

# CP SERIES

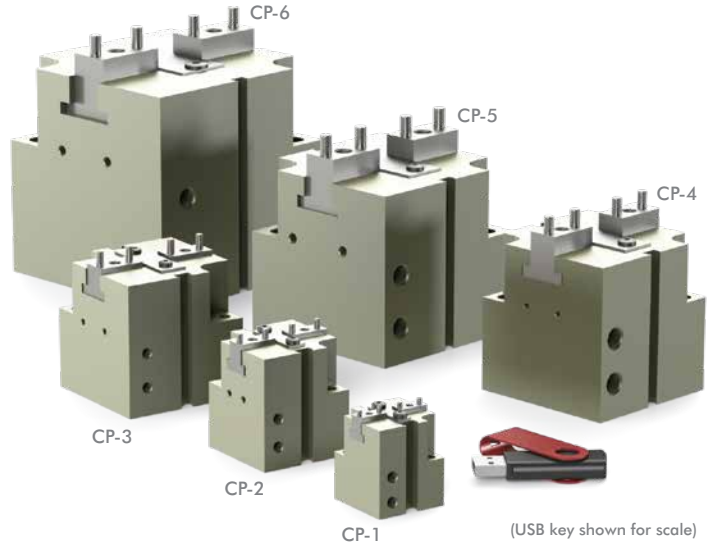
## 2-Jaw General Industrial Grippers | Features and Benefits | How To Order

### Features:

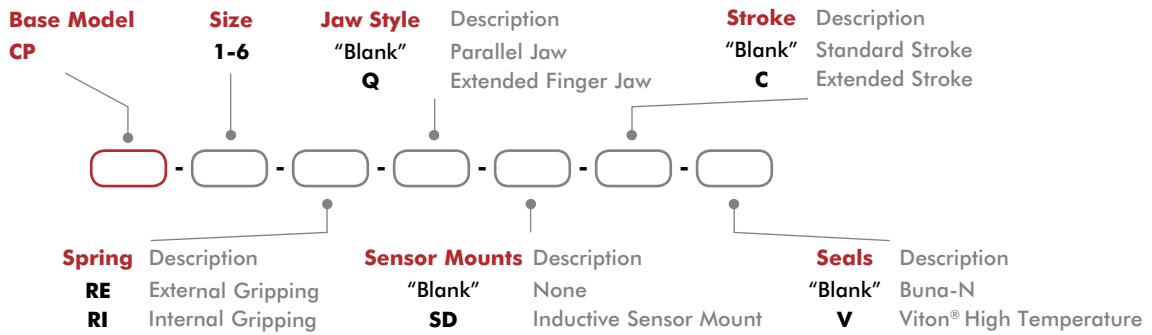
- Compact cam lever design general purpose square gripper
- Two jaw styles available, parallel or extended finger jaw
- Spring assist option for part retention in case of air pressure loss
- Standard and extended stroke option available
- Shielded design for harsh environments
- Magneto-resistive and Inductive sensing

### Applications:

- OEM pick and place machines
- Packaging applications
- General purpose gripping



## How To Order



## Accessories

Sensor Accessories	Model Numbers	Part Number	Qty/Unit
PNP Sensor with 0.3m Output Cable with 90° with M8 connector*	All Models	D1	1-2
NPN Sensor with 0.3m Output Cable with 90° with M8 connector*	CP-2, -3, -4, -5, -6	D10	1-2
PNP Sensor with 0.3m Output Cable with M8 connector*	All Models	D4	1-2
NPN Sensor with 0.3m Output Cable with M8 connector*	CP-2, -3, -4, -5, -6	D7	1-2
Inductive Sensor Mounting Kit (mounts 2 sensors) (SD)	See Datasheet		1
Inductive PNP Sensor with M8 Connector*	CP-2, -3, -4	OISP-011-C	1-2
Inductive NPN Sensor with M8 Connector*	CP-2, -3, -4	OISN-011-C	1-2
Inductive PNP Sensor with M12 Connector*	CP-5, -6	OISP-017-C	1-2
Inductive NPN Sensor with M12 Connector*	CP-5, -6	OISN-017-C	1-2
M8 Quick Disconnect 2 Meter Cable Length*	All Models	CABL-010	1-2
M12 Quick Disconnect 2 Meter Cable Length*	All Models	CABL-014	1-2

\* Sensor and cable sold separately.

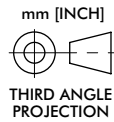
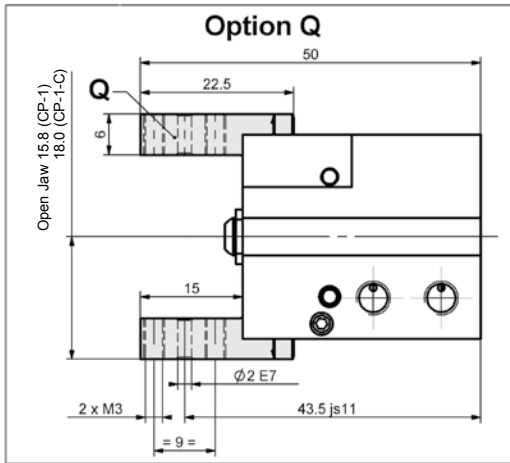
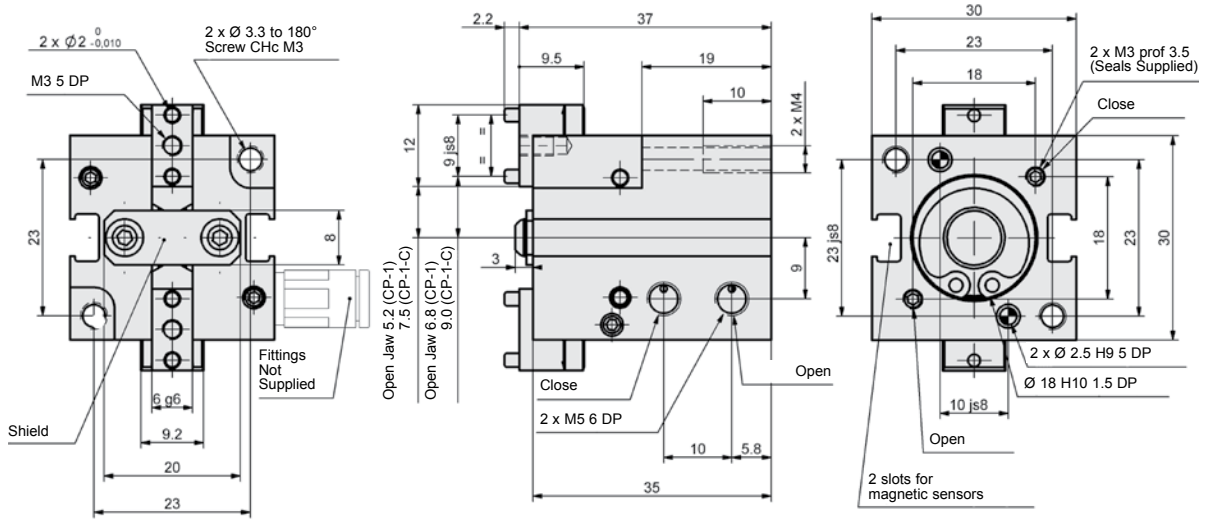
## 2-Jaw General Industrial Grippers | Technical Specifications

Specifications	Units	1	1-C	2	2-C	3	3-C
Total Rated Grip Force <b>F</b> @ 100 psi [7 bar] w/o Spring Assist	N [lbs]	89 [20]	60 [13]	238 [53]	161 [36]	677 [152]	407 [91]
Total Rated Grip Force <b>F</b> @ 100 psi [7 bar] with Spring Assist	N [lbs]	15 [3]	10 [2]	43 [10]	29 [7]	161 [36]	97 [22]
Total Stroke	mm [in]	4 [0.16]	6 [0.24]	6 [0.24]	9 [0.35]	10 [0.39]	16 [0.63]
Weight	kg [lbs]	0.09 [0.20]	0.09 [0.20]	0.21 [0.46]	0.20 [0.44]	0.45 [0.99]	0.47 [1.04]
Pressure Range w/o Spring	bar [psi]	2-10 [29-145]					
Pressure Range with Spring	bar [psi]	2.5-10 [36-145]					
Ingress Protection Class (IP)		IP54					
Displacement	cm <sup>3</sup> [in <sup>3</sup> ]	0.7 [0.04]		2.7 [0.16]		11.7 [0.71]	
Temperature Range	°C [°F]	-35°~80° [-30°~180°]					
Actuation (open/close)	sec	0.06				0.07	
Repeatability	mm [in]	±0.025 [±0.001]					
Valve to Actuate Single Acting		3-way, 2-position					
Valve to Actuate Double Acting		4-way, 2-position					

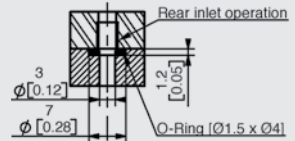
Specifications	Units	4	4-C	5	5-C	6	6-C
Total Rated Grip Force <b>F</b> @ 100 psi [7 bar] w/o Spring Assist	N [lbs]	1016 [228]	665 [149]	1591 [358]	1081 [243]	2749 [618]	2092 [470]
Total Rated Grip Force <b>F</b> @ 100 psi [7 bar] with Spring Assist	N [lbs]	222 [50]	145 [33]	322 [72]	219 [49]	711 [160]	541 [122]
Total Stroke	mm [in]	13 [0.51]	20 [0.79]	18 [0.71]	27 [1.06]	24 [0.94]	32 [1.26]
Weight	kg [lbs]	0.73 [1.61]	0.75 [1.65]	1.25 [2.76]	1.27 [2.80]	2.5 [5.51]	2.56 [5.64]
Pressure Range w/o Spring	bar [psi]	2-10 [29-145]					
Pressure Range with Spring	bar [psi]	2.5-10 [36-145]					
Ingress Protection Class (IP)		IP54					
Displacement	cm <sup>3</sup> [in <sup>3</sup> ]	24.2 [1.48]		53.5 [3.26]		114.8 [7.01]	
Temperature Range	°C [°F]	-35°~80° [-30°~180°]					
Actuation (open/close)	sec	0.07		0.09		0.12	
Repeatability	mm [in]	±0.025 [±0.001]					
Valve to Actuate Single Acting		3-way, 2-position					
Valve to Actuate Double Acting		4-way, 2-position					

# CP-1, CP-1-C

## 2-Jaw General Industrial Grippers | Dimensions and Technical Specifications

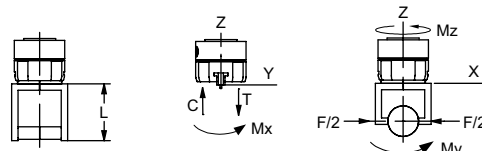
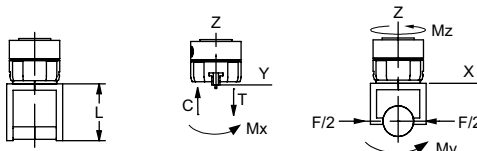
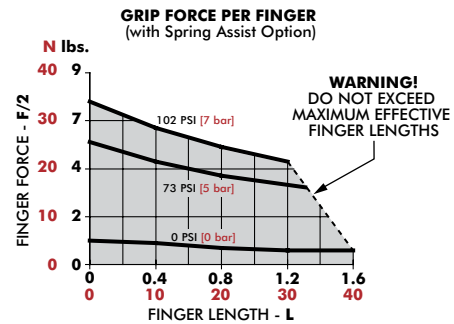
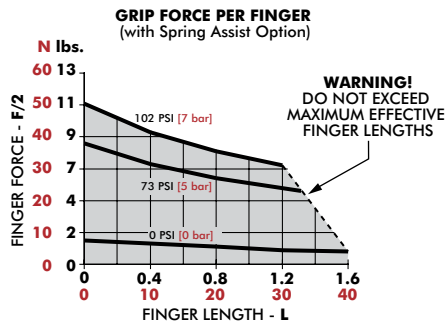


Grippers are supplied with open side air ports and top manifold air ports plugged. Top manifold sealing dimensions shown.



Seal Repair Kits	CP-1
Buna-N Seal Repair Kit	SCP1
Viton® Seal Repair Kit	SCP1V
Repair Kit (screws, springs, Buna-N seals)	KSCP1
Repair Kit (screws, springs, Viton® Seals)	KSCP1V

## Loading Information



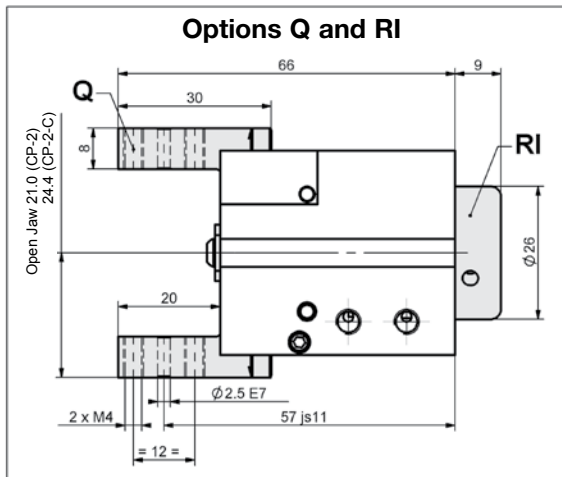
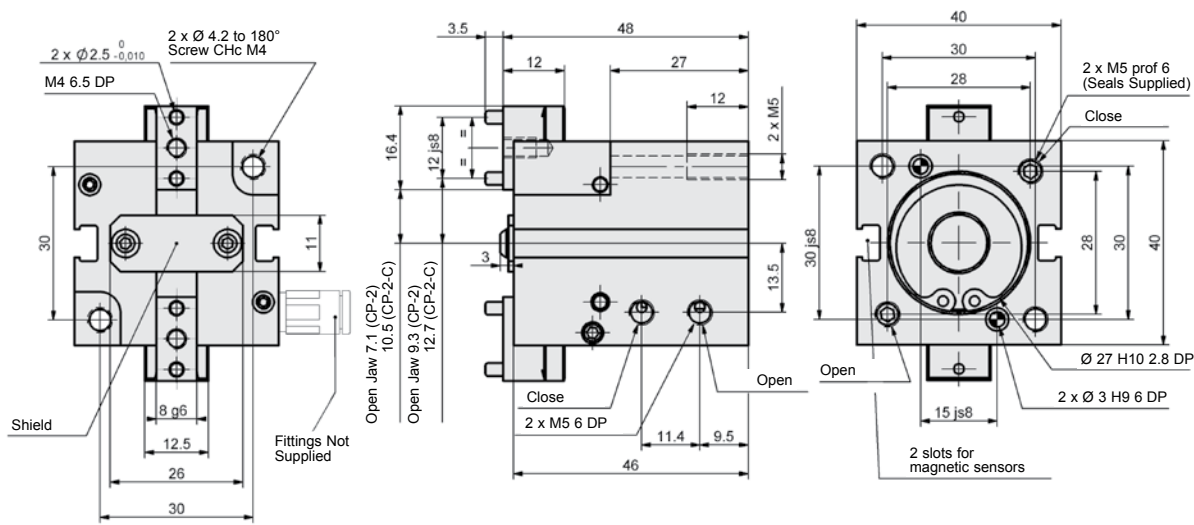
CP-1	Static	Dynamic
Maximum Tensile <b>T</b>	110 N [25 lbs]	10 N [2 lbs]
Maximum Compressive <b>C</b>	190 N [43 lbs]	10 N [2 lbs]
Maximum Moment <b>M<sub>x</sub></b>	1 Nm [9 in-lbs]	0.2 Nm [2 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	2 Nm [18 in-lbs]	0.4 Nm [4 in-lbs]
Maximum Moment <b>M<sub>z</sub></b>	2 Nm [18 in-lbs]	0.4 Nm [4 in-lbs]

CP-1-C	Static	Dynamic
Maximum Tensile <b>T</b>	110 N [25 lbs]	8 N [2 lbs]
Maximum Compressive <b>C</b>	190 N [43 lbs]	8 N [2 lbs]
Maximum Moment <b>M<sub>x</sub></b>	1 Nm [9 in-lbs]	0.2 Nm [2 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	2 Nm [18 in-lbs]	0.3 Nm [3 in-lbs]
Maximum Moment <b>M<sub>z</sub></b>	2 Nm [18 in-lbs]	0.3 Nm [3 in-lbs]

\*Capacities are per set of jaws and are not simultaneous

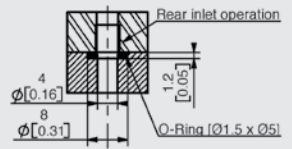
\*Capacities are per set of jaws and are not simultaneous

## 2-Jaw General Industrial Grippers | Dimensions and Technical Specifications



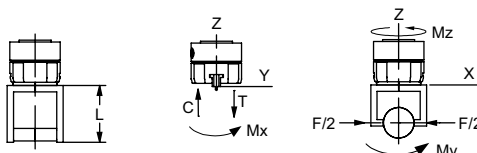
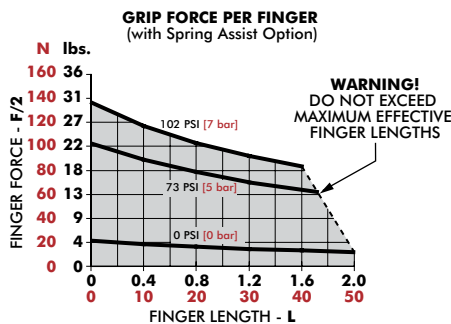
mm [INCH]  
THIRD ANGLE PROJECTION

Grippers are supplied with open side air ports and top manifold air ports plugged. Top manifold sealing dimensions shown.



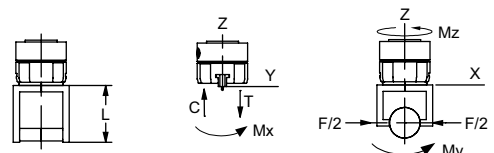
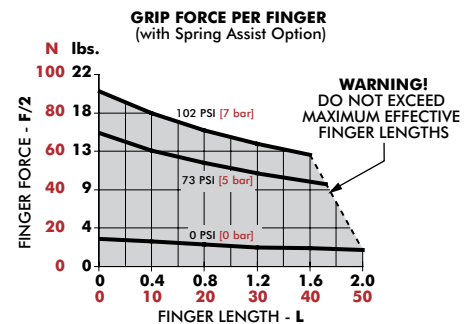
Sensor Accessories	CP-2
Inductive Sensor Mounting Kit (mounts 2 sensors) (SD)	SDCP2
Seal Repair Kits	CP-2
Buna-N Seal Repair Kit	SCP2
Viton® Seal Repair Kit	SCP2V
Repair Kit (screws, springs, Buna-N seals)	KSCP2
Repair Kit (screws, springs, Viton® Seals)	KSCP2V

## Loading Information



	Static	Dynamic
Maximum Tensile <b>T</b>	260 N [58 lbs]	26 N [6 lbs]
Maximum Compressive <b>C</b>	375 N [84 lbs]	26 N [6 lbs]
Maximum Moment <b>M<sub>x</sub></b>	5 Nm [44 in-lbs]	0.9 Nm [8 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	8 Nm [71 in-lbs]	1.5 Nm [13 in-lbs]
Maximum Moment <b>M<sub>z</sub></b>	8 Nm [71 in-lbs]	1.5 Nm [13 in-lbs]

\*Capacities are per set of jaws and are not simultaneous

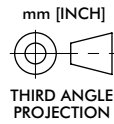
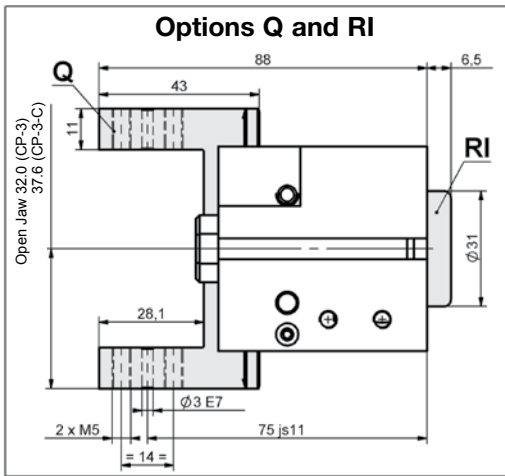
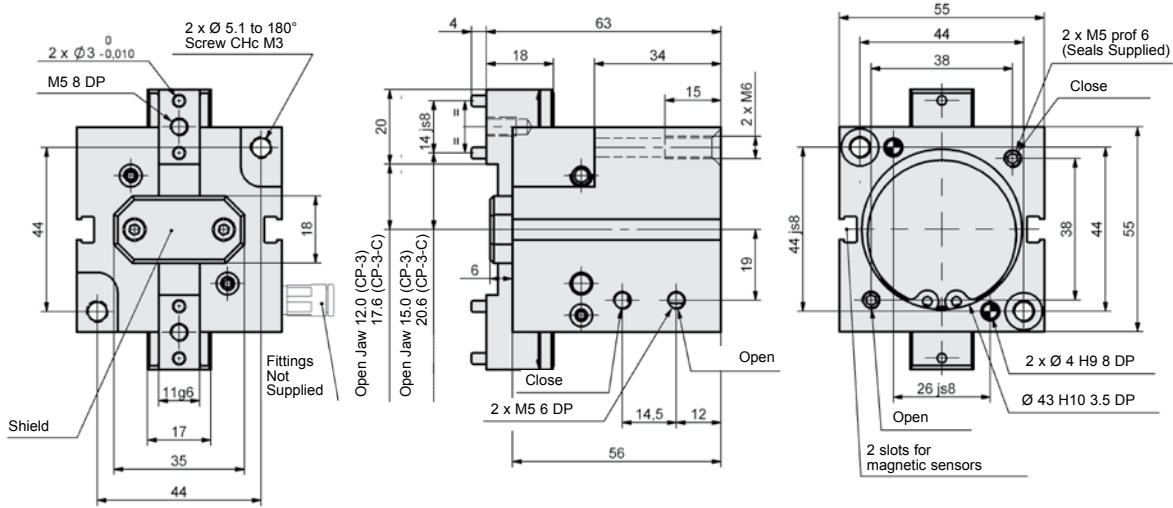


	Static	Dynamic
Maximum Tensile <b>T</b>	260 N [58 lbs]	22 N [5 lbs]
Maximum Compressive <b>C</b>	375 N [84 lbs]	22 N [5 lbs]
Maximum Moment <b>M<sub>x</sub></b>	4 Nm [35 in-lbs]	0.7 Nm [6 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	8 Nm [71 in-lbs]	1.2 Nm [11 in-lbs]
Maximum Moment <b>M<sub>z</sub></b>	8 Nm [71 in-lbs]	1.2 Nm [11 in-lbs]

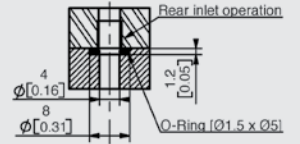
\*Capacities are per set of jaws and are not simultaneous

# CP-3, CP-3-C

## 2-Jaw General Industrial Grippers | Dimensions and Technical Specifications

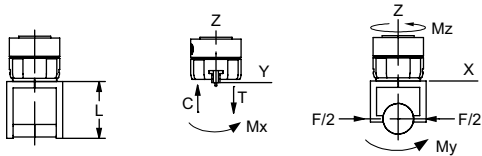
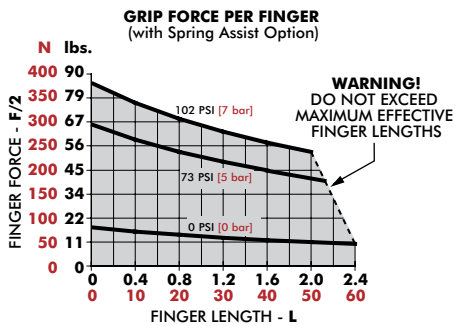


Grippers are supplied with open side air ports and top manifold air ports plugged. Top manifold sealing dimensions shown.



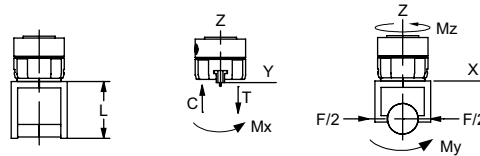
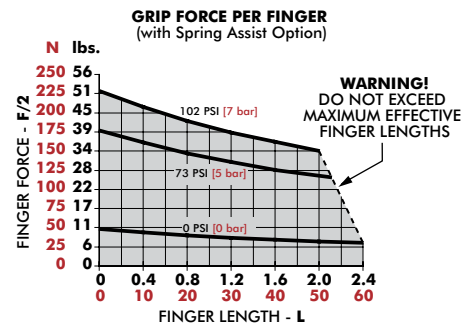
Sensor Accessories		CP-3
Inductive Sensor Mounting Kit (mounts 2 sensors) (SD)		SDCP3
Seal Repair Kits		CP-3
Buna-N Seal Repair Kit		SCP3
Viton® Seal Repair Kit		SCP3V
Repair Kit (screws, springs, Buna-N seals)		KSCP3
Repair Kit (screws, springs, Viton® Seals)		KSCP3V

## Loading Information



CP-3	Static	Dynamic
Maximum Tensile <b>T</b>	520 N [117 lbs]	72 N [16 lbs]
Maximum Compressive <b>C</b>	690 N [155 lbs]	72 N [16 lbs]
Maximum Moment <b>M<sub>x</sub></b>	11 Nm [97 in-lbs]	3.5 Nm [31 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	18 Nm [159 in-lbs]	6 Nm [53 in-lbs]
Maximum Moment <b>M<sub>z</sub></b>	17 Nm [150 in-lbs]	6 Nm [53 in-lbs]

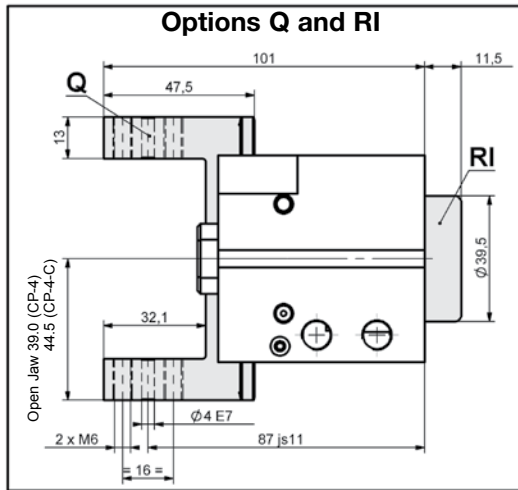
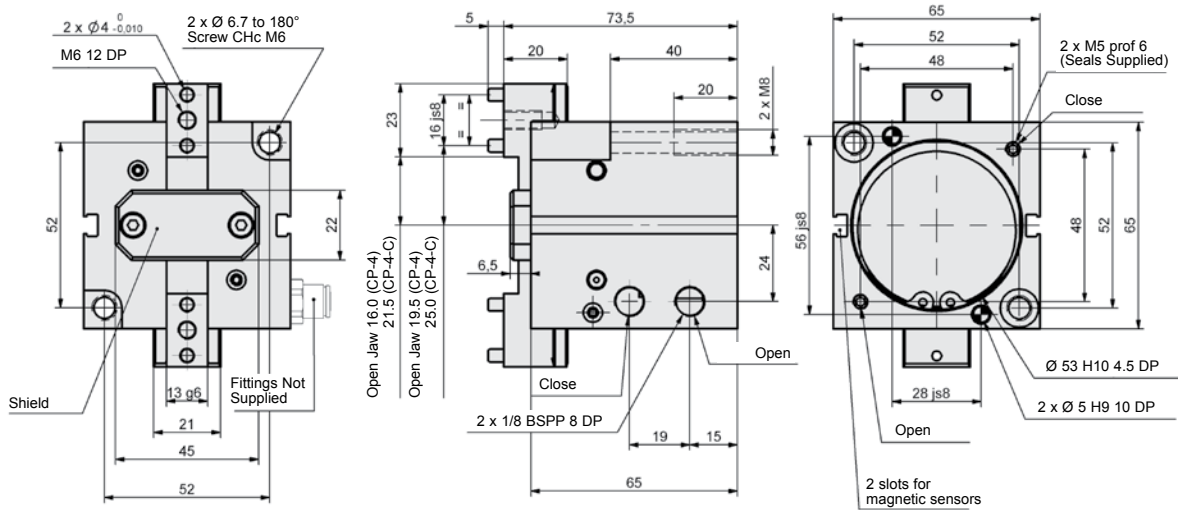
<sup>†</sup>Capacities are per set of jaws and are not simultaneous



CP-3-C	Static	Dynamic
Maximum Tensile <b>T</b>	500 N [112 lbs]	55 N [12 lbs]
Maximum Compressive <b>C</b>	675 N [152 lbs]	55 N [12 lbs]
Maximum Moment <b>M<sub>x</sub></b>	9 Nm [80 in-lbs]	2.5 Nm [22 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	16 Nm [142 in-lbs]	4 Nm [35 in-lbs]
Maximum Moment <b>M<sub>z</sub></b>	17 Nm [150 in-lbs]	4 Nm [35 in-lbs]

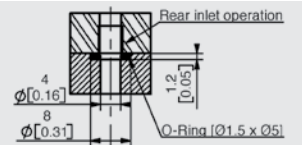
<sup>†</sup>Capacities are per set of jaws and are not simultaneous

## 2-Jaw General Industrial Grippers | Dimensions and Technical Specifications



mm [INCH]  
THIRD ANGLE PROJECTION

Grippers are supplied with open side air ports and top manifold air ports plugged. Top manifold sealing dimensions shown.



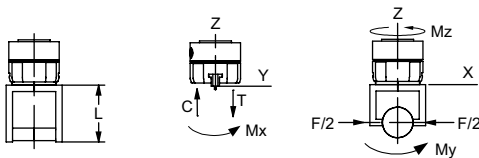
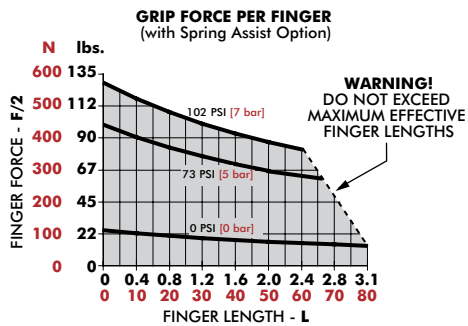
### Sensor Accessories

Inductive Sensor Mounting Kit (mounts 2 sensors) (SD) **CP-4**  
SDCP4

### Seal Repair Kits

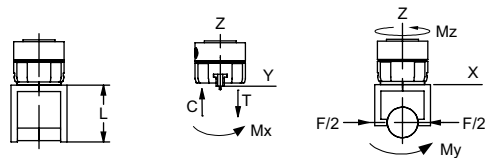
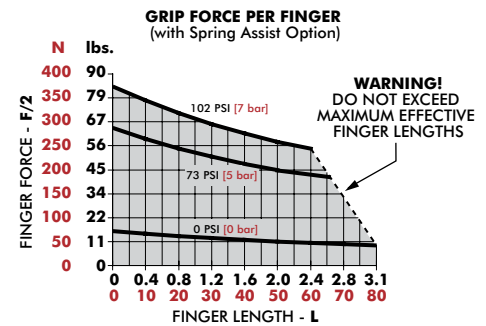
Buna-N Seal Repair Kit **CP-4**  
SCP4  
Viton® Seal Repair Kit **CP-4**  
SCP4V  
Repair Kit (screws, springs, Buna-N seals) **CP-4**  
KSCP4  
Repair Kit (screws, springs, Viton® Seals) **CP-4**  
KSCP4V

## Loading Information



CP-4	Static	Dynamic
Maximum Tensile <b>T</b>	740 N [166 lbs]	109 N [24 lbs]
Maximum Compressive <b>C</b>	830 N [187 lbs]	109 N [24 lbs]
Maximum Moment <b>M<sub>x</sub></b>	23 Nm [204 in-lbs]	6.5 Nm [58 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	35 Nm [310 in-lbs]	10 Nm [89 in-lbs]
Maximum Moment <b>M<sub>z</sub></b>	25 Nm [221 in-lbs]	8 Nm [71 in-lbs]

<sup>1</sup>Capacities are per set of jaws and are not simultaneous



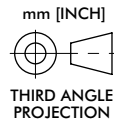
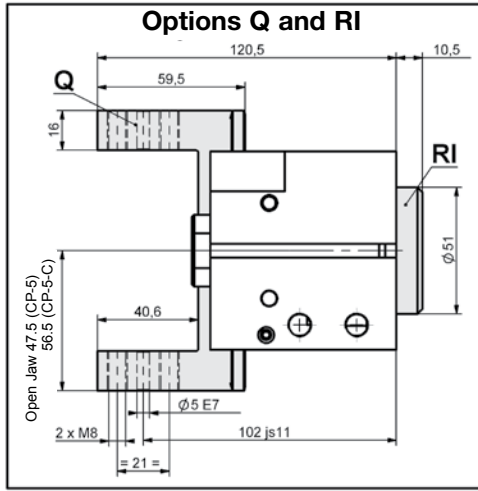
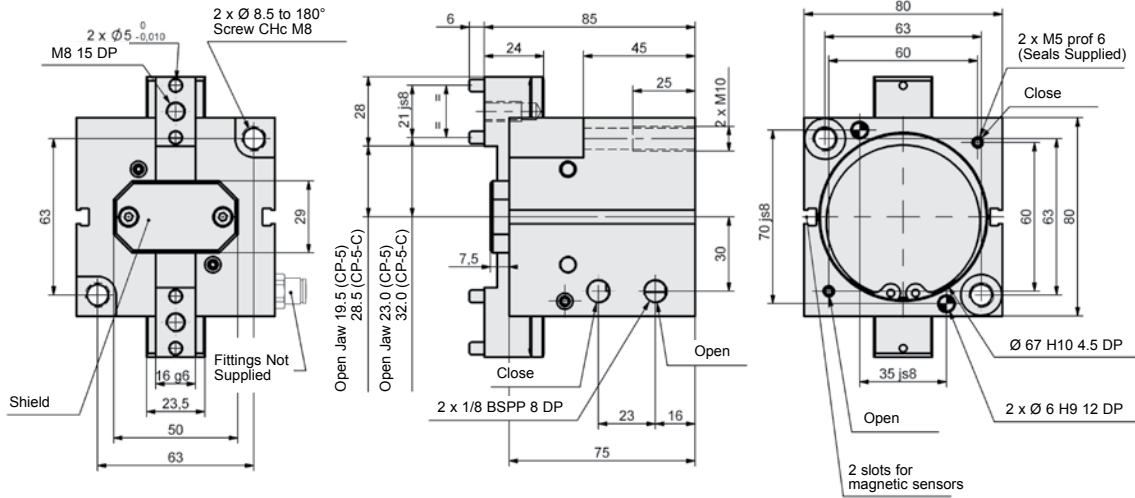
CP-4-C	Static	Dynamic
Maximum Tensile <b>T</b>	710 N [160 lbs]	89 N [20 lbs]
Maximum Compressive <b>C</b>	800 N [180 lbs]	89 N [20 lbs]
Maximum Moment <b>M<sub>x</sub></b>	18 Nm [159 in-lbs]	4.7 Nm [42 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	30 Nm [266 in-lbs]	7.6 Nm [67 in-lbs]
Maximum Moment <b>M<sub>z</sub></b>	25 Nm [221 in-lbs]	7.6 Nm [67 in-lbs]

<sup>1</sup>Capacities are per set of jaws and are not simultaneous

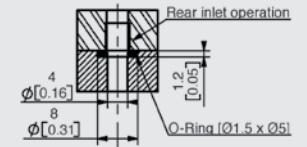


# CP-5, CP-5-C

## 2-Jaw General Industrial Grippers | Dimensions and Technical Specifications



Grippers are supplied with open side air ports and top manifold air ports plugged. Top manifold sealing dimensions shown.



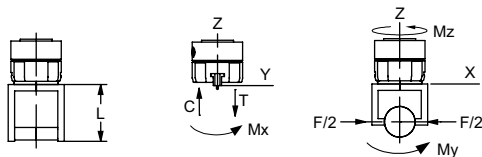
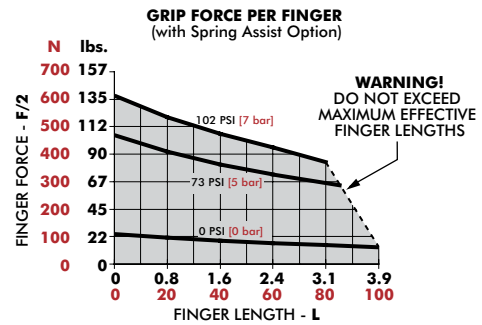
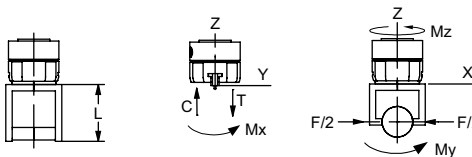
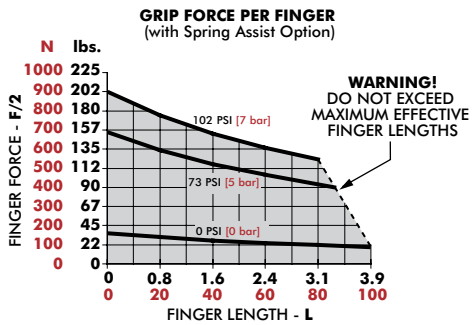
### Sensor Accessories

Inductive Sensor Mounting Kit (mounts 2 sensors) (SD) CP-5 SDCP5

### Seal Repair Kits

	CP-5
Buna-N Seal Repair Kit	SCP5
Viton® Seal Repair Kit	SCP5V
Repair Kit (screws, springs, Buna-N seals)	KSCP5
Repair Kit (screws, springs, Viton® Seals)	KSCP5V

## Loading Information



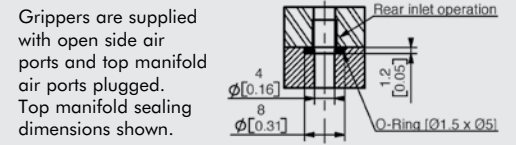
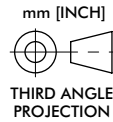
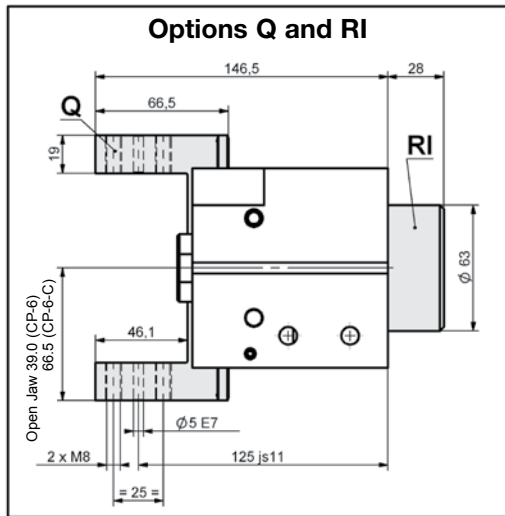
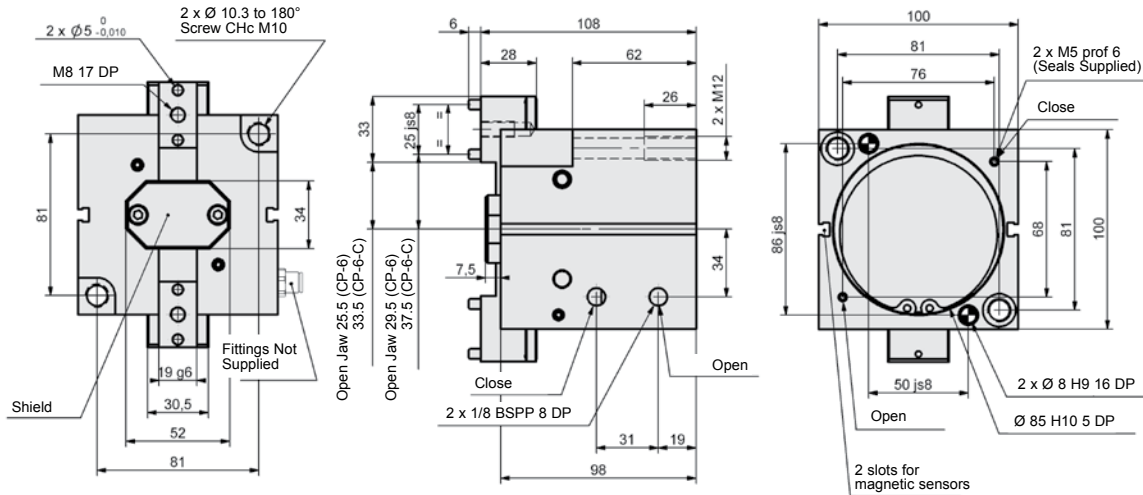
CP-5	Static	Dynamic
Maximum Tensile <b>T</b>	830 N [187 lbs]	169 N [38 lbs]
Maximum Compressive <b>C</b>	940 N [211 lbs]	169 N [38 lbs]
Maximum Moment <b>M<sub>x</sub></b>	27 Nm [6 in-lbs]	9 Nm [80 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	44 Nm [10 in-lbs]	14 Nm [124 in-lbs]
Maximum Moment <b>M<sub>z</sub></b>	30 Nm [7 in-lbs]	10 Nm [89 in-lbs]

\*Capacities are per set of jaws and are not simultaneous

CP-5-C	Static	Dynamic
Maximum Tensile <b>T</b>	820 N [184 lbs]	144 N [32 lbs]
Maximum Compressive <b>C</b>	930 N [209 lbs]	144 N [32 lbs]
Maximum Moment <b>M<sub>x</sub></b>	22 Nm [195 in-lbs]	7 Nm [62 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	40 Nm [354 in-lbs]	13 Nm [115 in-lbs]
Maximum Moment <b>M<sub>z</sub></b>	30 Nm [266 in-lbs]	10 Nm [89 in-lbs]

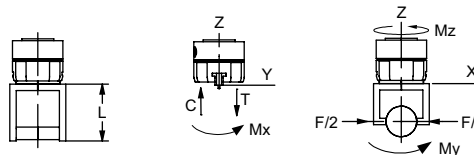
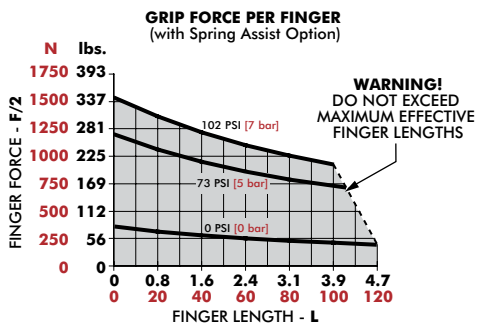
\*Capacities are per set of jaws and are not simultaneous

## 2-Jaw General Industrial Grippers | Dimensions and Technical Specifications



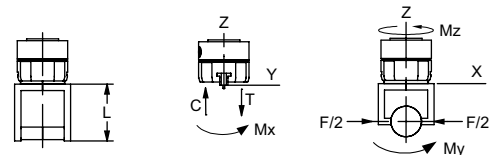
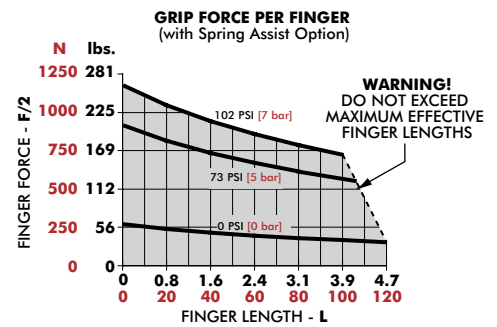
Sensor Accessories	CP-6
Inductive Sensor Mounting Kit (mounts 2 sensors) (SD)	SDCP6
Seal Repair Kits	CP-6
Buna-N Seal Repair Kit	SCP6
Viton® Seal Repair Kit	SCP6V
Repair Kit (screws, springs, Buna-N seals)	KSCP6
Repair Kit (screws, springs, Viton® Seals)	KSCP6V

## Loading Information



CP-6	Static	Dynamic
Maximum Tensile <b>T</b>	1375 N [309 lbs]	209 N [47 lbs]
Maximum Compressive <b>C</b>	1500 N [337 lbs]	209 N [47 lbs]
Maximum Moment <b>M<sub>x</sub></b>	48 Nm [11 in-lbs]	16 Nm [142 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	72 Nm [16 in-lbs]	24 Nm [212 in-lbs]
Maximum Moment <b>M<sub>z</sub></b>	68 Nm [15 in-lbs]	22 Nm [195 in-lbs]

†Capacities are per set of jaws and are not simultaneous



CP-6-C	Static	Dynamic
Maximum Tensile <b>T</b>	1340 N [301 lbs]	279 N [63 lbs]
Maximum Compressive <b>C</b>	1450 N [326 lbs]	279 N [63 lbs]
Maximum Moment <b>M<sub>x</sub></b>	42 Nm [372 in-lbs]	14 Nm [124 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	70 Nm [620 in-lbs]	23 Nm [204 in-lbs]
Maximum Moment <b>M<sub>z</sub></b>	64 Nm [566 in-lbs]	21 Nm [186 in-lbs]

†Capacities are per set of jaws and are not simultaneous