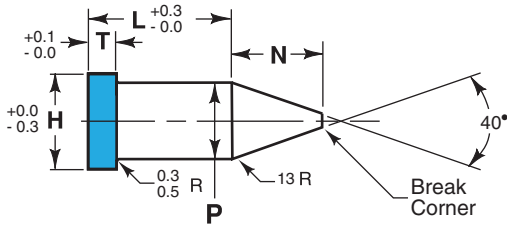
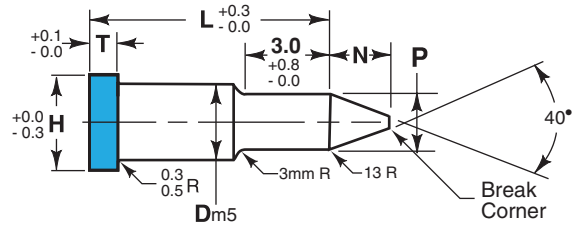


Sur-Align Straight (SAPQ)



Steel: M2 Rc 60-63
TOLERANCES
 P $+0.01$ -0.00 $\text{\textcircled{C}}$ 0.01 P to D
 Manufactured to ISO and NAPMA standards where applicable.

Sur-Align Nibbed (SAPN)

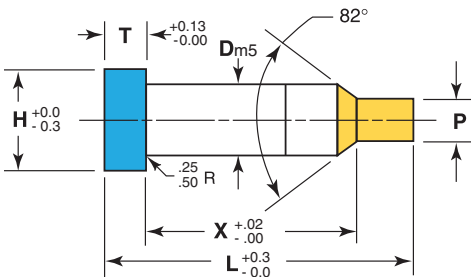


Ordering Example: Qty Steel Type Code L P Dim. Alt.
 10 M2 SAPQ 22 x 5.50 RL=29
 20 M2 SAPN 025 x 25 x 24.50

Sur-Align Pilots prevent movement. Reduce standard pilot deflection by mounting Sur-Align in your guide stripper plate.

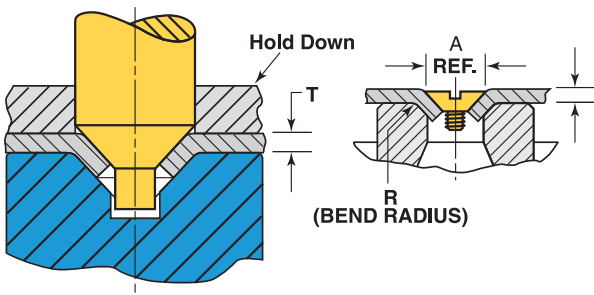
Type	Range P	Max N	Head		Lengths L								Shank			Min P	Range P	Max N
			T	H	16	20	22	25	28	32	35	Type	D	Code				
SAPQ	3.00 – 4.00	4	5	7	●	●	●	●	●	●	●	●	SAPN004	4	004	1.55	1.95 – 3.99	4
SAPQ	4.01 – 5.00	5	5	8	●	●	●	●	●	●	●	●	SAPN005	5	005	1.55	2.65 – 4.99	5
SAPQ	5.01 – 6.00	6	5	9	●	●	●	●	●	●	●	●	SAPN006	6	006	2.10	3.40 – 5.99	6
SAPQ	6.01 – 8.00	7	5	11	●	●	●	●	●	●	●	●	SAPN008	8	008	2.10	4.10 – 7.99	7
SAPQ	8.01 – 10.00	8	5	13	●	●	●	●	●	●	●	●	SAPN010	10	010	2.10	4.85 – 9.99	8
SAPQ	10.01 – 13.00	10	5	16	●	●	●	●	●	●	●	●	SAPN013	13	013	3.15	6.30 – 12.99	10
SAPQ	13.01 – 16.00	15	5	19	●	●	●	●	●	●	●	●	SAPN016	16	016	5.95	9.95 – 15.99	15
SAPQ	16.01 – 20.00	20	5	23	●	●	●	●	●	●	●	●	SAPN020	20	020	5.95	13.60 – 19.99	20
					●	●	●	●	●	●	●	●	SAPN025	25	025	7.95	17.25 – 24.99	25
					●	●	●	●	●	●	●	●	SAPN032	32	032	9.95	20.85 – 31.99	30

Any overall length within catalog range no extra cost Specify "RL" plus length.



Shank D M4	Code No.	Head		Lengths								Point	
		H	T	38	45	50	56	63	71	80	90		100
6.0	SCS-006	9	5	●	●	●	●	●	●	●	●	●	1.0 – 3.0
8.0	SCS-008	11	5	●	●	●	●	●	●	●	●	●	1.9 – 4.0
10.0	SCS-010	13	5		●	●	●	●	●	●	●	●	2.4 – 5.0
13.0	SCS-013	16	5			●	●	●	●	●	●	●	3.6 – 6.5
16.0	SCS-016	19	5				●	●	●	●	●	●	5.2 – 8.2
20.0	SCS-020	23	5					●	●	●	●	●	7.0 – 10.0
25.0	SCS-025	28	5						●	●	●	●	8.0 – 12.5

Ordering Example:
 Qty Code No. L P X = Y
 6 SCS013 x 56 x 3.60 x = 45 80 degrees



Countersink Punches

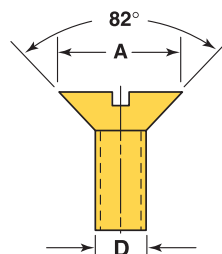
Steel: M2 Rc 60-63
TOLERANCES
 Heads Drawn Rc 40-55
 P $+0.01$ -0.00 $\text{\textcircled{C}}$.01 P to D
 Manufactured to ISO and NAPMA standards where applicable.

Nominal Screw Size	A Max.	D
M3	3.0	6.72
M4	4.0	8.96
M5	5.0	11.20
M6	6.0	13.44
M8	8.0	17.92
M10	10.0	22.40
M12	12.0	26.88
M16	16.0	33.60
M20	20.0	40.32

To produce best results with countersink punches, we recommend this method. As an additional feature, the stripper plate may be made of urethane or of a steel plate faced with urethane. As the urethane is compressed, it will flow along the angle of the countersink punch keeping the perforated and formed material flat and distortion free.

"C" = Co/Sink to theoretical sharp corner
 "T" = Material Thickness
 "A" = Screw Head Diameter
FORMULA TO CALCULATE "C"
 $.9T + A = C^*$

*This will result in an approximate flush screw mount.



Standard Alterations are changes that are beyond the ranges listed in the catalog that can be altered for a minimal charge. See page 37.