

New

Series CGCN self-centering three-jaw grippers with T-guide

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

SERIES CGCN SELF-CENTERING THREE-JAW GRIPPERS WITH T-GUIDE



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

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.

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.

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 |
| Sensores magnéticos de proximidad compatibles | Series CSD |

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

CODING EXAMPLE

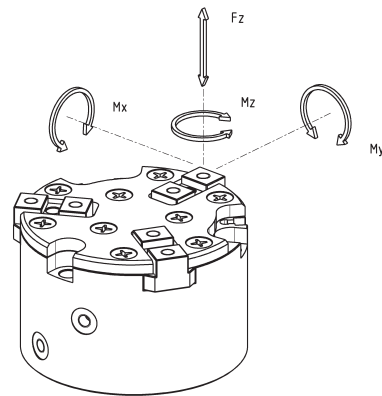
| | | | | |
|-------------|---|------------|---|-----------|
| CGCN | - | 050 | - | EX |
|-------------|---|------------|---|-----------|

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

SERIES CGCN SELF-CENTERING THREE-JAW GRIPPERS WITH T-GUIDE

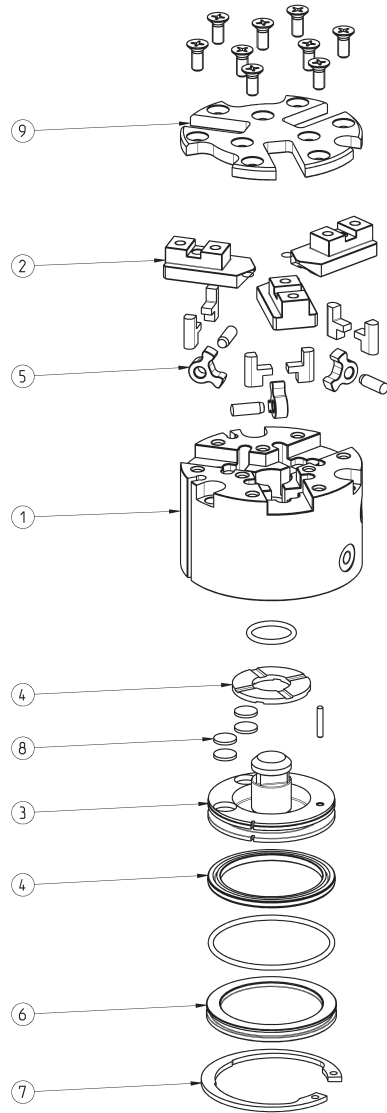
Maximum admissible loads and torques

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



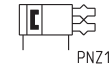
| Mod. | Fz s (N) | Mx s (Nm) | My s (Nm) | Mz s (Nm) |
|-----------------|----------|-----------|-----------|-----------|
| CGCN-050 | 360 | 6.3 | 6.93 | 6.57 |
| CGCN-064 | 540 | 11.7 | 12.6 | 12.6 |
| CGCN-080 | 900 | 23.4 | 24.3 | 21.6 |
| CGCN-100 | 1350 | 52.2 | 58.5 | 58.5 |
| CGCN-125 | 2250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

Series CGCN gripper construction

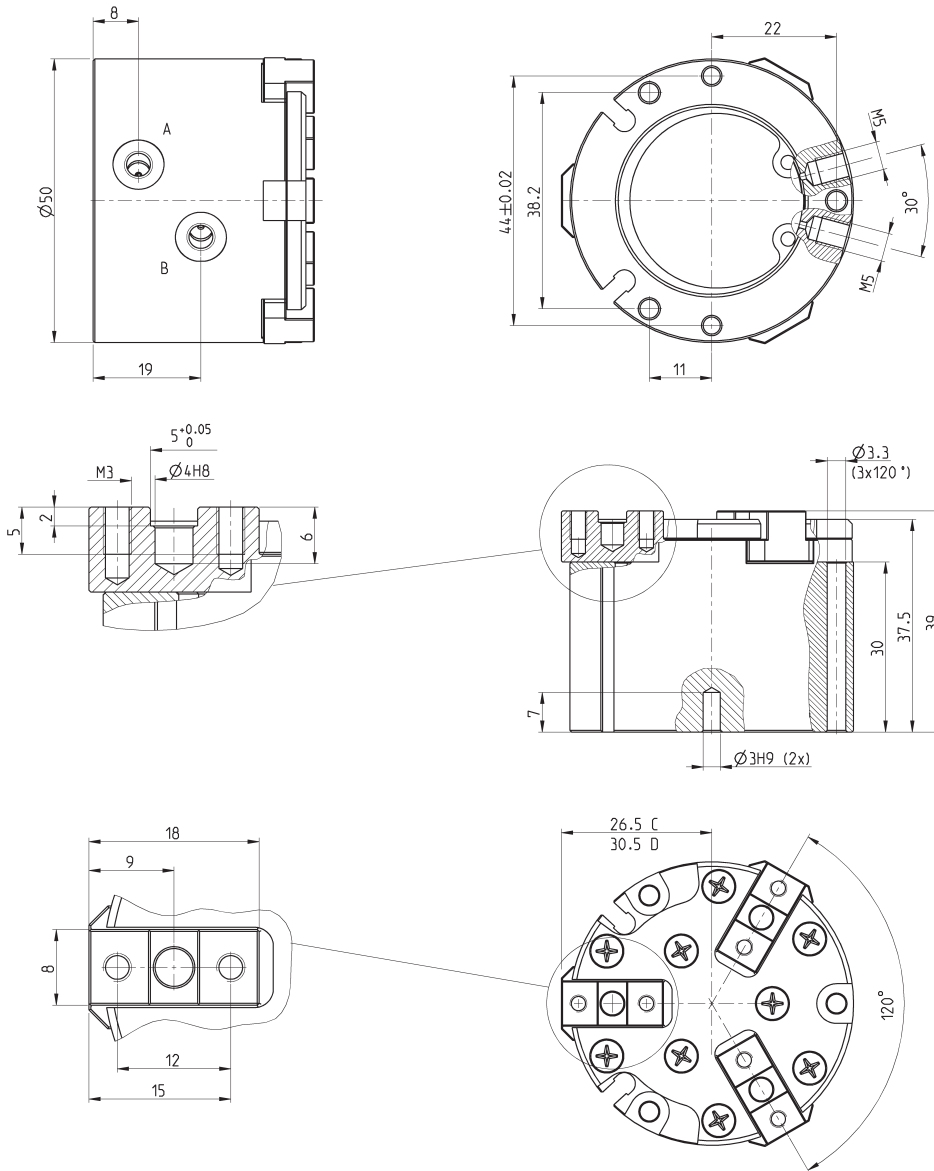


| LIST OF COMPONENTS | |
|--------------------|-----------------|
| PARTS | MATERIALS |
| 1 - Body | Aluminium |
| 2 - Jaw | Stainless steel |
| 3 - Piston | Stainless steel |
| 4 - Seals | HNBR / NBR |
| 5 - Levers | Steel |
| 6 - End cover | Aluminium |
| 7 - Seeger | Steel |
| 8 - Magnet | Neodymium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

Serie CGCN grippers, size 50mm



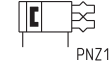
DRAWING LEGEND:
 A = Opening of air connection
 B = Closing of air connection
 C = Closed gripper
 D = Open gripper



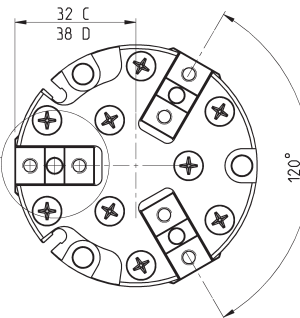
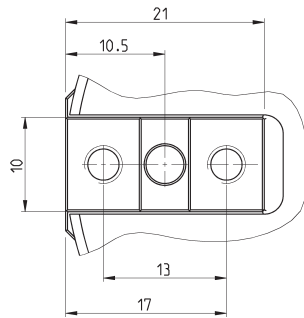
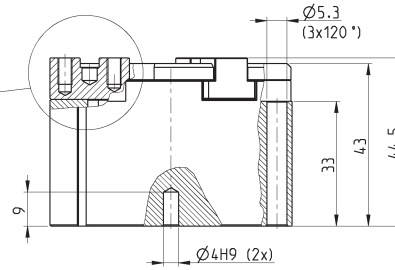
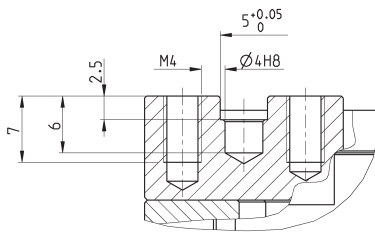
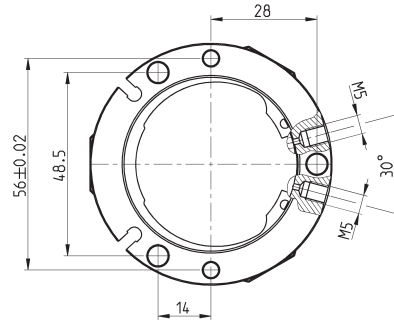
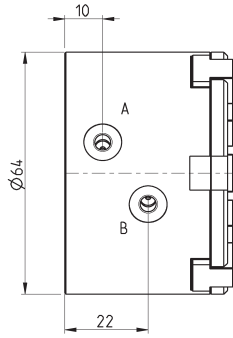
SERIES CGCN SELF-CENTERING THREE-JAW GRIPPERS WITH T-GUIDE

| 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

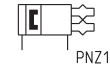


DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection
C = Closed gripper
D = Open gripper

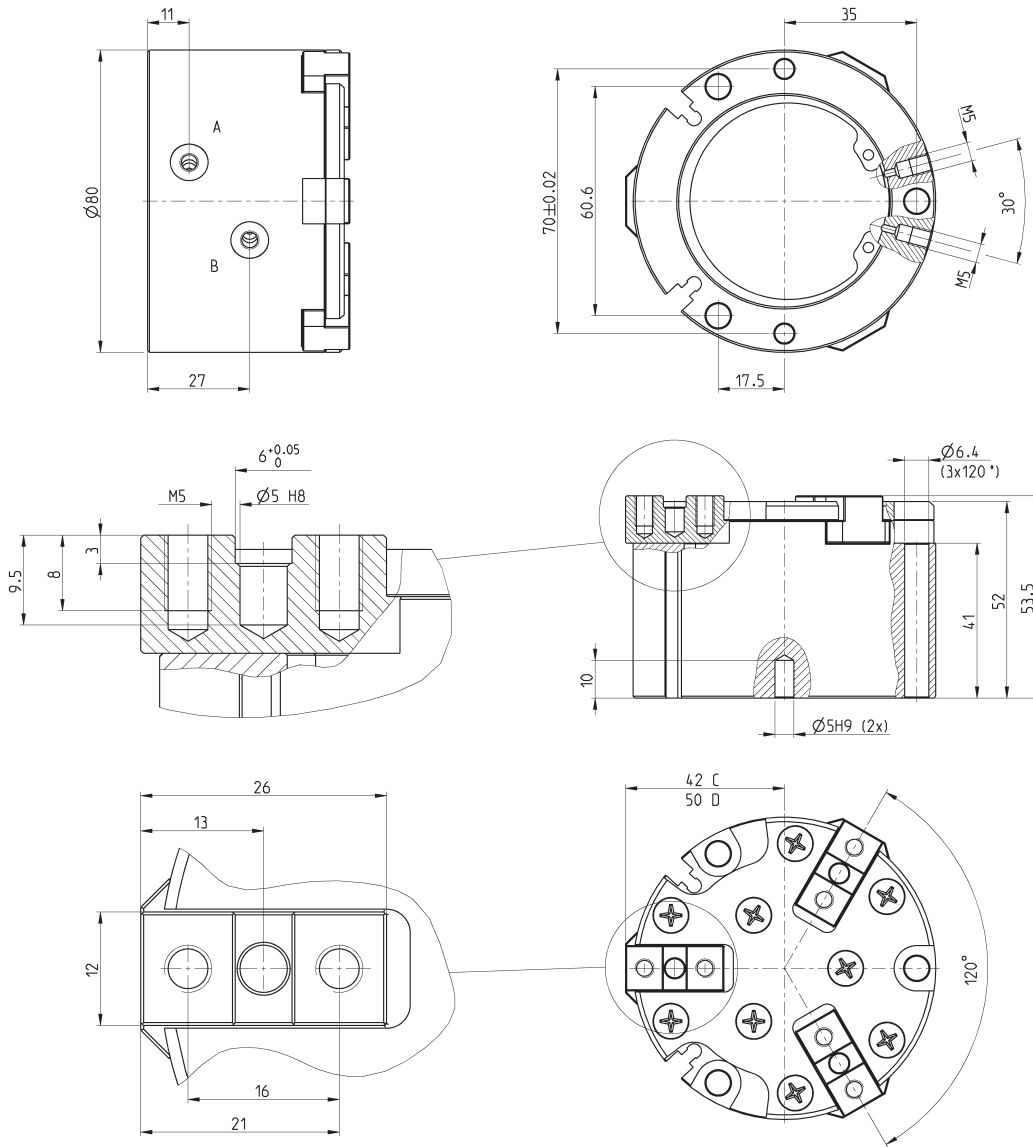


| Mod. | Closing gripping force each jaw at 6 bar (N) | Total closing gripping force at 6 bar (N) | Opening gripping force each jaw at 6 bar (N) | Total opening gripping force at 6 bar (N) | Stroke per jaw (mm) | Working pressure (bar) | Working temperature (°C) | Repeatability (mm) | Opening T (ms) | 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



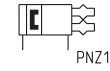
DRAWING LEGEND:
 A = Opening of air connection
 B = Closing of air connection
 C = Closed gripper
 D = Open gripper



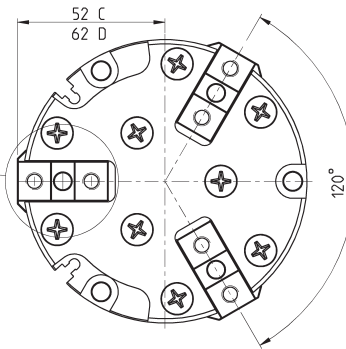
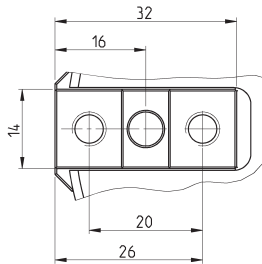
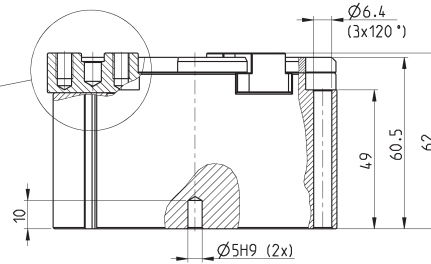
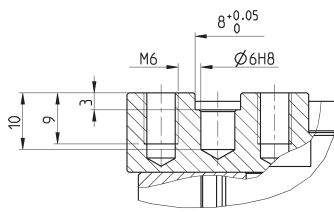
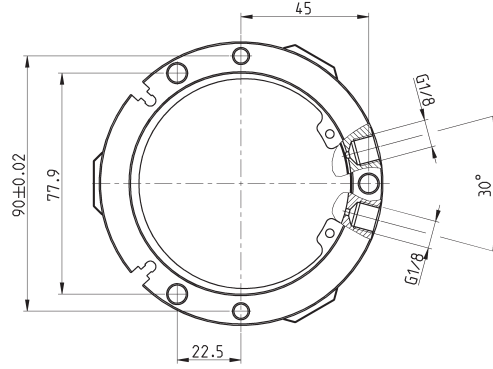
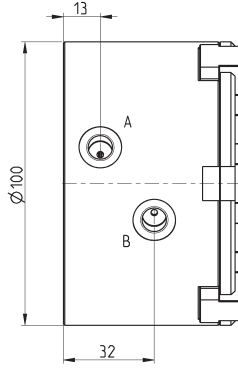
SERIES CGCN SELF-CENTERING THREE-JAW GRIPPERS WITH T-GUIDE

| 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

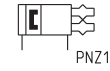


DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection
C = Closed gripper
D = Open gripper

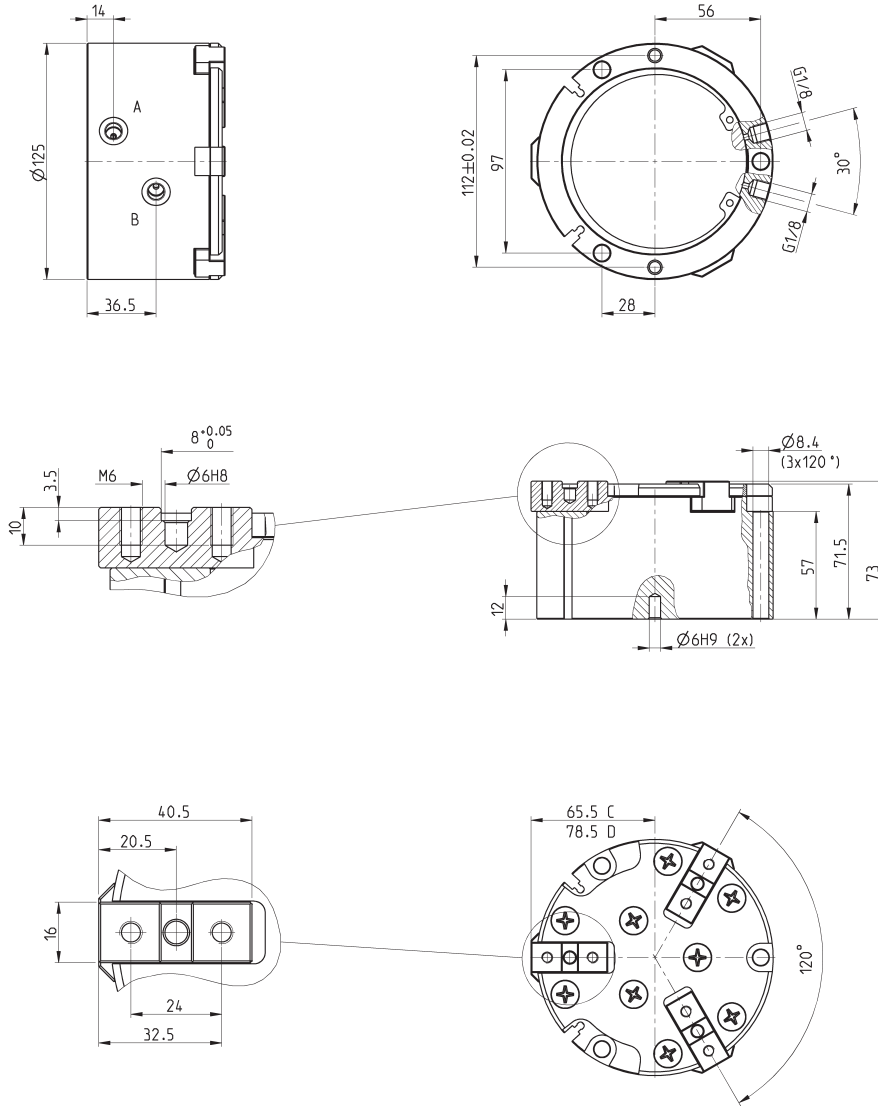


| Mod. | Closing gripping force each jaw at 6 bar (N) | Total closing gripping force at 6 bar (N) | Opening gripping force each jaw at 6 bar (N) | Total opening gripping force at 6 bar (N) | Stroke per jaw (mm) | Working pressure (bar) | Working temperature (°C) | Repeatability (mm) | Opening T (ms)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

Serie CGCN grippers, size 125mm



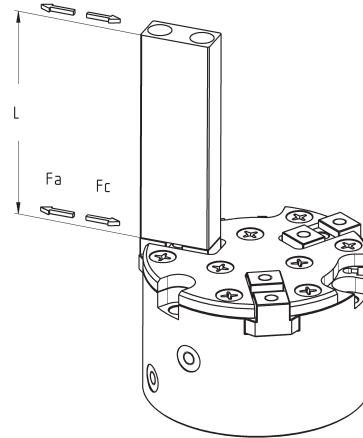
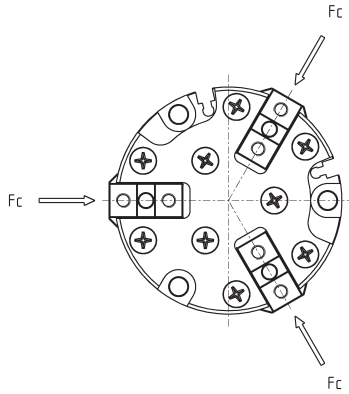
DRAWING LEGEND:
 A = Opening of air connection
 B = Closing of air connection
 C = Closed gripper
 D = Open gripper



SERIES CGCN SELF-CENTERING THREE-JAW GRIPPERS WITH T-GUIDE

| 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 |

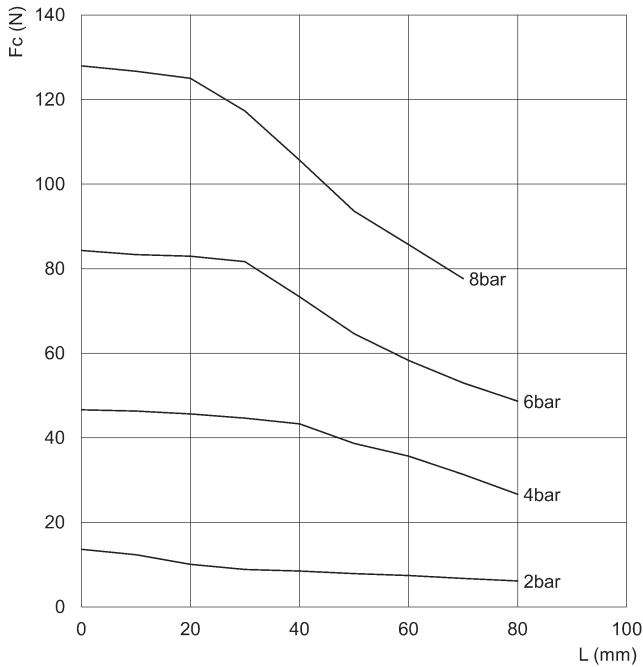
GRIPPING FORCE PER SINGLE JAW



The total gripping force has to be calculated as follows:
 Total $F_c = F_c \times 3$
 Total $F_a = F_a \times 3$

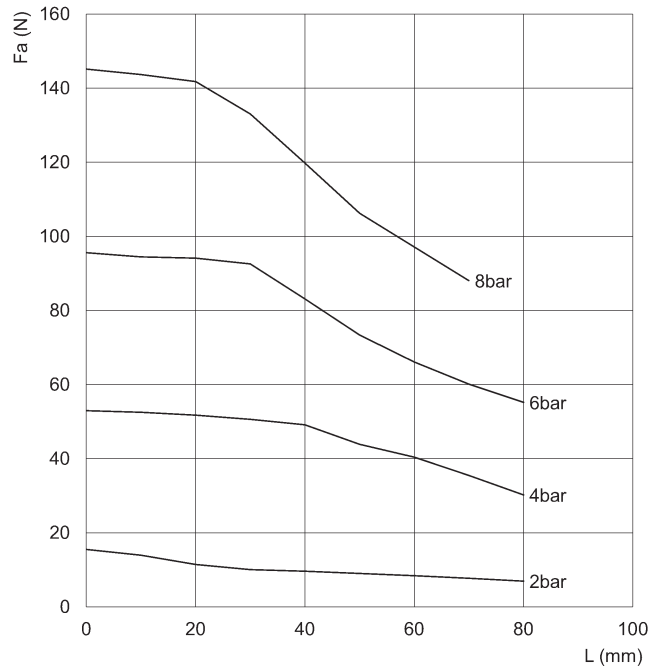
F_c = closing gripping force
 F_a = opening gripping force
 L = gripping point length

SERIES CGCN SELF-CENTERING THREE-JAW GRIPPERS WITH T-GUIDE



CGCN-050

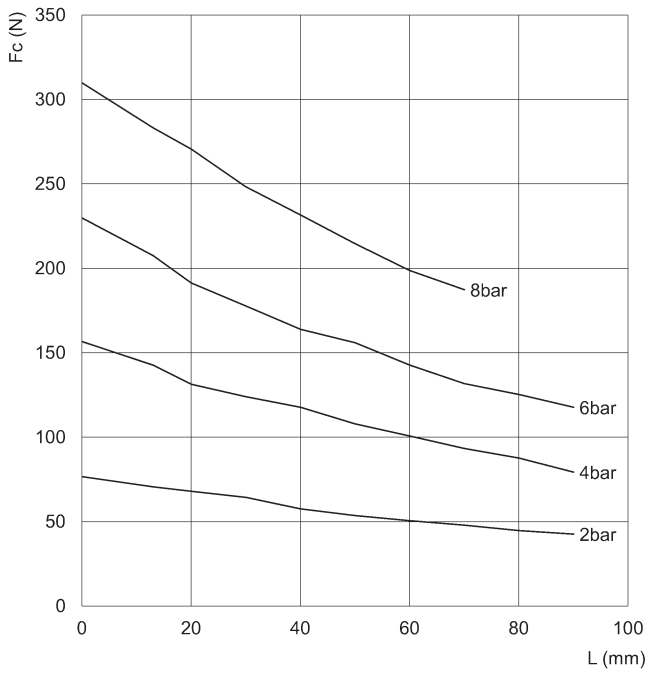
F_c = closing gripping force
 L = gripping point length



CGCN-050

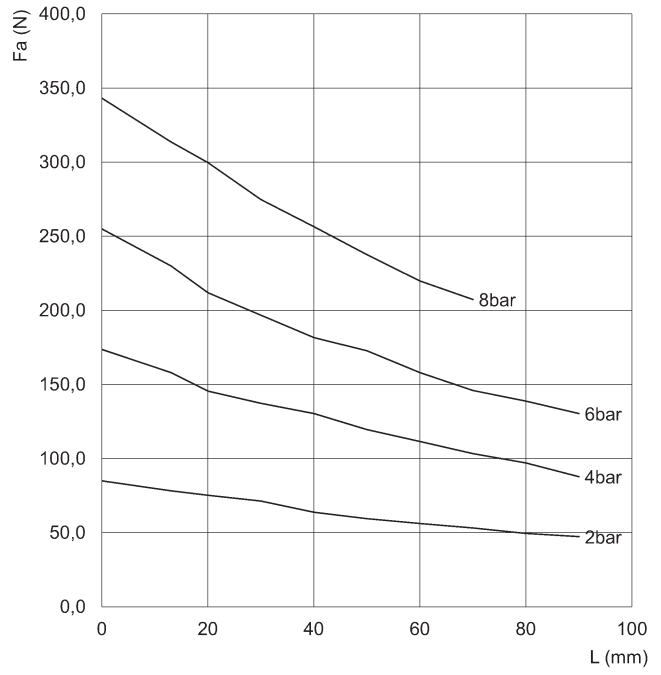
F_a = opening gripping force
 L = gripping point length

GRIPPING FORCE PER SINGLE JAW



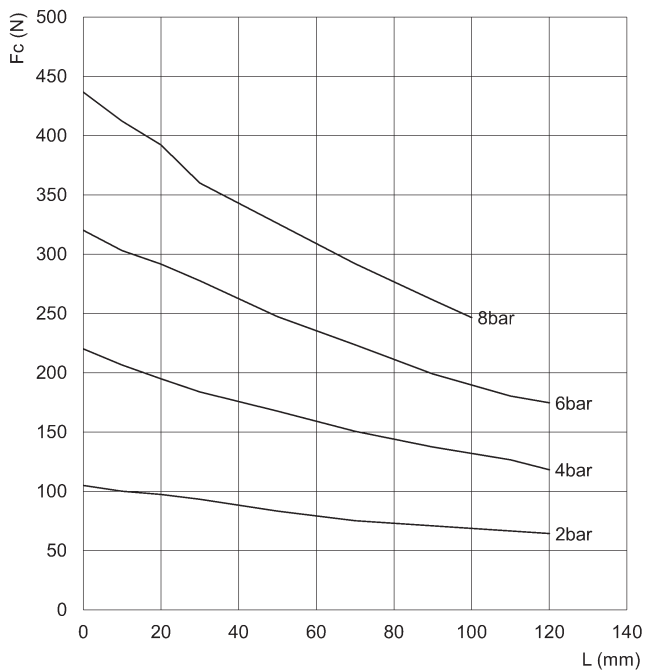
CGCN-064

Fc = closing gripping force
L = gripping point length



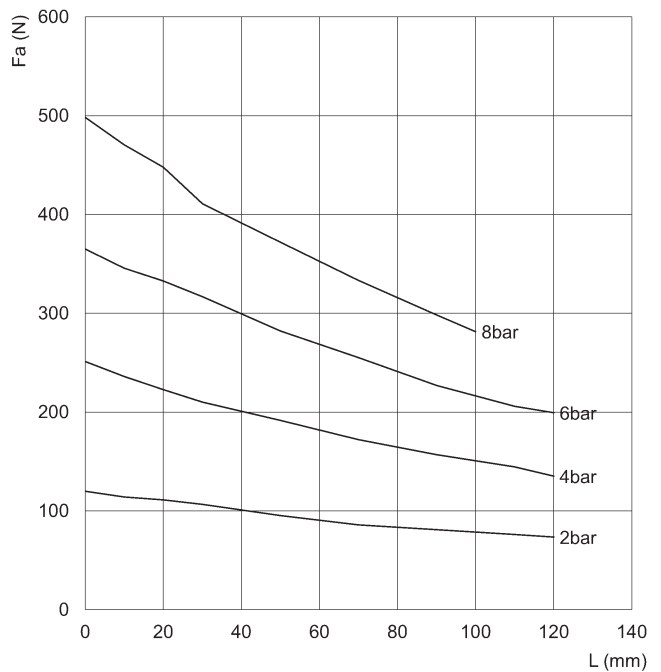
CGCN-064

Fa = opening gripping force
L = gripping point length



CGCN-080

Fc = closing gripping force
L = gripping point length

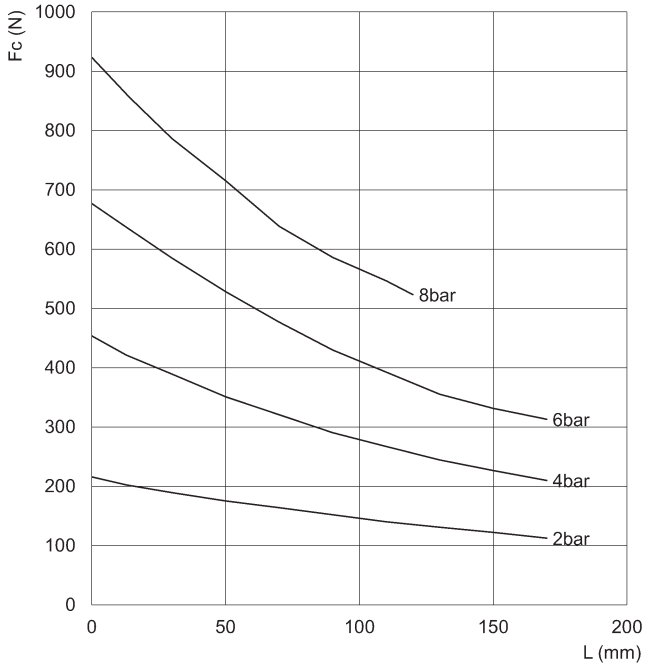


CGCN-080

Fa = opening gripping force
L = gripping point length

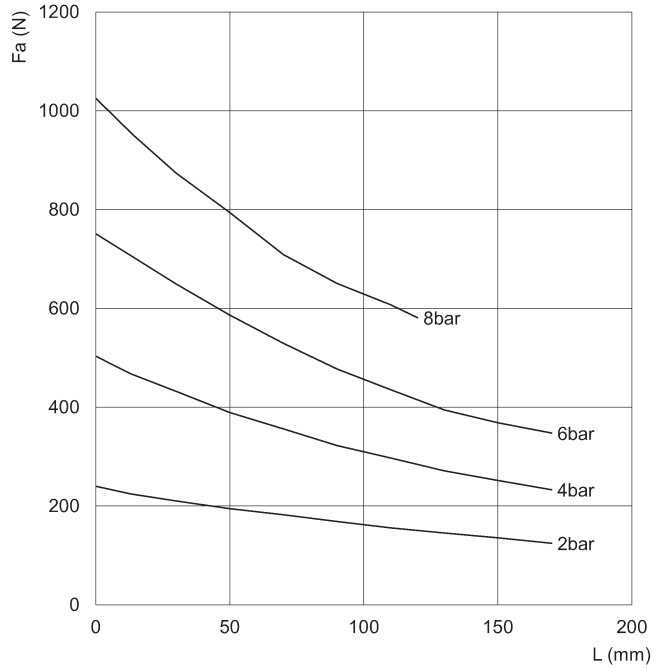
GRIPPING FORCE PER SINGLE JAW

SERIES CGCN SELF-CENTERING THREE-JAW GRIPPERS WITH T-GUIDE



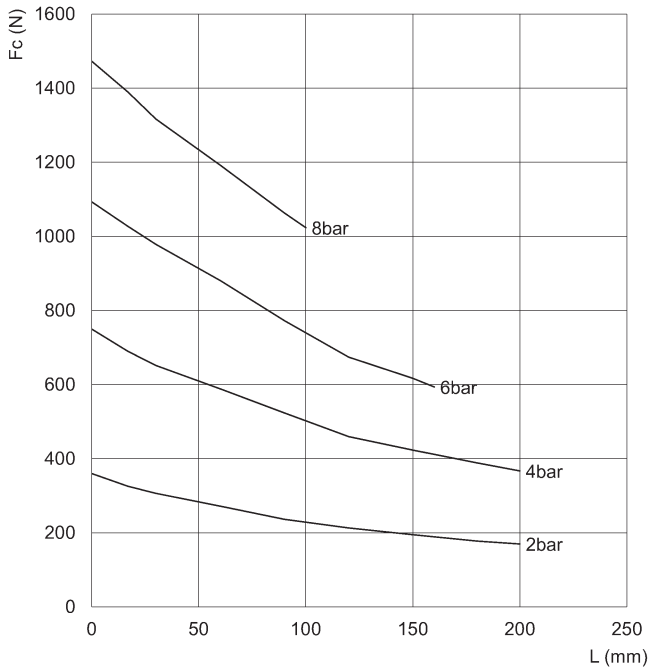
CGCN-100

Fc = closing gripping force
L = gripping point length



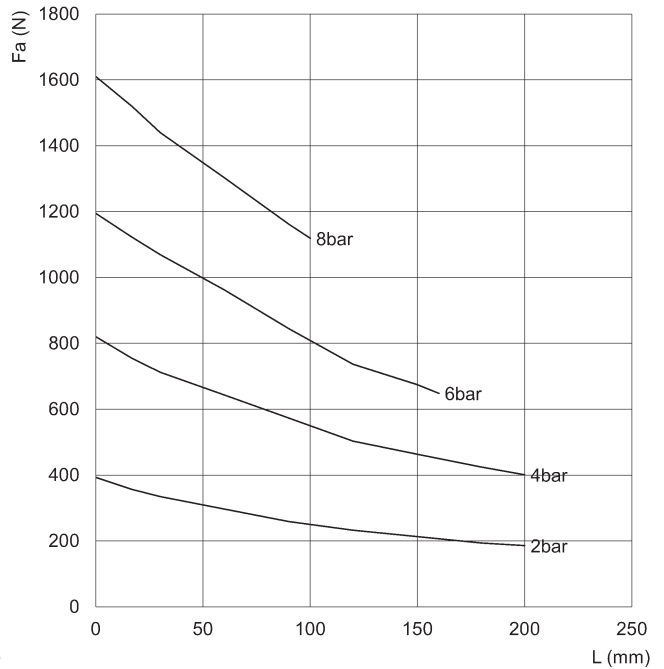
CGCN-100

Fa = opening gripping force
L = gripping point length



CGCN-125

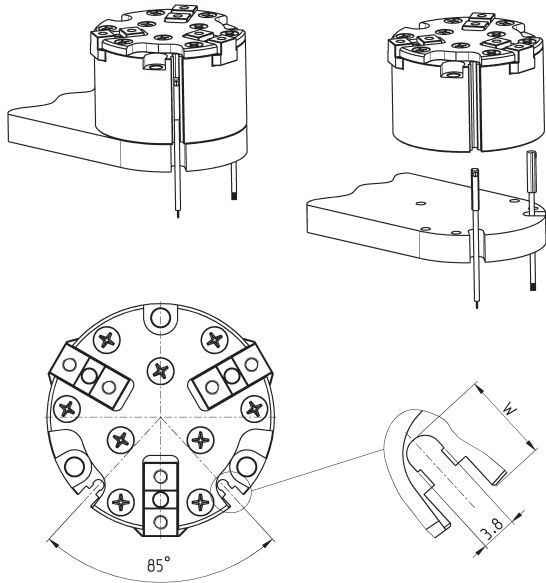
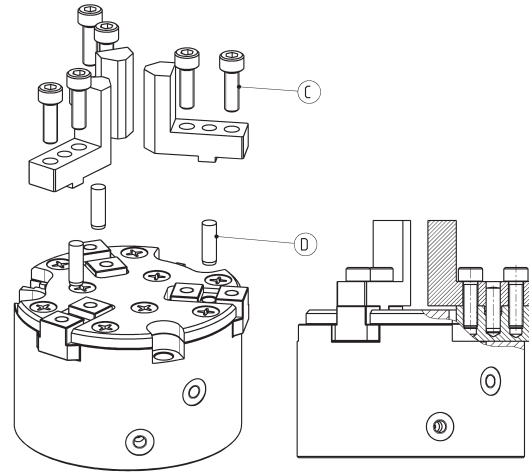
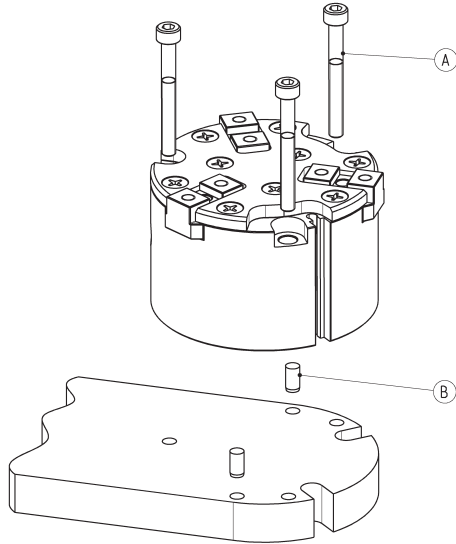
Fc = closing gripping force
L = gripping point length



CGCN-125

Fa = opening gripping force
L = gripping point length

Examples of mounting



SERIES CGCN SELF-CENTERING THREE-JAW GRIPPERS WITH T-GUIDE

| 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 |