※ Dust cover for coolant splashing, dust proof, drip proof, and environmental resistant.
※ Three directions of mounting.
※ Auto switch with indicator lamp.

How to order

CKL-25 RT 1

Number of auto switch

Auto switch type

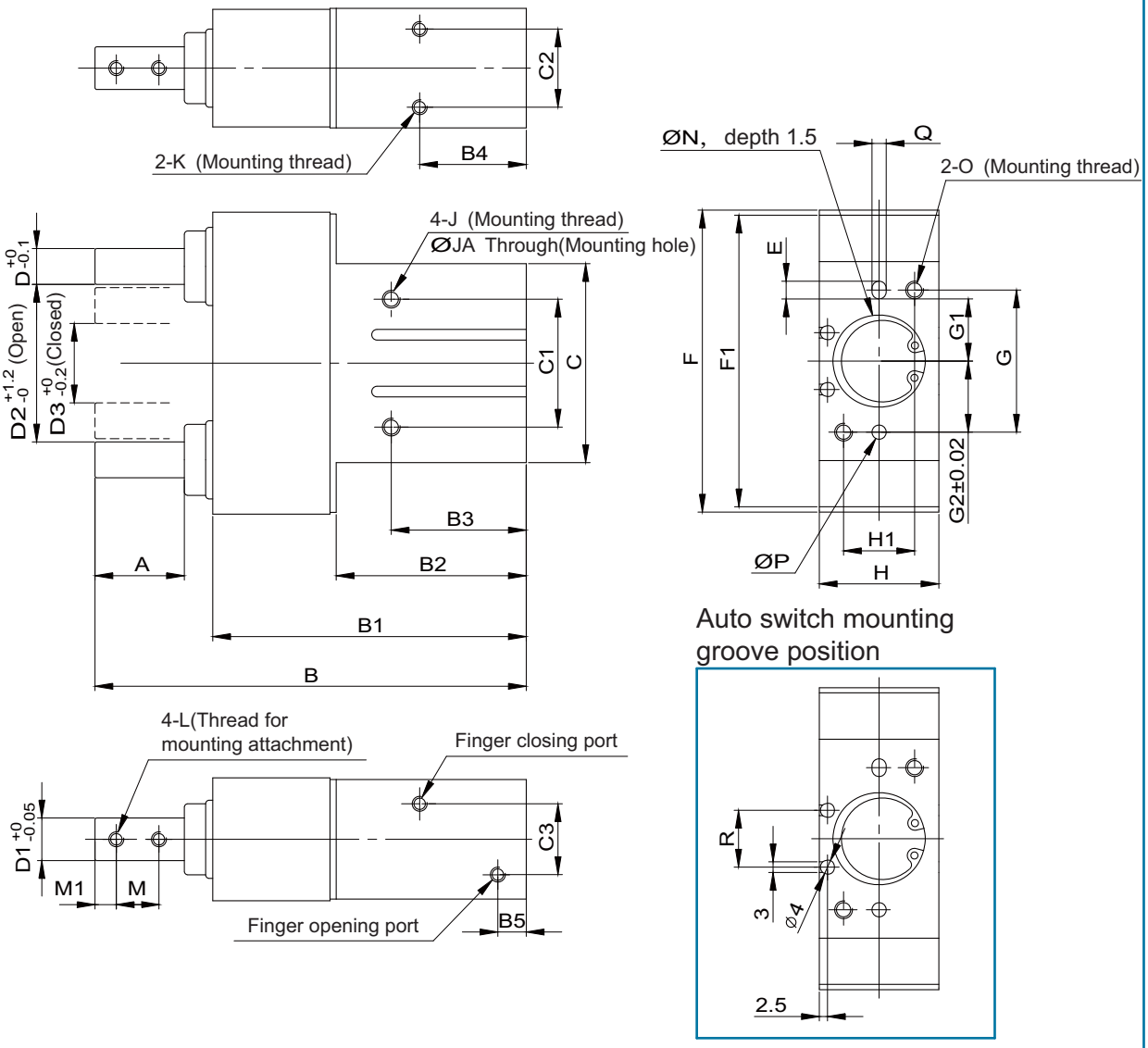
Perpendicular	In-line	Style
RTV	RT	Reed switch
RTNV	RTN	NPN
RTPV	RTP	PNP

Refer to P.5 for detailed auto switch specifications

Model	CKL-12	CKL-16	CKL-20	CKL-25
Cylinder bore(mm)	12	16	20	25
Fluid	Air			
Operating pressure(MPa)	0.1~0.6MPa			
Opening/Closing stroke(both sides)	11	14	18	22
Ambient and fluid temperature °C	-10~60°C			
Repeatability(mm)	±0.01			
Max.operating frequency(c.p.m)	90			
Lubrication	No Lubrication			
Action	Double acting			
Weight(g)	105	166	315	565

＊ Dust Cover:Chloroprene rubber (CR) - Black

CKL-12~25 / Long stroke type

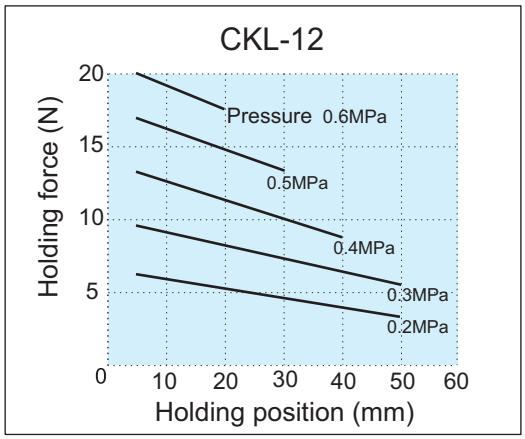


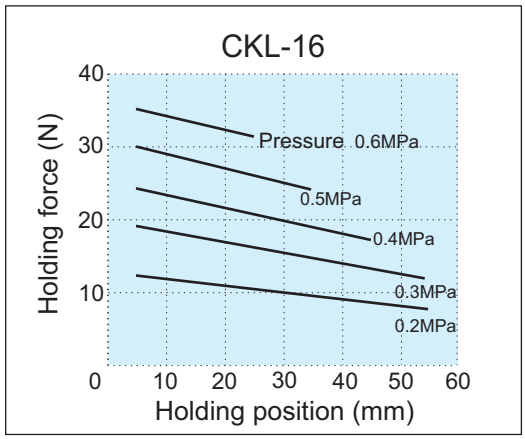
Model	A	B	B1	B2	B3	B4	B5	C	C1	C2	C3	D	D1
CKL-12	15	76	57	36	26	20	7	30	22	9	9.4	5	6
CKL-16	15	83	63	38.5	28	22	7	34	24	14	13	5	8
CKL-20	20	100	73.5	44.5	32	24	7.5	46	30	18.6	15	8	10
CKL-25	25	121	88.5	53.5	38	30	8	56	36	22	20	10	12

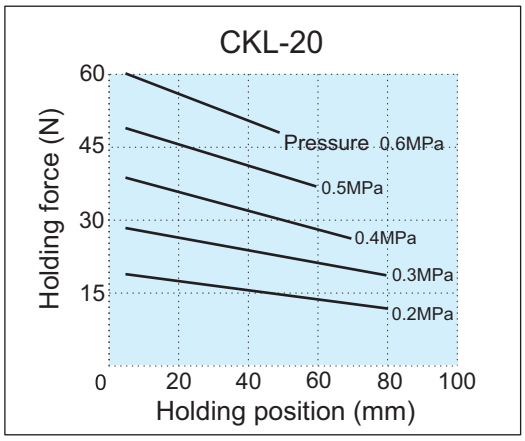
Model	D2	D3	E	F	F1	G	G1	G2	H	H1	J	JA
CKL-12	20	9	4	43	41.6	20	8	10	20	13	M4x0.7 DP8	3.4
CKL-16	28.6	14.6	4	56	54	22	10	12	23.6	15	M4x0.7 DP8	3.4
CKL-20	34	16	5	70	68	32	13.5	16	27.6	18	M5x0.8 DP10	4.3
CKL-25	41	19	5	84	81.6	40	17.5	20	33.6	22	M6x1 DP12	5.1

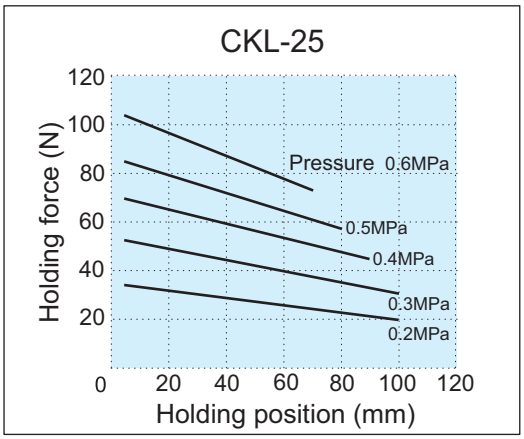
Model	K	L	M	M1	N	O	P	Q	R
CKL-12	M3x0.5 DP5	M3x0.5	7	4	Ø13H9 $^{+0.043}_{-0}$	M3x0.5 DP6	Ø3H9 $^{+0.025}_{-0}$ DP3	3H9 $^{+0.025}_{-0}$ DP3	11.6
CKL-16	M4x0.7 DP5	M3x0.5	7	4	Ø17H9 $^{+0.043}_{-0}$	M4x0.7 DP8	Ø3H9 $^{+0.025}_{-0}$ DP3	3H9 $^{+0.025}_{-0}$ DP3	13.6
CKL-20	M5x0.8 DP8	M4x0.7	9	5	Ø21H9 $^{+0.052}_{-0}$	M5x0.8 DP10	Ø4H9 $^{+0.030}_{-0}$ DP4	4H9 $^{+0.030}_{-0}$ DP4	15
CKL-25	M6x1 DP10	M5x0.8	12	6	Ø26H9 $^{+0.052}_{-0}$	M6x1 DP12	Ø4H9 $^{+0.030}_{-0}$ DP4	4H9 $^{+0.030}_{-0}$ DP4	16

Outside holding force

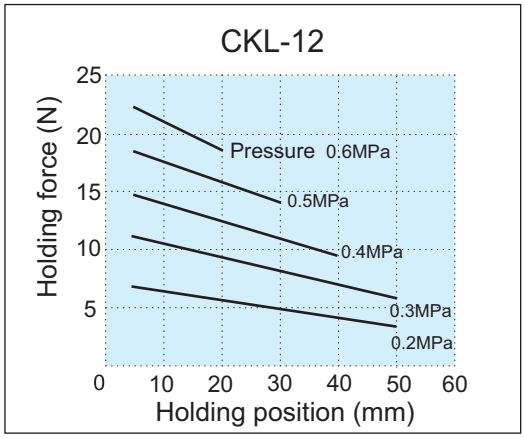


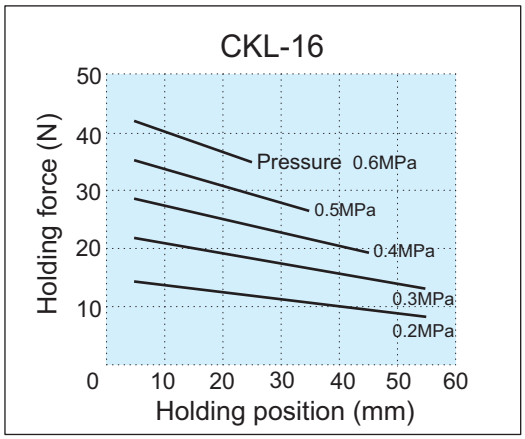


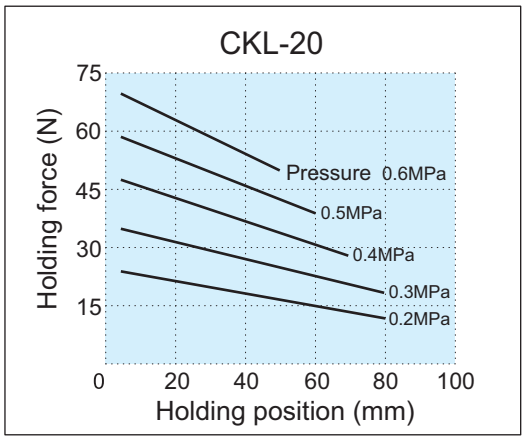


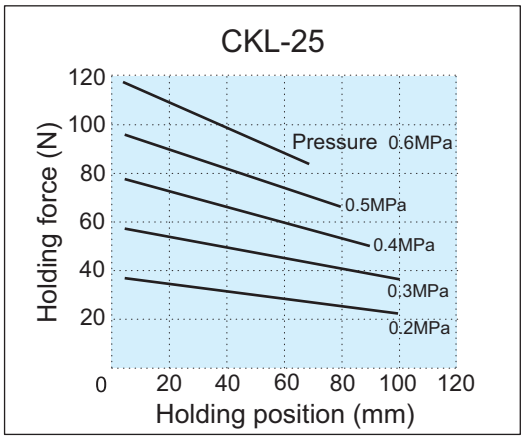


Inside holding force





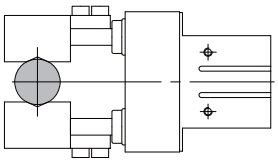




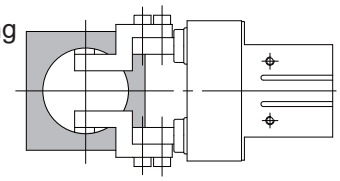
＊ It recommend:select a type of arithmetic holding force that can produce 10 to 20 times for work pice weight.
＊ Condition:Friction coefficient,great acceleration impact is expected during work pice rotate.

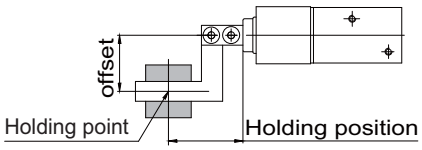
Confirmation of holding point

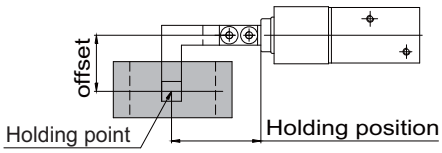
Outside holding



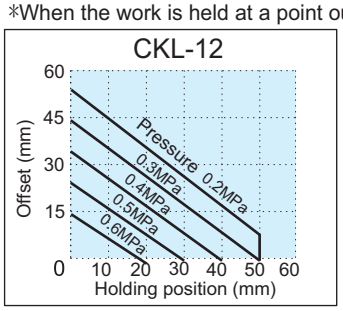
Inside holoding

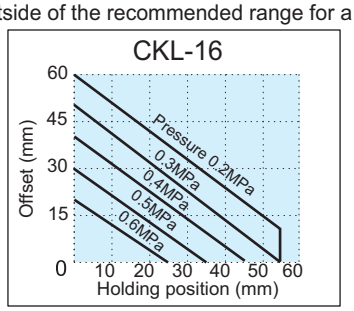


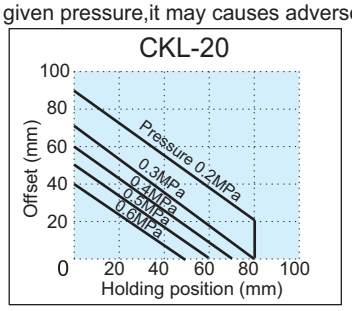


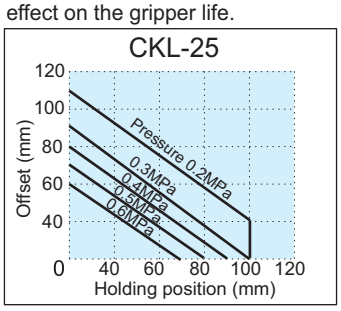


*Work should be held at a point within the range of offset distance for a given pressure indicated in the tables.
*When the work is held at a point outside of the recommended range for a given pressure,it may causes adverse effect on the gripper life.



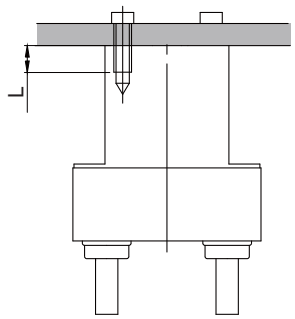






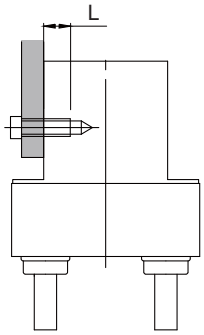
Mounting of air gripper

Axis Mounting (Body Tapped)



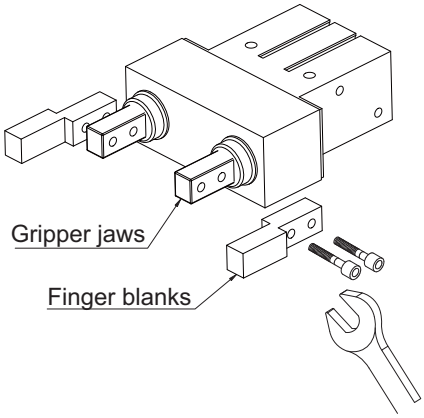
Model	Bolt	Maximum torque N.m	Max.screw depth L(mm)
CKL-12	M3 x 0.5	0.88	6
CKL-16	M4 x 0.7	2.1	8
CKL-20	M5 x 0.8	4.3	10
CKL-25	M6 x 1	7.3	12

Vertical Mounting (Body Tapped)

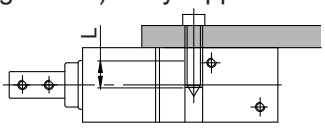


Model	Bolt	Maximum torque N.m	Max.screw depth L(mm)
CKL-12	M3 x 0.5	0.74	5
CKL-16	M4 x 0.7	1.3	5
CKL-20	M5 x 0.8	3.3	8
CKL-25	M6 x 1	5.9	10

How to Mount the finger blanks to the gripper jaws

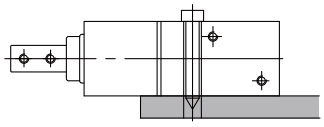


Lateral Mounting(Body Tapped,Body throught Hole) Body tapped



Model	Bolt	Maximum torque N.m	Max.screw depth L(mm)
CKL-12	M4 x 0.7	2.1	8
CKL-16	M4 x 0.7	2.1	8
CKL-20	M5 x 0.8	4.3	10
CKL-25	M6 x 1	7.3	12

Body through hole

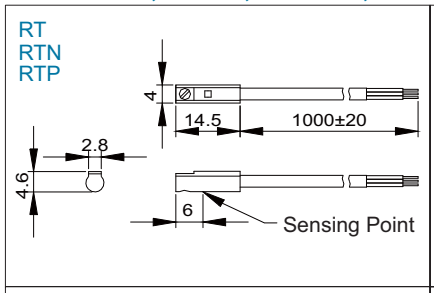


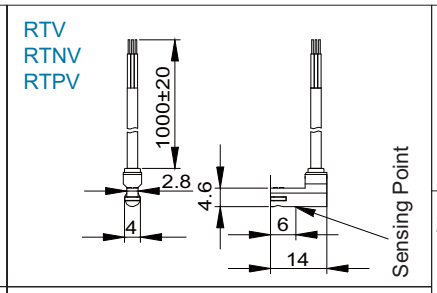
Model	Bolt	Maximum torque N.m
CKL-12	M3 x 0.5	0.88
CKL-16	M3 x 0.5	0.88
CKL-20	M4 x 0.7	2.1
CKL-25	M5 x 0.8	4.3

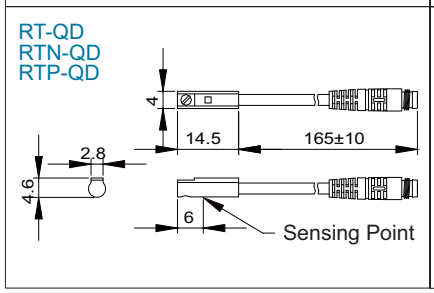
*To mount a finger blanks to a gripper jaws,make sure to use a wrench to support the finger blanks so as not to apply undue strain on the gripper jaws.
*Refer to the table below for the proper tightening torque on the bolt used for securing the attachment to the finger.

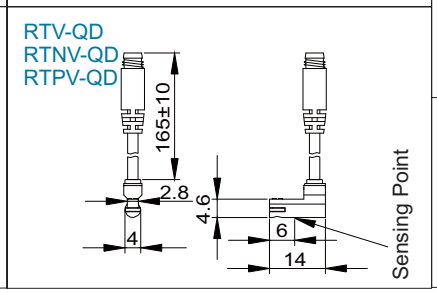
Model	Bolt	Maximum torque N.m
CKL-12	M3 x 0.5	0.59
CKL-16	M3 x 0.5	0.59
CKL-20	M4 x 0.7	1.4
CKL-25	M5 x 0.8	2.8

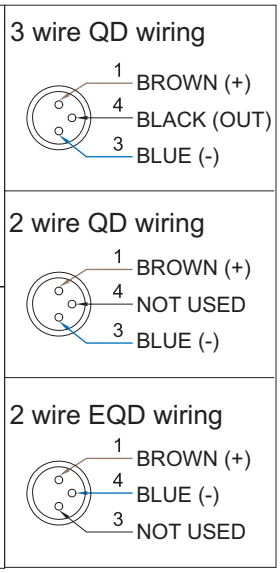
Applicable Type: CGZ,CG2(16~25),CG2L(16~25),CU,CKL, GRY,MRB,MRBS,MRC











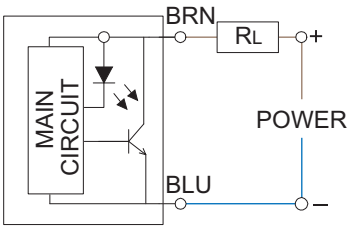
Specifications

	RT/RTV	RTN/RTNV	RTP/RTPV
Switching logic	SPST Normally Open	Solid State Output, Normally Open	
Sensor Type	Reed Switch	NPN Current Sinking	PNP Current Sourcing
Operating Voltage	5~120V DC/AC	5~28V DC	
Switching Current	4~20mA max.	50mA max.	
Switching Rating (NOTE 1.)	0.6W max.	1.5W max.	
Current Consumption	–	10mA@24 DC max.	
Voltage Drop	2.5V max.@40mA DC	0.5V@50mA max.	
Leakage Current	–	0.01mA max.	
Indicator	Red LED		Red or Green LED
Cable	2.6 Ø,2C,PVC	2.6 Ø,3C,PVC	
Max.Switch Frequency	200Hz	1000Hz	
Magnet Requirement	40Gauss		
Temperature Range	-10~70°C		
Shock (NOTE 2.)	30G	50G	
Vibration	90 m/s2 (9G), Double amplitude 1.5 mm		
Enclosure Classification	IP67		
Protection Circuit	None	Power Source Reverse polarity , Surge Suppression , Short-circuit	

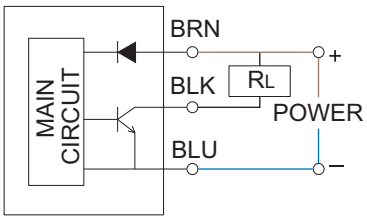
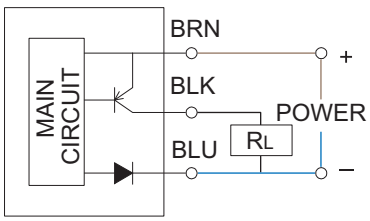
NOTE:
1.WARNING:Never exceed rating (Watt=Voltage x Amperage).Permanent demage to sensor will occur.
2.Sin wave / X,Y,Z 3 directions / 3 times each direction / 11 ms each time.

Connect Diagram

RT/RTV



RTN/RTNV



RTP/RTPV