

Note
Operating parameters: See Technical section

ASME
B94.11M

DIN
1897

M42
Cobalt

135° Split

Helix
Regular
21° to 34°

Straight
Shank

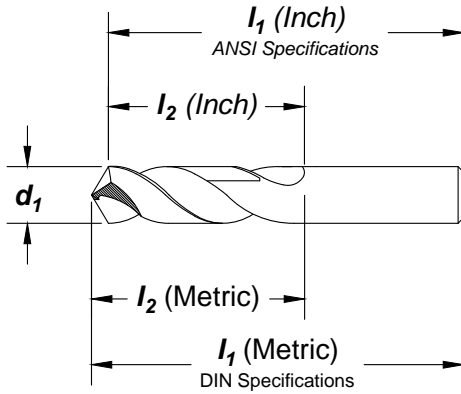
Surface
Treatment

Straw
Oxide

TiCN

Screw Machine Length

Cobalt



Feature:

Highly heat resistant substrate for tough to machine materials.

drill diameter			overall length		flute length		order number		
fraction	wire/letter	mm	decimal equivalent	in	mm	in	mm	2133 straw oxide	2133-TC TiCN
	*60		.0400	1.375		.500		C14501	—
	*59		.0410	1.375		.500		C14502	—
	*58		.0420	1.375		.500		C14504	—
	*57		.0430	1.375		.500		C14505	—
	*56		.0465	1.375		.500		C14508	—
*3/64			.0469	1.375		.500		C14509	—
		*1.2	.0472		30.00		8.00	C14835	—
	*55		.0520	1.625		.625		C14513	—
	*54		.0550	1.625		.625		C14515	—
		*1.5	.0591		32.00		9.00	C14838	—
	*53		.0595	1.625		.625		C14519	—
1/16			.0625	1.625		.625		C14521	C14846
		1.6	.0630		34.00		10.00	C14748	—
	52		.0635	1.688		.688		C14523	—
	51		.0670	1.688		.688		C14526	—
	50		.0700	1.688		.688		C14528	—
	49		.0730	1.688		.688		C14531	—
	48		.0760	1.688		.688		C14533	—
5/64			.0781	1.688		.688		C14535	—
	47		.0785	1.750		.750		C14536	—
		2.0	.0787		38.00		12.00	C14800	C14749
	46		.0810	1.750		.750		C14539	—
	45		.0820	1.750		.750		C14540	—
	44		.0860	1.750		.750		C14543	—
	43		.0890	1.750		.750		C14546	—
	42		.0935	1.750		.750		C14549	—
3/32			.0938	1.750		.750		C14550	C14848
		2.4	.0945		43.00		14.00	C14790	—
	41		.0960	1.813		.813		C14552	—
	40		.0980	1.813		.813		C14554	—
		2.5	.0984	1.693	43.00	.551	14.00	C14820	C14750

*Not split point.

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Benefits of 2133 Cobalt Screw Machine Drill

- Cobalt provides high heat resistance for tough applications.
- Short flutes provide enhanced rigidity and drill more accurate holes.

Styles: 2133, 2133-TC (continued)

drill diameter		overall length				flute length		order number	
fraction	d1 wire/letter	mm	decimal equivalent	in	mm	in	mm	2133 straw oxide	2133-TC TiCN
	39		.0995	1.813		.813		C14556	-
	38		.1015	1.813		.813		C14557	-
		2.6	.1024	1.693	43.00	.551	14.00	C14840	C14730
	37		.1040	1.813		.813		C14559	-
	36		.1065	1.813		.813		C14561	-
7/64			.1094	1.813		.813		C14562	-
	35		.1100	1.875		.875		C14563	-
		2.8	.1102		46.00		16.00	C14841	-
	34		.1110	1.875		.875		C14565	-
	33		.1130	1.875		.875		C14566	-
	32		.1160	1.875		.875		C14568	-
		3.0	.1181		46.00		16.00	C14821	C14751
	31		.1200	1.875		.875		C14570	-
		3.1	.1220		49.00		18.00	C14822	C14752
1/8			.1250	1.875		.875		C14572	C14850
		3.2	.1260		49.00		18.00	C14801	C14753
	30		.1285	1.938		.938		C14574	-
		3.3	.1299		49.00		18.00	C14802	C14754
	29		.1360	1.938		.938		C14577	-
		3.5	.1378		52.00		20.00	C14803	C14755
	28		.1405	1.938		.938		C14579	-
9/64			.1406	1.938		.938		C14580	-
	27		.1440	2.063		1.000		C14582	-
		3.7	.1457		52.00		20.00	C14823	-
	26		.1470	2.063		1.000		C14584	-
	25		.1495	2.063		1.000		C14585	-
	24		.1520	2.063		1.000		C14587	-
	23		.1540	2.063		1.000		C14589	-
5/32			.1562	2.063		1.000		C14590	C14852
	22		.1570	2.125		1.063		C14591	-
		4.0	.1575		55.00		22.00	C14824	C14756
	21		.1590	2.125		1.063		C14593	-
	20		.1610	2.125		1.063		C14594	-
		4.1	.1614		55.00		22.00	C14825	C14757
		4.2	.1654		55.00		22.00	C14804	C14758
	19		.1660	2.125		1.063		C14597	-
	18		.1695	2.125		1.063		C14599	-
11/64			.1719	2.125		1.063		C14600	-
	17		.1730	2.188		1.125		C14601	-
	16		.1770	2.188		1.125		C14603	-
		4.5	.1772		58.00		24.00	C14805	C14759
	15		.1800	2.188		1.125		C14605	-
		4.6	.1811		58.00		24.00	C14842	C14728
	14		.1820	2.188		1.125		C14607	-
	13		.1850	2.188		1.125		C14608	-
3/16			.1875	2.188		1.125		C14610	C14854
		4.8	.1890		62.00		26.00	C14806	C14760
	12		.1890	2.250		1.188		C14611	-
	11		.1910	2.250		1.188		C14613	-

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Material Reference	Steel (HRC)				Stainless Steel			Cast Iron (HRC)		Aluminum and Non-Ferrous	Hi-Temp Alloy		Hardened Steel (HRC)
	Low Carbon		Alloy		Austenitic	Martensitic	PH	Gray	Nodular		Ni, Co, Fe Based Super Alloy	Titanium	
Hardness	13-38	>38	16-38	> 38	300 Series	400 series		18-22	22-32				>45
Straw	◆		◆		◆	◆		◆	◆				
TiCN	☆		☆		☆	☆		☆	☆	☆	◆	◆	

☆ = Best Performance ◆ = Acceptable



Screw Machine Length

Cobalt

fraction	drill diameter		decimal equivalent	overall length		flute length		order number	
	d ₁ wire/letter	mm		l ₁ in	mm	l ₂ in	mm	2133 straw oxide	2133-TC TiCN
		4.9	.1929		62.00		26.00	C14826	-
	10		.1935	2.250		1.188		C14615	-
	9		.1960	2.250		1.188		C14616	-
		5.0	.1969		62.00		26.00	C14827	C14761
	8		.1990	2.250		1.188		C14618	-
		5.1	.2008		62.00		26.00	C14807	C14762
	7		.2010	2.250		1.188		C14620	-
13/64			.2031	2.250		1.188		C14621	-
	6		.2040	2.375		1.250		C14622	-
	5		.2055	2.375		1.250		C14624	-
	4		.2090	2.375		1.250		C14626	-
	3		.2130	2.375		1.250		C14628	-
		5.5	.2165		66.00		28.00	C14828	C14786
7/32			.2188	2.375		1.250		C14630	C14856
		5.6	.2205		66.00		28.00	C14843	-
	2		.2210	2.438		1.313		C14632	-
		5.7	.2244		66.00		28.00	C14844	-
	1		.2280	2.438		1.313		C14634	-
	A		.2340	2.438		1.313		C14637	-
15/64			.2344	2.438		1.313		C14638	-
		6.0	.2362		66.00		28.00	C14829	C14763
	B		.2380	2.500		1.375		C14640	-
		6.1	.2402		70.00		31.00	C14869	-
	C		.2420	2.500		1.375		C14642	-
	D		.2460	2.500		1.375		C14644	-
1/4, E	E		.2500	2.500		1.375		C14646	C14858
		6.5	.2559		70.00		31.00	C14808	C14764
	F		.2570	2.625		1.438		C14649	-
		6.6	.2598		70.00		31.00	C14809	-
	G		.2610	2.625		1.438		C14651	-
17/64			.2656	2.625		1.438		C14653	-
	H		.2660	2.688		1.500		C14654	-
		6.8	.2677		74.00		34.00	C14810	C14765
	I		.2720	2.688		1.500		C14657	-
		7.0	.2756		74.00		34.00	C14830	C14766
	J		.2770	2.688		1.500		C14659	-
	K		.2810	2.688		1.500		C14661	-
9/32			.2812	2.688		1.500		C14664	C14860
	L		.2900	2.750		1.563		C14665	-
		7.4	.2913		74.00		34.00	C14811	-
	M		.2950	2.750		1.563		C14667	-
		7.5	.2953		74.00		34.00	C14831	C14787
19/64			.2969	2.750		1.563		C14669	-
	N		.3020	2.813		1.625		C14671	-
5/16			.3125	2.813		1.625		C14675	C14861
		8.0	.3150		79.00		37.00	C14812	C14767
	O		.3160	2.938		1.688		C14677	-
		8.1	.3189		79.00		37.00	C14670	-
	P		.3230	2.938		1.688		C14680	-
21/64			.3281	2.938		1.688		C14682	-
	Q		.3320	3.000		1.688		C14684	-
		8.5	.3346		79.00		37.00	C14813	C14768
	R		.3390	3.000		1.688		C14687	-
11/32			.3438	3.000		1.688		C14689	C14862
	S		.3480	3.063		1.750		C14691	-
		9.0	.3543		84.00		40.00	C14814	C14769

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Styles: 2133, 2133-TC (continued)

drill diameter		overall length		flute length		order number			
fraction	d ₁ wire/letter	mm	decimal equivalent	in	mm	in	mm	2133 straw oxide	2133-TC TiCN
23/64	T		.3580	3.063		1.750		C14694	–
			.3594	3.063		1.750		C14696	–
	U		.3680	3.125		1.813		C14699	–
3/8		9.5	.3740		84.00		40.00	–	C14770
			.3750	3.125		1.813		C14702	C14863
	V		.3770	3.250		1.875		C14703	–
25/64	W		.3860	3.250		1.875		C14707	–
			.3906	3.250		1.875		C14709	–
		10.0	.3937		89.00		43.00	C14815	C14771
13/32	X		.3970	3.313		1.938		C14711	–
	Y		.4040	3.313		1.938		C14713	–
			.4062	3.313		1.938		C14715	C14864
27/64	Z		.4130	3.375		2.000		C14716	–
		10.5	.4134		89.00		43.00	C14816	C14788
			.4219	3.375		2.000		C14718	–
7/16		11.0	.4331		95.00		47.00	C14817	C14772
			.4375	3.438		2.063		C14721	C14865
		11.5	.4528		95.00		47.00	C14832	C14773
29/64		.4531	3.563		2.125		C14724	–	
15/32		.4688	3.625		2.125		C14726	C14867	
31/64		12.0	.4724		102.00		51.00	C14818	C14774
			.4844	3.688		2.188		C14729	–
		12.5	.4921		102.00		51.00	C14819	C14775
1/2		.5000	3.750		2.250		C14731	C14866	

Screw Machine Length
Cobalt

Material Reference	Steel (HRc)				Stainless Steel			Cast Iron (HRc)		Aluminum and Non-Ferrous	Hi-Temp Alloy		Hardened Steel (HRc)
	Low Carbon		Alloy		Austenitic	Martensitic	PH	Gray	Nodular		Ni, Co, Fe Based Super Alloy	Titanium	
Hardness	13-38	>38	16-38	> 38	300 Series	400 series		18-22	22-32				>45
Straw	◆		◆		◆	◆		◆	◆				
TiCN	☆		☆		☆	☆		☆	☆	☆	◆	◆	

☆ = Best Performance ◆ = Acceptable