

SUPER COBALT T-15 FLAT BOTTOM SPADE DRILL INSERTS

SIZE SERIES **Y, Z, 0, 1, 2**

Series	Diameter		EDP No.	
	Fractional	Decimal	TiAlN	TiN
Y	3/8"	.3750"	SF15024	SF05024
	13/32"	.4063"	SF15026	SF05026
Z	7/16"	.4375"	SF15028	SF05028
	15/32"	.4688"	SF15030	SF05030
	1/2"	.5000"	SF15032	SF05032
0	17/32"	.5313"	SF15034	SF05034
	9/16"	.5625"	SF15036	SF05036
	19/32"	.5938"	SF15038	SF05038
	5/8"	.6250"	SF15040	SF05040
	21/32"	.6563"	SF15042	SF05042
	11/16"	.6875"	SF15044	SF05044
1	23/32"	.7188"	SF15046	SF05046
	3/4"	.7500"	SF15048	SF05048
	25/32"	.7813"	SF15050	SF05050
	13/16"	.8125"	SF15052	SF05052
	27/32"	.8438"	SF15054	SF05054
	7/8"	.8750"	SF15056	SF05056
	29/32"	.9063"	SF15058	SF05058
	15/16"	.9375"	SF15060	SF05060
2	31/32"	.9688"	SF15062	SF05062
	1"	1.0000"	SF15100	SF05100
	1-1/32"	1.0313"	SF15102	SF05102
	1-1/16"	1.0625"	SF15104	SF05104
	1-3/32"	1.0938"	SF15106	SF05106
	1-1/8"	1.1250"	SF15108	SF05108
	1-5/32"	1.1563"	SF15110	SF05110
	1-3/16"	1.1875"	SF15112	SF05112
	1-7/32"	1.2188"	SF15114	SF05114
	1-1/4"	1.2500"	SF15116	SF05116
	1-9/32"	1.2813"	SF15118	SF05118
	1-5/16"	1.3125"	SF15120	SF05120
	1-11/32"	1.3438"	SF15122	SF05122
	1-3/8"	1.3750"	SF15124	SF05124



CUTTING CONDITION

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Material	Material Hardness (Bhn)	Speed (SFM)		Feed			
		TiN	TiAlN	Ø3/8" ~1/2"	Ø33/64" ~11/16"	Ø45/64" ~15/16"	Ø31/32" ~1*3/8"
Free machining Steel 1213, 12L13, 1215 12L14, 1118 etc	100 - 150	165	220	0.005	0.007	0.010	0.013
	150 - 200	150	215	0.005	0.007	0.010	0.013
	200 - 250	135	190	0.004	0.007	0.010	0.012
Low Carbon Steel 1015, 1020, 1140 1025 etc	85 - 125	140	195	0.005	0.007	0.009	0.012
	125 - 175	135	190	0.005	0.007	0.009	0.012
	175 - 225	125	180	0.004	0.006	0.008	0.011
Medium Carbon Steel 1035, 1050, 1045 1055, 1140 etc	225 - 275	115	175	0.004	0.006	0.008	0.011
	125 - 175	135	195	0.004	0.007	0.009	0.011
	175 - 225	125	180	0.004	0.006	0.007	0.011
Structural Steel A36, A516, A182 etc	225 - 275	115	165	0.004	0.006	0.007	0.011
	275 - 325	105	150	0.003	0.005	0.007	0.009
	100 - 150	115	165	0.004	0.007	0.009	0.011
Cast Iron / S,G Iron A48-76 GR30/GR45 A536-72 60-40-18 A220-76 GR40010 etc	150 - 250	100	140	0.004	0.007	0.008	0.009
	250 - 350	80	115	0.003	0.006	0.007	0.008
	120 - 150	145	215	0.005	0.010	0.014	0.016
Alloy Steel 8620, 4130, 4137 4140, 6150 etc	150 - 200	130	190	0.005	0.008	0.011	0.016
	200 - 220	110	165	0.005	0.008	0.010	0.014
	220 - 260	95	150	0.004	0.006	0.008	0.010
Tool Steel H13, H21, A2, S1 etc	260 - 320	80	120	0.004	0.005	0.006	0.008
	125 - 175	125	165	0.005	0.006	0.008	0.011
	175 - 225	115	150	0.004	0.006	0.008	0.011
High Temp. Alloy Hastelloy B, Inconel etc	225 - 275	105	145	0.004	0.005	0.007	0.011
	275 - 325	100	140	0.003	0.005	0.007	0.009
	325 - 375	90	120	0.003	0.005	0.007	0.009
High Strength Alloy 9840, 4340, 4330V etc	150 - 200	65	90	0.003	0.005	0.006	0.008
	200 - 250	45	75	0.003	0.005	0.006	0.008
	140 - 220	20	30	0.003	0.005	0.006	0.008
Aluminium 2014, 6061, 7075 etc	220 - 310	15	25	0.003	0.004	0.006	0.006
	225 - 300	65	90	0.004	0.006	0.007	0.008
	300 - 350	45	70	0.003	0.006	0.007	0.008
Stainless Steel 310, 316, 410, 330 etc	350 - 400	40	60	0.003	0.005	0.006	0.007
	30	520	700	0.007	0.011	0.014	0.017
	180	255	390	0.007	0.011	0.014	0.016
	135 - 185	60	90	0.005	0.007	0.008	0.009
	185 - 275	50	80	0.004	0.006	0.007	0.009

RPM = revolution per minute (rev/min)

SFM = surface feet per minute (ft/min)

DIA = diameter of drill (inch)

IPR = feed rate (in/rev)

IPM = inch per minute penetration rate

*** Formulas :**

$$\text{SFM} = (\text{RPM}) \cdot (.262) \cdot (\text{DIA.})$$

$$\text{IPM} = (\text{RPM}) \cdot (\text{IPR})$$

$$\text{RPM} = \frac{(\text{SFM}) \cdot (3.82)}{(\text{DIA.})}$$

The recommendations for speeds, feeds and other parameters presented in this chart are nominal recommendations and should be considered only as good starting points. Speed and feed reductions (20% reduction in speed and 10% reduction in feed) are recommended.

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