※ Opening / closing stroke move than twice the standard (CG2)
※ Interchangeable with CG2 in mounting



How to order

CG2L-16 RT 1

- CG2L-16: Type
- RT: Auto switch type
- 1: Number of auto switch

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

- RK, RKN, RKP: for CG2L 32 to 80
- RT, RTN, RTP: for CG2L 16 to 25

(Refer to P.79 for detailed auto switch specifications)

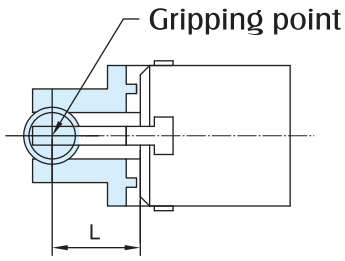
Specifications

Model		CG2L-16	CG2L-20	CG2L-25	CG2L-32	CG2L-40	CG2L-50	CG2L-63	CG2L-80
Stroke mm(dia.) Opening/Closing		10	10	12	16	20	28	32	40
Cylinder bore(mm)		16	20	25	32	40	50	63	80
Fluid		Air							
Operating pressure MPa		0.2~0.6							
Ambient and fluid temperature °C (°F)		-10~60 (14 to 140)							
Repeatability(mm)		±0.01							
Max. operating frequency(c.p.m)		120			60				30
Lubrication		No Lubrication							
Action		Double acting							
*Effective gripping force N at pressure of 0.5MPa * Note 1	External gripping force	14	25	42	74	118	187	335	500
	Internal gripping forc	16	28	47	82	130	204	359	525
Weight (g)		100	150	190	373	600	930	1850	2880

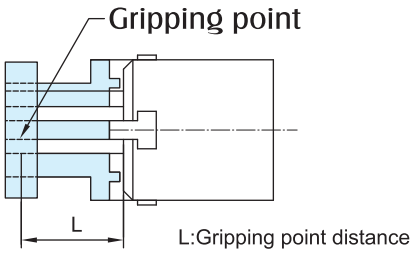
* Note 1) Values for 16 and 25 are with gripping point L=20mm, for 32 to 63 with gripping point L=30mm, and for 80 with gripping point L=50mm. Refer to the "Effective Gripping Force" data on pages through for the gripping force at each gripping position.
* Note 2) Open and closed diameter values apply for external gripping of workpieces.

Gripping Point

1.Work piece should be held at a point within the range for a given pressure indicated in the effective gripping force table shown below.
2.When the workpiece is held at a point outside of the recommended range for a give pressure, an excessive unbalanced load is applied to the finger sliding section, causing excessive play of the fingers and may cause premature failure.



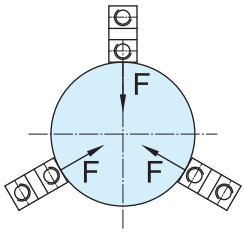
External gripping



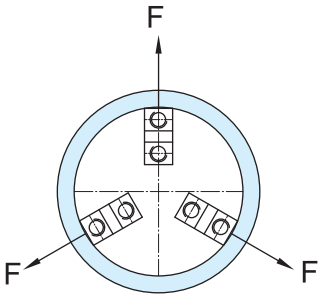
Internal gripping

Effective Gripping Force

The force shown in the tables represents the gripping force of one finger when all fingers and attachments are in contact with the work piece



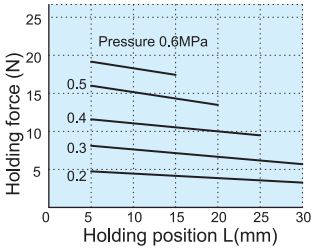
External gripping



Internal gripping

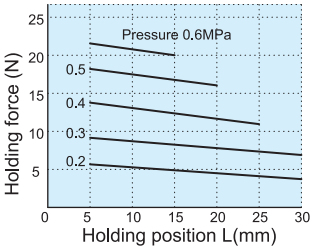
External hold

CG2L-16



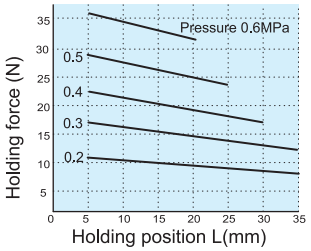
Internal hold

CG2L-16



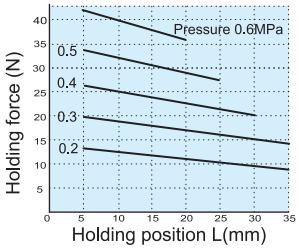
External hold

CG2L-20



Internal hold

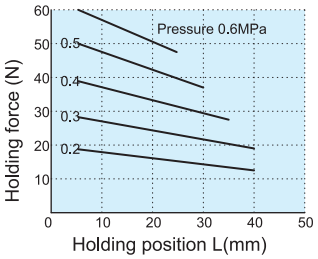
CG2L-20



Effective Holding Force

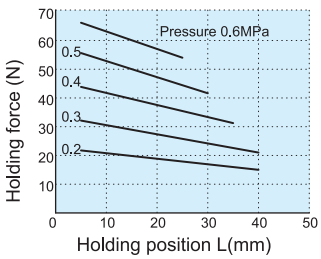
External hold

CG2L-25



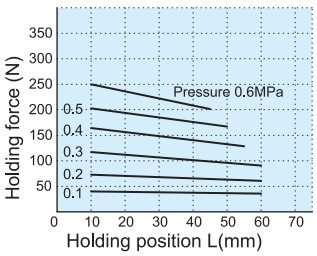
Internal hold

CG2L-25



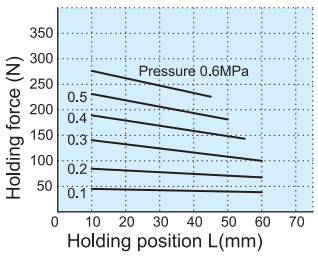
External hold

CG2L-50

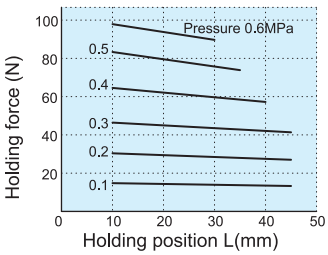


Internal hold

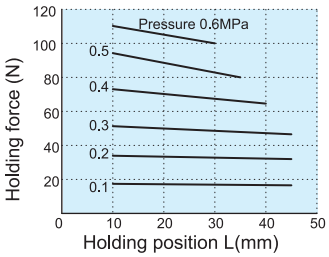
CG2L-50



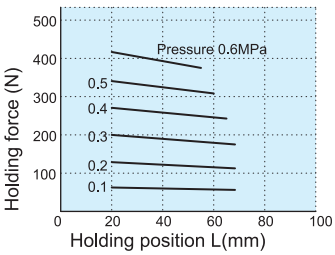
CG2L-32



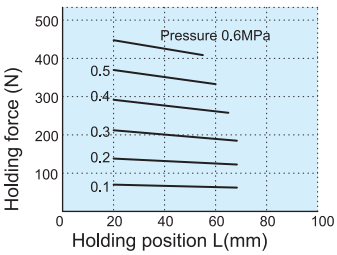
CG2L-32



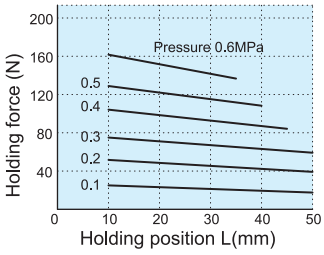
CG2L-63



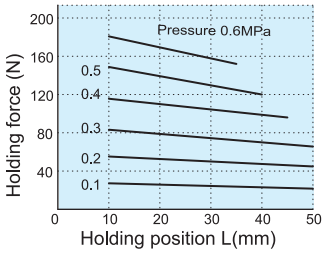
CG2L-63



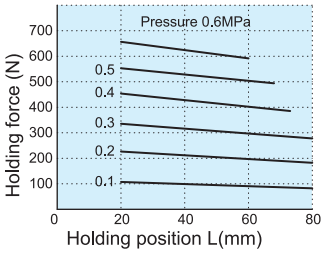
CG2L-40



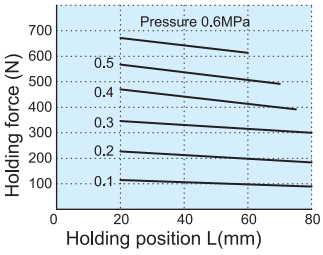
CG2L-40



CG2L-80

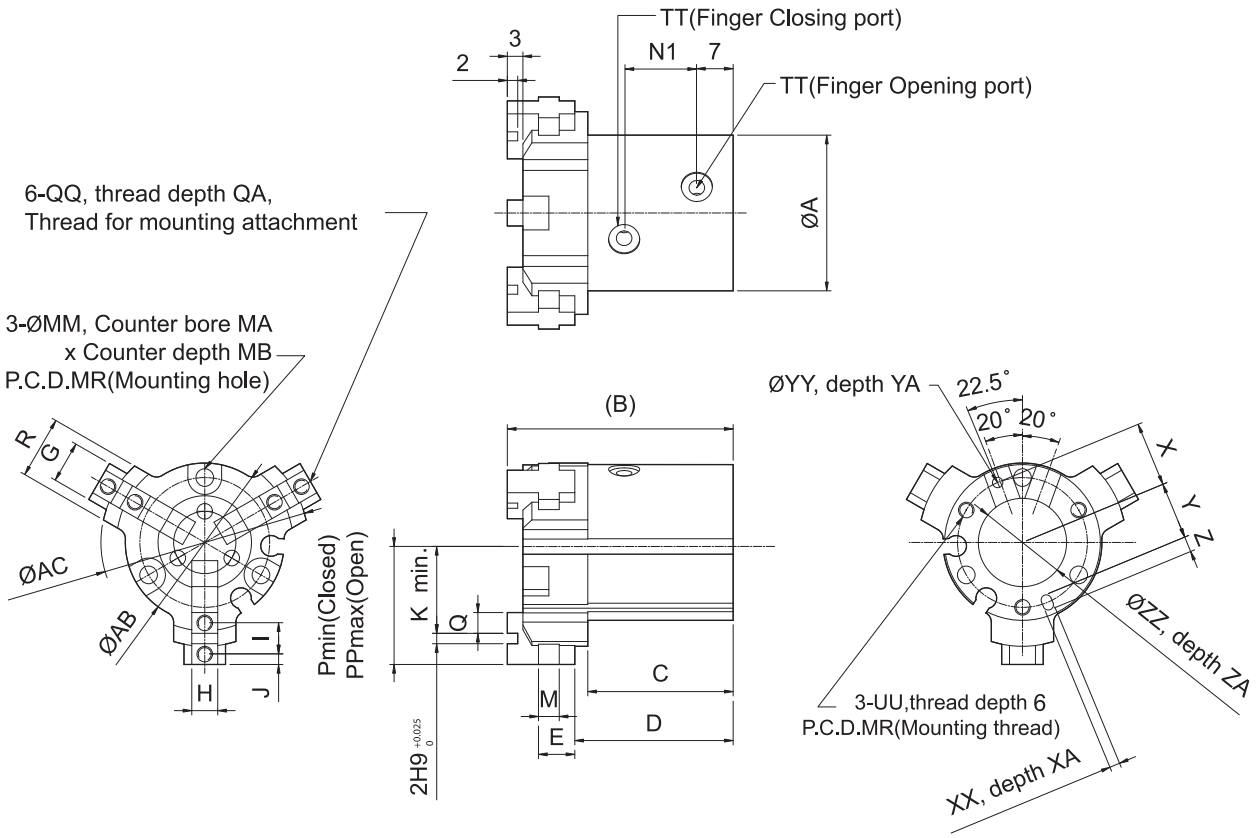


CG2L-80

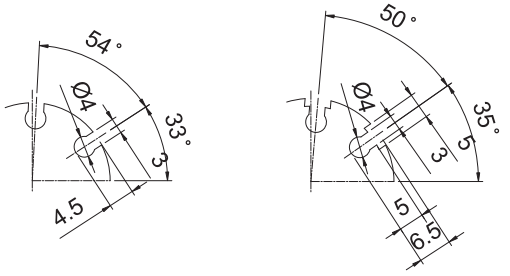


Dimensions

CG2L-16~25

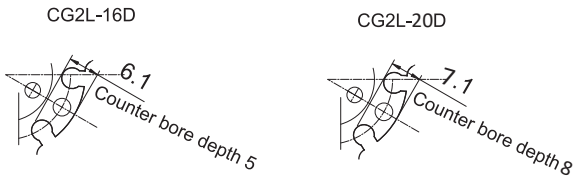


Auto switch mounting groove position(2 places)



CG2L-16D CG2L-20D CG2L-25D

Mounting hole counter bore dimensions



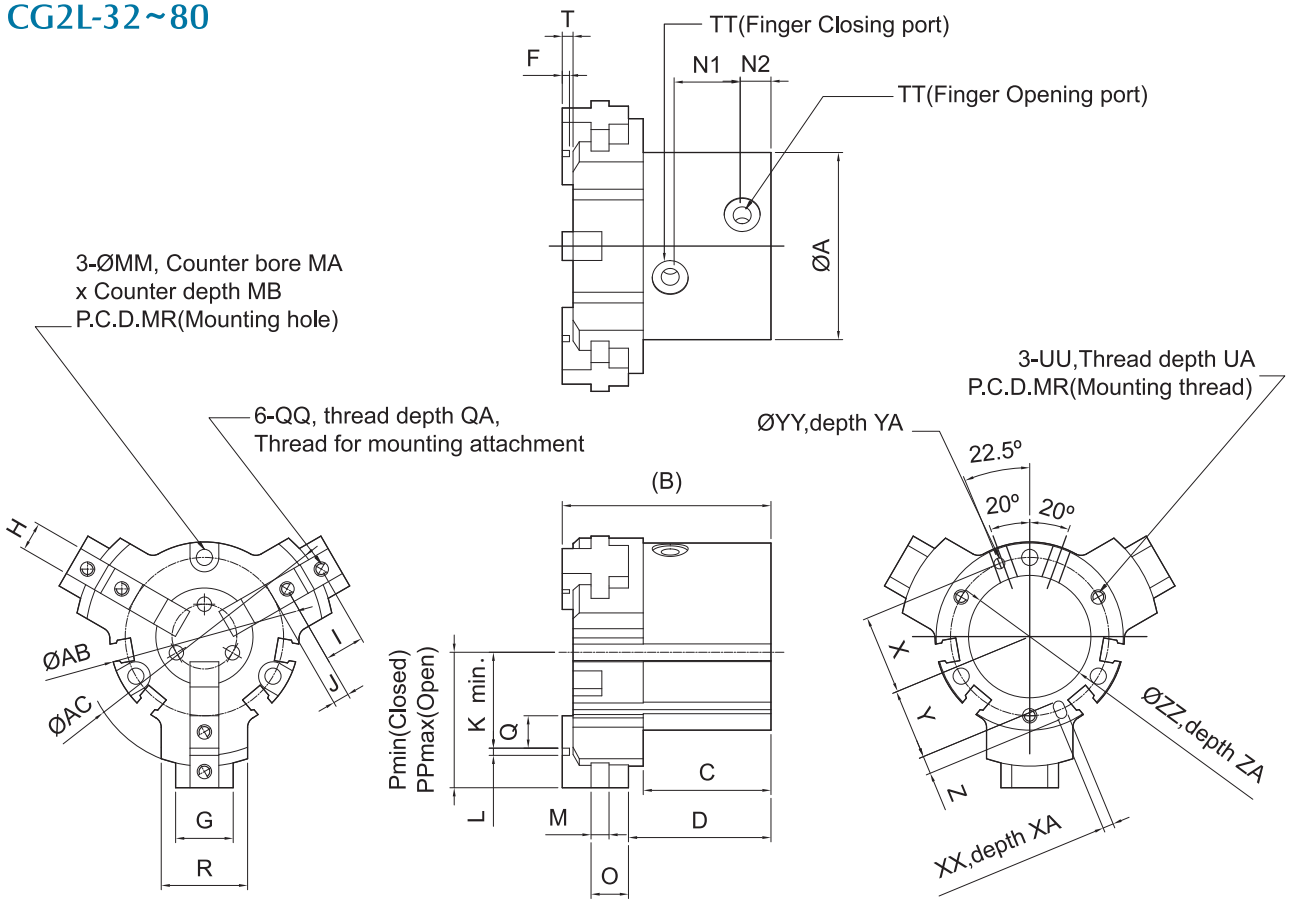
Note) The counter bore configuration differs only for the mounting hole section between the auto switch mounting grooves.(Ø16 only)

Model	A	AB	AC	B	C	D	E	G	H	I	J	K	M	MA	MB	MM	MR	N1	P	PP
CG2L-16	30	30.6	40	43.5	28	30.5	7	8	5h9 $^{0}_{-0.030}$	6	2	12.5	4	6.5	5	3.4	25	14	18.5	23.5
CG2L-20	36	36.6	45	46	29	32	8	11	6h9 $^{0}_{-0.030}$	7	2.5	14	4	6.5	8	3.4	29	14	21	26
CG2L-25	42	42.6	52	49	31.5	34.2	7.8	13	6h9 $^{0}_{-0.030}$	8	3	16	4.5	8	8	4.5	34	16.5	24	30

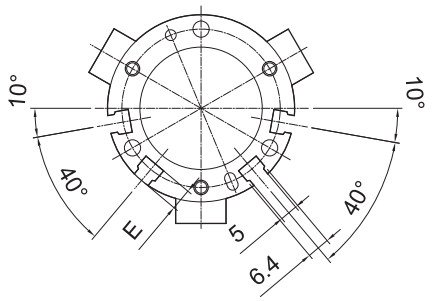
Model	Q	QA	QQ	R	TT	UU	X	XA	XX	Y	YA	YY	Z	ZA	ZZ
CG2L-16	4	5	M3x0.5	12	M3x0.5	M3x0.5	12.5	2	2H9 $^{+0.025}_{-0}$	11	2	2H9 $^{+0.025}_{-0}$	3	1.5	17H9 $^{+0.043}_{-0}$
CG2L-20	5	6	M3x0.5	16	M5x0.8	M3x0.5	14.5	2	2H9 $^{+0.025}_{-0}$	13	2	2H9 $^{+0.025}_{0}$	3	1.5	21H9 $^{+0.052}_{0}$
CG2L-25	6	6	M3x0.5	19	M5x0.8	M4x0.7	17	3	3H9 $^{+0.025}_{-0}$	14.5	3	3H9 $^{+0.025}_{-0}$	5	1.5	26H9 $^{+0.052}_{-0}$

Dimensions

CG2L-32~80



Auto switch mounting groove position



Model	A	AB	AC	B	C	D	E	F	G	H	I	J	K	L	M	MA	MB	MM	MR	N1	N2	O	P
CG2L-32	52	52.6	72	58	35.5	39.6	6	2	16	8h9 $^{0}_{-0.036}$	11	4.5	23	2H9 $^{+0.025}_{-0}$	5	8	8	4.5	44	20	8	10.4	34
CG2L-40	62	62.6	82	64	38.5	42.5	8	2	18	8h9 $^{0}_{-0.036}$	12	4.5	25.5	3H9 $^{+0.025}_{-0}$	7	9.5	11	5.5	53	22	9	13.5	37.5
CG2L-50	70	70.6	104	77.5	46.5	51.3	7	2	20	10h9 $^{0}_{-0.036}$	14	5	32	4H9 $^{+0.030}_{-0}$	8	9.5	14.5	5.5	62	29	9	17.7	46
CG2L-63	86	86.6	120	89	51	58.5	7.5	3	26	12h9 $^{0}_{-0.043}$	17	5.5	37	6H9 $^{+0.036}_{-0}$	10	11	17	6.6	76	30.5	12	19.5	54
CG2L-80	106	106.6	140	116	70	78.5	9	4	30	14h9 $^{0}_{-0.043}$	20	6	40.5	8H9 $^{+0.036}_{-0}$	11	11	23	6.6	95	37.5	14	23.5	60.5

Model	PP	Q	QA	QQ	R	T	TT	UA	UU	X	XA	XX	Y	YA	YY	Z	ZA	ZZ
CG2L-32	42	9	8	M4x0.7	24	3	M5x0.8	6	M4x0.7	22	3	3H9 $^{+0.025}_{-0}$	19.5	3	3H9 $^{+0.025}_{-0}$	5	2	34H9 $^{+0.062}_{-0}$
CG2L-40	47.5	9	8	M4x0.7	30	3	M5x0.8	10	M5x0.8	26.5	4	4H9 $^{+0.030}_{-0}$	23.5	4	4H9 $^{+0.030}_{-0}$	6	2	42H9 $^{+0.062}_{-0}$
CG2L-50	60	10	10	M5x0.8	32	3	M5x0.8	10	M5x0.8	31	4	4H9 $^{+0.030}_{-0}$	28	4	4H9 $^{+0.030}_{-0}$	6	2	52H9 $^{+0.074}_{-0}$
CG2L-63	70	11	10	M5x0.8	40	4	M5x0.8	12	M6x1	38	5	5H9 $^{+0.030}_{-0}$	34.5	5	5H9 $^{+0.030}_{-0}$	7	2.5	65H9 $^{+0.074}_{-0}$
CG2L-80	80.5	12	12	M6x1	50	5	Rc 1/8	12	M6x1	47.5	6	6H9 $^{+0.030}_{-0}$	43.5	6	6H9 $^{+0.030}_{-0}$	8	3	82H9 $^{+0.087}_{-0}$

Safety Instructions

Mounting

⚠ Warning

1. Do not scratch or gouge the gripper by dropping or bumping it when mounting.

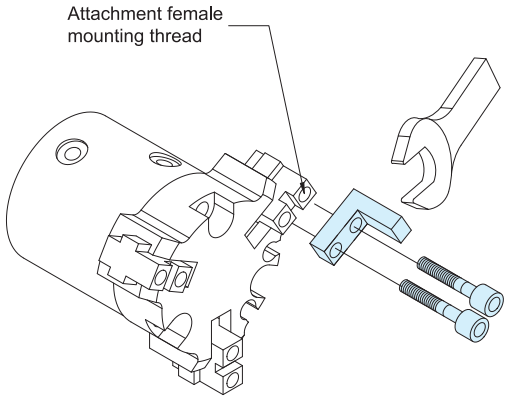
   Even a slight deformation can cause inaccuracy or malfunction.

2. Tighten screws within the specified torque range when mounting the attachments.

   Tightening with a higher torque than specified may cause malfunction, while tightening with a lower torque may allow slipping of the gripping position or dropping of work pieces, etc.

Mounting attachments to the fingers

Mount attachments by inserting bolts, etc., into the female mounting threads on the fingers and tightening with the torque shown in the table below.



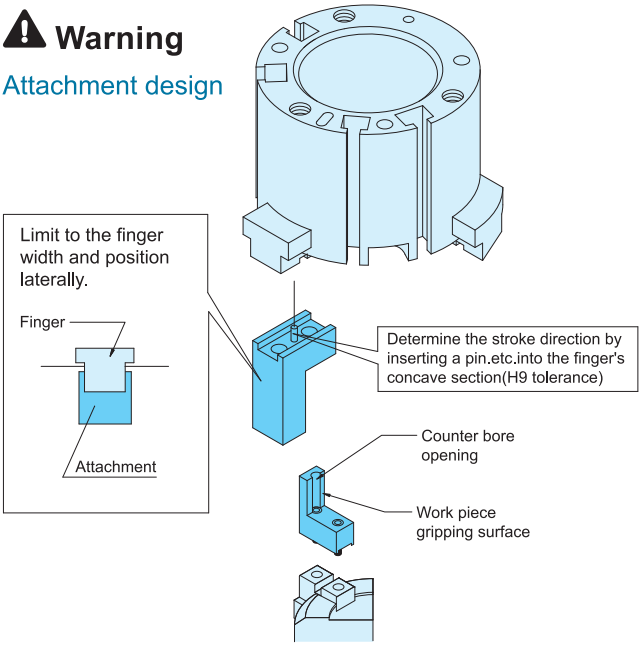
Model		Bolt	Maximum torque N.m
CG2 CG2L	16	M3x0.5	0.59
	20	M3x0.5	0.59
	25	M3x0.5	0.59
	32	M4x0.7	1.4
	40	M4x0.7	1.4
	50	M5x0.8	2.8
	63	M5x0.8	2.8
	80	M6x1	4.8
CG2	100	M8x1.25	12
	125	M10x1.5	24

3. When mounting an air gripper, tighten screws properly at a torque value within the limits of the specified range.

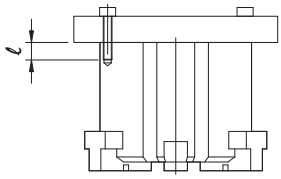
   Tightening at a torque above the limits of the range can cause malfunction, while tightening at a lower torque can cause slipping or dropping of work pieces, etc.

⚠ Warning

Attachment design



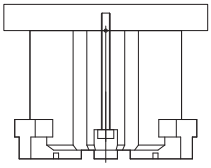
Mounting of air gripper Using tapped holes



Series CG2, CG2L

Model		Bolt	Maximum torque N.m	Max. screw depth ℓ (mm)
CG2 CG2L	16	M3x0.5	0.88	6
	20	M3x0.5	0.88	6
	25	M4x0.7	2.1	6
	32	M4x0.7	2.1	6
	40	M5x0.8	4.3	10
	50	M5x0.8	4.3	10
	63	M6x1	7.3	12
	80	M6x1	7.3	12
CG2	100	M8x1.25	18	16
	125	M10x1.5	36	20

Using through holes



Series CG2, CG2L

Model		Bolt	Maximum torque N.m
CG2 CG2L	16	M3x0.5	0.88
	20	M3x0.5	0.88
	25	M4x0.7	2.1
	32	M4x0.7	2.1
	40	M5x0.8	4.3
	50	M5x0.8	4.3
	63	M6x1	7.3
	80	M6x1	7.3
CG2	100	M8x1.25	18
	125	M10x1.5	36