

Stainless Steel Cylinder

Series CJ5-S/Series CG5-S

ø10, ø16 ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100



MK/MK2
RS
RE
REC
C..X
MTS
C..S
MQ
RHC
CC

For use in environments with water spray such as food processing machines

Stainless Steel Cylinder

Series *CJ5-S*/Series *CG5-S*

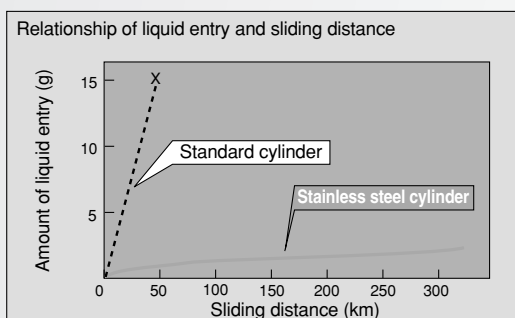
ø10, ø16

ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100

Uses grease for food processing machines that meets FDA (U.S. Food and Drug Administration) standards

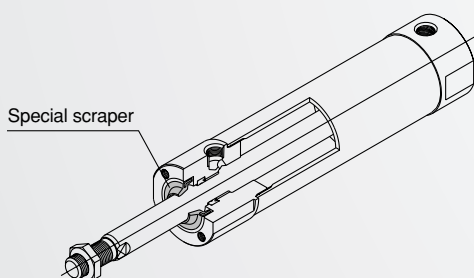
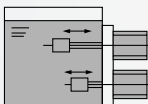
The use of non-toxic additives allows confident use in equipment for **foods, beverages and medical products**, etc.

Special scraper (standard) prevents water from entering the cylinder.



Conditions

Working fluid Air
 Pressure 0.5MPa
 Liquid Water-soluble coolant
 Piston speed 200mm/sec (60cpm)



Two types of seal material

NBR or **FKM** can be selected to accommodate the application.
 (Nitrile rubber) (Fluoro rubber)

Can be disassembled (Series **CG5-S**)
 Replacement of seals promotes an extended service life.

(Before disassembly, be sure to see the section regarding maintenance under "Specific Product Precautions" on page 4.7-30.)

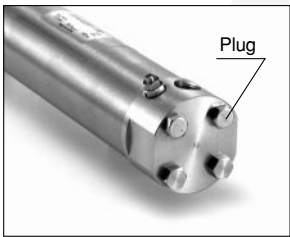
For use in environments with water spray such as food processing machines

All stainless steel specification (external parts)
Stainless steel (SUS304) is used for external metal parts.
 Corrosion resistance is improved even in environments with exposure to water.



Exterior configuration reduces residual liquid

- Electropolishing of mounting bracket surfaces makes them smoother to prevent build-up of liquids and foreign matter.
- Plugs are provided for unused mounting threads (Series CG5-S) to prevent residue build-up in the threads.



Series Variations

Series	Seal materials	Bore sizes (mm)										Applicable auto switches
		10	16	20	25	32	40	50	63	80	100	
CJ5-S	NBR	●	●									Water resistant D-H7BAL
CG5-S	FKM			●	●	●	●	●	●	●	●	Water resistant D-G5BAL

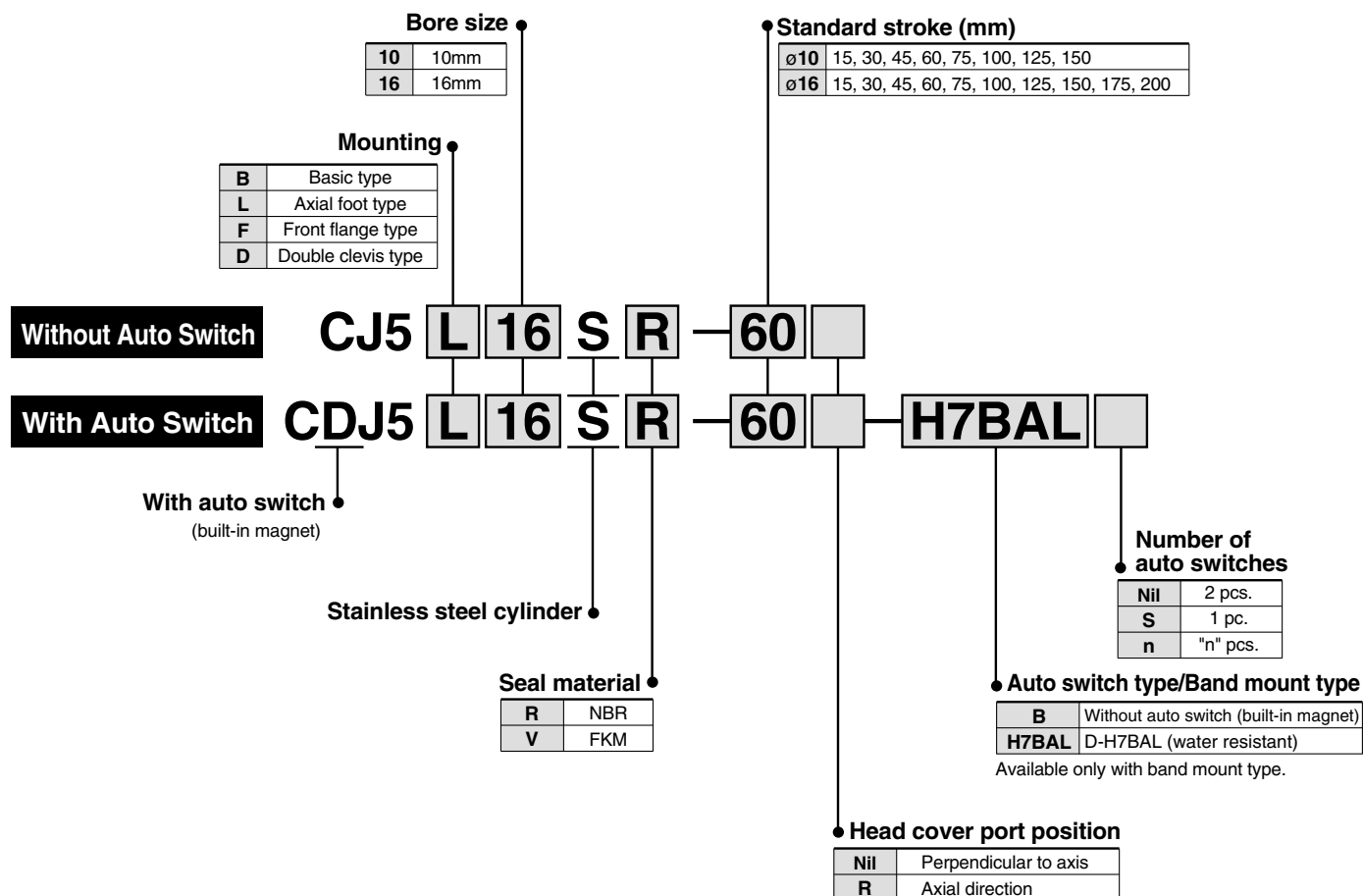
MK/MK2
RS
RE
REC
C..X
MTS
C..S
MQ
RHC
CC

Stainless Steel Cylinder

Series CJ5-S

ø10, ø16

How to Order



Mounting bracket part numbers

Mounting bracket	Bore size (mm)	
	10	16
Foot bracket	CJ-L016SUS	CJK-L016SUS
Flange bracket	CJ-F016SUS	CJK-F016SUS
T-bracket*	CJ-T010SUS	CJ-T016SUS

* The T-bracket is applicable to the double clevis type (D).

Auto switch mounting bracket part numbers (band mount type)

Bore size (mm)	Auto switch mounting bracket number	Note
10	BJ2-010S	Includes stainless steel mounting screws
16	BJ2-016S	

Grease pack for stainless steel cylinders/Part number: GR-R-010 (10g)

Auto switch specifications

D-H7BAL (with indicator light)/Band mount type	
Auto switch model	D-H7BAL
Wiring type	2 wire
Output type	—
Applicable load	24VDC Relay, PLC
Power supply voltage	—
Current consumption	—
Load voltage	24VDC (10 to 28VDC)
Load current	5 to 40mA
Internal voltage drop	4V or less
Leakage current	0.8mA or less at 24VDC
Indicator light	Actuated position Red LED lights up Optimum operating position ... Green LED lights up



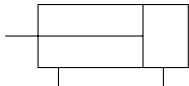
Use caution during operation as residue may collect on auto switches.

Specifications



JIS symbol

Double acting/Single rod



Action	Double acting single rod	
Fluid	Air	
Proof pressure	1.05MPa	
Maximum operating pressure	0.7MPa	
Minimum operating pressure	0.1MPa	
Ambient and fluid temperature	Without auto switch: -10 to 70°C, With auto switch: -10 to 60°C	
Cushion	Rubber bumper	
Lubrication	Not required (non-lube)	
Thread tolerance	JIS class 2	
Stroke length tolerance	+1.0 0	
Piston speed	50 to 750mm/s	
Allowable kinetic energy	ø10	0.035J
	ø16	0.090J
Mounting	Basic type, Axial foot type, Front flange type, Double clevis type	

Standard Strokes

(mm)

Bore size	Standard stroke
10	15, 30, 45, 60, 75, 100, 125, 150
16	15, 30, 45, 60, 75, 100, 125, 150, 175, 200

Mounting Types and Accessories

Mounting		Basic type	Axial foot type	Front flange type	Double clevis type*
Standard	Mounting nut	●	●	●	—
	Rod end nut	●	●	●	●
	Clevis pin	—	—	—	●
Optional	Single knuckle joint	●	●	●	●
	Double knuckle joint (with pin)*	●	●	●	●
	T-bracket	—	—	—	●
	Rod end cap	Flat type	●	●	●
		Round type	●	●	●

* Pin and snap ring are packed together with double clevis and double knuckle joint.

Weights

(g)

Bore size (mm)		10	16
Standard weight*		52	96
Additional weight per 15mm of stroke		4	6.5
Mounting bracket weight	Axial foot type	22	22
	Front flange type	16	16
	Double clevis type (with pin)**	6	16

* The mounting nut and rod end nut are included in the basic weight.

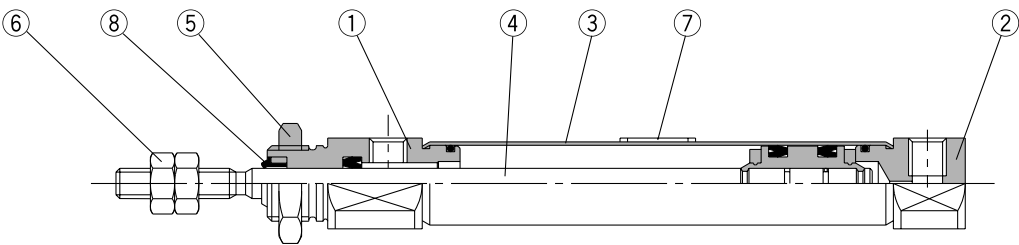
** The mounting nut is not included with the double clevis type.

Calculation (Example) CJ5L10SR-45

- Basic weight 52 (ø10)
 - Additional weight 4/15mm stroke
 - Cylinder stroke 45mm
 - Mounting bracket weight ... 22 (axial foot type)
- 52 + 4/15 x 45 + 22 = 86g

Series CJ5-S

Construction (Cannot be disassembled)

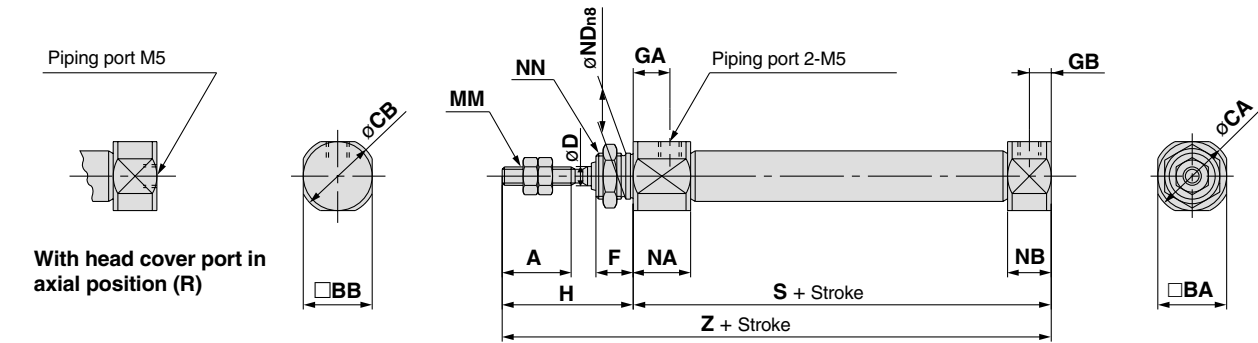


Parts list

No.	Description	Material	
1	Rod cover	SUS304	
2	Head cover	SUS304	
3	Cylinder tube	SUS304	
4	Piston rod	SUS304	
5	Mounting nut	SUS304	
6	Rod end nut	SUS304	
7	Label protector	PET	
8	Water resistant scraper	CJ5□□SR	NBR
		CJ5□□SV	FKM

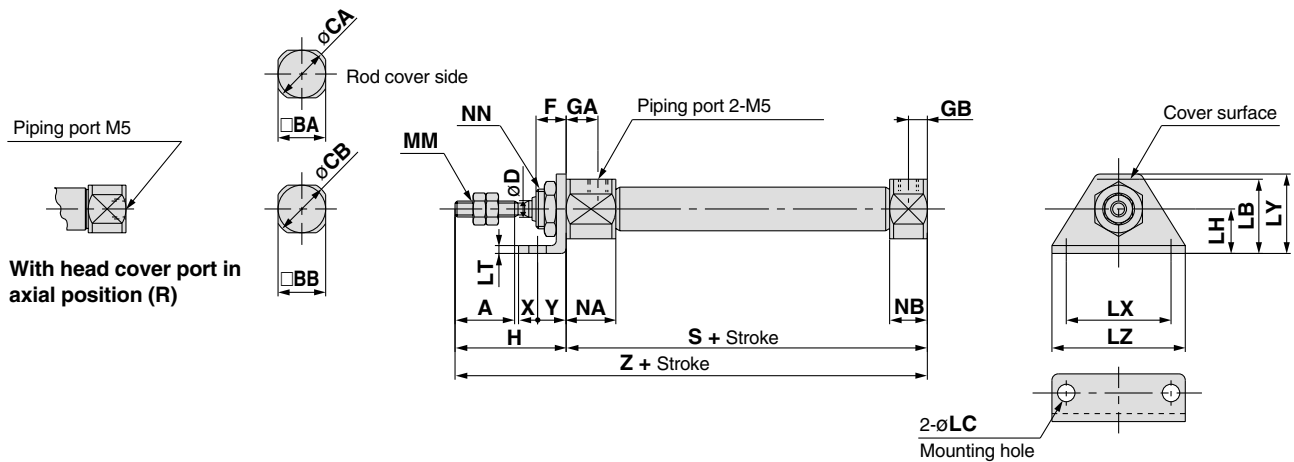
Dimensions

Basic type (B)/C□J5B□S $\frac{R}{V}$



																	(mm)
Bore size (mm)	A	BA	BB	CA	CB	D	F	GA	GB	H	MM	NN	NA	NB	ND _{n8}	S	Z
10	15	15	12	17	14	4	8	8	5	28	M4 x 0.7	M10 x 1.0	12.5	9.5	10 ⁰ _{-0.022}	46	74
16	15	18	18	20	20	5	8	8	5	28	M5 x 0.8	M12 x 1.0	12.5	9.5	12 ⁰ _{-0.027}	47	75

Axial foot type (L)/C□J5L□S_V^R

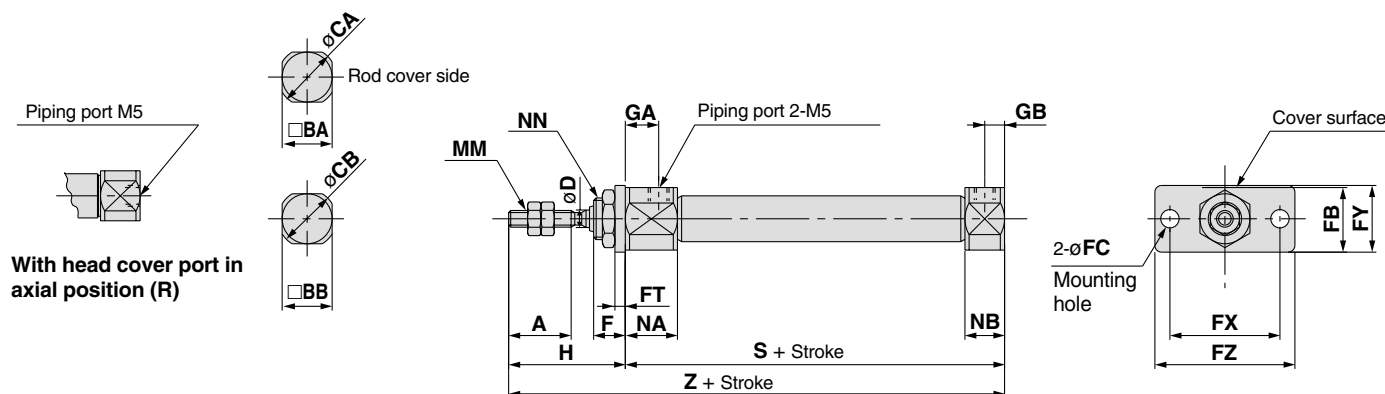


(mm)																									
Bore size (mm)	A	BA	BB	CA	CB	D	F	GA	GB	H	LB	LC	LH	LT	LX	LY	LZ	MM	NN	NA	NB	S	X	Y	Z
10	15	15	12	17	14	4	8	8	5	28	21.5	5.5	14	2.5	33	25	42	M4	M10 x 1.0	12.5	9.5	46	6	9	74
16	15	18	18	20	20	5	8	8	5	28	23	5.5	14	2.5	33	25	42	M5	M12 x 1.0	12.5	9.5	47	6	9	75

Series CJ5-S

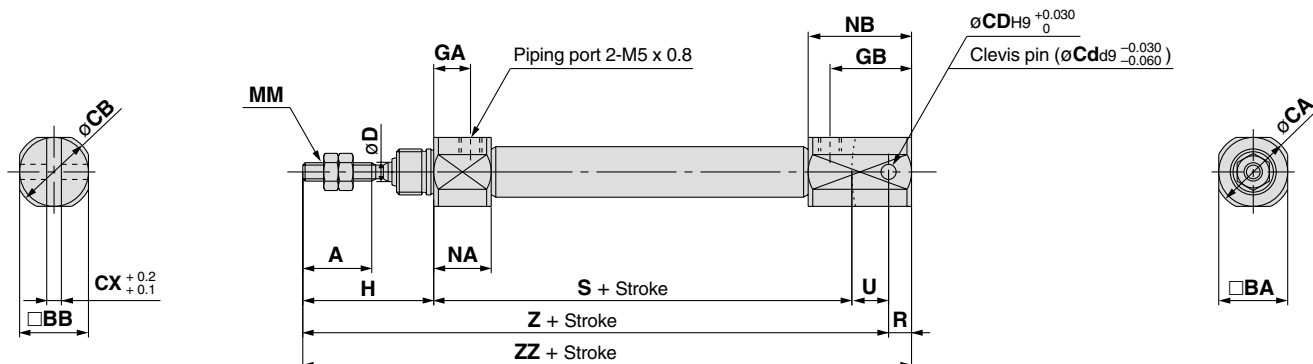
Dimensions

Front flange type (F)/C□J5F□S^R_V



																							(mm)
Bore size (mm)	A	BA	BB	CA	CB	D	F	FB	FC	FT	FX	FY	FZ	GA	GB	H	MM	NN	NA	NB	S	Z	
10	15	15	12	17	14	4	8	17.5	5.5	2.5	33	20	42	8	5	28	M4	M10 x 1.0	12.5	9.5	46	74	
16	15	18	18	20	20	5	8	19	5.5	2.5	33	20	42	8	5	28	M5	M12 x 1.0	12.5	9.5	47	75	

Double clevis type (D)/C□J5D□S^R_V

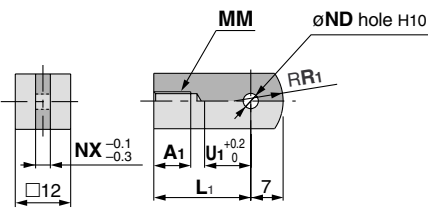


																							(mm)
Bore size (mm)	A	BA	BB	CA	CB	CD (Cd)	CX	D	GA	GB	H	MM	NA	NB	R	S	U	Z	ZZ				
10	15	15	12	17	14	3.3	3.2	4	8	18	28	M4	12.5	22.5	5	46	8	82	87				
16	15	18	18	20	20	5	6.5	5	8	23	28	M5	12.5	27.5	8	47	10	85	93				

* Clevis pin and snap ring are packed together.

Accessory Dimensions

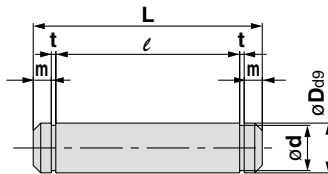
Single knuckle joint



Material: SUS304

Part no.	Applicable bore size (mm)	A1	L1	MM	NDH10	NX	R1	U1
I-J010SUS	10	8	21	M4	3.3 $\begin{smallmatrix} +0.048 \\ 0 \end{smallmatrix}$	3.1	8	9
I-J016SUS	16	8	25	M5	5 $\begin{smallmatrix} +0.048 \\ 0 \end{smallmatrix}$	6.4	12	14

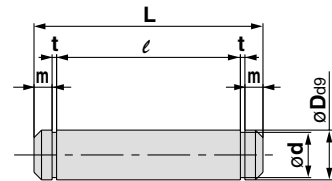
Clevis pin



Material: Pin and snap ring both SUS304

Part no.	Applicable bore size (mm)	Dd9	d	L	t	m	Snap ring
CD-J010	10	3.3 $\begin{smallmatrix} -0.030 \\ -0.060 \end{smallmatrix}$	3	15.2	12.2	1.2	C type 3.2
CD-Z015SUS	16	5 $\begin{smallmatrix} -0.030 \\ -0.060 \end{smallmatrix}$	4.8	22.7	18.3	1.5	C type 5

Knuckle pin

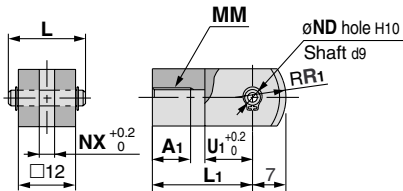


Material: Pin and snap ring both SUS304

Part no.	Applicable bore size (mm)	Dd9	d	L	t	m	Snap ring
CD-J010	10	3.3 $\begin{smallmatrix} -0.030 \\ -0.060 \end{smallmatrix}$	3	15.2	12.2	1.2	C type 3.2
IY-J015SUS	16	5 $\begin{smallmatrix} -0.030 \\ -0.060 \end{smallmatrix}$	4.8	16.6	12.2	1.5	C type 5

Double knuckle joint

* Knuckle pin and snap ring are packed together.

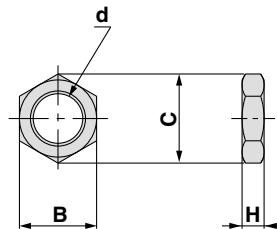


Material: SUS304

Part no.	Applicable bore size (mm)	A1	L	L1	MM	NDd9
Y-J010SUS	10	8	15.2	21	M4	3.3 $\begin{smallmatrix} -0.030 \\ -0.060 \end{smallmatrix}$
Y-J016SUS	16	11	16.6	21	M5	5 $\begin{smallmatrix} -0.030 \\ -0.060 \end{smallmatrix}$

Part no.	NDH10	NX	R1	U1
Y-J010SUS	3.3 $\begin{smallmatrix} +0.048 \\ 0 \end{smallmatrix}$	3.2	8	10
Y-J016SUS	5 $\begin{smallmatrix} +0.048 \\ 0 \end{smallmatrix}$	6.5	12	10

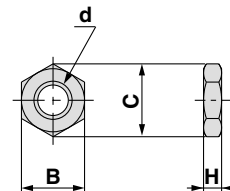
Mounting nut



Material: SUS304

Part no.	Applicable bore size (mm)	B	C	d	H
SNJ-016SUS	10	14	16.2	M10 x 1.0	4
SNKJ-016SUS	16	17	19.6	M12 x 1.0	4

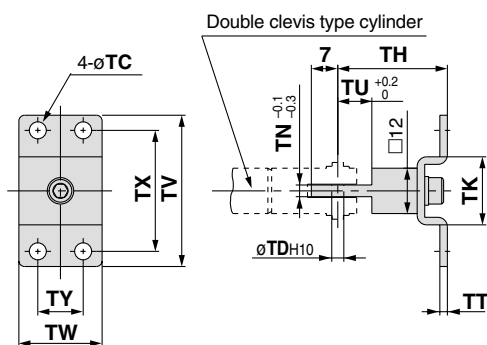
Rod end nut



Material: SUS304

Part no.	Applicable bore size (mm)	B	C	d	H
NTJ-010SUS	10	7	8.1	M4	3.2
NTJ-015SUS	16	8	9.2	M5	4

T-bracket

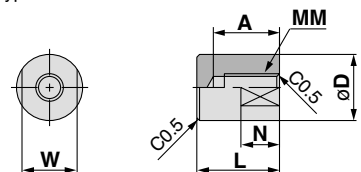


Material: SUS304

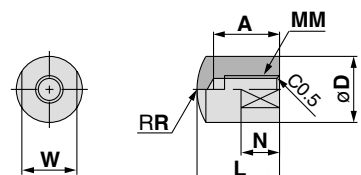
Part no.	Applicable bore size (mm)	TC	TDH10	TH	TK	TN	TT	TU	TV	TW	TX	TY
CJ-T010SUS	10	4.5	3.3 $\begin{smallmatrix} +0.048 \\ 0 \end{smallmatrix}$	29	18	3.1	2	9	40	22	32	12
CJ-T016SUS	16	5.5	5 $\begin{smallmatrix} +0.048 \\ 0 \end{smallmatrix}$	35	20	6.4	2.5	14	48	28	38	16

Rod end cap

Flat type/CJ-CF□□□



Round type/CJ-CR□□□



Material: POM

Part no.		Applicable bore size (mm)	A	D	L	MM	N	R	W
Flat type	Round type								
CJ-CF010	CJ-CR010	10	8	10	13	M4	6	10	8
CJ-CF016	CJ-CR016	16	10	12	15	M5	7	12	10

Stainless Steel Cylinder

Series CG5-S

Ø20, Ø25, Ø32, Ø40, Ø50, Ø63, Ø80, Ø100

How to Order

Without Auto Switch

CG5 L N 25 S R 100

With Auto Switch

CDG5 L N 25 S R 100 G5BAL

With auto switch
(built-in magnet)

Mounting

B	Basic type
L	Axial foot type
F	Front flange type
G	Rear flange type
E	Integral clevis type

Type

N	Non-lube, rubber bumper
A	Non-lube, air cushion

Bore size

20	20mm	50	50mm
25	25mm	63	63mm
32	32mm	80	80mm
40	40mm	100	100mm

Seal material

R	NBR
V	FKM

Stainless steel cylinder

Number of auto switches

Nil	2 pcs.
S	1 pc.
n	"n" pcs.

Auto switch type/Band mount type

Nil	Without auto switch (built-in magnet)
G5BAL	D-G5BAL (water resistant)

Auto switches are available in the band mount type only.

Cylinder stroke (mm)

Refer to the standard stroke table on page 4.7-11.

Mounting bracket part numbers

Mounting bracket	Bore size (mm)							
	20	25	32	40	50	63	80	100
Axial foot Note 1)	CG-L020SUS	CG-L025SUS	CG-L032SUS	CG-L040SUS	CG-L050SUS	CG-L063SUS	CG-L080SUS	CG-L100SUS
Flange	CG-F020SUS	CG-F025SUS	CG-F032SUS	CG-F040SUS	CG-F050SUS	CG-F063SUS	CG-F080SUS	CG-F100SUS
Trunnion bracket Note 2)	CG-E020SUS		CG-E032SUS		CG-E050SUS		CG-E080SUS	

Note 1) Order two foot brackets for each cylinder.

Note 2) Includes clevis pin and snap ring.

Auto switch mounting bracket part numbers (band mount type)

Auto switch model	Bore size (mm)							
	20	25	32	40	50	63	80	100
D-G5BAL	NBA-088S	NBA-106S	BGS1-032S	BAF-04S	BAF-05S	BAF-06S	BAF-08S	BAF-10S

* Includes stainless steel mounting screws.

Grease pack for stainless steel cylinders/Part number: GR-R-010 (10g)

Auto switch specifications

D-G5BAL (With indicator light)/Band mount type	
Auto switch model	D-G5BAL
Wiring type	2 wire
Output type	—
Applicable load	24VDC relay, PLC
Power supply voltage	—
Current consumption	—
Load voltage	24VDC (10 to 28VDC)
Load current	5 to 40mA
Internal voltage drop	4V or less
Leakage current	0.8mA or less at 24VDC
Indicator light	Actuated position Red LED lights up Optimum operating position ... Green LED lights up



Use caution during operation as residue may collect on auto switches.

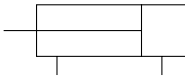
Stainless Steel Cylinder *Series CG5-S*

Specifications



JIS symbol

Double acting/Single rod



Minimum stroke for mounting auto switches

Model	Number of auto switches	
	2 pcs.	1 pc.
D-G5BAL	15mm	10mm

Refer to page 4.7-18 for details.

Action		Double acting single rod
Fluid		Air
Proof pressure		1.5MPa
Maximum operating pressure		1.0MPa
Minimum operating pressure		0.05MPa
Ambient and fluid temperature		Without auto switch: -10 to 70°C, With auto switch: -10 to 60°C
Cushion		Rubber bumper, Air cushion
Piston speed	ø20 to ø63	50 to 1000mm/s
	ø80, ø100	50 to 700mm/s
Thread tolerance		JIS class 2
Stroke length tolerance	ø20 to ø63	to 1000 $^{+1.4}_0$ mm, to 1200 $^{+1.5}_0$ mm
	ø80, ø100	to 1000 $^{+1.4}_0$ mm, to 1500 $^{+1.5}_0$ mm
Mounting		Basic type, Axial foot type, Front flange type, Rear flange type, Integral clevis type

Standard Strokes

(mm)

Bore size	Standard stroke ^{Note 1)}	Long stroke
20	25, 50, 75, 100, 125, 150, 200	201 to 350
25	25, 50, 75, 100, 125, 150, 200, 250, 300	301 to 400
32		301 to 450
40		301 to 800
50, 63		301 to 1200
80		301 to 1400
100		301 to 1500

Note 1) All non-standard strokes are produced upon receipt of order. (Spacers are not used on intermediate strokes.)

Accessories

Mounting		Basic type	Axial foot type	Front flange type	Rear flange type	Integral clevis type
Standard	Rod end nut	●	●	●	●	●
	Single knuckle joint	●	●	●	●	●
Optional	Double knuckle joint (with pin & snap ring)	●	●	●	●	●
	Trunnion bracket (with pin & snap ring)	—	—	—	—	●

Weights

(kg)

Bore size		20	25	32	40	50	63	80	100
Standard weight	Basic type	0.32	0.42	0.61	0.97	1.78	2.73	5.20	8.13
	Axial foot type	0.40	0.53	0.72	1.13	2.12	3.19	5.91	9.50
	Flange type	0.43	0.53	0.71	1.12	2.04	3.25	5.86	9.29
	Integral clevis type	0.37	0.48	0.72	1.12	2.17	3.26	6.48	9.94
Trunnion bracket		0.08	0.08	0.18	0.18	0.46	0.46	1.65	1.65
Single knuckle joint		0.04	0.07	0.07	0.11	0.22	0.22	0.53	0.78
Double knuckle joint (with pin)		0.05	0.09	0.09	0.18	0.33	0.33	0.73	1.07
Additional weight per 50mm of stroke		0.06	0.08	0.14	0.18	0.27	0.33	0.50	0.73
Additional weight with air cushion		0.02	0.02	0.03	0.02	0.06	0.07	0.14	0.16

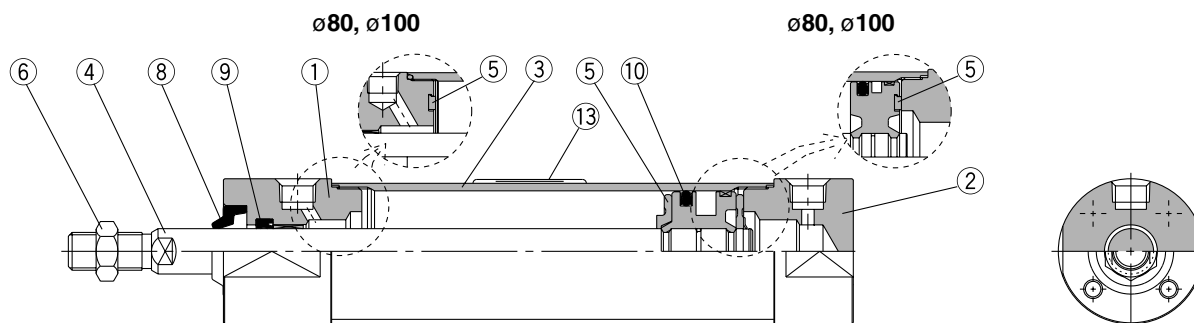
Calculation (Example) CG5LA 20SR-100
(Foot type ø20, 100mm stroke)

- Basic weight 0.40kg (Foot type ø20)
 - Additional stroke weight 0.06kg/50mm stroke
 - Air cylinder stroke 100mm
 - Additional air cushion weight 0.02kg
- 0.40 + 0.06 x 100/50 + 0.02 = 0.54kg

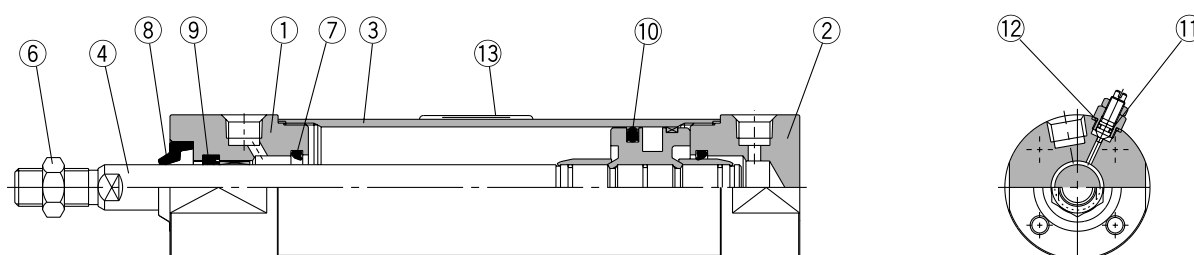
Series CG5-S

Construction

With rubber bumper



With air cushion



Parts list

No.	Description	Material
1	Rod cover	SUS304
2	Head cover	SUS304
3	Cylinder tube	SUS304
4	Piston rod	SUS304
5	Bumper	Urethane
6	Rod end nut	SUS304
7	Cushion seal	Urethane

Note) Magnets are installed on pistons of cylinders equipped with auto switches.

No.	Description	Material	
		CG5□□□SR	CG5□□□SV
8	Water resistant scraper	NBR	FKM
9	Rod seal		
10	Piston seal		
11	Valve seal		
12	Valve retainer gasket		
13	Label protector	PET	

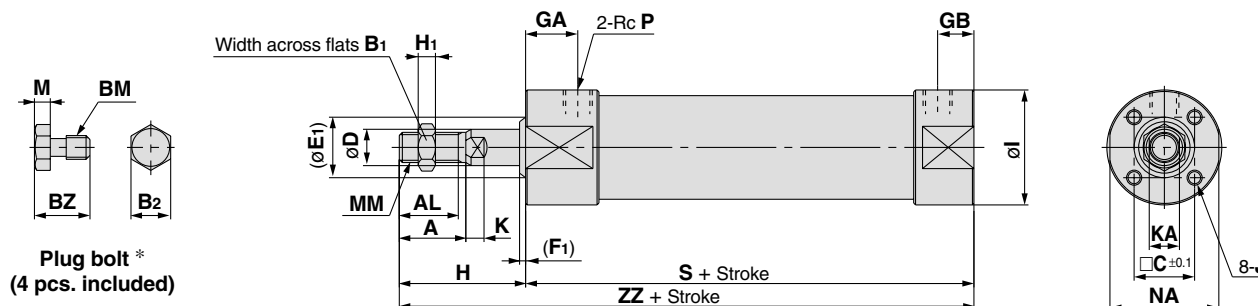
Replacement parts: Seal kits Note)

Bore size	Rubber bumper		Air cushion	
	CG5□N□SR	CG5□N□SV	CG5□A□SR	CG5□A□SV
20	CG5N20SR-PS	CG5N20SV-PS	CG5A20SR-PS	CG5A20SV-PS
25	CG5N25SR-PS	CG5N25SV-PS	CG5A25SR-PS	CG5A25SV-PS
32	CG5N32SR-PS	CG5N32SV-PS	CG5A32SR-PS	CG5A32SV-PS
40	CG5N40SR-PS	CG5N40SV-PS	CG5A40SR-PS	CG5A40SV-PS
50	CG5N50SR-PS	CG5N50SV-PS	CG5A50SR-PS	CG5A50SV-PS
63	CG5N63SR-PS	CG5N63SV-PS	CG5A63SR-PS	CG5A63SV-PS
80	CG5N80SR-PS	CG5N80SV-PS	CG5A80SR-PS	CG5A80SV-PS
100	CG5N100SR-PS	CG5N100SV-PS	CG5A100SR-PS	CG5A100SV-PS
Contents	Nos. 9 and 10 above		Nos. 9, 10, 11 and 12 above	

Note) A grease pack (GR-R-010, 10g) is included in seal kits.

Dimensions

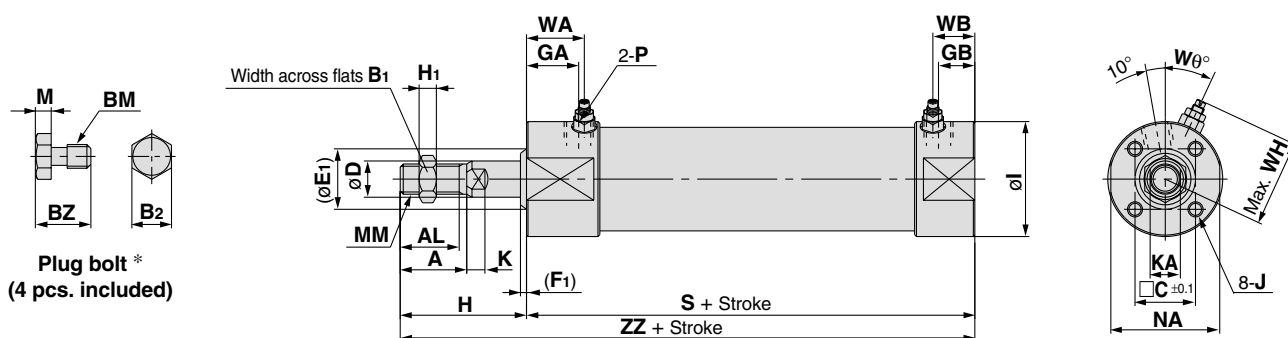
Basic type (B/C)□G5BN□S_V^R: With rubber bumper



Bore size (mm)	Stroke range	A	AL	B1	B2	BM	BZ	C	D	E1	F1	GA	GB	H	H1	I	J	K	KA	M	MM	NA	P	S	ZZ
20	to 350	18	15.5	13	7	M4	9	16.5	8	15	3	18	12	35	5	31	M4 depth 7	5	6	3	M8 x 1.25	29	1/8	83	118
25	to 400	22	19.5	17	8	M5	9.5	18.5	10	17	3	18	12	40	6	33	M5 depth 8	5.5	8	3.5	M10 x 1.25	29	1/8	83	123
32	to 450	22	19.5	17	8	M5	9.5	20	12	19	3	18	12	40	6	38	M5 depth 8	5.5	10	3.5	M10 x 1.25	35.5	1/8	85	125
40	to 800	30	27	19	10	M6	12	26	16	23	3	19	13	50	8	47	M6 depth 12	6	14	4	M14 x 1.5	44	1/8	93	143
50	to 1200	35	32	27	13	M8	15.5	32	20	28	3	21	14	58	11	58	M8 depth 16	7	18	5.5	M18 x 1.5	55	1/4	109	167
63	to 1200	35	32	27	17	M10	19	38	20	28	3	21	14	58	11	72	M10 depth 16	7	18	7	M18 x 1.5	69	1/4	109	167
80	to 1400	40	37	32	17	M10	19	50	25	33	3	28	20	71	13	89	M10 depth 22	10	22	7	M22 x 1.5	80	3/8	130	201
100	to 1500	40	37	41	19	M12	24	60	30	38	3	29	20	71	16	110	M12 depth 23	10	26	8	M26 x 1.5	100	1/2	131	202

* Install plug bolts, which are included, in any unused mounting holes.

Basic type (B/C)□G5BA□S_V^R: With air cushion



Bore size (mm)	Stroke range	A	AL	B1	B2	BM	BZ	C	D	E1	F1	GA	GB	H	H1	I	J	K	KA	M	MM	NA	P	S
20	to 350	18	15.5	13	7	M4	9	16.5	8	15	3	18	12	35	5	31	M4 depth 7	5	6	3	M8 x 1.25	29	M5	83
25	to 400	22	19.5	17	8	M5	9.5	18.5	10	17	3	18	12	40	6	33	M5 depth 8	5.5	8	3.5	M10 x 1.25	29	M5	83
32	to 450	22	19.5	17	8	M5	9.5	20	12	19	3	18	12	40	6	38	M5 depth 8	5.5	10	3.5	M10 x 1.25	35.5	Rc 1/8	85
40	to 800	30	27	19	10	M6	12	26	16	23	3	19	13	50	8	47	M6 depth 12	6	14	4	M14 x 1.5	44	Rc 1/8	93
50	to 1200	35	32	27	13	M8	15.5	32	20	28	3	21	14	58	11	58	M8 depth 16	7	18	5.5	M18 x 1.5	55	Rc 1/4	109
63	to 1200	35	32	27	17	M10	19	38	20	28	3	21	14	58	11	72	M10 depth 16	7	18	7	M18 x 1.5	69	Rc 1/4	109
80	to 1400	40	37	32	17	M10	19	50	25	33	3	28	20	71	13	89	M10 depth 22	10	22	7	M22 x 1.5	80	Rc 3/8	130
100	to 1500	40	37	41	19	M12	24	60	30	38	3	29	20	71	16	110	M12 depth 23	10	26	8	M26 x 1.5	100	Rc 1/2	131

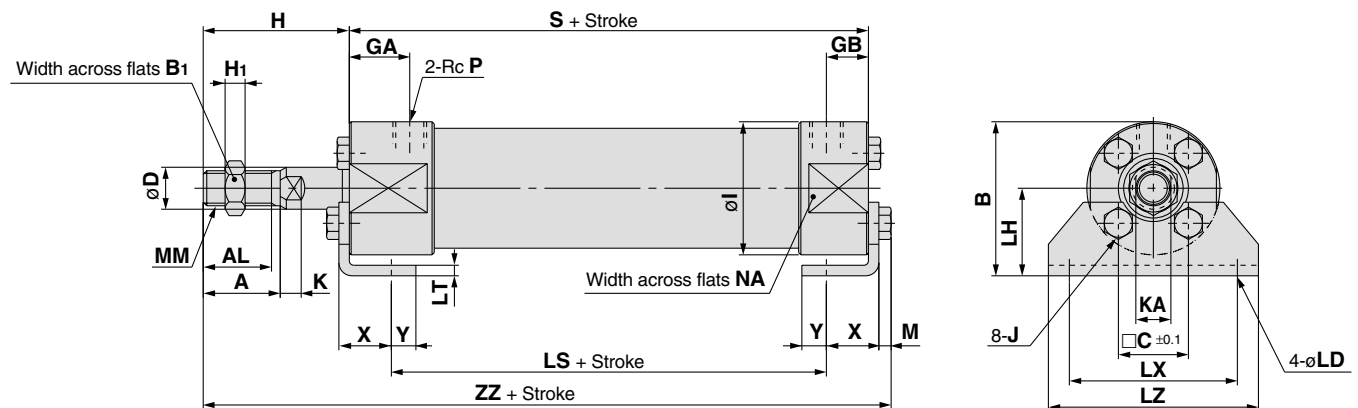
* Install plug bolts, which are included, in any unused mounting holes.

Bore size (mm)	WA	WB	WH	Wθ	ZZ
20	22	16	23	30°	118
25	22	16	25	30°	123
32	22	16	28.5	25°	125
40	22	16	33	20°	143
50	25	18	40.5	20°	167
63	25	18	47.5	20°	167
80	30	22	60.5	20°	201
100	31	22	71	20°	202

Series CG5-S

Dimensions

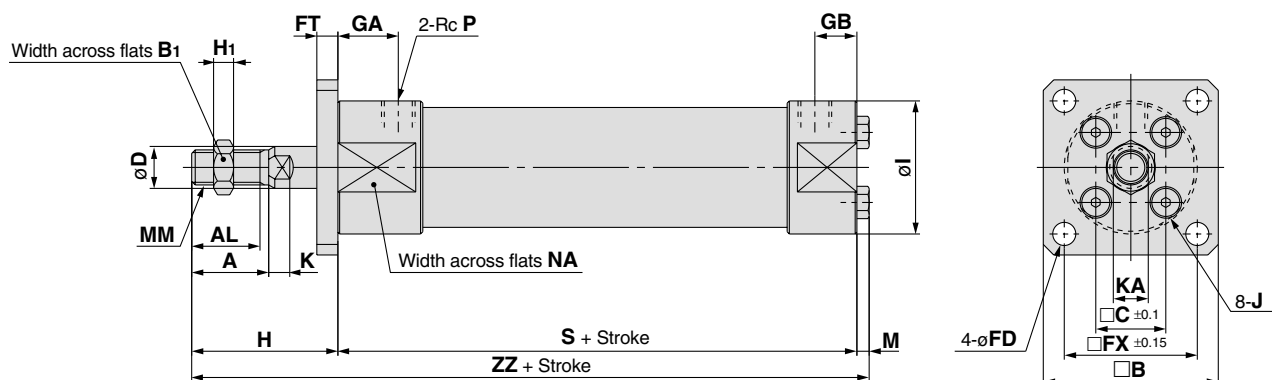
Axial foot type (L)/C□G5LN□S_V^R



Bore size (mm)	Stroke range	A	AL	B ₁	B	C	D	GA	GB	H	H ₁	I	J	K	KA	LD	LH	LS	LT	LX	LZ	M	MM	NA	P	S	X	Y	ZZ
20	to 350	18	15.5	13	37.5	16.5	8	18	12	35	5	31	M4	5	6	6	22	59	3	40	50	3	M8 x 1.25	29	1/8	83	15	7	124
25	to 400	22	19.5	17	41.5	18.5	10	18	12	40	6	33	M5	5.5	8	6	25	59	3	44	60	3.5	M10 x 1.25	29	1/8	83	15	7	129.5
32	to 450	22	19.5	17	44	20	12	18	12	40	6	38	M5	5.5	10	7.2	25	59	3	44	60	3.5	M10 x 1.25	35.5	1/8	85	16	6	131.5
40	to 800	30	27	19	53.5	26	16	19	13	50	8	47	M6	6	14	7.2	30	66	3	54	75	4	M14 x 1.5	44	1/8	93	16.5	6.5	150
50	to 1200	35	32	27	69	32	20	21	14	58	11	58	M8	7	18	10	40	74	4	66	90	5.5	M18 x 1.5	55	1/4	109	21.5	11.5	176.5
63	to 1200	35	32	27	81	38	20	21	14	58	11	72	M10	7	18	12	45	74	4	82	110	7	M18 x 1.5	69	1/4	109	21.5	11.5	178
80	to 1400	40	37	32	99.5	50	25	28	20	71	13	89	M10	10	22	12	55	82	4	100	130	7	M22 x 1.5	80	3/8	130	28	17	212
100	to 1500	40	37	41	125	60	30	29	20	71	16	110	M12	10	26	14	70	83	6	120	160	8	M26 x 1.5	100	1/2	131	30	15	216

* Foot brackets and plug bolts are installed before shipment from factory.

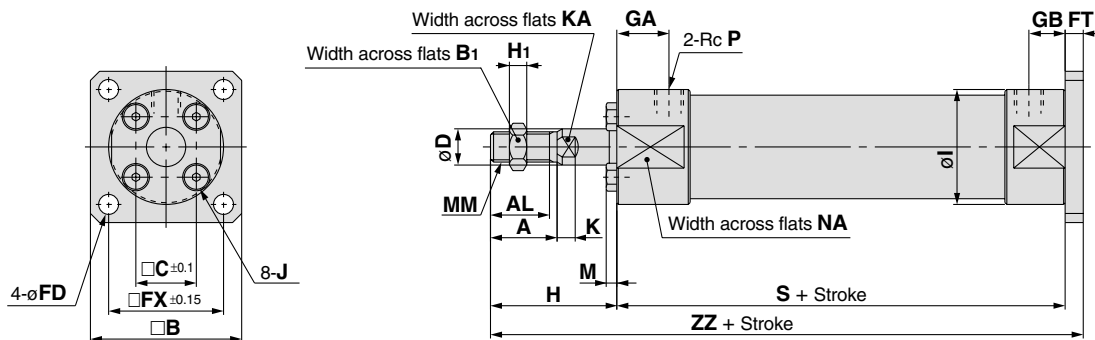
Front flange type (F)/C□G5FN□S_V^R



Bore size (mm)	Stroke range	A	AL	B ₁	B	C	D	FX	FD	FT	GA	GB	H	H ₁	I	J	K	KA	M	MM	NA	P	S	ZZ
20	to 350	18	15.5	13	50	16.5	8	36	5.5	6	18	12	35	5	31	M4	5	6	3	M8 x 1.25	29	1/8	83	121
25	to 400	22	19.5	17	50	18.5	10	36	5.5	6	18	12	40	6	33	M5	5.5	8	3.5	M10 x 1.25	29	1/8	83	126.5
32	to 450	22	19.5	17	50	20	12	38	6.6	6	18	12	40	6	38	M5	5.5	10	3.5	M10 x 1.25	35.5	1/8	85	128.5
40	to 800	30	27	19	60	26	16	46	6.6	6	19	13	50	8	47	M6	6	14	4	M14 x 1.5	44	1/8	93	147
50	to 1200	35	32	27	75	32	20	58	9	9	21	14	58	11	58	M8	7	18	5.5	M18 x 1.5	55	1/4	109	172.5
63	to 1200	35	32	27	90	38	20	70	11	9	21	14	58	11	72	M10	7	18	7	M18 x 1.5	69	1/4	109	174
80	to 1400	40	37	32	100	50	25	82	11	9	28	20	71	13	89	M10	10	22	7	M22 x 1.5	80	3/8	130	208
100	to 1500	40	37	41	125	60	30	100	14	10	29	20	71	16	110	M12	10	26	8	M26 x 1.5	100	1/2	131	210

* Flange brackets and plug bolts are installed before shipment from factory.

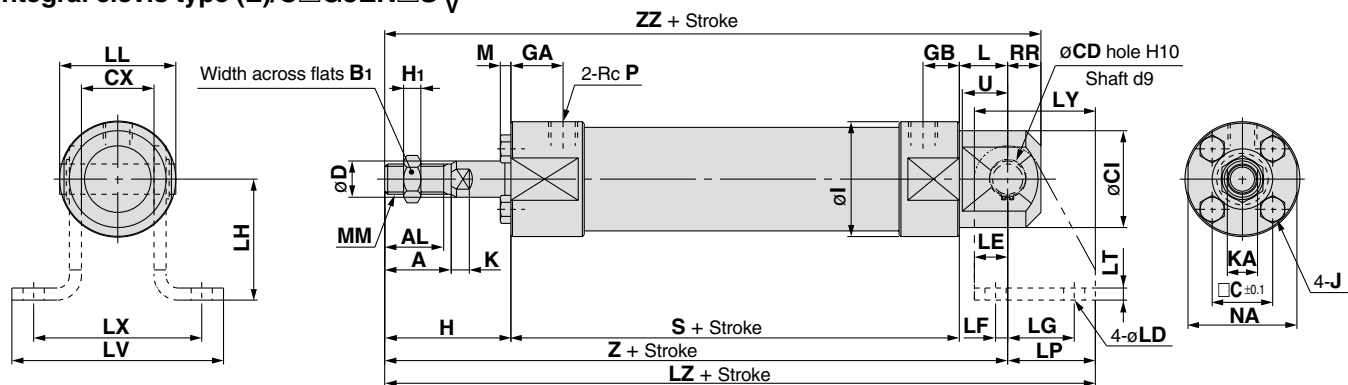
Dimensions

Rear flange type (G)/C□G5GN□S_V^R

(mm)

Bore size (mm)	Stroke range	A	AL	B ₁	B	C	D	FX	FD	FT	GA	GB	H	H ₁	I	J	K	KA	M	MM	NA	P	S	ZZ
20	to 200	18	15.5	13	50	16.5	8	36	5.5	6	18	12	35	5	31	M4	5	6	3	M8 x 1.25	29	1/8	83	124
25	to 300	22	19.5	17	50	18.5	10	36	5.5	6	18	12	40	6	33	M5	5.5	8	3.5	M10 x 1.25	29	1/8	83	129
32	to 300	22	19.5	17	50	20	12	38	6.6	6	18	12	40	6	38	M5	5.5	10	3.5	M10 x 1.25	35.5	1/8	85	131
40	to 500	30	27	19	60	26	16	46	6.6	6	19	13	50	8	47	M6	6	14	4	M14 x 1.5	44	1/8	93	149
50	to 600	35	32	27	75	32	20	58	9	9	21	14	58	11	58	M8	7	18	5.5	M18 x 1.5	55	1/4	109	176
63	to 600	35	32	27	90	38	20	70	11	9	21	14	58	11	72	M10	7	18	7	M18 x 1.5	69	1/4	109	176
80	to 750	40	37	32	100	50	25	82	11	9	28	20	71	13	89	M10	10	22	7	M22 x 1.5	80	3/8	130	210
100	to 750	40	37	41	125	60	30	100	14	10	29	20	71	16	110	M12	10	26	8	M26 x 1.5	100	1/2	131	212

* Flange brackets and plug bolts are installed before shipment from factory.

Integral clevis type (E)/C□G5EN□S_V^R

(mm)

Bore size (mm)	Stroke range	A	AL	B ₁	C	CD (hole)	CI	CX	D	GA	GB	H	H ₁	I	J	K	KA	L	M	MM	NA	P	RR	S	U
20	to 200	18	15.5	13	16.5	8 ^{+0.058} ₀	25	16 ⁰ _{-0.2}	8	18	12	35	5	31	M4	5	6	14	3	M8 x 1.25	29	1/8	9	83	13
25	to 300	22	19.5	17	18.5	8 ^{+0.058} ₀	27	16 ⁰ _{-0.2}	10	18	12	40	6	33	M5	5.5	8	14	3.5	M10 x 1.25	29	1/8	9	83	13
32	to 300	22	19.5	17	20	10 ^{+0.058} ₀	32	24 ⁰ _{-0.2}	12	18	12	40	6	38	M5	5.5	10	16	3.5	M10 x 1.25	35.5	1/8	11	85	15
40	to 500	30	27	19	26	10 ^{+0.058} ₀	40	24 ⁰ _{-0.2}	16	19	13	50	8	47	M6	6	14	16	4	M14 x 1.5	44	1/8	11	93	15
50	to 600	35	32	27	32	14 ^{+0.070} ₀	50	40 ⁰ _{-0.2}	20	21	14	58	11	58	M8	7	18	22	5.5	M18 x 1.5	55	1/4	15	109	21
63	to 600	35	32	27	38	14 ^{+0.070} ₀	60	40 ⁰ _{-0.2}	20	21	14	58	11	72	M10	7	18	22	7	M18 x 1.5	69	1/4	15	109	21
80	to 750	40	37	32	50	22 ^{+0.084} ₀	75	60 ⁰ _{-0.3}	25	28	20	71	13	89	M10	10	22	33	7	M22 x 1.5	80	3/8	23	130	32
100	to 750	40	37	41	60	22 ^{+0.084} ₀	90	60 ⁰ _{-0.3}	30	29	20	71	16	110	M12	10	26	33	8	M26 x 1.5	100	1/2	23	131	32

(mm)

Bore size (mm)	Z	ZZ	Trunnion bracket	CD (shaft)	LD	LE	LF	LG	LH	LL	LP	LT	LV	LX	LY	LZ
20	132	141	CG-E020SUS	8 ^{-0.040 -0.076}	7	9	2	14	30	27.6	21	3	56.5	42	30	153
25	137	146	CG-E020SUS	8 ^{-0.040 -0.076}	7	9	2	14	30	27.6	21	3	56.5	42	30	158
32	141	152	CG-E032SUS	10 ^{-0.040 -0.076}	7	11	4	22	40	38.4	29	4	70.5	56	40	170
40	159	170	CG-E032SUS	10 ^{-0.040 -0.076}	7	11	4	22	40	38.4	29	4	70.5	56	40	188
50	189	204	CG-E050SUS	14 ^{-0.050 -0.093}	12	15	5	25	50	59.6	35	6	106.5	84	50	224
63	189	204	CG-E050SUS	14 ^{-0.050 -0.093}	12	15	5	25	50	59.6	35	6	106.5	84	50	224
80	234	257	CG-E080SUS	22 ^{-0.065 -0.117}	14	23	6	40	80	87.2	57	9	144.5	120	80	291
100	235	258	CG-E080SUS	22 ^{-0.065 -0.117}	14	23	6	40	80	87.2	57	9	144.5	120	80	292

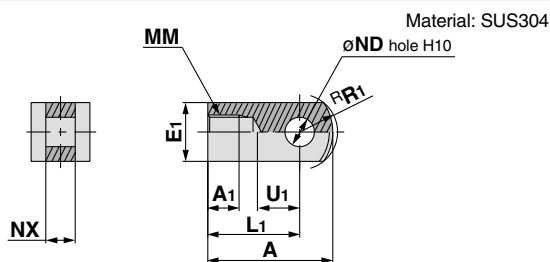
* Plug bolts are installed before shipment from factory.

* Trunnion brackets (with clevis pin and snap ring) are optional. (Not included.)

Series CG5-S

Accessory Dimensions

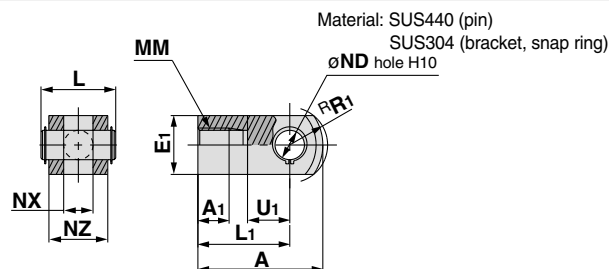
Single knuckle joint



(mm)

Part no.	Applicable bore size (mm)	A	A1	E1	L1	MM	NDH10	NX	R1	U1
I-G02SUS	20	34	8.5	□16	25	M8	8 ^{+0.058} ₀	8 ^{-0.2} _{-0.4}	10.3	11.5
I-G03SUS	25, 32	41	10.5	□20	30	M10 x 1.25	10 ^{+0.058} ₀	10 ^{-0.2} _{-0.4}	12.8	14
I-G04SUS	40	42	14	□22	30	M14 x 1.5	10 ^{+0.058} ₀	18 ^{-0.3} _{-0.5}	12	14
I-G05SUS	50, 63	56	18	□28	40	M18 x 1.5	14 ^{+0.070} ₀	22 ^{-0.3} _{-0.5}	16	20
I-G08SUS	80	71	21	□38	50	M22 x 1.5	18 ^{+0.070} ₀	28 ^{-0.3} _{-0.5}	21	27
I-G10SUS	100	79	21	□45	55	M26 x 1.5	22 ^{+0.084} ₀	32 ^{-0.3} _{-0.5}	24	31

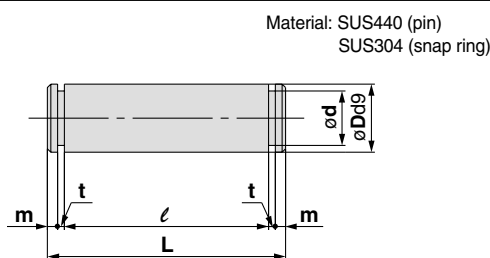
Double knuckle joint



(mm)

Part no.	Applicable bore size (mm)	A	A1	E1	L	L1	MM	NDH10	NX	NZ	R1	U1	Applicable pin no.
Y-G02SUS	20	34	8.5	16	21	25	M8	8 ^{+0.058} ₀	8 ^{+0.4} _{+0.2}	16	10.3	11.5	IY-G02SUS
Y-G03SUS	25, 32	41	10.5	20	25.6	30	M10 x 1.25	10 ^{+0.058} ₀	10 ^{+0.4} _{+0.2}	20	12.8	14	IY-G03SUS
Y-G04SUS	40	42	16	22	41.6	30	M14 x 1.5	10 ^{+0.058} ₀	18 ^{+0.5} _{+0.3}	36	12	14	IY-G04SUS
Y-G05SUS	50, 63	56	20	25	50.6	40	M18 x 1.5	14 ^{+0.070} ₀	22 ^{+0.5} _{+0.3}	44	16	20	IY-G05SUS
Y-G08SUS	80	71	23	35	64	50	M22 x 1.5	18 ^{+0.070} ₀	28 ^{+0.5} _{+0.3}	56	21	27	IY-G08SUS
Y-G10SUS	100	79	24	40	72	55	M26 x 1.5	22 ^{+0.084} ₀	32 ^{+0.5} _{+0.3}	64	24	31	IY-G10SUS

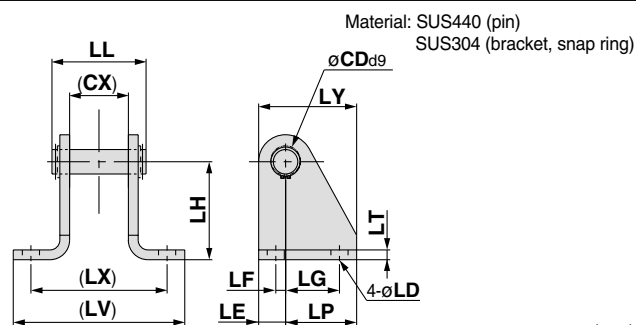
Knuckle joint pin



(mm)

Part no.	Applicable bore size (mm)	Dd9	d	L	ℓ	m	t	Snap ring
IY-G02SUS	20	8 ^{-0.040} _{-0.076}	7.6	21	16.2	1.5	0.9	C type 8 for shaft
IY-G03SUS	25, 32	10 ^{-0.040} _{-0.076}	9.6	25.6	20.2	1.55	1.15	C type 10 for shaft
IY-G04SUS	40	10 ^{-0.040} _{-0.076}	9.6	41.6	36.2	1.55	1.15	C type 10 for shaft
IY-G05SUS	50, 63	14 ^{-0.050} _{-0.093}	13.4	50.6	44.2	2.05	1.15	C type 14 for shaft
IY-G08SUS	80	18 ^{-0.050} _{-0.093}	17	64	56.2	2.55	1.35	C type 18 for shaft
IY-G10SUS	100	22 ^{-0.065} _{-0.117}	21	72	64.2	2.55	1.35	C type 22 for shaft

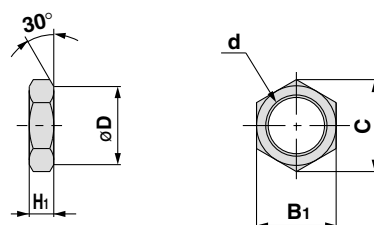
Trunnion bracket



(mm)

Part no.	Applicable bore size (mm)	CD (snap ring)	CX	LD	LE	LF	LG	LH	LL	LP	LT	LV	LX	LY
CG-E020SUS	20, 25	8 ^{-0.040} _{-0.076}	16	7	9	2	14	30	27.6	21	3	56.5	42	30
CG-E032SUS	32, 40	10 ^{-0.040} _{-0.076}	24	7	11	4	22	40	38.4	29	4	70.5	56	40
CG-E050SUS	50, 63	14 ^{-0.050} _{-0.093}	40	12	15	5	25	50	59.6	35	6	106.5	84	50
CG-E080SUS	80, 100	22 ^{-0.065} _{-0.117}	60	14	23	6	40	80	87.2	57	9	144.5	120	80

Rod end nut

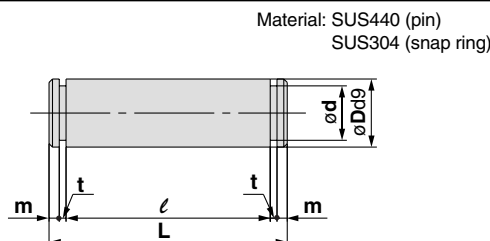


Material: SUS304

(mm)

Part no.	Applicable bore size (mm)	B1	C	D	d	H1
NT-02SUS	20	13	(15)	12.5	M8	5
NT-03SUS	25, 32	17	(19.6)	16.5	M10 x 1.25	6
NT-G04SUS	40	19	(21.9)	18	M14 x 1.5	8
NT-05SUS	50, 63	27	(31.2)	26	M18 x 1.5	11
NT-08SUS	80	32	(37.0)	31	M22 x 1.5	13
NT-10SUS	100	41	(47.3)	39	M26 x 1.5	16

Clevis pin



(mm)

Part no.	Applicable bore size (mm)	Dd9	d	L	ℓ	m	t	Snap ring
CD-E02SUS	20, 25	8 ^{-0.040} _{-0.076}	7.6	27.6	22.8	1.5	0.9	C type 8 for shaft
CD-E03SUS	32, 40	10 ^{-0.040} _{-0.076}	9.6	38.4	33	1.55	1.15	C type 10 for shaft
CD-E05SUS	50, 63	14 ^{-0.050} _{-0.093}	13.4	59.6	53.2	2.05	1.15	C type 14 for shaft
CD-E08SUS	80, 100	22 ^{-0.065} _{-0.117}	21	87.2	79.4	2.55	1.35	C type 22 for shaft

MK/MK2

RS

RE

REC

C..X

MTS

C..S

MQ

RHC

CC

Series CJ5-S/CG5-S Auto Switch Specifications

Auto Switch Common Specifications

Type	Solid State Switch
Operating time	1ms or less
Impact resistance	1000m/s ²
Insulation resistance	50MΩ or more at 500VDC (between lead wire and case)
Withstand voltage	1000VAC for 1 min. (between lead wire and case)
Ambient temperature	-10 to 60°C
Enclosure	IEC529 standard IP67, JISC0920 watertight construction

Lead Wire Length

The standard lead wire length for water resistant 2 colour indication solid state auto switches is 3 meters. (0.5m is not available.)

For solid state switches with flexible specification, enter "-61" after the lead wire length.

(Example) D-H7BAL- 61

Flexible specification

Lead Wire Colour Changes

2 wire

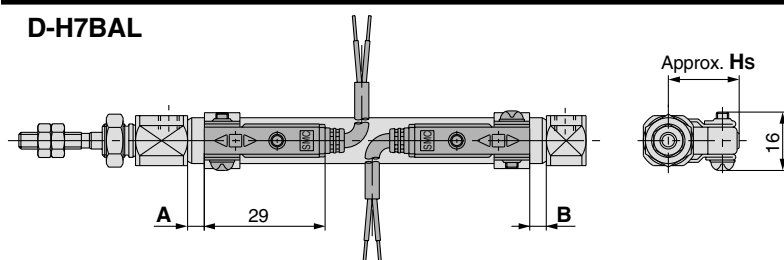
	Old	New
Output (+)	Red	Brown
Output (-)	Black	Blue

Lead wire colours of SMC switches have been changed as shown below in order to meet NECA Standard 0402 for production beginning September, 1996 and thereafter.

Special care should be taken regarding wire polarity during the time that the old colours still coexist with the new colours.

Auto Switch Mounting Positions and Minimum Mountable Strokes

D-H7BAL



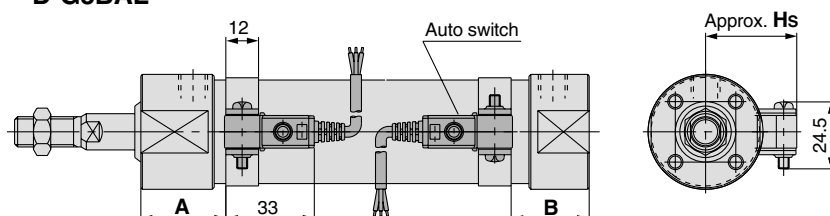
Minimum strokes for auto switch mounting

Mounting bracket	Basic type, Foot type, Flange type, Clevis type		
Number of switches	1 pc. (Rod cover side)	2 pcs. (Different sides)	2 pcs. (Same side)
Mounting surface	Port surface 	Port surface 	Port surface
Switch type			
Minimum stroke (mm)	10	15	60

Auto switch mounting positions (mm)

Applicable bore size (mm)	Auto switch model	D-H7BAL		
		A	B	HS
10		0	0	17
16		0.5	0.5	20.5

D-G5BAL



Minimum strokes for auto switch mounting

Mounting bracket	Basic type, Foot type, Flange type, Clevis type		
Number of switches	1 pc. (Rod cover side)	2 pcs. (Different sides)	2 pcs. (Same side)
Mounting surface	Port surface 	Port surface 	Port surface
Switch type			
Minimum stroke (mm)	10	15	75

Auto switch mounting position (mm)

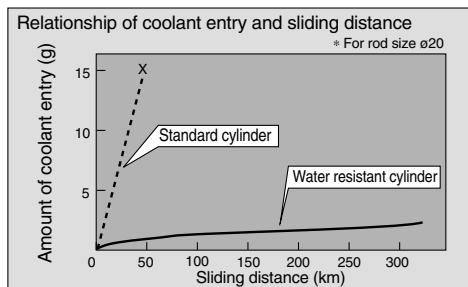
Applicable bore size (mm)	Auto switch model	D-G5BAL		
		A	B	HS
20		31.5	24	26
25		31.5	24	28.5
32		32.5	25	33
40		37	28	36.5
50		45.5	36	42
63		45.5	36	48.5
80		56	46	57.5
100		57	46	68

Related Equipment

Water Resistant Air Cylinder

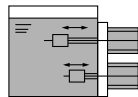
- For use in environments with water spray such as food processing machines and car wash machines
- Special scraper

- Dramatically improved water resistance compared to standard cylinders



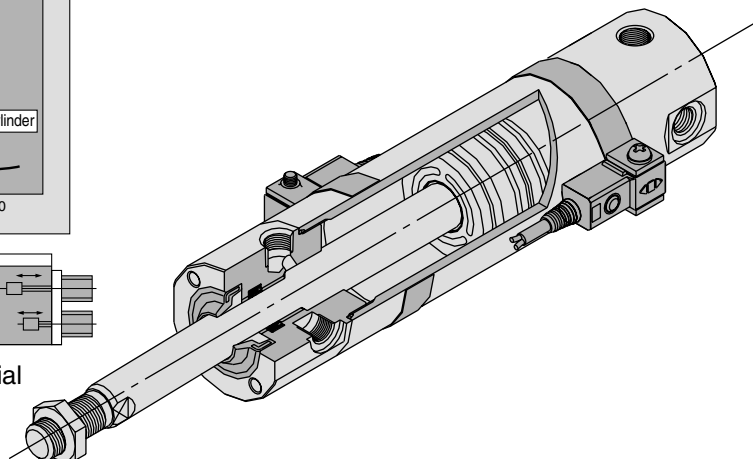
Conditions

Working fluid Air
Pressure 0.5MPa
Coolant Water-soluble
Piston speed 200mm/sec (60cpm)

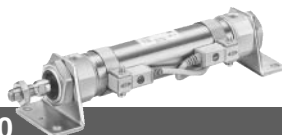


- Two types of standard seal material

Nitrile rubber (NBR)
Fluoro rubber (FKM)



Series CM2 $\phi 20$ to $\phi 40$



Specifications

Action	Double acting single rod
Bore size (mm)	$\phi 20$, $\phi 25$, $\phi 32$, $\phi 40$
Cushion	Rubber bumper
Switch mounting type	Band mount type
Made to order	Piston rod/Rod end nut material: Stainless steel (-XC6)

* Specifications other than above are identical to the standard basic type.

Series CG1 $\phi 32$ to $\phi 100$



Specifications

Action	Double acting single rod
Bore size (mm)	$\phi 32$, $\phi 40$, $\phi 50$, $\phi 63$, $\phi 80$, $\phi 100$
Cushion	Rubber bumper, Air cushion
Switch mounting type	Band mount type
Made to order	Piston rod/Rod end nut material: Stainless steel (-XC6)

* Specifications other than above are identical to the standard basic type.

How to Order

CDM2 [Mounting] Bore size **R** Stroke **H7BAL** **-XC6**

- With auto switch (built-in magnet)
- Water resistant cylinder

R	NBR (nitrile rubber) seals
V	FKM (fluoro rubber) seals
- Water resistant 2 colour indication solid state switch
- Made to order specification

How to Order

CDG1 [Mounting] Type Bore size **R** Stroke **G5BAL** **-XC6**

- With auto switch (built-in magnet)
- Water resistant cylinder

R	NBR (nitrile rubber) seals
V	FKM (fluoro rubber) seals
- Water resistant 2 colour indication solid state switch
- Made to order specification

Related Equipment

Water Resistant Air Cylinder

Compact cylinder

Series **CQ2** ø20 to ø100

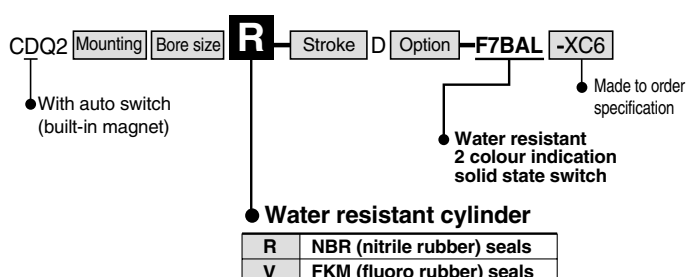


Specifications

Action	Double acting single rod
Bore size (mm)	ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100
Cushion	None
Switch mounting type	Rail mount type
Made to order	Piston rod/Rod end nut material: Stainless steel (-XC6)

* Specifications other than above are identical to the standard basic type.

How to Order



Series **CA1** ø40 to ø100

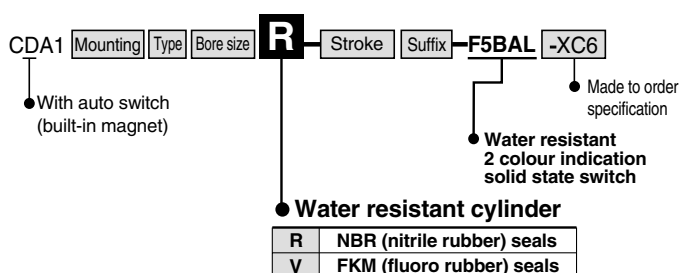


Specifications

Action	Double acting single rod
Bore size (mm)	ø40, ø50, ø63, ø80, ø100
Cushion	Air cushion
Switch mounting type	Tie-rod mount type
Made to order	Piston rod/Rod end nut material: Stainless steel (-XC6)

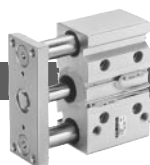
* Specifications other than above are identical to the standard basic type.
 Note 1) Air-hydro type and boot specification of series CA1 are excluded.
 Note 2) Combination of auto switches and steel tube is not available.

How to Order



Compact guide cylinder

Series **MGP** Ø20 to Ø100

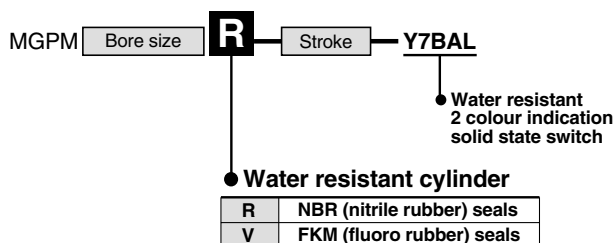


Specifications

Action	Double acting
Bore size (mm)	ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100
Bearing type	Slide bearing
Cushion	Rubber bumper
Switch mounting type	Direct mount type

* Specifications other than above are identical to the standard basic type.

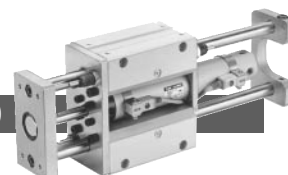
How to Order



* Use of stainless steel as the piston rod material will be treated as a special order.

Cylinder with guide

Series **MGG** Ø32 to Ø50

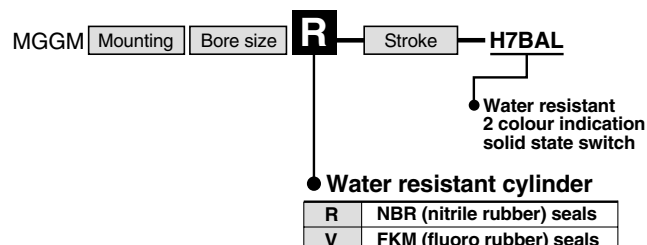


Specifications

Action	Double acting
Bore size (mm)	ø32, ø40, ø50
Bearing type	Slide bearing
Cushion	Rubber bumper, Built-in shock absorber
Switch mounting type	Band mount type

* Specifications other than above are identical to the standard basic type.
 Note 1) RBL (coolant resistant) type shock absorber is used.

How to Order



* Use of stainless steel as the piston rod material will be treated as a special order.

Related Equipment Speed Controller with One-touch Fittings Stainless Steel Series

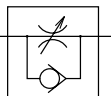


Refer to "Best Pneumatics No. 3" for details.

Elbow Type/Universal Type

AS-FG

JIS symbol



Applicable tubing O.D. (mm)	Connection threads	Model			
		Elbow type		Universal type	
		Meter-out	Meter-in	Meter-out	Meter-in
3.2	M5	AS1201FG-M5-23	AS1211FG-M5-23	AS1301FG-M5-23	AS1311FG-M5-23
	R 1/8	AS2201FG-01-23	AS2211FG-01-23	AS2301FG-01-23	AS2311FG-01-23
4	M5	AS1201FG-M5-04	AS1211FG-M5-04	AS1301FG-M5-04	AS1311FG-M5-04
	R 1/8	AS2201FG-01-04	AS2211FG-01-04	AS2301FG-01-04	AS2311FG-01-04
	R 1/4	-02-04	-02-04	-02-04	-02-04
6	M5	AS1201FG-M5-06	AS1211FG-M5-06	AS1301FG-M5-06	AS1311FG-M5-06
	R 1/8	AS2201FG-01-06	AS2211FG-01-06	AS2301FG-01-06	AS2311FG-01-06
	R 1/4	-02-06	-02-06	-02-06	-02-06
		AS3201FG-02-06	AS3211FG-02-06	AS3301FG-02-06	AS3311FG-02-06
	R 3/8	-03-06	-03-06	-03-06	-03-06
8	R 1/8	AS2201FG-01-08	AS2211FG-01-08	AS2301FG-01-08	AS2311FG-01-08
	R 1/4	-02-08	-02-08	-02-08	-02-08
		AS3201FG-02-08	AS3211FG-02-08	AS3301FG-02-08	AS3311FG-02-08
	R 3/8	-03-08	-03-08	-03-08	-03-08
10	R 1/8	AS2201FG-01-10	AS2211FG-01-10	—	—
	R 1/4	-02-10	-02-10	AS2301FG-02-10	AS2311FG-02-10
		AS3201FG-02-10	AS3211FG-02-10	AS3301FG-02-10	AS3311FG-02-10
	R 3/8	-03-10	-03-10	-03-10	-03-10
	R 1/2	AS4201FG-04-10	AS4211FG-04-10	AS4301FG-04-10	AS4311FG-04-10
12	R 1/4	AS3201FG-02-12	AS3211FG-02-12	AS3301FG-02-12	AS3311FG-02-12
	R 3/8	-03-12	-03-12	-03-12	-03-12
	R 1/2	AS4201FG-04-12	AS4211FG-04-12	AS4301FG-04-12	AS4311FG-04-12

MK/MK2

RS

RE

REC

C..X

MTS

C..S

MQ

RHC

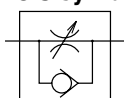
CC

In-line Type

AS-FG

SUS303

JIS symbol



Applicable tubing O.D. (mm)	Model
	In-line type
3.2	AS1001FG-23
4	AS1001FG-04
	AS2001FG-04
6	AS1001FG-06
	AS2001FG-06
	AS2051FG-06
	AS3001FG-06

Applicable tubing O.D. (mm)	Model
	In-line type
8	AS2051FG-08
	AS3001FG-08
10	AS3001FG-10
	AS4001FG-10
12	AS3001FG-12
	AS4001FG-12

Refer to "Best Pneumatics No. 3" for inch sizes.

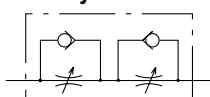
Dual Speed Controller

ASD-FG

SUS303

Provides lurching prevention and controls speed of single acting cylinders.

JIS symbol



Applicable tubing O.D. (mm)	Connection threads	Model
		Universal type
4	M5	ASD230FG-M5-04
	M5	ASD230FG-M5-06
6	R 1/8	ASD330FG-01-06S
	R 1/4	ASD430FG-02-06S
		ASD530FG-02-06S
	R 3/8	-03-06S
8	R 1/8	ASD330FG-01-08S
	R 1/4	ASD430FG-02-08S
		ASD530FG-02-08S
	R 3/8	-03-08S

Applicable tubing O.D. (mm)	Connection threads	Model
		Universal type
10	R 1/4	ASD430FG-02-10S
	R 3/8	ASD530FG-02-10S
		-03-10S
	R 1/2	ASD630FG-04-10S
12	R 1/4	ASD530FG-02-12S
	R 3/8	-03-12S
	R 1/2	ASD630FG-04-12S

Refer to "Best Pneumatics No. 3" for inch sizes.

Related Equipment

One-touch Fittings/Stainless Steel Series



Refer to "Best Pneumatics No. 4" for details.

Male Connector KGH

	Applicable tubing O.D. (mm)	Connection threads	Model
 <M5 type>	4	M5	KGH04-M5
		R 1/8	-01
		R 1/4	-02
	6	M5	KGH06-M5
		R 1/8	-01
		R 1/4	-02
		R 3/8	-03
	8	R 1/8	KGH08-01
		R 1/4	-02
		R 3/8	-03
 <R type>	10	R 1/8	KGH10-01
		R 1/4	-02
		R 3/8	-03
		R 1/2	-04
	12	R 1/4	KGH12-02
		R 3/8	-03
		R 1/2	-04
	16	R 3/8	KGH16-03
		R 1/2	-04

Male Elbow KGL

	Applicable tubing O.D. (mm)	Connection threads	Model
 <M5 type>	4	M5	KGL04-M5
		R 1/8	-01
		R 1/4	-02
	6	M5	KGL06-M5
		R 1/8	-01
		R 1/4	-02
		R 3/8	-03
	8	R 1/8	KGL08-01
		R 1/4	-02
		R 3/8	-03
 <R type>	10	R 1/8	KGL10-01
		R 1/4	-02
		R 3/8	-03
		R 1/2	-04
	12	R 1/4	KGL12-02
		R 3/8	-03
		R 1/2	-04
	16	R 3/8	KGL16-03
		R 1/2	-04

Hexagon Socket Head Male Connector KGS

	Applicable tubing O.D. (mm)	Connection threads	Model
 <M5 type>	4	M5	KGS04-M5
		R 1/8	-01
		R 1/4	-02
	6	M5	KGS06-M5
		R 1/8	-01
		R 1/4	-02
		R 3/8	-03
	8	R 1/8	KGS08-01
		R 1/4	-02
		R 3/8	-03
 <R type>	10	R 1/8	KGS10-01
		R 1/4	-02
		R 3/8	-03
		R 1/2	-04
	12	R 1/4	KGS12-02
		R 3/8	-03
		R 1/2	-04

Extended Male Elbow KGW

	Applicable tubing O.D. (mm)	Connection threads	Model
 <M5 type>	4	M5	KGW04-M5
		R 1/8	-01
		R 1/4	-02
	6	M5	KGW06-M5
		R 1/8	-01
		R 1/4	-02
		R 3/8	-03
	8	R 1/8	KGW08-01
		R 1/4	-02
		R 3/8	-03
 <R type>	10	R 1/4	KGW10-02
		R 3/8	-03
		R 1/2	-04
		R 1/4	KGW12-02
	12	R 3/8	-03
		R 1/2	-04
		R 1/2	-04

Male Run Tee KGY

	Applicable tubing O.D. (mm)	Connection threads	Model
 <M5 type>	4	M5	KGY04-M5
		R 1/8	-01
		R 1/4	-02
	6	M5	KGY06-M5
		R 1/8	-01
		R 1/4	-02
		R 3/8	-03
	8	R 1/8	KGY08-01
		R 1/4	-02
		R 3/8	-03
 <R type>	10	R 1/8	KGY10-01
		R 1/4	-02
		R 3/8	-03
		R 1/2	-04
	12	R 1/4	KGY12-02
		R 3/8	-03
		R 1/2	-04
	16	R 3/8	KGY16-03
		R 1/2	-04

Universal Male Elbow KGV

	Applicable tubing O.D. (mm)	Connection threads	Model
 <M5 type>	4	M5	KGV04-M5
		R 1/8	-01
		R 1/4	-02
	6	M5	KGV06-M5
		R 1/8	-01
		R 1/4	-02
		R 3/8	-03
	8	R 1/8	KGV08-01
		R 1/4	-02
		R 3/8	-03
 <R type>	10	R 1/4	KGV10-02
		R 3/8	-03
	12	R 3/8	KGV12-03
		R 1/2	-04

Branch Tee KGT

	Applicable tubing O.D. (mm)	Connection threads	Model
 <M5 type>	4	M5	KGT04-M5
		R 1/8	-01
		R 1/4	-02
 <R type>	6	M5	KGT06-M5
		R 1/8	-01
		R 1/4	-02
	8	R 3/8	-03
		R 1/8	KGT08-01
		R 1/4	-02
	10	R 3/8	-03
		R 1/2	-04
		R 1/4	KGT10-01
	12	R 3/8	-03
		R 1/2	-04
		R 1/4	KGT12-02
	16	R 3/8	KGT16-03
		R 1/2	-04

Branch Male Elbow KGLU

	Applicable tubing O.D. (mm)	Connection threads	Model
 <M5 type>	4	M5	KGLU04-M5
		R 1/8	-01
		R 1/4	-02
 <R type>	6	M5	KGLU06-M5
		R 1/8	-01
		R 1/4	-02
	8	R 3/8	-03
		R 1/8	KGLU08-01
		R 1/4	-02
	10	R 3/8	-03
		R 1/2	-04
		R 1/4	KGLU10-02
	12	R 3/8	-03
		R 1/2	-04
		R 1/4	KGLU12-02

Double Branch "Y" KGUD

	Applicable tubing O.D. (mm)	Connection threads	Model
 <M5 type>	4	R 1/8	KGUD04-01
		R 1/4	-02
	6	R 1/8	KGUD06-01
		R 1/4	-02

Plug-in "Y" KGU

	Applicable tubing O.D. (mm)	Connection threads	Model
 <M5 type>	4	M5	KGU04-M5
		R 1/8	-01
		R 1/4	-02
 <R type>	6	M5	KGU06-M5
		R 1/8	-01
		R 1/4	-02
	8	R 3/8	-03
		R 1/8	KGU08-01
		R 1/4	-02
	10	R 3/8	-03
		R 1/2	-04
		R 1/4	KGU10-02
	12	R 3/8	-03
		R 1/2	-04
		R 1/4	KGU12-02

Male Delta KGD

	Applicable tubing O.D. (mm)	Connection threads	Model
 <M5 type>	4	M5	KGD04-M5
		R 1/8	-01
		R 1/4	-02
 <R type>	6	M5	KGD06-M5
		R 1/8	-01
		R 1/4	-02
	8	R 3/8	-03
		R 1/8	KGD08-01
		R 1/4	-02
	10	R 3/8	-03
		R 1/2	-04
		R 1/4	KGD10-02
	12	R 3/8	-03
		R 1/2	-04
		R 1/4	KGD12-02

Straight Union KGH

	Applicable tubing O.D. (mm)	Model
	4	KGH04-00
	6	KGH06-00
	8	KGH08-00
	10	KGH10-00
	12	KGH12-00

Bulkhead Union KGE

	Applicable tubing O.D. (mm)	Model
	4	KGE04-00
	6	KGE06-00
	8	KGE08-00
	10	KGE10-00
	12	KGE12-00
	16	KGE16-00

MK/MK2

RS

RE

REC

C..X

MTS

C..S

MQ

RHC

CC

Related Equipment

One-touch Fittings/Stainless Steel Series



Refer to "Best Pneumatics No. 4" for details.

Union Elbow KGL

	Applicable tubing O.D. (mm)	Model
	4	KGL04-00
	6	KGL06-00
	8	KGL08-00
	10	KGL10-00
	12	KGL12-00
	16	KGL16-00

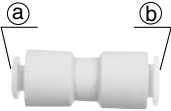
Union Tee KGT

	Applicable tubing O.D. (mm)	Model
	4	KGT04-00
	6	KGT06-00
	8	KGT08-00
	10	KGT10-00
	12	KGT12-00
	16	KGT16-00

Union "Y" KGU

	Applicable tubing O.D. (mm)	Model
	4	KGU04-00
	6	KGU06-00
	8	KGU08-00
	10	KGU10-00
	12	KGU12-00

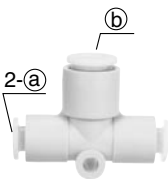
Different Dia. Straight KGH

	Applicable tubing O.D. (mm)		Model
	(a)	(b)	
	4	6	KGH04-06
	6	8	KGH06-08
	8	10	KGH08-10
	10	12	KGH10-12

Delta KGD

	Applicable tubing O.D. (mm)	Model
	4	KGD04-00
	6	KGD06-00
	8	KGD08-00
	10	KGD10-00
	12	KGD12-00

Different Dia. Tee KGT

	Applicable tubing O.D. (mm)		Model
	(a)	(b)	
	4	6	KGT04-06
	6	8	KGT06-08
	8	10	KGT08-10
	10	12	KGT10-12

Different Dia. Union "Y" KGU

	Applicable tubing O.D. (mm)		Model
	(a)	(b)	
	4	6	KGU04-06
	6	8	KGU06-08
	8	10	KGU08-10
	10	12	KGU10-12

Different Dia. Double Union "Y" KGUD

	Applicable tubing O.D. (mm)		Model
	(a)	(b)	
	4	6	KGUD04-06
	6	8	KGUD06-08

Branch Elbow KGLU

	Applicable tubing O.D. (mm)	Model
	4	KGLU04-00
	6	KGLU06-00
	8	KGLU08-00
	10	KGLU10-00
	12	KGLU12-00

Female Union KGF

	Applicable tubing O.D. (mm)	Connection threads	Model
4		Rc 1/8	KGF04-01
		Rc 1/4	-02
6		Rc 1/8	KGF06-01
		Rc 1/4	-02
		Rc 3/8	-03
		Rc 1/2	-04
8		Rc 1/8	KGF08-01
		Rc 1/4	-02
		Rc 3/8	-03
10		Rc 1/4	KGF10-02
		Rc 3/8	-03
12		Rc 1/4	KGF12-02
		Rc 3/8	-03
		Rc 1/2	-04

Plug-in Elbow **KGL**

	Applicable tubing O.D. (mm)	Applicable fitting size	Model
	4	4	KGL04-99
	6	6	KGL06-99
	8	8	KGL08-99
	10	10	KGL10-99
	12	12	KGL12-99

Plug-in Reducer **KGR**

	Applicable tubing O.D. (mm)	Applicable fitting size	Model
	4	6	KGR04-06
		8	-08
		10	-10
	6	4	KGR06-04
		8	-08
		10	-10
		12	-12
	8	10	KGR08-10
		12	-12
	10	12	KGR10-12
		16	-16
	12	16	KGR12-16

Bulkhead Connector **KGE**

	Applicable tubing O.D. (mm)	Connection threads	Model
	4	R 1/8	KGE04-01
		R 1/4	-02
	6	R 1/8	KGE06-01
		R 1/4	-02
		R 3/8	-03
	8	R 1/8	KGE08-01
		R 1/4	-02
		R 3/8	-03
	10	R 1/4	KGE10-02
		R 3/8	-03
	12	R 3/8	KGE12-03
		R 1/2	-04
	16	R 3/8	KGE16-03
		R 1/2	-04

Tube Cap **KGC**

	Applicable tubing O.D. (mm)	Model
	4	KGC04-00
	6	KGC06-00
	8	KGC08-00
	10	KGC10-00
	12	KGC12-00
	16	KGC16-00

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Related Equipment

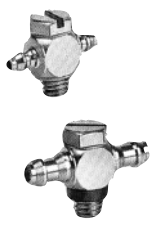
Miniature Fittings



Refer to "Best Pneumatics No. 4" for details.

Series MS

Description	Note	Model	Application
Barb fitting for soft tube 	ø3.18/2.18 x M5	MS-5AU-3	For piping soft nylon tubing
	ø3.18/2 x M5		For piping polyurethane tubing
	ø4/2.5 x M5	MS-5AU-4	For piping soft nylon and polyurethane tubing
	ø6/4 x M5	MS-5AU-6	
Barb elbow for soft tube 	ø3.18/2.18 x M5	MS-5ALHU-3	For piping soft nylon tubing
	ø3.18/2 x M5		For piping polyurethane tubing
	ø4/2.5 x M5	MS-5ALHU-4	Unrestricted 360° positioning and fastening around the stud axis
	ø6/4 x M5	MS-5ALHU-6	
Hose nipple 	ø4/2.5 x M5	MS-5H-4	For piping nylon, soft nylon and polyurethane tubing
	ø6/4 x M5	MS-5H-6	
Hose elbow 	ø4/2.5 x M5	MS-5HLH-4	• For piping nylon, soft nylon and polyurethane tubing
	ø6/4 x M5	MS-5HLH-6	• Unrestricted 360° positioning and fastening around the stud axis
Gasket 	Material: PVC	M-5G1	Seal for M5 threads

Description	Note	Model	Application
Universal elbow 	M5 female x M5 male	MS-5UL	Unrestricted 360° positioning and fastening around the stud axis
Universal tee 	M5 female x M5 female x M5 male	MS-5UT	Unrestricted 360° positioning and fastening around the stud axis
Reducer bushing 	R 1/8 x M5 female	MS-5B	Connects Rc 1/8 to M5 fitting
Plug 		MS-5P	Closes the unused M5 port
Extension fitting 	M5 male x M5 female	MS-5J	Extends piping to prevent interference with fittings
Nipple 	M5 male x M5 male	MS-5N	Connects a fitting to equipment or another fitting
Universal nipple 	M5 male x M5 male PAT	MS-5UN	Unrestricted positions and connection at 360° around the stud axis
Barb tee for soft tube 	ø3.18/2.18 x M5	MS-5ATHU-3	For piping soft nylon tubing
	ø3.18/2 x M5		For piping polyurethane tubing
	ø4/2.5 x M5	MS-5ATHU-4	Unrestricted 360° positioning and fastening around the stud axis
	ø6/4 x M5	MS-5ATHU-6	
Gasket (H) 	Material: Nylon 66 GF30%	M-5GH	Used only with: MS-5ALHU-6 MS-5HLH-4 MS-5HLH-6 MS-5ATHU-6

Related Equipment Tubing

Nylon Tubing

Series T

Model	T0425	T0403	T0604	T0645	T0806	T1075	T1209	T1613
Fluid	Air, Water							
Max. operating pressure (at 20°C)	1.5MPa							
Burst pressure	Refer to series T burst pressure characteristics curve. Note)							
Min. bending radius mm	13	25	24	36	48	60	75	100
Operating temperature	-20 to 60°C, With water: 0 to 40°C (with no freezing)							
Material	Nylon 12							

Note) Best Pneumatics No.4

20m roll

O.D.	I.D.	Color (color symbol)	Model
4	2.5	Black (B)	T0425 Colour symbol -20
		White (W)	
		Red (R)	
		Blue (BU)	
		Yellow (Y)	
		Green (G)	
	3	Black (B)	T0403 Colour symbol -20
		White (W)	
6	4	Black (B)	T0604 Colour symbol -20
		White (W)	
		Red (R)	
		Blue (BU)	
		Yellow (Y)	
		Green (G)	
	4.5	Black (B)	T0645 Colour symbol -20
		White (W)	
8	6	Black (B)	T0806 Colour symbol -20
		White (W)	
		Red (R)	
		Blue (BU)	
		Yellow (Y)	
		Green (G)	
10	7.5	Black (B)	T1075 Colour symbol -20
		White (W)	
		Red (R)	
		Blue (BU)	
		Yellow (Y)	
		Green (G)	
12	9	Black (B)	T1209 Colour symbol -20
		White (W)	
		Red (R)	
		Blue (BU)	
		Yellow (Y)	
		Green (G)	
16	13	Black (B)	T1613 Colour symbol -20
		White (W)	

100m roll

O.D.	I.D.	Color (color symbol)	Model
4	2.5	Black (B)	T0425
		White (W)	Colour symbol -100
6	4	Black (B)	T0604
		White (W)	Colour symbol -100
8	6	Black (B)	T0806
		White (W)	Colour symbol -100
10	7.5	Black (B)	T1075
		White (W)	Colour symbol -100
12	9	Black (B)	T1209
		White (W)	Colour symbol -100
16	13	Black (B)	T1613
		White (W)	Colour symbol -100†

* T1613 is on a reel.

Polyurethane Tubing

Series TU

Model	TU0425	TU0604	TU0805	TU1065	TU1208
Fluid	Air, Water				
Max. operating pressure (at 20°C)	0.8MPa				
Burst pressure	Refer to series TU burst pressure characteristics curve. Note)				
Min. bending radius mm	10	15	20	27	35
Operating temperature	-20 to 60°C, With water: 0 to 40°C (with no freezing)				
Material	Polyurethane				

Note) Best Pneumatics No.4

20m roll

O.D.	I.D.	Color (color symbol)	Model
4	2.5	Black (B)	TU0425 Colour symbol -20
		White (W)	
		Red (R)	
		Blue (BU)	
		Yellow (Y)	
		Green (G)	
	3	Clear (C)	TU0425 Colour symbol -20
		Orange (YR)	
		Black (B)	
		White (W)	
6	4	Black (B)	TU0604 Colour symbol -20
		White (W)	
		Red (R)	
		Blue (BU)	
		Yellow (Y)	
		Green (G)	
8	5	Black (B)	TU0805 Colour symbol -20
		White (W)	
		Red (R)	
		Blue (BU)	
		Yellow (Y)	
		Green (G)	
10	6.5	Black (B)	TU1065 Colour symbol -20
		White (W)	
		Red (R)	
		Blue (BU)	
		Yellow (Y)	
		Green (G)	
12	8	Black (B)	TU1208 Colour symbol -20
		White (W)	
		Red (R)	
		Blue (BU)	
		Yellow (Y)	
		Green (G)	
		Clear (C)	TU1208 Colour symbol -20
		Orange (YR)	
		Black (B)	
		White (W)	
		Red (R)	
		Blue (BU)	

100m roll

O.D.	I.D.	Color (color symbol)	Model
4	2.5	Black (B)	TU0425 Colour symbol -100
		White (W)	
		Red (R)	
		Blue (BU)	
		Yellow (Y)	
		Green (G)	
	3	Clear (C)	TU0425 Colour symbol -100
		Orange (YR)	
		Black (B)	
		White (W)	
6	4	Black (B)	TU0604 Colour symbol -100
		White (W)	
		Red (R)	
		Blue (BU)	
		Yellow (Y)	
		Green (G)	
8	5	Black (B)	TU0805 Colour symbol -100
		White (W)	
		Red (R)	
		Blue (BU)	
		Yellow (Y)	
		Green (G)	
10	6.5	Black (B)	TU1065 Colour symbol -100
		White (W)	
		Red (R)	
		Blue (BU)	
		Yellow (Y)	
		Green (G)	
12	8	Black (B)	TU1208 Colour symbol -100
		White (W)	
		Red (R)	
		Blue (BU)	
		Yellow (Y)	
		Green (G)	
		Clear (C)	TU1208 Colour symbol -100
		Orange (YR)	
		Black (B)	
		White (W)	
		Red (R)	
		Blue (BU)	

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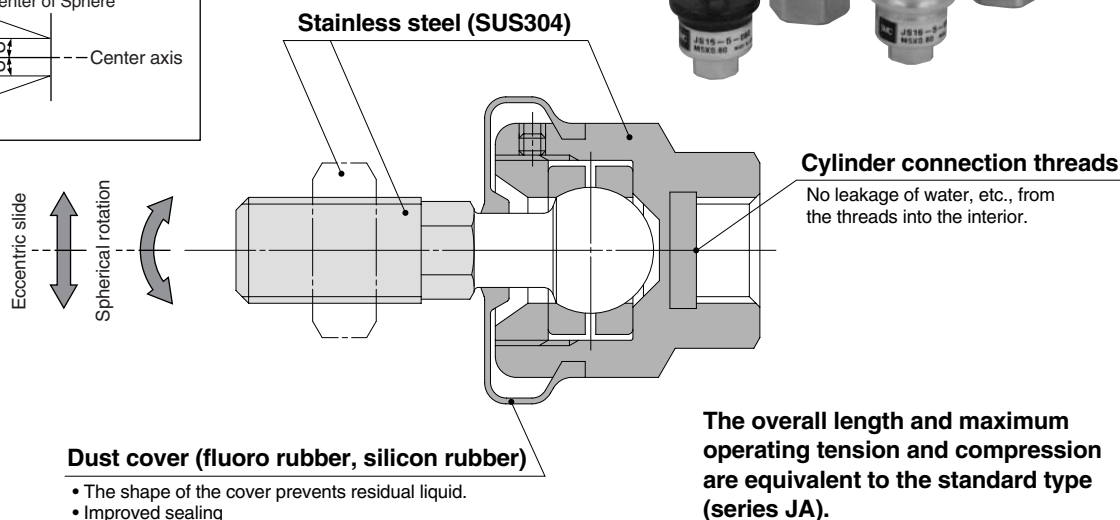
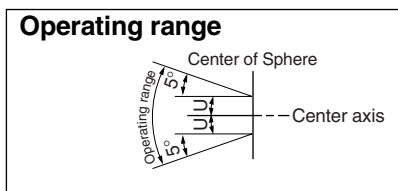
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Related Equipment

Floating Joint/Stainless Steel Type

Series JS

Stainless steel used for improved corrosion resistance



Models and Specifications

Model	Applicable cylinder bore size (mm) Note 1)	Applicable cylinder nominal thread size	Max. tension and compression N	Allowable eccentricity U	Operating pressure		Ambient temperature
					Pneumatic cylinder	Hydraulic cylinder	
JS10-4-070	10	M4	80	0.5	1MPa or less	— Note 2) 3.5MPa or less	-5 to 60°C
JS16-5-080	10, 16	M5	210	0.5			
JS20-8-125	20	M8	1100	0.5			
JS32-10-125	25, 32	M10 x 1.25	2500	0.5			
JS40-14-150	40	M14 x 1.5	6000	0.75			
JS63-18-150	50, 63	M18 x 1.5	11000	1			

Note 1) Use the applicable bore sizes as a guide. For details, consult the catalog of the cylinder being used for the rod end thread size.

Note 2) For 3.5MPa hydraulic cylinders, operate within the maximum tension and compression force.

How to Order

J S 32 10-125

Stainless steel type

Applicable bore size (mm)

Symbol	Applicable cylinder bore size (mm)
10	10
16	10, 16
20	20
32	25, 32
40	40
63	50, 63

Nominal thread size

Symbol	Applicable cylinder nominal thread size
4-070	M4
5-080	M5
8-125	M8
10-125	M10 x 1.25
14-150	M14 x 1.5
18-150	M18 x 1.5

Dust cover material

Symbol	Material
Nil	Fluoro rubber
S	Silicon rubber

Technical Data

Chemical Resistance Table

A : No influence or almost no influence
 B : Some influence, but operational depending on conditions
 C : Avoid use if possible
 D : Substantial influence, not suitable for use
 — : Not tested

Chemical Resistance Table

Parts			Body		Seal		Water resistant auto switch	
Material			Stainless steel	Aluminum	Nitrile rubber	Fluoro rubber	Resin casing	Lead wire
Chemical (Concentration weight %, Temperature °C)			SUS304	Al	NBR (-10 to 60°C)	FKM (-40 to 150°C)	PBT (-10 to 60°C)	PVC (-10 to 60°C)
Inorganic salt	1	Hydrochloric acid (20%, Room temperature)	D	D	B	A	A	B
	2	Chromic acid (25%, 70°C)	B	D	D	A	A	B
	3	Boric acid	B	D	A	A	A	B
	4	Sulfuric acid (30%, Room temperature)	D	D	A	A	A	B
	5	Phosphoric acid (50%, Room temperature)	B	D	A	A	A	B
Inorganic alkali	6	Ammonium hydroxide	B	B	D	A	A	B
	7	Sodium hydroxide (30%, Room temperature)	A	D	A	C	A	D
	8	Calcium hydroxide	C	D	A	A	A	A
	9	Magnesium hydroxide	B	B	A	A	A	A
Organic solvent	10	Acetylene	A	A	A	A	A	A
	11	Formic acid (25%, Room temperature)	B	C	D	C	C	C
	12	Citric acid	C	D	A	A	C	B
	13	Acetic acid (10%, Room temperature)	A	C	C	B	A	B
	14	Lactic acid (5%, 20°C)	B	D	A	A	A	B
Other (oil, gas, etc.)	15	Linseed oil	A	B	A	A	C	C
	16	Potassium chloride	B	C	A	A	A	A
	17	Calcium chloride	B	A	A	A	A	A
	18	Mineral oil	A	A	A	A	A	C
	19	Sodium hypochlorite (2%, Room temperature)	B	D	D	A	A	C
	20	Sodium chloride	B	—	A	A	A	A
	21	Carbon dioxide	A	A	A	A	A	A
	22	Natural gas	A	A	A	A	A	A
	23	Boric acid	B	D	A	A	A	B

* Unless noted otherwise, the solution concentration is in a saturated state.

* Chemical resistance is a guide that applies only to the stainless steel cylinder parts, and does not guarantee the performance of air cylinders (auto switches). Be sure to perform a verification test before operating.

* The temperature range for the protective label cover is between -40 to 110°C, and the temperature range for grease is between -20 to 150°C. (However, there is no relationship with the chemicals listed above.)

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Stainless Steel Cylinder Series CJ5-S/CG5-S

Specific Product Precautions

Be sure to read before handling.

Design

⚠ Warning

1. Note the weight of the stainless steel products.

Since the weight of stainless steel cylinders is approximately 1.5 to 3 times heavier than the standard products (with aluminum body), be careful when calculating weight estimates. Also, when mounting the cylinder on equipment where vibration is expected, avoid using single side brackets such as the flange type, and use double side brackets such as the foot type instead.

Selection

⚠ Warning

1. Generally, use nitrile rubber (NBR) seals with liquids that do not contain chlorine and sulphur, and use fluoro rubber (FKM) seals with liquids that contain chlorine and sulphur.

However, depending on the type and the brand of liquid (such as cleaning solvent) that splashes on the cylinder, the operating life of seals may be reduced dramatically. In cases where special additives are used, or where liquid caused trouble with the conventional nitrile or fluoro rubber seals in the past, request an investigation or set up a test period for the use of the seals.

2. Even the fluoro rubber specification may not be applicable depending on the type of chemicals and the operating temperature. Therefore, be sure to verify the seal's applicability before use.

Mounting

⚠ Warning

1. Do not rotate the cover.

If the cover is rotated when the cylinder is mounted or when fittings are screwed in, it may cause damage from the joint section of the cover.

Operating Environment

⚠ Warning

1. Fully consider the compatibility of stainless steel.

The corrosion resistance of stainless steel is not effective against all media and corrosive environments. Corrosion proceeds rapidly with strong hydrochloric acid, hydrofluoric acid, and high temperature ammonium gas, etc. Therefore its compatibility to the environment must be considered carefully.

2. Do not operate cylinders with auto switches in environments where oil and chemicals are used.

Contact SMC when operating in environments with coolants, cleaning solvents, various oils or chemicals, as it may cause adverse effects (faulty insulation, malfunction due to swelling of the potting resin, and hardening of lead wires, etc) to auto switches even in a short period of time. Even with the fluoro rubber seal specification, the auto switch related parts (switch body, mounting bracket, and built-in magnet) are identical to the standard specifications. Therefore, consult SMC regarding the cylinder's compatibility (such as chemical resistance) with an environment (chemicals, etc.) before operating.

3. Do not immerse the cylinder in water or chemicals.

When the cylinder is operated in a condition with water pressure, the fluid leaks into the cylinder in the early stages. In the worst case, the fluid may back flow inside the piping and damage the solenoid valve.

Maintenance

⚠ Caution

1. If there is a reduction in grease lubrication and reapplication of grease is necessary, use the special grease shown below.

Grease kit part no. for stainless steel cylinders

- GR-R-010 (10g)

Precautions for series CG5-S

1. Sealant* is used on the threads of the connecting sections of the cover and the cylinder tube for air-tight construction. When disassembling the cylinder, the old sealant must be completely removed, and new sealant must be applied before re-assembling.

* Loctite 542 (medium strength) or equivalent

2. ø50 or larger bore size cylinders cannot be disassembled.

When disassembling cylinders with bore sizes of ø20 through ø40, grip the double flat part of either the head cover or the rod cover with a vise and loosen the other side with a wrench or a monkey wrench, etc., and then remove the cover. When re-tightening, tighten approximately 2 degrees more than the original position. (Cylinders with ø50 or larger bore sizes are tightened with a large tightening torque and cannot be disassembled. Contact SMC when disassembly is required.)