CGPS-..-25	19	9	4.8	5
CGPS-..-32	26	9	4.8	5

Mounting shaft Mod. C-CGPS





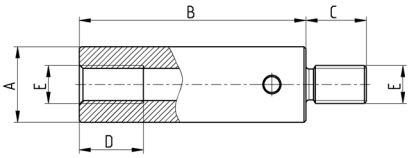


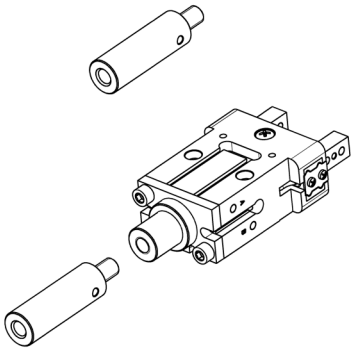


Supplied with:
1x aluminium shaft
2x steel fixing screws

Mod.	A	B	C	D	E	F	G	H	I	L	M	N	P	R	S
C-CGPS-10	23	18	16.4	12	Ø3	Ø11	Ø10	Ø12.8	18.5	11	1.5	3.5	M6	10	Ø5
C-CGPS-16	31	22	23.6	15	Ø4	Ø17	Ø14	Ø17.8	25	16	1.5	4	M8	13	Ø6.8
C-CGPS-20	42	32	27.6	18	Ø5	Ø21	Ø20	Ø22	32	21	2	5	M10	17	Ø8.5
C-CGPS-25	52	40	33.6	22	Ø6	Ø26	Ø20	Ø28	34	21	2	6	M10	17	Ø8.5
C-CGPS-32	60	46	40	26	Ø6	Ø34	Ø30	Ø37	45	31	2	7	M16	25	Ø14

Extension for mounting shaft Mod. L-CGPS

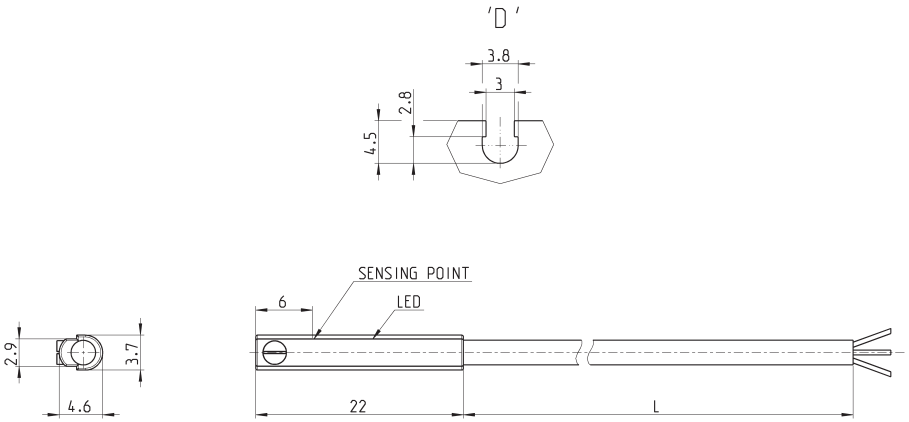




Supplied with:
1x aluminium extension

Mod.	A	B	C	D	E
L-CGPS-10	Ø10	40	9	10	M6
L-CGPS-16	Ø14	60	12	13	M8
L-CGPS-20/25	Ø20	60	16	17	M10
L-CGPS-32	Ø30	70	24	25	M16

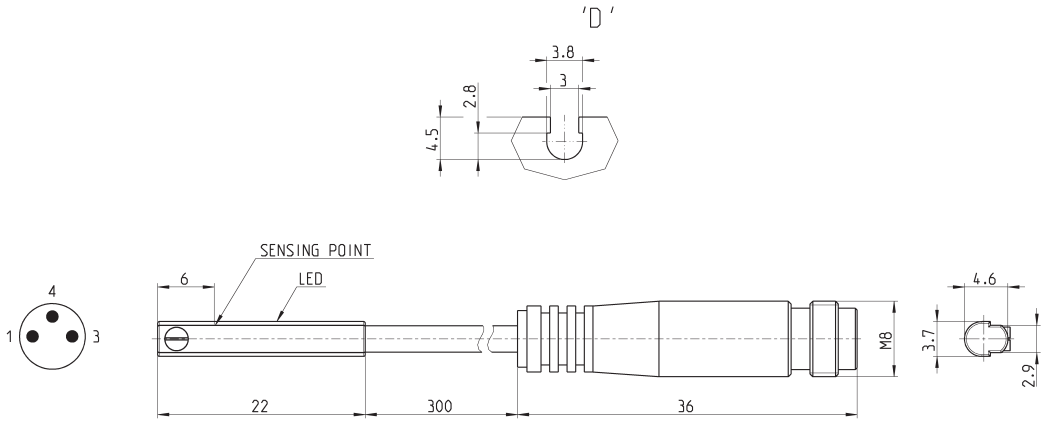
Series CSD magnetic proximity switches, 3-wire cable, D-slot



Mod.	Operation	Connections	Voltage	Output	Max. current	Max Load	Protection	L = length cable
CSD-D-334	Magnetoresistive	3 wires	10 ÷ 27 V DC	PNP	200 mA	6W	Against polarity reversing and overvoltage	2 m

Series CSD magnetic switches, male M8 3-pin conn., D-slot, right

Length of cable 0.3 metres

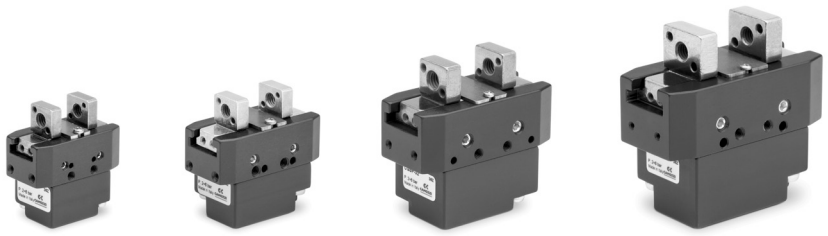


Mod.	Operation	Connection	Voltage	Output	Max. current	Max load	Protection
CSD-D-364	Magnetoresistive	3 wires with M8 connector	10 ÷ 27 V DC	PNP	200 mA	6W	Against polarity reversing and overvoltage

Series CGSP
Compact parallel grippers with T-guide

New

Single and double acting, magnetic, self-centering
Sizes: 20, 25, 32, 40



- Robust, compact and light design
- High resistance to external loads thanks to the T-guide
- High closing/opening repeatability
- High reliability
- Position detection thanks to magnetic proximity switch or inductive sensor kits.
- Protected against the entrance of impurities (IP40)
- Free from Copper, Silicone and PTFE
- High interchangeability (centering bushes)
- Variants available for use in ATEX zones

Series CGSP grippers, available in 4 sizes (20, 25, 32 and 40) are parallel and double acting, self-centering and guided by means of a T-shaped sliding guide. Thanks to the materials and surface coating used, the gripper offers a high reliability. Moreover, the internal force transmission system is protected against the entrance of impurities by means of a steel cover so the gripper can also be used in dusty environments.

Extreme compact dimensions, a light design and high positioning repeatability make this series of grippers particularly suitable for handling small items, even if high operating frequencies are required. Typical applications are pick & place, insertion, machine tending in the electronic components assembly sector, cosmetics & medical industry or in food packaging.

GENERAL DATA

Type of construction	Self-centering parallel gripper with T-guide
Operation	Single acting (NO, NC), double acting
Bores	Ø20, 25, 32, 40 mm
Force transmission	Lever
Air connections	M5 (Ø20, 25, 32), G1/8 (Ø40)
Working temperature	5°C ÷ 60°C
Storage temperature	-10°C ÷ 80°C
Maximum use frequency	3 Hz (ø20, 25, 32), 2 Hz (ø 40)
Repeatability	0.02 mm
Interchangeability	0.1 mm
Medium	Filtered air in class 7.4.4 according to ISO 8573-1. In case lubricated air is used, we recommend ISOVG32 oil and to never interrupt lubrication
Lubrication	After 10 million cycles, grease the sliding zones using Molykote DX grease
Protection class	IP 40
Compatibility	ROHS Directive
Certifications	ATEX (II 2GD c IIC 120°C(T4)-20°C≤Ta≤80)

N.B. Pressurize the pneumatic system gradually in order to avoid uncontrolled movements

CODING EXAMPLE

CGSP	-	20	-	NC	-	EX

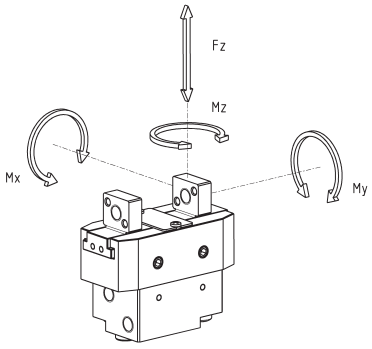
CGSP	SERIES	
20	SIZES 20 25 32 40	
NC	FUNCTIONING = double acting NO = single acting, normally open NC = single acting, normally closed	PNEUMATIC SYMBOLS PNZ1 PNZ3 PNZ2
EX	CERTIFICATION = standard EX = ATEX certification	

PNEUMATIC SYMBOLS

The pneumatic symbols which have been indicated in the CODING EXAMPLE are shown below.

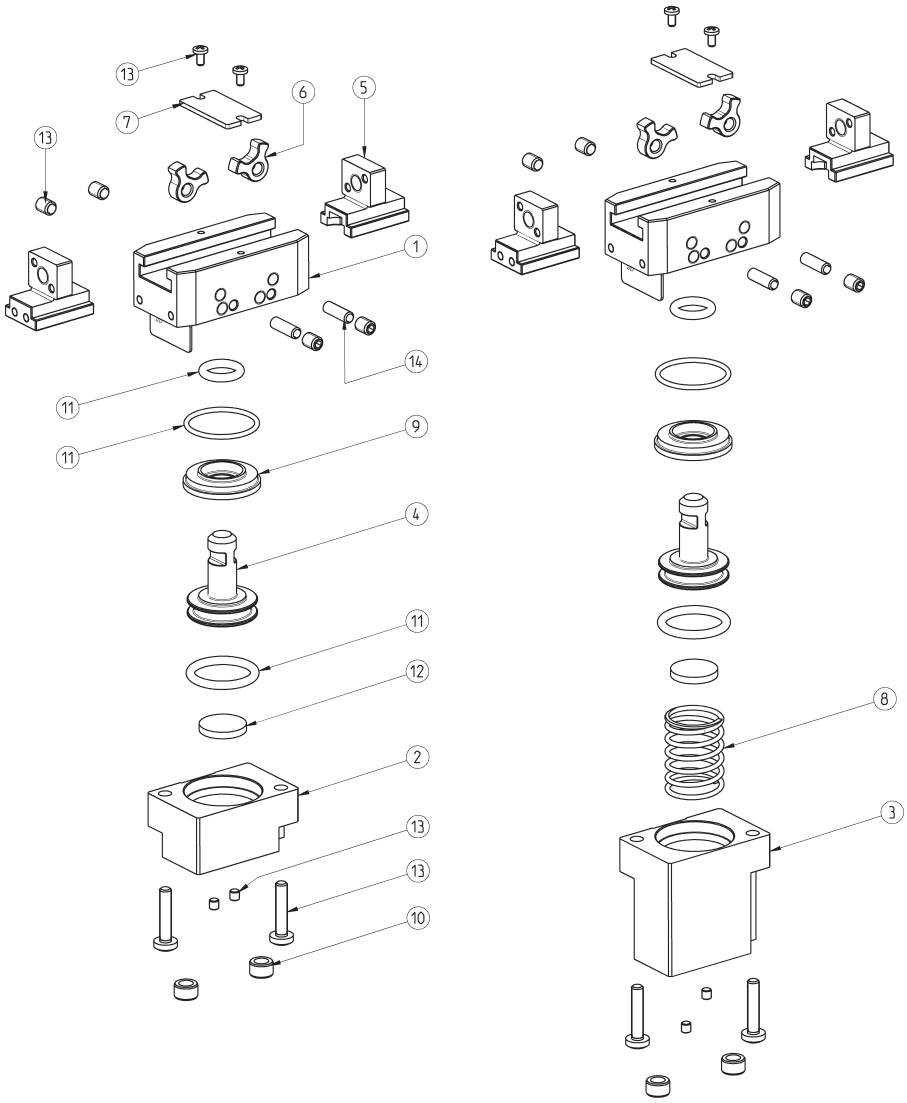
Maximum admissible loads and torques

Fz s, Mx s, My s, Mz s =
maximum admissible loads and
torques in static conditions
Fz d, Mx d, My d, Mz d =
maximum admissible loads and
torques in dynamic conditions



Mod.	Fz s (N)	Mx s (Nm)	My s (Nm)	Mz s (Nm)	Fz d (N)	Mx d (Nm)	My d (Nm)	Mz d (Nm)
CGSP-20	36	1.2	1.2	1.2	0.4	1.2	1.2	1.2
CGSP-25	60	2.4	2.4	2.4	0.6	2.4	2.4	2.4
CGSP-32	84	4.8	4.8	4.8	0.9	4.8	4.8	4.8
CGSP-40	144	7.2	7.2	7.2	1.5	7.2	7.2	7.2

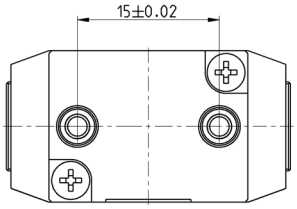
Series CGSP grippers - construction

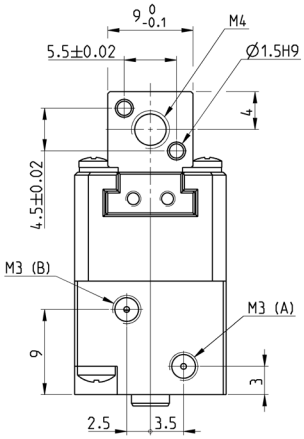


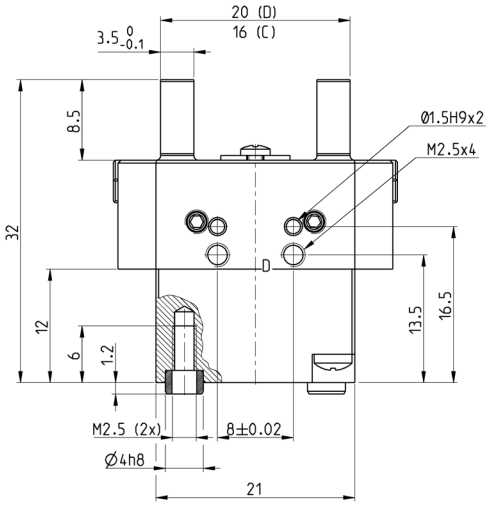
LIST OF COMPONENTS	
PARTS	MATERIALS
1 - Body	Aluminium
2 - End cap	Aluminium
3 - End cap NC/NO	Aluminium
4 - Piston	Stainless steel
5 - Jaw	Stainless steel
6 - Levers	Steel
7 - Cover	Stainless steel
8 - Spring	Stainless steel
9 - End cover	Aluminium
10 - Centering bushes	Stainless steel
11 - Seals	HNBR / FKM
12 - Magnet	Neodymium
13 - Screws and grub screws	Stainless steel
14 - Pins	Steel

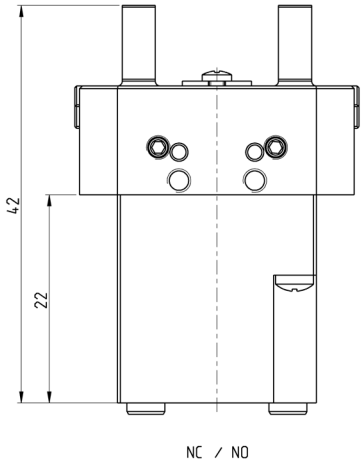
CGSP gripper, size 20 - dimensions

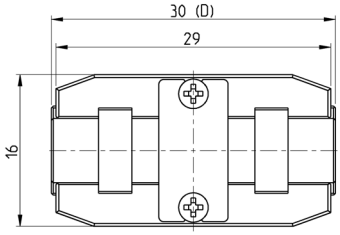
DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection
C = Closed gripper
D = Open gripper







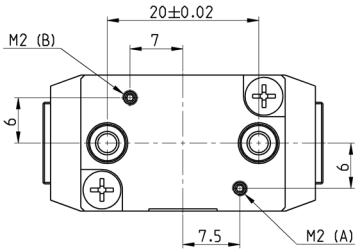


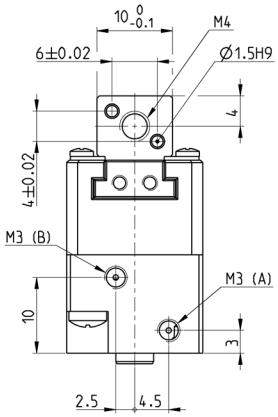


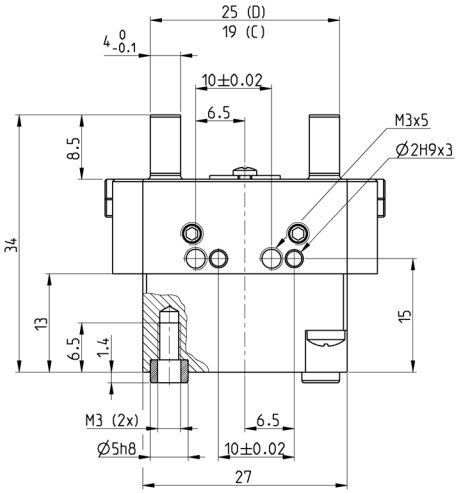
Mod.	Total closing gripping force at 6 bar (N)	Closing gripping force each jaw at 6 bar (N)	Total opening gripping force at 6 bar (N)	Opening gripping force each jaw at 6 bar (N)	Stroke per jaw (mm)	Working pressure (bar)	Working temperature (°C)	Opening time (ms)	Closing time (ms)	Weight (g)
CGSP-20	36	18	44	22	2	2 ÷ 8	5 ÷ 60	9	12	34
CGSP-20-NC	46	23	38	19	2	4 ÷ 8	5 ÷ 60	9	10	42
CGSP-20-NO	30	15	54	27	2	4 ÷ 8	5 ÷ 60	12	7	40

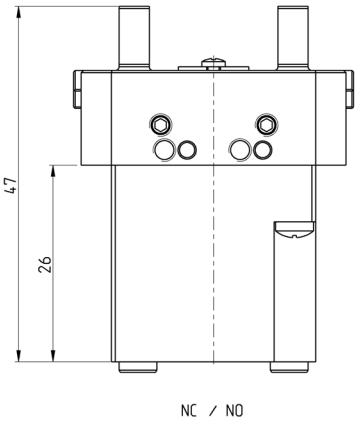
CGSP gripper, size 25 - dimensions

DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection
C = Closed gripper
D = Open gripper

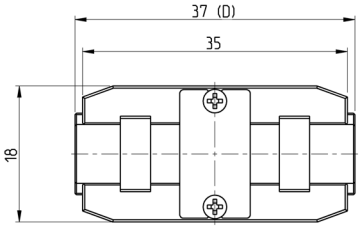








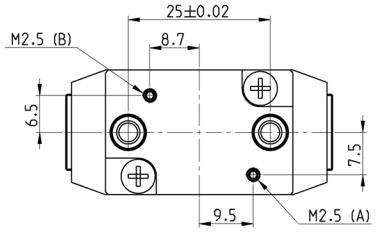
NC / NO

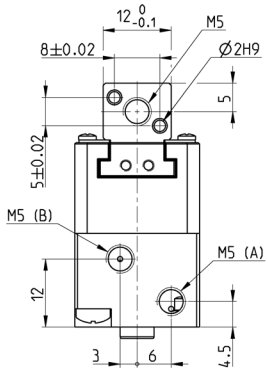


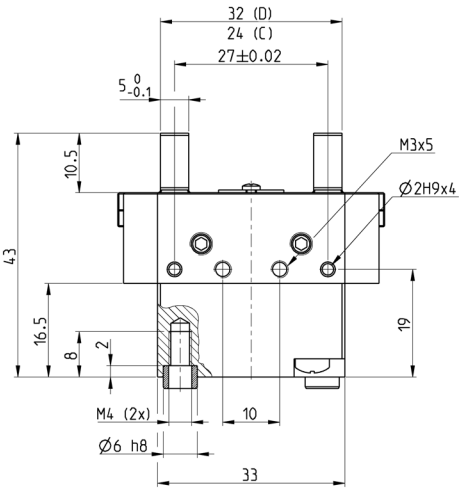
Mod.	Total closing gripping force at 6 bar (N)	Closing gripping force each jaw at 6 bar (N)	Total opening gripping force at 6 bar (N)	Opening gripping force each jaw at 6 bar (N)	Stroke per jaw (mm)	Working pressure (bar)	Working temperature (°C)	Opening time (ms)	Closing time (ms)	Weight (g)
CGSP-25	70	35	84	42	3	2 ÷ 8	5 ÷ 60	11	13	51
CGSP-25-NC	86	43	76	38	3	4 ÷ 8	5 ÷ 60	9	24	66
CGSP-25-NO	62	31	98	49	3	4 ÷ 8	5 ÷ 60	20	8	61

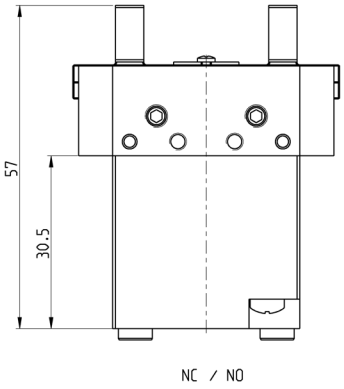
CGSP gripper, size 32 - dimensions

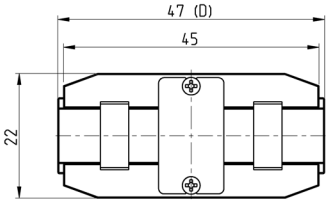
DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection
C = Closed gripper
D = Open gripper







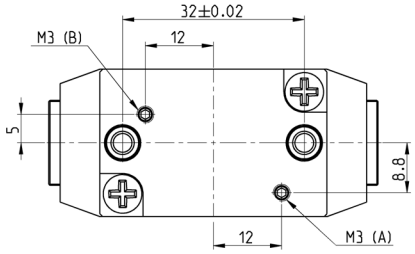


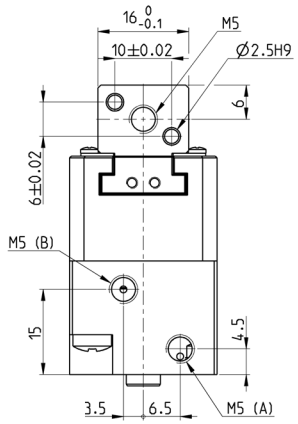


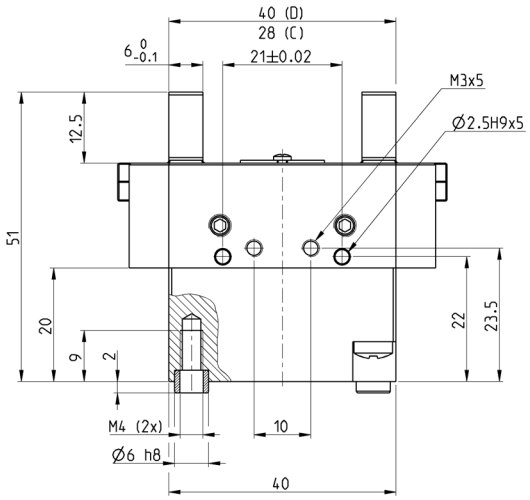
Mod.	Total closing gripping force at 6 bar (N)	Closing gripping force each jaw at 6 bar (N)	Total opening gripping force at 6 bar (N)	Opening gripping force each jaw at 6 bar (N)	Stroke per jaw (mm)	Working pressure (bar)	Working temperature (°C)	Opening time (ms)	Closing time (ms)	Weight (g)
CGSP-32	104	52	122	61	4	2 ÷ 8	5 ÷ 60	18	20	99
CGSP-32-NC	126	63	106	53	4	4 ÷ 8	5 ÷ 60	9	27	126
CGSP-32-NO	88	44	142	71	4	4 ÷ 8	5 ÷ 60	22	8	120

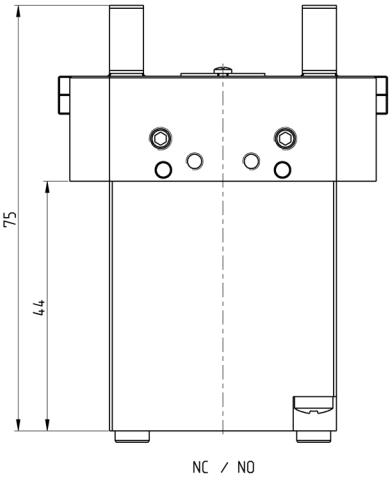
CGSP gripper, size 40 - dimensions

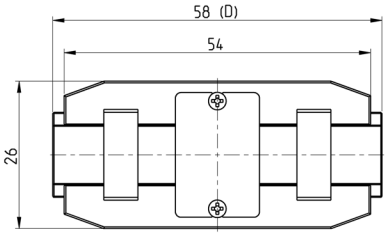
DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection
C = Closed gripper
D = Open gripper





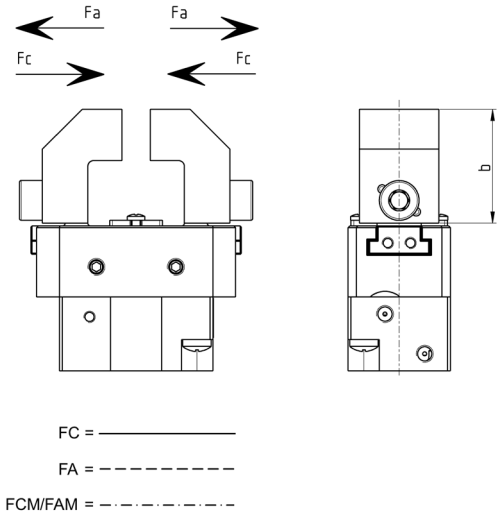




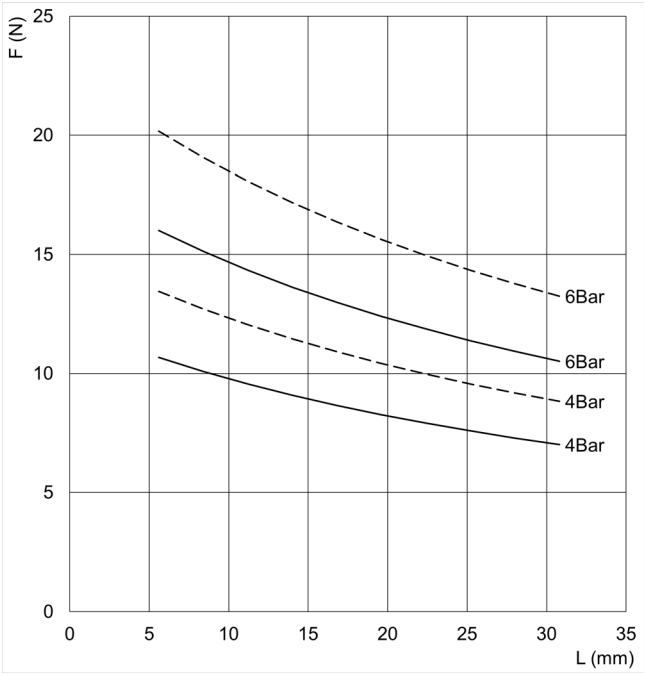


Mod.	Total closing gripping force at 6 bar (N)	Closing gripping force each jaw at 6 bar (N)	Total opening gripping force at 6 bar (N)	Opening gripping force each jaw at 6 bar (N)	Stroke per jaw (mm)	Working pressure (bar)	Working temperature (°C)	Opening time (ms)	Closing time (ms)	Weight (g)
CGSP-40	154	77	184	92	6	2 ÷ 8	5 ÷ 60	16	13	163
CGSP-40-NC	188	94	152	76	6	4 ÷ 8	5 ÷ 60	11	28	238
CGSP-40-NO	124	62	214	107	6	4 ÷ 8	5 ÷ 60	27	11	219

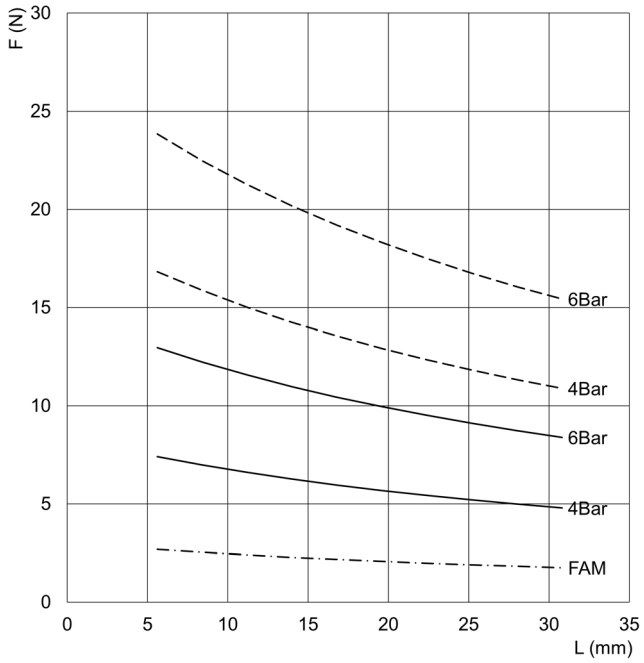
GRIPPING FORCE PER SINGLE JAW



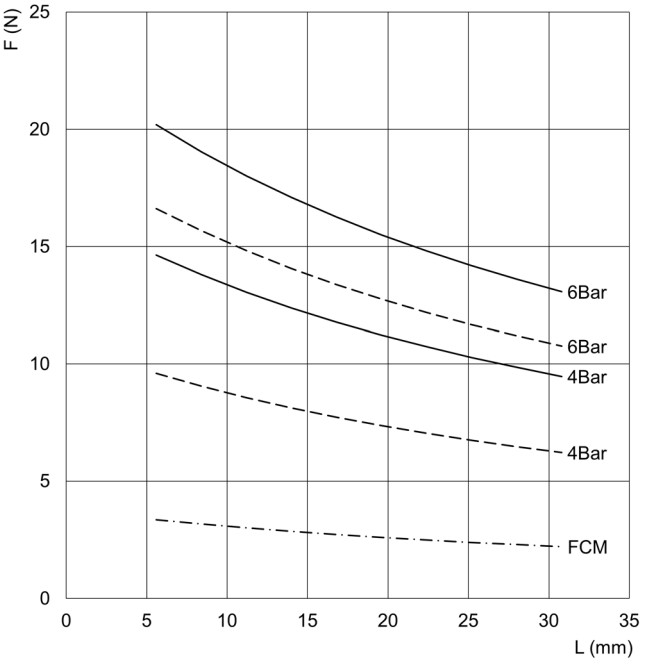
L = distance from gripping point
FA = opening force
FC = closing force
FAM = opening force of the spring
FCM = closing force of the spring



CGSP-20

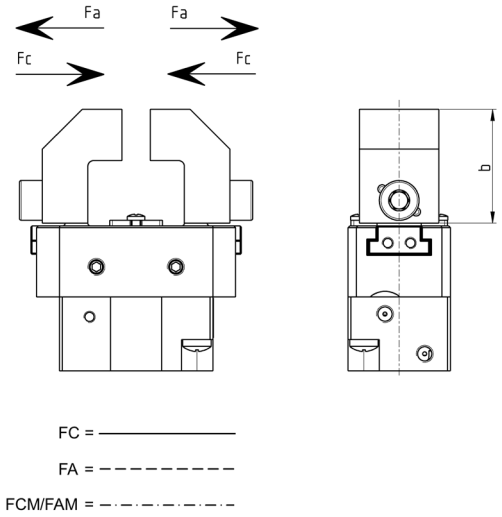


CGSP-20-NO

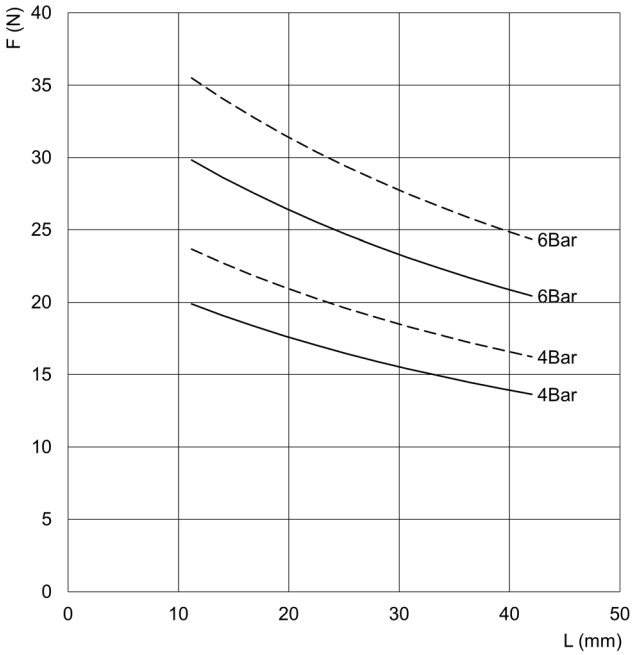


CGSP-20-NC

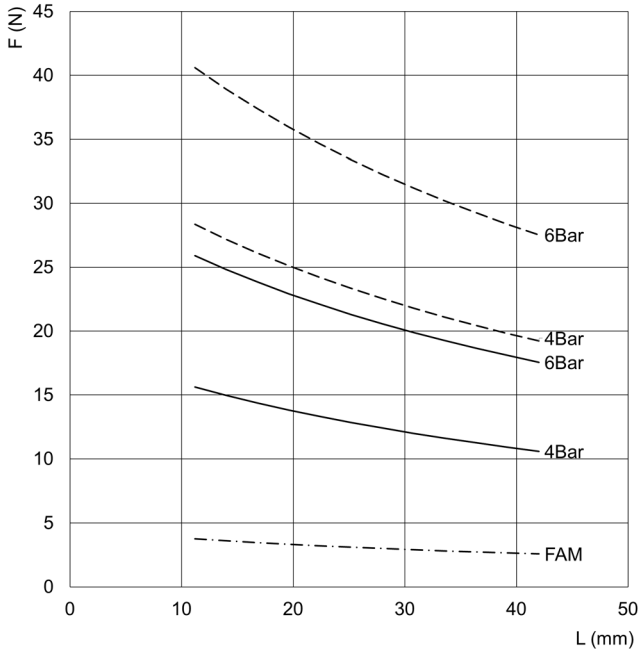
GRIPPING FORCE PER SINGLE JAW



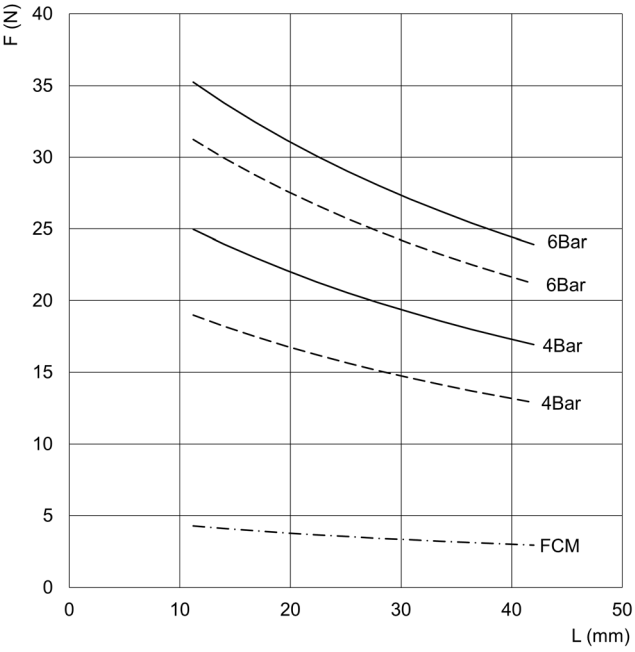
L = distance from gripping point
FA = opening force
FC = closing force
FAM = opening force of the spring
FCM = closing force of the spring



CGSP-25

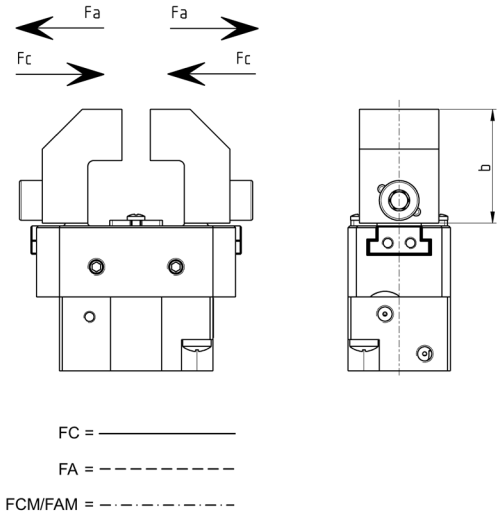


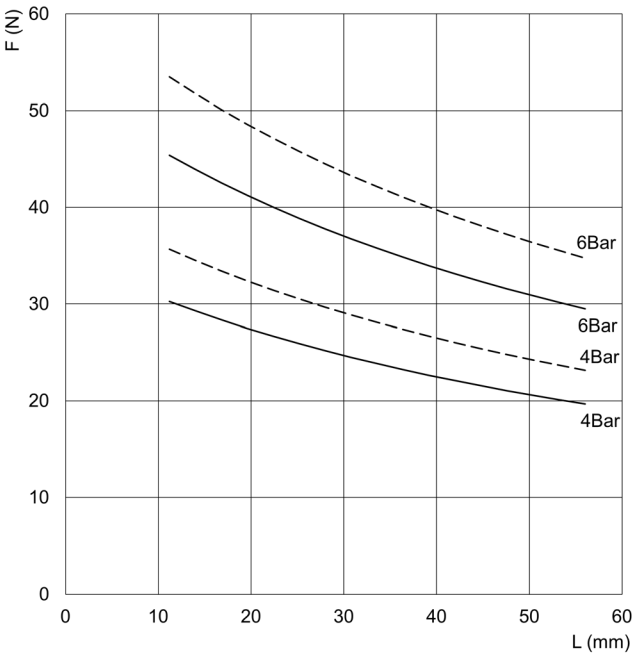
CGSP-25-NO



CGSP-25-NC

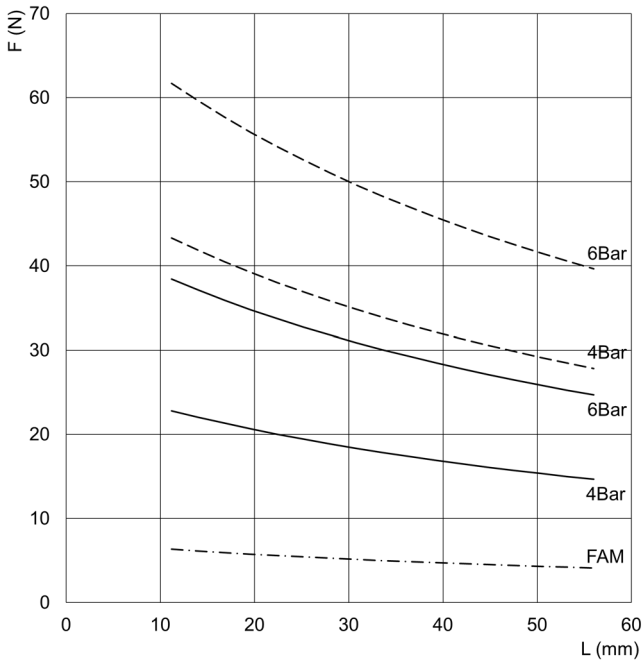
GRIPPING FORCE PER SINGLE JAW



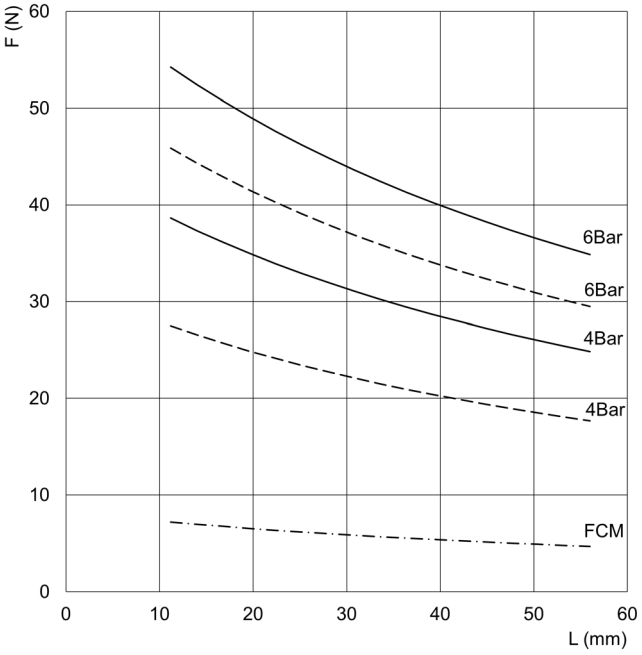


L = distance from gripping point
FA = opening force
FC = closing force
FAM = opening force of the spring
FCM = closing force of the spring

CGSP-32

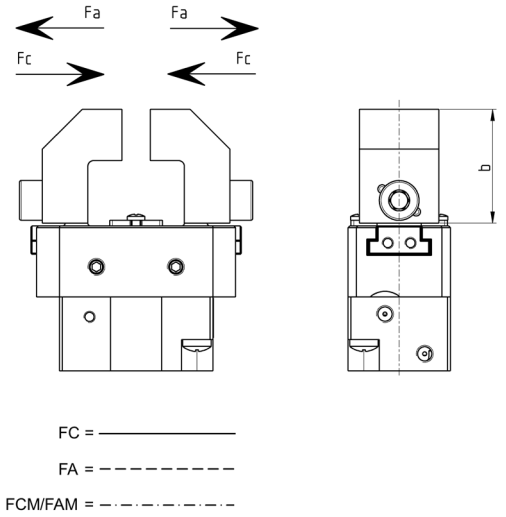


CGSP-32-NO

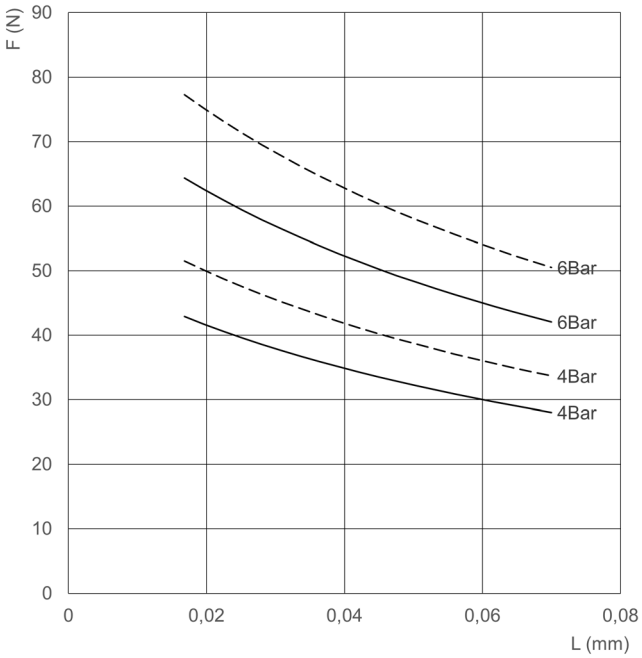


CGSP-32-NC

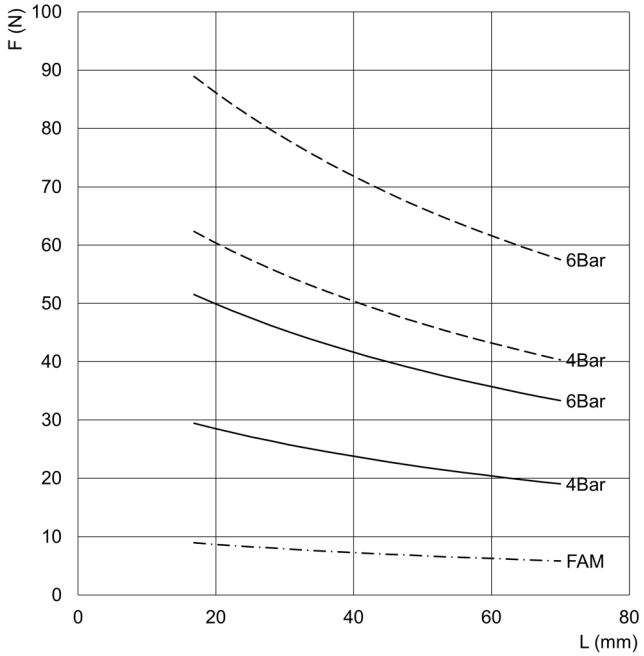
GRIPPING FORCE PER SINGLE JAW



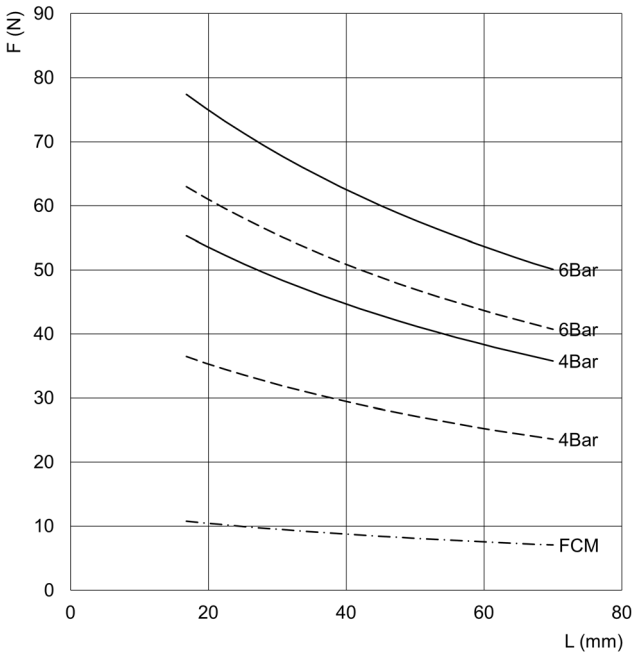
L = distance from gripping point
FA = opening force
FC = closing force
FAM = opening force of the spring
FCM = closing force of the spring



CGSP-40

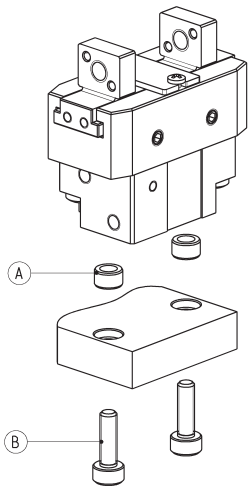


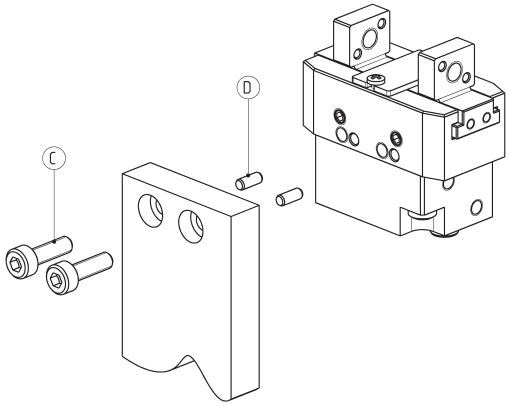
CGSP-40-NO

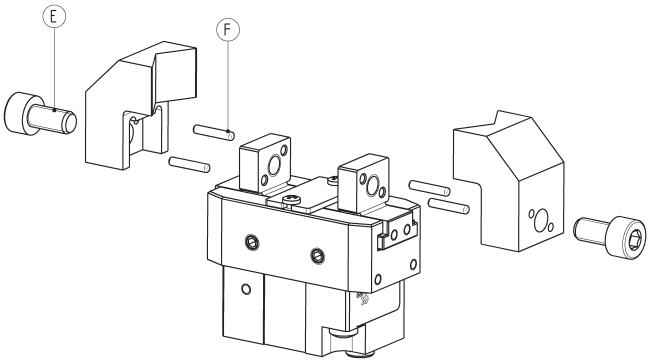


CGSP-40-NC

Examples of mounting

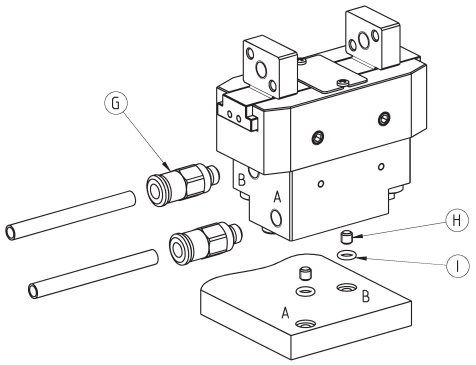






Mod.	A	B	C	D	E	F
CGSP-20	Ø4	M2.5	M2.5	Ø1.5	M4	Ø1.5
CGSP-25	Ø5	M3	M3	Ø2	M4	Ø1.5
CGSP-32	Ø6	M4	M3	Ø2	M5	Ø2
CGSP-40	Ø6	M4	M3	Ø2.5	M5	Ø2.5

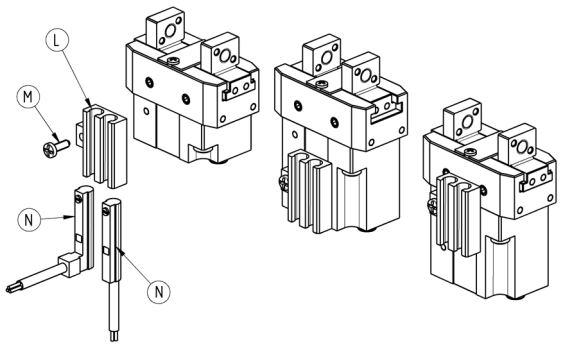
Air supply ports



Mod.	G	H	I
CGSP-20	M3	-	-
CGSP-25	M3	M2	OR 1x2.5
CGSP-32	M5	M2.5	OR 1x3
CGSP-40	M5	M3	OR 1x3.5

Magnetic sensors fixing kit

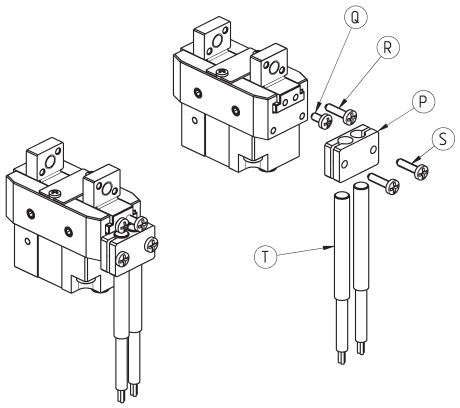
Supplied with:
- fixing screws (M)
- flange (L)



Mod.	M	N
M-CGSP-20	M2x6	CSD-...
M-CGSP-25	M2x6	CSD-...
M-CGSP-32	M2x6	CSD-...
M-CGSP-40	M2x6	CSD-...

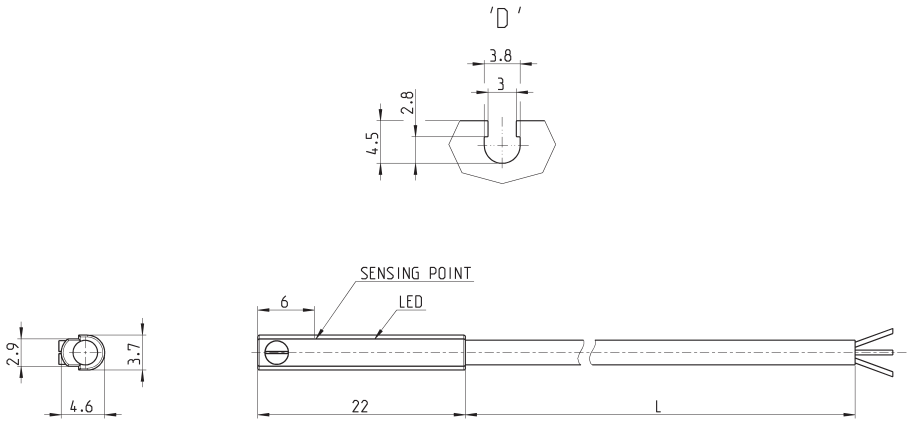
Inductive sensors fixing kit

Supplied with:
- fixing screws (S)
- setting screws (Q - R)
- flange (P)



Mod.	Q	R	S	T
I-CGSP-20	M1,6x3	M1,6x6	M2x6	Ø3
I-CGSP-25	M2x4	M2x8	M2x8	Ø4
I-CGSP-32	M2x4	M2x8	M2x8	Ø4
I-CGSP-40	M2x4	M2x10	M2x10	Ø4

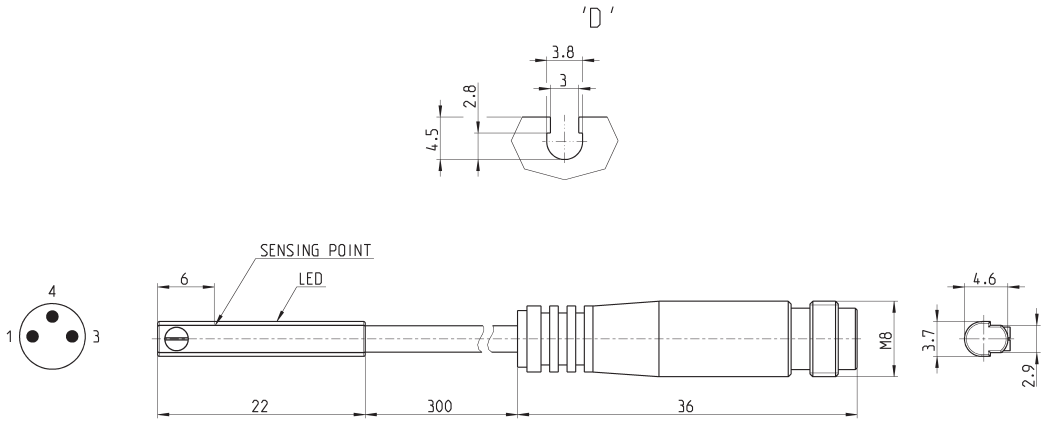
Series CSD magnetic proximity switches, 3-wire cable, D-slot



Mod.	Operation	Connections	Voltage	Output	Max. current	Max Load	Protection	L = length cable
CSD-D-334	Magnetoresistive	3 wires	10 ÷ 27 V DC	PNP	200 mA	6W	Against polarity reversing and overvoltage	2 m

Series CSD magnetic switches, male M8 3-pin conn., D-slot, right

Length of cable 0.3 metres



Mod.	Operation	Connection	Voltage	Output	Max. current	Max load	Protection
CSD-D-364	Magnetoresistive	3 wires with M8 connector	10 ÷ 27 V DC	PNP	200 mA	6W	Against polarity reversing and overvoltage

Series CGLN
wide opening parallel grippers

Double acting, magnetic, self-centering
Bores: ø 10, 16, 20, 25, 32 mm

- High installation versatility
- Rack and pinion synchronized mechanism
- Sturdy and accurate construction

Series CGLN's double piston ensures a high gripping force from within a compact unit. The body of the gripper is complete of grooves to mount magnetic proximity switches (Series CSC).

The wide range of bores and strokes available allows to meet technical requirements at its best.
Repositioning of the gripper is made easier by the 2 calibrated holes provided in the jaws and by the 2 locating pins in the base.

GENERAL DATA

Operation	double effect
Working pressure	2 ÷ 8 bar (3 ÷ 8 bar for Ø10)
Working temperature	5°C ÷ 60°C
Lubrification	not required
Repeatibility	± 0.1 mm
Effective gripping force with pressure = 0.5MPa and gripping moment R = 40 mm (Ø 10-16-20-25) or = 80 mm (Ø 32)	Ø 10 = 15N Ø 16 = 45N Ø 20 = 75N Ø 25 = 125N Ø 32 = 225N
Air ports	Ø 10 - 16 - 20 - 25 = M5 Ø 32 = G1/8
Fluid	filtered air, without lubrication. If lubricated air is used, it is recommended to use oil ISO VG32. Once applied, the lubrication should never be interrupted.

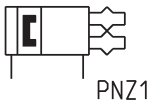
CODING EXAMPLE

CGLN	-	20	-	040

CGLN	SERIES	PNEUMATIC SYMBOL PNZ1
20	SIZES: 10 16 20 25 32	
040	STROKE	

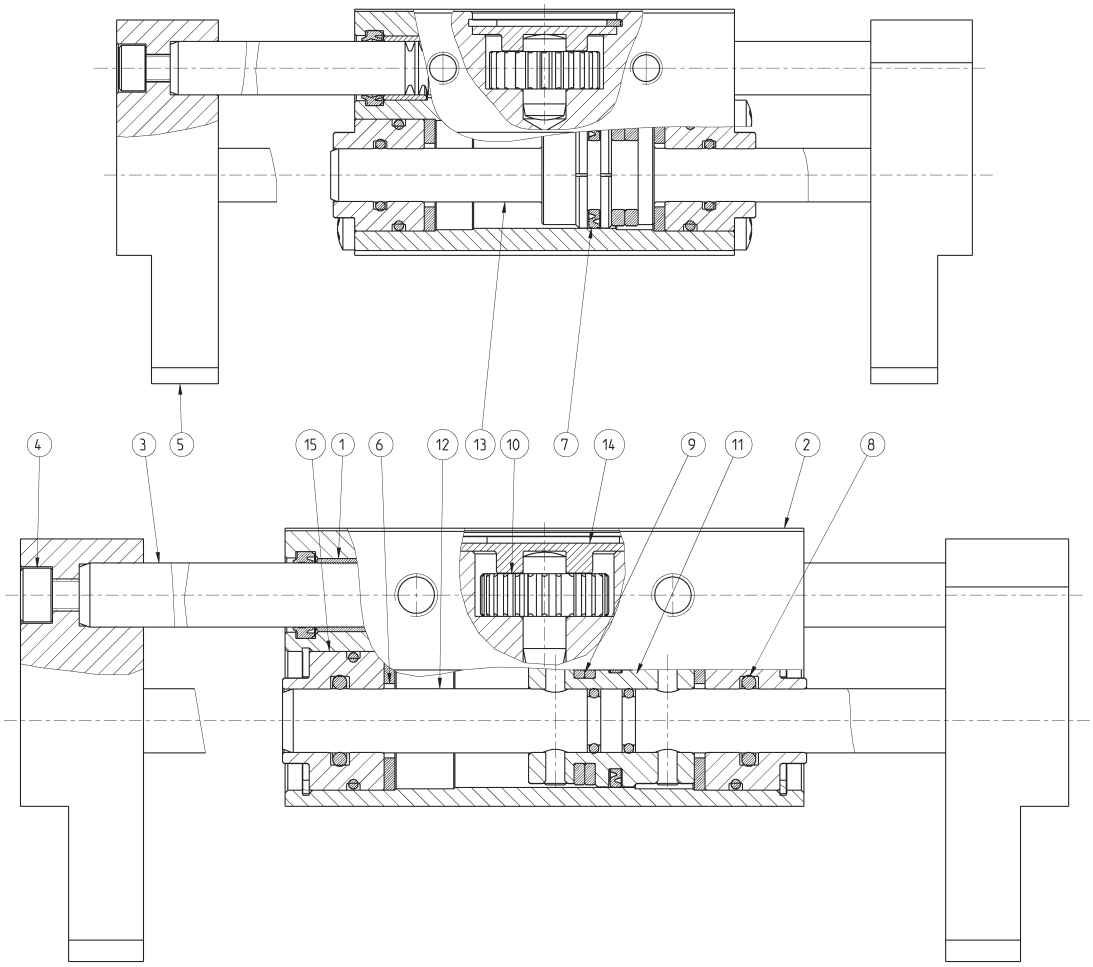
PNEUMATIC SYMBOLS

The pneumatic symbols which have been indicated in the CODING EXAMPLE are shown below.



PNZ1

Series CGLN Gripper - construction



LIST OF COMPONENTS	
PARTS	MATERIALS
1 - Bushing	Bronce
2 - Body	Aluminium
3 - Rack	Stainless steel
4 - Fixing screw	Steel
5 - Gripping flange	Aluminium
6 - Buffer seal	PU
7 - Piston seal	NBR
8 - Rod seal	NBR
9 - Magnet	Plastoferrite
10 - Pinion	Steel
11 - Piston	Aluminium
12 - Rod	Stainless steel
13 - Rod-piston	Stainless steel
14 - Plug	Aluminium
15 - Header	Steel

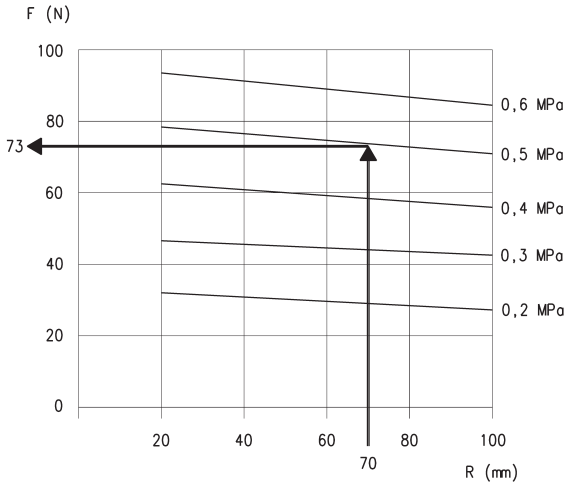
Sizing criteria: 1) GRIPPING FORCE ANALYSIS

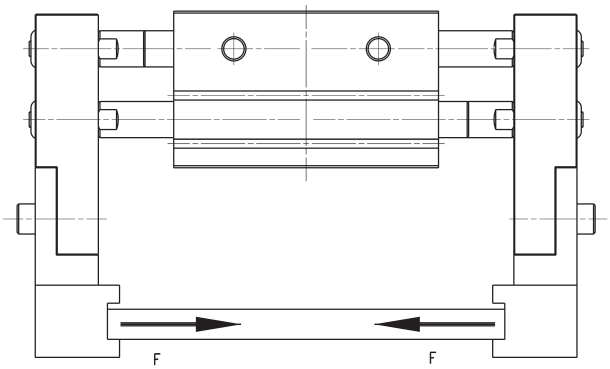
The selection of the size of the gripper has to be carried out according to the weight of the object that has to be moved. It is strongly recommended to select a gripper bore able to develop a gripping force at least 20 times higher than the weight of the object. In case of great acceleration or impact during the moving of the object, it is necessary to increase the factor of safety.

EXAMPLE OF CALCULATION (see the diagram on the right)
Size of the object to be moved (side x side) = 200 m x 20 mm
Weight of the object to be moved (Kg) = 0.3
Factor of safety = 20
Gripping moment R (mm) = 70
Working pressure (MPa) = 0.5
Minimum required gripping force Fmin = 0.3kg x 20 x 9.8m/s² = 60N

Through the diagrams "Effective Gripping force" we deduce from the above mentioned conditions that the gripping force with the mod. CGLN-20 is 73N, that is 24 times the weight of the object.
The condition requiring that gripping force is at least 20 times higher than the set gripping force is thus satisfied.
Once the gripper size is chosen, select a stroke that allows to have a maximum opening which is wider than the size of the object to be moved.
In the case above the gripper CGLN-20-80 is the right choice.
F = 220 mm > 200 mm

ACTUAL GRIPPING FORCE (F)
The shown gripping force corresponds to the gripping force of a finger when all fingers (or accessories) are in contact with the load.
F = Pushing force of 1 finger

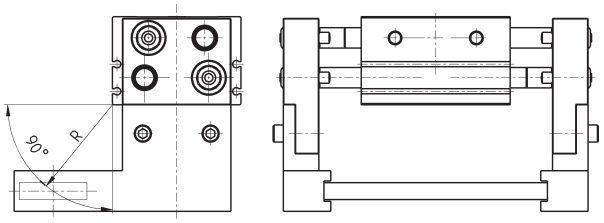




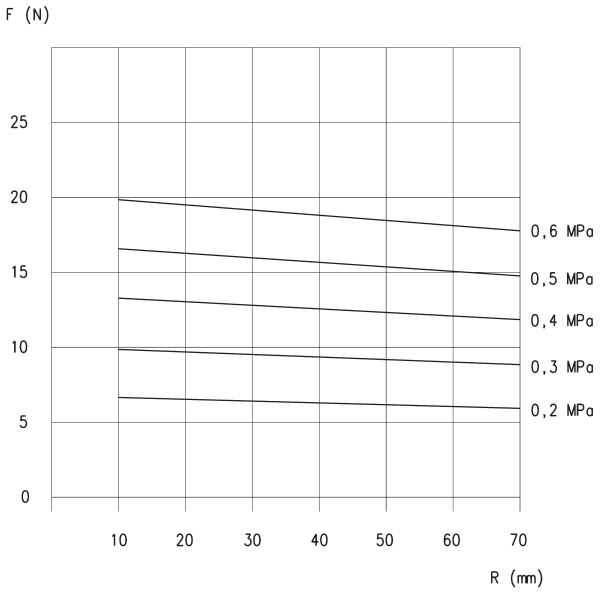
Sizing criteria: 2) GRIPPING DISTANCE ANALYSIS

The R gripping distance of the object has to meet the parameters of the lines of force which are indicated for each pressure in the diagrams "Effective grip force".
If the R distance is exceeded, the load applied will be too much overhanging, thus causing the screws to loosen as well as a reduced component life.

R = gripping distance (mm)

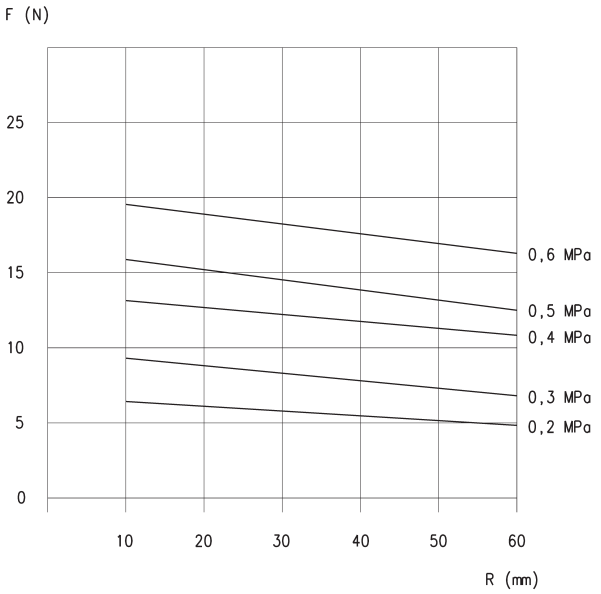


Gripping force for bore 10



CGLN-10-020

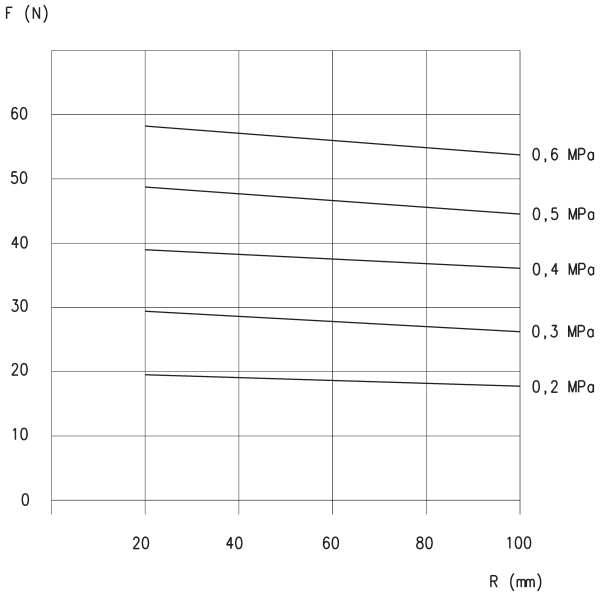
F = Gripping force (N)
R = Gripping moment (mm)



CGLN-10-040 and CGLN-10-060

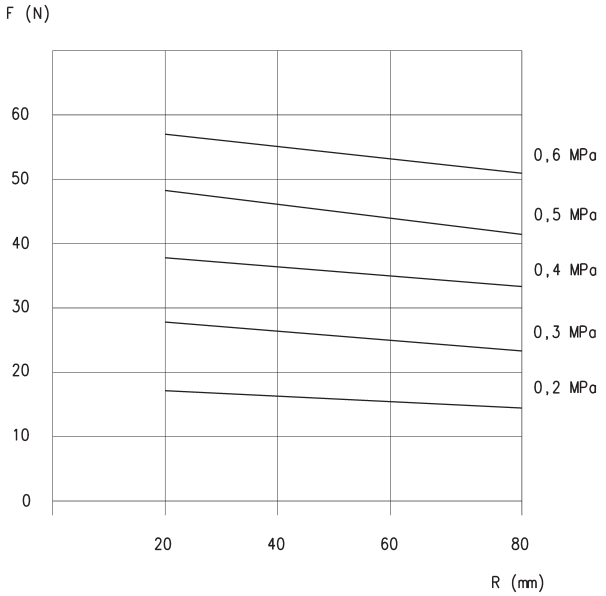
F = Gripping force (N)
R = Gripping moment (mm)

Gripping force for bore 16



CGLN-16-030

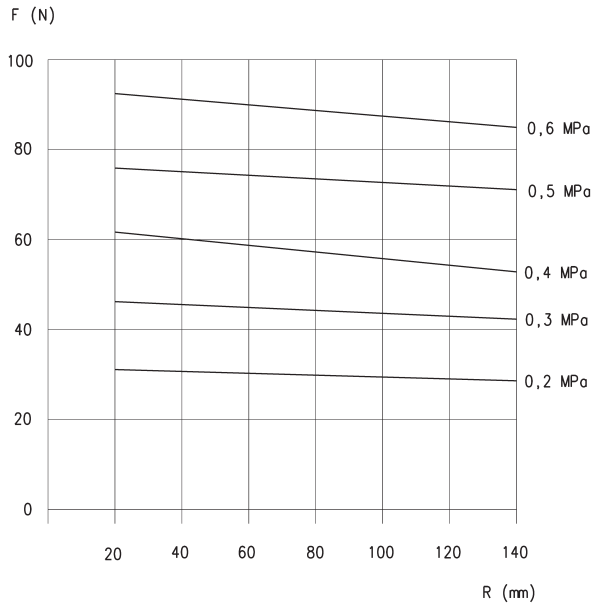
F = Gripping force (N)
R = Gripping moment (mm)



CGLN-16-060 and CGLN-16-080

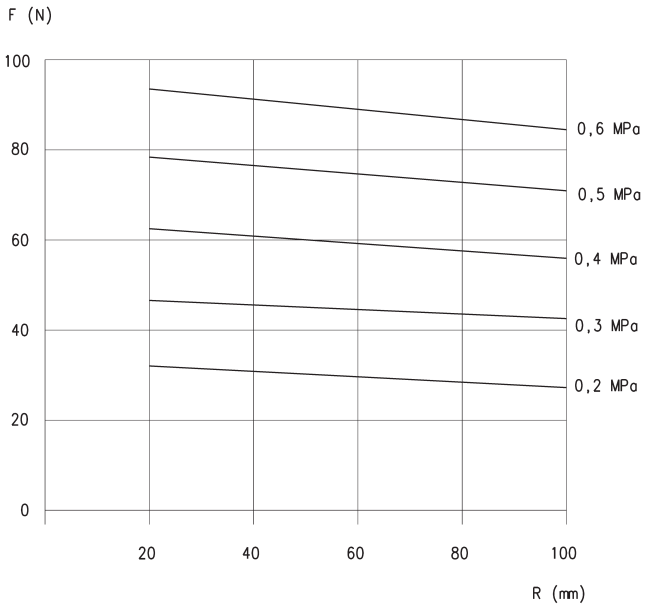
F = Gripping force (N)
R = Gripping moment (mm)

Gripping force for bore 20



CGLN-20-040

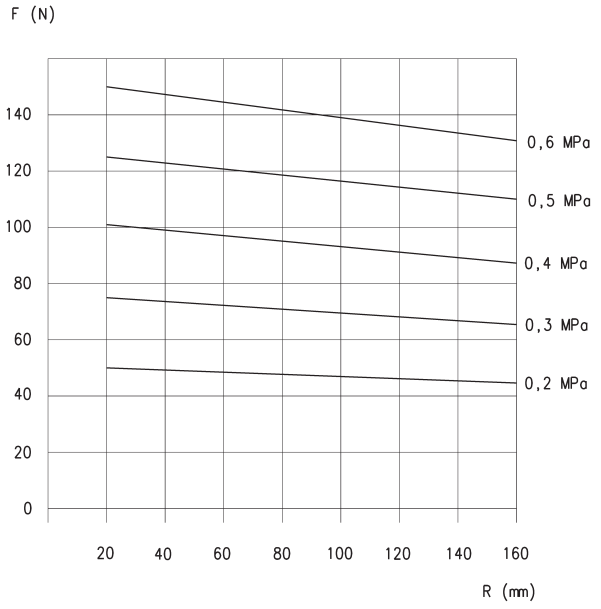
F = Gripping force (N)
R = Gripping moment (mm)



CGLN-20-080 and CGLN-20-100

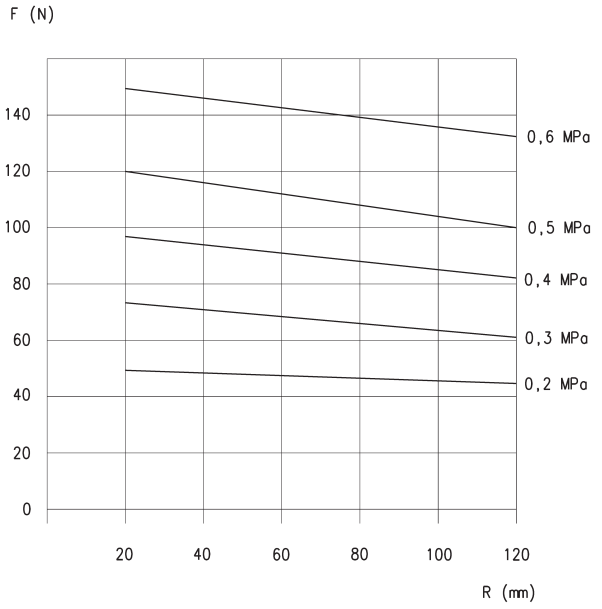
F = Gripping force (N)
R = Gripping moment (mm)

Gripping force for bore 25



CGLN-25-050

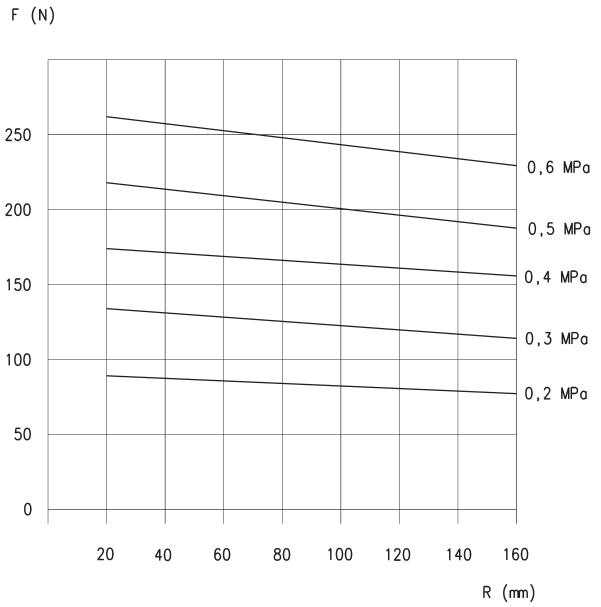
F = Gripping force (N)
R = Gripping moment (mm)



CGLN-25-100 and CGLN-25-120

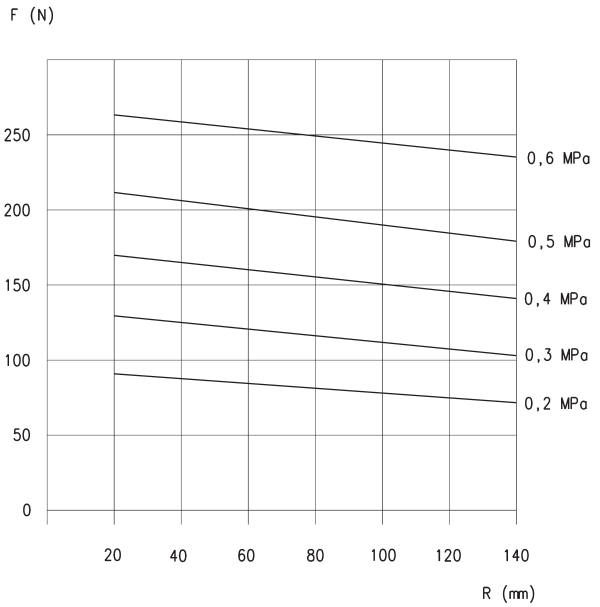
F = Gripping force (N)
R = Gripping moment (mm)

Gripping force for bore 32



CGLN-32-070

F = Gripping force (N)
R = Gripping moment (mm)



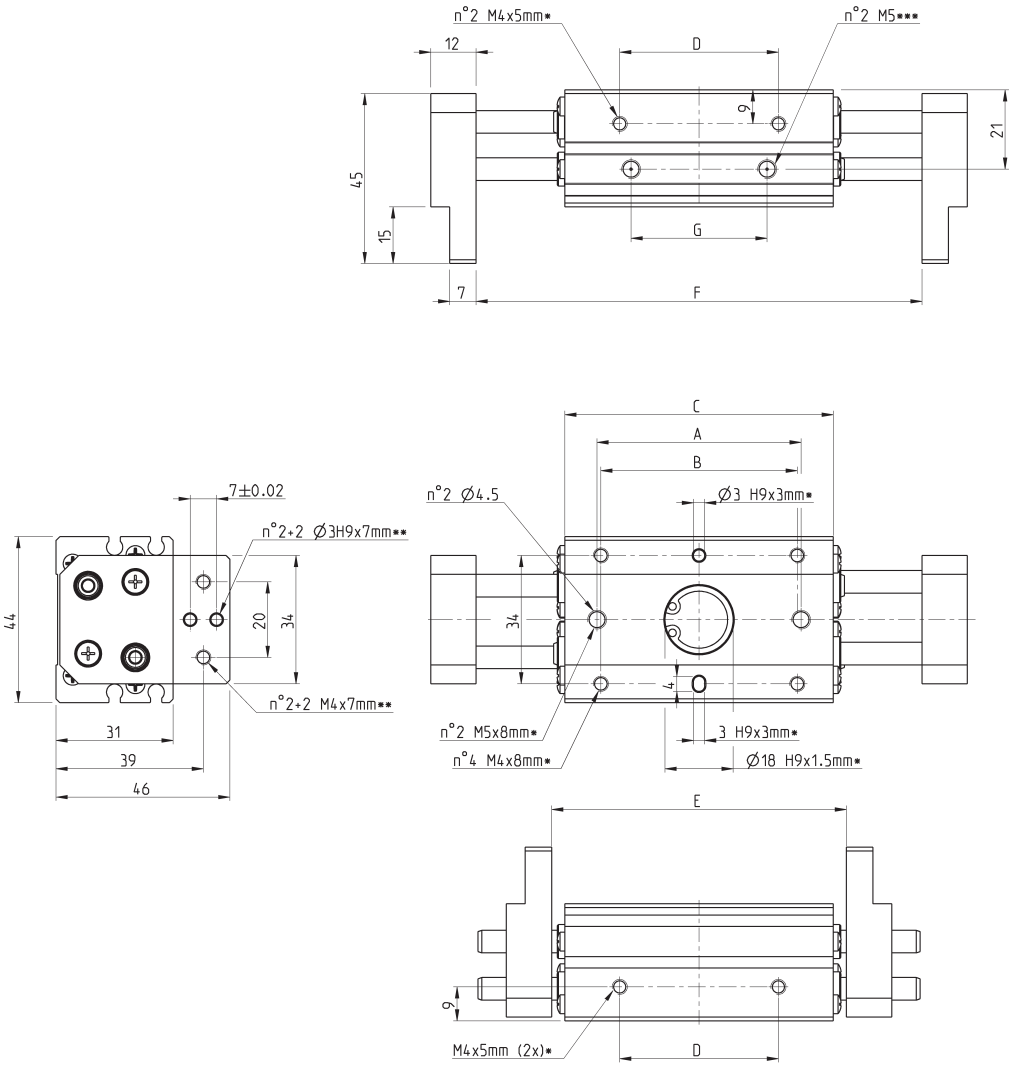
CGLN-32-120 and CGLN-32-170

F = Gripping force (N)
R = Gripping moment (mm)

CGLN gripper, bore 10 mm - dimensions

DRAWING LEGEND:

* = depth of the mounting threads
** = thread for the accessory mounting
*** = opening/closing of air connections

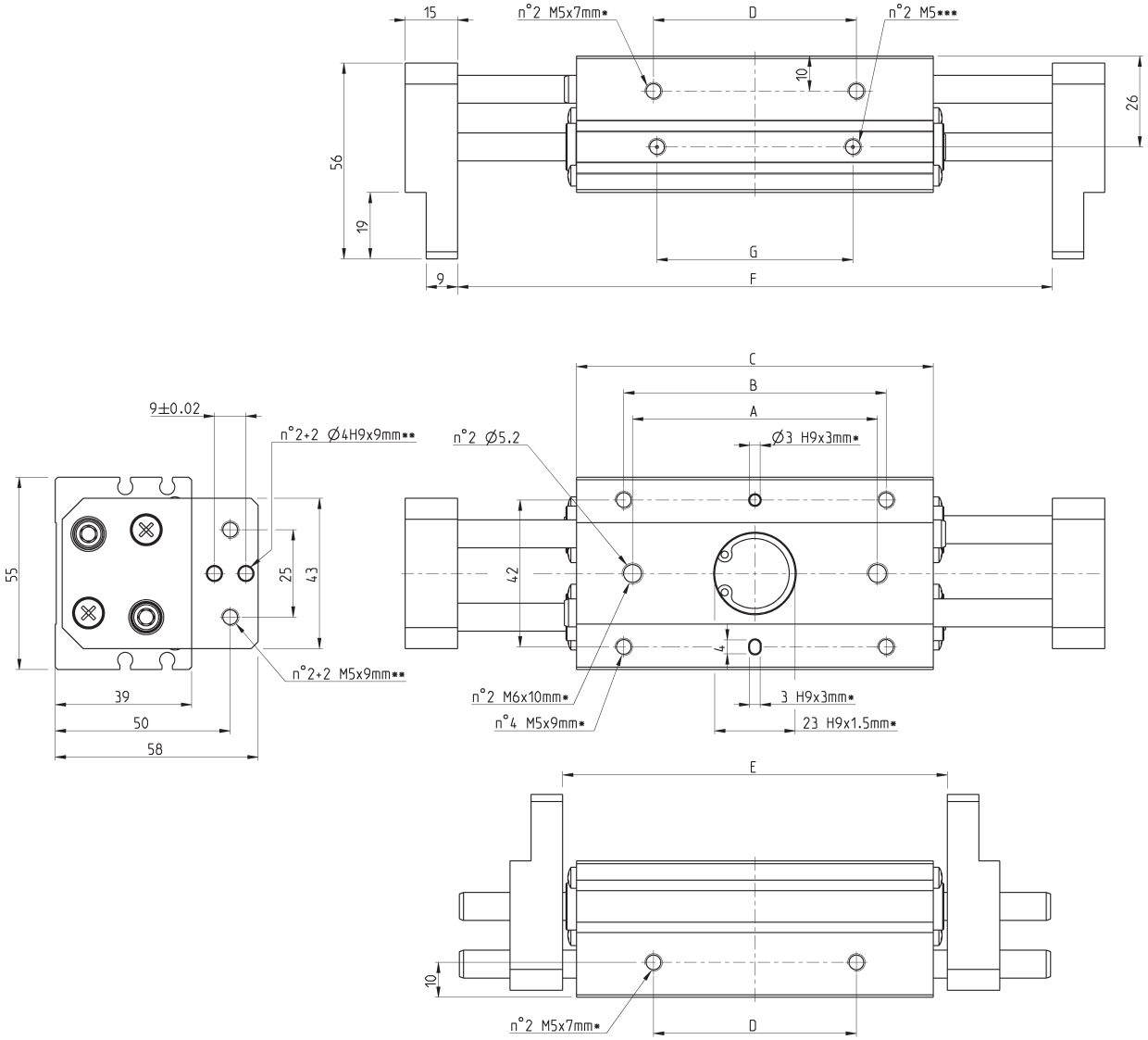


Mod.	Bore	Total stroke	A	B	C	D	E (Closed) Min opening	F (Open) Max opening	G	Max frequency (cycles/min)	Weight (g)
CGLN-10-020	10	20	38	36	51	26	56	76	20	60	310
CGLN-10-040	10	40	54	52	71	42	78	118	36	40	390
CGLN-10-060	10	60	72	70	89	60	96	156	54	40	460

CGLN gripper, bore 16 mm - dimensions

DRAWING LEGEND:

* = depth of the mounting threads
** = thread for the accessory mounting
*** = opening/closing of air connections

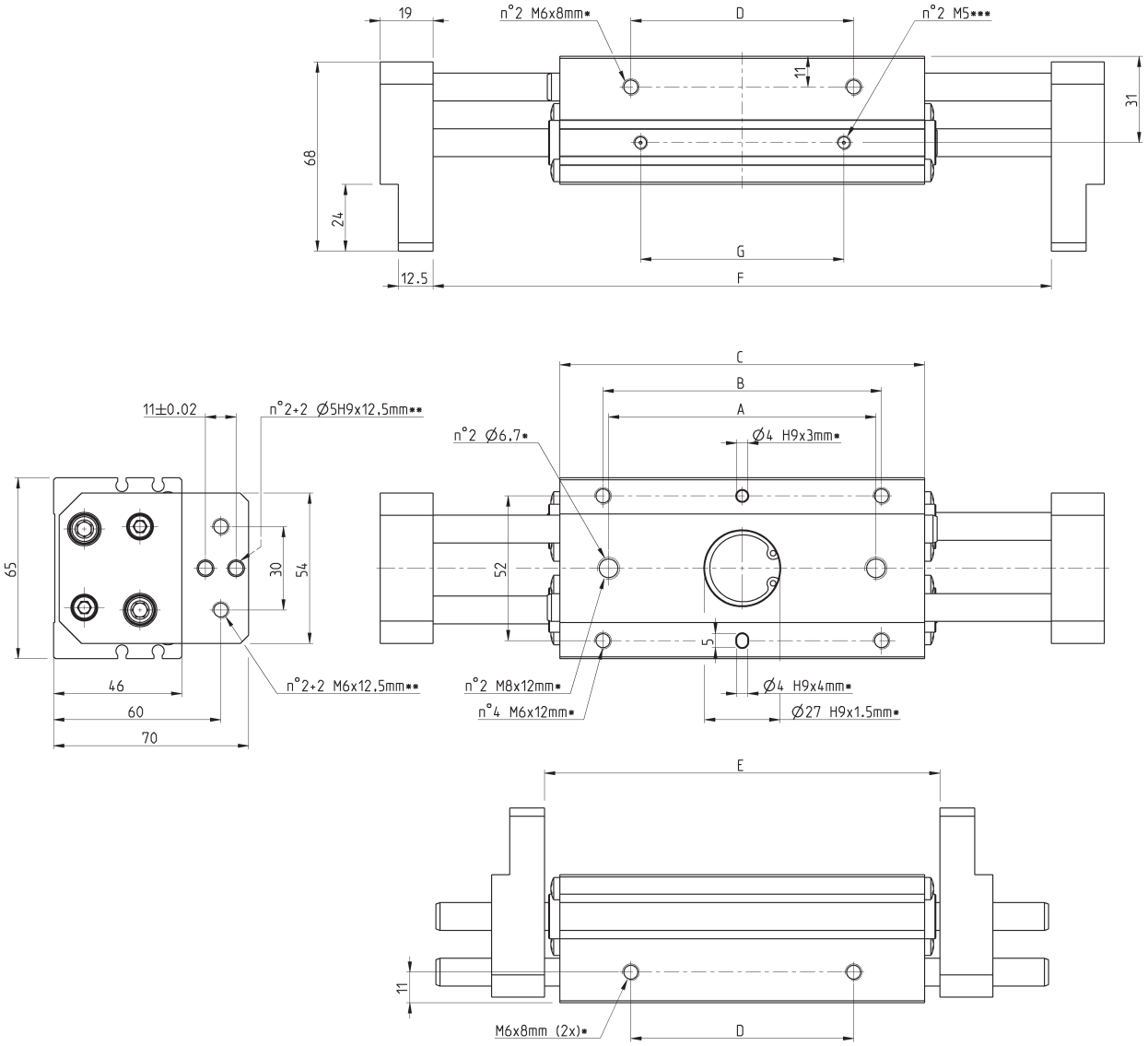


Mod.	Bore	Total stroke	A	B	C	D	E (Closed) Min opening	F (Open) Max opening	G	Max frequency (cycles/min)	Weight (g)
CGLN-16-030	16	30	40	45	60	28	68	98	26	60	590
CGLN-16-060	16	60	70	75	102	58	110	170	56	40	890
CGLN-16-080	16	80	90	95	122	78	130	210	76	40	1020

CGLN gripper, bore 20 mm - dimensions

DRAWING LEGEND:

* = depth of the mounting threads
** = thread for the accessory mounting
*** = opening/closing of air connections

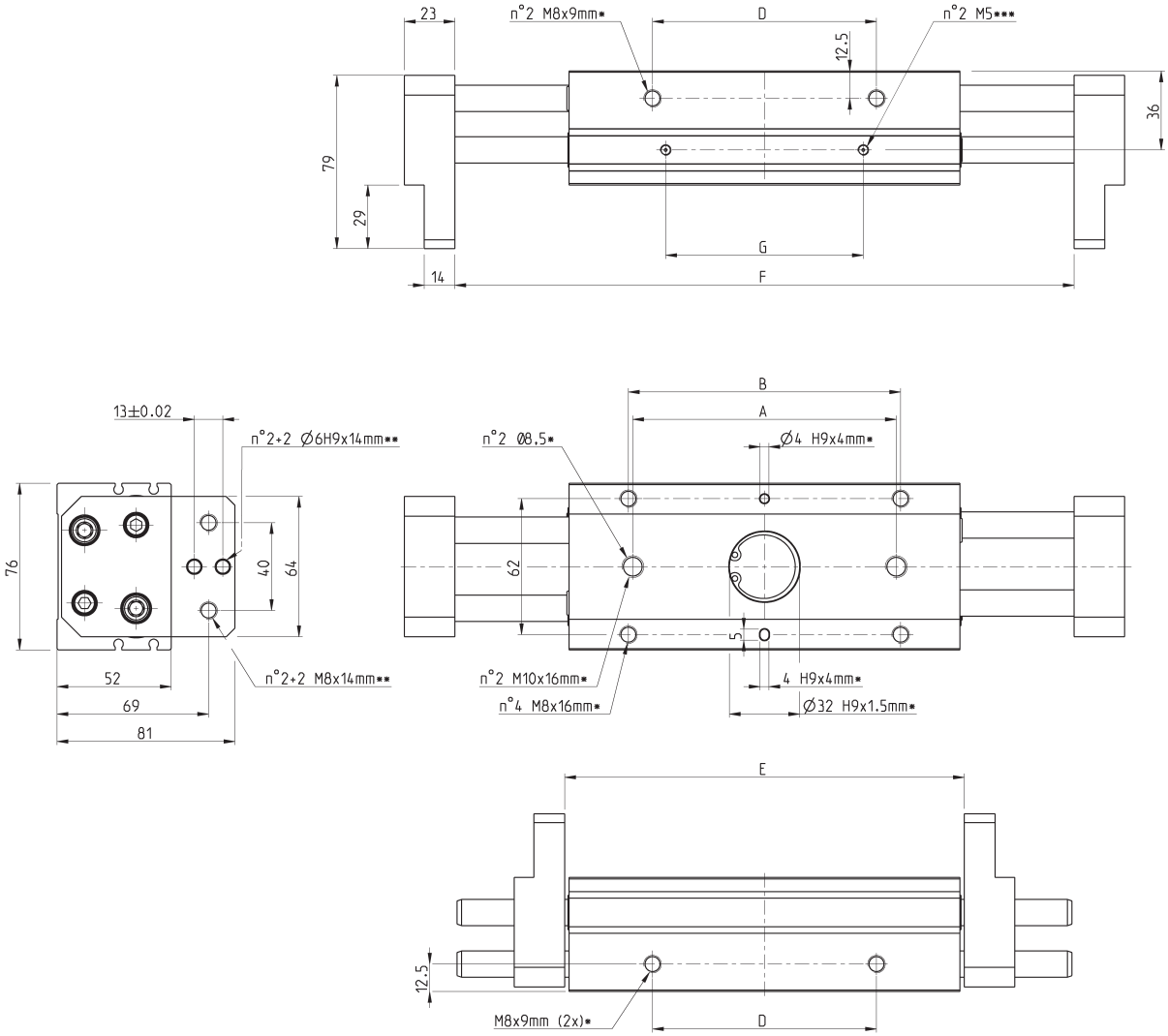


Mod.	Bore	Total stroke	A	B	C	D	E (Closed) Min opening	F (Open) Max opening	G	Max frequency (cycles/min)	Weight (g)
CGLN-20-040	20	40	54	58	71	38	82	122	31	60	1080
CGLN-20-080	20	80	96	100	131	80	142	222	73	40	1670
CGLN-20-100	20	100	116	120	151	100	162	262	93	40	1890

CGLN gripper, bore 25 mm - dimensions

DRAWING LEGEND:

* = depth of the mounting threads
** = thread for the accessory mounting
*** = opening/closing of air connections

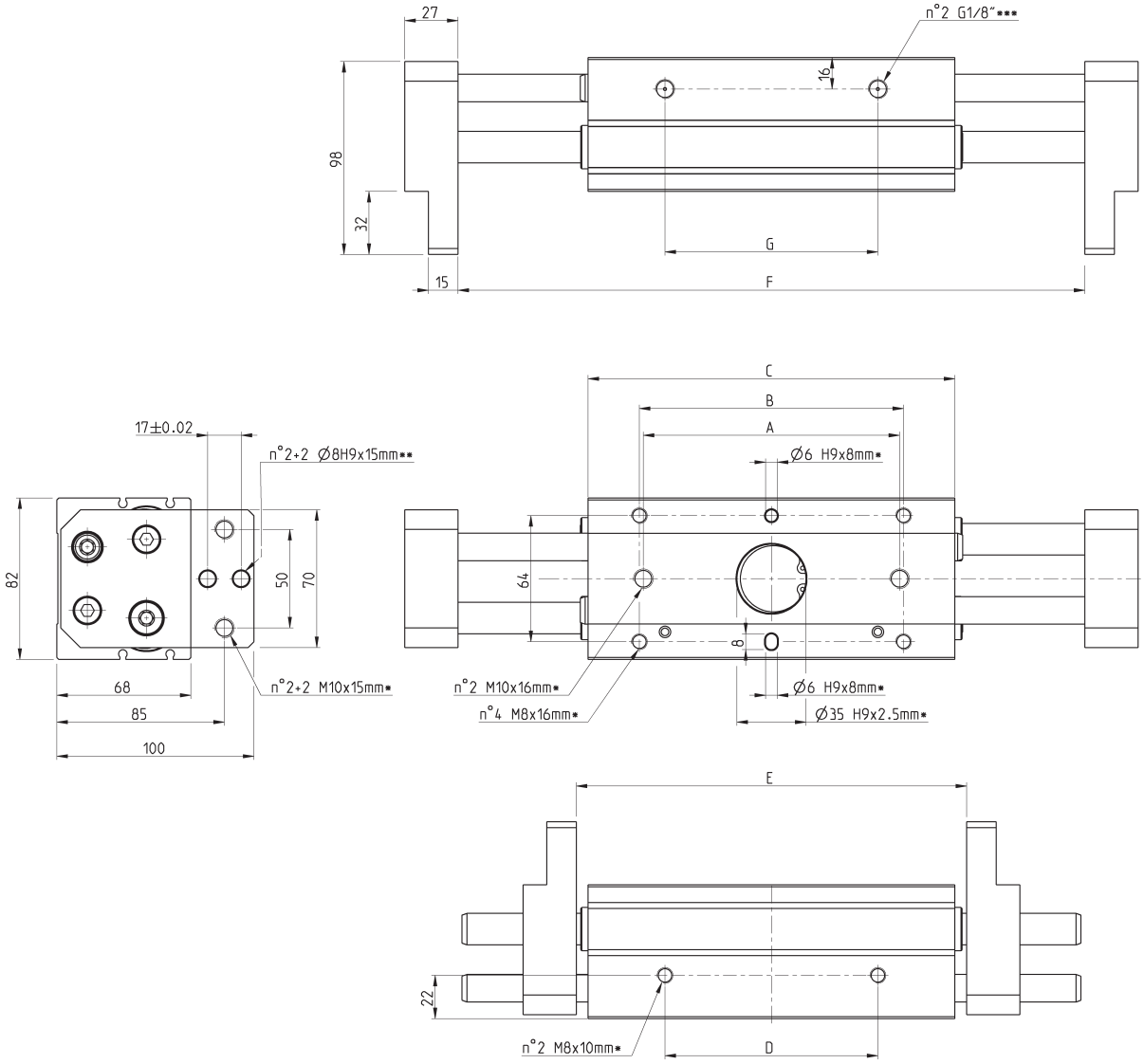


Mod.	Bore	Total stroke	A	B	C	D	E (Closed) Min opening	F (Open) Max opening	G	Max frequency (cycles/min)	Weight (g)
CGLN-25-050	25	50	66	70	97	48	100	150	36	60	1780
CGLN-25-100	25	100	120	124	178	102	182	282	90	40	2710
CGLN-25-120	25	120	138	142	195	120	200	320	108	40	2960

CGLN gripper, bore 32 mm - dimensions

DRAWING LEGEND:

* = depth of the mounting threads
** = thread for the accessory mounting
*** = opening/closing of air connections



Mod.	Bore	Total stroke	A	B	C	D	E (Closed) Min opening	F (Open) Max opening	G	Max frequency (cycles/min)	Weight (g)
CGLN-32-070	32	70	82	86	138	60	150	220	60	30	3580
CGLN-32-120	32	120	130	134	186	108	198	318	108	20	4470
CGLN-32-160	32	160	174	178	230	152	242	402	152	20	5240

New

Series CGSY radial grippers 180° opening

Double acting, magnetic, self-centering
Size: 10, 16, 20, 25

- Robust, compact and light design
- High gripping force
- Fixing from below and from the side
- Precision and positioning repeatability
- High interchangeability (bushes and centering plugs)
- Position detection (front) thanks to the use of Series CSD magnetic proximity switches
- In compliance with ROHS directive
- High speed opening and closing
- Variants available: for use in ATEX zones
- Protection against impurities at the inlet

Series CGSY has been designed to guarantee constant performance over time, even in demanding applications that require high levels of productivity. The gripper's opening angle of 180° enables operation in large work areas, while at the same time optimizing product handling. This makes it particularly suitable for duties such as blowing PET bottles and in filling applications for the food or chemical industries.

Its design and the materials used assure accurate operation even in harsh environments contaminated with dust or vapour and in applications where frequent washdown is usual.
Series CGSY grippers guarantee precision and flexibility during installation. Each gripper has calibrated holes on the base and side for very precise positioning.

GENERAL DATA

Type of construction	Radial gripper
Type of operation	Double-acting
Sizes	10, 16, 20, 25
Force transmission	Cam system
Closing torque at 6 bar	50 - 790 Ncm
Opening/closing angle	2x90°
Air connections	M5
Operating pressure	2 ÷ 8 bar
Operating temperature	5°C ÷ 60°C (standard)
Store temperature	-10°C ÷ 80°C
Maximum use frequency	3 Hz
Repeatability	0.05°
Medium	Filtered air in class 7.4.4 according to ISO 8573-1. In case lubricated air is used, we recommend ISOVG32 oil and to never interrupt lubrication.
Compatibility	ROHS Directive
Certifications	ATEX (II 2GD c IIC 120°C(T4)-20°C≤Ta≤80)

NOTE: Pressurize the pneumatic system gradually in order to avoid uncontrolled movements

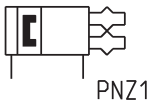
CODING EXAMPLE

CGSY	-	16	-	EX

CGSY	SERIES
16	SIZES: 10 = ø 10 mm 16 = ø 16 mm 20 = ø 20 mm 25 = ø 25 mm
EX	Add EX to order the certified ATEX version

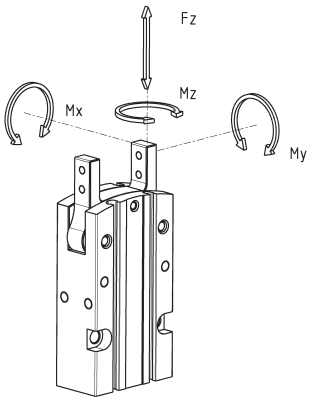
PNEUMATIC SYMBOLS

The pneumatic symbols which have been indicated in the CODING EXAMPLE are shown below.



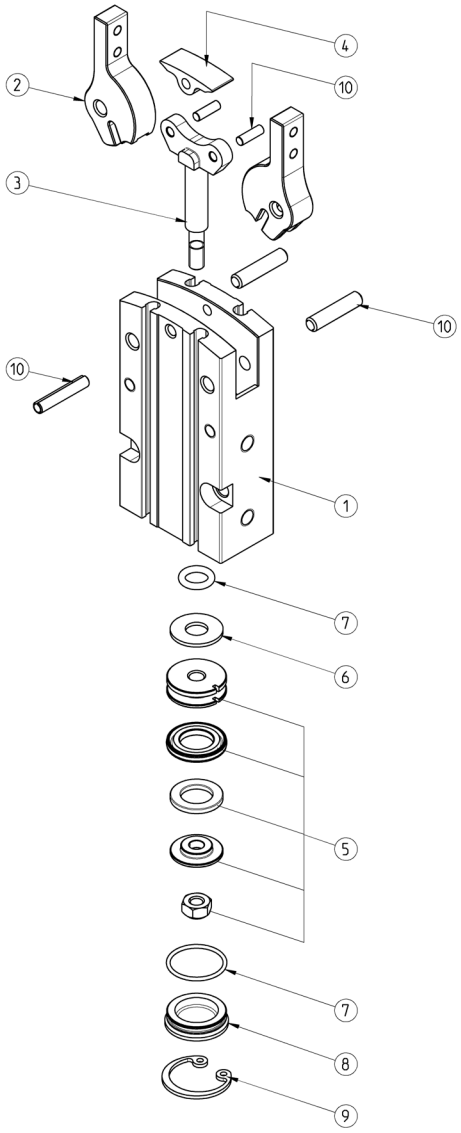
PNZ1

Maximum admissible loads and torques on the gripper



Maximum admissible loads and torques in static conditions				
Mod.	Fz (N)	Mx (Nm)	My (Nm)	Mz (Nm)
CGSY-10	35	0.5	0.5	0.5
CGSY-16	60	2	1	2
CGSY-20	100	4	2	4
CGSY-25	140	7	4	7

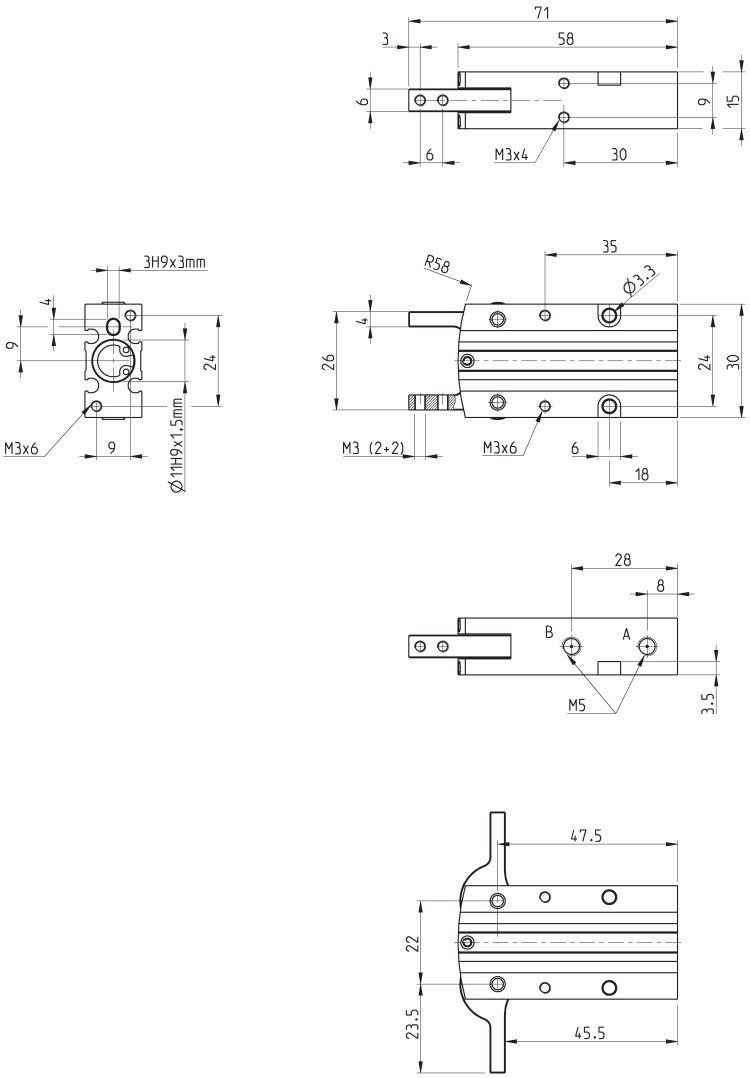
Series CGSY grippers - construction



LIST OF COMPONENTS	
PARTS	MATERIALS
1 - Body	Aluminium
2 - Jaw	Stainless steel
3 - Piston	Stainless steel
4 - Jaw cover	Pom (Acetal)
5 - Piston	Aluminum - NBR - Stainless steel - ferrite rubber (magnets)
6 - Cushion	PU Polyurethane
7 - Seals	HNBR - NBR
8 - Rear head	Pom (Acetal)
9 - Seeger	Stainless steel
10 - Pins	Steel

CGSY gripper, size 10 - dimensions

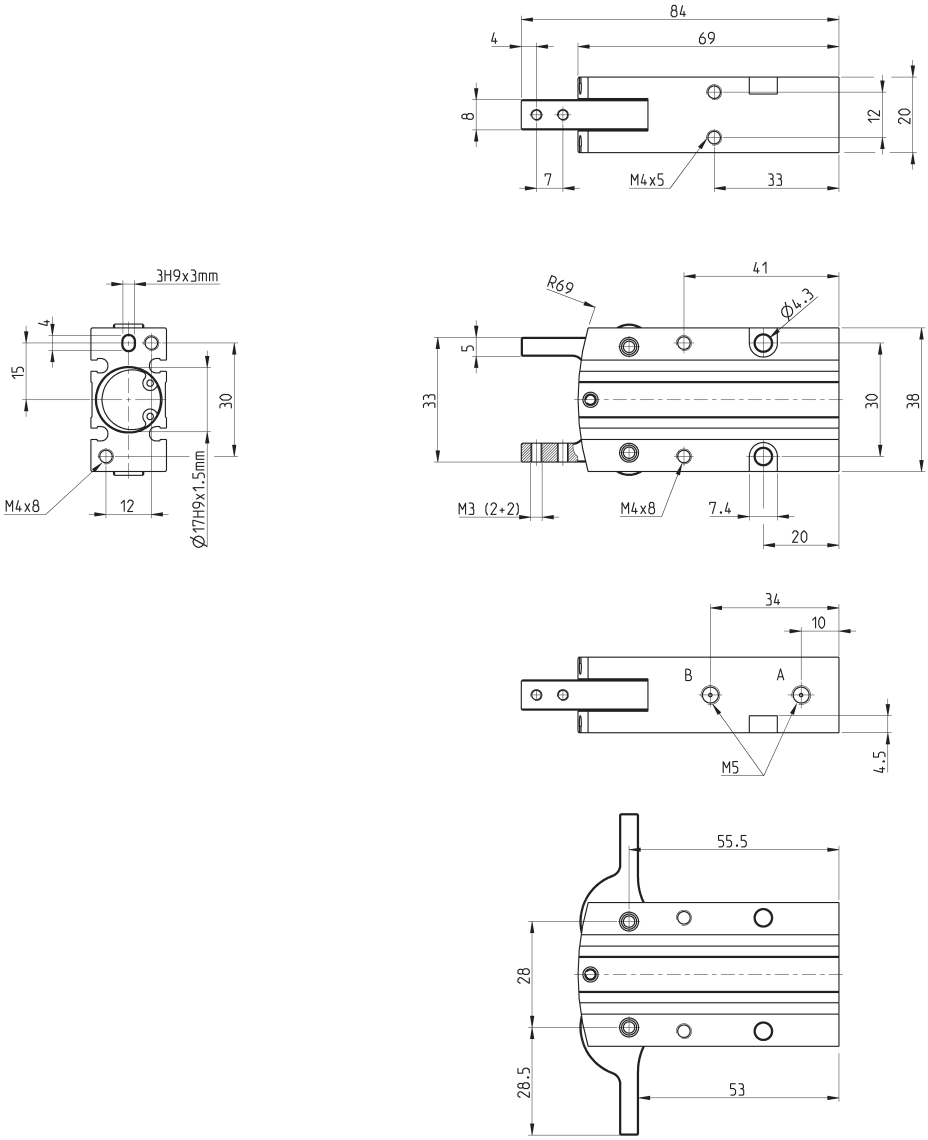
DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection



Mod.	Total closing gripping force at 6 bar (N)	Closing gripping force per jaw at 6 bar (N)	Total opening gripping force at 6 bar (N)	Opening gripping force per jaw at 6 bar (N)	Stroke per jaw (°)	Working pressure (bar)	Working temperature (°C)	Repeatability (°)	Max use frequency (Hz)	Weight (Kg)
CGSY-10	24	12	32.5	16.75	90°	2 ÷ 8	5 ÷ 60	0.05°	3	0.072

CGSY gripper, size 16 - dimensions

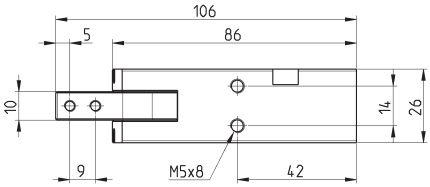
DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection

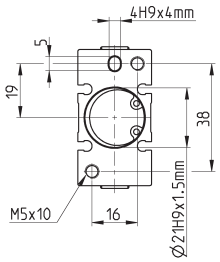


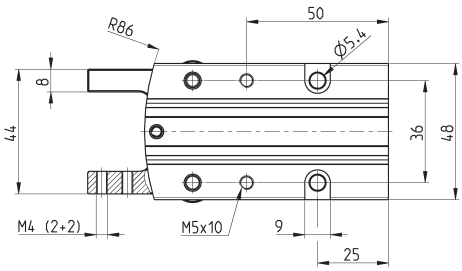
Mod.	Total closing gripping force at 6 bar (N)	Closing gripping force per jaw at 6 bar (N)	Total opening gripping force at 6 bar (N)	Opening gripping force per jaw at 6 bar (N)	Stroke per jaw (°)	Working pressure (bar)	Working temperature (°C)	Repeatability (°)	Max use frequency (Hz)	Weight (Kg)
CGSY-16	61	30.5	72	36	90°	2 ÷ 8	5 ÷ 60	0.05	3	0.147

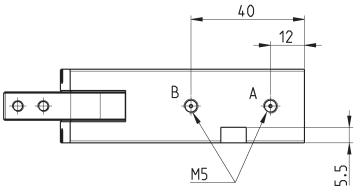
CGSY gripper, size 20 - dimensions

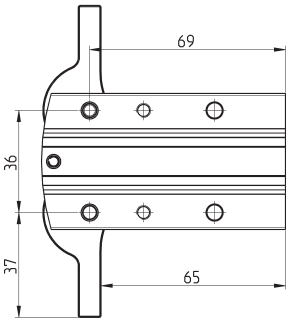
DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection







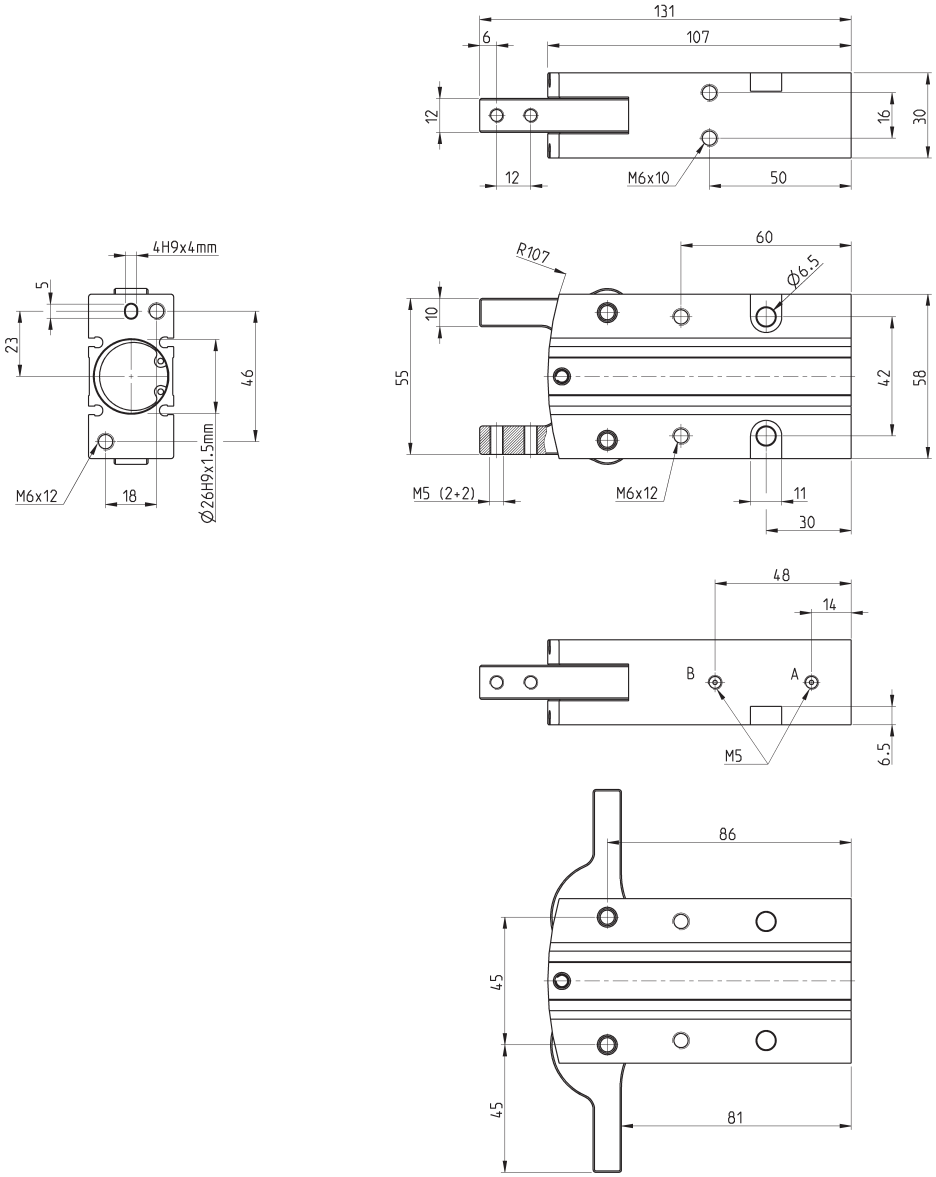




Mod.	Total closing gripping force at 6 bar (N)	Closing gripping force per jaw at 6 bar (N)	Total opening gripping force at 6 bar (N)	Opening gripping force per jaw at 6 bar (N)	Stroke per jaw (°)	Working pressure (bar)	Working temperature (°C)	Repeatability (°)	Max use frequency (Hz)	Weight (Kg)
CGSY-20	93	46.5	108	54	90°	2 ÷ 8	5 ÷ 60	0.05	3	0.313

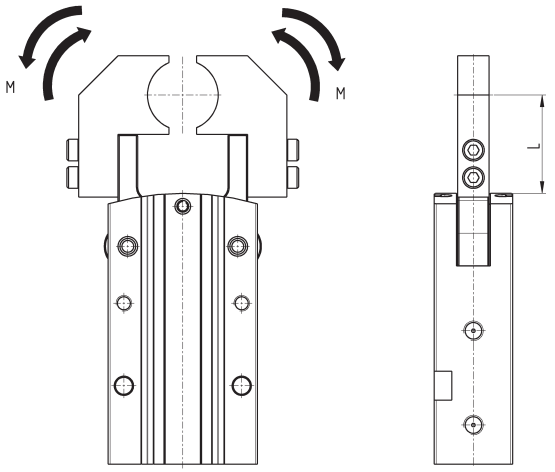
CGSY gripper, size 25 - dimensions

DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection



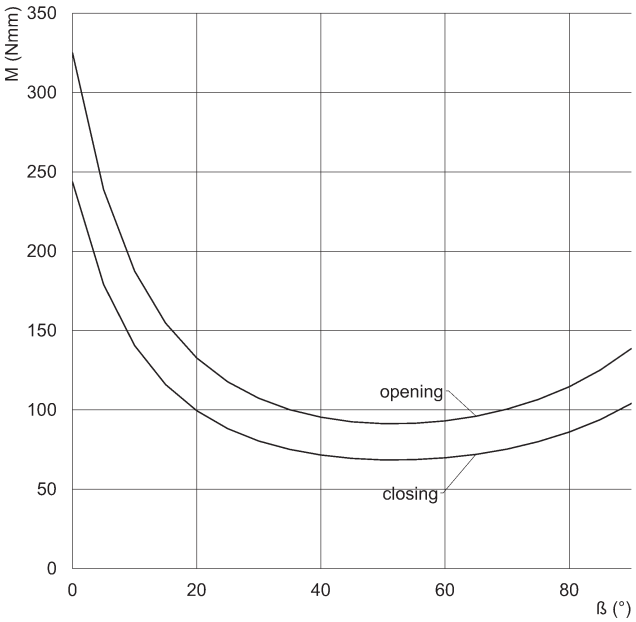
Mod.	Total closing gripping force at 6 bar (N)	Closing gripping force per jaw at 6 bar (N)	Total opening gripping force at 6 bar (N)	Opening gripping force per jaw at 6 bar (N)	Stroke per jaw (°)	Working pressure (bar)	Working temperature (°C)	Repeatability (°)	Max use frequency (Hz)	Weight (Kg)
CGSY-25	156	77	175	87.5	90°	2 ÷ 8	5 ÷ 60	0.05	3	0.552

GRIPPING FORCES Mod. CGSY-10



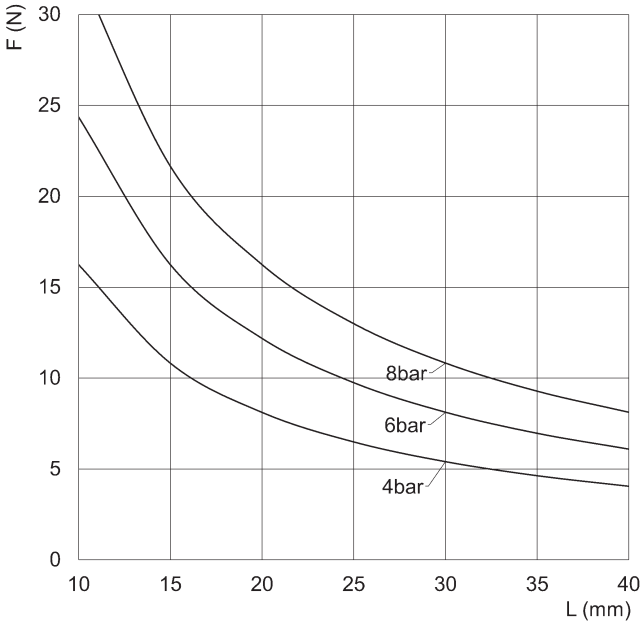
Gripping point position

L = arm
M = closing/opening moment



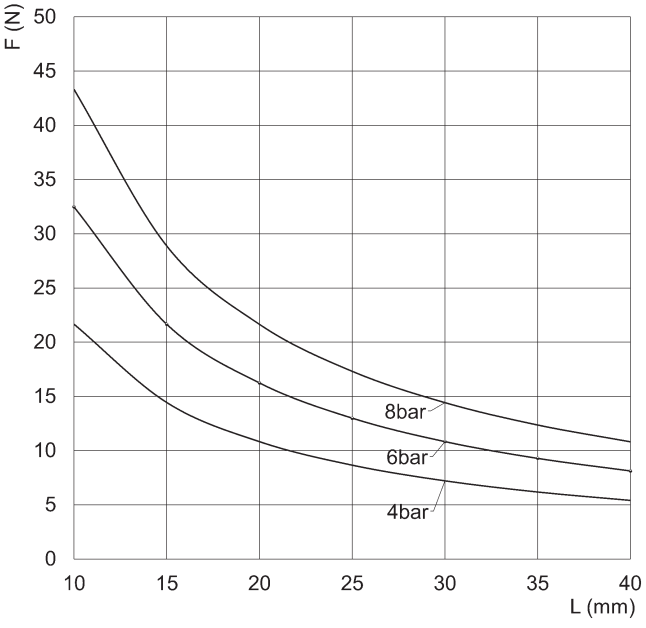
Moment in opening and closing

M = moment (Nxmm)
ß = opening angle (°)



Opening gripping force

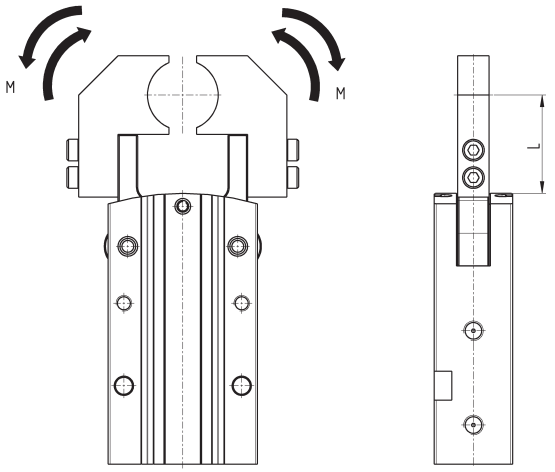
L = arm (mm)
F = gripping force (N)



Closing gripping force

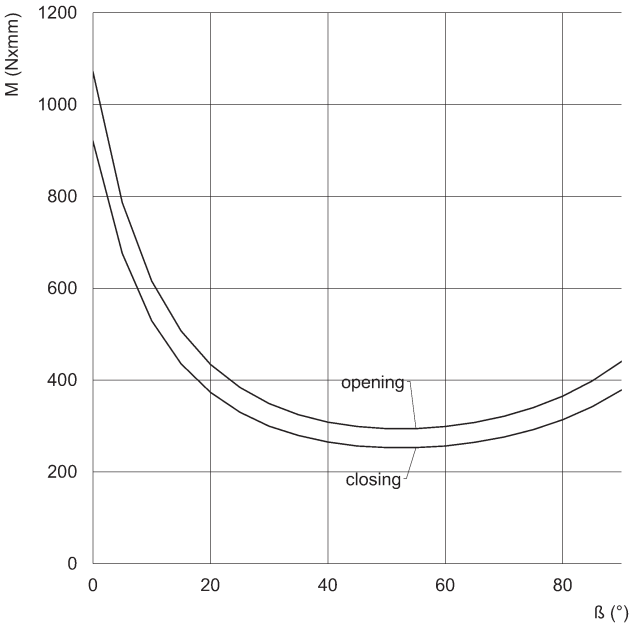
L = arm (mm)
F = gripping force (N)

GRIPPING FORCES Mod. CGSY-16



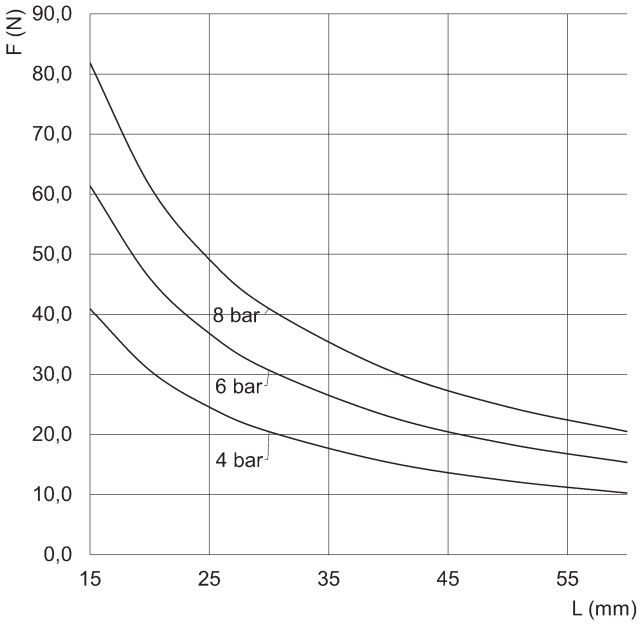
Gripping point position

L = arm
M = closing/opening moment



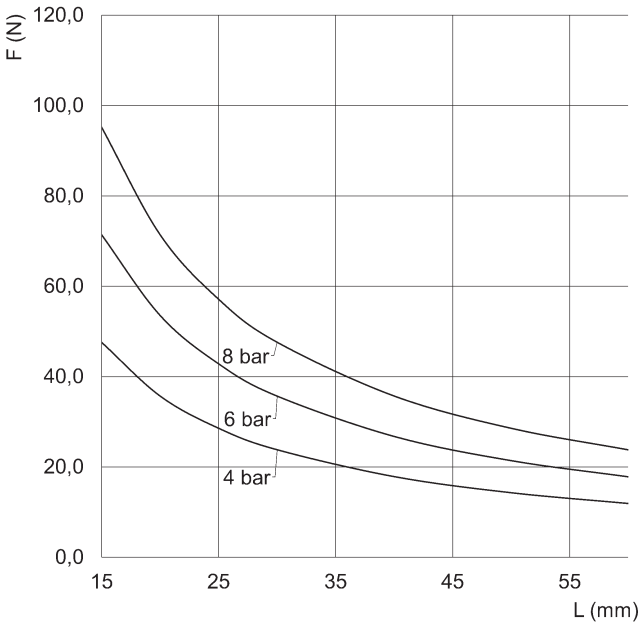
Moment in opening and closing

M = moment (Nxmm)
ß = opening angle (°)



Opening gripping force

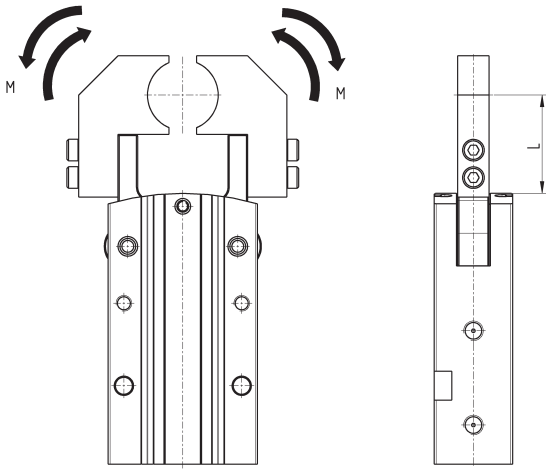
L = arm (mm)
F = gripping force (N)



Closing gripping force

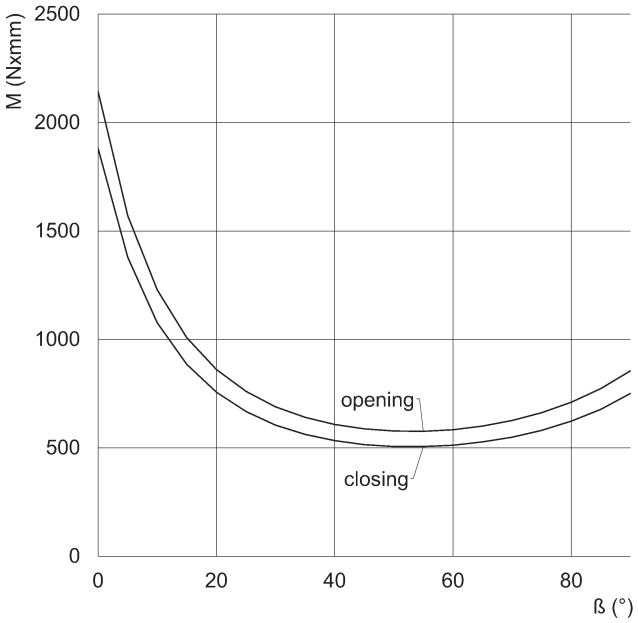
L = arm (mm)
F = gripping force (N)

GRIPPING FORCES Mod. CGSY-20



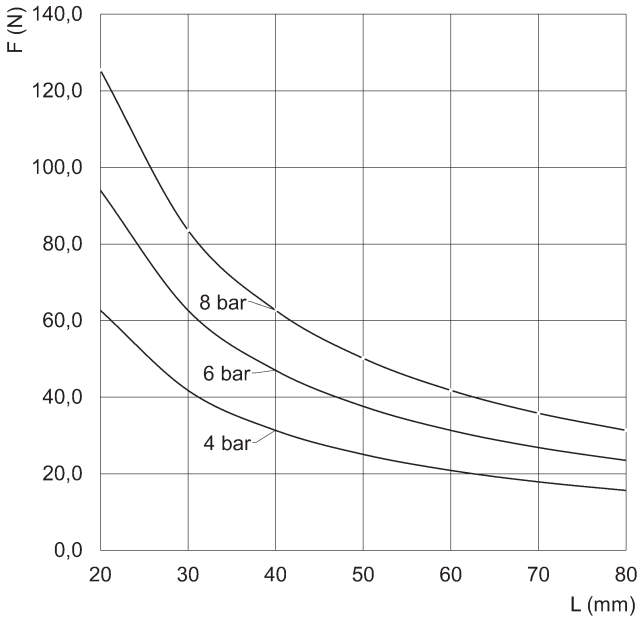
Gripping point position

L = arm
M = closing/opening moment



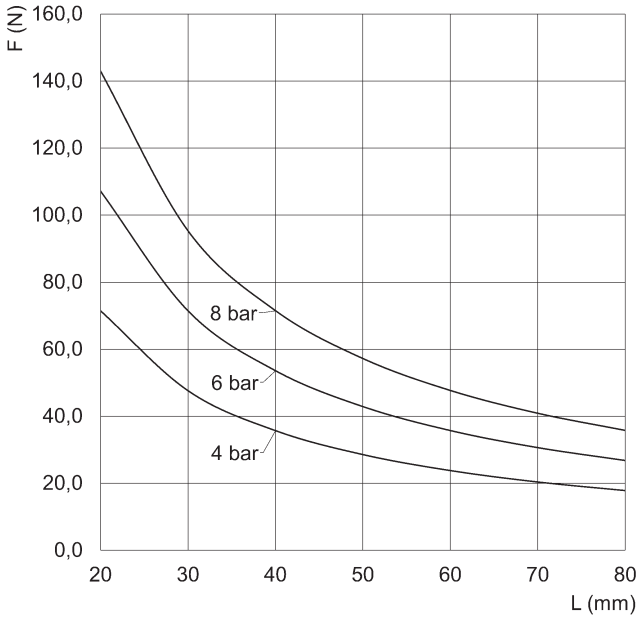
Moment in opening and closing

M = moment (Nxmm)
ß = opening angle (°)



Opening gripping force

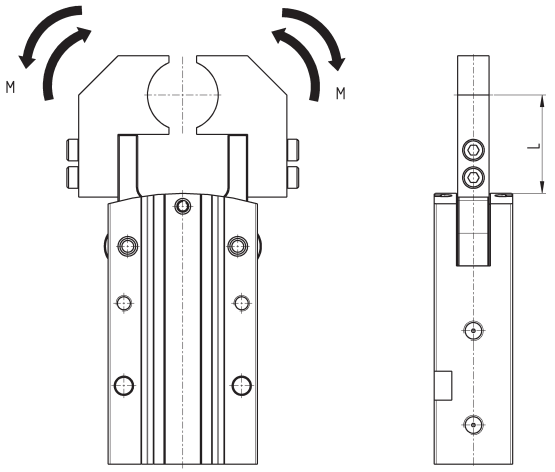
L = arm (mm)
F = gripping force (N)



Closing gripping force

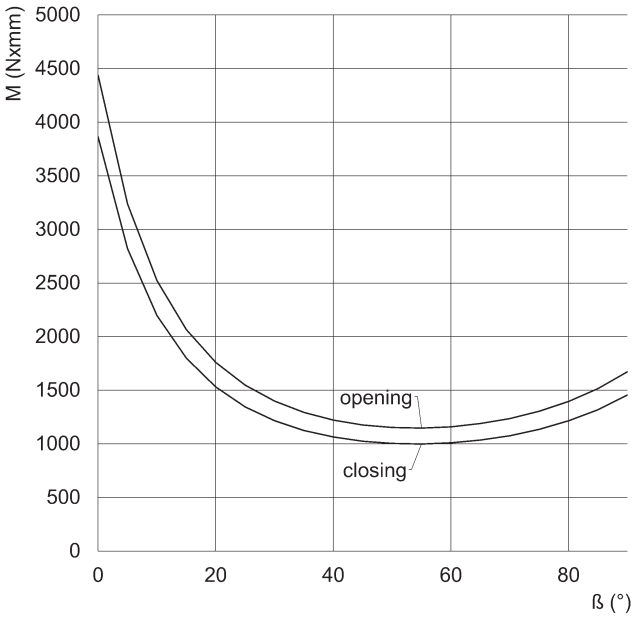
L = arm (mm)
F = gripping force (N)

GRIPPING FORCES Mod. CGSY-25



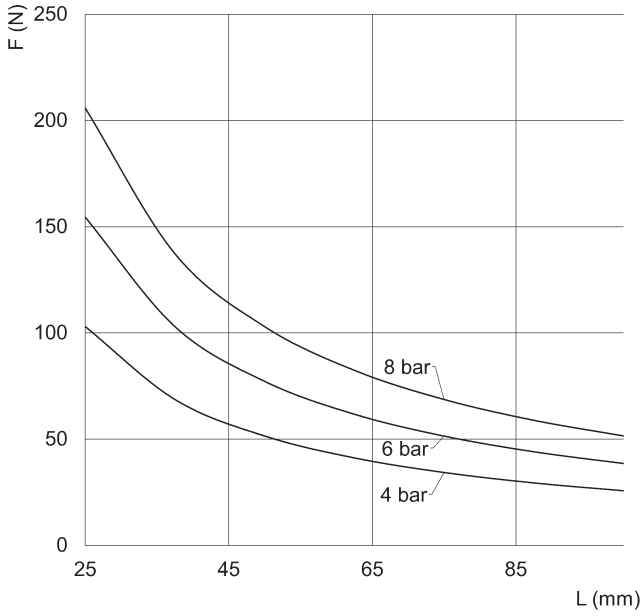
Gripping point position

L = arm
M = closing/opening moment



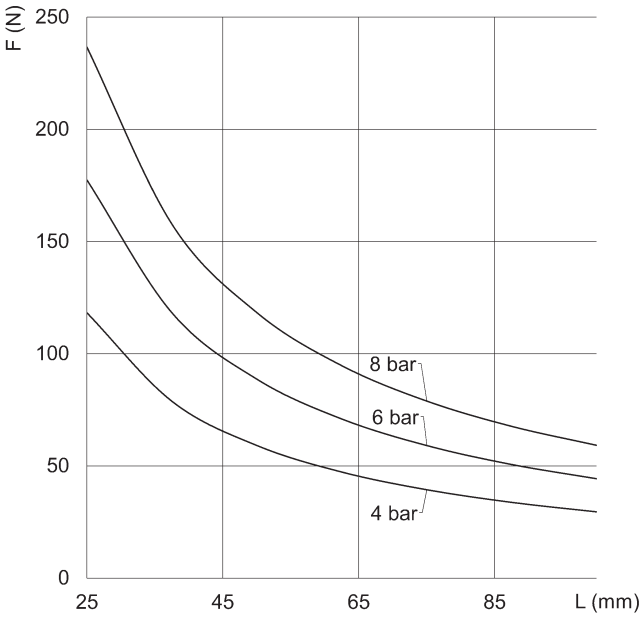
Moment in opening and closing

M = moment (Nxmm)
ß = opening angle (°)



Opening gripping force

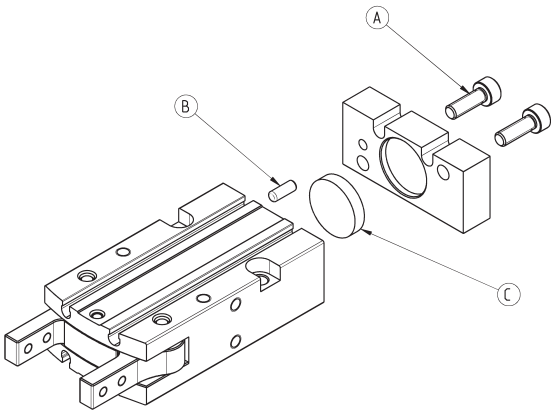
L = arm (mm)
F = gripping force (N)

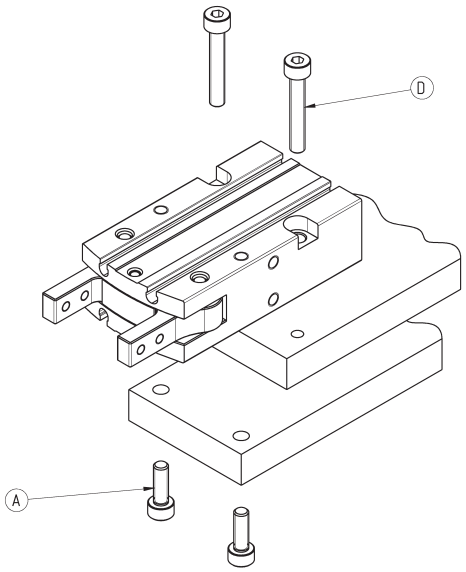


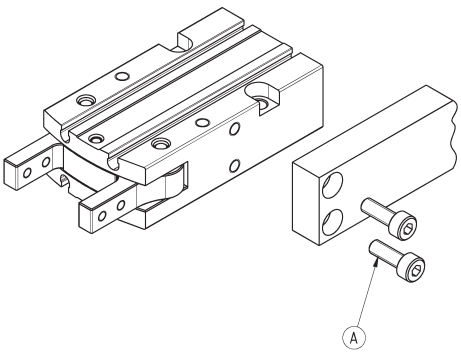
Closing gripping force

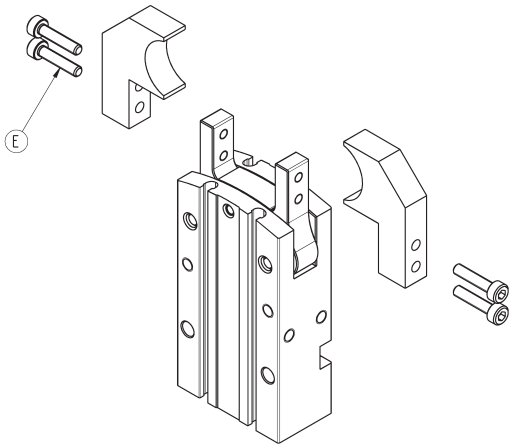
L = arm (mm)
F = gripping force (N)

Examples of mounting



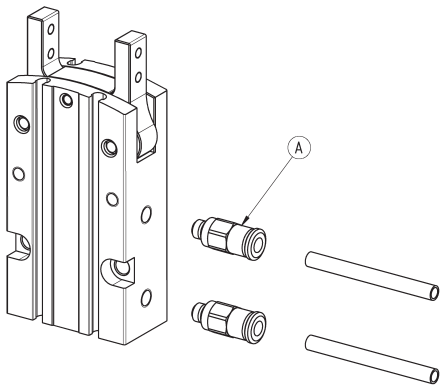






Mod.	A	B	C	D	E
CGSY-..-10	**M3**	Ø3	Ø11	M3	M3
CGSY-..-16	**M4**	Ø3	Ø17	M4	M3
CGSY-..-20	**M5**	Ø4	Ø21	M5	M4
CGSY-..-25	**M6**	Ø4	Ø26	M6	M5

Air supply ports

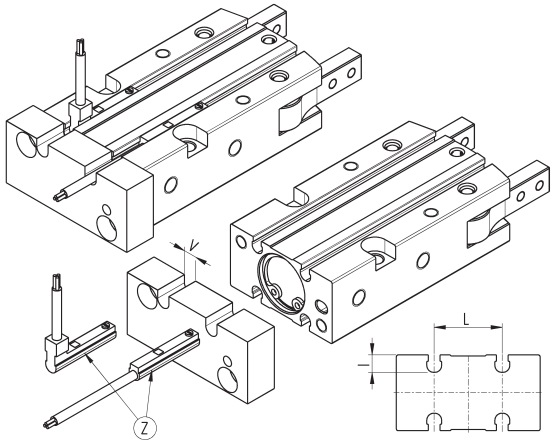


Mod.	A
CGSY-..-10	M5
CGSY-..-16	M5
CGSY-..-20	M5
CGSY-..-25	M5

Example of mounting: sensors

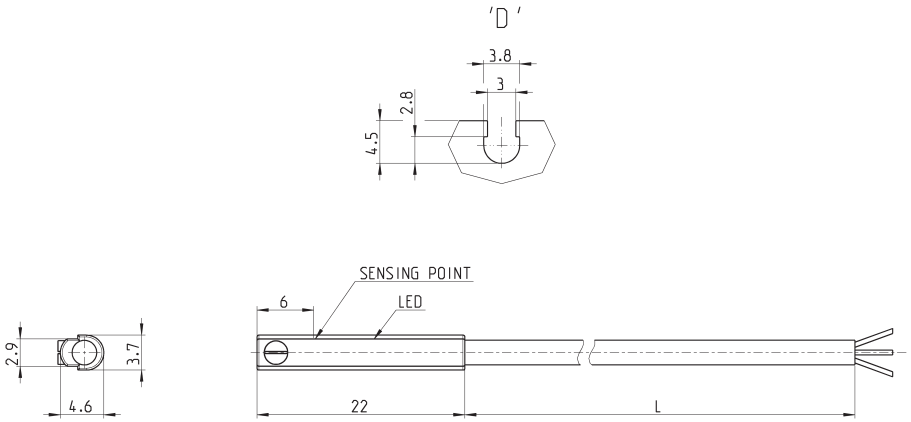
Z = sensor mod. CSD-D-334 or mod. CSD-D-364

In order to position the sensor correctly, a channel must be created in the base.



Mod.	I	L	V
CGSY-..-10	3.8	13	5
CGSY-..-16	4.7	18	5
CGSY-..-20	5.2	20	5
CGSY-..-25	5.2	24	5

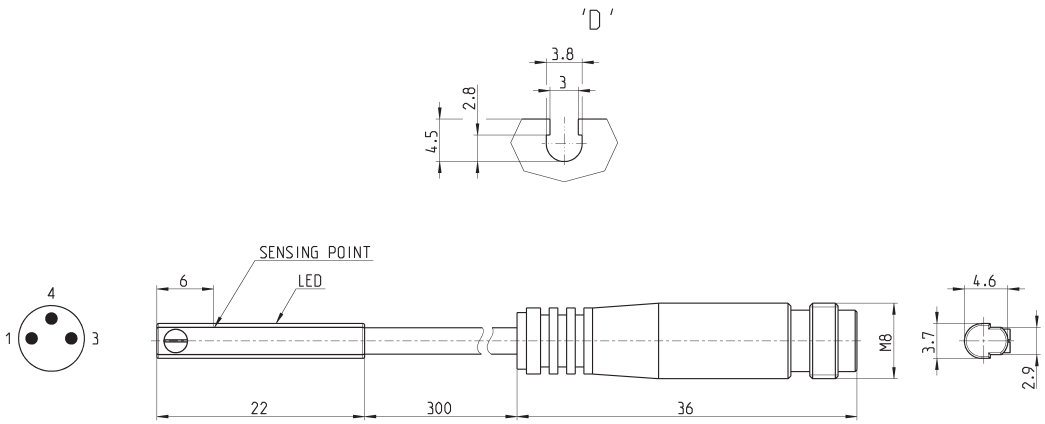
Series CSD magnetic proximity switches, 3-wire cable, D-slot



Mod.	Operation	Connections	Voltage	Output	Max. current	Max Load	Protection	L = length cable
CSD-D-334	Magnetoresistive	3 wires	10 ÷ 27 V DC	PNP	200 mA	6W	Against polarity reversing and overvoltage	2 m

Series CSD magnetic switches, male M8 3-pin conn., D-slot, right

Length of cable 0.3 metres



Mod.	Operation	Connection	Voltage	Output	Max. current	Max load	Protection
CSD-D-364	Magnetoresistive	3 wires with M8 connector	10 ÷ 27 V DC	PNP	200 mA	6W	Against polarity reversing and overvoltage

Series RPGA sprue grippers
Size 20mm

Angular, not self-centering, single-acting, Normally Open
Models available: Flat Finger, Curved Finger, Short Finger, Flat Finger with sensor slot, Curved Finger with sensor slot

Thanks to a piston with a size of 20mm and to the direct transfer of the force from the piston to the fingers,
Series RPGA guarantees a strong and a safe grip.

Their technical features ensure a high gripping force and make these grippers particularly suitable in the removal of injection molded items.
The surface treatments on each metallic part make this series very wear resistant.

D and E models are provided with a finger having a slot for the installation of an inductive sensor.

GENERAL DATA

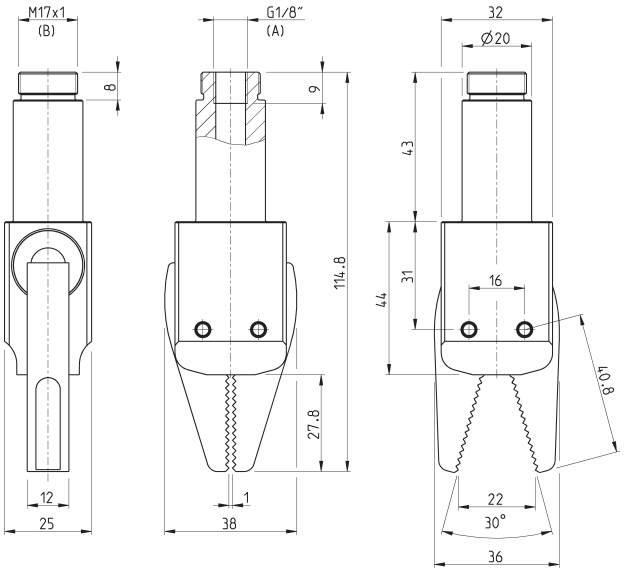
Operation	single-acting, Normally Open
Materials	anodized aluminium body and fingers, PU seals
Working pressure	2.5 bar ÷ 8 bar
Working temperature	0°C ÷ 60°C
Max frequency	2.5 Hz
Lubrication	Not necessary
Air ports	G1/8
Media	Filtered air, without lubrication
Size	20 mm
Weights	120 g (models A and B); 125 g (models C, D, E)
Gripping torque at 6 bar	310 Ncm
Opening torque at 6 bar	25 Ncm
Gripping force at 6 bar	90 N
Closing time without load	20 ms
Opening time	75 ms

CODING EXAMPLE

RPGA	-	20	-	A

RPGA	SERIES
20	SIZE: 20
A	TYPE OF CONSTRUCTION: A = Flat finger B = Curved finger C = Short finger with mounting holes for extensions D = Flat finger for sensor E = Curved finger for sensor

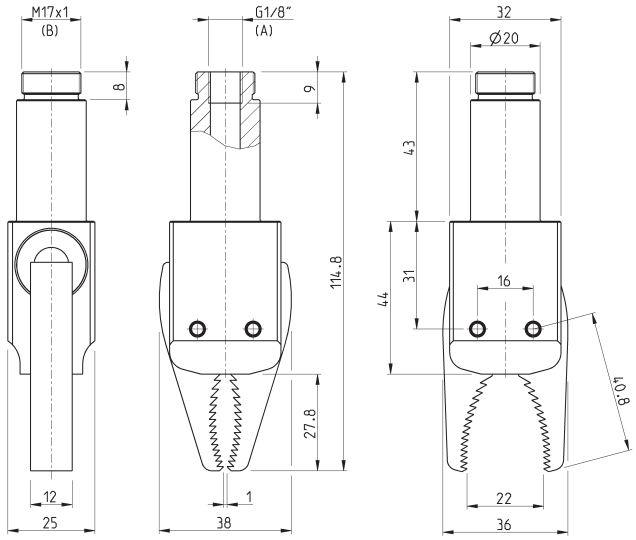
Flat finger gripper Mod. RPGA-20-A - dimensions



A = connection port
B = fixing thread

Mod.
RPGA-20-A

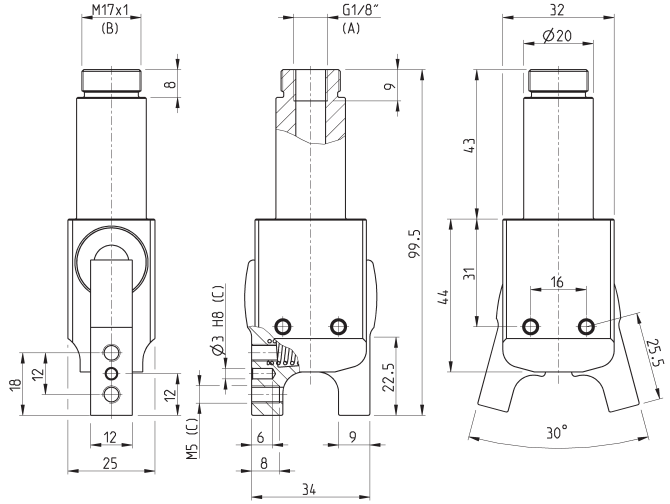
Curved finger gripper Mod. RPGA-20-B - dimensions



A = connection port
B = fixing thread

Mod.
RPGA-20-B

Short finger gripper Mod. RPGA-20-C - dimensions

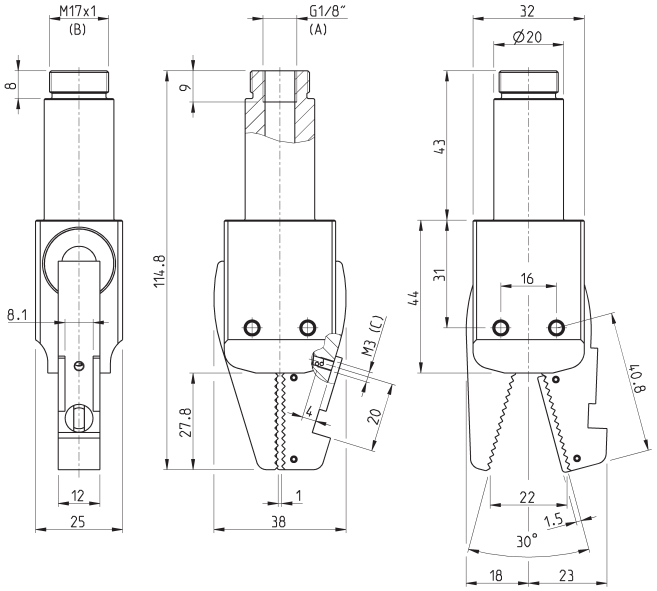


A = connection port
B = fixing thread
C = fixing holes

Mod.
RPGA-20-C

Flat finger gripper with sensor slot Mod. RPGA-20-D - dimensions

Note: the sensor is not supplied with the gripper

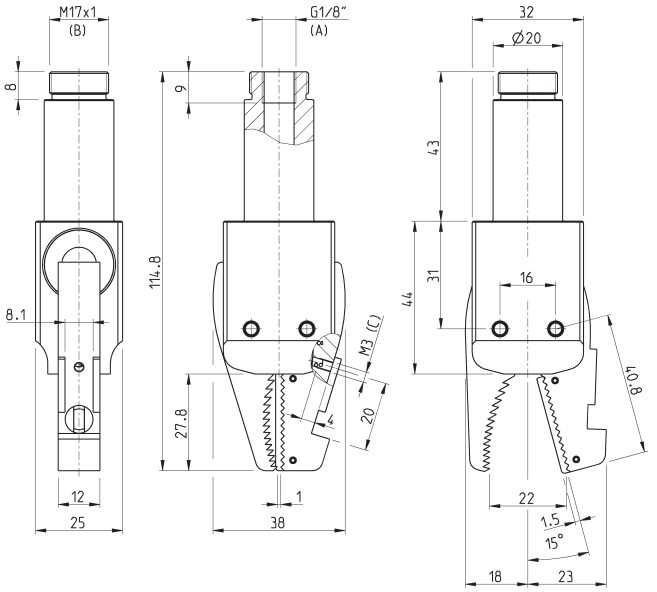


A = connection port
B = fixing thread
C = sensor fixing hole

Mod.
RPGA-20-D

Curved finger gripper with sensor slot Mod. RPGA-20-E - dimensions

Note: the sensor is not supplied with the gripper



A = connection port
B = fixing thread
C = sensor fixing hole

Mod.
RPGA-20-E

Series RPGB sprue grippers
Size 8, 12mm

Angular, not self-centering, single-acting, Normally Open
Models: Flat Finger, Short Finger, Flat Finger with sensor

- Suitable for plastic injection molding sector
- Easy to install
- Compact and lightweight
- Wear resistant
- Models RPGB-08-D and RPGB-12-D are supplied with sensor CSD-D-364 already mounted

The external design, the choice of materials and the search for miniaturization makes Series RPGB a compact and lightweight solution. The D model is provided with a finger having a slot for the installation of a magnetic sensor which is able to detect the grip of the piece.

Its technical features ensure a high gripping force and make this gripper particularly suitable in the removal of injection molded items.
The surface treatments on each metallic part make this series very wear resistant.

GENERAL DATA

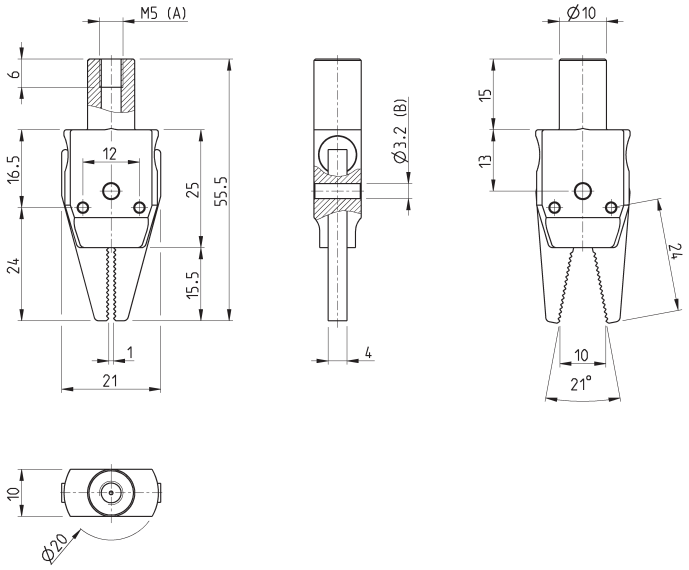
Operation	single-acting, Normally Open
Materials	anodized aluminium body and fingers, HNBR seals
Working pressure	2.5 bar ÷ 8 bar
Working temperature	0°C ÷ 60°C
Max frequency	3 Hz
Lubrication	Not necessary
Air ports	M5
Media	Filtered air, class 6.8.4 according to ISO 8573-1, without lubrication
Size	8, 12 mm
Weights	15 g (size 8) - 50 g (size 12)
Gripping torque at 6 bar **Opening torque at 6 bar** **Gripping force at 6 bar**	25 Ncm (size 8) - 90 Ncm (size 12) 2 Ncm (size 8) - 5 Ncm (size 12) 7 N (size 8) - 30 N (size 12)
Closing time without load	10 ms
Opening time	30 ms

CODING EXAMPLE

RPGB	-	12	-	A

RPGB	SERIES
12	SIZE: 08 12
A	TYPE OF CONSTRUCTION: A = Flat finger C = Short finger with mounting holes for extensions D = Flat finger with sensor mounted (CSD-D-364)

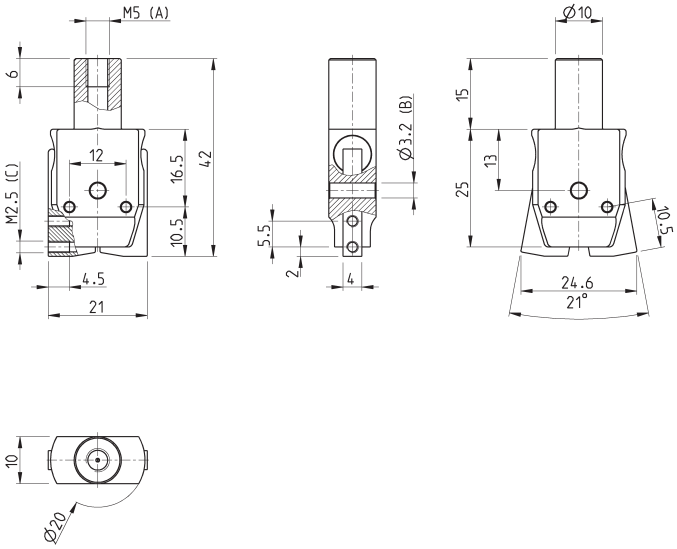
Flat finger gripper Mod. RPGB-08-A - dimensions



A = port connection
B = mounting hole

Mod.
RPGB-08-A

Short finger gripper Mod. RPGB-08-C - dimensions

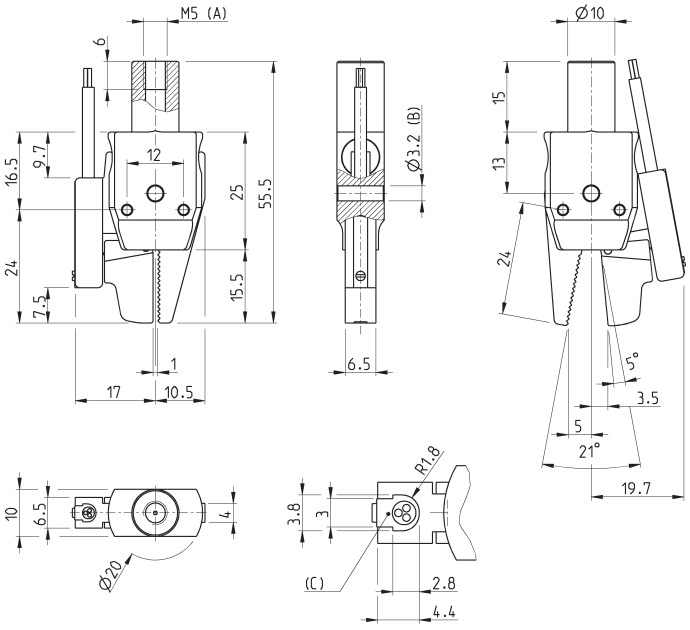


A = port connection
B = mounting hole
C = mounting thread

Mod.
RPGB-08-C

Flat finger gripper with sensor slot Mod. RPGB-08-D - dimensions

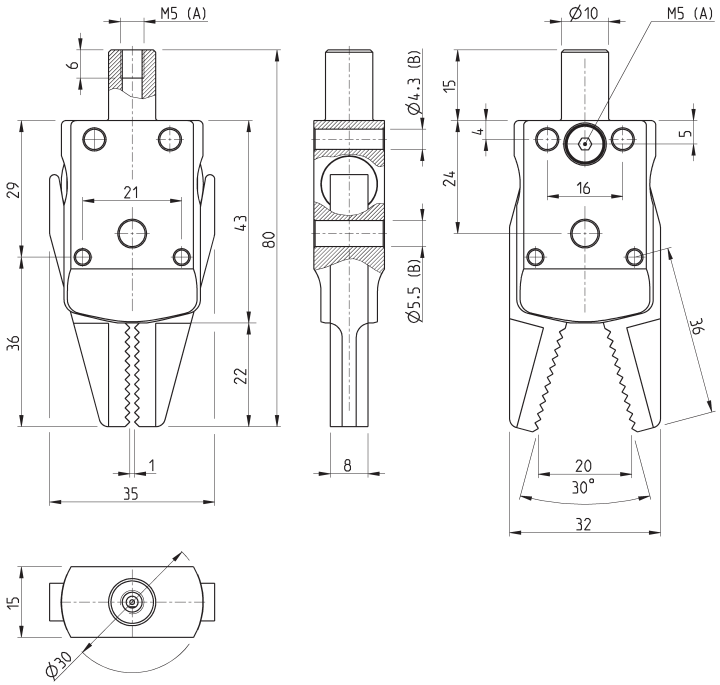
This model is supplied with sensor CSD-D-364 mounted.



A = connection port
B = mounting hole
C = sensor groove

Mod.
RPGB-08-D

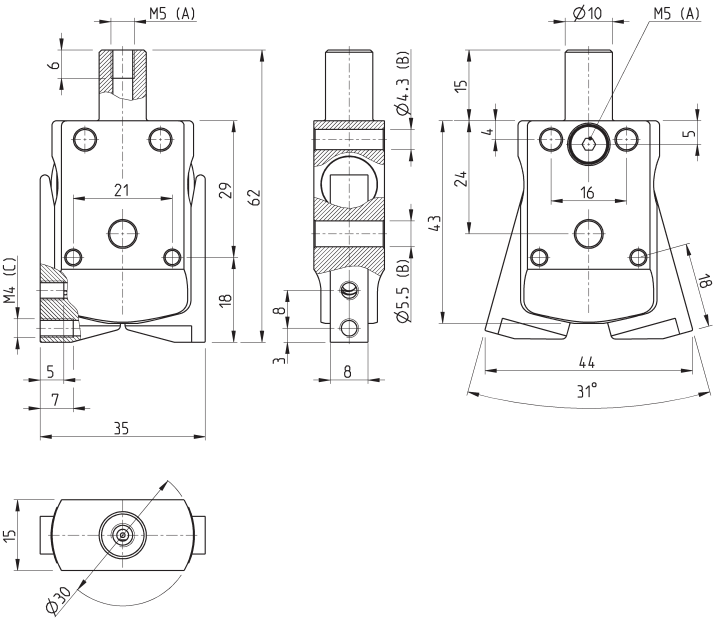
Flat finger gripper Mod. RPGB-12-A - dimensions



A = port connection
B = mounting holes

Mod.
RPGB-12-A

Short finger gripper Mod. RPGB-12-C - dimensions

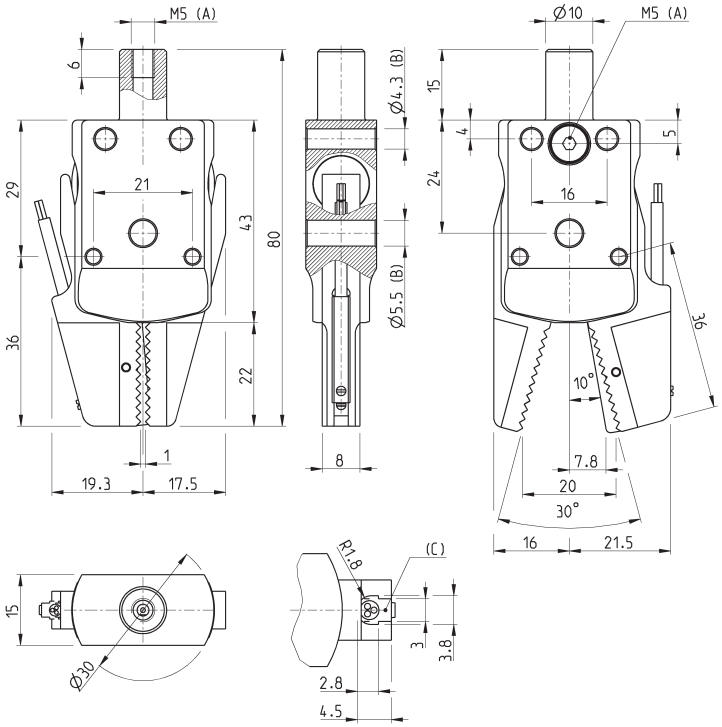


A = port connection
B = mounting holes
C = mounting thread

Mod.
RPGB-12-C

Flat finger gripper with sensor slot Mod. RPGB-12-D - dimensions

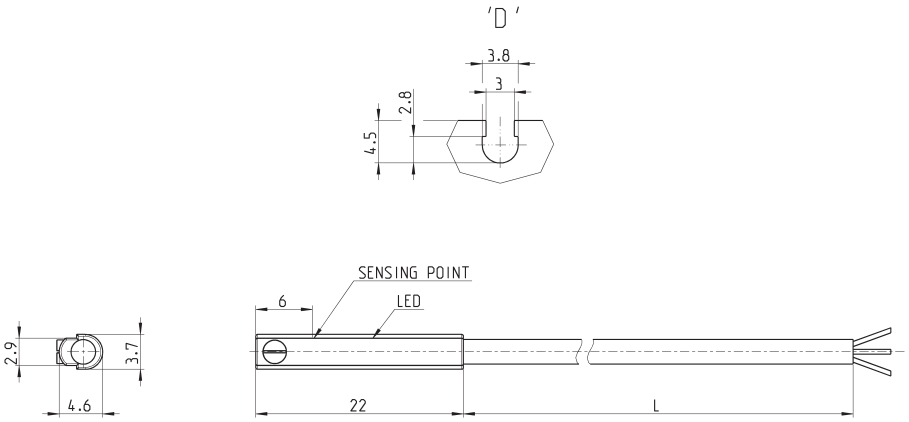
This model is supplied with sensor CSD-D-364 mounted.



A = port connection
B = mounting hole
C = sensor groove

Mod.
RPGB-12-D

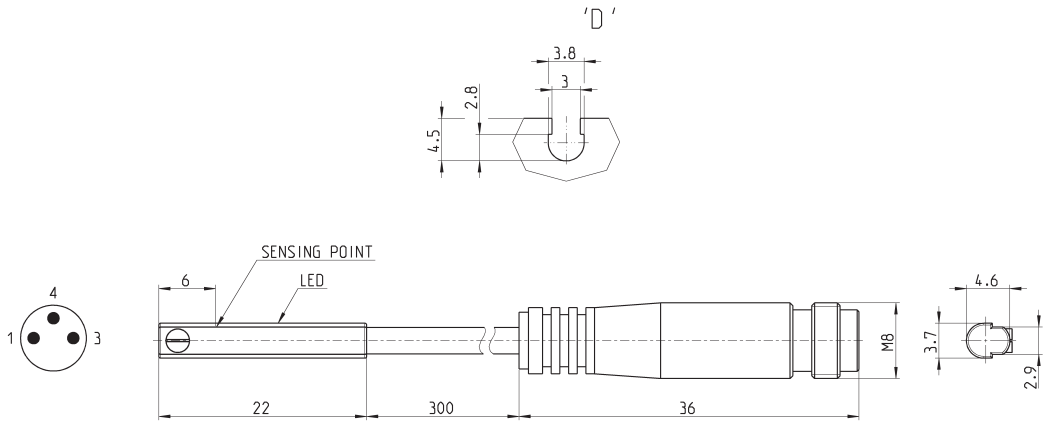
Series CSD magnetic proximity switches, 3-wire cable, D-slot



Mod.	Operation	Connections	Voltage	Output	Max. current	Max Load	Protection	L = length cable
CSD-D-334	Magnetoresistive	3 wires	10 ÷ 27 V DC	PNP	200 mA	6W	Against polarity reversing and overvoltage	2 m

Series CSD magnetic switches, male M8 3-pin conn., D-slot, right

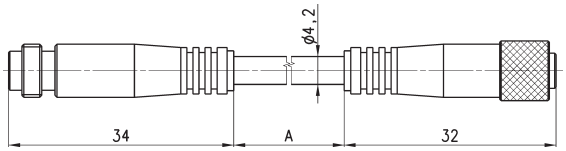
Length of cable 0.3 metres



Mod.	Operation	Connection	Voltage	Output	Max. current	Max load	Protection
CSD-D-364	Magnetoresistive	3 wires with M8 connector	10 ÷ 27 V DC	PNP	200 mA	6W	Against polarity reversing and overvoltage

Extension with connector M8, 3 Pin Male / Female

Non shielded

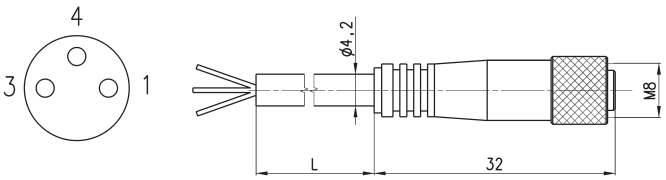


Mod.	cable length "L" (m)
CS-DW03HB-C250	2,5
CS-DW03HB-C500	5

Circular connectors M8, 3 Pin Female

With PU sheathing, non shielded cable.
Protection class: IP65

BN = Brown
BK = Black
BU = Blue



Mod.	L = cable length (m)
CS-2	2
CS-5	5
CS-10	10

Series CGZT three-jaw grippers with T-guide

New

Single and double acting, magnetic, self-centering
Sizes: 40, 50, 64, 80, 100, 125, 160 mm

- Robust and light
- 3 self-centering jaws
- IP40
- Fixing from the top and from below
- Supply on the side or on the bottom (even without using tubes)
- Double position detection
- Variants available: for use in ATEX zones and for high temperatures
- In compliance with ROHS directive
- High positioning repeatability
- High resistance and reliability to external loads thanks to T-guide
- Free from Copper, PTFE and Silicone

The new Series CGZT pneumatic grippers, thanks to the use of a high performing and precise force transmission system, are able to provide high gripping forces, while guaranteeing high repeatability in a compact and light design.

Available in 7 sizes (40, 50, 64, 80, 100, 125 and 160) and three different versions (double acting, single acting NO and single acting NC), allows you to find the best solution for every handling need. They are also available with a part retaining unit. This gripper series results particularly suitable to be combined with anthropomorphic or collaborative robots and gantry systems for applications in Pick and Place units, Material handling and the loading/unloading operations of machine tools.

GENERAL DATA

Type of construction	Three-jaw self-centering gripper with T-guide
Operation	Single acting (NO, NC) double acting
Sizes	40, 50, 64, 80, 100, 125, 160 mm
Force transmission	Lever
Air connections	M3 (40), M5 (50, 64, 80), G1/8 (100, 125, 160)
Working pressure	2 ÷ 8 bar (double acting), 4 ÷ 8 bar (single acting)
Working temperature	5°C ÷ 60°C (standard) - 5°C ÷ 130°C (high temperature version)
Store temperature	-10°C ÷ 80°C
Maximum use frequency	5 Hz (40, 50, 64); 3 Hz (80); 2 Hz (100, 125); 1 Hz (160)
Repeatability	≤ 0.02 mm
Interchangeability	0.1 mm
Medium	Air in class 7.4.4 according to ISO 8573-1. In case lubricated air is used, we recommend ISOVG32 oil and to never interrupt lubrication.
Lubrication	After 10 million cycles, grease the sliding zones using Molykote DX grease.
Protection class	IP40
Compatibility	ROHS Directive
Certifications	ATEX (II2G Ex h IIC T4 Gb II2D Ex h IIIC T120° Db -20°C≤Ta≤70°C). Add EX at the end of the commercial code to order the ATEX version.
Materials	Free from Copper, PTFE and Silicone

NOTE: Pressurize the pneumatic system gradually in order to avoid uncontrolled movements.

CODING EXAMPLE

CGZT	-	050	-	NC	-	W	EX

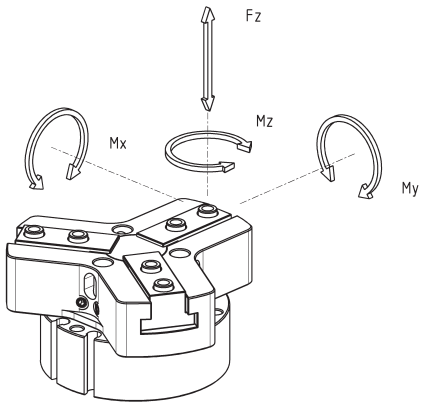
CGZT	SERIES	
050	SIZES: 040 = Ø25 050 = Ø33 064 = Ø43 080 = Ø54 100 = Ø76 125 = Ø96 160 = Ø125	
NC	FUNCTIONING: = double acting NO = single acting, normally open NC = single acting, normally closed	PNEUMATIC SYMBOLS PNZ1 PNZ3 PNZ2
W	VERSION: = standard W = high temperatures (130°C) - non magnetic	
EX	Add EX to order the certified ATEX version	

PNEUMATIC SYMBOLS

The pneumatic symbols which have been indicated in the CODING EXAMPLE are shown below.

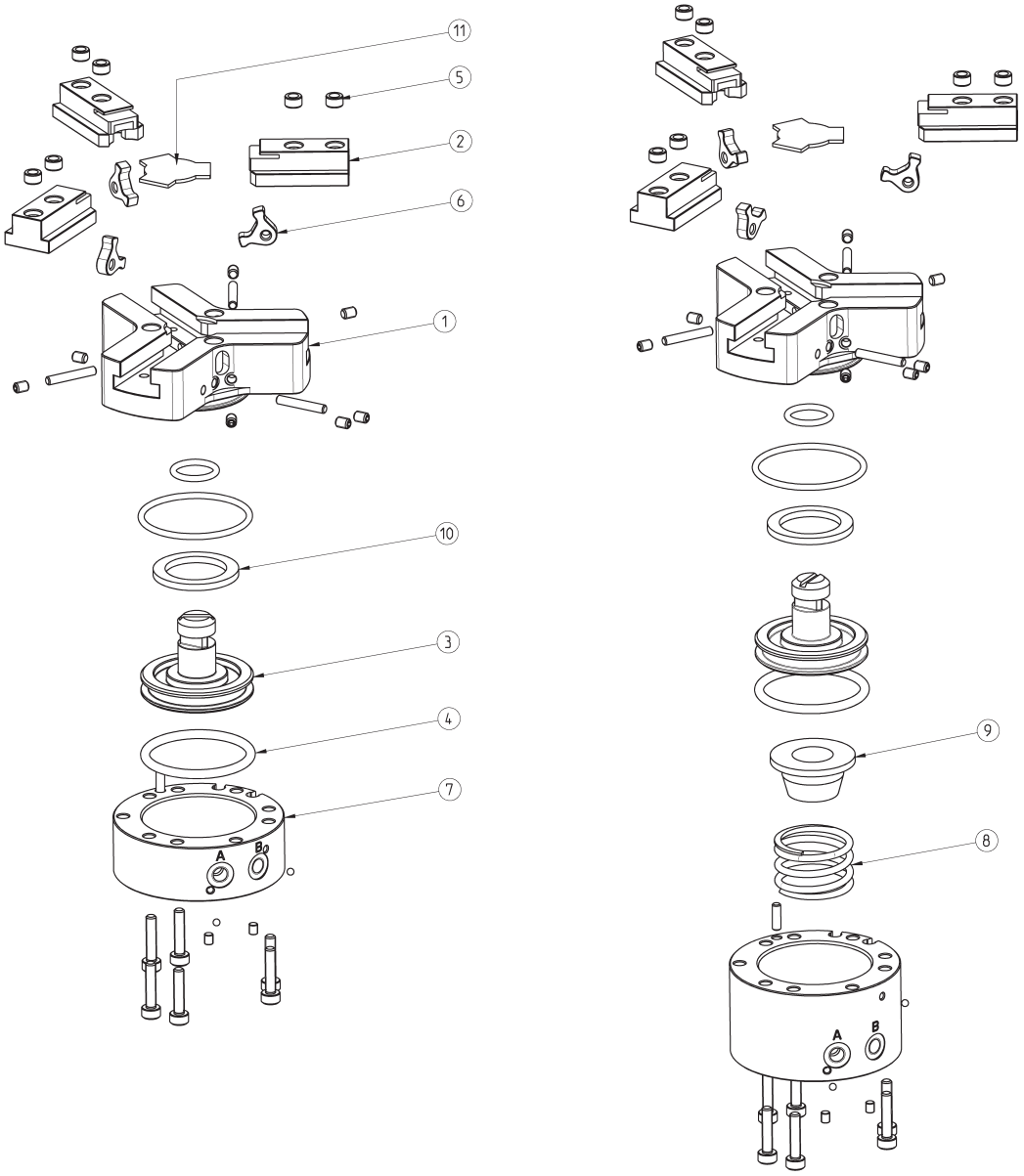
Maximum admissible loads and torques

Fz s, Mx s, My s, Mz s =
maximum admissible loads and
torques in static conditions



Mod.	Fz s (N)	Mx s (Nm)	My s (Nm)	Mz s (Nm)
CGZT-040	200	2.5	4	2.8
CGZT-050	400	7	7.3	7.7
CGZT-064	600	13	14	14
CGZT-080	1000	26	27	24
CGZT-100	1500	58	65	65
CGZT-125	2500	100	120	120
CGZT-160	4000	230	250	250

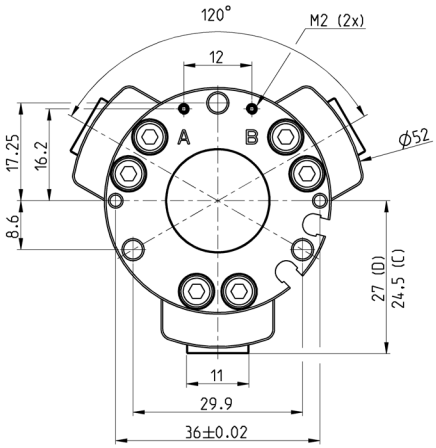
Series CGPT gripper - construction

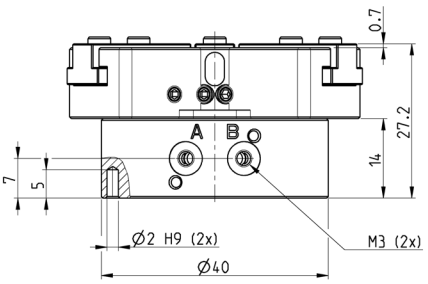


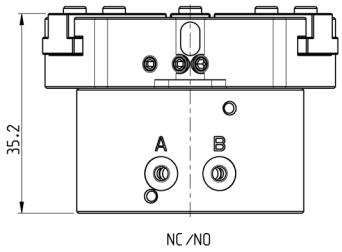
LIST OF COMPONENTS	
PARTS	MATERIALS
1 - Body	Aluminium
2 - Jaw	Stainless steel
3 - Piston	Stainless steel
4 - Seals	HNBR / FKM
5 - Centering bushes	Stainless steel
6 - Levers	Steel
7 - End cover	Aluminium
8 - Spring	Steel
9 - Guide de ressort	Aluminium
10 - Magnet	Neodymium
11 - Cover	Stainless steel

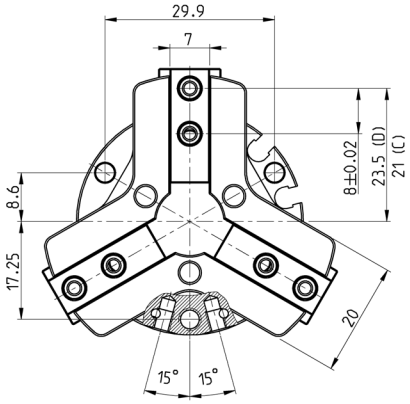
CGZT gripper, size 40mm - dimensions

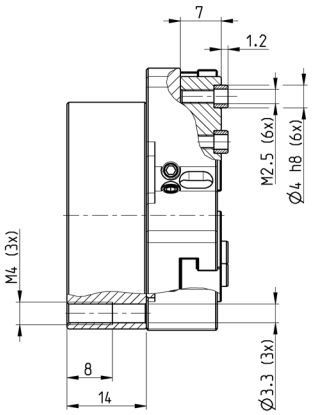
DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection
C = Closed gripper
D = Open gripper







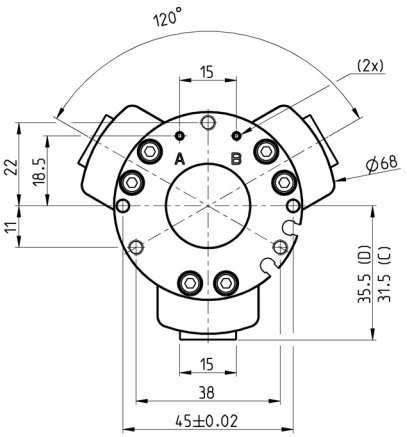


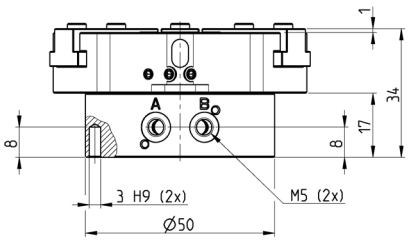


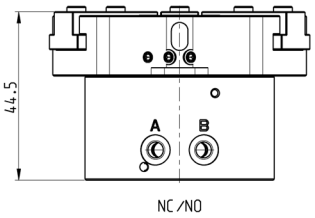
Mod.	Closing gripping force each jaw at 6 bar (N)	Total closing gripping force at 6 bar (N)	Opening gripping force each jaw at 6 bar (N)	Total opening gripping force at 6 bar (N)	Stroke per jaw (mm)	Working pressure (bar)	Working temperature (°C)	Repeatability (mm)	Opening T (ms)	Closing T (ms)	Weight (Kg)
CGZT-040	60	181	67	202	2.5	2 ÷ 8	5 ÷ 60	≤ 0.02	57	63	0.114
CGZT-040-NC	93	80	33	100	2.5	4 ÷ 8	5 ÷ 60	≤ 0.02	56	106	0.132
CGZT-040-NO	27	280	100	300	2.5	4 ÷ 8	5 ÷ 60	≤ 0.02	79	49	0.130

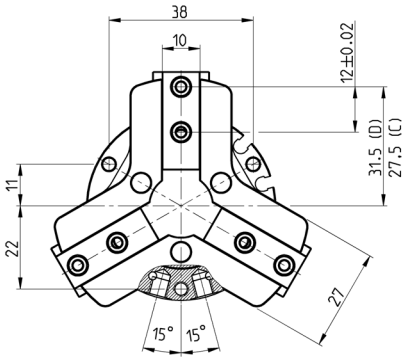
CGZT gripper, size 50mm - dimensions

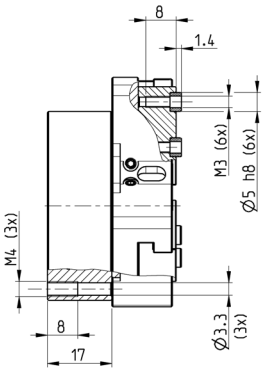
DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection
C = Closed gripper
D = Open gripper







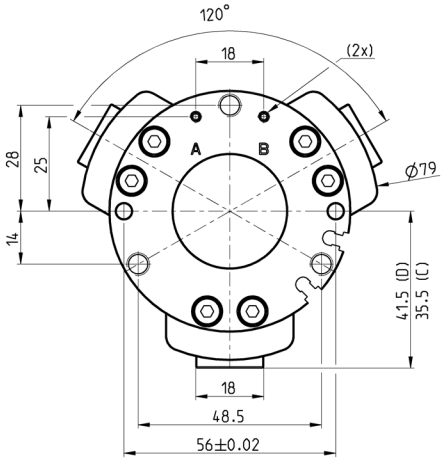


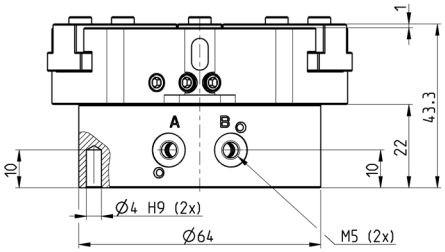


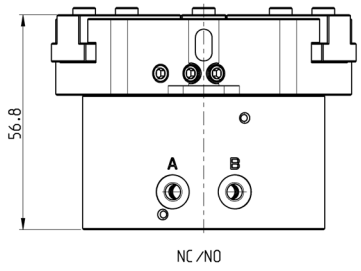
Mod.	Closing gripping force each jaw at 6 bar (N)	Total closing gripping force at 6 bar (N)	Opening gripping force each jaw at 6 bar (N)	Total opening gripping force at 6 bar (N)	Stroke per jaw (mm)	Working pressure (bar)	Working temperature (°C)	Repeatability (mm)	Opening T (ms)	Closing T (ms)	Weight (Kg)
CGZT-050	115	346	130	390	4	2 ÷ 8	5 ÷ 60	≤ 0.02	75	85	0.240
CGZT-050-NC	160	480	83	250	4	4 ÷ 8	5 ÷ 60	≤ 0.02	56	151	0.280
CGZT-050-NO	70	210	173	520	4	4 ÷ 8	5 ÷ 60	≤ 0.02	137	55	0.275

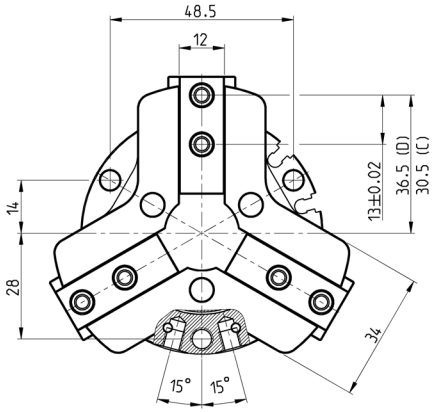
CGZT gripper, size 64mm - dimensions

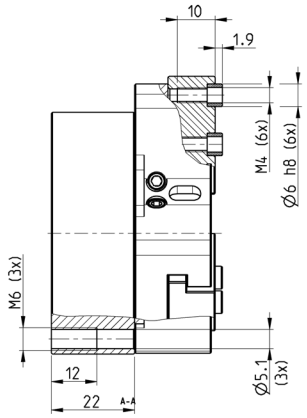
DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection
C = Closed gripper
D = Open gripper







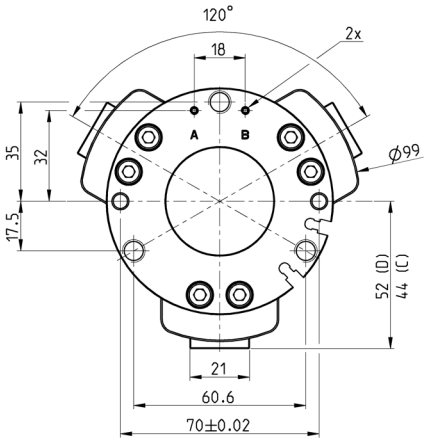


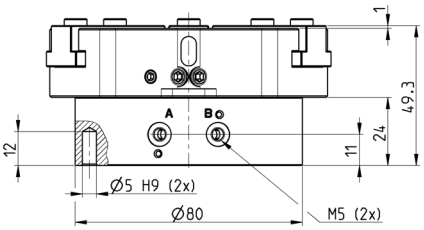


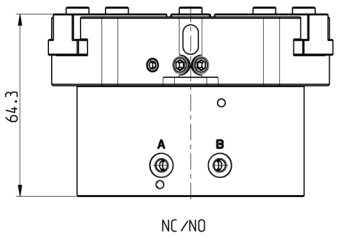
Mod.	Closing gripping force each jaw at 6 bar (N)	Total closing gripping force at 6 bar (N)	Opening gripping force each jaw at 6 bar (N)	Total opening gripping force at 6 bar (N)	Stroke per jaw (mm)	Working pressure (bar)	Working temperature (°C)	Repeatability (mm)	Opening T (ms)	Closing T (ms)	Weight (Kg)
CGZT-064	223	670	242	726	6	2 ÷ 8	5 ÷ 60	≤ 0.02	85	104	0.461
CGZT-064-NC	320	960	147	440	6	4 ÷ 8	5 ÷ 60	≤ 0.02	88	158	0.560
CGZT-064-NO	127	380	323	970	6	4 ÷ 8	5 ÷ 60	≤ 0.02	153	71	0.537

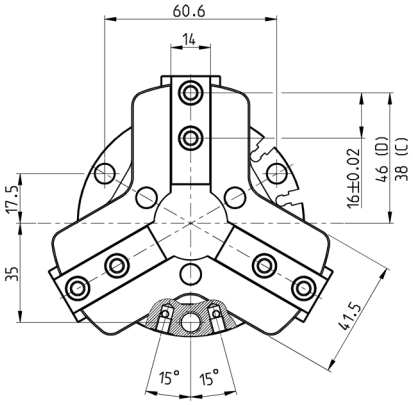
CGZT gripper, size 80mm - dimensions

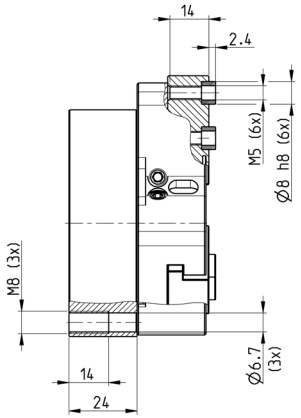
DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection
C = Closed gripper
D = Open gripper







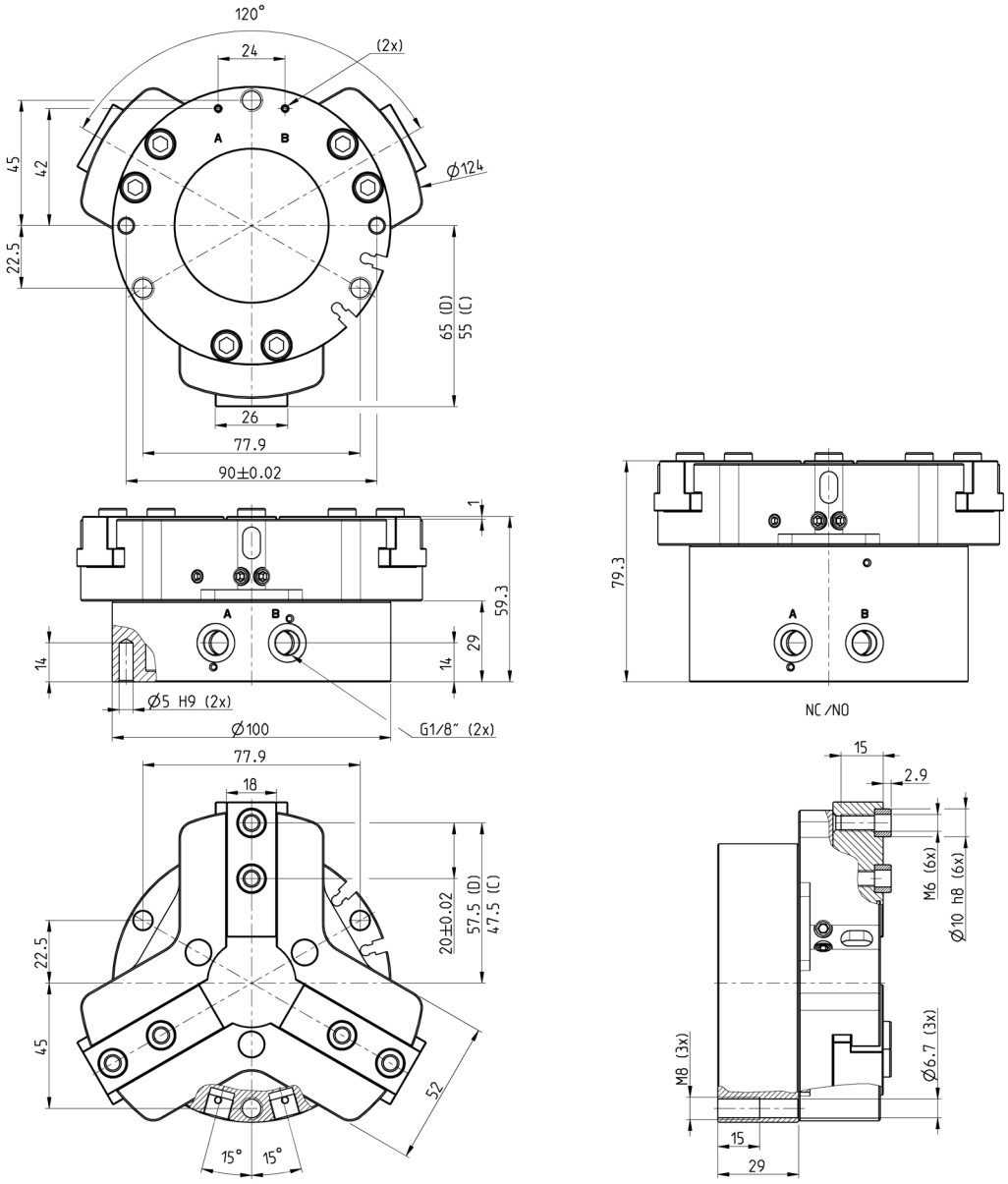




Mod.	Closing gripping force each jaw at 6 bar (N)	Total closing gripping force at 6 bar (N)	Opening gripping force each jaw at 6 bar (N)	Total opening gripping force at 6 bar (N)	Stroke per jaw (mm)	Working pressure (bar)	Working temperature (°C)	Repeatability (mm)	Opening T (ms)	Closing T (ms)	Weight (Kg)
CGZT-080	327	980	359	1078	8	2 ÷ 8	5 ÷ 60	≤ 0.02	116	133	0.796
CGZT-080-NC	437	1310	247	740	8	4 ÷ 8	5 ÷ 60	≤ 0.02	88	258	0.987
CGZT-080-NO	213	640	450	1350	8	4 ÷ 8	5 ÷ 60	≤ 0.02	195	73	0.934

CGZT gripper, size 100mm - dimensions

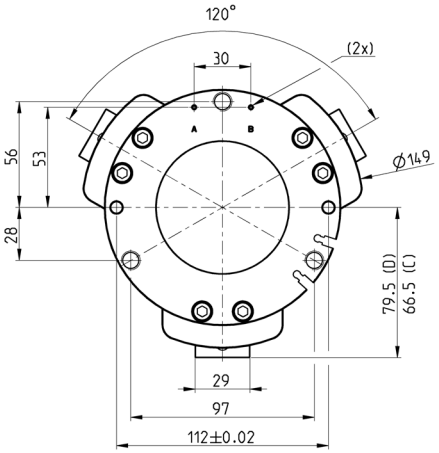
DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection
C = Closed gripper
D = Open gripper

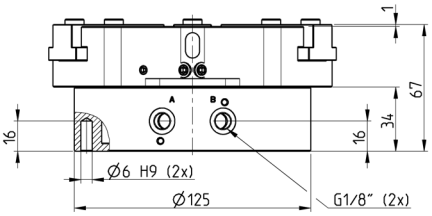


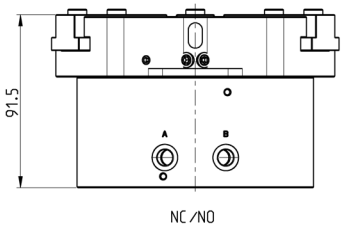
Mod.	Closing gripping force each jaw at 6 bar (N)	Total closing gripping force at 6 bar (N)	Opening gripping force each jaw at 6 bar (N)	Total opening gripping force at 6 bar (N)	Stroke per jaw (mm)	Working pressure (bar)	Working temperature (°C)	Repeatability (mm)	Opening T (ms)	Closing T (ms)	Weight (Kg)
CGZT-100	677	2030	722	2165	10	2 ÷ 8	5 ÷ 60	≤ 0.02	135	155	1.483
CGZT-100-NC	873	2620	523	1570	10	4 ÷ 8	5 ÷ 60	≤ 0.02	74	254	1.790
CGZT-100-NO	480	1440	917	2750	10	4 ÷ 8	5 ÷ 60	≤ 0.02	282	75	1.755

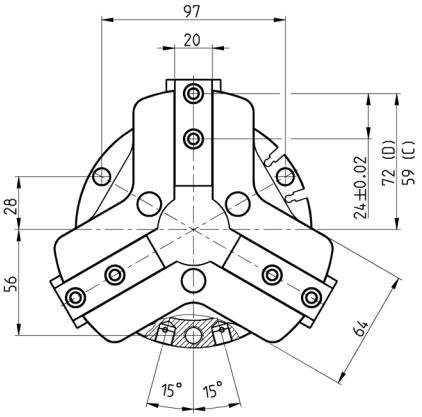
CGZT gripper, size 125mm - dimensions

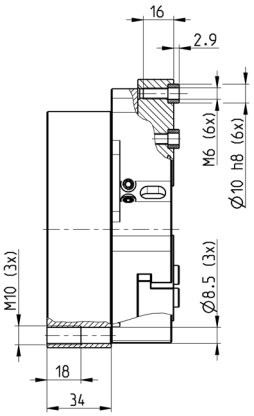
DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection
C = Closed gripper
D = Open gripper







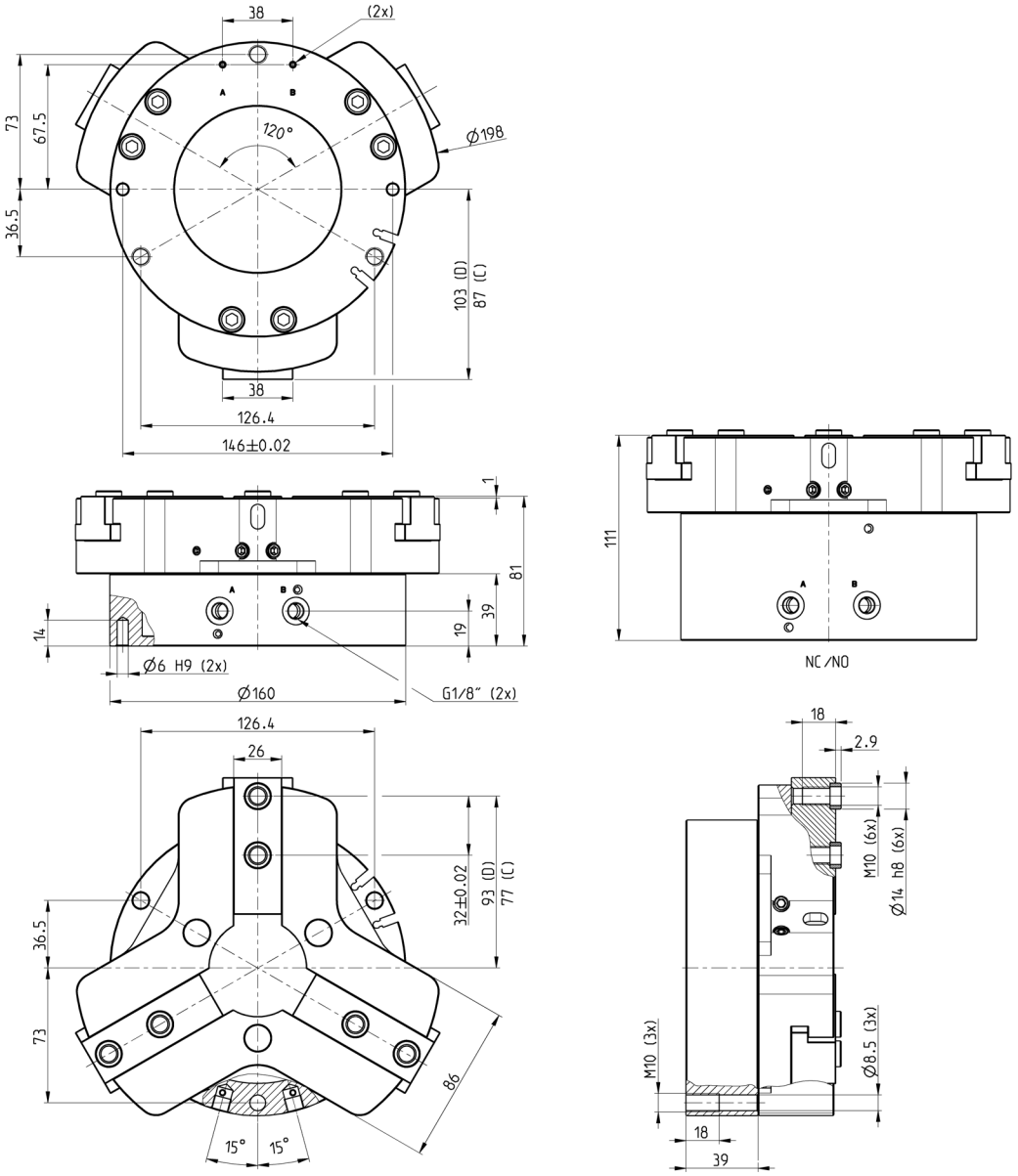




Mod.	Closing gripping force each jaw at 6 bar (N)	Total closing gripping force at 6 bar (N)	Opening gripping force each jaw at 6 bar (N)	Total opening gripping force at 6 bar (N)	Stroke per jaw (mm)	Working pressure (bar)	Working temperature (°C)	Repeatability (mm)	Opening T (ms)	Closing T (ms)	Weight (Kg)
CGZT-125	1123	3370	1198	3594	13	2 ÷ 8	5 ÷ 60	≤ 0.02	198	227	2.220
CGZT-125-NC	1400	4200	920	2760	13	4 ÷ 8	5 ÷ 60	≤ 0.02	108	349	3.005
CGZT-125-NO	843	2530	1477	4430	13	4 ÷ 8	5 ÷ 60	≤ 0.02	329	119	2.752

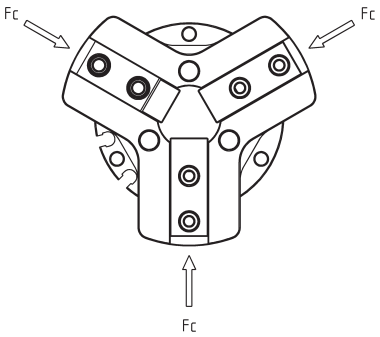
CGZT gripper, size 160mm - dimensions

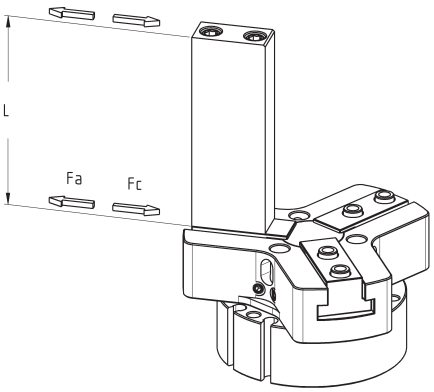
DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection
C = Closed gripper
D = Open gripper



Mod.	Closing gripping force each jaw at 6 bar (N)	Total closing gripping force at 6 bar (N)	Opening gripping force each jaw at 6 bar (N)	Total opening gripping force at 6 bar (N)	Stroke per jaw (mm)	Working pressure (bar)	Working temperature (°C)	Repeatability (mm)	Opening T (ms)	Closing T (ms)	Weight (Kg)
CGZT-160	1927	5780	1767	5300	16	2 ÷ 8	5 ÷ 60	≤ 0.02	239	304	4.714
CGZT-160-NC	2150	6450	1540	4620	16	4 ÷ 8	5 ÷ 60	≤ 0.02	150	791	6.504
CGZT-160-NO	1380	4140	2310	6930	16	4 ÷ 8	5 ÷ 60	≤ 0.02	418	129	5.851

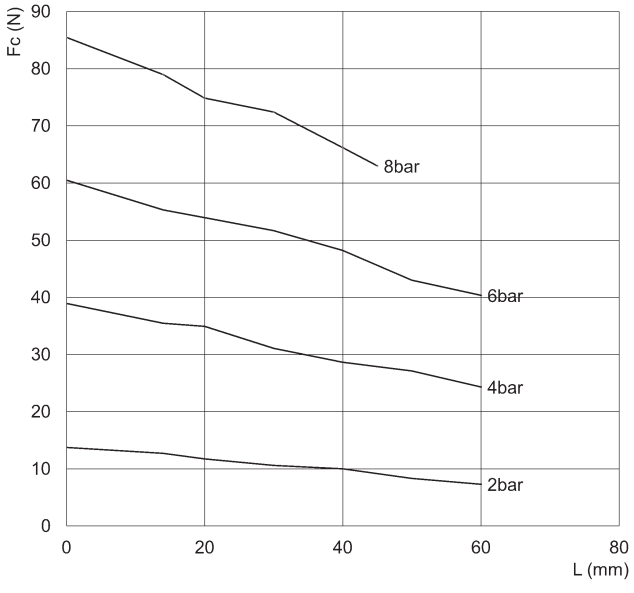
GRIPPING FORCE PER SINGLE JAW





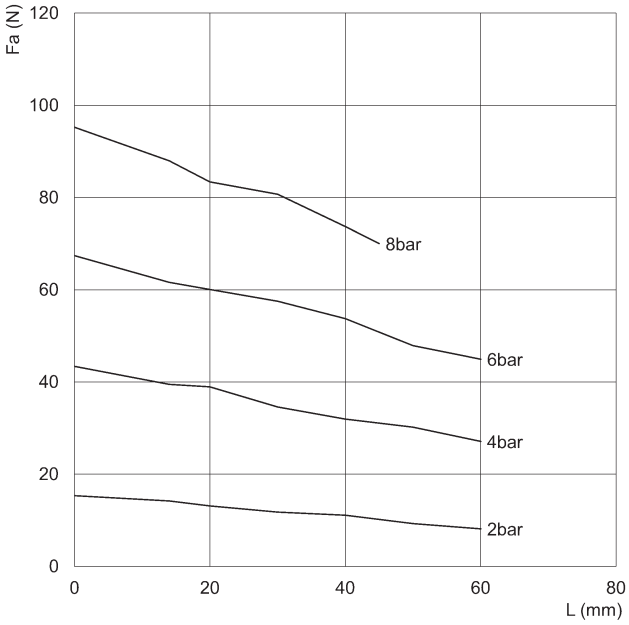
The total gripping force has to be calculated as follows:
Total Fc = Fc x 3
Total Fa = Fa x 3

Fc = closing gripping force
Fa = opening gripping force
L = gripping point length



CGZT-040

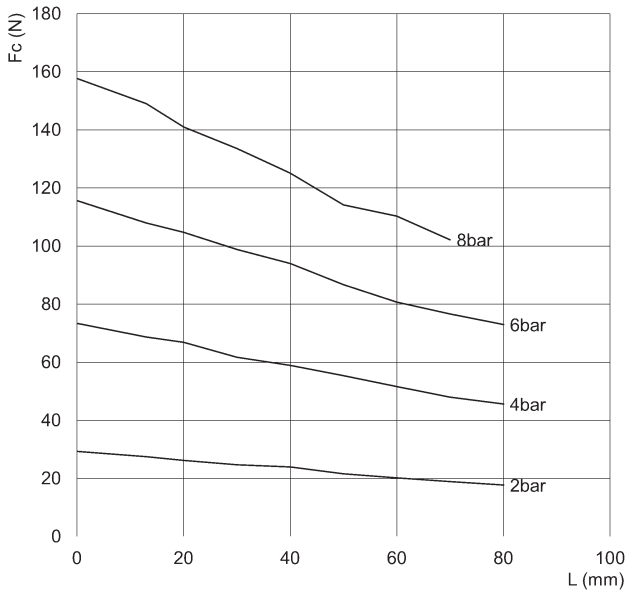
Fc = closing gripping force
L = gripping point length



CGZT-040

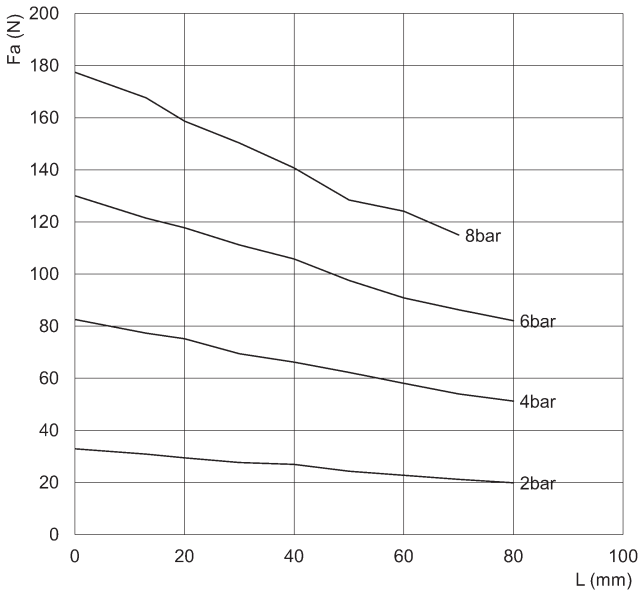
Fa = opening gripping force
L = gripping point length

GRIPPING FORCE PER SINGLE JAW



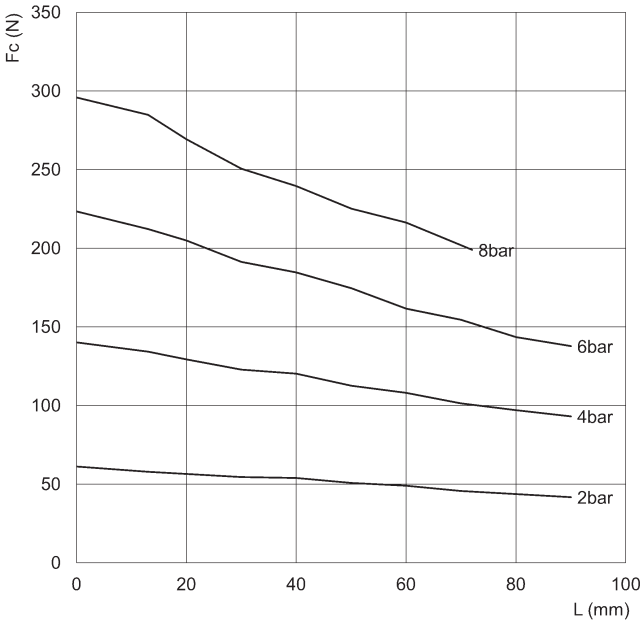
CGZT-050

Fc = closing gripping force
L = gripping point length



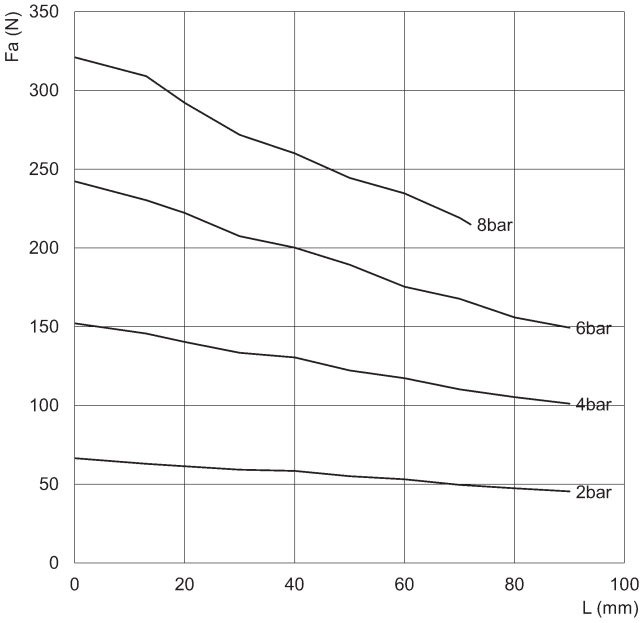
CGZT-050

Fa = opening gripping force
L = gripping point length



CGZT-064

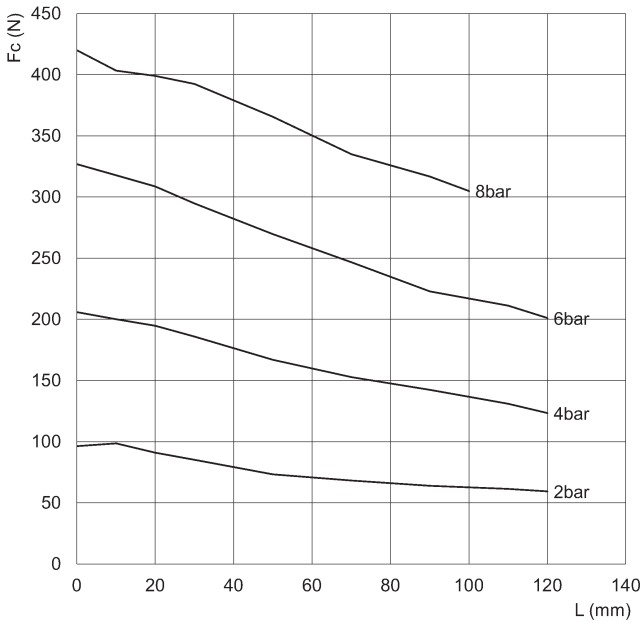
Fc = closing gripping force
L = gripping point length



CGZT-064

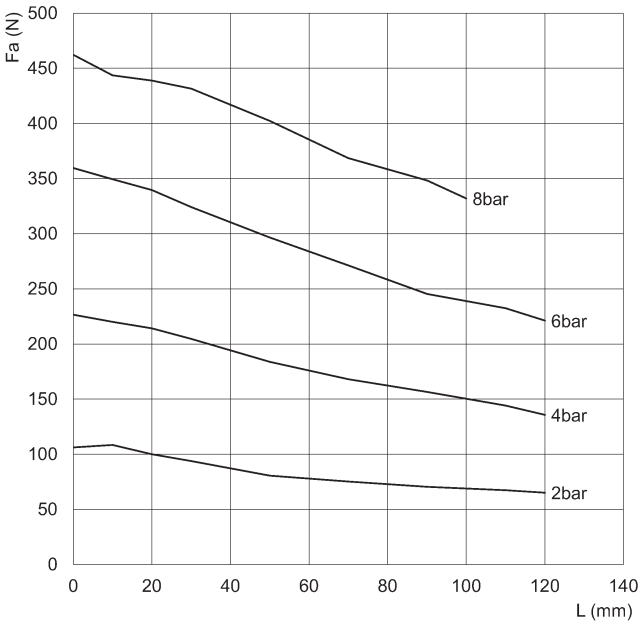
Fa = opening gripping force
L = gripping point length

GRIPPING FORCE PER SINGLE JAW



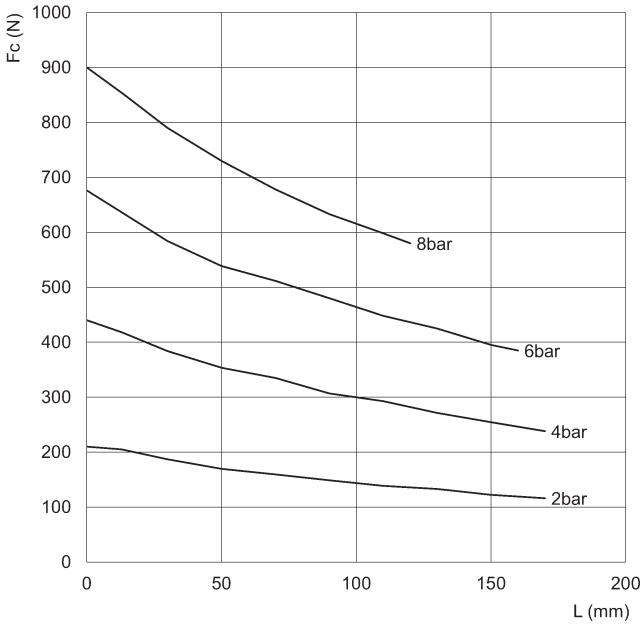
CGZT-080

Fc = closing gripping force
L = gripping point length



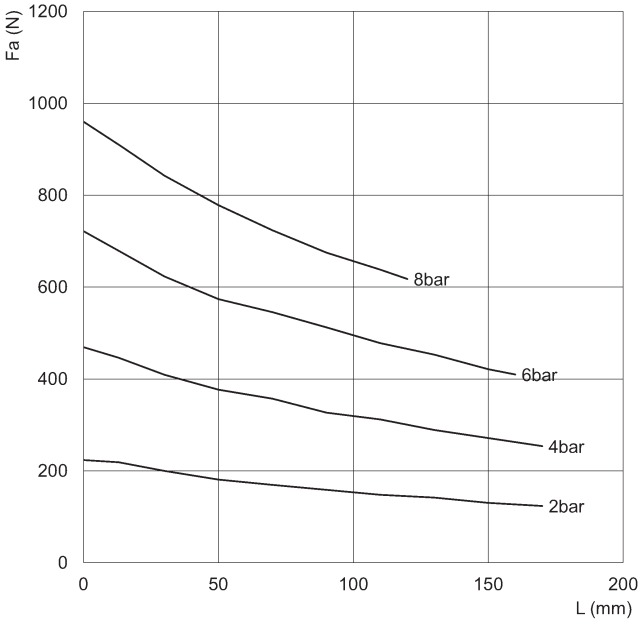
CGZT-080

Fa = opening gripping force
L = gripping point length



CGZT-100

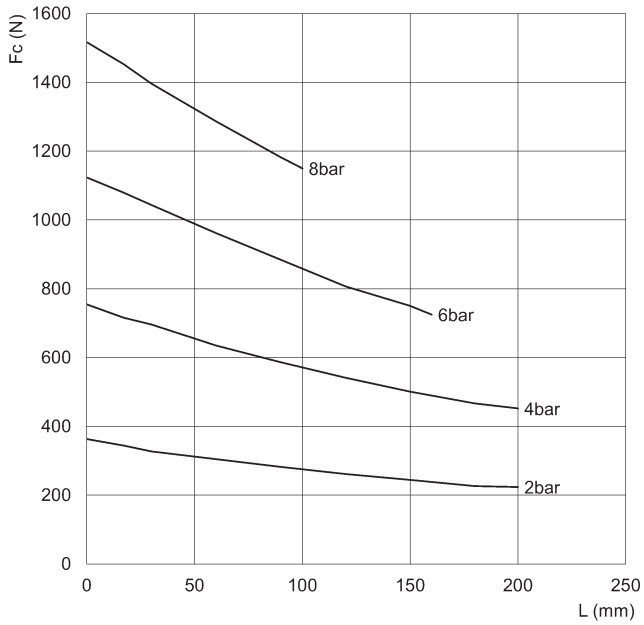
Fc = closing gripping force
L = gripping point length



CGZT-100

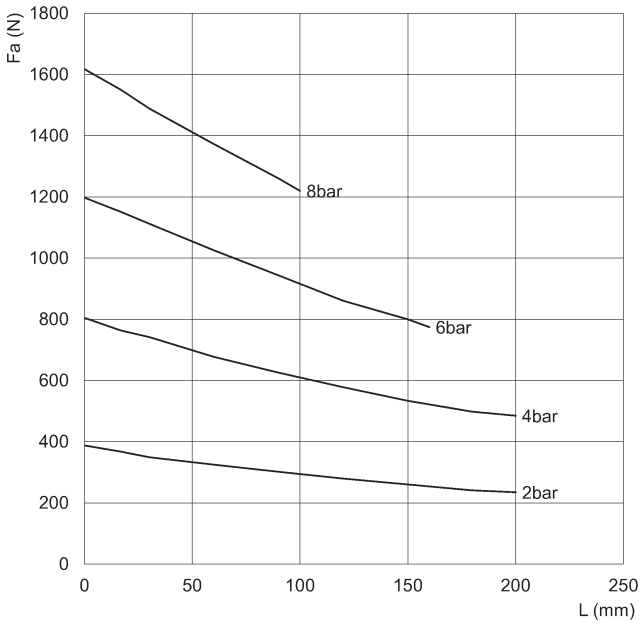
Fa = opening gripping force
L = gripping point length

GRIPPING FORCE PER SINGLE JAW



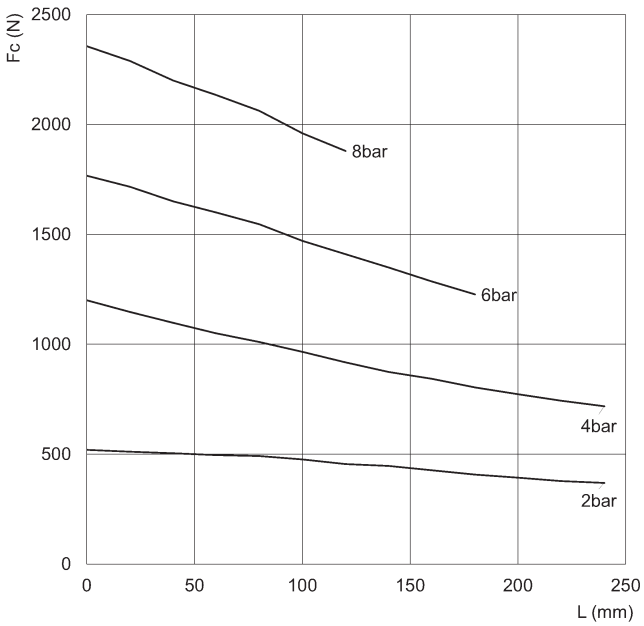
CGZT-125

Fc = closing gripping force
L = gripping point length



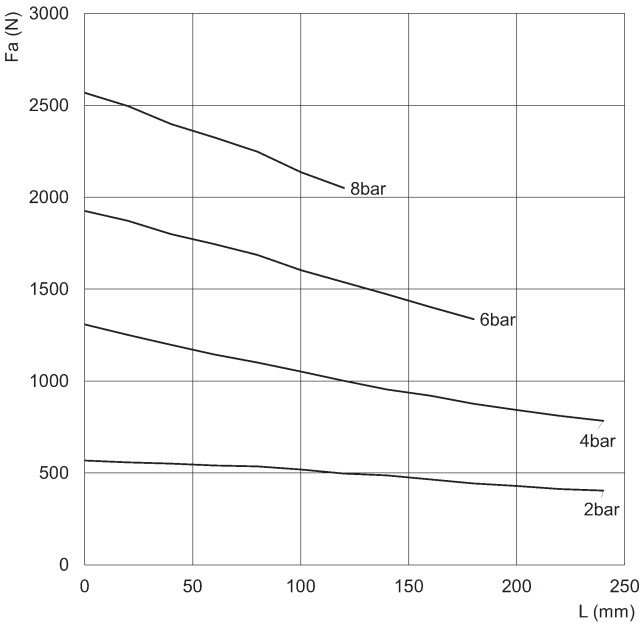
CGZT-125

Fa = opening gripping force
L = gripping point length



CGZT-160

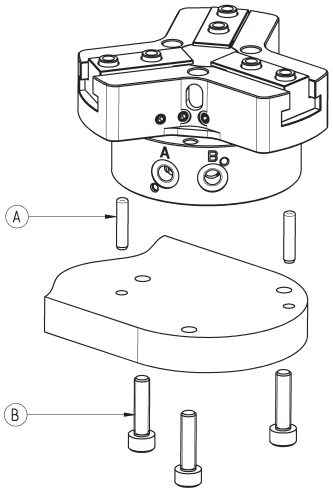
Fc = closing gripping force
L = gripping point length

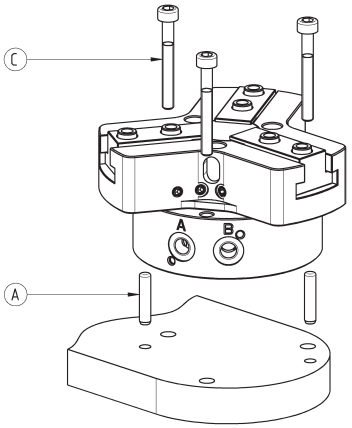


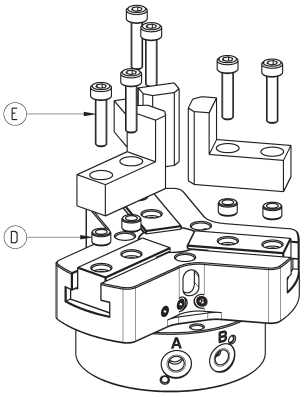
CGZT-160

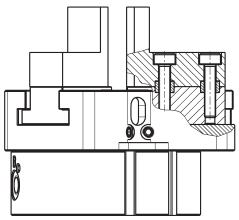
Fa = opening gripping force
L = gripping point length

Examples of mounting



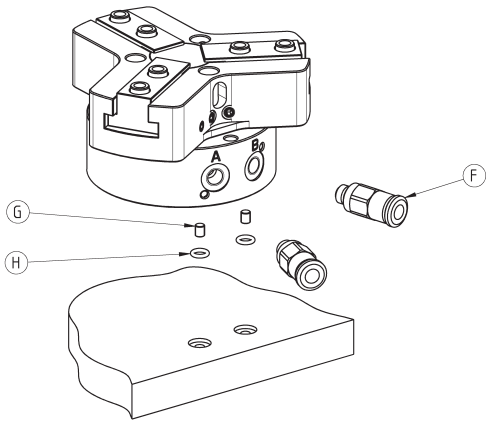






Mod.	A	B	C	D	E
CGZT-040	Ø2	M4	M3	Ø4	M2.5
CGZT-050	Ø3	M4	M3	Ø5	M3
CGZT-064	Ø4	M6	M5	Ø6	M4
CGZT-080	Ø5	M8	M6	Ø8	M5
CGZT-100	Ø5	M8	M6	Ø10	M6
CGZT-125	Ø6	M10	M8	Ø10	M6
CGZT-160	Ø6	M10	M8	Ø14	M10

Air supply ports

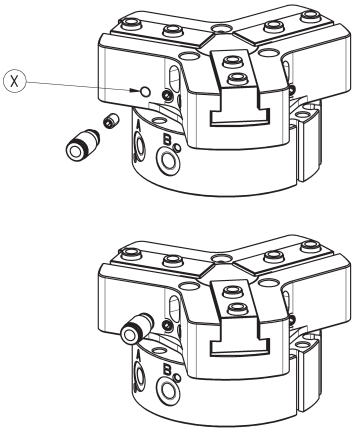


Mod.	F	G	H
CGZT-040	M3	M2	OR 1x2.5
CGZT-050	M5	M2.5	OR 1x3
CGZT-064	M5	M3	OR 1x3.5
CGZT-080	M5	M3	OR 1x3.5
CGZT-100	G1/8	M3	OR 1x3.5
CGZT-125	G1/8	M3	OR 1x3.5
CGZT-160	G1/8	M4	OR 1x4.5

Example of use of the pressurization/lubrication hole

Example of use of the lubrication (greasing) or pressurization hole of the zone with moving items

NOTE 1: grease the sliding zones using Molykote DX grease.
NOTE 2: supply a pressure of max 1 bar in order to avoid the sudden ejection of grease.

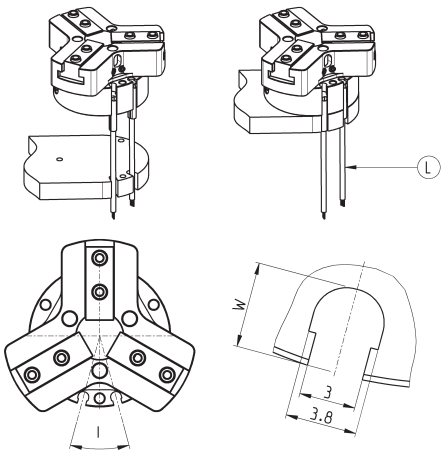


Mod.	X
CGZT-040	M3
CGZT-050	M3
CGZT-064	M5
CGZT-080	M5
CGZT-100	M5
CGZT-125	M5
CGZT-160	M5

Example of mounting: sensors

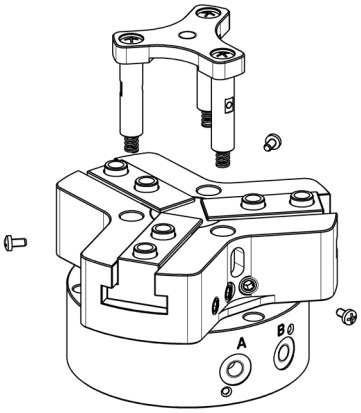
L = sensor Series CSD

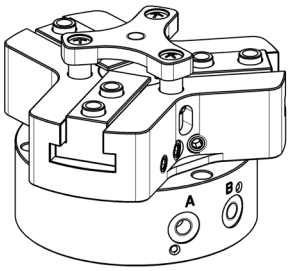
In order to position the sensor correctly, a channel must be created in the base.

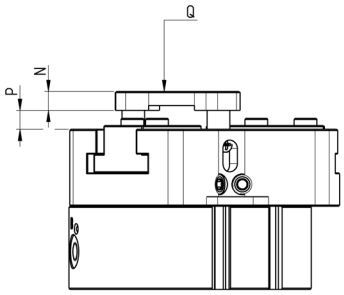


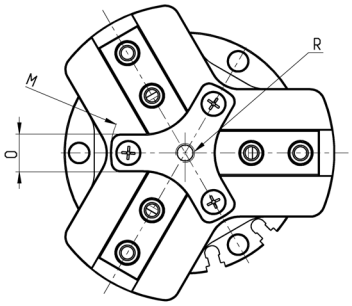
Mod.	I	W
CGZT-040	32°	4.5
CGZT-050	30°	4.6
CGZT-064	30°	6.5
CGZT-080	32°	8.7
CGZT-100	28°	9.3
CGZT-125	24°	11.5
CGZT-160	20°	12.5

Part retaining unit









Mod.	M	N	O	P	Q	R
P-CGZT-040	Ø24	3.5	6	0 ÷ 2.5	10 N	M3
P-CGZT-050	Ø32.5	4.5	8	0 ÷ 3	14 N	M4
P-CGZT-064	Ø39.5	5	10	0 ÷ 5	21 N	M5
P-CGZT-080	Ø49	6	12.5	0 ÷ 5	32 N	M6
P-CGZT-100	Ø59	7	14	0 ÷ 5	48 N	M8
P-CGZT-125	Ø73	8	18	0 ÷ 6	85 N	M10
P-CGZT-160	Ø99	9.5	25	0 ÷ 6	185 N	M10

Series CGCN Three-jaw grippers with T-guide

New

Double acting, magnetic, self-centering
Sizes: 50, 64, 80, 100, 125 mm

- Compact design
- 3 self-centering jaws
- IP40
- Supply on the side
- Long stroke
- In compliance with ROHS directive
- Free from Copper, PTFE and Silicone

The new Series CGCN pneumatic grippers are available in 5 different sizes (50, 64, 80, 100, 125).
Their compact design allows high clamping force and long strokes in reduced dimensions.

Thanks to the permanent magnet integrated into the gripper piston, the Series CSD magnetic proximity switches can be inserted in the grooves on the body.

GENERAL DATA

Type of construction	three-jaw self-centering gripper with T-guide
Operation	double acting
Sizes	50, 64, 80, 100, 125 mm
Force transmission	lever
Air connections	M5 (50, 64, 80) G1/8 (100, 125)
Working pressure	2 ÷ 8 bar
Working temperature	5°C ÷ 60°C
Store temperature	-10°C ÷ 80°C
Maximum use frequency	5 Hz (50, 64); 3 Hz (80); 2 Hz (100, 125)
Repeatability	≤ 0.05 mm
Interchangeability	0.1 mm
Medium	air in class 7.4.4 according to ISO 8573-1. In case lubricated air is used, we recommend ISOVG32 oil and to never interrupt lubrication.
Lubrication	After 10 million cycles, grease the sliding zones using Molykote DX grease.
Protection class	IP40
Compatibility	ROHS Directive
Certifications	ATEX (II2G Ex h IIC T4 Gb II2D Ex h IIIC T120° Db -20°C≤Ta≤70°C). To order the ATEX version add EX at the end of the commercial code.
Materials	free from Copper, PTFE and Silicone

NOTE: Pressurize the pneumatic system gradually in order to avoid uncontrolled movements.

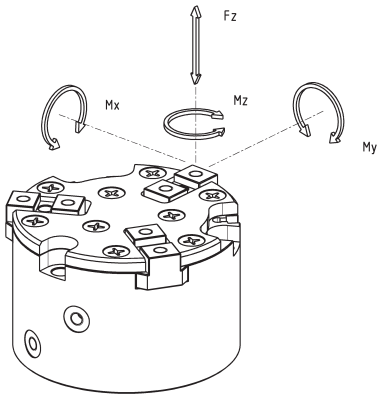
CODING EXAMPLE

CGCN	-	050	-	EX

CGCN	SERIES	
050	SIZES: 050 064 080 100 125	PNEUMATIC SYMBOLS PNZ1
EX	VERSIONS: = standard EX = ATEX certified	

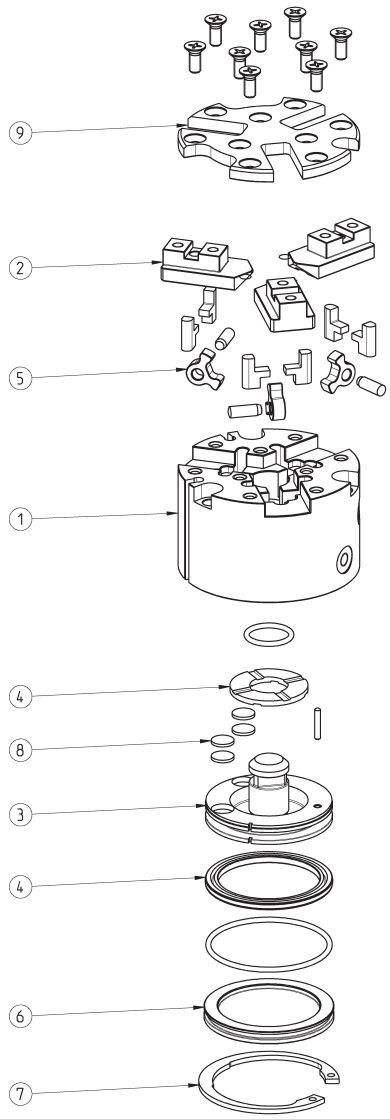
Maximum admissible loads and torques

Fz s, Mx s, My s, Mz s =
maximum admissible loads and
torques in static conditions



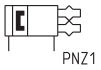
Mod.	Fz s (N)	Mx s (Nm)	My s (Nm)	Mz s (Nm)
CGCN-050	360	6.3	6.93	6.57
CGCN-064	540	11.7	12.6	12.6
CGCN-080	900	23.4	24.3	21.6
CGCN-100	1350	52.2	58.5	58.5
CGCN-125	2250	90	108	108

Series CGCN gripper construction

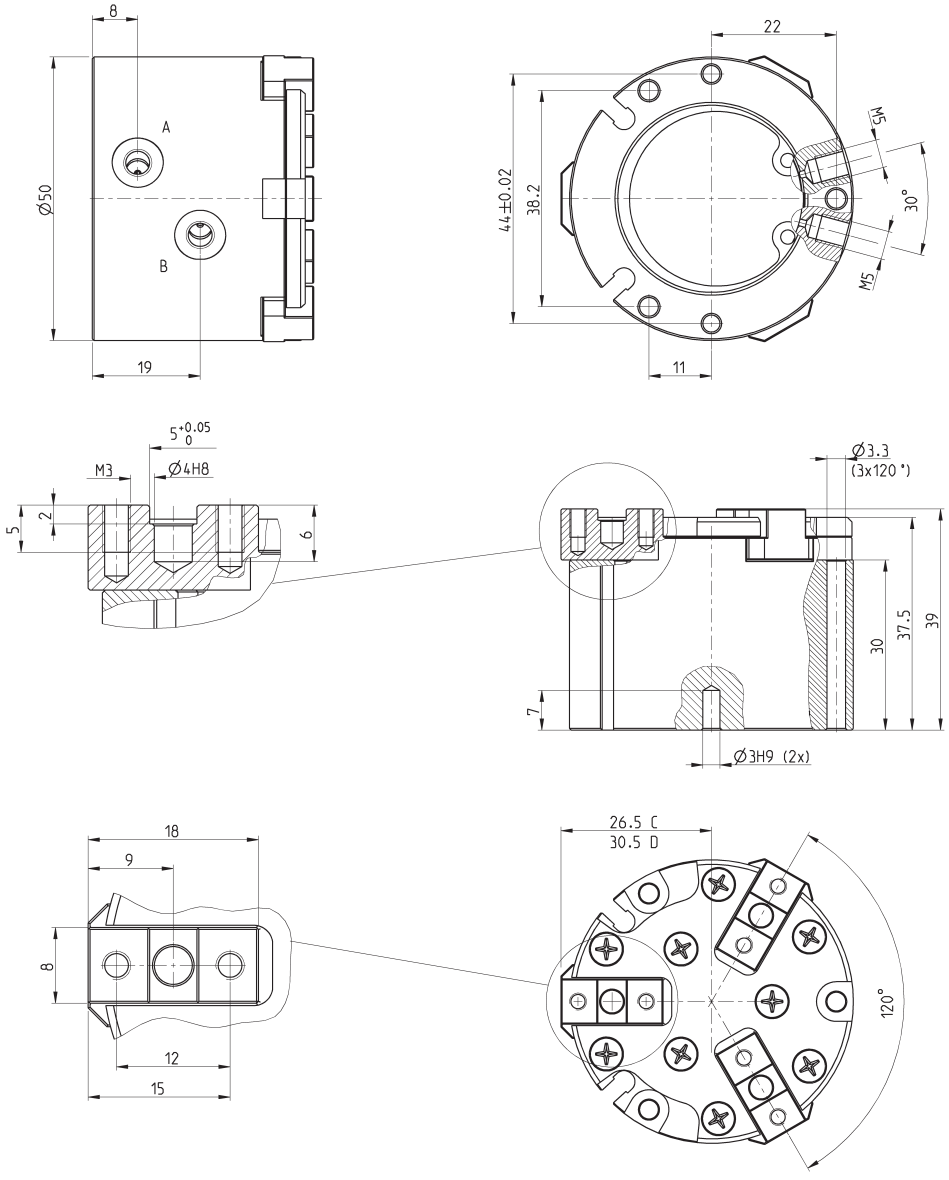


LIST OF COMPONENTS	
PARTS	MATERIALS
1 - Body	Aluminium
2 - Jaw	Stainless steel
3 - Piston	Stainless steel
4 - Seals	HNBR / NBR
5 - Levers	Steel
6 - End cover	Aluminium
7 - Seeger	Steel
8 - Magnet	Neodymium
9 - Cover	Aluminium

Serie CGCN grippers, size 50mm



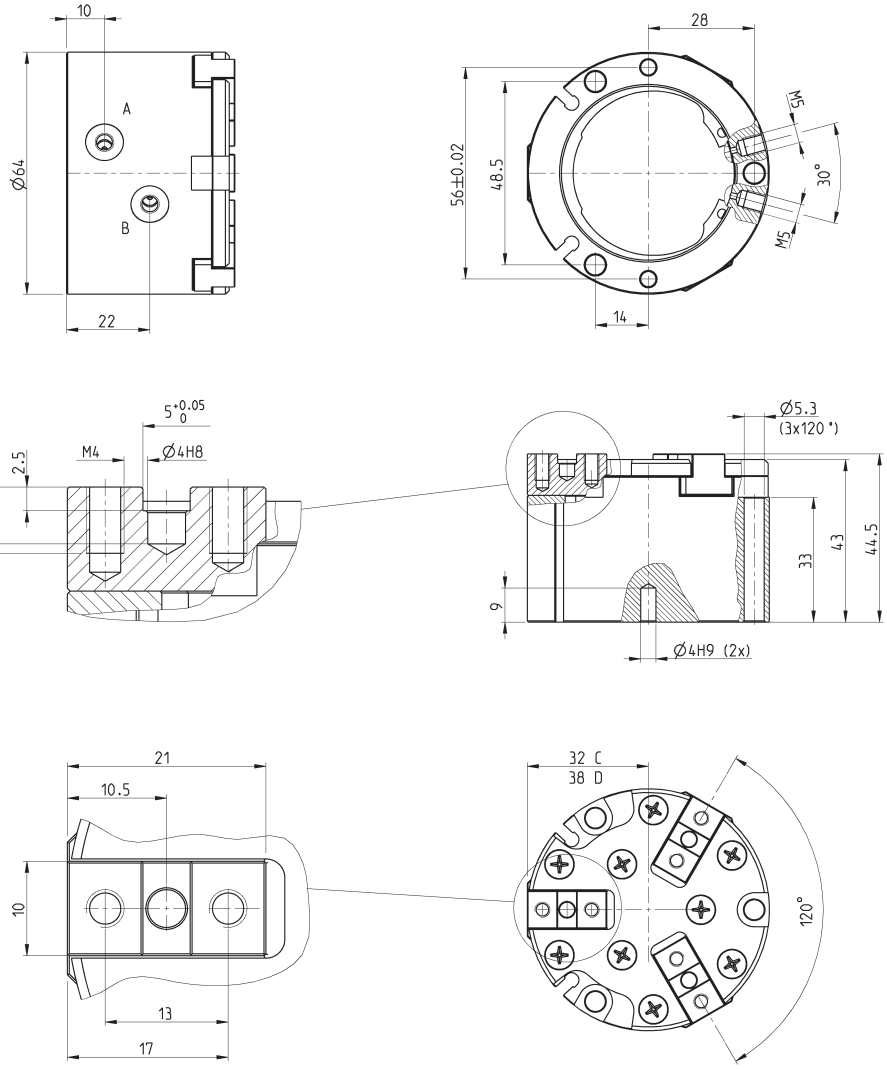
DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection
C = Closed gripper
D = Open gripper



Mod.	Closing gripping force each jaw at 6 bar (N)	Total closing gripping force at 6 bar (N)	Opening gripping force each jaw at 6 bar (N)	Total opening gripping force at 6 bar (N)	Stroke per jaw (mm)	Working pressure (bar)	Working temperature (°C)	Repeatability (mm)	Opening T (ms)	Closing T (ms)	Weight (Kg)
CGCN-050	84	253	95	286	4	2 ÷ 8	5 ÷ 60	≤ 0.05	60	64	0.21

Serie CGCN grippers, size 64mm

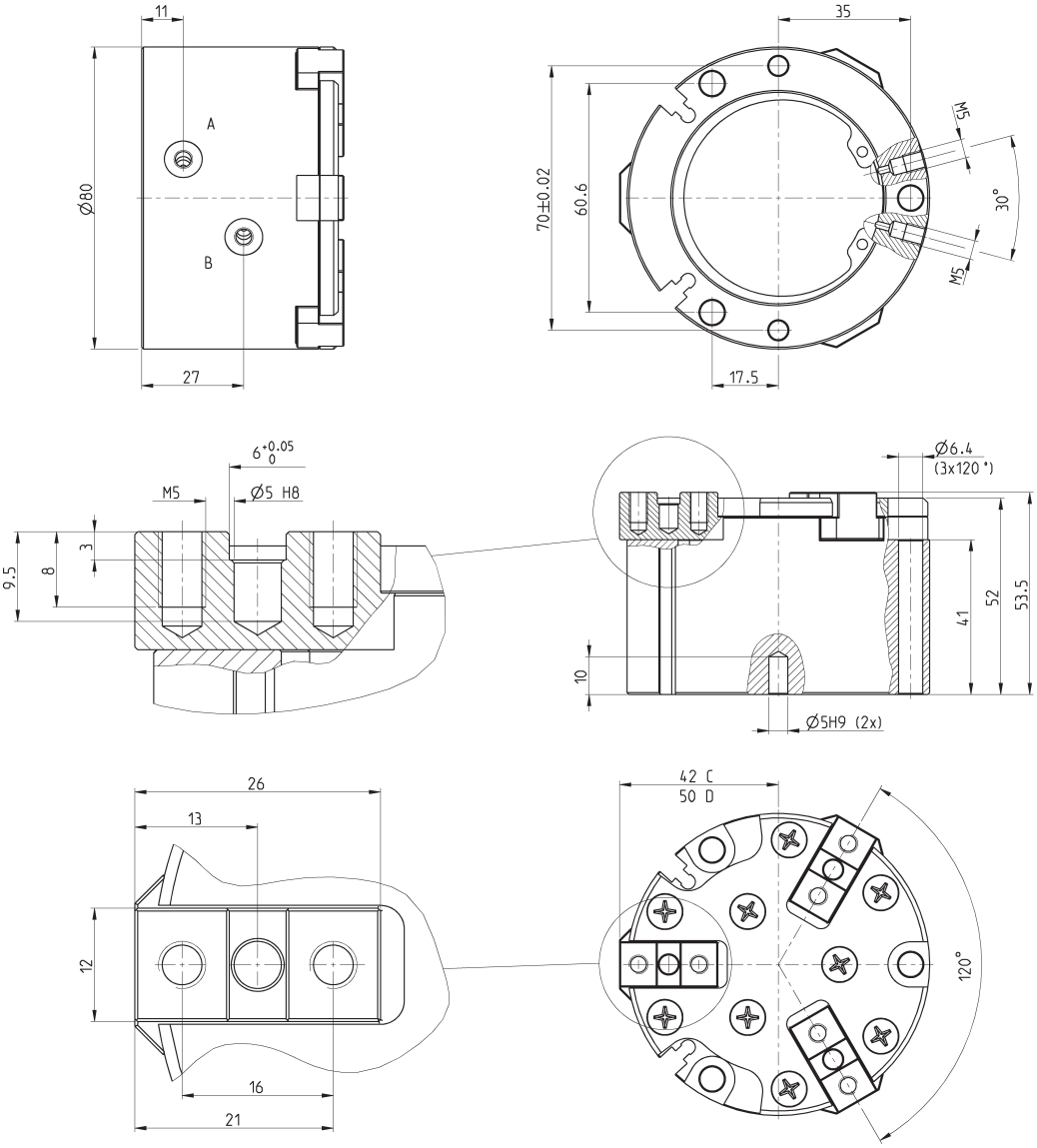
DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection
C = Closed gripper
D = Open gripper



Mod.	Closing gripping force each jaw at 6 bar (N)	Total closing gripping force at 6 bar (N)	Opening gripping force each jaw at 6 bar (N)	Total opening gripping force at 6 bar (N)	Stroke per jaw (mm)	Working pressure (bar)	Working temperature (°C)	Repeatability (mm)	Opening T (ms)	Closing T (ms)	Weight (Kg)
CGCN-064	230	690	255	764	6	2 ÷ 8	5 ÷ 60	≤ 0.05	79	78	0.4

Serie CGCN grippers, size 80mm

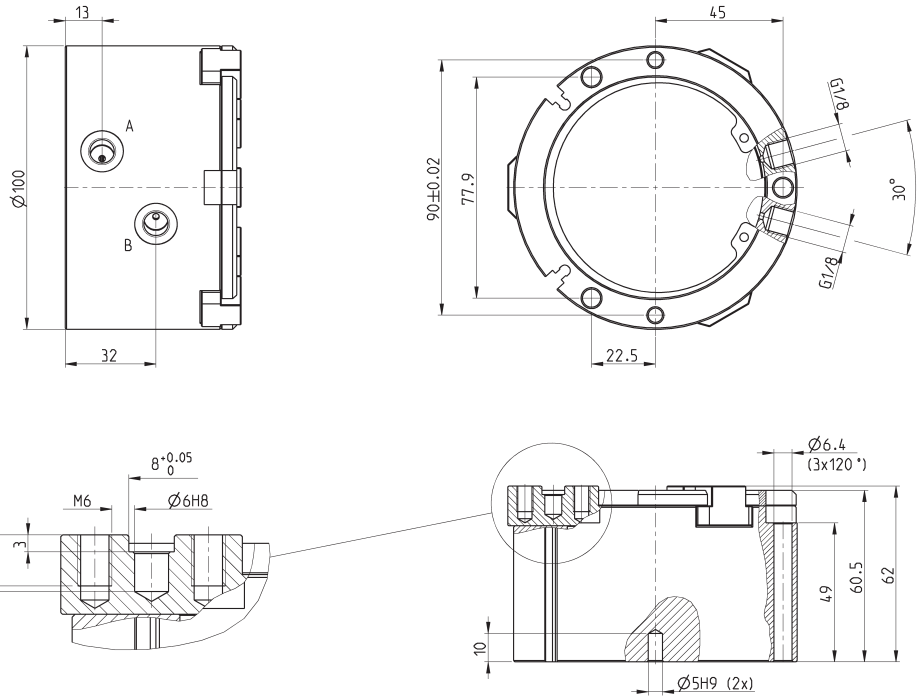
DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection
C = Closed gripper
D = Open gripper

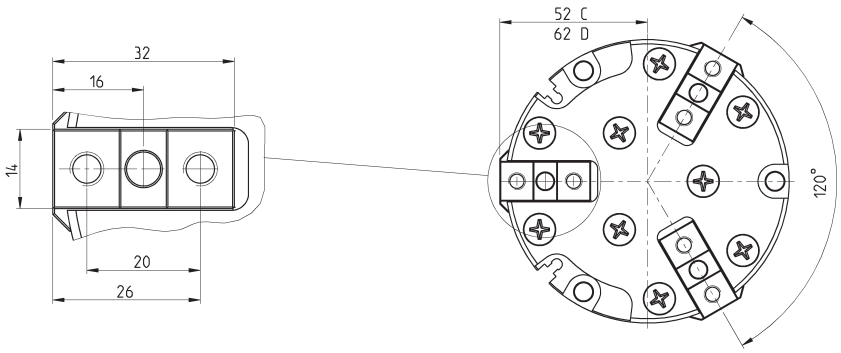


Mod.	Closing gripping force each jaw at 6 bar (N)	Total closing gripping force at 6 bar (N)	Opening gripping force each jaw at 6 bar (N)	Total opening gripping force at 6 bar (N)	Stroke per jaw (mm)	Working pressure (bar)	Working temperature (°C)	Repeatability (mm)	Opening T (ms)	Closing T (ms)	Weight (Kg)
CGCN-080	320	960	365	1095	8	2 ÷ 8	5 ÷ 60	≤ 0.05	87	99	0.76

Serie CGCN grippers, size 100mm

DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection
C = Closed gripper
D = Open gripper





Mod.	Closing gripping force each jaw at 6 bar (N)	Total closing gripping force at 6 bar (N)	Opening gripping force each jaw at 6 bar (N)	Total opening gripping force at 6 bar (N)	Stroke per jaw (mm)	Working pressure (bar)	Working temperature (°C)	Repeatability (mm)	Opening T (ms)	Closing T (ms)	Weight (Kg)
CGCN-100	677	2030	751	2254	10	2 ÷ 8	5 ÷ 60	≤ 0.05	110	125	1.36

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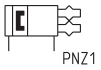
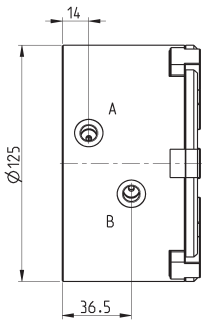
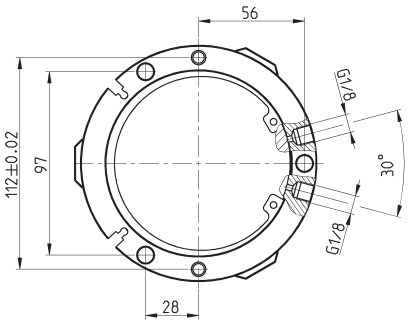
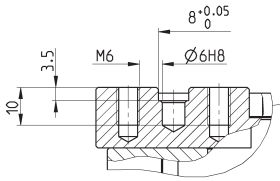
Serie CGCN grippers, size 125mm

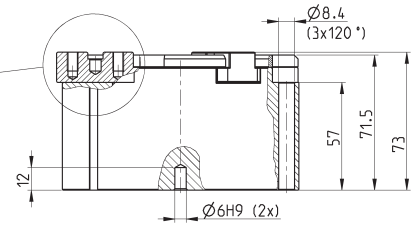


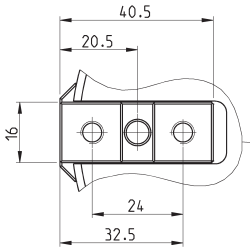
DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection
C = Closed gripper
D = Open gripper

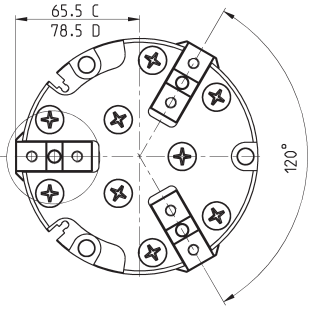






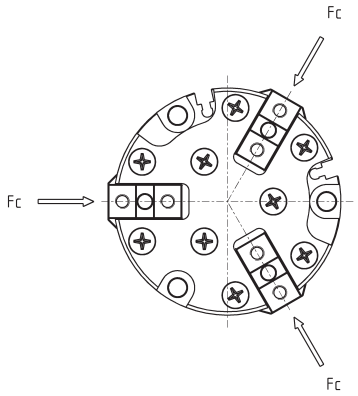


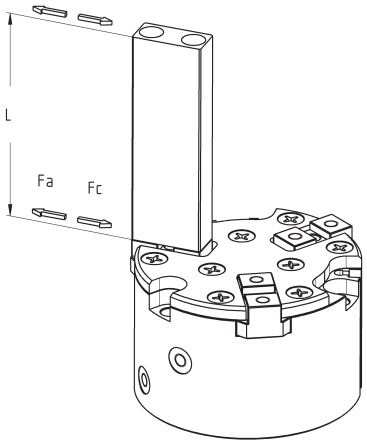




Mod.	Closing gripping force each jaw at 6 bar (N)	Total closing gripping force at 6 bar (N)	Opening gripping force each jaw at 6 bar (N)	Total opening gripping force at 6 bar (N)	Stroke per jaw (mm)	Working pressure (bar)	Working temperature (°C)	Repeatability (mm)	Opening T (ms)	Closing T (ms)	Weight (Kg)
CGCN-125	1093	3280	1195	3584	13	2 ÷ 8	5 ÷ 60	≤ 0.05	141	161	2.44

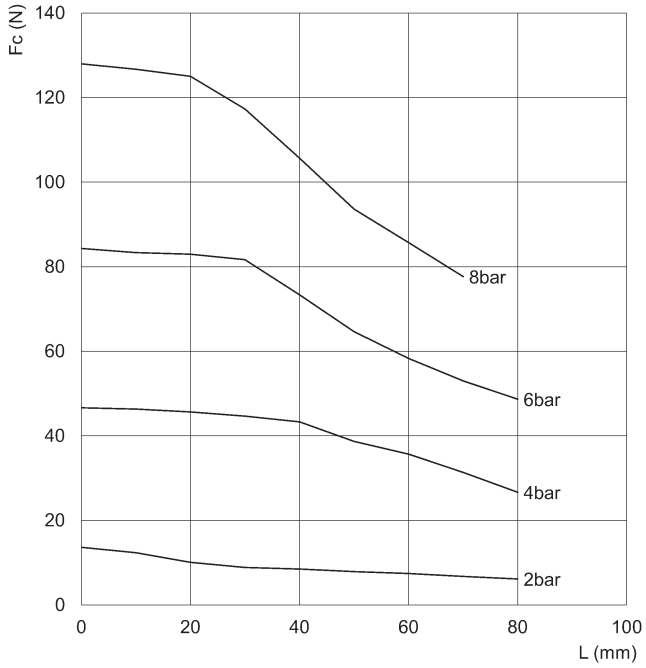
GRIPPING FORCE PER SINGLE JAW





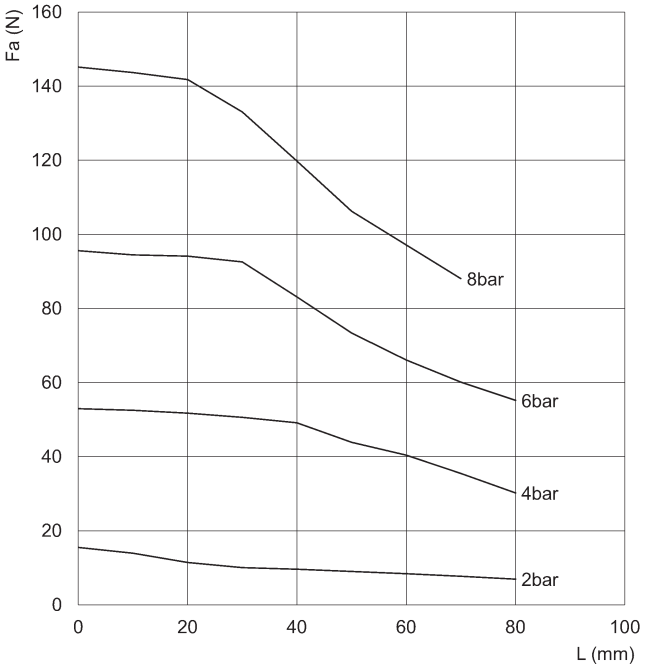
The total gripping force has to be calculated as follows:
Total Fc = Fc x 3
Total Fa = Fa x 3

Fc = closing gripping force
Fa = opening gripping force
L = gripping point length



CGCN-050

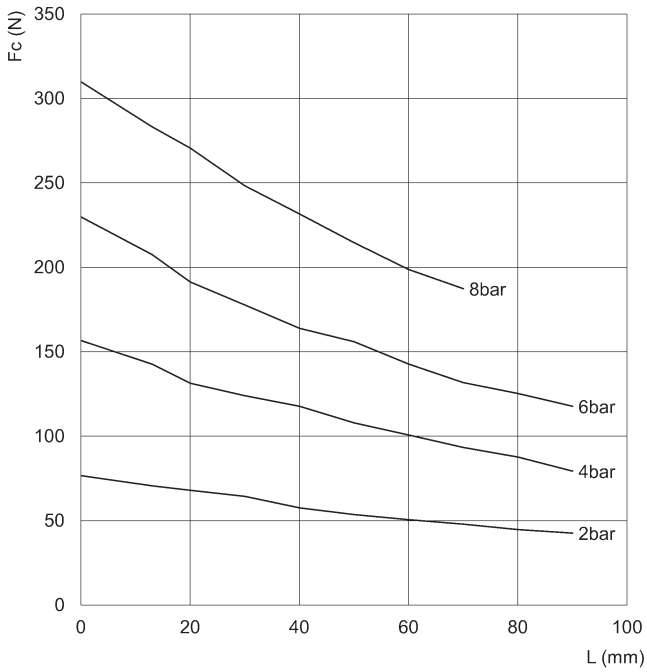
Fc = closing gripping force
L = gripping point length



CGCN-050

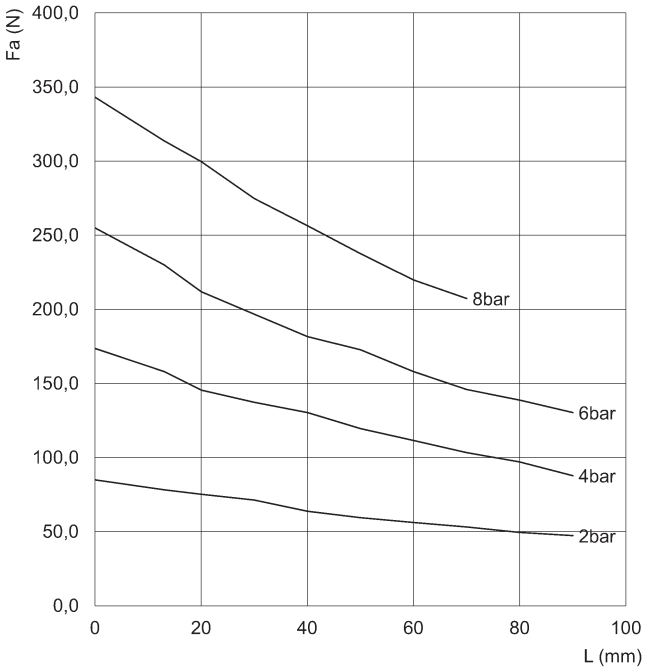
Fa = opening gripping force
L = gripping point length

GRIPPING FORCE PER SINGLE JAW



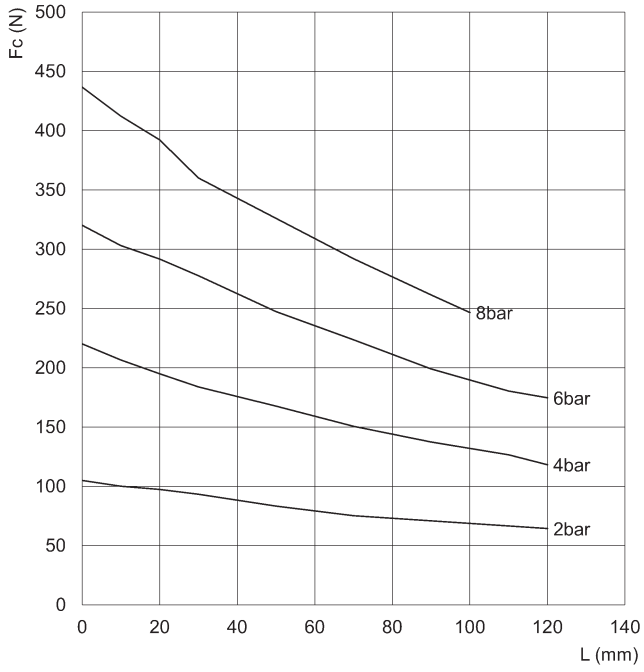
CGCN-064

Fc = closing gripping force
L = gripping point length



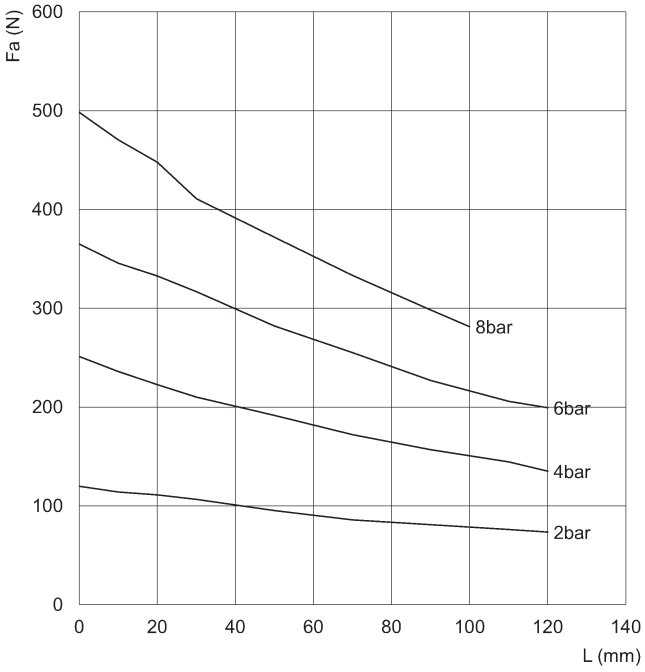
CGCN-064

Fa = opening gripping force
L = gripping point length



CGCN-080

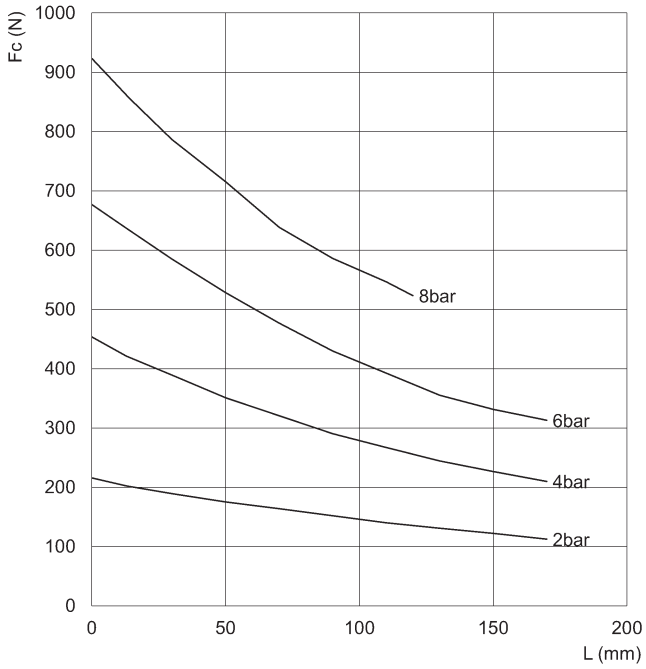
Fc = closing gripping force
L = gripping point length



CGCN-080

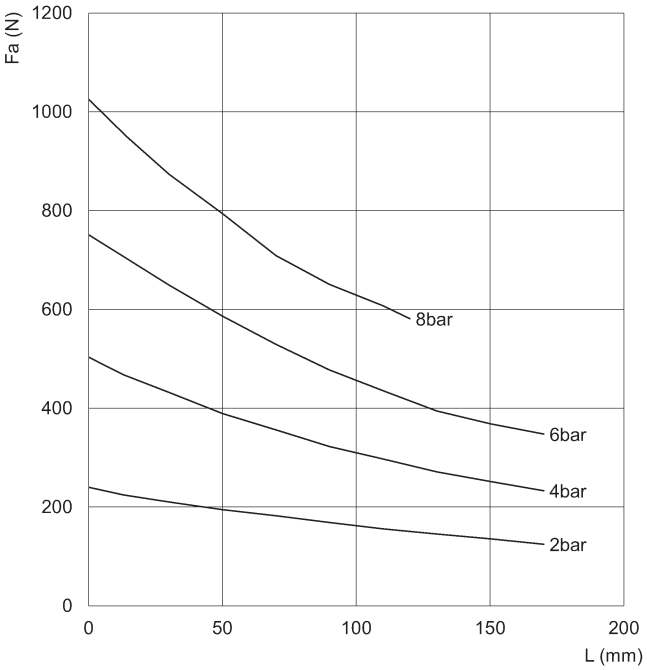
Fa = opening gripping force
L = gripping point length

GRIPPING FORCE PER SINGLE JAW



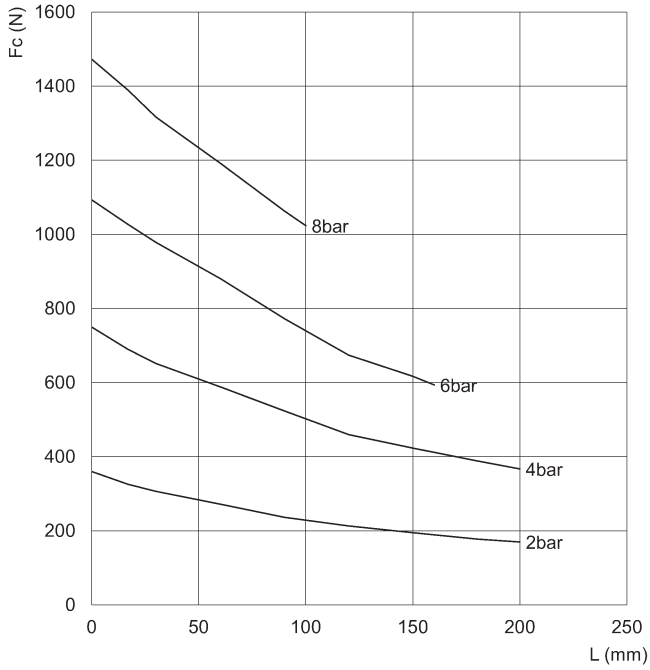
CGCN-100

Fc = closing gripping force
L = gripping point length



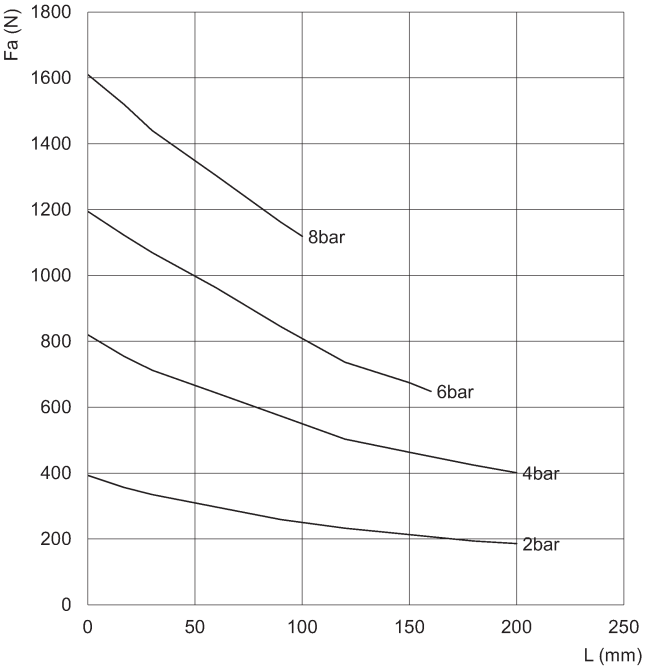
CGCN-100

Fa = opening gripping force
L = gripping point length



CGCN-125

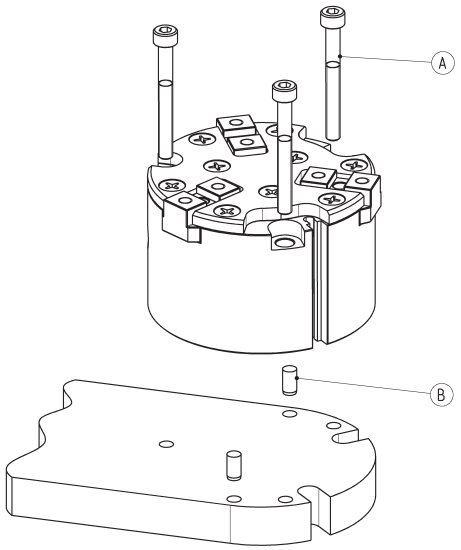
Fc = closing gripping force
L = gripping point length

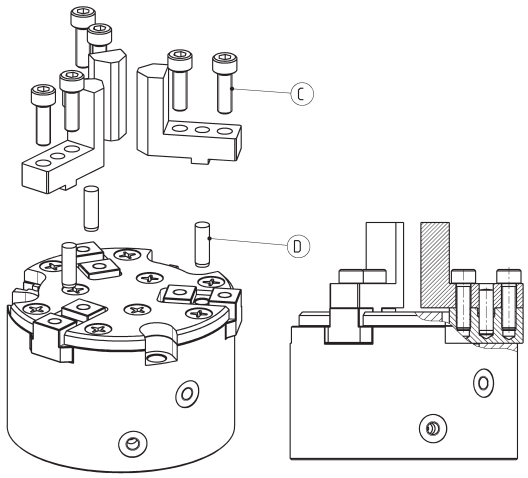


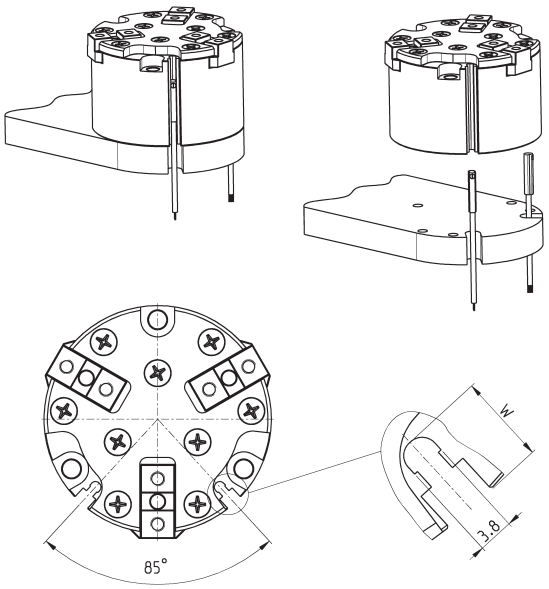
CGCN-125

Fa = opening gripping force
L = gripping point length

Examples of mounting







Mod.	A	B	C	D	W
CGCN-050	M3	Ø3	M3	Ø4	6
CGCN-064	M5	Ø4	M4	Ø4	6.4
CGCN-080	M6	Ø5	M5	Ø5	9.5
CGCN-100	M6	Ø5	M6	Ø6	8.6
CGCN-125	M8	Ø6	M6	Ø6	11

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