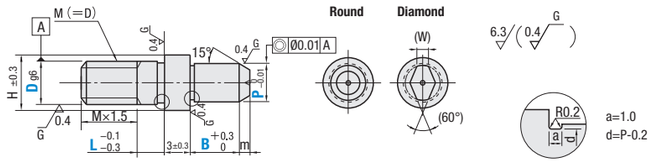
Locating Pins (Shoulder)

Threaded Shank

Locating Pins – Shoulder, Threaded Shank

RoHS 10

Material No.	Material	Surface Treatment	Hardness	P Configurable		P, L & B Configurable	
				Round	Diamond	Round	Diamond
(1)	01 Tool Steel Equivalent	—	Treated Hardness: 60~63 HRC min.	JPTNA	JPTND	FPTNA	FPTND
(2)	01 Tool Steel Equivalent	Hard Chrome Plating	Hardness: 50~55 HRC min. Plating Hardness: 750 HV min.	GJPTNA	GJPTND	GFPTNA	—



P Configurable

Part Number Type		D	D Tolerance g6	P 0.01 mm Increment	L	B	m	H	(W)	M (Coarse)
Round	Diamond	3	-0.002 -0.008	2.00–4.00	2	5	1	6	1	M3
		4	-0.004 -0.012	2.00–5.00		6			1.2	M4
		5		3.00–6.00	3		2	8	1.5	M5
		6		4.00–7.00		8			1.8	M6
JPTNA	JPTND	8	-0.005 -0.014	5.00–9.00	5		3	11	2.2	M8
GJPTNA	GJPTND	10		7.00–11.00		10		13	3	M10
		12	-0.006 -0.017	7.00–12.00	8			15	3.2	M12
		16		13.00–16.00			4	19	4	M16
		20	-0.007 -0.020	16.00–20.00	10	15	5	23	5.5	M20

P, L & B Configurable

Part Number Type		D	D Tolerance g6	P 0.01 mm Increment	L 1 mm Increment	B 0.1 mm Increment	m	H	(W)	M (Coarse)
Round	Diamond	3	-0.002 -0.008	2.00–4.00	2–6	2.0–10.0	1	6	1	M3
		4	-0.004 -0.012	2.00–5.00	2–8	2.0–10.0			1.2	M4
		5		3.00–6.00	3–10	2.0–10.0	2	8	1.5	M5
		6		4.00–7.00	3–10	2.0–12.0			1.8	M6
FPTNA	FPTND	8	-0.005 -0.014	5.00–9.00	5–10	2.0–15.0	3	11	2.2	M8
GFPTNA		10		7.00–11.00	5–15	3.0–20.0		13	3	M10
		12	-0.006 -0.017	7.00–12.00	8–15	3.0–20.0		15	3.2	M12
		16		13.00–16.00	8–20	5.0–20.0	4	19	4	M16
		20	-0.007 -0.020	16.00–20.00	10–20	5.0–20.0	5	23	5.5	M20

* The tightening torque (ref. value) for hardened products is strength class 8.8. (See technical data on MISUMI 2019 catalog **P.4015**).
* Not applicable when using locking adhesives or lock washers.

Part Number Example

Part Number - P - L - B

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

Part Number 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	Sperical Tip	Hex Socket Machining	Wrench Hole Machining
Code	HC	TC	RC	RAC	LAC
Spec.	HC=0.5 mm Increment ! HC>D, HC>P **Ordering Code:** HC10.0	Changes the m dimension. **Ordering Code:** TC8 (1 mm Increment)	Changes the relief to R0.5. **Ordering Code:**RC ! Applicable when H-P≥2. ⊗ Combination with LAC is not available.	Machines hex socket. **Ordering Code:** RAC	Machines wrench hole. **Ordering Code:** LAC

TC:

D	TC	D	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. 2 mm)
! P/2-TC x tan15°(=0.27)>0.5 (Tip Ø1.0min.)
! B Dimension changes when TC is specified. (Changed B dimension = B+m-TC)
⊗ Combination with RAC and LAC is not available.

RAC:

D	Applicable Dimension Tapped P	Tapped L	Tapped B	Threaded P	Threaded B	Hex Hole Dimension E	Hex Hole Dimension S
8, 8T	6.50~	13~	6.0~	6.50~	3.5~	2	3
10, 10T	7.00~	13~		7.00~			
12, 12T	7.00~	13~		7.00~			
13, 13T	9.00~	15~		—	—	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 and B Dimension Configurable only.
! Round shape is applicable to D≥8, and diamond to D≥10.
! When D=8, it is applicable to P≥6.
⊗ Combination with TC and LAC is not available

LAC:

D	Applicable Dimension B
8, 8T	5.0~
10, 10T	
12, 12T	
13, 13T	
16, 16T	
20, 20T	10.0~

P	Q
6.00–9.99	2
10.00–16.99	3.5
17.00~	5

! Round shape is applicable to D≥8 and P≥6, and diamond to D≥10 and P≥8.
! Orientation between diamond shape head and wrench hole is arbitrary.
⊗ Combination with TC, RC and RAC is not available.

Locating Pins (Shoulder, Pilot Angle)

D & P Tolerance Selectable

Locating Pins – Shoulder, Pilot Angle / D & P Tolerance Selectable

RoHS 10

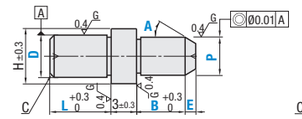
Material No.	Material	Surface Treatment	Hardness	Type		
				Standard	Tapped	Threaded
(1)	01 Tool Steel Equivalent	—	60~63 HRC min.	KFHA	KFHTA	KFHNA
(2)	01 Tool Steel Equivalent	Chrome Plating	60~63 HRC min. Plating Hardness 750 HV min.	GKFHA	GKFHTA	GKFHNA
(3)	304 Stainless Steel Equivalent	—	—	SKFHA	SKFHTA	SKFHNA
(5)	440C or 420 Stainless Steel	—	50~55 HRC min.	CKFHA	CKFHTA	CKFHNA

Tolerance Selection

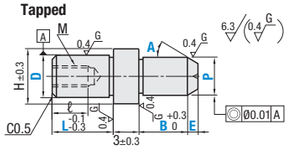
D or P	Standard Grade M	P	G	H	S	Precision Grade A	B
	m6	p6	g6	h7	—	—	—
1.00–3.00	+0.008 +0.002	+0.012 +0.006	-0.002 -0.008	0 -0.010			
3.01–6.00	+0.012 +0.004	+0.020 +0.012	-0.004 -0.012	0 -0.012			
6.01–10.00	+0.015 +0.006	+0.024 +0.015	-0.005 -0.014	0 -0.015	0 -0.01	+0.005 0	0 -0.005
10.01–18.00	+0.018 +0.007	+0.029 +0.018	-0.006 -0.017	0 -0.018			
18.01–20.00	+0.021 +0.008	+0.035 +0.022	-0.007 -0.020	0 -0.021			

! 440C or 420 Stainless Steel has an identification groove on D part.

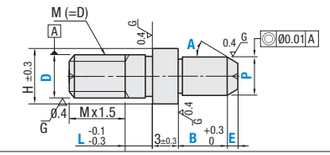
Standard



Tapped



Threaded



! P-2Etan A≥0.73 (Tip dia. Ø 0.73 or more)
Reference: tan15°=0.267 tan30°=0.577
tan45°= 1 tan60° = 1.732

Standard

Part Number Type	D Tolerance Selection	P Tolerance Selection	D	P 0.01 mm Increment	L 1 mm Increment	B 0.1 mm Increment	E 0.1 mm Increment	A Selection	C	H
KFHA GKFHA* SKFHA CKFHA	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
			3	2.00–4.00	3–6	2.0–10.0				
			4	2.00–5.00	4–8	2.0–10.0			1	8
			5	3.00–6.00	5–10	2.0–15.0				
			6	4.00–7.00	5–12	2.0–15.0			1.5	11
			8	5.00–9.00	5–16	2.0–20.0				
			10	7.00–11.00	8–20	3.0–30.0			2	13
			12	7.00–12.00	10–24	3.0–30.0				15
			13	8.00–13.00	13–26	5.0–30.0				16
			16	13.00–16.00	16–32	5.0–30.0			3	19
			20	16.00–20.00	20–40	5.0–30.0				23

! Precision Grade Tolerance is not available for the Chrome Plated Product Types. *(Precision Grade A and B).

Tapped

Part Number Type	D Tolerance Selection	P Tolerance Selection	D	P 0.01 mm Increment	L 1 mm Increment	B 0.1 mm Increment	E 0.1 mm Increment	A Selection	H	M (Coarse)	ℓ
KFHTA GKFHTA SKFHTA CKFHTA	M P G H	S M P G H	6	4.00–7.00	6–12	2.0–15.0	0.5–10.0	15 30 45 60	8	M3	5
			6T							M2.6	4
			8	5.00–9.00	8–16	2.0–20.0			11	M5	8
			8T							M4	6
			10	7.00–12.00	10–20	2.0–30.0			13	M5	8
			12	7.00–12.00	12–24	3.0–30.0			15		
			13	8.00–13.00	13–26	3.0–30.0			16	M8	10
			16	13.00–16.00	16–32	5.0–30.0			19		12
			20	16.00–20.00	20–40	5.0–30.0			23		

! Pins with D value ending in T (ex. 8T) one size smaller thread diameter and larger wall thickness.(Actual D dimension is the number without "T".)
! Note the strength of under-head part. **P.1542** ! Please confirm pilot hole depth on **P.1542**. Holes may go through.

Threaded

Part Number Type	D Tolerance Selection	P Tolerance Selection	D	P 0.01 mm Increment	L 1 mm Increment	B 0.1 mm Increment	E 0.1 mm Increment	A Selection	H	M (Coarse)
KFHNA GKFHNA* SKFHNA CKFHNA	M P G H *A *B	S M P G H *A *B	3	2.00–4.00	0–6	2.0–10.0	0.5–10.0	15 30 45 60	6	M3
			4	2.00–5.00	0–8	2.0–10.0				M4
			5	3.00–6.00	0–10	2.0–15.0			8	M5
			6	4.00–7.00	0–10	2.0–15.0				M6
			8	5.00–9.00	0–10	2.0–20.0			11	M8
			10	7.00–11.00	0–15	3.0–30.0			13	M10
			12	7.00–12.00	0–15	3.0–30.0			15	M12
			16	13.00–16.00	0–20	5.0–30.0			19	M16
			20	16.00–20.00	0–20	5.0–30.0			23	M20

! Precision Grade Tolerance is not available for the Chrome Plated Product Types. *(Precision Grade A and B).

Part Number Example

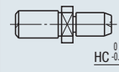
Part Number - P - L - B - E - A

KFHA M S 6 - P6.00 - L10 - B3.0 - E5.0 - A30

Part Number Alterations

Part Number - P - L - B - E - A - (HC / RC)

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

Alterations	Width Across Flats	Radius
Code	HC	RC
Spec.	 HC=0.5 mm Increment ! HC>D, HC>P HC10.0	Changes the relief to R0.5. **Ordering Code:** RC  ! Applicable when H-P≥2.