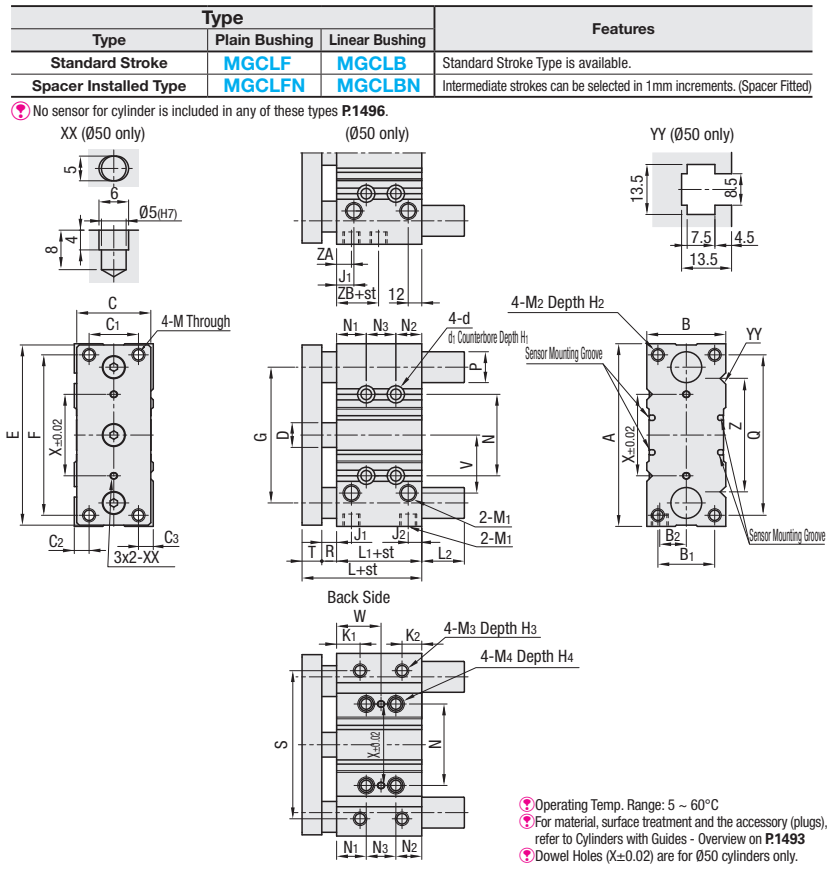
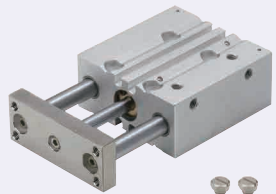


# Cylinders with Guides

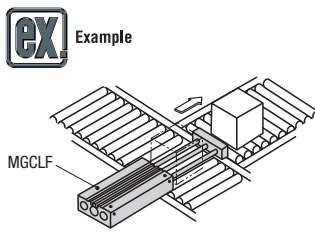
## Cylinders with Guides



Tube I.D. (mm)	A	B	B <sub>1</sub>	B <sub>2</sub>	C	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	d	d <sub>1</sub>	D	E	F	G	H <sub>1</sub>	H <sub>2</sub>	H <sub>3</sub>	H <sub>4</sub>	J <sub>1</sub>	J <sub>2</sub>	K <sub>1</sub>	K <sub>2</sub>	L	L <sub>1</sub>
12	58	26	18	8.5	22	14	6	6	4.3	8	6	56	48	41.5	4.5	9	7	10	11	15	12	12	39	29
16	64	30	22	10	25	16	7	7	4.3	8	8	62	52	46	4.5	11	7	10	11	17	11	13	43	31
20	85	36	26	11.5	30	18	8	10	5.2	9.5	10	72	60	55	5.5	13	7	12	12	23	11	14	47	35
25	96	42	32	13.5	38	26	8	8	5.2	9.5	12	86	70	65	5.5	15	9	12	11	23.5	12	13.5	47.5	35.5
32	116	51	38	16	48	30	11	10	6.8	11	16	112	96	80	6.5	18	11	16	11.5	25	12	16.5	47.5	33.5
50	148	64	46	21.5	60	40	12	12	8.6	14	20	146	130	110	9	22	-	20	14	11	-	-	72	44

Tube I.D. (mm)	M	M <sub>1</sub>	M <sub>2</sub>	M <sub>3</sub>	M <sub>4</sub>	N	N <sub>1</sub>	N <sub>2</sub>	N <sub>3</sub>	P		Q	R	S	T	V	W
										Plain Bushing	Linear Bushing						
12	M4x0.7	M5x0.8	M4x0.7	M4x0.7	M5x0.8	23	5	20	4+St	8	6	40	2	50	8	19.5	-
16	M5x0.8	M5x0.8	M5x0.8	M5x0.8	M5x0.8	24	5	22	4+St	10	8	42	2	54	10	23	-
20	M5x0.8	Rc1/8	M5x0.8	M5x0.8	M6x1.0	28	19	16	St	12	10	52	2	64	10	24.5	-
25	M6x1.0	Rc1/8	M6x1.0	M6x1.0	M6x1.0	34	22	12.5	1+St	16	13	62	2	76	10	24	-
32	M8x1.25	Rc1/8	M8x1.25	M8x1.25	M8x1.25	42	22	14.5	St-3	20	16	80	2	100	12	31	-
50	St=25	M10x1.5	Rc1/4	M10x1.5	-	M10x1.5	66	24	21	24	25	-	130	12	-	16	36
	St=50								22	48							47
	St=100								72	48							48

Tube I.D. (mm)	X	Z	Z <sub>A</sub>	Z <sub>B</sub>	L <sub>2</sub> Dimensions															
					St Stroke (mm)															
					Plain Bushing							Linear Bushing Type								
12	-	-	-	-	10	20	25	30	40	50	75	100	10	20	25	30	40	50	75	100
16	-	-	-	-	0	0	0	0	0	18	18	0	0	0	0	14	14	14	14	14
20	-	-	-	-	0	0	0	0	0	14	14	-	0	0	27	27	27	27	27	
25	-	-	-	-	0	0	0	0	0	14	14	-	2	2	35	35	35	35	35	
32	-	-	-	-	20	-	20	20	20	20	20	-	8	-	8	42	42	42	42	
50	66	92	12	9	-	-	34.5	-	-	34.5	-	46	-	-	-	-	-	-	-	



<Intermediate Stroke Work for Type with Spacer Installed>  
 Ex.) For MGCLFN12-70,  
 A 5mm spacer is mounted into a Sliding Bearing Standard Stroke Type cylinder with a 12mm I.D. and a 75mm stroke.  
 \* L<sub>2</sub>=18mm.  
 \* L<sub>1</sub> + St will be 29 + 75 = 104 mm.  
 \* All other external dimensions are the same as for MGCLF12-75.

## Standard Stroke

Type	Tube I.D. (mm)	St Stroke (mm) Selection	Unit Price															
			St Stroke (mm)															
			MGCLF				MGCLB				MGCLF				MGCLB			
(Slide Bearing) MGCLF Linear Bushing MGCLB	12	10	20	30	40	50	75	100										
	16																	
	20	20	30	40	50	75	100											
	25																	
	32	25	50	75	100													
	*50	25	50	100														

\* Tube I.D. 50 is applicable to MGCLF only.

## Spacer Installed

Type	Tube I.D. (mm)	Configurable St Stroke in 1mm Increment (Spacer Fitted)
(Slide Bearing) MGCLFN Linear Bushing MGCLBN	12	10~100
	16	
	20	20~100
	25	
	32	25~100



Ordering Example  
 Part Number - St Stroke  
 MGCLB16 - 50  
 MGCLFN12 - 70

Spacers are made of resin (POM).

Type	Tube I.D. (mm)	Unit Price (Body Price)							Spacer Unit Price (+ Body Price)						
		St Stroke (mm)							Intermediate Stroke with Spacer (mm)						
MGCLFN	12							11~19	26~49	21~29	31~39	41~49	51~74	76~99	
	16														
	20														
	25														
	32														
MGCLBN	12														
	16														
	20														
	25														
	32														



Alterations  
 Part Number - St Stroke - (TC, TH)  
 MGCLBN25 - 73 - TH  
 Applicable to MGCLFN and MGCLBN only.

Code	Cold Weather Resistance Specification		Heat Resistance Specification	
	TC	TH	TC	TH
Spec.	Usable in the ambient temperature range from -40°C to 60°C. Changes to low temp. resistant grease and low nitrile rubber gaskets. Low temp. resistant sensors for cylinders are not available.	Usable in the ambient temperature range from 5°C to 120°C. Changes to heat resistant grease and fluororubber gaskets. Heat resistant sensors for cylinders are not available. Change the spacer material to A6063.		

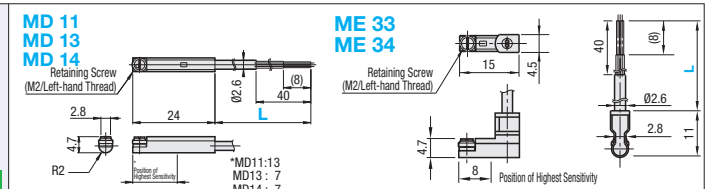
Tube I.D. (mm)	Standard Stroke Table				St Stroke (mm)			
	10	20	25	30	40	50	75	100
12	•	•	•	•	•	•	•	•
16	•	•	•	•	•	•	•	•
20	•	•	•	•	•	•	•	•
25	•	•	•	•	•	•	•	•
32	•	•	•	•	•	•	•	•

No spacer is provided when a standard stroke is specified.

## Sensors for Cylinders



RoHS 10



Type	L Selection	Load Voltage	Load Current	Indicator Light	Sensor Type	Line	Wire Exit	Unit Price	
								L <sub>1</sub> (1m)	L <sub>3</sub> (3m)
MD11	L <sub>1</sub> (1m) L <sub>3</sub> (3m)	24VDC	24VDC 5~40mA	LED (Lights when ON)	Contact	2-Line	Rear		
MD13		110VAC	110VAC 5~20mA		No Contact	3-Line			
MD14		28VDC or Less	0.1~40mA		No Contact	2-Line			
ME33		10~28VDC	5~20mA		No Contact	3-Line	Top		
ME34		VDc28 or Less	0.1~40mA		No Contact	2-Line			

Operating Temp. Range: 0 ~ 60°C  
 For detailed specifications of the Sensors, see P1484.



Ordering Example  
 Part Number  
 MD14L1