

Locating Pins for Fixtures - Square Head

Tip Shape Selectable

■Features: Square Head Locating Pins that secure workpiece at four points. Suitable for use with workpiece insertion and extraction.

Shouldered



RoHS 10

Type		Material	Hardness
Threaded	Set Screw		
LANQN	LATQN	SCM435	Treated Hardness 35~40HRC
TLANQN	TLATQN	SCM415	Carburized Treated Hardness: 55HRC~(Depth: 0.7 ~ 0.8) / Anti-carburizing on Threads

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

• Threaded
M (Coarse)=D
• Set Screw
Center misalignment between D and P, W: 0.1 or less

Tip Shape
Select from the diagram on the right.

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Tip Shape Selectable

shape A
The center hole remains.
 $P-2E \tan(A/2) \geq 0.73$

shape B
The center hole remains.
 $e = P/2 \tan(A/2) + R - (R/\sin(A/2))$

Part Number		P		W		B		L		A		E		Unit Price	
Type	Tip Shape	Tip Shape	Dh7	0.1mm Increment	0.1mm Increment	1mm Increment	Selection	Selection	Selection	Selection	Selection	(Shape A) 1mm Increment	Selection	LANQN	TLANQN
Hardened (Threaded) LANQN (Set Screw) LATQN (Taper R)	A (Tapered)	6	0 -0.012	7.0	5.0~17.0 (W≤P)	5~30 (B≤Wx3)	5 8 10	30	1~10	8 6 8 9 4 1	M5	1~10	8 6 8 9 4 1	M5	
		8	0 -0.015	7.0~9.0			5 8 10 12 15	60		8 10 11 5 1.5	M5		8 10 11 5 1.5	M5	
		10	0 -0.015	7.0~11.0			8 10 12 15	90		10 12 8 13 7 2	M6		10 12 8 13 7 2	M6	
		12	0 -0.018	9.0~13.0			10 12 15 18	120		12 15 10 15 9 3	M8		12 15 10 15 9 3	M8	
Carburized (Threaded) TLANQN (Set Screw) TLATQN (Taper R)	B (Taper R)	6	0 -0.012	7.0	5.0~17.0 (W≤P)	5~30 (B≤Wx3)	5 8 10	30	1~10	8 6 8 9 4 1	M5	1~10	8 6 8 9 4 1	M5	
		8	0 -0.015	7.0~9.0			5 8 10 12 15	60		8 10 11 5 1.5	M5		8 10 11 5 1.5	M5	
		10	0 -0.015	7.0~11.0			8 10 12 15	90		10 12 8 13 7 2	M6		10 12 8 13 7 2	M6	
		12	0 -0.018	9.0~13.0			10 12 15 18	120		12 15 10 15 9 3	M8		12 15 10 15 9 3	M8	

No Shoulder



RoHS 10

Type		Material	Hardness
Threaded	Set Screw		
LNNQN	LNTQN	SCM435	Treated Hardness 35~40HRC
TLNNQN	TLNTQN	SCM415	Carburized Treated Hardness: 55HRC~(Depth: 0.7 ~ 0.8) / Anti-carburizing on Threads

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shape B
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 $e = P/2 \tan(A/2) + R - (R/\sin(A/2))$

Part Number		P		W		B		L		A		E		Unit Price	
Type	Tip Shape	Tip Shape	Dh7	0.1mm Increment	0.1mm Increment	1mm Increment	Selection	Selection	Selection	Selection	Selection	(Shape A) 1mm Increment	Selection	LNNQN	TLNNQN
Hardened (Threaded) LNNQN (Set Screw) LNTQN (Taper R)	A (Tapered)	6	0 -0.012	9.0~12.0	5.0~30.0 (W≤P)	5~30 (B≤Wx3)	5 8 10	30	1~10	8 6 8 4 3	M5	1~10	8 6 8 4 3	M5	
		8	0 -0.015	11.0~16.0			5 8 10 12 15	60		10 12 8 7 4	M6		10 12 8 7 4	M6	
		10	0 -0.015	13.0~20.0			8 10 12 15	90		12 15 8 7 4	M6		12 15 8 7 4	M6	
		12	0 -0.018	15.0~25.0			10 12 15 18	120		15 10 9 6	M8		15 10 9 6	M8	
Carburized (Threaded) TLNNQN (Set Screw) TLNTQN (Taper R)	B (Taper R)	6	0 -0.012	9.0~12.0	5.0~30.0 (W≤P)	5~30 (B≤Wx3)	5 8 10	30	1~10	8 6 8 4 3	M5	1~10	8 6 8 4 3	M5	
		8	0 -0.015	11.0~16.0			5 8 10 12 15	60		10 12 8 7 4	M6		10 12 8 7 4	M6	
		10	0 -0.015	13.0~20.0			8 10 12 15	90		12 15 8 7 4	M6		12 15 8 7 4	M6	
		12	0 -0.018	15.0~25.0			10 12 15 18	120		15 10 9 6	M8		15 10 9 6	M8	

Ordering Example

Part Number

Type Tip Shape D P W B L A E

LANQN A 6 P7.0 W5.0 B15 L8 A30 E8

LNTQN B 8 P12.0 W10.0 B18 L8 A60 E8

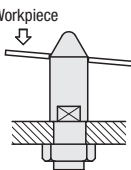
Alterations

Part Number P W B L A E (KC, MC, RTC)

LNNQN A P12.0 W5.0 B10 L8 A30 E5 KC

Alterations	Flat Position	Thread Dia.	Upper Relief Radius Change
Shouldered / No Shoulder	Shouldered / No Shoulder	MC	RTC
Code	KC	MC	RTC
Spec.	Ordering Code KC Changes the flat position to 90° from the standard position 0°.	Ordering Code MC8 Changes the thread diameter. D/3<M<D M min 3 Applicable to Threaded only.	Ordering Code RTC0.2 Changes R1 to R of the Selection below. Selection 0.2 R2 R3 RTC≤(H-P)/2 Applicable to Shouldered only.

Example Suitable for Use with Sloping Workpieces.



Locating Pins for Fixtures - Oval, Precision/Standard Grade

■Features: P and W dimensions are configurable in 0.1mm increment for better fit to the size of oval holes machined on workpieces. Tolerances of P and W dimensions are 0.05 for Precision Type and 0.2 for Standard Type.

Shouldered



RoHS 10

Type		Material	Hardness
Oval, Precision Grade	Oval, Standard Grade		
Threaded	Set Screw	Threaded	Set Screw
LNLNF	LNLTF	SCM435	Treated Hardness 35~40HRC
TLNLNF	TLNLTF	SCM415	Carburized Treated Hardness: 55HRC~(Depth: 0.7 ~ 0.8) / Anti-carburizing on Threads

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Part Number				P	W	B	L						Unit Price					
Type		Dg6		0.1mm Increment	0.1mm Increment	1mm Increment	Selection	L ₁	L	ℓ ₁	H	d	R	Applicable Set Screw	LNLNF LNLATF	TLNLNF TLNLATF	LNLNF NLATF	TLNLNF TLNLATF
Precision Grade (Threaded Hardening) (Set Screw Hardening) (Threaded Carburizing) (Set Screw Carburizing) TLNLNF TLNLATF	Standard Grade (Threaded Hardening) (Set Screw Hardening) (Threaded Carburizing) (Set Screw Carburizing) TLNLNF TLNLATF	6	-0.004 -0.012	5.0~9.0	3.0~17.0 (P≥W+2.0)	5~30 Standard Grade (B≤Wx4) Precision Grade (B≤Wx3)	5 8	8	6	8	9	4	1	M5				
		8	-0.005 -0.014	5.0~11.0			5 12 15	8	10	8	11	5	1.5	M5				
		10		7.0~13.0			10 12 15	10	12	8	13	7	2	M6				
		12	-0.006 -0.017	9.0~15.0			12 15 18	12	15	10	15	9	3	M6				
		16		13.0~19.0			15 18 20	12	18	10	19	13	4	M8				

No Shoulder



RoHS 10

Type		Material	Hardness
Oval, Precision Grade	Oval, Standard Grade		
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Part Number				P	W	B	L					R	Applicable Set Screw	Unit Price			
Type		Dg6		0.1mm Increment	0.1mm Increment	1mm Increment	Selection	L ₁	L	ℓ ₁	d			L ₁ N ₁ N ₁ F	TL ₁ N ₁ N ₁ F	N ₁ N ₁ F	TL ₁ N ₁ N ₁ F
Precision Grade (Threaded Hardening) L ₁ N ₁ N ₁ F L ₁ N ₁ N ₁ F (Threaded Carburizing) TL ₁ N ₁ N ₁ F TL ₁ N ₁ N ₁ F	Standard Grade (Threaded Hardening) N ₁ N ₁ F N ₁ N ₁ F (Set Screw Carburizing) TL ₁ N ₁ N ₁ F TL ₁ N ₁ N ₁ F	6	-0.004 -0.012	10.0~12.0	D+2≤W≤P-2	5~30 Standard Grade (B≤Wx4) Precision Grade (B≤Wx3)	5 8	8	6	8	4	3	M5				
		8	-0.005 -0.014	12.0~16.0			5 12 15	8	10	8	5	3	M5				
		10	-0.005 -0.014	14.0~20.0			10 12 15	10	12	8	7	3	M6				
		12	-0.006 -0.017	16.0~24.0			12 15 18	12	15	10	9	5	M8				
16				20.0~32.0			15 18 20	12	18	10	13	6	M8				

Ordering Example

Part Number

Type Tip Shape D P W B L

LNLNF A 10 P11.8 W8.8 B10 L10

TLNLNF B 8 P12.0 W10.0 B15 L12

Alterations

Part Number P W B L (KC, MC, RTC)

LNLNF A P7.8 W5.8 B5 L10 KC

Alterations	Flat Position	Thread Dia.	Upper Relief Radius Change	Tip Angle Change
Shouldered	Shouldered	MC	RTC	RC
Code	KC	MC	RTC	RC
Spec.	Ordering Code KC Changes the flat position to 90° from the standard position 0°. Applicable to Shouldered Type only.	Ordering Code MC8 Changes the thread diameter. D/3<M<D M min 3 Applicable to Threaded only.	Ordering Code RTC0.2 Changes R1 to R of the Selection below. Selection 0.2 R2 R3 RTC≤(H-P)/2 Applicable to Shouldered Type only.	Ordering Code RC60 Changes the tip angle. Selection 60°, 90°, 120°