

Locating Pins - Shouldered

Tapered, Threaded



Locating Pins - Shouldered

Taper Angle, D and P Selectable Tolerance



■Features: Shouldered, Press Fit + Lock Nut Type. Improved maintainability compared to the press fit type.

RoHS 10

Material No. | Material | Surface Treatment | Hardness | P Configurable (Round, Diamond) | P, L, B Configurable (Round, Diamond)

Material No.	Material	Surface Treatment	Hardness	P Configurable Round	P Configurable Diamond	P, L, B Configurable Round	P, L, B Configurable Diamond
①	EN 1.2510 Equiv.	-	Treated Hardness: 60 ~ 63HRC	JPTNA	JPTND	FPTNA	FPTND
②	EN 1.2510 Equiv.	Hard Chrome Plating	Treated Hardness: 50 ~ 55HRC Plating Hardness: 750HV ~	GJPTNA	GJPTND	GFPTNA	GFPTND

Step on Machining (Round, Diamond) with surface finish symbols and relief dimension 'a'.

■P Configurable

Part Number	Type	D	D Tolerance g6	P 0.01mm Increment	L	B	m	H	(W)	M (Coarse)	*Tightening Torque N·cm	Unit Price	Round Shape	Unit Price	Diamond Shape
												① EN 1.2510 Equiv. Hardened	② Hard EN 1.2510 Equiv.	③ EN 1.2510 Equiv. Hardened	④ Hard EN 1.2510 Equiv.
3	(Round) JPTNA	3	-0.002	2.00-4.00	2	5	1	6	1	M 3	98				
4	(Diamond) JPTND	4	-0.008	2.00-5.00		6			1.2	M 4	225				
5		5	-0.012	3.00-6.00	3		2	8	1.5	M 5	461				
6		6	-0.012	4.00-7.00		8			1.8	M 6	784				
8		8	-0.005	5.00-9.00	5		11	2.2	M 8	1911					
10		10	-0.014	7.00-11.00		10	3	13	3	M10	3783				
12		12	-0.006	7.00-12.00		10	15	3.2	M12	6605					
16		16	-0.017	13.00-16.00		10	4	19	4	M16	16366				
20		20	-0.007	16.00-20.00	10	15	5	23	5.5	M20	32928				

■P, L, B Configurable

Part Number	Type	D	D Tolerance g6	P 0.01mm Increment	L 1mm Increment	B 0.1mm Increment	m	H	(W)	M (Coarse)	*Tightening Torque N·cm	Unit Price	Round Shape	Unit Price	Diamond Shape	
												① EN 1.2510 Equiv. Hardened	② Hard EN 1.2510 Equiv.	③ EN 1.2510 Equiv. Hardened	④ Hard EN 1.2510 Equiv.	
3	(Round) FPTNA	3	-0.002	2.00-4.00	2-6	2.0-10.0	1	6	1	M 3	98					
4	(Diamond) FPTND	4	-0.008	2.00-5.00	2-8	2.0-10.0			1.2	M 4	225					
5		5	-0.004	3.00-6.00	3-10	2.0-10.0	2	8	1.5	M 5	461					
6		6	-0.012	4.00-7.00	3-10	2.0-12.0			1.8	M 6	784					
8		8	-0.005	5.00-9.00	5-10	2.0-15.0	11	2.2	M 8	1911						
10		10	-0.014	7.00-11.00	5-15	3.0-20.0	3	13	3	M10	3783					
12		12	-0.006	7.00-12.00	8-15	3.0-20.0			15	3.2	M12	6605				
16		16	-0.017	13.00-16.00	8-20	5.0-20.0	4	19	4	M16	16366					
20		20	-0.007	16.00-20.00	10-20	5.0-20.0	5	23	5.5	M20	32928					

*The tightening torque (ref. value) for hardened products is strength class 8.8. (See technical data on P. 2297.) Not applicable when using locking materials or lock washers.

Ordering Example: Part Number - P - L - B

JPTNA8 - 6.00
FPTNA6 - P4.01 - L8 - B3.5

Alterations: Part Number - P - L - B - (HC, TC, RC, RAC, LAC)

FPTNA6 - P4.01 - L8 - B3.5 - HC7.0

Alterations	Wrench Flats Alteration	Length of Tapered Point	Sphere Tip	Hex Socket Machining	Wrench Hole Machining
Code	HC	TC	RC	RAC	LAC
Spec.	HC=0.5mm Increment HC>D HC>P Ordering Code HC10.0	Changes the m dimension. Ordering Code TC8 (1mm increment) D TC TC 6 3-11 13 5-22 8 4-14 16 10 4-18 20 6-23 12 4-20 B+m=TC+2 (Straight Part min. 2mm) P/2-TC x tan15°(≈0.27) > 0.5 (Tip 0.1min.) B dimension changes when TC is specified. (Changed B dimension = B+m-TC) Combination with RAC and LAC is not available.	Changes the relief to R0.5. Ordering Code RC When H-P≥2 Combination with LAC is not available.	Machines hex sockets. Ordering Code RAC D Applicable Dimensions Internal Thread Threaded P B B E S 8 8T 6.00- 13- 6.50- 10 10T 7.00- 13- 7.00- 3.5- 2 3 12 12T 7.00- 13- 7.00- 13 13T 9.00- 15- 6.0- - 2.5 4 16 16T 13.00- 17- 13.00- 4.5- 3 5 20 20T 16.00- 20- 16.00- 6.0- 4 6 Applicable to P, L, B Dimension Configurable Type only. Round Shape is applicable to D≥8, and Diamond Shape to D≥10. When D=8, it is applicable to P≥6. Combination with TC and LAC is not available.	Machines wrench holes. Ordering Code LAC D Applicable Dimensions P Q 8 8T 6.00- 9.99 2 10 10T 10.00- 16.99 3.5 12 12T 5.0- 17.00- 5 13 13T 16 16T 20 20T 10.0- Round Shape is applicable to D≥8 and P≥6, and Diamond Shape to D≥10 and P≥8. Orientation between Diamond Shape Head and Wrench Hole is arbitrary. Combination with TC, RC, RAC is not available.

■Features: Shouldered with each dimension configurable.

RoHS 10

Material No. | Material | Surface Treatment | Hardness | Type (Press Fit, Tapped, Threaded)

Material No.	Material	Surface Treatment	Hardness	Press Fit	Tapped	Threaded
①	EN 1.2510 Equiv.	-	Treated Hardness: 60 ~ 63HRC	KFHA	KFHTA	KFHNA
②	EN 1.2510 Equiv.	Hard Chrome Plating	Treated Hardness: 60 ~ 55HRC Plating Hardness: 750HV ~	GKFA	GKFHTA	GKFHNA
③	EN 1.4301 Equiv.	-	-	SKFA	SKFHTA	SKFHNA
④	EN 1.4037 Equiv.	-	Treated Hardness: 50 ~ 55HRC	CKFA	CKFHTA	CKFHNA

Press Fit, Tapped, Threaded diagrams showing dimensions and surface finish symbols.

Relief dimension 'a' is a reference value.

■Press Fit

Part Number	Type	D Tolerance	P Tolerance	D	P 0.01mm Increment	L 1mm Increment	B 0.1mm Increment	E 0.1mm Increment	A Selection	H	M (Coarse)	*Tightening Torque N·cm	①	②	③	④	Unit Price				
																	① KFHA	② GKFA	③ SKFA	④ CKFA	
2	KFHA GKFA* SKFHA CKFA	M P G H A B	S M P G H A B	2	1.00-2.00	2-4	2.0-10.0	0.5-10.0	15 30 45 60	0.5	6	98	5	4	8	11	13	19	23		
3				2.00-4.00	3-6	2.0-10.0															
4				2.00-5.00	4-8	2.0-10.0															
5				3.00-6.00	5-10	2.0-10.0															
6				4.00-7.00	6-12	2.0-12.0															
8				5.00-9.00	8-16	2.0-15.0															
10				7.00-11.00	10-20	3.0-20.0															
12				7.00-12.00	12-24	3.0-20.0															
13				8.00-13.00	13-26	3.0-20.0															
16				13.00-16.00	16-32	5.0-20.0															
20				16.00-20.00	20-40	5.0-20.0															

*Hard Chrome Plating products are not available for * marked Precision Grade (Precision Grade A and B).

■Tapped

Part Number	Type	D Tolerance	P Tolerance	D	P 0.01mm Increment	L 1mm Increment	B 0.1mm Increment	E 0.1mm Increment	A Selection	H	M (Coarse)	*Tightening Torque N·cm	①	②	③	④	Unit Price				
																	① KFHTA	② GKFTA	③ SKFTA	④ CKFTA	
6	KFHTA GKFTA* SKFHTA CKFTA	M P G H A B	S M P G H A B	6	4.00-7.00	6-12	2.0-10.0	0.5-10.0	15 30 45 60	15	M3	98	5	4	8	11	13	19	23		
8				5.00-9.00	8-16	2.0-12.0															
10				7.00-11.00	10-20	2.0-15.0															
12				7.00-12.00	12-24	3.0-20.0															
13				8.00-13.00	13-26	3.0-20.0															
16				13.00-16.00	16-32	5.0-20.0															
20				16.00-20.00	20-40	5.0-20.0															

① Pins of D dimension with T have one size smaller thread diameter and larger wall thickness. (Actual D dimension is the number without "T").

② Note the strength of under-head part. P.1566 Please confirm pilot hole depth on P.1566. Holes may go through.

*The tightening torque (ref. value) for hardened products is strength class 8.8. (See technical data on P. 2297.) Not applicable when using locking materials or lock washers.

■Threaded

Part Number	Type	D Tolerance	P Tolerance	D	P 0.01mm Increment	L 1mm Increment	B 0.1mm Increment	E 0.1mm Increment	A Selection	H	M (Coarse)	*Tightening Torque N·cm	①	②	③	④	Unit Price				
																	① KFHNA	② GKFHNA	③ SKFHNA	④ CKFHNA	
3	KFHNA GKFHNA* SKFHNA CKFHNA	M P G H A B	S M P G H A B	3	2.00-4.00	2-6	2.0-10.0	0.5-10.0	15 30 45 60	6	M 3	98	5	4	8	11	13	19	23		
4				2.00-5.00	2-8	2.0-10.0															
5				3.00-6.00	3-10	2.0-10.0															
6				4.00-7.00	3-10	2.0-12.0															
8				5.00-9.00	5-10	2.0-15.0															
10				7.00-11.00	5-15	3.0-20.0															
12				7.00-12.00	8-15	3.0-20.0															
13				8.00-13.00	8-20	5.0-20.0															
16				13.00-16.00	8-20	5.0-20.0															
20				16.00-20.00	10-20	5.0-20.0															

*Hard Chrome Plating products are not available for * marked Precision Grade (Precision Grade A and B).

*The tightening torque (ref. value) for hardened products is strength class 8.8. (See technical data on P. 2297.) Not applicable when using locking materials or lock washers.

① Precision Grade Price
When A, B tolerance is selected, multiply by 1.1 to the above unit price.
Example of Price Calculation: KFHNAB16-P13.97-L12-B5.5

Ordering Example: Part Number

Type D Tol. P Tolerance D - P - L - B - E - A

KFHA M S 6 - P6.00 - L6 - B3.0 - E5.0 - A30

Alterations: Part Number - P - L - B - E - A - (HC, RC)

KFHAMS6 - P6.00 - L6 - B3.0 - E5.0 - A30 - RC

Alterations	Wrench Flats Alteration	Sphere Tip
Code	HC	RC
Spec.	HC=0.5mm Increment HC>D HC>P Ordering Code HC10.0	Changes the relief to R0.5. Ordering Code RC Applicable when H-P≥2.