

PARALLEL GRIPPERS WITH T-GUIDE

SERIES CGPT

Single and double acting, magnetic, self-centering
 Sizes: Ø16, 20, 25, 32, 40, 50, 63, 80 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
Sizes	Ø16, 20, 25, 32, 40, 50, 63, 80 mm
Force transmission	Lever
Air connections	M3 (Ø16), M5 (Ø20, 25, 32), G1/8 (Ø40, 50, 63, 80)
Operating pressure	2 ÷ 8 bar (double acting), 4 ÷ 8 bar (single acting)
Operating temperature [°C]	5°C ÷ 60°C (standard) - 5°C ÷ 130°C (high temperature version)
Store temperature	-10°C ÷ 80°C
Max. use frequency	3 Hz (Ø 16, 20, 25, 32), 2 Hz (Ø 40, 50, 63, 80)
Repeatability [% FS]	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≤T _a ≤80)
Materials	PTFE, Silicone and Copper free

Coding example

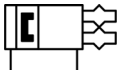
CGPT	-	16	-	NC	-	W	EX
CGPT	SERIES						
16	SIZES						
	16						
	20						
	25						
	32						
	40						
	50						
	63						
	80						
NC	OPERATION					PNEUMATIC SYMBOLS	
	= double acting					PNZ1	
	NO = single acting, normally open					PNZ3	
	NC = single acting, normally closed					PNZ2	
W	VERSION						
	= standard						
	W = high temperatures (130 °C)*						
EX	Add EX to order the certified ATEX version						

*In case the proximity switch is used in version W (high temperatures), the operation of the switch may vary.
Check the maximum operating temperature of the proximity switch.

Pneumatic symbols

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

PNZ1



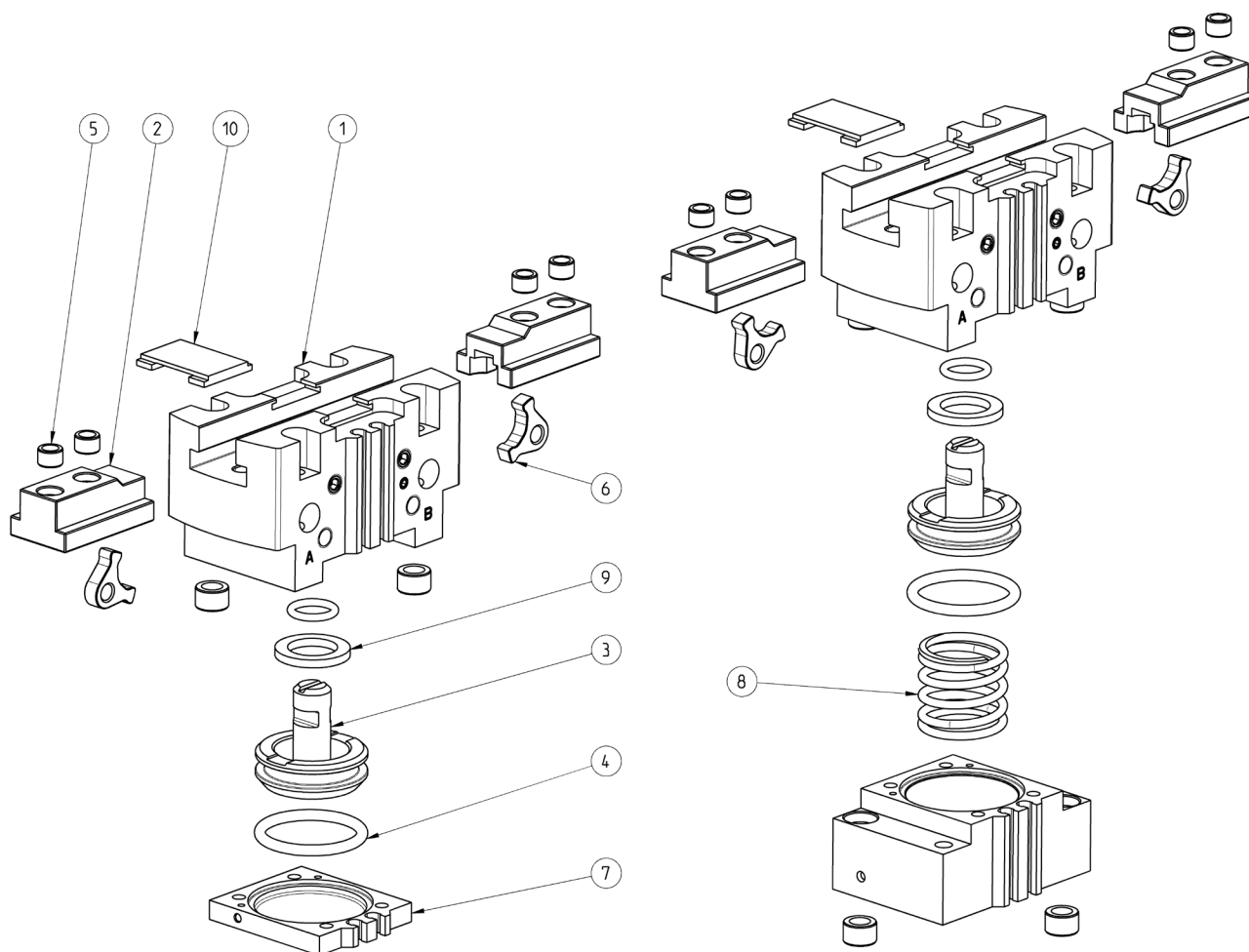
PNZ2



PNZ3

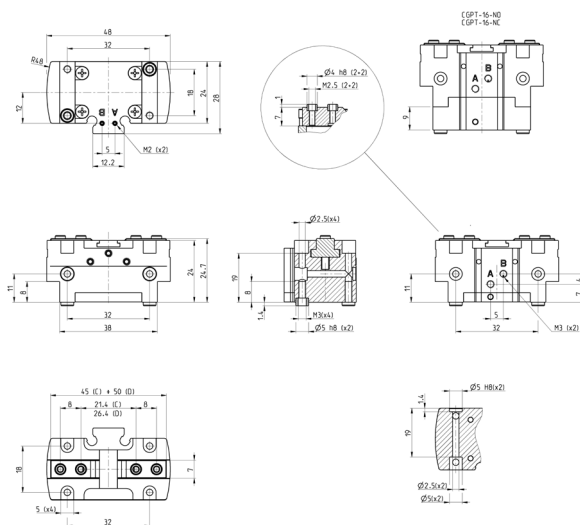


Series CGPT grippers - construction



PARTS	MATERIALS
1 - Body	Aluminium
2 - Guide	Stainless steel
3 - Cursor	Stainless steel
4 - Piston	HNBR / FKM
5 - Jaw	Stainless steel
6 - Cover	Steel
7 - Spring	Aluminium / Stainless steel
8 - Magnete	Stainless steel
9 - Screws	Neodymium
10 - Seals	Stainless steel

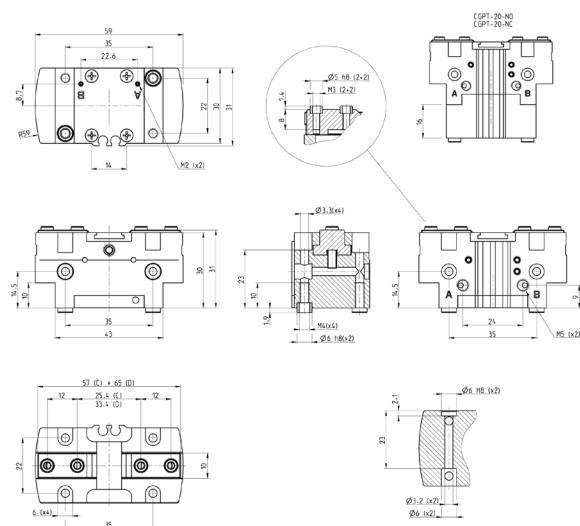
Gripper - size 16 mm



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

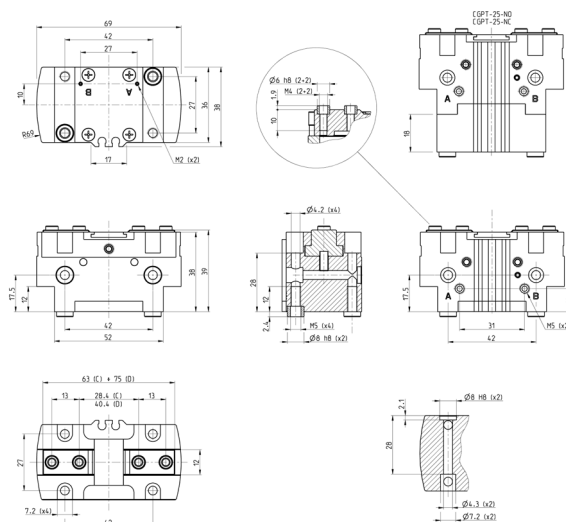
Mod.	Total closing gripping force at 6 bar [N]	Closing gripping force per jaw at 6 bar [N]	Total opening gripping force at 6 bar [N]	Opening gripping force per jaw at 6 bar [N]	Stroke per jaw [mm]	Working pressure [bar]	Working temperature [°C]	Repeatability [mm]	Max. use frequency [Hz]	Weight [kg]
CGPT-16	114	57	130	65	2,5	2 ÷ 8	5 ÷ 60	0,02	3	0,09
CGPT-16-NC	152	76	84	42	2,5	4 ÷ 8	5 ÷ 60	0,02	3	0,11
CGPT-16-NO	70	35	166	83	2,5	4 ÷ 8	5 ÷ 60	0,02	3	0,1

Gripper - size 20 mm

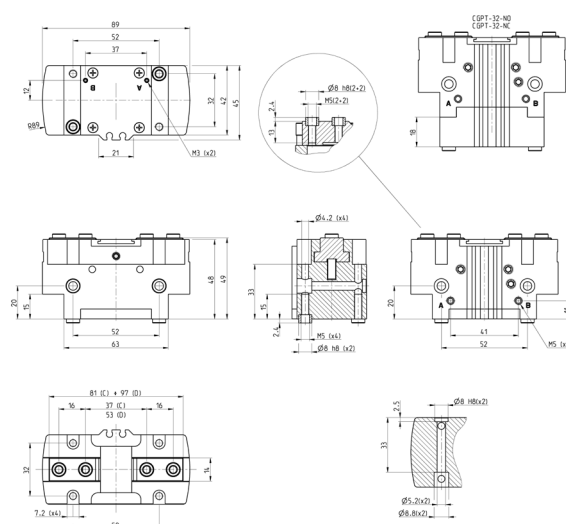


DRAWING LEGEND:
A = Opening of air connection
B = Closing of air connection
C = Closed gripper
D = Open gripper

Mod.	Total closing gripping force at 6 bar [N]	Closing gripping force 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 [mm]	Working pressure [bar]	Working temperature [°C]	Repeatability [mm]	Max. use frequency [Hz]	Weight [kg]
CGPT-20	158	79	180	94	4	2 ÷ 8	5 ÷ 60	0,02	3	0,15
CGPT-20-NC	198	99	120	60	4	4 ÷ 8	5 ÷ 60	0,02	3	0,2
CGPT-20-NO	100	50	220	110	4	4 ÷ 8	5 ÷ 60	0,02	3	0,18

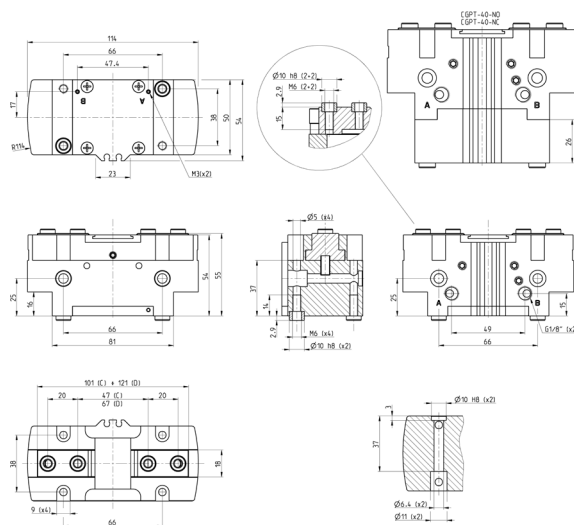


Mod.	Total closing gripping force at 6 bar [N]	Closing gripping force per jaw at 6 bar [N]	Total opening gripping force at 6 bar [N]	Opening gripping force per jaw at 6 bar [N]	Stroke per jaw [mm]	Working pressure [bar]	Working temperature [°C]	Repeatability [mm]	Max. use frequency [Hz]	Weight [kg]
CGPT-25	230	115	266	133	6	2 ÷ 8	5 ÷ 60	0,02	3	0,27
CGPT-25-NC	280	140	200	100	6	4 ÷ 8	5 ÷ 60	0,02	3	0,35
CGPT-25-NO	166	83	316	158	6	4 ÷ 8	5 ÷ 60	0,02	3	0,33



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 [mm]	Working pressure [bar]	Working temperature [°C]	Repeatability [mm]	Max. use frequency [Hz]	Weight [kg]
CGPT-32	388	194	450	225	8	2 ÷ 8	5 ÷ 60	0,02	3	0,5
CGPT-32-NC	456	228	354	177	8	4 ÷ 8	5 ÷ 60	0,02	3	0,61
CGPT-32-NO	300	150	512	256	8	4 ÷ 8	5 ÷ 60	0,02	3	0,59

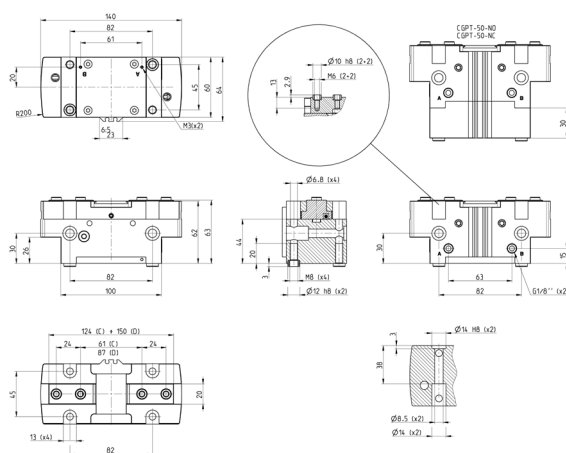
Gripper - size 40 mm



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 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 [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	740	370	504	252	10	4 ÷ 8	5 + 60	0,02	2	1,2
CGPT-40-NO	430	215	820	410	10	4 ÷ 8	5 + 60	0,02	2	1,1

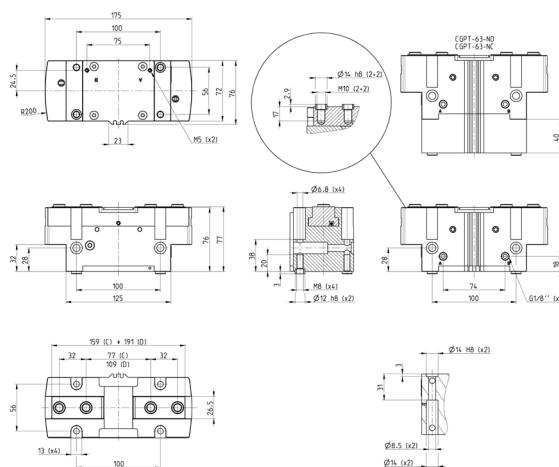
Gripper - size 50 mm



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 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 [mm]	Working pressure [bar]	Working temperature [°C]	Repeatability [mm]	Max. use frequency [Hz]	Weight [kg]
CGPT-50	1044	522	1208	604	13	2 ÷ 8	5 ÷ 60	0,02	1	1,45
CGPT-50-NC	1380	690	778	389	13	4 ÷ 8	5 ÷ 60	0,02	1	1,72
CGPT-50-NO	642	321	1524	762	13	4 ÷ 8	5 ÷ 60	0,02	1	1,89

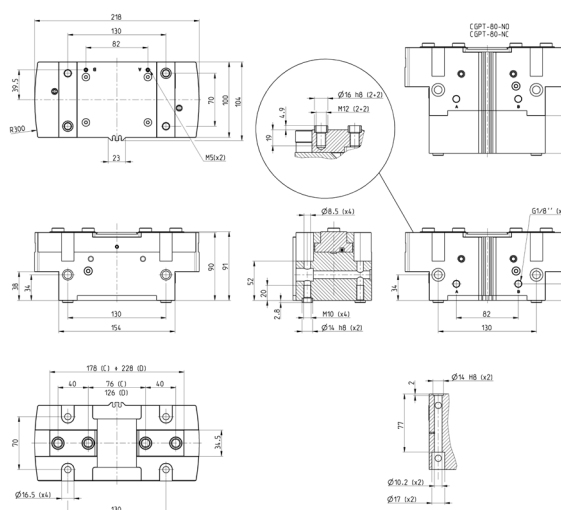
Gripper - size 63 mm


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 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 [mm]	Working pressure [bar]	Working temperature [°C]	Repeatability [mm]	Max. use frequency [Hz]	Weight [kg]
CGPT-63	1486	743	1722	861	16	2 ÷ 8	5 ÷ 60	0.02	3	2,69
CGPT-63-NC	1910	955	1144	572	16	4 ÷ 8	5 ÷ 60	0.02	2	3,32
CGPT-63-NO	946	473	2108	1054	16	4 ÷ 8	5 ÷ 60	0.02	2	3,28

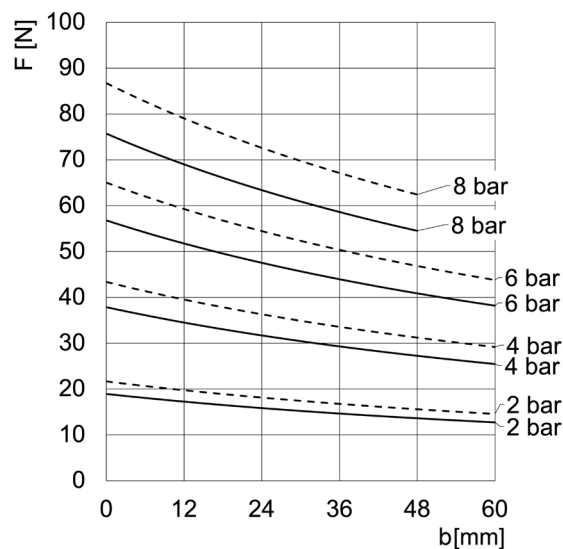
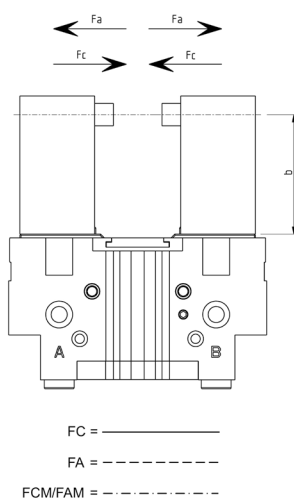
Gripper - size 80 mm


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 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 [mm]	Working pressure [bar]	Working temperature [°C]	Repeatability [mm]	Max. use frequency [Hz]	Weight [kg]
CGPT-80	2818	1409	3168	1584	25	2 ÷ 8	5 ÷ 60	0,02	1	5,16
CGPT-80-NC	3698	1849	2052	1026	25	4 ÷ 8	5 ÷ 60	0,02	1	6,89
CGPT-80-NO	1756	878	4006	2003	25	4 ÷ 8	5 ÷ 60	0,02	1	6,66

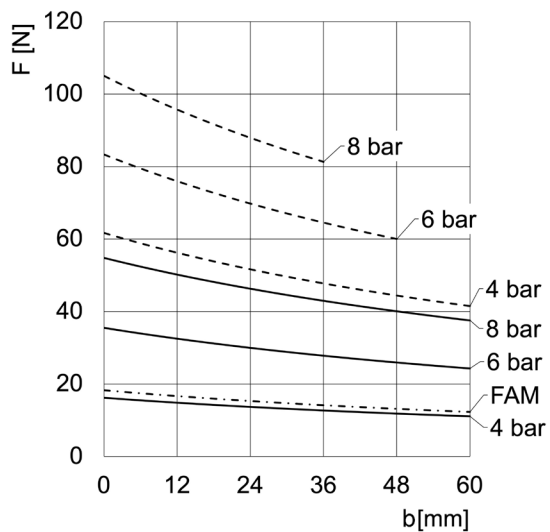
Gripping force (F) per single jaw



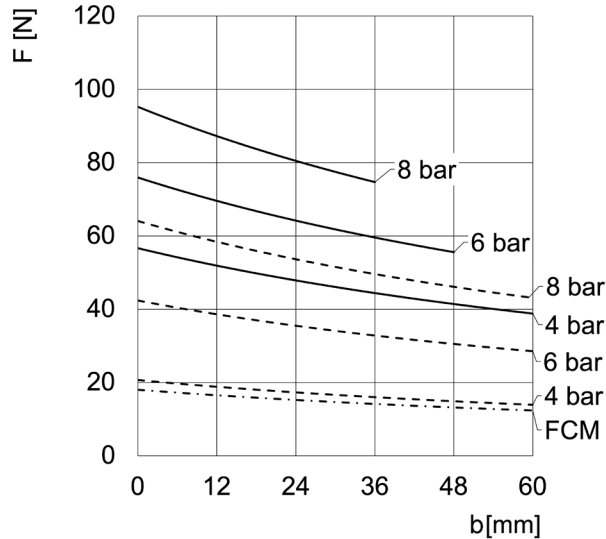
The total gripping force has to be calculated as follows:
Total $F = F \times 2$

b = distance from gripping point
 F_a = opening force
 F_c = closing force
 F_{AM} = opening spring force
 F_{CM} = closing spring force

CGPT-16

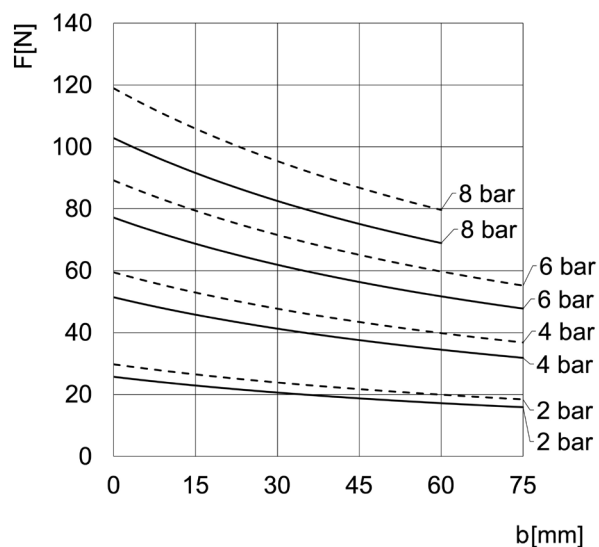
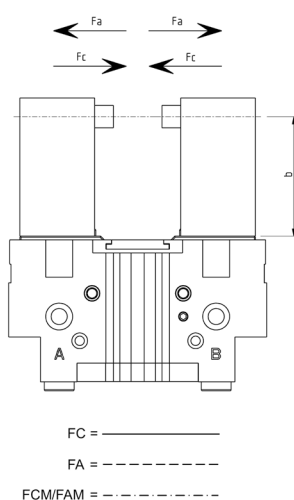


CGPT-16-NO



CGPT-16-NC

Gripping force (F) per single jaw



The total gripping force has to be calculated as follows:

$$\text{Total } F = F \times 2$$

b = distance from gripping point

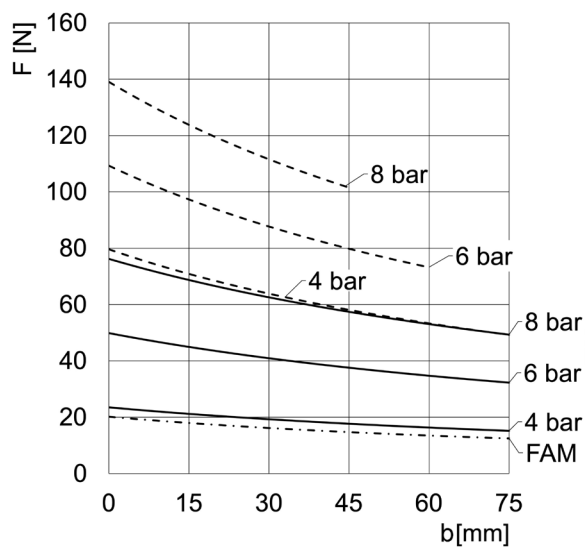
F_a = opening force

F_c = closing force

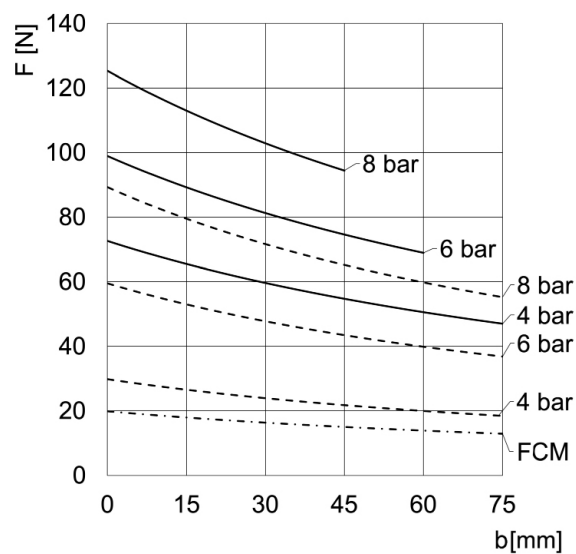
FAM = opening spring force

FCM = closing spring force

CGPT-20

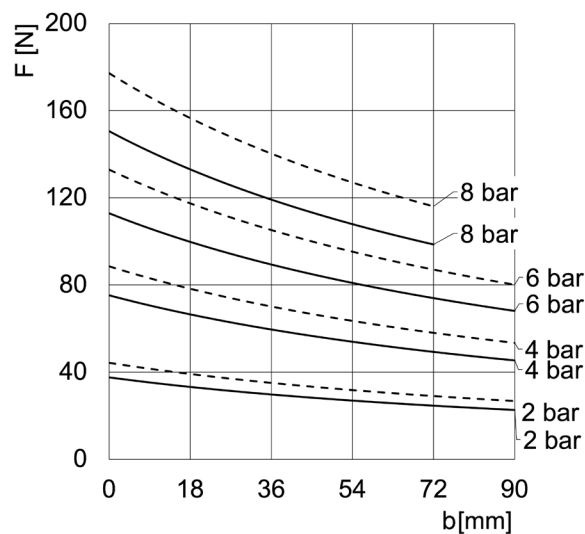
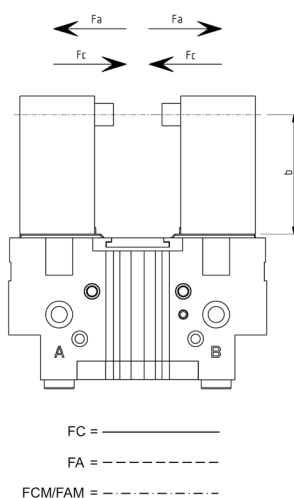


CGPT-20-NO



CGPT-20-NC

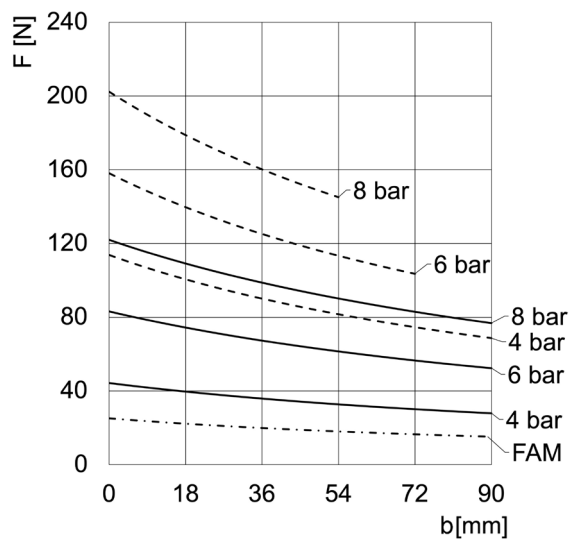
Gripping force (F) per single jaw



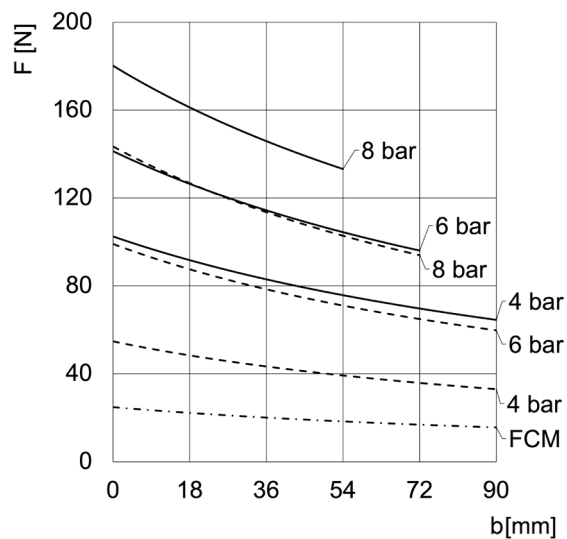
The total gripping force has to be calculated as follows:
Total $F = F \times 2$

b = distance from gripping point
 F_a = opening force
 F_c = closing force
 FAM = opening spring force
 FCM = closing spring force

CGPT-25

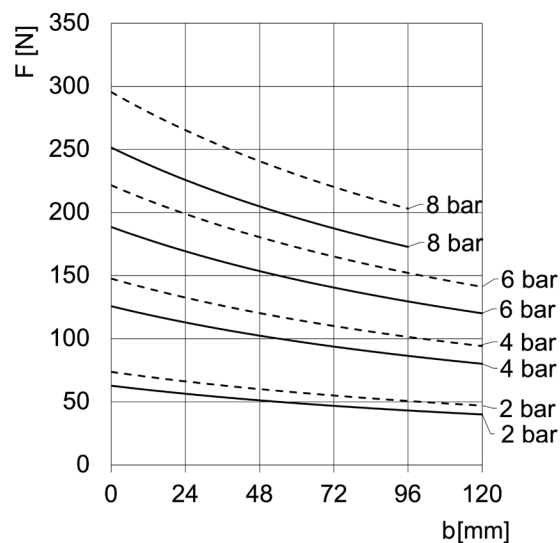
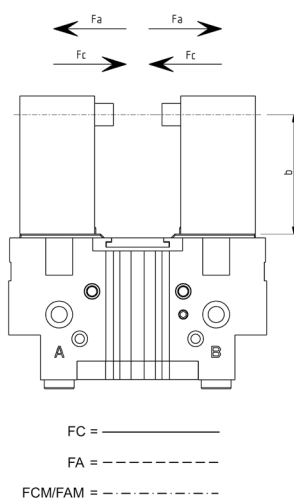


CGPT-25-NO



CGPT-25-NC

Gripping force (F) per single jaw



The total gripping force has to be calculated as follows:

$$\text{Total } F = F \times 2$$

b = distance from gripping point

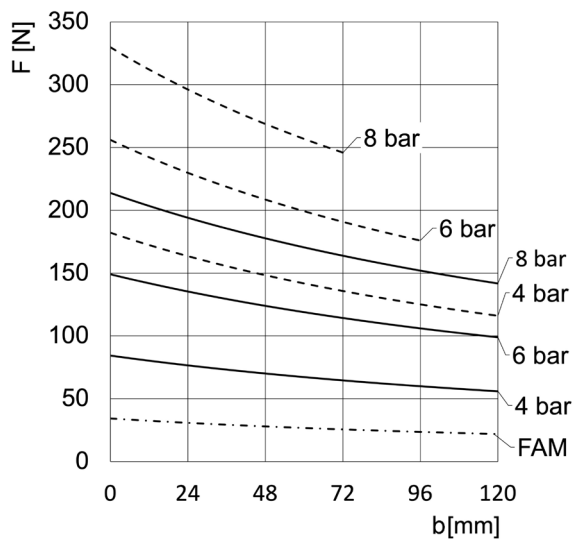
F_a = opening force

F_c = closing force

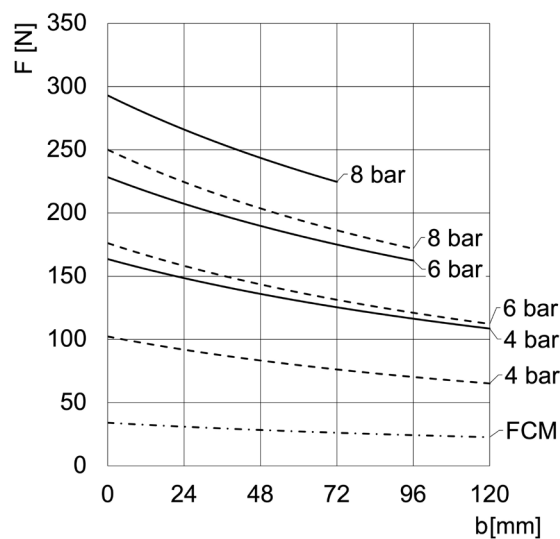
FAM = opening spring force

FCM = closing spring force

CGPT-32

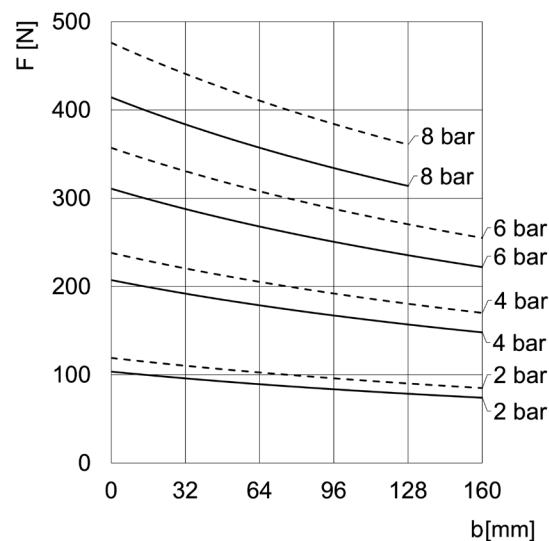
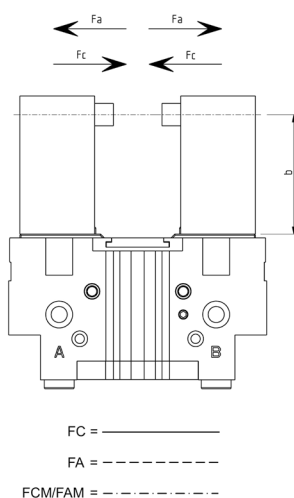


CGPT-32-NO



CGPT-32-NC

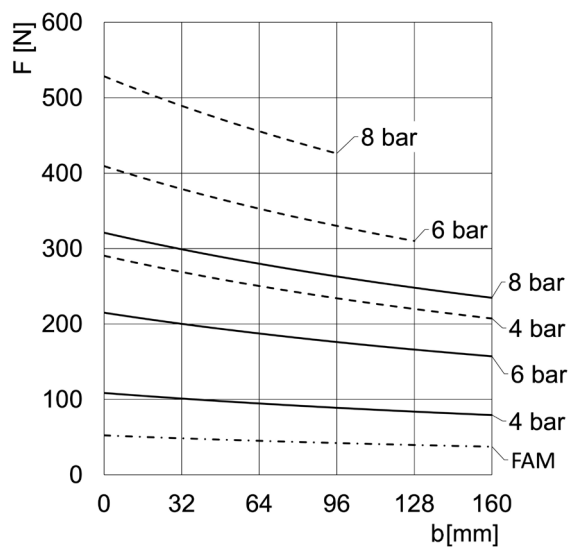
Gripping force (F) per single jaw



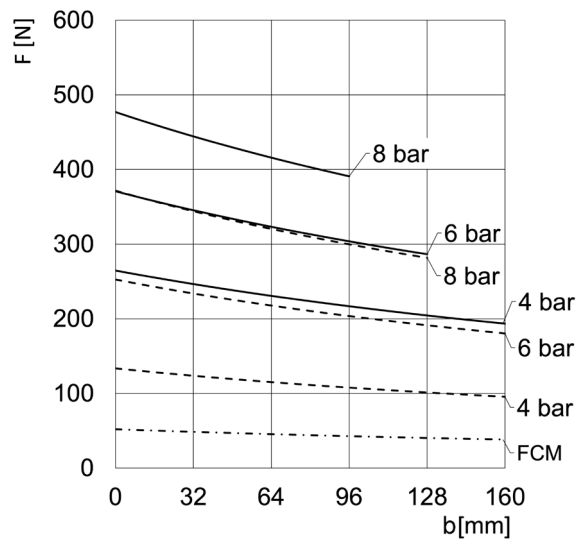
The total gripping force has to be calculated as follows:
Total $F = F \times 2$

b = distance from gripping point
 F_a = opening force
 F_c = closing force
 FAM = opening spring force
 FCM = closing spring force

CGPT-40

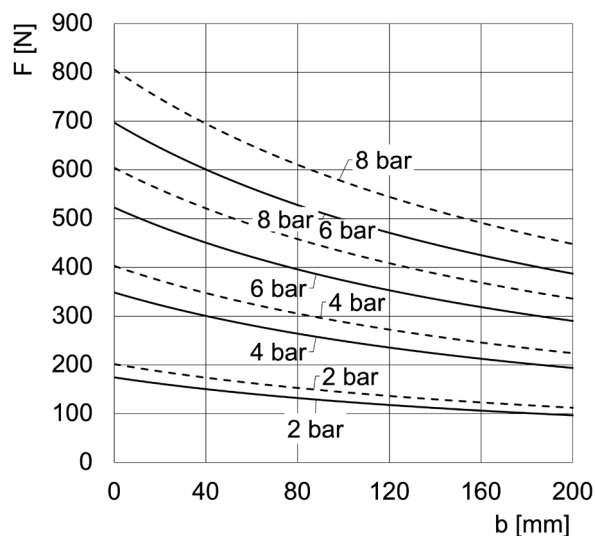
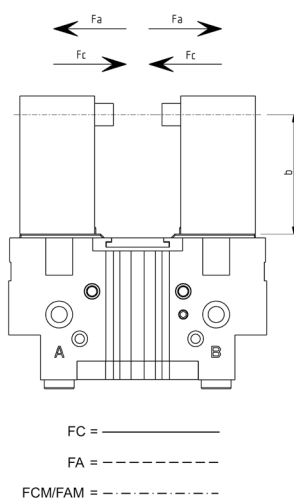


CGPT-40-NO



CGPT-40-NC

Gripping force (F) per single jaw

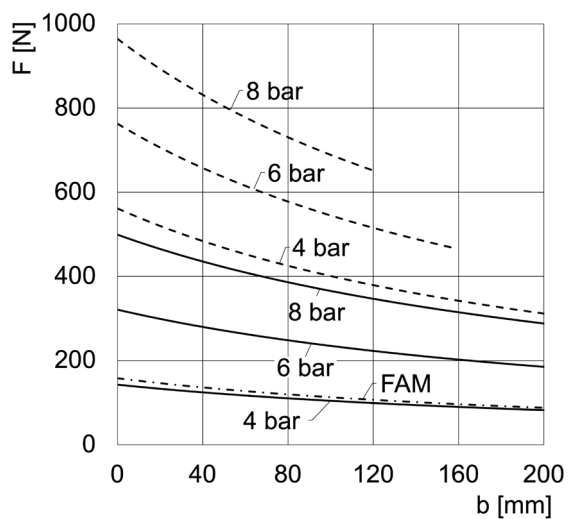


The total gripping force has to be calculated as follows:

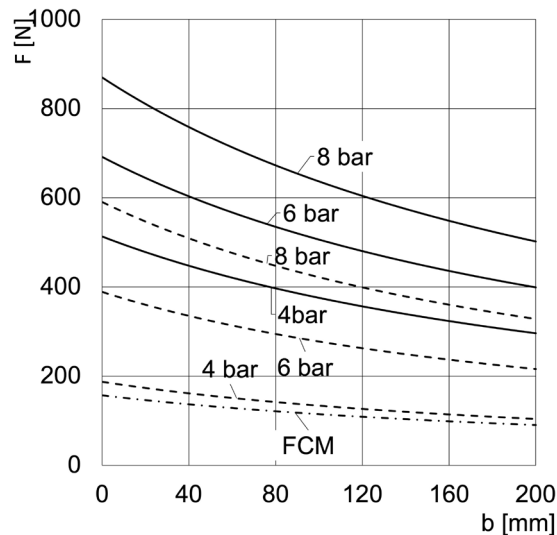
$$\text{Total } F = F \times 2$$

b = distance from gripping point
FA = opening force
FC = closing force
FAM = opening spring force
FCM = closing spring force

CGPT-50

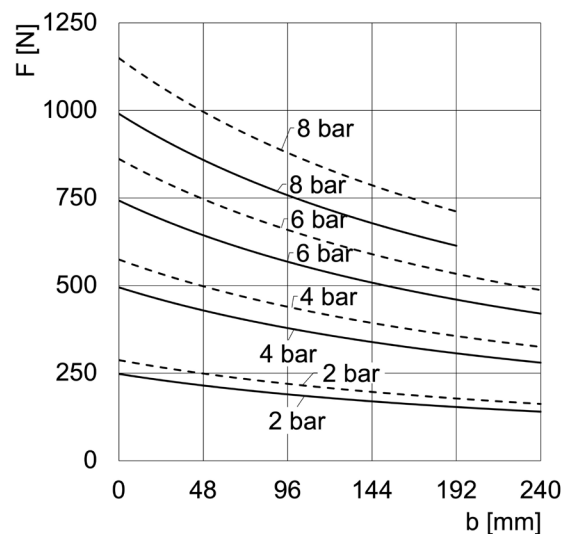
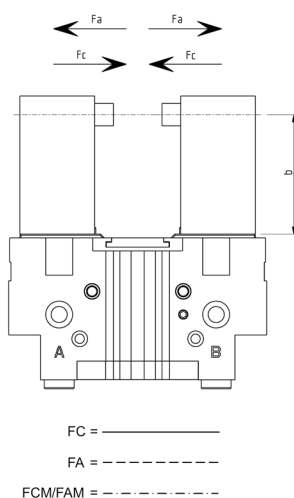


CGPT-50-NO



CGPT-50-NC

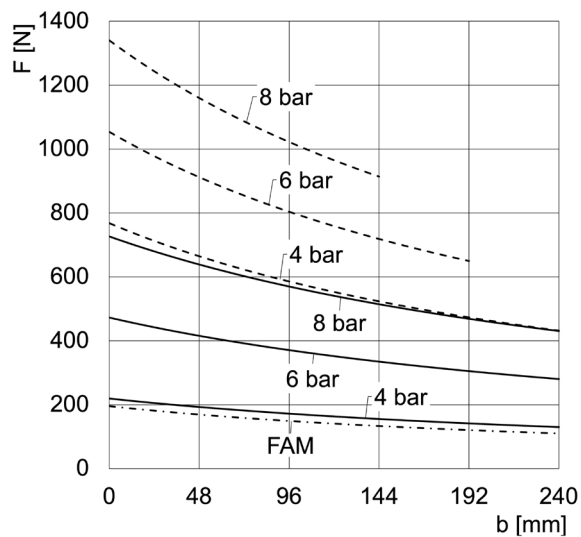
Gripping force (F) per single jaw



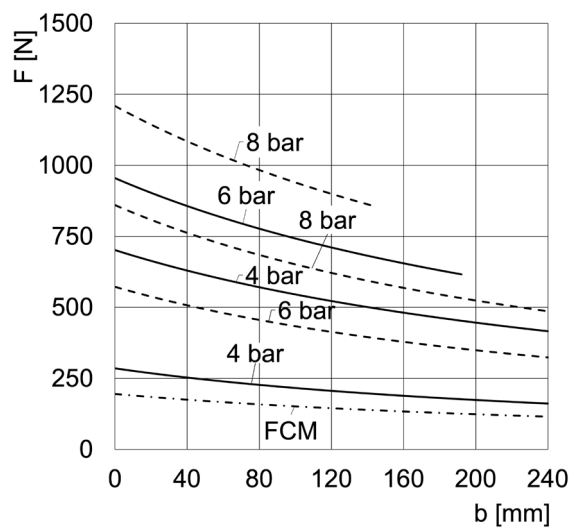
The total gripping force has to be calculated as follows:
Total $F = F \times 2$

b = distance from gripping point
 F_a = opening force
 F_c = closing force
 FAM = opening spring force
 FCM = closing spring force

CGPT-63

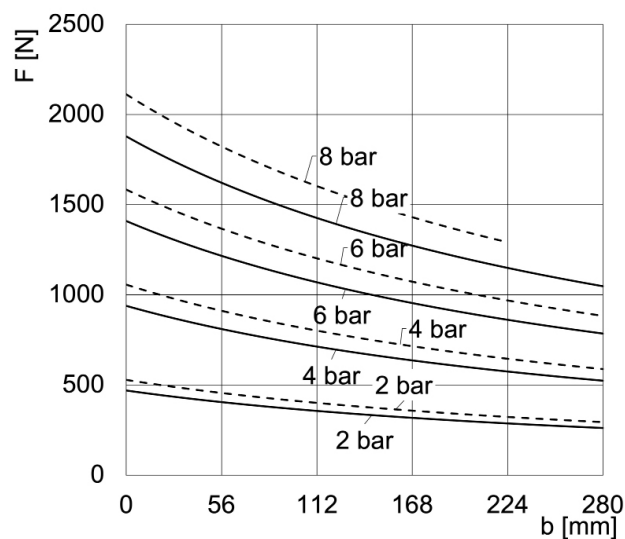
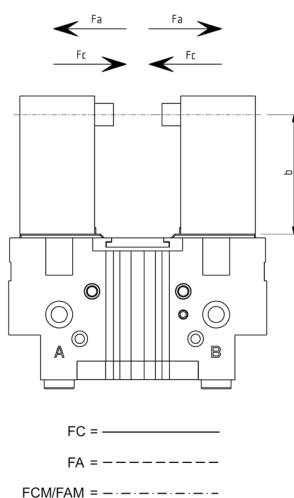


CGPT-63-NO



CGPT-63-NC

Gripping force (F) per single jaw

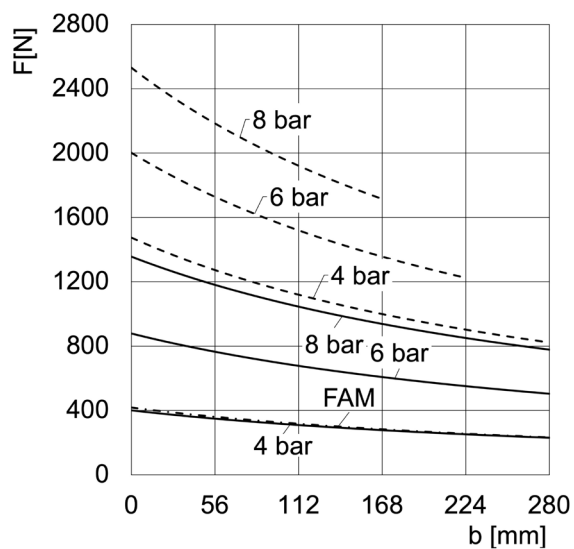


The total gripping force has to be calculated as follows:

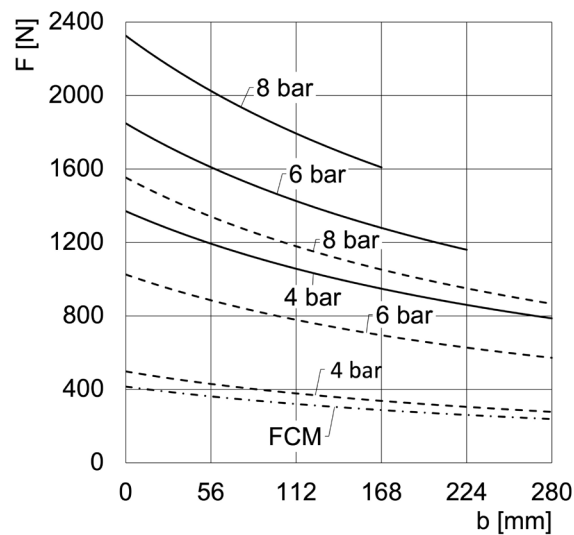
$$\text{Total } F = F \times 2$$

b = distance from gripping point
FA = opening force
FC = closing force
FAM = opening spring force
FCM = closing spring force

CGPT-80



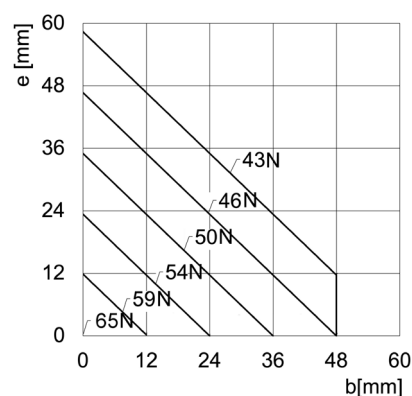
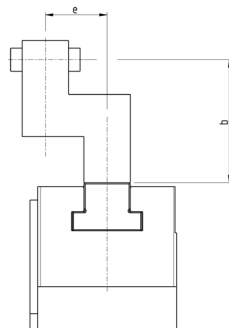
CGPT-80-NO



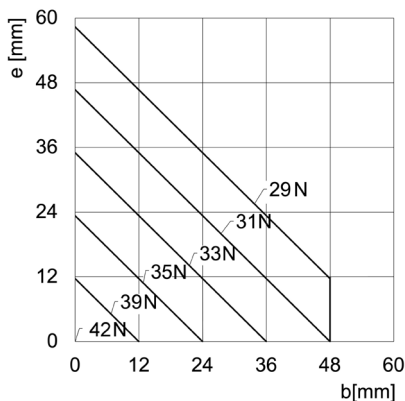
CGPT-80-NC

Length vs eccentricity CGPT-16

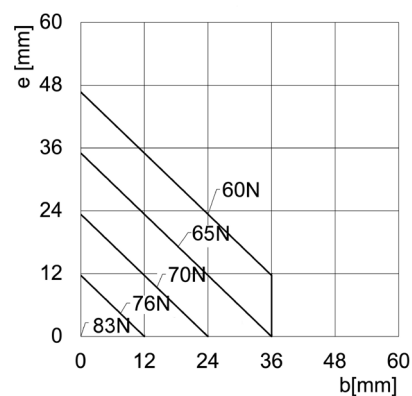
The total gripping force has to be calculated as follows: $\text{Total } F = F \times 2$.
Range of use of the gripper according to gripping point (b) and the arm (e).



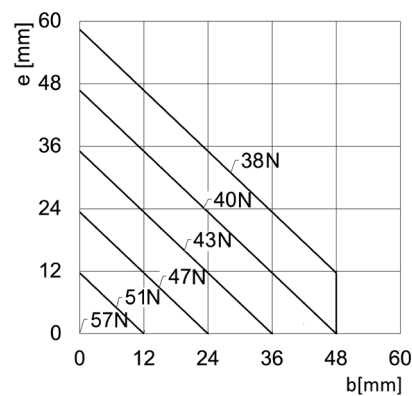
CGPT-16 opening



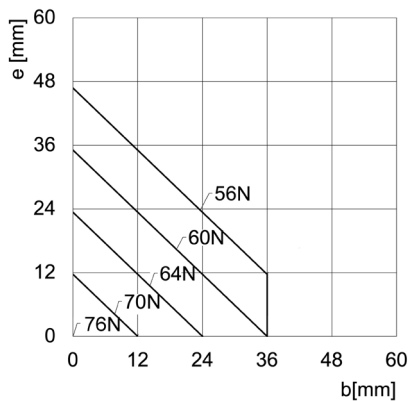
CGPT-16-NC opening



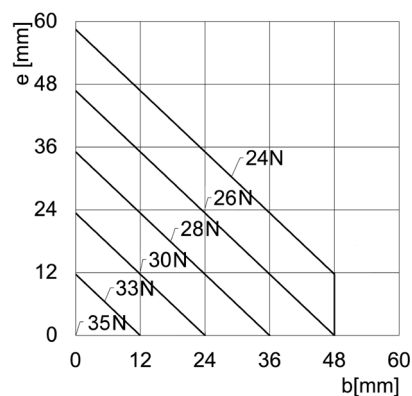
CGPT-16-NO opening



CGPT-16 closing



CGPT-16-NC closing

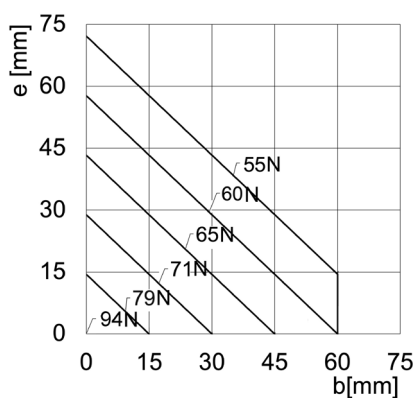
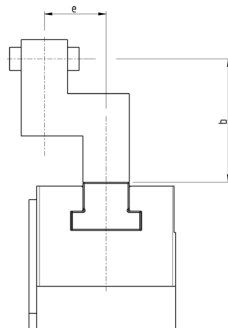


CGPT-16-NO closing

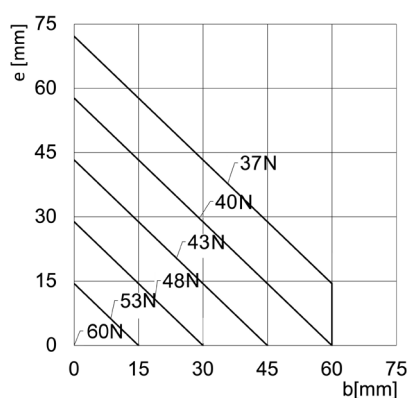
Length vs eccentricity CGPT-20

The total gripping force has to be calculated as follows: Total $F = F \times 2$.

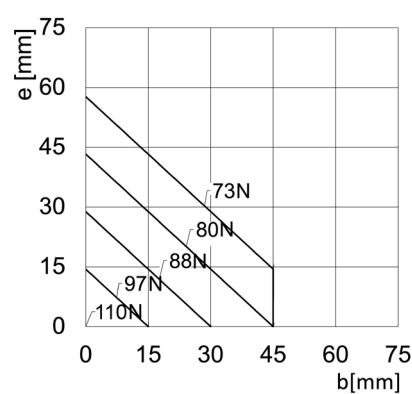
Range of use of the gripper according to gripping point (b) and the arm (e).



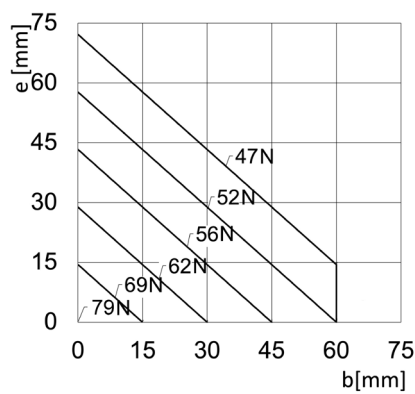
CGPT-20 opening



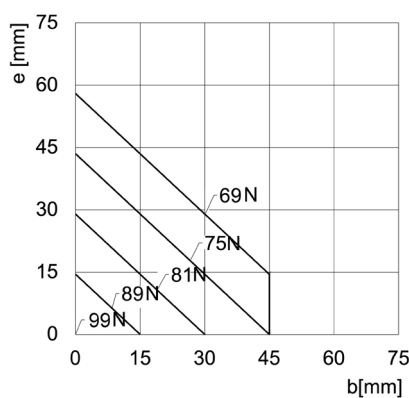
CGPT-20-NC opening



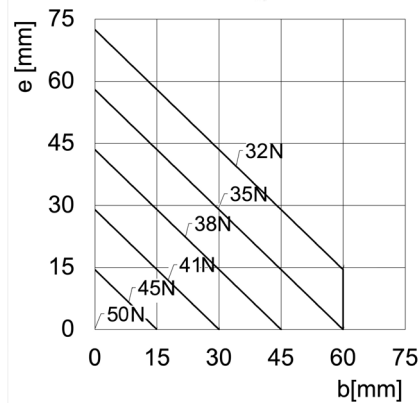
CGPT-20-NO opening



CGPT-20 closing



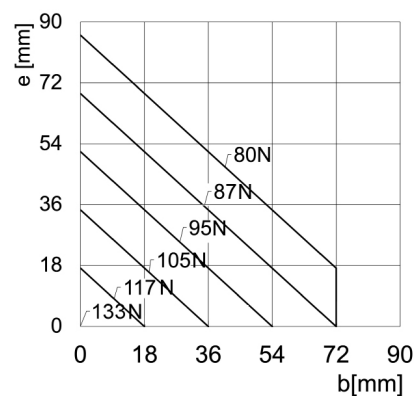
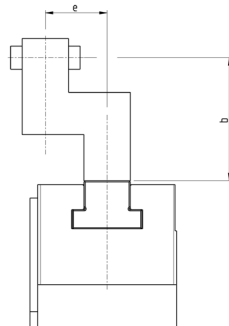
CGPT-20-NC closing



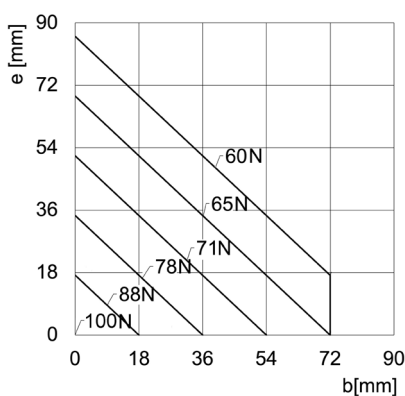
CGPT-20-NO closing

Length vs eccentricity CGPT-25

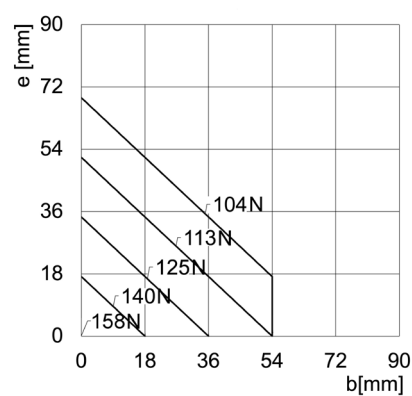
The total gripping force has to be calculated as follows: Total F = F x 2.
Range of use of the gripper according to gripping point (b) and the arm (e).



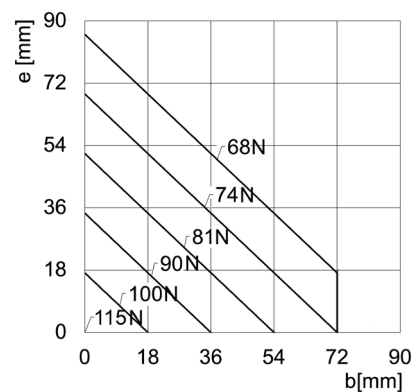
CGPT-25 opening



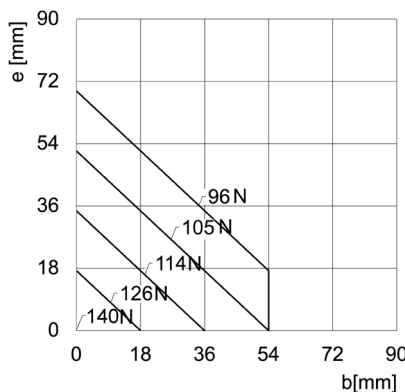
CGPT-25-NC opening



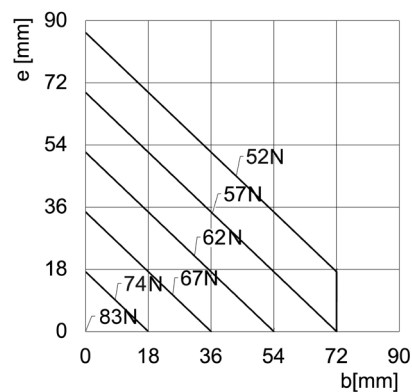
CGPT-25-NO opening



CGPT-25 closing



CGPT-25-NC closing

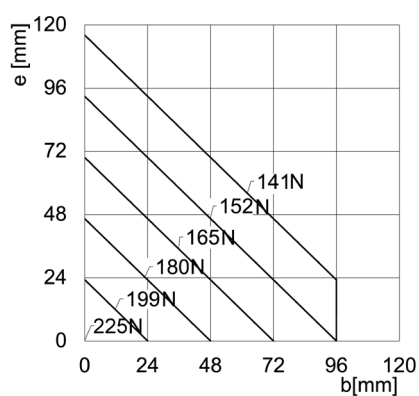
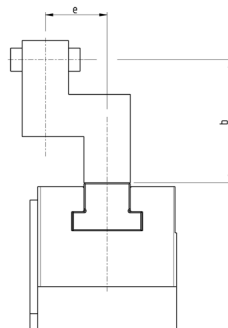


CGPT-25-NO closing

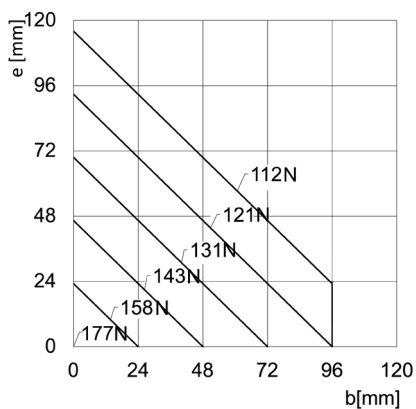
Length vs eccentricity CGPT-32

The total gripping force has to be calculated as follows: Total $F = F \times 2$.

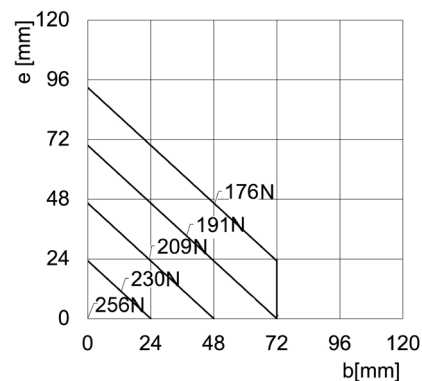
Range of use of the gripper according to gripping point (b) and the arm (e).



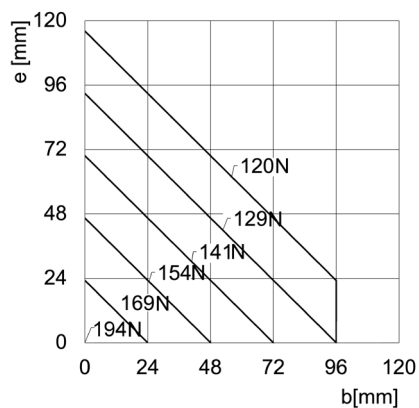
CGPT-32 opening



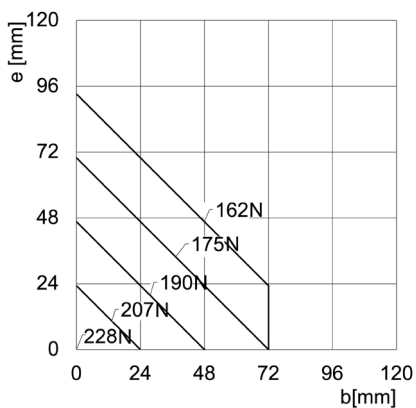
CGPT-32-NC opening



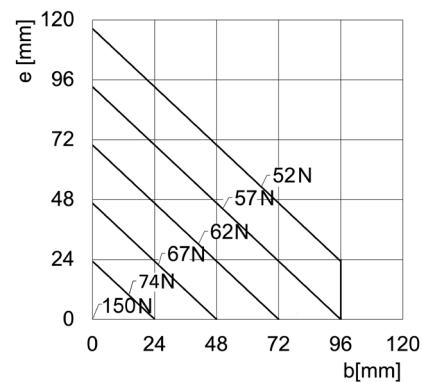
CGPT-32-NO opening



CGPT-32 closing



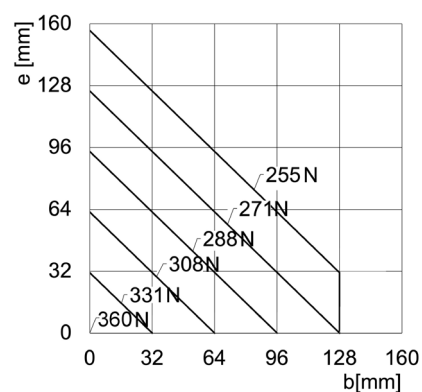
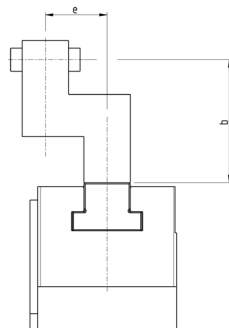
CGPT-32-NC closing



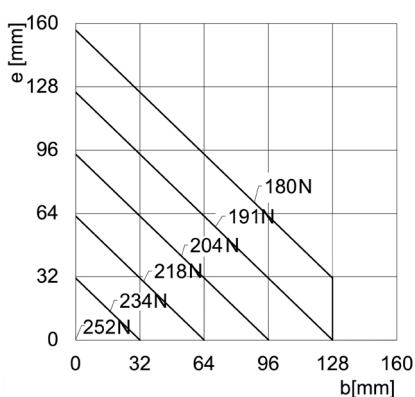
CGPT-32-NO closing

Length vs eccentricity CGPT-40

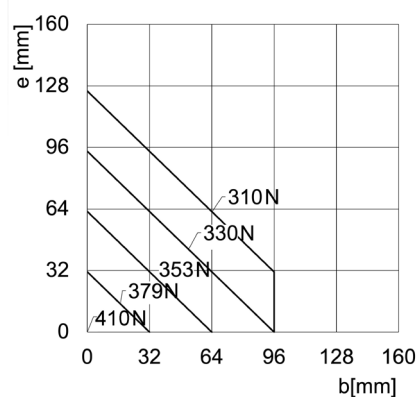
The total gripping force has to be calculated as follows: Total $F = F \times 2$.
Range of use of the gripper according to gripping point (b) and the arm (e).



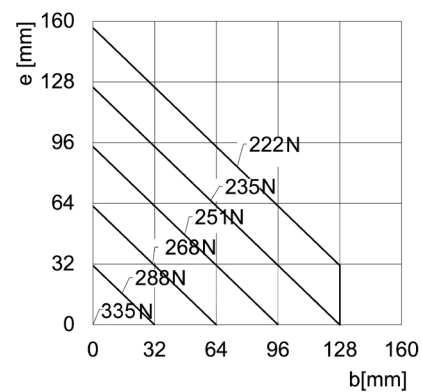
CGPT-40 opening



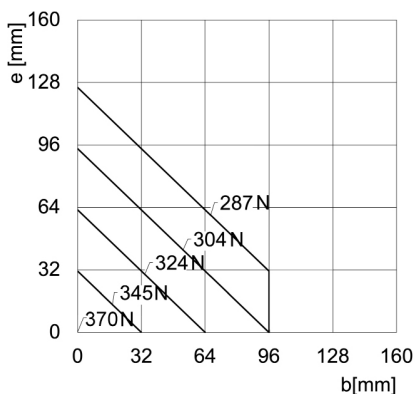
CGPT-40-NC opening



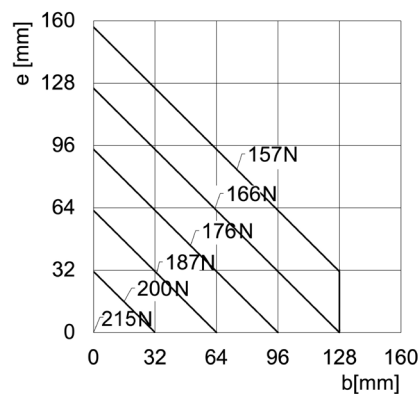
CGPT-40-NO opening



CGPT-40 closing



CGPT-40-NC closing

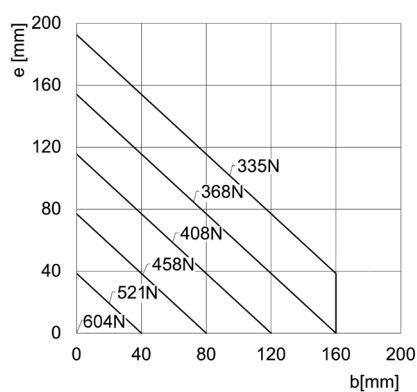
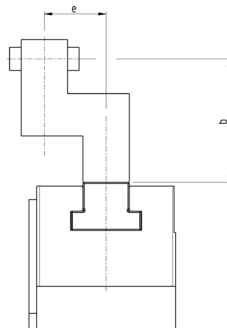


CGPT-40-NO closing

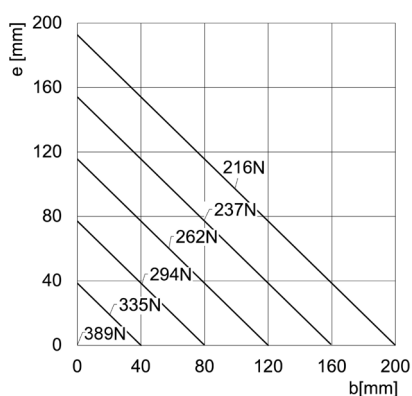
Length vs eccentricity CGPT-50

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

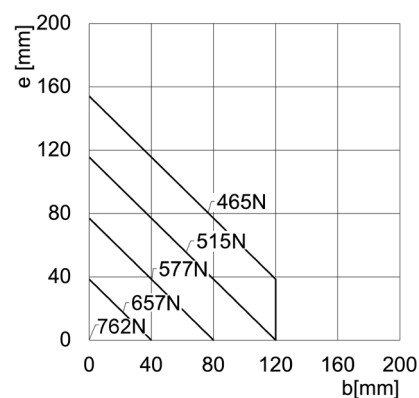
Range of use of the gripper according to gripping point (b) and the arm (e).



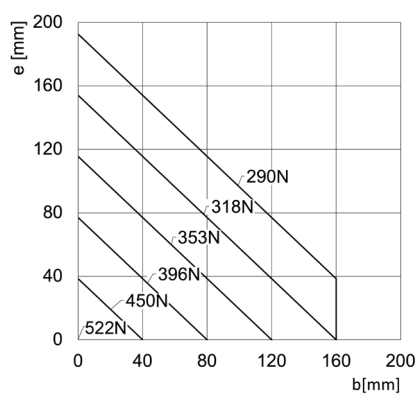
CGPT-50 opening



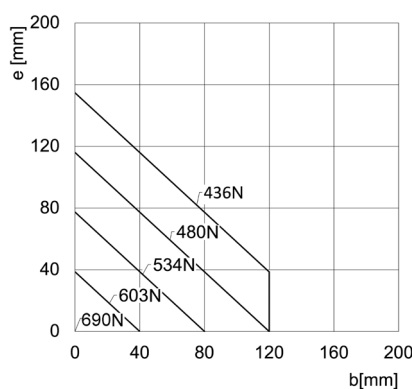
CGPT-50-NC opening



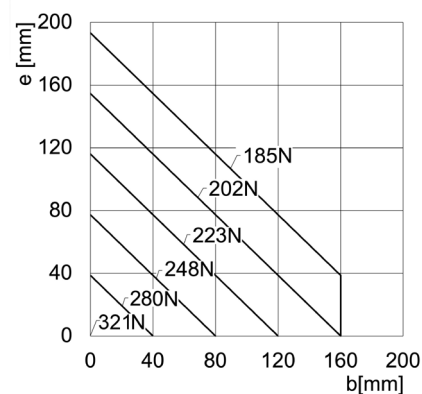
CGPT-50-NO opening



CGPT-50 closing



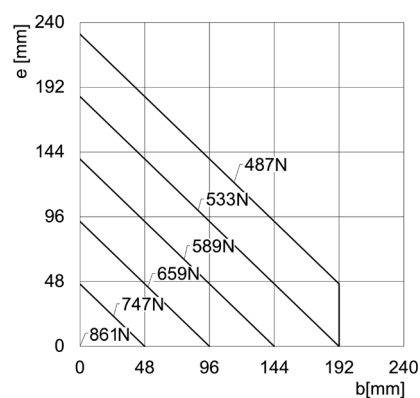
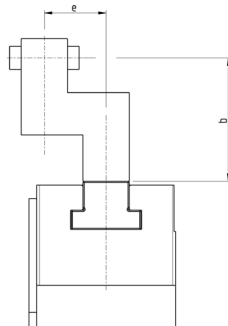
CGPT-50-NC closing



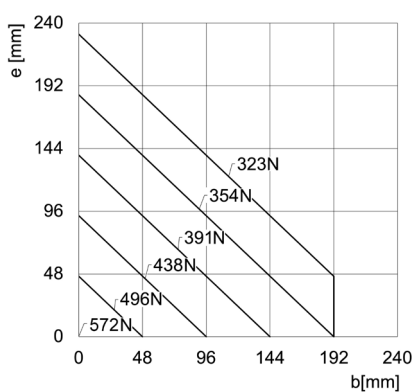
CGPT-50-NO closing

Length vs eccentricity CGPT-63

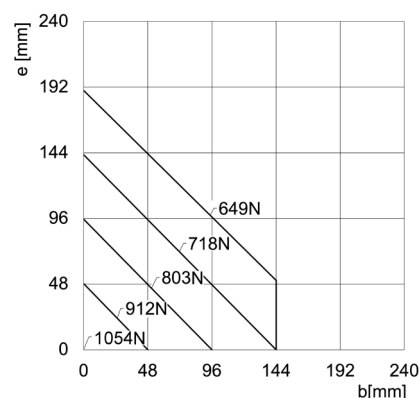
The total gripping force has to be calculated as follows: Total F = F x 2.
Range of use of the gripper according to gripping point (b) and the arm (e).



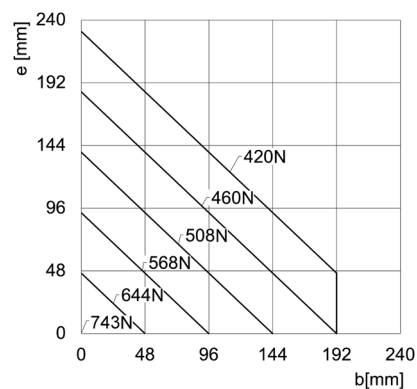
CGPT-63 opening



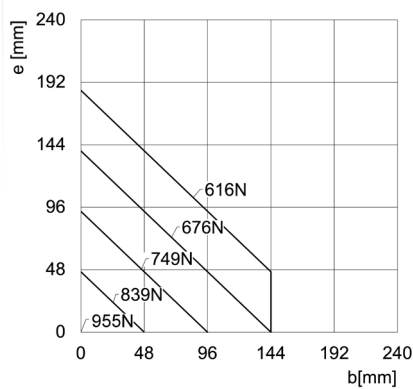
CGPT-63-NC opening



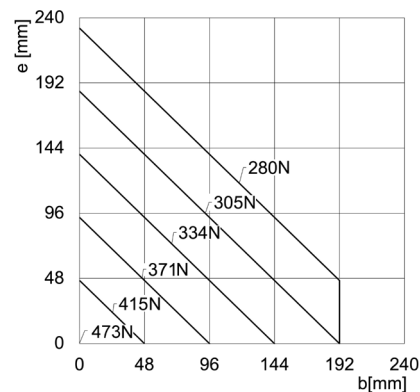
CGPT-63-NO opening



CGPT-63 closing



CGPT-63-NC closing

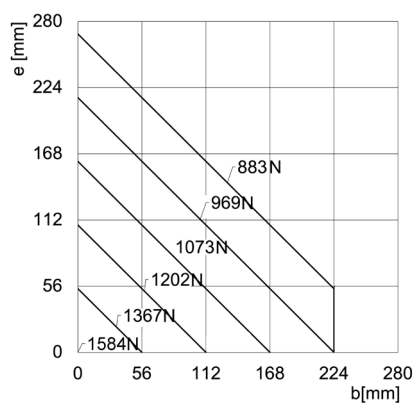
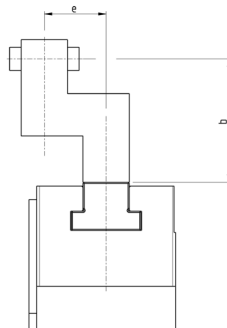


CGPT-63-NO closing

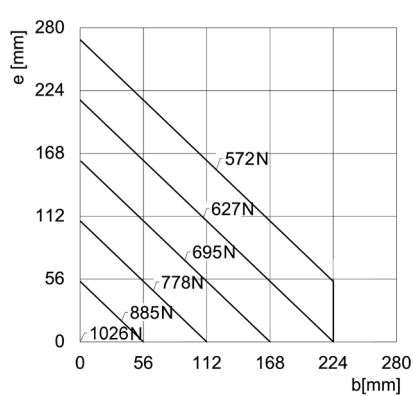
Length vs eccentricity CGPT-80

The total gripping force has to be calculated as follows: $\text{Total } F = F \times 2$.

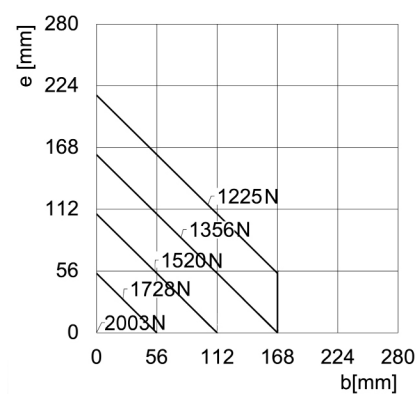
Range of use of the gripper according to gripping point (b) and the arm (e).



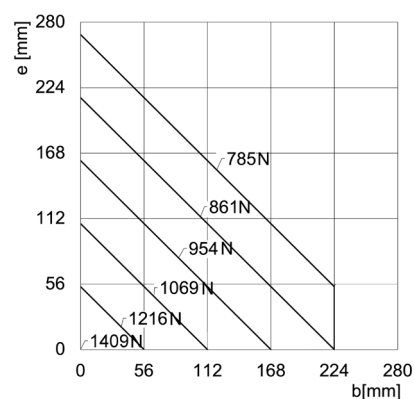
CGPT-80 opening



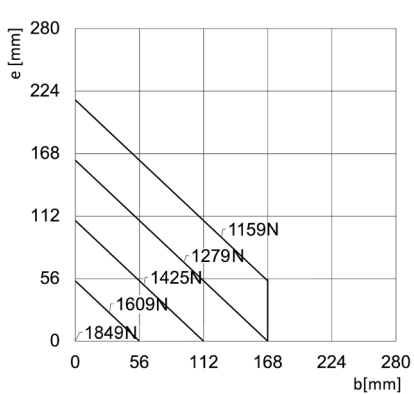
CGPT-80-NC opening



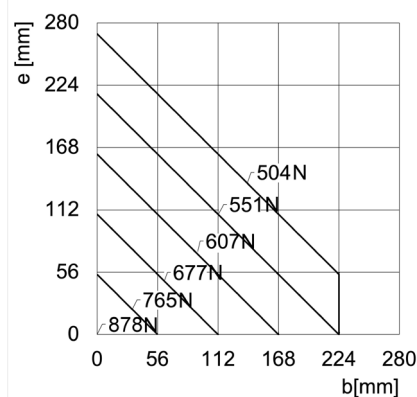
CGPT-80-NO opening



CGPT-80 closing

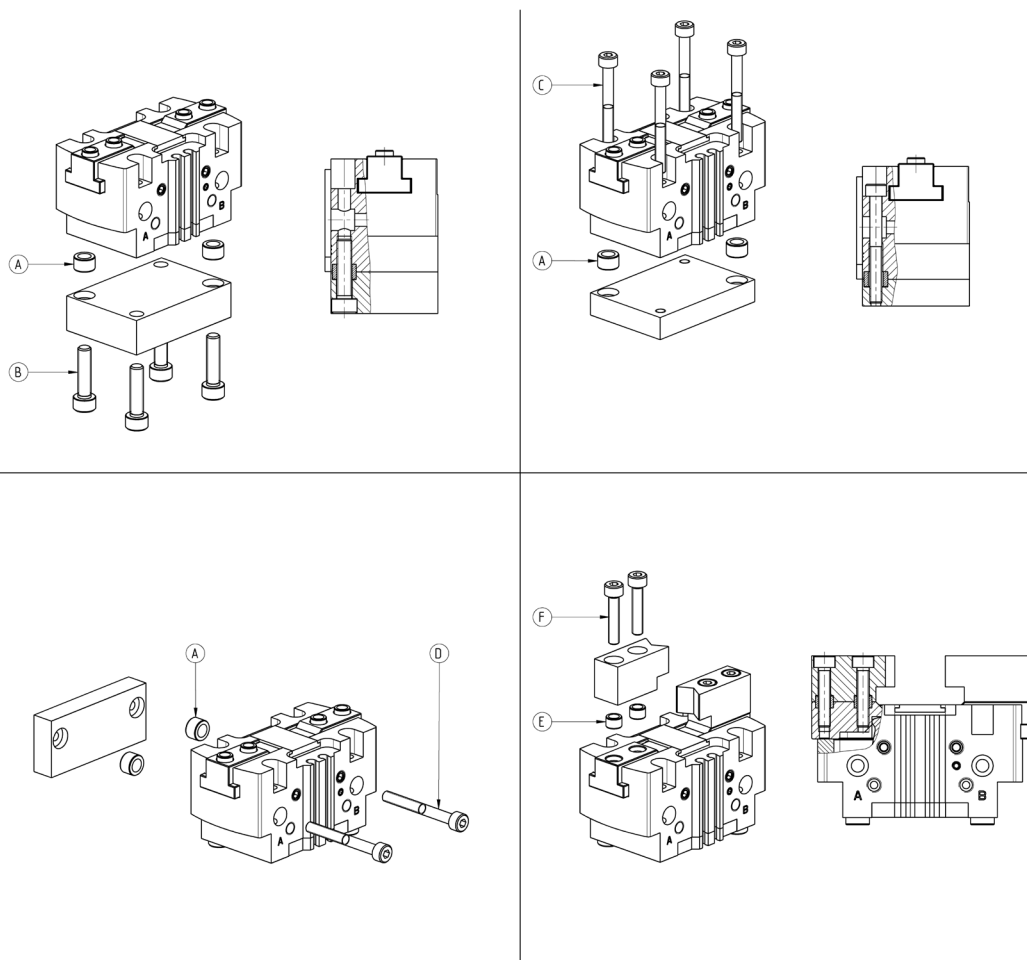


CGPT-80-NC closing



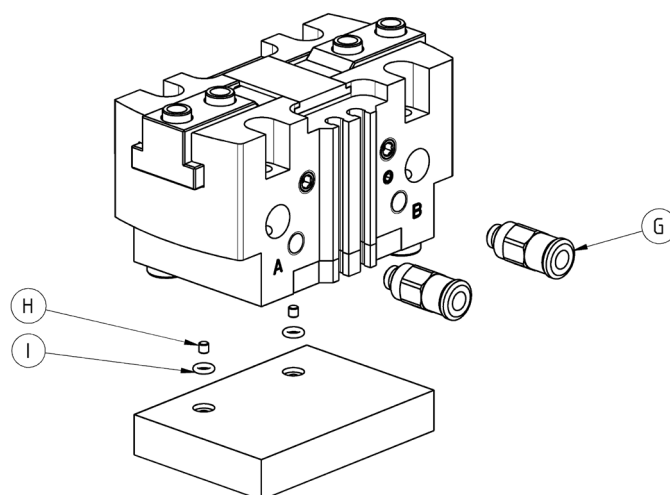
CGPT-80-NO closing

Examples of mounting



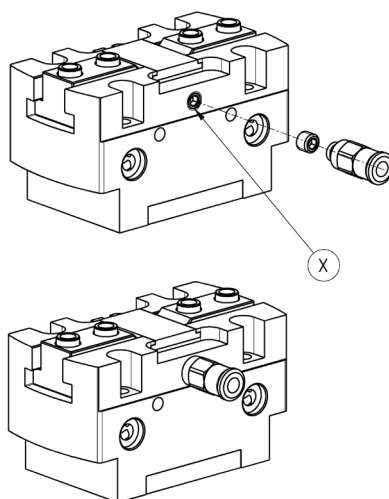
Mod.	A	B	C	D	E	F
CGPT-16	Ø5	M3	M2,5	M2,5	Ø4	M2,5
CGPT-20	Ø6	M4	M3	M3	Ø5	M3
CGPT-25	Ø8	M5	M4	M4	Ø6	M4
CGPT-32	Ø8	M5	M4	M5	Ø8	M5
CGPT-40	Ø10	M6	M5	M6	Ø10	M6
CGPT-50	Ø12	M8	M6	M8	Ø10	M6
CGPT-63	Ø12	M8	M6	M8	Ø14	M10
CGPT-80	Ø14	M10	M8	M10	Ø16	M12

Air supply ports



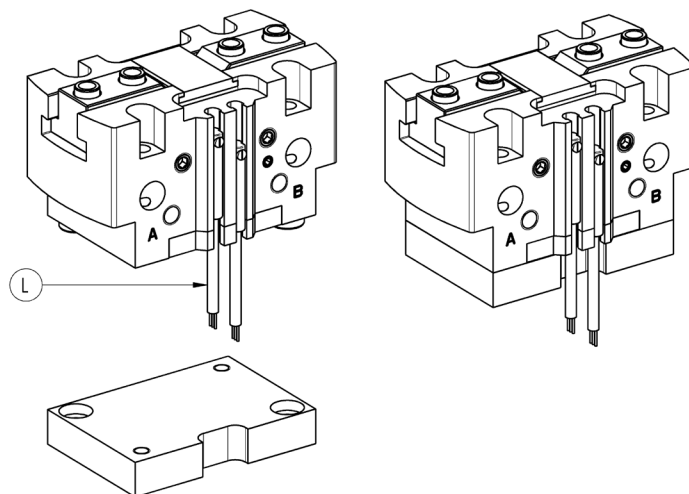
Mod.	G	H	I
CGPT-16	M3	M2	OR 2,5x1
CGPT-20	M5	M2	OR 2,5x1
CGPT-25	M5	M2	OR 2,5x1
CGPT-32	M5	M3	OR 3,5x1
CGPT-40	G1/8	M3	OR 3,5x1
CGPT-50	G1/8	M3	OR 3,5x1
CGPT-63	G1/8	M5	OR 5,28x1,78
CGPT-80	G1/8	M5	OR 5,28x1,78

Example of use of the pressurization/lubrication hole



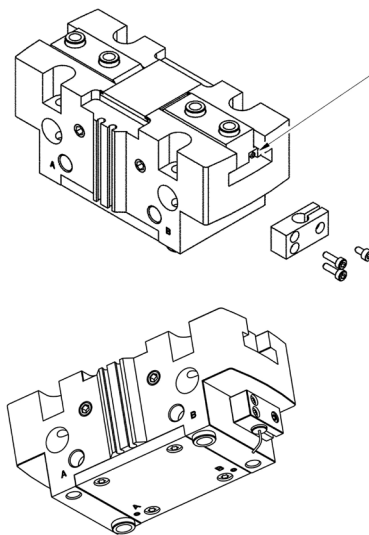
Mod.	X
CGPT-16	M3
CGPT-20	M5
CGPT-25	M5
CGPT-32	M5
CGPT-40	M5
CGPT-50	M5
CGPT-63	M5
CGPT-80	M5

Example of mounting: sensors

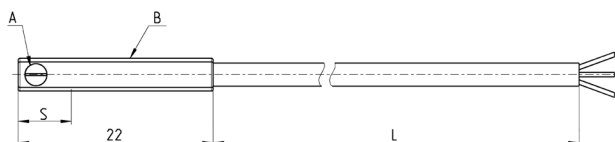
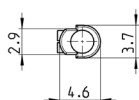
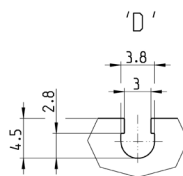


Mod.	L
CGPT-16	CSD...
CGPT-20	CSD...
CGPT-25	CSD...
CGPT-32	CSD...
CGPT-40	CSD...
CGPT-50	CSD...
CGPT-63	CSD...
CGPT-80	CSD...

Inductive sensor kit

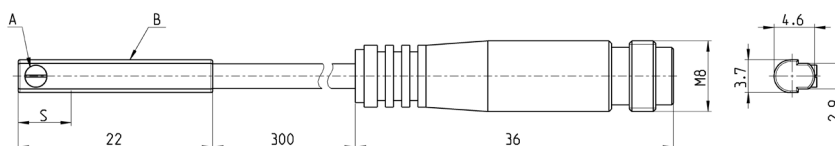
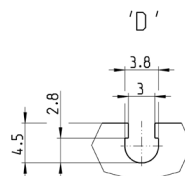


Mod.	
CGPT-50	P-CGPT
CGPT-63	P-CGPT
CGPT-80	P-CGPT

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


A = Fixing screw
 B = Led indicator
 S = Sensing point
 L = Length cable

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

Magnetic sensors Series CSD, conn. male M8 3 pin, hollow D, straight


A = Fixing screw
 B = Led indicator
 S = Sensing point
 L = Length cable

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