Tie Rod Type Cylinder(AL Tube)

GDC Series / Standard

Φ40, Φ50, Φ63, Φ80, Φ100, Φ125, Φ150

ORDER KEY

GDC ① LB ② 40 ③ [ ] ④ - 200 ⑤ Y ⑥ - A54 ⑦ - 2 ⑧

1. Series

GDC	Tie rod type

GDCN : Φ125, non-magnetic type

2. Mounting

Blank	Noe mounting
LB	Foot
FH	Head Flange
FC	Cap Flange
TH	Head Trunnion
TC	Cap Trunnion
TM	Center Trunnion
TDH	Head Trunnion Hole
TDC	Cap Trunnion Hole
TDM	Center Trunnion Hole
TSH	Head Trunnion Screw
TSC	Cap Trunnion Screw
TSM	Center Trunnion Screw
CA	CA Clevis
CB	CB clevis

3. Bore Size(mm)

40	Φ40
50	Φ50
63	Φ63
80	Φ80
100	Φ100
125	Φ125
150	Φ150

4. Cylinder Type

Blank	Standard
P	Oilless

5. Cylinder Stroke(mm)

Refer to the Table of Standard stroke

6. Rod Option

Blank	No option
I	I Knuckle
Y	Y Knuckle
J	Bellows
C	Coil scraper

7. Type of Switch

Blank	No switch
A54	CL-D-A54

8. Number of Switch

2	2 units
1	1 unit
n	n units

Model No. of Mounting

Bore Size(mm)	Φ40	Φ50	Φ63	Φ80	Φ100	Φ125	Φ150
Foot	GLB40	GLB50	GLB63	GLB80	GLB100	GLB125	GLB150
Flange	GFH40	GFH50	GFH63	GFH80	GFH100	GFH125	GFH150
Trunnion	GTM40	GTM50	GTM63	GTM80	GTM100	GTM125	GTM150
Trunnion Hole	GTDM40	GTDM50	GTDM63	GTDM80	GTDM100	GTDM125	GTDM150
Tuunnion Screw	GTSM40	GTSM50	GTSM63	GTSM80	GTSM100	GTSM125	GTSM150
CA Clevis	GCA40	GCA50	GCA63	GCA80	GCA100	GCA125	GCA150
CB Clevis	GCB40	GCB50	GCB63	GCB80	GCB100	GCB125	GCB150

Standard(AL Tube)

Specfication

Bore Size(mm)	Unit	Φ40	Φ50	Φ63	Φ80	Φ100	Φ125	Φ150
Fluid		Air						
Pressure Range	MPa(bar)	0.1~0.9(1.0~9.0)						
Proof Pressure	MPa(bar)	1.5(15)						
Temperature Range	℃	5~60						
Piston Speed Range	mm/s	50~500						
Cushion		Air cushion						
Stroke Allowance		~250 : $^{+1.0}_{0}$ 251~1000 : $^{+1.5}_{0}$, 1000V : $^{+2.0}_{0}$						
Mounting		Foot, Flange, Clevis, Trunnion						

Standard Stroke

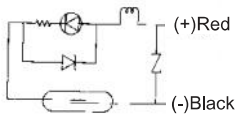
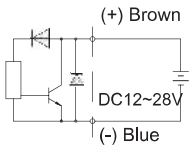
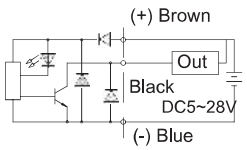
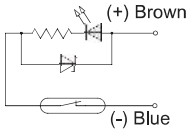
Bore Size (mm)	Standard Stroke (mm)														Max. Storke
	25	50	75	100	125	150	175	200	250	300	350	400	450	500	
Φ40	○	○	○	○	○	○	○	○	○	○	○	○	○	○	800
Φ50	○	○	○	○	○	○	○	○	○	○	○	○	○	○	1,200
Φ63	○	○	○	○	○	○	○	○	○	○	○	○	○	○	1,200
Φ80	○	○	○	○	○	○	○	○	○	○	○	○	○	○	1,500
Φ100	○	○	○	○	○	○	○	○	○	○	○	○	○	○	1,500
Φ125	○	○	○	○	○	○	○	○	○	○	○	○	○	○	1,500
Φ150	○	○	○	○	○	○	○	○	○	○	○	○	○	○	1,500

Theoretical Output

(Unit : N)

Bore Size (mm)	Rod dia (mm)	Direction of rod	Operation Pressure (MPa)							
			0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
Φ40	Φ16	Extended	251	377	502	628	754	879	1,005	1,130
		Retracted	211	317	422	528	633	739	844	950
Φ50	Φ20	Extended	393	589	785	981	1,178	1,374	1,570	1,766
		Retracted	330	495	659	824	989	1,154	1,319	1,484
Φ63	Φ20	Extended	623	935	1,246	1,558	1,869	2,181	2,493	2,804
		Retracted	560	840	1,121	1,401	1,681	1,961	2,241	2,521
Φ80	Φ25	Extended	1,005	1,507	2,010	2,512	3,014	3,517	4,019	4,522
		Retracted	907	1,360	1,813	2,267	2,720	3,173	3,627	4,080
Φ100	Φ30	Extended	1,570	2,355	3,140	3,925	4,710	5,495	6,280	7,065
		Retracted	1,429	2,143	2,857	3,572	4,286	5,000	5,715	6,429
Φ125	Φ24	Extended	2,453	3,680	4,906	6,133	7,359	8,586	9,813	11,039
		Retracted	2,261	3,391	4,522	5,652	6,782	7,913	9,043	10,174
Φ150	Φ40	Extended	3,533	5,299	7,065	8,831	10,598	12,364	14,130	15,896
		Retracted	3,281	4,922	6,563	8,203	9,844	11,485	13,125	14,766

Specification of Switch

Model No.									
	Reed type	Leed wire(1.5m)	CL-D-A54						
	Solid state type	Leed wire(1m)				CL-D-J591	CL-D-F591		
		Leed wire(3m)				CL-D-J593	CL-D-F593		
		Leed wire(5m)				CL-D-J595	CL-D-F595		
	B contact							CL-D-B54	
Load voltage			DC24V	AC110V	AC220V	DC 24V	DC 24V	DC 24V	AC 110V
Load current			5~100 mA	5~40 mA	5~20 mA	5~20 mA	0.1~40 mA	5~40 mA	5~20 mA
Internal voltage drop			2.4V less			5V less	0.5V less	3V less	3V less
Wiring method			2 wire			2 wire	3 wire(NPN)	2 wire	
Insulation resistance			50MΩ(500V MEGA)			100MΩ(500V MEGA)			
Temperature range			0 ~ 60℃						
Protection grade			IP67(IEC stadard)						
Indicatior lamp			Red LED (turn on at "ON")						
Internal circuit									
Application			Relay, PLC						

Min. Stroke with CL Type Switch

Model No.	Number of Switch	Except Trunnion type	Trunnion Type						
CL-D-A54	2ea (both side) 1ea (same side)	10:(Φ40~100)	Φ40	Φ50	Φ63	Φ80	Φ100	Φ125	Φ150
		20:(Φ125~150)	90	95	100	115	120	125	135
	n ea(same side)	$10+55\ \frac{(n-2)}{2}$:Φ40~100 n=2,4,6,8...	$90+55\ \frac{(n-2)}{2}$ n=4,8,12, 16...	$95+55\ \frac{(n-2)}{2}$ n=4,8,12, 16...	$100+55\ \frac{(n-2)}{2}$ n=4,8,12, 16...	$115+55\ \frac{(n-2)}{2}$ n=4,8,12, 16...	$120+55\ \frac{(n-2)}{2}$ n=4,8,12, 16...	$125+55\ \frac{(n-2)}{2}$ n=4,8,12, 16...	$135+55\ \frac{(n-2)}{2}$ n=4,8,12, 16...
		$20+55\ \frac{(n-2)}{2}$:Φ125~150 n=2,4,6,8...							

Weight

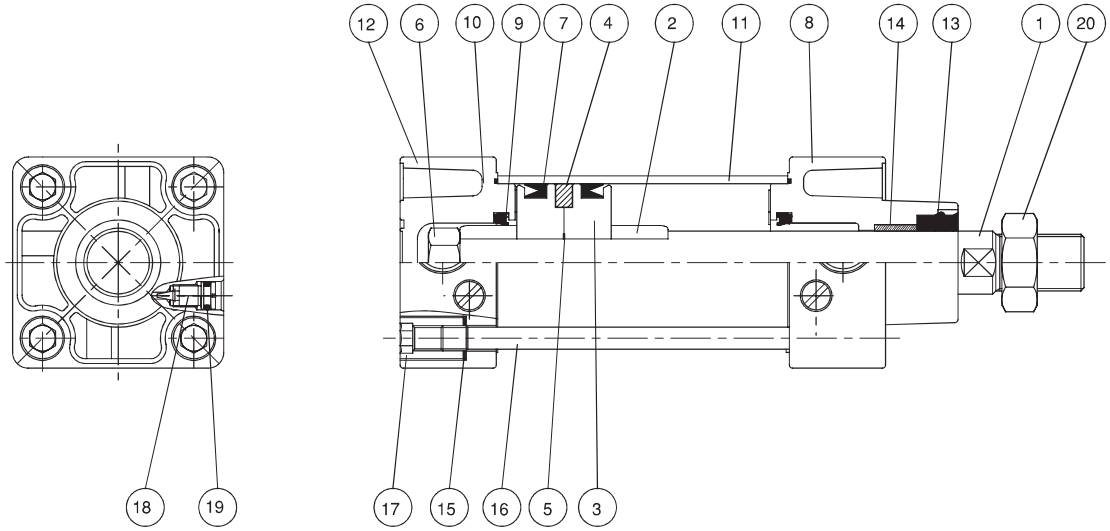
(Unit : kg)

GDC/ Standard		Φ40	Φ50	Φ63	Φ80	Φ100
Basic		0.8	1.3	1.52	0.74	3.92
Foot		0.96	1.52	1.82	3.34	4.68
Flange		0.92	1.48	1.78	3.16	4.6
CA Clevis		1.14	1.84	2.38	4.32	6.34
CB Clevis		1.1	1.8	2.34	4.14	6.16
Trunnion		1.24	1.96	2.64	4.32	6.78
Add per 50 Stroke		0.18	0.24	0.3	0.44	0.6
Option	I Knuckle	0.16	0.24	0.24	0.52	0.72
	Y Knuckle	0.26	0.34	0.34	0.74	0.98

Standard(AL Tube)

Construction & Part List

Double Acting



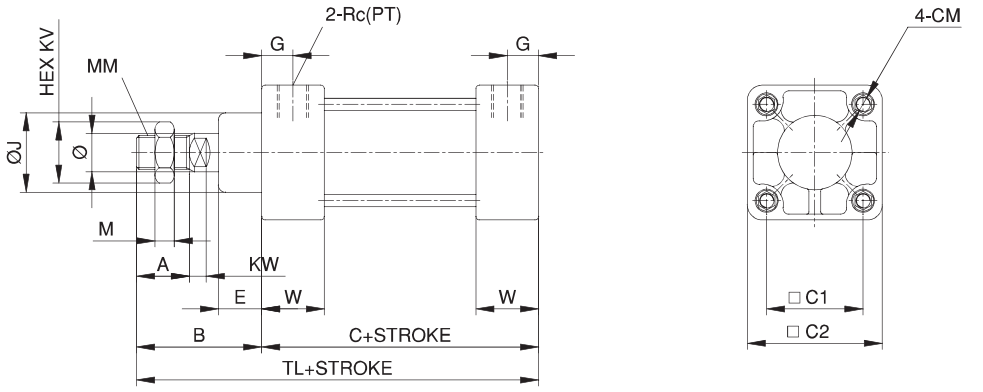
No	Part No.	Material
1	Piston Rod	Carbon Steel
2	Slip Ring	Carbon Steel
3	Piston	AL
4	Magnet	Plastic
5	O-Ring	NBR
6	Hex Nut	Carbon Steel
7	Piston Packing	NBR
8	Head Cover	AL
9	Cushion Packing	Urethan
10	O-Ring	NBR

No	Part No.	Material
11	Tube	AL
12	Rod Cover	AL
13	Rod Seal & Wiper	NBR
14	Rod Bush	-
15	Washer	Carbon Steel
16	Tie Rod	Carbon Steel
17	Nut	Carbon Steel
18	Cushion Needle	Carbon Steel
19	O-Ring	NBR
20	Hex Nut	Carbon Steel

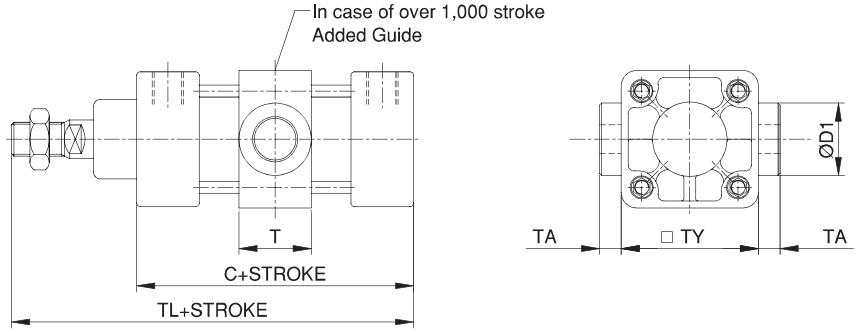
Dimension

Standard / Φ40~Φ100

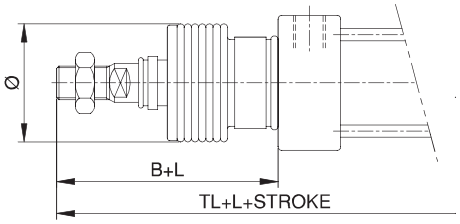
(Unit : mm)



With Guide



With Bellows



Ø	A	B	C		C1	C2	CM	ØD	ØD1	E	G	ØJ
			- 1000	1000 -								
40	22	52	90	-	40	56	M6x1.0	16	-	18	13	33
50	28	63	104	134	48	67	M8x1.25	20	30	23	13.5	40
63	28	63	104	134	59	78	M8x1.25	20	30	23	13.5	40
80	36	79	113	146	74	98	M12x1.75	25	40	28	15	45
100	45	95	124	162	90	116	M12x1.75	30	45	33	17	50

Ø	KV	KW	M	MM	Rc(PT)	T	TA	TL		TY	W
								- 1000	1000 -		
40	25	7	8	M14x1.5	1/4	-	-	142	-	57	26
50	31	10	11	M18x1.5	3/8	30	8.5	167	197	73	31
63	31	10	11	M18x1.5	3/8	35	9	167	197	86	31
80	37	11	13	M22x1.5	1/2	40	13.5	192	225	107	34
100	44	13	16	M26x1.5	1/2	45	10	219	257	130	36

With Bellows

Ø	B	TL	X	L									
				~100	101~200	201~300	301~400	401~500	501~600	601~700	701~800	801~900	901~1000
40	52	142	49	40	70	100	130	160	-	-	-	-	-
50	63	167	49	40	70	100	130	160	190	-	-	-	-
63	63	167	49	40	70	100	130	160	190	-	-	-	-
80	79	192	60	40	70	100	130	160	190	220	250	280	-
100	95	219	60	40	70	100	130	160	190	220	250	280	310