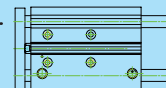


BALL BUSHING BEARING **D10G-1L**

SLIDE BEARING **D10G-1M**



Features

- Adjustable back stroke cylinder is only in rod cover with cushion.
- Easy to install, also reducing machine design work and cost.

Specification

Type	D10G-1L	D10G-1M
Bore	Φ 12、16、20、25、32、40、50、63	
Power fluid	Filtered air with or without lubrication	
The range of pressure	2.04 ~ 7.14 kgf/cm ²	
The range of temperature	-10 ~ +60 °C (Don't freeze)	
Material of cylinder barrel	Aluminium extrusion, Anodised 20 microns	

How to order

D10G-1L	40	50	-	A	1
Type	Bore	Stroke		Sensor switch	Quantity
D10G-1L	12 : Φ 12 16 : Φ 16 20 : Φ 20 25 : Φ 25 32 : Φ 32 40 : Φ 40 50 : Φ 50 63 : Φ 63	Please see stroke table		LN09D	1 : 1pc 2 : 2pcs
D10G-1M					

Stroke table

Bore	Stroke (mm)	Intermediate stroke
Φ 12、16	10,20,30,40,50,75,100	Non-standard stroke is available by installing interval space with standard stroke cylinder. Φ 12 ~ 32 : Available by the 1 mm stroke interval. Φ 40 ~ 63 : Available by the 5 mm stroke interval.
Φ 20、25	20,30,40,50,75,100	
Φ 32、40、50、63	25,50,75,100	

Theoretic force

Unit : N

Bore	Rod dia (mm)	Piston area(cm ²)	Operating pressure (kgf/cm ²)											
			0.2		0.3		0.4		0.5		0.6		0.7	
			A	B	A	B	A	B	A	B	A	B	A	B
Φ 12	6	113	23	17	34	25	45	34	57	42	68	51	79	59
Φ 16	8	201	40	30	60	45	80	60	101	75	121	90	141	106
Φ 20	10	314	63	47	94	71	126	94	157	118	188	141	220	165
Φ 25	12	491	98	76	147	113	196	151	245	189	295	227	344	264
Φ 32	16	804	161	121	241	181	322	241	402	302	483	362	563	422
Φ 40	16	1257	251	211	377	317	503	422	628	528	754	633	880	739
Φ 50	20	1963	393	330	589	495	785	660	982	825	1178	990	1374	1155
Φ 63	20	3117	623	561	935	841	1247	1121	1559	1402	1870	1682	2182	1962

Cylinder weight

● Complex bearing type

Unit : kg

Bore	Stroke (mm)											
	10	20	25	30	40	50	75	100	125	150	175	200
Φ 12	0.24	0.28	—	0.31	0.35	0.39	0.50	0.59	—	—	—	—
Φ 16	0.33	0.38	—	0.43	0.48	0.53	0.68	0.80	—	—	—	—
Φ 20	—	0.67	—	0.75	0.83	0.91	1.17	1.37	1.57	1.76	1.96	2.16
Φ 25	—	0.95	—	1.05	1.16	1.27	1.65	1.92	2.19	2.47	2.74	3.01
Φ 32	—	—	1.69	—	—	2.07	2.47	2.85	3.24	3.62	4.00	4.38
Φ 40	—	—	1.95	—	—	2.37	2.83	3.25	3.68	4.10	4.53	4.95
Φ 50	—	—	3.36	—	—	4.00	4.73	5.37	6.01	6.65	7.29	7.93
Φ 63	—	—	4.18	—	—	4.94	5.78	6.54	7.29	8.05	8.80	9.56

● Stainless ball bearing type

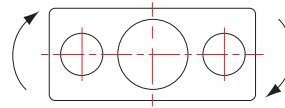
Unit : kg

Bore	Stroke (mm)											
	10	20	25	30	40	50	75	100	125	150	175	200
Φ 12	0.24	0.27	—	0.30	0.35	0.39	0.47	0.56	—	—	—	—
Φ 16	0.34	0.39	—	0.43	0.51	0.56	0.67	0.79	—	—	—	—
Φ 20	—	0.70	—	0.77	0.89	0.97	1.14	1.31	1.52	1.69	1.87	2.04
Φ 25	—	0.98	—	1.07	1.25	1.34	1.57	1.81	2.08	2.31	2.54	2.77
Φ 32	—	—	1.54	—	—	1.85	2.30	2.62	2.99	3.31	3.62	3.94
Φ 40	—	—	1.79	—	—	2.15	2.64	3.00	3.42	3.78	4.14	4.50
Φ 50	—	—	3.11	—	—	3.66	4.41	4.96	5.60	6.15	6.70	7.25
Φ 63	—	—	3.93	—	—	4.59	5.46	6.12	6.88	7.54	8.21	8.87

How to use in condition

End plate allowable rotation torque

Torque : $T(N \cdot m)$



● Complex bearing type

Unit : N · m

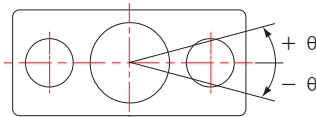
Bore	Stroke (mm)											
	10	20	25	30	40	50	75	100	125	150	175	200
Φ 12	0.39	0.32	—	0.27	0.24	0.21	0.43	0.36	—	—	—	—
Φ 16	0.69	0.58	—	0.49	0.43	0.38	0.69	0.58	—	—	—	—
Φ 20	—	1.05	—	0.93	0.83	0.75	1.88	1.63	1.44	1.28	1.16	1.06
Φ 25	—	1.76	—	1.55	1.38	1.25	2.96	2.57	2.26	2.02	1.83	1.67
Φ 32	—	—	6.35	—	—	5.13	5.69	4.97	4.42	3.98	3.61	3.31
Φ 40	—	—	7.00	—	—	5.66	6.27	5.48	4.87	4.38	3.98	3.65
Φ 50	—	—	13.0	—	—	10.8	12.0	10.6	9.50	8.60	7.86	7.24
Φ 63	—	—	14.7	—	—	12.1	13.5	11.9	10.7	9.69	8.86	8.16

● Stainless ball bearing type

Unit : N · m

Bore	Stroke (mm)											
	10	20	25	30	40	50	75	100	125	150	175	200
Φ 12	0.61	0.45	—	0.35	0.58	0.50	0.37	0.29	—	—	—	—
Φ 16	0.99	0.74	—	0.59	0.99	0.86	0.65	0.52	—	—	—	—
Φ 20	—	1.26	—	1.03	2.17	1.94	1.52	1.25	1.34	1.17	1.03	0.93
Φ 25	—	2.11	—	1.75	3.37	3.02	2.38	1.97	2.05	1.78	1.58	1.67
Φ 32	—	—	5.95	—	—	4.89	5.11	4.51	6.34	5.79	5.33	4.93
Φ 40	—	—	6.55	—	—	5.39	5.62	4.96	6.98	6.38	5.87	5.43
Φ 50	—	—	9.17	—	—	7.62	9.83	8.74	11.6	10.7	9.83	9.12
Φ 63	—	—	10.2	—	—	8.48	11.0	9.74	13.0	11.9	11.0	10.2

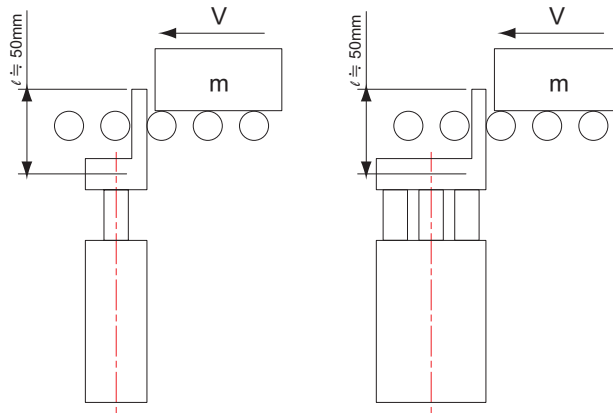
1N · m ≒ 10.2 kgf · cm



Bore	Not turning precision θ	
	D10G-1M	D10G-1L
Φ 12、16	$\pm 0.08^\circ$	$\pm 0.10^\circ$
Φ 20、25	$\pm 0.07^\circ$	$\pm 0.09^\circ$
Φ 32、40	$\pm 0.06^\circ$	$\pm 0.08^\circ$
Φ 50、63	$\pm 0.05^\circ$	$\pm 0.06^\circ$

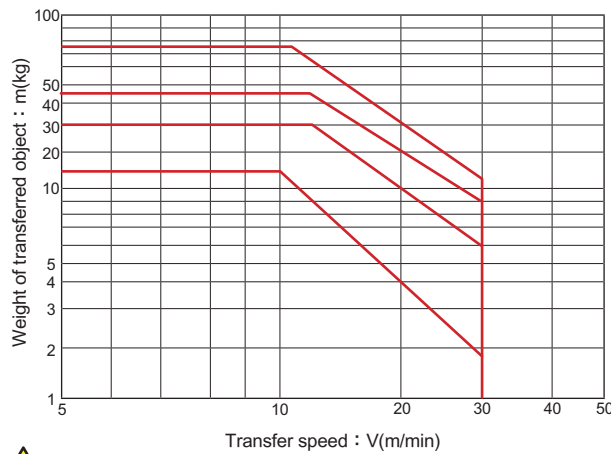
The range of brake

Complex bearing type



● When selecting a model with a longer l dimension, be sure to choose a bore size which is sufficiently large.

● Bore $\Phi 12 \sim 25$

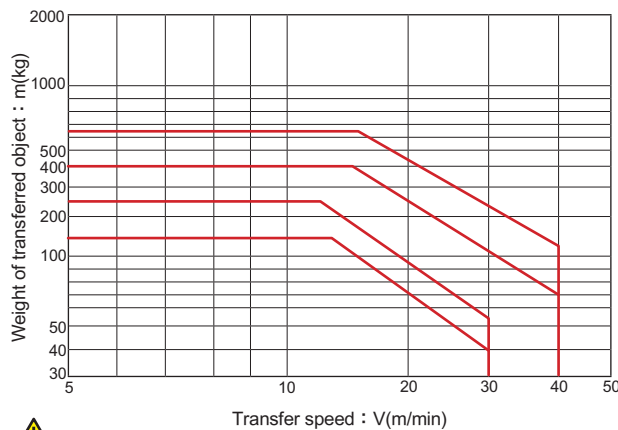


Caution

Note 1 : When using as stopper, select a model with 30st or less.

Note 2 : Ball bushing bearing cannot be used as a stopper.

● Bore $\Phi 32 \sim 63$



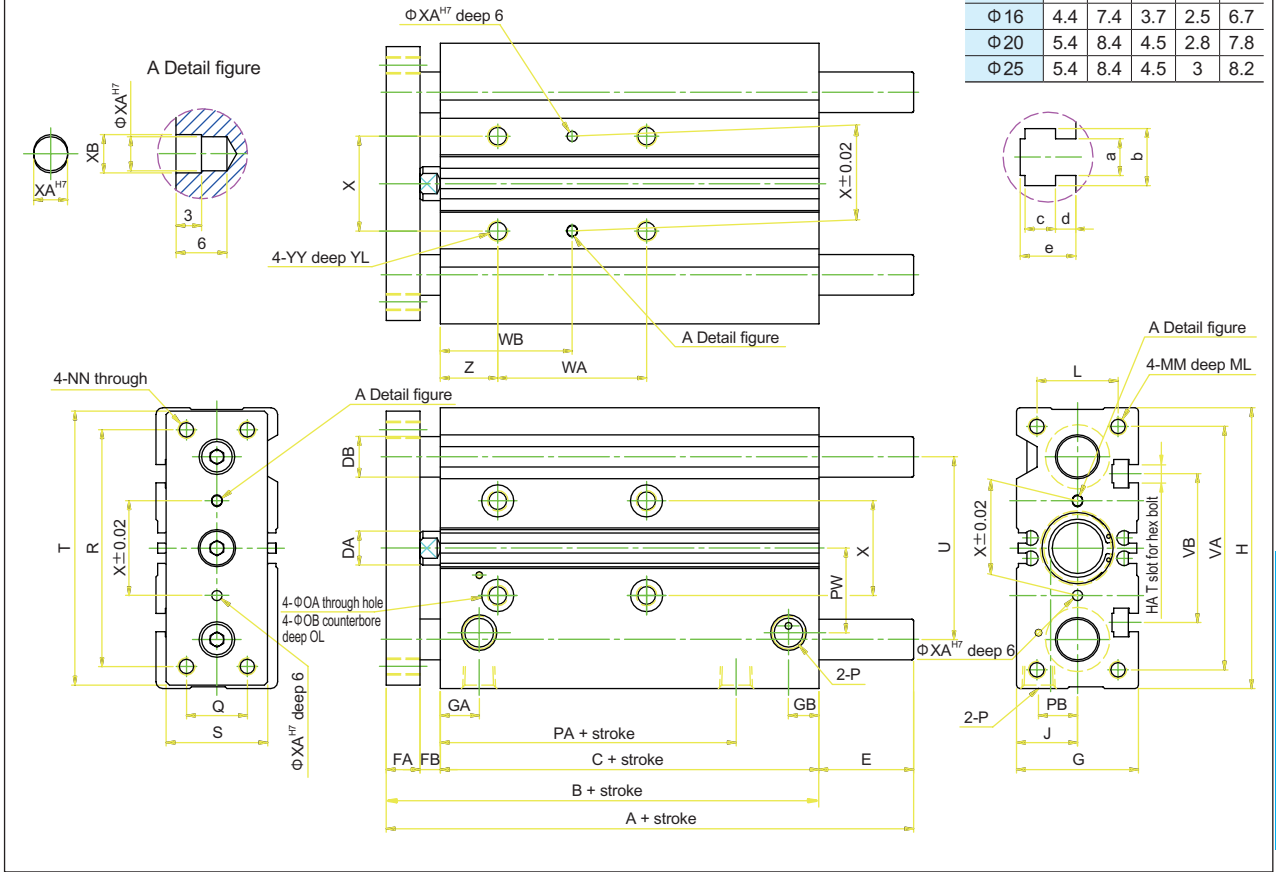
Caution

Note 1 : When using as a stopper, select a model with 50st or less.

Note 2 : Ball bushing bearing cannot be used as a stopper.

D10G-1 Bore $\Phi 12 \sim 25$ / Dimensional features

Mark Bore	a	b	c	d	e
$\Phi 12$	4.4	7.4	3.7	2	6.2
$\Phi 16$	4.4	7.4	3.7	2.5	6.7
$\Phi 20$	5.4	8.4	4.5	2.8	7.8
$\Phi 25$	5.4	8.4	4.5	3	8.2



Dimensional features

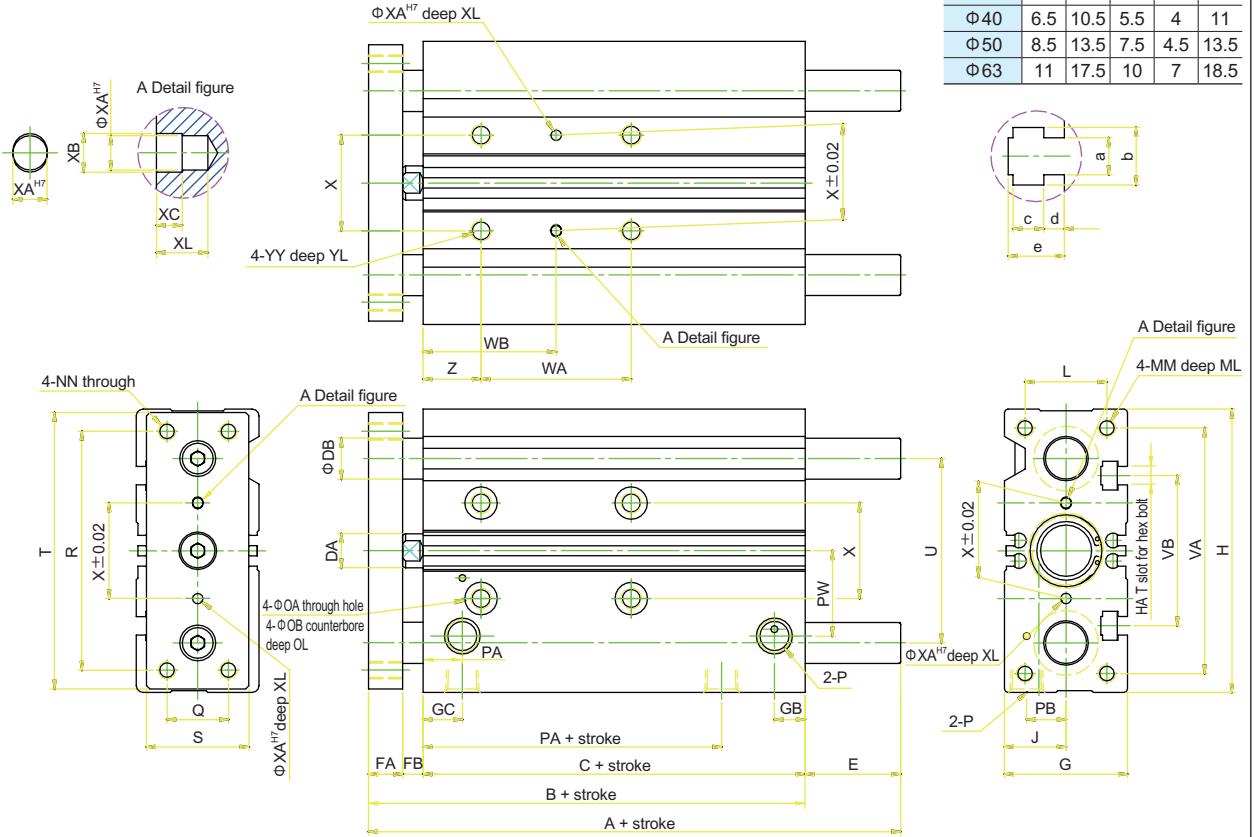
Mark	A																B	C	DA	DB		E						FA	FB	G	GA
	D10G-1L				D10G-1M				D10G-1L	D10G-1M	D10G-1L			D10G-1M																	
	10-50st	75-100st	100st ↑	30st ↓	40-100st	100st ↑	10-50st	75-100st			100st ↑	30st ↓	40-100st	100st ↑																	
$\Phi 12$	42	60.5	85	43	55	85	42	29	6	8	6	0	18.5	43	43	55	85	9.5	3.5	26	11										
$\Phi 16$	46	64.5	95	49	65	95	46	33	8	10	8	0	18.5	49	49	65	95	8	5	30	11										
$\Phi 20$	53	84.5		63	80	104	53	37	10	12	10	0	31.5			63	80	104	10	6	36	10.5									
$\Phi 25$	53.5	85		69.5	85.5	104.5	53.5	37.5	12	16	13	0	31.5			69.5	85.5	104.5	11	6	42	11.5									

Mark	GB	H	HA	J	L	MM	ML	NN	OA	OB	OL	P	PA	PB	PW	Q	R	S	T	U	VA	VB
$\Phi 12$	10	58	M4	13	18	M4x0.7	10	M4x0.7	4.3	8	4.5	M5x0.8	13	8	18	14	48	22	56	41	50	37
$\Phi 16$	9.5	64	M4	15	22	M5x0.8	12	M5x0.8	4.3	8	4.5	M5x0.8	15	10	19	16	54	25	62	46	56	38
$\Phi 20$	10.5	83	M5	18	24	M5x0.8	13	M5x0.8	5.3	9.5	5.5	Rc1/8	12.5	10.5	25	18	70	30	81	54	72	44
$\Phi 25$	11	93	M5	21	30	M6x1.0	15	M6x1.0	5.3	9.5	5.5	Rc1/8	12.5	13.5	28.5	26	78	38	91	64	82	50

Mark Bore	WA					WB					X	XA	XB	YY	YL	Z
	10-30st	40-100st	125-200st	250st-300st	300st ↑	10-30st	40-100st	125-200st	250st-300st	300st ↑						
$\Phi 12$	20	40	110	200	—	15	25	60	105	—	23	3	3.5	M5x0.8	10	5
$\Phi 16$	24	44	110	200	—	17	27	60	105	—	24	3	3.5	M5x0.8	10	5
$\Phi 20$	24	44	120	200	300	29	39	77	117	167	28	3	3.5	M6x1.0	12	17
$\Phi 25$	24	44	120	200	300	29	39	77	117	167	34	4	4.5	M6x1.0	12	17

D10G-1 Bore $\Phi 32 \sim 63$ / Dimensional features

Mark Bore	a	b	c	d	e
$\Phi 32$	6.5	10.5	5.5	3.5	9.5
$\Phi 40$	6.5	10.5	5.5	4	11
$\Phi 50$	8.5	13.5	7.5	4.5	13.5
$\Phi 63$	11	17.5	10	7	18.5



Dimensional table

Mark Bore	A					B	C	DA	DB		E					FA	FB	G	GA
	D10G-1L		D10G-1M						D10G-1L	D10G-1M	D10G-1L		D10G-1M						
	25-50st	75-200st	25-50st	75-100st	125-200st						25-50st	75-100st	125-200st	25-50st	75-100st				
$\Phi 32$	97	102	81	98	118	59.5	37.5	16	20	16	37.5	42.5	21.5	38.5	58.5	12	10	48	12.5
$\Phi 40$	97	102	81	98	118	66	44	16	20	16	31	36	15	32	52	12	10	54	14
$\Phi 50$	106.5	118	93	114	134	72	44	20	25	20	34.5	46	21	42	62	16	12	64	14
$\Phi 63$	106.5	118	93	114	134	77	49	20	25	20	29.5	41	16	37	57	16	12	78	16.5

Mark Bore	GB	H	HA	J	L	MM	ML	NN	OA	OB	OL	P	PA	GC	PB	PW	Q	R	S	T	U	VA	VB
$\Phi 32$	11.5	112	M6	24	34	M8x1.25	20	M8x1.25	6.6	11	7.5	Rc1/8	7	12.5	15	34	30	96	44	110	78	98	63
$\Phi 40$	12	120	M6	27	40	M8x1.25	20	M8x1.25	6.6	11	7.5	Rc1/8	13	14	18	38	30	104	44	118	86	106	72
$\Phi 50$	13	148	M8	32	46	M10x1.5	22	M10x1.5	8.6	14	9.5	Rc1/4	9	12	21.5	47	40	130	60	146	110	130	92
$\Phi 63$	14	162	M10	39	58	M10x1.5	22	M10x1.5	8.6	14	9.5	Rc1/4	14	16.5	28	58	50	130	70	158	124	142	110

Mark Bore	WA					WB					X	XA	XB	YY	YL	Z
	25st	50-100st	125-200st	250st-300st	300st ↑	25st	50-100st	125-200st	250st-300st	300st ↑						
$\Phi 32$	24	48	124	200	300	33	45	83	121	171	42	4	4.5	M8x1.25	16	21
$\Phi 40$	24	48	124	200	300	34	46	84	122	172	50	4	4.5	M8x1.25	16	22
$\Phi 50$	24	48	124	200	300	36	48	86	124	174	66	5	6	M10x1.5	20	24
$\Phi 63$	28	52	128	200	300	38	50	88	124	174	80	5	6	M10x1.5	20	24



Professional
and
High quality