

Locating Pins

APQ-R Large Head

3D CAD is available online.

Type	Coating	Material	Hardness
APQ	Standard NAAMS None - Plain T - TiN	8620 Alloy Steel (JIS SNCM220)	Carburized 58-62 HRC min. (Depth 0.5-0.7 after Grinding)
APQRL	A Configurable P - Plain T - TiN		

Tolerance			
Dim.	Tol.	Finish (Ra)	Geometric
0.0	±0.3	6.0 µm	⊥ 0.015 T.I.R to Datum A & B
0.00	±0.03	3.0 µm	∥ 0.03 T.I.R
0.000	±0.015	1.6 µm	⊙ 0.03 T.I.R

Tip Shape Selection		
A Shape	Bullet	
B Shape	Half Bullet	
C Shape	Sphere	

$$L \text{ ref.} = 48 + A + \sqrt{D \left(C - \frac{D}{4} \right)}$$

Standard NAAMS Pins													
Type	A Head Callout	A Lead Length								Retractable	Coating	B Rad	C Rad
		10 mm	15 mm	25 mm	35 mm	45 mm	55 mm	65 mm	75 mm				
APQ	16	1	2	3	4	5	6	7	8	R - Retractable	None - Plain T - TiN	2.0	48.0
	18	1	2	3	4	5	6	7	8				38.0
	20	1	2	3	4	5	6	7	8				50.0
	25	1	2	3	4	5	6	7	8				
	30	1	2	3	4	5	6	7	8				
	35	1	2	3	4	5	6	7	8				
	40	1	2	3	4	5	6	7	8				

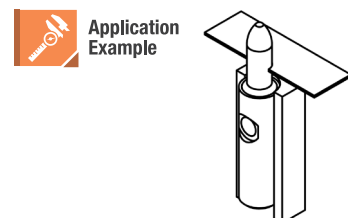
Standard NAAMS specifications are controlled by the NAAMS organization and the latest version of these products will be produced in compliance to: www.naamsstandards.org.

Configurable NAAMS (A Configurable)									
Type	Coating	Tip Shape	D Head Callout	A Lead Length (1 mm Inc.)	B Rad	C Rad			
						Tip A	Tip B	Tip C	
APQRL	P - Plain T - TiN	A B C	16	5-100	2.0	48.0	24.0	D/2	
			18			38.0	19.0		
			20			50.0	25.0		
			25						
			30						
			35						
	40								

Part Number Example

Standard: Part Number - D - A - Retractable - Coating
 APQ - 18 - 4 - R - T

Configurable: Part Number - Coating - Tip Shape - D - A
 APQRL - T - A - 19 - A42



Locating Pins

APE-R Small Head

3D CAD is available online.

Type	Retractable	Coating	Material	Hardness
APE	Standard NAAMS R - Front Hole S - Side Hole	None - Plain T - TiN	8620 Alloy Steel (JIS SNCM220)	Carburized 58-62 HRC min. (Depth 0.5-0.7 after Grinding)
APERS	A Configurable Front Hole	P - Plain T - TiN		
APESS	A Configurable Side Hole	P - Plain T - TiN		

Tolerance			
Dim.	Tol.	Finish (Ra)	Geometric
0.0	±0.3	6.0 µm	⊥ 0.015 T.I.R to Datum A & B
0.00	±0.03	3.0 µm	∥ 0.03 T.I.R
0.000	±0.015	1.6 µm	⊙ 0.03 T.I.R

Tip Shape Selection		
A Shape	Bullet	
B Shape	Half Bullet	
C Shape	Sphere	

$$L \text{ ref.} = 53 + A + \sqrt{D \left(C - \frac{D}{4} \right)}$$

Standard NAAMS																
Type	E Flat Callout (Actual)	A Lead Length									Retractable	Coating (Optional)	D Diameter	B Rad	C Rad	
		10 mm	15 mm	25 mm	35 mm	45 mm	55 mm	65 mm	75 mm	85 mm						95 mm
APE	06 (5.85)	1	2	3	4	5	6	-	-	-	-	R - Front Hole S - Side Hole	None - Plain T - TiN	7.09	1.0	18.0
	08 (7.85)	1	2	3	4	5	6	7	8	-	-			8.81		24.0
	10 (9.85)	1	2	3	4	5	6	7	8	9	0			10.63	2.0	30.0
	13 (12.85)	1	2	3	4	5	6	7	8	9	0			13.46		39.0

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Configurable NAAMS (A Configurable)										
Type	Coating	Tip Shape	E Flat Callout (Actual)	A Lead Length (1 mm Inc.)	D Diameter	B Rad	C Rad			
							Tip A	Tip B	Tip C	
APERS (Front Hole) APESS (Side Hole)	P - Plain T - TiN	A B C	06 (5.85)	10-55	7.09	1.0	18.0	9.0	D/2	
			08 (7.85)	10-75	8.81		24.0	12.0		
			10 (9.85)	10-100	10.63	30.0	15.0			
			13 (12.85)		13.46	39.0	19.5			

Part Number Example

Standard: Part Number - D - A - Retractable - Coating
 APE - 08 - 4 - R - T

Configurable: Part Number - Coating - Tip Shape - D - A
 APERS - P - C - 10 - A22
 APERS - T - A - 8 - A42

