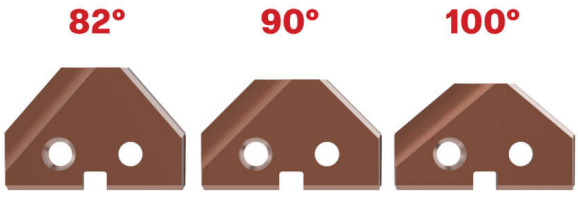
T-A Pro Form Inserts

PRODUCT CATALOG





ALLIED MACHINE & ENGINEERING

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T-A Pro Form Inserts

Countersink Specs

T-A Pro Drill Form Inserts

TA	C	F	0	–	90DEG
	Insert Substrate	Style	Series		Form Type
	C = Carbide **X** = High-speed steel (cobalt)	**F** = Form Insert	**Y** **Z** **0** **1** **2** **3**		**82DEG** = 82° form angle **90DEG** = 90° form angle **100DEG** = 100° form angle

Metric Screw Countersinks

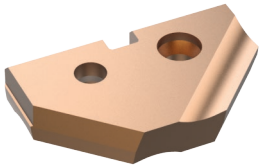
		Insert		Metric Screw Sizes										
A_1 (Form)	Series	D_2 - D_1 mm	D_2 - D_1 inch	M3	M4	M5	M6	M8	M10	M12	M14	M16	M20	M24
90°	Y	3.05 - 11.09	0.1200 - 0.4368											
	Z	3.05 - 12.69	0.1200 - 0.4998											
	0	6.22 - 17.64	0.2450 - 0.6946											
	1	10.29 - 24.37	0.4050 - 0.9596											
	2	12.70 - 35.04	0.5000 - 1.3797											
	3	15.88 - 47.80	0.6250 - 1.8820											

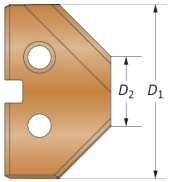
Imperial Screw Countersinks

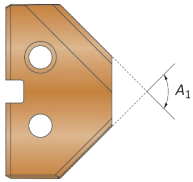
		Insert		Imperial Screw Sizes											
A_1 (Form)	Series	D_2 - D_1 mm	D_2 - D_1 inch	#6	#8	#10	#12	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"
82°	Y	3.43 - 11.09	0.1350 - 0.4368													
	Z	3.43 - 12.69	0.1350 - 0.4998													
	0	6.22 - 17.64	0.2450 - 0.6946													
	1	9.53 - 24.37	0.3750 - 0.9596													
	2	14.22 - 35.04	0.5600 - 1.3797													
	3	15.88 - 47.80	0.6250 - 1.8820													
100°	Y	3.30 - 11.09	0.1300 - 0.4368													
	Z	3.30 - 12.69	0.1300 - 0.4998													
	0	6.10 - 17.64	0.2400 - 0.6946													
	1	8.89 - 24.37	0.3500 - 0.9596													
	2	12.70 - 35.04	0.5000 - 1.3797													
	3	15.88 - 47.80	0.6250 - 1.8820													

T-A Pro Form Inserts

Countersink and Chamfer Inserts







Countersink and Chamfer Form Inserts

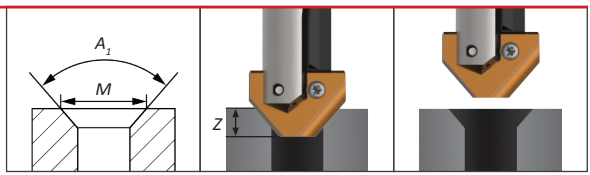
Insert					Part No.		
A_1 (Form)			D_2 - D_1		Carbide	HSS	Stub Holders*
Countersink	Chamfer	Series	mm	inch	AM300®	AM200®	Part No.
82°	—	Y	3.43 - 11.09	0.1350 - 0.4368	TACFY-82DEG	TAXFY-82DEG	HTAYx01-xxxx
		Z	3.43 - 12.69	0.1350 - 0.4998	TACFZ-82DEG	TAXFZ-82DEG	HTAZx01-xxxx
		0	6.22 - 17.64	0.2450 - 0.6946	TACF0-82DEG	TAXF0-82DEG	HTA0x01-xxxx
		1	9.53 - 24.37	0.3750 - 0.9596	TACF1-82DEG	TAXF1-82DEG	HTA1x01-xxxx
		2	14.22 - 35.04	0.5600 - 1.3797	TACF2-82DEG	TAXF2-82DEG	HTA2x01-xxxx
		3	15.88 - 47.80	0.6250 - 1.8820	TACF3-82DEG	TAXF3-82DEG	HTA3x01-xxxx
90°	2x45°	Y	3.05 - 11.09	0.1200 - 0.4368	TACFY-90DEG	TAXFY-90DEG	HTAYx01-xxxx
		Z	3.05 - 12.69	0.1200 - 0.4998	TACFZ-90DEG	TAXFZ-90DEG	HTAZx01-xxxx
		0	6.22 - 17.64	0.2450 - 0.6946	TACF0-90DEG	TAXF0-90DEG	HTA0x01-xxxx
		1	10.29 - 24.37	0.4050 - 0.9596	TACF1-90DEG	TAXF1-90DEG	HTA1x01-xxxx
		2	12.70 - 35.04	0.5000 - 1.3797	TACF2-90DEG	TAXF2-90DEG	HTA2x01-xxxx
		3	15.88 - 47.80	0.6250 - 1.8820	TACF3-90DEG	TAXF3-90DEG	HTA3x01-xxxx
100°	—	Y	3.30 - 11.09	0.1300 - 0.4368	TACFY-100DEG	TAXFY-100DEG	HTAYx01-xxxx
		Z	3.30 - 12.69	0.1300 - 0.4998	TACFZ-100DEG	TAXFZ-100DEG	HTAZx01-xxxx
		0	6.10 - 17.64	0.2400 - 0.6946	TACF0-100DEG	TAXF0-100DEG	HTA0x01-xxxx
		1	8.89 - 24.37	0.3500 - 0.9596	TACF1-100DEG	TAXF1-100DEG	HTA1x01-xxxx
		2	12.70 - 35.04	0.5000 - 1.3797	TACF2-100DEG	TAXF2-100DEG	HTA2x01-xxxx
		3	15.88 - 47.80	0.6250 - 1.8820	TACF3-100DEG	TAXF3-100DEG	HTA3x01-xxxx

NOTE: Only for use with stub holders.
*See holder nomenclature on page A25: 8 for holder body diameters (x) and shanks (xxxx).
Series Y-2: inserts sold in multiples of 2. | Series 3: inserts sold in multiples of 1.

Countersink (82°, 90°, and 100°)

$$\text{Z Depth } (Z) = \left(\frac{M - D_2}{2 \cdot (\tan(A_1 / 2))}\right)$$

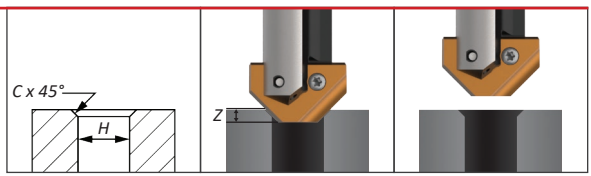
M = Desired major diameter
D_2 = Insert diameter at touch off flat
A_1 = Included angle of insert



Chamfer (90°)

$$\text{Z Depth } (Z) = \left(\frac{(H + (2 \cdot C)) - D_2}{2}\right)$$

H = Existing hole diameter
C = Radial chamfer size
D_2 = Insert diameter at touch off flat



A25: 55 A25: 61

Key on A25: 2

Recommended Drilling Data | Metric (mm)

T-A PRO FORM INSERTS | HIGH-SPEED STEEL

ISO	Material		Y / Z Series 9.50 mm - 12.69 mm	0 Series 12.70 mm - 17.64 mm	1 Series 17.65 mm - 24.37 mm	2 Series 24.38 mm - 35.04 mm	3 Series 35.05 mm - 47.80 mm
P	Low-Carbon Steel	m/min	45 - 70	45 - 70	45 - 70	60 - 75	60 - 75
		mm/rev	0.18 - 0.25	0.18 - 0.25	0.25 - 0.38	0.28 - 0.43	0.30 - 0.48
	Alloy Steel	m/min	40 - 65	40 - 65	40 - 65	45 - 70	45 - 70
		mm/rev	0.18 - 0.25	0.15 - 0.23	0.25 - 0.36	0.28 - 0.41	0.30 - 0.43
M	Stainless Steel	m/min	65 - 85	65 - 85	65 - 95	65 - 95	65 - 105
		mm/rev	0.18 - 0.25	0.18 - 0.25	0.20 - 0.36	0.20 - 0.36	0.25 - 0.41
K	Cast Iron	m/min	55 - 110	55 - 110	55 - 110	70 - 120	70 - 120
		mm/rev	0.20 - 0.30	0.20 - 0.30	0.20 - 0.48	0.23 - 0.48	0.33 - 0.53
N	Nonferrous	m/min	75 - 190	60 - 170	65 - 220	105 - 225	135 - 260
		mm/rev	0.18 - 0.25	0.18 - 0.25	0.25 - 0.38	0.28 - 0.43	0.30 - 0.48

T-A PRO FORM INSERTS | CARBIDE

ISO	Material		Y / Z Series 9.50 mm - 12.69 mm	0 Series 12.70 mm - 17.64 mm	1 Series 17.65 mm - 24.37 mm	2 Series 24.38 mm - 35.04 mm	3 Series 35.05 mm - 47.80 mm
P	Low-Carbon Steel	m/min	60 - 115	60 - 115	60 - 115	75 - 120	75 - 120
		mm/rev	0.18 - 0.28	0.18 - 0.28	0.28 - 0.41	0.30 - 0.46	0.33 - 0.51
	Alloy Steel	m/min	60 - 105	60 - 105	60 - 105	70 - 115	70 - 115
		mm/rev	0.18 - 0.28	0.18 - 0.28	0.28 - 0.43	0.30 - 0.48	0.30 - 0.48
M	Stainless Steel	m/min	75 - 100	75 - 100	75 - 115	75 - 115	75 - 120
		mm/rev	0.18 - 0.25	0.18 - 0.25	0.20 - 0.36	0.20 - 0.36	0.25 - 0.41
K	Cast Iron	m/min	105 - 195	105 - 195	105 - 195	130 - 210	130 - 210
		mm/rev	0.23 - 0.33	0.23 - 0.33	0.23 - 0.51	0.25 - 0.51	0.36 - 0.56
N	Nonferrous	m/min	105 - 215	105 - 245	105 - 275	120 - 290	120 - 290
		mm/rev	0.18 - 0.28	0.18 - 0.28	0.28 - 0.41	0.30 - 0.46	0.33 - 0.51

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