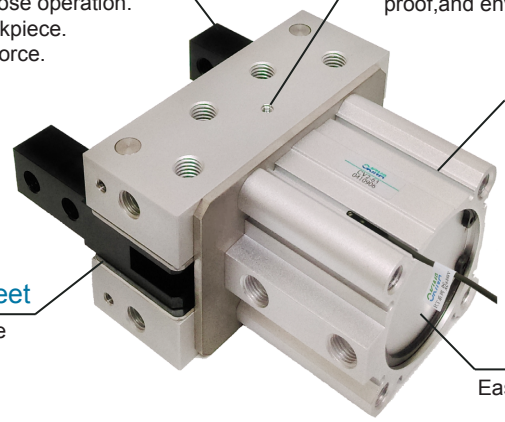


Toggle mechanism

Workpiece holding status is maintained even when the air is shut down by the toggle mechanism during close operation. Ideal for gripping heavy workpiece. Strong and stable gripping force.

Clean room Auto-lubrication

For coolant splashing,dust proof,drip proof,and environmental resistant.

Sensor

Auto switches to be mounted from 4 directions

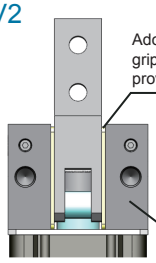
Stainless steel sheet

Good Wear resistance

Removable cover

Easy and fast during maintenance

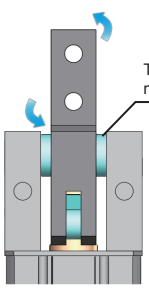
NEW CV2



Adopt stainless steel sheet,increase gripping area,not easy to shake and provide high moments.

Increase the thickness for strong support.

Old CV



The finger support area is small, non-resistance to high moments.

How to order

CV2 - 50 C L RT 1

- C: Cleanroom
- L: Auto-lubrication
- RT: Auto switch type
- 1: Number of auto switch

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

Refer to P.4 for detailed auto switch specifications

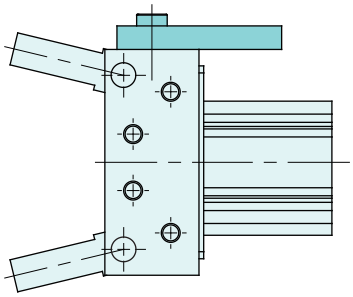
Model	CV2-32	CV2-40	CV2-50	CV2-63
Bore size(mm)	32	40	50	63
Finger opening angle(Total)	-3˚~28˚	-3˚~27˚	-2˚~23˚	-2˚~23˚
Gripping moment [N · m] (At the pressure of 0.5MPa)	12.3	35.8	63.2	105.9
Weight(kg)	0.95	1.34	2.05	2.86
Fluid	Air			
Operating pressure MPa(kgf/cm^2)	0.1~0.6(1.0~6.1)			
Ambient and fluid temperature˚C(˚F)	5~60(41 to 140)			
Lubrication	No Lubrication			
Action	Double acting			

∗ Maintenance:Re-Lubrication after appr. 1.5 million cycles recommended

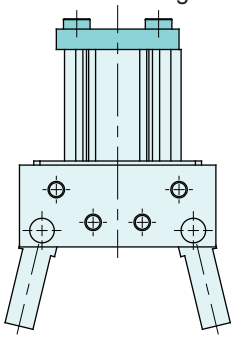
Easy mounting

3 types of mounting are possible.Lightweight, space-saving.

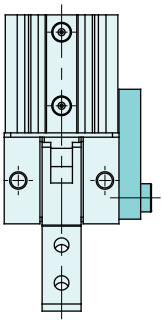
Vertical mounting



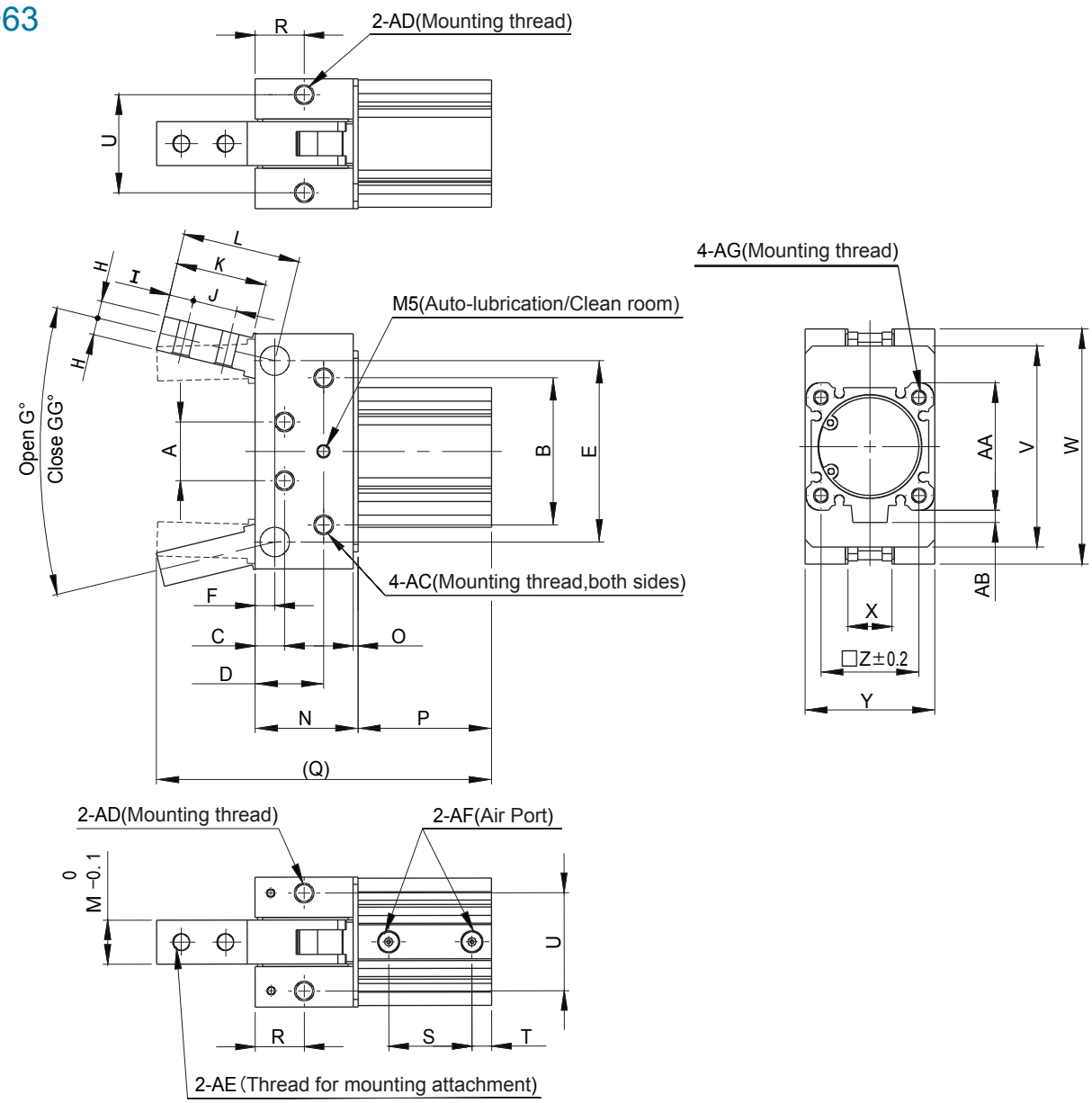
Axial mounting



Lateral mounting



CV2-32~63



Model	A	B	C	D	E	F	G	GG	H	I	J	K	L	M	N	O
CV2-32	18	50	12	28	68	8	28	-3	5.5	8	16	32	42	15	42	2
CV2-40	24	60	12	28	74	8	27	-3	7	10	18	37	48	18	42	2
CV2-50	30	80	16	35	100	10	23	-2	8	10	22	40	54	20	52.5	2.5
CV2-63	36	90	17	35	104	10	23	-2	10	11	24	45	60	24	54	4

Model	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC
CV2-32	48	124.1	20	30.5	7.5	34	74	86	15	46	34	45	4.5	M6X1.0DP10
CV2-40	54.5	136.8	20	34	8	40	82	96	18	53	40	52	5	M8X1.25DP10
CV2-50	60.5	157.5	25	39.5	10.5	52	110	124	20	66	50	64	7	M10X1.5DP12
CV2-63	66	170.8	25	40.5	10.5	60	116	132	24	80	60	77	7	M12X1.75DP17

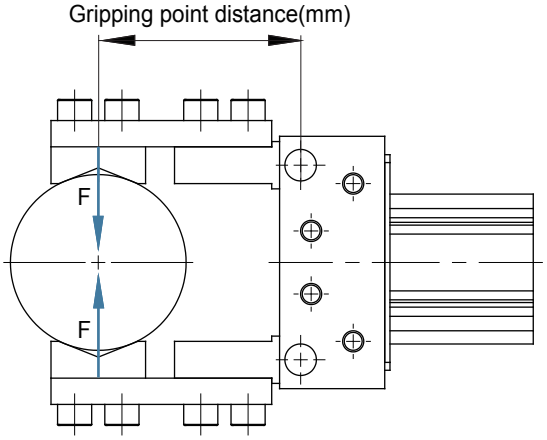
Model	AD	AE	AF	AG
CV2-32	M6X1.0DP15	M6X1.0 Through	G1/8	M6X1.0DP10
CV2-40	M8X1.25DP12	M8X1.25 Through	G1/8	M6X1.0DP10
CV2-50	M10X1.5DP12	M10X1.5 Through	G1/4	M8X1.25DP14
CV2-63	M12X1.75DP10	M12X1.75 Through	G1/4	M10X1.5DP18

※ Effective gripping force

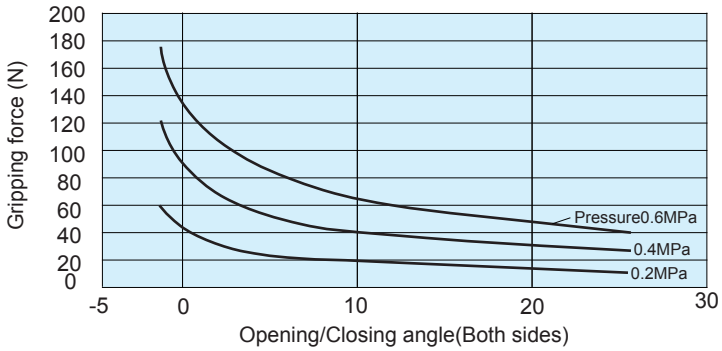
Workpiece gripping point should be within the range indicated in the graph.

※ Indication of effective gripping force

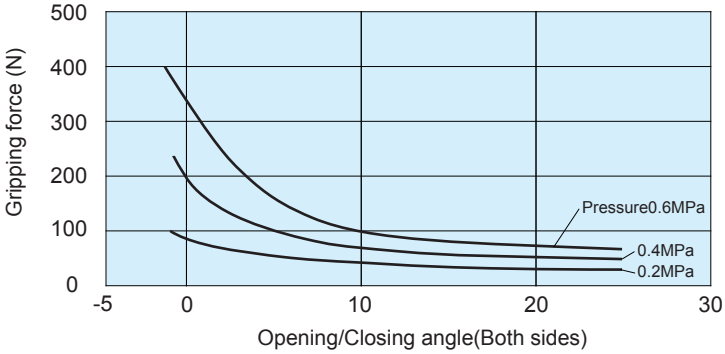
The effective gripping force shown in the graphs to the right is expressed as **F**,which is the thrust of one finger,when both fingers and attachments are in full contact with the workpiece as shown in the figure right.



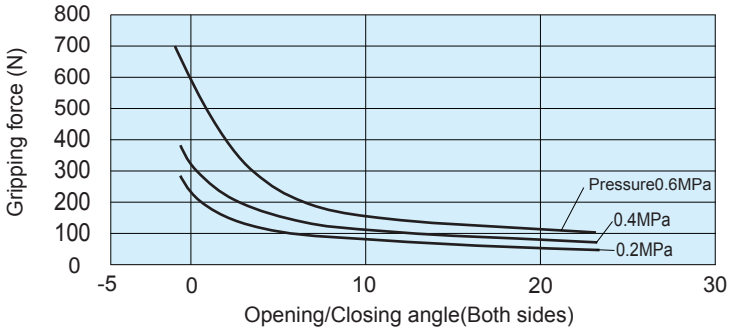
CV2-32，L=100mm



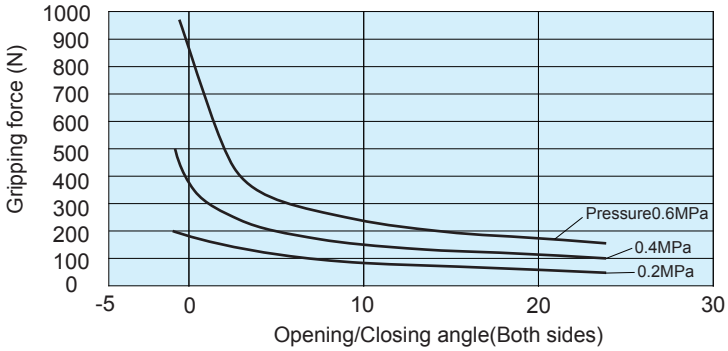
CV2-40，L=120mm



CV2-50，L=150mm



CV2-63，L=180mm



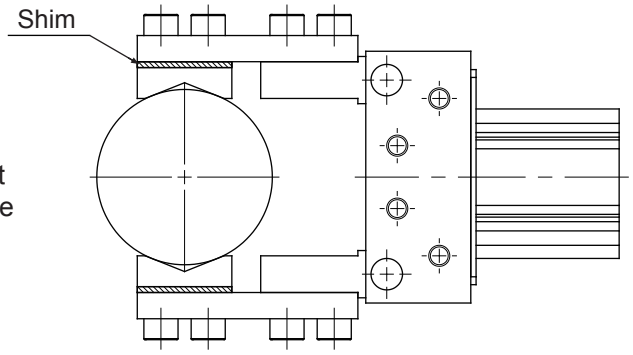
Attachment Design

1.Deisgn the attachment so that both fingers grip the workpiece when they are in parallel with each other.

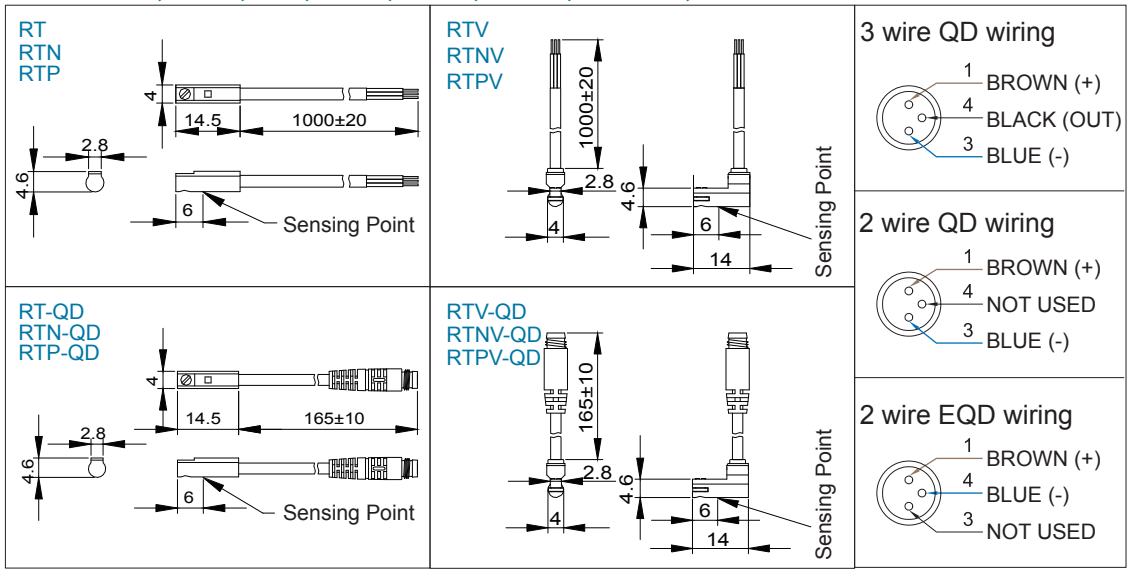
2.Take considerations so that the fine adjustment of the attachment can be made by putting the adjustment shim.

3.When the shim is thin,the gripping force becomes insuggicient and the workpiece may become unstable.Conversely,when the shim is thick,the toggle mechanism is difficult to cative and a large impulsive sound may sometimes be produced. Carefully check this point.

4.The gripping status may become untable due to continual wear of the bearing or sharft during operation.If this happens,make the adjustment,such as use of thicker shim according to the conditions.



Applicable Type: CGZ,CGZT,CGZF,CGZH,CG2(16~25),CG2L(16~25), CQZ,CV2,CU,CKL,GRY,MRB,MRBS,MRC



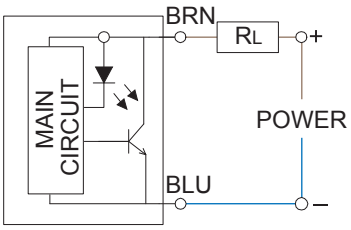
Specifications

	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	

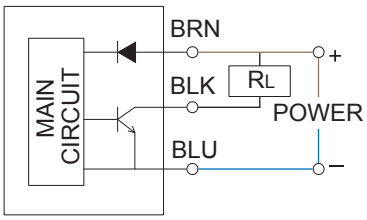
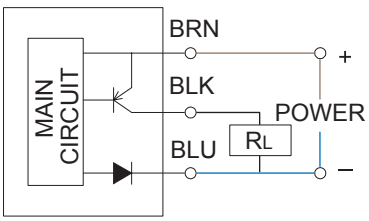
NOTE:
1.WARNING:Never exceed rating (Watt=Voltage x Amperage).Permanent demage to sensor will occur.
2.Sin wave / X,Y,Z 3 directions / 3 times each direction / 11 ms each time.

Connect Diagram

RT/RTV



RTN/RTNV



RTP/RTPV