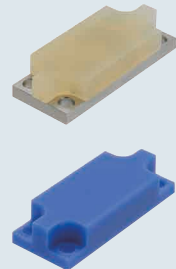


# Pushers for Cylinder with Twin Guide / MC Nylon Polyacetal Pushers

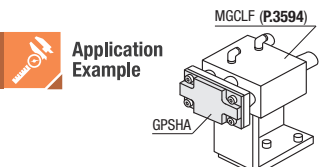
**Pushers for Cylinder with Twin Guide**

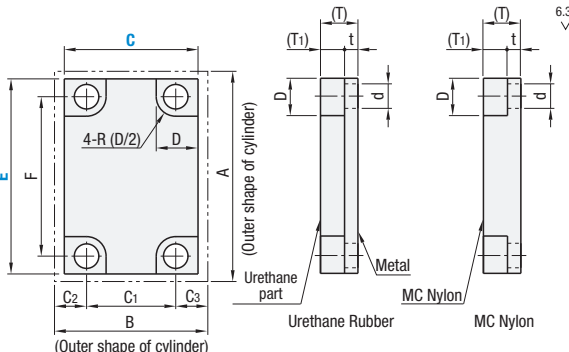


Type	Material	Hardness	Plate
GPSHA	Ether Polyurethane	Shore A90	304 Stainless Steel
GPSHS	Ester Polyurethane	Shore A70	304 Stainless Steel
GPSHM	MC Nylon	—	—

ⓘ For urethane rubber properties, refer to P.2566  
 ⓘ For MC nylon properties, refer to P.3067

**Application Example**






Type	Part Number		Plate Mounting Part External Dimensions		Cylinder External Dimensions		Reference Tube Inner Diameter	Mounting Hole Pitch				(T)	(T <sub>1</sub> )	t	Mounting Hole Information	
	C	E	A	B	F	C <sub>1</sub>		C <sub>2</sub>	C <sub>3</sub>	D	d					
GPSHA GPSHS GPSHM	22	56	58	26	12	48	14	6	6	12	7	4.9	8	4.5		
	25	62	64	30	16	52	16	7	7	13	8		9.5	5.5		
	30	72	85	36	20	60	18	8	10	14	9		12	6.6		
	38	86	96	42	25	70	26	8	8	16	11		13.5	8.5		
	48	112	116	51	32	96	30	11	10	16	11	17	8.5			

ⓘ Urethane rubber is baked on a metal plate. ⓘ Although urethane rubber could be discolored over time, it does not affect its property.  
 ⓘ For MC nylon, use a washer (P.2434) to protect the resin from being damaged.

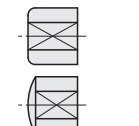
**MC Nylon Polyacetal Pushers**



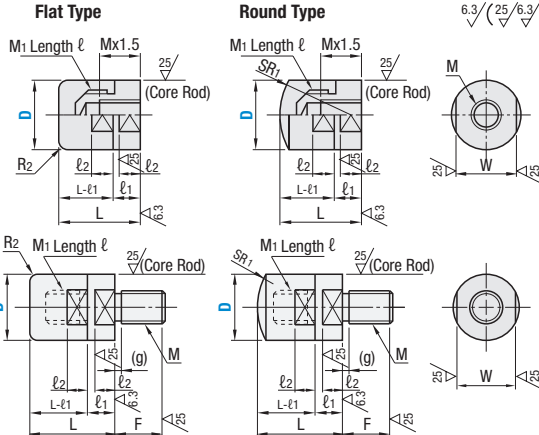
RoHS 10

Type	Shape		Material
	Flat	Round	
MC Nylon	Tapped	PSHMC RSHMC	MC Nylon
	Threaded	PSHMMC RSHMMC	Core Rod: 304 Stainless Steel
	Replacement Resin	MCKK MCRKK	MC Nylon
Polyacetal	Tapped	PSHPA RSHPA	Polyacetal
	Threaded	PSHMPA RSHMPA	Core Rod: 304 Stainless Steel
	Replacement Resin	PAKK PARKK	Polyacetal

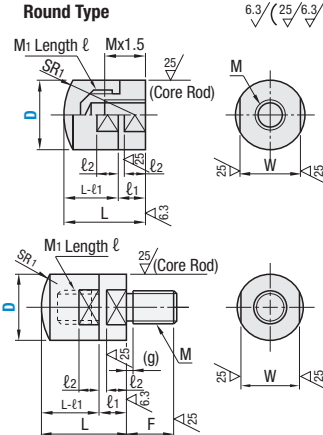
ⓘ For MC nylon properties, refer to P.3067  
 ⓘ For polyacetal properties, refer to P.3067  
 ℓ<sub>2</sub> (resin across flats) for D6 and D8 is as follows.



**Flat Type**



**Round Type**



**Tapped** ⓘ Tap depth for resin for replacement is ℓ. ⓘ Positions of the flats on resin and core rod may not coincide.

Part Number	L	M x Pitch	M <sub>1</sub> x Pitch	ℓ	SR <sub>1</sub>	R <sub>2</sub>	ℓ <sub>1</sub>	ℓ <sub>2</sub>	W
Replacement Resin Flat Set Flat PSHMC PSHPA Round RSHMC RSHPA MCKK PAKK MCRKK PARKK	8	12	M3 x 0.5	M5 x 0.8	4.5	8	5	4	7
	10	15	M4 x 0.7	M6 x 1.0	7	10	5	4	8
	12	16	M5 x 0.8	M8 x 1.25	8	12	5	4	10
	15	20	M6 x 1.0	M10 x 1.5	10	16	6	5	14
	20	25	M8 x 1.25	M12 x 1.75	12	20	8	6	17
	25	30	M10 x 1.5	M16 x 2.0	14	25	8	6	22
	30	35	M12 x 1.75	M16 x 2.0	18	30	10	8	27

**Threaded**

Part Number	L	M x Pitch (Coarse)	M <sub>1</sub> x Pitch (Coarse)	ℓ	SR <sub>1</sub>	R <sub>2</sub>	F	(g)	ℓ <sub>1</sub>	ℓ <sub>2</sub>	W
Replacement Resin Flat Set Flat PSHMMC PSHMPA Round RSHMMC RSHMPA MCKK PAKK MCRKK PARKK	6	10	M3 x 0.5	M3 x 0.5	3	6	4.5	1.5	5	4	5
	8	12	M4 x 0.7	M5 x 0.8	4.5	8	6	2	5	4	7
	10	15	M5 x 0.8	M6 x 1.0	7	10	7	2	5	4	8
	12	16	M6 x 1.0	M8 x 1.25	8	12	10	2	5	4	10
	15	20	M8 x 1.25	M10 x 1.5	10	16	12	2.5	6	5	14
	16	20	M8 x 1.25	M10 x 1.5	10	16	12	2.5	6	5	14
	20	25	M10 x 1.5	M12 x 1.75	12	20	14	2.5	8	6	17

**Part Number Example**

Part Number
GPSHA2562
GPSHM48112
PSHMC20
PSHMMC20
MCRKK12

# MC Nylon Polyacetal Pushers

continued

## Tapped

Type	Part Number	Available Sizes							
		MC Nylon				Polyacetal			
		Tapped		Replacement Resin		Tapped		Replacement Resin	
D	PSHMC	RSHMC	MCKK	MCRKK	PSHPA	RSHPA	PAKK	PARKK	
Set Flat PSHMC PSHPA Round RSHMC RSHPA	Replacement Resin Flat	8	•	•	•	•	•	•	•
	MCKK	10	•	•	•	•	•	•	•
	PAKK	12	•	•	•	•	•	•	•
	Round	15	•	•	•	•	•	•	•
	MCRKK	20	•	•	•	•	•	•	•
	PARKK	25	•	•	•	•	•	•	•
		30	•	•	•	•	•	•	

## Threaded

Type	Part Number	Available Sizes							
		MC Nylon				Polyacetal			
		Threaded		Replacement Resin		Threaded		Replacement Resin	
D	PSHMMC	RSHMMC	MCKK	MCRKK	PSHMPA	RSHMPA	PAKK	PARKK	
Set Flat PSHMMC PSHMPA Round RSHMMC RSHMPA	Replacement Resin Flat	6	•	•	•	•	•	•	•
	MCKK	8	•	•	•	•	•	•	•
	PAKK	10	•	•	•	•	•	•	•
	Round	12	•	•	•	•	•	•	•
	MCRKK	15	•	•	•	•	•	•	•
	PARKK	16	•	•	•	•	•	•	•
		20	•	•	•	•	•	•	

## Specifications

- Properties of MC nylon and polyacetal
- MC nylon: Excels in abrasion resistance compared with polyacetal
- Polyacetal: Excels in mechanical strength compared with MC nylon

Item	Abrasion Resistance	Slip Property	Dimensional Stability	Impact Resistance	Flame Resistance	Chemical Resistance			
						Oil	Acid	Alkali	Organic Solvents
MC Nylon	Good	Good	Acceptable	Good	—	Good	Poor	Good–Acceptable	Good
MC Nylon Conductive CDR2	Good	Good	Acceptable	Good	—	Good	Poor	Good–Acceptable	Good
Polyacetal	Acceptable	Good	Good	Good	[UL94] HB	Good	Acceptable – Poor	Good	Good

Item	Tensile Strength (at Ambient Temperature)	Elongation	Bending Strength	Compressive Strength		Rockwell Hardness (R Scale)	Continuous Operating Temperature	Volume Specific Resistivity (Ω · cm)	Density	Moisture Absorption	
				Yielding Point	5% Deformation					Water, Balanced	Water, 24hrs
Test Method ASTM	D-638	D-638	D-790	D-695	D-695	D-785	—	D-257	D-792	D-570	D-570
MC Nylon	96 MPa	30%	110 MPa	103 MPa	95 MPa	120	-40–120°C	4.2 x 10 <sup>15</sup>	1.16	6	0.8
MC Nylon Conductive CDR2	68 MPa	10%	117 MPa	—	98 MPa	119	Room Temperature -120°C	10 <sup>9</sup> x 10 <sup>4</sup>	1.20	—	—
Polyacetal	61 MPa	40%	89 MPa	—	103 MPa	119	-45–95°C	>10 <sup>14</sup>	1.41	0.7	0.22

ⓘ For more detailed Properties, see P.3067.