RADIAL GRIPPERS 180° OPENING
SERIES CGSY

DOUBLE ACTING, MAGNETIC, SELF-CENTERING
SIZE: 10, 16, 20, 25



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.

- 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

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)
Materials	PTFE, Silicone and Copper free
Compatible magnetic proximity switches	Series CSD

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

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RADIAL GRIPPERS 180° OPENING
SERIES CGSY - CODING EXAMPLE

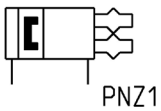
CODING EXAMPLE

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

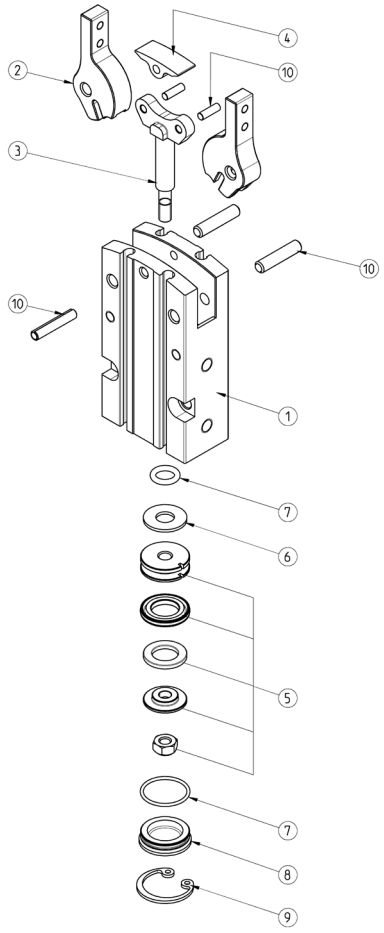
Pneumatic symbols

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



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Series CGSY grippers - construction

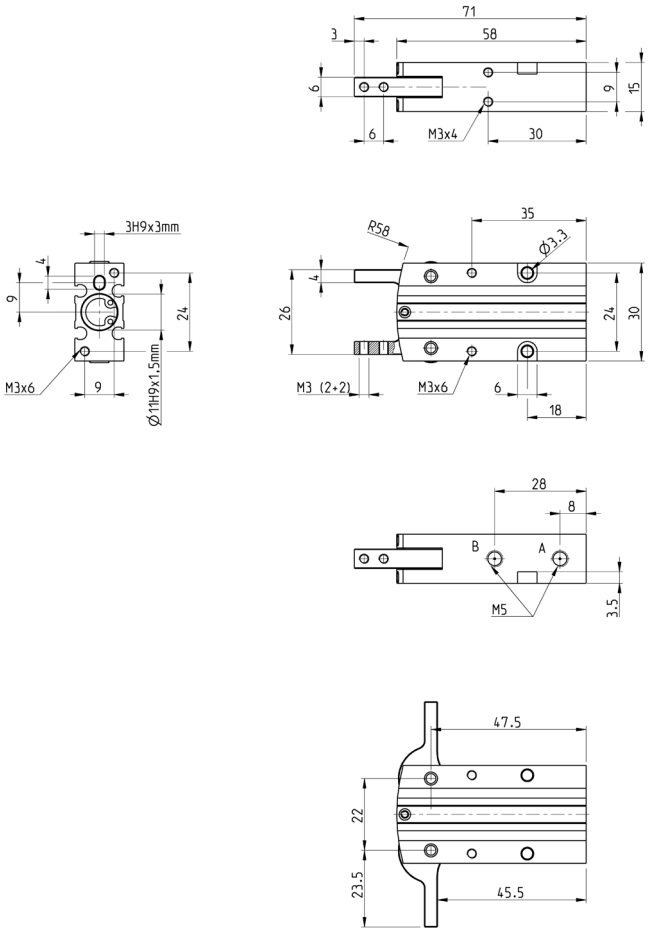


PARTS	Materials
1 - Body	Aluminium
2 - Jaw	Stainless steel
3 - Piston	Stainless steel
4 - Jaw cover	Pom (Acetal)
5 - Piston	Aluminum - NBR - Stainless steel - ferrite rubber (magnets)
6 - Cushion	PU Polyurethane
7 - Seals	HNBR - NBR
8 - Rear head	Pom (Acetal)
9 - Seeger	Stainless steel
10 - Pins	Steel

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RADIAL GRIPPERS 180° OPENING
SERIES CGSY - DIMENSIONAL CHARACTERISTICS

Gripper - size 10

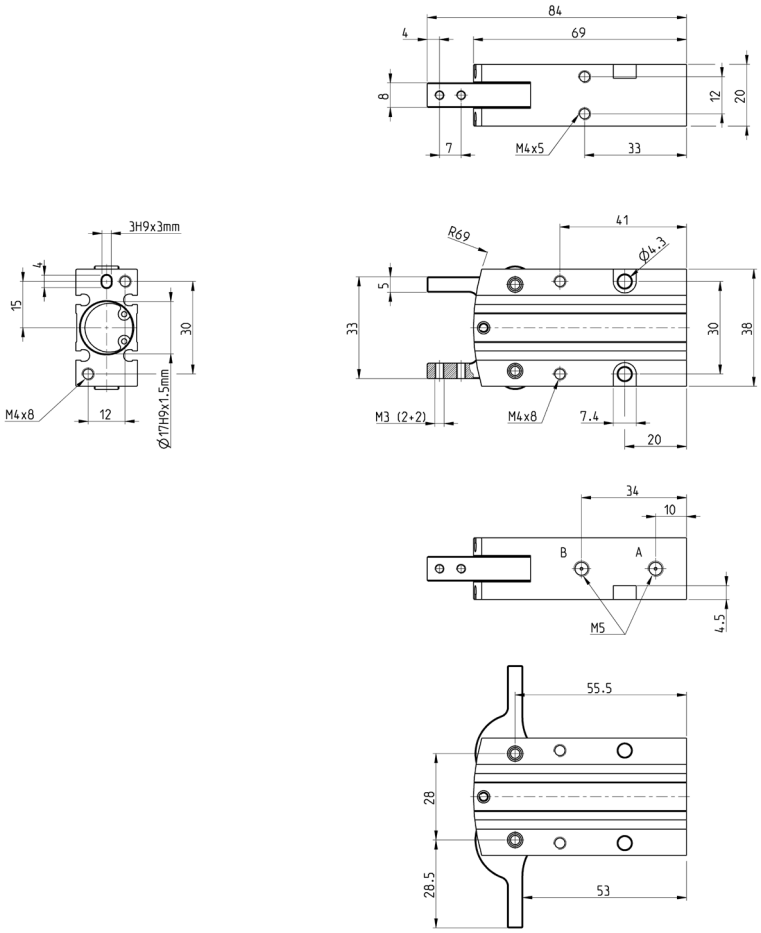


DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection

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

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Gripper - size 16



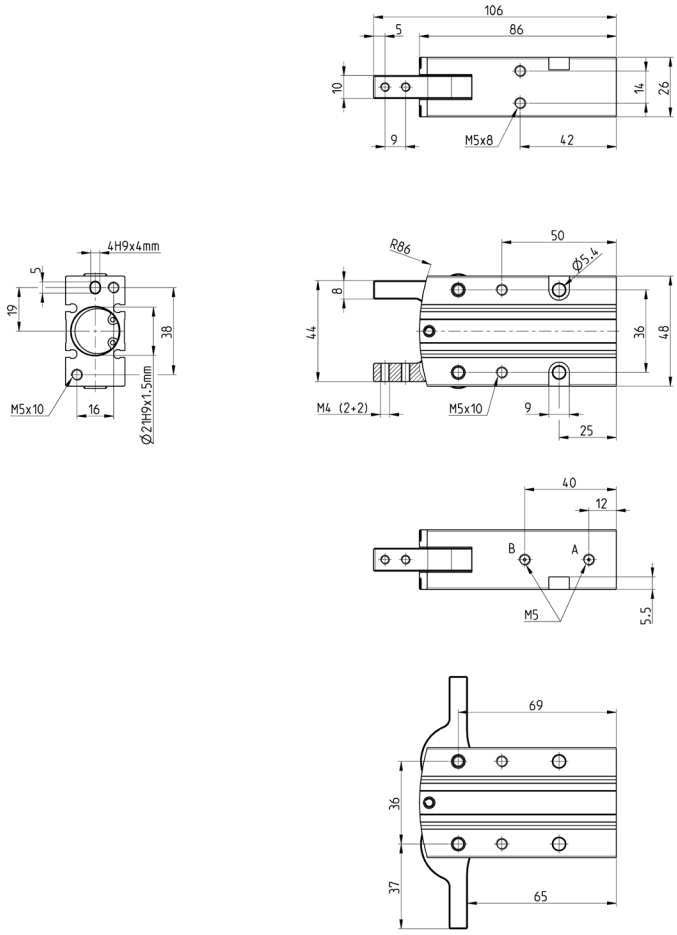
DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection

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

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RADIAL GRIPPERS 180° OPENING
SERIES CGSY - DIMENSIONAL CHARACTERISTICS

Gripper - size 20

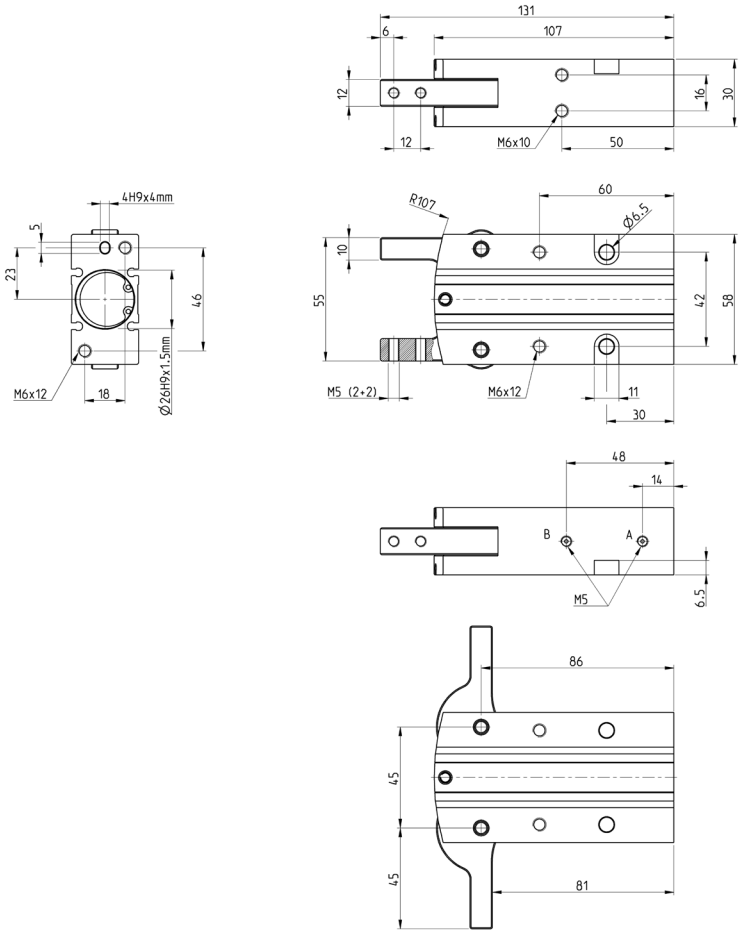


DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection

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

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Gripper - size 25

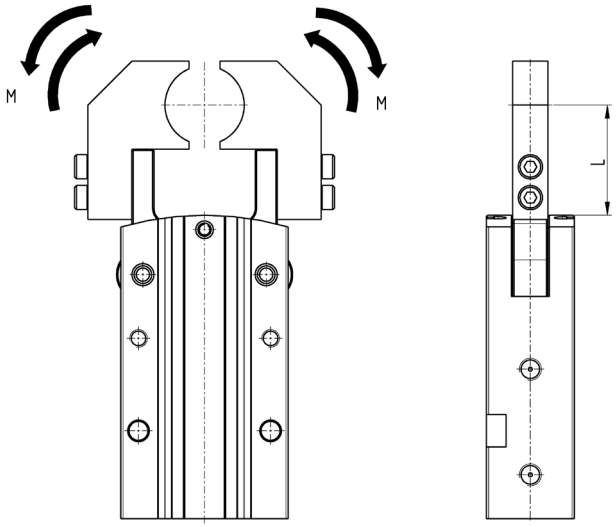


DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection

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

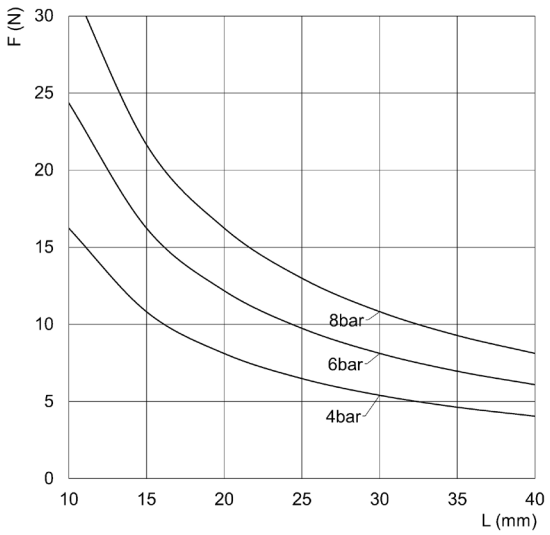
RADIAL GRIPPERS 180° OPENING
SERIES CGSY - DIAGRAMS

Gripping forces Mod. CGSY-10



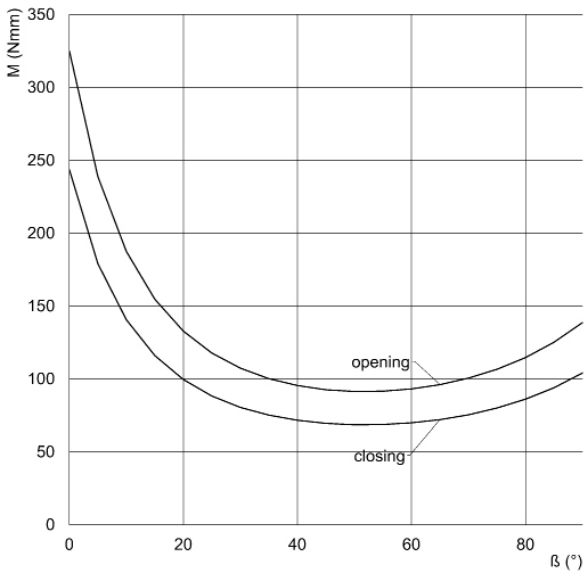
Gripping point position

L = arm
M = closing/opening moment



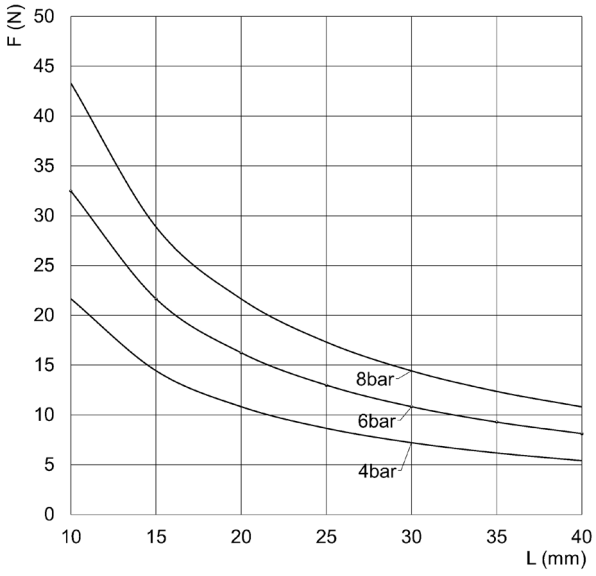
Opening gripping force

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



Moment in opening and closing

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

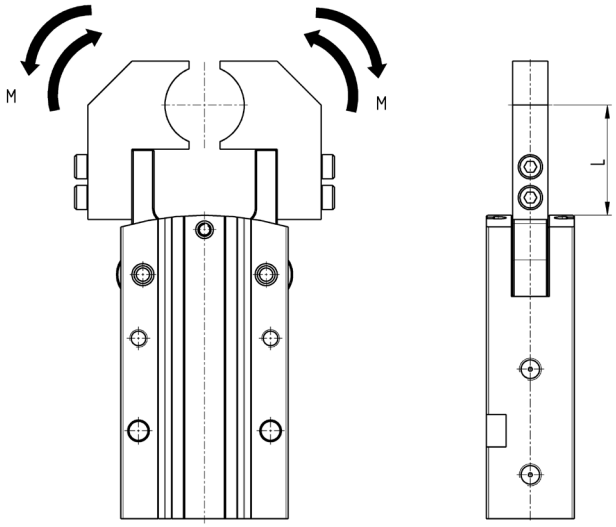


Closing gripping force

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

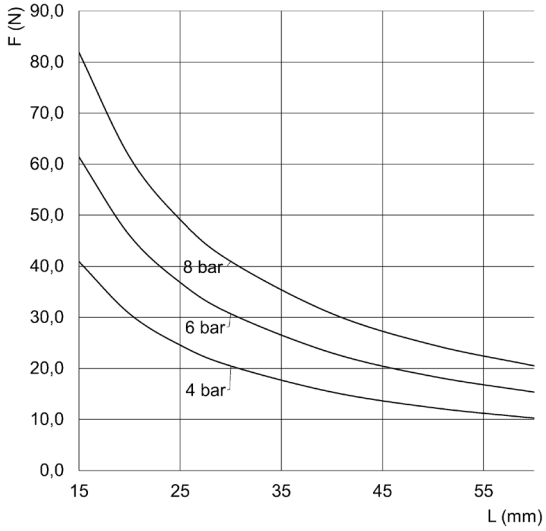
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Gripping forces Mod. CGSY-16



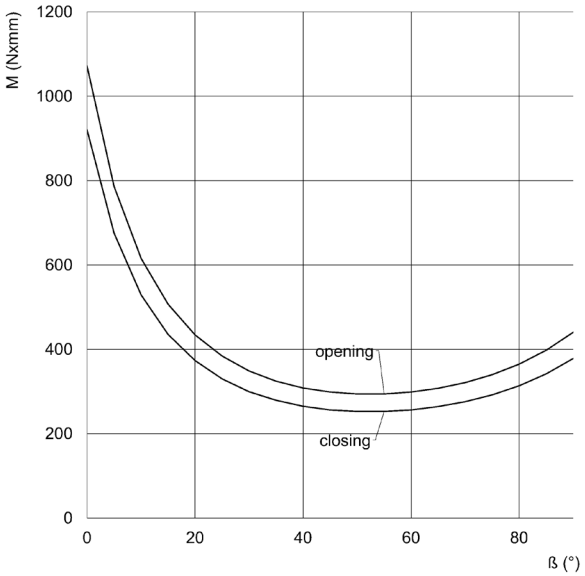
Gripping point position

L = arm
M = closing/opening moment



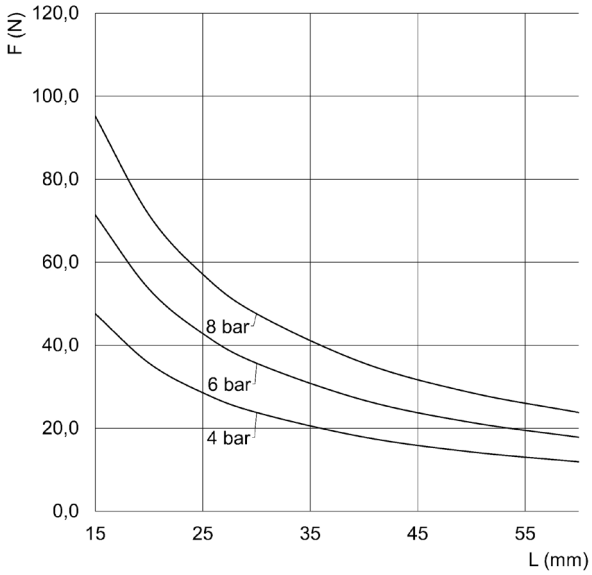
Opening gripping force

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



Moment in opening and closing

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



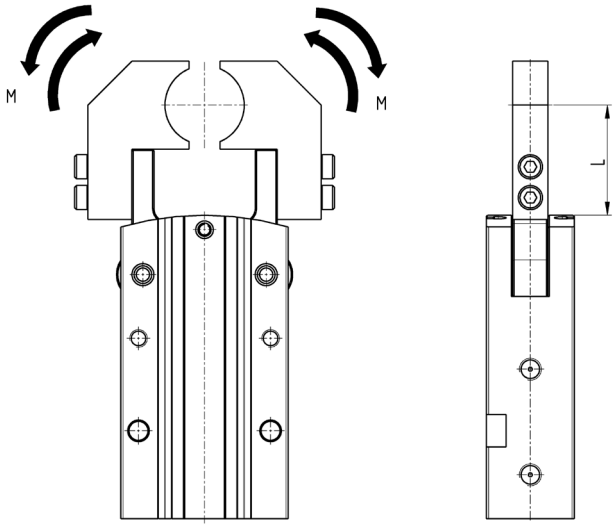
Closing gripping force

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

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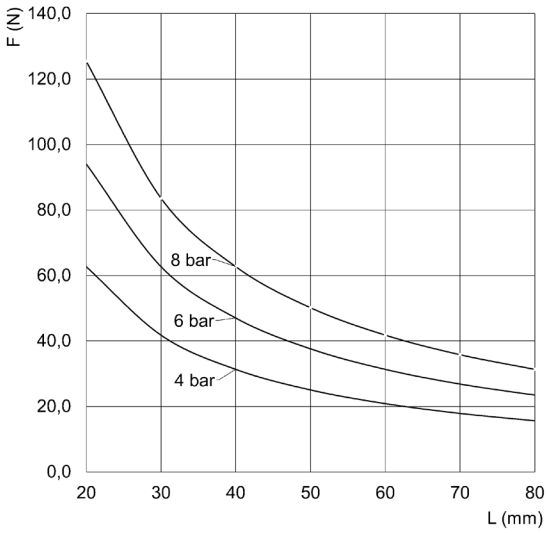
RADIAL GRIPPERS 180° OPENING
SERIES CGSY - DIAGRAMS

Gripping forces Mod. CGSY-20



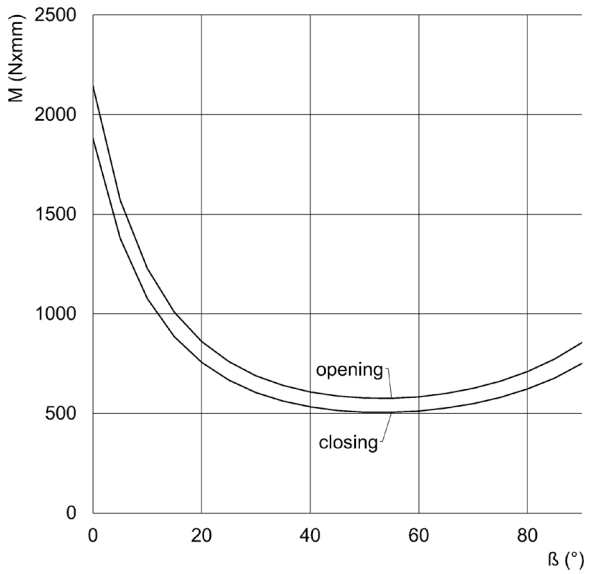
Gripping point position

L = arm
M = closing/opening moment



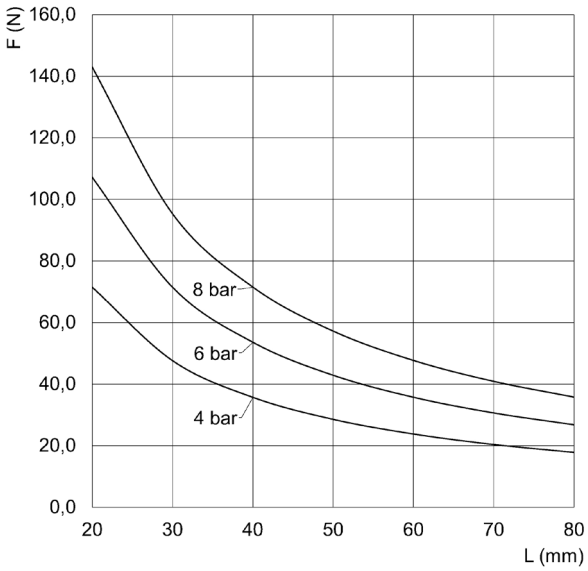
Opening gripping force

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



Moment in opening and closing

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

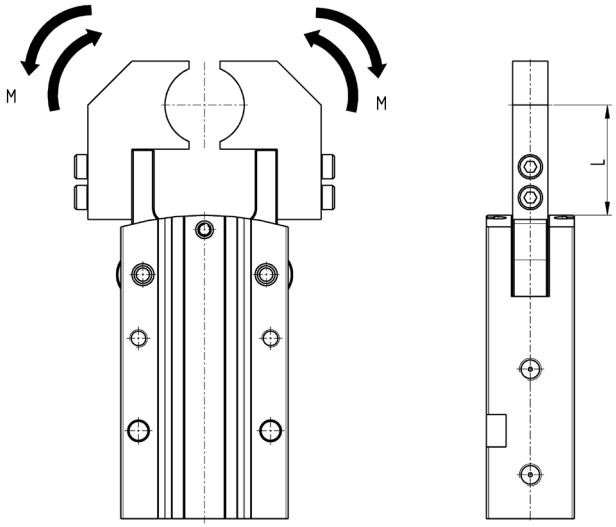


Closing gripping force

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

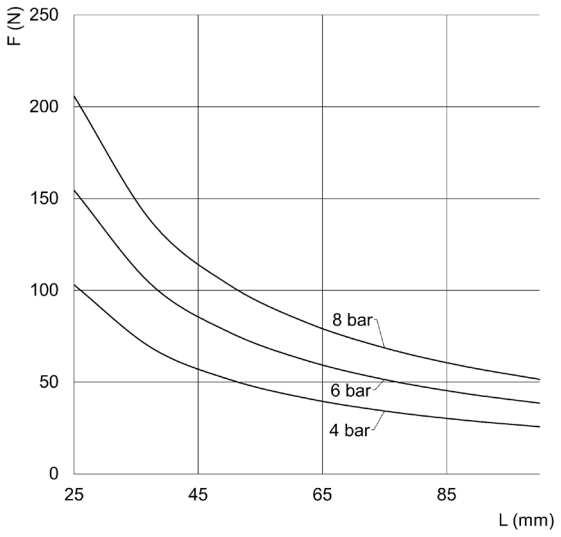
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Gripping forces Mod. CGSY-25



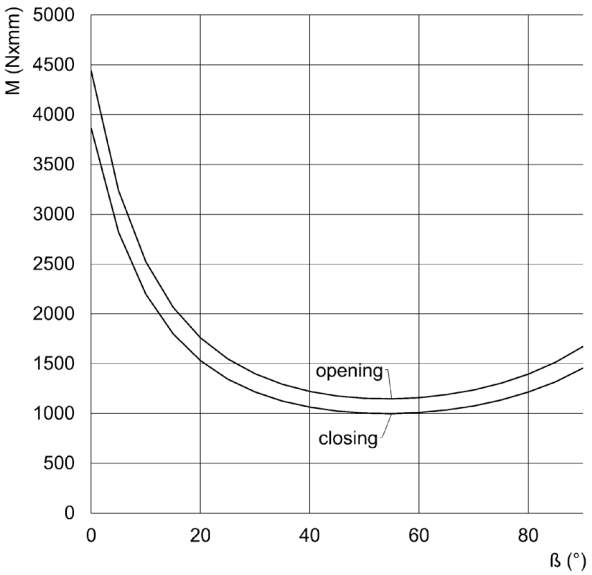
Gripping point position

L = arm
M = closing/opening moment



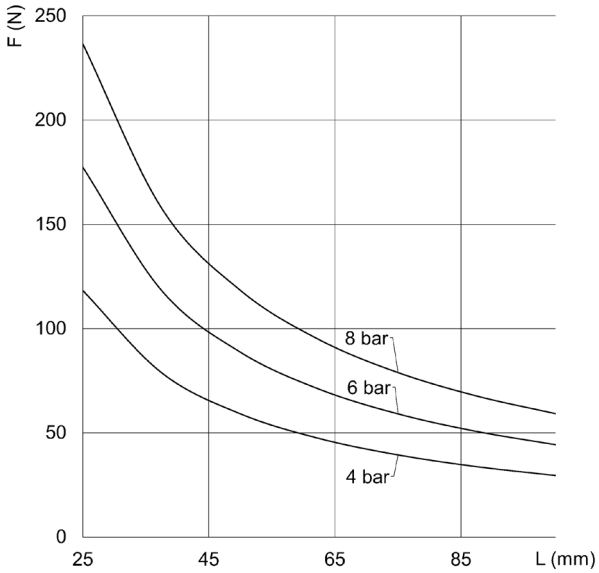
Opening gripping force

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



Moment in opening and closing

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



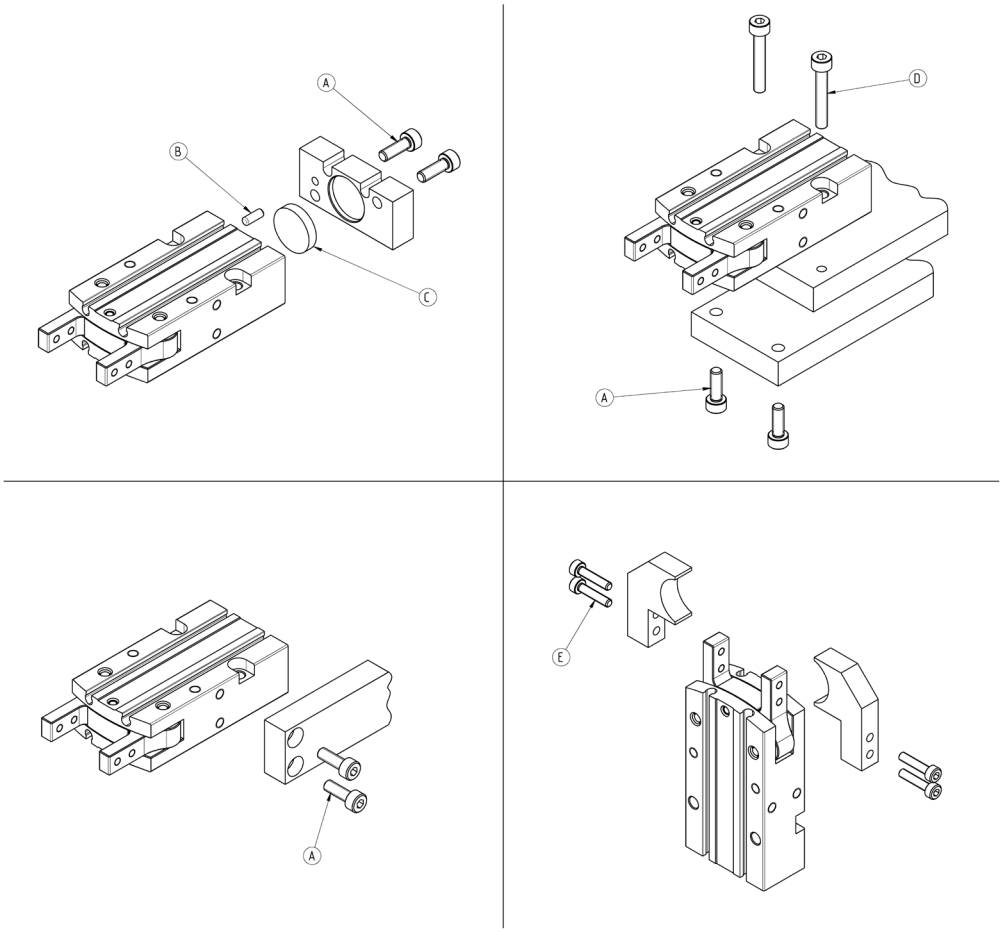
Closing gripping force

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

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RADIAL GRIPPERS 180° OPENING
SERIES CGSY - CATEGORIA DA INSERIRE

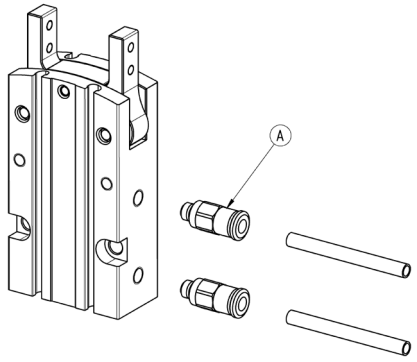
Examples of mounting



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

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Air supply ports

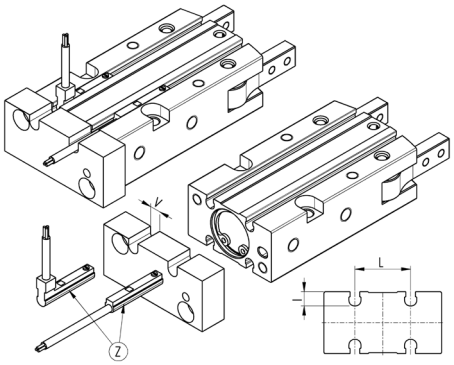


Mod.	A
CGSY-..-10	M5
CGSY-..-16	M5
CGSY-..-20	M5
CGSY-..-25	M5

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.

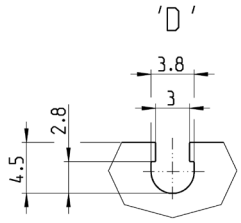


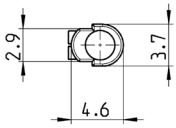
Mod.	I	L	V
CGSY-..-10	3.8	13	5
CGSY-..-16	4.7	18	5
CGSY-..-20	5.2	20	5
CGSY-..-25	5.2	24	5

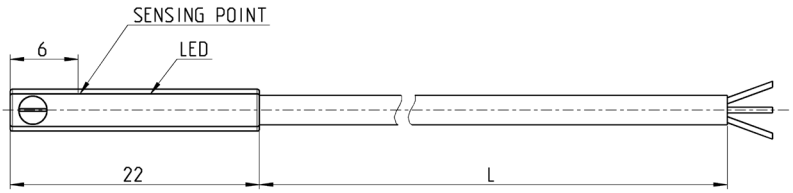
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Magnetic proximity switches, 3-wire cable, D-slot





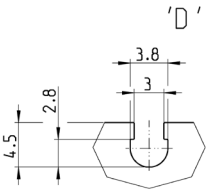




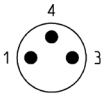
Mod.	Operation	Connections	Voltage	Output	Max. current	Max Load	Protection	L = length cable
CSD-D-334	Magnetoresistive	3 wires	10 ÷ 27 V DC	PNP	200 mA	6W	Against polarity reversing and overvoltage	2 m

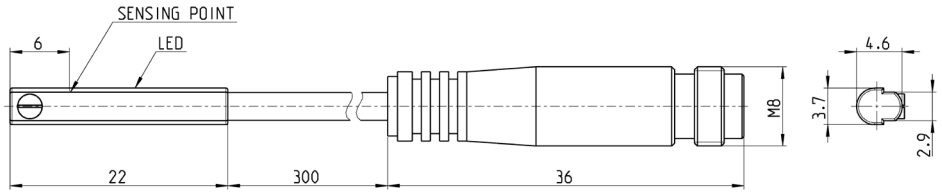
Series CSD magnetic switches, male M8 3-pin conn., D-slot, right





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	6 W	Against polarity reversing and overvoltage

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