


Locating Pins for Jigs & Fixtures

Configurable & No Shoulder

Locating Pins/Bushings for Locating Pins

Threaded



RoHS10

D	g6
3	-0.002 -0.008
4-6	-0.004 -0.012
8, 10	-0.005 -0.014
12, 16	-0.006 -0.017
20	-0.007 -0.020

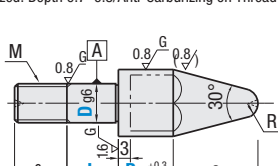
① $e = P/2 \tan 15^\circ + R - (R/\sin 15^\circ)$
 ② Dicoat® Treated / TiCN Treated items do not come with a center hole.
 ③ Dicoat® Treated items will have the () precision.

Type	Material	Hardness
FLNNA	4137 Alloy Steel	Treated Hardness 35~40 HRC min.
FTLNNA	SCM415 Alloy Steel (JIS)	Carburized Hardness 55 HRC min.
FSLNNA	304 Stainless Steel	—
FCLNNA	440C or 420 Stainless Steel	Treated Hardness 50~55 HRC min.

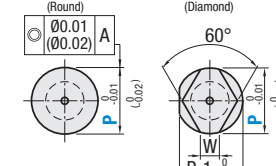
*Carburized: Depth 0.7~0.8/Anti-Carburizing on Thread

Type	Material	Hardness	Surface Treatment
R-FNNA	Round 4137 Alloy Steel	35~40 HRC (Surface 750 HV min.)	Hard Chrome Plating
R-FNND	Diamond	—	—
D-FNNA	Round D2 Tool Steel Equivalent	55 HRC min. (Surface 3000 HV min.)	Dicoat® Treated
D-FNND	Diamond	—	—

Reference: $\sin 15^\circ = 0.259$
 $\tan 15^\circ = 0.267$



(Round)




(Diamond)

Part Number		0.1 mm Increment			1 mm Increment	ℓ_1	R	M (Coarse)	W
Type	D	P	B	L					
Hardened (Round) FLNNA	3	4.0-6.0	2.0-16.0	5-10	5	2	M3	1.5	
	4	5.0-8.0	2.0-20.0	5-10	6		M4	2	
	5	6.0-10.0	2.0-24.0	5-10	6		M5	3	
	6	8.0-12.0	2.0-24.0	5-10	10		M6	3.5	
	8	10.0-16.0	2.0-26.0	5-10	12		M8	4	
	10	12.0-20.0	3.0-35.0	8-15	15		M10	6	
Carburized (Round) FTLNNA	3	4.0-6.0	2.0-16.0	5-10	5	3	M3	1.5	
	4	5.0-8.0	2.0-20.0	5-10	6		M4	2	
	5	6.0-10.0	2.0-24.0	5-10	6		M5	3	
	6	8.0-12.0	2.0-24.0	5-10	10		M6	3.5	
	8	10.0-16.0	2.0-26.0	5-10	12		M8	4	
	10	12.0-20.0	3.0-35.0	8-15	15		M10	6	
304 Stainless Steel (Round) FSLNNA	3	4.0-6.0	2.0-16.0	5-10	5	4	M3	1.5	
	4	5.0-8.0	2.0-20.0	5-10	6		M4	2	
	5	6.0-10.0	2.0-24.0	5-10	6		M5	3	
	6	8.0-12.0	2.0-24.0	5-10	10		M6	3.5	
	8	10.0-16.0	2.0-26.0	5-10	12		M8	4	
	10	12.0-20.0	3.0-35.0	8-15	15		M10	6	
440C or 420 Stainless Steel (Round) FCLNNA	3	4.0-6.0	2.0-16.0	5-10	5	8	M3	1.5	
	4	5.0-8.0	2.0-20.0	5-10	6		M4	2	
	5	6.0-10.0	2.0-24.0	5-10	6		M5	3	
	6	8.0-12.0	2.0-24.0	5-10	10		M6	3.5	
	8	10.0-16.0	2.0-26.0	5-10	12		M8	4	
	10	12.0-20.0	3.0-35.0	8-15	15		M10	6	

① B≤Px4 ② For Diamond Shape, B dimension 5.0 or more are applicable. ③ D16, D20 unavailable for R-FNNA, D-FNNA, R-FNND, D-FNND part types. ④ D3, D4, D5 unavailable for D-FNNA, D-FNND part types

Set Screw Flat Type



RoHS10

D	g6
6	-0.004 -0.012
8, 10	-0.005 -0.014
12, 16	-0.006 -0.017
20	-0.007 -0.020

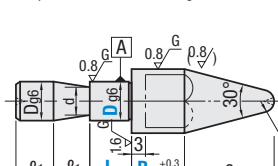
① $e = P/2 \tan 15^\circ + R - (R/\sin 15^\circ)$
 ② Dicoat® Treated / TiCN Treated items do not come with a center hole.
 ③ Dicoat® Treated / TiCN Treated items will have the () precision.

Type	Material	Hardness
FLNTA	4137 Alloy Steel	Treated Hardness 35~40 HRC min.
FTLNTA	SCM415 Alloy Steel	Carburized Hardness 55 HRC min.
FSLNTA	304 Stainless Steel	—
FCLNTA	440C or 420 Stainless Steel	Treated Hardness 50~55 HRC min.

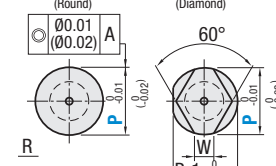
*Carburized: Depth 0.7~0.8/Anti-Carburizing on Thread

Type	Material	Hardness	Surface Treatment
R-FNTA	Round 4137 Alloy Steel	35~40 HRC (Surface 750 HV min.)	Hard Chrome Plating
R-FNTD	Diamond	—	—
D-FNTA	Round D2 Tool Steel Equivalent	55 HRC min. (Surface 3000 HV min.)	Dicoat® Treated
D-FNTD	Diamond	—	—

Reference: $\sin 15^\circ = 0.259$
 $\tan 15^\circ = 0.267$



(Round)



(Diamond)

Part Number		0.1 mm Increment			1 mm Increment	ℓ_1	d	R	Applicable Set Screws	W										
Type	D	P	B	L																
Hardened (Round) FLNTA	6	8.0-12.0	2.0-30.0	5-10	8	4	3	M5	3											
	8	10.0-16.0	2.0-35.0	5-10	8					4	M6	4								
	10	12.0-20.0	3.0-35.0	8-15	9								8	M8	6					
	12	14.0-25.0	3.0-35.0	10-18	13											9	M8	8		
	16	18.0-32.0	5.0-35.0	10-20	17														10	9
	20	22.0-35.0	5.0-35.0	10-20	17															

① B≤Px4 ② For Diamond Shape, B dimension 5.0 or more are applicable. ③ D16, D20 unavailable for R-FNTA, D-FNTA, R-FNTD, D-FNTD part types.

Part Number Example

Part Number: **FTLNNA12 - P14.2 - B15.1 - L10**

Part Number: **FLNTA10 - P12.1 - B10.5 - L8**

Part Number Alterations

Part Number: **FTLNNA12 - P14.2 - B15.1 - L10 - RC60**

Part Number: **FLNTA10 - P12.1 - B10.5 - L8 - RC120**

Alterations	Grooves for Wear Sign	Flat Position	Flat Machining	Tip Angle Change	Relief
Code	MK	KC	KD	RC	NNC
Spec.	Machine 4 grooves on B Dimension. The wear and tear of the grooves indicate the degree of wears. ① Applicable to Hardened, Carburized and Round Shape Products only ② Applicable when B ≥ 4 ③ When used together with RTC, the groove starts from the area of R value + 1 mm. Groove Depth: 0.2mm (±0.06 mm) Groove Shape: V Groove (90°)	Ordering Code: KC Changes the flat position to 90° from the standard position 0°. ① Applicable to Diamond Shape Type only.	Ordering Code: KD Machining on one side. ① Applicable to Round Shape Type only.	Ordering Code: RC60 Changes the tip angle. Section: 60° / 90° / 120°	Ordering Code: NNC Adds a relief at the thread end. ① Not applicable to Set Screw Type. ② For damage prevention, Dicoat® treatment is not applicable.




Locating Pin for Jig & Fixtures

Standard with Shoulder

Features: For Standard Grade, P dimension tolerance is ± 0.05 (for Precision Grade, ± 0.01 or ± 0.02), concentricity is 0.03 or 0.05 (for Precision Grade, 0.01 or 0.02).

Threaded



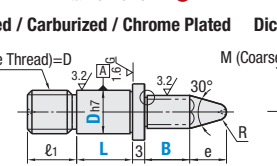
RoHS10

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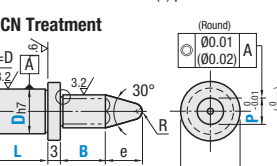
Type	Material	Hardness
ELANA	4137 Alloy Steel	Hardened 35~40 HRC min.
ELAND	Diamond	—
TELANA	SCM415 Alloy Steel (JIS)	Carburized Treated Hardness: 55 HRC min. (Depth: 0.7~0.8) Anti-Carburizing on Threads
TELAND	Diamond	—

Reference: $\sin 15^\circ = 0.259$
 $\tan 15^\circ = 0.267$

Type	Material	Hardness	Surface Treatment
D-LANA	Round D2 Tool Steel	55 HRC min. (Surface 3000 HV min.)	Dicoat® Treated
R-LANA	Diamond	—	—
R-LANA	Round 4137 Alloy Steel	35~40 HRC min. (Surface 750 HV min.)	Hard Chrome Plating
H-LANA	Round D2 Tool Steel	55 HRC min. (Surface 3000 HV min.)	TiCN Treatment
H-LAND	Diamond	—	—



(Round)




(Diamond)

Part Number		P Configurable			B Configurable			L Selection			ℓ_1	H	R	W
Type	Dh7	0.1 mm Increment	1 mm Increment	1 mm Increment	1 mm Increment	1 mm Increment	1 mm Increment	1 mm Increment						
Hardened (Round) ELANA	6	3.0-8.0	② 2-30 (B≤Px4)	5 8 10	6	9	1	1-2						
	8	3.0-10.0							10 11 1.5					
	10	4.5-12.0								12 13				
	10T	9.0-14.0									18 19			
	12	13.0-18.0										2		
	16	13.0-18.0											3 4 5	

① W Dimension D6, D8: W=2 when P>5.0. D10, 10T: W=1 when P<5.0; W=2 when 5.0≤P≤7.0; W=3 when P>7.0. ② L dimension in () is not applicable to diamond shape, Dicoat® and TiCN treatment®. ③ B Dimension 5 mm – will be selected for Dicoat® Treated / TiCN Treated items.

Set Screw Flat Type



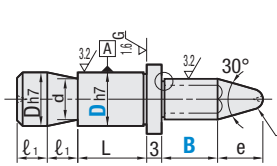
RoHS10

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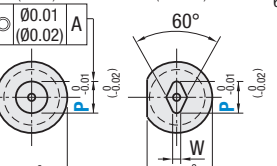
Type	Material	Hardness
ELATA	4137 Alloy Steel	Hardened 35~40 HRC min.
ELATD	Diamond	—
TELATA	SCM415 Alloy Steel (JIS)	Carburized 55 HRC min. (Depth 0.7~0.8) Anti-Carburizing on Threads
TELATD	Diamond	—

Reference: $\sin 15^\circ = 0.259$
 $\tan 15^\circ = 0.267$

Type	Material	Hardness	Surface Treatment
D-LATA	Round D2 Tool Steel	55 HRC min. (Surface 3000 HV min.)	Dicoat® Treated
D-LATD	Diamond	—	—
R-LATA	Round 4137 Alloy Steel	35~40 HRC min. (Surface 750 HV min.)	Hard Chrome Plating
H-LATA	Round D2 Tool Steel	55 HRC min. (Surface 3000 HV min.)	TiCN Treatment
H-LATD	Diamond	—	—



(Round)



(Diamond)

Part Number		P Configurable			B Configurable			L Selection			ℓ_1	H	d	R	Applicable Set Screw	W
Type	Dh7	0.1 mm Increment	1 mm Increment	1 mm Increment	1 mm Increment	1 mm Increment	1 mm Increment	1 mm Increment								
Hardened (Round) ELATA	6	3.0-8.0	② 2-30 (B≤Px4)	8	8	4	1	M5	1-2							
	8	3.0-10.0								11 5 1.5						
	10	4.5-12.0									13 7 2					
	10T	9.0-14.0										15 9 3				
	12	13.0-18.0											19 13 4			
	16	13.0-18.0												4 5		

① W Dimension D6, D8: W=2 when P>5.0. D10, 10T: W=1 when P<5.0; W=2 when 5.0≤P≤7.0; W=3 when P>7.0. ② B Dimension 5 mm – will be selected for Dicoat® Treated / TiCN Treated items.

Part Number Alterations

Part Number: **ELANA 6 - P6.8 - B14 - L5 - SC**

Part Number Example

Part Number: **ELANA 8 - P6.0 - B15 - L10**

Part Number: **ELATA 10 - P8.8 - B10**

Alterations	Flat Position	Flat	Wrench Flats	Thread Diameter
Code	KC	KD	SC	MC
Spec.	Ordering Code: KC Changes the flat position to 90° from the standard position 0°. ① Applicable to Diamond shape only.	Ordering Code: KD Machining on one side. ① H-P=2 ② Applicable to Round Shape Only.	Ordering Code: SC Adds wrench flats. H 9 11 13 15 19 H 7 8 11 13 17 ① Applicable to Round Shape Only.	Ordering Code: MC8 Changes the thread diameter. ① D/3≤M<D ② Mmin3 ③ Applicable to Threaded Type only.

Locating Pins/Bushings for Locating Pins