

Locating Pins (Shoulder Thickness Configurable)

Locating Pins – Shoulder Thickness Configurable

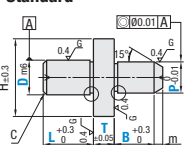


RoHS10

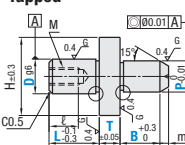
Material No.	Material	Surface Treatment	Hardness	Standard	Type Tapped	Threaded	Shape Code
(1)	O1 Tool Steel	—	Treated Hardness: 60–63 HRC min.	FPJ	FPU	FPN	AT (Round) DT (Diamond)
(2)	O1 Tool Steel	Hard Chrome Plating Plating Thickness: 3 μm or more	Hardness: 50–55 HRC min. Plating Hardness: 750 HV min.	GFPJ	GFPU	GFPN	
(3)	304 Stainless Steel	—	—	SFPJ	SFPU	SFPN	
(4)	304 Stainless Steel	Hard Chrome Plating Plating Thickness: 3 μm or more	Plating Hardness 750 HV min.	HFPJ	HFPU	HFPN	
(5)	440C Stainless Steel	—	Treated Hardness: 50–55 HRC min.	CFPJ	CFPU	CFPN	

① 440C Stainless Steel has an identification groove on D mounting section. ② A machining step remains on the shoulder top for Diamond Shape.

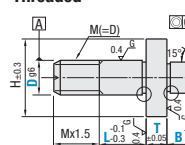
Standard



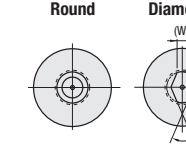
Tapped



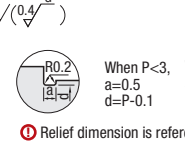
Threaded



Round



Diamond



③ Relief dimension is reference value.

Standard																												
Part Number				P	L	B	T							Available Types for Round Shape					Available Types for Diamond Shape									
Type	Shape	D	D Tolerance m6	0.01 mm Increment	1 mm Increment	0.1 mm Increment	0.5 mm Increment	H	C	m	(W)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)		
FPJ GFPJ SFPJ HFPJ CFPJ	AT Round	2	+0.008	1.00–2.00	2–4	2.0–10.0	1.0–10.0	7	0.5	0.5	—	•	•	•	•	•	—	—	—	—	—	—	—	—	—	—		
		3	+0.002	2.00–4.00	3–6	2.0–10.0		8			1	1.0	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
		4	+0.012	2.00–5.00	4–8	2.0–10.0		9			2	1.2	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
		5		3.00–6.00	5–10	2.0–15.0 (10.0)		10				1.5	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
		6		4.00–7.00	5–12	2.0–15.0		11				1.8	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	DT Diamond	8	+0.015	5.00–9.00	5–16	2.0–20.0 (15.0)		13	1.5	3	2.2	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
		10	+0.006	7.00–11.00	8 (10)–20	3.0–30.0 (25.0)		15			3	3	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
		12	+0.018	7.00–12.00	10–24	3.0–30.0 (25.0)		17			2	3.2	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
		13		+0.007	8.00–13.00	13–26		5.0–30.0 (25.0)			18	4	3.5	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
		16		13.00–16.00	16–32	5.0–30.0		21			4		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
		20		+0.021 +0.008	16.00–20.00	20–40		5.0–30.0			25		3	5.5	•	•	•	•	•	•	•	•	•	•	•	•	•	•

Tapped																									
Part Number				P	L	B	T								Available Types for Round Shape					Available Types for Diamond Shape					
Type	Shape	D	D Tolerance g6	0.01 mm Increment	1 mm Increment	0.1 mm Increment	0.5 mm Increment	H	m	(W)	M	Coarse	ℓ	(1) FPUAT	(2) GFPUAT	(3) SFPUAT	(4) HFPUAT	(5) CFPUAT	(1) FPUAT	(2) GFPUAT	(3) SFPUAT	(4) HFPUAT	(5) CFPUAT		
FPU GFPU SFPU HFPU CFPU	AT Round	5	-0.004	3.00–6.00	7–10	2.0–15.0 (10.0)	1.0–10.0	10	2	1.5	M2	3	•	•	•	•	—	•	•	•	•	•	•		
		6	-0.012	4.00–7.00	6 (9)–12	2.0–15.0		11		1.8	M3	5	•	•	•	•	•	•	•	•	•	•	•	•	
		8	-0.005	5.00–9.00	8 (12)–16	2.0–20.0 (15.0)		13		2.2	M5	8	•	•	•	•	•	•	•	•	•	•	•	•	
		10	-0.014	7.00–12.00	10 (12)–20	2.0–30.0 (25.0)		15		3		3	•	•	•	•	•	•	•	•	•	•	•	•	
	DT Diamond	12	-0.006	7.00–12.00	12–24	3.0–30.0 (25.0)		17	3.2	M8	10	•	•	•	•	•	•	•	•	•	•	•	•	•	
		13	-0.017	8.00–13.00	13 (14)–26	3.0–30.0 (25.0)		18	3.5		•	•	•	•	•	•	•	•	•	•	•	•	•	•	
		16	-0.017	13.00–16.00	16–32	5.0–30.0		21	4		•	•	•	•	•	•	•	•	•	•	•	•	•	•	
		20	-0.007 -0.020	16.00–20.00	20–40	5.0–30.0		25	5		5.5	12	•	•	•	•	•	•	•	•	•	•	•	•	•

① L dimension in () is applicable to Diamond Shape. ② Note the strength of under-head part. P.1542 ③ Please confirm pilot hole depth on P.1542. Holes may go through.
* Tightening torque will be within Strength Class of 10.9 as indicated in the Technical Data P.4016 (10.9). Not applicable when using locking materials or lock washers.

Threaded												
Part Number				P	L	B	T	H	m	(W)	*Tightening Torque N-cm	
Type	Shape	D	D Tolerance g6	0.01 mm Increment	1 mm Increment	0.1 mm Increment	0.5 mm Increment					
FPN GFPN SFPN HFPN CFPN	AT Round	3	-0.002 -0.008	2.00-4.00	0-6	2.0-10.0	1.0-10.0	8	1	1.0	147	
		4	-0.004 -0.012	2.00-5.00	0-8	2.0-10.0		9		1.2	333	
		5		3.00-6.00	0-10	2.0-15.0 (10.0)		10		1.5	676	
		6		4.00-7.00	0-10	2.0-15.0		11		1.8	1156	
		8		-0.005 -0.014	5.00-9.00	0-10		2.0-20.0 (15.0)	13	2.2	2803	
	DT Diamond	10	-0.014	7.00-11.00	0-15	3.0-30.0 (25.0)		15	3	3	5557	
		12	-0.006 -0.017	7.00-12.00	0-15	3.0-30.0 (25.0)		17		3.2	9702	
		16	-0.017	13.00-16.00	0-20	5.0-30.0		21		4	24108	
		20	-0.007 -0.020	16.00-20.00	0-20	5.0-30.0		25		5	5.5	46942

Part Number Example

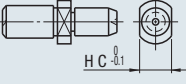
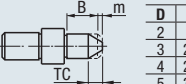
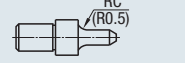
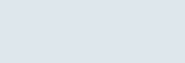
Part Number - P - L - B - T - H

FPJ ATD 12 - P9.98 - L15 - B5.5 - T12 - H13

Part Number Alterations

Part Number - P - L - B - T - H - (HC, TC, RC, TKC)

GFPJATD12 - L20 - T16.0
GFPNATD12 - P8.50 - L15 - B10.0 - T13 - H16.0 - RC
GFPJATD12 - L20 - H16.0

Alterations Code	Wrench Flats Alteration	Length of Tapered Point	Underhead Fillet	Shoulder Thickness Tolerance
	HC	TC	RC	TKC
Spec.	 HC=0.5 mm Increment ① HC>D, HC>P Ordering Code: HC10.0	 Changes the m dimension. Ordering Code: TC8 (1 mm Increment) ① B+m≥TC+2 (Straight Part min. 2 mm) ② Applicable when P≥2.00. ③ P/2-TCtan15°(=0.27)>0.5 (Tip Ø1.0min.) ④ B Dimension changes when TC is specified. (Changed B dimension = B+m-TC)	 Changes the relief to R0.5. Ordering Code: RC ① Applicable when H-P≥2.	 Changes shoulder thickness tolerance T±0.05 to T ^{+0.02} Ordering Code: TKC

Locating Pins (Shoulder Diameter & Thickness Configurable)

Locating Pins – Shoulder Diameter & Thickness Configurable

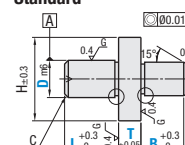


RoHS10

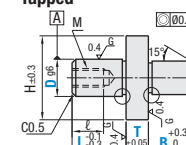
Material No.	Material	Surface Treatment	Hardness	Standard	Type Tapped	Threaded	Shape Code
(1)	O1 Tool Steel Equivalent	—	Treated Hardness: 60–63 HRC min.	FPJ	FPU	FPN	ATD (Round) DTD (Diamond)
(2)	O1 Tool Steel Equivalent	Hard Chrome Plating Plating Thickness: 3 μm or more	Hardness: 50–55 HRC min. Plating Hardness: 750 HV min.	GFPJ	GFPU	GFPN	
(3)	304 Stainless Steel Equivalent	—	—	SFPJ	SFPU	SFPN	
(4)	304 Stainless Steel Equivalent	Hard Chrome Plating Plating Thickness: 3 μm or more	Plating Hardness 750 HV min.	—	HFPJ	HFPN	
(5)	440C Stainless Steel Equivalent	—	Treated Hardness: 50–55 HRC min.	CFPJ	CFPU	CFPN	

① 440C Stainless Steel has an identification groove on D mounting section. ② A machining step remains on the shoulder top for Diamond Shape.

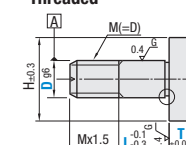
Standard



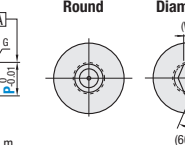
Tapped



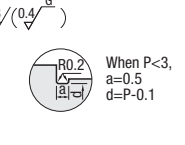
Threaded



Round



Diamond



③ Relief dimension is reference value.

Standard																									
Part Number			P	L	B	T	H	C	m	(W)	Available Types for Round Shape					Available Types for Diamond Shape									
Type	Shape	D	D Dimension Tolerance m6	0.01 mm Increment	1 mm Increment	0.1 mm Increment	0.5 mm Increment				(1)	(2)	(3)	(5)	FPJTD	(2)	SFFJTD	(3)	CFPJTD						
FPJ GFPJ SFPJ CFPJ	ATD Round	2	+0.008	1.00–2.00	2–4	2.0–10.0	1.0–15.0	5.0–10.0	0.5	0.5	—	•	•	•	•	—	—	—	—						
		3	+0.002	2.00–4.00	3–6	2.0–10.0		6.0–12.0			1	1.0	•	•	•	•	•	•	•	•	•				
		4	+0.012	2.00–5.00	4–8	2.0–10.0		7.0–13.0	1	2	1.2	•	•	•	•	•	•	•	•	•					
		5	+0.004	3.00–6.00	5–10	2.0–15.0 (10.0)		8.0–14.0			1.5	•	•	•	•	•	•	•	•	•					
		6	+0.004	4.00–7.00	5–12	2.0–15.0		9.0–15.0			1.8	•	•	•	•	•	•	•	•	•					
	DTD Diamond	8	+0.015	5.00–9.00	5–16	2.0–20.0 (15.0)		11.0–17.0	1.5	3	2.2	•	•	•	•	•	•	•	•	•					
		10	+0.006	7.00–11.00	8 (10)–20	3.0–30.0 (25.0)		13.0–19.0			3	•	•	•	•	•	•	•	•	•					
		12	+0.018	7.00–12.00	10–24	3.0–30.0 (25.0)		13.0–20.0			2	3.2	•	•	•	•	•	•	•	•					
		13	+0.007	8.00–13.00	13–26	5.0–30.0 (25.0)		15.0–21.0				3.5	•	•	•	•	•	•	•	•					
		16	+0.007	13.00–16.00	16–32	5.0–30.0		18.0–24.0				4	•	•	•	•	•	•	•	•					
	20	+0.021 +0.008	16.00–20.00	20–40	5.0–30.0	21.0–27.0	3	5	5.5	•	•	•	•	•	•	•	•	•							