

# Locating Pins for Fixtures

## Standard Grade, No Shoulder

Features: For Standard Grade, P Dim. 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**

Type	Material	Hardness	Type	Material	Hardness	Surface Treatment
ELNNA Round	SCM435	Hardening 35~40HRC	R-LNNA Round	SCM435	35~40HRC (Surface 750HV ~)	Hard Chrome Plating
ELNND Diamond	SCM435	Hardening 35~40HRC	R-LNND Diamond	SCM435	35~40HRC (Surface 750HV ~)	Hard Chrome Plating
TELNNA Round	SCM415	Carburized 55HRC~ (depth 0.7~0.8) / Anti-carburizing on Threads	D-LNNA Round	SKD11 Equivalent	55HRC~ (Surface 3000HV)	Dicoat® Treated
TELNND Diamond	SCM415	Carburized 55HRC~ (depth 0.7~0.8) / Anti-carburizing on Threads	D-LNND Diamond	SKD11 Equivalent	55HRC~ (Surface 3000HV)	Dicoat® Treated
			H-LNNA Round	SKD11 Equivalent	55HRC~ (Surface 3000HV)	TiCN Treatment
			H-LNND Diamond	SKD11 Equivalent	55HRC~ (Surface 3000HV)	TiCN Treatment

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

1 Dicoat® Treated / TiCN Thread Shape

$e = P/2 \tan 15^\circ + R - (R/\sin 15^\circ)$

Dicoat® Treated / TiCN Treated items do not come with a center hole.

Part Number	Type	Dh7	P	B	L Selection	L1	R	W	Unit Price											
									ELNNA	ELNND	TELNNA	TELNND	R-LNNA	R-LNND	D-LNNA	D-LNND	H-LNNA	H-LNND		
Hardened (Round)	Carburized (Round)	6	0	8.0-12.0	5	8	10	6	3	3										
					8	10	12	10	4	3.5										
					10	12	15	12	4	4										
					10T	12	15	15	5	5										
(Diamond)	(Diamond)	12	0	14.0-25.0	8	10	12	15	18	15	6	6								
					16	18	20	18	8	8										
					20	22	25	22	8	9										

L dimension in ( ) is not applicable to Diamond Shape, Dicoat® and TiCN treatment.  
B Dimension is selectable from 5 mm ~ for Dicoat® Treated / TiCN Treated Products/Diamond Shape.

**Set Screw**

Type	Material	Hardness	Type	Material	Hardness	Surface Treatment
ELNTA Round	SCM435	Hardening 35~40HRC	R-LNTA Round	SCM435	35~40HRC (Surface 750HV ~)	Hard Chrome Plating
ELNTD Diamond	SCM435	Hardening 35~40HRC	R-LNTD Diamond	SCM435	35~40HRC (Surface 750HV ~)	Hard Chrome Plating
TELNTA Round	SCM415	Carburized 55HRC~ (depth 0.7~0.8) / Anti-carburizing on Threads	D-LNTA Round	SKD11 Equivalent	55HRC~ (Surface 3000HV)	Dicoat® Treated
TELNTD Diamond	SCM415	Carburized 55HRC~ (depth 0.7~0.8) / Anti-carburizing on Threads	D-LNTD Diamond	SKD11 Equivalent	55HRC~ (Surface 3000HV)	Dicoat® Treated
			H-LNTA Round	SKD11 Equivalent	55HRC~ (Surface 3000HV)	TiCN Treatment
			H-LNTD Diamond	SKD11 Equivalent	55HRC~ (Surface 3000HV)	TiCN Treatment

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

1 Dicoat® Treated / TiCN Treated items will have the ( ) precision.

$e = P/2 \tan 15^\circ + R - (R/\sin 15^\circ)$

Dicoat® Treated / TiCN Treated items do not come with a center hole.

Part Number	Type	Dh7	P	B	L Selection	L1	d	R	Applicable Set Screw	W	Unit Price									
											ELNTA	ELNTD	TELNTA	TELNTD	R-LNTA	R-LNTD	D-LNTA	D-LNTD	H-LNTA	H-LNTD
Hardened (Round)	Carburized (Round)	6	0	8.0-12.0	5	8	4	3	M5	3										
					8	10	12	10	4	M5	3.5									
					10	12	15	12	4	M6	4									
					10T	12	15	15	5	M6	5									
(Diamond)	(Diamond)	12	0	14.0-25.0	8	10	9	6	M8	6										
					16	18	13	8	M8	8										
					20	22	17	8	M8	9										

B Dimension is selectable from 5 mm ~ for Dicoat® Treated / TiCN Treated Products / Diamond Shape.

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

ELNNA 10 - P12.0 - B10 - L8 (Threaded)  
ELNTA 6 - P10.0 - B15 (Set Screw)

Alterations: **P** - **B** - **L** - **A** - **E** - (KC, KD - etc.)

ELNNA 6 - P8.0 - B14 - L5 - KD

Alterations	Wear Groove Alterations	Flat Position	Flat Machining	Thread Dia.	Thread Length
Code	MK	KC	KD	MC	FC
Spec.	Drill 4 grooves at B Dimension. The wear and tear of the grooves indicate the degree of wear. Applicable to Hardening, Carburized and Round Shape Products only Applicable when B ≥ 4 Groove Depth: 0.2mm (±0.05mm) Groove Shape: V Groove (90°)	Ordering Code KC Changes the flat position to 90° from the standard position 0°. Applicable to Diamond Shape Type only.	Ordering Code KD Machining on one side. Applicable to Round Shape Type only.	Ordering Code MC Changes the flat position to 90° from the standard position 0°. D/3: M-C Mmin3 Applicable to Threaded only.	Ordering Code FC Changes the thread length. FC=1mm Increment D5-10: M-FC: Mx2 D12, 16: M-FC: Mx2.5 D20: M-FC: Mx2 Applicable to Threaded only. Not applicable to Dicoat® and TiCN treatment.

# Locating Pins for Fixtures

## Tip Shape Selectable, Standard Grade, No Shoulder

Features: For Standard Grade, P Dim. 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**

Type	Material	Hardness	Type	Material	Hardness	Surface Treatment
SELNNA Round	SCM435	Hardening 35~40HRC	D-SLNA Round	SKD11 Equivalent	55HRC~ (Surface 3000HV)	Dicoat® Treated
SELNND Diamond	SCM435	Hardening 35~40HRC	D-SLND Diamond	SKD11 Equivalent	55HRC~ (Surface 3000HV)	Dicoat® Treated
TSELNNA Round	SCM415	Carburized 55HRC~ (depth 0.7~0.8) / Anti-carburizing on Threads				
TSELNND Diamond	SCM415	Carburized 55HRC~ (depth 0.7~0.8) / Anti-carburizing on Threads				

Reference:  $\sin 15^\circ = 0.259$   $\tan 15^\circ = 0.267$   $\sin 30^\circ = 0.5$   $\tan 30^\circ = 0.577$   $\sin 45^\circ = 0.707$   $\tan 45^\circ = 1$   $\sin 60^\circ = 0.866$   $\tan 60^\circ = 1.732$

1 Dicoat® Treated / TiCN Thread Shape

Tip Shape: Select from the diagram on the right.

$e = P/2 \tan 15^\circ + R - (R/\sin 15^\circ)$

Dicoat® Treated items will have the ( ) precision and Thread Shape will be 1.

Only the Shape B Dicoat® Treated items do not come with a center hole.

Part Number	Type	Tip Shape	Dh7	P	B	L Selection	A Selection	E	L1	R	W	Unit Price								
												SELNNA	SELNND	TSELNNA	TSELNND	D-SLNA	D-SLND			
Hardened (Round)	Carburized (Round)	A (Tapered)	6	0	8.0-12.0	5	8	10	*30	6	3	3								
						8	10	12	10	4	3.5									
						10	12	15	12	4	4									
						10T	12	15	15	5	5									
(Diamond)	(Diamond)	B (Taper R)	12	0	14.0-25.0	8	10	12	15	18	15	6	6							
						16	18	20	18	8	8									
						20	22	25	22	8	9									

Angle A\*30 is not applicable to Tip Shape B. Select from Standard Grade, No Shoulder (P.1691).  
B Dimension is selectable from 5 mm ~ for Dicoat® Treated / Diamond Shape.

**Set Screw**

Type	Material	Hardness	Type	Material	Hardness	Surface Treatment
SELNTA Round	SCM435	Hardening 35~40HRC	D-SLNTA Round	SKD11 Equivalent	55HRC~ (Surface 3000HV)	Dicoat® Treated
SELNTD Diamond	SCM435	Hardening 35~40HRC	D-SLNTD Diamond	SKD11 Equivalent	55HRC~ (Surface 3000HV)	Dicoat® Treated
TSELNTA Round	SCM415	Carburized 55HRC~ (depth 0.7~0.8) / Anti-carburizing on Threads				
TSELNTD Diamond	SCM415	Carburized 55HRC~ (depth 0.7~0.8) / Anti-carburizing on Threads				

Reference:  $\sin 15^\circ = 0.259$   $\tan 15^\circ = 0.267$   $\sin 30^\circ = 0.5$   $\tan 30^\circ = 0.577$   $\sin 45^\circ = 0.707$   $\tan 45^\circ = 1$   $\sin 60^\circ = 0.866$   $\tan 60^\circ = 1.732$

1 Dicoat® Treated items will have the ( ) precision.

Tip Shape: Select from the diagram on the right.

$e = P/2 \tan 15^\circ + R - (R/\sin 15^\circ)$

Dicoat® Treated items will have the ( ) precision.

Only the Shape B Dicoat® Treated items do not come with a center hole.

Part Number	Type	Tip Shape	Dh7	P	B	L Selection	A Selection	E	L1	d	R	Applicable Set Screw	W	Unit Price							
														SELNTA	SELNTD	TSELNTA	TSELNTD	D-SLNTA	D-SLNTD		
Hardened (Round)	Carburized (Round)	A (Tapered)	6	0	8.0-12.0	5	8	4	3	M5	3										
						8	10	12	10	4	M5	3.5									
						10	12	15	12	4	M6	4									
						10T	12	15	15	5	M6	5									
(Diamond)	(Diamond)	B (Taper R)	12	0	14.0-25.0	8	10	9	6	M8	6										
						16	18	13	8	M8	8										
						20	22	17	8	M8	9										

Angle A\*30 is not applicable to Tip Shape B. Select from Standard Grade, No Shoulder (P.1691).  
B Dimension is selectable from 5 mm ~ for Dicoat® Treated / Diamond Shape.

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

SELNNA A 16 - P18.0 - B21 - L15 - A60 - E2 (Threaded)  
SELNTA B 10 - P14.0 - B10 - A60 (Set Screw)

Alterations: **P** - **B** - **L** - **A** - **E** - (KC, KD - etc.)

SELNTA A 6 - P8.0 - B14 - A30 - E2 - KD

Alterations	Wear Groove Alterations	Flat Position	Flat Machining	Thread Dia.	Thread Length
Code	MK	KC	KD	MC	FC
Spec.	Drill 4 grooves at B Dimension. The wear and tear of the grooves indicate the degree of wear. Applicable to Hardening, Carburized and Round Shape Products only Applicable when B ≥ 4 Groove Depth: 0.2mm (±0.05mm) Groove Shape: V Groove (90°)	Ordering Code KC Changes the flat position to 90° from the standard position 0°. Applicable to Diamond Shape Type only.	Ordering Code KD Machining on one side. Applicable to Round Shape Type only.	Ordering Code MC Changes the flat position to 90° from the standard position 0°. D/3: M-C Mmin3 Applicable to Threaded only.	Ordering Code FC Changes the thread length. FC=1mm Increment D5-10: M-FC: Mx2 D12, 16: M-FC: Mx2.5 D20: M-FC: Mx2 Applicable to Threaded only. Not applicable to Dicoat® and TiCN treatment.