



*shaping your dreams*



OSG GROUP COMPANY

S O M T A   U K   P R I C E   L I S T   V 1

## **SOMTA NOW HAS A TOOL WIZARD APP**

The **SOMTA** Tool Wizard Application allows ease of access to machining data parameters and provides automatic calculations based on the users input.

Available in iTunes, Google Play and as a WebApp



<http://app.somta.co.za>

# Introduction



Manufacturers & Suppliers of Drills, Reamers, End Mills, Bore Cutters, Taps & Dies, Toolbits, Solid Carbide Tooling, Carbide Insert Tooling, Custom Tools and Surface Coatings

Somta Tools specialises in the design and manufacture of standard and custom tools for the industrial and “do it yourself” markets. Product categories can be summarised as drills, cutters, reamers, threading tools and toolbits, which are made in a wide range of sizes, using various materials (HSS and Solid Carbide) and Balzers PVD surface coatings to extend wear life.












The factory in Pietermaritzburg manufactures 7 000 standard items and a further 6 000 made-to-order items to serve local markets and export markets in over 70 countries worldwide.

From humble beginnings in 1954 with 20 employees, Somta has grown into one of the largest cutting tool manufacturers in the southern hemisphere, operating from offices and modern manufacturing facilities laid out over 3 hectares with a complement of over 300 employees.

The company’s vision of “To manufacture and supply superior cutting tools, driven by a culture of service excellence, to global and domestic markets” is supported by ISO accreditation which was first achieved in 1991 and still remains in place today.



# Icon Legend and Descriptions

MEASURE	<b>mm</b> Metric	<b>inch</b> Imperial		
MATERIAL	<b>HSS</b> High Speed Steel	<b>HSS Co5</b> 5% Cobalt High Speed Steel		
FINISH	<b>BRIGHT FINISH</b> No Surface Treatment	<b>BLUE FINISH</b> Steam (HOMO) Temper	<b>GOLD OXIDE FINISH</b> Steam (HOMO) Temper Straw Colour	
	<b>TiAlN</b> Titanium Aluminium Nitride (Black Finish)	<b>TiN</b> Titanium Nitride (Gold Finish)	<b>BRIGHT FINISH WITH TiN TIP</b> Bright Finish with TiN Tip	
TYPE	<b>TYPE N</b> Type N Standard	<b>TYPE W</b> Type W For Soft Materials	<b>TYPE FS</b> Parabolic Flute Strong Core	
	<b>CBA</b> Colour Band Application			
STANDARD	<b>DIN 338</b> DIN Standard 338	<b>BASED ON ISO 3292</b> Based on ISO Standard 3292	<b>WORKS STD.</b> Factory Specifications	
	<b>QS</b> Quick Spiral			
SHANK	 Plain Shank h6 Tolerance			
POINT ANGLE	 118° Drill Point Angle	 60° & 90° Countersink Angles		
LENGTHS	 Drills Stub	 Drills Jobber	 Drills Long Series	
	 Drills Extra Length			
FLUTE-HELIX ANGLE	 30° Right hand helix			
CENTRE DRILLS	 Form A Standard			
TOLERANCE	 Tolerance on cutting Diameter			
MILLING PROFILE	 Internal Coolant			

# Material Overview



Recommended



Suitable

<b>P</b>	<b>Steel</b>	<i>Hardness</i>
1.1	Free Cutting Steel	< 120 HB
1.2	Structural Steel	< 200 HB
1.3	Plain Carbon Steel	< 250 HB
1.4	Alloy Steel	< 250 HB
1.5	Alloy Steel - Hardened	250 - 350 HB
1.6	Alloy Steel - Hardened	> 350 HB
1.7	Alloy Steel - Hardened	49 - 55 HRC
1.8	Alloy Steel - Hardened	55 - 63 HRC
<b>M</b>	<b>Stainless Steel</b>	<i>Hardness</i>
2.1	Free Machining Stainless Steel	< 250 HB
2.2	Austenitic Stainless Steel	< 320 HB
2.3	Ferritic and Martensitic Stainless Steel	< 300 HB
2.4	Precipitation Hardened Stainless Steel	320 - 410 HB
<b>K</b>	<b>Cast Iron</b>	<i>Hardness</i>
3.1	Lamellar Graphite Cast Iron	< 150 HB
3.2	Lamellar Graphite Cast Iron	150 - 300 HB
3.3	Nodular Graphite, Malleable Cast Iron	< 200 HB
3.4	Nodular Graphite, Malleable Cast Iron	200 - 300 HB
<b>Ti</b>	<b>Titanium</b>	<i>Hardness</i>
4.1	Titanium unalloyed	< 200 HB
4.2	Titanium alloyed	< 270 HB
4.3	Titanium alloyed	270 - 350 HB
<b>Ni</b>	<b>Nickel</b>	<i>Hardness</i>
5.1	Nickel unalloyed	< 150 HB
5.2	Nickel alloyed	< 270 HB
5.3	Nickel alloyed	270 - 350 HB
<b>Cu</b>	<b>Copper</b>	<i>Hardness</i>
6.1	Copper	< 100 HB
6.2	Beta Brass, Bronze	< 200 HB
6.3	Alpha Brass	< 200 HB
6.4	High Strength Bronze	< 470 HB
<b>N</b>	<b>Aluminium</b>	<i>Hardness</i>
7.1	Aluminium Magnesium unalloyed	< 100 HB
7.2	Aluminium Alloy < 5% Si	< 150 HB
7.3	Aluminium Alloy 5 to 10% Si	< 120 HB
7.4	Aluminium Alloy > 10% Si	
<b>Syn</b>	<b>Synthetic</b>	<i>Hardness</i>
8.1	Duroplastics (short chipping)	
8.2	Thermoplastics (long chipping)	
8.3	Fibre Reinforced Synthetic Materials	



# Selection Chart



## STRAIGHT SHANK DRILLS

Product		Code	Spec.
<b>Straight Shank Jobber Drills - Split Point - HSS - Blue Finish</b> For precision drilling.		101	DIN 338
<b>Straight Shank Jobber Drills - Split Point - HSS - Bright Finish with TiN tip</b> For precision drilling.		1TT	DIN 338
<b>NDX Jobber Drills - Heavy Duty - Split Point - HSS-Co5 - Gold Oxide Finish</b> For drilling high tensile steels and other difficult materials.		177	DIN 338
<b>Straight Shank Stub Drills - Split Point - HSS - Blue Finish</b> A robust drill suited to portable drill application.		140	DIN 1897
<b>Double Ended Sheet Metal / Body Drills - Split Point - HSS - Blue Finish</b> Double ended self centering drill designed to produce accurate holes in thin materials.		151	WORKS STD.
<b>Yellow Band Quick Spiral Jobber Drills - Thinned Point - HSS - Bright Finish</b> For drilling materials of low tensile strength.		1AQ	DIN 338
<b>Straight Shank Long Series Drills - Standard Point - HSS - Blue Finish</b> For general purpose long reach drilling.		116	DIN 340
<b>Straight Shank Extra Length Drills - Standard Point - HSS - Blue Finish</b> For extra deep hole drilling.		121-126	BASED ON ISO 3292
<b>UDL Jobber Drills - Split Point - HSS-Co5 - Bright Finish</b> Ideal for use on CNC machines where high productivity and accurate holes are required.		164	DIN 338
<b>UDL Jobber Drills - Split Point - HSS-Co5 - TiAlN Coated</b> Ideal for use on CNC machines where high productivity and accurate holes are required.		164A	DIN 338
<b>UDL Stub Drills - Split Point - HSS-Co5 - Bright Finish</b> Ideal for use on CNC machines where high productivity and accurate holes are required.		163	DIN 1897
<b>UDL Stub Drills - Split Point - HSS-Co5 - TiAlN Coated</b> Ideal for use on CNC machines where high productivity and accurate holes are required.		163A	DIN 1897
<b>UDL Long Series Drills - Split Point - HSS-Co5 - Bright Finish</b> Ideal for use on CNC machines where high productivity and accurate holes are required. High performance deep hole drilling.		110	DIN 340
<b>UDL Extra Length Drills - UX Point - HSS-Co5 - Bright Finish</b> Ideal for use on CNC machines where high productivity and accurate holes are required. High performance extra deep hole drilling.		118 119 120	DIN 1869
<b>Straight Shank Oil Feed Chipbreaker Drills - 5xD - HSS-Co5 - TiAlN Coated</b> High performance production drilling.		10F	WORKS STD.
<b>Straight Shank Oil Feed Chipbreaker Drills - 10xD - HSS-Co5 - TiAlN Coated</b> High performance production drilling.		10L	WORKS STD.
<b>NC Spotting Drills - Multi-Facet Point - HSS-Co5 - TiAlN Coated</b> For accurate positioning of holes. Ideal for CNC lathes. Alternative to using Centre drills.		184 185	DIN 1897
<b>NC Spotting Drills - Multi-Facet Point - HSS-Co5 - Bright Finish</b> For accurate positioning of holes. Ideal for CNC lathes. Alternative to using Centre drills.		184B 185B	DIN 1897
<b>Centre Drills - Form A - HSS - Bright Finish</b> For general centering operations on workpieces requiring additional machining between centres.		114	DIN 333
<b>Centre Drills - Form A - HSS - TiN Coated</b> For general centering operations on workpieces requiring additional machining between centres.		114T	DIN 333

Red denotes Somta Premium Products





Range	Page	P							M				K				Ti			Ni			Cu				N				Syn								
		1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	2.1	2.2	2.3	2.4	3.1	3.2	3.3	3.4	4.1	4.2	4.3	5.1	5.2	5.3	6.1	6.2	6.3	6.4	7.1	7.2	7.3	7.4	8.1	8.2	8.3					
0.3-20mm	8-9	●	●	●	●								●	●	○	○							○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
1-16mm	10-11	●	●	●	●					○	○	○		●	●	○	○							○	○	○	○	○	○	○	○	○	○	○	○	○	○		
1-13mm 1/16"	12	●	●	●	●	○	○			○	○	○		●	●	●	●							○	○	○	○	○	○	○	○	○	○	○	○	○	○		
1-13mm 17/64"	13	●	●	●	●					○	○	○		●	●	○	○							○	○	○	○	○	○	○	○	○	○	○	○	○	○		
1.5-8mm	14	●	●	●	●					○	○	○		●	●	○	○							○	○	○	○	○	○	○	○	○	○	○	○	○	○		
0.9-13mm	15	○	○	○	○	○	○																					●	●	●	●	○	○	○	○	○	○		
1-16mm	16	●	●	●	●					○	○	○		●	●	○	○							○	○	○	○	○	○	○	○	○	○	○	○	○	○		
1.5-13mm	17	●	●	●	●					○	○	○		●	●	○	○											○	○	○	○	○	○	○	○	○	○	○	
1-13mm	18	●	●	●	●	●				○	○	○		●	●	●	●							○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
1-13mm	19	●	●	●	●	●	●			●	●	●		●	●	●	●							○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
1-13mm	20	●	●	●	●	●				○	○	○		●	●	●	●							○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
1-13mm	21	●	●	●	●	●	●			●	●	●		●	●	●	●							○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
1-10mm	22	●	●	●	●	●				○	○	○		●	●	●	●							○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
2-16mm	23	●	●	●	●	●				○	○	○		●	●	●	●											○	○	○	○	○	○	○	○	○	○	○	○
12-20mm	24	●	●	●	●	●	●			●	●	●		●	●	●	●	○	○	○	○	○	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
12-20mm	25	●	●	●	●	●	●			●	●	●		●	●	●	●	○	○	○	○	○	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
3-20mm	26	●	●	●	○	○	○			○	○	○		○	○	○	○							○	○	○	○	●	●	●	●	●	●	●	●	●	●	●	
3-20mm	27	●	●	●	○	○	○			○	○	○		○	○	○	○							○	○	○	○	●	●	●	●	●	●	●	●	●	●	●	
0.8-10mm	28	●	●	●	●	○	○			○	○	○		●	●	○	○							○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
0.8-10mm	28	●	●	●	●	○	○			○	○	○		●	●	○	○							○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	



# Selection Chart

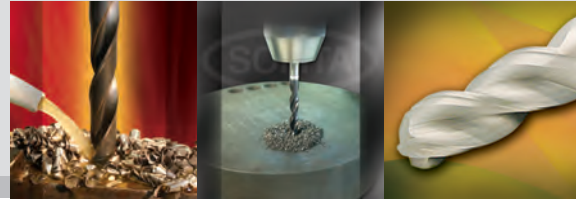


## REAMERS, COUNTERSINKS & COUNTERBORES

Product	Code	Spec.
<p><b>Parallel Shank Countersinks - HSS-Co5</b> To produce a countersink suitable for countersunk head screws, also used as a deburring tool.</p> 	<p><b>761</b> <b>763</b></p>	<p><b>DIN 334C</b> <b>DIN 335C</b></p>
<p><b>Parallel Shank Countersinks - HSS-Co5 - TiN Coated</b> To produce a countersink suitable for countersunk head screws, also used as a deburring tool.</p> 	<p><b>761T</b> <b>763T</b></p>	<p><b>DIN 334C</b> <b>DIN 335C</b></p>



Red denotes Somta Premium Products



Range	Page	P							M				K				Ti			Ni			Cu				N				Syn									
		1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	2.1	2.2	2.3	2.4	3.1	3.2	3.3	3.4	4.1	4.2	4.3	5.1	5.2	5.3	6.1	6.2	6.3	6.4	7.1	7.2	7.3	7.4	8.1	8.2	8.3						
6.3-25mm	34	●	●	●	●	●	●			○	○	○		●	●	●	●							●	●	●	●	●	●	●	●	●	●	●	●					
6.3-25mm	35	●	●	●	●	●	●			●	●	●		●	●	●	●							●	●	●	●	●	●	●	●	●	●	●	●	●	●			

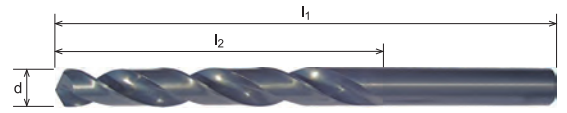




OSG GROUP COMPANY

# Straight Shank Jobber Drills

For precision drilling.



<b>P</b> 1.1	<b>P</b> 1.2	<b>P</b> 1.3	<b>P</b> 1.4	<b>K</b> 3.1	<b>K</b> 3.2	<b>K</b> 3.3	<b>K</b> 3.4	<b>Cu</b> 6.1	<b>Cu</b> 6.2	<b>Cu</b> 6.3	<b>Cu</b> 6.4	<b>N</b> 7.1	<b>N</b> 7.2	<b>N</b> 7.3	<b>N</b> 7.4	<b>Syn</b> 8.1	<b>Syn</b> 8.2
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Code
<b>101</b>

**Properties**

< 3.0mm  
Standard Point

≥ 3.0mm  
Split Point

mm	DIN 338	HSS
5xD	TYPE N	118°
h8	30°	BLUE FINISH

**Cutting Data**

pg 29

d	l <sub>2</sub>	l <sub>1</sub>	Code	Price	QTY
0.3	3	19	1010030	£1.45	10
0.35	4	19	1010035	£1.45	10
0.4	5	20	1010040	£1.45	10
0.45	5	20	1010045	£1.45	10
0.5	6	22	1010050	£1.45	10
0.55	7	24	1010055	£1.45	10
0.6	7	24	1010060	£1.45	10
0.62	8	26	1010062	£1.45	10
0.7	9	28	1010070	£1.45	10
0.75	9	28	1010075	£1.45	10
0.8	10	30	1010080	£1.45	10
0.88	11	32	1010088	£1.45	10
0.9	11	32	1010090	£1.45	10
0.92	11	32	1010092	£1.45	10
1	12	34	1010100	£1.20	10
1.05	12	34	1010105	£1.20	10
1.1	14	36	1010110	£1.20	10
1.15	14	36	1010115	£1.20	10
1.2	16	38	1010120	£1.20	10
1.25	16	38	1010125	£1.20	10
1.3	16	38	1010130	£1.20	10
1.35	18	40	1010135	£1.20	10
1.4	18	40	1010140	£1.20	10
1.45	18	40	1010145	£1.20	10
1.5	18	40	1010150	£1.15	10
1.55	20	43	1010155	£1.15	10
1.6	20	43	1010160	£1.15	10
1.65	20	43	1010165	£1.15	10
1.7	20	43	1010170	£1.15	10
1.75	22	46	1010175	£1.15	10
1.8	22	46	1010180	£1.15	10
1.85	22	46	1010185	£1.15	10
1.9	22	46	1010190	£1.15	10
1.95	24	49	1010195	£1.15	10
2	24	49	1010200	£1.15	10
2.05	24	49	1010205	£1.20	10
2.1	24	49	1010210	£1.20	10
2.15	27	53	1010215	£1.20	10
2.2	27	53	1010220	£1.20	10
2.25	27	53	1010225	£1.25	10
2.3	27	53	1010230	£1.25	10
2.35	27	53	1010235	£1.25	10
2.4	30	57	1010240	£1.25	10
2.45	30	57	1010245	£1.25	10
2.5	30	57	1010250	£1.25	10
2.55	30	57	1010255	£1.30	10
2.6	30	57	1010260	£1.30	10
2.65	30	57	1010265	£1.30	10
2.7	33	61	1010270	£1.30	10
2.75	33	61	1010275	£1.30	10
2.8	33	61	1010280	£1.30	10
2.85	33	61	1010285	£1.30	10
2.9	33	61	1010290	£1.30	10
2.95	33	61	1010295	£1.30	10
3	33	61	1010300	£1.50	10
3.1	36	65	1010310	£1.50	10
3.2	36	65	1010320	£1.50	10
3.25	36	65	1010325	£1.50	10
3.3	36	65	1010330	£1.50	10
3.4	39	70	1010340	£1.50	10
3.5	39	70	1010350	£1.40	10
3.6	39	70	1010360	£1.60	10
3.7	39	70	1010370	£1.65	10
3.8	43	75	1010380	£1.70	10
3.9	43	75	1010390	£1.70	10
4	43	75	1010400	£1.55	10
4.1	43	75	1010410	£1.80	10
4.2	43	75	1010420	£1.75	10

d	l <sub>2</sub>	l <sub>1</sub>	Code	Price	QTY
4.25	43	75	1010425	£1.80	10
4.3	47	80	1010430	£1.90	10
4.4	47	80	1010440	£2.00	10
4.5	47	80	1010450	£1.95	10
4.6	47	80	1010460	£2.05	10
4.7	47	80	1010470	£2.10	10
4.8	52	86	1010480	£2.15	10
4.9	52	86	1010490	£2.20	10
5	52	86	1010500	£2.00	10
5.1	52	86	1010510	£2.20	10
5.2	52	86	1010520	£2.30	10
5.25	52	86	1010525	£2.30	10
5.3	52	86	1010530	£2.40	10
5.4	57	93	1010540	£2.50	10
5.5	57	93	1010550	£2.70	10
5.6	57	93	1010560	£2.80	10
5.7	57	93	1010570	£2.85	10
5.75	57	93	1010575	£2.90	10
5.8	57	93	1010580	£2.90	10
5.9	57	93	1010590	£2.95	10
6	57	93	1010600	£2.75	10
6.1	63	101	1010610	£2.95	10
6.2	63	101	1010620	£3.00	10
6.25	63	101	1010625	£3.00	10
6.3	63	101	1010630	£3.00	10
6.4	63	101	1010640	£3.05	10
6.5	63	101	1010650	£3.20	10
6.6	63	101	1010660	£3.55	10
6.7	63	101	1010670	£3.65	10
6.75	69	109	1010675	£3.70	10
6.8	69	109	1010680	£3.70	10
6.9	69	109	1010690	£3.75	10
7	69	109	1010700	£4.05	10
7.1	69	109	1010710	£4.55	10
7.2	69	109	1010720	£4.60	10
7.3	69	109	1010730	£4.70	10
7.4	69	109	1010740	£4.75	10
7.5	69	109	1010750	£4.55	10
7.6	75	117	1010760	£4.80	10
7.7	75	117	1010770	£4.90	10
7.8	75	117	1010780	£5.00	10
7.9	75	117	1010790	£5.15	10
8	75	117	1010800	£4.70	10
8.1	75	117	1010810	£6.40	10
8.2	75	117	1010820	£6.55	10
8.25	75	117	1010825	£6.60	10
8.3	75	117	1010830	£6.65	10
8.4	75	117	1010840	£6.70	10
8.5	75	117	1010850	£6.15	10
8.6	81	125	1010860	£7.15	10
8.7	81	125	1010870	£7.35	10
8.75	81	125	1010875	£7.45	10
8.8	81	125	1010880	£7.55	10
8.9	81	125	1010890	£7.65	10
9	81	125	1010900	£6.55	10
9.1	81	125	1010910	£8.15	10
9.2	81	125	1010920	£8.30	10
9.25	81	125	1010925	£8.40	10
9.3	81	125	1010930	£8.50	10
9.4	81	125	1010940	£8.65	10
9.5	81	125	1010950	£7.35	10
9.6	87	133	1010960	£9.10	10
9.7	87	133	1010970	£9.35	10
9.75	87	133	1010975	£9.40	10
9.8	87	133	1010980	£9.45	10
9.9	87	133	1010990	£9.55	10
10	87	133	1011000	£8.05	5

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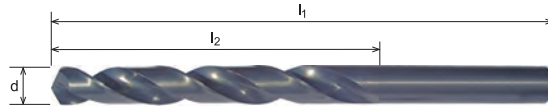
STRAIGHT SHANK DRILLS



shaping your dreams

# Straight Shank Jobber Drills

For precision drilling.



OSG GROUP COMPANY

<b>P</b> 1.1	<b>P</b> 1.2	<b>P</b> 1.3	<b>P</b> 1.4	<b>K</b> 3.1	<b>K</b> 3.2	<b>K</b> 3.3	<b>K</b> 3.4		
<b>Cu</b> 6.1	<b>Cu</b> 6.2	<b>Cu</b> 6.3	<b>Cu</b> 6.4	<b>N</b> 7.1	<b>N</b> 7.2	<b>N</b> 7.3	<b>N</b> 7.4	<b>Syn</b> 8.1	<b>Syn</b> 8.2

d	l <sub>2</sub>	l <sub>1</sub>	Code	Price	QTY	d	l <sub>2</sub>	l <sub>1</sub>	Code	Price	QTY
... from previous page											
10.1	87	133	1011010	£9.65	5	14.8	114	169	1011480	£21.80	1
10.2	87	133	1011020	£9.85	5	14.9	114	169	1011490	£21.80	1
10.25	87	133	1011025	£9.95	5	15	114	169	1011500	£21.80	1
10.3	87	133	1011030	£10.00	5	15.1	120	178	1011510	£22.40	1
10.4	87	133	1011040	£10.15	5	15.2	120	178	1011520	£22.90	1
10.5	87	133	1011050	£9.55	5	15.25	120	178	1011525	£23.75	1
10.6	87	133	1011060	£10.25	5	15.3	120	178	1011530	£23.95	1
10.7	94	142	1011070	£10.35	5	15.4	120	178	1011540	£25.05	1
10.75	94	142	1011075	£10.45	5	15.5	120	178	1011550	£26.10	1
10.8	94	142	1011080	£10.50	5	15.6	120	178	1011560	£26.15	1
10.9	94	142	1011090	£10.50	5	15.7	120	178	1011570	£26.20	1
11	94	142	1011100	£10.00	5	15.75	120	178	1011575	£26.20	1
11.1	94	142	1011110	£12.35	5	15.8	120	178	1011580	£26.30	1
11.2	94	142	1011120	£12.80	5	15.9	120	178	1011590	£26.35	1
11.3	94	142	1011130	£12.95	5	16	120	178	1011600	£26.45	1
11.4	94	142	1011140	£13.05	5	16.1	125	184	1011610	£26.70	1
11.5	94	142	1011150	£12.05	5	16.2	125	184	1011620	£26.95	1
11.6	94	142	1011160	£13.10	5	16.3	125	184	1011630	£27.60	1
11.7	94	142	1011170	£13.20	5	16.4	125	184	1011640	£27.60	1
11.8	94	142	1011180	£13.25	5	16.5	125	184	1011650	£28.70	1
11.9	101	151	1011190	£13.35	5	16.6	125	184	1011660	£29.85	1
12	101	151	1011200	£12.25	5	16.7	125	184	1011670	£31.00	1
12.1	101	151	1011210	£13.40	5	16.8	125	184	1011680	£31.55	1
12.2	101	151	1011220	£13.50	5	16.9	125	184	1011690	£32.15	1
12.25	101	151	1011225	£13.55	5	17	125	184	1011700	£32.50	1
12.3	101	151	1011230	£13.55	5	17.1	130	191	1011710	£33.50	1
12.4	101	151	1011240	£14.25	5	17.2	130	191	1011720	£34.15	1
12.5	101	151	1011250	£14.55	5	17.3	130	191	1011730	£35.05	1
12.6	101	151	1011260	£14.70	5	17.4	130	191	1011740	£36.35	1
12.7	101	151	1011270	£14.85	5	17.5	130	191	1011750	£37.65	1
12.75	101	151	1011275	£15.00	5	17.6	130	191	1011760	£37.90	1
12.8	101	151	1011280	£15.05	5	17.7	130	191	1011770	£38.20	1
12.9	101	151	1011290	£15.25	5	17.8	130	191	1011780	£38.40	1
13	101	151	1011300	£14.75	5	17.9	130	191	1011790	£38.70	1
13.1	101	151	1011310	£16.00	1	18	130	191	1011800	£39.20	1
13.2	101	151	1011320	£16.35	1	18.1	135	198	1011810	£40.00	1
13.25	108	160	1011325	£16.75	1	18.2	135	198	1011820	£40.85	1
13.3	108	160	1011330	£17.35	1	18.3	135	198	1011830	£41.55	1
13.4	108	160	1011340	£17.95	1	18.4	135	198	1011840	£42.25	1
13.5	108	160	1011350	£18.70	1	18.5	135	198	1011850	£43.90	1
13.6	108	160	1011360	£18.65	1	18.6	135	198	1011860	£43.45	1
13.7	108	160	1011370	£18.55	1	18.7	135	198	1011870	£43.30	1
13.8	108	160	1011380	£18.55	1	18.8	135	198	1011880	£43.15	1
13.9	108	160	1011390	£18.45	1	18.9	135	198	1011890	£42.45	1
14	108	160	1011400	£18.40	1	19	135	198	1011900	£42.35	1
14.1	114	169	1011410	£19.50	1	19.1	140	205	1011910	£43.30	1
14.2	114	169	1011420	£19.60	1	19.2	140	205	1011920	£44.60	1
14.25	114	169	1011425	£20.10	1	19.3	140	205	1011930	£45.95	1
14.3	114	169	1011430	£20.90	1	19.4	140	205	1011940	£47.20	1
14.4	114	169	1011440	£21.40	1	19.5	140	205	1011950	£49.55	1
14.5	114	169	1011450	£21.85	1	19.6	140	205	1011960	£50.15	1
14.6	114	169	1011460	£21.80	1	19.7	140	205	1011970	£50.65	1
14.7	114	169	1011470	£21.80	1	19.8	140	205	1011980	£51.30	1
14.75	114	169	1011475	£21.80	1	19.9	140	205	1011990	£52.25	1
						20	140	205	1012000	£53.85	1

Code
<b>101</b>

Properties		
< 3.0mm Standard Point		
≥ 3.0mm Split Point		
mm	DIN 338	HSS
5xD	TYPE N	
	30°	BLUE FINISH

Cutting Data	
pg 29	
app.somta.co.za	



**STRAIGHT SHANK DRILLS**



Size Range	No. of drills	Code	Price
1 - 13 x 0.5	25	1060040	£136.50

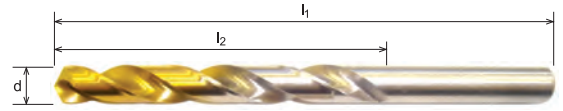




OSG GROUP COMPANY

# Straight Shank Jobber Drills

For precision drilling.



<b>P</b> ●	<b>P</b> ●	<b>P</b> ●	<b>P</b> ●	<b>M</b> ○	<b>M</b> ○	<b>M</b> ○								
1.1	1.2	1.3	1.4	2.1	2.2	2.3								
<b>K</b> ●	<b>K</b> ●	<b>K</b> ○	<b>K</b> ○	<b>Cu</b> ○	<b>Cu</b> ○	<b>Cu</b> ○	<b>Cu</b> ○	<b>N</b> ○	<b>N</b> ○	<b>N</b> ○	<b>N</b> ○	<b>Syn</b> ○	<b>Syn</b> ○	<b>Syn</b> ○
3.1	3.2	3.3	3.4	6.1	6.2	6.3	6.4	7.1	7.2	7.3	7.4	8.1	8.2	8.3

<b>Code</b>
<b>1TT</b>

**Properties**

< 3.0mm  
Standard Point

≥ 3.0mm  
Split Point

<b>mm</b>	<b>DIN 338</b>	<b>HSS</b>
<b>5xD</b>	<b>TYPE N</b>	<b>118°</b>
<b>h8</b>	<b>30°</b>	<b>BRIGHT FINISH WITH TIN TIP</b>

**Cutting Data**

pg 29

d	l <sub>2</sub>	l <sub>1</sub>	Code	Price	QTY
1	12	34	1TT0100	£1.35	10
1.05	12	34	1TT0105	£1.35	10
1.1	14	36	1TT0110	£1.35	10
1.15	14	36	1TT0115	£1.35	10
1.2	16	38	1TT0120	£1.35	10
1.25	16	38	1TT0125	£1.35	10
1.3	16	38	1TT0130	£1.35	10
1.35	18	40	1TT0135	£1.35	10
1.4	18	40	1TT0140	£1.35	10
1.45	18	40	1TT0145	£1.35	10
1.5	18	40	1TT0150	£1.35	10
1.55	20	43	1TT0155	£1.35	10
1.6	20	43	1TT0160	£1.40	10
1.7	20	43	1TT0170	£1.40	10
1.8	22	46	1TT0180	£1.40	10
1.9	22	46	1TT0190	£1.40	10
1.95	24	49	1TT0195	£1.40	10
2	24	49	1TT0200	£1.40	10
2.1	24	49	1TT0210	£1.45	10
2.2	27	53	1TT0220	£1.45	10
2.3	27	53	1TT0230	£1.45	10
2.4	30	57	1TT0240	£1.50	10
2.5	30	57	1TT0250	£1.45	10
2.6	30	57	1TT0260	£1.60	10
2.7	33	61	1TT0270	£1.60	10
2.75	33	61	1TT0275	£1.60	10
2.8	33	61	1TT0280	£1.60	10
2.9	33	61	1TT0290	£1.60	10
3	33	61	1TT0300	£1.80	10
3.1	36	65	1TT0310	£1.80	10
3.2	36	65	1TT0320	£1.80	10
3.3	36	65	1TT0330	£1.80	10
3.4	39	70	1TT0340	£1.80	10
3.5	39	70	1TT0350	£1.70	10
3.6	39	70	1TT0360	£1.95	10
3.7	39	70	1TT0370	£2.00	10
3.8	43	75	1TT0380	£2.00	10
3.9	43	75	1TT0390	£2.05	10
4	43	75	1TT0400	£1.85	10
4.1	43	75	1TT0410	£2.05	10
4.2	43	75	1TT0420	£2.00	10
4.3	47	80	1TT0430	£2.15	10
4.4	47	80	1TT0440	£2.30	10
4.5	47	80	1TT0450	£2.25	10
4.6	47	80	1TT0460	£2.35	10
4.7	47	80	1TT0470	£2.40	10
4.8	52	86	1TT0480	£2.45	10
4.9	52	86	1TT0490	£2.50	10
5	52	86	1TT0500	£2.30	10
5.1	52	86	1TT0510	£2.55	10
5.2	52	86	1TT0520	£2.65	10
5.3	52	86	1TT0530	£2.75	10
5.4	57	93	1TT0540	£2.85	10
5.5	57	93	1TT0550	£3.10	10
5.6	57	93	1TT0560	£3.20	10
5.7	57	93	1TT0570	£3.25	10
5.8	57	93	1TT0580	£3.35	10
5.9	57	93	1TT0590	£3.40	10
6	57	93	1TT0600	£3.05	10
6.1	63	101	1TT0610	£3.40	10
6.2	63	101	1TT0620	£3.40	10
6.3	63	101	1TT0630	£3.45	10
6.4	63	101	1TT0640	£3.50	10
6.5	63	101	1TT0650	£3.70	10
6.6	63	101	1TT0660	£4.10	10
6.7	63	101	1TT0670	£4.20	10
6.75	69	109	1TT0675	£4.20	10

d	l <sub>2</sub>	l <sub>1</sub>	Code	Price	QTY
6.8	69	109	1TT0680	£4.25	10
6.9	69	109	1TT0690	£4.30	10
7	69	109	1TT0700	£4.65	10
7.1	69	109	1TT0710	£5.25	10
7.2	69	109	1TT0720	£5.30	10
7.3	69	109	1TT0730	£5.40	10
7.4	69	109	1TT0740	£5.50	10
7.5	69	109	1TT0750	£5.25	10
7.6	75	117	1TT0760	£5.50	10
7.7	75	117	1TT0770	£5.65	10
7.8	75	117	1TT0780	£5.80	10
7.9	75	117	1TT0790	£5.90	10
8	75	117	1TT0800	£5.40	10
8.1	75	117	1TT0810	£7.05	10
8.2	75	117	1TT0820	£7.20	10
8.3	75	117	1TT0830	£7.30	10
8.4	75	117	1TT0840	£7.40	10
8.5	75	117	1TT0850	£6.75	10
8.6	81	125	1TT0860	£7.90	10
8.7	81	125	1TT0870	£8.10	10
8.8	81	125	1TT0880	£8.30	10
8.9	81	125	1TT0890	£8.40	10
9	81	125	1TT0900	£7.20	10
9.1	81	125	1TT0910	£9.00	10
9.2	81	125	1TT0920	£9.10	10
9.3	81	125	1TT0930	£9.35	10
9.4	81	125	1TT0940	£9.50	10
9.5	81	125	1TT0950	£8.10	10
9.6	87	133	1TT0960	£10.05	10
9.7	87	133	1TT0970	£10.25	10
9.8	87	133	1TT0980	£10.45	10
9.9	87	133	1TT0990	£10.50	10
10	87	133	1TT1000	£8.85	5
10.1	87	133	1TT1010	£10.60	5
10.2	87	133	1TT1020	£10.80	5
10.3	87	133	1TT1030	£10.95	5
10.4	87	133	1TT1040	£11.15	5
10.5	87	133	1TT1050	£10.55	5
10.6	87	133	1TT1060	£11.25	5
10.7	94	142	1TT1070	£11.40	5
10.8	94	142	1TT1080	£11.55	5
10.9	94	142	1TT1090	£11.55	5
11	94	142	1TT1100	£11.00	5
11.1	94	142	1TT1110	£13.60	5
11.2	94	142	1TT1120	£14.05	5
11.3	94	142	1TT1130	£14.25	5
11.4	94	142	1TT1140	£14.35	5
11.5	94	142	1TT1150	£13.25	5
11.6	94	142	1TT1160	£14.40	5
11.7	94	142	1TT1170	£14.55	5
11.8	94	142	1TT1180	£14.55	5
11.9	101	151	1TT1190	£14.65	5
12	101	151	1TT1200	£13.50	5
12.1	101	151	1TT1210	£14.75	5
12.2	101	151	1TT1220	£14.90	5
12.3	101	151	1TT1230	£14.90	5
12.4	101	151	1TT1240	£15.70	5
12.5	101	151	1TT1250	£16.00	5
12.6	101	151	1TT1260	£16.15	5
12.7	101	151	1TT1270	£16.30	5
12.75	101	151	1TT1275	£16.40	5
12.8	101	151	1TT1280	£16.50	5
12.9	101	151	1TT1290	£16.75	5
13	101	151	1TT1300	£16.20	5
13.5	108	160	1TT1350	£24.15	1
14	108	160	1TT1400	£24.35	1

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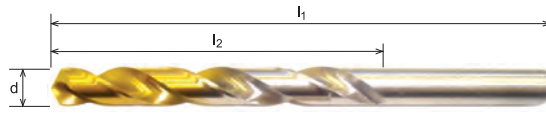
STRAIGHT SHANK DRILLS



shaping your dreams

# Straight Shank Jobber Drills

For precision drilling.



OSG GROUP COMPANY

<b>P</b> 1.1	<b>P</b> 1.2	<b>P</b> 1.3	<b>P</b> 1.4	<b>M</b> 2.1	<b>M</b> 2.2	<b>M</b> 2.3								
<b>K</b> 3.1	<b>K</b> 3.2	<b>K</b> 3.3	<b>K</b> 3.4	<b>Cu</b> 6.1	<b>Cu</b> 6.2	<b>Cu</b> 6.3	<b>Cu</b> 6.4	<b>N</b> 7.1	<b>N</b> 7.2	<b>N</b> 7.3	<b>N</b> 7.4	<b>Syn</b> 8.1	<b>Syn</b> 8.2	<b>Syn</b> 8.3

d	l <sub>2</sub>	l <sub>1</sub>	Code	Price	QTY	d	l <sub>2</sub>	l <sub>1</sub>	Code	Price	QTY
... from previous page						15.5	120	178	1TT1550	£36.25	1
14.5	114	169	1TT1450	£28.95	1	16	120	178	1TT1600	£39.05	1
15	114	169	1TT1500	£36.00	1						

Code
<b>1TT</b>

### Properties

	< 3.0mm Standard Point	
	≥ 3.0mm Split Point	
<b>mm</b>	<b>DIN 338</b>	<b>HSS</b>
<b>5xD</b>	<b>TYPE N</b>	
	<b>30°</b>	<b>BRIGHT FINISH WITH TIN TIP</b>

Size Range	No. of drills	Code	Price
1 - 13 x 0.5	25	1TT0040	£151.95



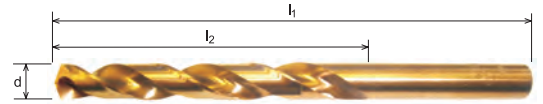
Cutting Data	
pg 29	



STRAIGHT SHANK DRILLS

# NDX Jobber Drills - Heavy Duty

For drilling high tensile steels and other difficult materials.



Code
<b>177</b>

P 1.1	P 1.2	P 1.3	P 1.4	P 1.5	P 1.6	M 2.1	M 2.2	M 2.3			
K 3.1	K 3.2	K 3.3	K 3.4	Cu 6.1	Cu 6.2	Cu 6.3	Cu 6.4	N 7.1	N 7.2	N 7.3	N 7.4

**Properties**

< 2.5mm Standard Point

≥ 2.5mm Split Point

mm inch	DIN 338	HSS Co5
5xD	TYPE N	130°
h8	33°	GOLD OXIDE FINISH

**Cutting Data**

pg 29

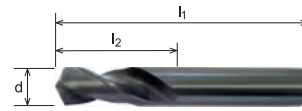
d	l2	l1	Code	Price	QTY	d	l2	l1	Code	Price	QTY
1	12	34	1770100	£1.65	10	6.8	69	109	1770680	£6.05	10
1.1	14	36	1770110	£1.65	10	6.9	69	109	1770690	£6.35	10
1.2	16	38	1770120	£1.65	10	7	69	109	1770700	£6.15	10
1.3	16	38	1770130	£1.65	10	7.1	69	109	1770710	£7.45	10
1.4	18	40	1770140	£1.65	10	7.2	69	109	1770720	£7.65	10
1.5	18	40	1770150	£1.60	10	7.3	69	109	1770730	£7.50	10
1/16"	20	43	1770159	£1.45	10	7.4	69	109	1770740	£7.45	10
1.6	20	43	1770160	£1.60	10	7.5	69	109	1770750	£7.25	10
1.7	20	43	1770170	£1.60	10	7.6	75	117	1770760	£7.45	10
1.8	22	46	1770180	£1.60	10	7.7	75	117	1770770	£7.55	10
1.85	22	46	1770185	£1.60	10	7.8	75	117	1770780	£7.65	10
1.9	22	46	1770190	£1.60	10	7.9	75	117	1770790	£7.75	10
2	24	49	1770200	£1.80	10	8	75	117	1770800	£8.05	10
2.1	24	49	1770210	£1.80	10	8.1	75	117	1770810	£8.15	10
2.2	27	53	1770220	£1.80	10	8.2	75	117	1770820	£8.25	10
2.3	27	53	1770230	£1.80	10	8.25	75	117	1770825	£8.35	10
2.4	30	57	1770240	£1.80	10	8.3	75	117	1770830	£8.45	10
2.5	30	57	1770250	£1.80	10	8.4	75	117	1770840	£8.65	10
2.6	30	57	1770260	£1.80	10	8.5	75	117	1770850	£8.85	10
2.7	33	61	1770270	£1.80	10	8.6	81	125	1770860	£9.05	10
2.8	33	61	1770280	£1.80	10	8.7	81	125	1770870	£9.45	10
2.9	33	61	1770290	£1.80	10	8.8	81	125	1770880	£9.65	10
2.95	33	61	1770295	£1.80	10	8.9	81	125	1770890	£10.05	10
3	33	61	1770300	£2.10	10	9	81	125	1770900	£10.45	10
3.1	36	65	1770310	£2.10	10	9.1	81	125	1770910	£10.80	10
3.2	36	65	1770320	£2.10	10	9.2	81	125	1770920	£11.05	10
3.25	36	65	1770325	£2.10	10	9.3	81	125	1770930	£11.70	10
3.3	36	65	1770330	£2.10	10	9.4	81	125	1770940	£11.70	10
3.4	39	70	1770340	£2.10	10	9.5	81	125	1770950	£11.70	10
3.5	39	70	1770350	£2.20	10	9.6	87	133	1770960	£12.30	10
3.6	39	70	1770360	£2.30	10	9.7	87	133	1770970	£12.95	10
3.7	39	70	1770370	£2.40	10	9.8	87	133	1770980	£12.95	10
3.8	43	75	1770380	£2.40	10	9.9	87	133	1770990	£12.95	10
3.9	43	75	1770390	£2.45	10	10	87	133	1771000	£12.95	5
4	43	75	1770400	£2.35	10	10.1	87	133	1771010	£13.05	5
4.1	43	75	1770410	£2.55	10	10.2	87	133	1771020	£13.75	5
4.2	43	75	1770420	£2.50	10	10.3	87	133	1771030	£14.55	5
4.25	43	75	1770425	£2.50	10	10.4	87	133	1771040	£15.35	5
4.3	47	80	1770430	£2.70	10	10.5	87	133	1771050	£16.15	5
4.4	47	80	1770440	£2.80	10	10.6	87	133	1771060	£16.35	5
4.5	47	80	1770450	£2.75	10	10.7	94	142	1771070	£16.45	5
4.6	47	80	1770460	£2.80	10	10.8	94	142	1771080	£16.50	5
4.7	47	80	1770470	£2.85	10	10.9	94	142	1771090	£16.65	5
4.8	52	86	1770480	£2.90	10	11	94	142	1771100	£16.70	5
4.9	52	86	1770490	£2.90	10	11.1	94	142	1771110	£16.85	5
5	52	86	1770500	£2.75	10	11.2	94	142	1771120	£17.15	5
5.1	52	86	1770510	£3.35	10	11.3	94	142	1771130	£17.25	5
5.2	52	86	1770520	£3.35	10	11.4	94	142	1771140	£17.40	5
5.3	52	86	1770530	£3.50	10	11.5	94	142	1771150	£17.55	5
5.4	57	93	1770540	£3.60	10	11.6	94	142	1771160	£17.75	5
5.5	57	93	1770550	£3.60	10	11.7	94	142	1771170	£17.85	5
5.6	57	93	1770560	£3.90	10	11.8	94	142	1771180	£17.95	5
5.7	57	93	1770570	£3.90	10	11.9	101	151	1771190	£18.20	5
5.8	57	93	1770580	£3.90	10	12	101	151	1771200	£18.40	5
5.9	57	93	1770590	£3.90	10	12.1	101	151	1771210	£19.10	5
6	57	93	1770600	£3.85	10	12.2	101	151	1771220	£19.35	5
6.1	63	101	1770610	£5.15	10	12.3	101	151	1771230	£19.80	5
6.2	63	101	1770620	£5.05	10	12.4	101	151	1771240	£20.75	5
6.25	63	101	1770625	£5.15	10	12.5	101	151	1771250	£21.15	5
6.3	63	101	1770630	£5.20	10	12.6	101	151	1771260	£21.40	5
6.4	63	101	1770640	£5.20	10	12.7	101	151	1771270	£21.65	5
6.5	63	101	1770650	£4.75	10	12.8	101	151	1771280	£21.80	5
6.6	63	101	1770660	£5.95	10	12.9	101	151	1771290	£22.25	5
6.7	63	101	1770670	£6.00	10	13	101	151	1771300	£23.30	5



STRAIGHT SHANK DRILLS

# Straight Shank Stub Drills

A robust drill suited to portable drill application.



OSG GROUP COMPANY

<b>P</b> 1.1	<b>P</b> 1.2	<b>P</b> 1.3	<b>P</b> 1.4	<b>M</b> 2.1	<b>M</b> 2.2	<b>M</b> 2.3	<b>K</b> 3.1	<b>K</b> 3.2	<b>K</b> 3.3	<b>K</b> 3.4
<b>Cu</b> 6.1	<b>Cu</b> 6.2	<b>Cu</b> 6.3	<b>Cu</b> 6.4	<b>N</b> 7.1	<b>N</b> 7.2	<b>N</b> 7.3	<b>N</b> 7.4	<b>Syn</b> 8.1	<b>Syn</b> 8.2	

d	l <sub>2</sub>	l <sub>1</sub>	Code	Price	QTY	d	l <sub>2</sub>	l <sub>1</sub>	Code	Price	QTY
1	6	26	1400100	£1.30	10	4.8	26	62	1400480	£3.55	10
1.1	7	28	1400110	£1.15	10	4.9	26	62	1400490	£3.65	10
1.2	8	30	1400120	£1.15	10	5	26	62	1400500	£3.70	10
1.3	8	30	1400130	£1.15	10	5.1	26	62	1400510	£3.85	10
1.4	9	32	1400140	£1.15	10	5.2	26	62	1400520	£4.00	10
1.5	9	32	1400150	£1.15	10	5.3	26	62	1400530	£4.25	10
1.6	10	34	1400160	£1.55	10	5.4	28	66	1400540	£4.25	10
1.7	10	34	1400170	£1.55	10	5.5	28	66	1400550	£4.25	10
1.8	11	36	1400180	£1.55	10	5.6	28	66	1400560	£4.45	10
2	12	38	1400200	£1.55	10	5.7	28	66	1400570	£4.45	10
2.1	12	38	1400210	£1.50	10	5.8	28	66	1400580	£4.50	10
2.2	13	40	1400220	£1.50	10	6	28	66	1400600	£9.05	10
2.25	13	40	1400225	£2.20	10	6.1	31	70	1400610	£9.60	10
2.3	13	40	1400230	£1.50	10	6.5	31	70	1400650	£9.95	10
2.4	14	43	1400240	£1.50	10	6.6	31	70	1400660	£5.45	10
2.5	14	43	1400250	£1.50	10	6.6	31	70	1400660	£5.45	10
2.6	14	43	1400260	£1.75	10	6.8	34	74	1400680	£5.55	10
2.65	14	43	1400265	£2.45	10	6.9	34	74	1400690	£5.70	10
2.7	16	46	1400270	£1.75	10	7	34	74	1400700	£5.75	10
2.8	16	46	1400280	£1.75	10	7.2	34	74	1400720	£6.00	10
2.85	16	46	1400285	£2.50	10	7.4	34	74	1400740	£6.45	10
2.9	16	46	1400290	£1.75	10	7.5	34	74	1400750	£6.40	10
3	16	46	1400300	£1.75	10	7.7	37	79	1400770	£7.05	10
3.1	18	49	1400310	£2.40	10	7.8	37	79	1400780	£6.85	10
3.2	18	49	1400320	£1.65	10	8	37	79	1400800	£6.95	10
3.25	18	49	1400325	£2.30	10	8.2	37	79	1400820	£7.30	10
3.3	18	49	1400330	£1.65	10	8.5	37	79	1400850	£7.85	10
3.4	20	52	1400340	£1.65	10	8.6	40	84	1400860	£8.40	10
3.5	20	52	1400350	£1.75	10	8.8	40	84	1400880	£8.40	10
3.6	20	52	1400360	£1.35	10	9	40	84	1400900	£8.65	10
3.7	20	52	1400370	£1.35	10	9.2	40	84	1400920	£9.40	10
3.8	22	55	1400380	£1.35	10	9.5	40	84	1400950	£9.25	10
3.9	22	55	1400390	£2.00	10	9.8	43	89	1400980	£9.90	10
4	22	55	1400400	£2.95	10	10	43	89	1401000	£10.35	5
4.1	22	55	1400410	£3.05	10	10.2	43	89	1401020	£10.60	5
4.2	22	55	1400420	£3.15	10	10.5	43	89	1401050	£11.00	5
4.3	24	58	1400430	£3.40	10	11	47	95	1401100	£12.15	5
4.4	24	58	1400440	£3.40	10	12	51	102	1401200	£14.80	5
4.5	24	58	1400450	£3.40	10	12.5	51	102	1401250	£15.70	5
4.6	24	58	1400460	£3.65	10	12.6	51	102	1401260	£15.70	5
4.7	24	58	1400470	£3.65	10	13	51	102	1401300	£18.05	5

Code
<b>140</b>

Properties		
	< 3.0mm Standard Point	
	≥ 3.0mm Split Point	
mm inch	DIN 1897	HSS
3xD	TYPE N	
	30°	BLUE FINISH

Cutting Data	
pg 29	



STRAIGHT  
SHANK DRILLS

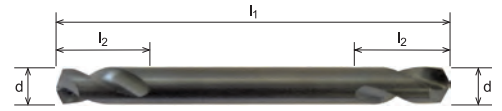




OSG GROUP COMPANY

## Double Ended Sheet Metal / Body Drills

Double ended self centering drill designed to produce accurate holes in thin materials.



<b>Code</b>
<b>151</b>

<b>P</b> 1.1	<b>P</b> 1.2	<b>P</b> 1.3	<b>P</b> 1.4	<b>M</b> 2.1	<b>M</b> 2.2	<b>M</b> 2.3							
<b>K</b> 3.1	<b>K</b> 3.2	<b>K</b> 3.3	<b>K</b> 3.4	<b>Cu</b> 6.1	<b>Cu</b> 6.2	<b>Cu</b> 6.3	<b>Cu</b> 6.4	<b>N</b> 7.1	<b>N</b> 7.2	<b>N</b> 7.3	<b>N</b> 7.4	<b>Syn</b> 8.1	<b>Syn</b> 8.2

Properties		
<p>&lt; 2.5mm Standard Point</p>		
<p>≥ 2.5mm Split Point</p>		
<b>mm</b>	<b>WORKS STD.</b>	<b>HSS</b>
<b>3xD</b>	<b>TYPE N</b>	<b>135°</b>
<b>h8</b>	<b>30°</b>	<b>BLUE FINISH</b>

d	l <sub>2</sub>	l <sub>1</sub>	Code	Price	QTY	d	l <sub>2</sub>	l <sub>1</sub>	Code	Price	QTY
1.5	6	34	1510150	£1.65	10	4.5	13	58	1510450	£2.75	10
1.8	6	36	1510180	£1.65	10	4.8	14	62	1510480	£3.15	10
2	6	38	1510200	£1.65	10	*4.9	14	62	1510490	£3.15	10
2.2	7	40	1510220	£1.65	10	#5	14	62	1510500	£3.15	10
*2.5	8	43	1510250	£1.65	10	5.2	14	62	1510520	£3.95	10
2.8	9	46	1510280	£1.80	10	5.5	15	66	1510550	£3.95	10
3	9	46	1510300	£1.80	10	5.8	15	66	1510580	£4.25	10
3.2	10	49	1510320	£1.95	10	6	15	66	1510600	£4.25	10
*3.3	10	49	1510330	£1.95	10	6.2	16	70	1510620	£5.10	10
3.5	11	52	1510350	£1.95	10	*6.5	16	70	1510650	£5.00	10
3.8	12	55	1510380	£2.15	10	7	18	74	1510700	£5.00	10
4	12	55	1510400	£2.15	10	7.5	19	80	1510750	£6.95	10
*4.1	12	55	1510410	£2.70	10	8	19	80	1510800	£8.25	10
#4.2	12	55	1510420	£2.70	10						

\* Blind rivet drill sizes  
# Groove blind rivet drill sizes

Cutting Data	
pg 29	



STRAIGHT SHANK DRILLS

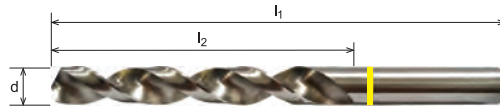
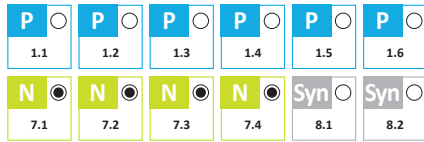


shaping your dreams



# Yellow Band Quick Spiral Jobber Drills

For drilling materials of low tensile strength.



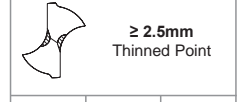
OSG GROUP COMPANY

d	l <sub>2</sub>	l <sub>1</sub>	Code	Price	QTY
0.9	11	32	1AQ0090	£1.75	1
1	12	34	1AQ0100	£2.30	1
1.1	14	36	1AQ0110	£2.45	1
1.2	16	38	1AQ0120	£2.45	1
1.3	16	38	1AQ0130	£1.80	1
1.4	18	40	1AQ0140	£1.80	1
1.5	18	40	1AQ0150	£1.75	1
1.6	20	43	1AQ0160	£1.75	1
1.7	20	43	1AQ0170	£2.05	1
1.75	22	46	1AQ0175	£2.00	1
1.8	22	46	1AQ0180	£1.85	1
1.9	22	46	1AQ0190	£2.15	1
2	24	49	1AQ0200	£2.45	1
2.1	24	49	1AQ0210	£2.45	1
2.2	27	53	1AQ0220	£2.45	1
2.25	27	53	1AQ0225	£2.40	1
2.3	27	53	1AQ0230	£2.45	1
2.4	30	57	1AQ0240	£2.60	1
2.5	30	57	1AQ0250	£2.60	1
2.6	30	57	1AQ0260	£2.60	1
2.7	33	61	1AQ0270	£2.35	1
2.75	33	61	1AQ0275	£2.35	1
2.8	33	61	1AQ0280	£2.35	1
2.9	33	61	1AQ0290	£2.30	1
3	33	61	1AQ0300	£2.55	1
3.1	36	65	1AQ0310	£2.60	1
3.2	36	65	1AQ0320	£2.65	1
3.3	36	65	1AQ0330	£2.85	1
3.4	39	70	1AQ0340	£3.00	1
3.5	39	70	1AQ0350	£2.90	1
3.6	39	70	1AQ0360	£3.15	1
3.7	39	70	1AQ0370	£3.00	1
3.8	43	75	1AQ0380	£3.25	1
3.9	43	75	1AQ0390	£3.35	1
4	43	75	1AQ0400	£3.35	1
4.1	43	75	1AQ0410	£3.45	1
4.2	43	75	1AQ0420	£3.50	1
4.3	47	80	1AQ0430	£3.65	1
4.4	47	80	1AQ0440	£3.70	1
4.5	47	80	1AQ0450	£3.75	1
4.6	47	80	1AQ0460	£3.80	1
4.7	47	80	1AQ0470	£3.85	1
4.8	52	86	1AQ0480	£4.10	1
4.9	52	86	1AQ0490	£4.25	1
5	52	86	1AQ0500	£4.30	1
5.1	52	86	1AQ0510	£4.60	1
5.2	52	86	1AQ0520	£4.65	1
5.3	52	86	1AQ0530	£4.55	1
5.4	57	93	1AQ0540	£5.00	1
5.5	57	93	1AQ0550	£5.10	1
5.6	57	93	1AQ0560	£5.15	1
5.7	57	93	1AQ0570	£5.40	1

d	l <sub>2</sub>	l <sub>1</sub>	Code	Price	QTY
5.8	57	93	1AQ0580	£5.50	1
5.9	57	93	1AQ0590	£5.55	1
6	57	93	1AQ0600	£5.60	1
6.1	63	101	1AQ0610	£5.65	1
6.2	63	101	1AQ0620	£5.75	1
6.3	63	101	1AQ0630	£5.80	1
6.4	63	101	1AQ0640	£5.85	1
6.5	63	101	1AQ0650	£6.00	1
6.6	63	101	1AQ0660	£6.50	1
6.7	63	101	1AQ0670	£6.55	1
6.8	69	109	1AQ0680	£7.00	1
6.9	69	109	1AQ0690	£7.05	1
7	69	109	1AQ0700	£7.15	1
7.1	69	109	1AQ0710	£7.35	1
7.2	69	109	1AQ0720	£7.45	1
7.3	69	109	1AQ0730	£7.60	1
7.4	69	109	1AQ0740	£7.90	1
7.5	69	109	1AQ0750	£7.75	1
7.6	75	117	1AQ0760	£8.00	1
7.7	75	117	1AQ0770	£8.30	1
7.8	75	117	1AQ0780	£8.20	1
7.9	75	117	1AQ0790	£8.50	1
8	75	117	1AQ0800	£8.40	1
8.1	75	117	1AQ0810	£8.50	1
8.2	75	117	1AQ0820	£8.65	1
8.3	75	117	1AQ0830	£8.75	1
8.4	75	117	1AQ0840	£9.10	1
8.5	75	117	1AQ0850	£9.00	1
8.6	81	125	1AQ0860	£10.00	1
8.7	81	125	1AQ0870	£10.10	1
8.8	81	125	1AQ0880	£10.30	1
8.9	81	125	1AQ0890	£10.85	1
9	81	125	1AQ0900	£10.75	1
9.1	81	125	1AQ0910	£11.70	1
9.2	81	125	1AQ0920	£11.70	1
9.3	81	125	1AQ0930	£11.70	1
9.4	81	125	1AQ0940	£11.55	1
9.5	81	125	1AQ0950	£11.40	1
9.6	87	133	1AQ0960	£12.60	1
9.7	87	133	1AQ0970	£12.45	1
9.8	87	133	1AQ0980	£12.60	1
9.9	87	133	1AQ0990	£12.70	1
10	87	133	1AQ1000	£12.85	1
10.2	87	133	1AQ1020	£13.30	1
10.5	87	133	1AQ1050	£13.85	1
11	94	142	1AQ1100	£15.25	1
11.5	94	142	1AQ1150	£16.45	1
12	101	151	1AQ1200	£18.10	1
12.5	101	151	1AQ1250	£19.00	1
12.7	101	151	1AQ1270	£19.00	1
13	101	151	1AQ1300	£19.85	1

Code
<b>1AQ</b>

Properties
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mm	DIN 338	HSS
5xD	CBA	TYPE W
130°	h8	40°
QS	BRIGHT FINISH	

Cutting Data
pg 30



**STRAIGHT SHANK DRILLS**





OSG GROUP COMPANY

# Straight Shank Long Series Drills

For general purpose long reach drilling.



Code
<b>116</b>

<b>P</b> 1.1	<b>P</b> 1.2	<b>P</b> 1.3	<b>P</b> 1.4	<b>M</b> 2.1	<b>M</b> 2.2	<b>M</b> 2.3	<b>K</b> 3.1	<b>K</b> 3.2	<b>K</b> 3.3	<b>K</b> 3.4
<b>Cu</b> 6.1	<b>Cu</b> 6.2	<b>Cu</b> 6.3	<b>Cu</b> 6.4	<b>N</b> 7.1	<b>N</b> 7.2	<b>N</b> 7.3	<b>N</b> 7.4	<b>Syn</b> 8.1	<b>Syn</b> 8.2	

**Properties**

Standard Point

mm **DIN 340** **HSS**

10xD **TYPE N** 118°

h8 30° **BLUE FINISH**

**Cutting Data**

pg 30

d	l <sub>2</sub>	l <sub>1</sub>	Code	Price	QTY	d	l <sub>2</sub>	l <sub>1</sub>	Code	Price	QTY
1	33	56	1160100	£4.10	10	5.7	91	139	1160570	£6.60	10
1.1	37	60	1160110	£4.05	10	5.8	91	139	1160580	£6.40	10
1.2	41	65	1160120	£4.05	10	5.9	91	139	1160590	£6.60	10
1.3	41	65	1160130	£4.05	10	6	91	139	1160600	£6.40	10
1.4	45	70	1160140	£4.05	10	6.1	97	148	1160610	£7.30	10
1.5	45	70	1160150	£4.05	10	6.2	97	148	1160620	£7.30	10
1.6	50	76	1160160	£4.30	10	6.3	97	148	1160630	£7.30	10
1.7	50	76	1160170	£4.30	10	6.4	97	148	1160640	£7.30	10
1.8	53	80	1160180	£4.40	10	6.5	97	148	1160650	£7.30	10
1.9	53	80	1160190	£4.40	10	6.6	97	148	1160660	£8.70	10
2	56	85	1160200	£4.40	10	6.7	97	148	1160670	£8.70	10
2.1	56	85	1160210	£4.40	10	6.8	102	156	1160680	£8.55	10
2.2	59	90	1160220	£4.40	10	6.9	102	156	1160690	£9.45	10
2.3	59	90	1160230	£4.40	10	7	102	156	1160700	£8.70	10
2.4	62	95	1160240	£4.40	10	7.1	102	156	1160710	£10.25	10
2.5	62	95	1160250	£4.40	10	7.2	102	156	1160720	£10.00	10
2.6	62	95	1160260	£4.65	10	7.3	102	156	1160730	£10.25	10
2.7	66	100	1160270	£4.65	10	7.4	102	156	1160740	£10.25	10
2.8	66	100	1160280	£4.65	10	7.5	102	156	1160750	£10.00	10
2.9	66	100	1160290	£4.65	10	7.6	109	165	1160760	£13.05	10
3	66	100	1160300	£4.65	10	7.7	109	165	1160770	£14.65	10
3.1	69	106	1160310	£5.65	10	7.8	109	165	1160780	£13.05	10
3.2	69	106	1160320	£5.65	10	7.9	109	165	1160790	£13.05	10
3.3	69	106	1160330	£5.55	10	8	109	165	1160800	£12.75	10
3.4	73	112	1160340	£5.65	10	8.2	109	165	1160820	£14.75	10
3.5	73	112	1160350	£5.55	10	8.5	109	165	1160850	£14.00	10
3.6	73	112	1160360	£2.90	10	8.8	115	175	1160880	£16.85	10
3.7	73	112	1160370	£2.90	10	9	115	175	1160900	£16.85	10
3.8	78	119	1160380	£2.90	10	9.2	115	175	1160920	£18.50	10
3.9	78	119	1160390	£2.90	10	9.5	115	175	1160950	£18.05	10
4	78	119	1160400	£2.90	10	9.8	121	184	1160980	£21.70	10
4.1	78	119	1160410	£3.60	10	10	121	184	1161000	£21.60	5
4.2	78	119	1160420	£3.60	10	10.2	121	184	1161020	£23.00	5
4.3	82	126	1160430	£3.75	10	10.5	121	184	1161050	£23.40	5
4.4	82	126	1160440	£3.75	10	10.8	128	195	1161080	£27.10	5
4.5	82	126	1160450	£3.70	10	11	128	195	1161100	£27.10	5
4.6	82	126	1160460	£5.35	10	11.2	128	195	1161120	£29.55	5
4.7	82	126	1160470	£4.40	10	11.5	128	195	1161150	£29.55	5
4.8	87	132	1160480	£4.25	10	11.8	128	195	1161180	£33.80	5
4.9	87	132	1160490	£4.40	10	12	134	205	1161200	£33.40	5
5	87	132	1160500	£4.25	10	12.2	134	205	1161220	£38.55	5
5.1	87	132	1160510	£5.90	10	12.5	134	205	1161250	£36.90	5
5.2	87	132	1160520	£5.75	10	12.8	134	205	1161280	£39.75	5
5.3	87	132	1160530	£5.90	10	13	134	205	1161300	£39.05	5
5.4	91	139	1160540	£5.90	10	14	140	214	1161400	£28.50	1
5.5	91	139	1160550	£5.90	10	15	144	220	1161500	£57.00	1
5.6	91	139	1160560	£6.40	10	16	149	227	1161600	£60.65	1

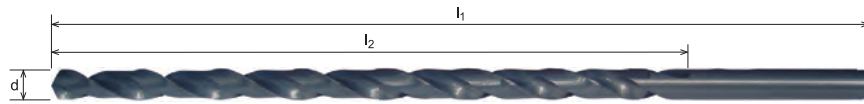


STRAIGHT SHANK DRILLS



shaping your dreams

**Straight Shank  
Extra Length Drills**  
For extra deep hole  
drilling.



OSG GROUP COMPANY

<b>P</b> 1.1	<b>P</b> 1.2	<b>P</b> 1.3	<b>P</b> 1.4	<b>M</b> 2.1	<b>M</b> 2.2	<b>M</b> 2.3	<b>K</b> 3.1	<b>K</b> 3.2	<b>K</b> 3.3	<b>K</b> 3.4
<b>N</b> 7.1	<b>N</b> 7.2	<b>N</b> 7.3	<b>N</b> 7.4	<b>Syn</b> 8.1	<b>Syn</b> 8.2					

<b>Codes</b>
<b>121 - 126</b>

d	l <sub>2</sub>	l <sub>1</sub>	Code	Price	QTY	d	l <sub>2</sub>	l <sub>1</sub>	Code	Price	QTY
1.5	80	125	1210150	£7.90	1	6.5	160	200	1230650	£23.90	1
1.5	100	160	1220150	£9.30	1	6.5	200	250	1240650	£33.00	1
2	80	125	1210200	£7.90	1	7	160	200	1230700	£26.85	1
2	100	160	1220200	£9.30	1	7	200	250	1240700	£38.35	1
2	160	200	1230200	£13.55	1	7	250	315	1250700	£48.95	1
2.5	80	125	1210250	£7.90	1	7	300	400	1260700	£65.55	1
2.5	100	160	1220250	£9.30	1	7.5	160	200	1230750	£25.85	1
2.5	160	200	1230250	£13.55	1	7.5	200	250	1240750	£37.25	1
3	80	125	1210300	£11.40	1	8	160	200	1230800	£26.85	1
3	100	160	1220300	£12.85	1	8	200	250	1240800	£38.35	1
3	160	200	1230300	£18.25	1	8	250	315	1250800	£48.95	1
3	200	250	1240300	£27.15	1	8	300	400	1260800	£65.55	1
3	250	315	1250300	£35.25	1	8.5	160	200	1230850	£31.40	1
3.5	100	160	1220350	£12.85	1	8.5	200	250	1240850	£46.85	1
3.5	160	200	1230350	£17.10	1	9	160	200	1230900	£31.40	1
3.5	200	250	1240350	£25.90	1	9	200	250	1240900	£45.85	1
4	100	160	1220400	£12.85	1	9	250	315	1250900	£60.75	1
4	160	200	1230400	£18.25	1	9	300	400	1260900	£77.25	1
4	200	250	1240400	£27.15	1	9.5	160	200	1230950	£30.45	1
4	250	315	1250400	£34.10	1	9.5	200	250	1240950	£45.85	1
4	300	400	1260400	£51.65	1	10	160	200	1231000	£31.40	1
4.5	100	160	1220450	£12.85	1	10	200	250	1241000	£46.85	1
4.5	160	200	1230450	£17.10	1	10	250	315	1251000	£61.45	1
4.5	200	250	1240450	£32.30	1	10	300	400	1261000	£77.25	1
5	100	160	1220500	£12.85	1	10.5	200	250	1241050	£51.85	1
5	160	200	1230500	£18.25	1	11	200	250	1241100	£51.85	1
5	200	250	1240500	£31.35	1	11	250	315	1251100	£68.85	1
5	250	315	1250500	£43.60	1	11	300	400	1261100	£97.55	1
5	300	400	1260500	£51.65	1	11.5	200	250	1241150	£51.20	1
5.5	100	160	1220550	£12.85	1	12	200	250	1241200	£51.85	1
5.5	160	200	1230550	£18.25	1	12	250	315	1251200	£68.85	1
5.5	200	250	1240550	£30.15	1	12	300	400	1261200	£97.55	1
6	100	160	1220600	£16.65	1	12.5	200	250	1241250	£57.30	1
6	160	200	1230600	£23.90	1	13	200	250	1241300	£63.20	1
6	200	250	1240600	£34.15	1	13	250	315	1251300	£81.45	1
6	250	315	1250600	£43.60	1	13	300	400	1261300	£129.30	1
6	300	400	1260600	£68.55	1						

**Properties**

Standard Point

mm BASED ON ISO 3292 HSS

15-20 xD TYPE N 118°

h8 30° BLUE FINISH

**Cutting Data**

pg 30

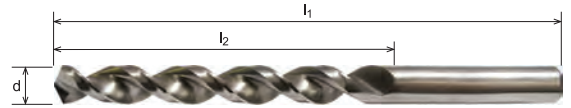


**STRAIGHT  
SHANK DRILLS**



## UDL Jobber Drills

Ideal for use on CNC machines where high productivity and accurate holes are required.



Code
<b>164</b>

P 1.1	P 1.2	P 1.3	P 1.4	P 1.5	M 2.1	M 2.2	M 2.3						
K 3.1	K 3.2	K 3.3	K 3.4	Cu 6.1	Cu 6.2	Cu 6.3	Cu 6.4	N 7.1	N 7.2	N 7.3	N 7.4	Syn 8.1	Syn 8.2

**Properties**

< 1.5mm  
Standard Point

≥ 1.5mm  
Split Point

mm	DIN 338	HSS Co5
5xD	TYPE FS	130°
h8	40°	BRIGHT FINISH

d	l2	l1	Code	Price	QTY	d	l2	l1	Code	Price	QTY
1	12	34	1640100	£1.75	10	5.3	52	86	1640530	£5.10	10
1.1	14	36	1640110	£1.70	10	5.4	57	93	1640540	£5.30	10
1.2	16	38	1640120	£2.10	10	5.5	57	93	1640550	£5.30	10
1.3	16	38	1640130	£2.10	10	5.6	57	93	1640560	£6.25	10
1.4	18	40	1640140	£2.50	10	5.7	57	93	1640570	£6.15	10
1.5	18	40	1640150	£2.45	10	5.8	57	93	1640580	£6.15	10
1.6	20	43	1640160	£2.40	10	5.9	57	93	1640590	£6.05	10
1.7	20	43	1640170	£2.45	10	6	57	93	1640600	£6.00	10
1.8	22	46	1640180	£2.45	10	6.1	63	101	1640610	£7.05	10
1.9	22	46	1640190	£2.45	10	6.2	63	101	1640620	£6.95	10
2	24	49	1640200	£2.55	10	6.3	63	101	1640630	£6.95	10
2.1	24	49	1640210	£2.65	10	6.4	63	101	1640640	£6.90	10
2.2	27	53	1640220	£2.65	10	6.5	63	101	1640650	£6.80	10
2.3	27	53	1640230	£2.65	10	6.6	63	101	1640660	£7.85	10
2.4	30	57	1640240	£2.70	10	6.7	63	101	1640670	£7.75	10
2.5	30	57	1640250	£2.75	10	6.8	69	109	1640680	£8.00	10
2.6	30	57	1640260	£2.90	10	6.9	69	109	1640690	£8.10	10
2.7	33	61	1640270	£2.90	10	7	69	109	1640700	£8.00	10
2.8	33	61	1640280	£2.90	10	7.1	69	109	1640710	£9.05	10
2.9	33	61	1640290	£2.80	10	7.2	69	109	1640720	£9.00	10
3	33	61	1640300	£2.80	10	7.3	69	109	1640730	£9.00	10
3.1	36	65	1640310	£3.05	10	7.4	69	109	1640740	£8.90	10
3.2	36	65	1640320	£3.00	10	7.5	69	109	1640750	£8.80	10
3.3	36	65	1640330	£3.00	10	7.6	75	117	1640760	£10.35	10
3.4	39	70	1640340	£3.20	10	7.7	75	117	1640770	£10.30	10
3.5	39	70	1640350	£3.15	10	7.8	75	117	1640780	£10.30	10
3.8	43	75	1640380	£3.60	10	7.9	75	117	1640790	£10.20	10
3.9	43	75	1640390	£3.70	10	8	75	117	1640800	£10.10	10
4	43	75	1640400	£3.65	10	8.5	75	117	1640850	£11.05	10
4.1	43	75	1640410	£4.05	10	9	81	125	1640900	£12.80	10
4.2	43	75	1640420	£4.05	10	9.5	81	125	1640950	£13.95	10
4.3	47	80	1640430	£4.25	10	10	87	133	1641000	£16.00	5
4.4	47	80	1640440	£4.20	10	10.5	87	133	1641050	£17.60	5
4.5	47	80	1640450	£4.15	10	11	94	142	1641100	£19.55	5
4.8	52	86	1640480	£4.50	10	11.5	94	142	1641150	£20.75	5
4.9	52	86	1640490	£4.45	10	12	101	151	1641200	£23.05	5
5	52	86	1640500	£4.45	10	12.5	101	151	1641250	£25.90	5
5.1	52	86	1640510	£5.15	10	13	101	151	1641300	£26.65	5
5.2	52	86	1640520	£5.10	10						

**Cutting Data**

pg 30

Size Range	No. of drills	Code	Price
1 - 13 x 0.5	25	1640025	£260.25



STRAIGHT SHANK DRILLS

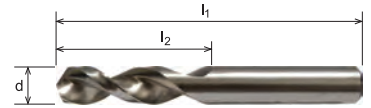




OSG GROUP COMPANY

## UDL Stub Drills

Ideal for use on CNC machines where high productivity and accurate holes are required.



Code
<b>163</b>

P 1.1	P 1.2	P 1.3	P 1.4	P 1.5	M 2.1	M 2.2	M 2.3								
K 3.1	K 3.2	K 3.3	K 3.4	Cu 6.1	Cu 6.2	Cu 6.3	Cu 6.4	N 7.1	N 7.2	N 7.3	N 7.4	Syn 8.1	Syn 8.2		

Properties		
<p>&lt; 1.5mm Standard Point</p>		
<p>≥ 1.5mm Split Point</p>		
mm	DIN 1897	HSS Co5
3xD	TYPE FS	130°
h8	40°	BRIGHT FINISH

Cutting Data	
pg 31	

d	l2	l1	Code	Price	QTY	d	l2	l1	Code	Price	QTY
1	6	26	1630100	£2.45	10	6.1	31	70	1630610	£5.55	10
1.1	7	28	1630110	£2.45	10	6.2	31	70	1630620	£5.55	10
1.2	8	30	1630120	£2.45	10	6.3	31	70	1630630	£5.55	10
1.3	8	30	1630130	£2.45	10	6.4	31	70	1630640	£5.55	10
1.4	9	32	1630140	£2.30	10	6.5	31	70	1630650	£5.85	10
1.5	9	32	1630150	£2.30	10	6.6	31	70	1630660	£5.95	10
1.6	10	34	1630160	£2.05	10	6.7	31	70	1630670	£6.40	10
1.7	10	34	1630170	£2.05	10	6.8	34	74	1630680	£6.60	10
1.8	11	36	1630180	£2.15	10	6.9	34	74	1630690	£6.60	10
1.9	11	36	1630190	£2.15	10	7	34	74	1630700	£6.65	10
2	12	38	1630200	£2.15	10	7.1	34	74	1630710	£6.80	10
2.1	12	38	1630210	£2.25	10	7.2	34	74	1630720	£7.05	10
2.2	13	40	1630220	£2.25	10	7.3	34	74	1630730	£7.05	10
2.3	13	40	1630230	£2.30	10	7.4	34	74	1630740	£7.05	10
2.4	14	43	1630240	£2.35	10	7.5	34	74	1630750	£8.15	10
2.5	14	43	1630250	£2.35	10	7.6	37	79	1630760	£8.15	10
2.6	14	43	1630260	£2.40	10	7.7	37	79	1630770	£8.15	10
2.7	16	46	1630270	£2.45	10	7.8	37	79	1630780	£8.15	10
2.8	16	46	1630280	£2.45	10	7.9	37	79	1630790	£8.15	10
2.9	16	46	1630290	£2.50	10	8	37	79	1630800	£8.30	10
3	16	46	1630300	£2.55	10	8.1	37	79	1630810	£8.65	10
3.1	18	49	1630310	£2.55	10	8.2	37	79	1630820	£8.65	10
3.2	18	49	1630320	£2.65	10	8.3	37	79	1630830	£8.65	10
3.3	18	49	1630330	£2.70	10	8.4	37	79	1630840	£8.65	10
3.4	20	52	1630340	£2.70	10	8.5	37	79	1630850	£9.75	10
3.5	20	52	1630350	£3.05	10	8.6	40	84	1630860	£9.95	10
3.6	20	52	1630360	£3.10	10	8.7	40	84	1630870	£9.95	10
3.7	20	52	1630370	£3.10	10	8.8	40	84	1630880	£10.15	10
3.8	22	55	1630380	£3.10	10	8.9	40	84	1630890	£10.15	10
3.9	22	55	1630390	£3.10	10	9	40	84	1630900	£10.35	10
4	22	55	1630400	£3.25	10	9.1	40	84	1630910	£10.45	10
4.1	22	55	1630410	£3.20	10	9.2	40	84	1630920	£10.95	10
4.2	22	55	1630420	£3.50	10	9.3	40	84	1630930	£11.00	10
4.3	24	58	1630430	£3.55	10	9.4	40	84	1630940	£11.05	10
4.4	24	58	1630440	£3.55	10	9.5	40	84	1630950	£11.45	10
4.5	24	58	1630450	£3.65	10	9.6	43	89	1630960	£12.10	10
4.6	24	58	1630460	£3.65	10	9.7	43	89	1630970	£12.10	10
4.8	26	62	1630480	£3.80	10	9.8	43	89	1630980	£12.10	10
4.9	26	62	1630490	£3.90	10	9.9	43	89	1630990	£12.25	10
5	26	62	1630500	£4.20	10	10	43	89	1631000	£12.90	5
5.1	26	62	1630510	£4.20	10	10.2	43	89	1631020	£12.95	5
5.2	26	62	1630520	£4.20	10	10.5	43	89	1631050	£13.35	5
5.3	26	62	1630530	£4.50	10	10.8	47	95	1631080	£14.40	5
5.4	28	66	1630540	£4.50	10	11	47	95	1631100	£15.15	5
5.5	28	66	1630550	£4.55	10	11.2	47	95	1631120	£15.85	5
5.6	28	66	1630560	£4.75	10	11.5	47	95	1631150	£15.85	5
5.7	28	66	1630570	£2.15	10	12	51	102	1631200	£17.85	5
5.8	28	66	1630580	£4.80	10	12.5	51	102	1631250	£20.80	5
5.9	28	66	1630590	£4.95	10	13	51	102	1631300	£17.15	5
6	28	66	1630600	£5.55	10						



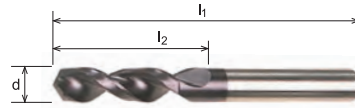
STRAIGHT SHANK DRILLS



shaping your dreams

# UDL Stub Drills

Ideal for use on CNC machines where high productivity and accurate holes are required.



OSG GROUP COMPANY

<b>P</b> 1.1	<b>P</b> 1.2	<b>P</b> 1.3	<b>P</b> 1.4	<b>P</b> 1.5	<b>P</b> 1.6	<b>M</b> 2.1	<b>M</b> 2.2	<b>M</b> 2.3					
<b>K</b> 3.1	<b>K</b> 3.2	<b>K</b> 3.3	<b>K</b> 3.4	<b>Cu</b> 6.1	<b>Cu</b> 6.2	<b>Cu</b> 6.3	<b>Cu</b> 6.4	<b>N</b> 7.1	<b>N</b> 7.2	<b>N</b> 7.3	<b>N</b> 7.4	<b>Syn</b> 8.1	<b>Syn</b> 8.2

d	l <sub>2</sub>	l <sub>1</sub>	Code	Price	QTY	d	l <sub>2</sub>	l <sub>1</sub>	Code	Price	QTY
1	6	26	1630100A	£2.90	10	6.1	31	70	1630610A	£8.00	10
1.1	7	28	1630110A	£2.90	10	6.2	31	70	1630620A	£8.00	10
1.2	8	30	1630120A	£2.90	10	6.3	31	70	1630630A	£8.00	10
1.3	8	30	1630130A	£2.90	10	6.4	31	70	1630640A	£8.00	10
1.4	9	32	1630140A	£2.90	10	6.5	31	70	1630650A	£8.65	10
1.5	9	32	1630150A	£2.95	10	6.6	31	70	1630660A	£8.65	10
1.6	10	34	1630160A	£2.95	10	6.7	31	70	1630670A	£8.65	10
1.7	10	34	1630170A	£2.95	10	6.8	34	74	1630680A	£8.65	10
1.8	11	36	1630180A	£2.95	10	6.9	34	74	1630690A	£8.65	10
1.9	11	36	1630190A	£2.95	10	7	34	74	1630700A	£9.05	10
2	12	38	1630200A	£3.05	10	7.1	34	74	1630710A	£9.05	10
2.1	12	38	1630210A	£3.05	10	7.2	34	74	1630720A	£9.05	10
2.2	13	40	1630220A	£3.05	10	7.3	34	74	1630730A	£9.05	10
2.3	13	40	1630230A	£3.05	10	7.4	34	74	1630740A	£9.05	10
2.4	14	43	1630240A	£3.05	10	7.5	34	74	1630750A	£10.45	10
2.5	14	43	1630250A	£3.10	10	7.6	37	79	1630760A	£10.45	10
2.6	14	43	1630260A	£3.10	10	7.7	37	79	1630770A	£10.45	10
2.7	16	46	1630270A	£3.10	10	7.8	37	79	1630780A	£10.45	10
2.8	16	46	1630280A	£3.10	10	7.9	37	79	1630790A	£10.45	10
2.9	16	46	1630290A	£3.10	10	8	37	79	1630800A	£11.00	10
3	16	46	1630300A	£3.20	10	8.1	37	79	1630810A	£11.00	10
3.1	18	49	1630310A	£3.70	10	8.2	37	79	1630820A	£11.00	10
3.2	18	49	1630320A	£3.70	10	8.3	37	79	1630830A	£11.00	10
3.3	18	49	1630330A	£3.70	10	8.4	37	79	1630840A	£11.00	10
3.4	20	52	1630340A	£4.10	10	8.5	37	79	1630850A	£13.40	10
3.5	20	52	1630350A	£5.20	10	8.6	40	84	1630860A	£13.40	10
3.6	20	52	1630360A	£5.20	10	8.7	40	84	1630870A	£13.40	10
3.7	20	52	1630370A	£5.20	10	8.8	40	84	1630880A	£13.40	10
3.8	22	55	1630380A	£5.20	10	8.9	40	84	1630890A	£13.40	10
3.9	22	55	1630390A	£5.20	10	9	40	84	1630900A	£13.70	10
4	22	55	1630400A	£6.20	10	9.1	40	84	1630910A	£13.70	10
4.1	22	55	1630410A	£6.20	10	9.2	40	84	1630920A	£13.70	10
4.2	22	55	1630420A	£6.20	10	9.3	40	84	1630930A	£13.70	10
4.3	24	58	1630430A	£6.20	10	9.4	40	84	1630940A	£13.70	10
4.4	24	58	1630440A	£6.20	10	9.5	40	84	1630950A	£14.50	10
4.5	24	58	1630450A	£6.25	10	9.6	43	89	1630960A	£14.50	10
4.6	24	58	1630460A	£6.25	10	9.7	43	89	1630970A	£14.50	10
4.8	26	62	1630480A	£6.25	10	9.8	43	89	1630980A	£14.50	10
4.9	26	62	1630490A	£6.25	10	9.9	43	89	1630990A	£14.50	10
5	26	62	1630500A	£6.55	10	10	43	89	1631000A	£15.75	5
5.1	26	62	1630510A	£6.55	10	10.2	43	89	1631020A	£15.75	5
5.2	26	62	1630520A	£6.55	10	10.5	43	89	1631050A	£16.85	5
5.3	26	62	1630530A	£6.55	10	10.8	47	95	1631080A	£16.85	5
5.4	28	66	1630540A	£6.55	10	11	47	95	1631100A	£17.85	5
5.5	28	66	1630550A	£7.35	10	11.2	47	95	1631120A	£18.60	5
5.6	28	66	1630560A	£7.35	10	11.5	47	95	1631150A	£18.70	5
5.7	28	66	1630570A	£7.35	10	12	51	102	1631200A	£21.55	5
5.8	28	66	1630580A	£7.35	10	12.5	51	102	1631250A	£25.10	5
5.9	28	66	1630590A	£7.35	10	13	51	102	1631300A	£26.15	5
6	28	66	1630600A	£8.00	10						

Code
<b>163A</b>

Properties		
< 1.5mm Standard Point		
≥ 1.5mm Split Point		
mm	DIN 1897	HSS Co5
3xD	TYPE FS	130°
h8	40°	TiAIN

Cutting Data	
pg 31	



STRAIGHT SHANK DRILLS

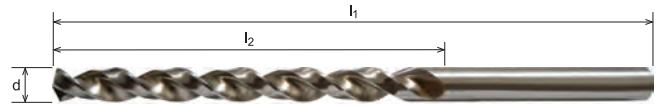




OSG GROUP COMPANY

## UDL Long Series Drills

Ideal for use on CNC machines where high productivity and accurate holes are required. High performance deep hole drilling.



Code
<b>110</b>

P 1.1	P 1.2	P 1.3	P 1.4	P 1.5	M 2.1	M 2.2	M 2.3						
K 3.1	K 3.2	K 3.3	K 3.4	Cu 6.1	Cu 6.2	Cu 6.3	Cu 6.4	N 7.1	N 7.2	N 7.3	N 7.4	Syn 8.1	Syn 8.2

Properties		
<p>&lt; 1.5mm Standard Point</p>		
<p>≥ 1.5mm Split Point</p>		
mm	DIN 340	HSS Co5
10xD	TYPE FS	130°
h8	40°	BRIGHT FINISH

Cutting Data	
pg 31	

d	l <sub>2</sub>	l <sub>1</sub>	Code	Price	QTY	d	l <sub>2</sub>	l <sub>1</sub>	Code	Price	QTY
1	33	56	1100100	£2.65	10	5.6	91	139	1100560	£10.00	10
1.1	37	60	1100110	£2.60	10	5.7	91	139	1100570	£10.00	10
1.2	41	65	1100120	£2.80	10	5.8	91	139	1100580	£9.85	10
1.3	41	65	1100130	£2.85	10	5.9	91	139	1100590	£9.75	10
1.4	45	70	1100140	£4.25	10	6	91	139	1100600	£9.15	10
1.5	45	70	1100150	£4.95	10	6.1	97	148	1100610	£12.10	10
1.6	50	76	1100160	£5.50	10	6.2	97	148	1100620	£11.10	10
1.7	50	76	1100170	£5.45	10	6.3	97	148	1100630	£10.45	10
1.8	53	80	1100180	£5.35	10	6.4	97	148	1100640	£11.90	10
1.9	53	80	1100190	£5.35	10	6.5	97	148	1100650	£12.80	10
2	56	85	1100200	£5.35	10	6.6	97	148	1100660	£11.75	10
2.1	56	85	1100210	£5.35	10	6.7	97	148	1100670	£11.05	10
2.2	59	90	1100220	£5.55	10	6.8	102	156	1100680	£13.85	10
2.3	59	90	1100230	£5.55	10	6.9	102	156	1100690	£13.70	10
2.4	62	95	1100240	£5.80	10	7	102	156	1100700	£13.55	10
2.5	62	95	1100250	£4.90	10	7.1	102	156	1100710	£12.90	10
2.6	62	95	1100260	£4.85	10	7.2	102	156	1100720	£14.00	10
2.7	66	100	1100270	£5.10	10	7.3	102	156	1100730	£13.85	10
2.8	66	100	1100280	£5.10	10	7.4	102	156	1100740	£13.70	10
2.9	66	100	1100290	£5.00	10	7.5	102	156	1100750	£12.90	10
3	66	100	1100300	£4.90	10	7.6	109	165	1100760	£14.80	10
3.1	69	106	1100310	£5.20	10	7.7	109	165	1100770	£14.80	10
3.2	69	106	1100320	£5.10	10	7.8	109	165	1100780	£14.70	10
3.3	69	106	1100330	£5.10	10	7.9	109	165	1100790	£14.50	10
3.4	73	112	1100340	£5.80	10	8	109	165	1100800	£13.75	10
3.5	73	112	1100350	£5.75	10	8.1	109	165	1100810	£15.80	10
3.6	73	112	1100360	£5.70	10	8.2	109	165	1100820	£15.80	10
3.7	73	112	1100370	£5.70	10	8.3	109	165	1100830	£15.80	10
3.8	78	119	1100380	£5.90	10	8.4	109	165	1100840	£15.65	10
3.9	78	119	1100390	£5.90	10	8.5	109	165	1100850	£14.80	10
4	78	119	1100400	£5.90	10	8.6	115	175	1100860	£17.35	10
4.1	78	119	1100410	£6.50	10	8.7	115	175	1100870	£17.40	10
4.2	78	119	1100420	£6.50	10	8.8	115	175	1100880	£17.20	10
4.3	82	126	1100430	£7.10	10	8.9	115	175	1100890	£17.05	10
4.4	82	126	1100440	£7.05	10	9	115	175	1100900	£16.20	10
4.5	82	126	1100450	£7.05	10	9.1	115	175	1100910	£18.55	10
4.6	82	126	1100460	£7.70	10	9.2	115	175	1100920	£18.55	10
4.7	82	126	1100470	£7.45	10	9.3	115	175	1100930	£18.40	10
4.8	87	132	1100480	£8.30	10	9.4	115	175	1100940	£18.20	10
4.9	87	132	1100490	£8.20	10	9.5	115	175	1100950	£17.35	10
5	87	132	1100500	£7.65	10	9.6	121	184	1100960	£20.50	10
5.1	87	132	1100510	£8.30	10	9.7	121	184	1100970	£20.50	10
5.2	87	132	1100520	£8.20	10	9.8	121	184	1100980	£20.30	10
5.3	87	132	1100530	£7.60	10	9.9	121	184	1100990	£20.15	10
5.4	91	139	1100540	£10.05	10	10	121	184	1101000	£19.50	5
5.5	91	139	1100550	£10.05	10						



STRAIGHT SHANK DRILLS

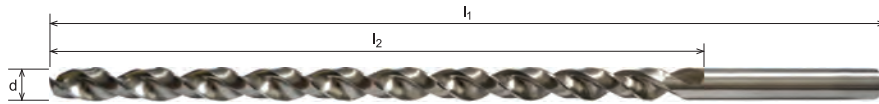


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# UDL Extra Length Drills

Ideal for use on CNC machines where high productivity and accurate holes are required. High performance extra deep hole drilling.



OSG GROUP COMPANY

<b>P</b> 1.1	<b>P</b> 1.2	<b>P</b> 1.3	<b>P</b> 1.4	<b>P</b> 1.5	<b>M</b> 2.1	<b>M</b> 2.2	<b>M</b> 2.3	<b>K</b> 3.1	<b>K</b> 3.2	<b>K</b> 3.3	<b>K</b> 3.4
<b>N</b> 7.1	<b>N</b> 7.2	<b>N</b> 7.3	<b>N</b> 7.4	Syn 8.1	Syn 8.2						

Codes
<b>118 - 120</b>

d	l <sub>2</sub>	l <sub>1</sub>	Code	Price	QTY	d	l <sub>2</sub>	l <sub>1</sub>	Code	Price	QTY
<b>Series 1</b>											
2	85	125	1180200	£4.05	1	8.5	165	240	1180850	£29.40	1
2	90	135	1180201	£4.55	1	9	175	250	1180900	£33.45	1
2.5	95	140	1180250	£5.25	1	9.5	175	250	1180950	£36.50	1
3	100	150	1180300	£5.95	1	10	185	265	1181000	£41.90	1
3	105	155	1180301	£6.25	1	*11	195	280	1181100	£49.95	1
3.5	115	165	1180350	£6.60	1	*11.5	195	280	1181150	£53.80	1
4	120	175	1180400	£8.05	1	*12	205	295	1181200	£60.55	1
4.5	125	185	1180450	£9.75	1	*12.5	205	295	1181250	£65.00	1
5	135	195	1180500	£11.70	1	*13	205	295	1181300	£69.65	1
5.5	140	205	1180550	£14.10	1	*13.5	220	310	1181350	£80.05	1
6	140	205	1180600	£15.40	1	*14	220	310	1181400	£85.50	1
6.5	150	215	1180650	£17.85	1	*14.5	220	310	1181450	£90.00	1
7	155	225	1180700	£20.60	1	*15	220	310	1181500	£95.20	1
7.5	155	225	1180750	£22.80	1	*15.5	230	320	1181550	£109.15	1
8	165	240	1180800	£35.30	1	*16	230	320	1181600	£110.60	1
<b>Series 2</b>											
3	130	190	1190300	£6.65	1	9.5	220	320	1190950	£44.90	1
3	135	200	1190301	£7.65	1	10	235	340	1191000	£51.80	1
3.5	145	210	1190350	£8.60	1	*10.5	235	340	1191050	£54.25	1
4	150	220	1190400	£10.50	1	*11	250	365	1191100	£62.60	1
4.5	160	235	1190450	£12.05	1	*12	260	375	1191200	£74.60	1
5	170	245	1190500	£14.35	1	*12.5	260	375	1191250	£80.25	1
5.5	180	260	1190550	£17.15	1	*13	260	375	1191300	£86.05	1
6	180	260	1190600	£18.85	1	*13.5	275	380	1191350	£93.55	1
6.5	190	275	1190650	£22.20	1	*14	275	380	1191400	£98.45	1
7	200	290	1190700	£25.00	1	*14.5	275	380	1191450	£109.80	1
7.5	200	290	1190750	£27.85	1	*15	275	380	1191500	£110.85	1
8	210	305	1190800	£32.30	1	*15.5	290	400	1191550	£131.90	1
8.5	210	305	1190850	£35.75	1	*16	290	400	1191600	£132.20	1
9	220	320	1190900	£41.00	1						
<b>Series 3</b>											
4	190	280	1200400	£11.55	1	9	280	410	1200900	£49.00	1
4.5	200	295	1200450	£12.50	1	9.5	280	410	1200950	£53.75	1
5	210	315	1200500	£16.05	1	10	295	430	1201000	£65.00	1
5.5	225	330	1200550	£18.10	1	*10.5	295	430	1201050	£66.30	1
6	225	330	1200600	£21.80	1	*11	300	455	1201100	£75.90	1
6.5	235	350	1200650	£26.15	1	*11.5	300	455	1201150	£82.15	1
7	250	370	1200700	£29.65	1	*12	300	480	1201200	£93.15	1
7.5	250	370	1200750	£32.90	1	*12.5	300	480	1201250	£100.30	1
8	265	390	1200800	£40.75	1	*13	300	480	1201300	£107.70	1
8.5	265	390	1200850	£42.60	1						

**Properties**

UX Point

mm	DIN 1869	HSS Co5
15-20 xD	TYPE FS	130°
h8	40°	BRIGHT FINISH

**Cutting Data**

pg 31-32

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\* Works Standard



STRAIGHT SHANK DRILLS

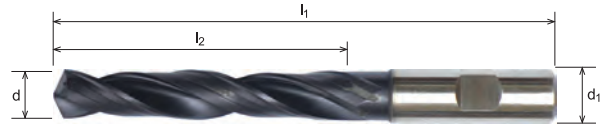




OSG GROUP COMPANY

# Straight Shank Oil Tube Chipbreaker Drills

High performance production drilling.



Code
<b>10F</b>

Properties		
Multi-Facet Point		
mm	WORKS STD.	HSS Co5
5xD	TYPE N	
TiAlN		

P 1.1	P 1.2	P 1.3	P 1.4	P 1.5	P 1.6	M 2.1	M 2.2	M 2.3	K 3.1	K 3.2	K 3.3	K 3.4	Ti 4.1	Ti 4.2	Ti 4.3	Ni 5.1	Ni 5.2	Ni 5.3	Cu 6.1	Cu 6.2	Cu 6.3	Cu 6.4	N 7.1	N 7.2	N 7.3	N 7.4	Syn 8.1	Syn 8.2	Syn 8.3
-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	-------	-------	-------	-------	---------	---------	---------

d	d <sub>1</sub>	l <sub>2</sub>	l <sub>1</sub>	Code	Price	QTY
12	12	78	125	10F1200	£122.50	1
12.5	14	88	135	10F1250	£138.80	1
13	14	88	135	10F1300	£138.80	1
13.5	14	88	135	10F1350	£138.80	1
14	14	88	135	10F1400	£138.80	1
14.5	16	100	150	10F1450	£157.95	1
15	16	100	150	10F1500	£157.95	1
15.5	16	100	150	10F1550	£157.95	1
16	16	100	150	10F1600	£157.95	1
16.5	18	115	165	10F1650	£192.20	1
17	18	115	165	10F1700	£192.20	1
17.5	18	115	165	10F1750	£192.20	1
18	18	115	165	10F1800	£192.20	1
18.5	20	128	180	10F1850	£220.15	1
19	20	128	180	10F1900	£220.15	1
19.5	20	128	180	10F1950	£220.15	1
20	20	128	180	10F2000	£220.15	1

Cutting Data	
pg 32	 <a href="http://appsomta.co.za">appsomta.co.za</a>

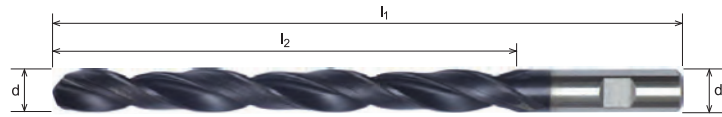


STRAIGHT SHANK DRILLS



shaping your dreams

**Straight Shank  
Oil Tube Chipbreaker Drills**  
High performance production drilling.



OSG GROUP COMPANY

P 1.1	P 1.2	P 1.3	P 1.4	P 1.5	P 1.6	M 2.1	M 2.2	M 2.3	K 3.1	K 3.2	K 3.3	K 3.4	Ti 4.1	Ti 4.2	Ti 4.3	Ni 5.1	Ni 5.2	Ni 5.3	Cu 6.1	Cu 6.2	Cu 6.3	Cu 6.4	N 7.1	N 7.2	N 7.3	N 7.4	Syn 8.1	Syn 8.2	Syn 8.3
-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	-------	-------	-------	-------	---------	---------	---------

Code
<b>10L</b>

d	d <sub>1</sub>	l <sub>2</sub>	l <sub>1</sub>	Code	Price	QTY
12	12	138	185	10L1200	£179.35	1
12.5	14	158	205	10L1250	£207.60	1
13	14	158	205	10L1300	£207.60	1
13.5	14	158	205	10L1350	£207.60	1
14	14	158	205	10L1400	£207.60	1
14.5	16	180	230	10L1450	£238.10	1
15	16	180	230	10L1500	£238.10	1
15.5	16	180	230	10L1550	£238.10	1
16	16	180	230	10L1600	£238.10	1
16.5	18	200	250	10L1650	£273.25	1
17	18	200	250	10L1700	£273.25	1
17.5	18	200	250	10L1750	£273.25	1
18	18	200	250	10L1800	£273.25	1
18.5	20	228	280	10L1850	£314.85	1
19	20	228	280	10L1900	£314.85	1
19.5	20	228	280	10L1950	£314.85	1
20	20	228	280	10L2000	£314.85	1

Properties		
Multi-Facet Point		
mm	WORKS STD.	HSS Co5
10xD	TYPE N	
		30°
TiAIN		

Cutting Data	
pg 32	app.somta.co.za



STRAIGHT SHANK DRILLS



OSG GROUP COMPANY

Codes

**184, 185**

Properties



Multi-Facet Point

mm **DIN 1897** **HSS Co5**



Cutting Data

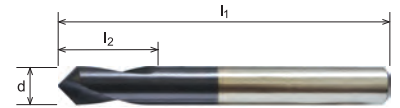
pg 32



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## NC Spotting Drills

For accurate positioning of holes. Ideal for CNC lathes.  
Alternative to using Centre drills.



P 1.1	P 1.2	P 1.3	P 1.4	P 1.5	P 1.6	M 2.1	M 2.2	M 2.3					
K 3.1	K 3.2	K 3.3	K 3.4	Cu 6.1	Cu 6.2	Cu 6.3	Cu 6.4	N 7.1	N 7.2	N 7.3	N 7.4	Syn 8.1	Syn 8.2

d	l <sub>2</sub>	l <sub>1</sub>	Code	Price	QTY
<b>90° Point Angle</b>					
3	10	46	1840300	£6.60	1
4	12	55	1840400	£8.40	1
5	14	62	1840500	£9.85	1
6	16	66	1840600	£12.95	1
8	21	79	1840800	£15.70	1
10	25	89	1841000	£19.85	1
12	30	102	1841200	£30.40	1
16	38	115	1841600	£47.55	1
20	45	131	1842000	£79.45	1
<b>120° Point Angle</b>					
3	10	46	1850300	£6.60	1
4	12	55	1850400	£8.40	1
5	14	62	1850500	£9.85	1
6	16	66	1850600	£12.95	1
8	21	79	1850800	£15.70	1
10	25	89	1851000	£19.85	1
12	30	102	1851200	£30.40	1
16	38	115	1851600	£47.55	1
20	45	131	1852000	£79.45	1



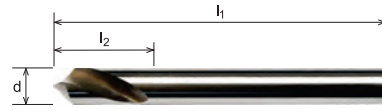
STRAIGHT SHANK DRILLS



shaping your dreams

# NC Spotting Drills

For accurate positioning of holes. Ideal for CNC lathes. Alternative to using Centre drills.



OSG GROUP COMPANY

P 1.1	P 1.2	P 1.3	P 1.4	P 1.5	P 1.6	M 2.1	M 2.2	M 2.3						
K 3.1	K 3.2	K 3.3	K 3.4	Cu 6.1	Cu 6.2	Cu 6.3	Cu 6.4	N 7.1	N 7.2	N 7.3	N 7.4	Syn 8.1	Syn 8.2	

Codes

**184B, 185B**

d	l <sub>2</sub>	l <sub>1</sub>	Code	Price	QTY
<b>90° Point Angle</b>					
3	10	46	1840300B	£6.05	1
4	12	55	1840400B	£6.95	1
5	14	62	1840500B	£7.55	1
6	16	66	1840600B	£8.30	1
8	21	79	1840800B	£11.05	1
10	25	89	1841000B	£14.75	1
12	30	102	1841200B	£20.90	1
16	38	115	1841600B	£38.10	1
20	45	131	1842000B	£65.65	1
<b>120° Point Angle</b>					
3	10	46	1850300B	£6.05	1
4	12	55	1850400B	£6.95	1
5	14	62	1850500B	£7.55	1
6	16	66	1850600B	£8.30	1
8	21	79	1850800B	£11.05	1
10	25	89	1851000B	£14.75	1
12	30	102	1851200B	£20.90	1
16	38	115	1851600B	£38.10	1
20	45	131	1852000B	£65.65	1

Properties

Multi-Facet Point

mm	DIN 1897	HSS Co5
3xD	90°/120°	h8
h6	20°	BRIGHT FINISH

Cutting Data

pg 33



**STRAIGHT SHANK DRILLS**





OSG GROUP COMPANY

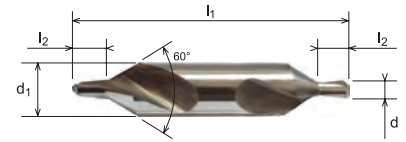
Code
<b>114</b>

Properties		
mm	<b>DIN 333</b>	<b>HSS</b>
	<b>BRIGHT FINISH</b>	

Cutting Data	
pg 33	
app.somta.co.za	

### Centre Drills - Form A

For general centering operations on workpieces requiring additional machining between centres.



P 1.1	P 1.2	P 1.3	P 1.4	P 1.5	P 1.6	M 2.1	M 2.2	M 2.3						
K 3.1	K 3.2	K 3.3	K 3.4	Cu 6.1	Cu 6.2	Cu 6.3	Cu 6.4	N 7.1	N 7.2	N 7.3	N 7.4	Syn 8.1	Syn 8.2	Syn 8.3

d	d <sub>1</sub>	l <sub>2</sub>	l <sub>1</sub>	Code	Price	QTY
0.8	3.15	1.1	25	1140080	£5.35	1
1	3.15	1.3	31.5	1140100	£5.50	1
1.25	3.15	1.6	31.5	1140125	£5.80	1
1.6	4	2	35.5	1140160	£6.05	1
2	5	2.5	40	1140200	£7.05	1
2.5	6.3	3.1	45	1140250	£7.45	1
3.15	8	3.9	50	1140315	£10.05	1
4	10	5	56	1140400	£12.70	1
5	12.5	6.3	63	1140500	£15.75	1
6.3	16	8	71	1140630	£22.45	1
8	20	10.1	80	1140800	£44.30	1
10	25	12.8	100	1141000	£59.30	1

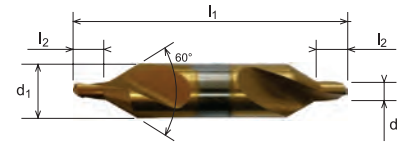
Code
<b>114T</b>

Properties		
mm	<b>DIN 333</b>	<b>HSS</b>
	<b>TiN</b>	

Cutting Data	
pg 33	
app.somta.co.za	

### Centre Drills - Form A

For general centering operations on workpieces requiring additional machining between centres.



P 1.1	P 1.2	P 1.3	P 1.4	P 1.5	P 1.6	M 2.1	M 2.2	M 2.3						
K 3.1	K 3.2	K 3.3	K 3.4	Cu 6.1	Cu 6.2	Cu 6.3	Cu 6.4	N 7.1	N 7.2	N 7.3	N 7.4	Syn 8.1	Syn 8.2	Syn 8.3

d	d <sub>1</sub>	l <sub>2</sub>	l <sub>1</sub>	Code	Price	QTY
0.8	3.15	1.1	25	1140080T	£7.05	1
1	3.15	1.3	31.5	1140100T	£6.60	1
1.25	3.15	1.6	31.5	1140125T	£6.70	1
1.6	4	2	35.5	1140160T	£7.15	1
2	5	2.5	40	1140200T	£8.35	1
2.5	6.3	3.1	45	1140250T	£10.35	1
3.15	8	3.9	50	1140315T	£14.20	1
4	10	5	56	1140400T	£17.75	1
5	12.5	6.3	63	1140500T	£22.25	1
6.3	16	8	71	1140630T	£26.05	1
8	20	10.1	80	1140800T	£47.80	1
10	25	12.8	100	1141000T	£62.45	1



STRAIGHT SHANK DRILLS



shaping your dreams

# Cutting Data



OSG GROUP COMPANY

## 101

Material	Ø Vc m/min	F (mm/rev.)											
		1	2	3	4	5	6	8	10	12	15	16	20
P	1.1 35	0.015-0.025	0.050-0.083	0.077-0.128	0.087-0.145	0.098-0.163	0.113-0.188	0.143-0.238	0.171-0.285	0.182-0.304	0.203-0.339	0.210-0.350	0.240-0.400
	1.2 30	0.015-0.025	0.050-0.083	0.077-0.128	0.087-0.145	0.098-0.163	0.113-0.188	0.143-0.238	0.171-0.285	0.182-0.304	0.203-0.339	0.210-0.350	0.240-0.400
	1.3 25	0.014-0.023	0.038-0.063	0.055-0.091	0.063-0.105	0.071-0.119	0.082-0.136	0.104-0.173	0.124-0.206	0.134-0.223	0.152-0.253	0.158-0.263	0.186-0.310
	1.4 20	0.014-0.023	0.038-0.063	0.055-0.091	0.063-0.105	0.071-0.119	0.082-0.136	0.104-0.173	0.124-0.206	0.134-0.223	0.152-0.253	0.158-0.263	0.186-0.310
K	3.1 30	0.015-0.025	0.050-0.083	0.077-0.128	0.087-0.145	0.098-0.163	0.113-0.188	0.143-0.238	0.171-0.285	0.182-0.304	0.203-0.339	0.210-0.350	0.240-0.400
	3.2 24	0.014-0.023	0.038-0.063	0.055-0.091	0.063-0.105	0.071-0.119	0.082-0.136	0.104-0.173	0.124-0.206	0.134-0.223	0.152-0.253	0.158-0.263	0.186-0.310
	3.3 20	0.013-0.021	0.032-0.054	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175	0.113-0.188	0.130-0.216	0.135-0.225	0.161-0.269
	3.4 14	0.013-0.021	0.032-0.054	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175	0.113-0.188	0.130-0.216	0.135-0.225	0.161-0.269
Cu	6.1 33	0.014-0.024	0.042-0.070	0.063-0.105	0.072-0.120	0.082-0.136	0.095-0.158	0.120-0.200	0.143-0.238	0.154-0.256	0.173-0.289	0.180-0.300	0.210-0.350
	6.2 35	0.016-0.026	0.057-0.095	0.089-0.149	0.101-0.168	0.113-0.188	0.130-0.216	0.165-0.275	0.199-0.331	0.210-0.350	0.233-0.388	0.240-0.400	0.270-0.450
	6.3 27	0.015-0.025	0.050-0.083	0.077-0.128	0.087-0.145	0.098-0.163	0.113-0.188	0.143-0.238	0.171-0.285	0.182-0.304	0.203-0.339	0.210-0.350	0.240-0.400
	6.4 16	0.014-0.024	0.042-0.070	0.063-0.105	0.072-0.120	0.082-0.136	0.095-0.158	0.120-0.200	0.143-0.238	0.154-0.256	0.173-0.289	0.180-0.300	0.210-0.350
N	7.1 33	0.018-0.030	0.063-0.105	0.101-0.169	0.114-0.190	0.128-0.213	0.148-0.246	0.188-0.313	0.224-0.373	0.236-0.394	0.262-0.436	0.270-0.450	0.304-0.506
	7.2 30	0.016-0.026	0.057-0.095	0.089-0.149	0.101-0.168	0.113-0.188	0.130-0.216	0.165-0.275	0.199-0.331	0.210-0.350	0.233-0.388	0.240-0.400	0.270-0.450
	7.3 27	0.015-0.025	0.050-0.083	0.077-0.128	0.087-0.145	0.098-0.163	0.113-0.188	0.143-0.238	0.171-0.285	0.182-0.304	0.203-0.339	0.210-0.350	0.240-0.400
	7.4 24	0.014-0.023	0.038-0.063	0.055-0.091	0.063-0.105	0.071-0.119	0.082-0.136	0.104-0.173	0.124-0.206	0.134-0.223	0.152-0.253	0.158-0.263	0.186-0.310
Syn	8.1 30	0.018-0.030	0.063-0.105	0.101-0.169	0.114-0.190	0.128-0.213	0.148-0.246	0.188-0.313	0.224-0.373	0.236-0.394	0.262-0.436	0.270-0.450	0.304-0.506
	8.2 28	0.015-0.025	0.050-0.083	0.077-0.128	0.087-0.145	0.098-0.163	0.113-0.188	0.143-0.238	0.171-0.285	0.182-0.304	0.203-0.339	0.210-0.350	0.240-0.400

Parameters based on ideal conditions. Please adjust parameter accordingly to real applications.

**% Speed and Feed reduction for deep hole drilling:**  
 More than 3 x Drill Diameter - 10%, More than 4 x Drill Diameter - 20%, More than 5 x Drill Diameter - 30%, More than 6 x Drill Diameter - 40%



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## 1TT

Material	Ø Vc m/min	F (mm/rev.)										
		1	2	3	4	5	6	8	10	12	15	16
P	1.1 47	0.018-0.030	0.063-0.105	0.101-0.169	0.114-0.190	0.128-0.213	0.148-0.246	0.188-0.313	0.224-0.373	0.236-0.394	0.262-0.436	0.270-0.450
	1.2 40	0.018-0.030	0.063-0.105	0.101-0.169	0.114-0.190	0.128-0.213	0.148-0.246	0.188-0.313	0.224-0.373	0.236-0.394	0.262-0.436	0.270-0.450
	1.3 35	0.014-0.023	0.038-0.063	0.055-0.091	0.063-0.105	0.071-0.119	0.082-0.136	0.104-0.173	0.124-0.206	0.134-0.223	0.152-0.253	0.158-0.263
	1.4 30	0.014-0.023	0.038-0.063	0.055-0.091	0.063-0.105	0.071-0.119	0.082-0.136	0.104-0.173	0.124-0.206	0.134-0.223	0.152-0.253	0.158-0.263
M	2.1 20	0.014-0.023	0.038-0.063	0.055-0.091	0.063-0.105	0.071-0.119	0.082-0.136	0.104-0.173	0.124-0.206	0.134-0.223	0.152-0.253	0.158-0.263
	2.2 12	0.014-0.024	0.042-0.070	0.063-0.105	0.072-0.120	0.082-0.136	0.095-0.158	0.120-0.200	0.143-0.238	0.154-0.256	0.173-0.289	0.180-0.300
	2.3 16	0.011-0.019	0.024-0.040	0.033-0.055	0.038-0.063	0.042-0.070	0.048-0.080	0.060-0.100	0.074-0.123	0.083-0.138	0.094-0.156	0.098-0.163
	3.1 40	0.018-0.030	0.063-0.105	0.101-0.169	0.114-0.190	0.128-0.213	0.148-0.246	0.188-0.313	0.224-0.373	0.236-0.394	0.262-0.436	0.270-0.450
K	3.2 30	0.013-0.021	0.032-0.054	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175	0.113-0.188	0.130-0.216	0.135-0.225
	3.3 28	0.013-0.021	0.032-0.054	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175	0.113-0.188	0.130-0.216	0.135-0.225
	3.4 26	0.013-0.021	0.032-0.054	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175	0.113-0.188	0.130-0.216	0.135-0.225
	6.1 50	0.014-0.024	0.042-0.070	0.063-0.105	0.072-0.120	0.082-0.136	0.095-0.158	0.120-0.200	0.143-0.238	0.154-0.256	0.173-0.289	0.180-0.300
Cu	6.2 33	0.016-0.026	0.057-0.095	0.089-0.149	0.101-0.168	0.113-0.188	0.130-0.216	0.165-0.275	0.199-0.331	0.210-0.350	0.233-0.388	0.240-0.400
	6.3 39	0.015-0.025	0.050-0.083	0.077-0.128	0.087-0.145	0.098-0.163	0.113-0.188	0.143-0.238	0.171-0.285	0.182-0.304	0.203-0.339	0.210-0.350
	6.4 30	0.014-0.024	0.042-0.070	0.063-0.105	0.072-0.120	0.082-0.136	0.095-0.158	0.120-0.200	0.143-0.238	0.154-0.256	0.173-0.289	0.180-0.300
	7.1 41	0.020-0.033	0.069-0.110	0.113-0.188	0.128-0.213	0.143-0.238	0.165-0.275	0.210-0.350	0.248-0.413	0.263-0.438	0.291-0.485	0.300-0.500
N	7.2 38	0.018-0.030	0.063-0.105	0.101-0.169	0.114-0.190	0.128-0.213	0.148-0.246	0.188-0.313	0.224-0.373	0.236-0.394	0.262-0.436	0.270-0.450
	7.3 33	0.016-0.026	0.057-0.095	0.089-0.149	0.101-0.168	0.113-0.188	0.130-0.216	0.165-0.275	0.199-0.331	0.210-0.350	0.233-0.388	0.240-0.400
	7.4 33	0.016-0.026	0.057-0.095	0.089-0.149	0.101-0.168	0.113-0.188	0.130-0.216	0.165-0.275	0.199-0.331	0.210-0.350	0.233-0.388	0.240-0.400
	8.1 30	0.016-0.026	0.057-0.095	0.089-0.149	0.101-0.168	0.113-0.188	0.130-0.216	0.165-0.275	0.199-0.331	0.210-0.350	0.233-0.388	0.240-0.400
Syn	8.2 50	0.015-0.025	0.050-0.083	0.077-0.128	0.087-0.145	0.098-0.163	0.113-0.188	0.143-0.238	0.171-0.285	0.182-0.304	0.203-0.339	0.210-0.350
	8.3 35	0.014-0.023	0.038-0.063	0.055-0.091	0.063-0.105	0.071-0.119	0.082-0.136	0.104-0.173	0.124-0.206	0.134-0.223	0.152-0.253	0.158-0.263

## 177

Material	Ø Vc m/min	F (mm/rev.)										
		1	2	3	4	5	6	8	10	12	15	
P	1.1 35	0.018-0.030	0.063-0.105	0.101-0.169	0.114-0.190	0.128-0.213	0.148-0.246	0.188-0.313	0.224-0.373	0.236-0.394	0.262-0.436	
	1.2 30	0.015-0.025	0.050-0.083	0.077-0.128	0.087-0.145	0.098-0.163	0.113-0.188	0.143-0.238	0.171-0.285	0.182-0.304	0.203-0.339	
	1.3 27	0.014-0.024	0.042-0.070	0.063-0.105	0.072-0.120	0.082-0.136	0.095-0.158	0.120-0.200	0.143-0.238	0.154-0.256	0.173-0.289	
	1.4 24	0.014-0.023	0.038-0.063	0.055-0.091	0.063-0.105	0.071-0.119	0.082-0.136	0.104-0.173	0.124-0.206	0.134-0.223	0.152-0.253	
M	1.5 17	0.013-0.021	0.032-0.054	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175	0.113-0.188	0.130-0.216	
	1.6 10	0.012-0.020	0.029-0.048	0.040-0.066	0.045-0.075	0.051-0.085	0.059-0.098	0.074-0.123	0.089-0.149	0.098-0.163	0.112-0.186	
	2.1 22	0.013-0.021	0.032-0.054	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175	0.113-0.188	0.130-0.216	
	2.2 11	0.014-0.024	0.042-0.070	0.063-0.105	0.072-0.120	0.082-0.136	0.095-0.158	0.120-0.200	0.143-0.238	0.154-0.256	0.173-0.289	
K	2.3 15	0.011-0.019	0.024-0.040	0.033-0.055	0.038-0.063	0.042-0.070	0.048-0.080	0.060-0.100	0.074-0.123	0.083-0.138	0.094-0.156	
	3.1 35	0.015-0.025	0.050-0.083	0.077-0.128	0.087-0.145	0.098-0.163	0.113-0.188	0.143-0.238	0.171-0.285	0.182-0.304	0.203-0.339	
	3.2 28	0.012-0.020	0.029-0.048	0.040-0.066	0.045-0.075	0.051-0.085	0.059-0.098	0.074-0.123	0.089-0.149	0.098-0.163	0.112-0.186	
	3.3 22	0.013-0.021	0.032-0.054	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175	0.113-0.188	0.130-0.216	
Cu	3.4 17	0.013-0.021	0.032-0.054	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175	0.113-0.188	0.130-0.216	
	6.1 38	0.015-0.025	0.050-0.083	0.077-0.128	0.087-0.145	0.098-0.163	0.113-0.188	0.143-0.238	0.171-0.285	0.182-0.304	0.203-0.339	
	6.2 40	0.014-0.023	0.038-0.063	0.055-0.091	0.063-0.105	0.071-0.119	0.082-0.136	0.104-0.173	0.124-0.206	0.134-0.223	0.152-0.253	
	6.3 27	0.015-0.025	0.050-0.083	0.077-0.128	0.087-0.145	0.098-0.163	0.113-0.188	0.143-0.238	0.171-0.285	0.182-0.304	0.203-0.339	
N	6.4 21	0.014-0.023	0.038-0.063	0.055-0.091	0.063-0.105	0.071-0.119	0.082-0.136	0.104-0.173	0.124-0.206	0.134-0.223	0.152-0.253	
	7.1 33	0.018-0.030	0.063-0.105	0.101-0.169	0.114-0.190	0.128-0.213	0.148-0.246	0.188-0.313	0.224-0.373	0.236-0.394	0.262-0.436	
	7.2 30	0.018-0.030	0.063-0.105	0.101-0.169	0.114-0							



OSG GROUP COMPANY

Parameters based on ideal conditions. Please adjust parameter accordingly to real applications.

**% Speed and Feed reduction for deep hole drilling:**  
 More than 3 x Drill Diameter - 10%, More than 4 x Drill Diameter - 20%, More than 5 x Drill Diameter - 30%, More than 6 x Drill Diameter - 40%



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## 1AQ

Material	Ø Vc m/min	1	2	3	4	5	6	8	10	12	15
		F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)
P	1.1 60	0.018-0.030	0.063-0.105	0.101-0.169	0.114-0.190	0.128-0.213	0.148-0.246	0.188-0.313	0.224-0.373	0.236-0.394	0.262-0.436
	1.2 50	0.018-0.030	0.063-0.105	0.101-0.169	0.114-0.190	0.128-0.213	0.148-0.246	0.188-0.313	0.224-0.373	0.236-0.394	0.262-0.436
	1.3 44	0.016-0.026	0.057-0.095	0.089-0.149	0.101-0.168	0.113-0.188	0.130-0.216	0.165-0.275	0.199-0.331	0.210-0.350	0.233-0.388
	1.4 44	0.016-0.026	0.057-0.095	0.089-0.149	0.101-0.168	0.113-0.188	0.130-0.216	0.165-0.275	0.199-0.331	0.210-0.350	0.233-0.388
	1.5 33	0.014-0.024	0.042-0.070	0.063-0.105	0.072-0.120	0.082-0.136	0.095-0.158	0.120-0.200	0.143-0.238	0.154-0.256	0.173-0.289
	1.6 26	0.014-0.024	0.042-0.070	0.063-0.105	0.072-0.120	0.082-0.136	0.095-0.158	0.120-0.200	0.143-0.238	0.154-0.256	0.173-0.289
N	7.1 60	0.018-0.030	0.063-0.105	0.101-0.169	0.114-0.190	0.128-0.213	0.148-0.246	0.188-0.313	0.224-0.373	0.236-0.394	0.262-0.436
	7.2 45	0.024-0.040	0.089-0.149	0.146-0.244	0.164-0.273	0.182-0.303	0.210-0.350	0.266-0.444	0.315-0.525	0.341-0.569	0.361-0.601
	7.3 40	0.024-0.040	0.089-0.149	0.146-0.244	0.164-0.273	0.182-0.303	0.210-0.350	0.266-0.444	0.315-0.525	0.341-0.569	0.361-0.601
Syn	7.4 48	0.016-0.026	0.057-0.095	0.089-0.149	0.101-0.168	0.113-0.188	0.130-0.216	0.165-0.275	0.199-0.331	0.210-0.350	0.233-0.388
	8.1 55	0.016-0.026	0.057-0.095	0.089-0.149	0.101-0.168	0.113-0.188	0.130-0.216	0.165-0.275	0.199-0.331	0.210-0.350	0.233-0.388
	8.2 40	0.014-0.024	0.042-0.070	0.063-0.105	0.072-0.120	0.082-0.136	0.095-0.158	0.120-0.200	0.143-0.238	0.154-0.256	0.173-0.289

## 116

Material	Ø Vc m/min	1	2	3	4	5	6	8	10	12	15	16
		F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)
P	1.1 27	0.014-0.024	0.042-0.070	0.063-0.105	0.072-0.120	0.082-0.136	0.095-0.158	0.120-0.200	0.143-0.238	0.154-0.256	0.173-0.289	0.180-0.300
	1.2 25	0.014-0.024	0.042-0.070	0.063-0.105	0.072-0.120	0.082-0.136	0.095-0.158	0.120-0.200	0.143-0.238	0.154-0.256	0.173-0.289	0.180-0.300
	1.3 20	0.013-0.021	0.032-0.054	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175	0.113-0.188	0.130-0.216	0.135-0.225
	1.4 16	0.013-0.021	0.032-0.054	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175	0.113-0.188	0.130-0.216	0.135-0.225
	2.1 10	0.012-0.020	0.029-0.048	0.040-0.066	0.045-0.075	0.051-0.085	0.059-0.098	0.074-0.123	0.089-0.149	0.098-0.163	0.112-0.186	0.116-0.194
	2.2 6	0.012-0.023	0.038-0.063	0.055-0.091	0.063-0.105	0.071-0.119	0.082-0.136	0.104-0.173	0.124-0.206	0.134-0.223	0.152-0.253	0.158-0.263
M	2.3 4	0.011-0.018	0.021-0.035	0.028-0.046	0.031-0.051	0.035-0.058	0.040-0.066	0.050-0.084	0.060-0.100	0.069-0.113	0.077-0.129	0.081-0.135
	3.1 28	0.015-0.025	0.050-0.083	0.077-0.128	0.087-0.145	0.098-0.163	0.113-0.188	0.143-0.238	0.171-0.285	0.182-0.304	0.203-0.339	0.210-0.350
	3.2 21	0.013-0.021	0.032-0.054	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175	0.113-0.188	0.130-0.216	0.135-0.225
K	3.3 15	0.012-0.020	0.029-0.048	0.040-0.066	0.045-0.075	0.051-0.085	0.059-0.098	0.074-0.123	0.089-0.149	0.098-0.163	0.112-0.186	0.116-0.194
	3.4 13	0.012-0.020	0.029-0.048	0.040-0.066	0.045-0.075	0.051-0.085	0.059-0.098	0.074-0.123	0.089-0.149	0.098-0.163	0.112-0.186	0.116-0.194
	6.1 30	0.013-0.021	0.032-0.054	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175	0.113-0.188	0.130-0.216	0.135-0.225
Cu	6.2 32	0.015-0.025	0.050-0.083	0.077-0.128	0.087-0.145	0.098-0.163	0.113-0.188	0.143-0.238	0.171-0.285	0.182-0.304	0.203-0.339	0.210-0.350
	6.3 27	0.014-0.024	0.042-0.070	0.063-0.105	0.072-0.120	0.082-0.136	0.095-0.158	0.120-0.200	0.143-0.238	0.154-0.256	0.173-0.289	0.180-0.300
	6.4 16	0.013-0.021	0.032-0.054	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175	0.113-0.188	0.130-0.216	0.135-0.225
N	7.1 32	0.016-0.026	0.057-0.095	0.089-0.149	0.101-0.168	0.113-0.188	0.130-0.216	0.165-0.275	0.199-0.331	0.210-0.350	0.233-0.388	0.240-0.400
	7.2 27	0.015-0.025	0.050-0.083	0.077-0.128	0.087-0.145	0.098-0.163	0.113-0.188	0.143-0.238	0.171-0.285	0.182-0.304	0.203-0.339	0.210-0.350
	7.3 27	0.014-0.024	0.042-0.070	0.063-0.105	0.072-0.120	0.082-0.136	0.095-0.158	0.120-0.200	0.143-0.238	0.154-0.256	0.173-0.289	0.180-0.300
Syn	7.4 25	0.013-0.021	0.032-0.054	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175	0.113-0.188	0.130-0.216	0.135-0.225
	8.1 35	0.016-0.026	0.057-0.095	0.089-0.149	0.101-0.168	0.113-0.188	0.130-0.216	0.165-0.275	0.199-0.331	0.210-0.350	0.233-0.388	0.240-0.400
	8.2 26	0.014-0.024	0.042-0.070	0.063-0.105	0.072-0.120	0.082-0.136	0.095-0.158	0.120-0.200	0.143-0.238	0.154-0.256	0.173-0.289	0.180-0.300

## 121-126

Material	Ø Vc m/min	1	2	3	4	5	6	8	10	12	15
		F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)
P	1.1 24	0.013-0.021	0.032-0.054	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175	0.113-0.188	0.130-0.216
	1.2 22	0.013-0.021	0.032-0.054	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175	0.113-0.188	0.130-0.216
	1.3 16	0.011-0.019	0.024-0.040	0.033-0.055	0.038-0.063	0.042-0.070	0.048-0.080	0.060-0.100	0.074-0.123	0.083-0.138	0.094-0.156
	1.4 15	0.011-0.019	0.024-0.040	0.033-0.055	0.038-0.063	0.042-0.070	0.048-0.080	0.060-0.100	0.074-0.123	0.083-0.138	0.094-0.156
	2.1 9	0.011-0.019	0.024-0.040	0.033-0.055	0.038-0.063	0.042-0.070	0.048-0.080	0.060-0.100	0.074-0.123	0.083-0.138	0.094-0.156
	2.2 4	0.013-0.021	0.032-0.054	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175	0.113-0.188	0.130-0.216
M	2.3 8	0.009-0.015	0.017-0.029	0.022-0.036	0.024-0.040	0.027-0.045	0.032-0.053	0.041-0.068	0.047-0.078	0.052-0.086	0.062-0.103
	3.1 25	0.014-0.024	0.042-0.070	0.063-0.105	0.072-0.120	0.082-0.136	0.095-0.158	0.120-0.200	0.143-0.238	0.154-0.256	0.173-0.289
	3.2 18	0.012-0.020	0.029-0.048	0.040-0.066	0.045-0.075	0.051-0.085	0.059-0.098	0.074-0.123	0.089-0.149	0.098-0.163	0.112-0.186
K	3.3 13	0.011-0.019	0.024-0.040	0.033-0.055	0.038-0.063	0.042-0.070	0.048-0.080	0.060-0.100	0.074-0.123	0.083-0.138	0.094-0.156
	3.4 9	0.011-0.019	0.024-0.040	0.033-0.055	0.038-0.063	0.042-0.070	0.048-0.080	0.060-0.100	0.074-0.123	0.083-0.138	0.094-0.156
	7.1 24	0.015-0.025	0.050-0.083	0.077-0.128	0.087-0.145	0.098-0.163	0.113-0.188	0.143-0.238	0.171-0.285	0.182-0.304	0.203-0.339
N	7.2 22	0.014-0.024	0.042-0.070	0.063-0.105	0.072-0.120	0.082-0.136	0.095-0.158	0.120-0.200	0.143-0.238	0.154-0.256	0.173-0.289
	7.3 22	0.014-0.024	0.042-0.070	0.063-0.105	0.072-0.120	0.082-0.136	0.095-0.158	0.120-0.200	0.143-0.238	0.154-0.256	0.173-0.289
	7.4 20	0.013-0.021	0.032-0.054	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175	0.113-0.188	0.130-0.216
Syn	8.1 30	0.015-0.025	0.050-0.083	0.077-0.128	0.087-0.145	0.098-0.163	0.113-0.188	0.143-0.238	0.171-0.285	0.182-0.304	0.203-0.339
	8.2 26	0.014-0.023	0.038-0.063	0.055-0.091	0.063-0.105	0.071-0.119	0.082-0.136	0.104-0.173	0.124-0.206	0.134-0.223	0.152-0.253

## 164 Bright Finish

Material	Ø Vc m/min	1	2	3	4	5	6	8	10	12	15
		F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)
P	1.1 38	0.015-0.025	0.050-0.083	0.077-0.128	0.087-0.145	0.098-0.163	0.113-0.188	0.143-0.238	0.171-0.285	0.182-0.304	0.203-0.339
	1.2 33	0.015-0.025	0.050-0.083	0.077-0.128	0.087-0.145	0.098-0.163	0.113-0.188	0.143-0.238	0.171-0.285	0.182-0.304	0.203-0.339
	1.3 26	0.015-0.025	0.050-0.083	0.077-0.128	0.087-0.145	0.098-0.163	0.113-0.188	0.143-0.238	0.171-0.285	0.182-0.304	0.203-0.339
	1.4 26	0.015-0.025	0.050-0.083	0.077-0.128	0.087-0.145	0.098-0.163	0.113-0.188	0.143-0.238	0.171-0.285	0.182-0.304	0.203-0.339
	1.5 21	0.013-0.021	0								



Parameters based on ideal conditions. Please adjust parameter according to real applications.

**% Speed and Feed reduction for deep hole drilling:**  
 More than 3 x Drill Diameter - 10%, More than 4 x Drill Diameter - 20%, More than 5 x Drill Diameter - 30%, More than 6 x Drill Diameter - 40%



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## 163 Bright Finish

Material	Ø	Vc (mm/min)										
		1	2	3	4	5	6	8	10	12	15	
P	1.1	40	0.018-0.030	0.063-0.105	0.101-0.169	0.114-0.190	0.128-0.213	0.148-0.246	0.188-0.313	0.224-0.373	0.236-0.394	0.262-0.436
	1.2	34	0.018-0.030	0.063-0.105	0.101-0.169	0.114-0.190	0.128-0.213	0.148-0.246	0.188-0.313	0.224-0.373	0.236-0.394	0.262-0.436
	1.3	32	0.016-0.026	0.057-0.095	0.089-0.149	0.101-0.168	0.113-0.188	0.130-0.216	0.165-0.275	0.199-0.331	0.210-0.350	0.233-0.388
	1.4	32	0.016-0.026	0.057-0.095	0.089-0.149	0.101-0.168	0.113-0.188	0.130-0.216	0.165-0.275	0.199-0.331	0.210-0.350	0.233-0.388
	1.5	23	0.013-0.021	0.032-0.054	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175	0.113-0.188	0.130-0.216
M	2.1	15	0.014-0.023	0.038-0.063	0.055-0.091	0.063-0.105	0.071-0.119	0.082-0.136	0.104-0.173	0.124-0.206	0.134-0.223	0.152-0.253
	2.2	7	0.014-0.023	0.038-0.063	0.055-0.091	0.063-0.105	0.071-0.119	0.082-0.136	0.104-0.173	0.124-0.206	0.134-0.223	0.152-0.253
	2.3	9	0.012-0.020	0.029-0.048	0.040-0.066	0.045-0.075	0.051-0.085	0.059-0.098	0.074-0.123	0.089-0.149	0.098-0.163	0.112-0.186
K	3.1	34	0.021-0.035	0.076-0.126	0.124-0.206	0.140-0.233	0.156-0.260	0.180-0.300	0.229-0.381	0.270-0.450	0.289-0.481	0.314-0.524
	3.2	26	0.021-0.035	0.076-0.126	0.124-0.206	0.140-0.233	0.156-0.260	0.180-0.300	0.229-0.381	0.270-0.450	0.289-0.481	0.314-0.524
	3.3	26	0.021-0.035	0.076-0.126	0.124-0.206	0.140-0.233	0.156-0.260	0.180-0.300	0.229-0.381	0.270-0.450	0.289-0.481	0.314-0.524
	3.4	19	0.018-0.030	0.063-0.105	0.101-0.169	0.114-0.190	0.128-0.213	0.148-0.246	0.188-0.313	0.224-0.373	0.236-0.394	0.262-0.436
Cu	6.1	65	0.015-0.025	0.050-0.083	0.077-0.128	0.087-0.145	0.098-0.163	0.113-0.188	0.143-0.238	0.171-0.285	0.182-0.304	0.203-0.339
	6.2	66	0.018-0.030	0.063-0.105	0.101-0.169	0.114-0.190	0.128-0.213	0.148-0.246	0.188-0.313	0.224-0.373	0.236-0.394	0.262-0.436
	6.3	40	0.018-0.030	0.063-0.105	0.101-0.169	0.114-0.190	0.128-0.213	0.148-0.246	0.188-0.313	0.224-0.373	0.236-0.394	0.262-0.436
	6.4	31	0.014-0.024	0.042-0.070	0.063-0.105	0.072-0.120	0.082-0.136	0.095-0.158	0.120-0.200	0.143-0.238	0.154-0.256	0.173-0.289
N	7.1	75	0.021-0.035	0.076-0.126	0.124-0.206	0.140-0.233	0.156-0.260	0.180-0.300	0.229-0.381	0.270-0.450	0.289-0.481	0.314-0.524
	7.2	45	0.024-0.040	0.089-0.149	0.146-0.244	0.164-0.273	0.182-0.303	0.210-0.350	0.266-0.444	0.315-0.525	0.341-0.569	0.361-0.601
	7.3	40	0.024-0.040	0.089-0.149	0.146-0.244	0.164-0.273	0.182-0.303	0.210-0.350	0.266-0.444	0.315-0.525	0.341-0.569	0.361-0.601
	7.4	36	0.018-0.030	0.063-0.105	0.101-0.169	0.114-0.190	0.128-0.213	0.148-0.246	0.188-0.313	0.224-0.373	0.236-0.394	0.262-0.436
Syn	8.1	55	0.018-0.030	0.063-0.105	0.101-0.169	0.114-0.190	0.128-0.213	0.148-0.246	0.188-0.313	0.224-0.373	0.236-0.394	0.262-0.436
	8.2	40	0.015-0.025	0.050-0.083	0.077-0.128	0.087-0.145	0.098-0.163	0.113-0.188	0.143-0.238	0.171-0.285	0.182-0.304	0.203-0.339

## 163, 164 TiAlN Coated

Material	Ø	Vc (mm/min)										
		1	2	3	4	5	6	8	10	12	15	
P	1.1	54	0.018-0.030	0.063-0.105	0.101-0.169	0.114-0.190	0.128-0.213	0.148-0.246	0.188-0.313	0.224-0.373	0.236-0.394	0.262-0.436
	1.2	46	0.018-0.030	0.063-0.105	0.101-0.169	0.114-0.190	0.128-0.213	0.148-0.246	0.188-0.313	0.224-0.373	0.236-0.394	0.262-0.436
	1.3	43	0.016-0.026	0.057-0.095	0.089-0.149	0.101-0.168	0.113-0.188	0.130-0.216	0.165-0.275	0.199-0.331	0.210-0.350	0.233-0.388
	1.4	43	0.016-0.026	0.057-0.095	0.089-0.149	0.101-0.168	0.113-0.188	0.130-0.216	0.165-0.275	0.199-0.331	0.210-0.350	0.233-0.388
	1.5	31	0.013-0.021	0.032-0.054	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175	0.113-0.188	0.130-0.216
M	2.1	20	0.014-0.023	0.038-0.063	0.055-0.091	0.063-0.105	0.071-0.119	0.082-0.136	0.104-0.173	0.124-0.206	0.134-0.223	0.152-0.253
	2.2	9	0.014-0.023	0.038-0.063	0.055-0.091	0.063-0.105	0.071-0.119	0.082-0.136	0.104-0.173	0.124-0.206	0.134-0.223	0.152-0.253
	2.3	12	0.012-0.020	0.029-0.048	0.040-0.066	0.045-0.075	0.051-0.085	0.059-0.098	0.074-0.123	0.089-0.149	0.098-0.163	0.112-0.186
K	3.1	46	0.021-0.035	0.076-0.126	0.124-0.206	0.140-0.233	0.156-0.260	0.180-0.300	0.229-0.381	0.270-0.450	0.289-0.481	0.314-0.524
	3.2	35	0.021-0.035	0.076-0.126	0.124-0.206	0.140-0.233	0.156-0.260	0.180-0.300	0.229-0.381	0.270-0.450	0.289-0.481	0.314-0.524
	3.3	35	0.021-0.035	0.076-0.126	0.124-0.206	0.140-0.233	0.156-0.260	0.180-0.300	0.229-0.381	0.270-0.450	0.289-0.481	0.314-0.524
	3.4	26	0.018-0.030	0.063-0.105	0.101-0.169	0.114-0.190	0.128-0.213	0.148-0.246	0.188-0.313	0.224-0.373	0.236-0.394	0.262-0.436
Cu	6.1	88	0.015-0.025	0.050-0.083	0.077-0.128	0.087-0.145	0.098-0.163	0.113-0.188	0.143-0.238	0.171-0.285	0.182-0.304	0.203-0.339
	6.2	89	0.018-0.030	0.063-0.105	0.101-0.169	0.114-0.190	0.128-0.213	0.148-0.246	0.188-0.313	0.224-0.373	0.236-0.394	0.262-0.436
	6.3	54	0.018-0.030	0.063-0.105	0.101-0.169	0.114-0.190	0.128-0.213	0.148-0.246	0.188-0.313	0.224-0.373	0.236-0.394	0.262-0.436
	6.4	42	0.014-0.024	0.042-0.070	0.063-0.105	0.072-0.120	0.082-0.136	0.095-0.158	0.120-0.200	0.143-0.238	0.154-0.256	0.173-0.289
N	7.1	101	0.021-0.035	0.076-0.126	0.124-0.206	0.140-0.233	0.156-0.260	0.180-0.300	0.229-0.381	0.270-0.450	0.289-0.481	0.314-0.524
	7.2	61	0.024-0.040	0.089-0.149	0.146-0.244	0.164-0.273	0.182-0.303	0.210-0.350	0.266-0.444	0.315-0.525	0.341-0.569	0.361-0.601
	7.3	54	0.024-0.040	0.089-0.149	0.146-0.244	0.164-0.273	0.182-0.303	0.210-0.350	0.266-0.444	0.315-0.525	0.341-0.569	0.361-0.601
	7.4	49	0.018-0.030	0.063-0.105	0.101-0.169	0.114-0.190	0.128-0.213	0.148-0.246	0.188-0.313	0.224-0.373	0.236-0.394	0.262-0.436
Syn	8.1	74	0.018-0.030	0.063-0.105	0.101-0.169	0.114-0.190	0.128-0.213	0.148-0.246	0.188-0.313	0.224-0.373	0.236-0.394	0.262-0.436
	8.2	54	0.015-0.025	0.050-0.083	0.077-0.128	0.087-0.145	0.098-0.163	0.113-0.188	0.143-0.238	0.171-0.285	0.182-0.304	0.203-0.339

## 110

Material	Ø	Vc (mm/min)								
		1	2	3	4	5	6	8	10	
P	1.1	38	0.014-0.023	0.038-0.063	0.055-0.091	0.063-0.105	0.071-0.119	0.082-0.136	0.104-0.173	0.124-0.206
	1.2	33	0.014-0.023	0.038-0.063	0.055-0.091	0.063-0.105	0.071-0.119	0.082-0.136	0.104-0.173	0.124-0.206
	1.3	22	0.014-0.024	0.042-0.070	0.063-0.105	0.072-0.120	0.082-0.136	0.095-0.158	0.120-0.200	0.143-0.238
	1.4	22	0.014-0.024	0.042-0.070	0.063-0.105	0.072-0.120	0.082-0.136	0.095-0.158	0.120-0.200	0.143-0.238
	1.5	17	0.011-0.019	0.024-0.040	0.033-0.055	0.038-0.063	0.042-0.070	0.048-0.080	0.060-0.100	0.074-0.123
M	2.1	15	0.011-0.019	0.024-0.040	0.033-0.055	0.038-0.063	0.042-0.070	0.048-0.080	0.060-0.100	0.074-0.123
	2.2	7	0.013-0.021	0.032-0.054	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175
	2.3	9	0.011-0.018	0.021-0.035	0.028-0.046	0.031-0.051	0.035-0.058	0.040-0.066	0.050-0.084	0.060-0.100
K	3.1	16	0.021-0.035	0.076-0.126	0.124-0.206	0.140-0.233	0.156-0.260	0.180-0.300	0.229-0.381	0.270-0.450
	3.2	16	0.021-0.035	0.076-0.126	0.124-0.206	0.140-0.233	0.156-0.260	0.180-0.300	0.229-0.381	0.270-0.450
	3.3	16	0.021-0.035	0.076-0.126	0.124-0.206	0.140-0.233	0.156-0.260	0.180-0.300	0.229-0.381	0.270-0.450
	3.4	12	0.015-0.025	0.050-0.083	0.077-0.128	0.087-0.145	0.098-0.163	0.113-0.188	0.143-0.238	0.171-0.285
Cu	6.1	65	0.014-0.023	0.038-0.063	0.055-0.091	0.063-0.105	0.071-0.119	0.082-0.136	0.104-0.173	0.124-0.206
	6.2	70	0.014-0.023	0.038-0.063	0.055-0.091	0.063-0.105	0.071-0.119	0.082-0.136	0.104-0.173	0.124-0.206
	6.3	34	0.014-0.024	0.042-0.070	0.063-0.105	0.072-0.120	0.082-0.136	0.095-0.158	0.120-0.200	0.143-0.238
	6.4	30	0.014-0.024	0.042-0.070	0.063-0.105	0.072-0.120	0.082-0.136	0.095-0.158	0.120-0.200	0.143-0.238
N	7.1	53	0.015-0.025	0.050-0.083	0.077-0.128	0.087-0.145	0.098-0.163	0.113-0.188	0.143-0.238	0.171-0.2



OSG GROUP COMPANY

Parameters based on ideal conditions. Please adjust parameter accordingly to real applications.

**% Speed and Feed reduction for deep hole drilling:**  
More than 3 x Drill Diameter - 10%, More than 4 x Drill Diameter - 20%, More than 5 x Drill Diameter - 30%, More than 6 x Drill Diameter - 40%



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## 119

Material	Ø Vc m/min	3	4	5	6	8	10	12	15	16
		F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)
P	1.1 31	0.028-0.046	0.031-0.051	0.035-0.058	0.040-0.066	0.050-0.084	0.060-0.100	0.068-0.113	0.077-0.129	0.081-0.135
	1.2 26	0.028-0.046	0.031-0.051	0.035-0.058	0.040-0.066	0.050-0.084	0.060-0.100	0.068-0.113	0.077-0.129	0.081-0.135
	1.3 22	0.028-0.046	0.031-0.051	0.035-0.058	0.040-0.066	0.050-0.084	0.060-0.100	0.068-0.113	0.077-0.129	0.081-0.135
	1.4 22	0.028-0.046	0.031-0.051	0.035-0.058	0.040-0.066	0.050-0.084	0.060-0.100	0.068-0.113	0.077-0.129	0.081-0.135
	1.5 12	0.022-0.036	0.024-0.040	0.027-0.045	0.032-0.053	0.041-0.068	0.047-0.078	0.052-0.086	0.062-0.103	0.065-0.108
M	2.1 12	0.028-0.046	0.031-0.051	0.035-0.058	0.040-0.066	0.050-0.084	0.060-0.100	0.068-0.113	0.077-0.129	0.081-0.135
	2.2 7	0.028-0.046	0.031-0.051	0.035-0.058	0.040-0.066	0.050-0.084	0.060-0.100	0.068-0.113	0.077-0.129	0.081-0.135
	2.3 8	0.022-0.036	0.024-0.040	0.027-0.045	0.032-0.053	0.041-0.068	0.047-0.078	0.052-0.086	0.062-0.103	0.065-0.108
K	3.1 23	0.028-0.046	0.031-0.051	0.035-0.058	0.040-0.066	0.050-0.084	0.060-0.100	0.068-0.113	0.077-0.129	0.081-0.135
	3.2 23	0.028-0.046	0.031-0.051	0.035-0.058	0.040-0.066	0.050-0.084	0.060-0.100	0.068-0.113	0.077-0.129	0.081-0.135
	3.3 16	0.028-0.046	0.031-0.051	0.035-0.058	0.040-0.066	0.050-0.084	0.060-0.100	0.068-0.113	0.077-0.129	0.081-0.135
	3.4 11	0.022-0.036	0.024-0.040	0.027-0.045	0.032-0.053	0.041-0.068	0.047-0.078	0.052-0.086	0.062-0.103	0.065-0.108
N	7.1 24	0.077-0.128	0.087-0.145	0.098-0.163	0.113-0.188	0.143-0.238	0.171-0.285	0.182-0.304	0.203-0.339	0.210-0.350
	7.2 22	0.063-0.105	0.072-0.120	0.082-0.136	0.095-0.158	0.120-0.200	0.143-0.238	0.154-0.256	0.173-0.289	0.180-0.300
	7.3 22	0.055-0.091	0.063-0.105	0.071-0.119	0.082-0.136	0.104-0.173	0.124-0.206	0.134-0.223	0.152-0.253	0.158-0.263
	7.4 20	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175	0.113-0.188	0.130-0.216	0.135-0.225
Syn	8.1 30	0.077-0.128	0.087-0.145	0.098-0.163	0.113-0.188	0.143-0.238	0.171-0.285	0.182-0.304	0.203-0.339	0.210-0.350
	8.2 26	0.055-0.091	0.063-0.105	0.071-0.119	0.082-0.136	0.104-0.173	0.124-0.206	0.134-0.223	0.152-0.253	0.158-0.263

## 120

Material	Ø Vc m/min	4	5	6	8	10	12	15
		F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)
P	1.1 31	0.024-0.040	0.027-0.045	0.032-0.053	0.041-0.068	0.047-0.078	0.052-0.086	0.062-0.103
	1.2 26	0.024-0.040	0.027-0.045	0.032-0.053	0.041-0.068	0.047-0.078	0.052-0.086	0.062-0.103
	1.3 22	0.024-0.040	0.027-0.045	0.032-0.053	0.041-0.068	0.047-0.078	0.052-0.086	0.062-0.103
	1.4 22	0.024-0.040	0.027-0.045	0.032-0.053	0.041-0.068	0.047-0.078	0.052-0.086	0.062-0.103
	1.5 12	0.024-0.040	0.027-0.045	0.032-0.053	0.041-0.068	0.047-0.078	0.052-0.086	0.062-0.103
M	2.1 12	0.024-0.040	0.027-0.045	0.032-0.053	0.041-0.068	0.047-0.078	0.052-0.086	0.062-0.103
	2.2 7	0.024-0.040	0.027-0.045	0.032-0.053	0.041-0.068	0.047-0.078	0.052-0.086	0.062-0.103
	2.3 8	0.024-0.040	0.027-0.045	0.032-0.053	0.041-0.068	0.047-0.078	0.052-0.086	0.062-0.103
K	3.1 23	0.024-0.040	0.027-0.045	0.032-0.053	0.041-0.068	0.047-0.078	0.052-0.086	0.062-0.103
	3.2 23	0.024-0.040	0.027-0.045	0.032-0.053	0.041-0.068	0.047-0.078	0.052-0.086	0.062-0.103
	3.3 16	0.024-0.040	0.027-0.045	0.032-0.053	0.041-0.068	0.047-0.078	0.052-0.086	0.062-0.103
	3.4 11	0.024-0.040	0.027-0.045	0.032-0.053	0.041-0.068	0.047-0.078	0.052-0.086	0.062-0.103
N	7.1 24	0.087-0.145	0.098-0.163	0.113-0.188	0.143-0.238	0.171-0.285	0.182-0.304	0.203-0.339
	7.2 22	0.072-0.120	0.082-0.136	0.095-0.158	0.120-0.200	0.143-0.238	0.154-0.256	0.173-0.289
	7.3 22	0.063-0.105	0.071-0.119	0.082-0.136	0.104-0.173	0.124-0.206	0.134-0.223	0.152-0.253
	7.4 20	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175	0.113-0.188	0.130-0.216
Syn	8.1 30	0.087-0.145	0.098-0.163	0.113-0.188	0.143-0.238	0.171-0.285	0.182-0.304	0.203-0.339
	8.2 26	0.063-0.105	0.071-0.119	0.082-0.136	0.104-0.173	0.124-0.206	0.134-0.223	0.152-0.253

## 10F, 10L

Material	Ø Vc m/min	12	15	16	20
		F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)
P	1.1 35	0.236-0.394	0.262-0.436	0.270-0.450	0.304-0.506
	1.2 30	0.182-0.304	0.203-0.339	0.210-0.350	0.240-0.400
	1.3 27	0.154-0.256	0.173-0.289	0.180-0.300	0.210-0.350
	1.4 23	0.134-0.223	0.152-0.253	0.158-0.263	0.186-0.310
	1.5 17	0.113-0.188	0.130-0.216	0.135-0.225	0.161-0.269
	1.6 10	0.098-0.163	0.112-0.186	0.116-0.194	0.141-0.235
M	2.1 24	0.113-0.188	0.130-0.216	0.135-0.225	0.161-0.269
	2.2 11	0.154-0.256	0.173-0.289	0.180-0.300	0.210-0.350
	2.3 17	0.083-0.138	0.094-0.156	0.098-0.163	0.120-0.200
K	3.1 35	0.236-0.394	0.262-0.436	0.270-0.450	0.304-0.506
	3.2 28	0.154-0.256	0.173-0.289	0.180-0.300	0.210-0.350
	3.3 22	0.113-0.188	0.130-0.216	0.135-0.225	0.161-0.269
	3.4 17	0.113-0.188	0.130-0.216	0.135-0.225	0.161-0.269
Ti	4.1 28	0.154-0.256	0.173-0.289	0.180-0.300	0.210-0.350
	4.2 20	0.098-0.163	0.112-0.186	0.116-0.194	0.141-0.235
	4.3 11	0.083-0.138	0.094-0.156	0.098-0.163	0.120-0.200
Ni	5.1 15	0.154-0.256	0.173-0.289	0.180-0.300	0.210-0.350
	5.2 7	0.113-0.188	0.130-0.216	0.135-0.225	0.161-0.269
	5.3 6	0.068-0.113	0.077-0.129	0.081-0.135	0.101-0.169
Cu	6.1 38	0.289-0.481	0.314-0.524	0.323-0.538	0.364-0.606
	6.2 40	0.236-0.394	0.262-0.436	0.270-0.450	0.304-0.506
	6.3 27	0.182-0.304	0.203-0.339	0.210-0.350	0.240-0.400
N	6.4 21	0.134-0.223	0.152-0.253	0.158-0.263	0.186-0.310
	7.1 33	0.236-0.394	0.262-0.436	0.270-0.450	0.304-0.506
	7.2 30	0.210-0.350	0.233-0.388	0.240-0.400	0.270-0.450
	7.3 30	0.182-0.304	0.203-0.339	0.210-0.350	0.240-0.400
Syn	7.4 27	0.134-0.223	0.152-0.253	0.158-0.263	0.186-0.310
	8.1 35	0.263-0.438	0.291-0.485	0.300-0.500	0.338-0.563
	8.2 28	0.236-0.394	0.262-0.436	0.270-0.450	0.304-0.506
8.3 20	0.182-0.304	0.203-0.339	0.210-0.350	0.240-0.400	

## 184, 185 TiAlN Coated

Material	Ø Vc m/min	3	4	5	6	8	10	12	16	20
		F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)
P	1.1 45	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175	0.113-0.188	0.135-0.225	0.161-0.269
	1.2 39	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175	0.113-0.188	0.135-0.225	0.161-0.269
	1.3 35	0.033-0.055	0.038-0.063	0.042-0.070	0.048-0.080	0.060-0.100	0.074-0.123	0.083-0.138	0.098-0.163	0.120-0.200
	1.4 27	0.033-0.055	0.038-0.063	0.042-0.070	0.048-0.080	0.060-0.100	0.074-0.123	0.083-0.138	0.098-0.163	0.120-0.200
	1.5 18	0.033-0.055	0.038-0.063	0.042-0.070	0.048-0.080	0.060-0.100	0.074-0.123	0.083-0.138	0.098-0.163	0.120-0.200
	1.6 13	0.028-0.046	0.031-0.051	0.035-0.058	0.040-0.066	0.050-0.084	0.060-0.100	0.068-0.113	0.081-0.135	0.101-0.169
M	2.1 20	0.033-0.055	0.038-0.063	0.042-0.070	0.048-0.080	0.060-0.100	0.074-0.123	0.083-0.138	0.098-0.163	0.120-0.200
	2.2 11	0.040-0.066	0.045-0.075	0.051-0.085	0.059-0.098	0.074-0.123	0.089-0.149	0.098-0.163	0.116-0.194	0.141-0.235
	2.3 13	0.028-0.046	0.031-0.051	0.035-0.058	0.040-0.066	0.050-0.084	0.060-0.100	0.068-0.113	0.081-0.135	0.101-0.169
K	3.1 41	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175	0.113-0.188	0.135-0.225	0.161-0.269
	3.2 35	0.033-0.055	0.038-0.063	0.042-0.070	0.048-0.080	0.060-0.100	0.074-0.123	0.083-0.138	0.098-0.163	0.120-0.200
	3.3 26	0.033-0.055	0.038-0.063	0.042-0.070	0.048-0.080	0.060-0.100	0.074-0.123	0.083-0.138	0.098-0.163	0.120-0.200
	3.4 20	0.028-0.046	0.031-0.051	0.035-0.058	0.040-0.066	0.050-0.084	0.060-0.100	0.068-0.113	0.081-0.135	0.101-0.169
Cu	6.1 35	0.040-0.066	0.045-0.075	0.051-0.085	0.059-0.098	0.074-0.123	0.089-0.149	0.098-0.163	0.116-0.194	0.141-0.235
	6.2 42	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175	0.113-0.188	0.135-0.225	0.161-0.269
	6.3 35	0.040-0.066	0.045-0.075	0.051-0.085	0.059-0.098	0.074-0.123	0.089-0.149	0.098-0.163	0.116-0.194	0.141-0.235
	6.4 20	0.040-0.066	0.045-0.075	0.051-0.085	0.059-0.098	0.074-0.123	0.089-0.149	0.098-0.163	0.116-0.194	0.141-0.235
N	7.1 42	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175	0.113-0.188	0.135-0.225	0.161-0.269
	7.2 39	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175	0.113-0.188	0.135-0.225	0.161-0.269
	7.3 39	0.040-0.066	0.045-0.075	0.051-0.085	0.059-0.098	0.074-0.123	0.089-0.149	0.098-0.163	0.116-	

## 184, 185 Bright Finish

Material	Ø	Vc m/min	3	4	5	6	8	10	12	16	20
			F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)
P	1.1	35	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175	0.113-0.188	0.135-0.225	0.161-0.269
	1.2	30	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175	0.113-0.188	0.135-0.225	0.161-0.269
	1.3	27	0.033-0.055	0.038-0.063	0.042-0.070	0.048-0.080	0.060-0.100	0.074-0.123	0.083-0.138	0.098-0.163	0.120-0.200
	1.4	21	0.033-0.055	0.038-0.063	0.042-0.070	0.048-0.080	0.060-0.100	0.074-0.123	0.083-0.138	0.098-0.163	0.120-0.200
	1.5	14	0.033-0.055	0.038-0.063	0.042-0.070	0.048-0.080	0.060-0.100	0.074-0.123	0.083-0.138	0.098-0.163	0.120-0.200
M	1.6	10	0.028-0.046	0.031-0.051	0.035-0.058	0.040-0.066	0.050-0.084	0.060-0.100	0.068-0.113	0.081-0.135	0.101-0.169
	2.1	16	0.033-0.055	0.038-0.063	0.042-0.070	0.048-0.080	0.060-0.100	0.074-0.123	0.083-0.138	0.098-0.163	0.120-0.200
	2.2	9	0.040-0.066	0.045-0.075	0.051-0.085	0.059-0.098	0.074-0.123	0.089-0.149	0.098-0.163	0.116-0.194	0.141-0.235
K	2.3	10	0.028-0.046	0.031-0.051	0.035-0.058	0.040-0.066	0.050-0.084	0.060-0.100	0.068-0.113	0.081-0.135	0.101-0.169
	3.1	32	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175	0.113-0.188	0.135-0.225	0.161-0.269
	3.2	27	0.033-0.055	0.038-0.063	0.042-0.070	0.048-0.080	0.060-0.100	0.074-0.123	0.083-0.138	0.098-0.163	0.120-0.200
	3.3	20	0.033-0.055	0.038-0.063	0.042-0.070	0.048-0.080	0.060-0.100	0.074-0.123	0.083-0.138	0.098-0.163	0.120-0.200
Cu	3.4	16	0.028-0.046	0.031-0.051	0.035-0.058	0.040-0.066	0.050-0.084	0.060-0.100	0.068-0.113	0.081-0.135	0.101-0.169
	6.1	27	0.040-0.066	0.045-0.075	0.051-0.085	0.059-0.098	0.074-0.123	0.089-0.149	0.098-0.163	0.116-0.194	0.141-0.235
	6.2	33	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175	0.113-0.188	0.135-0.225	0.161-0.269
	6.3	27	0.040-0.066	0.045-0.075	0.051-0.085	0.059-0.098	0.074-0.123	0.089-0.149	0.098-0.163	0.116-0.194	0.141-0.235
N	6.4	16	0.040-0.066	0.045-0.075	0.051-0.085	0.059-0.098	0.074-0.123	0.089-0.149	0.098-0.163	0.116-0.194	0.141-0.235
	7.1	33	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175	0.113-0.188	0.135-0.225	0.161-0.269
	7.2	30	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175	0.113-0.188	0.135-0.225	0.161-0.269
	7.3	30	0.040-0.066	0.045-0.075	0.051-0.085	0.059-0.098	0.074-0.123	0.089-0.149	0.098-0.163	0.116-0.194	0.141-0.235
Syn	7.4	25	0.040-0.066	0.045-0.075	0.051-0.085	0.059-0.098	0.074-0.123	0.089-0.149	0.098-0.163	0.116-0.194	0.141-0.235
	8.1	30	0.055-0.091	0.063-0.105	0.071-0.119	0.082-0.136	0.104-0.173	0.124-0.206	0.134-0.223	0.158-0.263	0.186-0.310
	8.2	35	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175	0.113-0.188	0.135-0.225	0.161-0.269

Parameters based on ideal conditions. Please adjust parameter accordingly to real applications.

**% Speed and Feed reduction for deep hole drilling:**  
 More than 3 x Drill Diameter - 10%, More than 4 x Drill Diameter - 20%, More than 5 x Drill Diameter - 30%, More than 6 x Drill Diameter - 40%



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## 114, 115 Bright Finish

Material	Ø	Vc m/min	1	2	3	4	5	6	8	10
			F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)
P	1.1	35	0.016-0.026	0.057-0.095	0.089-0.149	0.101-0.168	0.113-0.188	0.130-0.216	0.165-0.275	0.199-0.331
	1.2	30	0.016-0.026	0.057-0.095	0.089-0.149	0.101-0.168	0.113-0.188	0.130-0.216	0.165-0.275	0.199-0.331
	1.3	25	0.014-0.024	0.042-0.070	0.063-0.105	0.072-0.120	0.082-0.136	0.095-0.158	0.120-0.200	0.143-0.238
	1.4	20	0.014-0.023	0.038-0.063	0.055-0.091	0.063-0.105	0.071-0.119	0.082-0.136	0.104-0.173	0.124-0.206
	1.5	13	0.013-0.021	0.032-0.054	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175
M	1.6	9	0.012-0.020	0.029-0.048	0.040-0.066	0.045-0.075	0.051-0.085	0.059-0.098	0.074-0.123	0.089-0.149
	2.1	15	0.013-0.021	0.032-0.054	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175
	2.2	8	0.014-0.024	0.042-0.070	0.063-0.105	0.072-0.120	0.082-0.136	0.095-0.158	0.120-0.200	0.143-0.238
K	2.3	10	0.011-0.019	0.024-0.040	0.033-0.055	0.038-0.063	0.042-0.070	0.048-0.080	0.060-0.100	0.074-0.123
	3.1	30	0.016-0.026	0.057-0.095	0.089-0.149	0.101-0.168	0.113-0.188	0.130-0.216	0.165-0.275	0.199-0.331
	3.2	24	0.014-0.023	0.038-0.063	0.055-0.091	0.063-0.105	0.071-0.119	0.082-0.136	0.104-0.173	0.124-0.206
	3.3	20	0.013-0.021	0.032-0.054	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175
Cu	3.4	14	0.013-0.021	0.032-0.054	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175
	6.1	35	0.014-0.024	0.042-0.070	0.063-0.105	0.072-0.120	0.082-0.136	0.095-0.158	0.120-0.200	0.143-0.238
	6.2	33	0.016-0.026	0.057-0.095	0.089-0.149	0.101-0.168	0.113-0.188	0.130-0.216	0.165-0.275	0.199-0.331
	6.3	27	0.015-0.025	0.050-0.083	0.077-0.128	0.087-0.145	0.098-0.163	0.113-0.188	0.143-0.238	0.171-0.285
N	6.4	16	0.014-0.024	0.042-0.070	0.063-0.105	0.072-0.120	0.082-0.136	0.095-0.158	0.120-0.200	0.143-0.238
	7.1	33	0.018-0.030	0.063-0.105	0.101-0.169	0.114-0.190	0.128-0.213	0.148-0.246	0.188-0.313	0.224-0.373
	7.2	30	0.016-0.026	0.057-0.095	0.089-0.149	0.101-0.168	0.113-0.188	0.130-0.216	0.165-0.275	0.199-0.331
	7.3	27	0.015-0.025	0.050-0.083	0.077-0.128	0.087-0.145	0.098-0.163	0.113-0.188	0.143-0.238	0.171-0.285
Syn	7.4	22	0.015-0.025	0.050-0.083	0.077-0.128	0.087-0.145	0.098-0.163	0.113-0.188	0.143-0.238	0.171-0.285
	8.1	30	0.018-0.030	0.063-0.105	0.101-0.169	0.114-0.190	0.128-0.213	0.148-0.246	0.188-0.313	0.224-0.373
	8.2	28	0.015-0.025	0.050-0.083	0.077-0.128	0.087-0.145	0.098-0.163	0.113-0.188	0.143-0.238	0.171-0.285
	8.3	14	0.014-0.023	0.038-0.063	0.055-0.091	0.063-0.105	0.071-0.119	0.082-0.136	0.104-0.173	0.124-0.206

## 114, 115 TiN Coated

Material	Ø	Vc m/min	1	2	3	4	5	6	8	10
			F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)
P	1.1	47	0.016-0.026	0.057-0.095	0.089-0.149	0.101-0.168	0.113-0.188	0.130-0.216	0.165-0.275	0.199-0.331
	1.2	41	0.016-0.026	0.057-0.095	0.089-0.149	0.101-0.168	0.113-0.188	0.130-0.216	0.165-0.275	0.199-0.331
	1.3	34	0.014-0.024	0.042-0.070	0.063-0.105	0.072-0.120	0.082-0.136	0.095-0.158	0.120-0.200	0.143-0.238
	1.4	27	0.014-0.023	0.038-0.063	0.055-0.091	0.063-0.105	0.071-0.119	0.082-0.136	0.104-0.173	0.124-0.206
	1.5	18	0.013-0.021	0.032-0.054	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175
M	1.6	12	0.012-0.020	0.029-0.048	0.040-0.066	0.045-0.075	0.051-0.085	0.059-0.098	0.074-0.123	0.089-0.149
	2.1	20	0.013-0.021	0.032-0.054	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175
	2.2	11	0.014-0.024	0.042-0.070	0.063-0.105	0.072-0.120	0.082-0.136	0.095-0.158	0.120-0.200	0.143-0.238
K	2.3	14	0.011-0.019	0.024-0.040	0.033-0.055	0.038-0.063	0.042-0.070	0.048-0.080	0.060-0.100	0.074-0.123
	3.1	41	0.016-0.026	0.057-0.095	0.089-0.149	0.101-0.168	0.113-0.188	0.130-0.216	0.165-0.275	0.199-0.331
	3.2	32	0.014-0.023	0.038-0.063	0.055-0.091	0.063-0.105	0.071-0.119	0.082-0.136	0.104-0.173	0.124-0.206
	3.3	27	0.013-0.021	0.032-0.054	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175
Cu	3.4	19	0.013-0.021	0.032-0.054	0.047-0.078	0.053-0.089	0.060-0.100	0.069-0.115	0.086-0.144	0.105-0.175
	6.1	47	0.014-0.024	0.042-0.070	0.063-0.105	0.072-0.120	0.082-0.136	0.095-0.158	0.120-0.200	0.143-0.238
	6.2	45	0.016-0.026	0.057-0.095	0.089-0.149	0.101-0.168	0.113-0.188	0.130-0.216	0.165-0.275	0.199-0.331
	6.3	36	0.015-0.025	0.050-0.083	0.077-0.128	0.087-0.145	0.098-0.163	0.113-0.188	0.143-0.238	0.171-0.285
N	6.4	22	0.014-0.024	0.042-0.070	0.063-0.105	0.072-0.120	0.082-0.136	0.095-0.158	0.120-0.200	0.143-0.238
	7.1	45	0.018-0.030	0.063-0.105	0.101-0.169	0.114-0.190	0.128-0.213	0.148-0.246	0.188-0.313	0.224-0.373
	7.2	41	0.016-0.026	0.057-0.095	0.089-0.149	0.101-0.168	0.113-0.188	0.130-0.216	0.165-0.275	0.199-0.331
	7.3	36	0.015-0.025	0.050-0.083	0.077-0.128	0.087-0.145	0.098-0.163	0.113-0.188	0.143-0.238	0.171-0.285
Syn	7.4	30	0.015-0.025	0.050-0.083	0.077-0.128	0.087-0.145	0.098-0.163	0.113-0.188	0.143-0.238	0.171-0.285
	8.1	41	0.018-0.030	0.063-0.105	0.101-0.169	0.114-0.190	0.128-0.213	0.148-0.246	0.188-0.313	0.224-0.373
	8.2	38	0.015-0.025	0.050-0.083	0.077-0.128	0.087-0.145	0.098-0.163	0.113-0.188	0.143-0.238	0.171-0.285
	8.3	19	0.014-0.023	0.038-0.063	0.055-0.091	0.063-0.105	0.071-0.119	0.082-0.136	0.104-0.173	0.124-0.206





OSG GROUP COMPANY

Codes

**761, 763**

Properties

mm	DIN 334C 761	DIN 335C 763
HSS Co5	60° & 90°	

Cutting Data

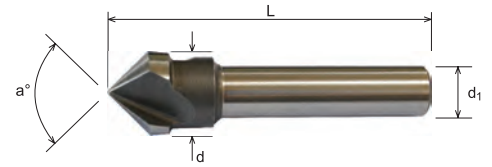
pg 36



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## Parallel Shank Countersinks

To produce a countersink suitable for countersunk head screws, also used as a deburring tool.



P 1.1	P 1.2	P 1.3	P 1.4	P 1.5	P 1.6				
M 2.1	M 2.2	M 2.3	K 3.1	K 3.2	K 3.3	K 3.4			
Cu 6.1	Cu 6.2	Cu 6.3	Cu 6.4	N 7.1	N 7.2	N 7.3	N 7.4	Syn 8.1	Syn 8.2

d	d <sub>1</sub>	L	Code	Price
<b>a° = 60°</b>				
6.3	5	45	7610630	£22.85
8	6	50	7610800	£24.15
10	6	50	7611000	£29.10
12.5	8	56	7611250	£33.85
16	10	63	7611600	£51.85
20	10	67	7612000	£62.85
25	10	71	7612500	£87.75
<b>a° = 90°</b>				
6.3	5	45	7630630	£24.20
8	6	50	7630800	£26.35
10	6	50	7631000	£26.80
12.5	8	56	7631250	£32.25
16	10	60	7631600	£50.55
20	10	63	7632000	£63.60
25	10	67	7632500	£87.05



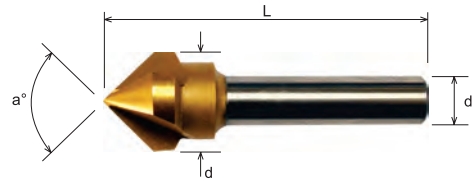
REAMERS,  
COUNTERSINKS  
& COUNTERBORES



shaping your dreams

## Parallel Shank Countersinks

To produce a countersink suitable for countersunk head screws, also used as a deburring tool.



OSG GROUP COMPANY

P 1.1	P 1.2	P 1.3	P 1.4	P 1.5	P 1.6				
M 2.1	M 2.2	M 2.3	K 3.1	K 3.2	K 3.3	K 3.4			
Cu 6.1	Cu 6.2	Cu 6.3	Cu 6.4	N 7.1	N 7.2	N 7.3	N 7.4	Syn 8.1	Syn 8.2

Codes

**761T, 763T**

Properties

mm	DIN 334C 761T	DIN 335C 763T
HSS Co5	60° & 90°	TiN

Cutting Data

pg 36



d	d <sub>1</sub>	L	Code	Price
<b>a° = 60°</b>				
6.3	5	45	7610630T	£23.95
8	6	50	7610800T	£27.85
10	6	50	7611000T	£30.80
12.5	8	56	7611250T	£35.90
16	10	63	7611600T	£54.10
20	10	67	7612000T	£66.60
25	10	71	7612500T	£91.60
<b>a° = 90°</b>				
6.3	5	45	7630630T	£25.05
8	6	50	7630800T	£27.85
10	6	50	7631000T	£28.55
12.5	8	56	7631250T	£33.90
16	10	60	7631600T	£52.25
20	10	63	7632000T	£67.30
25	10	67	7632500T	£91.05



Description	Code	Price
Parallel Shank Countersink Set - TiN Coated	7630000T	£193.25
THIS SET CONTAINS		
6.3mm - 7630630T, 10mm - 7631000T, 12.5mm - 7631250T, 16mm - 7631600T, 20mm - 7632000T		



REAMERS,  
COUNTERSINKS  
& COUNTERBORES

## 761, 763 Uncoated

Parameters based on ideal conditions. Please adjust parameter accordingly to real applications.



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Material	Ø	Vc m/min	6.3	8	10	12.5	16	20	25
			F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)
P	1.1	30	0.068-0.113	0.083-0.138	0.098-0.163	0.098-0.163	0.120-0.200	0.143-0.238	0.158-0.263
	1.2	25	0.060-0.100	0.075-0.125	0.090-0.150	0.090-0.150	0.113-0.188	0.135-0.225	0.150-0.250
	1.3	20	0.045-0.075	0.060-0.100	0.075-0.125	0.075-0.125	0.090-0.150	0.113-0.188	0.135-0.225
	1.4	15	0.045-0.075	0.060-0.100	0.075-0.125	0.075-0.125	0.090-0.150	0.113-0.188	0.135-0.225
	1.5	10	0.030-0.050	0.038-0.063	0.045-0.075	0.045-0.075	0.060-0.100	0.075-0.125	0.090-0.150
	1.6	6	0.023-0.038	0.030-0.050	0.038-0.063	0.038-0.063	0.045-0.075	0.060-0.100	0.068-0.113
M	2.1	8	0.038-0.063	0.045-0.075	0.060-0.100	0.060-0.100	0.075-0.125	0.090-0.150	0.105-0.175
	2.2	6	0.030-0.050	0.038-0.063	0.045-0.075	0.045-0.075	0.060-0.100	0.075-0.125	0.090-0.150
	2.3	4	0.023-0.038	0.030-0.050	0.038-0.063	0.038-0.063	0.045-0.075	0.060-0.100	0.068-0.113
K	3.1	25	0.068-0.113	0.083-0.138	0.098-0.163	0.098-0.163	0.120-0.200	0.143-0.238	0.158-0.263
	3.2	15	0.045-0.075	0.060-0.100	0.075-0.125	0.075-0.125	0.090-0.150	0.113-0.188	0.135-0.225
	3.3	12	0.038-0.063	0.045-0.075	0.060-0.100	0.060-0.100	0.075-0.125	0.090-0.150	0.105-0.175
	3.4	8	0.038-0.063	0.045-0.075	0.060-0.100	0.060-0.100	0.075-0.125	0.090-0.150	0.105-0.175
Cu	6.1	25	0.045-0.075	0.060-0.100	0.075-0.125	0.075-0.125	0.090-0.150	0.113-0.188	0.135-0.225
	6.2	20	0.068-0.113	0.083-0.138	0.098-0.163	0.098-0.163	0.120-0.200	0.143-0.238	0.158-0.263
	6.3	25	0.068-0.113	0.083-0.138	0.098-0.163	0.098-0.163	0.120-0.200	0.143-0.238	0.158-0.263
	6.4	10	0.045-0.075	0.060-0.100	0.075-0.125	0.075-0.125	0.090-0.150	0.113-0.188	0.135-0.225
N	7.1	30	0.075-0.125	0.090-0.150	0.113-0.188	0.113-0.188	0.135-0.225	0.150-0.250	0.165-0.275
	7.2	25	0.068-0.113	0.083-0.138	0.098-0.163	0.098-0.163	0.120-0.200	0.143-0.238	0.158-0.263
	7.3	20	0.068-0.113	0.083-0.138	0.098-0.163	0.098-0.163	0.120-0.200	0.143-0.238	0.158-0.263
Syn	8.1	10	0.068-0.113	0.083-0.138	0.098-0.163	0.098-0.163	0.120-0.200	0.143-0.238	0.158-0.263
	8.2	20	0.075-0.125	0.090-0.150	0.113-0.188	0.113-0.188	0.135-0.225	0.150-0.250	0.165-0.275

## 761, 763 TiN Coated

Material	Ø	Vc m/min	6.3	8	10	12.5	16	20	25
			F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)	F (mm/rev.)
P	1.1	41	0.068-0.113	0.083-0.138	0.098-0.163	0.098-0.163	0.120-0.200	0.143-0.238	0.158-0.263
	1.2	34	0.060-0.100	0.075-0.125	0.090-0.150	0.090-0.150	0.113-0.188	0.135-0.225	0.150-0.250
	1.3	27	0.045-0.075	0.060-0.100	0.075-0.125	0.075-0.125	0.090-0.150	0.113-0.188	0.135-0.225
	1.4	20	0.045-0.075	0.060-0.100	0.075-0.125	0.075-0.125	0.090-0.150	0.113-0.188	0.135-0.225
	1.5	14	0.030-0.050	0.038-0.063	0.045-0.075	0.045-0.075	0.060-0.100	0.075-0.125	0.090-0.150
	1.6	8	0.023-0.038	0.030-0.050	0.038-0.063	0.038-0.063	0.045-0.075	0.060-0.100	0.068-0.113
M	2.1	11	0.038-0.063	0.045-0.075	0.060-0.100	0.060-0.100	0.075-0.125	0.090-0.150	0.105-0.175
	2.2	8	0.030-0.050	0.038-0.063	0.045-0.075	0.045-0.075	0.060-0.100	0.075-0.125	0.090-0.150
	2.3	5	0.023-0.038	0.030-0.050	0.038-0.063	0.038-0.063	0.045-0.075	0.060-0.100	0.068-0.113
K	3.1	34	0.068-0.113	0.083-0.138	0.098-0.163	0.098-0.163	0.120-0.200	0.143-0.238	0.158-0.263
	3.2	20	0.045-0.075	0.060-0.100	0.075-0.125	0.075-0.125	0.090-0.150	0.113-0.188	0.135-0.225
	3.3	16	0.038-0.063	0.045-0.075	0.060-0.100	0.060-0.100	0.075-0.125	0.090-0.150	0.105-0.175
	3.4	11	0.038-0.063	0.045-0.075	0.060-0.100	0.060-0.100	0.075-0.125	0.090-0.150	0.105-0.175
Cu	6.1	34	0.045-0.075	0.060-0.100	0.075-0.125	0.075-0.125	0.090-0.150	0.113-0.188	0.135-0.225
	6.2	27	0.068-0.113	0.083-0.138	0.098-0.163	0.098-0.163	0.120-0.200	0.143-0.238	0.158-0.263
	6.3	34	0.068-0.113	0.083-0.138	0.098-0.163	0.098-0.163	0.120-0.200	0.143-0.238	0.158-0.263
	6.4	14	0.045-0.075	0.060-0.100	0.075-0.125	0.075-0.125	0.090-0.150	0.113-0.188	0.135-0.225
N	7.1	41	0.075-0.125	0.090-0.150	0.113-0.188	0.113-0.188	0.135-0.225	0.150-0.250	0.165-0.275
	7.2	34	0.068-0.113	0.083-0.138	0.098-0.163	0.098-0.163	0.120-0.200	0.143-0.238	0.158-0.263
	7.3	27	0.068-0.113	0.083-0.138	0.098-0.163	0.098-0.163	0.120-0.200	0.143-0.238	0.158-0.263
Syn	8.1	14	0.068-0.113	0.083-0.138	0.098-0.163	0.098-0.163	0.120-0.200	0.143-0.238	0.158-0.263
	8.2	27	0.075-0.125	0.090-0.150	0.113-0.188	0.113-0.188	0.135-0.225	0.150-0.250	0.165-0.275



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