

suttontools
world class cutting tools


12xD DRILLS



- New self-centring point geometry
- Double-margin guidance lands
- Improved coolant flow

ISO	VDI	Material Group	Sutton
P	A	Steel	N
M	R	Stainless Steel	VA
K	F	Cast Iron	GG
N	N	Non-Ferrous Metals, Aluminiums & Coppers	Al W
S	S	Titaniums & Super Alloys	Ti Ni
H	H	Hard Materials (≥ 45 HRC)	H

^ VDI 3323 material groups can also be determined by referring to the workpiece material cross reference listing. Refer to our full catalogue.

EXTRA LONG	
	
Catalogue Code	D371
Material	VHM
Surface Finish	AlCrN
Sutton Designation	N
Geometry	R30 - IK
Drilling Depth	$\leq 12 \times \varnothing$

Catalogue Code
Material
Surface Finish
Sutton Designation
Geometry
Drilling Depth

ISO	VDI ³³²³	Material	Condition	HB	N/mm ²	Vc	Feed #	
P	1	Steel - Non-alloy, cast & free cutting	~ 0.15 %C	A	125	440	80	8
	2		~ 0.45 %C	A	190	640	80	8
	3			QT	250	840	70	7
	4		~ 0.75 %C	A	270	910	70	7
	5			QT	300	1010	60	6
	6	Steel - Low alloy & cast < 5% of alloying elements		A	180	610	80	6
	7			QT	275	930	60	5
	8			QT	300	1010	60	5
	9			QT	350	1180	40	5
	10	Steel - High alloy, cast & tool		A	200	680	50	6
	11			HT	325	1100	-	-
	12	Steel - Corrosion resistant & cast	Ferritic / Martensitic	A	200	680	-	-
	13		Martensitic	QT	240	810	-	-
M	14.1	Stainless Steel	Austenitic	AH	180	610	40	5
	14.2		Duplex		250	840	30	4
	14.3		Precipitation Hardening		250	840	-	-
K	15	Cast Iron - Grey (GG)	Ferritic / Pearlitic		180	610	80	8
	16		Pearlitic		260	880	70	8
	17	Cast Iron - Nodular (GGG)	Ferritic		160	570	60	7
	18		Pearlitic		250	840	60	7
	19	Cast Iron - Malleable	Ferritic		130	460	60	7
20	Pearlitic			230	780	60	7	

Condition: A (Annealed), AH (Age Hardened), C (Cast), HT (Hardened & Tempered), QT (Quenched & Tempered)
Bold = Optimal | Regular = Effective

Notes on Drilling

1. High pressure coolant preferred
2. Pilot hole with short (3xD) same size drill to approximately 1.5xD recommended
3. Without pilot drilling, reduce feed to 30% until 1.5xD depth is engaged in workpiece, then increase to recommended feedrate to full programmed depth

Ø	Feed Table (f) (mm/rev)									
	Feed #									
	1	2	3	4	5	6	7	8	9	10
2.0	0.020	0.025	0.030	0.040	0.050	0.060	0.075	0.095	0.120	0.15
3.0	0.030	0.035	0.045	0.055	0.070	0.090	0.110	0.135	0.17	0.21
4.0	0.040	0.045	0.060	0.075	0.090	0.115	0.140	0.18	0.22	0.27
5.0	0.045	0.055	0.070	0.090	0.110	0.135	0.17	0.21	0.26	0.32
6.0	0.055	0.065	0.080	0.100	0.125	0.16	0.19	0.24	0.30	0.37
8.0	0.070	0.085	0.105	0.130	0.16	0.20	0.25	0.31	0.38	0.47
10.0	0.085	0.105	0.125	0.16	0.19	0.24	0.30	0.37	0.46	0.56
12.0	0.095	0.120	0.15	0.18	0.23	0.28	0.34	0.42	0.52	0.64
16.0	0.125	0.15	0.19	0.23	0.29	0.36	0.44	0.54	0.66	0.82
20.0	0.15	0.18	0.23	0.28	0.34	0.42	0.52	0.64	0.80	0.98
25.0	0.18	0.22	0.27	0.33	0.41	0.50	0.60	0.74	0.90	1.10



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