

# SUPERCUT SPADE DRILL

GENERAL MACHINING & DRILLING LARGE DIAMETERS  
WITH LONGER TOOL LIFE AND HIGH PRODUCTIVITY



<b>P</b>	<b>H</b>	<b>M</b>	<b>S</b>	<b>K</b>	<b>N</b>
Steel	Hardened Steel	Stainless Steel	HSSA's	Cast Iron	Non Ferrous



## FEATURES







- Holders are available from 2 x D to 25 x D
- A wide range of insert sizes can fit in each holder
- Inserts are available in both metric and imperial
- Fully ground self centering inserts available in five grades HSS, HSS-E, Powder Metal & 2 Carbide grades
- Morse taper or weldon shank
- Through coolant
- Made from high quality alloy steel

## BENEFITS

- Can be used to drill deep holes
- Reduced range of holders required
- Faster set up times, as inserts can be changed on the machine
- Extremely accurate compared to traditional indexable drills, even in deep holes
- High performance in a wide range of materials
- Lower cutting resistance
- Suitable for new or old machines



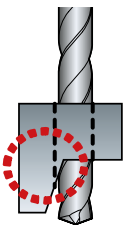
# TOOL SELECTION

Description		Drilling Depth	Sizes	Page
SUPERCUT SPADE DRILL HOLDER WELDON SHANK			9.5~65.09	733
SUPERCUT SPADE DRILL HOLDER MORSE TAPER SHANK			9.5~114	734
SUPERCUT SPADE DRILL INSERTS			9.5~114	735
SUPERCUT SPADE DRILL FLAT BOTTOM INSERTS			11.5~45	738

## MACHINING GUIDELINES

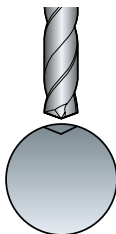
- All inserts are self centering. DO NOT SPOT DRILL or CENTER DRILL.
- For new jobs it is recommended cutting data is lowered by 10-20% as a starting point.
- Through coolant must be used on all holes greater than 1xD max drill depth.
- Please follow cutting data guidelines. Premature wear or tool failure can occur if incorrect data is used.

### PIERCING STAGE



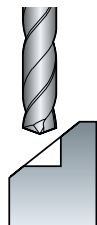
Decrease the feed rate by 50%

### CIRCULAR SURFACE



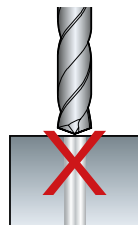
Pilot drill with a larger drill point angle or machine with end mill

### INCLINED SURFACE



Machine with end mill first

### BORING



Not recommended. Will result in tool failure.

## INSERT SELECTION

Series A Holders Take Series A inserts  
Series B Holders Take Series B inserts  
and so on.

Holder Series	Insert Series	Insert Diameters
A	A	9.5 - 11
B	B	11.11 - 12.7
C	C	13 - 17.5
D	D	17.86 - 24
E	E	24.61 - 35
F	F	35.72 - 47.63
G	G	48 - 65.09
H	H	65.30 - 88*
I	I	90 - 114*

\*Morse taper shank only

## SUPERCUT SPADE DRILL APPLICATION

The Supercut Spade Drill is the most versatile drilling system in the world, suitable for both CNC and conventional machining applications. It is possible to drill from 9.5mm to 114mm diameter using just 9 different sized holders with high accuracy and performance.

Each spade drill holder can clamp a wide range of insert sizes for different diameter holes, making it the most cost effective and universal drilling system available. Supercut is a must for any sub-contract machine shop that drills a wide variety of hole diameters from one day to the next, saving you vital money on buying new indexable drills for every diameter or boring holes out to size. Inserts are fully ground and available in both metric or imperial sizes.

Spade drills work with completely different cutting data to indexable drills; using much higher feed per revolution but lower RPM. The results are similar overall feed rates and time per hole to indexable insert drills, but vastly superior tool life, meaning less down time due to insert wear and reduced cost in tool usage.

## INSERTS

Inserts are available in both metric and imperial and a wide range of sizes can fit in each holder. There is a secure, high precision interface between the drill body and the insert so there is no need to reset tool length after insert change

Flat bottom inserts are also available for creating a flat bottom in a pre-existing hole



## CHIP DIVIDERS

SELF CENTERING DESIGN for extremely accurate drilling, even in deep holes



GRADE	APPLICATION	Unstable Machining	Stable Machining
T15 HSS 5% Cobalt M4 HSS	First choice for general machining of all materials	✓	✓
M48 Powder Metal	For Increased tool life over T15. Ideal for stainless steel, harder & tougher materials	✓	✓
K20 Solid Carbide	Ideal for high alloy steels, stainless steel heat resistant super alloys & aluminium	✗	✓
P40 Solid Carbide	Ultimate performance on all steels	✗	✓

## HOLDERS

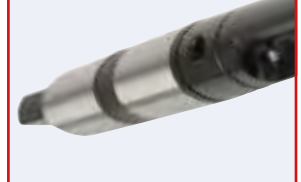
Supercut holders are available for short holes to deep holes up to 25xD. As the insert is self-centering, deep hole drilling is possible with reliability and accuracy. For holders 15 x D and above, it is recommended that you pilot drill 1xD with a short length spade drill of the same diameter (do not pilot drill with a smaller diameter drill or drill point with a different angle - this will cause tool failure. HSS or PM inserts are recommended for drilling above 7xD.

## SHANK TYPES

### WELDON



### MORSE TAPER



Weldon holders have through coolant supply from the rear of the shank. Morse taper holders have through coolant on the side of the shank above the morse taper. Machines without through coolant can be adapted by using a coolant adapter with a morse taper shank tool.

STUB



SHORT



INTERMEDIATE



STANDARD



EXTENDED



SUPER LONG



MEGA LONG



**SUPERCUT SPADE DRILL HOLDER 9.5 ~ 65.09mm WELDON SHANK**

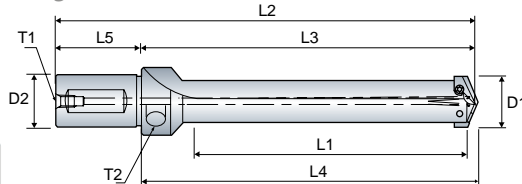


For General Machining and Drilling Large Diameters with Longer Tool Life and High Productivity

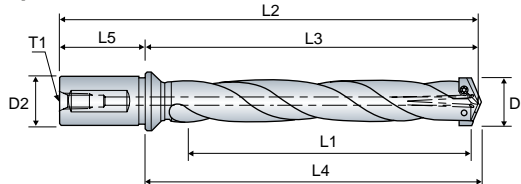
- ▶ Available in diameters 9.5mm-65.09mm
- ▶ Inserts available in coated grades for steel, stainless steel, cast iron & aluminium



**Straight Flute**



**Spiral Flute**



D1	Series	Length	Flute	D2	L1	L2	L3	L4	L5	T1 Pipe Tap Rear	T2 Pipe Tap Side	Order Code	Price
9.50 - 11	A	Stub	Straight	16	19.1	89	47	50	41.9	1/16"	1/8"	P74Y0160	▲
		Short	Straight	20	31.8	103	61	63	41.9	1/8"	-	P75Y0200	▲
		Standard	Spiral	20	60.3	131	89	92	41.9	1/8"	-	P83Y0200	▲
		Extended	Spiral	20	111.1	182	140	142	41.9	1/8"	-	P84Y0200	▲
		Super Long	Straight	20	222	296	251	254	41.9	1/8"	-	P85Y0200	▲
		Mega Long	Straight	20	290	363	319	322	41.9	1/8"	-	P86Y0200	▲
11.11 - 12.7	B	Stub	Straight	16	19.1	89	47	50	41.9	1/16"	1/8"	P74Z0160	▲
		Short	Straight	20	31.8	103	61	63	41.9	1/8"	-	P75Z0200	▲
		Standard	Spiral	20	60.3	131	89	92	41.9	1/8"	-	P83Z0200	▲
		Extended	Spiral	20	111.1	182	140	142	41.9	1/8"	-	P84Z0200	▲
		Super Long	Straight	20	222	296	252	254	41.9	1/8"	-	P85Z0200	▲
		Mega Long	Straight	20	290	363	320	322	41.9	1/8"	-	P86Z0200	▲
13 - 17.5	C	Stub	Straight	20	22.2	89	47	50	41.9	1/8"	1/8"	P7400200	▲
		Short	Straight	20	34.9	105	63	66	41.9	1/8"	-	P7500200	▲
		Standard	Spiral	20	63.5	134	92	94	41.9	1/8"	-	P8300200	▲
		Intermediate	Spiral	20	114.3	184	142	145	41.9	1/8"	-	P8400200	▲
		Extended	Spiral	20	178	248	206	209	41.9	1/8"	-	P8500200	▲
		Super Long	Straight	20	295	368	323	326	41.9	1/8"	-	P8600200	▲
		Mega Long	Straight	20	387	457	415	418	41.9	1/8"	-	P8700200	▲
17.86 - 24	D	Stub	Straight	25	47.6	128	75	79	53.1	1/8"	1/8"	P7410250	▲
		Short	Straight	25	66.7	160	107	110	53.1	1/8"	-	P7510250	▲
		Intermediate	Spiral	25	117.5	207	154	158	53.1	1/8"	-	P8210250	▲
		Standard	Spiral	25	168.3	258	205	209	53.1	1/8"	-	P8310250	▲
		Extended	Spiral	25	269.9	360	307	310	53.1	1/8"	-	P8410250	▲
		Super Long	Straight	25	457	551	495	498	53.1	1/8"	-	P8510250	▲
		Mega Long	Straight	25	565	659	603	606	53.1	1/8"	-	P8610250	▲
24.61 - 35	E	Stub	Straight	32	57.2	146	88	92	57.9	1/4"	1/8"	P7420320	▲
		Short	Straight	32	85.7	186	128	132	57.9	1/4"	-	P7520320	▲
		Intermediate	Spiral	32	136.5	237	179	183	57.9	1/4"	-	P8220320	▲
		Standard	Spiral	32	187.3	288	230	233	57.9	1/4"	-	P8320320	▲
		Extended	Spiral	32	288.9	389	331	335	57.9	1/4"	-	P8420320	▲
		Super Long	Straight	32	511	612	554	557	57.9	1/4"	-	P8520320	▲
		Mega Long	Straight	32	692	783	725	738	57.9	1/4"	-	P8620320	▲
35.72 - 47.63	F	Short	Straight	40	120.7	243	173	177	70.1	1/4"	-	P7530400	▲
		Intermediate	Spiral	40	165.1	287	217	222	70.1	1/4"	-	P8230400	▲
		Standard	Straight	40	209.6	332	261	266	70.1	1/4"	-	P8330400	▲
		Extended	Straight	40	349.3	471	401	406	70.1	1/4"	-	P7830400	▲
		Super Long	Straight	40	558	680	610	615	70.1	1/4"	-	P8430400	▲
48 - 65.09	G	Short	Straight	40	130.2	249	179	184	70.1	1/4"	-	P7540400	▲
		Standard	Spiral	40	231.8	351	281	285	70.1	1/4"	-	P8340400	▲
		Extended	Straight	40	422.3	541	471	476	70.1	1/4"	-	P7840400	▲
		Super Long	Straight	40	625	750	674	679	70.1	1/4"	-	P7940400	▲

▲ UK stock - Generally x-stock for next day delivery ▼ European stock - Generally 2-3 days delivery (please check for lead times)



**SUPERCUT SPADE DRILL HOLDER 9.5 ~ 114mm MORSE TAPER SHANK**

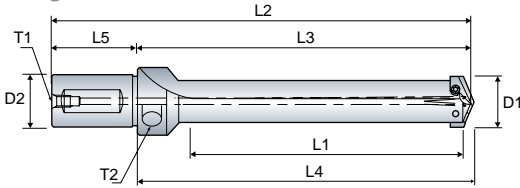


For General Machining and Drilling Large Diameters with Longer Tool Life and High Productivity

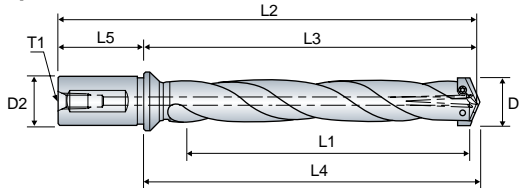
- ▶ Available in diameters 9.5mm-114mm
- ▶ Inserts available in coated grades for steel, stainless steel, cast iron & aluminium



**Straight Flute**

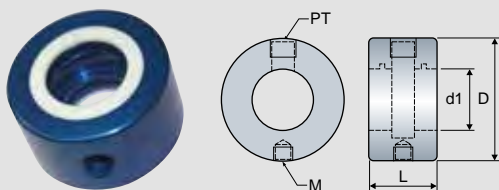


**Spiral Flute**



D	Series	Length	Flute	L1	L2	L3	L4	M Morse Taper No.	T Pipe Tap	ORDER CODE	PRICE
9.5 - 11	A	Short	Straight	31.8	160.3	51.5	88	2	1/16"	P51Y0020	▲
		Standard	Spiral	60.3	188.9	80.2	116.7	2	1/16"	P59Y0020	▲
		Extended	Spiral	111.1	239.7	130.9	167.4	2	1/16"	P60Y0020	▲
11.11 - 12.7	B	Short	Straight	31.8	160.3	51.5	88	2	1/16"	P51Z0020	▲
		Standard	Spiral	60.3	188.9	80.2	116.7	2	1/16"	P59Z0020	▲
		Extended	Spiral	111.1	239.7	130.9	167.4	2	1/16"	P60Z0020	▲
13 - 17.5	C	Short	Straight	35	164.3	55.5	92.4	2	1/16"	P5100020	▲
		Intermediate	Spiral	63.5	192.9	84.1	121	2	1/16"	P5900020	▲
		Standard	Spiral	114.3	243.7	135	171.8	2	1/16"	P6000020	▲
		Extended	Spiral	178	344.0	199	235.8	2	1/16"	P6100020	▲
17.86 - 24	D	Short	Straight	69.8	232.5	98.4	142.5	3	1/8"	P5110030	▲
		Intermediate	Spiral	120.7	283.3	149.2	193.3	3	1/8"	P5810030	▲
		Standard	Spiral	171.5	334.2	200	244.1	3	1/8"	P5910030	▲
		Extended	Spiral	273.1	435.8	301.6	345.7	3	1/8"	P6010030	▲
24.61 - 35	E	Short	Straight	85.7	273.8	114.3	160.4	4	1/8"	P5120040	▲
		Intermediate	Spiral	136.5	324.6	165.1	211.2	4	1/8"	P5820040	▲
		Standard	Spiral	187.3	375.4	215.9	262	4	1/8"	P5920040	▲
		Extended	Spiral	289	477.0	317.5	363.6	4	1/8"	P6020040	▲
35.72 - 47.63	F	Short	Straight	120.6	319.1	152.4	206.4	4	1/4"	P5130040	▲
		Intermediate	Spiral	165.1	363.6	196.9	250.9	4	1/4"	P5830040	▲
		Standard	Spiral	209.5	408.0	241.3	295.3	4	1/4"	P5930040	▲
		Extended	Spiral	349.3	547.7	381	435	4	1/4"	P5430040	▲
48 - 65.09	G	Short	Straight	130.1	363.5	165.1	219.1	5	1/4"	P5140050	▲
		Standard	Spiral	231.8	465.1	266.7	320.7	5	1/4"	P5940050	▲
		Extended	Straight	422.3	655.6	457.2	511.2	5	1/4"	P5440050	▲
65.3 - 88	H	Short	Straight	171.5	430.2	215.9	287.3	5	1/2"	P5150050	▲
		Standard	Spiral	273.1	531.8	317.5	388.9	5	1/2"	P5950050	▲
		Extended	Straight	463.6	722.3	508	579.4	5	1/2"	P5450050	▲
90 - 114	I	Short	Straight	171.5	439.7	225.4	296.8	5	1/2"	P5170050	▲
		Standard	Spiral	273.1	541.3	327	398.5	5	1/2"	P5970050	▲
		Extended	Straight	555.6	823.9	609.6	681.1	5	1/2"	P5470050	▲

**COOLANT RINGS For Morse Taper Shank Holders**



Convert taper shank holders to through coolant from an external coolant pipe. Ideal for deeper holes, better swarf clearance, preventing insert failure and longer tool life. Through coolant machine not required!

Series	Drill Diameter	B	C	M	E	ORDER CODE	PRICE
A	9.5 - 11	44.45	22.23	M8x1.25	1/8"	COS - 190522	▲
B	11.11 - 12.7						
C	13.00 - 17.5						
D	17.86 - 24	53.97	28.57	M8x1.25	1/8"	COS - 254028	▲
E	24.61 - 35						
F	35.72 - 47.63	63.50	34.92	M10x1.5	1/4"	COS - 317535	▲
G	48.00 - 65.09	76.20	34.92	M10x1.5	1/4"	COS - 444535	▲
H	65 - 88	95.27	44.45	M12x1.75	1/2"	COS - 571544	▲
I	90 - 114						

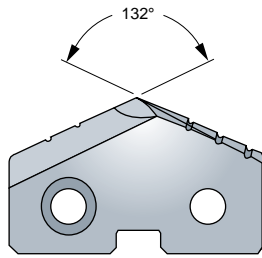
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**SUPERCUT SPADE DRILL INSERTS 9 ~ 17.5mm**



For General Machining and Drilling Large Diameters with Longer Tool Life and High Productivity

► Self centering giving extremely accurate drilling, even in deep holes



GRADE	APPLICATION	Unstable Machining	Stable Machining
T15/M4	First choice for general machining of all materials	✓	✓
M48	Increased tool life over T15. Ideal for stainless steel, harder & tougher materials	✓	✓
K20	Coated carbide. Ideal for high alloy steels, stainless steel & aluminium	✗	✓
P40	Coated carbide. Ultimate performance on all steels	✗	✓



SERIES & Diameter min. to max. mm (inch)	Diameter		T15 HSS 5% Cobalt (TIALN)		M48 Powder Metal (TIALN)		K20 Solid Carbide (TiALN)		P40 Solid Carbide (TiALN)	
	mm	inch	ORDER CODE	PRICE	ORDER CODE	PRICE	ORDER CODE	PRICE	ORDER CODE	PRICE
<b>A</b> 9.5 - 11.07 (0.374" - 0.436")	9.5	-	S1165095 ▲		S1565095 ▲		S1765095 ▲		S1865095 ▲	
	9.53	3/8"	S1115024 ▲		S1515024 ▲		S1715024 ▲		S1815024 ▲	
	9.8	-	S1165098 ▲		S1565098 ▲		S1765098 ▲		S1865098 ▲	
	9.92	25/64"	S1115025 ▲		S1515025 ▲		S1715025 ▲		S1815025 ▲	
	10	-	S1165100 ▲		S1565100 ▲		S1765100 ▲		S1865100 ▲	
	10.2	-	S1165102 ▲		S1565102 ▲		S1765102 ▲		S1865102 ▲	
	10.32	13/32"	S1115026 ▲		S1515026 ▲		S1715026 ▲		S1815026 ▲	
	10.5	-	S1165105 ▲		S1565105 ▲		S1765105 ▲		S1865105 ▲	
	10.72	27/64"	S1115027 ▲		S1515027 ▲		S1715027 ▲		S1815027 ▲	
	10.8	-	S1165108 ▲		S1565108 ▲		S1765108 ▲		S1865108 ▲	
11	-	S1165110 ▲		S1565110 ▲		S1765110 ▲		S1865110 ▲		
<b>B</b> 11.11 - 12.95 (0.437" - 0.51")	11.11	7/16"	S1115028 ▲		S1515028 ▲		S1715028 ▲		S1815028 ▲	
	11.5	-	S1165115 ▲		S1565115 ▲		S1765115 ▲		S1865115 ▲	
	11.51	29/64"	S1115029 ▲		S1515029 ▲		S1715029 ▲		S1815029 ▲	
	11.91	15/32"	S1115030 ▲		S1515030 ▲		S1715030 ▲		S1815030 ▲	
	12	-	S1165120 ▲		S1565120 ▲		S1765120 ▲		S1865120 ▲	
	12.3	31/64"	S1115031 ▲		S1515031 ▲		S1715031 ▲		S1815031 ▲	
	12.5	-	S1165125 ▲		S1565125 ▲		S1765125 ▲		S1865125 ▲	
12.7	1/2"	S1115032 ▲		S1515032 ▲		S1715032 ▲		S1815032 ▲		
<b>C</b> 12.98 - 17.65 (0.511" - 0.695")	13	-	S1165130 ▲		S1565130 ▲		S1765130 ▲		S1865130 ▲	
	13.1	33/64"	S1115033 ▲		S1515033 ▲		S1715033 ▲		S1815033 ▲	
	13.49	17/32"	S1115034 ▲		S1515034 ▲		S1715034 ▲		S1815034 ▲	
	13.5	-	S1165135 ▲		S1565135 ▲		S1765135 ▲		S1865135 ▲	
	14	-	S1165140 ▲		S1565140 ▲		S1765140 ▲		S1865140 ▲	
	14.29	9/16"	S1115036 ▲		S1515036 ▲		S1715036 ▲		S1815036 ▲	
	14.5	-	S1165145 ▲		S1565145 ▲		S1765145 ▲		S1865145 ▲	
	14.68	37/64"	S1115037 ▲		S1515037 ▲		S1715037 ▲		S1815037 ▲	
	15	-	S1165150 ▲		S1565150 ▲		S1765150 ▲		S1865150 ▲	
	15.08	19/32"	S1115038 ▲		S1515038 ▲		S1715038 ▲		S1815038 ▲	
	15.5	-	S1165155 ▲		S1565155 ▲		S1765155 ▲		S1865155 ▲	
	15.88	5/8"	S1115040 ▲		S1515040 ▲		S1715040 ▲		S1815040 ▲	
	16	-	S1165160 ▲		S1565160 ▲		S1765160 ▲		S1865160 ▲	
	16.5	-	S1165165 ▲		S1565165 ▲		S1765165 ▲		S1865165 ▲	
	16.67	21/32"	S1115042 ▲		S1515042 ▲		S1715042 ▲		S1815042 ▲	
17	-	S1165170 ▲		S1565170 ▲		S1765170 ▲		S1865170 ▲		
17.46	11/16"	S1115044 ▲		S1515044 ▲		S1715044 ▲		S1815044 ▲		
17.5	-	S1165175 ▲		S1565175 ▲		S1765175 ▲		S1865175 ▲		

▲ UK stock - Generally x-stock for next day delivery ▼ European stock - Generally 2-3 days delivery (please check for lead times) continued overleaf...



**SUPERCUT SPADE DRILL INSERTS 17.86 ~ 35mm**

For General Machining and Drilling Large Diameters with Longer Tool Life and High Productivity

SERIES & Diameter min. to max. mm (inch)	Diameter		T15 HSS 5% Cobalt (TIALN)		M48 Powder Metal (TIALN)		K20 Solid Carbide (TIALN)		P40 Solid Carbide (TIALN)	
	mm	inch	ORDER CODE	PRICE	ORDER CODE	PRICE	ORDER CODE	PRICE	ORDER CODE	PRICE
<b>D</b> 17.53 - 24.38 (0.69" - 0.96")	17.86	45/64"	S1115045 ▲		S1515045 ▲		S1715045 ▲		S1815045 ▲	
	18	-	S1165180 ▲		S1565180 ▲		S1765180 ▲		S1865180 ▲	
	18.26	23/32"	S1115046 ▲		S1515046 ▲		S1715046 ▲		S1815046 ▲	
	18.5	-	S1165185 ▲		S1565185 ▲		S1765185 ▲		S1865185 ▲	
	18.65	47/64"	S1115047 ▲		S1515047 ▲		S1715047 ▲		S1815047 ▲	
	19	-	S1165190 ▲		S1565190 ▲		S1765190 ▲		S1865190 ▲	
	19.05	3/4"	S1115048 ▲		S1515048 ▲		S1715048 ▲		S1815048 ▲	
	19.45	49/64"	S1115049 ▲		S1515049 ▲		S1715049 ▲		S1815049 ▲	
	19.5	-	S1165195 ▲		S1565195 ▲		S1765195 ▲		S1865195 ▲	
	19.84	25/32"	S1115050 ▲		S1515050 ▲		S1715050 ▲		S1815050 ▲	
	20	-	S1165200 ▲		S1565200 ▲		S1765200 ▲		S1865200 ▲	
	20.5	-	S1165205 ▲		S1565205 ▲		S1765205 ▲		S1865205 ▲	
	20.64	13/16"	S1115052 ▲		S1515052 ▲		S1715052 ▲		S1815052 ▲	
	21	-	S1165210 ▲		S1565210 ▲		S1765210 ▲		S1865210 ▲	
	21.43	27/32"	S1115054 ▲		S1515054 ▲		S1715054 ▲		S1815054 ▲	
	22	-	S1165220 ▲		S1565220 ▲		S1765220 ▲		S1865220 ▲	
	22.23	7/8"	S1115056 ▲		S1515056 ▲		S1715056 ▲		S1815056 ▲	
	23	-	S1165230 ▲		S1565230 ▲		S1765230 ▲		S1865230 ▲	
	23.02	29/32"	S1115058 ▲		S1515058 ▲		S1715058 ▲		S1815058 ▲	
	23.42	59/64"	S1115059 ▲		S1515059 ▲		S1715059 ▲		S1815059 ▲	
23.81	15/16"	S1115060 ▲		S1515060 ▲		S1715060 ▲		S1815060 ▲		
24	-	S1165240 ▲		S1565240 ▲		S1765240 ▲		S1865240 ▲		
<b>E</b> 24.41 - 35.05 (0.961" - 1.38")	24.61	31/32"	S1115062 ▲		S1515062 ▲		S1715062 ▲		S1815062 ▲	
	25	63/64"	S1115063 ▲		S1515063 ▲		S1715063 ▲		S1815063 ▲	
	25.4	1"	S1115100 ▲		S1515100 ▲		S1715100 ▲		S1815100 ▲	
	25.8	1-1/64"	S1115101 ▲		S1515101 ▲		S1715101 ▲		S1815101 ▲	
	26	-	S1165260 ▲		S1565260 ▲		S1765260 ▲		S1865260 ▲	
	26.19	1-1/32"	S1115102 ▲		S1515102 ▲		S1715102 ▲		S1815102 ▲	
	26.99	1-1/16"	S1115104 ▲		S1515104 ▲		S1715104 ▲		S1815104 ▲	
	27	-	S1165270 ▲		S1565270 ▲		S1765270 ▲		S1865270 ▲	
	27.78	1-3/32"	S1115106 ▲		S1515106 ▲		S1715106 ▲		S1815106 ▲	
	28	-	S1165280 ▲		S1565280 ▲		S1765280 ▲		S1865280 ▲	
	28.58	1-1/8"	S1115108 ▲		S1515108 ▲		S1715108 ▲		S1815108 ▲	
	29	-	S1165290 ▲		S1565290 ▲		S1765290 ▲		S1865290 ▲	
	29.37	1-5/32"	S1115110 ▲		S1515110 ▲		S1715110 ▲		S1815110 ▲	
	30	-	S1165300 ▲		S1565300 ▲		S1765300 ▲		S1865300 ▲	
	30.16	1-3/16"	S1115112 ▲		S1515112 ▲		S1715112 ▲		S1815112 ▲	
	30.96	1-7/32"	S1115114 ▲		S1515114 ▲		S1715114 ▲		S1815114 ▲	
	31	-	S1165310 ▲		S1565310 ▲		S1765310 ▲		S1865310 ▲	
	31.75	1-1/4"	S1115116 ▲		S1515116 ▲		S1715116 ▲		S1815116 ▲	
	32	-	S1165320 ▲		S1565320 ▲		S1765320 ▲		S1865320 ▲	
	32.54	1-9/32"	S1115118 ▲		S1515118 ▲		S1715118 ▲		S1815118 ▲	
33	-	S1165330 ▲		S1565330 ▲		S1765330 ▲		S1865330 ▲		
33.34	1-5/16"	S1115120 ▲		S1515120 ▲		S1715120 ▲		S1815120 ▲		
34	-	S1165340 ▲		S1565340 ▲		S1765340 ▲		S1865340 ▲		
34.13	1-11/32"	S1115122 ▲		S1515122 ▲		S1715122 ▲		S1815122 ▲		
34.93	1-3/8"	S1115124 ▲		S1515124 ▲		S1715124 ▲		S1815124 ▲		
35	-	S1165350 ▲		S1565350 ▲		S1765350 ▲		S1865350 ▲		

▲ UK stock - Generally x-stock for next day delivery ▼ European stock - Generally 2-3 days delivery (please check for lead times)

**MATERIAL APPLICATIONS**

● Excellent ○ Good

INSERT GRADE	Free Machining Steels		Carbon Steels		Alloy Steels		High Alloyed Steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminium	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	
T15	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○
M4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
M48	●	●	●	●	●	●	●	●	●	●	●	○	○	○	○	○	○
K20	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
P40	●	●	●	●	●	●	●	●	●	●	●	○	○	○	○	○	○



**SUPERCUT SPADE DRILL INSERTS 35.72 ~ 114mm**

For General Machining and Drilling Large Diameters with Longer Tool Life and High Productivity

SERIES & Diameter min. to max. mm (inch)	Diameter		T15 HSS 5% Cobalt (TiAlN)	
	mm	inch	ORDER CODE	PRICE
<b>F</b> 35.72 - 47.8 (1.353" - 1.882")	35.72	1-13/32"	S1115126 ▲	
	36	-	S1165360 ▲	
	36.51	1-7/16"	S1115128 ▲	
	37	-	S1165370 ▲	
	37.31	1-15/32"	S1115130 ▲	
	38	-	S1165380 ▲	
	38.1	1-1/2"	S1115132 ▲	
	38.89	1-17/32"	S1115134 ▲	
	39	-	S1165390 ▲	
	39.69	1-9/16"	S1115136 ▲	
	40	-	S1165400 ▲	
	40.48	1-19/32"	S1115138 ▲	
	41	-	S1165410 ▲	
	41.28	1-5/8"	S1115140 ▲	
	42	-	S1165420 ▲	
	42.07	1-21/32"	S1115142 ▲	
	42.86	1-11/16"	S1115144 ▲	
	43	-	S1165430 ▲	
	43.66	1-23/32"	S1115146 ▲	
	<b>G</b> 46.99 - 65.28 (1.85" - 2.57")	44	-	S1165440 ▲
44.45		1-3/4"	S1115148 ▲	
45		-	S1165450 ▲	
45.24		1-25/32"	S1115150 ▲	
46		-	S1165460 ▲	
46.04		1-13/16"	S1115152 ▲	
46.83		1-27/32"	S1115154 ▲	
47		-	S1165470 ▲	
47.63		1-7/8"	S1115156 ▲	
48		-	S1165480 ▲	
48.42		1-29/32"	S1115158 ▲	
49		-	S1165490 ▲	
49.21		1-15/16"	S1115160 ▲	
50		-	S1165500 ▲	
50.01		1-31/32"	S1115162 ▲	
50.8		2"	S1115200 ▲	
51		-	S1165510 ▲	
51.59		2-1/32"	S1115202 ▲	
52		2-3/64"	S1115203 ▲	
52.39		2-1/16"	S1115204 ▲	
<b>H</b> 63.5 - 89.08 (3.001" - 3.507")	53	-	S1165530 ▲	
	53.18	2-3/32"	S1115206 ▲	
	53.98	2-1/8"	S1115208 ▲	
	54	-	S1165540 ▲	
	54.79	2-5/32"	S1115210 ▲	
	55	-	S1165550 ▲	
	55.56	2-3/16"	S1115212 ▲	
	56	-	S1165560 ▲	
	56.36	2-7/32"	S1115214 ▲	
	57	-	S1165570 ▲	
	57.15	2-1/4"	S1115216 ▲	
	57.94	2-9/32"	S1115218 ▲	
	58	-	S1165580 ▲	
	58.74	2-5/16"	S1115220 ▲	
	59	-	S1165590 ▲	
	59.53	2-11/32"	S1115222 ▲	
	60	-	S1165600 ▲	
	60.33	2-3/8"	S1115224 ▲	
	61	-	S1165610 ▲	

SERIES & Diameter min. to max. mm (inch)	Diameter		T15 HSS 5% Cobalt (TiAlN)	
	mm	inch	ORDER CODE	PRICE
<b>G</b> 46.99 - 65.28 (1.85" - 2.57")	61.12	2-13/32"	S1115226 ▲	
	61.91	2-7/16"	S1115228 ▲	
	62	-	S1165620 ▲	
	62.71	2-15/32"	S1115230 ▲	
	63	-	S1165630 ▲	
	63.5	2-1/2"	S1115232 ▲	
	64	-	S1165640 ▲	
	64.29	2-17/32"	S1115234 ▲	
	65	-	S1165650 ▲	
	65.09	2-9/16"	S1115236 ▲	

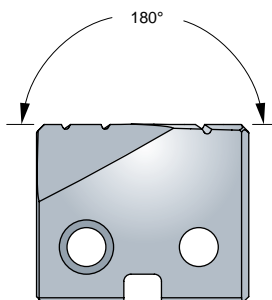
SERIES & Diameter min. to max. mm (inch)	Diameter		M4 HSS (TiAlN)	
	mm	inch	ORDER CODE	PRICE
<b>H</b> 63.5 - 89.08 (3.001" - 3.507")	63.5	2-1/2"	S14152D2 ▲	
	64	-	S146564A ▲	
	64.29	2-17/32"	S14152D4 ▲	
	65.09	2-9/16"	S14152D6 ▲	
	65.88	2-19/32"	S1415238 ▲	
	66	-	S1465660 ▲	
	66.68	2-5/8"	S1415240 ▲	
	67.47	2-21/32"	S1415242 ▲	
	68	-	S1465680 ▲	
	68.26	2-11/16"	S1415244 ▲	
	69.05	2-23/32"	S1415246 ▲	
	69.85	2-3/4"	S1415248 ▲	
	70	-	S1465700 ▲	
	70.64	2-25/32"	S1415250 ▲	
	71.44	2-13/16"	S1415252 ▲	
	72	-	S1465720 ▲	
	72.23	2-27/32"	S1415254 ▲	
	73.03	2-7/8"	S1415256 ▲	
	73.82	2-29/32"	S1415258 ▲	
	74	-	S1465740 ▲	
74.61	2-15/16"	S1415260 ▲		
75.41	2-31/32"	S1415262 ▲		
<b>I</b> 90 - 114	76	-	S1465760 ▲	
	76.2	3"	S1415300 ▲	
	78	-	S1465780 ▲	
	80	-	S1465800 ▲	
	82	-	S1465820 ▲	
	84	-	S1465840 ▲	
	86	-	S1465860 ▲	
	88	-	S1465880 ▲	
	90	-	S1465900 ▲	
	92	-	S1465920 ▲	
94	-	S1465940 ▲		
96	-	S1465960 ▲		
98	-	S1465980 ▲		
100	-	S1465A00 ▲		
102	-	S1465A20 ▲		
104	-	S1465A40 ▲		
106	-	S1465A60 ▲		
108	-	S1465A80 ▲		
110	-	S1465B00 ▲		
112	-	S1465B20 ▲		
114	-	S1465B40 ▲		

▲ UK stock - Generally x-stock for next day delivery ▼ European stock - Generally 2-3 days delivery (please check for lead times)



**SUPERCUT SPADE DRILL FLAT BOTTOM INSERTS 11.5 ~ 45mm**

- ▶ Can be used as a finishing tool for creating a flat bottom in a pre-existing hole
- ▶ Suitable for drilling into a solid surface (maximum depth 1xD)



**MATERIAL APPLICATIONS**

**T15** First choice for general machining of all materials

SERIES & Diameter min. to max.	Diameter mm	Thickness mm	T15 HSS 5% Cobalt (TiAlN)		SERIES & Diameter min. to max.	Diameter mm	Thickness mm	T15 HSS 5% Cobalt (TiAlN)	
			ORDER CODE	PRICE				ORDER CODE	PRICE
<b>B</b> 11.5 - 12.5	11.5	2.4	S2165115	▲	<b>E</b> 25 - 35	25	4.8	S2165250	▲
	12		S2165120	▲		26		S2165260	▲
	12.5		S2165125	▲		27		S2165270	▲
<b>C</b> 13 - 17.5	13	3.2	S2165130	▲		28		S2165280	▲
	13.5		S2165135	▲		29		S2165290	▲
	14		S2165140	▲		30		S2165300	▲
	14.5		S2165145	▲		31		S2165310	▲
	15		S2165150	▲		32		S2165320	▲
	15.5		S2165155	▲		33		S2165330	▲
	16		S2165160	▲		34		S2165340	▲
16.5	S2165165	▲	35	S2165350	▲				
<b>D</b> 18 - 24	17	4	S2165170	▲	<b>F</b> 36 - 45	36	6.4	S2165360	▲
	17.5		S2165175	▲		37		S2165370	▲
	18		S2165180	▲		38		S2165380	▲
	18.5		S2165185	▲		39		S2165390	▲
	19		S2165190	▲		40		S2165400	▲
	19.5		S2165195	▲		41		S2165410	▲
	20		S2165200	▲		42		S2165420	▲
	20.5		S2165205	▲		43		S2165430	▲
	21		S2165210	▲		44		S2165440	▲
	22		S2165220	▲		45		S2165450	▲

▲ UK stock - Generally x-stock for next day delivery ▼ European stock - Generally 2-3 days delivery (please check for lead times)

**MATERIAL APPLICATIONS**

● Excellent ○ Good

INSERT GRADE	Free Machining Steels ~HRC24 ~HB250	Carbon Steels ~HRC28 ~HB275	Alloy Steels HRC28~HB275~ ~HRC28 ~HB275	High Alloyed Steels ~HRC37 ~HB350 HRC37~HB350~	Structural Steels ~HRC24 ~HB250 HRC24~HB250~	Tool Steels ~HRC13 ~HB200 HRC13~HB200~	Stainless Steels ~HRC28 ~HB275 ~HRC19 ~HB220	Cast Iron HRC19~HB220~	Aluminium ~HRC8 ~HB180	Copper Alloys ~HB110
T15	●	●	●	○	○	○	○	○	●	○



**SUPERCUT SPADE DRILL FLAT BOTTOM HSS**

**CUTTING DATA**

T15 GRADE

Drilling

Insert Grade	Material	Workpiece		Surface Speed vc (m/min)	Feed Rate (mm/rev)			
		Hardness			Ø9.5~12.5	Ø13~17.5	Ø18~24	Ø25~35
		Bhn	HRC					
T15	FREE MACHINING STEEL	100 - 150	-	67	0.13	0.18	0.25	0.32
		150 - 200	- 13	65	0.13	0.18	0.25	0.32
		200 - 250	13 - 24	58	0.11	0.18	0.25	0.30
	LOW CARBON STEEL	85 - 125	-	60	0.12	0.18	0.22	0.30
		125 - 175	- 7	58	0.12	0.18	0.22	0.30
		175 - 225	7 - 20	55	0.10	0.15	0.19	0.27
		225 - 275	20 - 28	53	0.10	0.15	0.19	0.27
	MEDIUM CARBON STEEL	125 - 175	- 7	60	0.11	0.18	0.22	0.28
		175 - 225	7 - 20	55	0.10	0.15	0.18	0.27
		225 - 275	20 - 28	50	0.10	0.15	0.18	0.27
		275 - 325	28 - 34	46	0.08	0.14	0.17	0.22
	STRUCTURAL STEEL	100 - 150	-	50	0.11	0.18	0.23	0.28
		150 - 250	- 24	44	0.10	0.18	0.19	0.22
		250 - 350	24 - 37	36	0.08	0.16	0.18	0.19
	ALLOY STEEL	125 - 175	- 7	50	0.12	0.16	0.19	0.29
		175 - 225	7 - 20	46	0.10	0.16	0.19	0.29
		225 - 275	20 - 28	45	0.10	0.13	0.18	0.28
		275 - 325	28 - 34	42	0.07	0.12	0.18	0.22
		325 - 375	34 - 40	37	0.06	0.12	0.17	0.22
	TOOL STEEL	150 - 200	- 13	29	0.07	0.12	0.15	0.20
		200 - 250	13 - 24	23	0.07	0.12	0.15	0.20
	HIGH STRENGTH ALLOY	225 - 300	- 32	28	0.10	0.14	0.16	0.19
		300 - 350	32 - 37	22	0.08	0.14	0.18	0.19
		350 - 400	37 - 43	18	0.06	0.12	0.18	0.18
	STAINLESS STEEL	135 - 185	- 9	29	0.18	0.18	0.20	0.23
		185 - 275	9 - 28	25	0.15	0.15	0.18	0.22
	HIGH TEMP ALLOY	140 - 220	- 19	213	0.17	0.28	0.36	0.43
		220 - 310	19 - 33	121	0.17	0.28	0.36	0.41
	CAST IRON / SG IRON	120 - 150	-	66	0.13	0.25	0.35	0.41
		150 - 200	- 13	60	0.12	0.21	0.29	0.40
200 - 220		13 - 19	51	0.12	0.20	0.25	0.36	
220 - 260		19 - 26	48	0.10	0.14	0.20	0.25	
260 - 320		26 - 34	37	0.10	0.13	0.13	0.20	
ALUMINIUM	30	-	10	0.06	0.14	0.16	0.19	
	180	- 8	9	0.06	0.11	0.14	0.15	

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

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

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

► The recommendations for speeds, feeds and other parameters presented in this table are nominal recommendations and should be considered only as good starting points.

**SUPERCUT SPADE DRILL HSS & POWDER METAL**

**CUTTING DATA**

T15, M4 & M48 GRADES

Drilling

Insert Grade	Workpiece			Surface Speed vc (m/min)	Feed Rate (mm/rev)						
	Material	Hardness Bhn	HRc		Ø9.5~12.5	Ø13~17.5	Ø18~24	Ø25~35	Ø36~47	Ø48~65	Ø66~114
M4	FREE MACHINING STEEL	100 - 150		84	0.16	0.23	0.31	0.40	0.48	0.55	0.67
		150 - 200	- 13	81	0.16	0.23	0.31	0.40	0.48	0.55	0.67
		200 - 250	13 - 24	72	0.14	0.23	0.31	0.38	0.48	0.57	0.69
	LOW CARBON STEEL	85 - 125		75	0.15	0.22	0.28	0.37	0.46	0.56	0.67
		125 - 175	- 7	72	0.15	0.22	0.28	0.37	0.46	0.56	0.67
		175 - 225	7 - 20	69	0.13	0.19	0.24	0.34	0.43	0.50	0.57
	MEDIUM CARBON STEEL	225 - 275	20 - 28	66	0.13	0.19	0.24	0.34	0.43	0.50	0.57
		125 - 175	- 7	75	0.14	0.22	0.28	0.35	0.45	0.55	0.65
		175 - 225	7 - 20	69	0.13	0.19	0.23	0.34	0.43	0.50	0.58
T15	M48	225 - 275	20 - 28	63	0.13	0.19	0.23	0.34	0.43	0.50	0.58
T15	M48	275 - 325	28 - 34	58	0.10	0.17	0.21	0.28	0.38	0.45	0.55
M4	STRUCTURAL STEEL	100 - 150		63	0.14	0.23	0.29	0.35	0.44	0.50	0.63
		150 - 250	- 24	55	0.13	0.22	0.24	0.28	0.38	0.46	0.59
T15	M48	250 - 350	24 - 37	45	0.10	0.20	0.22	0.24	0.34	0.40	0.48
M4	ALLOY STEEL	125 - 175	- 7	63	0.15	0.20	0.24	0.36	0.43	0.47	0.53
		175 - 225	7 - 20	58	0.13	0.20	0.24	0.36	0.42	0.46	0.55
		225 - 275	20 - 28	56	0.13	0.16	0.23	0.35	0.41	0.44	0.55
T15	M48	275 - 325	28 - 34	53	0.09	0.15	0.22	0.28	0.38	0.41	0.50
T15	M48	325 - 375	34 - 40	46	0.08	0.15	0.21	0.27	0.38	0.40	0.51
M4	TOOL STEEL	150 - 200	- 13	36	0.08	0.17	0.20	0.24	0.30	0.37	0.39
		200 - 250	13 - 24	29	0.08	0.14	0.18	0.19	0.25	0.29	0.34
T15	M48	225 - 300	- 32	35	0.13	0.18	0.23	0.24	0.36	0.43	0.50
M4	HIGH STRENGTH ALLOY	300 - 350	32 - 37	27	0.10	0.18	0.23	0.24	0.36	0.43	0.50
		350 - 400	37 - 43	22	0.08	0.15	0.20	0.22	0.30	0.48	0.46
		135 - 185	- 9	34	0.14	0.20	0.23	0.26	0.36	0.41	0.50
T15	M48	185 - 275	9 - 28	29	0.12	0.18	0.20	0.24	0.30	0.36	0.46
T15	M48	140 - 220	- 19	12	0.08	0.17	0.20	0.24	0.30	0.37	0.39
M48	HIGH TEMP ALLOY	220 - 310	19 - 33	11	0.08	0.14	0.18	0.19	0.25	0.29	0.34
M4		CAST IRON / SG IRON	120 - 150		75	0.16	0.30	0.40	0.49	0.59	0.69
	150 - 200		- 13	70	0.14	0.26	0.35	0.45	0.56	0.64	0.68
	200 - 220		13 - 19	58	0.14	0.23	0.30	0.41	0.46	0.52	0.60
	220 - 260		19 - 26	52	0.13	0.17	0.23	0.30	0.35	0.43	0.50
T15	M48	260 - 320	26 - 34	41	0.10	0.15	0.16	0.23	0.28	0.35	0.40
M4	ALUMINIUM	30		244	0.19	0.33	0.41	0.50	0.54	0.64	0.62
		180	- 8	137	0.19	0.33	0.41	0.46	0.54	0.64	0.62

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

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

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

► The recommendations for speeds, feeds and other parameters presented in this table are nominal recommendations and should be considered only as good starting points.



**SUPERCUT SPADE DRILL CARBIDE**

**CUTTING DATA**

P40 & K20 GRADES

Drilling

Insert Grade	Material	Workpiece		Surface Speed vc (m/min)	Feed Rate (mm/rev)				
		Hardness			Ø9.5~12.5	Ø13~17.5	Ø18~24	Ø25~35	Ø36~47
		Bhn	HRc						
P40	FREE MACHINING STEEL	100 - 150		125	0.18	0.28	0.36	0.44	0.50
		150 - 200	- 13	110	0.16	0.26	0.33	0.39	0.45
		200 - 250	13 - 24	101	0.14	0.23	0.31	0.41	0.42
	LOW CARBON STEEL	85 - 125		119	0.20	0.24	0.31	0.42	0.46
		125 - 175	- 7	107	0.18	0.24	0.31	0.39	0.43
		175 - 225	7 - 20	96	0.15	0.22	0.29	0.36	0.40
		225 - 275	20 - 28	84	0.13	0.22	0.29	0.36	0.40
	MEDIUM CARBON STEEL	125 - 175	- 7	102	0.17	0.24	0.31	0.37	0.42
		175 - 225	7 - 20	93	0.15	0.22	0.28	0.36	0.40
		225 - 275	20 - 28	84	0.15	0.22	0.28	0.36	0.40
		275 - 325	28 - 34	67	0.13	0.19	0.26	0.33	0.37
	STRUCTURAL STEEL	100 - 150		91	0.19	0.26	0.34	0.39	0.43
		150 - 250	- 24	75	0.15	0.24	0.29	0.33	0.37
		250 - 350	24 - 37	73	0.13	0.23	0.27	0.29	0.33
	ALLOY STEEL	125 - 175		98	0.18	0.25	0.32	0.40	0.45
		175 - 225	- 13	88	0.15	0.23	0.29	0.38	0.42
		225 - 275	13 - 19	81	0.15	0.21	0.28	0.37	0.41
		275 - 325	19 - 26	78	0.12	0.20	0.27	0.33	0.40
		325 - 375	26 - 34	64	0.10	0.18	0.23	0.30	0.38
	TOOL STEEL	150 - 200	- 7	67	0.09	0.18	0.22	0.28	0.31
		200 - 250	7 - 20	50	0.09	0.18	0.22	0.28	0.31
K20	HIGH STRENGTH ALLOY	225 - 300	20 - 28	30	0.10	0.17	0.23	0.27	0.33
		300 - 350	28 - 34	24	0.10	0.14	0.20	0.24	0.30
		350 - 400	34 - 40	62	0.15	0.23	0.25	0.29	0.38
P40	STAINLESS STEEL	135 - 185	- 13	55	0.12	0.20	0.23	0.27	0.35
		185 - 275	13 - 24	47	0.10	0.18	0.20	0.24	0.30
K20	HIGH TEMP ALLOY	140 - 220	- 9	62	0.19	0.19	0.21	0.24	0.30
		220 - 310	9 - 28	46	0.15	0.17	0.20	0.21	0.25
	CAST IRON / SG IRON	120 - 150	- 19	137	0.18	0.30	0.37	0.46	0.56
		150 - 200	19 - 33	125	0.17	0.26	0.32	0.42	0.53
		200 - 220	- 32	111	0.14	0.23	0.30	0.38	0.45
		220 - 260	32 - 37	93	0.13	0.15	0.28	0.33	0.37
		260 - 320	37 - 43	79	0.13	0.18	0.23	0.28	0.33
	ALUMINIUM	30		427	0.24	0.38	0.45	0.50	0.53
180		- 8	291	0.22	0.33	0.40	0.45	0.48	

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

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

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

► The recommendations for speeds, feeds and other parameters presented in this table are nominal recommendations and should be considered only as good starting points.