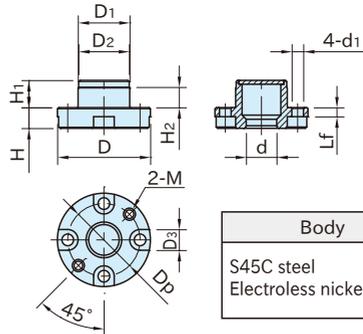


AMWF-BU

PNEUMATIC FLEX LOCATOR BUSHINGS



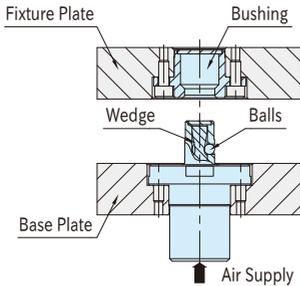
Body
S45C steel Electroless nickel plated

Part Number	D ₁ (g6)	H ₂	D ₂	H ₁	D	H	d (E7)	d ₁	L _f	D ₃	M	D _p	Weight (g)
AMWF18-BU	20	7.5	19.6	10.5	36	8	12.1	4.5	3.5	8	M4X0.7	28	57
AMWF26-BU	25	7	24.6	11	44	9.5	16.1	5.5	4	9.5	M5X0.8	34	97

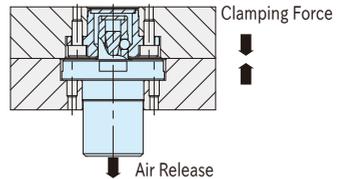
Reference

- How To Install PNEUMATIC FLEX LOCATORS
- How To Use PNEUMATIC FLEX LOCATORS

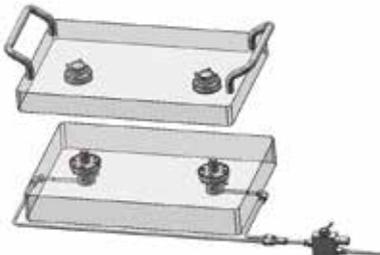
Features



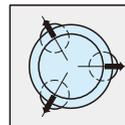
Supply air for unclamping.
The wedge goes up and releases the balls.



Release air for clamping. The wedge goes down and pushes the balls to pull down the bushing.
Can keep clamped without air supply.



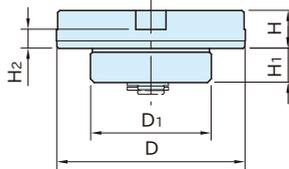
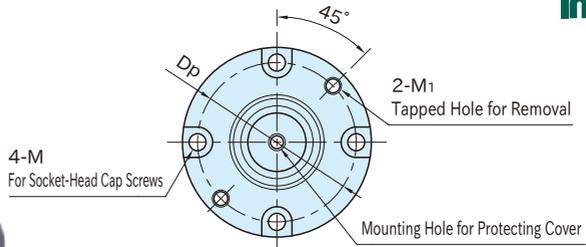
Quick clamping and unclamping reduce set-up time in production equipment.



Locating Repeatability : $\pm 10 \mu\text{m}$
The bushing is centered and clamped when the 3 balls are pushed out to gain high locating repeatability.

CP725

FLEX LOCATOR BUSHINGS (Blind)



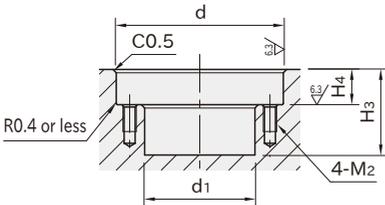
Body	Tapered Bushing
Steel(SCM440) Black oxide finished	Steel(SCM440) ISONITE Treated (Nitrocarburized)

Part Number	D (g6)	H	D ₁	H ₁	M	H ₂	M ₁	D _p	Lifting Force (N) (*)	Weight (g)
CP725-16032	32	6.5	20	7	M3	3	M3×0.5	25.5	110	60
CP725-25050	50	10	32	9	M4	5	M4×0.7	42	180	160
CP725-38070	70	15	48	14	M5	9	M5×0.8	60	400	508
CP725-56095	95	22	70	21	M6	15	M6×1	84	690	1451

*) The lifting force is the power of the inner spring of the body to push up up the movable tapered bushing.

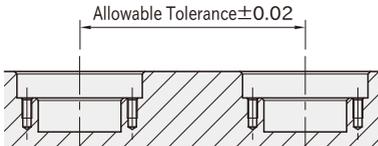
How To Use

Mouting Hole Dimensions

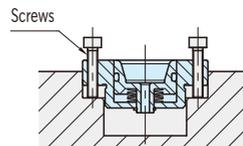


Part Number	d (H7)	H ₄ (±0.05)	d ₁	H ₃	M ₂
CP725-16032	32	7	21	18	M3×0.5
CP725-25050	50	10.5	33	24	M4×0.7
CP725-38070	70	15.5	49	35	M5×0.8
CP725-56095	95	22.5	71	51	M6×1

Spacing Tolerance



How to Remove



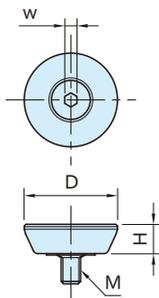
For removal, insert screws into the tapped holes and screw it.

Reference

- Mechanism of FLEX LOCATORS
- How To Install FLEX LOCATORS (Blind)
- How To Use FLEX LOCATORS (Blind)

CP725-P

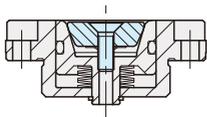
FLEX LOCATOR PROTECTING COVERS



Body	Screw
A5056 Red	Steel(SCM435) Black oxide finished

Part Number	D	H	M	w	Weight (g)	Proper Flex Locator Bushings
CP725-16032P	12	4	M3×0.5	2	3	CP725-16032
CP725-25050P	19	6	M4×0.7	2.5	5	CP725-25050
CP725-38070P	29	7	M5×0.8	3	14	CP725-38070
CP725-56095P	44	8	M6×1	4	35	CP725-56095

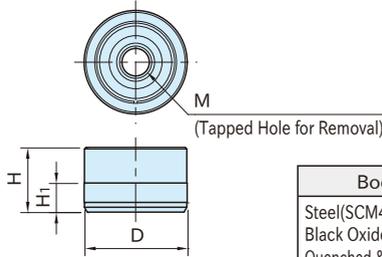
How to Install



Mount on Flex Locator Bushings using the tapped hole and use it as a protective cover.

CP726

FLEX LOCATOR BUSHINGS (Through)



Body	Tapered Bushing
Steel(SCM440) Black Oxide Finished Quenched & Tempered	Steel(SCM440) ISONITE Treated (Nitrocarburized)

Part Number	D	H	H ₁	M	Lifting Force (N) (*)	Weight (g)
CP726-12025	25 (+0.028 / +0.018)	16	8	M 8X1.25 (Prepared Hole φ 6.8)	540	46
CP726-15032	32 (+0.031 / +0.021)	20	9	M10X1.5 (Prepared Hole φ 8.5)	600	92
CP726-20045	45 (+0.031 / +0.021)	26	11	M14X1.5 (Prepared Hole φ 12.5)	780	230

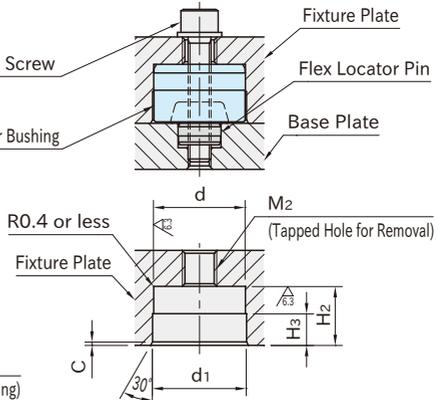
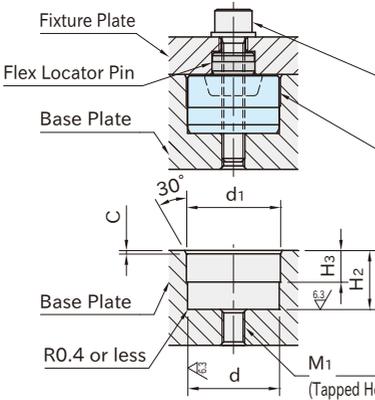
*) The lifting force is the power of the inner spring of the body to push up the movable tapered bushing.

How To Use

■ Mounting Hole Dimensions for Press Fit

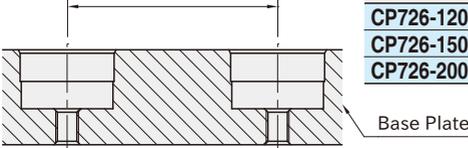
Installation of the Bushings on the Base Plate

Installation of the Bushings on the Fixture Plate



■ Spacing Tolerance

Allowable Tolerance ±0.02



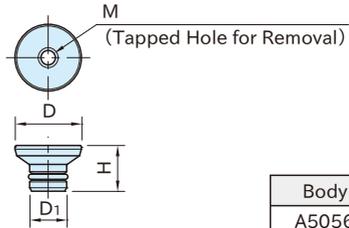
Part Number	d (H6)	H ₂ (±0.05)	d ₁	H ₃	C	M ₁	M ₂
CP726-12025	25	16.5	25.2	8	1	M 6X1	M10X1.5
CP726-15032	32	20.5	32.2	11	1.2	M 8X1.25	M12X1.75
CP726-20045	45	26.5	45.2	15	1.5	M12X1.75	M16X2

Reference

- Mechanism of FLEX LOCATORS
- How To Install FLEX LOCATORS (Through)
- How To Use FLEX LOCATORS (Through)

CP726-P

FLEX LOCATOR PROTECTING COVERS



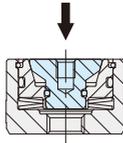
Body	O-Ring
A5056 Red	NBR

Part Number	D	H	D ₁	M	Weight (g)	Proper Flex Locator Bushings
CP726-12025P	15	10	9	M4×0.7	2	CP726-12025
CP726-15032P	19	13	11	M5×0.8	5	CP726-15032
CP726-20045P	29	18	16	M6×1	17	CP726-20045

How To Use

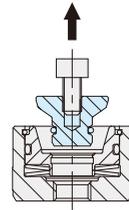
How to Install

Insert the product to the center hole of the Flex Locator Bushings and use it as a protective cover.



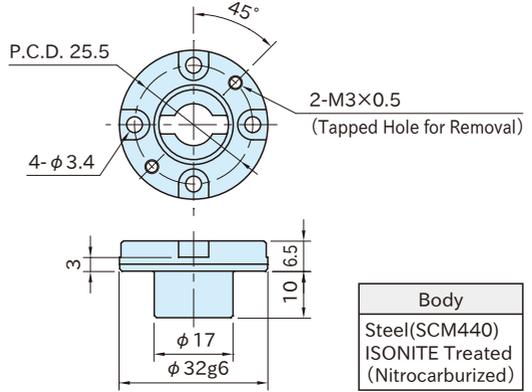
How to Remove

Insert a screw into the tapped hole and pull it out.



CP727

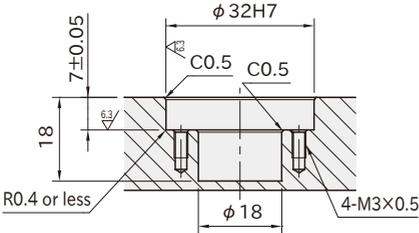
ONE-TOUCH FLEX LOCATOR BUSHING



Part Number	Weight (g)
CP727-0840R	32

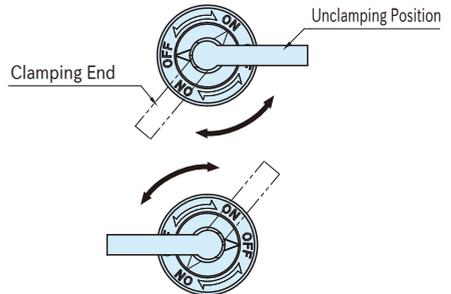
How To Use

Mounting Hole Dimensions

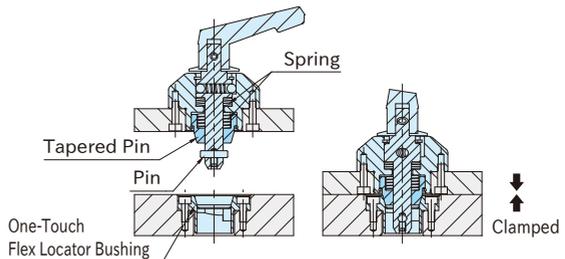
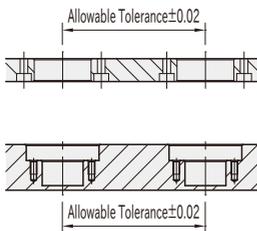


Features:

Two pair of unclamping and clamping end positions of handle can be chosen.



Spacing Tolerance



- The plates are located by fitting of the tapered parts.
- The pin contacts the cam surface inside the One-Touch Flex Locator Bushing, and it compresses the inner spring, then the plates are clamped.
- *) No locating function with CP722-0840R-06N

Reference

- Mechanism of FLEX LOCATORS
- How To Use ONE-TOUCH FLEX LOCATORS

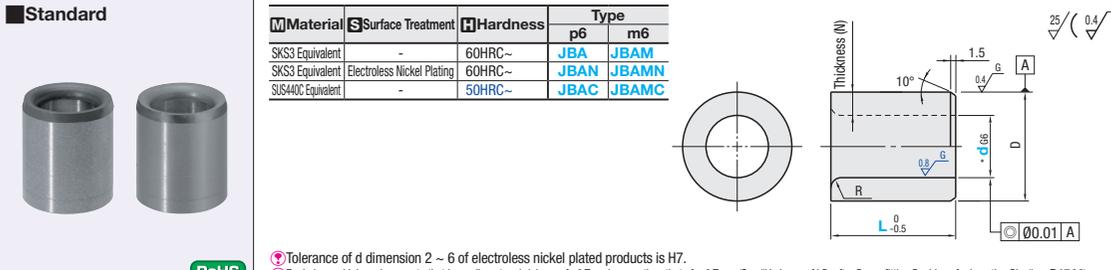
Bushings for Locating Pins

Straight, Standard / Thin Wall

Bushings for Locating Pins

Configurable, Straight, Standard / Thin Wall

Standard



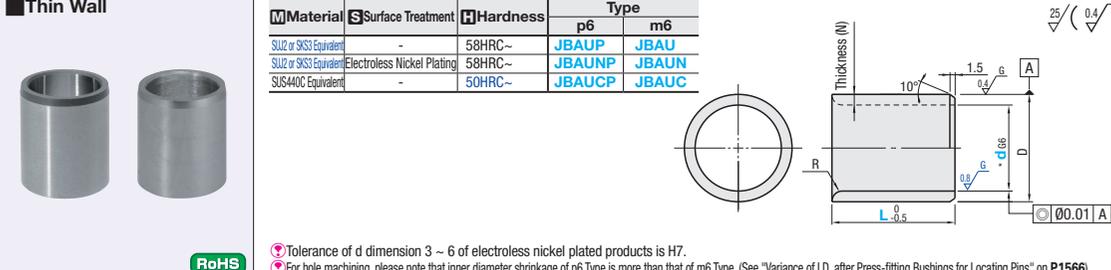
Material	Surface Treatment	Hardness	Type	
			p6	m6
SKS3 Equivalent	-	60HRC~	JBA	JBAM
SKS3 Equivalent	Electroless Nickel Plating	60HRC~	JBAN	JBAMN
SUS40C Equivalent	-	50HRC~	JBAC	JBAMC

Ⓜ Tolerance of d dimension 2 ~ 6 of electroless nickel plated products is H7.
 Ⓜ For hole machining, please note that inner diameter shrinkage of p6 Type is more than that of m6 Type. (See "Variance of I.D. after Press-fitting Bushings for Locating Pins" on P1566)

Type	Part Number	D Tolerance		L Selection	Thickness (N)	R	D	D Tolerance		Unit Price			
		No Surface Treatment	Electroless Nickel Plating					p6	m6	JBA	JBAN	JBAMN	JBAMC
(p6) JBA JBAN JBAC	2	+0.008 +0.002	+0.010 0	5 6 7 8 10 12	1.5	0.8	5	+0.020 +0.012	+0.012 +0.004				
	3				2	7							
	4				2	8							
	5	+0.012 +0.004	+0.012 0	5 6 7 8 10 12 15 16 20	2.5	1	10	+0.024 +0.015	+0.015 +0.006				
	6				2	12							
	8				2	12							
(m6) JBAM JBAMN JBAMC	10	+0.014 +0.005	+0.014 +0.005	5 6 7 8 10 12 15 16 20 25	2	2	12	+0.029 +0.018	+0.018 +0.007				
	12			6 7 8 10 12 15 16 20 25 30	2.5	15							
	13			8 10 12 15 16 20 25 30	3	18							
	15	+0.017 +0.006	+0.017 +0.006	10 12 *15 16 20 *25 30	4.5	22							
	16			12 15 16 20 *25 30	5	25							
	20			12 15 16 20 25 30	5	26							
	25	+0.020 +0.007	+0.020 +0.007	16 20 25 30 *35	5	30		+0.042 +0.026	+0.025 +0.009				

Ⓜ L dimension with * is not applicable to JBAMC.

Thin Wall



Material	Surface Treatment	Hardness	Type	
			p6	m6
SU2 or SKS3 Equivalent	-	58HRC~	JBAUP	JBAU
SU2 or SKS3 Equivalent	Electroless Nickel Plating	58HRC~	JBAUNP	JBAUN
SUS40C Equivalent	-	50HRC~	JBAUCP	JBAUC

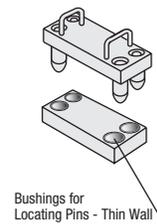
Ⓜ Tolerance of d dimension 3 ~ 6 of electroless nickel plated products is H7.
 Ⓜ For hole machining, please note that inner diameter shrinkage of p6 Type is more than that of m6 Type. (See "Variance of I.D. after Press-fitting Bushings for Locating Pins" on P1566)

Type	Part Number	D Tolerance		L Selection	Thickness (N)	R	D	D Tolerance		Unit Price		
		No Surface Treatment	Electroless Nickel Plating					p6	m6	JBAUP	JBAUNP	JBAUCP
(p6) JBAUP JBAUNP JBAUCP	3	+0.008 +0.002	+0.010 0	5 6 8 10 12	1	0.5	5	+0.020 +0.012	+0.012 +0.004			
	4			5 6 8 10 12 15 16								
	5											
	6	+0.012 +0.004	+0.012 0	5 6 8 10 12 15 16 20			8	+0.024 +0.015	+0.015 +0.006			
	8						10					
	10	+0.014 +0.005	+0.014 +0.005	6 8 10 12 15 16 20	1.5	13						
(m6) JBAU JBAUN JBAUC	12			8 10 12 15 16 20	2	15						
	13			10 12 *15 16 20	2	17						
	15	+0.017 +0.006	+0.017 +0.006	10 12 15 16 20	2	19						
	16			10 12 15 16 20 25	2.5	21		+0.035 +0.022	+0.021 +0.008			
	20			12 15 16 20 25	2.5	26						
	25	+0.020 +0.007	+0.020 +0.007	20 25	3	31		+0.042 +0.026	+0.025 +0.009			

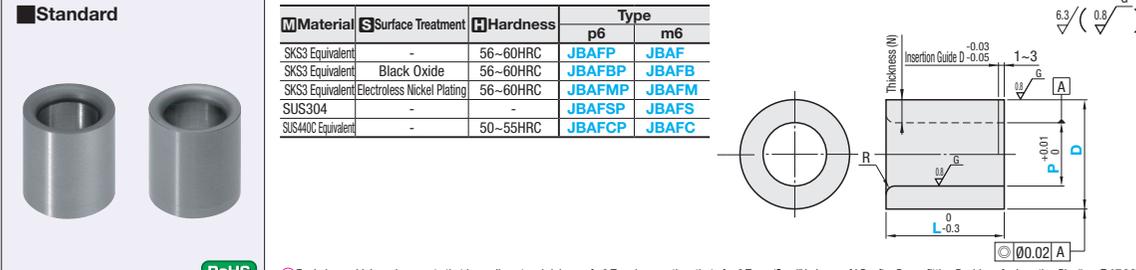
Ⓜ L dimension with * is not applicable to JBAUN.

Ordering Example
 Part Number - L
 JBAC12 - 10
 JBAN8 - 8

EX Example



Standard



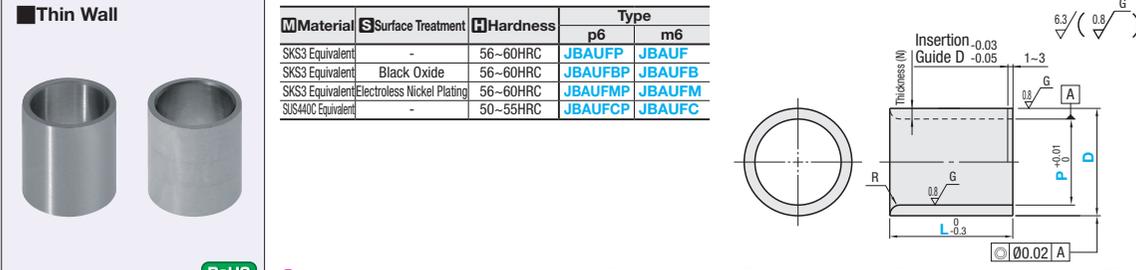
Material	Surface Treatment	Hardness	Type	
			p6	m6
SKS3 Equivalent	-	56~60HRC	JBAFP	JBAF
SKS3 Equivalent	Black Oxide	56~60HRC	JBAFBP	JBAFB
SKS3 Equivalent	Electroless Nickel Plating	56~60HRC	JBAFMP	JBAFM
SUS304	-	-	JBAFSP	JBAFS
SUS40C Equivalent	-	50~55HRC	JBAFCP	JBAFC

Ⓜ For hole machining, please note that inner diameter shrinkage of p6 Type is more than that of m6 Type. (See "Variance of I.D. after Press-fitting Bushings for Locating Pins" on P1566)

Type	Part Number	D Tolerance		P	L	Thickness (N)	R	Unit Price					
		p6	m6					0.01mm Increment	0.1mm Increment	JBAF	JBAFBP	JBAFMP	JBAFCP
(p6) JBAFP JBAFBP JBAFMP JBAFSP JBAFCP	5	+0.022	+0.012	2.00~2.50	5.0~6.0	1.25~1.50	0.8						
	7			2.00~3.50	5.0~8.0	1.75~2.50							
	8	+0.024 +0.015	+0.015 +0.006	3.00~4.50	5.0~13.0		1.0						
	10			4.00~6.50	5.0~20.0	1.75~3.00							
	12			6.00~8.50		2.25~3.50	2.0						
	15	+0.029 +0.018	+0.018 +0.007	8.00~10.50	5.0~40.0	2.75~4.00							
	18			10.00~12.50		3.25~4.00	3.0						
	20			12.00~13.50		4.25~5.00							
	22			12.00~13.50		4.75~6.00							
	25	+0.035 +0.022	+0.021 +0.008	13.00~15.50		4.75~5.50							
26			15.00~16.50		4.75~7.00								
30			16.00~20.50		5.00~7.50								
35	+0.042 +0.026	+0.025 +0.009	20.00~25.00										

Ⓜ L≤Px2.5 when P≥3.59 L≤Px3.0 when P≥3.60 Ⓜ For (D-P)/2≤2, R≤2

Thin Wall



Material	Surface Treatment	Hardness	Type	
			p6	m6
SKS3 Equivalent	-	56~60HRC	JBAUFP	JBAUF
SKS3 Equivalent	Black Oxide	56~60HRC	JBAUFBP	JBAUFB
SKS3 Equivalent	Electroless Nickel Plating	56~60HRC	JBAUFMP	JBAUFM
SUS40C Equivalent	-	50~55HRC	JBAUFCP	JBAUFC

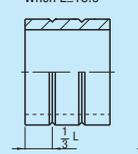
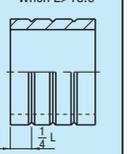
Ⓜ For hole machining, please note that inner diameter shrinkage of p6 Type is more than that of m6 Type. (See "Variance of I.D. after Press-fitting Bushings for Locating Pins" on P1566)

Type	Part Number	D Tolerance		P	L	Thickness (N)	R	Unit Price					
		p6	m6					0.01mm Increment	0.1mm Increment	JBAUFP	JBAUFBP	JBAUFMP	JBAUFCP
(p6) JBAUFP JBAUFBP JBAUFMP JBAUFCP	7			3.51~5.00	5.0~8.0	1.00~1.74	0.5						
	8	+0.024	+0.015	4.51~6.00	5.0~13.0	1.25~2.24							
	9	+0.015	+0.006	4.51~6.50		1.00~1.74	1.0						
	10			6.51~8.00	5.0~20.0	1.00~1.50							
	11			8.00~9.00		1.50~1.74	1.5						
	12			8.51~9.00		1.50~2.24							
	13			8.51~10.00		1.50~2.24	2.0						
	14	+0.029 +0.018	+0.018 +0.007	9.00~11.00	5.0~40.0	1.50~2.50							
	15			10.51~12.00		1.50~2.24	1.0						
	17			10.51~13.00		2.00~3.24							
18			12.51~14.00		2.00~2.74	1.5							
20			13.51~15.00		2.50~3.24								
22			13.51~17.00		2.50~4.24								
25	+0.035 +0.022	+0.021 +0.008	15.51~19.00		3.00~4.74								
26			16.51~20.00		3.00~4.74								
30			20.51~24.00		3.00~4.74								
35	+0.042 +0.026	+0.025 +0.009	25.01~29.00		3.00~4.99								

Ⓜ L≤Px2.5 when P≥3.59 L≤Px3.0 when P≥3.60

Ordering Example
 Part Number - P - L
 JBAUF10 - P4.00 - L8.5
 JBAUFC10 - P8.00 - L15.0

Alterations
 Part Number - P - L - (RS)
 JBAFP20 - P12.00 - L20.0 - RS

Alteration	Code	Spec.
Loctite Adhesive Groove Machining When L≤13.0 	RS	Adds a Loctite adhesive groove. Ⓜ Number of O.D. Grooves • When L≤13.0 → 2 lines • When L>13.0 → 3 lines [Ordering Code] RS Ⓜ When D≤13, D-P≥3 When D≥14, D-P≥4 Ⓜ Not applicable to Thin Wall Type. Ⓜ Not applicable to L<9.0.
Loctite Adhesive Groove Machining When L>13.0 		

Bushings for Locating Pins

Shouldered, Standard / Thin Wall

Bushings for Locating Pins

Configurable, Shouldered, Standard / Thin Wall

Standard

Material	Surface Treatment	Hardness	Type	
			p6	m6
SKS3 Equivalent	-	60HRC~	JBH	JBHM
SKS3 Equivalent	Electroless Nickel Plating	60HRC~	JBHN	JBHMN
SUS40C Equivalent	-	50HRC~	JBHC	JBHMC

RoHS

Tolerance of d dimension 2 ~ 6 of electroless nickel plated products is H7.
 For hole machining, please note that inner diameter shrinkage of p6 Type is more than that of m6 Type.
 (See "Variance of I.D. after Press-fitting Bushings for Locating Pins" on P1566)

Type	d	D Tolerance		L Selection	Thickness (N)	R	H	T	D	D Tolerance		Unit Price		
		No Surface Treatment	Electroless Nickel Plating							p6	m6	JBH	JBHN	JBHM
(p6) JBH JBHN JBHC	2	+0.008	+0.010	5 6 8 10 12	1.5	0.8	9	2.5	5	+0.020	+0.012			
	3	+0.002	0	5 6 8 *10 12	2		11	7	8	+0.012	+0.004			
	4	+0.012	+0.012	*5 6 8 10 12 15 *16 20	2		12	8	10	+0.024	+0.015			
	5	+0.004	0	5 6 8 10 12 15 16 20	2.5	1	13	3	12	+0.015	+0.006			
	6				2		14	10	15					
	8	+0.014	+0.014	5 6 8 10 12 15 16 20 25	2		16	12	18					
	10	+0.005	+0.005	6 8 10 12 15 16 20 25	2.5	1	19	4	15	+0.029	+0.018			
	12			8 10 12 15 16 20 25 30	3	2	22	18	20	+0.018	+0.007			
	13	+0.017	+0.017	10 12 15 16 20 25 30	4.5		26	22	25					
	15	+0.006	+0.006	10 *12 *15 *16 *20 *25 *30	5		30	5	25	+0.035	+0.021			
16			10 12 15 16 20 25 30	5		26	5	26	+0.022	+0.008				
20	+0.020	+0.020	12 15 16 20 25 30	5	3	35	6	30						
25	+0.007	+0.007	16 20 25 *30 35	5		40	6	35	+0.042	+0.025				

* L dimension with * is not applicable to JBHMC.

Thin Wall

Material	Surface Treatment	Hardness	Type	
			p6	m6
SUJ2 or SKS3 Equivalent	-	58HRC~	JBHUP	JBHU
SUJ2 or SKS3 Equivalent	Electroless Nickel Plating	58HRC~	JBHUNP	JBHUN
SUS40C Equivalent	-	50HRC~	JBHUCP	JBHUC

RoHS

Tolerance of d dimension 3 ~ 6 of electroless nickel plated products is H7.
 For hole machining, please note that inner diameter shrinkage of p6 Type is more than that of m6 Type.
 (See "Variance of I.D. after Press-fitting Bushings for Locating Pins" on P1566)

Type	d	D Tolerance		L Selection	Thickness (N)	R	H	T	D	D Tolerance		Unit Price		
		No Surface Treatment	Electroless Nickel Plating							p6	m6	JBHU	JBHUN	JBHUC
(p6) JBHUP JBHUNP JBHUCP	3	+0.008	+0.010	6 8 10 12	1	0.5	9	2.5	5	+0.020	+0.012			
	4	+0.002	0	6 8 10 12 15 16	1		10	6	8	+0.012	+0.004			
	5	+0.012	+0.012	6 8 10 12 *15 *16 20	1		11	3	7	+0.024	+0.015			
	6	+0.004	0	6 8 10 12 *15 16 20	1		12	8	8	+0.015	+0.006			
	8	+0.014	+0.014	6 8 10 12 *15 16 20	1		14	10	10					
	10	+0.005	+0.005	6 8 10 12 15 16 20	1.5	1	17	4	13	+0.029	+0.018			
	12			8 10 12 15 16 *20	2	2	19	15	15	+0.022	+0.007			
	13	+0.017	+0.017	10 12 15 16 20	2	1	21	17	17	+0.018	+0.007			
	15	+0.006	+0.006	12 15 16 20	2	1	24	19	19					
	16			12 15 16 20 *25	2.5		26	21	21	+0.035	+0.021			
20	+0.020	+0.020	12 15 16 20 25	2.5	2	31	26	26	+0.022	+0.008				
25	+0.007	+0.007	20 25	3	2	36	31	31	+0.042	+0.025				

* L dimension with * is not applicable to JBHUC.

Ordering Example: Part Number - P - L
 JBH5 - 8
 JBHUN12 - 12

Standard

Material	Surface Treatment	Hardness	Type	
			p6	m6
SKS3 Equivalent	-	56-60HRC	JBHF	JBHF
SKS3 Equivalent	Black Oxide	56-60HRC	JBHF	JBHF
SKS3 Equivalent	Electroless Nickel Plating	56-60HRC	JBHF	JBHF
SUS304	-	-	JBHF	JBHF
SUS40C Equivalent	-	50-55HRC	JBHF	JBHF

RoHS

For hole machining, please note that inner diameter shrinkage of p6 Type is more than that of m6 Type.
 (See "Variance of I.D. after Press-fitting Bushings for Locating Pins" on P1566)

Type	D	D Tolerance		P	L	Thickness (N)	R	H	T	Unit Price				
		p6	m6							0.01mm Increment	0.1mm Increment	JBHF	JBHF	JBHF
(p6) JBHF JBHF JBHF JBHF JBHF	5	+0.022	+0.022	2.20-2.50	3.0-3.5	1.25-1.50	0.8	9	2.5					
	7	+0.024	+0.015	2.20-3.50	3.0-6.0	1.75-2.50		11						
	8	+0.015	+0.006	3.00-4.50	3.0-10.0			12	3					
	10			4.00-6.50		1.75-3.00		14						
	12	+0.029	+0.018	6.00-8.50	3.0-15.0			16	4					
	15	+0.018	+0.007	8.00-10.50		2.25-3.50		19						
	18			10.00-12.50		2.75-4.00		22						
	20			12.00-13.50	5.0-35.0	3.25-4.00	2.0	26						
	22	+0.035	+0.021	12.00-13.50		4.25-5.00		26	5					
	25	+0.022	+0.008	13.00-15.50		4.75-6.00		30						
26			15.00-16.50		4.75-5.50		30							
30			16.00-20.50		4.75-7.00		35	6						
35	+0.022	+0.022	20.00-25.00	5.0-50.0	5.00-7.50	3.0	40							

* L+T≤Px2.5 when P≤3.59 L+T≤Px3.0 when P≥3.60

Thin Wall

Material	Surface Treatment	Hardness	Type	
			p6	m6
SKS3 Equivalent	-	56-60HRC	JBHF	JBHF
SKS3 Equivalent	Black Oxide	56-60HRC	JBHF	JBHF
SKS3 Equivalent	Electroless Nickel Plating	56-60HRC	JBHF	JBHF
SUS40C Equivalent	-	50-55HRC	JBHF	JBHF

RoHS

For hole machining, please note that inner diameter shrinkage of p6 Type is more than that of m6 Type.
 (See "Variance of I.D. after Press-fitting Bushings for Locating Pins" on P1566)

Type	D	D Tolerance		P	L	Thickness (N)	R	H	T	Unit Price				
		p6	m6							0.01mm Increment	0.1mm Increment	JBHF	JBHF	JBHF
(p6) JBHF JBHF JBHF JBHF JBHF	7	+0.024	+0.015	3.51-5.00	3.0-6.0	1.00-1.74		11	2.5					
	8	+0.015	+0.006	4.51-6.00	3.0-10.0	1.25-2.24		12						
	9			4.51-6.50		1.00-1.74		13.5	3					
	10			6.51-8.00		1.50-1.74		14						
	11	+0.029	+0.018	8.00-9.00	3.0-15.0	1.00-1.50	0.5	15	4					
	12	+0.018	+0.007	8.51-9.00		1.50-1.74		16						
	13			8.51-10.00		1.50-2.24		17						
	14			9.00-11.00		1.50-2.50		18						
	15			10.51-12.00	5.0-35.0	1.50-2.24		19						
	17			10.51-13.00		2.00-3.24		21						
18			12.51-14.00		2.00-2.74		22							
20			13.51-15.00		2.50-3.24		26	5						
22			13.51-17.00		2.50-4.24		26							
25	+0.035	+0.021	15.51-19.00		3.00-4.74		30							
26			16.51-20.00		3.00-4.74		30							
30			20.51-24.00		3.00-4.74		35	6						
35	+0.022	+0.022	25.01-29.00	5.0-50.0	3.00-4.99	1.5	40							

* L+T≤Px2.5 when P≤3.59 L+T≤Px3.0 when P≥3.60

Ordering Example: Part Number - P - L
 JBHF25 - P14.00 - L20.0
 JBHF15 - P11.00 - L20.0

Alterations Part Number - P - L - (RC, TC)
 JBHF12 - P8.00 - L12.0 - RC

Alterations	Code	Spec.
I.D. Radius R	RC	Machines Radius R on both sides. Thickness 1.5mm or more Size of R will be the same as R on shoulder side with D dimension 10 or more. (Ordering Code) RC
Shoulder Thickness	TC	1mm Increment (Ordering Code) TC4 3≤TC<T *0.A.L. becomes short as much as T-TC. *Applicable when D≥12.

Bushings for Locating Pins

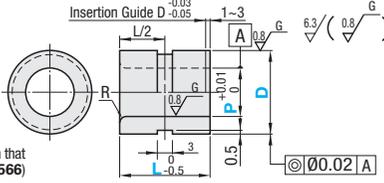
Retaining, Oval

Retaining



Material	Surface Treatment	Hardness	Type	
			p6	m6
SKS3 Equivalent	-	56-60HRC	JBAFPG	JBAFG
SKS3 Equivalent	Black Oxide	56-60HRC	JBAFBPG	JBAFBG
SKS3 Equivalent	Electroless Nickel Plating	56-60HRC	JBAFMFG	JBAFMG
SUS304	-	-	JBAFSPG	JBAFSG
SUS40C Equivalent	-	50-55HRC	JBAFCPG	JBAFCG

For hole machining, please note that inner diameter shrinkage of p6 Type is more than that of m6 Type. (See "Variance of I.D. after Press-fitting Bushings for Locating Pins" on P.1566)



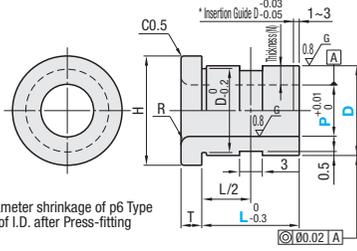
Type	Part Number	D Tol.		P		L		R	Unit Price				
		p6	m6	0.01mm Increment	0.1mm Increment	JBAFPG	JBAFBPG		JBAFMFG	JBAFSPG	JBAFCPG		
(p6)	8	+0.024	+0.015	4.00-4.50	10.0-13.0	1.0							
	10	+0.015	+0.006	4.00-6.50	10.0-20.0								
	12			6.00-8.50									
	15	+0.029	+0.018	8.00-10.50									
	18	+0.018	+0.007	10.00-12.50									
(m6)	20			12.00-13.50	10.0-40.0	2.0							
	22	+0.035	+0.021	12.00-13.50									
	25	+0.022	+0.008	13.00-15.50									
	26			15.00-16.50									
	30			16.00-20.50									
35	+0.042	+0.025	20.00-25.00	12.0-60.0	3.0								

Shouldered, Retaining



Material	Surface Treatment	Hardness	Type		
			p6	m6	h6
SKS3 Equivalent	-	56-60HRC	JBHFPG	JBHFG	JBHG
SKS3 Equivalent	Electroless Nickel Plating	56-60HRC	JBHFMPG	JBHFMG	JBHMG
SUS40C Equivalent	-	50-55HRC	JBHFCPG	JBHFCG	-

The insertion guide is not available for D dimension tolerance h6 at D shaft tip.



D	p6	m6	h6
8	+0.024	+0.015	-0.009
10	+0.015	+0.006	0
12			
15	+0.029	+0.018	-0.011
18	+0.018	+0.007	0
20			
22			
25	+0.035	+0.021	-0.013
26	+0.022	+0.008	0
30			
35	+0.042	+0.025	-0.016
	+0.026	+0.009	0

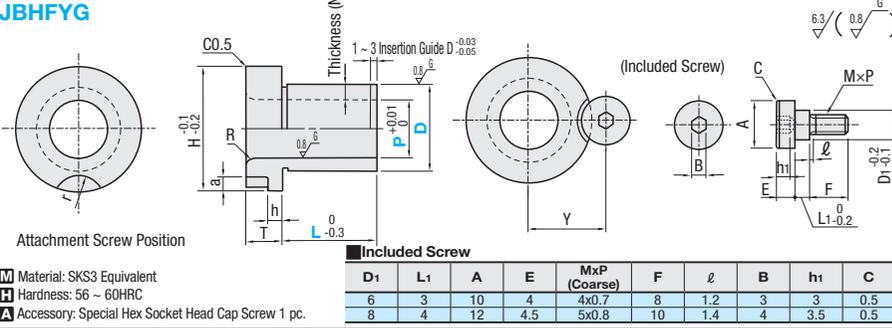
For hole machining, please note that inner diameter shrinkage of p6 Type is more than that of m6 Type. (See "Variance of I.D. after Press-fitting Bushings for Locating Pins" on P.1566)

Type	Part Number	D	P		L		Thickness (N)	R	H	T	Unit Price		
			0.01mm Increment	0.1mm Increment	JBHFPG	JBHFMFG					JBHFCPG		
(p6)	8	8	4.00-4.50	8.0-10.0	1.75-2.50	1.0	12	3					
	10	10	4.00-6.50	8.0-15.0	1.75-3.00		14						
	12	12	6.00-8.50				16						
	15	15	8.00-10.50				19	4					
	18	18	10.00-12.50				22						
(m6)	20	20	12.00-13.50	10.0-35.0	2.25-3.50	2.0	26						
	22	22	12.00-13.50		2.75-4.00		30						
	25	25	13.00-15.50		3.25-4.00		35	5					
	26	26	15.00-16.50		4.25-5.00		40						
	30	30	16.00-20.50		4.75-6.00								
(h6)	35	35	20.00-25.00	12.0-50.0	4.75-7.00	3.0	40	6					
					5.00-7.50								

Notched, Retaining



JBHFG



Attachment Screw Position

Included Screw

D1	L1	A	E	MxP (Coarse)	F	ℓ	B	h1	C
6	3	10	4	4x0.7	8	1.2	3	3	0.5
8	4	12	4.5	5x0.8	10	1.4	4	3.5	0.5

Material: SKS3 Equivalent
Hardness: 56 ~ 60HRC
Accessory: Special Hex Socket Head Cap Screw 1 pc.

Type	Part Number	D	D Tolerance	P		L		Thickness (N)	R	H	T	h	a	r	Screw Position Y	Accessory Special Material Screw	Tightening Torque N-cm	Unit Price
				0.01mm Increment	0.1mm Increment	0.01mm Increment	0.1mm Increment											
JBHFG	10	10	-0.019	4.00-6.50	3.0-12.0	1.75-3.00	1	18										
	12	12		6.00-8.50	10.0-18.0	2.25-3.50	20	7.5	3									
	15	15	-0.023	8.00-10.50		2.75-4.00	23											
	18	18		10.00-12.50	10.0-30.0	3.25-4.00	26											
	20	20		12.00-13.50		4.25-5.00	30											
	22	22		12.00-13.50		4.75-6.00	33	9	4	7								
	25	25	-0.027	13.00-15.50	12.0-35.0	4.75-5.50	34											
26	26		15.00-16.50		4.75-7.00	38												
30	30		16.00-20.50	12.0-50.0														

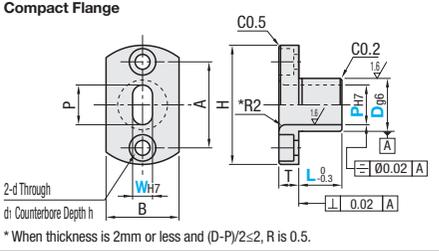
Features: Economy type is priced up to 74% lower than Standard Type with the tolerance of $+0.3$ for P Dimension/W Dimension and 0 for D Dimension.

Oval - Compact Flange



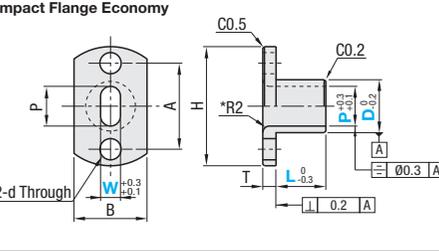
Compact Flange

Material	Surface Treatment	Hardness	Type
SKS3	-	56-60HRC	JBEH
Equivalent	Electroless Nickel Plating	56-60HRC	JBEMH



Compact Flange Economy

Material	Surface Treatment	Hardness	Type
S45C Equivalent	Electroless Nickel Plating	-	JBFR
			JBFM
		45-50HRC	JBFK
	Electroless Nickel Plating		JBFN



When thickness is 2mm or less and (D-P)/2 ≤ 2, R is 0.5.

Compact Flange

Part Number	Type	D	D Tolerance	PH7	WH7	L	T	H	A	B	d	d1	h	Unit Price		
														JBEH	JBEMH	
JBEMH	10	10	-0.005	4.00-8.00	3.00 ≤ W < P	8-40	L+TsPx3	5	25	17	12	3.3	6.5	3.5		
	12	12	-0.014	4.00-10.00					28	20	15					
	16	16	-0.017	8.00-14.00					36	26	22					
	20	20	-0.007	10.00-18.00					40	30	25	4.5	8	4.5		
	25	25	-0.020	13.00-22.00					44	34	30					
30	30		16.00-25.00	56	42	35										
35	35	-0.009	18.0-25.00	60	46	40	6.6	11	6.5							

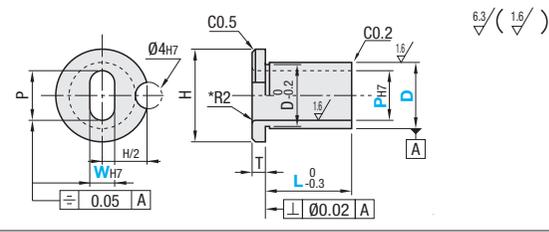
Compact Flange Economy

Part Number	Type	D	P	W	L	T	H	A	B	d	Unit Price						
											JBFR	JBFM	JBFK	JBFN			
JBFR	JBFM	JBFK	JBFN	10	4.0-8.0	4.0 ≤ W < P	5-40	L+TsPx3	3	25	17	12	5				
				12	4.0-10.0					28	20	15					
				15	8.0-13.0							17					
				16	8.0-14.0												
				18	10.0-16.0												
				20	10.0-18.0							22					
				25	13.0-22.0							4	44	34	30		
				30	16.0-25.0							5	56	42	35		
				35	18.0-25.0							60	46	40	8		

Oval - Shouldered (Dowel Pin)



Material	Surface Treatment	Hardness	Type
SKS3	-	56-60HRC	JBPE
Equivalent	Electroless Nickel Plating	56-60HRC	JBPEM



When thickness is 2mm or less and (D-P)/2 ≤ 2, R is 0.5.

Type	Part Number	D	D Tolerance		PH7	WH7	L	T	H	Unit Price	
			p6	m6						JBPE	JBPEM
(p6)	10	10	+0.024	+0.015	4.00-8.00	3.00 ≤ W < P	8-40	L+TsPx3	3	14	
	12	12	+0.015	+0.006	4.00-10.00					16	
	16	16	+0.029	+0.018	8.00-14.00					20	
	20	20	+0.035	+0.021	10.00-18.00					26	
	25	25	+0.022	+0.008	13.00-22.00					30	
(m6)	30	30	+0.035	+0.021	16.00-25.00	35					
	35	35	+0.042	+0.025	18.0-25.00	40					
			+0.026	+0.009							

Ordering Example

Part Number - P - W - L

JBAFG8 - P4.1 - W4.5 - L11

JBHG20 - P13.0 - W4.5 - L20

JBHFG18 - P12.00 - W4.5 - L18.0

JBFR10 - P6.0 - W4.5 - L10

JBPE10 - P6.8 - W4.8 - L15

Alterations

Part Number - P - W - L - (HC, RH)

JBAFG18 - P8.00 - W4.5 - L15.0 - HC

JBFR10 - P6.0 - W4.5 - L10 - RH

Example Notched, Retaining



Alterations	Code	Spec.
Set Screw Groove Depth	HC	Changes the depth of set screw groove depth from 0.5mm to 1.0mm. Ordering Code HC Applicable to Retaining Straight only. Applicable to D dimension 18 or more.
Inner Diameter Radius R	RH	Changes the inner diameter radius R from shoulder side to D dimension end face. Size of R will be the same as R on shoulder side. Ordering Code RH Applicable to Compact Flange, Economy Type only. (D-P)/2-R ≥ 1.7

Bushings for Locating Pins

Copper Alloy, Straight / Flanged

Bushings for Locating Pins

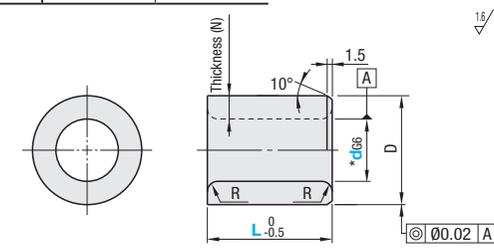
Ceramic / Inner Groove Straight / Shouldered

■ **Features:** Suitable for preventing pin abrasion and rust since it is softer than steel.

■ Copper Alloy, Straight



Material	Type	
	Dp6	Dm6
CAC304 (High-tensile Brass)	JBAD	JBADM



RoHS

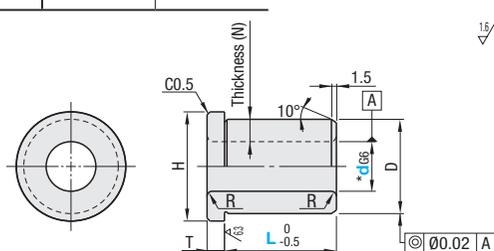
* For hole machining, please note that inner diameter shrinkage of p6 Type is more than that of m6 Type. (See "Variance of I.D. after Press-fitting Bushings for Locating Pins" below.)

Part Number Type	d	D Tolerance	L Selection					Thickness (N)	R	D	D Tolerance		Unit Price	
			p6	m6	JBAD	JBADM	p6				m6	JBAD	JBADM	
(Dp6) JBAD	5	+0.012	5	6	8	10	12	15	0.5	10	+0.024	+0.015		
	6	+0.004	5	6	8	10	12	15			+0.015	+0.006		
	8	+0.014	5	6	8	10	12	15			16	20		
	10	+0.005	6	8	10	12	15	16			20	25		
(Dm6) JBADM	12	+0.017	8	10	12	15	16	20	25	30	+0.029	+0.018		
	13	+0.006	10	12	15	16	20	25	30	+0.018	+0.007			
	15	+0.017	12	15	16	20	25	30	35	4	1	+0.035	+0.021	
	16	+0.006	12	15	16	20	25	30	35	5		+0.022	+0.008	
	20	+0.020	12	15	16	20	25	30	35	5	2	+0.042	+0.025	
	25	+0.007	16	20	25	30	35	40	45	5		+0.026	+0.009	

■ Copper Alloy, Flanged



Material	Type	
	Dp6	Dm6
CAC304 (High-tensile Brass)	JBHD	JBHDM



RoHS

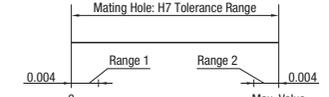
* For hole machining, please note that inner diameter shrinkage of p6 Type is more than that of m6 Type. (See "Variance of I.D. after Press-fitting Bushings for Locating Pins" below.)

Part Number Type	d	D Tolerance	L Selection					Thickness (N)	R	H	T	D	D Tolerance		Unit Price	
			p6	m6	JBHD	JBHDM	p6						m6	JBHD	JBHDM	
(Dp6) JBHD	5	+0.012	5	6	8	10	12	0.5	14	3	10	+0.024	+0.015			
	6	+0.004	5	6	8	10	12					15	+0.015	+0.006		
	8	+0.014	5	6	8	10	12					15	16	20		
	10	+0.005	6	8	10	12	15					16	20	25		
(Dm6) JBHDM	12	+0.017	8	10	12	15	16	20	25	30	1	+0.029	+0.018			
	13	+0.006	10	12	15	16	20	25	30	+0.018		+0.007				
	15	+0.017	12	15	16	20	25	30	35	4	1	+0.035	+0.021			
	16	+0.006	12	15	16	20	25	30	35	5		+0.022	+0.008			
	20	+0.020	12	15	16	20	25	30	35	5	2	+0.042	+0.025			
	25	+0.007	16	20	25	30	35	40	45	5		+0.026	+0.009			

Ordering Example

Part Number	-	L
JBAD6	-	10
JBHDM10	-	20

■ Variance of I.D. after Press-fitting Bushings for Locating Pins (Reference)



Housing Bore Diameter Tolerance: in Range 1	
D Tolerance	p6
99.90%	99.83%

Housing Bore Diameter Tolerance: in Range 2	
D Tolerance	p6
99.99%	99.92%

Bushing for Locating Pin - Copper Alloy Bushings - Copper Alloy

RoHS

* Data above are not guaranteed but experimental values.

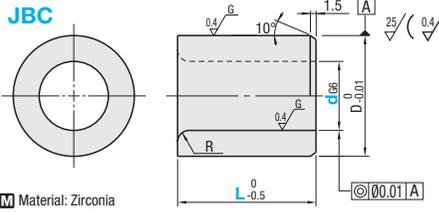
■ **Features:** Bushings for Locating Pins - Ceramics - excel in heat resistance, insulation, and abrasion resistance.

■ Ceramics



RoHS

Material: Zirconia



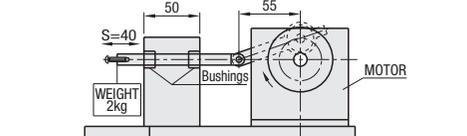
Ordering Example

Part Number	-	L
JBC16	-	20

Part Number Type	d	L Selection	R	D	Unit Price
JBC	6	8 10	1	10	
	8	10 12		12	
	10	12 16		15	
	12	16 20		18	
	13	10 12 16	2	22	
	15	16 20		25	
	16	20 25		26	
	20	25 30		30	

- ⚠ Avoid pressing Ceramic Bushing in. It may crack when struck hard. Use of Loctite is recommended.
- ⚠ Strength may degrade when used at the temperature over 100°C for extended durations, or when operating temperature varies from normal to high repeatedly.
- ⚠ For orders larger than indicated quantity, please request a quotation.

■ Bushings for Locating Pins - Ceramic Abrasion Data



Sample	Inner Diameter (Before Test)	Inner Diameter (After Test)	Difference
Ceramic JBC10-10	10.011	10.012	0.001
Steel JBA10-10	10.008	10.037	0.029

■ Test Conditions

<Measuring Method>
Apply load on the bush by reciprocating Ø10 round shaft with 40mm stroke with a 2kg weight on the end in the crank mechanism (left diagram).

- <Measuring Instrument Overview>
- Operation Hours : 60 hours each
 - Lubricant: JIS Machine Oil (Tellus 32) * drip-feed every 2 hours
 - Round Shaft Stroke : 40mm
 - Temperature : 25-27°C

■ Testing Results

Ceramics excel in abrasion resistance compared to steel. Suitable for long-term use with locating pins insertion and extraction, maintaining an excellent abrasion resistance.

■ Automotive parts welding machine

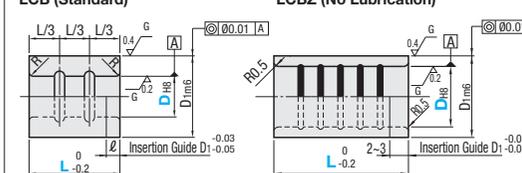


How to Mount: Set a plastic board. Using a plastic hammer, press Ceramic Bushing slightly in. Circumstance: Set it between heat source and fixtures with high accuracy but transfer minimum heat to fixtures.

■ Straight



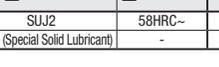
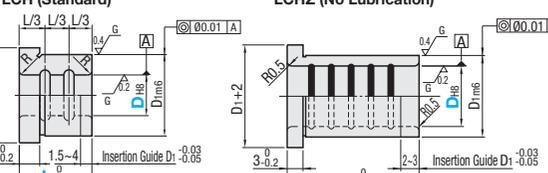
Material	Hardness	Type	
		Straight	Shouldered
SUJ2	58HRC~	LCB	LCH
FC250 (Special Solid Lubricant)	-	LCBZ	LCHZ



RoHS

* L dimensions 5, 6 of LCB (standard) have one groove at L/2 position.

■ Shouldered

RoHS

■ Straight

Part Number Type	D _{H8}	L Selection	D _{m6}	ℓ	R	Unit Price	
						LCB	LCBZ
(Standard) LCB	5	*5 *6 *8 *10 *12 *16	10	0.021	1.5		
	6	6 8 10 *12 *16	12	2	0.5		
	8	8 10 12 16 20	14	0.025	1		
	10	10 12 16 20 25	16	3	1.2		
(No Lubrication) LCBZ	12	12 16 20 25 30	18	0.029	1.5		
	13	16 *20 25 30	22	4	2		
	15	16 20 25 30	25	0.034	1.5		
	16	20 25 30 35	26	3	2		
	20	20 25 30 35	30	4	2		
	25	20 25 30 35	35	0.034	2		

■ Shouldered

Part Number Type	D _{H8}	L Selection	D _{m6}	ℓ	R	Unit Price	
						LCH	LCHZ
(Standard) LCH	5	*8 *10 *12 *16	10	0.021	1.5		
	6	8 10 *12 *16	12	2	0.5		
	8	8 10 12 16 20	14	0.025	1		
	10	10 12 16 20 25	16	3	1.2		
(No Lubrication) LCHZ	12	12 16 20 25 30	18	0.029	1.5		
	13	16 *20 25 30	22	4	2		
	15	16 20 25 30	25	0.034	1.5		
	16	20 25 30 35	26	3	2		
	20	20 25 30 35	30	4	2		
	25	20 25 30 35	35	0.034	2		

* L Dimensions marked with * are available for LCB only. ⚠ For orders larger than indicated quantity, please check with WOS. ⚠ L Dimensions marked with * are available for LCH only. ⚠ For orders larger than indicated quantity, please check with WOS.

Ordering Example

Part Number	-	L
LCB10	-	12
LCBZ12	-	20
LCH25	-	30
LCHZ25	-	35

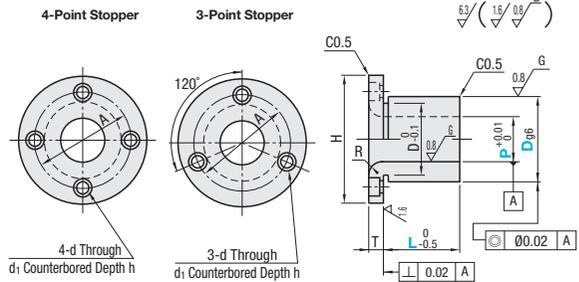
Bushings for Locating Pins

Flanged



Material	Surface Treatment	Hardness	Type			
			P Fixed and L Selectable 4-Point Stopper	P, L Configurable 3-Point Stopper	P, L Configurable 4-Point Stopper	P, L Configurable 3-Point Stopper
SKS3 Equivalent	Black Oxide Electroless Nickel Plating	* Treated Hardness: 56 ~ 60HRC	JBY	JBT	JBYF	JBTf
SUS304	-	-	JBYM	-	JBYFB	JBTfM
SUS440C Equivalent	-	Treated Hardness: 50 ~ 55HRC	-	-	JBYFS	-

* P Fixed Type is 60 to 63HRC.



P Fixed and L Selectable JBT is available for P dimension with * 1 mark only. L dimensions marked with *2 are not available for JBYM.

Part Number	Type	P	L Selection				R	H	T	Dg6	A	d	d1	h	Unit Price Round Flange			
			5	8	10	12									JBY	JBYM	JBT	
JBY JBYM JBT	5	8	10	12	*16	1	25	5	10	-0.005 -0.014	17	3.3	6.5	3.5				
		*16	8	10	12													16
	*18	10	12	16	20	30	2	28	6	12	-0.006 -0.017	20	4.5	8	4.5			
			*110	12	16	20												
	*112	12	16	20	25	30	2	36	6	15	-0.007 -0.020	26	6.6	11	6.5			
			*13	12	16	*20												
	*115	12	16	20	25	30	2	40	6	22	-0.007 -0.020	30	6.6	11	6.5			
			*16	16	20	25												
	*120	16	20	25	30	35	3	56	8	30	-0.009 -0.025	42	6.6	11	6.5			
			25	20	25	30												

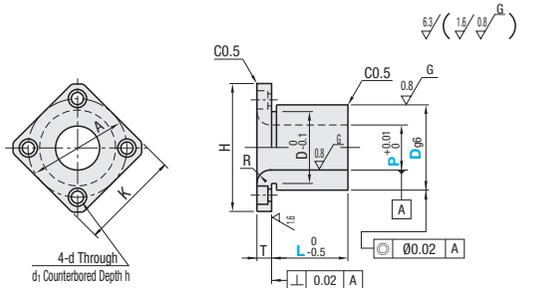
P and L Configurable L+T≤Px3.0

Part Number	Type	Dg6	P 0.01mm Increment	L 0.1mm Increment	R	H	T	A	d	d1	h	Unit Price Round Flange -4-Point Stopper				Unit Price Round Flange -3-Point Stopper								
												JBYF	JBYFB	JBYFM	JBYFS	JBYFC	JBTf	JBTfM						
Round Flanges, 4-Point Stopper JBYF JBYFB JBYFM JBYFS JBYFC	10	-0.005 -0.014	4.00-6.50	5.0-15.0	1	25	5	17	3.3	6.5	3.5													
	12	-0.006 -0.017	6.00-8.50	10.0-12.50																				
	15	-0.007 -0.020	8.00-10.50	12.00-13.50																				
	18	-0.007 -0.020	10.00-12.50	12.00-13.50								2	40	6	30	4.5	8	4.5						
	20	-0.007 -0.020	12.00-13.50	15.00-16.50																				
Round Flanges, 3-Point Stopper JBTf JBTfM	25	-0.009 -0.025	13.00-15.50	12.0-50.0	3	56	8	42	6.6	11	6.5													
	26	-0.009 -0.025	15.00-16.50	20.00-25.00																				
	30	-0.009 -0.025	16.00-20.50	20.00-25.00																				
	35	-0.009 -0.025	20.00-25.00	20.00-25.00																				



Material	Surface Treatment	Hardness	Type	
			P Fixed and L Selectable	P, L Configurable
SKS3 Equivalent	Black Oxide Electroless Nickel Plating	* Treated Hardness: 56 ~ 60HRC	JBS	JBSF
SUS304	-	-	JBSM	JBSFM
SUS440C Equivalent	-	Treated Hardness: 50 ~ 55HRC	-	JBSFS

* P Fixed Type is 60 to 63HRC.



P Fixed and L Selectable L dimensions marked with * are not available for JBSM.

Part Number	Type	P	L Selection				R	H	K	T	Dg6	A	d	d1	h	Unit Price		
			8	10	*12	16										JBS	JBSM	
JBS JBSM	8	10	12	16	20	2	28	22	5	12	-0.006 -0.017	20	3.3	6.5	3.5			
		12	10	12	16													20
	*10	12	16	20	25	30	2	36	28	6	15	-0.007 -0.020	26	4.5	8	4.5		
			*15	12	16	20												
	*16	12	16	20	25	*35	2	44	34	8	25	-0.007 -0.020	34	6.6	11	6.5		
			20	16	20	25												
*25	16	20	25	*35	40	3	56	44	8	30	-0.009 -0.025	42	6.6	11	6.5			
		60	47	35	46													

P and L Configurable L+T≤Px3.0

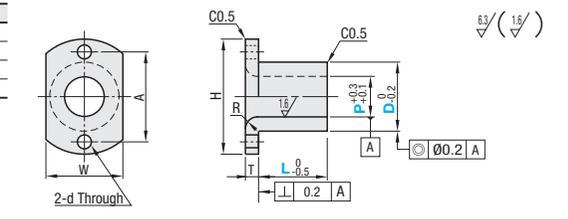
Part Number	Type	Dg6	P 0.01mm Increment	L 0.1mm Increment	R	H	K	T	A	d	d1	h	Unit Price			
													JBSF	JBSFB	JBSFM	JBSFS
JBSF JBSFB JBSFM JBSFS JBSFC	10	-0.005 -0.014	4.00-6.50	5.0-15.0	1	25	20	5	17	3.3	6.5	3.5				
		12	-0.006 -0.017	6.00-8.50									10.0-12.50			
	15	-0.007 -0.020	8.00-10.50	10.00-12.50	2	36	28	6	26	4.5	8	4.5				
													20	12.00-13.50	12.00-13.50	
	22	-0.007 -0.020	12.00-13.50	10.0-35.0	2	40	31	6	30	4.5	8	4.5				
													25	12.00-13.50	13.00-15.50	
	26	-0.007 -0.020	13.00-15.50	15.00-16.50	2	44	34	8	34	6.6	11	6.5				
													30	15.00-16.50	16.00-20.50	
	35	-0.009 -0.025	16.00-20.50	12.0-50.0	3	56	44	8	42	6.6	11	6.5				
													60	20.00-25.00	20.00-25.00	

Features: Economy type is priced up to 49% lower without D/P Dimensions grinding and with the tolerance of P Dimension $+0.3$ / -0.1 and D Dimension 0 / -0.2 .

Compact Flange Economy



Material	Surface Treatment	Hardness	Type
S45C Equivalent	-	-	JBOR
	Electroless Nickel Plating	-	JBOM
	Electroless Nickel Plating	45-50HRC	JBOK JBON



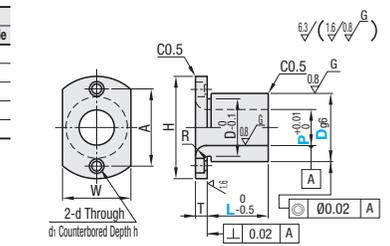
Part Number	Type	D	P 0.1mm Increment	L 1mm Increment	R	H	W	T	A	d	Unit Price							
											JBOR	JBOM	JBOK	JBON				
JBOR JBOM JBOK JBON	10	12	4.0-6.5	5-15	1	25	12	17	17	5								
		15	6.0-8.5	8.0-10.5														
		16	8.0-10.5	9.0-11.5														
	18	20	22	10.0-12.5	5-35	2	40	20	30	3	30							
												25	12.0-13.5	12.0-13.5				
												26	13.0-15.5	15.0-16.5				
	35	60	40	20.0-25.0	5-50	3	56	35	5	42	8							
												60	40	46				

Compact Flange



Material	Surface Treatment	Hardness	Type	
			P Fixed and L Selectable	P, L Configurable
SKS3 Equivalent	Black Oxide Electroless Nickel Plating	* Treated Hardness: 56 ~ 60HRC	JBN	JBNF
SUS304	-	-	JBNM	JBNFM
SUS440C Equivalent	-	Treated Hardness: 50 ~ 55HRC	-	JBNFS JBNFC

* P Fixed Type is 60 to 63HRC.



P Fixed and L Selectable

Part Number	Type	P	L Selection				R	H	W	T	Dg6	A	d	d1	h	Unit Price		
			JBN	JBNM														
JBN JBNM	5	8	10	12	16	1	25	12	5	10	-0.005 -0.014	17	3.3	6.5	3.5			
		12	10	12	16													20
	10	12	15	12	16	20	2	28	15	6	12	-0.006 -0.017	26	4.5	8	4.5		
	15	18	20	12	16	20	2	36	22	6	15	-0.007 -0.020	30	4.5	8	4.5		
	25	60	40	16	20	25	3	56	35	8	30	-0.009 -0.025	42	6.6	11	6.5		

P and L Configurable L+T≤Px3.0

Part Number	Type	Dg6	P 0.01mm Increment	L 0.1mm Increment	R	H	W	T	A	d	d1	h	Unit Price			
													JBNF	JBNFB	JBNFM	JBNFS
JBNF JBNFB JBNFM JBNFS JBNFC	10	-0.005 -0.014	4.00-6.50	5.0-15.0	1	25	12	5	17	3.3	6.5	3.5				
		12	-0.006 -0.017	6.00-8.50									10.0-12.50			
	15	-0.007 -0.020	8.00-10.50	10.00-12.50	2	36	22	6	26	4.5	8	4.5				
													18	10.00-12.50	12.00-13.50	
	22	-0.007 -0.020	12.00-13.50	10.0-35.0	2	40	25	6	30	4.5	8	4.5				
													25	12.00-13.50	13.00-15.50	
	30	-0.009 -0.025	15.00-16.50	12.0-50.0	3	44	30	8	34	6.6	11	6.5				
													60	16.00-20.50	20.00-25.00	

Ordering Example

Part Number	-	P	-	L
JBY6	-	12	-	12
JBSF20	-	P13.00	-	L30.0
JBOR10	-	P5.0	-	L8
JBN10	-	P5.0	-	L10

Alterations

Part Number	-	P	-	L	-	(TKC, RC, FC, RH)
JBNF15	-	P10.0	-	L10.0	-	TKC
JBTf20						

Bushings for Locating Pins - High Hardness Stainless Steel Straight

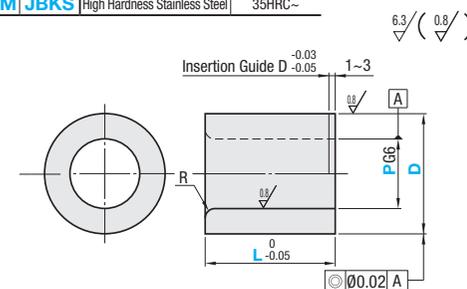
For products uncovered by e-Catalog Standard, see P.131.

Features: This product is much lower than, and can be delivered more quickly than the existing products.



RoHS

Type			Material	Hardness
Dp6	Dm6	Dh7		
JBK	JBKM	JBKS	High Hardness Stainless Steel	35HRC~



D	p6	m6	h7
5	+0.020 +0.012	+0.012 +0.004	0 -0.012
7	+0.024 +0.015	+0.015 +0.006	0 -0.015
12	+0.029 +0.018	+0.018 +0.007	0 -0.018

Straight

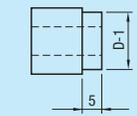
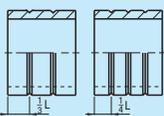
Part Number		P	L	R	Unit Price	Volume Discount Rate			
Type	D	0.1mm Increment	0.1mm Increment			1~19 pc(s)	20~49 pcs	50~100 pcs	101~300 pcs
JBK (p6) JBKM (m6) JBKS (h7)	5	2.0~3.0	5.0~10.0	0.5					
	7	2.0~5.0							
	8	3.0~6.0	5.0~15.0						
	10	4.0~8.0							
	12	6.0~10.0	5.0~30.0						
	14	6.0~10.0							
15	8.0~12.5	5.0~40.0							

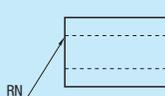
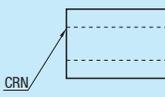
Ordering Example

Part Number	-			P	-			L
Type	D							
JBKM	8			5.9			12.0	
JBKS	10			8.0			20.0	

Alterations

Part Number	-			P	-			L	(FC, RS, RN, CRN)
Type	D								
JBKM	7			3.2	10.0		FC		
JBKS	12			8.0	25.0		CRN		

Alterations	Code	Spec.
Groove (for Adhesive Reservoir) 	FC	Adds an adhesive reservoir groove. • D≥P+3: Applicable only when a wall of 1.5mm or thicker is remaining. • Applicable only when L≥10.
Adhesive Groove Machining When L≤13.0 When L>13.0 	RS	Adds an adhesive groove. • Number of O.D. Grooves • When L≤13.0 → 2 lines • When L≤13.0 → 3 lines [Ordering Code] RS • When D≤13, D-P≥3. When D≥14, D-P≥4. • Not applicable when L<9.0.

Alterations	Code	Spec.
Radius R C Chamfered 	RN	Adds C Chamfering (0.5 or less) to R.
Radius R Square Corner 	CRN	Replaces R with square corner. • Edge may be burred.