

Air Cylinders

Pen-Style Type (Double Acting)

Pen-Style Type



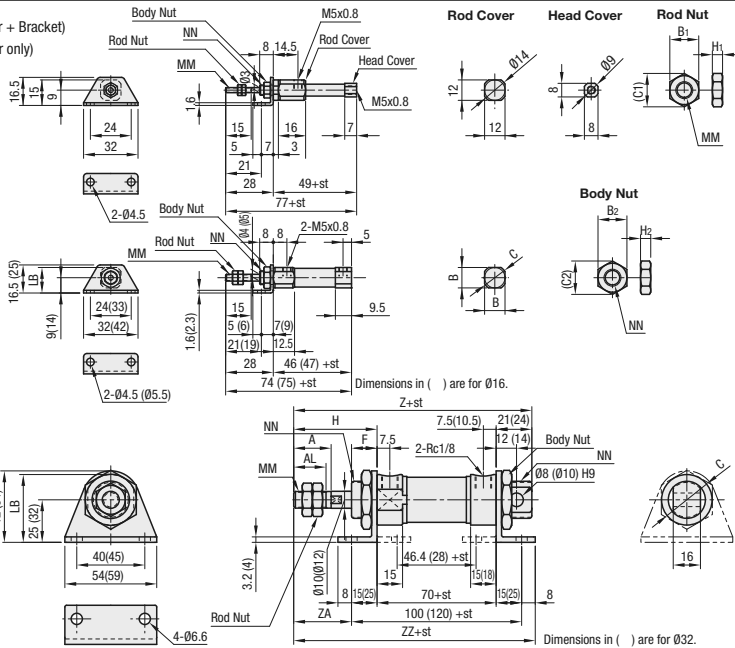
RoHS

MSPCB (Cylinder + Bracket) MSPCN (Cylinder only)

Tube I.D.
Ø6

Ø10~16

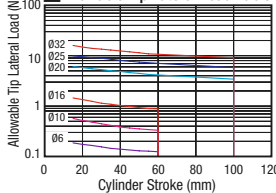
Ø20~32



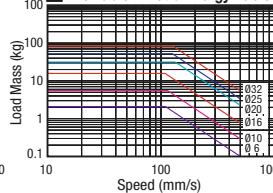
Tube I.D. (mm)	A	AL	B	B1	B2	C	C1	C2	F	H	H1	H2	LB	MM	NN	Z	ZA	ZZ
6	-	-	-	5.5	8	-	6.4	9.2	-	-	2.4	4	-	M3x0.5	M6x1.0	-	-	-
10	-	-	12	7	11	14	8.1	12.7	-	-	3.2	4	15	M4x0.7	M8x1.0	-	-	-
16	-	-	18	8	14	20	9.2	16.2	-	-	4	4	23	M5x0.8	M10x1.0	-	-	-
20	20	18	-	13	30	28	15	34.6	12	38	5	6	38.4	M8x1.25	M22x1.5	129	23	131
25	22	20	-	17	30	33.5	19.6	34.6	15	49	6	6	39.9	M10x1.25	M22x1.5	140	34	142
32	22	20	-	17	32	37.5	19.6	37	18	52	6	8	50	M10x1.25	M24x2.0	146	27	155

Part Number		St Stroke (mm)	MSPCB Unit Price						MSPCN Unit Price							
Type	Tube I.D. (mm)		Stroke (mm)						Stroke (mm)							
			15	25	30	45	50	60	100	15	25	30	45	50	60	100
(Cylinder + Bracket) MSPCB	6	15 30 45 60		-		-		-		-		-		-		-
	10	15 30 45 60		-		-		-		-		-		-		-
	16	15 30 45 60		-		-		-		-		-		-		-
	20	15 25 50 100			-	-		-			-	-		-		-
(Cylinder only) MSPCN	25	15 25 50 100			-	-		-			-	-		-		-
	32	15 25 50 100			-	-		-			-	-		-		-

Allowable Tip Lateral Load Table



Allowable Kinetic Energy Table



Theoretical Output

Tube I.D. (mm)	Operating Direction	Operating Pressure (MPa)	0.2	0.3	0.4	0.5	0.6	0.7
6	Push	5.7	8.5	11.3	14.1	17	19.8	
	Pull	4.2	6.4	8.5	10.6	12.7	14.8	
10	Push	15.7	23.6	31.4	39.3	47.1	55	
	Pull	13.2	19.8	26.4	33	39.6	46.2	
16	Push	40	60	80	101	121	141	
	Pull	36	54	73	91	109	127	
20	Push	63	94	126	157	189	220	
	Pull	47	71	94	118	141	165	
25	Push	98	147	196	245	295	344	
	Pull	83	124	165	206	247	289	
32	Push	161	241	322	402	483	563	
	Pull	138	207	277	346	415	484	

Pen-Style Sensors for Cylinders

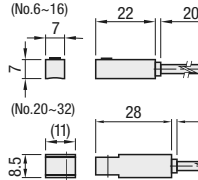


RoHS

MSRNS (Contact Type)

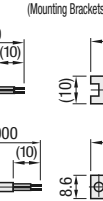
(No Contact Type)

Accessory: 1 pc.
(Mounting Bracket)



MSRNS (No Contact Type)

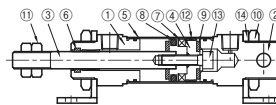
(Accessory) (12)



Part Number	Type	No.	Applicable Cylinder	Unit Price
MSRNS		6	MSPCB 6	
		10	MSPCB 10	
		16	MSPCB 16	
		20	MSPCB 20	
		25	MSPCB 25	
		32	MSPCB 32	

Ordering Example
Part Number - Stroke
MSPCB6 - 30

Air Cylinder - Pen-Style - Structure Diagram



Pen-Style Type : Parts List

No.	Part Name	Ø6	Ø10	Ø16	Ø20	Ø25	Ø32
①	Rod Cover	EN AW-6061 Equiv.	EN AW-6061 Equiv.	EN AW-6061 Equiv.	EN AW-6061 Equiv.	EN AW-6061 Equiv.	EN AW-6061 Equiv.
②	Head Cover	EN 1.4305 Equiv.	EN 1.1191 Equiv.	EN 1.4305 Equiv.	EN 1.1191 Equiv.	EN 1.4305 Equiv.	EN 1.1191 Equiv.
③	Piston Rod	EN 1.4305 Equiv.	EN 1.1191 Equiv.	EN 1.4305 Equiv.	EN 1.1191 Equiv.	EN 1.4305 Equiv.	EN 1.1191 Equiv.
④	Piston	EN AW-6061 Equiv.	EN AW-6061 Equiv.	EN AW-6061 Equiv.	EN AW-6061 Equiv.	EN AW-6061 Equiv.	EN AW-6061 Equiv.
⑤	Tube	EN 1.4301 Equiv.	EN 1.4301 Equiv.	EN 1.4301 Equiv.	EN 1.4301 Equiv.	EN 1.4301 Equiv.	EN 1.4301 Equiv.
⑥	Rod Gasket	NBR	NBR	NBR	NBR	NBR	NBR
⑦	Magnet	Plastic Magnet	Plastic Magnet	Plastic Magnet	Plastic Magnet	Plastic Magnet	Plastic Magnet
⑧	Piston Gasket	NBR	NBR	NBR	NBR	NBR	NBR
⑨	Cushion	NBR	NBR	NBR	NBR	NBR	NBR
⑩	Body Nut	EN CW614N Equiv.	EN 1.0038 Equiv.	EN CW614N Equiv.	EN 1.0038 Equiv.	EN CW614N Equiv.	EN 1.0038 Equiv.
⑪	Rod Nut	EN CW614N Equiv.	EN 1.0038 Equiv.	EN CW614N Equiv.	EN 1.0038 Equiv.	EN CW614N Equiv.	EN 1.0038 Equiv.
⑫	Wear Contact	Teflon	Teflon	Teflon	Teflon	Teflon	Teflon
⑬	Piston Bolt	EN 1.7220 Equiv.	EN 1.7220 Equiv.	EN 1.7220 Equiv.	EN 1.7220 Equiv.	EN 1.7220 Equiv.	EN 1.7220 Equiv.
⑭	Foot	EN 1.0038 Equiv.	EN 1.0038 Equiv.	EN 1.0038 Equiv.	EN 1.0038 Equiv.	EN 1.0038 Equiv.	EN 1.0038 Equiv.

(Note) JIS-EN CW614N Equiv. is for Ø10 and Ø16, POM is for Ø25.

Pen-Style Type : Basic Specification

Tube I.D. (mm)	6	10	16	20	25	32
Operating Type	Double Acting					
Applicable Fluid	Air					
Min. Operating Pressure (MPa)	0.12 0.06					
Max. Operating Pressure (MPa)	0.7					
Pressure Resistance (MPa)	1.0					
Operating Temp. Range (°C)	5~60					
Piston Speed (mm/s)	50~500					
Cushion Mechanism	NBR					
Stroke Tolerance (mm)	0~+1.5 0~+2.0					
Lubrication	Lubrication Free					
Pipe Connection Bore Dia.	M5x0.8 Rc1/8					

* See P1483 for the theoretical reference speed.

Specifications : Special Sensor for Pen-Style Type

Type	MSRCS	MSRNS
No.	6~16 20~32	6~16 20~32
Contact Type	Contact	No Contact
Contact Structure	Normally Open	Normally Open
Operating Supply Voltage Range	5~24VAC/DC 5~220VAC 5~28VDC 5~30VDC	5~24VAC/DC 5~220VAC 5~28VDC 5~30VDC
Load Current Range	100mA or Less/40mA or Less/20mA or Less/10mA or Less	100mA or Less/40mA or Less/20mA or Less/10mA or Less
Impact Resistance	30G	50G
Internal Voltage Drop	2.5V or Less/2.0V or Less/1.5V or Less/1.0V or Less	2.5V or Less/2.0V or Less/1.5V or Less/1.0V or Less
Response Time	1ms or Less	1ms or Less
Operating Temperature	5~60°C	5~60°C
Lead Wire	2 Conductors Ø2.0 3 Conductors Ø1.3 3 Conductors Ø1.3	2 Conductors Ø2.0 3 Conductors Ø1.3 3 Conductors Ø1.3
Lead Wire Length	2m	2m
Protection Structure	IP67 IP66 IP67 IP66	IP67 IP66 IP67 IP66
Indicator Light	Green Green Green Green	Green Green Green Green
Indicator Light Color	Green Green Green Green	Green Green Green Green

Coupling Rods for Air Cylinders / Thread Conversion Adapters

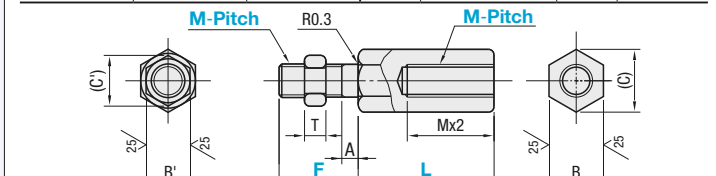
L Selectable / L Configurable / L and F Configurable

Extension Rod for Air Cylinders



RoHS

Type	L Selectable	L Configurable	L and F Configurable	Material	Surface Treatment	Accessory
FJEB	FJEB	FJEB	FJEB	EN 1.1191 Equiv.	Black Oxide	EN 1.0038 Equiv.
FJERC	FJERC	FJERC	FJERC	EN 1.4301 Equiv.	Electroless Nickel Plating	EN 1.4301 Equiv.
FJESC	FJESC	FJESC	FJESC	EN 1.4301 Equiv.	Electroless Nickel Plating	EN 1.4301 Equiv.



Part Number		L				F		A	B	(C)	Included Nut			Unit Price										
Type	M-Pitch	Selectable				Configurable (1mm Increment)	Standard				Configurable (1mm Increment)	B' (C')	T	Qty.	FJEB	FJERC	FJESC	FJEB	FJER	FJES	FJEB	FJERF		
L Selectable FJEB FJERC FJESC	3-0.5	20 25 30 35 40 50 75 100			20~100	17.5		2.5	6	6.9	5.5	6.4	2.4	2 pcs.										
	4-0.7																							
	5-0.8																							
	6-1.0																							
L Configurable FJEB FJER FJES	8-1.0	30 35 40 50 75 100 150 200			32~200	18			10	11.5	10	11.5	5											
	8-1.25																							
	10-1.25																							
	10-1.5																							
L and F Configurable FJEBF FJERF	12-1.25	40 50 75 100 150 200			48~200	24		3	21(19)	24.2(21.9)	19	21.9	7	1 pc.										
	12-1.5																							
	14-1.5																							
	18-1.5																							
	20-1.5																							
	22-1.5																							
♥The dimension in the brackets () is for FJEBF, FJER, FJESC, FJES.																								

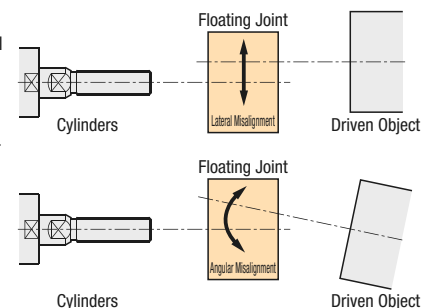
Floating Joints - Overview

Features of Floating Joints

This Product connects cylinder and operated object and absorbs misalignment (= Lateral Misalignment) or Angular Misalignment (= Out of Parallelism Tolerance).

Advantages of Floating Joints

- It is not necessary for the cylinder shaft to match the connecting body with high precision.
- Thrust does not lower even if the precision of the shaft fit is rough.
- Prevents breakage of cylinder gaskets and prolong the life of operated objects.



Types of Floating Joints

Quick Connection Type: The connector latches in the groove of the holder and the connecting unit, enabling simple connection simply by passing through the hole of the connecting unit.

Cylinder Rod Tip Shape	Connector	Connector and Holder Set	Holder
Threaded	[Tapped Type] Fixed P.1527 Separate P.1529 Configurable P.1528	Connector and Holder Set P.1526	Mounting Image Flange Type P.1533 Compact Type P.1536
Tapped	[Threaded Type] Fixed P.1530 Separate Type P.1532 Configurable P.1531 Bolt Mount Type P.1532	Connector and Holder Set P.1530	Mounting Image Bar Type P.1535 Top Mount Type P.1534

Flange Type: Connect can be retained by a flange. Use Backing Plates (Cover plates) to avoid breakage of operated objects by impact caused by connectors.

Cylinder Rod Tip Shape	Connector, Mount Flange Sets	Backing Plates	Connected images of the cylinder and driven part
Threaded	[Tapped Type] Standard P.1539 Separate P.1539 Wrench Flats P.1539	Round, Wrench Flats P.1544	Cylinders Connector, Mount Flange Sets Backing Plate Driven Part
Tapped	[Threaded Type] Standard P.1541 Separate P.1541 Wrench Flats P.1541		

One-Piece Type: This product absorbs lateral, angular misalignment. Extra Short Type is compact in size and space-saving.

Joining Method	Floating Joints Integrated Type	Connected images of the cylinder and driven part
	Threaded for Cylinder Tapped for Cylinder	
Side Mounting	Extra Short Threaded Stud Mount (for Threaded Cylinder) P.1549 Miniature P.1547 Screw-In P.1547 Extra Short Threaded Stud Mount (for Tapped Cylinder) P.1549	Cylinders Connector Driven Part
Foot Mount	Extra Short Foot Mount (for Threaded Cylinder) P.1550 Bracket Mounting P.1548 Extra Short Foot Mount (for Tapped Cylinder) P.1550	Cylinders Connector Driven Part
Flange Mounting	Extra Short Tapped Round P.1551 Extra Short Tapped Compact P.1551 Flange Mounting P.1547 Extra Short Threaded Round P.1551 Extra Short Threaded Compact P.1551	Cylinders Connector Driven Part

Floating Joints - Quick Connection Type

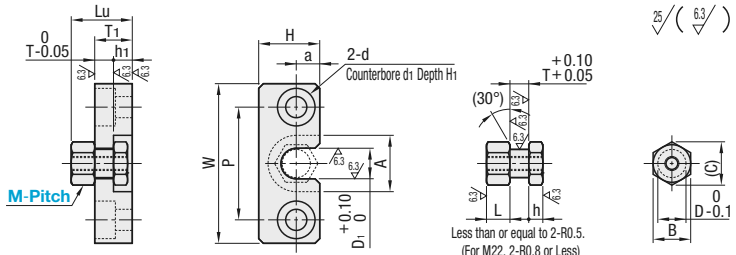
[Tapped] Cylinder Connector and Holder SetSheet Metal Holder Set

Features: Purchasing a set of Connector (FJR) and Holder (HLRA) for Floating Joints Quick Connection Type is better value than purchasing stand-alone products.

Cylinder Connector and Holder Set



Type	Holder Type	Material	Surface Treatment	Hardness
FJRHA	HLRA	EN 1.1191 Equiv.	Tuffride®	500HV~

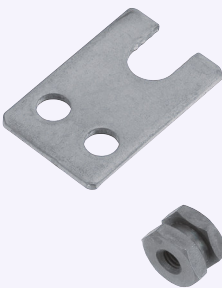


Tuffride® is a trademark of DURFERRIT GmbH.
Tuffride® may cause uneven color, which doesn't affect mechanical function.
For details of Tuffride®, see P.1907.

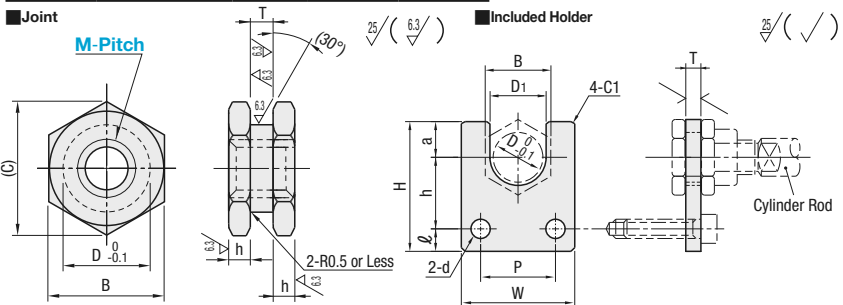
Part Number	Type	M-Pitch	T	D	L	h	B	C	D1	A	T1	h1	W	H	a	P	d	d1	H1	Lu	Unit Price
FJRHA		3-0.5	4	6	5	3	8	9.2	6.5	12	8	4	34	13	5	24	4.5	8	4.4	13	
		4-0.7	4	7	6	3	10	11.5	8	14	8	4	36	15	6	26	4.5	8	4.4	14	
		5-0.8	6	8	7	3	12	13.9	9	17	10	4	42	18	7	30	5.5	9.5	5.4	17	
		6-1.0	6	10	8	4	14	16.2	11	19	11	5	44	20	8	32	5.5	9.5	5.4	19	
		8-1.25	8	13	9	4	17	19.6	14	23	13	5	52	24	10	38	6.6	11	6.5	22	
		10-1.25	8	16	11	4	21	24.2	18	28	13	5	56	30	12	42	6.6	11	6.5	24	
		14-1.5	12	21	13	4	26	30	23	34	17	5	70	36	15	52	9	14	8.6	30	
		18-1.5	15	25	15	5	30	34.6	27	38	21	6	84	43	19	62	11	17	10.5	36	

Ordering Example: Part Number FJRHA5-0.8

Sheet Metal Holder Set



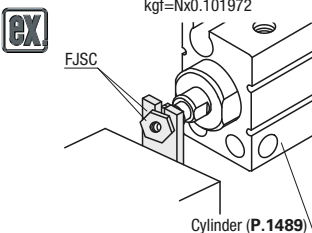
Type	Material	Surface Treatment	Hardness
FJSC	EN 1.1191 Equiv.	Tuffride®	500HV~



Tuffride® may cause uneven color, which doesn't affect mechanical function.
Tuffride® is a trademark of DURFERRIT GmbH. For details of Tuffride®, see P.1907.

Part Number	Type	M-Pitch	T	h	D	B	(C)	Tolerance	B	D1	W	H	a	h	ℓ	P	d	Maximum Applied Tensile/Compression Force (N)	Unit Price
FJSC		3-0.5	2.3	+0.3	6	8	9.2	±0.19	8	6.5	16	25	5	14	6	8	4.5	19	
		4-0.7	2.3	+0.25	7	10	11.5	±0.19	10	8	19	26	6	14	6	10	4.5	54	
		5-0.8	3.2	+0.35	8	12	13.9	±0.23	12	9	22	33	7	18	8	12	5.5	123	
		6-1.0	3.2	+0.3	10	14	16.2	±0.23	14	11	25	34	8	18	8	14	5.5	123	

Ordering Example: Part Number FJSC4-0.7



Floating Joints - Quick Connection Type

[Tapped] Cylinder Connector Fixed

■Features: The tip is a connector connected to threaded cylinder rod. It is a low-priced fixed type.



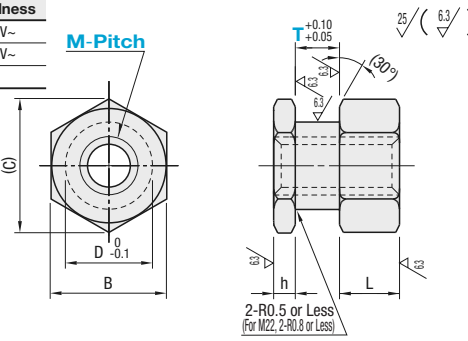




Type	Material	Surface Treatment	Hardness
FJG	EN 1.1191 Equiv.	Hard Chrome Plating	750HV~
FJR	EN 1.1191 Equiv.	Tufftride®	500HV~
FJRSS	EN 1.4301 Equiv.	-	-

☞ For FJRSL, see eCatalog.

☞ Tufftride® is a trademark of DURFERRIT GmbH.
☞ Tufftride® may cause uneven color, which doesn't affect mechanical function.
☞ For details of Tufftride®, see P.1907.



■Fixed

Part Number		T *Specification not required for FJG.	L	h	D	B	C	Unit Price			Applicable Holder										
Type	M-Pitch							FJG	FJR	FJRSS	HLRA□ P1533	HLRB□ P1535	HLRC□ P1534	HLRE□ P1536							
FJG FJR FJRSS	3-0.5	4	5	3	6	8	9.2							-							
	4-0.7		6		7	10	11.5								HLRE7						
	5-0.8	7	8		12	13.9								HLRE8							
	6-1.0	6	8	4	10	14	16.2							HLRE10							
	8-1.0		9		13	17	19.6		-					HLRE13							
	8-1.25	11			16	21	24.2			-					HLRE16						
	10-1.25							12								-					HLRE18
	12-1.25															-					HLRE21
	14-1.5	12	13	5	21	26	30			-					HLRE25						
	16-1.5		15		25	30	34.6			-											
	18-1.5		17		27	32	36.9			-			-		-						
	22-1.5	20	17	6	27	32	36.9			-											

☞ FJG is a floating connector for air cylinders.

☞ FJG is a floating connector for air cylinders.

**Ordering Example**

Part Number - T

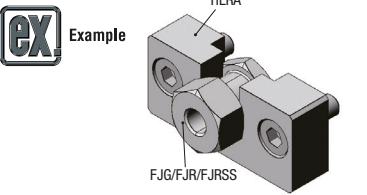
FJG8-1.25

FJR5-0.8 - 6

FJRSS4-0.7 - 4

■Features for new standard "FJG"

- Global standard supported internationally
- Low price is realized through mass production.
- Plating makes the external quality superior to the previous products.



■T Selectable Type

Part Number		T Selection										L	h	D	B	(C)	Unit Price	
Type	M-Pitch	FJR					FJRSS										FJR	FJRSS
FJR FJRSS	3-0.5	2	3	5	6		3					5	3	6	8	9.2		
	4-0.7	2	3	5	6	8	3	5	6	8		6		7	10	11.5		
	5-0.8	3	4	5	8	9	3	4	5	8	9	7		8	12	13.9		
	6-1.0	3	4	5	8	9	4	5	8			8	4	10	14	16.2		
	8-1.0											9		13	17	19.6		-
	8-1.25	4	5	6	9	10	5	6		12		10		13	15	16		
	10-1.25	4	5	6	9	10	6	9	10	12		11	4	16	21	24.2		-
	10-1.5											12		18	23	26.6		-
	12-1.25											13		21	26	30		-
	12-1.5											14	5	25	30	34.6		-
	14-1.5	5	6	8	9	10	8	9	10	16	19	15		27	32	36.9		-
	16-1.5											17						-
18-1.5											15	5	25	30	34.6		-	
22-1.5											17	6	27	32	36.9		-	

☞ For compatible holders, see HLRAF (P.1533).

**Ordering Example**

Part Number - T

FJR5-0.8 - 8

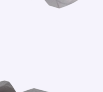
FJRSS4-0.7 - 8

Floating Joints - Quick Connection Type

[Tapped] Cylinder Connector Configurable

■Features: Fine adjustment of size is possible with size configurable type.

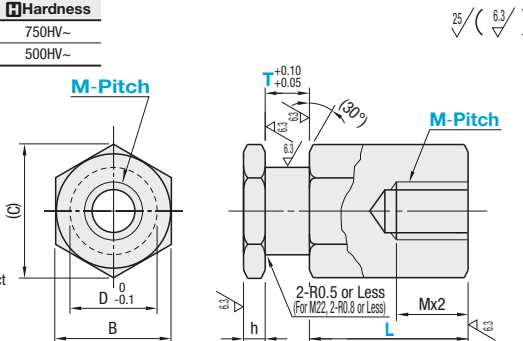




Type	Material	Surface Treatment	Hardness
FJGF	EN 1.1191 Equiv.	Hard Chrome Plating	750HV~
FJRL	EN 1.1191 Equiv.	Tufftride®	500HV~

☞ For FJRSL, see eCatalog.

☞ Tufftride® is a trademark of DURFERRIT GmbH.
☞ Tufftride® may cause uneven color, which doesn't affect mechanical function.
☞ For details of Tufftride®, see P.1907.
☞ No Tufftride® Treatment on the Thread End of FJRL.



■T / L Configurable

Part Number		T		L	h	D	B	C	Unit Price
Type	M-Pitch	0.1mm Increment	1mm Increment						
FJGF	3-0.5	2.0~20.0	3~10	3	6	8	9.2		
	4-0.7	2.0~20.0	3~20						
	5-0.8	2.0~20.0	3~20						
	6-1.0	3.0~20.0	4~30	4	10	14	16.2		
	8-1.0	3.0~20.0	4~30						
	8-1.25	3.0~20.0	4~30						
	10-1.25	3.0~20.0	4~40	5	16	21	24.2		
	10-1.5	3.0~20.0	4~40						
	12-1.25	4.0~20.0	5~40						
	12-1.5	4.0~20.0	5~40	6	18	23	26.6		
	14-1.5	4.0~20.0	5~40						
	16-1.5	8.0~30.0	8~40						
	18-1.5	8.0~30.0	8~40	5	25	30	34.6		
	22-1.5	10.0~30.0	10~40						

☞ When h+T+L≤3M, the tapped hole goes through.

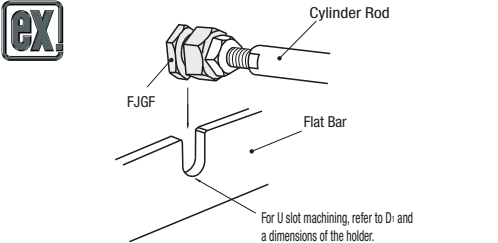
☞ FJGF is a floating connector for air cylinders.

☞ FJGF is a floating connector for air cylinders.

■Example of Connector T Dimensions for Connection to Flat Bar

Processing Method	Plate Thickness	Tolerance Upper Limit	Tolerance Lower Limit	Connector T Dimension	Backlash*
Ex. 1 Cold Rolling	4.5	0	-0.1	4.5	0.05~0.2
Ex. 2 Hot Rolling	5	+0.3	-0.3	5.3	0.05~0.7

* Clearance for tolerance between Flat Bar and Connector



■T Selection / L Configurable

Part Number		T										L	h	D	B	(C)	Unit Price	
Type	M-Pitch	Selection										1mm Increment						
FJRL	3-0.5	2	3	4	5	6						3-50	3	6	8	9.2		
	4-0.7	2	3	4	5	6	8					3-60		7	10	11.5		
	5-0.8	3	4	5	6	8	9	10				3-60		8	12	13.9		
	6-1.0	3	4	5	6	8	9	10	12				4-80	4	10	14	16.2	
	8-1.0	4 5 6 8 9 10 12 13 15 16										4-100	13		17	19.6		
	8-1.25	4 5 6 8 9 10 12 13 15 16 19 20										4-100	16		21	24.2		
	10-1.25	5 6 8 9 10 12 13 15 16 19 20										5-100	5	18	23	26.6		
	10-1.5	5 6 8 9 10 12 13 15 16 19 20										5-100		21	26	30		
	12-1.25	8 9 10 12 13 15 16 19 20										8-100		6	25	30	34.6	
	12-1.5	8 9 10 12 13 15 16 19 20										8-100	27		32	36.9		
	14-1.5	12 15 20										10-100						
	16-1.5																	
	18-1.5																	
	22-1.5																	

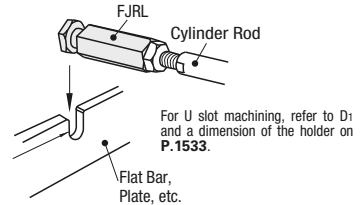
☞ For compatible holders, see HLRAF (P.1533).

**Ordering Example**

Part Number - T - L

FJRL4-0.7 - 8 - 20

■It is possible to extend or adjust the join length.



Floating Joints - Quick Connection Type

[Tapped] Cylinder Connector - Separate Type / Circular Type

Floating Joints - Quick Connection Type

[Tapped] Cylinder Connector and Holder Set / Connector Only

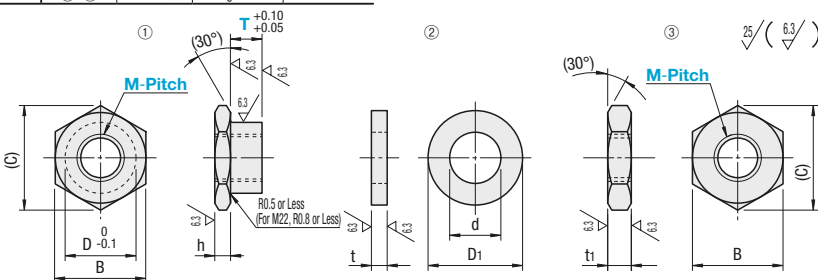
Separate Type



RoHS

Type	Components	Material	Surface Treatment	Hardness
FJT	① ②	EN 1.1191 Equiv.	Tufftride®	500HV~
FJTSW	① ②	EN 1.4301 Equiv.	Nitriding Treatment	1000HV~
FJN	① ③	EN 1.1191 Equiv.	Tufftride®	500HV~
FJNSW	① ③	EN 1.4301 Equiv.	Nitriding Treatment	1000HV~

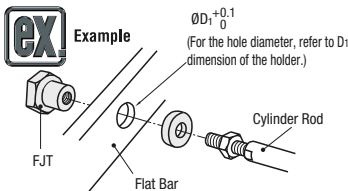
⚠ Tufftride® is a trademark of DUFERRIT GmbH.
⚠ Tufftride® may cause uneven color, which doesn't affect mechanical function.
⚠ For details of Tufftride®, P.1907



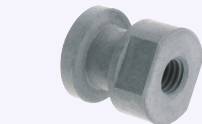
Part Number		T Selection										Unit Price			
Type	M-Pitch	T	D	B	(C)	t	t1	D1	d	FJT	FJTSW	FJN	FJNSW		
FJT FJTSW FJN FJNSW	3-0.5	2	3	4	5	6		6	8	9.2					
	4-0.7	2	3	4	5	6	8	7	10	11.5					
	5-0.8		3	4	5	6	8	8	12	13.9					
	6-1.0		3	4	5	6	8	9	10	12					
	8-1.0			4	5	6	8	9	10	12	13	15	16		
	8-1.25														
	10-1.25														
	10-1.5														
	12-1.25														
	12-1.5														
	14-1.5														
	18-1.5														
	22-1.5														

⚠ When T=2, only FJT and FJN are available.

Part Number	-	T
FJT6-1.0	-	10

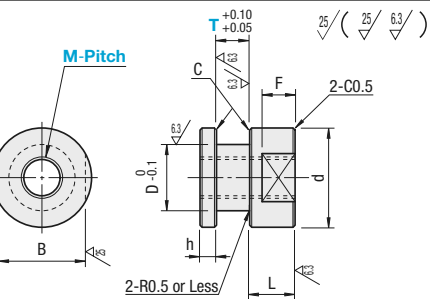


Circular Type



RoHS

Type	Material	Surface Treatment	Hardness
FJCL	EN 1.1191 Equiv.	Tufftride®	500HV~



⚠ Tufftride® is a trademark of DUFERRIT GmbH.
⚠ Tufftride® may cause uneven color, which doesn't affect mechanical function.
⚠ For details of Tufftride®, P.1907

Part Number		T Selection										Unit Price			
Type	M-Pitch	T	D	B	(C)	t	t1	D1	d	FJT	FJTSW	FJN	FJNSW		
FJCL	3-0.5	2	3	4	5	6		6	8	9.2					
	4-0.7	2	3	4	5	6	8	7	10	11.5					
	5-0.8		3	4	5	6	8	8	12	13.9					
	6-1.0		3	4	5	6	8	9	10	12					
	8-1.25			4	5	6	8	9	10	12	13	15	16		
	8-1.5														
	10-1.5														
	12-1.5														
	14-1.5														
	18-1.5														
	22-1.5														
	25-1.5														

Part Number	-	T
FJCL6-1.0	-	8

Features: The tip is a cylinder connector connected to tapped type cylinder rod.

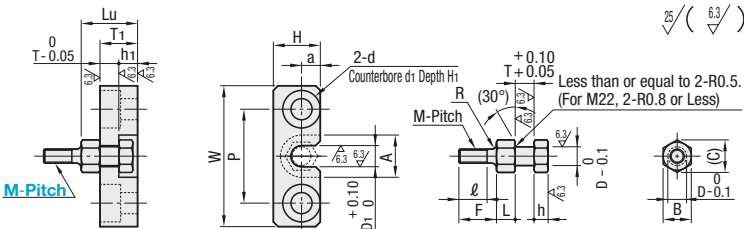
Holder Set



RoHS

Type	Holder Type	Material	Surface Treatment	Hardness
FJDHA	HLRA	EN 1.1191 Equiv.	Tufftride®	500HV~

⚠ Tufftride® is a trademark of DUFERRIT GmbH.
⚠ Tufftride® may cause uneven color, which doesn't affect mechanical function.
⚠ For details of Tufftride®, see P.1907.



Part Number		T Selection										Unit Price			
Type	M-Pitch	T	D	B	(C)	t	t1	D1	d	FJT	FJTSW	FJN	FJNSW		
FJDHA	3-0.5	2	3	4	5	6		6	8	9.2					
	4-0.7	2	3	4	5	6	8	7	10	11.5					
	5-0.8		3	4	5	6	8	8	12	13.9					
	6-1.0		3	4	5	6	8	9	10	12					
	8-1.25			4	5	6	8	9	10	12	13	15	16		
	8-1.5														
	10-1.5														
	12-1.5														
	14-1.5														
	18-1.5														
	22-1.5														
	25-1.5														

Ordering Example	Part Number
FJDHA5-0.8	

Connector only

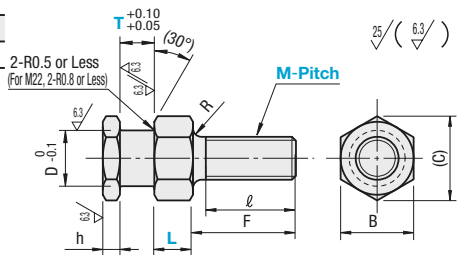


RoHS

Type	Material	Surface Treatment	Hardness
FJD	EN 1.1191 Equiv.	Tufftride®	500HV~

⚠ For FJDSW, see eCatalog.

⚠ Tufftride® is a trademark of DUFERRIT GmbH.
⚠ Tufftride® may cause uneven color, which doesn't affect mechanical function.
⚠ For details of Tufftride®, see P.1907.



Fixed

Part Number		T Selection										Unit Price			
Type	M-Pitch	T	D	B	(C)	t	t1	D1	d	FJT	FJTSW	FJN	FJNSW		
FJD	3-0.5	2	3	4	5	6		6	8	9.2					
	4-0.7	2	3	4	5	6	8	7	10	11.5					
	5-0.8		3	4	5	6	8	8	12	13.9					
	6-1.0		3	4	5	6	8	9	10	12					
	8-1.25			4	5	6	8	9	10	12	13	15	16		
	8-1.5														
	10-1.5														
	12-1.5														
	14-1.5														
	18-1.5														
	22-1.5														
	25-1.5														

T Selectable Type

Part Number		T Selection										Unit Price			
Type	M-Pitch	T	D	B	(C)	t	t1	D1	d	FJT	FJTSW	FJN	FJNSW		
FJD	3-0.5	2	3	4	5	6		6	8	9.2					
	4-0.7	2	3	4	5	6	8	7	10	11.5					
	5-0.8		3	4	5	6	8	8	12	13.9					
	6-1.0		3	4	5	6	8	9	10	12					
	8-1.25			4	5	6	8	9	10	12	13	15	16		
	8-1.5														
	10-1.5														
	12-1.5														
	14-1.5														
	18-1.5														
	22-1.5														
	25-1.5														

⚠ For compatible holders, see HLRAF (P.1533).

Ordering Example	Part Number	-	T
FJD5-0.8	-		5

Floating Joints - Quick Connection Type

[Threaded] Cylinder Connector - Configurable Type / Circular Type

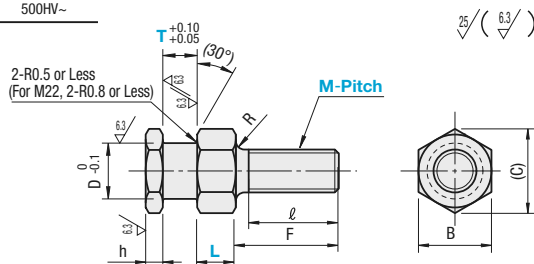
Configurable Type



Type	Material	Surface Treatment	Hardness
FJDL	EN 1.1191 Equiv.	Tuffride®	500HV~

- Tuffride® is a trademark of DURFERRIT GmbH.
- Tuffride® may cause uneven color, which doesn't affect mechanical function.
- For details of Tuffride®, see P.1907.
- No Tuffride® Treatment on F Dimension for FJDL.

RoHS



25 (6.3)

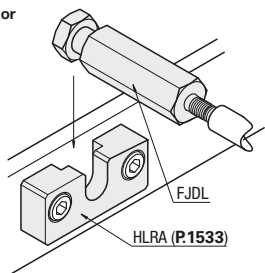
Part Number		T Selection										L	h	D	F	ℓ	B	(C)	R	Unit Price
Type	M-Pitch											1mm Increment								
FJDL	3-0.5	3	4								3-15	3	4	8	6	6	6.9	1		
	4-0.7	3	4	5	6	8					3-20			11	9		8			9.2
	5-0.8	3	4	5	6	8	9	10	3-25	6	13			11	8		9.2			
	6-1.0		4	5	6	8					4-30			7	19		17			10
	8-1.25			5	6	8					12	4-40	10	20	18	14	16.2	1.5		
	10-1.5				6	8	9	10	12		4-50	13	24	21	17	19.6				
	16-2.0								12	20	8-80	4	21	40	37	26	30	2		
	20-2.5								15	20	10-100		5	25	50	46	30			34.6
	22-2.5								12	15	20		6	27	60	56	32	36.9	2.5	
											10-100									

For compatible holders, see HLRAF (P1533).

Ordering Example: Part Number - T - L
FJDL10-1.5 - 8 - 20



It is possible to extend or adjust the join length.



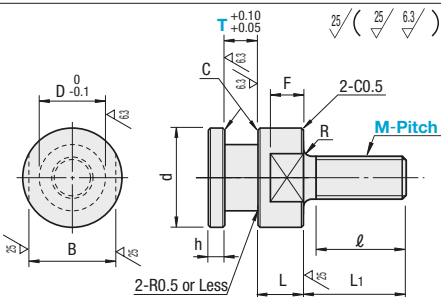
Circular Type



Type	Material	Surface Treatment	Hardness
FJCLM	EN 1.1191 Equiv.	Tuffride®	500HV~

- Tuffride® is a trademark of DURFERRIT GmbH.
- Tuffride® may cause uneven color, which doesn't affect mechanical function.
- For details of Tuffride®, see P.1907.

RoHS



Part Number																	Applicable Holder	
Type	M-Pitch	T Selection			h	D	d	L	F	L ₁	ℓ	B	R	C	Unit Price	T Dimensions for FJCLM	HLRB P1535	
FJCLM	4-0.7	3	4		3	4	14	6	4	11	9	10	1.5	0.2		4	HLRB4	
	5-0.8		4	5		6	6	7	5	13	11	12					HLRB6	
	6-1.0		4	6		7	16	8	6	19	17	14					HLRB7	
	8-1.25			6	8	4	10	20	9	7	20	18	17	0.5		6	HLRB10	
	10-1.5				8		13	24	11	8	24	21	21			8	HLRB13	
	16-2.0				12		21	35	13	11	35	32	30			12	HLRB21	
	20-2.5						15	5	25	40	15	13	40			37	36	15

Ordering Example: Part Number - T
FJCLM4-0.7 - 4

Floating Joints - Quick Connection Type

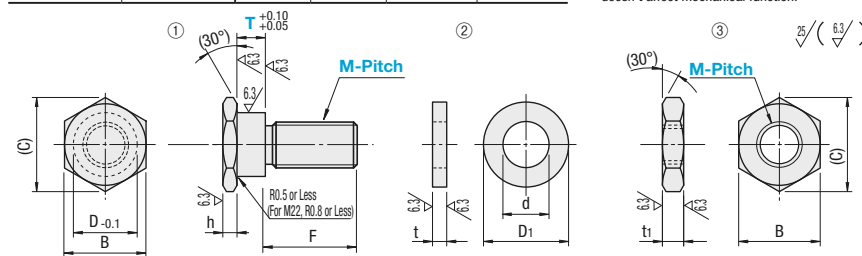
[Threaded] Cylinder Connector - Separate Type / Bolt Mount Type

Separate Type



RoHS

Type		Components	Material	Surface Treatment	Hardness
F Fixed	F Configurable	① ②	EN 1.1191 Equiv.	Tuffride®	500HV~
FJTM	FJTMF	① ②			
FJNM	FJNMF	① ③			



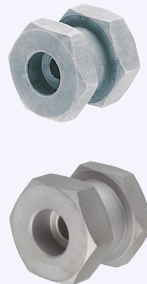
- Tuffride® is a trademark of DURFERRIT GmbH.
- No Tuffride® Treatment on F Dimension for FJTMF and FJNMF.
- For details of Tuffride®, see P.1907.
- Tuffride® may cause uneven color, which doesn't affect mechanical function.

Part Number		T Selection										F		h	D	B	(C)	t	t ₁	D ₁	d
Type	M-Pitch											F Fixed	F Configurable (1mm Increment)								
F Fixed FJTM FJNM	3-0.5	3	4*							10	7-15	3	6	8	9.2	3	5	9	3.2		
	4-0.7	3	4*							13	8-20		7	10	11.5			11	4.3		
	5-0.8	3	4	6*						15	8-25		8	12	13.9			13	5.3		
	6-1.0			6*						21	9-30		10	14	16.2			15	6.4		
	8-1.25		4	6	8*	9				23	11-40		13	17	19.6			18	8.4		
F Configurable FJTMF FJNMF	10-1.5				8*					27	13-50	4	16	21	24.2	4	8	22	10.5		
	16-2.0					12	15*			43	21-80		17	22	27.5			27	13.5		
	20-2.5						15*			48	24-100		18	24	30.0			29	15.0		
	22-2.5						15	20*		52	27-100		19	26	32.0			31	16.0		
													6	27	32			36.9	35	23	

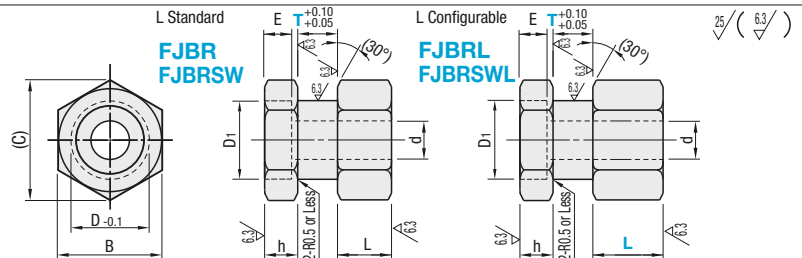
Ordering Example: Part Number - T - F
FJTM5-0.8 - 4
FJNMF10-1.5 - 8 - 20

M-Pitch	Unit Price				Applicable Holder			
	F Fixed	F Configurable	FJTM	FJNMF	HLRA P1533	HLRB P1535	HLRC P1534	HLRE P1536
3-0.5					HLRA6	HLRB6	HLRC6	-
4-0.7					HLRA7	HLRB7	HLRC7	HLRE7
5-0.8					HLRA8	HLRB8	HLRC8	HLRE8
6-1.0					HLRA10	HLRB10	HLRC10	HLRE10
8-1.25					HLRA13	HLRB13	HLRC13	HLRE13
10-1.5					HLRA16	HLRB16	HLRC16	HLRE16
16-2.0					HLRA25	HLRB25	HLRC25	HLRE25
20-2.5					HLRA25	HLRB25	HLRC25	HLRE25
22-2.5					HLRA27	-	HLRC27	-

Bolt Mount Type



RoHS



- Tuffride® is a trademark of DURFERRIT GmbH.
- For L Configurable Type, surface treatment is not added to the end.
- Tuffride® may cause uneven color, which doesn't affect mechanical function.
- For details of Tuffride®, see P.1907.

L Standard	L Configurable	Material	Surface Treatment	Hardness
FJBR	FJBRL	EN 1.1191 Equiv.	Tuffride®	500HV~
FJBRSW	FJBRSWL	EN 1.4301 Equiv.	Nitriding Treatment	1000HV~

Part Number		T Selection										L		h	D	B	(C)	D ₁	d	E	Unit Price			
Type	No.											L Fixed	L Configurable (trim increment)								FJBR	FJBRSW	FJBRL	FJBRSWL
L Fixed	FJBR	3	3	4	5	6	8	9	10	12	5	3-10	4	10	14	16.2	6.5	3.4	3.5					
	FJBRSW	4										5	13	17	19.6	8	4.5	4.5						
		5	4	5	6	8	9	10	12	15			6	16	21	24.2	9.5	5.5	5.5					
L Configurable	FJBRL	6									6	3-20	8	18	23	26.6	11	6.6	6.5					
	FJBRSWL	8			5	6	8	9	10	12		15		10	21	26	30	14	9	8.6				
		10					8	9	10	12		15		10	12	25	30	34.6	17.5	11	10.8			

Ordering Example: Part Number - T - L
FJBR6 - 8
FJBRL10 - 12 - 14

Holder

Side Mount, Flange Type

■Features: Prepared for types with different hardness.



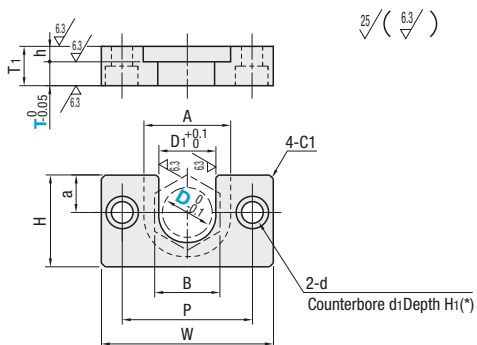
■T Fixed

Type	Material	Surface Treatment	Hardness
HLRA	EN 1.1191 Equiv.	Tuffride®	500HV~
HLRASW	EN 1.4301 Equiv.	Nitriding Treatment	1000HV~
HLRASS		-	-
HLRAC		Hard Chrome Plating	700HV~

■T Configurable

Type	Material	Surface Treatment	Hardness
HLRAF	EN 1.1191 Equiv.	Tuffride®	500HV~

- ⚠ Tuffride® is a trademark of DUFERRIT GmbH.
- ⚠ Tuffride® may cause uneven color, which doesn't affect mechanical function.
- ⚠ For details on Tuffride®, see P.1907.
- ⚠ * Holes for HLRAF are straight holes, not counterbored.



■T Fixed

Part Number		T	B	D1	A	T1	h	W	H	a	P	d	d1	H1	Unit Price			
Type	D														HLRA	HLRASW	HLRASS	HLRAC
HLRA HLRASW HLRASS HLRAC	4	6	4.5	9	8	4	30	10	4	20	4.5	8	4.4					
	6	8	6.5	12	8	4	34	13	5	24	5.5	9.5	5.4					
	7	10	8	14	8	4	36	15	6	26	6.6	11	6.5					
	8	12	9	17	10	4	42	18	7	30	9	14	8.6					
	10	14	11	19	11	4	44	20	8	32	11	17	10.5					
	13	17	14	23	13	5	52	24	10	38	11	17	10.5					
	16	21	18	28	13	5	56	30	12	42	11	17	10.5					
	18	23	20	31	17	6	66	34	14	48	11	17	10.5					
	21	26	23	34	17	6	70	36	15	52	11	17	10.5					
	25	15	30	27	38	21	84	43	19	62	11	17	10.5					
	27	20	32	29	40	27	7											

■T Configurable

Part Number		T	B	D1	A	T1	h	W	H	a	P	d	d1	H1	Unit Price			
Type	D	1mm Increment													HLRAF			
HLRAF	6	3~6	8	6.5	12	T+h	4	34	13	5	24	4.5	8	4.4				
	7	3~8	10	8	14	T+h	4	36	15	6	26	5.5	9.5	5.4				
	8	3~10	12	9	17	T+h	4	42	18	7	30	6.6	11	6.5				
	10	3~12	14	11	19	T+h	4	44	20	8	32	9	14	8.6				
	13	4~12	17	14	23	T+h	5	52	24	10	38	11	17	10.5				
	16	5~15	21	18	28	T+h	5	56	30	12	42	11	17	10.5				
	21	6~15	26	23	34	T+h	6	70	36	15	52	11	17	10.5				
	25	8~20	30	27	38	T+h	6	84	43	19	62	11	17	10.5				
	27	12~20	32	29	40	T+h	7											



Ordering Example
Part Number - T
HLRA8
HLRAF6 - 3

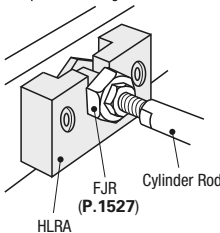


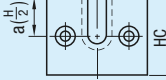
Example



Alterations
Part Number - (HC)
HLRA8 - HC30

App. Example of Floating Joints and Holders



Alteration Code	Height HC																								
	Available for HLRA only.																								
																									
Spec.	The range of HC is shown as below.																								
	<table><tr><th>D</th><th>HC 1mm Increment</th><th>a</th></tr><tr><td>4</td><td>12~20</td><td rowspan="10"></td></tr><tr><td>6</td><td>16~25</td></tr><tr><td>7</td><td>18~30</td></tr><tr><td>8</td><td>22~30</td></tr><tr><td>10</td><td>24~35</td></tr><tr><td>13</td><td>28~40</td></tr><tr><td>16</td><td>36~45</td></tr><tr><td>18</td><td>40~50</td></tr><tr><td>21</td><td>42~50</td></tr><tr><td>25</td><td>48~60</td></tr></table>	D	HC 1mm Increment	a	4	12~20		6	16~25	7	18~30	8	22~30	10	24~35	13	28~40	16	36~45	18	40~50	21	42~50	25	48~60
D	HC 1mm Increment	a																							
4	12~20																								
6	16~25																								
7	18~30																								
8	22~30																								
10	24~35																								
13	28~40																								
16	36~45																								
18	40~50																								
21	42~50																								
25	48~60																								
	⚠ Not applicable to D27.																								

Holder

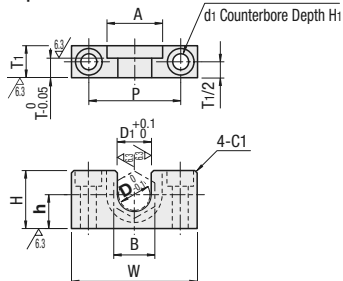
Top/Bottom Mount, Flange Type

■Features: Up/down mounting direction and height is also configurable.

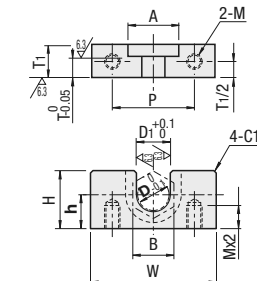


Mounting method	Height h Fixed	Height h Configurable	Material	Surface Treatment	Hardness
Top Mount	HLRC	HLRCH	EN 1.1191 Equiv.	Tuffride®	500HV~
Bottom Mount	HLRCB	HLRCBH			

Top Mount



Bottom Mount



- ⚠ Tuffride® may cause uneven color, which doesn't affect mechanical function.
- ⚠ Tuffride® is a trademark of DUFERRIT GmbH. ⚠ For details on Tuffride®, see P.1907.

■h Fixed

Part Number		h	H	B	D1	A	T	T1	W	P	d	d1	H1	M	Unit Price	
Type	D														HLRC	HLRCB
Top Mount HLRC	4	6	h+4	6	4.5	9	4	8	30	20	3.5	6.5	3.5	3		
	6	8	h+5	8	6.5	12	4	10	34	24	4.5	8	4.5	4		
	7	9	h+6	10	8	14	6	10	36	26	5.5	9.5	5.5	5		
	8	11	h+7	12	9	17	8	12	42	30	6.6	11	6.5	6		
	10	12	h+8	14	11	19	6	12	44	32	9	14	9	8		
	13	14	h+10	17	14	23	8	13	52	38	11	17	10.5			
	16	18	h+12	21	18	28	8	13	56	42	11	17	10.5			
	18	20	h+14	23	20	31	12	17	66	48	11	17	10.5			
	21	21	h+15	26	23	34	12	17	70	52	11	17	10.5			
	25	24	h+19	30	27	38	15	21	84	62	11	17	10.5			
	27			32	29	40	20	27								

■h Configurable

Part Number		h	H	B	D1	A	T	T1	W	P	d	d1	H1	M	Unit Price	
Type	D	1mm Increment													HLRCH	HLRCBH
Top Mount HLRCH	4	7~16	h+4	6	4.5	9	4	8	30	20	3.5	6.5	3.5	3		
	6	9~20	h+5	8	6.5	12	4	10	34	24	4.5	8	4.5	4		
	7	10~24	h+6	10	8	14	6	10	36	26	5.5	9.5	5.5	5		
	8	12~23	h+7	12	9	17	8	12	42	30	6.6	11	6.5	6		
	10	13~27	h+8	14	11	19	6	12	44	32	9	14	9	8		
	13	15~30	h+10	17	14	23	8	13	52	38	11	17	10.5			
	16	19~33	h+12	21	18	28	8	13	56	42	11	17	10.5			
	18	21~36	h+14	23	20	31	12	17	66	48	11	17	10.5			
	21	22~35	h+15	26	23	34	12	17	70	52	11	17	10.5			
	25	23~41	h+19	30	27	38	15	21	84	62	11	17	10.5			
	27			32	29	40	20	27								



Ordering Example
Part Number - h
HLRC13
HLRCH27 - 30

Holder

Bar Type

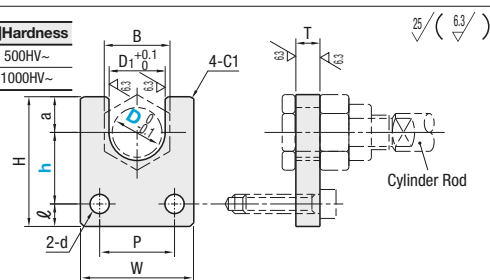
■ Features: Prepared for types with different hardness.

Side Mount



Height h Fixed	Height h Configurable	Material	Surface Treatment	Hardness
HLRB	HLRBH	EN 1.1191 Equiv.	Tufftride®	500HV~
HLRBSW	-	EN 1.4301 Equiv.	Nitriding Treatment	1000HV~

For details on Tufftride®, see P.1907.
Tufftride® may cause uneven color, which doesn't affect mechanical function.
Tufftride® is a trademark of DURFERRIT GmbH.



Part Number		h		B	D ₁	T	Tolerance	W	H*	a	ℓ	P	d	Unit Price									
Type	D	HLRB	HLRBH											HLRB	HLRBSW	HLRBH							
Height h Fixed HLRB HLRBSW	4	14	6~20	6	4.5	4	0 -0.12	16	24	4	6	8	4.5										
	6		5~19	8	6.5																		
	7		7~18	10	8																		
	8		7~25	12	9																		
	10	18	9~24	14	11	6	25	34	8	8	14	5.5											
Height h Configurable HLRBH	13	25	12~30	17	14	8	0 -0.15	32	45	10	10	20	6.6										
	16		13~28	21	18				38	47				12	26								
	18		30	19~34	23				20	12				0 -0.18	50	56	14	12	34	9			
	21			18~33	26				23							57	15						
	25	40	21~46	30	27	15	8 -0.22	65	74	19	15	44	11										

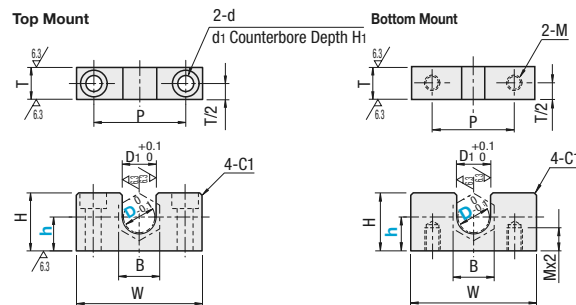
* For height h configurable type, H=a+h+l

Ordering Example	Part Number	-	h
	HLRBH10	-	14

Top/Bottom Mount



Connecting method	Bar Type		Material	Surface Treatment	Hardness
	Height h Fixed	Height h Configurable			
Top Mount	HLRD	HLRDH	EN 1.1191 Equiv.	Tufftride®	500HV~
Bottom Mount	-	HLRDBH			



Tufftride® may cause uneven color, which doesn't affect mechanical function.
Tufftride® is a trademark of DURFERRIT GmbH. For details on Tufftride®, see P.1907.

Part Number		h																Unit Price			
Type	D	HLRD Standard	HLRDH, HLRDBH 1mm Increment		H	B	D1	T	Tolerance	W	P	d	d1	H1	M	HLRD	HLRDH	HLRDBH			
Height h Fixed HLRD	Top Mount	7	9	10-24	h+6	10	8	8	0	36	26	4.5	-	-	4						
	Height h Configurable HLRDBH	8	11	12-23	h+7	12	9	10	-0.15	42	30	5.5	9.5	5.5	5						
		10	12	13-27	h+8	14	11	12	0	44	32										
		13	14	15-30	h+10	17	14	13	-0.18	52	38										
	Bottom Mount	16	18	19-33	h+12	21	18	15		56	42	6.6	11	6.5	6						
Height h Configurable HLRDBH		18	20	21-36	h+14	23	20	16	0	66	48										
		21	21	22-35	h+15	26	23	19	-0.22	70	52										
		25	24	25-41	h+19	30	27	20		84	62	11	17	11	10						

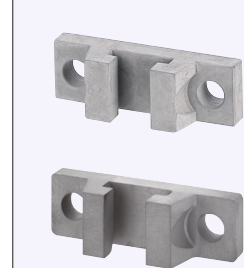
Ordering Example	Height h Fixed	Part Number	-	h
		HLRD13	-	21
	Height h Configurable	Part Number	-	h
		HLRDH16	-	21

Holder

Compact / L-Shaped

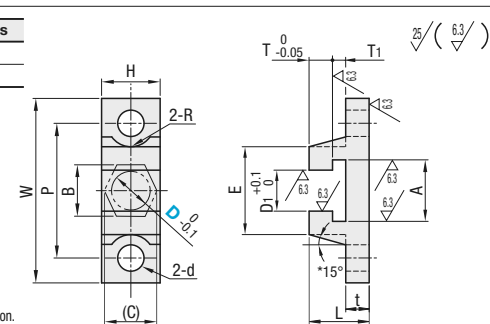
■ Features: The holder saves space.

Compact



Type	Material	Surface Treatment	Hardness
HLRE	EN 1.1191 Equiv.	Tufftride®	500HV~
HLRESW	EN 1.4301 Equiv.	Nitriding Treatment	1000HV~

* D=18, 21 and 25 are straight without taper.
Tufftride® is a trademark of DURFERRIT GmbH.
Tufftride® may cause uneven color, which doesn't affect mechanical function.
For details of Tufftride®, see P.1907.

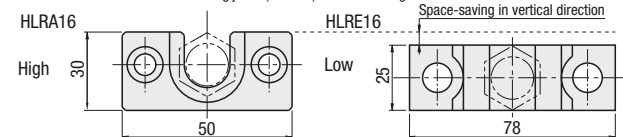


Part Number		B		(C)		D1		T		T1		W		H		P		R		d		L		t		A		E		Unit Price		
Type	D																													HLRE	HLRESW	
HLRE	7	10	11.5	8	4	4.5	45	12	32	5	4.5	13.5	5	13	20	15.4	22	17.5	24	25.5	39	28.5	12	31.5	56	35.2	64					
	8	12	13.9	9	6																											
	10	14	16.2	11	8																											
	13	17	19.6	14	10																											
	16	21	24.2	18	12																											
	18	23	26.6	20	14																											
	21	26	30	23	16																											
	25	30	34.6	27	15																											

Ordering Example	Part Number
	HLRE8

Features

1. In comparison with the conventional holder (HLRA), overall height (H dimension) is lower.
2. The holder saves space.
3. The conventional floating joints (FJR etc.) can be used together.



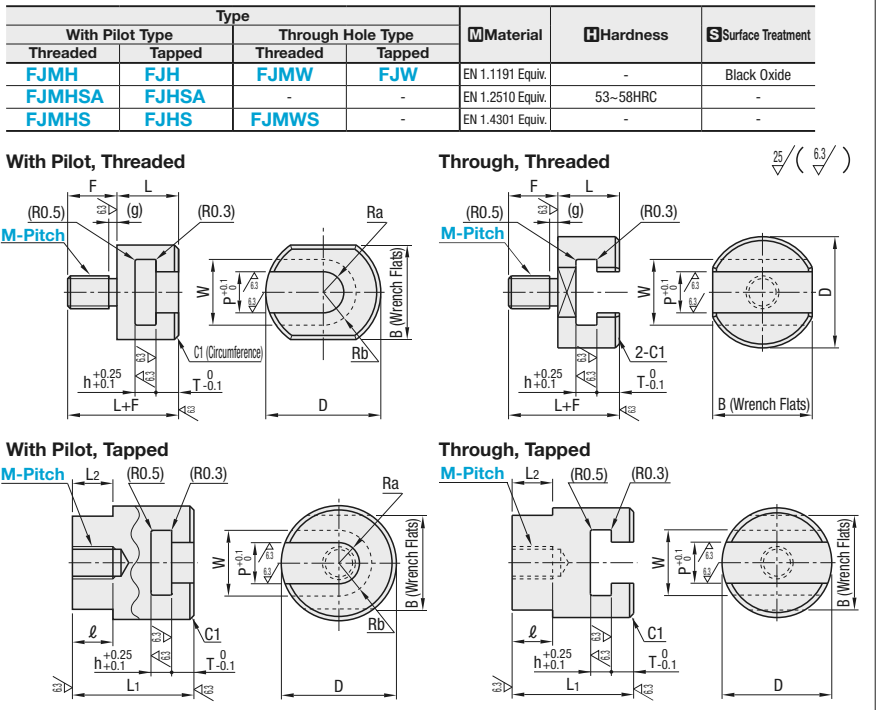
L-Shaped



Type	M Material	S Surface Treatment	H Hardness
HLRL	EN 1.0038 Equiv.	Tufftride®	500HV~

Floating Joints T-Slots

T-Slot Mounted Holder

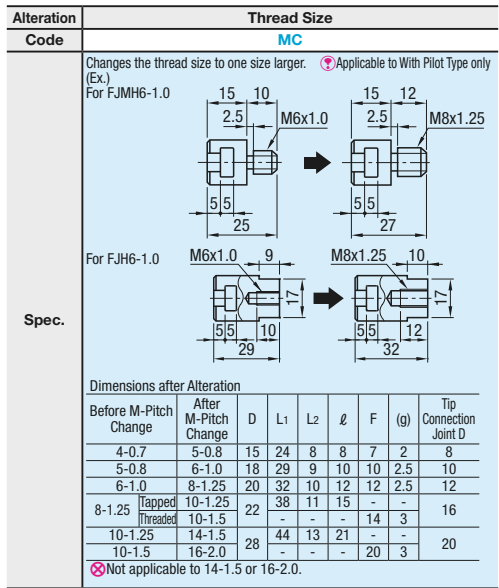


Part Number			D	P	W	Ra (P/2)	Rb (W/2)	B	L	L ₁	L ₂	T	h	ℓ	F	(g)	Tip Connection Joint D
Type		M-Pitch															
With Pilot, Threaded FJMH FJMHA FJMHS	Through, Threaded FJMW	4-0.7	15	5	8	2.5	4	13	12	21	7	4	4	6	6	2	8
		5-0.8	18	6	9	3	4.5	15		24	8			8	7		10
		6-1.0	20	7	11	3.5	5.5	17	15	29	9	5	5	10	10	2.5	12
		8-1.25	22	9	13	4.5	6.5	19		32	10			12	12		16
With Pilot, Tapped FJH FJHSA FJHS	Through, Tapped FJW	10-1.25	28	12	17	6	8.5	25	-	38	11	6	6	15	-	-	20
		10-1.5							18	-	-			-	14	3	
		14-1.5	33	15	21	7.5	10.5	30	-	44	13			21	-	-	25
		16-2.0							20	-	-			-	20	3	

Ordering Example
Part Number
FJMH8-1.25
FJH10-1.25

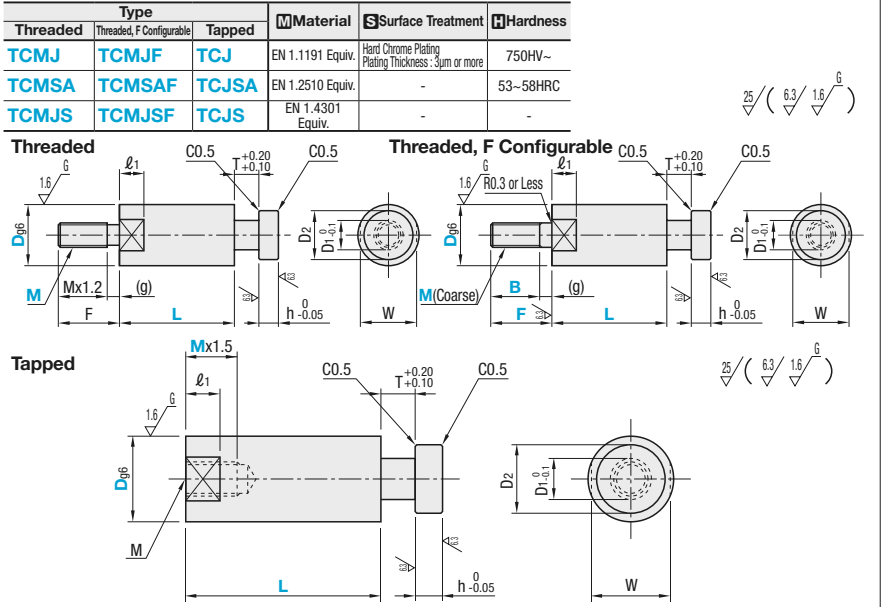
Alterations
Part Number - (MC)
FJMH8-1.25 - MC

M-Pitch	Unit Price							
	With Pilot Type				Through Hole Type			
	Threaded	Tapped	Threaded	Tapped	Threaded	Tapped	Threaded	Tapped
4-0.7	FJMH	FJMW	FJMHA	FJHSA	FJMHS	FJHS	FJMW	FJWS
5-0.8								
6-1.0								
8-1.25								
10-1.25								
10-1.5								
14-1.5								
16-2.0								



Floating Joints T-Slots

Tip Connection Joints

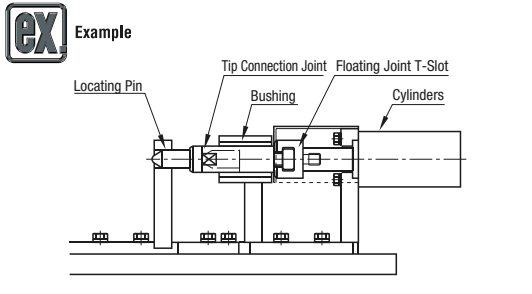
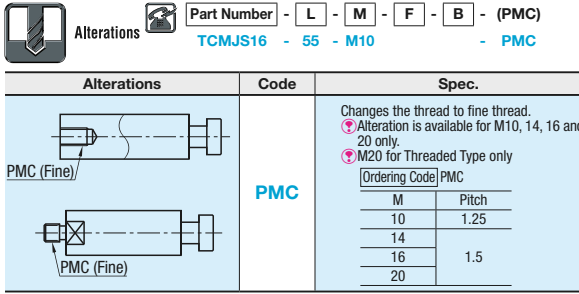


Part Number		L 1mm Increment	M (Coarse)	* Selection only for F Configurable 1mm Increment		h	D1	D2	T	W	ℓ1
Type	D			F	B						
Threaded											
TCMJ	8	10~100	3 4 5 6*								
TCMSA	10	10~100	4 5 6 8*								
TCMJS	12	15~150	5 6 8 10*								
Threaded, F Configurable											
TCMJF	16	15~150	6 8 10 12*								
TCMSAF	20	20~200	8 10 12 14 16*								
TCMJSF	25	25~200	10 12 14 16 20*								
Tapped											
TCJ											
TCJSA											
TCJS											

* marked dimensions are applicable to Threaded only.

Ordering Example
Part Number - L - M - F - B
TCMJ10 - 80 - M6
TCMSAF20 - 200 - M16 - F45 - B35

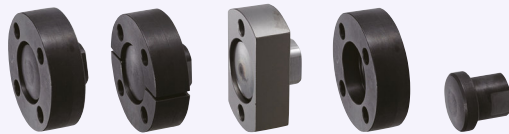
D	Unit Price							
	Threaded		Threaded, F Configurable			Tapped		
	TCMJ	TCMSA	TCMJF	TCMSAF	TCMJSF	TCJ	TCJSA	TCJS
8	Min. L - 100	L101 - Max.	Min. L - 100	L101 - Max.	Min. L - 100	L101 - Max.	Min. L - 100	L101 - Max.
10	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-



Floating Joints Flange Mounting

[Tapped] Standard Type

■ **Features:** Connector can be fixed securely by a flange.

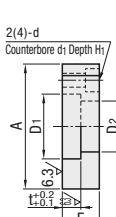
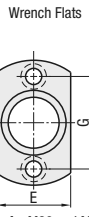
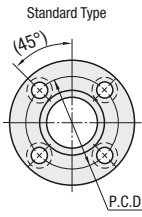


RoHS

Type							Material	H Hardness		S Surface Treatment	
Set			Connector only		Flange only			Flange	Connector		
Standard	Separate	Wrench Flats	L Fixed	L Configurable	Standard	Separate					Wrench Flats
FJA	FJB	FJC	FJCN	FJCNL	FJA-H	FJB-H	FJC-H	EN 1.1191 Equiv.	45~55HRC	Section 45-50HRC Induction Hardened Surface	Black Oxide
FJAS	FJBS	FJCS	FJCNH	FJCNHL	FJAS-H	FJBS-H	FJCS-H	EN 1.4125 Equiv. *			
								* M24 ~ 30 is EN 1.4031 Equiv.			

* M24 ~ 30 is EN 1.4031 Equiv.

Mount Flanges



Cylinder Connector



EN 1.4125 Equiv. / EN 1.4031 Equiv. Hardened Type may be discolored due to hardening. Refer to Allowable Misalignment on the right-hand page.

Set

Part Number		Mount Flanges												Cylinder Connector										Unit Price					
Type	M	A	D1	D2	t	F	P.C.D.	d	d1	H1	E	G	MxPitch	ℓ	L	D	H	T	W	L1	SR	FJA	FJB	FJC	FJAS	FJBS	FJCS		
Standard FJA FJAS	3	42	18	13	5	10	30	4.5	8	5	24	30	3x0.5	6	15	12	17	5	10	6	40								
	4												4x0.7	8															
	5	48	20	15	6	12	34	6	9.5	5.5	28	34	5x0.8	10	20	14	19	6	12	8	50								
	6												6x1.0	12															
	8	51	24	17	8	16	37	7	11	6	30	37	8x1.25	14	25	16	23	8	14	10	60								
Separate FJB FJBS	10	54	28	21		40					32	40	10x1.25	15		20	27												
	12	70	36	27	10	20	52	10	14	8	42	52	12x1.25	18	35	25	34	10	22	12	100								
	14												14x1.5	21															
	16	90	46	35	12	24	68	12	17.5	10	54	68	16x1.5	24	45	32	43	12	27	15									
Wrench Flats FJC FJCS	18												18x1.5	27															
	20												20x1.5	30															
	22	106	56	44	15	30	80	14	20	12		66	80	22x1.5	33	55	40	52	15	32	18	200							
	24													24x1.5	36														
	26	116	66	53	16	32	86				78	86	26x1.5	39	60	49	62	16	41	23									
	30													30x1.5	43														
36	134	74	59	18	40	104	18	26	18	80	104	36x1.5	45	65	54	69	18	46	48	250									

Connector only (See the Set Size Table for detailed sizes.)

Part Number		L		Unit Price			
Type	M	Fixed	Configurable (1mm Increment)	FJCN	FJCNH	FJCNL	FJCNHL
L Fixed FJCN FJCNH	3	15					
	4	20					
	5	25	30~60				
	6	30	40~80				
	8	35	50~100				
	10	40	60~100				
L Configurable FJCNL FJCNHL	12	45					
	14	50					
	16	55					
	18	60					
	20	65					
	22						

Connector only L Configurable

Part Number - L
FJCNL10 - 50

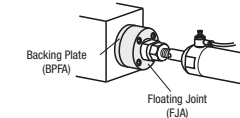
Other Than Above

Part Number
FJA10

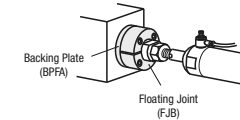
Flange only (See the Set Size Table for detailed sizes.)

Part Number		Unit Price					
Type	M	FJA-H	FJB-H	FJC-H	FJAS-H	FJBS-H	FJCS-H
Standard FJA-H FJAS-H	3						
	4						
	5						
	6						
	8						
	10						
Separate FJB-H FJBS-H	12						
	14						
	16						
	18						
	20						
	22						
Wrench Flats FJC-H FJCS-H	24						
	26						
	30						
	36						

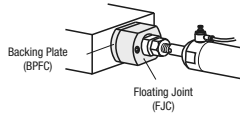
Standard Type



Separate Type



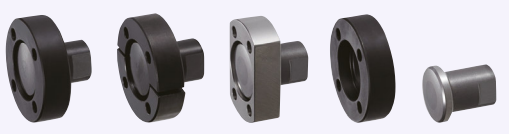
Wrench Flats



Floating Joints Flange Mounting

[Tapped] Space Saving Type

■ **Features:** Compact Type with small diameter of a mounting screw. Floating Connectors for Air Cylinders.



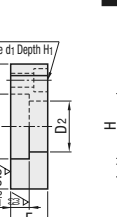
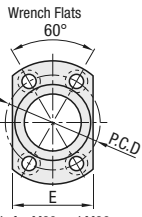
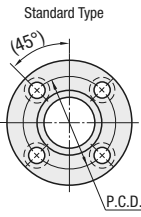
RoHS

Set			Type			Material	Hardness		Surface Treatment	
Standard	Separate	Wrench Flats	Connector only	Flange only			Flange	Connector		
			L Fixed	Standard	Separate					Wrench Flats
FJUA	FJUB	FJUC	FJUN	FJUA-H	FJUB-H	FJUC-H	EN 1.1191 Equiv.	45~55HRC	Section, 45 ~ 50HRC Induction Hardened	Black Oxide
FJUAS	-	FJUCS	FJUNS	FJUAS-H	FJUBS-H	FJUCS-H	EN 1.4125 Equiv. *			

* M24 ~ 30 is EN 1.4031 Equiv.

* M24 ~ 30 is EN 1.4031 Equiv.

Mount Flanges



Cylinder Connector



EN 1.4125 Equiv. / EN 1.4031 Equiv. Hardened Type may be discolored due to hardening.

Set

Part Number		Mount Flanges										Cylinder Connector										Unit Price					
Type	M	A	D1	D2	t	F	P.C.D.	d	d1	H1	E	G	MxPitch	ℓ	L	D	H	T	W	L1	SR	FJUA	FJUB	FJUC	FJUAS	FJUBS	FJUCS
Standard FJUA FJUAS	5	34	17	13	5	11	24	4.5	8	5	22	34	5x0.8	10	17	12	16	5	10	6	50						
	6	40	23	17	6	12	28	6	9.5	5.5	25	40	6x1.0	12	20	14	19	6	12	8	60						
	8	40	23	17	6	12	28	6	9.5	5.5	25	40	8x1.25	14	23	16	22	8	14	10	60						
	10	40	23	17	6	12	28	6	9.5	5.5	25	40	10x1.25	15	25	16	22	8	14	10	60						
Separate FJUB FJUBS	12	52	32	24	8	16	32	8	14	8	42	52	12x1.25	18	29	22	30	5.5	19	10	100						
	14	52	32	24	8	16	32	8	14	8	42	52	14x1.5	21	33	22	30	5.5	19	10	100						
	16	62	39	31	10	20	36	10	17	10	50	62	16x1.5	24	37	28	36	8	21	12	100						
	18	62	39	31	10	20	36	10	17	10	50	62	18x1.5	27	41	28	36	8	21	12	100						
Wrench Flats FJUC FJUCS	20	74	46	36	12	24	40	12	19	12	58	74	20x1.5	30	46	32	42	10	26	15	200						
	22	74	46	36	12	24	40	12	19	12	58	74	22x1.5	33	50	32	42	10	26	15	200						
	24	80	52	42	14	28	44	14	21	14	64	80	24x1.5	36	55	38	48	12	32	16	200						
	26	80	52	42	14	28	44	14	21	14	64	80	26x1.5	39	60	38	48	12	32	16	200						
	30	90	62	52	16	32	48	16	23	16	74	90	30x1.5	43	65	48	58	16	36	18	250						

Connector only

(See the Set Size Table for detailed sizes.)

Part Number		Unit Price	
Type	M	FJUN	FJUNS
FJUN FJUNS	5		
	6		
	8		
	10		
	12		
	14		
	16		
	18		
	20		
	22		
	24		
	26		
	30		

Flange only

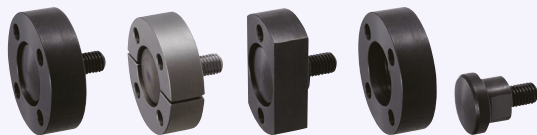
(See the Set Size Table for detailed sizes.)

Part Number		Unit Price					
Type	M	FJUA-H	FJUAS-H	FJUB-H	FJUBS-H	FJUC-H	FJUCS-H
Standard FJUA-H FJUAS-H	5						
	6						
	8						
	10						
	12						
Separate FJUB-H FJUBS-H	14						
	16						
	18						
	20						
	22						
Wrench Flats FJUC-H FJUCS-H	24						
	26						
	30						

Floating Joints Flange Mounting

[Threaded] Standard Type

■ **Features:** Connector can be fixed securely by a flange.

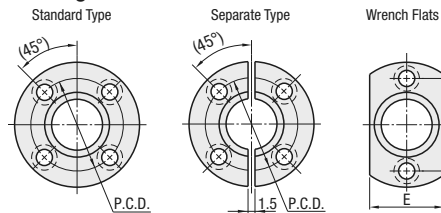


RoHS

Set			Type			Material	Hardness		Surface Treatment
Standard	Separate	Wrench Flats	F Fixed	F Configurable	Flange only		Flange	Connector	
FJMA	FJMB	FJMC	FJCNF	FJCNR	FJA-H	EN 1.1191 Equiv.	45~55HRC	Section, 45 ~ 50HRC Induction Hardened	Black Oxide
FJMAS	FJMBS	FJMCS	FJCNFS	FJCNRS	FJAS-H	EN 1.4125 Equiv. *			

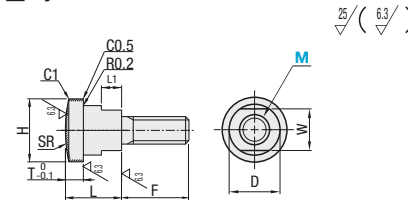
* Material for M22 is EN 1.4031 Equiv.

Mount Flanges



⚠ EN 1.4125 Equiv. / EN 1.4031 Equiv. Hardened Type may be discolored due to hardening. ⚠ Refer to Allowable Misalignment on the right-hand page.

Cylinder Connector



Set

Part Number		Mount Flanges													Cylinder Connector										Unit Price				
Type	M	A	D1	D2	t	F	P.C.D.	d	d1	H1	E	G	MxPitch	F	L	D	H	T	W	L1	SR	FJMA	FJMB	FJMC	FJMAS	FJMBS	FJMCS		
Standard	3	42	18	13	5	10	30	4.5	8	5	24	30	3x0.5	5	14	12	17	5	10	6	40								
FJMA	4												4x0.7	6															
FJMAS	5	48	20	15	6	12	34	6	9.5	5.5	28	34	5x0.8	7	16	14	19	6	12	8	50								
	6												6x1.0	10															
Separate	8	51	24	17		8	16	37			30	37	8x1.25	12	20	16	23	8	14	10	60								
FJMB	10	54	28	21	8	16	40		7	11	6	32	40	10x1.5	15	20	20	27	8	17	10	60							
FJMBS	12	70	36	27	10	20	52	10	14	8	42	52	12x1.75	16	25	25	34	10	22	12	100								
Wrench Flats	16	90	46	35	12	24	68	12	17.5	10	54	68	16x2.0	18	30	32	43	12	27	15	100								
FJMC	20												20x2.5	25															
FJMCS	22	106	56	44	15	30	80	14	20	12	66	80	22x2.5	28	55	40	52	15	32	18	200								

Connector only (See the Set Size Table for detailed sizes.)

Part Number	Type	M	Fixed	F	Unit Price
				Configurable (1mm increment)	FJCNF FJCNFS FJCNR FJCNRS
F Fixed	FJCNF	3	5	5-8	
	FJCNFS	4	6	5-10	
	FJCNFS	5	7	5-12	
	FJCNFS	6	10	6-18	
	FJCNFS	8	12	10-25	
F Configurable	FJCNR	10	15	10-25	
	FJCNRS	12	16	12-36	
	FJCNRS	16	18	15-40	
	FJCNRS	20	25	20-60	
	FJCNRS	22	28	-	

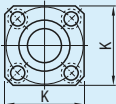
Flange only (See the Set Size Table for detailed sizes.)

Part Number	Type	M	Unit Price
			FJA-H FJB-H FJC-H FJAS-H FJBS-H FJCS-H
Standard	FJA-H	3	
	FJB-H	4	
	FJAS-H	5	
	FJB-H	6	
	FJB-H	8	
	FJB-H	10	
	FJB-H	12	
Wrench Flats	FJC-H	16	
	FJC-H	20	
	FJCS-H	22	

Ordering Example
Connector only F Configurable
Part Number - F
FJCNR10 - 15

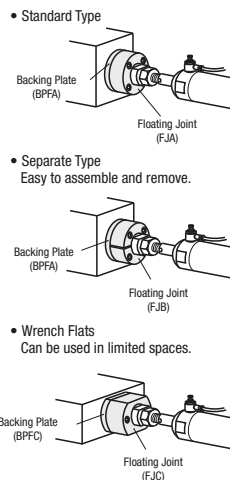
Other Than Above
Part Number
FJMA10
FJB-H14

Alterations
Part Number - F - (AWC)
FJMA10
FJCNRS - 12 - NC

	Flange Cut	Undercut Processing																
Alteration																		
Code	AWC	NC																
Spec.	Cuts four sides of the flange. Ordering Code AWC ⚠ Standard Type only (Not applicable to FJMA22) <table><tr><th>M</th><th>K</th></tr><tr><td>3, 4</td><td>32</td></tr><tr><td>5, 6</td><td>36</td></tr><tr><td>8</td><td>40</td></tr><tr><td>10</td><td>42</td></tr><tr><td>12</td><td>54</td></tr><tr><td>16</td><td>68</td></tr><tr><td>20, 22</td><td>80</td></tr></table>	M	K	3, 4	32	5, 6	36	8	40	10	42	12	54	16	68	20, 22	80	Machines an undercut at the base of threads. Ordering Code NC ⚠ Applicable to FJCNR and FJCNRS only.
M	K																	
3, 4	32																	
5, 6	36																	
8	40																	
10	42																	
12	54																	
16	68																	
20, 22	80																	



Example



Floating Joints Flange Mounting

[Threaded] Space Saving Type

■ **Features:** Compact Type with small diameter of a mounting screw. Floating Connectors for Air Cylinders.

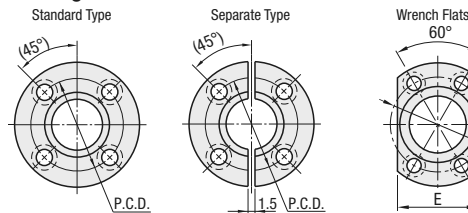


RoHS

Set			Type			Material	Hardness		Surface Treatment
Standard	Separate	Wrench Flats	L Fixed	Standard	Separate		Flange	Connector	
FJUMA	FJUMB	FJUMC	FJUNF	FJUA-H	FJUB-H	EN 1.1191 Equiv.	45~55HRC	Section, 45 ~ 50HRC Induction Hardened	Black Oxide
FJUMAS	-	FJUMCS	FJUNFS	FJUAAS-H	FJUBS-H	EN 1.4125 Equiv. *			

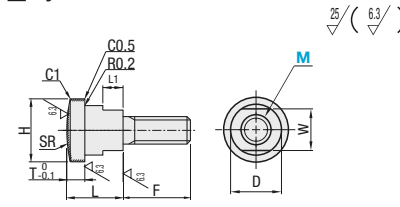
* Material for M22 is EN 1.4031 Equiv.

Mount Flanges



⚠ EN 1.4125 Equiv. / EN 1.4031 Equiv. Hardened Type may be discolored due to hardening.

Cylinder Connector



Set

Part Number		Mount Flanges											Cylinder Connector										Unit Price				
Type	M	A	D1	D2	t	F	P.C.D.	d	d1	H1	E	MxPitch	F	L	D	H	T	W	L1	SR	FJUMA	FJUMAS	FJUMB	FJUMC	FJUMCS		
Standard FJUMA FJUMAS	5	34	17	13	5	11	24	4.5	8	5	22	5x0.8	10	14	12	16	5	10	3	50							
	6											6x1.0	13														
	8											8x1.25	15														
Separate FJUMB FJUMBS	10	40	23	17			30				25	10x1.5	18	15	16	22		13	4	60							
	12											12x1.75	22														
	16											16x2.0	30														
Wrench Flats FJUMC FJUMCS	20	62	39	31	8	16	48	7	11	6	41	16x2.0	30	20	28	36	8	21	4	100							
	22											20x2.5	32														
												22x2.5	35														

Connector only (See the Set Size Table for detailed sizes.)

Part Number	Type	M	Unit Price
			FJUNF FJUNFS
	FJUNF	5	
	FJUNF	6	
	FJUNF	8	
	FJUNF	10	
	FJUNF	12	
	FJUNF	16	
	FJUNF	20	
	FJUNF	22	

Flange only (See the Set Size Table for detailed sizes.)

Part Number	Type	M	Unit Price
			FJUA-H FJUAAS-H FJUB-H FJUBS-H FJUC-H FJUCS-H
Standard	FJUA-H	5	
	FJUAAS-H	6	
	FJUAAS-H	8	
	FJUAAS-H	10	
	FJUAAS-H	12	
	FJUAAS-H	16	
Separate	FJUB-H	10	
	FJUBS-H	12	
	FJUBS-H	16	
Wrench Flats	FJUC-H	20	
	FJUCS-H	22	

Allowable Misalignment (mm)

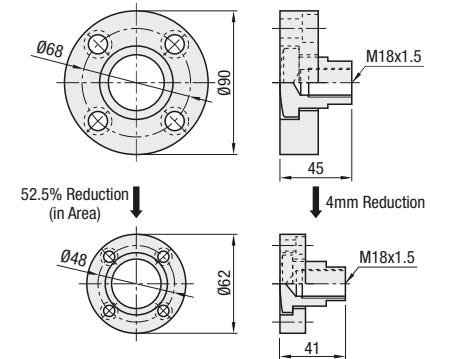
M	U
3~10	0.5
12, 14	1
16, 18	1.5
20, 22	2



Ordering Example

Part Number
FJUMA5
FJUBS-H12

Comparison between Standard Shape Type and Space Saving Shape Type (when M=18 Tapped Type)



Floating Joints - Flange Mounting

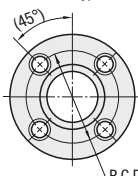
Flat Dual Mountable Side Flange and Cylinder Connector with 4 Sided Wrench Flats - Sets

■ **Features** - Flange: Mounting holes are tapped, which enables the product to be fixed from both sides. Connector: Change from 2 sided wrench flats to 4 sided wrench flats makes fine positioning possible.

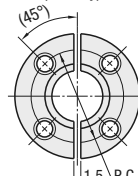
■ Dual Mountable Side Flange and Cylinder Connector with 4 Sided Wrench Flats - Sets

	Type			Mount Flanges			Cylinder Connector		
	Standard	Separate	Wrench Flats	Material	Hardness	Surface Treatment	Material	Hardness	
Set	FJAT	FJBT	FJCT	EN 1.1191 Equiv.	45-55HRC	Black Oxide	EN 1.1191 Equiv.	45-50HRC	Section, 45-50HRC
	FJATS	-	-	EN 1.4125 Equiv.	-	-	EN 1.4125 Equiv.	Induction Hardened Surface	

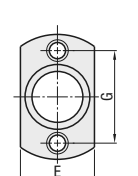
Standard Type



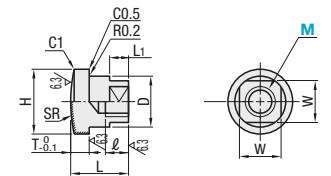
Separate Type



Wrench Flats



Cylinder Connector



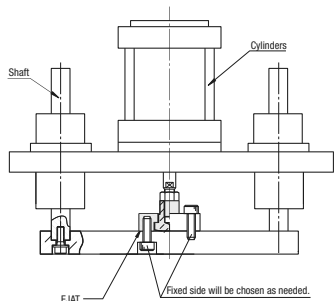
Part Number		Mount Flanges										Cylinder Connector									
Type	M	A	D1	D2	t	F	P.C.D.	M1	E	G	MxPitch	ℓ	L	D	H	T	W	L1	SR		
Set	8	51	24	17	8	16	37	M6	30	37	8x1.25	14	25	16	23	8	14	10	60		
Standard	FJAT	54	28	21			40		32	40	10x1.25	15		20	27		17				
Separate	FJATS	14	70	36	27	10	20	M8	42	52	14x1.5	21	35	25	34	10	22	12	100		
Wrench Flats	FJBT	18	90	46	35	12	24	M10	54	68	18x1.5	27	45	32	43	12	27	15			
	FJCT	22	106	56	44	15	30	M12	66	80	22x1.5	33	55	40	52	15	32	18	200		

EN 1.4125 Equiv. Hardened Type may be discolored due to hardening.

Unit Price					
M		FJAT	FJBT	FJCT	FJATS
8					
10					
14					
18					
22					

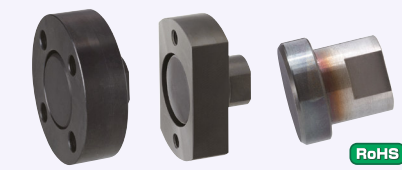
■ Allowable Misalignment (mm)

M	U
8, 10	0.5
14	1
18	1.5
22	2

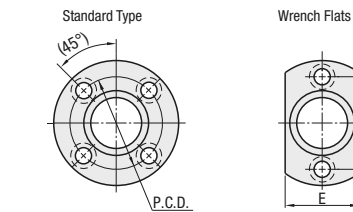


Tip shape of cylinder connector is flat.

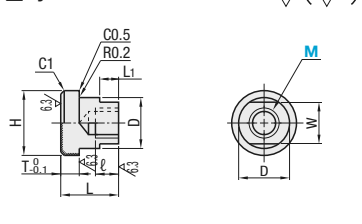
■ Flat Connector Sets



■ Mount Flanges



■ Cylinder Connector



Part Number		Mount Flanges											Cylinder Connector										Unit Price				
Type	M	A	D1	D2	t	F	P.C.D.	d	d1	H1	E	G	MxPitch	ℓ	L	D	H	T	W	L1	FJAZ	FJAZS	FJCZ	FJZN	FJZNS		
Set FJAZ FJAZS FJCZ Cylinder Connector only FJZN FJZNS	8	51	24	17	8	16	37	7	11	6	30	37	8x1.25	14	25	16	23	8	14	10							
	10	54	28	21		40							32	40		10x1.25	15		20	27		17					
	14	70	36	27	10	20	52	10	14	8	42	52	14x1.5	21	35	25	34	10	22	12							
	18	90	46	35	12	24	68	12	17.5	10	54	68	18x1.5	27	45	32	43	12	27	15							
	22	106	56	44	15	30	80	14	20	12	66	80	22x1.5	33	55	40	52	15	32	18		-			-		

EN 1.4125 Equiv. Hardened Type may be discolored due to hardening.

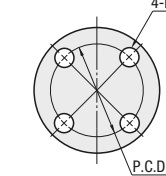


Backing Plates

■ **Features:** Avoids breakage of operated objects by impact caused by connectors.

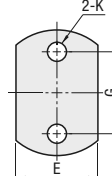
Shape	Type				Material	Hardness	Surface Treatment
	Standard		Wrench Flats				
Standard	BPFA	BPFUA	BPFC	BPFUC	EN 1.1191 Equiv.	45~50HRC	Black Oxide
	BPFAS	BPFUAS	BPFCS	BPFUCS	EN 1.4125 Equiv. *		-
Space Saving	BPUA	-	BPUC	BPUUC	EN 1.1191 Equiv.		Black Oxide

Standard

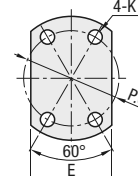


Wrench Flats

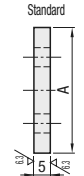
Standard



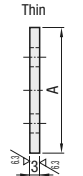
Space Saving



Standard



Thin



* Material for BPFUAS and BPFUCS is EN 1.4031 Equiv.

■ Floating Joint (for Standard Shape Type) Backing Plates

Part Number		Unit Price												
Type	No. (M No.)	A	P.C.D.	E	G	K	Standard				Thin			
Standard	3	42	30	24	30	4.5	BPFA	BPFC	BPFAS	BPFCS	BPFUA	BPFUC	BPFUAS	BPFUCS
	4													
	5	48	34	28	34	6								
	6													
	8	51	37	30	37									
	10	54	40	32	40	7								
	12	70	52	42	52	10								
	14													
	16	90	68	54	68	12								
	18													
Wrench Flats	20	106	80	66	80	14								
	22													
	24	116	86	78	86									
	26													
	30	134	104	80	104	18								

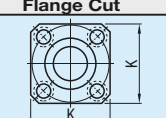
EN 1.4125 Equiv. / EN 1.4031 Equiv. Hardened Type may be discolored due to hardening.

For floating joints M36, the applicable backing plate is No. 30.

■ Floating Joint (for Space Saving Shape Type) Backing Plates

Part Number		Unit Price						
Type	No. (M No.)	A	P.C.D.	E	K	Standard		Thin
Standard	5	34	24	22	4.5	BPFA	BPFC	BPFUA
	6							
	8	40	30	25				
	10							
	12	52	40	34	6			
	14							
	16	62	48	41	7			
	18							
	20	74	58	48	10			
	22							
Wrench Flats	24	80	64	54				
	26							
	30	90	74	64				

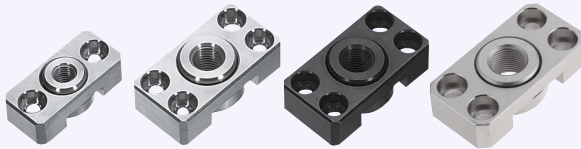


Flange Cut	
Alteration	
Code	AWC
Spec.	Cuts four sides of the flange. (Ordering Code) AWC No. K 3, 4 32 5, 6 36 8 40 10 42 12, 14 54 16, 18 68 20, 22 80 24, 26 86 30 104

Floating Joints - Flange Mounting

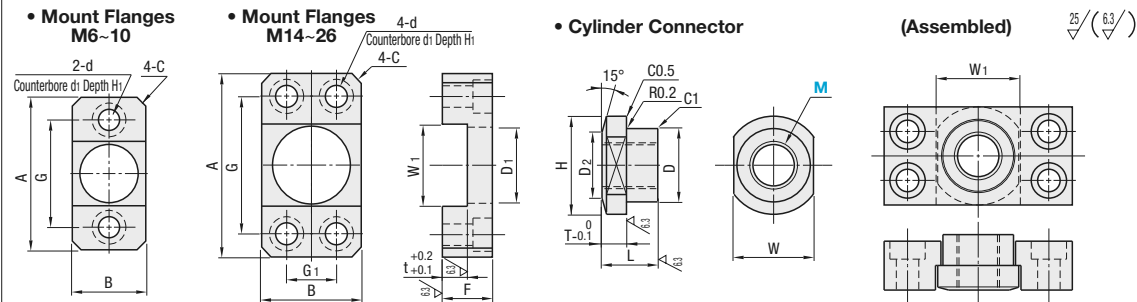
Square Flange / Square Flange - Thin

■ **Features:** Square flange makes it compact. A shorter design length can be realized when arranging in series.



RoHS

Type	Set	Mount Flanges			Cylinder Connector		
		Material	Surface Treatment	Hardness	Material	Surface Treatment	Hardness
Square Flange Type	FJCF	EN 1.1191 Equiv.	Black Oxide	28~33HRC	EN 1.1191 Equiv.	Black Oxide	28~33HRC
	FJCFM	EN 1.4301 Equiv.	Electroless Nickel Plating	-	EN 1.4301 Equiv.	Electroless Nickel Plating	-
Square Flange - Thin	FJCF	EN 1.1191 Equiv.	Black Oxide	28~33HRC	EN 1.1191 Equiv.	Black Oxide	28~33HRC



Square Flange

Part Number		Cylinder Connector								Mount Flanges											
Type	M	MxPitch	L	D	D2	H	T	W	A	G	B	G1	W1	D1	t	F	d	d1	H1	C	
Set FJCF FJCFM FJCFM FJCFM	6	6x1.0	10	12	11	16	4	13	38	26	16		14	13	4	8	4.5	8	4	2	
	8	8x1.25	12	14	13	20	5	16	43	30	20	-	17	15	5	10	5.5	9.5	5		
	10	10x1.25	16	18	15	24	7	20	50	35	24		21	19	7	14				3	
	14	14x1.5	18	24	20	32	8	26	60	45	32	16	27	25	8	16	7	11	6		
	18	18x1.5	20	30	26	38	9	33	75	55	38	20	34.5	31.5	9	18	10	14	8		
	22	22x1.5	24	35	30	48	11	40	90	65	48	25	42	37	11	22					
	26	26x1.5	28	40	32	54	13	45	100	75	54	30	47	42	13	26	12	17.5	10	4	

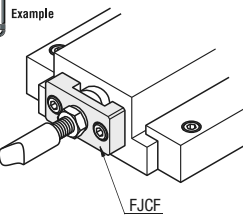
Square Flange - Thin

Part Number		Cylinder Connector							Mount Flanges												
Type	M	MxPitch	L	D	D ₂	H	T	W	A	G	B	G ₁	W ₁	D ₁	t	F	d	d ₁	H ₁	C	
Set FJCF	10	10x1.25	8	18	15	24	3.5	20	50	35	24	-	21	19	3.5	7					
	14	14x1.5	9	24	20	32	4	26	60	45	32	16	27	25	4	8	7	11	4	3	
	18	18x1.5	10	30	26	38	4.5	33	75	55	38	20	34.5	31.5	4.5	9	10	14	5		

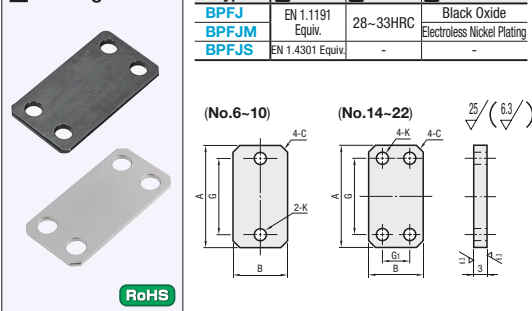


Part Number
FJCF10

M	Unit Price			
	FJCF	FJCFM	FJCFM	FJCF
6				
8				
10				
14				
18				
22				
26				



Backing Plates



Part Number		A	G	B	G1	K	C	Unit Price		
Type	No.							BPFJ	BPFJM	BPFJS
BPFJ BPFJM BPFJS	6	38	26	16	-	4.5	2			
	8	43	30	20		5.5				
	10	50	35	24	7	3				
	14	60	45	32			16			
	18	75	55	38			20	10		
	22	90	65	48	25	12	4			

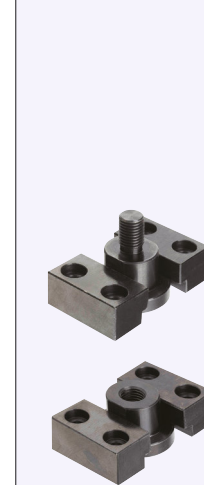


Part Number
BPFJ10

Floating Joints - Flange Mounting

Slide

■ **Features:** Mounting pitch is configurable.

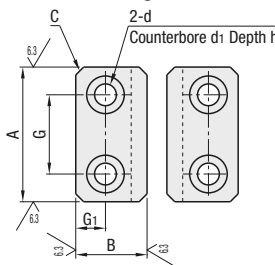


RoHS

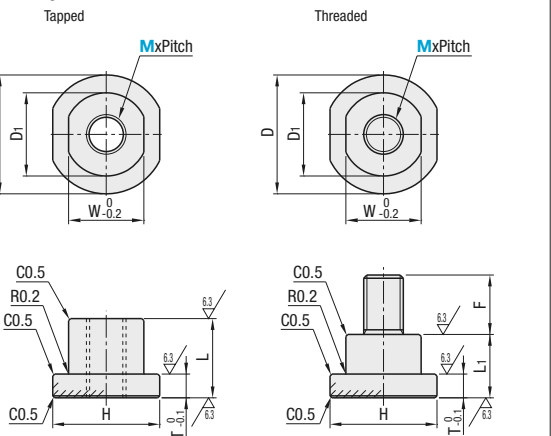
Screws	Components			Mount Flanges			Cylinder Connector		
	Set	Cylinder Connector	Mount Flange	Material	Surface Treatment	Hardness	Material	Surface Treatment	Hardness
Tapped	FJY	-	FJY-H	EN 1.1191 Equiv.	Black Oxide	40~45HRC	EN 1.1191 Equiv.	Black Oxide	Section 45 ~ 50HRC
Threaded	FJMY	FJMYN							Induction Hardened Surface

25/6.3/6.3

Mount Flanges



Cylinder Connector



Mount Flange and Cylinder Connector - Sets / Mount Flange

Part Number		Cylinder Connector										Mount Flanges											
Type	M	Tapped		Threaded			D	D ₁	H	T	W	A	G	B	G ₁	E	t	T ₁	d	d ₁	h	C	
		MxPitch	L	MxPitch	L ₁	F																	
Set Connector, Tapped FJY	6	6x1.0	14	6x1.0	11	13	20	14	18	4	12	22	12	14	6	3	4	8	4.5	8	4.5	2	
	8	8x1.25	17	8x1.25	14	15	23	16	20	5	14	25	14				5	11					
Connector, Threaded FJMY	10	10x1.25	21	10x1.5	16	18	30	21	27	6	19	34	20	19	8	4	6	13	5.5	9.5	5	3	
	14	14x1.5	25	-	-	-	38	27	34	7	24	42	26	22	9	5	7	15	6.5	11	6.5		
Cylinder Connector Connector, Threaded FJMYN	16	-	-	16x2.0	19	30	45	32	40	8	30	48	30	25	10	5	8	15	10	14	8		
	18	18x1.5	28	-	-	-																	
Mount Flange FJY-H	20	-	-	20x2.5	20	32	56	40	50	10	36	60	38	28	11	7	10	18	10	14	8		
	22	22x1.5	33	22x2.5	23	35																	



Part Number
FJY18

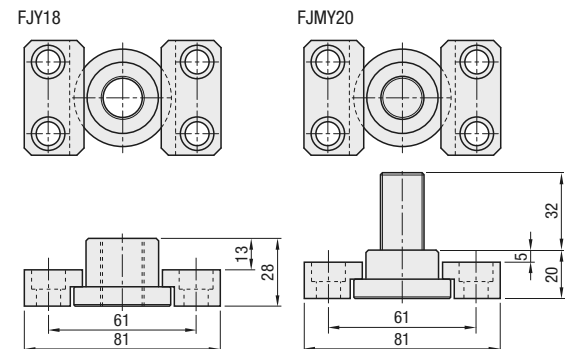
M	Unit Price			
	Set		Cylinder Connector	Mount Flange (Set of 2 pcs.)
	FJY	FJMY	FJMYN	FJY-H
6				
8				
10				
14		-	-	
16	-			
18		-	-	
20	-			
22				

Features

- Allowable lateral misalignment can be adjusted by adjusting the mounting pitch as desired.
- Sliding removal design is also suitable for frequent maintenance scheme.

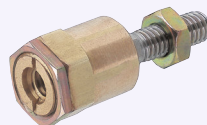


Example Assembled (when Allowable Misalignment is 0.5mm)



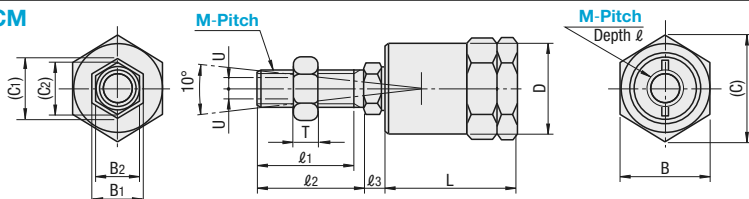
Floating Joints Integrated Type

Miniature



RoHS

FLCM



	M Material	A Accessory
Main Body	See P.1548.	Hex Nut (Trivalent Bright Chromate)
Thread	EN 1.4301 Equiv.	

Part Number Type	M-Pitch	ℓ	ℓ ₁	ℓ ₂	ℓ ₃	L	T	D	B	B ₁	B ₂	(C)	(C ₁)	(C ₂)	Allowable Misalignment U	Working Load kgf (N)	Mass (g)	Unit Price 1~9 pc(s).	Volume Discount Rate 10~20
FLCM	3-0.5	4.5	8	8	3	12	1.8	11	11	5.5	5.5	12.7	6.4	6.4	0.5	~1.9(19)	8		
	4-0.7		10	10			2.4			7	7		8.1	8.1		~5.4(53)	9		
	5-0.8	6	11	12.5	4	17	3.2	14	14	8	6	16.2	9.2	7		~12.3(121)	21		
	6-1.0		14	15.5			3.6			10			11.5				22		

Excessively (6mm or more) tightening the screw (Tapped) might prevent the ball inside from moving.

For orders larger than indicated quantity, please check with WOS.

Screw-In

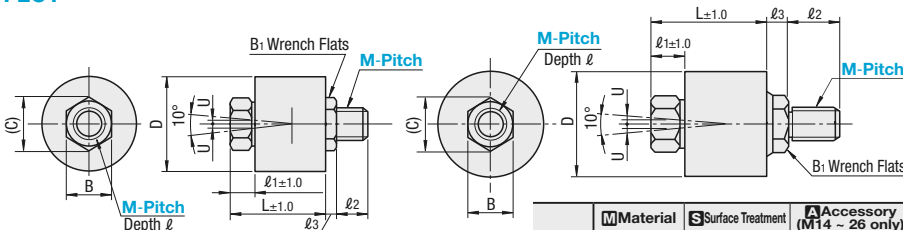


RoHS

FLCT

• M8~M12

• M14~M26



	M Material	S Surface Treatment	A Accessory (M14 ~ 26 only)
Main Body	See P.1548.	Trivalent Bright Chromate	Hex Nut (Trivalent Bright Chromate)
Thread	EN 1.0038 Equiv.		

Thread for M8 ~ M12 has no surface treatment.

Part Number Type	M-Pitch	ℓ	ℓ ₁	ℓ ₂	ℓ ₃	L	D	B	B ₁	(C)	Allowable Misalignment U	Working Load kgf (N) for Push and Pull	Mass (kg)	Unit Price 1~4 pc(s).	Volume Discount Rate 5~10
FLCT	8-1.0	8	6			30	30	14	13	16.2	0.5	~60(588)	0.12		
	10-1.25	10	9	12	3	36	36	19	17	22	0.75	~120(1177)	0.19		
	12-1.5											0.20			
	14-1.5	13	14		6	49	45	23	23	26.6	1	~540(5296)	0.40		
	16-1.5			24		59		29		33.5		0.50			
	18-1.5	15	24			74.5	61	35	29	40.4	1.5	~780(7644)	1.10		
	22-1.5	22	31	32	11.5	84	69	41	35	47.3		~1380(13524)	1.80		
	26-1.5		33	42	15										

For orders larger than indicated quantity, please check with WOS.

Flange Mounting

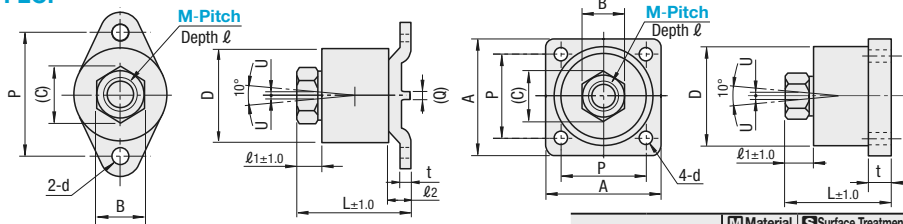


RoHS

FLCF

• M8~M12

• M14~M26

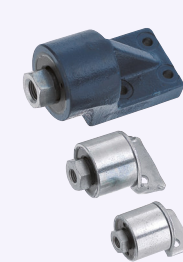


	M Material	S Surface Treatment
Main Body	See P.1548.	Trivalent Bright Chromate
Thread	EN 1.0038 Equiv.	
Mounting Part	(M8-M12) EN 1.0030 Equiv.	(M14-M26) EN-JL 1030 Equiv.

Part Number Type	M-Pitch	ℓ	ℓ ₁	ℓ ₂	t	L	D	d	A	P	(Q)	B	(C)	Allowable Misalignment U	Working Load kgf (N) for Push and Pull	Mass (kg)	Unit Price 1~4 pc(s).	Volume Discount Rate 5~10
FLCF	8-1.0	8	6	6		36.5	30	5.5		40	10	14	16.2	0.5	~60(588)	0.14		
	10-1.25	10	9	7	3	43.5	36	6.5	-	48	14	19	22	0.75	~120(1177)	0.20		
	12-1.5																	
	14-1.5	13	14		12	54	49	7	60	43		23	26.6	1	~540(5296)	0.54		
	16-1.5					64						29	33.5		0.60			
	18-1.5	15	24			78	61	9	76	55		35	40.4	1.5	~780(7644)	1.10		
	22-1.5	22	31			88	69	11	90	64		41	47.3		~1380(13524)	1.80		
	26-1.5		33															

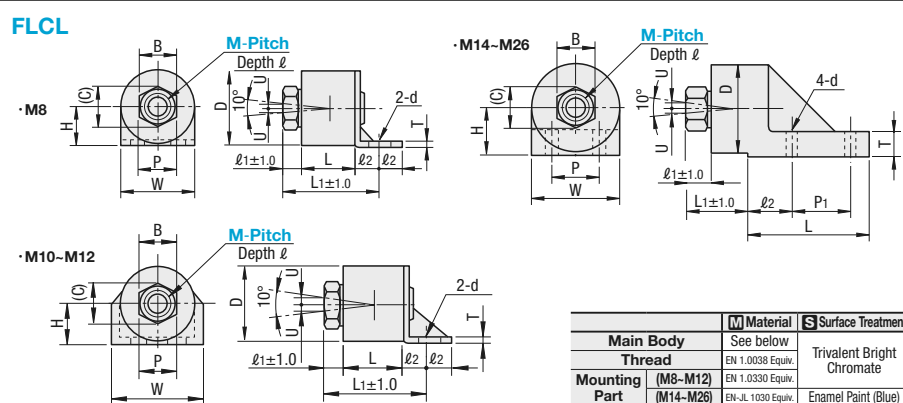
For orders larger than indicated quantity, please check with WOS.

Bracket Mounting



RoHS

FLCL



	M Material	S Surface Treatment
Main Body	See below	Trivalent Bright Chromate
Thread	EN 1.0038 Equiv.	
Mounting Part	(M8-M12) EN 1.0030 Equiv.	(M14-M26) EN-JL 1030 Equiv.

Part Number Type	M-Pitch	ℓ	ℓ ₁	ℓ ₂	L	L ₁	T	D	d	W	P	P ₁	H	B	(C)	Allowable Misalignment U	Working Load kgf (N) for Push and Pull	Mass (kg)	Unit Price 1~4 pc(s).	Volume Discount Rate 5~10
FLCL	8-1.0	8	6	10	23.5	39.5		30	5.5	31	16		16	14	16.2	0.5	~60(588)	0.16		
	10-1.25	10	9	12	28.5	49.5	3	36	6.5	43	20		19	19	22	0.75	~120(1177)	0.27		
	12-1.5																0.28			
	14-1.5	13	14		35		14	51	7	51	28	35	26	23	26.6	1	~540(5296)	0.80		
	16-1.5			27	70	45								29	33.5		0.90			
	18-1.5	15	24		55	18	62	9	62	36	46	32	35	35	40.4	1.5	~780(7644)	1.50		
	22-1.5	22	31	34	90	61	22	69	11	69	40	54	37	41	47.3		~1380(13524)	2.30		
	26-1.5		33	42	112	61														

For orders larger than indicated quantity, please check with WOS.



Ordering Example

Part Number

FLCM3-0.5
FLCT10-1.25



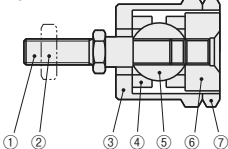
Overview

- The tip inside the connector is spherical, and absorption of misalignment is possible. Shaft alignment and parallelism setting in cylinder mounting can thus be achieved merely by visual estimation.
- Due to integration of connector and holder, selecting is easy, and at the same time, number of parts is reduced.
- For Miniature Type (FLCM), screws with sizes M3 to M6 are provided for small cylinders.
- For Standard Type, three mounting variations are offered: Screw-In Type (FLCT), Flange Mounting Type (FLCF) and Bracket Mounting Type (FLCL).

Components

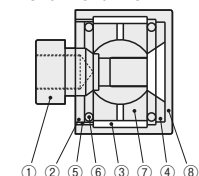
	Thread Dia.	Type (How to Mount)
Miniature	M3~M6	FLCM (Screw-In)
Standard	M8~M26	FLCT (Screw-In), FLCF (Flange Mounting), FLCL (Bracket Mounting)

Miniature (M3 ~ M6)
FLCM



Part Number	Part Name	Material
①	Stud	EN 1.4301 Equiv.
②	Nut	EN 1.0038 Equiv.
③	Case	EN CW614N Equiv.
④	Ball Holder	EN CW614N Equiv.
⑤	Ball Joiner	EN CW614N Equiv.
⑥	Socket	EN CW614N Equiv.
⑦	Rod Tip Nut	JIS-SWCH8R

Standard (M8 ~ M26)
FLCT / FLCF / FLCL



Part Number	Part Name	Material
①	Rod Tip Socket	EN 1.0038 Equiv. (M26 to EN 1.1191 Equiv.)
②	Cap	EN 1.3505 Equiv.
③	Radial Direction Clearance	-
④	Steel Ball Retainer	EN 1.3505 Equiv.
⑤	Rubber Steel Ball Retainer Plate	Nitrile Rubber
⑥	Steel Ball	-
⑦	Ball Holder	EN 1.3505 Equiv.
⑧	Case	EN-JL 1030 Equiv.

Features

- Misalignment is absorbed in three-dimensions through the ball joint swing A and misalignment motion B. (See Figure ①)
- FLCT, FLCF and FLCL have a built-in bearing, which reduces lateral load significantly and absorbs misalignment. (See Figure ②)

Figure ①

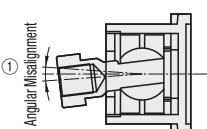
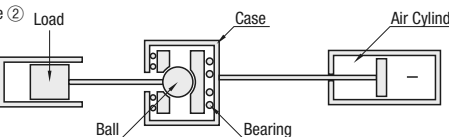


Figure ②

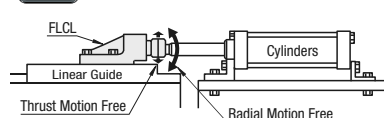


Benefits

- The following benefits are obtained by installing on the cylinder rod.
- Prevents one end of cylinder rod from getting worn out. Prevents breakage of the gasket.
- Enables operation at low pressure. Prevents thrust decline.

Precautions for Use

- Although the screw is rotatable, the connector cannot be used as a rotating joint.
- Non-reusable after disassembled.
- Grease filled to eliminate oiling.
- The applied load shown is static. Note that the applied load value for repeated impact load will be lower than shown.



Floating Joints Integrated Type

Extra Short Flange Mount



Screws	Type		Material	Surface Treatment	Hardness	Spring Material
	Round	Compact Type				
Tapped	FJCR	FJCC	EN 1.1191 Equiv.	Black Oxide	40~45HRC	Spring Steel
	FJCRT	FJCCT	Tuffride®	500HV~	40~45HRC	Spring Stainless Steel
	FJCRS	FJCCS	EN 1.4125 Equiv.	-	40~45HRC	Spring Steel
Threaded	FJMCR	FJMCC	EN 1.1191 Equiv.	Black Oxide	40~45HRC	Spring Steel
	FJMCRT	FJMCCT	Tuffride®	500HV~	40~45HRC	Spring Stainless Steel
	FJMCRS	FJMCCS	EN 1.4125 Equiv.	-	40~45HRC	Spring Steel

⚠ Tuffride® is a trademark of DUFERRIT GmbH.
⚠ Tuffride® may cause uneven color, which doesn't affect mechanical function.

For details on Tuffride®, see P1907.
Do not insert screws deeper than the depth of tapped holes. Malfunction may occur.

Floating Connectors - Extra Short Flange Mount - Tapped (for Threaded Cylinder)

Part Number	Type	M-Pitch	ℓ	W	L ₁	A	L	F	P.C.D.	d	d ₁	H	E	G	Allowable Misalignment U	Allowable Angular Deviation A'	St (Reference)	Working Load kgf(N)	Mass (g)	
																			Round	Compact Type
Round FJCR FJCRT FJCRS Compact Type FJCC FJCCT FJCCS	Tapped	3-0.5	11	7	3	39	14	10	28.6	4.5	8	5	21	28.6	0.5	3	0.45	~2.8(27.5)	78	51
		4-0.7	11	7	4	44	16	10.5	32.1	6	9.5	5.5	23	32.1	0.5	4	0.65	~7.8(76.5)	77	50
		5-0.8	12.5	7	4	44	16	10.5	32.1	6	9.5	5.5	23	32.1	0.5	4	0.65	~20(196.1)	106	69
		6-1.0	12.5	7	4	44	16	10.5	32.1	6	9.5	5.5	23	32.1	0.5	4	0.65	~105	68	
		8-1.25	16	10	5	50	20	13	36.6	7	11	6	26	36.6	1.0	5	0.95	~80(784.5)	166	109
		10-1.25	20	12	6	52	25	17	38.6	7	11	6	28	38.6	1.0	5	1.1	~236	157	
	Threaded	12-1.25	23	17	7	66	28	19.5	49.6	9	14	8	36	49.6	1.0	5	1.4	~411	274	
		14-1.5	23	17	7	66	28	19.5	49.6	9	14	8	36	49.6	1.0	5	1.4	~402	269	
		16-1.5	30	22	9	70	35	24.5	53.6	12	18	10	40	53.6	1.5	5	1.5	~553	372	
		18-1.5	30	22	9	70	35	24.5	53.6	12	18	10	40	53.6	1.5	5	1.5	~538	363	
		20-1.5	38	27	10	88	45	31.5	68.1	12	18	10	51	68.1	1.5	5	1.9	~1078	735	
		22-1.5	38	27	10	88	45	31.5	68.1	12	18	10	51	68.1	1.5	5	1.9	~1058	715	

Floating Connectors - Extra Short Flange Mount - Threaded (for Tapped Cylinder)

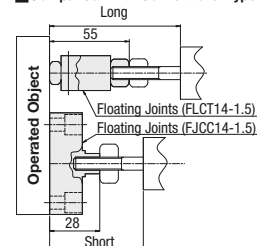
Part Number	Type	M-Pitch	F	W	L ₁	A	L	T	P.C.D.	d	d ₁	H	E	G	Allowable Misalignment U	Allowable Angular Deviation A'	St (Reference)	Working Load kgf(N)	Mass (g)	
																			Round	Compact Type
Round FJMCR FJMCT FJMCRS Compact Type FJMCC FJMCCCT FJMCCS	Tapped	5-0.8	10	7	4	44	16	10.5	32.1	6	9.5	5.5	23	32.1	0.5	4	0.65	~20(196.1)	103	67
		6-1.0	12	7	4	44	16	10.5	32.1	6	9.5	5.5	23	32.1	0.5	4	0.65	~105	69	
		8-1.25	15	10	5	50	20	13	36.6	7	11	6	26	36.6	1.0	5	0.95	~173	113	
		10-1.5	15	12	6	52	25	17	38.6	7	11	6	28	38.6	1.0	5	1.1	~246	163	
		12-1.75	18	17	7	66	28	19.5	49.6	9	14	8	36	49.6	1.0	5	1.4	~445	298	
		16-2.0	20	22	9	70	35	24.5	53.6	12	18	10	40	53.6	1.5	5	1.5	~653	457	
	Threaded	20-2.5	25	27	10	88	45	31.5	68.1	12	18	10	51	68.1	1.5	5	1.9	~1304	928	



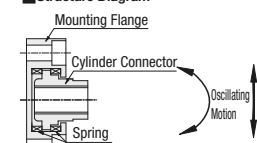
Features

- The distance between cylinder and operated object can be made short.
- Large allowable eccentricity absorbs misalignment.
- Deep tapped hole allows wide-ranging adjustment.
- Compact Type is designed for space-saving.

Comparison with Conventional Type



Structure Diagram



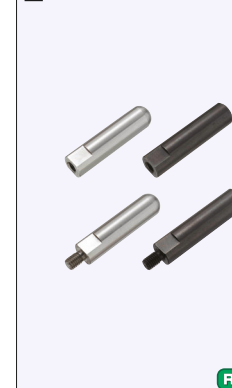
* Threaded Type has the same structure.

M-Pitch	Unit Price				
	FJCR	FJCC	FJCRT	FJCCT	FJCRS
3-0.5					
4-0.7					
5-0.8					
6-1.0					
8-1.25					
10-1.25					
12-1.25					
14-1.5					
16-1.5					
18-1.5					
20-1.5					
22-1.5					

M-Pitch	Unit Price					
	FJMCR	FJMCC	FJMCT	FJMCCT	FJMCRS	FJMCCS
5-0.8						
6-1.0						
8-1.25						
10-1.5						
12-1.75						
16-2.0						
20-2.5						

Metal Pushers / Urethane Caps

Metal Pushers



Type	Flat	Sphere	Material	Surface Treatment	Hardness
	Tapped	Threaded	Tapped	Threaded	
KPHF	KPMF	KPHR	KPMR	EN 1.1191 Equiv.	Black Oxide
KPHFS	-	KPHRS	-	EN 1.4031 Equiv.	Induction Hardened and Tempered HRC45~50

⚠ 8S, 10S, 12, 12S, 14S and 18S are fine thread pitch. For thread details, refer to the right.

⚠ 12M is course thread pitch.

Tapped Type

Part Number	Type	D	L 1mm Increment		M Selection	ℓ	W	Unit Price			
			Flat	Sphere				KPHF	KPHFS	KPHR	KPHRS
Flat KPHF KPHFS	8	6	15~50	17~50	3	8	5				
		8	17~50	20~50	3 4	8	7				
		10	19~50	23~50	3 4 5	8	8				
		12	21~100	26~100	4 5 6	10	10				
		15	23~100	30~100	5 6 8S 8	10	14				
		16	23~100	30~100	5 6 8S 8	10	14				
	10	18	26~100	34~100	6 8S 8 10S 10 12S 12 12M	15	27				
		20	28~100	37~100	8S 8 10S 10 12S 12 12M	15	27				
		30	36~100	50~100	10S 10 12S 12 12M 14S 18S	20	37				
		40	41~150	60~100	10S 10 12S 12 12M 14S 18S	20	37				

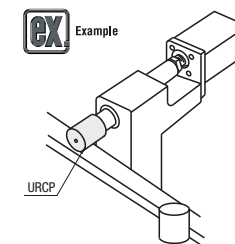
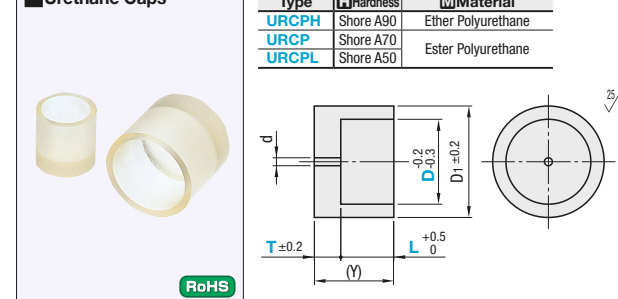
Threaded Type

Part Number	Type	D	L 1mm Increment		M Selection	ℓ	W	Unit Price	
			Flat	Sphere				KPMF	KPMR
Flat KPMF	8	6	15~50	17~50	3 4 5	8	5		
		8	17~50	20~50	4 5 6	8	7		
		10	19~50	23~50	5 6 8S 8	8	8		
		12	21~100	26~100	6 8S 8 10S 10	10	10		
		15	23~100	30~100	8S 8 10S 10 12S 12 12M	10	14		
		16	23~100	30~100	8S 8 10S 10 12S 12 12M	10	14		
	10	18	26~100	34~100	10S 10 12S 12 12M 16	15	27		
		20	28~100	37~100	10S 10 12S 12 12M 16	15	27		
		25	36~100	55~100	16 18 20	15	27		
		30	36~100	55~100	16 18 20	15	27		

⚠ 8S, 10S, 12 and 12S are fine thread pitch. For thread details, refer to the right.



Urethane Caps



Part Number	Type	D	T Selection	L Selection	D ₁	d	(Y)	Unit Price		
								URCPH	URCP	URCPL
URCPH URCP URCPL	8	3	3	5 8	1	12	Y=T+L			
		4	3	5* 10						
		5	3	10* 15						
		6	5	10 15						
		3	3	10* 15						
		6	5	10 15						
		8	5	10* 15						
		10	5	10 15						
		13	5	15* 20						
		16	5	15 20						
		20	5	20* 25						
		25	5	20 25						
		30	7	20 25						
		35	7	20 25						
		40	10	20 25						

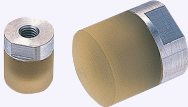
- Only * marked dimensions are available for URCPH and URCPL.
- Urethane may discolor over time but there is no effect on properties.
- The Urethane Cap hole diameter is designed to fit the tolerances of MISUMI Linear Shafts.

Urethane Rubber Pushers

■Features: Pushers with shore A30 ~ 90 are available.

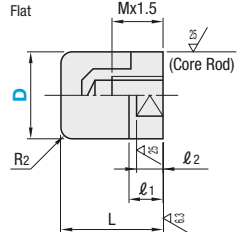
■Tapped Type

Type		Pushers		Core Rod
Flat	Round	Hardness	Material	Material
URLH	URSH	Shore A90	Ether Polyurethane	EN 1.4301 Equiv.
URLM	URSM	Shore A70	Ester Polyurethane	
URLL	URSL	Shore A50		
PSHLH	RSHLH	Shore A30		

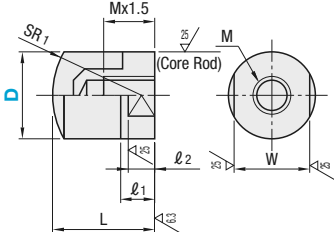


For urethane rubber properties, see **P.389**.

Flat



Round





$$\sqrt[6.3]{\left(\frac{25}{\sqrt[6.3]{}}\right)}$$

Part Number		L		MxPitch		SR1		R2		l1		l2		W		Unit Price		
Type	D															URLH URSH	URLM, URLL URSM, URSL	PSHLH RSHLH
Flat URLH URLM URLL PSHLH	8	12	M3x0.5	8	1	5	4	7	1	5	4	7	1	7	1			
	10	15	M4x0.7	10														
	12	16	M5x0.8	12														
	16	20	M6x1.0	16	2	6	5	14	2	6	5	14	2	10	2			
	20	25	M8x1.25	20														
	25	30	M10x1.5	25														
	25A	30	M10x1.25	25	3	10	8	22	3	10	8	22	3	22	3			-
	30	35	M12x1.75	30														-
	32	37	M14x1.5	32														-
	36	45	M18x1.5	36	3.5	12	10	32	3.5	12	10	32	3.5	32	3.5			-
	40	50	M20x1.5	40														-
	40A	50	M22x1.5	40														-

For pitches of D dimension 25A are fine threaded. The thread of D dimension 40A is M22x1.5. Urethane rubber is thermally bonded to the core rod. Urethane may discolor over time but there is no effect on properties.

■Threaded Type

■ Threaded Type

RoHS

Type		Pushers		Core Rod	
Flat	Round	Hardness	Material	Material	
USLH	USSH	Shore A90	Ether Polyurethane	EN 1.4301 Equiv.	
USLM	USSM	Shore A70	Ester Polyurethane		
USLL	USSL	Shore A50			
PSHMLH	RSHMLH	Shore A30			

For urethane rubber properties, see P.389.

6.3 / (2.5 / 6.3)

Part Number		L	MxPitch (Coarse)	SR ₁	R ₂	m	ℓ ₁	ℓ ₂	f	R ₃ Max.	W	Unit Price			
Type	D											USLH USSH	USLM, USLL USSM, USSL	PSHMLH RSHMLH	
Flat USLH USLM USLL PSHMLH	Round	6	10	M3x0.5	6	1	4.5	5	4	1	0.3	5			
	8	12	M4x0.7	8	6		7								
	10	15	M5x0.8	10	7		8								
	12	16	M6x1.0	12	2	10	1.5	0.75	10						
	16	20	M8x1.25	16		12			6	5	14				
	20	25	M10x1.5	20		14			8	6	17			-	
	25	30	M16x2.0	25	3	18	10	8	3	1	22			-	
	32	37	M20x2.5	32								30			-
	36	45	M22x2.5	36		3.5					24	12	10	3.5	32

Urethane may discolor over time but there is no effect on properties. Urethane rubber is thermally bonded to the core rod.

Ordering Example
Part Number
URLM10
USLM12

Silicon Rubber Pushers / Fluororubber Pushers

■Features: Silicon Rubber Pushers: Pushers which are superior to Urethane Rubber Pushers in heat / chemical resistance. Fluororubber Pushers: Pushers which are made of fluorine with excellent chemical resistance.

■Tapped Type

Type		Pushers		Core Rod
Flat	Round	Hardness	Material	Material
SLLM	SLSM	Shore A70	Silicon Rubber	EN 1.4301 Equiv.
PSHPT	RSHPT	Shore A80	Fluororubber (FPM)	

For properties of urethane rubber and fluororubber, see P.390.

Flat

Round

6.3 / (2.5 / 6.3)

Part Number		L		MxPitch		SR1		R2		l1		l2		W		Unit Price	
Type	D															SLLM SLSM	PSHPT RSHPT
Flat SLLM PSHPT	8	12	M3x0.5	8	1	5	4	7	1	5	4	7	1	7	1		
	10	15	M4x0.7	10													
	12	16	M5x0.8	12													
	16	20	M6x1.0	16	2	6	5	14	2	6	5	14	2	10	2		
	20	25	M8x1.25	20													
	25	30	M10x1.5	25													
	25A	30	M10x1.25	25	3	10	8	22	3	10	8	22	3	22	3		
	30	35	M12x1.75	30													

Urethane rubber and fluororubber are thermally bonded to a core rod.

■Threaded Type

Type		Pushers		Core Rod
Flat	Round	Hardness	Material	Material
SLLM	SSSM	Shore A70	Silicon Rubber	EN 1.4301 Equiv.
PSHMPT	RSHMPT	Shore A80	Fluororubber (FPM)	

For properties of urethane rubber and fluororubber, see P.390.

Flat

Round

6.3 / (2.5 / 6.3)

Part Number		L		MxPitch		SR1		R2		m		l1		l2		f		R3 Max.		W		Unit Price	
Type	D																					SLLM SSSM	PSHMPT RSHMPT
Flat SLLM PSHMPT	6	10	M3x0.5	6	1	4.5	5	4	1	1.5	0.75	1	5	4	1	0.3	5	0.3	5	1	5		
	8	12	M4x0.7	8																			
	10	15	M5x0.8	10																			
	12	16	M6x1.0	12	2	6	5	14	2	6	5	14	2	10	2	1.5	0.75	1.5	10	2	10		
	16	20	M8x1.25	16																			
	20	25	M10x1.5	20																			

Urethane rubber and fluororubber are thermally bonded to a core rod.

Ordering Example
Part Number
PSHPT8



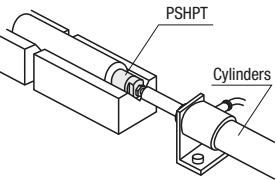
■Shore Hardness for Rubber Pushers for reference

Allowable Hardness Range: Listed values ±5

Shore A95	Golf Ball
Shore A90	Hard Ball
Shore A70	Soft Ball
Shore A50	Plastic Eraser
Shore A30	Bicycle Tire Tubes

Following is the comparison table for ASKER C and Shore A.

Durometer A (Shore A)	10	20	30	40	50	60	70	80	90
ASKER C	20	30	40	50	60	70	80	90	
SRIS 0101 Type C	1	1	1	1	1	1	1	1	1



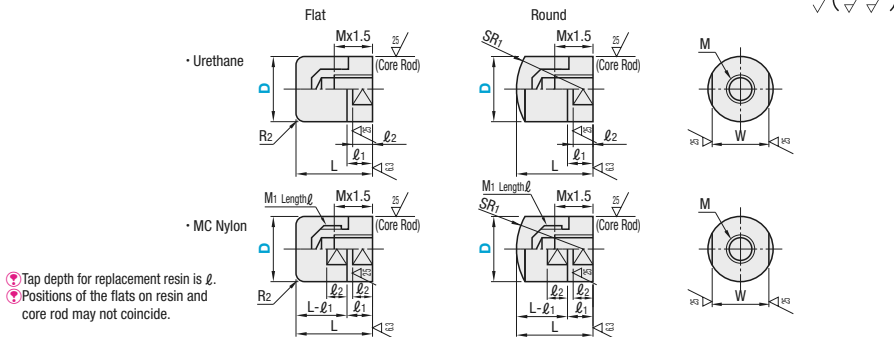
Large Diameter Pushers

■Features: Workpiece contact area is made larger by enlarging D dimension (O.D.).

■Tapped Type



Type		Pushers		Core Rod
Flat	Round	Hardness	Material	Material
PSHDL	RSHDL	Shore A90	Ether Polyurethane	EN 1.4301 Equiv.
PSHDS	RSHDS	Shore A70	Ester Polyurethane	
PSHDMC	RSHDMC	-	MC Nylon	



① Tap depth for replacement resin is ℓ .
② Positions of the flats on resin and core rod may not coincide.

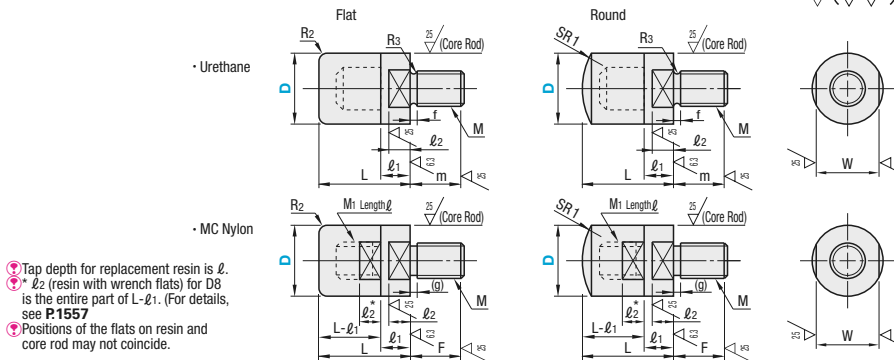
Part Number		L	MxPitch	M1xPitch	ℓ	SR1	R2	ℓ_1	ℓ_2	W	Unit Price		
Type	D										PSHDL RSHDL	PSHDS RSHDS	PSHDMC RSHDMC
Set Flat PSHDL PSHDS PSHDMC	10	15	M3x0.5	M5x0.8	4.5	10	1			8			
	12	16	M4x0.7	M6x1.0	7	12	2			10			
	16	20	M5x0.8	M8x1.25		16		5	4	14			
	20	25	M6x1.0	M10x1.5	8	20		6	5	17			
	25	30	M8x1.25	M12x1.75	10	25	3	8	6	22			
	30	35	M10x1.5		14	30		10	8	27			
	36	45	M12x1.75	M16x2.0	16	36	3.5	12	10	32			
Round RSHDL RSHDS RSHDMC	10	15	M3x0.5	M5x0.8	4.5	10	1			8			
	12	16	M4x0.7	M6x1.0	7	12	2			10			
	16	20	M5x0.8	M8x1.25		16		5	4	14			
	20	25	M6x1.0	M10x1.5	8	20		6	5	17			
	25	30	M8x1.25	M12x1.75	10	25	3	8	6	22			
	30	35	M10x1.5		14	30		10	8	27			
	36	45	M12x1.75	M16x2.0	16	36	3.5	12	10	32			

① Urethane may discolor over time but there is no effect on properties. ② For MC Nylon Type, replacement resin (MCRDKK) is provided. Please visit our website.

■Threaded Type



Type		Pushers		Core Rod
Flat	Round	Hardness	Material	Material
PSHDMH	RSHDMH	Shore A90	Ether Polyurethane	EN 1.4301 Equiv.
PSHDS	RSHDS	Shore A70	Ester Polyurethane	
PSHDMC	RSHDMC	-	MC Nylon	



① Tap depth for replacement resin is ℓ .
② ℓ_2 (resin with wrench flats) for D8 is the entire part of L- ℓ_1 . (For details, see P.1557)
③ Positions of the flats on resin and core rod may not coincide.

Part Number		L	MxPitch (Coarse)	Material: Resin				SR1	R2	m	ℓ1	ℓ2	f	R3 Max.	W	Unit Price		
Type	D			MxPitch (Coarse)	ℓ	F	(g)									PSHDMH RSHDMH	PSHDS RSHDS	PSHDMC RSHDMC
Flat PSHDMH PSHDS PSHDMC	Round RSHDMH RSHDS RSHDMC	8	12	M3x0.5	M3x0.5	3	5	1.5	8	1	6		1	0.3	7			
		10	15	M4x0.7	M5x0.8	4.5	6		10		7	5	4	1	0.5	8		
		12	16	M5x0.8	M6x1.0	7	7	2	12	2	10			1.5	0.5	10		
		16	20	M6x1.0	M8x1.25	7	10		16		12	6	5	2	0.75	14		
		20	25	M8x1.25	M10x1.5	8	12	2.5	20		14	8	6			17		
		25	30	M10x1.5	M12x1.75	10	14		25	3	18				1	22	-	-
		30	35	M16x2.0	M16x2.0	14	18	3.5	30		20	10	8	3.5		27	-	-

① Urethane may discolor over time but there is no effect on properties. ② For MC Nylon Type, replacement resin is provided. Please visit our website.

Ordering Example
Part Number
PSHDH20
RSHDS16

■Bushing Part Area Comparison

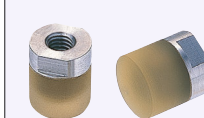
Standard Pushers (P1553)			Large Diameter Pushers			Increase			Standard Pushers (P1553)			Large Diameter Pushers			Increase		
D	Bushing Part Area		D	Bushing Part Area		D	Bushing Part Area		D	Bushing Part Area		D	Bushing Part Area		D	Bushing Part Area	
6	28	8	50	2	78%	16	201	20	314	4	56%						
8	50	10	79	2	56%	20	314	25	491	5	56%						
10	79	12	113	2	44%	25	491	30	707	5	44%						
12	113	16	201	4	78%	30	707	36	1,017	6	44%						

Formula : (D/2)²×3.14

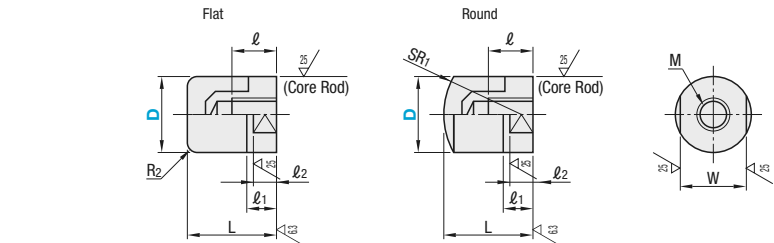
Small Diameter Pushers

■Features: Pushers suitable for space saving with small D dimension (O.D.). Small diameter alleviates the burden on the cylinder rod.

■Tapped Type



Type		Pushers		Core Rod
Flat	Round	Hardness	Material	Material
PSHEH	RSHEH	Shore A90	Ether Polyurethane	EN 1.4301 Equiv.
PSHES	RSHES	Shore A70	Ester Polyurethane	



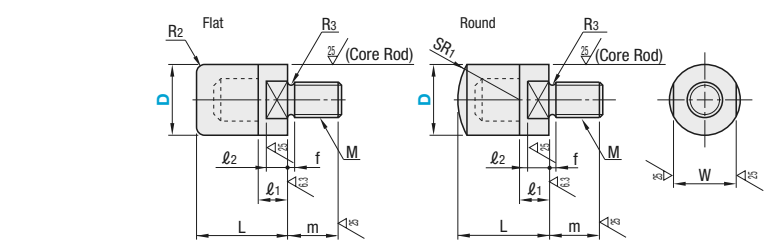
Part Number		L	MxPitch	SR1	R2	ℓ	ℓ_1	ℓ_2	W	Unit Price	
Type	D									PSHEH RSHEH	PSHES RSHES
Flat PSHEH PSHES	6	10	M3x0.5	6		3.5			5		
	8	12	M4x0.7	8	1	5			7		
	10	15	M5x0.8	10		6.5	5	4	8		
	12	16	M6x1.0	12		7			10		
	16	20	M8x1.25	16	2	10	6	5	14		
Round RSHEH RSHES	6	10	M3x0.5	6		3.5			5		
	8	12	M4x0.7	8	1	5			7		
	10	15	M5x0.8	10		6.5	5	4	8		
	12	16	M6x1.0	12		7			10		
	16	20	M8x1.25	16	2	10	6	5	14		

① Urethane may discolor over time but there is no effect on properties. ② Urethane rubber is thermally bonded to the core rod.

■Threaded Type



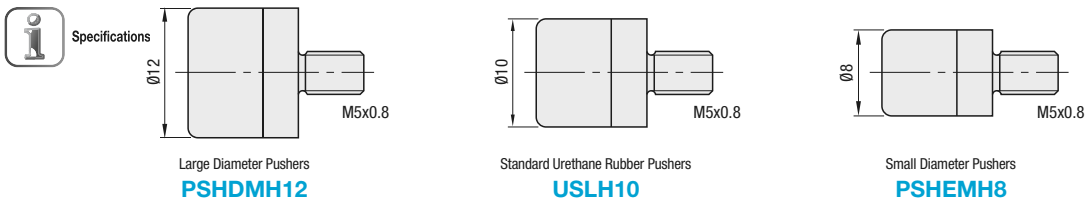
Type		Pushers		Core Rod
Flat	Round	Hardness	Material	Material
PSHEMH	RSHEMH	Shore A90	Ether Polyurethane	EN 1.4301 Equiv.
PSHEMS	RHEMS	Shore A70	Ester Polyurethane	



Part Number		L	MxPitch	SR1	R2	m	ℓ_1	ℓ_2	f	R3 Max.	W	Unit Price	
Type	D											PSHEMH RSHEMH	PSHEMS RHEMS
Flat PSHEMH PSHEMS	8	12	M5x0.8	8		6			1.3	0.3	7		
	10	15	M6x1.0	10	1	7	5	4	1.5	0.5	8		
	12	16	M8x1.25	12		10			2		10		
	16	20	M10x1.5	16	2	12	6	5	2	0.75	14		
Round RSHEMH RHEMS	8	12	M5x0.8	8		6			1.3	0.3	7		
	10	15	M6x1.0	10	1	7	5	4	1.5	0.5	8		
	12	16	M8x1.25	12		10			2		10		
	16	20	M10x1.5	16	2	12	6	5	2	0.75	14		

① Urethane may discolor over time but there is no effect on properties. ② Urethane rubber is thermally bonded to the core rod.

Ordering Example
Part Number
PSHEH16
RSHES12



① When selecting same thread Dia., workpiece contact area is made larger by enlarging diameter and smaller by reducing diameter.

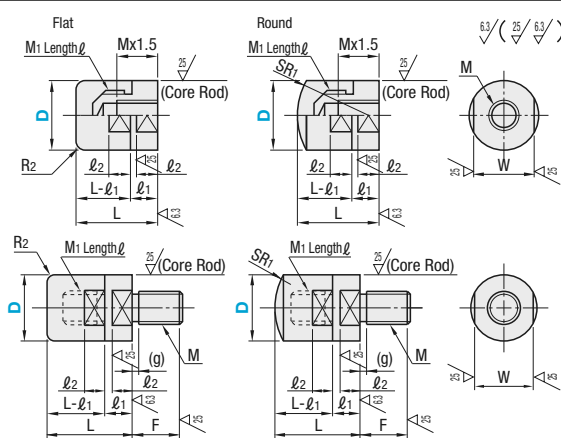
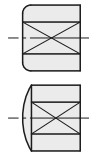
Standard Type

■ **Features:** MC nylon used pushers. For maintenance, resin for replacement is provided.



Type		Shape		 Material
		Flat	Round	
MC Nylon	Tapped	PSHMC	RSHMC	MC Nylon Material: EN 1.4301 Equiv.
	Threaded	PSHMMC	RSHMMC	
	Replacement Resin	MCKK	MCRKK	MC Nylon
Polyacetal	Tapped	PSHPA	RSHPA	Polyacetal Material: EN 1.4301 Equiv.
	Threaded	PSHMPA	RSHPMA	
	Replacement Resin	PAKK	PARKK	Polyacetal

ℓ_2 (resin with wrench flats) for D6 and D8 is as follows.



■ **Tapped** ⓘ Positions of the flats on resin and core rod may not coincide. ⓘ Tap depth for replacement resin is 2.

Part Number		L	MxPitch	M1xPitch	ℓ	SR1	R2	ℓ1	ℓ2	W	Unit Price									
											MC Nylon				Polyacetal					
											Set		Replacement Resin		Set		Replacement Res			
Type	D										PSHMC	RSHMC	MCKK	MCRKK	PSHPA	RSHPA	PAKK	PARKK		
Set Flat PSHMC PSHPA Round RSHMC RSHPA	Replacement Resin Flat MCKK PAKK Round MCRKK PARKK	8	12	M3x0.5	M5x0.8	4.5	8	1	5	4	7									
		10	15	M4x0.7	M6x1.0	7	10				8									
		12	16	M5x0.8	M8x1.25	8	12				10									
		15	20	M6x1.0	M10x1.5	10	16	2	6	5	14									
		16																		
		20										25	M8x1.25	M12x1.75	12	20	8	6	17	
		25	30	M10x1.5	M16x2.0	14	25	3	10	8	22	-	-	-	-	-	-	-	-	
		30	35	M12x1.75	M16x2.0	18	30				27	-	-	-	-	-	-	-		

■ Threaded

Part Number		L	MxPitch (Coarse)	MxPitch (Coarse)	ℓ	SR ₁	R ₂	F	(g)	ℓ ₁	ℓ ₂	W	Unit Price									
													MC Nylon				Polyacetal					
													Set		Replacement Resin		Set		Replacement Resin			
Type	D												P5HMMC	R5HMMC	MCKK	MCKRK	P5HMPA	R5HMPA	PAKK	PARKK		
Set Flat	Replacement Resin Flat	6	10	M3x0.5	M3x0.5	3	6		4.5	1.5	5	4	5									
		8	12	M4x0.7	M5x0.8	4.5	8	1	6					7								
PSHMMC PSHMPA Round	MCKK PAKK Round	10	15	M5x0.8	M6x1.0	7	10		7	2	5	4	8									
		12	16	M6x1.0	M8x1.25	8	12		10					10								
		15	20	M8x1.25	M10x1.5	10	16	2	12	2.5	6	5	14									
		16																				
	R5HMMC R5HMPA	MCKRK PARKK	20	25	M10x1.5	M12x1.75	12	20	3	14		8	6	17								



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.

Polyamide: Exceeds in Mechanical Strength Compared with MC Nylon						Chemical Resistance.			
Item	Abrasion Resistance	Slip Property	Dimensional Stability	Impact Resistance	Flame Resistance	Oil	Acid	Alkali	Organic Solvent
MC Nylon	○	○	△	○	-	○	×	○~△	○
MC Nylon Electrical Conductivity CDR2	○	○	△	○	-	○	×	○~△	○
Polyacetal	△	○	○	○	[UL94] HB Equiv.	○	△~×	○	

Item	Tensile Strength	Elongation	Bending	Compressive Strength		Rockwell	Continuous	Volume Specific	Density	Moisture Absorption	
	(at ambient temperature)		Strength	Yielding Point	% Deformation	Hardness (R Scale)	Operating Temperature	Resistivity (Ω · cm)		Water, Balanced	Water, 24h
Test Method ASTM	D-638		D-790	D-695	D-785		-	D-257	D-792	D-570	
MC Nylon	96MPa	30%	110MPa	103MPa	95MPa	120	-40 ~ 120°C	4.2x10 ¹⁵	1.16	6	0.8
MC Nylon Electrical Conductivity CDR2	68MPa	10%	117MPa	-	98MPa	119	Room Temperature ~120°C	10 ⁵ x10 ⁴	1.20	-	-
Polycetal	61MPa	40%	89MPa	-	103MPa	119	-45 ~ 95°C	>10 ¹⁴	1.41	0.7	0.22

 For detailed Properties, see **P.953**.

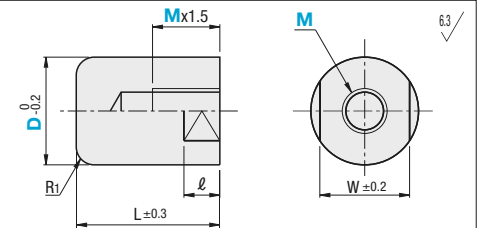
Thread Insert



Type	Material	Color	Thread
JPHJ	Polyacetal	White	Thread Insert (EN 1.4301 Equiv.)
JPHM	MC Nylon Electrical Conductivity C0R2	Black	
JPHMC	MC Nylon	Blue	

♥ Properties of polyacetal and MC nylon, see **P.1557**.

⚠ Properties of polyacetal and MC nylon, see **P.1557**.



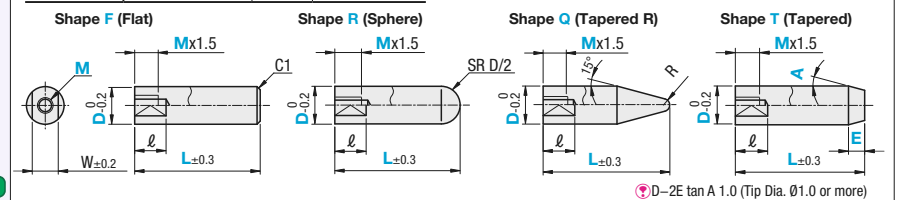
Part Number		M Selection					L	R1	ℓ	W	Unit Price		
Type	D										JPHJ	JPHM	JPHMC
JPHJ JPHM JPHMC	8	3 4				12				7			
	10	3 4 5				15	1	8		8			
	12	4 5 6				16				10			
	15	5 6 8S 8					2						
	16	6 8S 8				20				14			
	18	6 8S 8 10S 10 12S 12											
	20	8S 8 10S 10 12S 12 12M				25				17			
	30	10S 10 12S 12 12M 14S 18S				35			15	27			
	40	10S 10 12S 12 12M 14S 18S				45			20	37			

❗ 8S, 10S, 12, 12S, 14S and 18S are fine thread pitch. For thread details, refer to the right. ❗ 12M is course thread pitch.



Type	Material	Color	Thread
JPFJ	Polyacetal	White	Thread Insert (EN 1.4301 Equiv.)
JPFM	MC Nylon Conductive CDR2	Black	
JPFMC	MC Nylon	Blue	

⚠ Properties of polyacetal and MC nylon, see **P.953**.



⚠ D-2E tan A 1.0 (Tip Dia. Ø1.0 or more)

Part Number			L	M	Tapered Type only		R	ℓ	W			
Type	Shape	D	1mm Increment	Selection	E 0.5mm Increment	A 1° Increment						
JPFJ (Polyacetal) JPFM (MC Nylon Conductive CDR2) JPFMC (MC Nylon)	F R Q* T	6	10(17)~50	3	5.0≤E E≤Mx3	1~45°	1	8	5			
		8	12(19)~50	3 4			1.5		7			
		10	15(22)~50	3 4 5					8			
		12	16(27)~100	4 5 6			2	10	10			
		15	20(35)~100	5 6 8S 8					3	15	14	
		16		6 8S 8							20	27
		18	25(40)~100	6 8S 8 10S 10								37
		20		8S 8 10S 10 12S 12 12M								
		30	35(63)~100	10S 10 12S 12 12M 14S 18S								
		40	45(87)~100	10S 10 12S 12 12M 14S 18S								

* Dimensions in () are the minimum L dimensions when shape Q is selected. 8S, 10S, 12, 12S, 14S and 18S are fine thread pitch. For thread details, refer to the right. 12M is course thread pitch.



Part Number						
Type	Shape	D	L	M	E	A
JPFJ	R	12	40	6		
JPFMC	T	12	35	5	E8	A15

- Thread

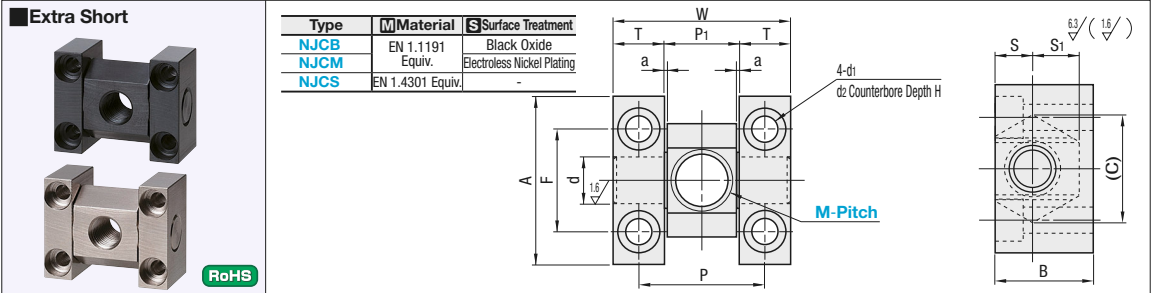
M	MxPitch
3	M3x0.5
4	M4x0.7
5	M5x0.8
6	M6x1.0
8S	M8x1.0
8	M8x1.25
10S	M10x1.25
10	M10x1.5
12S	M12x1.25
12	M12x1.5
12M	M12x1.75
14S	M14x1.5
18S	M18x1.5

[illegible]

Knuckle Joints

Extra Short / Tool-Less

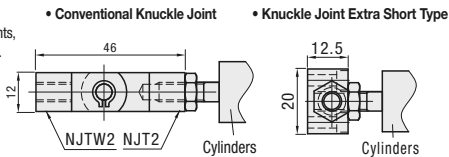
■ **Features:** Extra Short Type that can be used in a limited space is available.



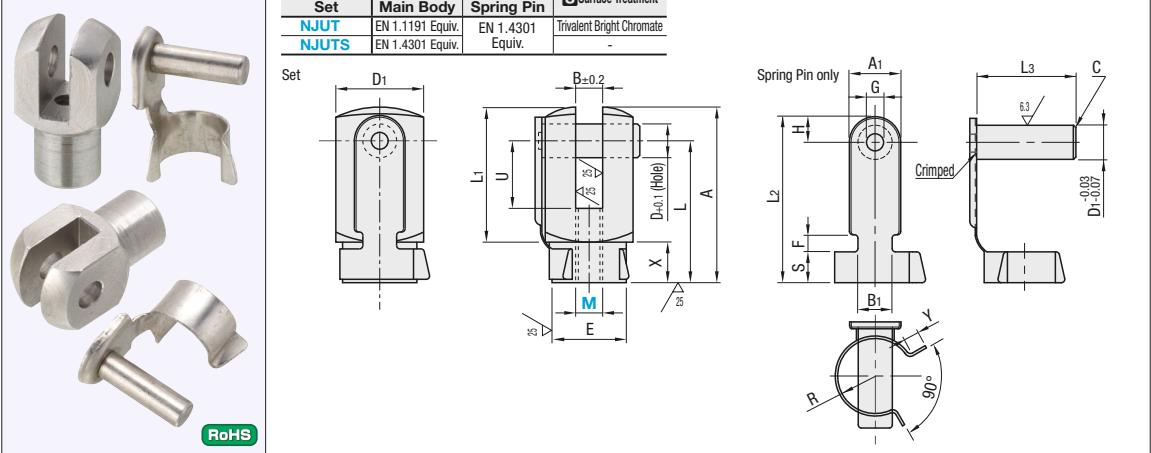
Part Number		A	B	d	F	W	P	T	P ₁	a	S	S ₁	(C)	d ₁	d ₂	H	Mass (g)	Unit Price			
Type	M-Pitch																	NJCB	NJCM	NJCS	
NJCB NJCM NJCS	3-0.5	18	10.5		11	19	13.5		8	0.3	4	5	11.6	2.8	4.5	3	21				
	4-0.7	19		5		20.5	15		9.5			5.5	12.7				26				
	5-0.8		11.5		12	25.5	18	7.5	10.5								36				
	6-1.0	20		6	13	27	20	7	13			6	13.9				39				
	8-1.0	24	17	8	16	34	26	8	18			7	8.5				19.6	82			
	10-1.25	30	20.5	10	20	38	29	9	20		8	10.5	24.3	4.5	8	4.5	139				
	12-1.25	36	25	12	24	44	34	10	24		10	12.5	28.9				230				
	14-1.5	42	28.5	14	28	52	40	12	28		11	14.5	33.5				365				
	16-1.5	48	33	16	32	60	46	14	32		0.5	13	16	37	5.5	9.5	5.5	542			
	18-1.5	54	36	18	36	68	52	16	36			14	18	41.6				764			

Ordering Example
Part Number
NJCS10-1.25
NJCB18-1.5

■ **Features:**
Compared to the conventional knuckle joints,
① Suitable for use in a very limited space.
② Supporting shaft is incorporated.
③ A reduced number of component parts allows easy assembly.



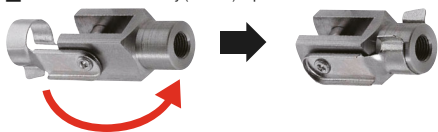
Tool-Less



Part Number	Type	M	MxPitch	D±0.1	B±0.2	U	A	L	L ₁	D ₁	E	X	Unit Price	
													NJUT	NJUTS
Set NJUT NJUTS		4	M4x0.7	4.2	4.3	6	21	16	13	11	8.5	8		
		5	M5x0.8	5.3										
		6	M6x1.0	6.8	6.8	12	31	24	22	16	12.5	9		
		8	M8x1.25	10.5	8.3	20	52	42	38	26	21	14		
		10	M10x1.25		10.3									

Ordering Example
Part Number
NJUT6

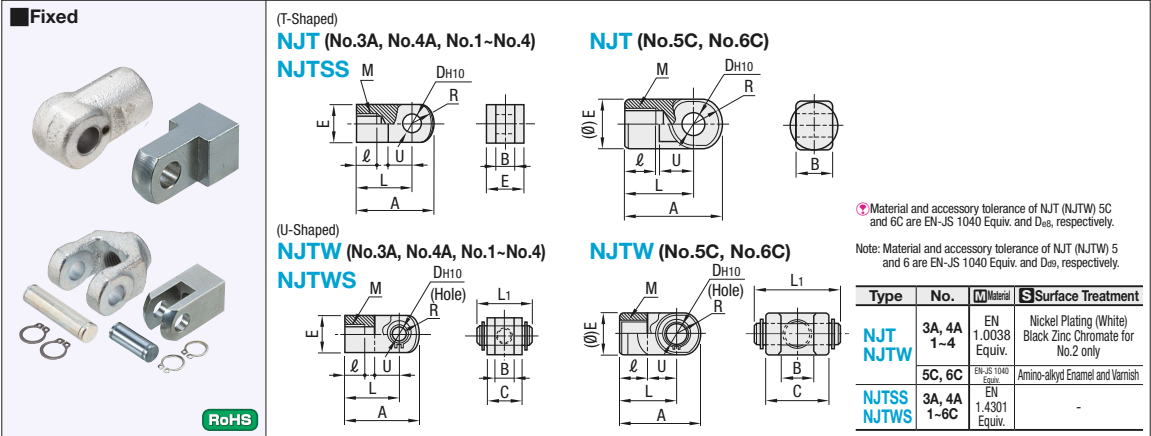
■ **Features:** Quick assembly (removal) is possible.



Knuckle Joints

Fixed / B Selectable

■ **Features:** T-Shaped/U-Shaped Fixed and Concave/Convex with B Dimension Selectable.



Part Number	Type	No.	A	ℓ	E	L	M	R	U	DH10	B Tolerance	Applicable Cylinder I.D. (mm)	Unit Price	
													NJT	NJTSS
NJT NJTSS		3A	19	5	8	14	M3x0.5	5	5	4 +0.048 0	4	6		
		4A	19	5	8	14	M4x0.7	5	5	4 +0.048 0	4	10		
		1	21.5	6	10	16	M5x0.8	6.3	7	5 +0.048 0	5	12		
		2	32	8	12	25	M6x1	8.1	14	8 +0.058 0	6.4	16		
		3	34	8.5	16	25	M8x1.25	10.3	11.5	8 +0.058 0	8	20		
		4	41	10.5	20	30	M10x1.25	12.8		10 +0.058 0	10	25		
		5C	42	14	22		M14x1.5	12	14	10 +0.058 0	18	32, 40		
		6C	56	18	28	40	M18x1.5	16	20	14 +0.070 0	22	50, 63		

⚠ I.D. (mm) of an applicable cylinder is for a compact cylinder. In the selection, please also check M (diameter of a mounting screw).

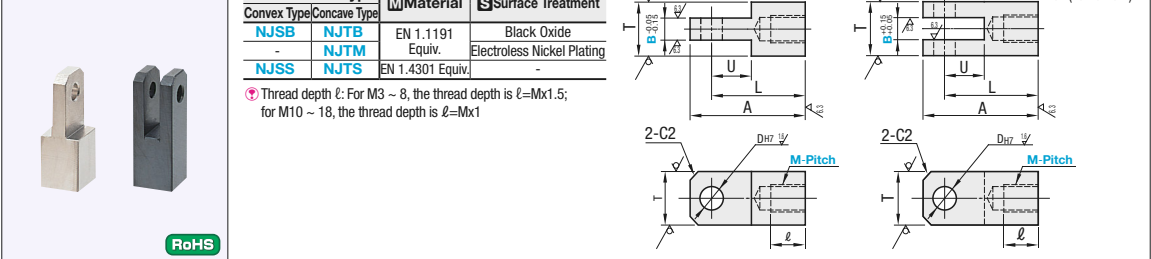
Part Number	Type	No.	A	ℓ	E	L	M	R	U	DH10	B Tolerance	C	L ₁	Applicable Cylinder I.D. (mm)	Unit Price	
															NJT	NJTWS
NJTW NJTWS		3A	19	5	8	14	M3x0.5	5	5	4 +0.048 0	4	8	12	6		
		4A	19	5	8	14	M4x0.7	5	5	4 +0.048 0	4	10	12	10		
		1	21.5	6	10	16	M5x0.8	6.3	7	5 +0.048 0	5	10	14.6	12		
		2	28	11	12	21	M6x1	8.1	10	8 +0.058 0	6.5	12	16.6	16		
		3	34	8.5	16	25	M8x1.25	10.3	11.5	8 +0.058 0	8	16	21	20		
		4	41	10.5	20	30	M10x1.25	12.8		10 +0.058 0	10	20	25.6	25		
		5C	42	16	22		M14x1.5	12	14	10 +0.058 0	18	36	41.6	32, 40		
		6C	56	20	28	40	M18x1.5	16	20	14 +0.070 0	22	44	50.6	50, 63		

⚠ I.D. (mm) of an applicable cylinder is for a compact cylinder. In the selection, please also check M (diameter of a mounting screw).

* The knuckle joint pin and retaining ring (2 pcs.) are included in the package of NJT, NJTSS, NJTW and NJTWS.

Ordering Example
Part Number
NJT2
NJT3A
NJTW5C

B Selectable



Part Number		B Selection	DH7	U	A	L	T	Unit Price				
Type	M-Pitch							Convex Type		Concave Type		
								NJSB	NJSS	NJTB	NJTM	NJTS
(Convex Type) NJSB NJSS	3-0.5	4, 5	4	10	26	20	10					
	4-0.7	5, 6	5		31	25	12					
	5-0.8											
	6-1.0	4, 6										
	8-1.0	5, 8	8		15	43	35	16				
8-1.25												
(Concave Type) NJTB NJTM NJTS	10-1.25	6, 10	10				20					
10-1.5	8, 10	12	50	40		22						
12-1.25												
12-1.5												
14-1.5	10, 12		20	62	50	25						
16-1.5				67	55							
18-1.5	12, 14	69			28							

Ordering Example

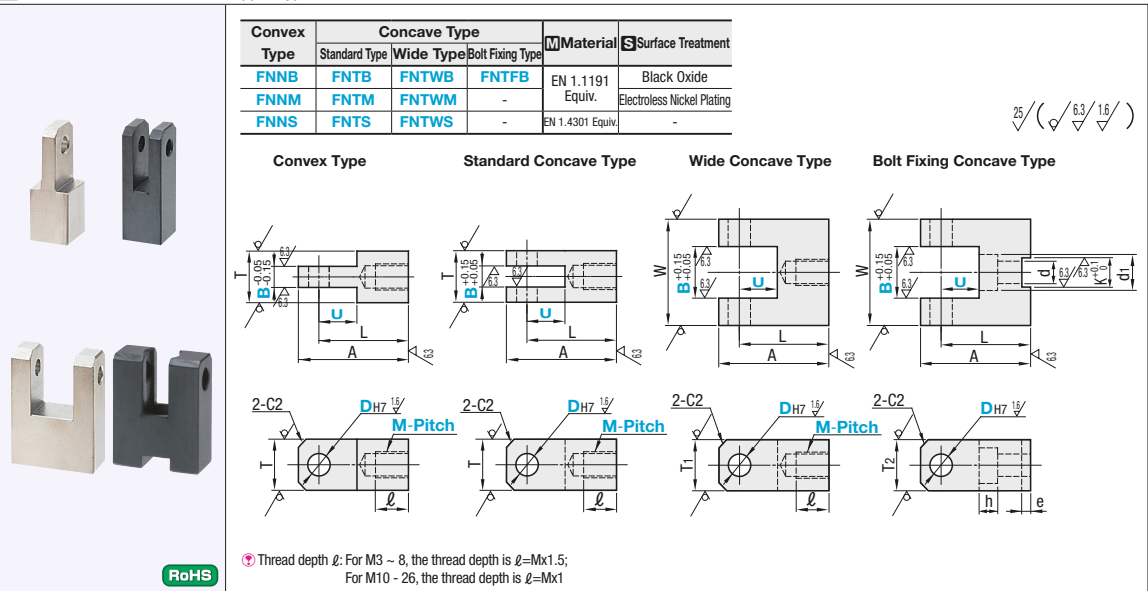
Part Number	-	B
NJSB5-0.8	-	B6
NJTS8-1.25	-	B5

Ordering Example
Part Number
NJSB5-0.8
NJTS8-1.25

Knuckle Joints

Tapped, Configurable

■Features: Various Concave Tapped types are available.



Part Number		DH7 Selection	B 1mm Increment				U 5mm Increment	A	L	T	T ₁	T ₂	W	d	h	d ₁	K	e		
Type	M-Pitch		Convex Type	Concave Type																
				Standard Type	Wide Type	Bolt Fixing Type														
Convex Type FNNB FNNM FNNS	*3-0.5	3 4 5	3~10	3~5	6~10	6~10	10~20	L+6	U+10	10	9	10 12	19	3.2	3.5	6.5	5	2.5		
	*4-0.7								U+15	12	12	12	25	4.2	4.5	8	6			
	*5-0.8	4 5 6	4~12	4~6	7~12	7~12	10~30				12	16	16	25	5.2	5.5	9.5	8	3.5	
	*6-1.0														6.2	6.5	11	10	4	
Standard Concave Type FNTB FNTM FNTS	8-1.0	5 6 8	5~16	5~8	9~16	-	15~30	L+8	U+20	16	16	- 20	32	-	-	-	-	-		
	*8-1.25				9~16	-				20	19	- 25	38	-	-	-	-	-	-	
	10-1.25	6 8 10	6~20	6~10	11~20	-														
	*10-1.5				11~20															
Wide Concave Type FNTWB FNTWM FNTWS	12-1.25	8 10 12 13	8~22	8~11	12~22	-	20~30	L+10	U+25	22	22	-	44							
	12-1.5							L+12	U+30	25	25	-	50	-	-	-	-	-		
	14-1.5							L+14	U+35	28	30									
	16-1.5	10 12 13 14 15 16	10~25	10~13	14~25			L+16	U+45	32										
Bolt Fixing Concave Type (Only * marked sizes) FNTFB	18-1.5		12~28	12~14	15~28			L+14	U+35	28	30									
	22-1.5	12 13 14 15 16 20	12~32	12~16				L+16	U+45	32										
	26-1.5		12~38	12~18				L+19	U+50	38										

- Only * marked sizes are available for Bolt Fixing Concave Type (FNTFB).
- For Bolt Fixing Concave Type (FNTFB), when $B < d_1$ is specified, the knuckle joint shape is as the lower right photo shown above.
- For M22 - 1.5 and M26 - 1.5, only Convex Type and Standard Concave Type are available.

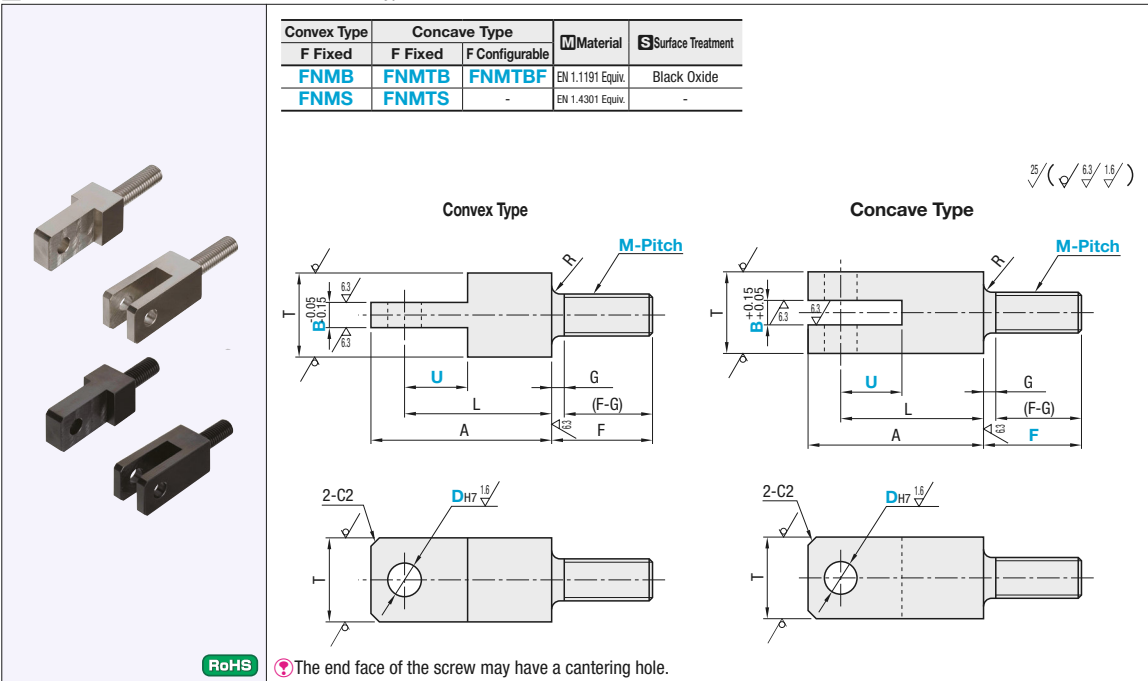
Ordering Example: Part Number - D - B - U
FNNB8-1.0 - D6 - B8 - U20
FNTWM6-1.0 - D6 - B9 - U10

Type	Unit Price									
	Convex Type			Standard Concave Type			Wide Concave Type			Bolt Fixing Concave Type
M-Pitch	FNNB	FNNM	FNNS	FNTB	FNTM	FNTS	FNTWB	FNTWM	FNTWS	FNTFB
3-0.5										
4-0.7										
5-0.8										
6-1.0										
8-1.0										-
8-1.25										
10-1.25										-
10-1.5										
12-1.25										
12-1.5										
14-1.5										
16-1.5										
18-1.5										
22-1.5										
26-1.5										

Knuckle Joints

Threaded, Configurable

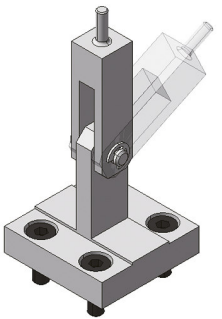
■Features: Convex/Concave Selectable Threaded Type.



Part Number		DH7 Selection	B 1mm Increment		U 5mm Increment	F		A	L	T	G	R
Type	M-Pitch		Convex Type	Concave Type		Standard	Configurable 1mm Increment					
Convex Type F Fixed FNMB FNMS	3~0.5		3 4 5	3~10	3~5	10~20	9					
	4~0.7	12					10~16	12				
	5~0.8	4 5 6	4~12	4~6	10~30	14	12~19		L+6	12	4	
	6~1.0					16	13~22					
Concave Type F Fixed FNMTB FNMTS	8~1.25	5 6 8	5~16	5~8	15~30	20	16~28	L+8	U+15	16		
	10~1.5	6 8 10	6~20	6~10		25	20~35	L+10		20	5	
	16~2.0	12 13 14 15 16 20	12~32	12~16	20~30	39	31~55	L+16	U+20	32	7	1.6
	20~2.5	12 13 14 15 16 20	12~38	12~18		49	39~69	L+19		38	9	

Ordering Example: Part Number - D - B - U - F
FNMB8-1.25 - D8 - B9 - U20
FNMTBF10-1.5 - D10 - B7 - U25 - F30

Example
Combination of these app. examples can be selected on our website.
For details of selections see P87



M-Pitch	Unit Price				
	Convex Type		Concave Type		
	F Fixed	F Configurable	F Fixed	F Configurable	F Configurable
3-0.5	FNMB	FNMS	FNMTB	FNMTS	FNMTBF
4-0.7					
5-0.8					
6-1.0					
8-1.25					
10-1.5					
16-2.0					
20-2.5					