

I Knuckle



Ordering code

F-M16X150 I

Accessories code

Knuckle

I: I Knuckle

Screw thread

M3: M3
M4: M4
M5: M5
M6: M6
M8: M8
M10: M10
M12: M12
M14: M14
M16: M16
M18: M18
M20: M20
M22: M22
M26: M26
M27: M27
M36: M36
M42: M42

Thread pitch

Screw thread	Thread pitch
M3	050: 0.5mm
M4	070: 0.7mm
M5	080: 0.8mm
M6	100: 1.0mm
M8, M10, M12	125: 1.25mm
M14, M16, M18	150: 1.5mm
M20, M22, M26	200: 2.0mm
M27, M36, M42	

Table for I knuckle and cylinder

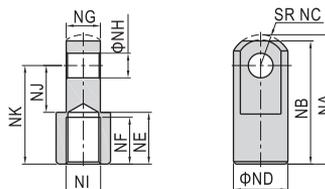
Accessory	Cylinder						SE						SI/SIF					
	32	40	50	63	80	100	125	32	40	50	63	80	100	125	160	200		
F-M10X125I	●							●										
F-M12X125I		●							●									
F-M16X150I			●	●						●	●							
F-M20X150I					●	●						●	●					
F-M27X200I							●							●				
F-M36X200I															●	●		

Accessory	Cylinder			SGC						SC/SU/SCF/SUF						JSI		
	125	160	200	250	32	40	50	63	80	100	32	40	50	63	80	100	125	
F-M10X125I					●													
F-M12X125I						●												
F-M14X150I							●						●					
F-M16X150I								●	●									
F-M18X150I													●	●				
F-M20X150I										●	●							
F-M22X150I																●		
F-M26X150I																	●	
F-M27X200I	●																●	
F-M36X200I		●	●															
F-M42X200I				●														

Accessory	Cylinder		MI						MPG				
	8	10	12	16	20	25	32	40	6	8	10	12	16
F-M3X050I													●
F-M4X070I	●	●									●	●	
F-M5X080I												●	●
F-M6X100I			●	●									
F-M8X125I					●								
F-M10X125I						●	●						
F-M12X125I							●						

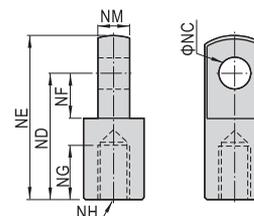
Dimensions

M14\M18\M22\M26



Type/Item	NA	NB	NC	ND	NE	NF	NG	NH	NJ	NK	NI
F-M14X150I	52.5	50	12.5	22	21	19	13.8	10	19	40	M14×1.5
F-M18X150I	66.5	64	16.5	28	27	24	19.8	14	24	50	M18×1.5
F-M22X150I	83.5	80	23.5	40	29	26	29.8	22	34	60	M22×1.5
F-M26X150I	83.5	80	23.5	40	29	26	29.8	22	34	60	M26×1.5

Others



Type/Item	NC	ND	NE	NF	NG	NH	NM
F-M3x050I	3	12	15.5	5	5	M3×0.5	3
F-M4x070I	4	16	21	6.8	8	M4×0.7	4
F-M5x080I	5	25	32	14.1	7.5	M5×0.8	6.3
F-M6x100I	6	21	28	8.5	8	M6×1.0	6
F-M8x125I	8	30	40	11	15	M8×1.25	8
F-M10x125I	10	40	50	15	20	M10×1.25	10
F-M12x125I	12	48	62	24	20	M12×1.25	12
F-M16x150I	16	64	82	32	23	M16×1.5	16
F-M20x150I	20	80	102	40	30	M20×1.5	20
F-M27x200I	30	110	139	51	45	M27×2.0	30
F-M36x200I	35	144	181	65	55	M36×2.0	35
F-M42x200I	40	168	211	85	62	M42×2.0	40



I knuckle

Floating Joints - Quick Connection Type

Cylinder Connector and Holder Set

Feature: A set of Connector (FJR / FJD) and Holder (HLRA) for Floating Joints Quick Connection Type is available for easy selection.

Type		Holder Shape	Material	Surface Treatment	Hardness
Tapped	Threaded				
FJRHA	FJDHA	Side Mount (HLRA)	S45C Equivalent	Tuffride®	500HV~

FJRHA

FJDHA

Tuffride® may cause uneven color, which doesn't affect mechanical function.
 Tuffride® is a trademark of DURFERRIT GmbH.
 For details of "Tuffride®", see P.1793.

Floating Joints - Quick Connection Type

Tapped Type

Surface treatment of SUS304 has changed from Tuffride® to Nitriding treatment. Better corrosion resistance and hardness, less particle generation on the surface than the conventional products.

Type		Material	Surface Treatment	Hardness
FJR	FJRL	S45C Equivalent	Tuffride®	500HV~
FJRS	-	-	-	-
FJRSW	FJRSWL	SUS304	Nitriding Treatment	1000HV~
FJRC	-	-	Hard Chrome Plating	750HV~

L Standard

FJR
FJRS
FJRSW
FJRC

L Configurable

FJRL
FJRSWL

Tuffride® may cause uneven color, which doesn't affect mechanical function.
 Tuffride® is a trademark of DURFERRIT GmbH.
 For details of "Tuffride®", see P.1793.
 No Tuffride® treatment on the screw end of L Configurable Type.

Tapped Type

Part Number	Cylinder Connector							Holder											
	Type	M-Pitch	T	D	L	h	B	C	D1	A	T1	h1	W	H	a	P	d	d1	H1
FJRHA	3-0.5	4	6	5	3	8	9.2	6.5	12	8	4	34	13	5	24	4.5	8.0	4.4	13
	4-0.7	4	7	6	3	10	11.5	8	14	8	4	36	15	6	26	4.5	8.0	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	11.0	6.5	22
	10-1.25	8	16	11	4	21	24.2	18	28	13	5	56	30	12	42	6.6	11.0	6.5	24
	14-1.5	12	21	13	4	26	30.0	23	34	17	5	70	36	15	52	9	14.0	8.6	30
	18-1.5	15	25	15	5	30	34.6	27	38	21	6	84	43	19	62	11	17.0	10.5	36

Threaded Type

Part Number	Cylinder Connector							Holder														
	Type	M-Pitch	T	D	L	h	F	ℓ	B	C	R	D1	A	T1	h1	W	H	a	P	d	d1	H1
FJDHA	3-0.5	4	4	4	3	8	6	6	6.9	1.0	4.5	9	8	4	30	10	4	20	4.5	8.0	4.4	12
	4-0.7	4	4	5	3	11	9	6	6.9	1.0	4.5	9	8	4	30	10	4	20	4.5	8.0	4.4	13
	5-0.8	4	6	5	3	13	11	8	9.2	1.0	6.5	12	8	4	34	13	5	24	4.5	8.0	4.4	13
	6-1.0	4	7	6	3	19	17	10	11.5	1.5	8	14	8	4	36	15	6	26	4.5	8.0	4.4	14
	8-1.25	6	10	8	4	20	18	14	16.2	1.5	11	19	11	5	44	20	8	32	5.5	9.5	5.4	19

Ordering Example

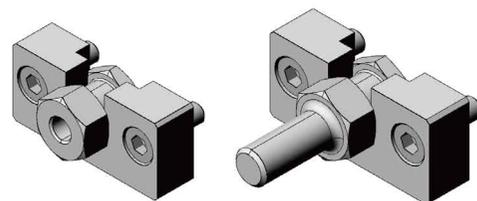
Part Number: **FJRHA5-0.8**
FJDHA10-1.5

Example

The combination shown below is available on the website. For details of selections, see P.81

* Enter a number in the search box on e-Catalog. The search result will be shown in "Modular Assembler" area on the right-hand side of the screen.

e-Catalog Search Number:



Part Number	Type	M-Pitch	T												L		h	D	B (C)			
			2	3	4	5	6	8	9	10	12	13	15	16	18	19				20	L Fixed	L Configurable (1mm Increment)
L Fixed	FJR	3-0.5	2	3	4	5	6										5	3~50	3	6	8	9.2
	FJRS	4-0.7	2	3	4	5	6	8									6	3~60		7	10	11.5
	FJRSW	5-0.8	3	4	5	6	8	9	10								7	3~60		8	12	13.9
	FJRC	6-1.0	3	4	5	6	8	9	10	12							8	4~80		10	14	16.2
L Configurable	FJRL	8-1.0															9	4~100	4	13	17	19.6
	FJRSWL	8-1.25															10	4~100		16	21	24.2
	FJR	10-1.25															11	4~100		18	23	26.6
	FJRS	10-1.5															12	5~100		21	26	30
	FJRSW	12-1.25															13	5~100		26	32	36.6
	FJRC	14-1.5															15	8~100		30	37	41.4
	FJR	16-1.5															16	8~100		36	44	48.6
	FJRS	18-1.5															17	10~100		42	51	55.8
	FJRSW	22-1.5															18	10~100		50	60	66.6

For L Configurable Type, tapped holes go through when h+T+L<3M. T=2 is only available for FJR.

Floating Joint and Holder Application Table (FJR, FJR_, FJR_, FJR_)

M-Pitch	T	HLRA P.1437		HLRB P.1437		HLRC P.1438		HLRE P.1439		HLRF P.1437	
		HLRA	HLRB	HLRC	HLRE	HLRF	HLRA	HLRB	HLRC	HLRE	HLRF
3-0.5	4	6	-	-	-	-	-	3-6	6-3-6		
4-0.7	4	7	4	7	8	7		7-3-8	7-3-8		
5-0.8	6	8	6	8	10	8		8-3-10	8-3-10		
6-1.0	6	10	6	10	12	10		10-3-12	10-3-12		
8-1.0	8	13	8	13	13	13		13-4-12	13-4-12		
8-1.25	8	13	8	13	15	16		13-5-15	16-5-15		
10-1.25	12	18	12	18	16	18		18-6-15	18-6-15		
12-1.25	12	18	12	18	19	21		18-6-15	21-6-15		
14-1.5	15	25	15	25	20	25		25-8-20	25-8-20		
18-1.5	20	27	20	27	-	-		27-12-20	27-12-20		

Holder size 27 is only applicable to HLRA and HLRC.

For holder dimension details see P.1437-1439

Ordering Example

Part Number: **FJR5-0.8** - **T** - **L**
FJRL14-1.5 - **6** - **20**
FJRC10-1.25 - **8**

Floating Joint and Holder Application Table (FJD, FJDSW, FJDL)

M-Pitch	T	HLRA P.1437		HLRB P.1437		HLRC P.1438		HLRE P.1439		HLRF P.1437	
		HLRA	HLRB	HLRC	HLRE	HLRF	HLRA	HLRB	HLRC	HLRE	HLRF
3-0.5	4	4	-	-	-	-	-	-	-	-	-
4-0.7	4	4	4	4	4	4		4-4-4	4-4-4		
5-0.8	6	6	6	6	6	6		6-6-6	6-6-6		
6-1.0	6	6	6	6	6	6		6-6-6	6-6-6		
8-1.25	8	8	8	8	8	8		8-8-8	8-8-8		
10-1.5	12	12	12	12	12	12		12-12-12	12-12-12		
12-1.5	15	15	15	15	15	15		15-15-15	15-15-15		
14-1.5	20	20	20	20	20	20		20-20-20	20-20-20		

Holder size 27 is only applicable to HLRA and HLRC.

For holder dimension details see P.1437-1439

About Nitriding Treatment

Pretreatment of SUS facilitates formation of nitride layer.

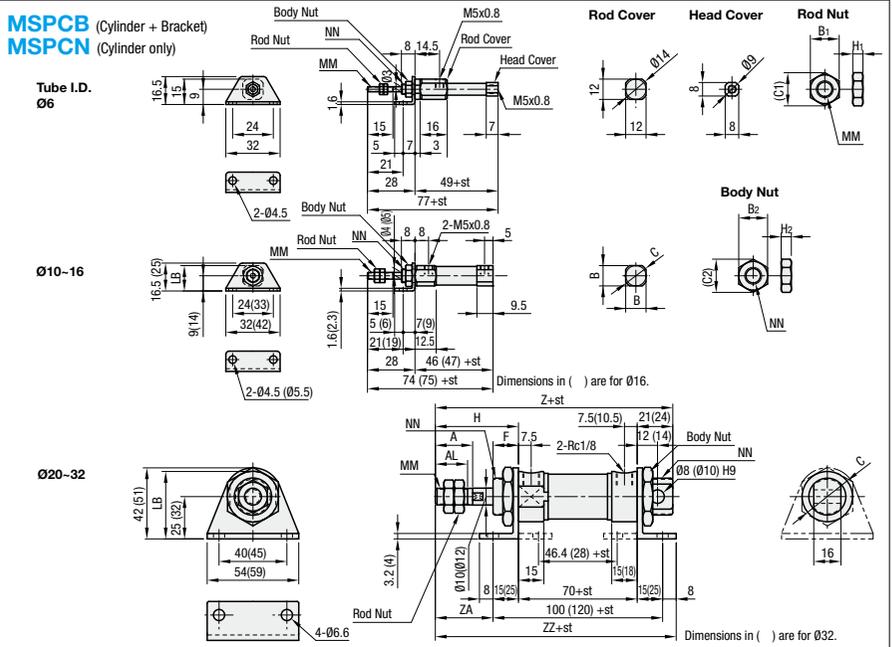
Air Cylinders

Pen-Style Type (Double Acting)

Coupling Rods for Air Cylinders / Thread Conversion Adapters

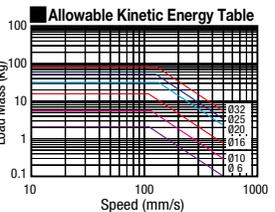
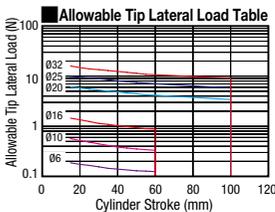
L Selectable / L Configurable / L and F Configurable

Pen-Style Type



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

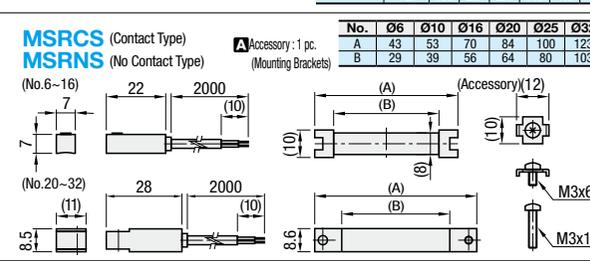
Part Number	Type	Tube I.D. (mm)	St. Stroke (mm)	MSPCB Unit Price							MSPCN Unit Price							
				15	25	30	45	50	60	100	15	25	30	45	50	60	100	
(Cylinder + Bracket)		6	15 30 45 60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MSPCB		10	15 30 45 60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		16	15 30 45 60	-	-	-	-	-	-	-	-	-	-	-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



Theoretical Output

Tube I.D. (mm)	Operating Direction	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	23.8	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

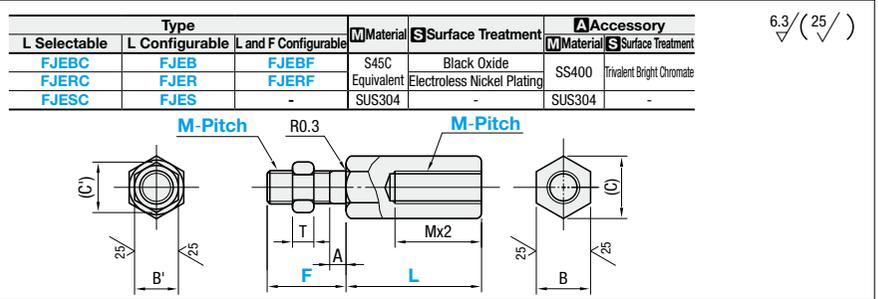
Pen-Style Sensors for Cylinders



Part Number	Applicable Cylinder	Unit Price
6	MSPCB16	MSRCS
10	MSPCN10	MSRNS
16	MSPCB16	MSRCS
20	MSPCN20	MSRNS
25	MSPCB25	MSRCS
32	MSPCN32	MSRNS

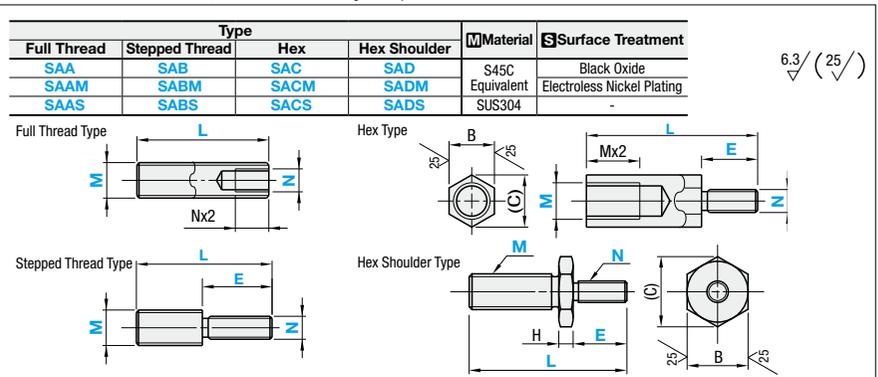
Part Number	Stroke
MSPCB6	30
MSPCN10	30

Extension Rod for Air Cylinders



Part Number	Type	M-Pitch	L		F		A	B	C	B'	C'	T	Qty.	Included Nut								Unit Price						
			Selectable	Configurable (1mm Increment)	Standard	Configurable (1mm Increment)								FJEB	FJER	FJES	FJEB	FJER	FJES	FJEB	FJER		FJES					
L Selectable	FJEB, FJER, FJES	3-0.5	20 25 30 35 40 50 75 100	20-100	17.5	10-15	2.5	6	6.9	5.5	6.4	2.4	2 pcs.															
		4-0.7																		12-20	8	9.2	8	9.2	4			
		5-0.8																		14-20	10	11.5	10	11.5	5			
L Configurable	FJEB, FJER, FJES	8-1.0	30 35 40 50 75 100 150 200	32-200	18	14-40	3	14(13)	16(21.5)	13	15	5	1 pc.															
		8-1.25																		40-200	22	14-50	17	19.6	17	19.6	6	
		10-1.5																		48-200	24	16-60	21(19)	24(21.9)	19	21.9	7	
L and F Configurable	FJEB, FJER	12-1.25	40 50 75 100 150 200	48-200	24	17-70	5	23(22)	26(25.4)	22	25.4	8																
		12-1.5																			56-200	30	25-80	26(27)	30(31.2)	27	31.2	15
		14-1.5																			72-200	35	30-80	30	34.6	30	34.6	16
		18-1.5																			80-200	40	30-80	32	37	32	37	18
		20-1.5																			75 100 150 200	35	30-80	32	37	32	37	18

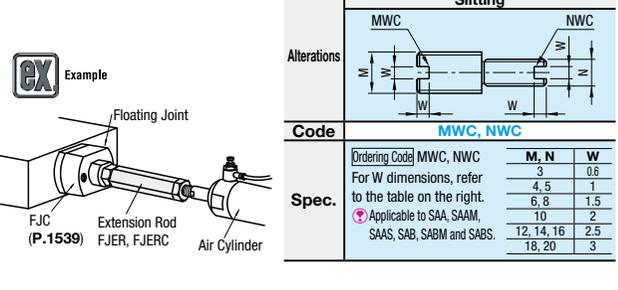
Thread Conversion Adapters



Part Number	Type	M		L	M (Coarse)	NS (Fine)	E	H	B	C
		Coarse	Fine Thread							
SAA	5	-	-	20-100	3 4*	-	5-16	8	9.2	
SAB	6	-	-	20-100	3 4 5*	-	6-20	3	10	11.5
SAC	8	8S	M8x1.0	30-150	4 5 6*	-	8-24	13	15	
SAD	10	10S	M10x1.25	30-150	5 6* 8*	8*	10-32	4	17	19.6
SAAM	12	12S	M12x1.25	40-200	6 8 10*	8 10*	12-40	5	19	21.9
SABM	14	14S	M14x1.5	40-200	6 8 10* 12*	8 10* 12*	14-48	6	22	25.4
SACM	16	16S	M16x1.5	40-200	8 10 12* 14*	8 10 12* 14*	16-56	7	24	27.7
SADM	18	18S	M18x1.5	50-200	10 12 14* 16*	10 12 14* 16*	18-64	8	27	31.2
SAAS	20	20S	M20x1.5	50-200	10 12 14 16* 18*	10 12 14 16* 18*	20-72	10	30	34.6

* marked dimensions are not available for SAA, SAAM and SAAS.
 NS (Fine Thread) pitch is same as M Fine Thread (Nominal Thread Dia.).
 SAA, SAAM, SAAS are LxNx4 SAB, SABM, SABS are LxMx2+E SAC, SACM, SACS are LxMx2+E SAD, SADM, SADS are M+H+E+LxMx4+H+(N)Sx4

M	Coarse	Fine	Unit Price
5	-	-	SAA, SAB, SAC, SAD, SAAM, SABM, SABS, SACM, SACS, SADM, SAAS, SABS, SACS, SADS
6	-	-	
8	8S	-	
10	10S	-	
12	12S	-	
14	14S	-	
16	16S	-	
18	18S	-	
20	20S	-	



Floating Joints - Overview

Floating Joints - Quick Connection Type

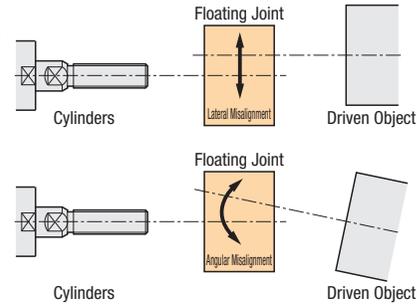
[Tapped] Cylinder Connector and Holder Set/Sheet Metal Holder Set

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	Backing Plate	Cylinders Connector, Mount Flange Sets Backing Plate Driven Part
Tapped	[Threaded Type] Standard P.1541 Separate P.1541 Wrench Flats P.1541	Round, Wrench Flats P.1544	

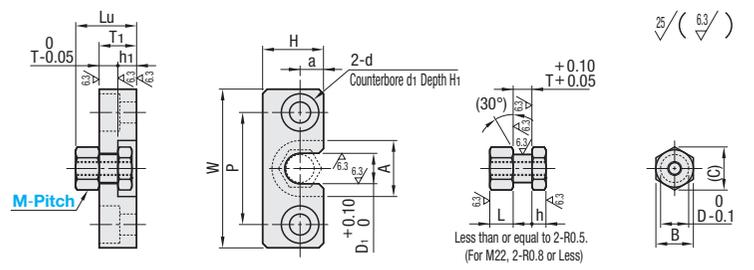
One-Piece Type: This product absorbs lateral, angular misalignment. Extra Short Type is compact in size and space-saving.

Joining Method	Floating Joints Integrated Type		Connected images of the cylinder and driven part		
	Threaded for Cylinder	Tapped for Cylinder	Cylinders	Connector	Driven Part
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			
Foot Mount	Extra Short Foot Mount (for Threaded Cylinder) P.1550 Bracket Mounting P.1548	Extra Short Foot Mount (for Tapped Cylinder) P.1550			
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			

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	S45C Equivalent	Tufftride®	500HV~

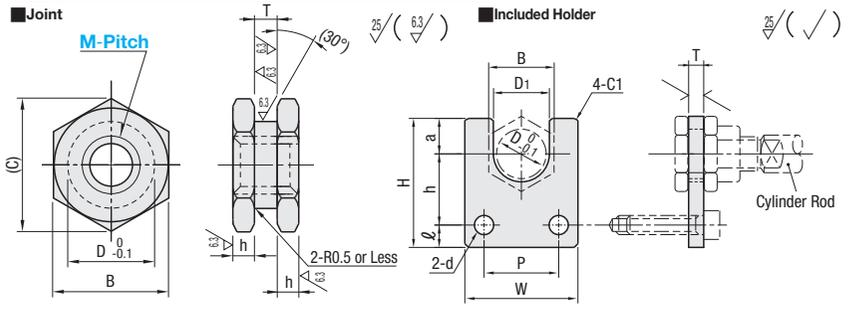


Part Number	Cylinder Connector										Holder										Unit Price
	Type	M-Pitch	T	D	L	h	B	C	D1	A	T1	h1	W	H	a	P	d	d1	H1	Lu	
FJRHA	3-0.5	4	6	5	3	8	9.2	6.5	12	8	4	34	13	5	24	4.5	8	4.4	13		
	4-0.7	4	7	6	3	10	11.5	8	14	8	4	36	15	6	26	4.5	8	4.4	14		
	5-0.8	6	8	7	3	12	13.9	9	17	10	4	42	18	7	30	5.5	9.5	5.4	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

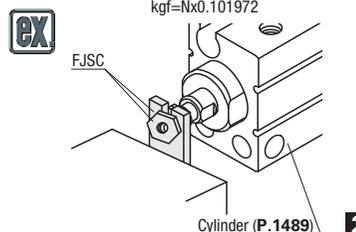
Sheet Metal Holder Set

Type	Material		Surface Treatment	Hardness
	Floating Joints	Holder		
FJSC	S45C Equivalent	SPOC Equivalent	Tufftride®	500HV~



Part Number	Included Holder										Unit Price								
	Type	M-Pitch	T	h	D	B	(C)	T	B	D1		W	H	a	h	ℓ	P	d	Maximum Applied Tensile / Compression Force (N)
FJSC	3-0.5	2.3	+0.3 +0.25	2	6	8	9.2	2.3	±0.19	8	6.5	16	25	5	14	6	8	4.5	19
	4-0.7	3.2	+0.35 +0.3	3	7	10	11.5	3.2	±0.23	10	8	19	26	6	10	10	12	5.5	54
	5-0.8	3.2	+0.35 +0.3	3	8	12	13.9	3.2	±0.23	12	9	22	33	7	12	12	14	5.5	123
	6-1.0	3.2	+0.35 +0.3	3	10	14	16.2	3.2	±0.23	14	11	25	34	8	14	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	S45C Equivalent	Hard Chrome Plating	750HV~
FJR	S45C Equivalent	Tuffride®	500HV~
FJRSS	SUS304	-	-

☞ For FJRSW, see eCatalog.

☞ Tuffride® is a trademark of DURFERRIT GmbH.
☞ Tuffride® may cause uneven color, which doesn't affect mechanical function.
☞ For details of Tuffride®, see P1907.

Part Number	Type	M-Pitch	T	L	h	D	B	C	Unit Price				Applicable Holder				
									FJG	FJR	FJRSS	HLRA P.1533	HLRB P.1535	HLRC P.1534	HLRE P.1536		
3-0.5	FJG FJR FJRSS	4-0.7	4	5	3	6	8	9.2					HLRA6	HLRB6	HLRC6	-	
5-0.8		6	7	10		11.5								HLRA7	HLRB7	HLRC7	HLRE7
6-1.0		8	8	12	13.9								HLRA8	HLRB8	HLRC8	HLRE8	
8-1.0		8	9	10	14	16.2							HLRA10	HLRB10	HLRC10	HLRE10	
8-1.25		8	11	13	17	19.6							HLRA13	HLRB13	HLRC13	HLRE13	
10-1.25		8	11	16	21	24.2							HLRA16	HLRB16	HLRC16	HLRE16	
10-1.5		8	12	18	23	26.6							HLRA18	HLRB18	HLRC18	HLRE18	
12-1.25		12	13	21	26	30							HLRA21	HLRB21	HLRC21	HLRE21	
12-1.5		12	15	25	30	34.6							HLRA25	HLRB25	HLRC25	HLRE25	
14-1.5		15	17	27	32	36.9							HLRA27	-	HLRC27	-	
16-1.5		15	15	5	25	30	34.6										
18-1.5		15	15	5	25	30	34.6										
18-1.5		15	15	5	25	30	34.6										
22-1.5		20	17	6	27	32	36.9										

☞ FJG is a floating connector for air cylinders.

Ordering Example

Part Number - T

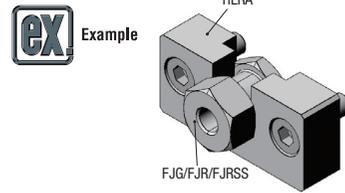
FJG8-1.25 - 4

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	Type	M-Pitch	T Selection										L	h	D	B	(C)	Unit Price		
			FJR					FJRSS										FJR	FJRSS	
3-0.5	FJR FJRSS	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	10	3	4	5	8	9	10	7	8	12	13.9			
6-1.0		3	4	5	8	9	10	12	4	5	8		8	10	14	16.2				
8-1.0		4	5	6	9	10	12	13	15	16			9	13	17	19.6				
8-1.25		4	5	6	9	10	12	13	15	16	12		5	6						
10-1.25		4	5	6	9	10	12	13	15	16	19	20	6	9	10	12				
10-1.5		4	5	6	9	10	12	13	15	16	19	20	11	4	16	21	24.2			
12-1.25		5	6	8	9	10	13	15	16	19	20		12	18	23	26.6				
12-1.5		5	6	8	9	10	13	15	16	19	20		12	18	23	26.6				
14-1.5		5	6	8	9	10	13	15	16	19	20	8	9	10	16	19	13	21	26	30
16-1.5		8	9	10	12	13	16	19	20				15	5	25	30	34.6			
18-1.5		8	9	10	12	13	16	19	20	12			15	5	25	30	34.6			
22-1.5		12	15										17	6	27	32	36.9			

☞ For compatible holders, see HLRAF (P1533).

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	S45C Equivalent	Hard Chrome Plating	750HV~
FJRL	S45C Equivalent	Tuffride®	500HV~

☞ For FJRSSL, see eCatalog.

☞ Tuffride® is a trademark of DURFERRIT GmbH.
☞ Tuffride® may cause uneven color, which doesn't affect mechanical function.
☞ For details of Tuffride®, see P1907.
☞ No Tuffride® Treatment on the Thread End of FJRL.

T / L Configurable

Part Number	Type	M-Pitch	T		L	h	D	B	C	Unit Price
			0.1mm Increment	1mm Increment						
3-0.5	FJGF	4-0.7	2.0-20.0	3-10	3	6	8	9.2		
5-0.8		2.0-20.0	3-20	8	12	13.9				
6-1.0		3.0-20.0	4-30	10	14	16.2				
8-1.0		3.0-20.0	4-30	13	17	19.6				
8-1.25		3.0-20.0	4-30	16	21	24.2				
10-1.25		3.0-20.0	4-40	18	23	26.6				
10-1.5		3.0-20.0	4-40	21	26	30				
12-1.25		4.0-20.0	5-40	21	26	30				
12-1.5		4.0-20.0	5-40	25	30	34.6				
14-1.5		4.0-20.0	5-40	25	30	34.6				
16-1.5		8.0-30.0	8-40	27	32	36.9				
18-1.5		8.0-30.0	8-40	27	32	36.9				
22-1.5		10.0-30.0	10-40	27	32	36.9				

Part Number - T - L

FJGF4-0.7 - 4.5 - 15

☞ When h+T+L≤3M, the tapped hole goes through.
☞ FJGF is a floating connector for air cylinders.

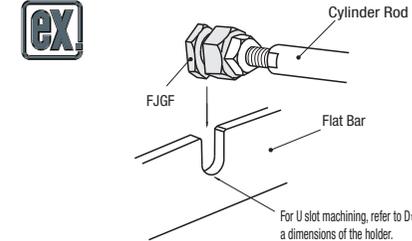
☞ Reference Example of T Dimension Configuring Method

- Configure T Dimension when using an Original Holder/Flat Bar combination.
- It is possible to minimize backlash by "Size Configuration allowing for Groove Width/Allowance".

Example of Connector T Dimensions for Connection to Flat Bar

Processing Method	Plate Thickness	Tolerance		Connector T Dimension	Backlash*
		Upper Limit	Lower Limit		
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	Type	M-Pitch	T Selection										L	h	D	B	(C)	Unit Price
			1mm Increment															
3-0.5	FJRL	2	3	4	5	6	3-50	3	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	9	10	8	12	13.9							
6-1.0		3	4	5	6	8	9	10	12	10	14	16.2						
8-1.0		4	5	6	8	9	10	12	13	15	16	13	17	19.6				
8-1.25		4	5	6	8	9	10	12	13	15	16	16	21	24.2				
10-1.25		4	5	6	8	9	10	12	13	15	16	19	20	18	23	26.6		
10-1.5		4	5	6	8	9	10	12	13	15	16	19	20	21	26	30		
12-1.25		5	6	8	9	10	12	13	15	16	19	20	5-100	25	30	34.6		
12-1.5		5	6	8	9	10	12	13	15	16	19	20	5-100	25	30	34.6		
14-1.5		8	9	10	12	13	15	16	19	20	20	8-100	27	32	36.9			
16-1.5		8	9	10	12	13	15	16	19	20	20	8-100	27	32	36.9			
18-1.5		8	9	10	12	13	15	16	19	20	20	8-100	27	32	36.9			
22-1.5		12	15	20	10-100	6	27	32	36.9									

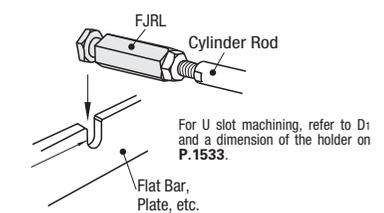
☞ For compatible holders, see HLRAF (P1533).

Ordering Example

Part Number - T - L

FJRL4-0.7 - 8 - 20

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



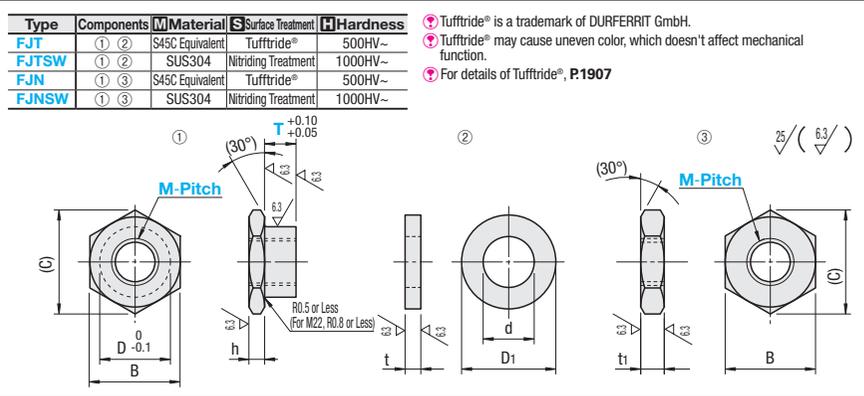
Floating Joints - Quick Connection Type

[Tapped] Cylinder Connector - Separate Type / Circular Type

Floating Joints - Quick Connection Type

[Tapped] Cylinder Connector and Holder Set / Connector Only

Separate Type



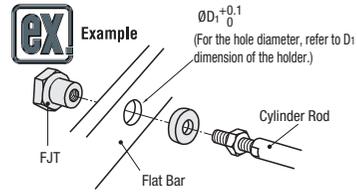
Type	Components	Material	Surface Treatment	Hardness
FJT	① ②	S45C Equivalent	Tuffride®	500HV~
FJTSW	① ②	SUS304	Nitriding Treatment	1000HV~
FJN	① ③	S45C Equivalent	Tuffride®	500HV~
FJNSW	① ③	SUS304	Nitriding Treatment	1000HV~

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

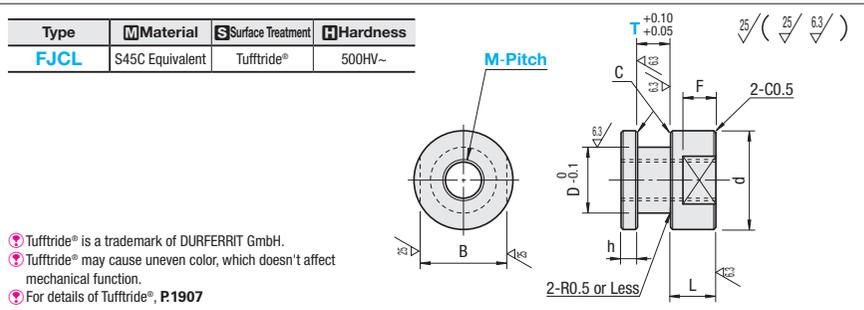
Part Number Type	M-Pitch	T Selection										h	D	B	(C)	t	t1	D1	d	Unit Price				
		3	4	5	6	8	9	10	12	13	15									16	FJT	FJTSW	FJN	FJNSW
FJT FJTSW FJN FJNSW	3-0.5	2	3	4	5	6						3	6	8	9.2			3	9	3.2				
	4-0.7	2	3	4	5	6	8					3	7	10	11.5			4	11	4.3				
	5-0.8	3	4	5	6	8	9	10				4	8	12	13.9			5	13	5.3				
	6-1.0	3	4	5	6	8	9	10	12			4	10	14	16.2			6	15	6.4				
	8-1.0		4	5	6	8	9	10	12	13	15	16						8	18	8.4				
	8-1.25																							
	10-1.25		4	5	6	8	9	10	12	13	15	16	19	20				10	22	10.5				
	10-1.5																							
	12-1.25			5	6	8	9	10	12	13	15	16	19	20				12	24	13				
	12-1.5																							
	14-1.5		5	6	8	9	10	12	13	15	16	19	20					14	27	15				
	18-1.5			8	9	10	12	13	15	16	19	20			5	25	30	34.6	18	31	19			
	22-1.5														6	27	32	36.9	22	35	23			

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

Part Number	-	T
Example	FJT6-1.0	- 10



Circular Type



Type	Material	Surface Treatment	Hardness
FJCL	S45C Equivalent	Tuffride®	500HV~

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

Part Number Type	M-Pitch	T Selection										h	L	D	d	B	F	C	Unit Price	Applicable Holder			
		3	4	5	6	8	9	10	12	13	15									16	HLRA P.1533	HLRB P.1535	HLRC P.1534
FJCL	3-0.5	4	5									4	5	6	10	8	3			HLRA6	HLRB6	HLRC6	HLRE6
	4-0.7	3	4	5								3	6	7	14	10	4						
	5-0.8	4	5	6								4	7	8	12	5							
	6-1.0	4	6	8								4	8	10	16	14	6						
	8-1.25		8	9	10							6	9	13	20	17	7						
	8-1.25																						
	10-1.25		8									6	10	16	24	21	8						
	10-1.5																						
	12-1.25		8	9	10	12						8	11	16	24	21	8						
	12-1.5																						
	14-1.5		8									12	12	18	26	22	10						
	14-1.5																						
	18-1.5		15									15	13	21	30	27	11						
	18-1.5																						

Ordering Example	Part Number	-	T
	FJCL6-1.0	-	8

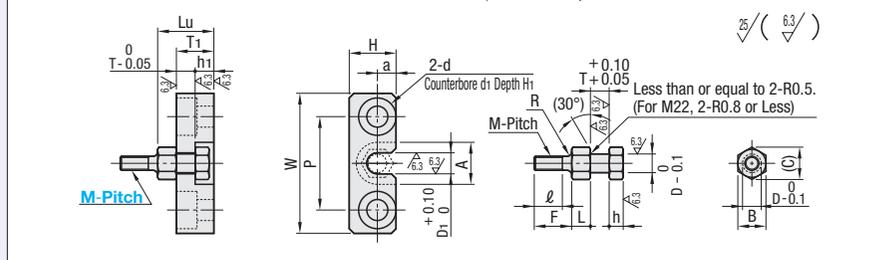
Features: The tip is a cylinder connector connected to tapped type cylinder rod.

Holder Set



Type	Holder Type	Material	Surface Treatment	Hardness
FJDHA	HLRA	S45C Equivalent	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	Cylinder Connector										Holder										Unit Price			
		T	D	L	h	F	l	B	C	R	D1	A	T1	h1	W	P	a	2-d	Counterbore d1 Depth H1	R	M-Pitch		L	h	D
FJDHA	3-0.5	4	4	4	3	8	6	6	6.9	1	4.5	9	8	4	30	10	4	20	4.5	8	4.4	12			
	4-0.7	4	4	5	3	11	9	6	6.9	1	4.5	9	8	4	30	10	4	20	4.5	8	4.4	13			
	5-0.8	4	6	5	3	13	11	8	9.2	1	6.5	12	8	4	34	13	5	24	4.5	8	4.4	13			
	6-1.0	4	7	6	3	19	17	10	11.5	1.5	8	14	8	4	36	15	6	26	4.5	8	4.4	14			
	8-1.25	6	10	8	4	20	18	14	16.2	1.5	11	19	11	5	44	20	8	32	5.5	9.5	5.4	19			
	10-1.5	8	13	9	4	24	21	17	19.6	2	14	23	13	5	52	24	10	38	6.6	11	6.5	22			

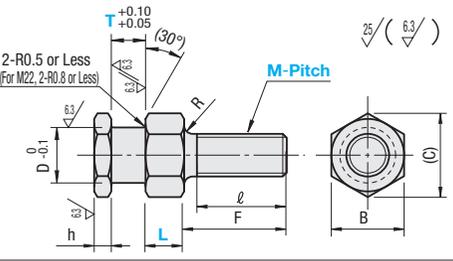
Ordering Example	Part Number
	FJDHA5-0.8

Connector only



Type	Material	Surface Treatment	Hardness
FJD	S45C Equivalent	Tuffride®	500HV~

⚠ For FJDSW, see eCatalog.



⚠ 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.

Fixed

Part Number Type	M-Pitch	T	L	h	D	F	l	B	(C)	R	Unit Price	Applicable Holder			
												HLRA P.1533	HLRB P.1535	HLRC P.1534	HLRE P.1536
FJD	3-0.5	4	4									HLRA4	HLRB4	HLRC4	-
	4-0.7	4										HLRA4	HLRB4	HLRC4	-
	5-0.8	4	5	3								HLRA6	HLRB6	HLRC6	-
	6-1.0	4	6									HLRA7	HLRB7	HLRC7	HLRE7
	8-1.25	6	8									HLRA10	HLRB10	HLRC10	HLRE10
	10-1.5	8	9	4								HLRA13	HLRB13	HLRC13	HLRE13
	16-2.0	12	12									HLRA21	HLRB21	HLRC21	HLRE21
	20-2.5	15	15	5	25	50	46	30	34.6			HLRA25	HLRB25	HLRC25	HLRE25
	22-2.5	20	17	6	27	60	56	32	36.9	2.5		HLRA27	-	HLRC27	-

T Selectable Type

Part Number Type	M-Pitch	T Selection										L	h	D	F	l	B	(C)	R	Unit Price			
		3	4	5	6	8	9	10	12	13	15										16		
FJD	3-0.5	3										4		4	8	6	6	6.9	1				
	4-0.7	3	5	6	8							5	3	6	13	11	8	9.2					
	5-0.8	3	5	6	8	9	10					6		7	19	17	10	11.5					
	6-1.0	5	6	8								8		8	10	20	18	14	16.2				
	8-1.25	5	8									9	4	10	20	18	14	16.2					
	10-1.5		6	9	10	12						12		12	21	40	37	26	30				
	16-2.0											15	5	25	50	46	30	34.6					
	20-2.5											17	6	27	60	56	32	36.9	2.5				

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

Ordering Example	Part Number	-	T
	FJD5-0.8	-	5

Holder

Side Mount, Flange Type

■ Features: Prepared for types with different hardness.



RoHS

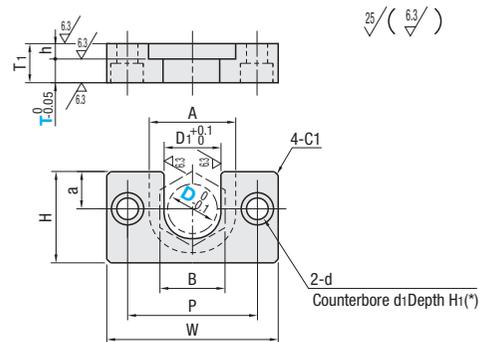
T Fixed

Type	Material	Surface Treatment	Hardness
HLRA	S45C Equivalent	Tufftride®	500HV~
HLRASW	SUS304 Equivalent	Nitriding Treatment	1000HV~
HLRASS		-	-
HLRAC	-	Hard Chrome Plating	700HV~

T Configurable

Type	Material	Surface Treatment	Hardness
HLRAF	S45C Equivalent	Tufftride®	500HV~

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



T Fixed

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

T Configurable

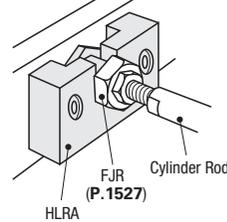
Part Number	Type	D	T	B	D1	A	T1	h	W	H	a	P	d	d1	H1	Unit Price	
																HLRAF	HLRAC
6	HLRAF	6	3~6	8	6.5	12	T+h	4	34	13	5	24	4.5	8	4.4		
7	HLRAF	7	3~8	10	8	14	T+h	4	36	15	6	26	4.5	8	4.4		
8	HLRAF	8	3~10	12	9	17	T+h	4	42	18	7	30	5.5	9.5	5.4		
10	HLRAF	10	3~12	14	11	19	T+h	4	44	20	8	32	5.5	9.5	5.4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

Ordering Example: Part Number - T
HLRA8 - 3

Example: HLRA8 - 3

Alterations: Part Number - (HC)
HLRA8 - HC30

App. Example of Floating Joints and Holders



Alteration Code	Height HC
Spec.	Available for HLRA only.
	The range of HC is shown as below.
D	HC 1mm Increment
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

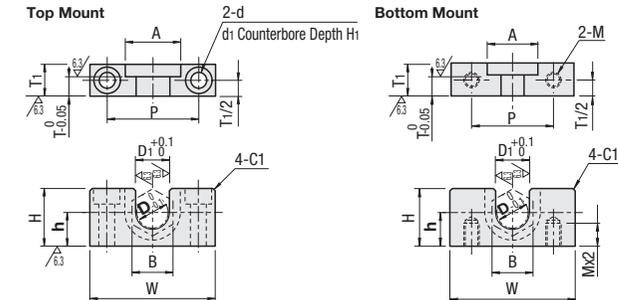
Top/Bottom Mount, Flange Type

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



RoHS

Mounting method	Height h Fixed	Height h Configurable	Material	Surface Treatment	Hardness
Top Mount	HLRC	HLRCH	S45C Equivalent	Tufftride®	500HV~
Bottom Mount	HLRCB	HLRCBH			



- 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.

h Fixed

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

h Configurable

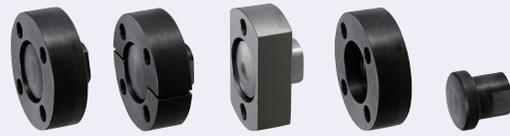
Part Number	Type	D	h	H	B	D1	A	T	T1	W	P	d	d1	H1	M	Unit Price	
																HLRCH	HLRCBH
4	HLRCH	4	7~16	h+4	6	4.5	9	4	8	30	20	3.5	6.5	3.5	3		
6	HLRCH	6	9~20	h+5	8	6.5	12	4	10	34	24	4.5	8	4.5	4		
7	HLRCH	7	10~24	h+6	10	8	14	4	10	36	26	4.5	8	4.5	4		
8	HLRCH	8	12~23	h+7	12	9	17	4	12	42	30	5.5	9.5	5.5	5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

Ordering Example: Part Number - h
HLRC13 - 30

Floating Joints Flange Mounting

[Tapped] Standard Type

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

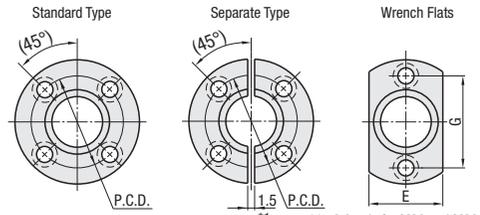


RoHS

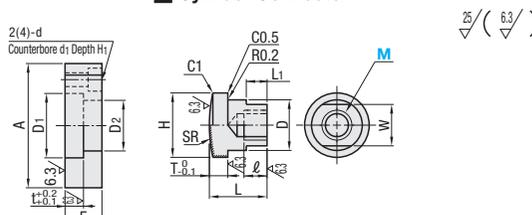
Set			Type			Material	Hardness		Surface Treatment	
Standard	Separate	Wrench Flats	L Fixed	L Configurable	Flange only		Flange	Connector		
FJA	FJB	FJC	FJCN	FJCNL	FJA-H	FJB-H	FJC-H	S45C	45~55HRC	Black Oxide
FJAS	FJBS	FJCS	FJCMS	FJCNLS	FJAS-H	FJBS-H	FJCS-H	SUS440C Equivalent*	45~55HRC Induction Hardened Surface	-

* M24 ~ 30 is SUS420J2 Equivalent.

Mount Flanges



Cylinder Connector



⚠ SUS440C Equivalent / SUS420J2 Equivalent 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						
		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	3	42	18	13	5	10	30	4.5	8	5	24	30	3x0.5	6	15	12	17	5	10	6	40							
	4	48	20	15	6	12	34	6	9.5	5.5	28	34	4x0.7	8	20	14	19	6	12	8	50							
	5	51	24	17	8	16	37	7	11	6	30	37	5x0.8	10	25	16	23	8	14	10	60							
Separate	10	54	28	21	8	16	40	7	11	6	32	40	6x1.0	12	25	20	27	8	17	10	60							
	12	70	36	27	10	20	52	10	14	8	42	52	8x1.25	18	35	25	34	10	22	12	100							
	14	74	38	29	10	20	56	10	14	8	44	56	10x1.25	21	35	25	34	10	22	12	100							
Wrench Flats	16	90	46	35	12	24	68	12	17.5	10	54	68	12x1.25	24	45	32	43	12	27	15	200							
	18	90	46	35	12	24	68	12	17.5	10	54	68	14x1.5	27	45	32	43	12	27	15	200							
	20	106	56	44	15	30	80	14	20	12	66	80	16x1.5	30	55	40	52	15	32	18	200							
	22	116	66	53	16	32	86	14	20	12	78	86	18x1.5	33	60	49	62	16	41	23	200							
	24	116	66	53	16	32	86	14	20	12	78	86	20x1.5	36	60	49	62	16	41	23	200							
	26	116	66	53	16	32	86	14	20	12	78	86	22x1.5	39	60	49	62	16	41	23	200							
Wrench Flats	30	134	74	59	18	40	104	18	26	18	80	104	24x1.5	43	65	54	69	18	46	24	250							
	36	134	74	59	18	40	104	18	26	18	80	104	26x1.5	45	65	54	69	18	46	24	250							

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

Part Number	Type	L		Unit Price			
		M	Fixed	FJCN	FJCNLS	FJCNL	FJCNLS
L Fixed	3	15					
	4	20					
	5	25	30-60				
	6	30					
	8	35	40-80				
	10	40					
L Configurable	12	45	50-100				
	14	50					
	16	55					
	18	60	60-100				
	20	65					
	22	70					

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

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

• Connector only L Configurable

Part Number - L
FJCNL10 - 50

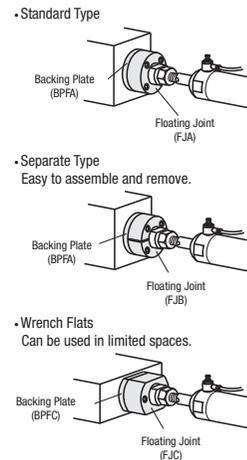
• Other Than Above

Part Number
FJA10

Part Number - (AWC)
FJA10 - AWC

Alteration	Flange Cut																				
Code	AWC																				
Spec.	Cuts four sides of the flange. (Ordering Code) AWC ⊗ Standard Type only (Not applicable to M36)																				
	<table border="1"> <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, 14</td> <td>54</td> </tr> <tr> <td>16, 18</td> <td>68</td> </tr> <tr> <td>20, 22</td> <td>80</td> </tr> <tr> <td>24, 26</td> <td>86</td> </tr> <tr> <td>30</td> <td>104</td> </tr> </table>	M	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
M	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																				

Example



Floating Joints Flange Mounting

[Tapped] Space Saving Type

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

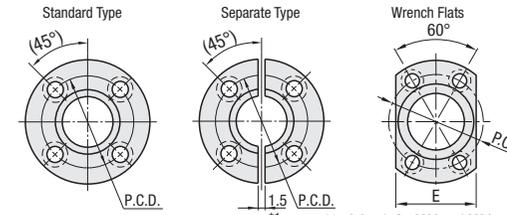


RoHS

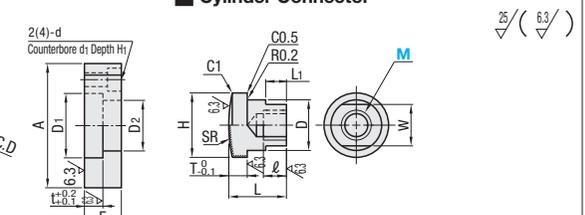
Set			Type			Material	Hardness		Surface Treatment
Standard	Separate	Wrench Flats	L Fixed	Standard	Separate		Flange	Connector	
FJUA	FJUB	FJUC	FJUN	FJUA-H	FJUB-H	FJUC-H	S45C	45~55HRC	Black Oxide
FJUAS	-	FJUCS	FJUNS	FJUAS-H	FJUBS-H	FJUCS-H	SUS440C Equivalent*	45~55HRC	-

* M24 ~ 30 is SUS420J2 Equivalent.

Mount Flanges



Cylinder Connector



⚠ SUS440C Equivalent / SUS420J2 Equivalent Hardened Type may be discolored due to hardening.

Set	Part Number	Mount Flanges													Cylinder Connector							Unit Price					
		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	FJUCS
Standard	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	11	30	6	9.5	5.5	25	40	6x1.0	12	20	16	22	6	13	8	60						
	8	40	23	17	6	11	30	6	9.5	5.5	25	40	8x1.25	14	23	16	22	5	13	8	60						
Separate	10	52	32	24	8	12	40	7	11	6	34	52	10x1.25	15	25	16	22	6	13	8	100						
	12	52	32	24	8	12	40	7	11	6	34	52	12x1.25	18	29	16	22	6	13	8	100						
	14	62	39	31	8	16	48	7	11	6	41	62	14x1.5	21	33	16	22	6	13	8	100						
Wrench Flats	16	62	39	31	8	16	48	7	11	6	41	62	16x1.5	24	37	16	22	6	13	8	100						
	18	62	39	31	8	16	48	7	11	6	41	62	18x1.5	27	41	16	22	6	13	8	100						
	20	74	46	36	10	20	58	10	14	8	48	74	20x1.5	30	46	16	22	6	13	8	200						
	22	74	46	36	10	20	58	10	14	8	48	74	22x1.5	33	50	16	22	6	13	8	200						
	24	80	52	42	12	24	64	10	14	8	54	80	24x1.5	36	55	16	22	6	13	8	200						
	26	80	52	42	12	24	64	10	14	8	54	80	26x1.5	39	60	16	22	6	13	8	200						
Wrench Flats	30	90	62	52	16	32	74	10	14	8	64	90	30x1.5	43	65	16	22	6	13	8	250						

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

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

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

Part Number	Type	Unit Price					
		M	FJUA-H	FJUB-H	FJUC-H	FJUAS-H	FJUCS-H
Standard	5						
	6						
	8						
	10						
	12						
	14						
Separate	16						
	18						
	20						
	22						
	24						
	26						
Wrench Flats	28						
	30						

Allowable Misalignment (mm)

M	U
3-10	0.5
12, 14	1
16, 18	1.5
20-26</	

Floating Joints - Flange Mounting

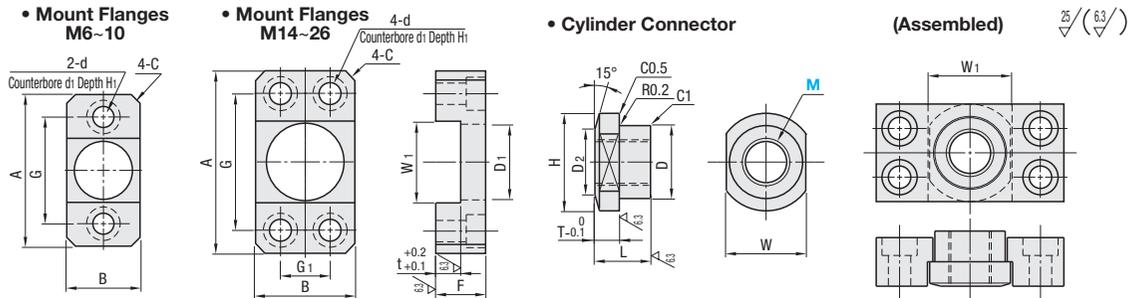
Square Flange / Square Flange - Thin

■ **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	Material	Surface Treatment
Square Flange Type	FJCF	S45C Equivalent	Black Oxide	S45C Equivalent	Black Oxide
	FJCFM	SUS304	Electroless Nickel Plating	SUS304	Electroless Nickel Plating
	FJCFM	-	-	-	-
Square Flange - Thin	FJCFM	S45C Equivalent	Black Oxide	S45C Equivalent	Black Oxide



Square Flange

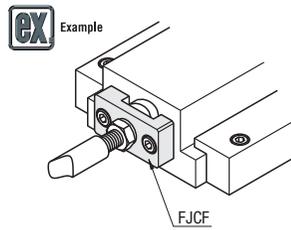
Part Number	Cylinder Connector							Mount Flanges													
	Type	M	MxPitch	L	D	D ₂	H	T	W	A	G	B	G ₁	W ₁	D ₁	t	F	d	d ₁	H ₁	C
Set FJCF FJCFM FJCFM	6	6x1.0	10	12	11	16	4	13	38	26	16	-	14	13	4	8	4.5	8	4	4	2
	8	8x1.25	12	14	13	20	5	16	43	30	20	-	17	15	5	10	5.5	9.5	5	3	
	10	10x1.25	16	18	15	24	7	20	50	35	24	-	21	19	7	14	7	11	6	3	
	14	14x1.5	18	24	20	32	8	26	60	45	32	16	27	25	8	16	7	11	6	3	
	18	18x1.5	20	30	26	38	9	33	75	55	38	20	34.5	31.5	9	18	10	14	8	3	
	22	22x1.5	24	35	30	48	11	40	90	65	48	25	42	37	11	22	12	17.5	10	4	
26	26x1.5	28	40	32	54	13	45	100	75	54	30	47	42	13	26						

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
Set FJCFM	10	10x1.25	8	18	15	24	3.5	20	50	35	24	-	21	19	3.5	7	7	11	4	3
	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	

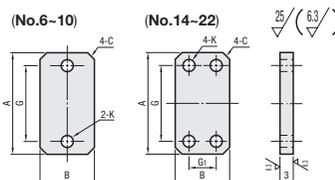
Ordering Example Part Number FJCF10

M	Unit Price			
	Square Flange			Square Flange - Thin
	FJCF	FJCFM	FJCFM	FJCFM
6				
8				
10				
14				
18				
22				
26				



Backing Plates

Type	Material	Hardness	Surface Treatment
BPFJ	S45CEquivalent	28~33HRC	Black Oxide
BPFJM	SUS304	-	Electroless Nickel Plating
BPFJS	-	-	-



Part Number	Type	No.	Unit Price								
			A	G	B	G ₁	K	C	BPFJ	BPFJM	BPFJS
BPFJ BPFJM BPFJS	6	6	38	26	16	-	4.5	2			
	8	8	43	30	20	-	5.5	2			
	10	10	50	35	24	-	7	3			
	14	14	60	45	32	16	7	3			
	18	18	75	55	38	20	10	4			
	22	22	90	65	48	25	12	4			

Ordering Example Part Number BPFJ10

Floating Joints - Flange Mounting

Slide

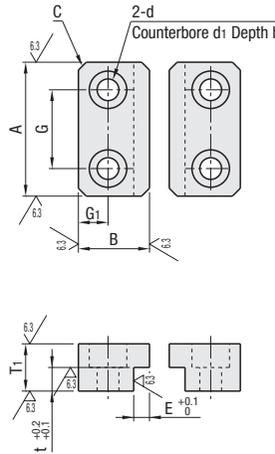
■ **Features:** Mounting pitch is configurable.

Screws	Components			Mount Flanges			Cylinder Connector		
	Set	Cylinder Connector	Mount Flange	Material	Surface Treatment	Hardness	Material	Surface Treatment	Hardness
Tapped	FJY	-	FJY-H	S45C Equivalent	Black Oxide	40~45HRC	S45C Equivalent	Black Oxide	Section, 45~50HRC Induction Hardened Surface
Threaded	FJMY	FJMYN	FJY-H	S45C Equivalent	Black Oxide	40~45HRC	S45C Equivalent	Black Oxide	Section, 45~50HRC Induction Hardened Surface

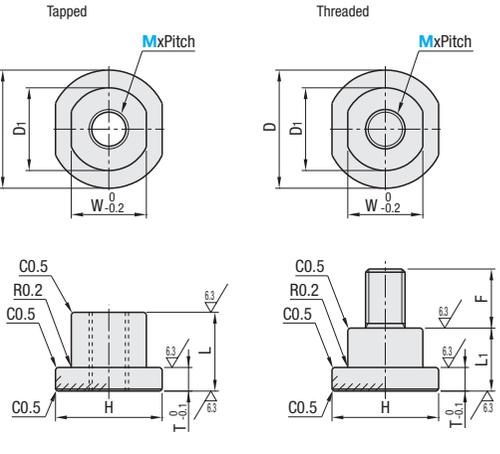
25 / (6.3 / 6.3)



Mount Flanges



Cylinder Connector



RoHS

Mount Flange and Cylinder Connector - Sets / Mount Flange

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

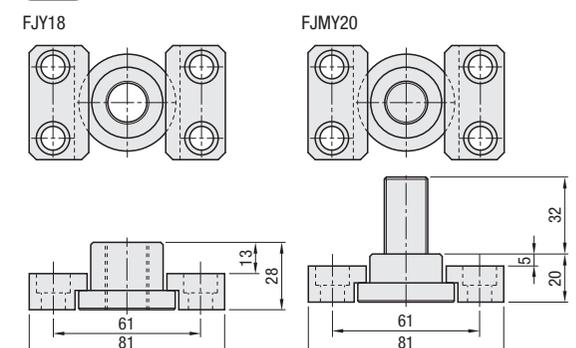
Ordering Example Part Number FJY18

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

Extra Short Flange Mount

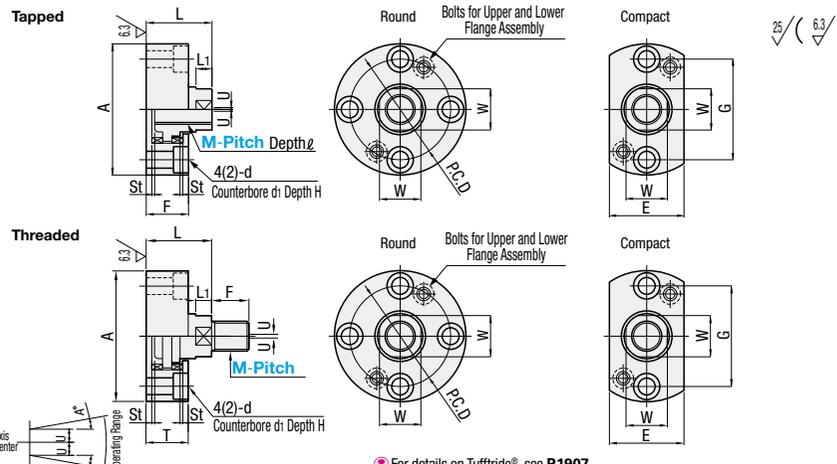
Note that, for some of the types shown here, order might be unable to be received by the MISUMI Indonesia offices.

Metal Pushers / Urethane Caps



Screws	Type		Material	Surface Treatment	Hardness	Spring Material
	Round	Compact Type				
Tapped	FJCR	FJCC	S45C Equivalent	Black Oxide	40-45HRC	Spring Steel
	FJCRT	FJCCCT	Tuffride®	Tuffride®	500HV~	500HV~
	FJCRS	FJCCS	SUS440C Equivalent	-	40-45HRC	Spring Stainless Steel
Threaded	FJMCR	FJMCC	S45C Equivalent	Black Oxide	40-45HRC	Spring Steel
	FJMCR	FJMCC	Tuffride®	Tuffride®	500HV~	500HV~
	FJMCRS	FJMCCS	SUS440C Equivalent	-	40-45HRC	Spring Stainless 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	L1	A	L	F	P.C.D.	d	d1	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	3-0.5	4-0.7	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
		6-1.0	12.5	4	44	16	10.5	32.1	6	9.5	5.5	23	32.1	106					69	
		8-1.25	16	10	5	50	20	13	36.6	7	11	6	26	36.6					166	109
	Compact Type FJCC FJCCCT FJCCS	10-1.25	20	12	6	52	25	17	38.6	9	14	8	36	49.6	1.0	5	1.1	~80(784.5)	236	157
		12-1.25	23	17	7	66	28	19.5	49.6										411	274
		14-1.5	27	20	8	74	32	21.5	53.6										402	269
		16-1.5	30	22	9	80	35	24.5	53.6										553	372
		18-1.5	33	24	10	86	38	26.5	53.6										538	363
		20-1.5	36	26	11	92	41	28.5	53.6										1078	735
	22-1.5	38	27	10	88	45	31.5	68.1	1058	715										

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

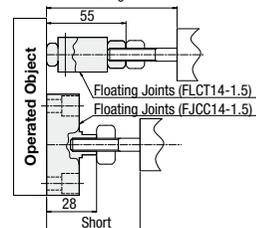
Part Number	Type	M-Pitch	F	W	L1	A	L	T	P.C.D.	d	d1	H	E	G	Allowable Misalignment U	Allowable Angular Deviation A'	St (Reference)	Working Load kgf(N)	Mass (g)	
																			Round	Compact Type
Round FJMCR FJMCR FJMCRS	5-0.8	6-1.0	10	7	4	44	16	10.5	32.1	6	9.5	5.5	23	32.1	0.5	4	0.65	~20(196.1)	103	67
		8-1.25	15	10	5	50	20	13	36.6	7	11	6	26	36.6					173	113
		10-1.5	15	12	6	52	25	17	38.6	7	11	6	28	38.6					246	163
	Compact Type FJMCC FJMCCCT FJMCCS	12-1.75	18	17	7	66	28	19.5	49.6	9	14	8	36	49.6	1.0	5	1.4	~440(4315)	445	298
		16-2.0	20	22	9	70	35	24.5	53.6										653	457
		20-2.5	25	27	10	88	45	31.5	68.1										1304	928

Part Number
FJCR10-1.25

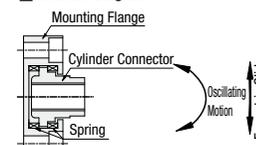
Features

- 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 Long



Structure Diagram



* Threaded Type has the same structure.

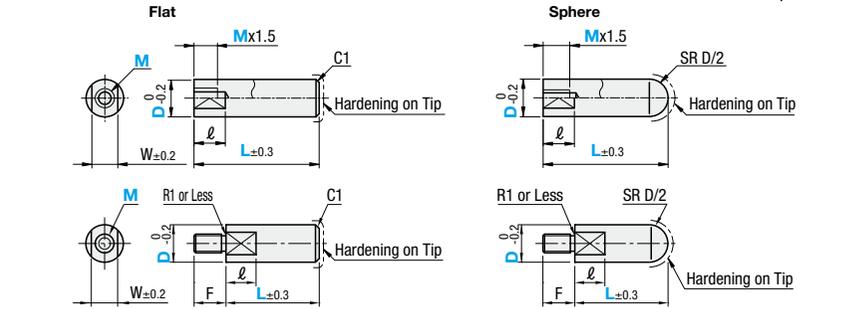
M-Pitch	Unit Price				
	FJCR	FJCC	FJCRT	FJCCCT	FJCRS
3-0.5					
4-0.7					
5-0.8					
6-1.0					
8-1.25					
10-1.25					
12-1.25					
14-1.5					
16-1.5					
18-1.5					
20-1.5					
22-1.5					

M-Pitch	Unit Price					
	FJMCR	FJMCC	FJMCR	FJMCCCT	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



Type	Type		Material	Surface Treatment	Hardness
	Flat	Sphere			
Tapped	KPHF	KPMF	S45C Equivalent	Black Oxide	Induction Hardened and Tempered HRC45-50
	KPHFS	KPHRS	SUS420J2	-	



Tapped Type

Ⓜ KPHFS and KPHRS (SUS420J2) may discolor due to Hardening.

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

Ⓜ Mx2.5+5≤L is required for Tapped Type. Ⓜ 8S, 10S, 12, 12S, 14S and 18S are fine thread pitch. For thread details, refer to the right.
Ⓜ 12M is coarse thread pitch.

Threaded Type

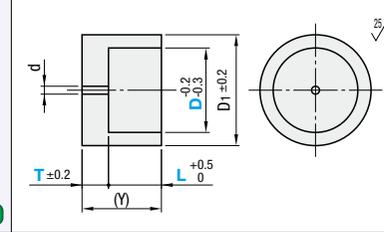
Part Number	Type	L 1mm Increment		M Selection	ℓ	W	Unit Price			
		Flat	Sphere				KPMF	KPMR		
Flat KPMF	6	15-50	17-50	3 4 5	8	5				
		8	17-50	20-50		4 5 6	7			
		10	19-50	23-50		5 6 8S 8	8			
	12	21-100	26-100	6 8S 8 10S 10		10				
		15	23-100	30-100		8S 8 10S 10 12S 12 12M	14			
		16	23-100	30-100		8S 8 10S 10 12S 12 12M	10			
Sphere KPMR	18	26-100	34-100	10S 10 12S 12 12M 16	15	27				
		20	28-100	37-100		10S 10 12S 12 12M 16	17			
		25	36-100	55-100		16 18 20	22			
	30	41-150	60-100	16 18 20		20				
		8S	10S	12S		14S	18S			
		10S	12S	12M		14S	18S			

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

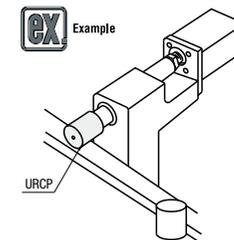
Ordering Example
Part Number - L - M
KPHF10 - 20 - 5
KPMF18 - 40 - 12S

Urethane Caps

Type	D	T Selection	L Selection	D1	d	(Y)	Unit Price	
							URCPH	URCPL
URCPH URCP URCPL	3	3	5 8	8	1	Y=T+L		
	4	3	5* 10					
	5	3	10* 15					
	6	3	10 15					
	8	3	10* 15					
	10	3	10 15					
	12	3	10* 15					
	15	3	10 15					
	20	3	10 15					
	25	3	10 15					
	30	3	10 15					
	35	3	10 15					



Part Number - T - L
URCP6 - 5 - 10



- Ⓜ 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

Silicon Rubber Pushers / Fluororubber Pushers

Features: Pushers with shore A30 ~ 90 are available.

Tapped Type

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

SUS304

RoHS

Part Number	Type	D	L	MxPitch	SR1	R2	l1	l2	W	Unit Price		
										URLH URSH	URLM, URLL URSM, URSL	PSHLH RSHLH
Flat URLH URLM URLL PSHLH	Round URSH URSM URSL RSHLH	8	12	M3x0.5	8	1	5	4	7			
		10	15	M4x0.7	10	2	6	5	8			
		12	16	M5x0.8	12	2	8	6	10			
		16	20	M6x1.0	16	2	10	8	14			
		20	25	M8x1.25	20	2	14	10	17			
		25	30	M10x1.5	25	3	18	12	22			
		25A	30	M10x1.25	25	3	18	12	22			
		30	35	M12x1.75	30	3.5	22	14	27			
		32	37	M14x1.5	32	3.5	24	16	30			
		36	45	M18x1.5	36	3.5	28	18	32			
		40	50	M20x1.5	40	3.5	32	20	36			
		40A	50	M22x1.5	40	3.5	36	22	36			

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

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

SUS304

RoHS

Part Number	Type	D	L	MxPitch (Coarse)	SR1	R2	m	l1	l2	f	W	Unit Price		
												USLH USSH	USLM, USLL USSM, USSL	PSHMLH RSHMLH
Flat USLH USLM USLL PSHMLH	Round USSH USSM USSL RSHMLH	6	10	M3x0.5	6	1	4.5	5						
		8	12	M4x0.7	8	1	6	7						
		10	15	M5x0.8	10	1.5	7	8						
		12	16	M6x1.0	12	2	10	10						
		16	20	M8x1.25	16	2	12	14						
		20	25	M10x1.5	20	2	14	17						
		25	30	M16x2.0	25	3	18	22						
		32	37	M20x2.5	32	3.5	22	30						
		36	45	M22x2.5	36	3.5	24	32						

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

Ordering Example: **URLM10** **USLM12**

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	Material
SLLM	SLSM	Shore A70 Silicon Rubber
PSHPT	RSHT	Shore A80 Fluororubber (FPM)

SUS304

RoHS

Part Number	Type	D	L	MxPitch	SR1	R2	l1	l2	W	Unit Price	
										SLLM SLSM	PSHPT RSHT
Flat SLLM PSHPT	Round SLSM RSHT	8	12	M3x0.5	8	1	5	4	7		
		10	15	M4x0.7	10	2	6	5	8		
		12	16	M5x0.8	12	2	8	6	10		
		16	20	M6x1.0	16	2	10	8	14		
		20	25	M8x1.25	20	2	14	10	17		
		25	30	M10x1.5	25	3	18	12	22		
		25A	30	M10x1.25	25	3	18	12	22		
		30	35	M12x1.75	30	3.5	22	14	27		

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

Threaded Type

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

SUS304

RoHS

Part Number	Type	D	L	MxPitch	SR1	R2	m	l1	l2	f	W	Unit Price	
												SLLM SSSM	PSHMPT RSHMPT
Flat SLLM PSHMPT	Round SSSM RSHMPT	6	10	M3x0.5	6	1	4.5	5					
		8	12	M4x0.7	8	1	6	7					
		10	15	M5x0.8	10	1.5	7	8					
		12	16	M6x1.0	12	2	10	10					
		16	20	M8x1.25	16	2	12	14					
		20	25	M10x1.5	20	3	14	17					

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

Ordering Example: **PSHPT8**

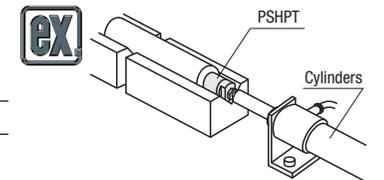


Shore Hardness for Rubber Pushers for reference

Allowable Hardness Range: Listed values ±5

Shore A95	Golf Ball	Hard
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	Material
PSHDDH	RSHDDH	Shore A90 Ether Polyurethane
PSHDS	RSHDS	Shore A70 Ester Polyurethane
PSHDMC	RSHDMC	- MC Nylon

For urethane rubber properties, see P389.
For MC Nylon properties, see P953.

Tap depth for replacement resin is ℓ_2 .
Positions of the flats on resin and core rod may not coincide.

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

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

Threaded Type

Type	Pushers	Core Rod
Flat	Round	Material
PSHDMH	RSHDMH	Shore A90 Ether Polyurethane
PSHDMS	RSHDMS	Shore A70 Ester Polyurethane
PSHDMC	RSHDMC	- MC Nylon

For urethane rubber properties, see P389.
For MC Nylon properties, see P953.

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 P1557)
Positions of the flats on resin and core rod may not coincide.

Part Number	Type	D	L	MxPitch (Coarse)	Material: Resin				SR1	R2	m	ℓ_1	ℓ_2	f	W	Unit Price		
					MxPitch (Coarse)	ℓ	F	(g)								PSHDMH RSHDMH	PSHDMS RSHDMS	PSHDMC RSHDMC
8	Flat	12	12	M3x0.5	M3x0.5	3	5	1.5	8	1	6	5	4	1	7			
10	Flat	15	15	M4x0.7	M5x0.8	4.5	6	2	10	1	7	5	4	1.5	8			
12	Flat	16	16	M5x0.8	M6x1.0	7	7	2	12	2	10	6	5	2	10			
16	Flat	20	20	M6x1.0	M8x1.25	10	10	2.5	16	2	12	8	6	2	14			
20	Flat	25	25	M8x1.25	M10x1.5	8	12	2.5	20	3	14	8	6	3	17			
25	Flat	30	30	M10x1.5	M12x1.75	10	14	3	25	3	18	10	8	3	22			
30	Flat	35	35	M16x2.0	M16x2.0	14	18	3.5	30	3	20	10	8	3.5	27			

Urethane may discolor over time but there is no effect on properties. 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					
D	Bushing Part Area	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%	25	491
8	50	10	79	2	56%	20	314	25	491	5	56%	30	707
10	79	12	113	2	44%	25	491	30	707	5	44%	36	1,017
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	Material
PSHEH	RSHEH	Shore A90 Ether Polyurethane
PSHES	RSHES	Shore A70 Ester Polyurethane

For urethane rubber properties, see P389.

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

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

Threaded Type

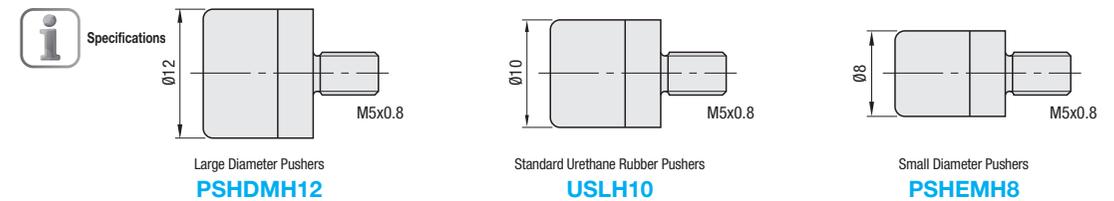
Type	Pushers	Core Rod
Flat	Round	Material
PSHEMH	RSHEMH	Shore A90 Ether Polyurethane
PSHEMS	RSEMS	Shore A70 Ester Polyurethane

For urethane rubber properties, see P389.

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

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
PSHEH16
RSEMS12



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

Resin Pushers

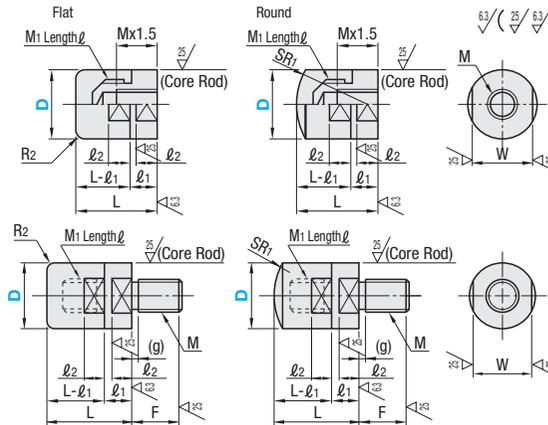
Standard Type

■ 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: SUS304
	Threaded	PSHMMC RSHMMC	
Polyacetal	Replacement Resin	MCKK MCRKK	MC Nylon
	Tapped	PSHPA RSHPA	Polyacetal Material: SUS304
	Threaded	PSHMPA RSHMPA	
	Replacement Resin	PAKK PARKK	Polyacetal

ℓ₂ (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 ℓ.

Part Number	Type	D	L	MxPitch	M1Pitch	ℓ	SR1	R2	ℓ1	ℓ2	W	Unit Price								
												MC Nylon		Polyacetal						
												Set	Replacement Resin	Set	Replacement Resin					
												PSHMC	RSHMC	MCKK	MCRKK	PSHPA	RSHPA	PAKK	PARKK	
Set Flat	Replacement Resin Flat	8	12	M3x0.5	M5x0.8	4.5	8	1	5	4	7									
PSHMC	MCKK	10	15	M4x0.7	M6x1.0	7	10	2	6	5	10									
PSHPA	PAKK	12	16	M5x0.8	M8x1.25	8	12	3	8	8	12									
Round	Round	15	20	M6x1.0	M10x1.5	10	16	2	6	5	14									
RSHMC	MCRKK	16	20	M6x1.0	M10x1.5	10	16	2	6	5	14									
RSHPA	PARKK	20	25	M8x1.25	M12x1.75	12	20	3	8	6	17									
		25	30	M10x1.5	M16x2.0	14	25	3	10	8	22									
		30	35	M12x1.75	M16x2.0	18	30	3	10	8	27									

■ Threaded

Part Number	Type	D	L	MxPitch (Coarse)	M1Pitch (Coarse)	ℓ	SR1	R2	F (g)	ℓ1	ℓ2	W	Unit Price								
													MC Nylon		Polyacetal						
													Set	Replacement Resin	Set	Replacement Resin					
													PSHMMC	RSHMMC	MCKK	MCRKK	PSHMPA	RSHMPA	PAKK	PARKK	
Set Flat	Replacement Resin Flat	6	10	M3x0.5	M3x0.5	3	6	4.5	1.5	5	4	5									
PSHMC	MCKK	8	12	M4x0.7	M5x0.8	4.5	8	1	6	7	7										
PSHMPA	PAKK	10	15	M5x0.8	M6x1.0	7	10	2	7	10	10										
Round	Round	12	16	M6x1.0	M8x1.25	8	12	2	10	10	10										
RSHMC	MCRKK	15	20	M8x1.25	M10x1.5	10	16	2.5	12	12	14										
RSHMPA	PARKK	16	20	M8x1.25	M10x1.5	10	16	2.5	12	12	14										
		20	25	M10x1.5	M12x1.75	12	20	3	14	14	17										

Ordering Example Part Number PSHMC20 MCRKK12

Specifications

■ Properties of MC nylon and polyacetal

- MC nylon: Excels in abrasion resistance compared with polyacetal.
- Polyacetal: Excels in mechanical strength compared with MC nylon.

Item	Abrasion Resistance	Slip Property	Dimensional Stability	Impact Resistance	Flame Resistance	Chemical Resistance.			
						Oil	Acid	Alkali	Organic Solvents
MC Nylon	○	○	△	○	-	○	×	○~△	○
MC Nylon Electrical Conductivity CDR2	○	○	△	○	-	○	×	○~△	○
Polyacetal	△	○	○	○	[UL94] HB Equivalent	○	△~×	○	○

Item	Tensile Strength (at ambient temperature)	Elongation	Bending Strength	Compressive Strength	Rockwell Hardness (R Scale)	Continuous Operating Temperature	Volume Specific Resistivity (Ω · cm)	Density	Moisture Absorption		
									Water, Balanced	Water, 24hs	
Test Method ASTM	D-638	D-790	D-695	D-785	D-792	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 ¹² x10 ⁴	1.20	-	-
Polyacetal	61MPa	40%	89MPa	-	103MPa	119	-45 ~ 95°C	>10 ¹⁴	1.41	0.7	0.22

Ⓢ For detailed Properties, see P.953.

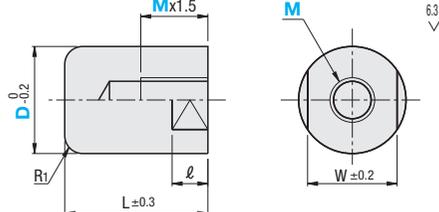
Resin Pushers

Thread Insert



Type	Material	Color	Thread
JPHJ	Polyacetal	White	Thread Insert (SUS304)
JPHM	MC Nylon Electrical Conductivity CDR2	Black	
JPHMC	MC Nylon	Blue	

Ⓢ Properties of polyacetal and MC nylon, see P.1557.



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

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

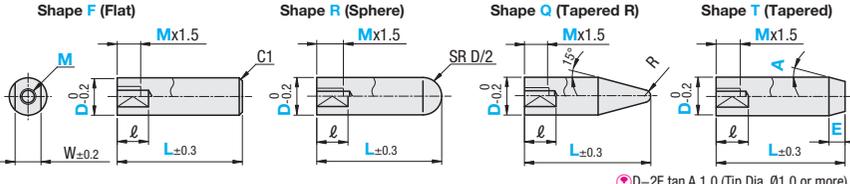
Ordering Example Part Number - M JPHJ10 - 4

■ Shape Selectable and L Configurable



Type	Material	Color	Thread
JPFJ	Polyacetal	White	Thread Insert (SUS304)
JPFM	MC Nylon Conductive CDR2	Black	
JPFMC	MC Nylon	Blue	

Ⓢ Properties of polyacetal and MC nylon, see P.953.



Part Number	Type	Shape	D	L	1mm Increment	M Selection	Tapered Type only		R	ℓ	W				
							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					7				
			10	15(22)~50	3	4					5	8			
			12	16(27)~100	4	5					6	10			
			15	20(35)~100	5	6					8S	8	14		
			16	20(35)~100	6	8S					8	17			
			18	25(40)~100	6	8S					8	10S	10		
			20	25(40)~100	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.

Ordering Example

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

D	L Min. ~ 59				Unit Price				
	JPFJ	JPFM	JPFMC	JPFJ	JPFM	JPFMC	Machining Charge (Body Price +)		
6							Shape R	Shape Q	Shape T
8									
10									
12									
15									
16									
18									
20									
30									
40									

• 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

Knuckle Joints

Extra Short / Tool-Less

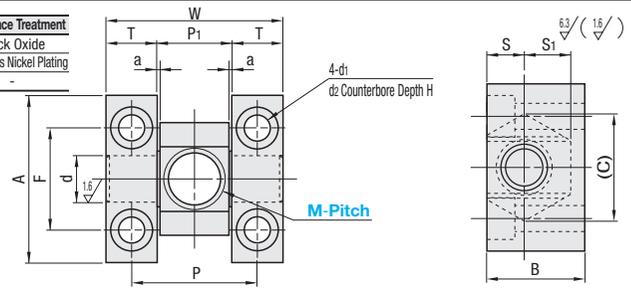
■ Features: Extra Short Type that can be used in a limited space is available.

■ Extra Short



RoHS

Type	Material	Surface Treatment
NJCB	S45C Equivalent	Black Oxide
NJCM	S45C Equivalent	Electroless Nickel Plating
NJCS	SUS304	-



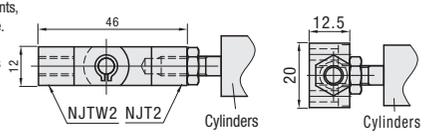
4-d1
dz Counterbore Depth H

M-Pitch

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

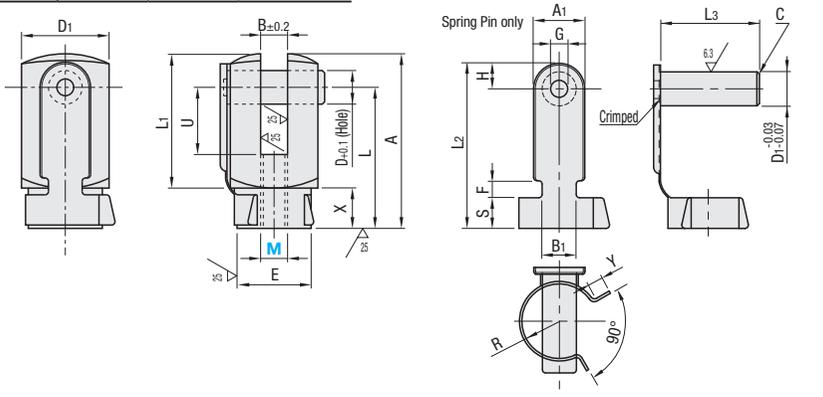


Tool-Less



RoHS

Type	Material	Surface Treatment
NJUT	S45C Equivalent	Trivalent Bright Chromate
NJUTS	SUS304	-



Set

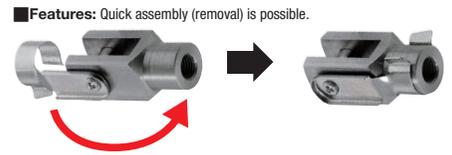
Spring Pin only

Crimped

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	4	M4x0.7	4.2	4.3	6	21	16	13	11	8.5	8		
	5	5	M5x0.8	6.8	5.3	12	31	24	22	16	12.5	9		
	6	6	M6x1.0	10.5	6.8	20	52	42	38	26	21	14		
	8	8	M8x1.25	10.5	8.3	20	52	42	38	26	21	14		

M Applicable to Set	D ₁ ±0.03 ±0.07	A ₁	B ₁	Y	L ₂	L ₃	H	F	G	S	R	C
4	4	9.5	5	3	18	13	4	3	3	6	4.5	1
5, 6	6.5	14	7	4	28	18	6	5	5	6	6.5	1.5
8, 10	10	20	10	6	48	28	8	4	6	10	11	2

Ordering Example
Part Number
NJUT6



Knuckle Joints

Fixed / B Selectable

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

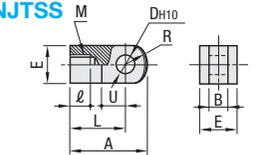
■ Fixed



RoHS

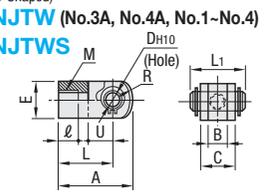
(T-Shaped)

NJT (No.3A, No.4A, No.1~No.4)
NJTSS

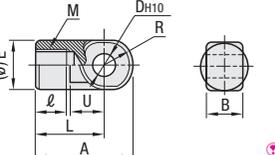


(U-Shaped)

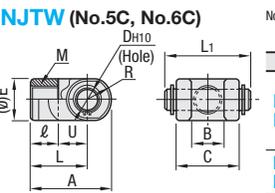
NJTW (No.3A, No.4A, No.1~No.4)
NJTWS



NJT (No.5C, No.6C)



NJTW (No.5C, No.6C)



Material and accessory tolerance of NJT (NJTW) 5C and 6C are FCD400 and Dis, respectively.

Note: Material and accessory tolerance of NJT (NJTW) 5 and 6 are FCD450 and Dis, respectively.

Type	No.	Material	Surface Treatment
NJT	3A, 4A 1~4	SS400	Nickel Plating (White) Black Zinc Chromate for No.2 only
NJTSS	5C, 6C	FCD400	Amino-alkyl Eramel and Varnish
NJTWS	3A, 4A 1~6C	SUS304	-

Part Number	Type	No.	A	ℓ	E	L	M	R	U	D _{H10}	B Tolerance	Applicable Cylinder I.D. (mm)	Unit Price	
													NJT	NJTSS
NJT NJTSS	3A	19	5	8	14	M3x0.5	5	5	4	4 +0.048 0	4	6		
	4A	19	5	8	14	M4x0.7	5	5	4	4 +0.048 0	4	10		
	1	21.5	6	10	16	M5x0.8	6.3	7	5	5 +0.048 0	5	12		
	2	32	8	12	25	M6x1	8.1	14	8	8 +0.058 0	8	16		
	3	34	8.5	16	30	M8x1.25	10.3	11.5	8	8 +0.058 0	8	20		
	4	41	10.5	20	30	M10x1.25	12.8	14	10	10 +0.058 0	10	25		
5C 6C	5C	42	14	22	30	M14x1.5	12	14	14	14 +0.070 0	18	32, 40		
	6C	56	18	28	40	M18x1.5	16	20	14	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	D _{H10}	B Tolerance	C	L ₁	Applicable Cylinder I.D. (mm)	Unit Price		No.	D ₉	D ₈	L ₁	d	L	N	M	Retaining Ring																																									
															NJT	NJTWS																																																		
NJTW NJTWS	3A	19	5	8	14	M3x0.5	5	5	4	4 +0.048 0	4	8	12	6			3A	6	4	-0.030 -0.060	12	3.8	8.2	1.9	0.5	C Type for Shaft 4																																								
	4A	19	5	8	14	M4x0.7	5	5	4	4 +0.048 0	4	10	10			1											12	5	-0.030 -0.060	14.6	4.8	10.2	2.2	0.7	C Type for Shaft 5																															
	1	21.5	6	10	16	M5x0.8	6.3	7	5	5 +0.048 0	5	10	14.6	12																						2	16	8	-0.040 -0.076	21	7.6	16.2	2.4	0.9	C Type for Shaft 8																					
	2	28	11	12	21	M6x1	8.1	10	8	8 +0.058 0	8	16	16.6	16																																3	20	10	-0.040 -0.076	25.6	9.6	20.2	2.7	1.15	C Type for Shaft 10											
	3	34	8.5	16	25	M8x1.25	10.3	11.5	8	8 +0.058 0	8	20	25.6	25																																										4	25	10	-0.040 -0.076	41.6	41.6	36.2	1.6	1.15	C Type for Shaft 10	
	4	41	10.5	20	30	M10x1.25	12.8	14	10	10 +0.058 0	10	25	25																																																					5C
5C	42	14	22	30	M14x1.5	12	14	14	14 +0.070 0	18	32, 40	32, 40			6C		50, 63	14	-0.025 -0.032 -0.059	50.6	50.6	50.6	2.1	1.1	C Type for Shaft 14																																									
6C	56	20	28	40	M18x1.5	16	20	14	14 +0.070 0	22	50, 63	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

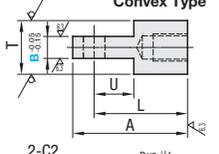
B Selectable



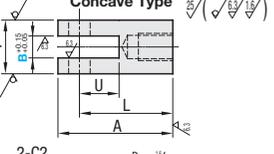
RoHS

B Selectable Type	Material	Surface Treatment
Convex Type/Concave Type	S45C Equivalent	Black Oxide
NJSB/NJTB	SUS304	Electroless Nickel Plating
NJSS/NJTS	SUS304	-

Convex Type



Concave Type



Part Number	Type	M-Pitch	B Selection	D _{H7}	U	A	L	T	Unit Price		
									Convex Type	Concave Type	
(Convex Type) NJSB NJSS	3-0.5	4, 5	4			26	20	10			
	4-0.7	5, 6	5		10	31	25	12			
	5-0.8	5, 6	5		10	31	25	12			
	6-1.0	4, 6	8		10	43	35	16			
	8-1.0	5, 8	8		10	43	35	16			
	8-1.25	5, 8	8		10	43	35	16			
(Concave Type) NJTB NJTM NJTS	10-1.25	6, 10	10		15	50	40	22			
	10-1.5	6, 10	10		15	50	40	22			
	12-1.25	8, 10	12		15	62	50	25			
	12-1.5	8, 10	12		15	62	50	25			
	14-1.5	10, 12	12		15	67	55	28			
	16-1.5	10, 12	12		15	67	55	28			

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

Knuckle Joints

Tapped, Configurable

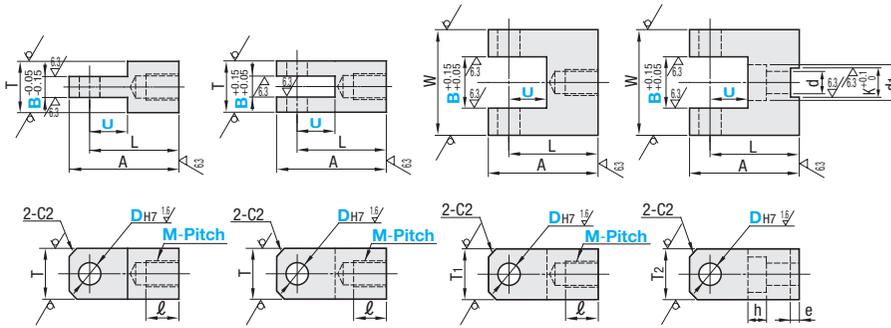
■ Features: Various Concave Tapped types are available.



Convex Type	Concave Type				Material	Surface Treatment
	Standard Type	Wide Type	Bolt Fixing Type	FNTFB		
FNNB	FNTB	FNTWB	FNTFB	S45C Equivalent	Black Oxide	
FNNM	FNTM	FNTWM	-	SUS304	Electroless Nickel Plating	
FNNS	FNTS	FNTWS	-	SUS304	-	

25 / (∇ 6.3 / 1.6 / ∇)

Convex Type Standard Concave Type Wide Concave Type Bolt Fixing Concave Type



2-C2 $D_{H7} \frac{1}{2}$ M-Pitch

Ⓜ Thread depth ℓ : For M3 ~ 8, the thread depth is $\ell = M \times 1.5$; For M10 - 26, the thread depth is $\ell = M \times 1$

RoHS

Part Number	Type	M-Pitch	DH7 Selection	B 1mm Increment				U 5mm Increment	A	L	T	T1	T2	W	d	h	d1	K	e		
				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	19	3.2	3.5	6.5	5	2.5		
		*4-0.7	4 5 6	4~12	4~6	7~12	7~12	10~30			12	12	12	25	5.2	5.5	9.5	8	3.5		
		*5-0.8	5 6 8	5~16	5~8	9~16	9~16	-			16	16	20	32	8.2	9	14	14	4	-	
		*6-1.0	6 8 10	6~20	6~10	11~20	11~20	-			20	19	25	38	10.2	11	18	17	4	-	
Standard Concave Type FNTB FNTM FNTS		8-1.0	5 6 8	5~16	5~8	9~16	-	L+8	U+20	16	16	20	32	8.2	9	14	14	4	-		
		*8-1.25	6 8 10	6~20	6~10	11~20	11~20			-	20	19	25	38	10.2	11	18	17	4	-	
		10-1.25	8 10 12 13	8~22	8~11	12~22	-			-	22	22	44	-	-	-	-	-	-	-	-
		*10-1.5	10 12 13 14 15 16	10~25	10~13	14~25	-			-	25	25	50	-	-	-	-	-	-	-	-
Wide Concave Type FNTWB FNTWM FNTWS		12-1.25	8 10 12 13	8~22	8~11	12~22	-	L+10	U+25	22	22	44	-	-	-	-	-	-	-		
		12-1.5	10 12 13 14 15 16	10~25	10~13	14~25	-			-	25	25	50	-	-	-	-	-	-	-	
		14-1.5	12 13 14 15 16 20	12~28	12~14	15~28	-			-	28	30	-	-	-	-	-	-	-	-	
		16-1.5	12 13 14 15 16 20	12~32	12~16	-	-			-	32	-	-	-	-	-	-	-	-	-	
Bolt Fixing Concave Type (Only * marked sizes) FNTFB		16-1.5	10 12 13 14 15 16	10~25	10~13	14~25	-	L+12	U+30	25	25	-	50	-	-	-	-	-			
		18-1.5	12 13 14 15 16 20	12~28	12~14	15~28	-			-	28	30	-	-	-	-	-	-	-		
		22-1.5	12 13 14 15 16 20	12~32	12~16	-	-			-	32	-	-	-	-	-	-	-	-		
26-1.5	12 13 14 15 16 20	12~38	12~18	-	-	-	38	-	-	-	-	-	-	-	-	-					

- Ⓜ Only * marked sizes are available for Bolt Fixing Concave Type (FNTFB).
- Ⓜ For Bolt Fixing Concave Type (FNTFB), when B < d1 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

Example: 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

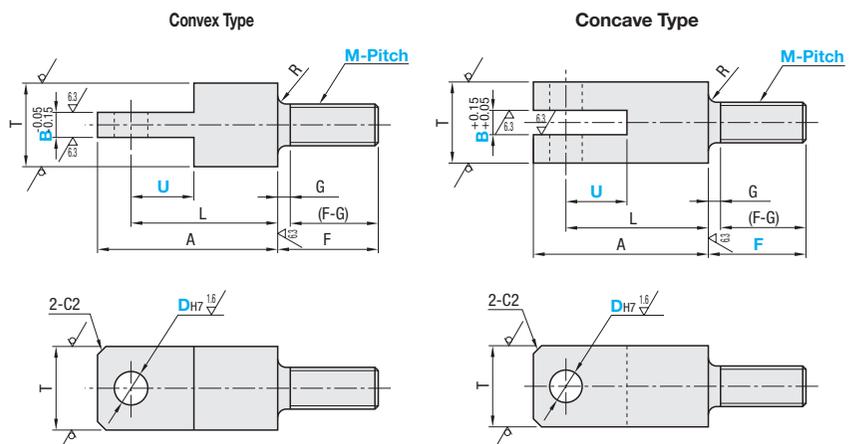
■ Features: Convex/Concave Selectable Threaded Type.



Convex Type	Concave Type			Material	Surface Treatment
	F Fixed	F Fixed	F Configurable		
FNMB	FNMTB	FNMTBF	S45C Equivalent	Black Oxide	
FNMS	FNMTS	-	SUS304	-	

25 / (∇ 6.3 / 1.6 / ∇)

Convex Type Concave Type



M-Pitch

Ⓜ The end face of the screw may have a cantering hole.

RoHS

Part Number	Type	M-Pitch	DH7 Selection	B 1mm Increment		U 5mm Increment	F						
				Convex Type	Concave Type		Standard	Configurable 1mm Increment	A	L	T	G	R
Convex Type F Fixed FNMB FNMS		3-0.5	3 4 5	3-10	3-5	10~20	9	8~12	L+5	U+10	10	3	0.8
		4-0.7	4 5 6	4-12	4-6	10~30	12	10~16	L+6	U+10	12	4	
		5-0.8	5 6 8	5-16	5-8	15~30	14	12~19	L+8	U+15	16	5	
		6-1.0	6 8 10	6-20	6-10	20~30	16	13~22	L+10	U+20	20	7	
Concave Type F Fixed F Configurable FNMTB FNMTBF FNMTS		8-1.25	8 10 12 13	8-22	8-11	12~22	20	16~28	L+8	U+15	16	5	1.6
		10-1.5	10 12 13 14 15 16	10~25	10~13	14~25	25	20~35	L+10	U+20	20	7	
		16-2.0	12 13 14 15 16 20	12~32	12~16	-	39	31~55	L+16	U+20	32	9	
		20-2.5	12 13 14 15 16 20	12~38	12~18	-	49	39~69	L+19	U+20	38	9	

Ordering Example

Part Number - D - B - U - F

Example: FNMB8-1.25 - D8 - B9 - U20
FNMTBF10-1.5 - D10 - B7 - U25 - F30

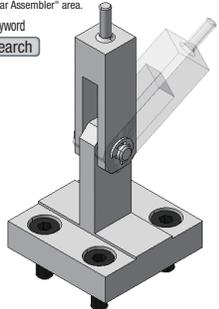
Example

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

*Enter the search keyword in the search box on e-Catalog. The search result will be shown in "Modular Assembler" area.

e-Catalog Search Keyword

#MA602 Search



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