MGP Series Compact Guide Cylinder







Rubber bumper

Ordering Code

MGP Series Compact Guide Cylinder

MGP M 25 □ 30 Z - S

- **Bearing type**: M: Slide bearing; L: Ball bushing; A: High precision ball bushing
- **Bore**: 25
- **Thread type**: Nil: M5×0.8; Rc: Rc; TN: NPT; TF: G
  * For bore sizes Φ12 and Φ16, only M5×0.8 is available.
- **Stroke**: 30 Z
- **Magnet**: Nil: Without magnet; S: With magnet

Specifications

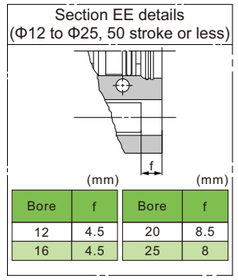
Bore size (mm)	12	16	20	25	32	40	50	63	80	100
Acting type	Double acting									
Working medium	Air									
Proof pressure	1.5MPa									
Max. Working pressure	1.0MPa									
Min. Working pressure	0.12MPa		0.1MPa							
Working temperature	-10 to 60℃ (No freezing)									
Speed range	50 to 500 mm/s								50 to 400 mm/s	
Cushion type	Rubber bumper on both ends									
Lubrication	Not required (Non-lube)									
Tolerance of stroke	+1.5 0 mm									

* Max. speed with no load. Depending on the operating conditions, the piston speed may not be satisfied.

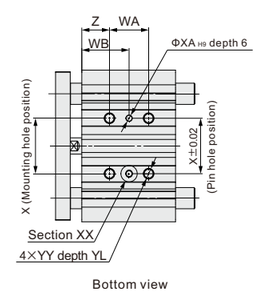
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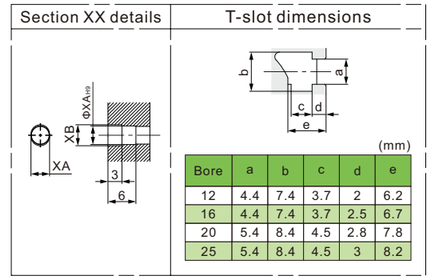
MGP Series Compact Guide Cylinder

Main Dimensions Φ12 to Φ25 MGPM, MGPL, MGPA

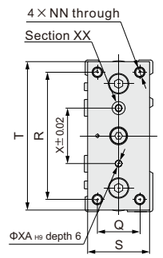


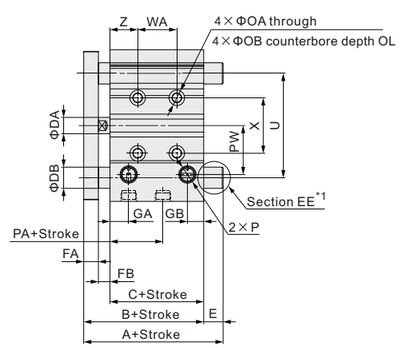
Bore	f	Bore	f
12	4.5	20	8.5
16	4.5	25	8

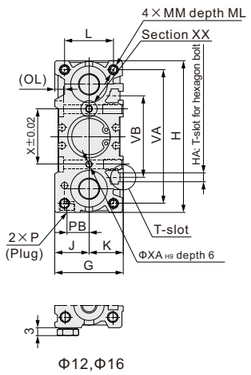




Bore	a	b	c	d	e
12	4.4	7.4	3.7	2	6.2
16	4.4	7.4	3.7	2.5	6.7
20	5.4	8.4	4.5	2.8	7.8
25	5.4	8.4	4.5	3	8.2







MGPM, MGPL, MGPA Common Dimensions

(mm)

Bore	Standard stroke (mm)	B	C	DA	FA	FB	G	GA	GB	H	HA	J	K	L	MM	ML	NN	OA	OB	OL	P		
																					Nil	TN	TF
12	10, 20, 30, 40, 50, 75, 100 125, 150, 175, 200, 250	42	29	6	7	6	26	10	7	58	M4	13	13	18	M4×0.7	10	M4×0.7	4.3	8	4.5	M5×0.8	–	–
16		46	33	8	7	6	30	10.5	7.5	64	M4	15	15	22	M5×0.8	12	M5×0.8	4.3	8	4.5	M5×0.8	–	–
20	20, 30, 40, 50, 75, 100, 125, 150, 175, 200, 250, 300, 350, 400	53	37	10	8	8	36	11.5	9	83	M5	18	18	24	M5×0.8	13	M5×0.8	5.4	9.5	5.5	Rc1/8	NPT1/8	G1/8
25		53.5	37.5	10	9	7	42	11.5	10	93	M5	21	21	30	M6×1.0	15	M6×1.0	5.4	9.5	5.5	Rc1/8	NPT1/8	G1/8

Bore	PA	PB	PW	Q	R	S	T	U	VA	VB	WA					WB					X	XA	XB	YY	YL	Z
											⩽30 st	30 st to 100 st	100 st to 200 st	200 st to 300 st	>300 st	⩽30 st	30 st to 100 st	100 st to 200 st	200 st to 300 st	>300 st						
12	13	8	18	14	48	22	56	41	50	37	20	40	110	200	—	15	25	60	105	—	23	3	3.5	M5×0.8	10	5
16	14.5	10	19	16	54	25	62	46	56	38	24	44	110	200	—	17	27	60	105	—	24	3	3.5	M5×0.8	10	5
20	13.5	10.5	25	18	70	30	81	54	72	44	24	44	120	200	300	29	39	77	117	167	28	3	3.5	M6×1.0	12	17
25	12.5	13.5	30	26	78	38	91	64	82	50	24	44	120	200	300	29	39	77	117	167	34	4	4.5	M6×1.0	12	17

MGPM (Slide bearing) A, DB, E Dimensions

Bore	A				DB	E			
	⩽50 st	50 st to 100 st	100 st to 200 st	>200 st		⩽50 st	50 st to 100 st	100 st to 200 st	>200 st
12	42	60.5	82.5	82.5	8	0	18.5	40.5	40.5
16	46	64.5	92.5	92.5	10	0	18.5	46.5	46.5
20	53	77.5	77.5	110	12	0	24.5	24.5	57
25	53.5	77.5	77.5	109.5	16	0	24	24	56

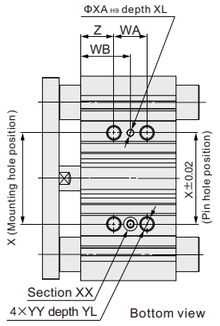
MGPL (Ball bushing) MGPA (High precision ball bushing) A, DB, E Dimensions (mm)

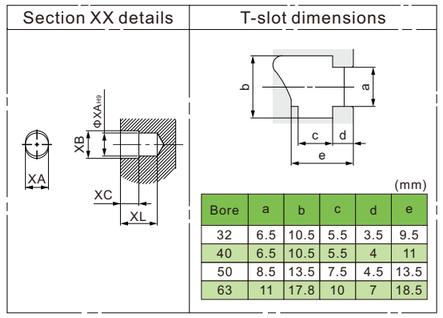
Bore	A				DB	E			
	⩽30 st	30 st to 100 st	100 st to 200 st	>200 st		⩽30 st	30 st to 100 st	100 st to 200 st	>200 st
12	43	55	84.5	84.5	6	1	13	42.5	42.5
16	49	65	94.5	94.5	8	3	19	48.5	48.5
20	59	76	100	117.5	10	6	23	47	64.5
25	65.5	81.5	100.5	117.5	13	12	28	47	64

*1) Refer to Section EE details for the shape of Φ12 to Φ25 with stroke of 50 or less.
*2) The use of a slot (width XA, length XB, depth 3) allows for a relaxed pin pitch tolerance, with the pin hole (ΦXA H9, depth 6) as the reference, without affecting mounting accuracy.
*3) For bore size Φ12 and Φ16, only M5×0.8 port is available.
*4) For bore size Φ20 or more, choice of Rc, NPT, G port is available.

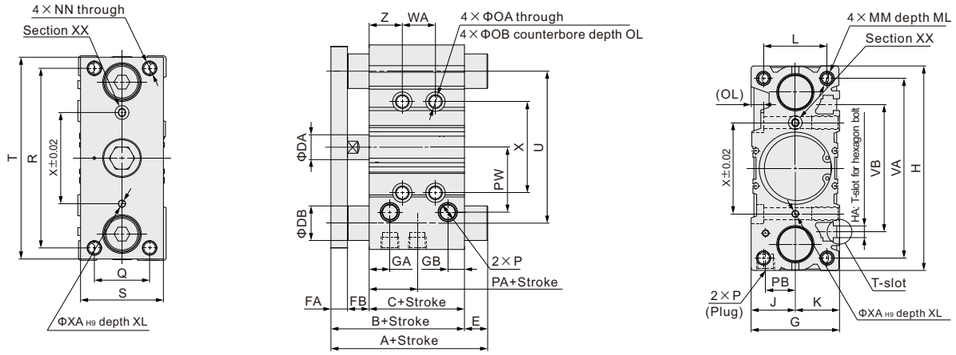
MGP Series Compact Guide Cylinder

Main Dimensions Φ32 to Φ63 MGPM, MGPL, MGPA





Bore	a	b	c	d	e
32	6.5	10.5	5.5	3.5	9.5
40	6.5	10.5	5.5	4	11
50	8.5	13.5	7.5	4.5	13.5
63	11	17.8	10	7	18.5



MGPM, MGPL, MGPA Common Dimensions

(mm)

Bore	Standard stroke (mm)	B	C	DA	FA	FB	G	GA	GB	H	HA	J	K	L	MM	ML	NN	OA	OB	OL	P		
																					Nil	TN	TF
32	25, 50, 75, 100, 125, 150, 175, 200, 250, 300, 350, 400	59.5	37.5	14	10	12	48	12	9	112	M6	24	24	34	M8×1.25	20	M8×1.25	6.7	11	7.5	Rc1/8	NPT1/8	G1/8
40		66	44	14	10	12	54	15	12	120	M6	27	27	40	M8×1.25	20	M8×1.25	6.7	11	7.5	Rc1/8	NPT1/8	G1/8
50		72	44	18	12	16	64	15	12	148	M8	32	32	46	M10×1.5	22	M10×1.5	8.6	14	9	Rc1/4	NPT1/4	G1/4
63		77	49	18	12	16	78	15.5	13.5	162	M10	39	39	58	M10×1.5	22	M10×1.5	8.6	–	9	Rc1/4	NPT1/4	G1/4

Bore	PA	PB	PW	Q	R	S	T	U	VA	VB	WA						WB					X	XA	XB	XC	XL	YY	YL	Z
											⩽25 st	25 st to 100 st	100 st to 200 st	200 st to 300 st	>300 st	⩽25 st	25 st to 100 st	100 st to 200 st	200 st to 300 st	>300 st								
32	6.5	16	35.5	30	96	44	110	78	98	63	24	48	124	200	300	33	45	83	121	171	42	4	4.5	3	6	M8×1.25	16	21
40	13	18	39.5	30	104	44	118	86	106	72	24	48	124	200	300	34	46	84	122	172	50	4	4.5	3	6	M8×1.25	16	22
50	9	21.5	47	40	130	60	146	110	130	92	24	48	124	200	300	36	48	86	124	174	66	5	6	4	8	M10×1.5	20	24
63	13	28	58	50	130	70	158	124	142	110	28	52	128	200	300	38	50	88	124	174	80	5	6	4	8	M10×1.5	20	24

MGPM (Slide bearing) A, DB, E Dimensions

(mm)

Bore	A			DB	E		
	⩽50 st	50 st to 200 st	>200 st		⩽50 st	50 st to 200 st	>200 st
32	75	93.5	129.5	20	15.5	34	70
40	75	93.5	129.5	20	9	27.5	63.5
50	88.5	109.5	150.5	25	16.5	37.5	78.5
63	88.5	109.5	150.5	25	11.5	32.5	73.5

MGPL (Ball bushing)
MGPA (High precision ball bushing) A, DB, E Dimensions

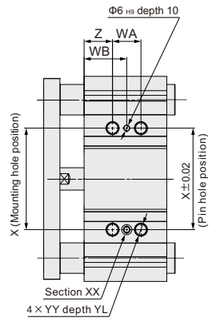
(mm)

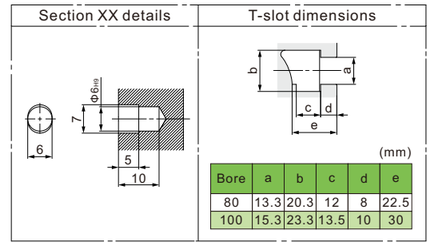
Bore	A				DB	E			
	⩽50 st	50 st to 100 st	100 st to 200 st	>200 st		⩽50 st	50 st to 100 st	100 st to 200 st	>200 st
32	79.5	96.5	116.5	138.5	16	20	37	57	79
40	79.5	96.5	116.5	138.5	16	13.5	30.5	50.5	72.5
50	91.5	112.5	132.5	159.5	20	19.5	40.5	60.5	87.5
63	91.5	112.5	132.5	159.5	20	14.5	35.5	55.5	82.5

*1) The use of a slot (width XA, length XB, depth XC) allows for a relaxed pin pitch tolerance, with the pin hole (ΦXA H9, depth XL) as the reference, without affecting mounting accuracy.
*2) Choice of Rc, NPT, G port is available.

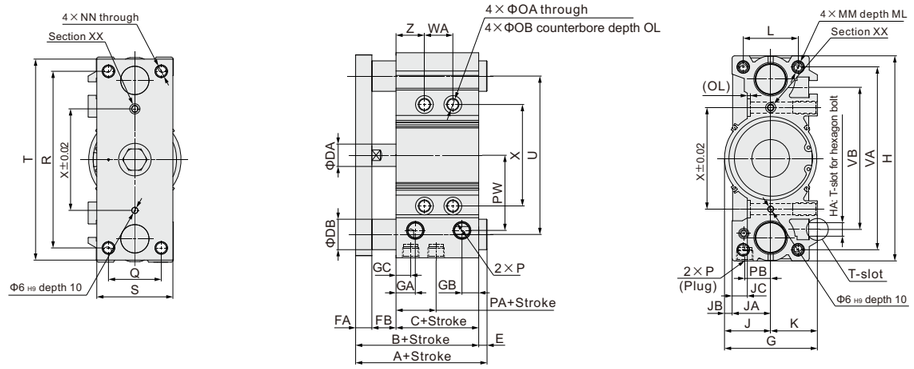
MGP Series Compact Guide Cylinder

Main Dimensions Φ80, Φ100 MGPM, MGPL, MGPA





Bore	a	b	c	d	e
80	13.3	20.3	12	8	22.5
100	15.3	23.3	13.5	10	30



MGPM, MGPL, MGPA Common Dimensions

(mm)

Bore	Standard stroke (mm)	B	C	DA	FA	FB	G	GA	GB	GC	H	HA	J	JA	JB	JC	K	L
80	25, 50, 75, 100, 125, 150, 175, 200, 250, 300, 350, 400	96.5	56.5	22	16	24	91.5	19	16.5	14.5	202	M12	45.5	38	7.5	15	46	54
100		116	66	26	19	31	111.5	22.5	20.5	18	240	M14	55.5	45	10.5	10	56	62

Bore	MM	ML	NN	OA	OB	OL	P			PA	PB	PW	Q	R	S	T	U
							Nil	TN	TF								
80	M12×1.75	25	M12×1.75	10.6	17.5	3	Rc3/8	NPT3/8	G3/8	14.5	25.5	74	52	174	75	198	156
100	M14×2.0	31	M14×2.0	12.5	20	8	Rc3/8	NPT3/8	G3/8	17.5	32.5	89	64	210	90	236	188

Bore	VA	VB	WA					WB					X	YY	YL	Z
			⩽25 st	25 st to 100 st	100 st to 200 st	200 st to 300 st	>300 st	⩽25 st	25 st to 100 st	100 st to 200 st	200 st to 300 st	>300 st				
80	180	140	28	52	128	200	300	42	54	92	128	178	100	M12×1.75	24	28
100	210	166	48	72	148	220	320	35	47	85	121	171	124	M14×2.0	28	11

MGPM (Slide bearing) A, DB, E Dimensions

(mm)

Bore	A			DB	E		
	⩽50 st	50 st to 200 st	>200 st		⩽50 st	50 st to 200 st	>200 st
80	104.5	131.5	180.5	30	8	35	84
100	126.5	151.5	190.5	36	10.5	35.5	74.5

MGPL (Ball bushing)
MGPA (High precision ball bushing) A, DB, E Dimensions

(mm)

Bore	A				DB	E			
	⩽25 st	25 st to 50 st	50 st to 200 st	>200 st		⩽25 st	25 st to 50 st	50 st to 200 st	>200 st
80	104.5	128.5	158.5	191.5	25	8	32	62	95
100	119.5	145.5	178.5	201.5	30	3.5	29.5	62.5	85.5

*1) The use of a slot (width X6, length 7, depth 5) allows for a relaxed pin pitch tolerance, with the pin hole (Φ6 H9, depth 10) as the reference, without affecting mounting accuracy.
*2) Choice of Rc, NPT, G port is available.