

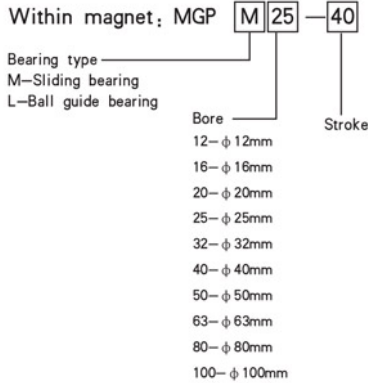
New Type Cylinder With Guide Rod

($\phi 12 - \phi 100$)

- Small volume, compact
- High side load resistance
- Strong resistance to torque force
- High non-rock-over precision
- Choose the sliding bearing or ball guide bearing for the bearing of guide rod
- Easy for installation and use
- The position of two-surface connecting pipe is optional



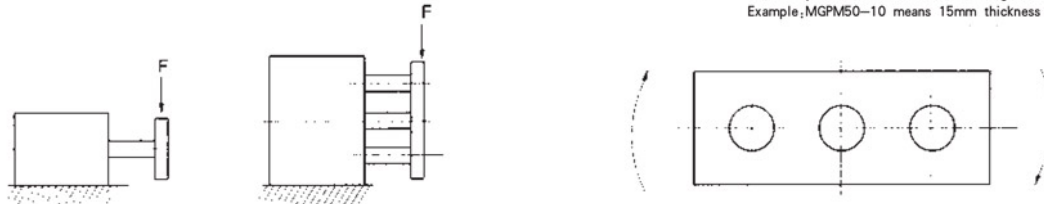
Type Select



Order

- 1) Bore: 12, Stroke: 50, Sliding bearing.
Code: MGPM12-50
- 2) Bore: 40, Stroke: 100, Ball guide bearing.
Code: MGPL40-100

Load and twist power



Bore (mm)	20	25	32	40	50	
Applicable Fluid	Air					
Acting type	Double Acting					
Proof pressure	1.5MPa[15.3kgf/cm ²]					
Max Pressure	1.0MPa[10.2kgf/cm ²]					
Minimum pressure	0.12MPa[1.02kgf/cm ²]		0.12MPa[1.2kgf/cm ²]			
Environment fluid temperature	-10°C 60°C (No Freeze)					
Piston speed	50 550mm/s		50 400mm/s			
Cushion	Rubber cushion					
Stroke tolerance	+1.5, 0mm					
Lubrication	No					
Bearing	Sliding/Ball guide bearing					
Non-rotating rate for piston rod	Sliding	$\pm 0.08^\circ$	$\pm 0.07^\circ$	$\pm 0.06^\circ$	$\pm 0.05^\circ$	$\pm 0.04^\circ$
	Ball guide bearing	$\pm 0.10^\circ$	$\pm 0.09^\circ$	$\pm 0.08^\circ$	$\pm 0.08^\circ$	$\pm 0.05^\circ$
	M5x0.8	1/8	1/4	3/8		

* If lubricate please use ISOVG32

Stroke/Magnetic switch

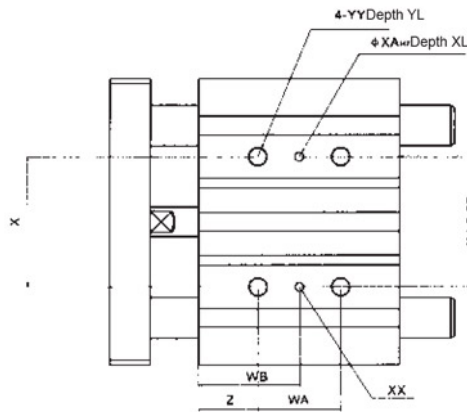
Bore (mm)	note1)	Standard Stroke (mm)	Channel mounting
			1) Magnetic switch
12, 16		10, 20, 30, 40, 50, 75, 100	D-273L D-276L D-280L D-Y59AL D-Y59BL
20, 25		20, 30, 40, 50, 75, 100, 125, 150, 175, 200	
32, 40, 50, 63, 80, 100		25, 50, 75, 100, 125, 150, 175, 200	

- *1: The stroke, 5, 10, 15, 20, 30, 35#, is made from mounting 5, 10, 20mm thickness pad.
*2: The specification and feature of magnetic switch should refer their series.
Example: MGPM50-10 means 15mm thickness pad within MGPM50-25.

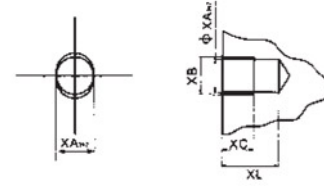
Bore (mm)	Type	Max load on the flank F(N)												Max anti-twist power (N.m)											
		Stroke (mm)												Stroke (mm)											
		10	20	25	30	40	50	75	100	125	150	175	200	10	20	25	30	40	50	75	100	125	150	175	200
12	MPGM	24	19	-	17	14	13	26	22	-	-	-	-	0.39	0.32	-	0.27	0.24	0.21	0.43	0.36	-	-	-	-
	MPGL	37	27	-	22	35	30	23	18	-	-	-	-	0.78	0.66	-	0.57	0.93	0.85	0.69	0.58	-	-	-	-
16	MPGM	38	31	-	27	23	21	37	32	-	-	-	-	0.69	0.58	-	0.49	0.43	0.38	0.69	0.58	-	-	-	-
	MPGL	54	40	-	32	54	47	35	28	-	-	-	-	1.23	1.06	-	0.92	1.53	1.40	1.16	0.99	-	-	-	-
20	MPGM	-	49	-	43	38	35	87	75	66	59	54	49	-	1.05	-	0.93	0.83	0.75	1.88	1.63	1.44	1.28	1.16	1.06
	MPGL	-	58	-	48	101	90	70	58	62	54	48	43	-	1.70	-	1.52	3.06	2.87	2.47	2.17	2.38	2.16	1.98	1.82
25	MPGM	-	69	-	60	54	49	116	100	88	79	71	65	-	1.76	-	1.55	1.38	1.25	2.96	2.57	2.26	2.02	1.83	1.67
	MPGL	-	82	-	68	132	118	93	77	80	70	62	55	-	2.80	-	2.53	4.67	4.39	3.81	3.36	3.65	3.31	3.02	2.78
32	MPGM	-	-	203	-	-	164	182	159	142	127	116	106	-	-	6.35	-	-	5.13	5.69	4.97	4.42	3.98	3.61	3.31
	MPGL	-	-	113	-	-	78	130	107	130	114	101	90	-	-	4.76	-	-	3.86	6.53	5.75	7.10	6.46	5.92	5.47
40	MPGM	-	-	203	-	-	164	182	159	142	127	116	106	-	-	7.00	-	-	5.66	2.27	5.48	4.87	4.38	3.98	3.65
	MPGL	-	-	113	-	-	78	129	106	130	114	101	90	-	-	5.24	-	-	4.25	7.19	6.33	7.81	7.11	6.52	6.02
50	MPGM	-	-	296	-	-	245	273	241	216	195	179	164	-	-	13.00	-	-	10.8	12.0	10.6	9.50	8.60	7.86	7.24
	MPGL	-	-	120	-	-	83	178	148	148	129	114	102	-	-	7.02	-	-	5.76	12.3	10.9	11.2	10.2	9.40	8.69
63	MPGM	-	-	296	-	-	245	273	241	216	195	179	164	-	-	14.70	-	-	12.1	13.5	12.0	10.7	9.69	8.86	8.16
	MPGL	-	-	117	-	-	81	176	145	145	126	111	99	-	-	7.77	-	-	6.35	13.7	12.2	12.5	11.4	10.5	9.65
80	MPGM	-	-	352	-	-	297	368	329	298	272	251	232	-	-	22.00	-	-	18.6	22.9	20.5	18.6	17.0	15.6	14.5
	MPGL	-	-	125	-	-	99	281	240	208	184	163	147	-	-	10.30	-	-	9.35	24.8	22.7	20.9	19.4	18.0	16.9
100	MPGM	-	-	515	-	-	445	498	450	410	377	349	325	-	-	38.80	-	-	33.5	37.5	33.8	30.9	28.4	28.2	24.4
	MPGL	-	-	138	-	-	108	395	340	297	263	235	211	-	-	13.60	-	-	12.2	41.1	37.9	35.1	32.7	30.5	28.6

New Type Cylinder With Guide Rod

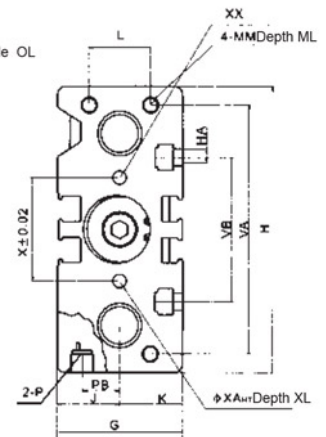
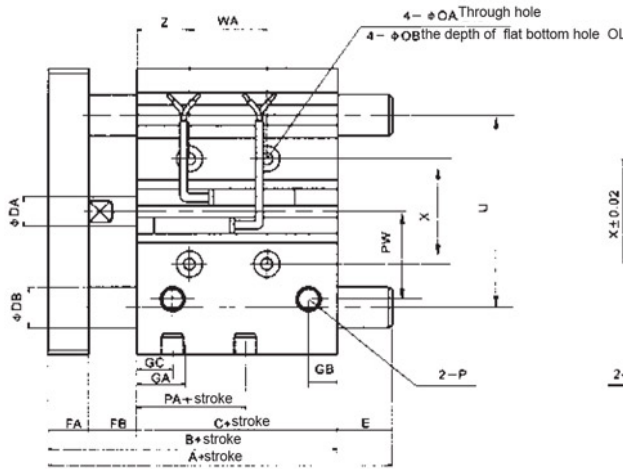
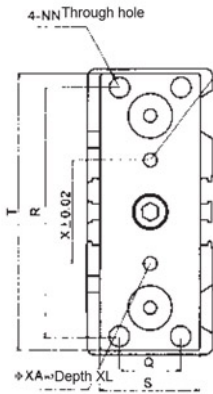
φ 12-φ 25



(φ 12-φ 100)



XXDetail drawing



MGPM, MGPL Dimension (φ 12 φ 25)

Bore (mm)	Stander Stroke	B	C	DA	FA	FB	G	GA	GB	H	HA	J	K	L	MM	ML	NN	OA	OB	OL	P	PA	PB	PW	Q
12	10, 20, 30, 40, 50, 75, 100	42	29	6	8	8	5	26	11	58	M4	13	13	18	M4×0.7	10	M4×0.7	4, 3	8	4, 5	M5×0.8	13	8	18	14
		46	33	8	8	8	5	30	11	64	M4	15	15	22	M5×0.8	12	M5×0.8	4, 3	8	4, 5	M5×0.8	15	10	19	16
20	20, 30, 40, 50, 75, 100, 125, 150, 175, 200	53	37	10	10	10	6	36	10.5	83	M5	18	18	24	M5×0.8	13	M5×0.8	5, 6	9, 5	5, 5	Rc ^{1/8}	12, 5	10, 5	25	18
		53.5	37.5	12	10	10	6	42	11.5	93	M5	21	21	30	M6×1.0	15	M6×1.0	5, 6	9, 5	5, 5	Rc ^{1/8}	12, 5	13, 5	28, 5	26

Bore (mm)	Stander Stroke	R	S	T	U	VA	VB	WA			WB			X	XA	XB	XC	XL	YY	YL	Z
								≤30st	40st-100st	≥125st	≤30st	40st-100st	≥125st								
12	10, 20, 30, 40, 50, 75, 100	48	22	56	41	50	37	20	40	-	15	25	-	23	3	3, 5	3	6	M5×0.8	10	5
		54	25	62	46	56	38	24	44	-	17	27	-	24	3	3, 5	3	6	M5×0.8	10	5
20	20, 30, 40, 50, 75, 100, 125, 150, 175, 200	70	30	81	54	72	44	24	44	120	29	39	77	28	3	3, 5	3	6	M6×1.0	12	17
		78	38	91	64	82	50	24	44	120	29	39	77	34	4	4, 5	3	6	M6×1.0	12	17

MGPM (Sliding bearing)

Bore (mm)	A			DB	E		
	50st≥	50st<100st≥	100st<		50st≥	50st<100st≥	100st<
12	42	42	85	8	42	42	85
16	46	46	95	10	46	46	95

MGPL (Ball guide bearing)

Bore (mm)	A			DB	E		
	30st≥	30st<100st≥	100st<		30st≥	30st<100st≥	100st<
12	43	55	85	6	1	13	43
16	49	65	95	8	3	19	49

MGPM (Sliding bearing)

Bore (mm)	A			DB	E		
	50st≥	50st<200st≥	200st<		50st≥	50st<100st≥	100st<
20	53	84, 5	122	16	0	31, 5	69
25	53, 5	85	122	20	0	31, 5	68, 5

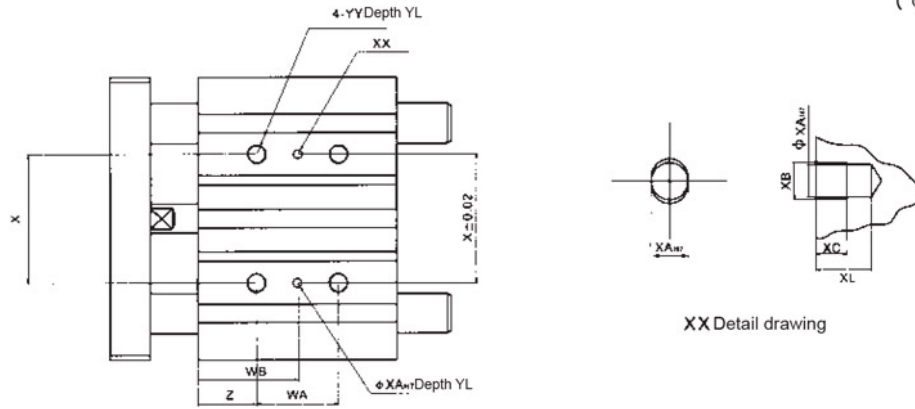
MGPL (Ball guide bearing)

Bore (mm)	A				DB	E			
	30st≥	30st<100st≥	50st<200st≥	200st<		30st≥	30st<100st≥	50st<200st≥	200st<
20	63	80	104	122	10	10	27	51	69
25	69, 5	80, 5	104, 5	122	13	16	32	51	68, 5

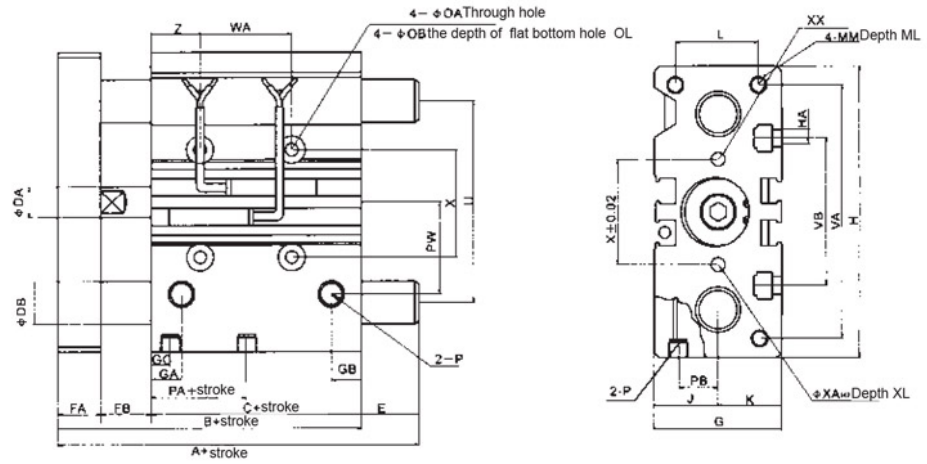
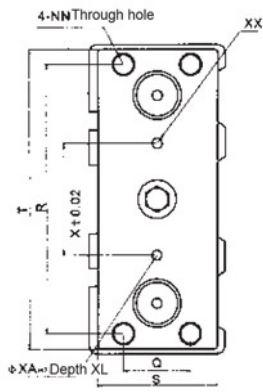
New Type Cylinder With Guide Rod

($\phi 12 - \phi 100$)

$\phi 32 - \phi 63$



XX Detail drawing



MGPM, MGPL Dimension

Bore (mm)	Stander Stroke	B	C	DA	FA	FB	G	GA	GB	H	HA	J	K	L	MM	ML	NN	OA	OB	OL	P	PA	PB	PW	Q
32	25, 50, 75, 100, 125, 150, 175, 200	59.5	37.5	16	12	10	48	12.5	9	112	M6	24	24	34	M8×1.25	20	M8×1.25	6.6	11	7.5	Rc ^{1/8}	7	15	34	30
40		66	44	16	12	10	54	14	10	120	M6	27	27	40	M8×1.25	20	M8×1.25	6.6	11	7.5	Rc ^{1/8}	13	18	38	30
50		72	44	20	16	12	64	14	11	148	M8	32	32	46	M10×1.5	22	M10×1.5	8.6	14	9	Rc ^{1/8}	9	21.5	47	40
63		77	49	20	16	12	78	16.5	13.5	162	M10	39	39	58	M10×1.5	22	M10×1.5	8.6	14	9	Rc ^{1/8}	14	28	55	50

Bore (mm)	Stander Stroke	R	S	T	U	VA	VB	WA			WB			X	XA	XB	XC	XL	YY	YL	Z
								25st	50, 75, 100st	100st	25st	50, 75, 100st	100st								
32	25, 50, 75, 100, 125, 150, 175, 200	96	44	110	78	98	63	24	48	124	33	45	83	42	4	4.5	3	6	M8×1.25	16	21
40		104	44	118	86	106	72	24	48	124	34	46	84	50	4	4.5	3	6	M8×1.25	16	22
50		130	60	146	110	130	92	24	48	124	36	48	86	66	5	6	4	8	M10×1.5	20	24
63		130	70	158	124	142	110	28	52	128	38	50	88	80	5	6	4	8	M10×1.5	20	24

MGPM (Sliding bearing)

Bore (mm)	A			DB	E		
	50st>	50st<200st>	200st<		50st>	50st<200st>	200st<
32	97	102	140	20	37.5	42.5	80.5
40	97	102	140	20	31	36	74
50	106.5	118	161	25	34.5	46	89
63	106.5	118	161	25	29.5	41	84

MGPL (Ball guide bearing)

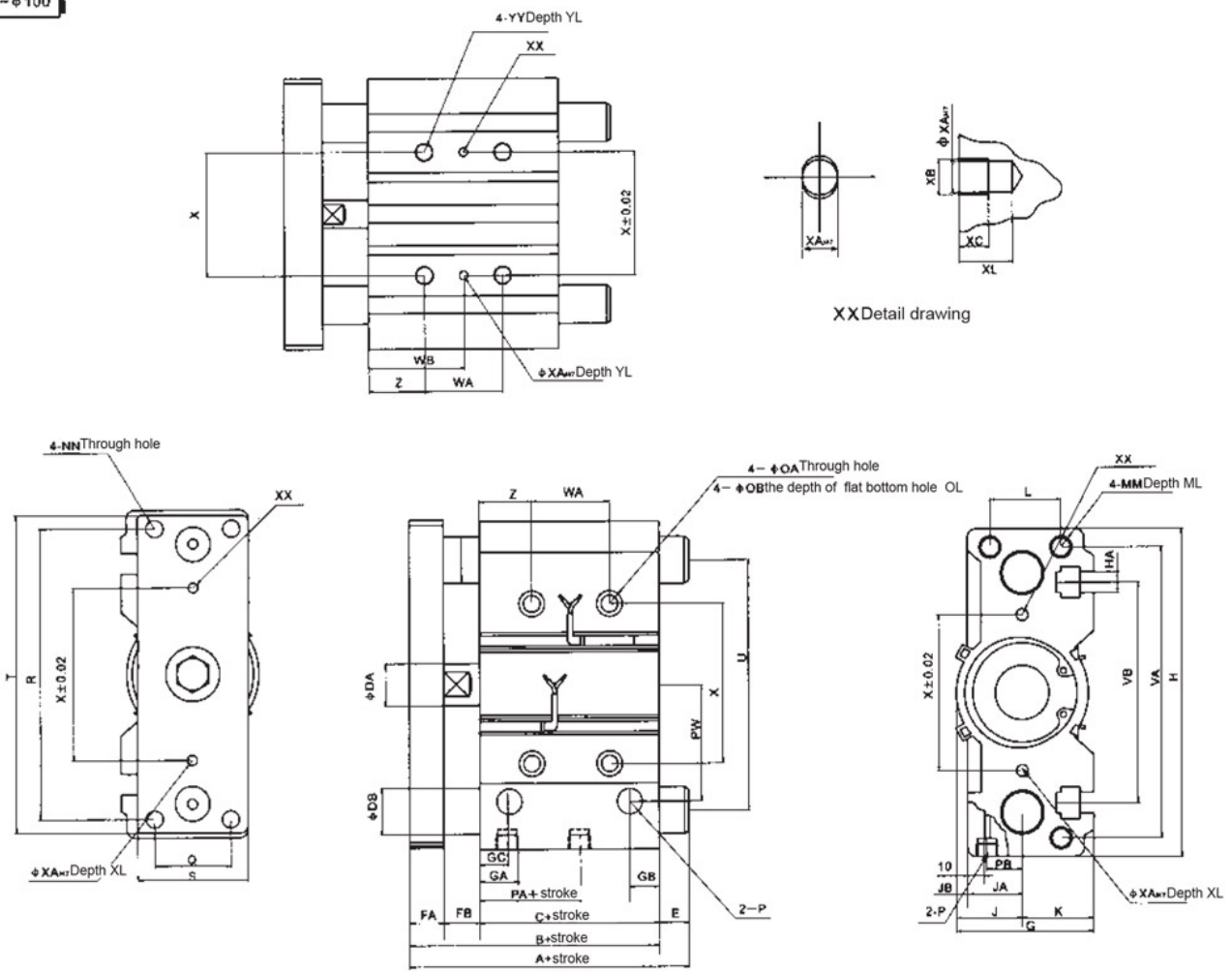
Bore (mm)	A				DB	E			
	50st>	50st<100st>	100st<200st>	200st<		50st>	50st<100st>	100st<200st>	200st<
32	81	98	140	140	16	21.5	38.5	58.5	80
40	81	98	140	140	16	15	32	52	74
50	93	114	161	161	20	21	42	62	89
63	93	114	161	161	20	16	37	57	84

New Type Cylinder With Guide Rod

Figure Dimension(mm)

($\phi 12 - \phi 100$)

$\phi 80 - \phi 100$



MGPM, MGPL Dimension

Bore (mm)	Stander Stroke	B	C	DA	FA	FB	G	GA	GB	H	HA	J	JA	JB	K	L	MM	ML	NN	OA	OB	OL	P	PA	PB	PW
80	25, 50, 75, 100,	96.5	56.5	25	22	18	91.5	19	15.5	202	M12	45.5	38	7.5	46	54	M12×1.75	30	M12×1.75	10.6	17.5	8	Rc ^{3/8}	14.5	25.5	74
100	125, 150, 175, 200	116	66	30	25	25	111.5	23	19	240	M14	55.5	45	10.5	56	62	M14×2.0	32	M14×2.0	12.5	20	8	Rc ^{3/8}	17.5	32.5	89

Bore (mm)	Stander Stroke	Q	R	S	T	U	VA	VB	WA			WB			X	XA	XB	XC	XL	YY	YL	Z
									25st	50, 75, 100st	100st	25st	50, 75, 100st	100st								
80	25, 50, 75, 100,	52	174	75	198	156	180	140	28	52	128	42	54	92	100	6	7	5	10	M12×1.75	24	28
100	125, 150, 175, 200	64	210	90	236	188	210	166	48	72	148	35	47	85	124	6	7	5	10	M14×2.0	28	11

MGPM (Sliding bearing)

Bore (mm)	A			DB	E		
	50st>	50st<200st>	200st<		50st>	50st<200st>	200st<
80	115	142	193	30	18.5	45.5	96.5
100	137	162	203	36	21	46	87

MGPL (Ball guide bearing)

Bore (mm)	A				DB	E			
	25st>	25st<50st>	50st<200st>	200st<		25st>	25st<50st>	50st<200st>	200st<
80	109.5	130	160	193	25	13	33.5	63.5	96.5
100	121	147	180	203	30	5	31	64	87