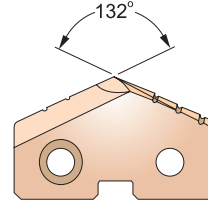


SPADE DRILL INSERTS - SUPER HSS T15
EINWEG BOHREINSATZ - SUPER HSS T15

- ▶ For use in high nickel alloys and materials over 280 Brinell.
- ▶ Set up time can be reduced due to changing inserts easily on the machine.
- ▶ Any non-standard size available.

- ▶ Zur Anwendung bei legierten Stählen mit hohem Nickelanteil und Werkstoffen über 280 Brinell
- ▶ Reduzierte Rüstzeiten, einfacher Einsatzwechsel auf der Maschine
- ▶ Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.325

Series Min. to Max. (mm/inch)	Diameter			Thick Metric (mm/inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		SUPER HSS (T15)		
					TiN	TiCN	TiAlN
Y 9.50 (.374") to 11.07 (.436")	3/8"	9.50	.3740"	2.4 (3/32")	S1155095	S1160095	S1165095
		9.53	.3750"		S1105024	S1110024	S1115024
	25/64"	9.80	.3860"		S1155098	S1160098	S1165098
		9.92	.3906"		S1105025	S1110025	S1115025
	13/32"	10.00	.3937"		S1155100	S1160100	S1165100
		10.20	.4016"		S1155102	S1160102	S1165102
	27/64"	10.32	.4063"		S1105026	S1110026	S1115026
		10.50	.4134"		S1155105	S1160105	S1165105
	11.00	10.72	.4219"		S1105027	S1110027	S1115027
		10.80	.4252"		S1155108	S1160108	S1165108
Z 11.11(.437") to 12.95(.510")	7/16"	11.00	.4331"	2.4 (3/32")	S1155110	S1160110	S1165110
		11.11	.4375"		S1105028	S1110028	S1115028
	29/64"	11.50	.4528"		S1155115	S1160115	S1165115
		11.51	.4531"		S1105029	S1110029	S1115029
	15/32"	11.91	.4688"		S1105030	S1110030	S1115030
		12.00	.4724"		S1155120	S1160120	S1165120
	31/64"	12.30	.4844"		S1105031	S1110031	S1115031
		12.50	.4921"		S1155125	S1160125	S1165125
	1/2"	12.70	.5000"		S1105032	S1110032	S1115032
		13.00	.5118"		S1155130	S1160130	S1165130
0 12.98 (.511") to 17.65 (.695")	33/64"	13.10	.5156"	3.2 (1/8")	S1105033	S1110033	S1115033
		17/32"	13.49		.5313"	S1105034	S1110034
	35/64"	13.50	.5315"		S1155135	S1160135	S1165135
		13.89	.5469"		S1105035	S1110035	S1115035
	9/16"	14.00	.5512"		S1155140	S1160140	S1165140
		14.29	.5625"		S1105036	S1110036	S1115036
	37/64"	14.50	.5709"		S1155145	S1160145	S1165145
		14.68	.5781"		S1105037	S1110037	S1115037
	19/32"	15.00	.5906"		S1155150	S1160150	S1165150
		15.08	.5938"		S1105038	S1110038	S1115038
39/64"	15.48	.6094"	S1105039	S1110039	S1115039		
	15.50	.6102"	S1155155	S1160155	S1165155		
5/8"	15.88	.6250"	S1105040	S1110040	S1115040		
	16.00	.6299"	S1155160	S1160160	S1165160		

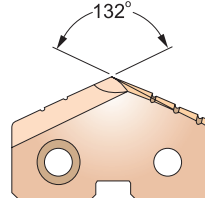
◎ : Excellent ○ : Good

Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys
	~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc37 (~HB350)	HRc37~ (~HB350~)	~HRc24 (~HB250)	HRc24~ (~HB250~)	~HRc13 (~HB200)	HRc13~ (~HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (~HB220~)	~HRc8 (~HB180)
◎	◎	◎	◎	○	○	○	◎	◎	○	○	○	○	◎	○	○

SPADE DRILL INSERTS - SUPER HSS T15 EINWEG BOHREINSATZ - SUPER HSS T15

- ▶ For use in high nickel alloys and materials over 280 Brinell.
- ▶ Set up time can be reduced due to changing inserts easily on the machine.
- ▶ Any non-standard size available.

- ▶ Zur Anwendung bei legierten Stählen mit hohem Nickelanteil und Werkstoffen über 280 Brinell
- ▶ Reduzierte Rüstzeiten, einfacher Einsatzwechsel auf der Maschine
- ▶ Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.325

Series Min. to Max. (mm/inch)	Diameter			Thick Metric (mm/inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		SUPER HSS (T15)		
					TiN	TiCN	TiAlN
0 12.98(.511") to 17.65(.695")	41/64"	16.27	.6406"	3.2 (1/8")	S1105041	S1110041	S1115041
		16.50	.6496"		S1155165	S1160165	S1165165
	21/32"	16.67	.6563"		S1105042	S1110042	S1115042
		17.00	.6693"		S1155170	S1160170	S1165170
	43/64"	17.07	.6719"		S1105043	S1110043	S1115043
	11/16"	17.46	.6875"		S1105044	S1110044	S1115044
1 17.53 (.690") to 24.38 (.960")		17.50	.6890"	4.0 (5/32")	S1155175	S1160175	S1165175
	45/64"	17.86	.7031"		S1105045	S1110045	S1115045
		18.00	.7087"		S1155180	S1160180	S1165180
	23/32"	18.26	.7188"		S1105046	S1110046	S1115046
		18.50	.7283"		S1155185	S1160185	S1165185
	47/64"	18.65	.7344"		S1105047	S1110047	S1115047
		19.00	.7480"		S1155190	S1160190	S1165190
	3/4"	19.05	.7500"		S1105048	S1110048	S1115048
	49/64"	19.45	.7656"		S1105049	S1110049	S1115049
		19.50	.7677"		S1155195	S1160195	S1165195
	25/32"	19.84	.7813"		S1105050	S1110050	S1115050
		20.00	.7874"		S1155200	S1160200	S1165200
	51/64"	20.24	.7969"		S1105051	S1110051	S1115051
		20.50	.8071"		S1155205	S1160205	S1165205
	13/16"	20.64	.8125"		S1105052	S1110052	S1115052
		21.00	.8268"		S1155210	S1160210	S1165210
	27/32"	21.43	.8438"		S1105054	S1110054	S1115054
	55/64"	21.83	.8594"		S1105055	S1110055	S1115055
		22.00	.8661"		S1155220	S1160220	S1165220
	7/8"	22.23	.8750"		S1105056	S1110056	S1115056
57/64"	22.62	.8906"	S1105057	S1110057	S1115057		
	23.00	.9055"	S1155230	S1160230	S1165230		
29/32"	23.02	.9063"	S1105058	S1110058	S1115058		
59/64"	23.42	.9219"	S1105059	S1110059	S1115059		
15/16"	23.81	.9375"	S1105060	S1110060	S1115060		
	24.00	.9449"	S1155240	S1160240	S1165240		

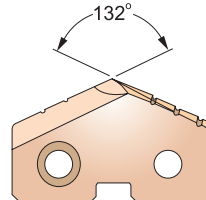
◎ : Excellent ○ : Good

Non-alloy Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
	~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc37 (~HB350)	HRc37~ (~HB350~)	~HRc24 (~HB250)	HRc24~ (~HB250~)	~HRc13 (~HB200)	HRc13~ (~HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (~HB220~)	~HRc8 (~HB180)	~HB110
◎	◎	◎	◎	○	○	○	◎	◎	○	○	○	○	○	◎	○	○

SPADE DRILL INSERTS - SUPER HSS T15
EINWEG BOHREINSATZ - SUPER HSS T15

- ▶ For use in high nickel alloys and materials over 280 Brinell.
- ▶ Set up time can be reduced due to changing inserts easily on the machine.
- ▶ Any non-standard size available.

- ▶ Zur Anwendung bei legierten Stählen mit hohem Nickelanteil und Werkstoffen über 280 Brinell
- ▶ Reduzierte Rüstzeiten, einfacher Einsatzwechsel auf der Maschine
- ▶ Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.325

Series Min. to Max. (mm/inch)	Diameter			Thick Metric (mm/inch)	EDP No. SUPER HSS (T15)		
	Inch (inch)	Metric (mm)	Decimal (inch)		TiN	TiCN	TiAIN
2 24.41 (.961") to 35.05 (1.380")	31/32"	24.61	.9688"	4.8 (3/16")	S1105062	S1110062	S1115062
	63/64"	25.00	.9843"		S1155250	S1160250	S1165250
	1"	25.40	1.0000"		S1105100	S1110100	S1115100
	1-1/64"	25.80	1.0156"		S1105101	S1110101	S1115101
		26.00	1.0236"		S1155260	S1160260	S1165260
	1-1/32"	26.19	1.0313"		S1105102	S1110102	S1115102
	1-3/64"	26.59	1.0469"		S1105103	S1110103	S1115103
	1-1/16"	26.99	1.0625"		S1105104	S1110104	S1115104
		27.00	1.0630"		S1155270	S1160270	S1165270
	1-3/32"	27.78	1.0938"		S1105106	S1110106	S1115106
		28.00	1.1024"		S1155280	S1160280	S1165280
	1-7/64"	28.18	1.1094"		S1105107	S1110107	S1115107
	1-1/8"	28.58	1.1250"		S1105108	S1110108	S1115108
		29.00	1.1417"		S1155290	S1160290	S1165290
	1-5/32"	29.37	1.1563"		S1105110	S1110110	S1115110
		30.00	1.1811"		S1155300	S1160300	S1165300
	1-3/16"	30.16	1.1875"		S1105112	S1110112	S1115112
	1-7/32"	30.96	1.2188"		S1105114	S1110114	S1115114
		31.00	1.2205"		S1155310	S1160310	S1165310
	1-1/4"	31.75	1.2500"		S1105116	S1110116	S1115116
	32.00	1.2598"	S1155320	S1160320	S1165320		
1-9/32"	32.54	1.2813"	S1105118	S1110118	S1115118		
1-5/16"	33.00	1.2992"	S1155330	S1160330	S1165330		
	33.34	1.3125"	S1105120	S1110120	S1115120		
	34.00	1.3386"	S1155340	S1160340	S1165340		
1-11/32"	34.13	1.3438"	S1105122	S1110122	S1115122		
1-3/8"	34.93	1.3750"	S1105124	S1110124	S1115124		
	35.00	1.3780"	S1155350	S1160350	S1165350		
3 34.37(1.353") to 47.80(1.882")	1-13/32"	35.72	1.4063"	6.4 (1/4")	S1105126	S1110126	S1115126
		36.00	1.4173"		S1155360	S1160360	S1165360
	1-7/16"	36.51	1.4375"		S1105128	S1110128	S1115128
		37.00	1.4567"		S1155370	S1160370	S1165370
	1-15/32"	37.31	1.4688"		S1105130	S1110130	S1115130
		38.00	1.4961"		S1155380	S1160380	S1165380

◎ : Excellent ○ : Good

Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys
	~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc37 (~HB350)	HRc37~ (~HB350~)	~HRc24 (~HB250)	HRc24~ (~HB250~)	~HRc13 (~HB200)	HRc13~ (~HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (~HB220~)	~HRc8 (~HB180)
◎	◎	◎	◎	○	○	○	◎	◎	○	○	○	○	◎	○	○

i-DREAM DRILLS

DREAM DRILLS -GENERAL

DREAM DRILLS -INOX

DREAM DRILLS -ALU

DREAM DRILLS -CFRP

DREAM DRILLS -MQL TYPE

DREAM DRILLS for HARDENED STEELS

GENERAL CARBIDE DRILLS

NC-SPOTTING DRILLS

CENTER DRILLS

MULTI-1 DRILLS

HPD DRILLS

GOLD-P DRILLS

STRAIGHT SHANK DRILLS

TAPER SHANK DRILLS

NC-SPOTTING DRILLS

CENTER DRILLS

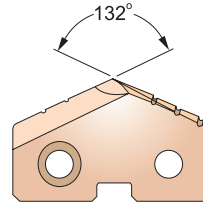
SPADE DRILLS

TECHNICAL DATA

SPADE DRILL INSERTS - SUPER HSS T15 EINWEG BOHREINSATZ - SUPER HSS T15

- ▶ For use in high nickel alloys and materials over 280 Brinell.
- ▶ Set up time can be reduced due to changing inserts easily on the machine.
- ▶ Any non-standard size available.

- ▶ Zur Anwendung bei legierten Stählen mit hohem Nickelanteil und Werkstoffen über 280 Brinell
- ▶ Reduzierte Rüstzeiten, einfacher Einsatzwechsel auf der Maschine
- ▶ Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.325

Series Min. to Max. (mm/inch)	Diameter			Thick Metric (mm/inch)	EDP No.			
	Inch (inch)	Metric (mm)	Decimal (inch)		SUPER HSS (T15)			
					TiN	TiCN	TiAlN	
3 34.37 (1.353") to 47.80 (1.882")	1-1/2"	38.10	1.5000"	6.4 (1/4")	S1105132	S1110132	S1115132	
	1-17/32"	38.89	1.5313"		S1105134	S1110134	S1115134	
		39.00	1.5354"		S1155390	S1160390	S1165390	
	1-9/16"	39.69	1.5625"		S1105136	S1110136	S1115136	
		40.00	1.5748"		S1155400	S1160400	S1165400	
	1-19/32"	40.48	1.5938"		S1105138	S1110138	S1115138	
		41.00	1.6142"		S1155410	S1160410	S1165410	
	1-5/8"	41.28	1.6250"		S1105140	S1110140	S1115140	
		42.00	1.6535"		S1155420	S1160420	S1165420	
	1-21/32"	42.07	1.6563"		S1105142	S1110142	S1115142	
	1-11/16"	42.86	1.6875"		S1105144	S1110144	S1115144	
		43.00	1.6929"		S1155430	S1160430	S1165430	
	1-23/32"	43.66	1.7188"		S1105146	S1110146	S1115146	
		44.00	1.7323"		S1155440	S1160440	S1165440	
	1-3/4"	44.45	1.7500"		S1105148	S1110148	S1115148	
		45.00	1.7717"		S1155450	S1160450	S1165450	
		1-25/32"	45.24		1.7813"	S1105150	S1110150	S1115150
			46.00		1.8110"	S1155460	S1160460	S1165460
	1-13/16"	46.04	1.8125"	S1105152	S1110152	S1115152		
	1-27/32"	46.83	1.8438"	S1105154	S1110154	S1115154		
		47.00	1.8504"	S1155470	S1160470	S1165470		
	1-7/8"	47.63	1.8750"	S1105156	S1110156	S1115156		
		48.00	1.8898"	S1155480	S1160480	S1165480		
4 46.99 (1.850") to 65.28 (2.570")		48.42	1.9063"	7.9 (5/16")	S1105158	S1110158	S1115158	
		49.00	1.9291"		S1155490	S1160490	S1165490	
		1-15/16"	49.21		1.9375"	S1105160	S1110160	S1115160
			50.00		1.9685"	S1155500	S1160500	S1165500
		1-31/32"	50.01		1.9688"	S1105162	S1110162	S1115162
		2"	50.80		2.0000"	S1105200	S1110200	S1115200
			51.00		2.0079"	S1155510	S1160510	S1165510
		2-1/32"	51.59		2.0313"	S1105202	S1110202	S1115202
		2-3/64"	52.00		2.0472"	S1155520	S1160520	S1165520
		2-1/16"	52.39		2.0625"	S1105204	S1110204	S1115204
			53.00		2.0866"	S1155530	S1160530	S1165530

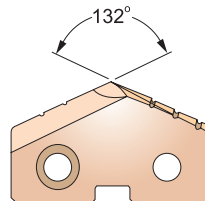
◎ : Excellent ○ : Good

Non-alloy Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
	-HRc24 (-HB250)	-HRc28 (-HB275)	HRc28~ (HB275~)	-HRc28 (-HB275)	HRc28~ (HB275~)	-HRc37 (-HB350)	HRc37~ (HB350~)	-HRc24 (-HB250)	HRc24~ (HB250~)	-HRc13 (-HB200)	HRc13~ (HB200~)	-HRc28 (-HB275)	-HRc19 (-HB220)	HRc19~ (HB220~)	-HRc8 (-HB180)	-HB110
◎	◎	◎	◎	○	○	○	◎	◎	○	○	○	○	○	◎	○	○

SPADE DRILL INSERTS - SUPER HSS T15
EINWEG BOHREINSATZ - SUPER HSS T15

- ▶ For use in high nickel alloys and materials over 280 Brinell.
- ▶ Set up time can be reduced due to changing inserts easily on the machine.
- ▶ Any non-standard size available.

- ▶ Zur Anwendung bei legierten Stählen mit hohem Nickelanteil und Werkstoffen über 280 Brinell
- ▶ Reduzierte Rüstzeiten, einfacher Einsatzwechsel auf der Maschine
- ▶ Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.325

Series Min. to Max. (mm/inch)	Diameter			Thick Metric (mm/inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		SUPER HSS (T15)		
					TiN	TiCN	TiAlN
4 46.99 (1.850") to 65.28 (2.570")	2-3/32"	53.18	2.0938"	7.9 (5/16")	S1105206	S1110206	S1115206
	2-1/8"	53.98	2.1250"		S1105208	S1110208	S1115208
		54.00	2.1260"		S1155540	S1160540	S1165540
	2-5/32"	54.77	2.1563"		S1105210	S1110210	S1115210
		55.00	2.1654"		S1155550	S1160550	S1165550
	2-3/16"	55.56	2.1875"		S1105212	S1110212	S1115212
		56.00	2.2047"		S1155560	S1160560	S1165560
	2-7/32"	56.36	2.2188"		S1105214	S1110214	S1115214
		57.00	2.2441"		S1155570	S1160570	S1165570
	2-1/4"	57.15	2.2500"		S1105216	S1110216	S1115216
	2-9/32"	57.94	2.2813"		S1105218	S1110218	S1115218
		58.00	2.2835"		S1155580	S1160580	S1165580
	2-5/16"	58.74	2.3125"		S1105220	S1110220	S1115220
		59.00	2.3228"		S1155590	S1160590	S1165590
	2-11/32"	59.53	2.3438"		S1105222	S1110222	S1115222
		60.00	2.3622"		S1155600	S1160600	S1165600
	2-3/8"	60.33	2.3750"		S1105224	S1110224	S1115224
		61.00	2.4016"		S1155610	S1160610	S1165610
	2-13/32"	61.12	2.4063"		S1105226	S1110226	S1115226
	2-7/16"	61.91	2.4375"		S1105228	S1110228	S1115228
	62.00	2.4409"	S1155620	S1160620	S1165620		
2-15/32"	62.71	2.4688"	S1105230	S1110230	S1115230		
	63.00	2.4803"	S1155630	S1160630	S1165630		
2-1/2"	63.50	2.5000"	S1105232	S1110232	S1115232		
	64.00	2.5197"	S1155640	S1160640	S1165640		
2-17/32"	64.29	2.5313"	S1105234	S1110234	S1115234		
	65.00	2.5591"	S1155650	S1160650	S1165650		
2-9/16"	65.09	2.5625"	S1105236	S1110236	S1115236		

◎ : Excellent ○ : Good

Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys
	~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc37 (~HB350)	HRc37~ (~HB350~)	~HRc24 (~HB250)	HRc24~ (~HB250~)	~HRc13 (~HB200)	HRc13~ (~HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (~HB220~)	~HRc8 (~HB180)
◎	◎	◎	◎	○	○	○	◎	◎	○	○	○	○	◎	○	○



DRILL INSERT (METRIC) - HSS BOHREINSATZ (METRISCH) - HSS

Material	Material Hardness		* HSS Grade	Speed (M/min)			Feed (mm/rev)						
	(Bhn)	(HRc)		TiN	TiCN	TiAlN	Ø9.5 ~12.5	Ø13 ~17.5	Ø18 ~24	Ø25 ~35	Ø36 ~47	Ø48 ~65	Ø66 ~114
Free machining Steels 9SMn36, 9SMnPb28 10SPb20 etc	100 - 150		HSS	63	79	84	0.16	0.23	0.31	0.40	0.48	0.55	0.67
	150 - 200	- 13	HSS	58	70	81	0.16	0.23	0.31	0.40	0.48	0.55	0.67
	200 - 250	13 - 24	HSS	51	66	72	0.14	0.23	0.31	0.38	0.48	0.57	0.69
Low Carbon Steels C10, C15, C22, C25 etc	85 - 125		HSS	54	67	75	0.15	0.22	0.28	0.37	0.46	0.56	0.67
	125 - 175	- 7	HSS	51	63	72	0.15	0.22	0.28	0.37	0.46	0.56	0.67
	175 - 225	7 - 20	HSS	49	58	69	0.13	0.19	0.24	0.34	0.43	0.50	0.57
Medium Carbon Steels C35, C40, C45 etc	225 - 275	20 - 28	HSS	45	56	66	0.13	0.19	0.24	0.34	0.43	0.50	0.57
	125 - 175	- 7	HSS	52	63	75	0.14	0.22	0.28	0.35	0.45	0.55	0.65
	175 - 225	7 - 20	HSS	48	59	69	0.13	0.19	0.23	0.34	0.43	0.50	0.58
Structural Steels St33, St37-2, St44-2 St52, St60 etc	225 - 275	20 - 28	HSS	45	56	63	0.13	0.19	0.23	0.34	0.43	0.50	0.58
	275 - 325	28 - 34	SH, PH	42	52	58	0.10	0.17	0.21	0.28	0.38	0.45	0.55
	100 - 150		HSS	44	56	63	0.14	0.23	0.29	0.35	0.44	0.50	0.63
Cast Iron / S,G Iron GG10, 20, 25, 35, 40 GGG50, 70 GTW35, GTS70 etc	150 - 250	- 24	HSS	39	47	55	0.13	0.22	0.24	0.28	0.38	0.46	0.59
	250 - 350	24 - 37	SH, PH	32	41	45	0.10	0.20	0.22	0.24	0.34	0.40	0.48
	120 - 150		HSS	52	64	75	0.16	0.30	0.40	0.49	0.59	0.69	0.75
Alloy Steels 45CrNiMo4, 42CrMo4 16MnCr5, Ck75 35CrMo4, 16MnCr5 etc	150 - 200	- 13	HSS	48	58	70	0.14	0.26	0.35	0.45	0.56	0.64	0.68
	200 - 220	13 - 19	HSS	42	53	58	0.14	0.23	0.30	0.41	0.46	0.52	0.60
	220 - 260	19 - 26	SH, PH	35	44	52	0.13	0.17	0.23	0.30	0.35	0.43	0.50
Tool Steels 102Cr6, 105WCr6, C75W etc	260 - 320	26 - 34	SH, PH	29	35	41	0.10	0.15	0.16	0.23	0.28	0.35	0.40
	125 - 175	- 7	HSS	48	58	63	0.15	0.20	0.24	0.36	0.43	0.47	0.53
	175 - 225	7 - 20	HSS	45	56	58	0.13	0.20	0.24	0.36	0.42	0.46	0.55
High Temp. Alloy Hastelloy B, Inconel etc	225 - 275	20 - 28	HSS	41	50	56	0.13	0.16	0.23	0.35	0.41	0.44	0.55
	275 - 325	28 - 34	SH, PH	39	47	53	0.09	0.15	0.22	0.28	0.38	0.41	0.50
	325 - 375	34 - 40	SH, PH	36	43	46	0.08	0.15	0.21	0.27	0.38	0.40	0.51
High Strength Alloy 36CrNiMo4, 34CrNiMo8 40NiCrMo73 etc	150 - 200	- 13	SH	25	34	36	0.09	0.15	0.19	0.25	0.28	0.36	0.41
	200 - 250	13 - 24	SH, PH	19	27	29	0.09	0.15	0.19	0.25	0.28	0.36	0.41
Aluminum AlCuSiMn, AlMgSi0.5, AlZnMgCu1.5 etc	140 - 220	- 19	SH, PH	9	11	12	0.08	0.17	0.20	0.24	0.30	0.37	0.39
	220 - 310	19 - 33	PH	8	9	11	0.08	0.14	0.18	0.19	0.25	0.29	0.34
	225 - 300	- 32	SH, PH	25	34	35	0.13	0.18	0.23	0.24	0.36	0.43	0.50
Stainless Steels X7Cr13, X10CrAl118, X5CrNi189, X5CrNiMo18 10 etc	300 - 350	32 - 37	SH, PH	19	26	27	0.10	0.18	0.23	0.24	0.36	0.43	0.50
	350 - 400	37 - 43	PH	16	21	22	0.08	0.15	0.20	0.22	0.30	0.48	0.46
Aluminum AlCuSiMn, AlMgSi0.5, AlZnMgCu1.5 etc	30		HSS	187	229	244	0.19	0.33	0.41	0.50	0.54	0.64	0.62
	180	- 8	HSS	92	137	137	0.19	0.33	0.41	0.46	0.54	0.64	0.62
Stainless Steels X7Cr13, X10CrAl118, X5CrNi189, X5CrNiMo18 10 etc	135 - 185	- 9	HSS	24	29	34	0.14	0.20	0.23	0.26	0.36	0.41	0.50
	185 - 275	9 - 28	HSS	20	23	29	0.12	0.18	0.20	0.24	0.30	0.36	0.46

RPM= revolution per minute (rev/min)

M/min= surface meter per minute(M/min)

DIA= diameter of drill (mm)

mm/rev = feed rate(mm/rev)

* Formulas :

$$M/min = \frac{(RPM) \cdot (\pi) \cdot (DIA.)}{1000}$$

$$mm/min = (RPM) \cdot (mm/rev)$$

$$RPM = \frac{(M/min) \cdot (1000)}{(\pi) \cdot (DIA.)}$$

* HSS Grade : HSS = HSS M4, SH = Super HSS T15, PH = Premium HSS M48

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.

I-DREAM DRILLS

DREAM DRILLS -GENERAL

DREAM DRILLS -INOX

DREAM DRILLS -ALU

DREAM DRILLS -CFRP

DREAM DRILLS -MQL TYPE

DREAM DRILLS for HARDENED STEELS

GENERAL CARBIDE DRILLS

NC-SPOTTING DRILLS

CENTER DRILLS

MULTI-1 DRILLS

HPD DRILLS

GOLD-P DRILLS

STRAIGHT SHANK DRILLS

TAPER SHANK DRILLS

NC-SPOTTING DRILLS

CENTER DRILLS

SPADE DRILLS

TECHNICAL DATA