

# Locating Pins for Fixtures

## Tip Shape Selectable, Standard Grade, Shouldered

**Features:** For Standard Grade, P Dim. Tolerance is  $\pm 0.05$  (for Precision Grade,  $-0.01$  or  $-0.02$ ), concentricity is 0.03 or 0.05 (for Precision Grade, 0.01 or 0.02). Tip shape is selectable. Polishing Relief Groove is smaller than the conventional products to avoid a workpiece getting stuck.

### Threaded

**SELANA** Round  
**SELAND** Diamond  
**TSELANA** Round  
**TSELAND** Diamond

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

**RoHS 10**

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

Type	Material	Hardness	Type	Material	Hardness	Surface Treatment
SELANA	Round	SCM435	R-SLANA	Round	35-40HRC	Hard Chrome Plating
SELAND	Diamond	35-40HRC	R-SLAND	Diamond	SCM435	35-40HRC (Surface 750HV ~)
TSELANA	Round	SCM415	D-SLANA	Round	55HRC~	Dicoat® Treated
TSELAND	Diamond	Carburized 55HRC~ (depth 0.7 ~ 0.8) / Anti-carburizing on Threads	D-SLAND	Diamond	SKD11 Equivalent	55HRC~ (Surface 3000HV)

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

Ⓢ Relief dimensions are reference values.

**Tip Shape Selectable**

Shape A: The center hole remains. P-2tan(A/2) > 0.73 P-2tan(A/2) > 2 (Dicoat®)

Shape B: The center hole remains. e = P/2tan(A/2) + R - (Rsin(A/2))

Part Number		Type	Tip Shape	Dh7	P	B	L	A	E	W	SELANA	SELAND	TSELANA	TSELAND	R-SLANA	R-SLAND	D-SLANA	D-SLAND	Unit Price	
Hardened (Round)	Carburized (Round)	Hard Chrome (Round)	Dicoat (Round)	A (Tapered)	6	0.012	3.0-7.0	5	8	10	6	9	1	1-2						
					8	0	3.0-9.0	5	8	10	12	15	10	11	1.5	1-2				
(Diamond)	(Diamond)	(Diamond)	(Diamond)	B (Taper R)	10T	-0.015	4.5-12.0	(5)	(8)	(10)	12	13	2	1-3						
					12	0	4.5-12.0	(5)	(8)	(10)	12	15	18	13	2	1-3				
					16	-0.018	9.0-13.0	(8)	(10)	12	15	18	20	120						
							13.0-16.0	(10)	12	15	18	20	120							

Ⓢ 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 Ⓢ L dimension in ( ) is not applicable to Diamond Shape and Dicoat® treatment.  
 Ⓢ Angle A°30 is not applicable to Tip Shape B. Select from Standard Grade, Shouldered (P.1689). Ⓢ B Dimension 5 mm ~ will be selected for Dicoat® Treated / TiCN Treated items.

### Set Screw

**SELATA** Round  
**SELATD** Diamond  
**TSELATA** Round  
**TSELATD** Diamond

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

**RoHS 10**

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

Type	Material	Hardness	Type	Material	Hardness	Surface Treatment
SELATA	Round	SCM435	R-SLATA	Round	35-40HRC	Hard Chrome Plating
SELATD	Diamond	35-40HRC	R-SLATD	Diamond	SCM435	35-40HRC (Surface 750HV ~)
TSELATA	Round	SCM415	D-SLATA	Round	55HRC~	Dicoat® Treated
TSELATD	Diamond	Carburized 55HRC~ (depth 0.7 ~ 0.8) / Anti-carburizing on Threads	D-SLATD	Diamond	SKD11 Equivalent	55HRC~ (Surface 3000HV)
			H-SLATA	Round	SKD11	55HRC~ (Surface 3000HV)
			H-SLATD	Diamond	Equivalent	55HRC~ (Surface 3000HV)

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

Ⓢ Relief dimensions are reference values.

**Tip Shape Selectable**

Shape A: The center hole remains. P-2tan(A/2) > 0.73 P-2tan(A/2) > 2 (Dicoat®, TiCN)

Shape B: The center hole remains. e = P/2tan(A/2) + R - (Rsin(A/2))

Part Number		Type	Tip Shape	Dh7	P	B	L	A	E	W	SELATA	SELATD	TSELATA	TSELATD	R-SLATA	R-SLATD	D-SLATA	D-SLATD	H-SLATA	H-SLATD	Unit Price	
Hardened (Round)	Carburized (Round)	Hard Chrome (Round)	Dicoat (Round)	TiCN (Round)	A (Tapered)	6	0.012	3.0-7.0	5	8	9	4	1	M5	1-2							
						8	0	3.0-9.0	5	8	11	5	1.5	M5	1-2							
(Diamond)	(Diamond)	(Diamond)	(Diamond)	(Diamond)	B (Taper R)	10T	-0.015	4.5-12.0	(5)	(8)	(13)	7	2	M6	1-3							
						12	0	4.5-12.0	(5)	(8)	(13)	7	2	M6	1-3							
						16	-0.018	9.0-13.0	(8)	(10)	15	9	3	M8	4							
								13.0-16.0	(10)	19	13	4	M8	5								

Ⓢ 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 Ⓢ Angle A°30 is not applicable to Tip Shape B. Select from Standard Grade, Shouldered (P.1689).  
 Ⓢ B Dimension 5 mm ~ will be selected for Dicoat® Treated / TiCN Treated items.

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

**Type** Tip Shape D

SELANA A 16 - P14.2 - B21 - L15 - A60 - E2  
 SELATA B 8 - P6.0 - B15 - A90

**Alterations** Part Number - P - B - L - A - E - (KC, KD, SC, MC)

SELATA A 6 - P6.8 - B14 - A30 - E2 - SC

Alterations	Wear Groove Alterations	Flat Position	Flat Machining	Wrench Flats	Thread Dia.	Thread Length	Upper Relief Radius Change
<b>Code</b>	MK	KC	KD	SC	MC	FC	RTC
<b>Spec.</b>	Drill 4 grooves at B Dimension. The wear and tear of the grooves indicate the degree of wears. Ⓢ Applicable to Hardening, Carburized and Round Shape Products only Ⓢ Applicable when B ≥ 4 Groove Depth: 0.2mm (±0.05mm) Groove Shape: V Groove (90°)	<b>Ordering Code</b> KC Changes the flat position to 90° from the standard position 0°. Ⓢ Applicable to Diamond Shape Type only.	<b>Ordering Code</b> KD Adds machining on one side. Ⓢ H-P-2 Ⓢ Applicable to Round Shape Type only.	<b>Ordering Code</b> SC Adds wrench flats. H 9   11   13   15   19 H 7   8   11   13   17 Ⓢ Applicable to Round Shape Type only.	<b>Ordering Code</b> MC8 Changes the thread diameter. Ⓢ D/3-M-D Mmin3 Ⓢ Applicable to Threaded only.	<b>Ordering Code</b> FC15 Changes the thread length. FC=1mm increment D6-10 : M-FC-Mx3 D12, 16 : M-FC-Mx2.5 D20 : M-FC-Mx2 Ⓢ Applicable to Threaded only. Ⓢ Not applicable to Dicoat® and TiCN treatment.	<b>Ordering Code</b> RTC1 Changes the relief to the following radius R. Selection) R1 R2 R3 Ⓢ RTC=(H-P)/2 Ⓢ Applicable when B:5