

Bushings for Inspection Jigs

Straight (P, L Dimension Configurable / Selectable)

Applicable Pins: (Round Edge Type) P.1806-1809, 1813-1820, 1827

Material	Hardness	Surface Treatment	(1) P, L Selectable		(2) P, L Configurable	
			Type	Material Code	Type	Material Code
Standard Type JIS-SKS93 Tool Steel (JIS) Equivalent (Raw Material)	50-60 HRC	Electroless Nickel Plating	P ^{+0.03} _{-0.01}	KJB	A	SN
						S
						SM
						SS
D ⁰ _{-0.02}	440C or 420 Stainless Steel	45-50 HRC	P _{H7}	KJBH	—	SSC
						S
Press Fit Type JIS-SKS93 Tool Steel (JIS) Equivalent	50-60 HRC	Electroless Nickel Plating	P ^{+0.03} _{-0.01}	KJBP	—	SM
						SS
						SSC
						S
D _{0.05}	440C or 420 Stainless Steel	45-50 HRC	P _{H7}	KJBPH	—	SSC
						S

ⓘ Some combinations are unavailable. Refer to the price list to select the available combination.

P	H7
2.00-3.00	+0.001 0
3.01-6.00	+0.012 0
6.01-10.00	+0.015 0
10.01-18.00	+0.018 0
18.01-30.00	+0.021 0
30.01-32.00	+0.025 0

ⓘ 1. Press-fit type has a 1-3 mm guide part (D^{-0.03}_{-0.05}).
 ⓘ 2. When wall is 2 mm or less (D-P)/2≤2, R is 0.5.

(1) P, L Selectable: Select Type, Material Code, D Dimension (For details refer to order example below).

Type	Part Number	P	L	R		
P ^{+0.03} _{-0.01} KJB	A	10	3	10	1.0	
			4	10 15		
			5	10 15		
			6	10 15		
			8	15		
			8	15		
	12	A	12	6	15	0.5
				8	15 20	
				10	15	
				10	15 20	
				16	15	
				12	15 20	
16	A	16	8	15	2.0	
			10	15 20		
			13	15 20		
			20	25		
			20	25		
			25	25		

(2) P, L Configurable

Type	Part Number		D	P 0.01 mm Increment	L 1 mm Increment	R	Available Types																			
	Standard	Press Fit					P ^{+0.03} _{-0.01}					P _{H7}														
Standard Type P ^{+0.03} _{-0.01} P _{H7} KJB KJBH	SN S SM SS ⓘ SSC	S SM ⓘ SSC	8	2.00-6.00	5-40 When P<5 L≤Px4	1.0	KJBSN	KJBS	KJBSPM	KJBSS	KJBSSC	KJBSSC	KJBHNS	KJBHS	KJBPHS	KJBHSM	KJBHSS	KJBHSSC								
			10	2.00-8.00			•	•	•	•	•	•	•	•	•	•	•	•	•	•						
			12	4.00-10.00			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•				
			16	8.00-14.00			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•				
			20	10.00-18.00			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•			
			25	15.00-23.00			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•			
			30 ⓘ ⁴	20.00-27.00			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•			
			35 ⓘ ⁴	25.00-32.00			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•			
			Press Fit Type P ^{+0.03} _{-0.01} P _{H7} KJBP KJBPH	SS SSC			SSC	8	2.00-6.00	When P≥5 L≤Px3	2.0	•	•	•	•	•	•	•	•	•	•	•	•	•		
								10	2.00-8.00			•	•	•	•	•	•	•	•	•	•	•	•	•	•	
								12	4.00-10.00			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
								16	8.00-14.00			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
20	10.00-18.00	•			•	•		•	•			•	•	•	•	•	•	•	•	•	•	•	•			
25	15.00-23.00	•			•	•		•	•			•	•	•	•	•	•	•	•	•	•	•	•			

ⓘ 3. For 304 Stainless Steel, there must be a 2mm or greater wall thickness ((D-P)/2≥2). ⓘ 4. D=30 and 35 are only applicable to SKS93 Tool Steel (JIS) (except electroless nickel plating).

Part Number Example

Type	Material Code	D	P	L
KJB	A	16	P12	L15
KJB	S	10	P3.97	L10

Part Number Alterations

Part Number	P	L	(FC / NC...etc.)
KJBS10	P3.00	L6	STC
KJBSN12	P8.00	L20	CRN

Alterations	Code	Spec.
Radius R Square Corner	CRN	Replaces R with square corner. ⓘ Edge may be burred. ⓧ Combination with alteration LKC is not available.
Additional Surface Treatment (Black Oxide)	STC	Adds Black Oxide Surface Treatment. ⓘ Only applicable to material SKS93 (except electroless nickel plating).
Changes L Dimension Tolerance	LKC	Changes L dimension tolerance to ⁰ _{-0.05} ⓧ Combination with alteration CRN is not available.
Flats Machining	HT	Adds a flat on bushing.

ⓘ Only applicable to P, L Dimension Configurable Type.

Alterations	Code	Spec.
Groove (For adhesive reservoir)	FC	Adds groove for accumulating adhesives. ⓘ D≥P+3: Applicable only when a wall of 1.5 mm or thicker is remaining. ⓘ Applicable only when L≥10.
Groove (Retaining)	NC	Adds groove for retaining. ⓘ D≥P+3: Applicable only when a wall of 1.5 mm or thicker is remaining. ⓘ Applicable only when L≥10.
Radius R C Chamfered	RN	Adds C Chamfering (0.5 or less) to R.

Bushings for Inspection Jigs

Straight with Shoulder

Feature: Height is adjustable at shoulder as a shim (2, 3 and 5mm).
 Applicable Pins: (Round Edge Type) P.1806-1809, 1813-1820, 1827

Material	Hardness	Surface Treatment	(1) T Selectable		(2) T, H Configurable		P	H7	
			Type	Material Code	Type	Material Code			
Standard Type JIS-SKS93 Tool Steel (JIS) Equivalent	50-60 HRC	Electroless Nickel Plating	P ^{+0.03} _{-0.01}	KJB	—	ST	S	2.00-3.00	+0.001 0
						STM			
						STS			
						STSC			
D ⁰ _{-0.02}	440C or 420 Stainless Steel	45-50 HRC	P _{H7}	KJBH	—	KJBFH	SSC	3.01-6.00	+0.012 0
						SS			
Press Fit Type JIS-SKS93 Tool Steel (JIS) Equivalent	50-60 HRC	Electroless Nickel Plating	P ^{+0.03} _{-0.01}	KJBP	—	ST	S	6.01-10.00	+0.015 0
						STM			
						STS			
						STSC			
D _{0.05}	440C or 420 Stainless Steel	45-50 HRC	P _{H7}	KJBPH	—	KJBPFH	SSC	10.01-18.00	+0.018 0
						SS			
30.01-32.00	440C or 420 Stainless Steel	45-50 HRC	P _{H7}	KJBPH	—	KJBPFH	SSC	18.01-30.00	+0.021 0
						SS			

ⓘ Some combinations are unavailable. Refer to the available list to select the available combination.

ⓘ 1. Press-fit type has a 1-3 mm guide part (D^{-0.03}_{-0.05}).
 ⓘ 2. When wall is 2mm or less (D-P)/2≤2, R is 0.5.
 ⓘ 3. For the Press Fit Type, when L - T ≤ 3, either the guide part will be shorter, or there will be no guide part and a 0.3 to 0.5 chamfer.

(1) T Selectable: Select Type, Material Code, D Dimension (For details refer to order example below).

Type	Material Code	D	P 0.01 mm Increment	L 1 mm Increment	T±0.05	H	R	Available Types														
								P ^{+0.03} _{-0.01}				P _{H7}										
Standard Type P ^{+0.03} _{-0.01} P _{H7} KJB KJBH	ST STM STS ⓘ ³ STSC	10	2.00-6.00	2.00-8.00	5-40 When P<4 L≤Px4	2 3 5	D+4	1.0	KJBST	KJBSTM	KJBSTST	KJBSTSC	KJBHST	KJBHSTM	KJBHSTST	KJBHSTSC						
									•	•	•	•	•	•	•	•	•	•	•			
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ⓘ 3. For 304 Stainless Steel, there must be a 2mm or greater wall thickness ((D-P)/2≥2). ⓘ 4. D=30 and 35 are only applicable to SKS93 Tool Steel (JIS) (except electroless nickel plating).

(2) T, H Configurable: Select Type, Material Code, D Dimension (For details refer to order example below).

Type	Material Code	D	P 0.01 mm Increment	L 1 mm Increment	T±0.05	H	R						
								Standard Type P ^{+0.03} _{-0.01} P _{H7} KJBF KJBFH	S SM SS ⓘ ³ SSC	10	2.00-6.00	2.00-8.00	4.00-10.00
•	•	•	•	•	•								
•	•	•	•	•	•	•							
•	•	•	•	•	•	•							
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•	•	•	•	•	•	•							

ⓘ 3. For 304 Stainless Steel, there must be a 2mm or greater wall thickness ((D-P)/2≥2).

Part Number Example

Type	Material Code	D	P	L	T	H
KJB	ST	10	P3.97	L6	T2	
KJBF	S	10	P7.00	L15	T5.0	H15

Part Number Alterations

Part Number	P	L	T	H	(FC / NC...etc.)
KJBFS16	P12.00	L30	T3.3	H20	FC
KJBST10	P8.00	L20	T3		LKC

Alterations	Code	Spec.
Groove (For adhesive reservoir)	FC	Adds groove for accumulating adhesives. ⓘ D≥P+3: Applicable only when a wall of 1.5 mm or thicker is remaining. ⓘ Applicable only when L≤15.
Groove (Retaining)	NC	Adds groove for retaining. ⓘ D≥P+3: Applicable only when a wall of 1.5 mm or thicker is remaining. ⓘ Applicable only when L≤15.
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. ⓧ Combination with TKC and LKC is not available.

Alterations	Code	Spec.
Additional Surface Treatment (Black Oxide)	STC	Adds Black Oxide Surface Treatment. ⓘ Applicable to material SKS93 (except electroless nickel plating) only.
Shoulder Thickness Tolerance	TKC	Changes shoulder thickness tolerance to ±0.01. ⓘ Applicable to With Shoulder T Dimension Selectable Type only. ⓧ Combination with alteration CRN and LKC is not available.
Changes L Dimension Tolerance	LKC	Changes L dimension tolerance to ⁰ _{-0.05} . ⓧ Combination with TKC and CRN is not available.
Flats Machining	HT	Adds a flat on bushing. ⓘ No flat on shoulder part.