

NEW

Universal

Sustainable

High performance

Effortless Drilling With the Long-life WTX Drill Series

Patented features enable high performance for a range of materials

CERATIZIT is a high-technology engineering group specialized in cutting tools and hard material solutions.

Tooling a Sustainable Future

ceratizit.com



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GROUP

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Customer Service Team

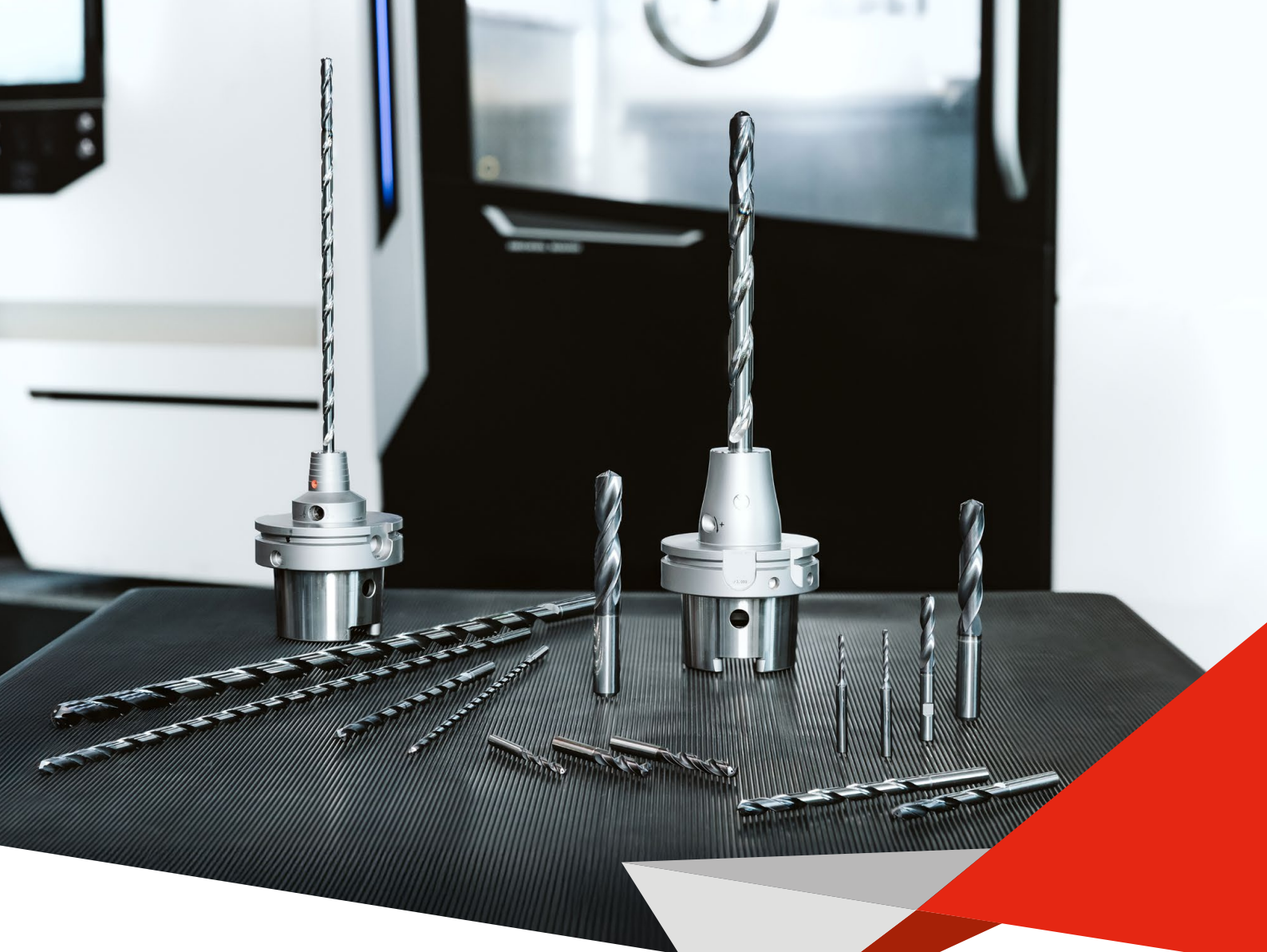
<https://cuttingtools.ceratizit.com>
1-800-783-2280 (US) or 1-905-551-1743 (Canada)
customerservice.usa@ceratizit.com
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On-site technical support

Your Local Technical Sales Engineer

Your customer number



WTX – UNI & WTX – Deep UNI

High-performance drill series for universal use

**Large selection of drills for precision drilling
in a wide range of materials**

WTX – UNI & WTX – Quattro:

High-performance and long-life drills with sustainable carbide and new geometries

WTX – Deep UNI:

Effortless deep-hole drilling due to improved tool stability

Whenever precision drilling of a wide range of materials is required, our WTX – UNI range is the reliable solution for all of your machining requirements – whether in steel, stainless steel, or cast iron. We have made significant improvements to the cutting data and expanded our range of drills even further. It has never been easier to benefit from high flexibility, long tool lives, and sustainability.



upGRADE 

More sustainable carbide, high performance and long tool life

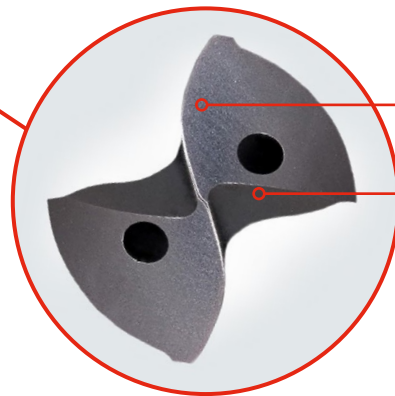
The universal solid carbide drills:
WTX – UNI & WTX – Quattro

Full performance from 99% reprocessed materials

The new WTX – UNI range offers an entirely new geometry with patented features. These tools are the first solid carbide drilling tools made from **CT-GS20Y**: our most sustainable **upGRADE** carbide grade to date. They enable a significant increase in performance and deliver even better cutting data as well as a longer tool life compared to their predecessors.

- ▲ CT-GS20Y carbide powder, lowest product carbon footprint (PCF) in its class
- ▲ Option of an additional PCF certificate to gain more transparency on your own carbon footprint

Features of the WTX – UNI & WTX – Quattro high-performance drill lines



Relief ground

Patented face geometry



Convex main cutting edge

- ▲ Outstanding stability
- ▲ Delivers enhanced cutting values
- ▲ Excellent self-centering

The **WTX – UNI** with two guiding chamfers is available in 3xD and 5xD both with and without through coolant, in shank variants HA/HB/HE. The **WTX – Quattro** comes with coolant holes as standard and is available with four guiding chamfers in the dimensions 5xD, 8xD, and 12xD.

The 3xD and 5xD variants of the new **WTX – UNI** and **WTX – Quattro** series also offer perfectly tailored high-performance pilot drills that are ideally suited for use with the **WTX – Deep UNI** range of deep-hole drills.

upGRADE carbide CT-GS20Y
+ Sustainability

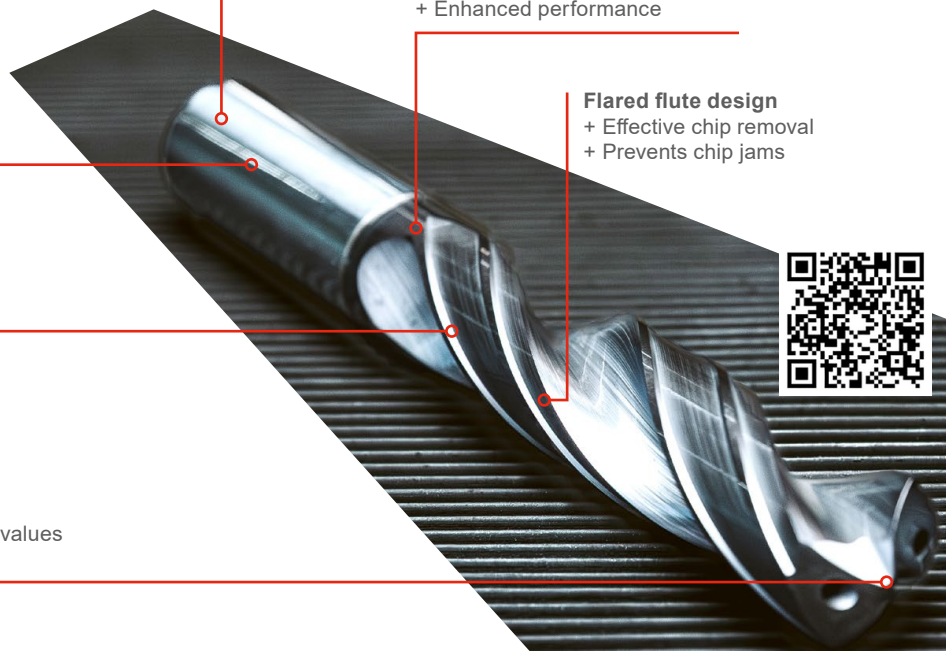
DPA74S DRAGONSKIN coating
+ Long tool life
+ Enhanced performance

Flared flute design
+ Effective chip removal
+ Prevents chip jams

With through coolant
3xD, 5xD,
also available without
through coolant

4 guiding chamfers
(5xD and higher)
+ Positional accuracy

140° point angle
(135° for 8xD, 12xD)
+ Outstanding tool stability
+ Delivers enhanced cutting values
+ Excellent self-centering





Effortless deep-hole drilling with the WTX – Deep UNI

Maximum reliability thanks
to improved tool stability



Tools can be reground back to their original geometry and have original coating re-applied.





The optimized WTX – Deep UNI deep-hole drill delivers precision drilling and maximum process security

The WTX – Deep UNI deep-hole drill is highly reliable due to a **new geometry** which minimizes tool breakage and rejects.

What's more, the **polished chip spaces** with **flared flute design** ensure improved chip removal. This geometry provides enhanced cutting values compared to the previous version. **Four guiding chamfers** ensure a high degree of drilling and positional accuracy and reduce drill drift to a minimum. Tool life is significantly extended because of the innovative and **high-performance DPA74S tip coating**.

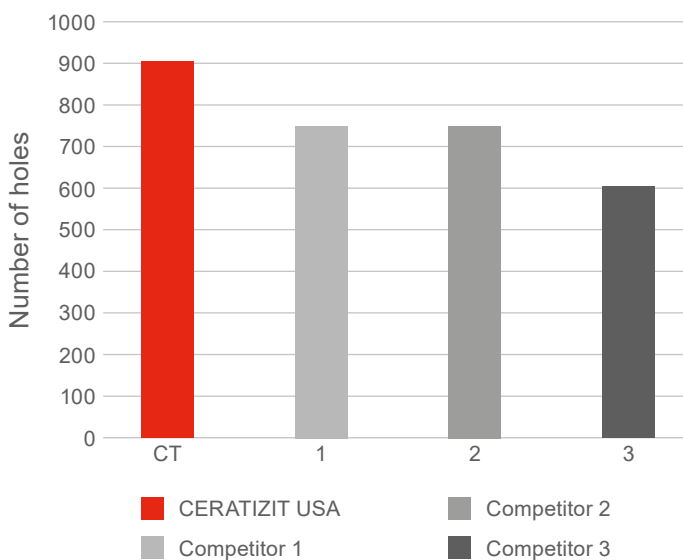
High performance for a range of materials



The deep-hole drills in the WTX – Deep UNI series can be used universally in a range of materials with a particular focus on **ISO-P** (steel), **ISO-M** (stainless steel), **ISO-K** (cast iron), and in some cases also **ISO-S** (heat-resistant). The range in stock covers hole depths from 16xD to 50xD and is available in the diameter ranges Ø 3-14 mm and Ø 3-8 mm (40xD and 50xD). For the inch range, 6xD to 30xD: Ø 3-14 mm → approximately 0.118" to 0.551".

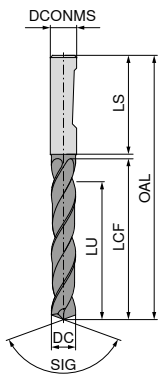
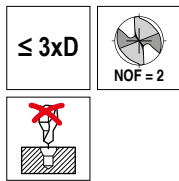
Competitor comparison: Tool life

Test conditions	
Material	42CrMoS4ex
Material number	Similar to 1.7225
Tool	UNI deep-hole drill
Size	30xD
Cutting data	
v_c	85 m/min.
f	0.11 mm/rev
a_p	149 mm
\varnothing	5.0 mm
n	5412 min ⁻¹
V_f	595 mm/min.
Coolant	CPS-F emulsion 9%



WTX – High Performance Drill, DIN 6537

- ▲ convex main cutting edge for high cutting edge stability and process security
- ▲ high cutting values and long service life achievable
- ▲ universal application



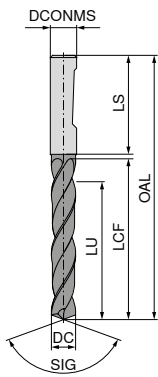
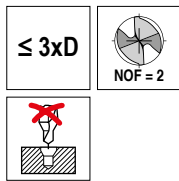
DC _{m7} mm	DC inch	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	10 600 ...	10 601 ...	10 602 ...
3.000		6	62	20	14	36	03000	03000	03000
3.100		6	62	20	14	36	03100	03100	03100
3.150		6	62	20	14	36	03150	03150 ¹⁾	03150 ¹⁾
3.175	1/8	6	62	20	14	36	03175		
3.200		6	62	20	14	36	03200	03200 ¹⁾	03200 ¹⁾
3.250		6	62	20	14	36	03250	03250 ¹⁾	03250 ¹⁾
3.300		6	62	20	14	36	03300	03300 ¹⁾	03300
3.400		6	62	20	14	36	03400	03400	03400 ¹⁾
3.500		6	62	20	14	36	03500	03500 ¹⁾	03500
3.600		6	62	20	14	36	03600	03600	03600 ¹⁾
3.700		6	62	20	14	36	03700	03700 ¹⁾	03700 ¹⁾
3.800		6	66	24	17	36	03800	03800 ¹⁾	03800 ¹⁾
3.850		6	66	24	17	36	03850	03850 ¹⁾	03850 ¹⁾
3.900		6	66	24	17	36	03900	03900	03900 ¹⁾
3.970	5/32	6	66	24	17	36	03970		
4.000		6	66	24	17	36	04000	04000	04000
4.100		6	66	24	17	36	04100	04100 ¹⁾	04100 ¹⁾
4.200		6	66	24	17	36	04200	04200 ¹⁾	04200
4.250		6	66	24	17	36	04250	04250	04250 ¹⁾
4.300		6	66	24	17	36	04300	04300	04300
4.350		6	66	24	17	36	04350	04350 ¹⁾	04350 ¹⁾
4.400		6	66	24	17	36	04400	04400 ¹⁾	04400
4.450		6	66	24	17	36	04450	04450 ¹⁾	04450 ¹⁾
4.500		6	66	24	17	36	04500	04500 ¹⁾	04500
4.600		6	66	24	17	36	04600	04600 ¹⁾	04600
4.650		6	66	24	17	36	04650	04650 ¹⁾	04650 ¹⁾
4.700		6	66	24	17	36	04700	04700 ¹⁾	04700 ¹⁾
4.760	3/16	6	66	28	20	36	04760		
4.800		6	66	28	20	36	04800	04800 ¹⁾	04800 ¹⁾
4.900		6	66	28	20	36	04900	04900 ¹⁾	04900 ¹⁾
4.950		6	66	28	20	36	04950	04950 ¹⁾	04950 ¹⁾
5.000		6	66	28	20	36	05000	05000	05000
5.050		6	66	28	20	36	05050	05050 ¹⁾	05050
5.100		6	66	28	20	36	05100	05100	05100 ¹⁾
5.200		6	66	28	20	36	05200	05200 ¹⁾	05200
5.300		6	66	28	20	36	05300	05300	05300

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1) Not in stock

WTX – High Performance Drill, DIN 6537

- ▲ convex main cutting edge for high cutting edge stability and process security
- ▲ high cutting values and long service life achievable
- ▲ universal application



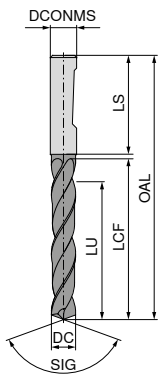
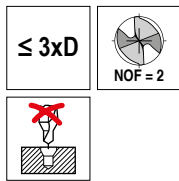
DC _{m7} mm	DC inch	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	10 600 ...	10 601 ...	10 602 ...
5.400		6	66	28	20	36	05400	05400 ¹⁾	05400 ¹⁾
5.500		6	66	28	20	36	05500	05500 ¹⁾	05500
5.550		6	66	28	20	36	05550	05550 ¹⁾	05550 ¹⁾
5.560	7/32	6	66	28	20	36	05560		
5.600		6	66	28	20	36	05600	05600	05600 ¹⁾
5.700		6	66	28	20	36	05700	05700 ¹⁾	05700 ¹⁾
5.750		6	66	28	20	36	05750	05750 ¹⁾	05750 ¹⁾
5.800		6	66	28	20	36	05800	05800 ¹⁾	05800
5.900		6	66	28	20	36	05900	05900 ¹⁾	05900 ¹⁾
5.950	15/64	6	66	28	20	36	05950	05950 ¹⁾	05950 ¹⁾
6.000		6	66	28	20	36	06000	06000	06000
6.100		8	79	34	24	36	06100	06100	06100
6.200		8	79	34	24	36	06200	06200 ¹⁾	06200
6.300		8	79	34	24	36	06300	06300 ¹⁾	06300 ¹⁾
6.350	1/4	8	79	34	24	36	06350		
6.400		8	79	34	24	36	06400	06400 ¹⁾	06400 ¹⁾
6.500		8	79	34	24	36	06500	06500	06500
6.600		8	79	34	24	36	06600	06600 ¹⁾	06600
6.700		8	79	34	24	36	06700	06700 ¹⁾	06700 ¹⁾
6.750	17/64	8	79	34	24	36	06750		
6.800		8	79	34	24	36	06800	06800	06800
6.900		8	79	34	24	36	06900	06900	06900 ¹⁾
7.000		8	79	34	24	36	07000	07000 ¹⁾	07000
7.100		8	79	41	29	36	07100	07100 ¹⁾	07100 ¹⁾
7.140	9/32	8	79	41	29	36	07140		
7.200		8	79	41	29	36	07200	07200 ¹⁾	07200 ¹⁾
7.300		8	79	41	29	36	07300	07300 ¹⁾	07300 ¹⁾
7.400		8	79	41	29	36	07400	07400 ¹⁾	07400 ¹⁾
7.450		8	79	41	29	36	07450	07450 ¹⁾	07450 ¹⁾
7.500		8	79	41	29	36	07500	07500	07500 ¹⁾
7.700		8	79	41	29	36	07700	07700 ¹⁾	07700 ¹⁾
7.800		8	79	41	29	36	07800	07800 ¹⁾	07800
7.900		8	79	41	29	36	07900	07900 ¹⁾	07900 ¹⁾
7.940	5/16	8	79	41	29	36	07940		
8.000		8	79	41	29	36	08000	08000	08000
8.100		10	89	47	35	40	08100	08100 ¹⁾	08100 ¹⁾

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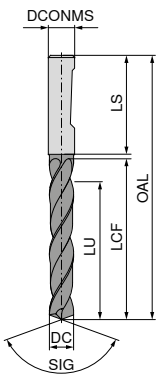
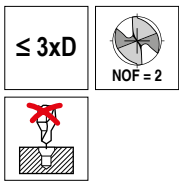
DC _{m7} mm	DC inch	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	10 600 ...	10 601 ...	10 602 ...
8.200		10	89	47	35	40	08200	08200 ¹⁾	08200 ¹⁾
8.300		10	89	47	35	40	08300	08300 ¹⁾	08300 ¹⁾
8.400		10	89	47	35	40	08400	08400 ¹⁾	08400 ¹⁾
8.500		10	89	47	35	40	08500	08500	08500
8.600		10	89	47	35	40	08600	08600	08600 ¹⁾
8.700		10	89	47	35	40	08700	08700 ¹⁾	08700 ¹⁾
8.800		10	89	47	35	40	08800	08800 ¹⁾	08800 ¹⁾
9.000		10	89	47	35	40	09000	09000 ¹⁾	09000 ¹⁾
9.100		10	89	47	35	40	09100	09100 ¹⁾	09100 ¹⁾
9.200		10	89	47	35	40	09200	09200 ¹⁾	09200 ¹⁾
9.300		10	89	47	35	40	09300	09300 ¹⁾	09300 ¹⁾
9.350		10	89	47	35	40	09350	09350 ¹⁾	09350 ¹⁾
9.400		10	89	47	35	40	09400	09400 ¹⁾	09400 ¹⁾
9.500		10	89	47	35	40	09500	09500 ¹⁾	09500 ¹⁾
9.525	3/8	10	89	47	35	40	09525		
9.600		10	89	47	35	40	09600	09600 ¹⁾	09600 ¹⁾
9.800		10	89	47	35	40	09800	09800 ¹⁾	09800 ¹⁾
9.900		10	89	47	35	40	09900	09900 ¹⁾	09900 ¹⁾
9.920	25/64	10	89	47	35	40	09920		
10.000		10	89	47	35	40	10000	10000	10000
10.100		12	102	55	40	45	10100	10100 ¹⁾	10100 ¹⁾
10.200		12	102	55	40	45	10200	10200	10200
10.300		12	102	55	40	45	10300	10300	10300 ¹⁾
10.500		12	102	55	40	45	10500	10500	10500 ¹⁾
10.550		12	102	55	40	45	10550	10550 ¹⁾	10550 ¹⁾
10.700		12	102	55	40	45	10700	10700 ¹⁾	10700 ¹⁾
10.800		12	102	55	40	45	10800	10800 ¹⁾	10800 ¹⁾
11.000		12	102	55	40	45	11000	11000 ¹⁾	11000 ¹⁾
11.100		12	102	55	40	45	11100	11100 ¹⁾	11100 ¹⁾
11.200		12	102	55	40	45	11200	11200 ¹⁾	11200 ¹⁾
11.300		12	102	55	40	45	11300	11300 ¹⁾	11300 ¹⁾
11.350		12	102	55	40	45	11350	11350 ¹⁾	11350 ¹⁾
11.450		12	102	55	40	45	11450	11450 ¹⁾	11450 ¹⁾
11.500		12	102	55	40	45	11500	11500 ¹⁾	11500 ¹⁾
11.800		12	102	55	40	45	11800	11800 ¹⁾	11800 ¹⁾
12.000		12	102	55	40	45	12000	12000	12000

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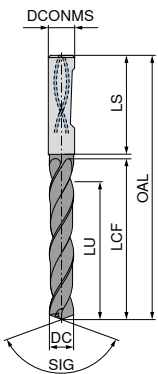
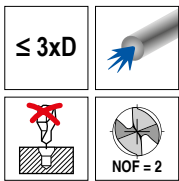
DC _{m7} mm	DC inch	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	10 600 ...	10 601 ...	10 602 ...
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12.250		14	107	60	43	45	12250	12250 ¹⁾	12250 ¹⁾
12.500		14	107	60	43	45	12500	12500 ¹⁾	12500 ¹⁾
12.550		14	107	60	43	45	12550	12550 ¹⁾	12550 ¹⁾
12.700	1/2	14	107	60	43	45	12700	12700 ¹⁾	12700 ¹⁾
12.800		14	107	60	43	45	12800	12800 ¹⁾	12800 ¹⁾
13.000		14	107	60	43	45	13000	13000	13000 ¹⁾
13.100		14	107	60	43	45	13100	13100 ¹⁾	13100 ¹⁾
13.300		14	107	60	43	45	13300	13300 ¹⁾	13300 ¹⁾
13.350		14	107	60	43	45	13350	13350 ¹⁾	13350 ¹⁾
13.500		14	107	60	43	45	13500	13500 ¹⁾	13500 ¹⁾
13.800		14	107	60	43	45	13800	13800 ¹⁾	13800 ¹⁾
14.000		14	107	60	43	45	14000	14000	14000
14.200		16	115	65	45	48	14200	14200	14200 ¹⁾
14.500		16	115	65	45	48	14500	14500 ¹⁾	14500 ¹⁾
14.800		16	115	65	45	48	14800	14800 ¹⁾	14800 ¹⁾
15.000		16	115	65	45	48	15000	15000 ¹⁾	15000
15.100		16	115	65	45	48	15100	15100 ¹⁾	15100 ¹⁾
15.250		16	115	65	45	48	15250	15250	15250 ¹⁾
15.300		16	115	65	45	48	15300	15300 ¹⁾	15300 ¹⁾
15.500		16	115	65	45	48	15500	15500 ¹⁾	15500 ¹⁾
15.800		16	115	65	45	48	15800	15800 ¹⁾	15800 ¹⁾
15.875	5/8	16	115	65	45	48	15875	15875	15875
16.000		16	115	65	45	48	16000	16000 ¹⁾	16000 ¹⁾
16.500		18	123	73	51	48	16500	16500 ¹⁾	16500 ¹⁾
17.000		18	123	73	51	48	17000	17000 ¹⁾	17000 ¹⁾
17.500		18	123	73	51	48	17500	17500 ¹⁾	17500 ¹⁾
18.000		18	123	73	51	48	18000	18000 ¹⁾	18000 ¹⁾
19.050	3/4	20	131	79	55	50	19050	19050	19050

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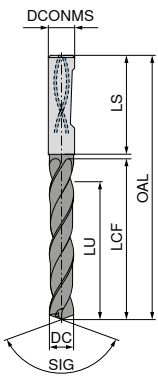
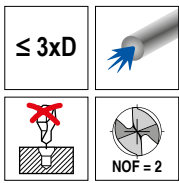


DC _{m7} mm	DC inch	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	10 603 ...	10 604 ...	10 605 ...
3.000		6	62	20	14	36	03000	03000	03000
3.100		6	62	20	14	36	03100	03100 ¹⁾	03100 ¹⁾
3.150		6	62	20	14	36	03150	03150 ¹⁾	03150 ¹⁾
3.175	1/8	6	62	20	14	36	03175		
3.200		6	62	20	14	36	03200	03200	03200 ¹⁾
3.250		6	62	20	14	36	03250	03250 ¹⁾	03250 ¹⁾
3.300		6	62	20	14	36	03300	03300	03300
3.400		6	62	20	14	36	03400	03400 ¹⁾	03400
3.500		6	62	20	14	36	03500	03500 ¹⁾	03500 ¹⁾
3.600		6	62	20	14	36	03600	03600 ¹⁾	03600 ¹⁾
3.700		6	62	20	14	36	03700	03700 ¹⁾	03700
3.800		6	66	24	17	36	03800	03800 ¹⁾	03800 ¹⁾
3.850		6	66	24	17	36	03850	03850 ¹⁾	03850 ¹⁾
3.900		6	66	24	17	36	03900	03900 ¹⁾	03900 ¹⁾
3.970	5/32	6	66	24	17	36	03970		
4.000		6	66	24	17	36	04000	04000	04000
4.100		6	66	24	17	36	04100	04100 ¹⁾	04100 ¹⁾
4.200		6	66	24	17	36	04200	04200	04200
4.250		6	66	24	17	36	04250	04250 ¹⁾	04250 ¹⁾
4.300		6	66	24	17	36	04300	04300 ¹⁾	04300
4.350		6	66	24	17	36	04350	04350 ¹⁾	04350 ¹⁾
4.400		6	66	24	17	36	04400	04400 ¹⁾	04400 ¹⁾
4.450		6	66	24	17	36	04450	04450 ¹⁾	04450 ¹⁾
4.500		6	66	24	17	36	04500	04500 ¹⁾	04500 ¹⁾
4.600		6	66	24	17	36	04600	04600 ¹⁾	04600 ¹⁾
4.650		6	66	24	17	36	04650	04650 ¹⁾	04650 ¹⁾
4.700		6	66	24	17	36	04700	04700 ¹⁾	04700
4.760	3/16	6	66	28	20	36	04760		
4.800		6	66	28	20	36	04800	04800 ¹⁾	04800 ¹⁾
4.900		6	66	28	20	36	04900	04900	04900
4.950		6	66	28	20	36	04950	04950 ¹⁾	04950 ¹⁾
5.000		6	66	28	20	36	05000	05000	05000
5.050		6	66	28	20	36	05050	05050 ¹⁾	05050 ¹⁾
5.100		6	66	28	20	36	05100	05100	05100 ¹⁾
5.200		6	66	28	20	36	05200	05200 ¹⁾	05200
5.300		6	66	28	20	36	05300	05300 ¹⁾	05300 ¹⁾
5.400		6	66	28	20	36	05400	05400 ¹⁾	05400 ¹⁾
5.500		6	66	28	20	36	05500	05500 ¹⁾	05500
5.550		6	66	28	20	36	05550	05550 ¹⁾	05550
5.560	7/32	6	66	28	20	36	05560		
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1) Not in stock

WTX – High Performance Drill, DIN 6537

- ▲ convex main cutting edge for high cutting edge stability and process security
- ▲ high cutting values and long service life achievable
- ▲ universal application

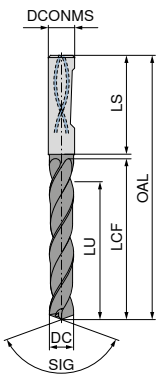
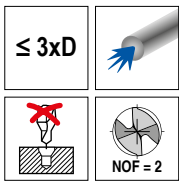


DC _{m7} mm	DC inch	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	10 603 ...	10 604 ...	10 605 ...
5.600		6	66	28	20	36	05600	05600	05600 ¹⁾
5.700		6	66	28	20	36	05700	05700 ¹⁾	05700 ¹⁾
5.750		6	66	28	20	36	05750	05750 ¹⁾	05750 ¹⁾
5.800		6	66	28	20	36	05800	05800 ¹⁾	05800
5.900		6	66	28	20	36	05900	05900 ¹⁾	05900 ¹⁾
5.950	15/64	6	66	28	20	36	05950	05950 ¹⁾	05950 ¹⁾
6.000		6	66	28	20	36	06000	06000	06000
6.100		8	79	34	24	36	06100	06100 ¹⁾	06100 ¹⁾
6.200		8	79	34	24	36	06200	06200 ¹⁾	06200 ¹⁾
6.300		8	79	34	24	36	06300	06300 ¹⁾	06300 ¹⁾
6.350	1/4	8	79	34	24	36	06350	06300 ¹⁾	06300 ¹⁾
6.400		8	79	34	24	36	06400	06400 ¹⁾	06400 ¹⁾
6.500		8	79	34	24	36	06500	06500 ¹⁾	06500
6.600		8	79	34	24	36	06600	06600	06600 ¹⁾
6.700		8	79	34	24	36	06700	06700 ¹⁾	06700 ¹⁾
6.750	17/64	8	79	34	24	36	06750	06800	06800
6.800		8	79	34	24	36	06800	06800	06800
6.900		8	79	34	24	36	06900	06900	06900 ¹⁾
7.000		8	79	34	24	36	07000	07000 ¹⁾	07000
7.100		8	79	41	29	36	07100	07100 ¹⁾	07100 ¹⁾
7.140	9/32	8	79	41	29	36	07140	07200	07200 ¹⁾
7.200		8	79	41	29	36	07200	07200 ¹⁾	07200 ¹⁾
7.300		8	79	41	29	36	07300	07300 ¹⁾	07300 ¹⁾
7.400		8	79	41	29	36	07400	07400	07400
7.450		8	79	41	29	36	07450	07450 ¹⁾	07450 ¹⁾
7.500		8	79	41	29	36	07500	07500 ¹⁾	07500
7.600		8	79	41	29	36	07600	07600 ¹⁾	07600 ¹⁾
7.700		8	79	41	29	36	07700	07700 ¹⁾	07700 ¹⁾
7.800		8	79	41	29	36	07800	07800 ¹⁾	07800
7.900		8	79	41	29	36	07900	07900 ¹⁾	07900 ¹⁾
7.940	5/16	8	79	41	29	36	07940	08000	08000
8.000		8	79	41	29	36	08000	08000 ¹⁾	08000
8.100		10	89	47	35	40	08100	08100 ¹⁾	08100 ¹⁾
8.200		10	89	47	35	40	08200	08200 ¹⁾	08200 ¹⁾
8.300		10	89	47	35	40	08300	08300	08300 ¹⁾
8.400		10	89	47	35	40	08400	08400 ¹⁾	08400 ¹⁾
8.500		10	89	47	35	40	08500	08500	08500
8.600		10	89	47	35	40	08600	08600 ¹⁾	08600 ¹⁾
8.700		10	89	47	35	40	08700	08700 ¹⁾	08700 ¹⁾
8.800		10	89	47	35	40	08800	08800	08800 ¹⁾
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1) Not in stock

WTX – High Performance Drill, DIN 6537

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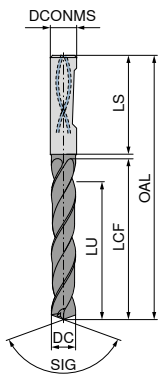
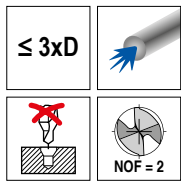


DC _{m7} mm	DC inch	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	10 603 ...	10 604 ...	10 605 ...
9.000		10	89	47	35	40	09000	09000	09000
9.100		10	89	47	35	40	09100	09100	09100 ¹⁾
9.200		10	89	47	35	40	09200	09200 ¹⁾	09200 ¹⁾
9.300		10	89	47	35	40	09300	09300	09300 ¹⁾
9.350		10	89	47	35	40	09350	09350 ¹⁾	09350 ¹⁾
9.400		10	89	47	35	40	09400	09400	09400 ¹⁾
9.500		10	89	47	35	40	09500	09500 ¹⁾	09500
9.525	3/8	10	89	47	35	40	09525		
9.600		10	89	47	35	40	09600	09600 ¹⁾	09600 ¹⁾
9.700		10	89	47	35	40	09700	09700 ¹⁾	09700 ¹⁾
9.800		10	89	47	35	40	09800	09800	09800 ¹⁾
9.900		10	89	47	35	40	09900	09900 ¹⁾	09900 ¹⁾
9.920	25/64	10	89	47	35	40	09920		
10.000		10	89	47	35	40	10000	10000	10000
10.100		12	102	55	40	45	10100	10100 ¹⁾	10100 ¹⁾
10.200		12	102	55	40	45	10200	10200	10200
10.300		12	102	55	40	45	10300	10300	10300 ¹⁾
10.400		12	102	55	40	45	10400	10400	10400 ¹⁾
10.500		12	102	55	40	45	10500	10500	10500
10.550		12	102	55	40	45	10550	10550 ¹⁾	10550 ¹⁾
10.600		12	102	55	40	45	10600	10600	10600 ¹⁾
10.700		12	102	55	40	45	10700	10700 ¹⁾	10700 ¹⁾
10.800		12	102	55	40	45	10800	10800	10800 ¹⁾
10.900		12	102	55	40	45	10900	10900 ¹⁾	10900 ¹⁾
11.000		12	102	55	40	45	11000	11000	11000
11.100		12	102	55	40	45	11100	11100	11100 ¹⁾
11.200		12	102	55	40	45	11200	11200	11200 ¹⁾
11.250		12	102	55	40	45	11250	11250 ¹⁾	11250 ¹⁾
11.300		12	102	55	40	45	11300	11300	11300 ¹⁾
11.350		12	102	55	40	45	11350	11350 ¹⁾	11350 ¹⁾
11.400		12	102	55	40	45	11400	11400 ¹⁾	11400 ¹⁾
11.450		12	102	55	40	45	11450	11450 ¹⁾	11450 ¹⁾
11.500		12	102	55	40	45	11500	11500	11500 ¹⁾
11.600		12	102	55	40	45	11600	11600	11600 ¹⁾
11.700		12	102	55	40	45	11700	11700	11700 ¹⁾
11.800		12	102	55	40	45	11800	11800	11800
12.000		12	102	55	40	45	12000	12000 ¹⁾	12000
12.150		14	107	60	43	45	12150	12150 ¹⁾	12150 ¹⁾
12.250		14	107	60	43	45	12250	12250 ¹⁾	12250 ¹⁾
12.500		14	107	60	43	45	12500	12500	12500
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WTX – High Performance Drill, DIN 6537

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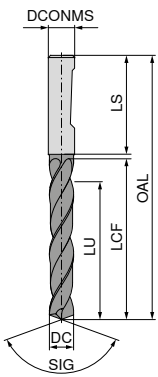
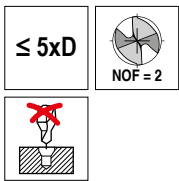


DC _{m7} mm	DC inch	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	10 603 ...	10 604 ...	10 605 ...
12.550		14	107	60	43	45	12550	12550 ¹⁾	12550 ¹⁾
12.700	1/2	14	107	60	43	45	12700	12700 ¹⁾	12700 ¹⁾
12.800		14	107	60	43	45	12800	12800 ¹⁾	12800 ¹⁾
12.900		14	107	60	43	45	12900	12900 ¹⁾	12900 ¹⁾
13.000		14	107	60	43	45	13000	13000	13000
13.100		14	107	60	43	45	13100	13100 ¹⁾	13100 ¹⁾
13.300		14	107	60	43	45	13300	13300 ¹⁾	13300 ¹⁾
13.350		14	107	60	43	45	13350	13350 ¹⁾	13350 ¹⁾
13.500		14	107	60	43	45	13500	13500	13500 ¹⁾
13.800		14	107	60	43	45	13800	13800 ¹⁾	13800 ¹⁾
14.000		14	107	60	43	45	14000	14000	14000
14.200		16	115	65	45	48	14200	14200 ¹⁾	14200 ¹⁾
14.500		16	115	65	45	48	14500	14500	14500 ¹⁾
14.800		16	115	65	45	48	14800	14800 ¹⁾	14800 ¹⁾
15.000		16	115	65	45	48	15000	15000	15000
15.100		16	115	65	45	48	15100	15100 ¹⁾	15100 ¹⁾
15.250		16	115	65	45	48	15250	15250 ¹⁾	15250 ¹⁾
15.300		16	115	65	45	48	15300	15300 ¹⁾	15300 ¹⁾
15.500		16	115	65	45	48	15500	15500	15500 ¹⁾
15.800		16	115	65	45	48	15800	15800 ¹⁾	15800 ¹⁾
15.875	5/8	16	115	65	45	48	15875		
16.000		16	115	65	45	48	16000	16000	16000 ¹⁾
16.500		18	123	73	51	48	16500	16500 ¹⁾	16500 ¹⁾
16.800		18	123	73	51	48	16800	16800 ¹⁾	16800 ¹⁾
17.000		18	123	73	51	48	17000	17000 ¹⁾	17000 ¹⁾
17.500		18	123	73	51	48	17500	17500	17500 ¹⁾
17.600		18	123	73	51	48	17600	17600 ¹⁾	17600 ¹⁾
17.800		18	123	73	51	48	17800	17800 ¹⁾	17800 ¹⁾
18.000		18	123	73	51	48	18000	18000 ¹⁾	18000 ¹⁾
18.500		20	131	79	55	50	18500	18500 ¹⁾	18500 ¹⁾
19.000		20	131	79	55	50	19000	19000 ¹⁾	19000 ¹⁾
19.050	3/4	20	131	79	55	50	19050		
19.500		20	131	79	55	50	19500	19500 ¹⁾	19500 ¹⁾
19.800		20	131	79	55	50	19800	19800 ¹⁾	19800 ¹⁾
20.000		20	131	79	55	50	20000	20000 ¹⁾	20000 ¹⁾
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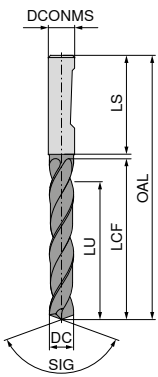
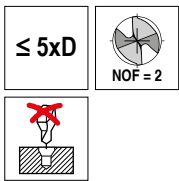


DC _{m7} mm	DC inch	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	10 606 ...	10 607 ...	10 608 ...
3.00		6	66	28	23	36	03000	03000	03000
3.10		6	66	28	23	36	03100	03100	03100
3.15		6	66	28	23	36	03150	03150	03150
3.20		6	66	28	23	36	03200	03200	03200
3.25		6	66	28	23	36	03250	03250	03250
3.30		6	66	28	23	36	03300	03300	03300
3.40		6	66	28	23	36	03400	03400	03400
3.50		6	66	28	23	36	03500	03500	03500
3.60		6	66	28	23	36	03600	03600	03600
3.70		6	66	28	23	36	03700	03700	03700
3.80		6	74	36	29	36	03800	03800	03800
3.90		6	74	36	29	36	03900	03900	03900
4.00		6	74	36	29	36	04000	04000	04000
4.10		6	74	36	29	36	04100	04100	04100
4.20		6	74	36	29	36	04200	04200	04200
4.25		6	74	36	29	36	04250	04250	04250
4.30		6	74	36	29	36	04300	04300	04300
4.40		6	74	36	29	36	04400	04400	04400
4.50		6	74	36	29	36	04500	04500	04500
4.60		6	74	36	29	36	04600	04600	04600
4.65		6	74	36	29	36	04650	04650	04650
4.70		6	74	36	29	36	04700	04700	04700
4.80		6	82	44	35	36	04800	04800	04800
4.90		6	82	44	35	36	04900	04900	04900
5.00		6	82	44	35	36	05000	05000	05000
5.05		6	82	44	35	36	05050	05050	05050
5.10		6	82	44	35	36	05100	05100	05100
5.20		6	82	44	35	36	05200	05200	05200
5.30		6	82	44	35	36	05300	05300	05300
5.40		6	82	44	35	36	05400	05400	05400
5.50		6	82	44	35	36	05500	05500	05500
5.55		6	82	44	35	36	05550	05550	05550
5.60		6	82	44	35	36	05600	05600	05600
5.70		6	82	44	35	36	05700	05700	05700
5.75		6	82	44	35	36	05750	05750	05750
5.80		6	82	44	35	36	05800	05800	05800
5.90		6	82	44	35	36	05900	05900	05900

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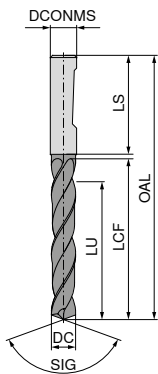
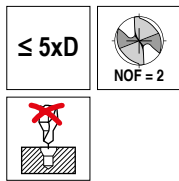


DC _{m7} mm	DC inch	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	10 606 ...	10 607 ...	10 608 ...
5.95	15/64	6	82	44	35	36	05950	05950	05950
6.00		6	82	44	35	36	06000	06000	06000
6.10		8	91	53	43	36	06100	06100	06100
6.20		8	91	53	43	36	06200	06200	06200
6.40		8	91	53	43	36	06400	06400	06400
6.50		8	91	53	43	36	06500	06500	06500
6.60		8	91	53	43	36	06600	06600	06600
6.80		8	91	53	43	36	06800	06800	06800
6.90		8	91	53	43	36	06900	06900	06900
7.00		8	91	53	43	36	07000	07000	07000
7.20		8	91	53	43	36	07200	07200	07200
7.40		8	91	53	43	36	07400	07400	07400
7.50		8	91	53	43	36	07500	07500	07500
7.70		8	91	53	43	36	07700	07700	07700
7.80		8	91	53	43	36	07800	07800	07800
8.00		8	91	53	43	36	08000	08000	08000
8.10		10	103	61	49	40	08100	08100	08100
8.20		10	103	61	49	40	08200	08200	08200
8.40		10	103	61	49	40	08400	08400	08400
8.50		10	103	61	49	40	08500	08500	08500
8.60		10	103	61	49	40	08600	08600	08600
8.70		10	103	61	49	40	08700	08700	08700
8.80		10	103	61	49	40	08800	08800	08800
9.00		10	103	61	49	40	09000	09000	09000
9.10		10	103	61	49	40	09100	09100	09100
9.30		10	103	61	49	40	09300	09300	09300
9.35		10	103	61	49	40	09350	09350	09350
9.40		10	103	61	49	40	09400	09400	09400
9.50		10	103	61	49	40	09500	09500	09500
9.80		10	103	61	49	40	09800	09800	09800
10.00		10	103	61	49	40	10000	10000	10000
10.20		12	118	71	56	45	10200	10200	10200
10.30		12	118	71	56	45	10300	10300	10300
10.50		12	118	71	56	45	10500	10500	10500
10.80		12	118	71	56	45	10800	10800	10800
11.00		12	118	71	56	45	11000	11000	11000
11.20		12	118	71	56	45	11200	11200	11200

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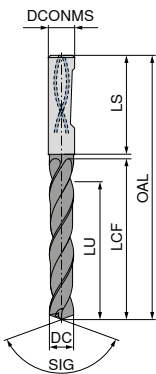
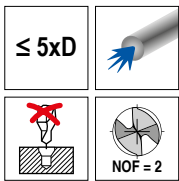


DC _{m7} mm	DC inch	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	10 606 ...	10 607 ...	10 608 ...
11.30		12	118	71	56	45	11300	11300	11300
11.50		12	118	71	56	45	11500	11500	11500
11.80		12	118	71	56	45	11800	11800	11800
12.00		12	118	71	56	45	12000	12000	12000
12.15		14	124	77	60	45	12150	12150	12150
12.25		14	124	77	60	45	12250	12250	12250
12.50		14	124	77	60	45	12500	12500	12500
12.55		14	124	77	60	45	12550	12550	12550
12.70	1/2	14	124	77	60	45	12700	12700	12700
12.80		14	124	77	60	45	12800	12800	12800
13.00		14	124	77	60	45	13000	13000	13000
13.50		14	124	77	60	45	13500	13500	13500
13.80		14	124	77	60	45	13800	13800	13800
14.00		14	124	77	60	45	14000	14000	14000
14.20		16	133	83	63	48	14200	14200	14200
14.50		16	133	83	63	48	14500	14500	14500
15.00		16	133	83	63	48	15000	15000	15000
15.50		16	133	83	63	48	15500	15500	15500
16.00		16	133	83	63	48	16000	16000	16000
16.50		18	143	93	71	48	16500	16500	16500
17.00		18	143	93	71	48	17000	17000	17000
17.50		18	143	93	71	48	17500	17500	17500
18.00		18	143	93	71	48	18000	18000	18000
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→ v_c Page 32

WTX – High Performance Drill, DIN 6537

- ▲ convex main cutting edge for high cutting edge stability and process security
- ▲ high cutting values and long service life achievable
- ▲ universal application

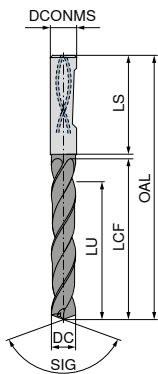
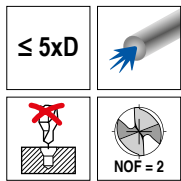


DC _{m7} mm	DC inch	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	10 609 ...	10 610 ...	10 611 ...
3.000		6	66	28	23	36	03000	03000	03000
3.100		6	66	28	23	36	03100	03100	03100
3.150		6	66	28	23	36	03150	03150	03150
3.175	1/8	6	66	28	23	36	03175		
3.200		6	66	28	23	36	03200	03200	03200
3.250		6	66	28	23	36	03250	03250	03250
3.300		6	66	28	23	36	03300	03300	03300
3.400		6	66	28	23	36	03400	03400	03400
3.500		6	66	28	23	36	03500	03500	03500
3.600		6	66	28	23	36	03600	03600	03600
3.700		6	66	28	23	36	03700	03700	03700
3.800		6	74	36	29	36	03800	03800	03800
3.850		6	74	36	29	36	03850	03850	03850
3.900		6	74	36	29	36	03900	03900	03900
3.970		6	74	36	29	36	03970		
4.000	5/32	6	74	36	29	36	04000	04000	04000
4.100		6	74	36	29	36	04100	04100	04100
4.200		6	74	36	29	36	04200	04200	04200
4.250		6	74	36	29	36	04250	04250	04250
4.300		6	74	36	29	36	04300	04300	04300
4.350		6	74	36	29	36	04350	04350	04350
4.400		6	74	36	29	36	04400	04400	04400
4.450		6	74	36	29	36	04450	04450	04450
4.500		6	74	36	29	36	04500	04500	04500
4.600		6	74	36	29	36	04600	04600	04600
4.650		6	74	36	29	36	04650	04650	04650
4.700		6	74	36	29	36	04700	04700	04700
4.760	3/16	6	82	44	35	36	04760		
4.800		6	82	44	35	36	04800	04800	04800
4.900		6	82	44	35	36	04900	04900	04900
4.950		6	82	44	35	36	04950	04950	04950
5.000		6	82	44	35	36	05000	05000	05000
5.050		6	82	44	35	36	05050	05050	05050
5.100		6	82	44	35	36	05100	05100	05100

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WTX – High Performance Drill, DIN 6537

- ▲ convex main cutting edge for high cutting edge stability and process security
- ▲ high cutting values and long service life achievable
- ▲ universal application

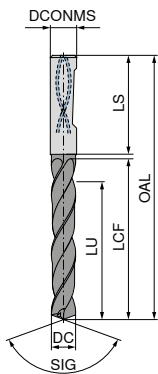
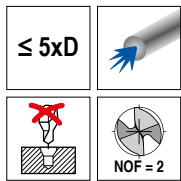


DC _{m7} mm	DC inch	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	10 609 ...	10 610 ...	10 611 ...
5.200		6	82	44	35	36	05200	05200	05200
5.300		6	82	44	35	36	05300	05300	05300
5.400		6	82	44	35	36	05400	05400	05400
5.500		6	82	44	35	36	05500	05500	05500
5.550		6	82	44	35	36	05550	05550	05550
5.560	7/32	6	82	44	35	36	05560		
5.600		6	82	44	35	36	05600	05600	05600
5.700		6	82	44	35	36	05700	05700	05700
5.750		6	82	44	35	36	05750	05750	05750
5.800		6	82	44	35	36	05800	05800	05800
5.900		6	82	44	35	36	05900	05900	05900
5.950	15/64	6	82	44	35	36	05950	05950	05950
6.000		6	82	44	35	36	06000	06000	06000
6.100		8	91	53	43	36	06100	06100	06100
6.200		8	91	53	43	36	06200	06200	06200
6.300		8	91	53	43	36	06300	06300	06300
6.350	1/4	8	91	53	43	36	06350		
6.400		8	91	53	43	36	06400	06400	06400
6.500		8	91	53	43	36	06500	06500	06500
6.600		8	91	53	43	36	06600	06600	06600
6.700		8	91	53	43	36	06700	06700	06700
6.750	17/64	8	91	53	43	36	06750		
6.800		8	91	53	43	36	06800	06800	06800
6.900		8	91	53	43	36	06900	06900	06900
7.000		8	91	53	43	36	07000	07000	07000
7.100		8	91	53	43	36	07100	07100	07100
7.140	9/32	8	91	53	43	36	07140		
7.200		8	91	53	43	36	07200	07200	07200
7.300		8	91	53	43	36	07300	07300	07300
7.400		8	91	53	43	36	07400	07400	07400
7.450		8	91	53	43	36	07450	07450	07450
7.500		8	91	53	43	36	07500	07500	07500
7.600		8	91	53	43	36	07600	07600	07600
7.700		8	91	53	43	36	07700	07700	07700

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WTX – High Performance Drill, DIN 6537

- ▲ convex main cutting edge for high cutting edge stability and process security
- ▲ high cutting values and long service life achievable
- ▲ universal application

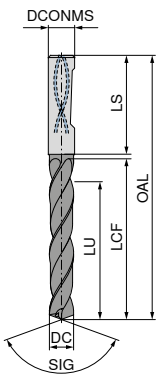
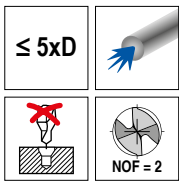


DC _{m7} mm	DC inch	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	10 609 ...	10 610 ...	10 611 ...
7.800		8	91	53	43	36	07800	07800	07800
7.900		8	91	53	43	36	07900	07900	07900
7.940	5/16	8	91	53	43	36	07940		
8.000		8	91	53	43	36	08000	08000	08000
8.100		10	103	61	49	40	08100	08100	08100
8.200		10	103	61	49	40	08200	08200	08200
8.300		10	103	61	49	40	08300	08300	08300
8.400		10	103	61	49	40	08400	08400	08400
8.500		10	103	61	49	40	08500	08500	08500
8.600		10	103	61	49	40	08600	08600	08600
8.700		10	103	61	49	40	08700	08700	08700
8.800		10	103	61	49	40	08800	08800	08800
8.900		10	103	61	49	40	08900	08900	08900
9.000		10	103	61	49	40	09000	09000	09000
9.100		10	103	61	49	40	09100	09100	09100
9.200		10	103	61	49	40	09200	09200	09200
9.300		10	103	61	49	40	09300	09300	09300
9.350		10	103	61	49	40	09350	09350	09350
9.400		10	103	61	49	40	09400	09400	09400
9.450		10	103	61	49	40	09450	09450	09450
9.500		10	103	61	49	40	09500	09500	09500
9.525	3/8	10	103	61	49	40	09525		
9.600		10	103	61	49	40	09600	09600	09600
9.700		10	103	61	49	40	09700	09700	09700
9.800		10	103	61	49	40	09800	09800	09800
9.900		10	103	61	49	40	09900	09900	09900
9.920	25/64	10	103	61	49	40	09920		
10.000		10	103	61	49	40	10000	10000	10000
10.100		12	118	71	56	45	10100	10100	10100
10.200		12	118	71	56	45	10200	10200	10200
10.300		12	118	71	56	45	10300	10300	10300
10.400		12	118	71	56	45	10400	10400	10400
10.500		12	118	71	56	45	10500	10500	10500
10.550		12	118	71	56	45	10550	10550	10550

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WTX – High Performance Drill, DIN 6537

- ▲ convex main cutting edge for high cutting edge stability and process security
- ▲ high cutting values and long service life achievable
- ▲ universal application

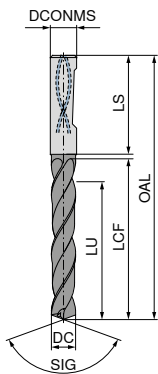
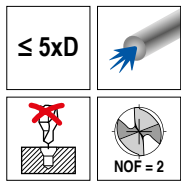


DC _{m7} mm	DC inch	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	10 609 ...	10 610 ...	10 611 ...
10.600		12	118	71	56	45	10600	10600	10600
10.700		12	118	71	56	45	10700	10700	10700
10.750		12	118	71	56	45	10750	10750	10750
10.800		12	118	71	56	45	10800	10800	10800
10.900		12	118	71	56	45	10900	10900	10900
11.000		12	118	71	56	45	11000	11000	11000
11.100		12	118	71	56	45	11100	11100	11100
11.200		12	118	71	56	45	11200	11200	11200
11.250		12	118	71	56	45	11250	11250	11250
11.300		12	118	71	56	45	11300	11300	11300
11.350		12	118	71	56	45	11350	11350	11350
11.400		12	118	71	56	45	11400	11400	11400
11.450		12	118	71	56	45	11450	11450	11450
11.500		12	118	71	56	45	11500	11500	11500
11.600		12	118	71	56	45	11600	11600	11600
11.700		12	118	71	56	45	11700	11700	11700
11.800		12	118	71	56	45	11800	11800	11800
11.900		12	118	71	56	45	11900	11900	11900
12.000		12	118	71	56	45	12000	12000	12000
12.150		14	124	77	60	45	12150	12150	12150
12.250		14	124	77	60	45	12250	12250	12250
12.500		14	124	77	60	45	12500	12500	12500
12.550		14	124	77	60	45	12550	12550	12550
12.700	1/2	14	124	77	60	45	12700	12700	12700
12.800		14	124	77	60	45	12800	12800	12800
12.900		14	124	77	60	45	12900	12900	12900
13.000		14	124	77	60	45	13000	13000	13000
13.100		14	124	77	60	45	13100	13100	13100
13.300		14	124	77	60	45	13300	13300	13300
13.350		14	124	77	60	45	13350	13350	13350
13.500		14	124	77	60	45	13500	13500	13500
13.700		14	124	77	60	45	13700	13700	13700
13.800		14	124	77	60	45	13800	13800	13800
14.000		14	124	77	60	45	14000	14000	14000

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WTX – High Performance Drill, DIN 6537

- ▲ convex main cutting edge for high cutting edge stability and process security
- ▲ high cutting values and long service life achievable
- ▲ universal application



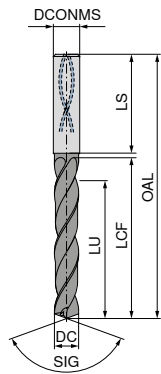
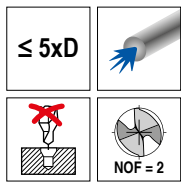
DC _{m7} mm	DC inch	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	10 609 ...	10 610 ...	10 611 ...
14.200		16	133	83	63	48	14200	14200	14200
14.500		16	133	83	63	48	14500	14500	14500
14.800		16	133	83	63	48	14800	14800	14800
15.000		16	133	83	63	48	15000	15000	15000
15.100		16	133	83	63	48	15100	15100	15100
15.250		16	133	83	63	48	15250	15250	15250
15.300		16	133	83	63	48	15300	15300	15300
15.350		16	133	83	63	48	15350	15350	15350
15.500		16	133	83	63	48	15500	15500	15500
15.600		16	133	83	63	48	15600	15600	15600
15.800		16	133	83	63	48	15800	15800	15800
15.875	5/8	16	133	83	63	48	15875		
16.000		16	133	83	63	48	16000	16000	16000
16.050		18	143	93	71	48	16050	16050	16050
16.500		18	143	93	71	48	16500	16500	16500
16.800		18	143	93	71	48	16800	16800	16800
16.900		18	143	93	71	48	16900	16900	16900
17.000		18	143	93	71	48	17000	17000	17000
17.500		18	143	93	71	48	17500	17500	17500
17.600		18	143	93	71	48	17600	17600	17600
17.800		18	143	93	71	48	17800	17800	17800
18.000		18	143	93	71	48	18000	18000	18000
18.500		20	155	101	77	50	18500	18500	18500
18.800		20	155	101	77	50	18800	18800	18800
18.900		20	155	101	77	50	18900	18900	18900
19.000		20	155	101	77	50	19000	19000	19000
19.050	3/4	20	155	101	77	50	19050		
19.500		20	155	101	77	50	19500	19500	19500
19.800		20	155	101	77	50	19800	19800	19800
20.000		20	155	101	77	50	20000	20000	20000
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→ v_c Page 31

WTX – High Performance Drill, DIN 6537

- ▲ convex main cutting edge for high cutting edge stability and process security
- ▲ high cutting values and long service life achievable

- ▲ universal application
- ▲ four guidance lands ensure increased positioning accuracy



Quattro

DPA74S

upGRADE[®]

DRAGONSKIN



SIG 140°

Solid carbide

10 612 ...

DC _{m7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	
3.0	6	66	28	23	36	03000
3.1	6	66	28	23	36	03100
3.2	6	66	28	23	36	03200
3.3	6	66	28	23	36	03300
3.4	6	66	28	23	36	03400
3.5	6	66	28	23	36	03500
3.6	6	66	28	23	36	03600
3.7	6	66	28	23	36	03700
3.8	6	74	36	29	36	03800
3.9	6	74	36	29	36	03900
4.0	6	74	36	29	36	04000
4.1	6	74	36	29	36	04100
4.2	6	74	36	29	36	04200
4.3	6	74	36	29	36	04300
4.4	6	74	36	29	36	04400
4.5	6	74	36	29	36	04500
4.6	6	74	36	29	36	04600
4.7	6	74	36	29	36	04700
4.8	6	82	44	35	36	04800
4.9	6	82	44	35	36	04900
5.0	6	82	44	35	36	05000
5.1	6	82	44	35	36	05100
5.2	6	82	44	35	36	05200
5.3	6	82	44	35	36	05300
5.4	6	82	44	35	36	05400
5.5	6	82	44	35	36	05500
5.6	6	82	44	35	36	05600
5.7	6	82	44	35	36	05700
5.8	6	82	44	35	36	05800
5.9	6	82	44	35	36	05900
6.0	6	82	44	35	36	06000
6.1	8	91	53	43	36	06100
6.2	8	91	53	43	36	06200
6.3	8	91	53	43	36	06300
6.4	8	91	53	43	36	06400
6.5	8	91	53	43	36	06500
6.6	8	91	53	43	36	06600
6.7	8	91	53	43	36	06700
6.8	8	91	53	43	36	06800
6.9	8	91	53	43	36	06900
7.0	8	91	53	43	36	07000
7.1	8	91	53	43	36	07100
7.2	8	91	53	43	36	07200

10 612 ...

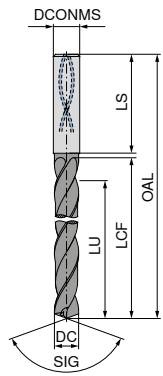
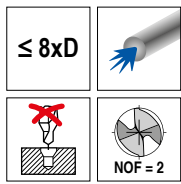
DC _{m7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	
7.4	8	91	53	43	36	07400
7.5	8	91	53	43	36	07500
7.6	8	91	53	43	36	07600
7.7	8	91	53	43	36	07700
7.8	8	91	53	43	36	07800
7.9	8	91	53	43	36	07900
8.0	8	91	53	43	36	08000
8.1	10	103	61	49	40	08100
8.2	10	103	61	49	40	08200
8.4	10	103	61	49	40	08400
8.5	10	103	61	49	40	08500
8.6	10	103	61	49	40	08600
8.7	10	103	61	49	40	08700
8.8	10	103	61	49	40	08800
8.9	10	103	61	49	40	08900
9.0	10	103	61	49	40	09000
9.1	10	103	61	49	40	09100
9.2	10	103	61	49	40	09200
9.3	10	103	61	49	40	09300
9.4	10	103	61	49	40	09400
9.5	10	103	61	49	40	09500
9.6	10	103	61	49	40	09600
9.7	10	103	61	49	40	09700
9.8	10	103	61	49	40	09800
9.9	10	103	61	49	40	09900
10.0	10	103	61	49	40	10000
10.1	12	118	71	56	45	10100
10.2	12	118	71	56	45	10200
10.3	12	118	71	56	45	10300
10.4	12	118	71	56	45	10400
10.5	12	118	71	56	45	10500
10.8	12	118	71	56	45	10800
10.9	12	118	71	56	45	10900
11.0	12	118	71	56	45	11000
11.1	12	118	71	56	45	11100
11.2	12	118	71	56	45	11200
11.5	12	118	71	56	45	11500
11.8	12	118	71	56	45	11800
12.0	12	118	71	56	45	12000
12.5	14	124	77	60	45	12500
12.8	14	124	77	60	45	12800
13.0	14	124	77	60	45	13000
13.5	14	124	77	60	45	13500
13.8	14	124	77	60	45	13800
14.0	14	124	77	60	45	14000
14.5	16	133	83	63	48	14500
14.8	16	133	83	63	48	14800
15.0	16	133	83	63	48	15000
15.5	16	133	83	63	48	15500
15.8	16	133	83	63	48	15800
16.0	16	133	83	63	48	16000
16.5	18	143	93	71	48	16500
17.0	18	143	93	71	48	17000
17.5	18	143	93	71	48	17500
18.0	18	143	93	71	48	18000

P	●
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→ V_c Page 31

WTX – High Performance Drill, factory standard

- ▲ convex main cutting edge for high cutting edge stability and process security
- ▲ high cutting values and long service life achievable
- ▲ universal application
- ▲ four guidance lands ensure increased positioning accuracy



Quattro
DPA74S

upGRADE[®]

DRAGONSKIN



SIG 135°

Solid carbide

10 613 ...

DC _{h7} mm	DC inch	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	
3.000		6	72	34	29	36	03000
3.100		6	72	34	29	36	03100
3.175	1/8	6	72	34	29	36	03175
3.200		6	72	34	29	36	03200
3.300		6	72	34	29	36	03300
3.400		6	72	34	29	36	03400
3.500		6	72	34	29	36	03500
3.600		6	72	34	29	36	03600
3.700		6	72	34	29	36	03700
3.800		6	81	43	36	36	03800
3.900		6	81	43	36	36	03900
3.970	5/32	6	81	43	36	36	03970
4.000		6	81	43	36	36	04000
4.100		6	81	43	36	36	04100
4.200		6	81	43	36	36	04200
4.300		6	81	43	36	36	04300
4.400		6	81	43	36	36	04400
4.500		6	81	43	36	36	04500
4.600		6	81	43	36	36	04600
4.700		6	81	43	36	36	04700
4.760	3/16	6	95	57	48	36	04760
4.800		6	95	57	48	36	04800
4.900		6	95	57	48	36	04900
5.000		6	95	57	48	36	05000
5.100		6	95	57	48	36	05100
5.200		6	95	57	48	36	05200
5.300		6	95	57	48	36	05300
5.400		6	95	57	48	36	05400
5.500		6	95	57	48	36	05500
5.560	7/32	6	95	57	48	36	05560
5.600		6	95	57	48	36	05600
5.700		6	95	57	48	36	05700
5.800		6	95	57	48	36	05800
5.900		6	95	57	48	36	05900
5.950	15/64	6	95	57	48	36	05950
6.000		6	95	57	48	36	06000
6.100		8	114	76	64	36	06100
6.200		8	114	76	64	36	06200
6.300		8	114	76	64	36	06300
6.350	1/4	8	114	76	64	36	06350
6.400		8	114	76	64	36	06400
6.500		8	114	76	64	36	06500
6.600		8	114	76	64	36	06600
6.700		8	114	76	64	36	06700
6.750	17/64	8	114	76	64	36	06750
6.800		8	114	76	64	36	06800
6.900		8	114	76	64	36	06900

10 613 ...

DC _{h7} mm	DC inch	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	
7.000		8	114	76	64	36	07000
7.100		8	114	76	64	36	07100
7.140	9/32	8	114	76	64	36	07140
7.200		8	114	76	64	36	07200
7.400		8	114	76	64	36	07400
7.500		8	114	76	64	36	07500
7.600		8	114	76	64	36	07600
7.700		8	114	76	64	36	07700
7.800		8	114	76	64	36	07800
7.900		8	114	76	64	36	07900
7.940	5/16	8	114	76	64	36	07940
8.000		8	114	76	64	36	08000
8.100		10	142	95	80	40	08100
8.200		10	142	95	80	40	08200
8.400		10	142	95	80	40	08400
8.500		10	142	95	80	40	08500
8.600		10	142	95	80	40	08600
8.800		10	142	95	80	40	08800
9.000		10	142	95	80	40	09000
9.100		10	142	95	80	40	09100
9.200		10	142	95	80	40	09200
9.300		10	142	95	80	40	09300
9.400		10	142	95	80	40	09400
9.500		10	142	95	80	40	09500
9.525	3/8	10	142	95	80	40	09525
9.600		10	142	95	80	40	09600
9.700		10	142	95	80	40	09700
9.800		10	142	95	80	40	09800
9.900		10	142	95	80	40	09900
9.920	25/64	10	142	95	80	40	09920
10.000		10	142	95	80	40	10000
10.100		12	162	114	96	45	10100
10.200		12	162	114	96	45	10200
10.300		12	162	114	96	45	10300
10.400		12	162	114	96	45	10400
10.500		12	162	114	96	45	10500
10.800		12	162	114	96	45	10800
10.900		12	162	114	96	45	10900
11.000		12	162	114	96	45	11000
11.100		12	162	114	96	45	11100
11.200		12	162	114	96	45	11200
11.500		12	162	114	96	45	11500
11.800		12	162	114	96	45	11800
12.000		12	162	114	96	45	12000
12.500		14	178	131	112	45	12500
12.700	1/2	14	178	131	112	45	12700
12.800		14	178	131	112	45	12800
13.000		14	178	131	112	45	13000
13.500		14	178	131	112	45	13500
13.800		14	178	131	112	45	13800
14.000		14	178	131	112	45	14000
14.500		16	203	152	128	48	14500
14.800		16	203	152	128	48	14800
15.000		16	203	152	128	48	15000
15.500		16	203	152	128	48	15500
15.800		16	203	152	128	48	15800
15.875	5/8	16	203	152	128	48	15875
16.000		16	203	152	128	48	16000
16.500		18	222	171	144	48	16500
17.000		18	222	171	144	48	17000
17.500		18	222	171	144	48	17500
18.000		18	222	171	144	48	18000
19.000		20	243	190	160	50	19000
19.050	3/4	20	243	190	160	50	19050
20.000		20	243	190	160	50	20000

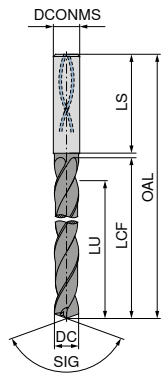
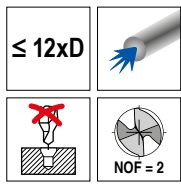
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→ v_c Page 33

WTX – High Performance Drill, factory standard

- ▲ convex main cutting edge for high cutting edge stability and process security
- ▲ high cutting values and long service life achievable

- ▲ universal application
- ▲ four guidance lands ensure increased positioning accuracy



Quattro

DPA74S

upGRADE[®]

DRAGONSKIN



SIG 135°

Solid carbide

10 614 ...

DC _{h7} mm	DC inch	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	
3.000		6	92	54	48	36	03000
3.100		6	92	54	48	36	03100
3.175	1/8	6	92	54	48	36	03175
3.200		6	92	54	48	36	03200
3.300		6	92	54	48	36	03300
3.400		6	92	54	48	36	03400
3.500		6	92	54	48	36	03500
3.600		6	92	54	48	36	03600
3.700		6	92	54	48	36	03700
3.800		6	102	64	58	36	03800
3.900		6	102	64	58	36	03900
3.970	5/32	6	102	64	58	36	03970
4.000		6	102	64	58	36	04000
4.100		6	102	64	58	36	04100
4.200		6	102	64	58	36	04200
4.300		6	102	64	58	36	04300
4.400		6	102	64	58	36	04400
4.500		6	102	64	58	36	04500
4.600		6	102	64	58	36	04600
4.700		6	102	64	58	36	04700
4.760	3/16	6	116	78	70	36	04760
4.800		6	116	78	70	36	04800
4.900		6	116	78	70	36	04900
5.000		6	116	78	70	36	05000
5.100		6	116	78	70	36	05100
5.200		6	116	78	70	36	05200
5.300		6	116	78	70	36	05300
5.400		6	116	78	70	36	05400
5.500		6	116	78	70	36	05500
5.560	7/32	6	116	78	70	36	05560
5.600		6	116	78	70	36	05600
5.700		6	116	78	70	36	05700
5.800		6	116	78	70	36	05800
5.900		6	116	78	70	36	05900
5.950	15/64	6	116	78	70	36	05950
6.000		6	116	78	70	36	06000
6.100		8	146	108	94	36	06100
6.200		8	146	108	94	36	06200
6.350	1/4	8	146	108	94	36	06350
6.500		8	146	108	94	36	06500
6.600		8	146	108	94	36	06600
6.750	17/64	8	146	108	94	36	06750
6.800		8	146	108	94	36	06800

10 614 ...

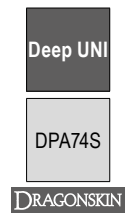
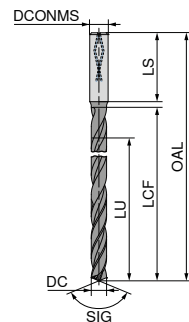
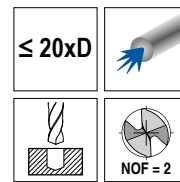
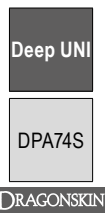
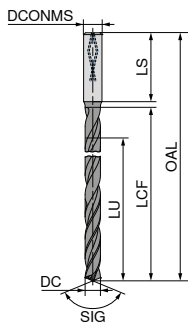
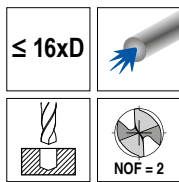
DC _{h7} mm	DC inch	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	
7.000		8	146	108	94	36	07000
7.100		8	146	108	94	36	07100
7.140	9/32	8	146	108	94	36	07140
7.500		8	146	108	94	36	07500
7.700		8	146	108	94	36	07700
7.800		8	146	108	94	36	07800
7.940	5/16	8	146	108	94	36	07940
8.000		8	146	108	94	36	08000
8.100		10	162	120	110	40	08100
8.200		10	162	120	110	40	08200
8.500		10	162	120	110	40	08500
8.600		10	162	120	110	40	08600
8.800		10	162	120	110	40	08800
9.000		10	162	120	110	40	09000
9.500		10	162	120	110	40	09500
9.525	3/8	10	162	120	110	40	09525
9.800		10	162	120	110	40	09800
9.900		10	162	120	110	40	09900
9.920	25/64	10	162	120	110	40	09920
10.000		10	162	120	110	40	10000
10.100		12	204	156	142	45	10100
10.200		12	204	156	142	45	10200
10.300		12	204	156	142	45	10300
10.500		12	204	156	142	45	10500
10.800		12	204	156	142	45	10800
11.000		12	204	156	142	45	11000
11.200		12	204	156	142	45	11200
11.500		12	204	156	142	45	11500
11.800		12	204	156	142	45	11800
12.000		12	204	156	142	45	12000
12.500		14	230	182	166	45	12500
12.700	1/2	14	230	182	166	45	12700
13.000		14	230	182	166	45	13000
13.500		14	230	182	166	45	13500
14.000		14	230	182	166	45	14000
14.500		16	260	208	192	48	14500
15.000		16	260	208	192	48	15000
15.500		16	260	208	192	48	15500
15.875	5/8	16	260	208	192	48	15875
16.000		16	260	208	192	48	16000
16.500		18	285	234	216	48	16500
17.000		18	285	234	216	48	17000
17.500		18	285	234	216	48	17500
18.000		18	285	234	216	48	18000

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→ v_c Page 33

WTX – High performance deep hole drills

- ▲ up to 16xD without peck drilling
- ▲ pilot hole necessary
- ▲ excellent alignment precision
- ▲ secure chip evacuation



SIG 138°

Solid carbide

11 116 ...

DC _{h7}	DC	DCONMS _{h6}	OAL	LCF	LU	LS	
mm	inch	mm	mm	mm	mm	mm	
3.000		6	103	60	55	36	03000
3.175	1/8	6	103	60	55	36	03175
3.200		6	103	60	55	36	03200
3.300		6	108	65	60	36	03300
3.500		6	108	65	59	36	03500
3.800		6	114	71	65	36	03800
3.970	5/32	6	118	76	70	36	03970
4.000		6	118	76	70	36	04000
4.200		6	126	84	77	36	04200
4.500		6	126	84	77	36	04500
4.760	3/16	6	135	93	85	36	04760
4.800		6	135	93	85	36	04800
5.000		6	135	93	85	36	05000
5.500		6	147	106	97	36	05500
5.560	7/32	6	147	106	97	36	05560
5.800		6	151	111	102	36	05800
5.950	15/64	6	151	111	102	36	05950
6.000		6	151	111	102	36	06000
6.350	1/4	8	162	120	110	36	06350
6.500		8	162	120	110	36	06500
6.750	17/64	8	172	130	119	36	06750
6.800		8	172	130	119	36	06800
7.000		8	172	130	119	36	07000
7.140	9/32	8	180	139	128	36	07140
7.500		8	180	139	127	36	07500
7.800		8	188	148	136	36	07800
7.940	5/16	8	188	148	136	36	07940
8.000		8	188	148	136	36	08000
8.500		10	203	157	144	40	08500
8.800		10	213	167	153	40	08800
9.000		10	213	167	153	40	09000
9.525	3/8	10	229	185	170	40	09525
9.800		10	229	185	170	40	09800
9.920	25/64	10	229	185	170	40	09200
10.000		10	229	185	170	40	10000
10.200		12	245	194	178	45	10200
10.800		12	254	203	186	45	10800
11.000		12	254	203	186	45	11000
11.800		12	271	222	204	45	11800
12.000		12	271	222	204	45	12000
12.700	1/2	14	291	240	220	45	12700
13.000		14	291	240	220	45	13000
14.000		14	308	259	238	45	14000

P	●
M	●
K	●
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WTX – High performance deep hole drills

- ▲ up to 20xD without peck drilling
- ▲ pilot hole necessary
- ▲ excellent alignment precision
- ▲ secure chip evacuation



SIG 138°

Solid carbide



SIG 138°

Solid carbide

11 120 ...

DC _{h7}	DCONMS _{h6}	OAL	LCF	LU	LS	
mm	mm	mm	mm	mm	mm	
3.0	6	115	72	67	36	03000
3.2	6	115	72	67	36	03200
3.3	6	122	79	74	36	03300
3.5	6	122	79	73	36	03500
3.8	6	129	86	80	36	03800
4.0	6	135	93	87	36	04000
4.2	6	144	102	95	36	04200
4.5	6	144	102	95	36	04500
4.8	6	155	113	105	36	04800
5.0	6	155	113	105	36	05000
5.5	6	169	128	119	36	05500
5.8	6	175	135	126	36	05800
6.0	6	175	135	126	36	06000
6.5	8	188	146	136	36	06500
6.8	8	200	158	147	36	06800
7.0	8	200	158	147	36	07000
7.5	8	210	169	157	36	07500
7.8	8	220	180	168	36	07800
8.0	8	220	180	168	36	08000
8.5	10	237	191	178	40	08500
8.8	10	249	203	189	40	08800
9.0	10	249	203	189	40	09000
9.8	10	269	225	210	40	09800
10.0	10	269	225	210	40	10000
10.2	12	287	236	220	45	10200
10.8	12	298	247	230	45	10800
11.0	12	298	247	230	45	11000
11.8	12	319	270	252	45	11800
12.0	12	319	270	252	45	12000
13.0	14	343	292	272	45	13000
14.0	14	364	315	294	45	14000

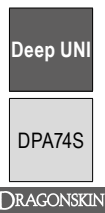
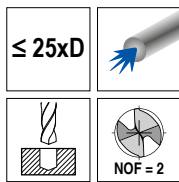
P	●
M	●
K	●
N	●
S	○
H	○
O	○

→ v_c Page 34

→ v_c Page 34

WTX – High performance deep hole drills

- ▲ up to 25xD without peck drilling
- ▲ pilot hole necessary
- ▲ excellent alignment precision
- ▲ secure chip evacuation



SIG 138°
Solid carbide

11 125 ...

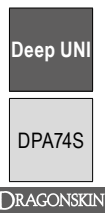
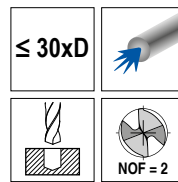
DC _{h7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	
3.0	6	131	88	83	36	03000
3.2	6	131	88	83	36	03200
3.3	6	140	97	92	36	03300
3.5	6	140	97	91	36	03500
3.8	6	148	105	99	36	03800
4.0	6	155	113	107	36	04000
4.2	6	166	124	117	36	04200
4.5	6	166	124	117	36	04500
4.8	6	180	138	130	36	04800
5.0	6	180	138	130	36	05000
5.5	6	198	157	148	36	05500
5.8	6	205	165	156	36	05800
6.0	6	205	165	156	36	06000
6.5	8	221	179	169	36	06500
6.8	8	235	193	182	36	06800
7.0	8	235	193	182	36	07000
7.5	8	247	206	194	36	07500
7.8	8	260	220	208	36	07800
8.0	8	260	220	208	36	08000
8.5	10	280	234	221	40	08500
8.8	10	294	248	234	40	08800
9.0	10	294	248	234	40	09000
9.8	10	319	275	260	40	09800
10.0	10	319	275	260	40	10000
10.2	12	340	289	273	45	10200
10.8	12	353	302	285	45	10800
11.0	12	353	302	285	45	11000
11.8	12	379	330	312	45	11800
12.0	12	379	330	312	45	12000
13.0	14	408	357	337	45	13000
14.0	14	434	385	364	45	14000

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→ v_c Page 35

WTX – High performance deep hole drills

- ▲ up to 30xD without peck drilling
- ▲ pilot hole necessary
- ▲ excellent alignment precision
- ▲ secure chip evacuation



SIG 138°
Solid carbide

11 130 ...

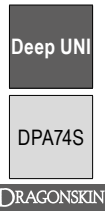
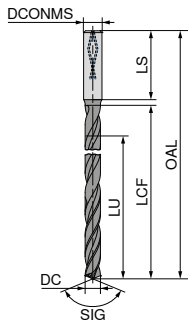
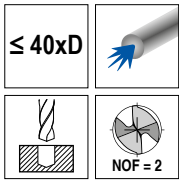
DC _{h7} mm	DC inch	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	
3.000		6	147	104	99	36	03000
3.175	1/8	6	147	104	99	36	03175
3.200		6	147	104	99	36	03200
3.300		6	157	114	109	36	03300
3.500		6	157	114	108	36	03500
3.800		6	167	124	118	36	03800
3.970	5/32	6	176	134	128	36	03970
4.000		6	176	134	128	36	04000
4.200		6	189	147	140	36	04200
4.500		6	189	147	140	36	04500
4.760	3/16	6	205	163	155	36	04760
4.800		6	205	163	155	36	04800
5.000		6	205	163	155	36	05000
5.500		6	226	185	176	36	05500
5.560	7/32	6	226	185	176	36	05560
5.800		6	235	195	186	36	05800
5.950	15/64	6	235	195	186	36	05950
6.000		6	235	195	186	36	06000
6.350	1/4	8	253	211	201	36	06350
6.500		8	253	211	201	36	06500
6.750	17/64	8	270	228	217	36	06750
6.800		8	270	228	217	36	06800
7.000		8	270	228	217	36	07000
7.140	9/32	8	285	244	233	36	07140
7.500		8	285	244	232	36	07500
7.800		8	300	260	248	36	07800
7.940	5/16	8	300	260	248	36	07940
8.000		8	300	260	248	36	08000
8.500		10	322	276	263	40	08500
8.800		10	339	293	279	40	08800
9.000		10	339	293	279	40	09000
9.525	3/8	10	369	325	310	40	09525
9.800		10	369	325	310	40	09800
9.920	25/64	10	369	325	310	40	09920
10.000		10	369	325	310	40	10000
10.200		12	392	341	325	45	10200
10.800		12	408	357	340	45	10800
11.000		12	408	357	340	45	11000
11.800		12	439	390	372	45	11800
12.000		12	439	390	372	45	12000
12.700	1/2	14	473	422	402	45	12700
13.000		14	473	422	402	45	13000
14.000		14	504	455	434	45	14000

P	●
M	●
K	●
N	
S	
H	
O	

→ v_c Page 35

WTX – High performance deep hole drills

- ▲ up to 40xD without peck drilling
- ▲ pilot hole necessary
- ▲ excellent alignment precision
- ▲ secure chip evacuation



SIG 135°
Solid carbide

11 140 ...

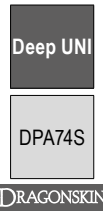
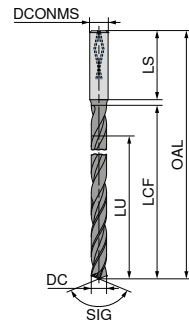
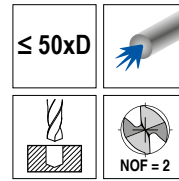
DC _{e7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	
3.0	6	186	143	138	36	03000
3.5	6	199	156	150	36	03500
4.0	6	225	183	177	36	04000
4.2	6	243	201	194	36	04200
4.5	6	243	201	194	36	04500
4.8	6	265	223	215	36	04800
5.0	6	265	223	215	36	05000
5.5	6	295	254	245	36	05500
6.0	6	308	267	258	36	06000
6.5	8	331	289	279	36	06500
6.8	8	354	312	301	36	06800
7.0	8	354	312	301	36	07000
7.5	8	375	334	322	36	07500
8.0	8	396	356	344	36	08000

P	●
M	○
K	●
N	
S	
H	
O	

→ v_c Page 36

WTX – High performance deep hole drills

- ▲ up to 50xD without peck drilling
- ▲ pilot hole necessary
- ▲ excellent alignment precision
- ▲ secure chip evacuation



SIG 135°
Solid carbide

11 150 ...

DC _{e7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	
3.0	6	218	175	170	36	03000
3.5	6	234	191	185	36	03500
4.0	6	266	224	218	36	04000
4.2	6	288	246	239	36	04200
4.5	6	288	246	239	36	04500
4.8	6	315	273	265	36	04800
5.0	6	315	273	265	36	05000
5.5	6	352	311	302	36	05500
6.0	6	367	327	318	36	06000
6.5	8	396	354	344	36	06500
6.8	8	424	382	371	36	06800
7.0	8	424	382	371	36	07000
7.5	8	450	409	397	36	07500
8.0	8	476	436	424	36	08000

P	●
M	○
K	●
N	
S	
H	
O	

→ v_c Page 36

Material examples for cutting data tables

	Material sub-group	Index	Composition / Structure / Heat treatment	Tensile strength lbf/in ² / HB / HRC	Material number	Material designation	Material number	Material designation
P	Unalloyed steel	P.1.1	< 0.15 % C Annealed	60900 lbf/in ² / 125 HB	1.0401	1015	1.0301	1010
		P.1.2	< 0.45 % C Annealed	92800 lbf/in ² / 190 HB	1.1191	1045	1.0737	12L14
		P.1.3	< 0.45 % C Tempered	121800 lbf/in ² / 250 HB	1.1191	1045	1.0503	1043
		P.1.4	< 0.75 % C Annealed	132000 lbf/in ² / 270 HB	1.1223	1060	1.0535	1055
		P.1.5	< 0.75 % C Tempered	146500 lbf/in ² / 300 HB	1.1223	1060	1.1274	1095
	Low-alloy steel	P.2.1	Annealed	88500 lbf/in ² / 180 HB	1.7131	5115	1.6523	8620
		P.2.2	Tempered	134900 lbf/in ² / 275 HB	1.7131	5115	1.6582	4340
		P.2.3	Tempered	146500 lbf/in ² / 300 HB	1.7225	4142	1.7131	5115
		P.2.4	Tempered	174000 lbf/in ² / 375 HB	1.7225	4142	1.7223	4140
	High-alloy steel and high-alloy tool steel	P.3.1	Annealed	98600 lbf/in ² / 200 HB	1.4021	420	1.2379	D2
		P.3.2	Hardened and tempered	159500 lbf/in ² / 300 HB	1.2343	H11	1.3343	M2
		P.3.3	Hardened and tempered	188500 lbf/in ² / 400 HB	1.2343	H11	1.2363	A2
	Stainless steel	P.4.1	Ferritic / martensitic Annealed	98600 lbf/in ² / 200 HB	1.4016	430	1.4125	440C
		P.4.2	Martensitic Tempered	117500 lbf/in ² / 250 HB	1.4112	S44003	1.4021	420
M	Stainless steel	M.1.1	Austenitic / austenitic-ferritic Quenched	88500 lbf/in ² / 200 HB	1.4301	304	1.4401	316
		M.2.1	Austenitic Tempered	300 HB	1.4841	314	1.4568	17-7 PH
		M.3.1	Austenitic / ferritic (Duplex)	113100 lbf/in ² / 230 HB	1.4462	S32205	1.4410	S32750
K	Grey cast iron	K.1.1	Pearlitic / ferritic	88500 lbf/in ² / 180 HB	0.6010	A48-20B	0.6025	A48-40 B
		K.1.2	Pearlitic (martensitic)	127600 lbf/in ² / 260 HB	0.6030	A48-45B	0.6040	A48-60 B
	Spherulitic graphite cast iron	K.2.1	Ferritic	78300 lbf/in ² / 160 HB	0.7040	60-40-18	0.7050	65-45-12
		K.2.2	Pearlitic	122600 lbf/in ² / 250 HB	0.7070	100-70-03	0.7660	A439 Type D2
	Malleable iron	K.3.1	Ferritic	63800 lbf/in ² / 130 HB	0.8035	GTW-35-04		
		K.3.2	Pearlitic	113100 lbf/in ² / 230 HB	0.8170	70003		
N	Aluminium wrought alloy	N.1.1	Non-hardenable	60 HB	3.0255	A91060	3.0255	A91060
		N.1.2	Hardenable	49300 lbf/in ² / 100 HB	3.1355	2024	3.1355	2024
	Cast aluminium alloy	N.2.1	≤ 12 % Si, non-hardenable	36300 lbf/in ² / 75 HB	3.2581	A04130 / A413-0	3.2581	A04130 / A413-0
		N.2.2	≤ 12 % Si, hardenable	43500 lbf/in ² / 90 HB	3.2134	G-AlSi5Cu1Mg		
		N.2.3	> 12 % Si, non-hardenable	63800 lbf/in ² / 130 HB		G-AlSi17Cu4Mg		
	Copper and copper alloys (bronze/brass)	N.3.1	Free-machining alloys, PB > 1 %	54400 lbf/in ² / 110 HB	2.0380	CuZn39Pb2 (Ms58)	2.0380	C37700
		N.3.2	CuZn, CuSnZn	43500 lbf/in ² / 90 HB	2.0331	CuZn15	2.0331	C34000
		N.3.3	CuSn, lead-free copper and electrolytic copper	49300 lbf/in ² / 100 HB	2.0060	E-Cu57		
	Magnesium alloys	N.4.1	Magnesium and magnesium alloys	70 HB	3.5612	MgAl6Zn		
	S	Heat-resistant alloys	S.1.1	Fe - basis Annealed	98600 lbf/in ² / 200 HB	1.4864	X12NiCrSi 36-16	1.4864
S.1.2			137800 lbf/in ² / 280 HB		1.4980	X6NiCrTiMoVB25-15-2	1.4980	S66286
S.2.1			Ni or Co basis Annealed	121800 lbf/in ² / 250 HB	2.4856	Inconel 625	2.4812	Hastelloy C
S.2.2				171100 lbf/in ² / 350 HB	2.4952	Nimonic 80A	2.4668	Inconel 718
S.2.3				Cast	156600 lbf/in ² / 320 HB	2.4674	Nimocast PK24	2.4670
Titanium alloys		S.3.1	Pure titanium	5800 lbf/in ²	3.7025	Ti99,8		
		S.3.2	Alpha + beta alloys	152300 lbf/in ²	3.7165	TiAl6V4		
	S.3.3	Beta alloys	203100 lbf/in ² / 410 HB	Ti555.3	Ti-5Al-5V-5Mo-3Cr			
H	Hardened steel	H.1.1	Hardened and tempered	46-55 HRC				
		H.1.2	Hardened and tempered	56-60 HRC				
		H.1.3	Hardened and tempered	61-65 HRC				
		H.1.4	Hardened and tempered	66-70 HRC				
	Chilled iron	H.2.1	Cast	400 HB				
	Hardened cast iron	H.3.1	Hardened and tempered	55 HRC				
O	Non-metal materials	O.1.1	Plastics, duroplastic	≤ 21800 lbf/in ²				
		O.1.2	Plastics, thermoplastic	≤ 14500 lbf/in ²				
		O.2.1	Aramid fibre-reinforced	≤ 145000 lbf/in ²				
		O.2.2	Glass/carbon-fibre reinforced	≤ 145000 lbf/in ²				
		O.3.1	Graphite					

* Tensile Strength at Rupture (Rm)

Cutting data standard values – WTX – UNI, WTX – Quattro

Index	WTX-UNI 10 603 ... / 10 604 ... / 10 605 ... / 10 609 ... / 10 610 ... / 10 611 ... – WTX-Quattro 10 612 ...											
	With through coolant v_c (m/min)	3xD / 5xD										
		$\varnothing \leq 3$	$\varnothing > 3-4$	$\varnothing > 4-5$	$\varnothing > 5-6$	$\varnothing > 6-8$	$\varnothing > 8-10$	$\varnothing > 10-12$	$\varnothing > 12-14$	$\varnothing > 14-16$	$\varnothing > 16-18$	$\varnothing > 18-20$
		f (mm/rev)										
P.1.1	155	0,16	0,19	0,21	0,24	0,29	0,34	0,39	0,44	0,47	0,50	0,52
P.1.2	130	0,14	0,17	0,19	0,21	0,26	0,31	0,35	0,40	0,42	0,44	0,47
P.1.3	130	0,14	0,17	0,19	0,21	0,26	0,31	0,35	0,40	0,42	0,44	0,47
P.1.4	130	0,14	0,17	0,19	0,21	0,26	0,31	0,35	0,40	0,42	0,44	0,47
P.1.5	130	0,14	0,17	0,19	0,21	0,26	0,31	0,35	0,40	0,42	0,44	0,47
P.2.1	140	0,16	0,19	0,21	0,24	0,29	0,34	0,39	0,44	0,47	0,50	0,52
P.2.2	130	0,14	0,17	0,19	0,21	0,26	0,31	0,35	0,40	0,42	0,44	0,47
P.2.3	130	0,14	0,17	0,19	0,21	0,26	0,31	0,35	0,40	0,42	0,44	0,47
P.2.4	110	0,14	0,17	0,19	0,21	0,26	0,31	0,35	0,40	0,42	0,44	0,47
P.3.1	125	0,14	0,17	0,19	0,21	0,26	0,31	0,35	0,40	0,42	0,44	0,47
P.3.2	105	0,14	0,17	0,19	0,21	0,26	0,31	0,35	0,40	0,42	0,44	0,47
P.3.3	70	0,14	0,17	0,19	0,21	0,26	0,31	0,35	0,40	0,42	0,44	0,47
P.4.1	60	0,07	0,08	0,09	0,10	0,12	0,13	0,15	0,17	0,18	0,19	0,20
P.4.2	40	0,07	0,08	0,09	0,10	0,12	0,13	0,15	0,17	0,18	0,19	0,20
M.1.1	50	0,07	0,08	0,09	0,10	0,12	0,13	0,15	0,17	0,18	0,19	0,20
M.2.1	50	0,07	0,08	0,09	0,10	0,12	0,13	0,15	0,17	0,18	0,19	0,20
M.3.1	50	0,07	0,08	0,09	0,10	0,12	0,13	0,15	0,17	0,18	0,19	0,20
K.1.1	130	0,19	0,22	0,25	0,28	0,34	0,40	0,46	0,52	0,55	0,58	0,61
K.1.2	120	0,19	0,22	0,25	0,28	0,34	0,40	0,46	0,52	0,55	0,58	0,61
K.2.1	120	0,14	0,17	0,19	0,21	0,26	0,31	0,35	0,40	0,42	0,44	0,47
K.2.2	110	0,14	0,17	0,19	0,21	0,26	0,31	0,35	0,40	0,42	0,44	0,47
K.3.1	120	0,14	0,17	0,19	0,21	0,26	0,31	0,35	0,40	0,42	0,44	0,47
K.3.2	110	0,14	0,17	0,19	0,21	0,26	0,31	0,35	0,40	0,42	0,44	0,47
N.1.1												
N.1.2												
N.2.1												
N.2.2												
N.2.3												
N.3.1												
N.3.2												
N.3.3												
N.4.1												
S.1.1												
S.1.2												
S.2.1												
S.2.2												
S.2.3												
S.3.1												
S.3.2												
S.3.3												
H.1.1	35	0,07	0,08	0,09	0,10	0,12	0,13	0,15	0,17	0,18	0,19	0,20
H.1.2												
H.1.3												
H.1.4												
H.2.1	35	0,07	0,08	0,09	0,10	0,12	0,13	0,15	0,17	0,18	0,19	0,20
H.3.1	35	0,07	0,08	0,09	0,10	0,12	0,13	0,15	0,17	0,18	0,19	0,20
O.1.1												
O.1.2												
O.2.1												
O.2.2												
O.3.1												



The cutting data depends extremely on the external conditions, the material and machine type. The indicated values are possible values which have to be increased or reduced according to the application conditions.

Cutting data standard values – WTX – UNI

Index	WTX-UNI 10 600 ... / 10 601 ... / 10 602 ... / 10 606 ... / 10 607 ... / 10 608 ...											
	3xD / 5xD											
	without IK	Ø ≤3	Ø >3-4	Ø >4-5	Ø >5-6	Ø >6-8	Ø >8-10	Ø >10-12	Ø >12-14	Ø >14-16	Ø >16-18	Ø >18-20
	v _c (m/min)	f (mm/rev)										
P.1.1	125	0,16	0,19	0,21	0,24	0,29	0,34	0,39	0,44	0,47	0,50	0,52
P.1.2	110	0,14	0,17	0,19	0,21	0,26	0,31	0,35	0,40	0,42	0,44	0,47
P.1.3	110	0,14	0,17	0,19	0,21	0,26	0,31	0,35	0,40	0,42	0,44	0,47
P.1.4	105	0,14	0,17	0,19	0,21	0,26	0,31	0,35	0,40	0,42	0,44	0,47
P.1.5	105	0,14	0,17	0,19	0,21	0,26	0,31	0,35	0,40	0,42	0,44	0,47
P.2.1	110	0,16	0,19	0,21	0,24	0,29	0,34	0,39	0,44	0,47	0,50	0,52
P.2.2	105	0,14	0,17	0,19	0,21	0,26	0,31	0,35	0,40	0,42	0,44	0,47
P.2.3	105	0,14	0,17	0,19	0,21	0,26	0,31	0,35	0,40	0,42	0,44	0,47
P.2.4	90	0,14	0,17	0,19	0,21	0,26	0,31	0,35	0,40	0,42	0,44	0,47
P.3.1	100	0,14	0,17	0,19	0,21	0,26	0,31	0,35	0,40	0,42	0,44	0,47
P.3.2	85	0,14	0,17	0,19	0,21	0,26	0,31	0,35	0,40	0,42	0,44	0,47
P.3.3	55	0,14	0,17	0,19	0,21	0,26	0,31	0,35	0,40	0,42	0,44	0,47
P.4.1												
P.4.2												
M.1.1												
M.2.1												
M.3.1												
K.1.1	110	0,19	0,22	0,25	0,28	0,34	0,40	0,46	0,52	0,55	0,58	0,61
K.1.2	95	0,19	0,22	0,25	0,28	0,34	0,40	0,46	0,52	0,55	0,58	0,61
K.2.1	95	0,14	0,17	0,19	0,21	0,26	0,31	0,35	0,40	0,42	0,44	0,47
K.2.2	90	0,14	0,17	0,19	0,21	0,26	0,31	0,35	0,40	0,42	0,44	0,47
K.3.1	95	0,14	0,17	0,19	0,21	0,26	0,31	0,35	0,40	0,42	0,44	0,47
K.3.2	90	0,14	0,17	0,19	0,21	0,26	0,31	0,35	0,40	0,42	0,44	0,47
N.1.1												
N.1.2												
N.2.1												
N.2.2												
N.2.3												
N.3.1												
N.3.2												
N.3.3												
N.4.1												
S.1.1												
S.1.2												
S.2.1												
S.2.2												
S.2.3												
S.3.1												
S.3.2												
S.3.3												
H.1.1	30	0,07	0,08	0,09	0,10	0,12	0,13	0,15	0,17	0,18	0,19	0,20
H.1.2												
H.1.3												
H.1.4												
H.2.1	30	0,07	0,08	0,09	0,10	0,12	0,13	0,15	0,17	0,18	0,19	0,20
H.3.1	30	0,07	0,08	0,09	0,10	0,12	0,13	0,15	0,17	0,18	0,19	0,20
O.1.1												
O.1.2												
O.2.1												
O.2.2												
O.3.1												



The cutting data depends extremely on the external conditions, the material and machine type. The indicated values are possible values which have to be increased or reduced according to the application conditions.

Cutting data standard values – WTX – Quattro

Index	WTX-Quattro 10 613 ... / 10 614 ...											
	With through coolant v_c (m/min)	8xD / 12xD										
		$\varnothing \leq 3$	$\varnothing > 3-4$	$\varnothing > 4-5$	$\varnothing > 5-6$	$\varnothing > 6-8$	$\varnothing > 8-10$	$\varnothing > 10-12$	$\varnothing > 12-14$	$\varnothing > 14-16$	$\varnothing > 16-18$	$\varnothing > 18-20$
		f (mm/rev)										
P.1.1	120	0,13	0,16	0,18	0,20	0,25	0,30	0,34	0,39	0,42	0,44	0,47
P.1.2	100	0,11	0,13	0,15	0,18	0,22	0,26	0,31	0,35	0,36	0,38	0,40
P.1.3	100	0,11	0,13	0,15	0,18	0,22	0,26	0,31	0,35	0,36	0,38	0,40
P.1.4	100	0,11	0,13	0,15	0,18	0,22	0,26	0,31	0,35	0,36	0,38	0,40
P.1.5	100	0,11	0,13	0,15	0,18	0,22	0,26	0,31	0,35	0,36	0,38	0,40
P.2.1	105	0,13	0,16	0,18	0,20	0,25	0,30	0,34	0,39	0,42	0,44	0,47
P.2.2	100	0,11	0,13	0,15	0,18	0,22	0,26	0,31	0,35	0,36	0,38	0,40
P.2.3	100	0,11	0,13	0,15	0,18	0,22	0,26	0,31	0,35	0,36	0,38	0,40
P.2.4	80	0,11	0,13	0,15	0,18	0,22	0,26	0,31	0,35	0,36	0,38	0,40
P.3.1	95	0,11	0,13	0,15	0,18	0,22	0,26	0,31	0,35	0,36	0,38	0,40
P.3.2	75	0,11	0,13	0,15	0,18	0,22	0,26	0,31	0,35	0,36	0,38	0,40
P.3.3												
P.4.1	50	0,06	0,08	0,09	0,10	0,13	0,15	0,18	0,20	0,22	0,23	0,24
P.4.2	35	0,06	0,08	0,09	0,10	0,13	0,15	0,18	0,20	0,22	0,23	0,24
M.1.1	40	0,06	0,08	0,09	0,10	0,13	0,15	0,18	0,20	0,22	0,23	0,24
M.2.1	40	0,06	0,08	0,09	0,10	0,13	0,15	0,18	0,20	0,22	0,23	0,24
M.3.1	40	0,06	0,08	0,09	0,10	0,13	0,15	0,18	0,20	0,22	0,23	0,24
K.1.1	100	0,15	0,18	0,20	0,23	0,29	0,34	0,40	0,45	0,49	0,52	0,55
K.1.2	85	0,15	0,18	0,20	0,23	0,29	0,34	0,40	0,45	0,49	0,52	0,55
K.2.1	85	0,11	0,13	0,15	0,18	0,22	0,26	0,31	0,35	0,36	0,38	0,40
K.2.2	80	0,11	0,13	0,15	0,18	0,22	0,26	0,31	0,35	0,36	0,38	0,40
K.3.1	85	0,11	0,13	0,15	0,18	0,22	0,26	0,31	0,35	0,36	0,38	0,40
K.3.2	80	0,11	0,13	0,15	0,18	0,22	0,26	0,31	0,35	0,36	0,38	0,40
N.1.1												
N.1.2												
N.2.1												
N.2.2												
N.2.3												
N.3.1												
N.3.2												
N.3.3												
N.4.1												
S.1.1												
S.1.2												
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H.2.1												
H.3.1												
O.1.1												
O.1.2												
O.2.1												
O.2.2												
O.3.1												



The cutting data depends extremely on the external conditions, the material and machine type. The indicated values are possible values which have to be increased or reduced according to the application conditions.

Cutting data standard values – WTX – Deep UNI

Index	11 116 ...									11 120 ...								
	With through coolant	16xD								With through coolant	20xD							
		∅ ≤3	∅ >3-4	∅ >4-5	∅ >5-6	∅ >6-8	∅ >8-10	∅ >10-12	∅ >12-14		∅ ≤3	∅ >3-4	∅ >4-5	∅ >5-6	∅ >6-8	∅ >8-10	∅ >10-12	∅ >12-14
	v _c (m/min)	f (mm/rev)								v _c (m/min)	f (mm/rev)							
P.1.1	110	0,13	0,16	0,18	0,20	0,25	0,30	0,34	0,39	110	0,13	0,16	0,18	0,20	0,25	0,30	0,34	0,39
P.1.2	105	0,13	0,16	0,18	0,20	0,25	0,30	0,34	0,39	100	0,13	0,16	0,18	0,20	0,25	0,30	0,34	0,39
P.1.3	105	0,13	0,16	0,18	0,20	0,25	0,30	0,34	0,39	100	0,13	0,16	0,18	0,20	0,25	0,30	0,34	0,39
P.1.4	100	0,11	0,13	0,15	0,16	0,20	0,24	0,27	0,31	100	0,11	0,13	0,15	0,16	0,20	0,24	0,27	0,31
P.1.5	100	0,11	0,13	0,15	0,16	0,20	0,24	0,27	0,31	100	0,11	0,13	0,15	0,16	0,20	0,24	0,27	0,31
P.2.1	105	0,13	0,16	0,18	0,20	0,25	0,30	0,34	0,39	105	0,13	0,16	0,18	0,20	0,25	0,30	0,34	0,39
P.2.2	105	0,11	0,13	0,15	0,16	0,20	0,24	0,27	0,31	100	0,11	0,13	0,15	0,16	0,20	0,24	0,27	0,31
P.2.3	100	0,11	0,13	0,15	0,16	0,20	0,24	0,27	0,31	95	0,11	0,13	0,15	0,16	0,20	0,24	0,27	0,31
P.2.4	80	0,11	0,13	0,15	0,16	0,20	0,24	0,27	0,31	80	0,11	0,13	0,15	0,16	0,20	0,24	0,27	0,31
P.3.1	100	0,11	0,13	0,15	0,16	0,20	0,24	0,27	0,31	100	0,11	0,13	0,15	0,16	0,20	0,24	0,27	0,31
P.3.2	85	0,11	0,13	0,15	0,16	0,20	0,24	0,27	0,31	80	0,11	0,13	0,15	0,16	0,20	0,24	0,27	0,31
P.3.3																		
P.4.1	80	0,08	0,10	0,11	0,13	0,16	0,19	0,23	0,26	75	0,08	0,10	0,11	0,13	0,16	0,19	0,23	0,26
P.4.2	55	0,08	0,10	0,11	0,13	0,16	0,19	0,23	0,26	55	0,08	0,10	0,11	0,13	0,16	0,19	0,23	0,26
M.1.1	60	0,08	0,10	0,11	0,13	0,16	0,19	0,23	0,26	60	0,08	0,10	0,11	0,13	0,16	0,19	0,23	0,26
M.2.1	60	0,08	0,10	0,11	0,13	0,16	0,19	0,23	0,26	60	0,08	0,10	0,11	0,13	0,16	0,19	0,23	0,26
M.3.1	60	0,08	0,10	0,11	0,13	0,16	0,19	0,23	0,26	60	0,08	0,10	0,11	0,13	0,16	0,19	0,23	0,26
K.1.1	115	0,19	0,22	0,25	0,28	0,34	0,40	0,46	0,52	110	0,19	0,22	0,25	0,28	0,34	0,40	0,46	0,52
K.1.2	110	0,19	0,22	0,25	0,28	0,34	0,40	0,46	0,52	105	0,19	0,22	0,25	0,28	0,34	0,40	0,46	0,52
K.2.1	115	0,16	0,19	0,21	0,24	0,29	0,34	0,39	0,44	110	0,16	0,19	0,21	0,24	0,29	0,34	0,39	0,44
K.2.2	110	0,16	0,19	0,21	0,24	0,29	0,34	0,39	0,44	105	0,16	0,19	0,21	0,24	0,29	0,34	0,39	0,44
K.3.1	115	0,16	0,19	0,21	0,24	0,29	0,34	0,39	0,44	110	0,16	0,19	0,21	0,24	0,29	0,34	0,39	0,44
K.3.2	110	0,16	0,19	0,21	0,24	0,29	0,34	0,39	0,44	105	0,16	0,19	0,21	0,24	0,29	0,34	0,39	0,44
N.1.1																		
N.1.2																		
N.2.1																		
N.2.2																		
N.2.3																		
N.3.1																		
N.3.2																		
N.3.3																		
N.4.1																		
S.1.1																		
S.1.2																		
S.2.1																		
S.2.2																		
S.2.3																		
S.3.1	40	0,03	0,04	0,05	0,06	0,08	0,10	0,12	0,14	35	0,03	0,04	0,05	0,06	0,08	0,10	0,12	0,14
S.3.2	30	0,03	0,04	0,05	0,06	0,08	0,10	0,12	0,14	25	0,03	0,04	0,05	0,06	0,08	0,10	0,12	0,14
S.3.3																		
H.1.1																		
H.1.2																		
H.1.3																		
H.1.4																		
H.2.1																		
H.3.1																		
O.1.1																		
O.1.2																		
O.2.1																		
O.2.2																		
O.3.1																		



The cutting data depends extremely on the external conditions, the material and machine type. The indicated values are possible values which have to be increased or reduced according to the application conditions.

Cutting data standard values – WTX – Deep UNI

Index	11 125 ...									11 130 ...								
	With through coolant	25xD								With through coolant	30xD							
		∅ ≤3	∅ >3-4	∅ >4-5	∅ >5-6	∅ >6-8	∅ >8-10	∅ >10-12	∅ >12-14		∅ ≤3	∅ >3-4	∅ >4-5	∅ >5-6	∅ >6-8	∅ >8-10	∅ >10-12	∅ >12-14
		f (mm/rev)									f (mm/rev)							
v _c (m/min)									v _c (m/min)									
P.1.1	100	0,12	0,14	0,15	0,17	0,21	0,25	0,28	0,32	95	0,12	0,14	0,15	0,17	0,21	0,25	0,28	0,32
P.1.2	90	0,12	0,14	0,15	0,17	0,21	0,25	0,28	0,32	85	0,12	0,14	0,15	0,17	0,21	0,25	0,28	0,32
P.1.3	90	0,12	0,14	0,15	0,17	0,21	0,25	0,28	0,32	85	0,12	0,14	0,15	0,17	0,21	0,25	0,28	0,32
P.1.4	90	0,08	0,10	0,11	0,13	0,16	0,19	0,23	0,26	85	0,08	0,10	0,11	0,13	0,16	0,19	0,23	0,26
P.1.5	90	0,08	0,10	0,11	0,13	0,16	0,19	0,23	0,26	85	0,08	0,10	0,11	0,13	0,16	0,19	0,23	0,26
P.2.1	95	0,12	0,14	0,15	0,17	0,21	0,25	0,28	0,32	90	0,12	0,14	0,15	0,17	0,21	0,25	0,28	0,32
P.2.2	90	0,08	0,10	0,11	0,13	0,16	0,19	0,23	0,26	85	0,08	0,10	0,11	0,13	0,16	0,19	0,23	0,26
P.2.3	85	0,08	0,10	0,11	0,13	0,16	0,19	0,23	0,26	80	0,08	0,10	0,11	0,13	0,16	0,19	0,23	0,26
P.2.4	70	0,08	0,10	0,11	0,13	0,16	0,19	0,23	0,26	70	0,08	0,10	0,11	0,13	0,16	0,19	0,23	0,26
P.3.1	90	0,08	0,10	0,11	0,13	0,16	0,19	0,23	0,26	80	0,08	0,10	0,11	0,13	0,16	0,19	0,23	0,26
P.3.2	70	0,08	0,10	0,11	0,13	0,16	0,19	0,23	0,26	70	0,08	0,10	0,11	0,13	0,16	0,19	0,23	0,26
P.3.3																		
P.4.1	70	0,06	0,07	0,09	0,10	0,13	0,16	0,19	0,22	65	0,06	0,07	0,09	0,10	0,13	0,16	0,19	0,22
P.4.2	50	0,06	0,07	0,09	0,10	0,13	0,16	0,19	0,22	45	0,06	0,07	0,09	0,10	0,13	0,16	0,19	0,22
M.1.1	55	0,06	0,07	0,09	0,10	0,13	0,16	0,19	0,22	50	0,06	0,07	0,09	0,10	0,13	0,16	0,19	0,22
M.2.1	55	0,06	0,07	0,09	0,10	0,13	0,16	0,19	0,22	50	0,06	0,07	0,09	0,10	0,13	0,16	0,19	0,22
M.3.1	55	0,06	0,07	0,09	0,10	0,13	0,16	0,19	0,22	50	0,06	0,07	0,09	0,10	0,13	0,16	0,19	0,22
K.1.1	100	0,19	0,22	0,25	0,28	0,34	0,40	0,46	0,52	90	0,19	0,22	0,25	0,28	0,34	0,40	0,46	0,52
K.1.2	95	0,19	0,22	0,25	0,28	0,34	0,40	0,46	0,52	85	0,19	0,22	0,25	0,28	0,34	0,40	0,46	0,52
K.2.1	100	0,13	0,16	0,18	0,20	0,25	0,30	0,34	0,39	80	0,13	0,16	0,18	0,20	0,25	0,30	0,34	0,39
K.2.2	95	0,13	0,16	0,18	0,20	0,25	0,30	0,34	0,39	85	0,13	0,16	0,18	0,20	0,25	0,30	0,34	0,39
K.3.1	100	0,13	0,16	0,18	0,20	0,25	0,30	0,34	0,39	90	0,13	0,16	0,18	0,20	0,25	0,30	0,34	0,39
K.3.2	95	0,13	0,16	0,18	0,20	0,25	0,30	0,34	0,39	85	0,13	0,16	0,18	0,20	0,25	0,30	0,34	0,39
N.1.1																		
N.1.2																		
N.2.1																		
N.2.2																		
N.2.3																		
N.3.1																		
N.3.2																		
N.3.3																		
N.4.1																		
S.1.1																		
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S.2.2																		
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S.3.3																		
H.1.1																		
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H.2.1																		
H.3.1																		
O.1.1																		
O.1.2																		
O.2.1																		
O.2.2																		
O.3.1																		



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Cutting data standard values – WTX – Deep UNI

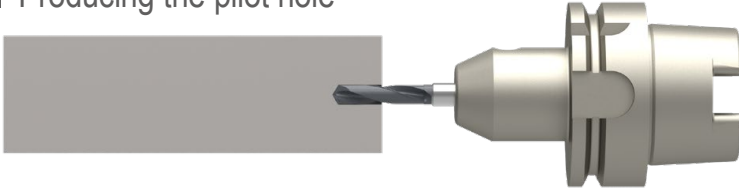
Index	11 140 ...						11 150 ...					
	With through coolant v_c (m/min)	40xD					With through coolant v_c (m/min)	50xD				
		$\emptyset \leq 3$	$\emptyset >3-4$	$\emptyset >4-5$	$\emptyset >5-6$	$\emptyset >6-8$		$\emptyset \leq 3$	$\emptyset >3-4$	$\emptyset >4-5$	$\emptyset >5-6$	$\emptyset >6-8$
		f (mm/rev)						f (mm/rev)				
P.1.1	80	0,08	0,10	0,11	0,13	0,16	70	0,08	0,10	0,11	0,13	0,16
P.1.2	70	0,08	0,10	0,11	0,13	0,16	55	0,08	0,10	0,11	0,13	0,16
P.1.3	70	0,08	0,10	0,11	0,13	0,16	55	0,08	0,10	0,11	0,13	0,16
P.1.4	70	0,06	0,07	0,09	0,10	0,13	55	0,06	0,07	0,09	0,10	0,13
P.1.5	70	0,06	0,07	0,09	0,10	0,13	55	0,06	0,07	0,09	0,10	0,13
P.2.1	75	0,08	0,10	0,11	0,13	0,16	65	0,08	0,10	0,11	0,13	0,16
P.2.2	70	0,06	0,07	0,09	0,10	0,13	60	0,06	0,07	0,09	0,10	0,13
P.2.3	65	0,06	0,07	0,09	0,10	0,13	55	0,06	0,07	0,09	0,10	0,13
P.2.4	55	0,06	0,07	0,09	0,10	0,13	50	0,06	0,07	0,09	0,10	0,13
P.3.1	65	0,06	0,07	0,09	0,10	0,13	55	0,06	0,07	0,09	0,10	0,13
P.3.2	55	0,06	0,07	0,09	0,10	0,13	55	0,06	0,07	0,09	0,10	0,13
P.3.3												
P.4.1	55	0,04	0,05	0,06	0,08	0,10	50	0,04	0,05	0,06	0,08	0,10
P.4.2	40	0,04	0,05	0,06	0,08	0,10	35	0,04	0,05	0,06	0,08	0,10
M.1.1	45	0,04	0,05	0,06	0,08	0,10	40	0,04	0,05	0,06	0,08	0,10
M.2.1	45	0,04	0,05	0,06	0,08	0,10	40	0,04	0,05	0,06	0,08	0,10
M.3.1	45	0,04	0,05	0,06	0,08	0,10	40	0,04	0,05	0,06	0,08	0,10
K.1.1	80	0,13	0,16	0,18	0,20	0,25	65	0,13	0,16	0,18	0,20	0,25
K.1.2	75	0,13	0,16	0,18	0,20	0,25	60	0,13	0,16	0,18	0,20	0,25
K.2.1	80	0,11	0,13	0,15	0,16	0,20	65	0,11	0,13	0,15	0,16	0,20
K.2.2	75	0,11	0,13	0,15	0,16	0,20	60	0,11	0,13	0,15	0,16	0,20
K.3.1	80	0,11	0,13	0,15	0,16	0,20	65	0,11	0,13	0,15	0,16	0,20
K.3.2	75	0,11	0,13	0,15	0,16	0,20	60	0,11	0,13	0,15	0,16	0,20
N.1.1												
N.1.2												
N.2.1												
N.2.2												
N.2.3												
N.3.1												
N.3.2												
N.3.3												
N.4.1												
S.1.1												
S.1.2												
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S.2.2												
S.2.3												
S.3.1												
S.3.2												
S.3.3												
H.1.1												
H.1.2												
H.1.3												
H.1.4												
H.2.1												
H.3.1												
O.1.1												
O.1.2												
O.2.1												
O.2.2												
O.3.1												



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Strategy for the production of deep holes with the WTX – Deep UNI solid carbide deep hole drill

1 Producing the pilot hole



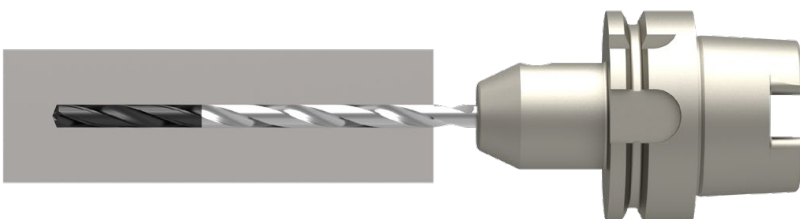
- ▲ For the pilot hole, we recommend a WTX drill 3xD / 5xD with the same nominal diameter
- ▲ The pilot hole should be 0.01–0.03 mm larger in diameter and at least 3xD deep.
- ▲ It is essential to ensure that the point angle of the pilot drill is bigger than the point angle of the deep hole drill.

2 Movement of the deep hole drill into the pilot hole



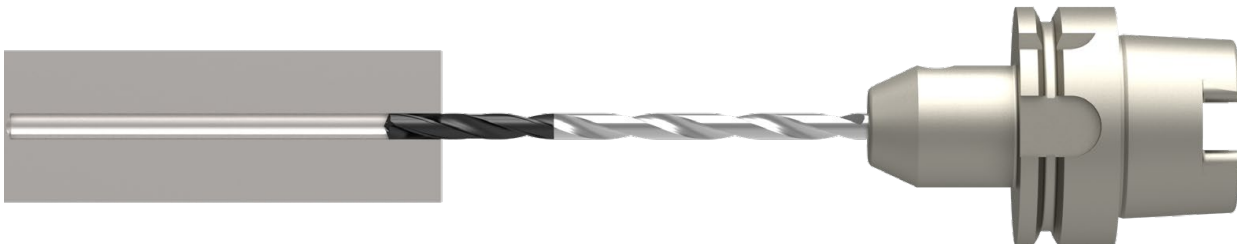
- ▲ Move the WTX – Deep UNI deep hole drill without coolant pressure and with reduced speed ($n = 200\text{--}300$ 1/min) into the pilot hole at a feed of $v_f = 1.000$ mm/min
- ▲ Approx. 2 mm before reaching the bottom of the hole (end of the pilot hole), stop the feed, switch on the coolant and wait for a short time until the recommended pressure is reached. Then increase the spindle speed to the recommended speed as smoothly as possible.

3 Drilling to required depth without pecking



- ▲ Reduce feed rate for cross holes and at drill exit by 50%

4 Retracting the drill



- ▲ Retract the drill to approximately the depth of the pilot hole.
- ▲ Reduce the rpm to a low speed ($n = 200\text{--}300$ 1/min).
- ▲ Use normal rapid feed ($V_f = 3.000$ mm/min) when exiting the hole.



For horizontal deep drilling operations from 40xD, move the deep hole drill into the hole counter-clockwise at 200 1/min. This prevents sagging of the deep hole drill.



It is essential to ensure that deep hole drills **never** run unsupported at full speed in the machine !



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Part of the Plansee Group

We reserve the right to make technical changes and product improvements.

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