Universal

Sustainable

High performance

Hassle-free drilling with the durable WTX drill series

High-performance machining in a range of materials with patented features

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

Tooling a Sustainable Future

ceratizit.com

CERATIZIT GROUP

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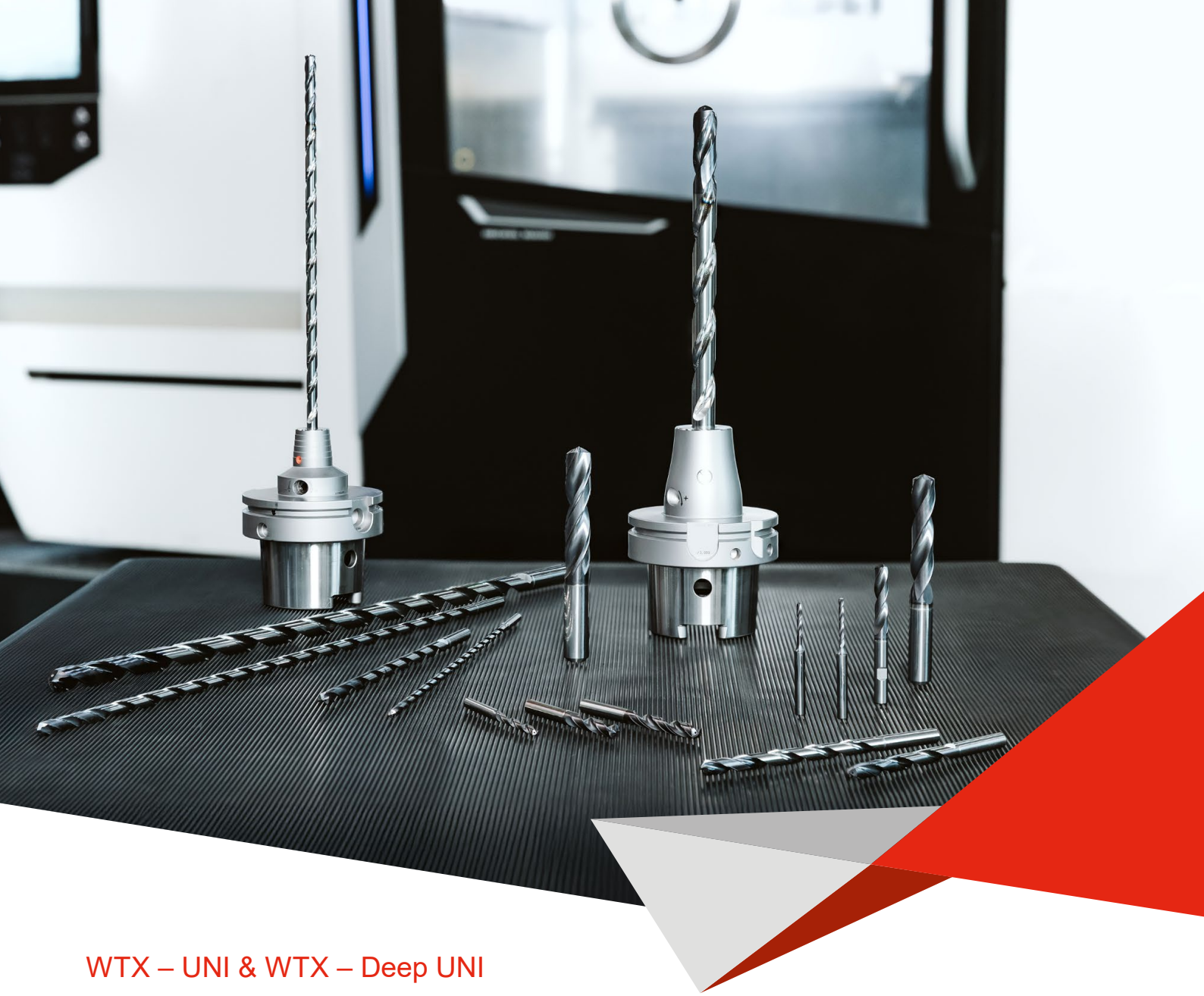
https://cuttingtools.ceratizit.com

On-site technical support

Your Local Technical Sales Engineer

Your customer number



WTX – UNI & WTX – Deep UNI

Powerful, universal drill series

Large drill portfolio for making precise holes in a wide variety of materials

WTX – UNI & WTX – Quattro:
High-performance, durable drilling with sustainable carbide and new geometries

WTX – Deep UNI:
Hassle-free deep-hole drilling thanks to improved tool stability

Whenever you need to drill precise holes in a wide variety of materials, including steel, stainless steel and cast iron, our WTX – UNI series is the reliable solution for all your machining requirements. Compared to the predecessor model, we've really optimised the cutting data and created an even wider range of drills. It's never been easier to make the most of a high level of flexibility, long service lives and sustainability.

upGRADE

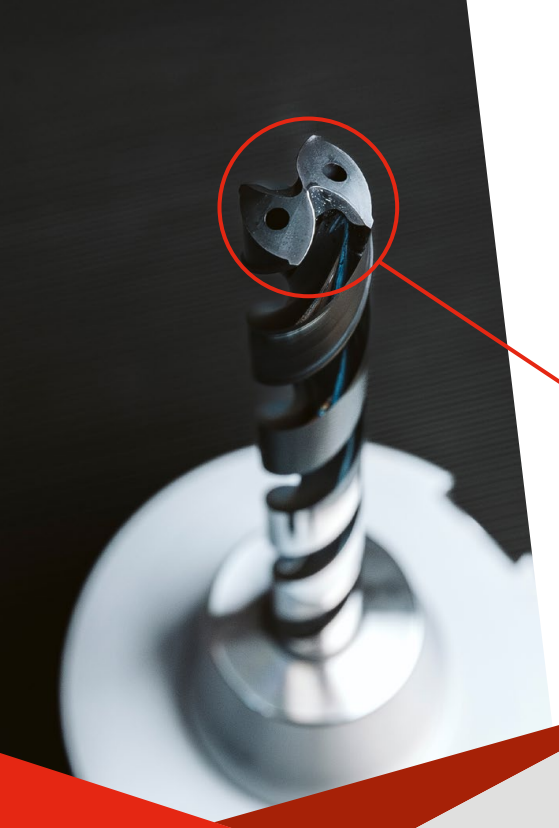
More sustainable carbide, high performance and long tool life

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

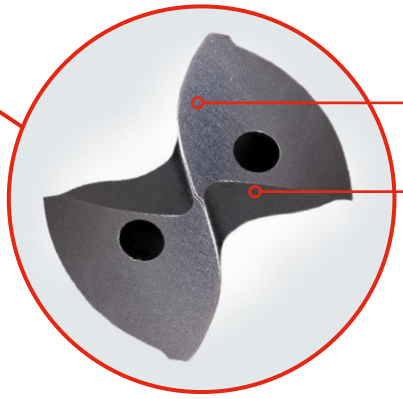
Full performance from 99% reprocessed materials

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



Cone-shaped finish

Patented
end geometry

+ Convex main cutting edge

- Very high stability
- Enables high cutting values
- Good self-centring capabilities

The **WTX – UNI** with two guide lands is available in 3xD and 5xD with or without thro' coolant in both cases, and in shank variants HA/HB/HE. The **WTX – Quattro** is always equipped with coolant holes and comes with four guide lands in the dimensions 5xD, 8xD and 12xD.

With the 3xD and 5xD variants in the new **WTX – UNI** and **WTX – Quattro** series, there are also high-performance pilot drills available which have been perfectly adapted for use in combination with the deep hole drills in the **WTX – Deep UNI** series.

upGRADE carbide CT-GS20Y
+ Sustainability

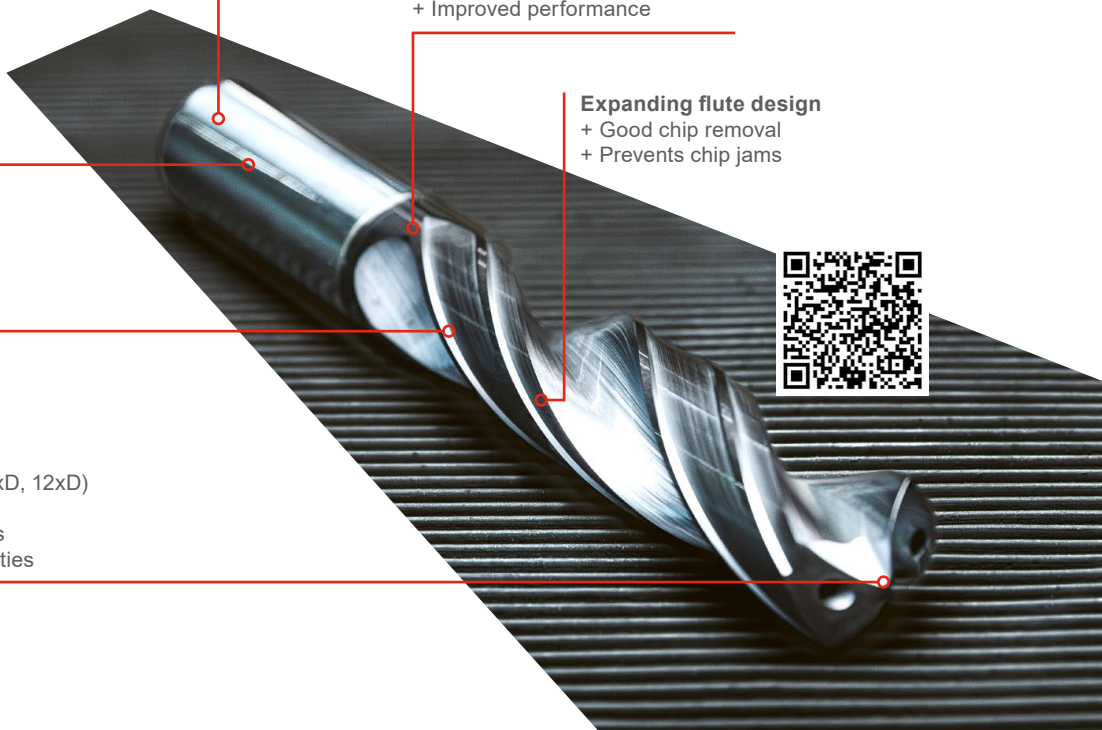
DPA74S DRAGONSKIN coating
+ Long tool life
+ Improved performance

With thro' coolant
3xD & 5xD
also without thro' coolant

Expanding flute design
+ Good chip removal
+ Prevents chip jams

4 guide lands (from 5xD)
+ Positional accuracy

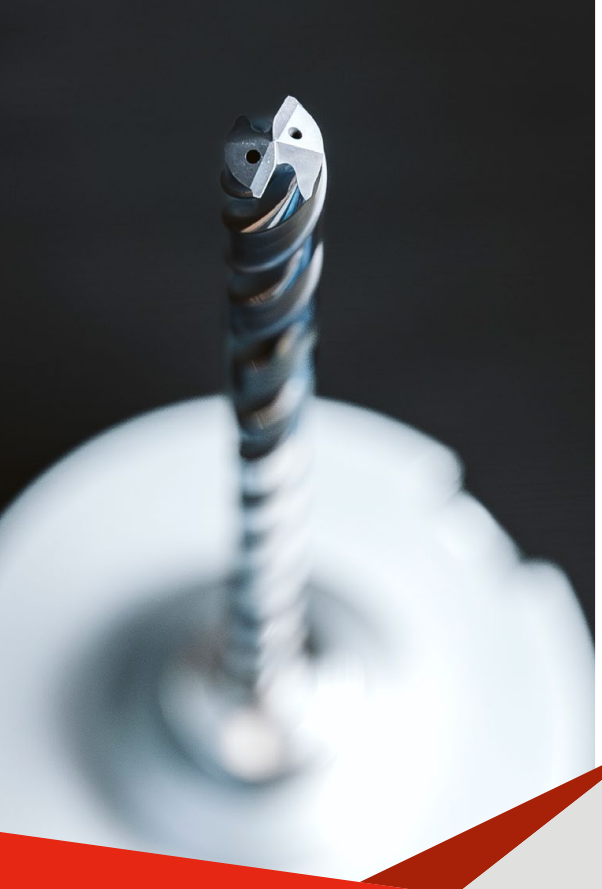
140° point angle (135° for 8xD, 12xD)
+ High tool stability
+ Enables high cutting values
+ Good self-centring capabilities



Hassle-free deep-hole drilling with the WTX – Deep UNI

Maximum reliability thanks to improved tool stability

After use, the tools can be reground to their original geometry and the original coating re-applied.



Precise holes and maximum process security with the optimised WTX – Deep UNI deep hole drill

The WTX – Deep UNI deep hole drill is highly reliable as its **new geometry** minimises tool breakage and rejects. The **polished chip spaces** with **expanding flute design** also provide an improved chip flow, permitting higher cutting values compared to the predecessor product. **Four guide lands** ensure high drilling and positional accuracy and reduce hole deviation to a minimum. The head is also coated with the innovative, **high-performance DPA74S coating**, which significantly increases tool life.

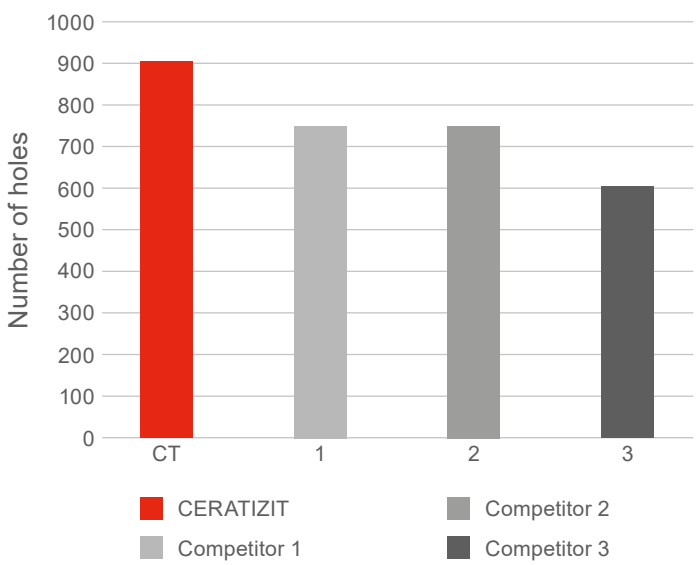
Powerful in a range of materials

P	M	K	N	S	H	O
●	●	●		○		

The WTX – Deep UNI series of deep hole drills can be used universally with a wide 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 held in stock covers hole depths of 16xD to 50xD and is available in the diameter range of Ø 3-14 mm or Ø 3-8 mm (40xD and 50xD).

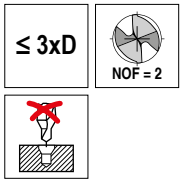
Competitor comparison: Tool life

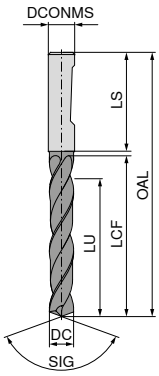
Test conditions	
Material	42CrMoS4ex
Material number	Similar to 1.7225
Tool	UNI deep hole drill
Size	30xD
Cutting data values	
v_c	85 m/min.
f	0.11 mm/rev
a_p	149 mm
Ø	5.0 mm
n	5412 min^{-1}
V_f	595 mm/min.
Cooling medium	Emulsion CPS-F 9%

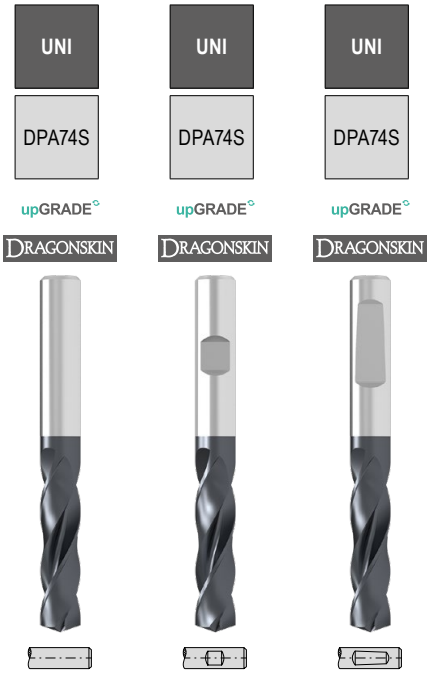


WTX – High Performance Drill, DIN 6537

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







SIG 140°
Solid carbide

SIG 140°
Solid carbide

SIG 140°
Solid carbide

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					
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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	
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5,300		6	66	28	20	36	05300		05300		05300	
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1) Not ex-stock

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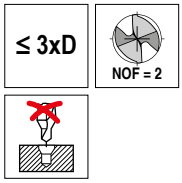
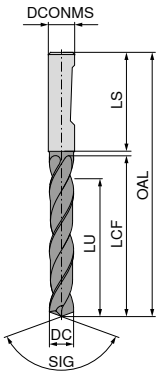
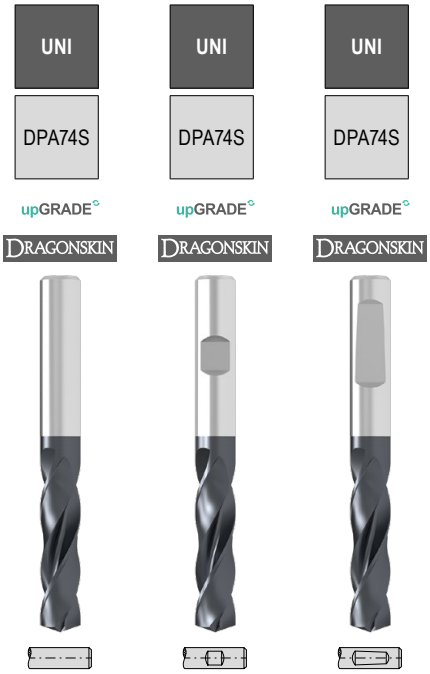
WTX – High Performance Drill, DIN 6537

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







SIG 140°
Solid carbide

SIG 140°
Solid carbide

SIG 140°
Solid carbide

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**		
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8,000		8	79	41	29	36	**08000**	**08000**	**08000**
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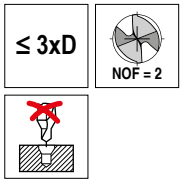
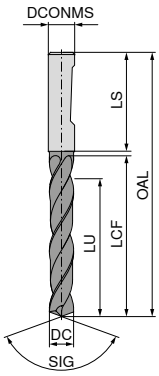
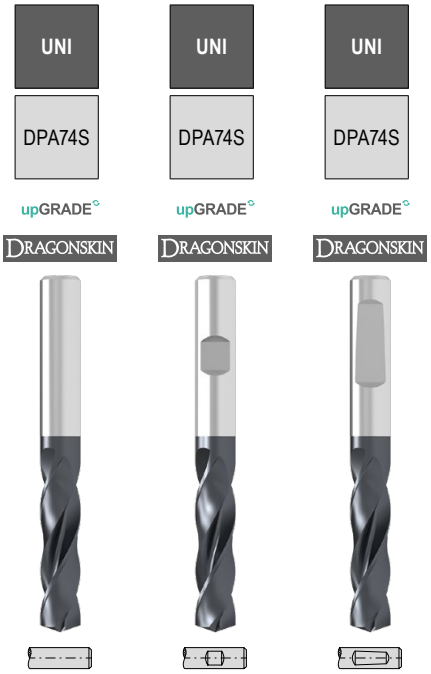
WTX – High Performance Drill, DIN 6537

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







SIG 140°
Solid carbide

SIG 140°
Solid carbide

SIG 140°
Solid carbide

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**		
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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**
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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)]
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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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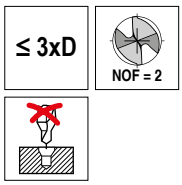
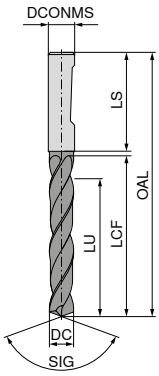
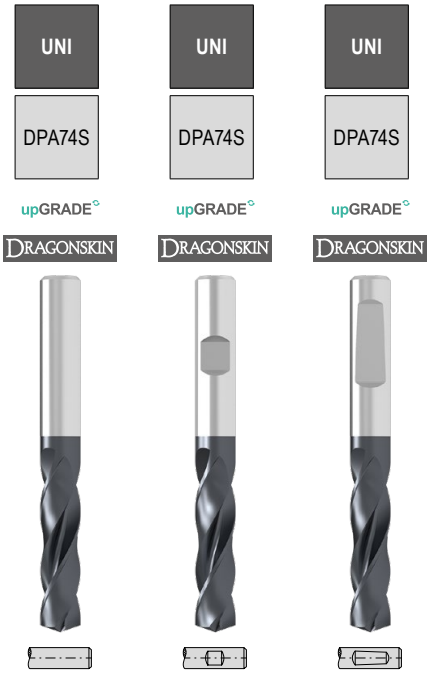
→ v_c Page 32

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







SIG 140°
Solid carbide

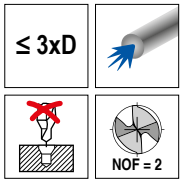
DC m7 mm	DC inch	DCONMS h6 mm	OAL mm	LCF mm	LU mm	LS mm	10 600 ...	10 601 ...	10 602 ...
12,150		14	107	60	43	45	12150	12150[1)]	12150[1)]
12,250		14	107	60	43	45	12250	12250[1)]	12250[1)]
12,500		14	107	60	43	45	12500	12500[1)]	12500[1)]
12,550		14	107	60	43	45	12550	12550[1)]	12550[1)]
12,700	1/2	14	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		
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		
P							●	●	●
M									
K							●	●	●
N									
S									
H							○	○	○
O									

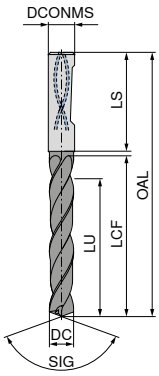
1) Not ex-stock

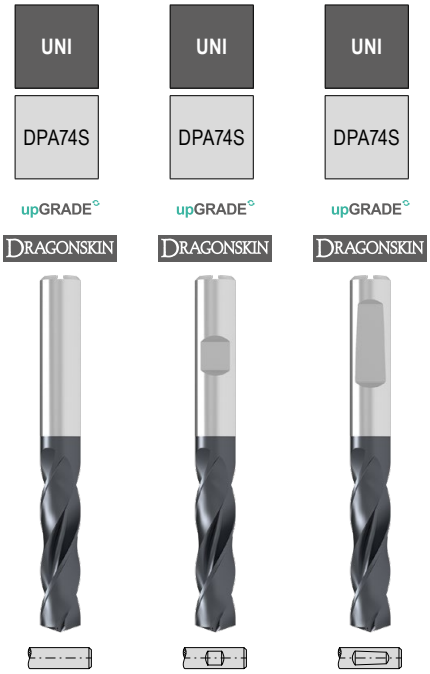
→ v_c Page 32

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







SIG 140°
Solid carbide

SIG 140°
Solid carbide

SIG 140°
Solid carbide

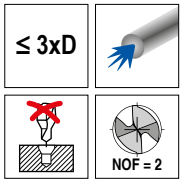
DC $_{m7}$ mm	DC inch	DCONMS $_{h6}$ mm	OAL mm	LCF mm	LU mm	LS mm	10 603 ...	10 604 ...	10 605 ...
3,000		6	62	20	14	36	03000	03000	03000
3,100		6	62	20	14	36	03100	03100 [1)]	03100 [1)]
3,150		6	62	20	14	36	03150	03150 [1)]	03150 [1)]
3,175	1/8	6	62	20	14	36	03175		
3,200		6	62	20	14	36	03200	03200	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	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		
P							●	●	●
M							●	●	●
K							●	●	●
N									
S									
H							○	○	○
O									

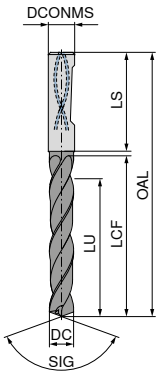
1) Not ex-stock

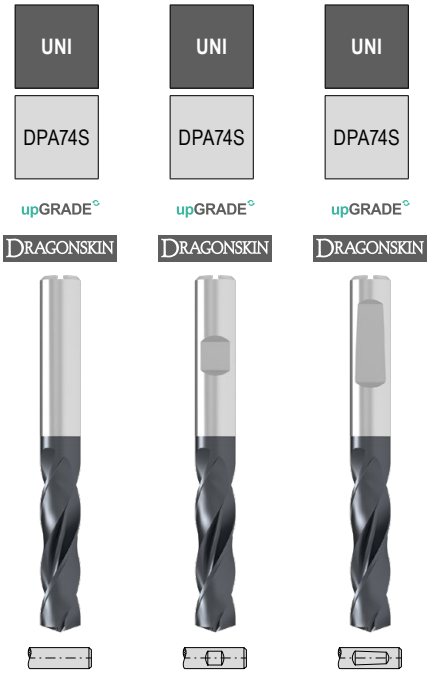
→ v_c Page 31

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







SIG 140°
Solid carbide

SIG 140°
Solid carbide

SIG 140°
Solid carbide

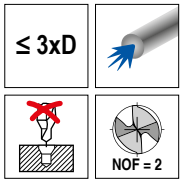
DC $_{m7}$ mm	DC inch	DCONMS $_{h6}$ mm	OAL mm	LCF mm	LU mm	LS mm	10 603 ...	10 604 ...	10 605 ...
5,600		6	66	28	20	36	05600	05600	05600[1)]
5,700		6	66	28	20	36	05700	05700[1)]	05700[1)]
5,750		6	66	28	20	36	05750	05750[1)]	05750[1)]
5,800		6	66	28	20	36	05800	05800[1)]	05800
5,900		6	66	28	20	36	05900	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		
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		
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	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		
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)]
P							●	●	●
M							●	●	●
K							●	●	●
N									
S									
H							○	○	○
O									

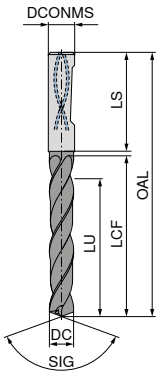
1) Not ex-stock

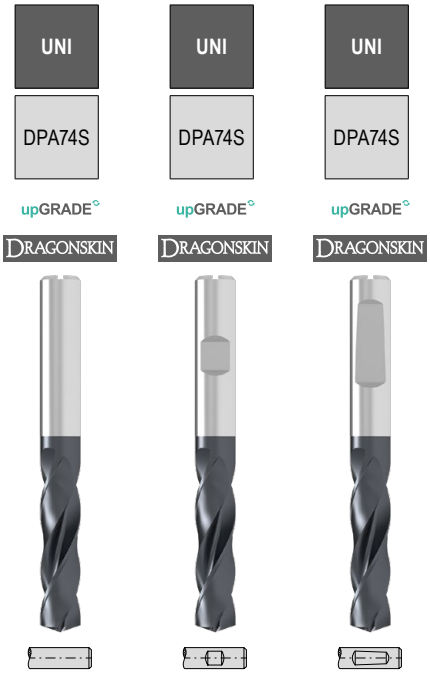
→ v_c Page 31

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







SIG 140°
Solid carbide

SIG 140°
Solid carbide

SIG 140°
Solid carbide

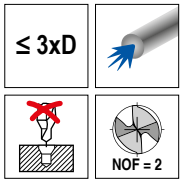
DC $_{m7}$ mm	DC inch	DCONMS $_{h6}$ mm	OAL mm	LCF mm	LU mm	LS mm	10 603 ...	10 604 ...	10 605 ...
9,000		10	89	47	35	40	09000	09000	09000
9,100		10	89	47	35	40	09100	09100	09100[1)]
9,200		10	89	47	35	40	09200	09200[1)]	09200[1)]
9,300		10	89	47	35	40	09300	09300	09300[1)]
9,350		10	89	47	35	40	09350	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
P							●	●	●
M							●	●	●
K							●	●	●
N									
S									
H							○	○	○
O									

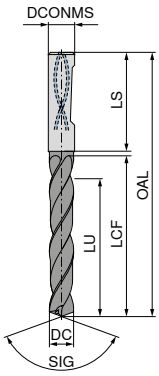
1) Not ex-stock

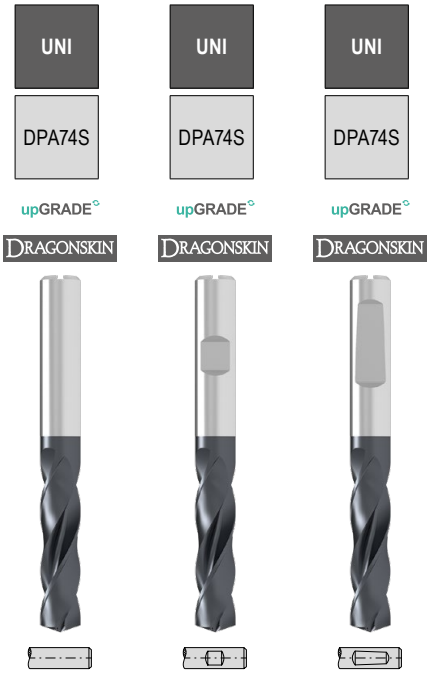
→ v_c Page 31

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







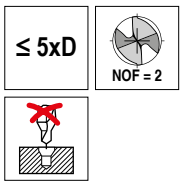
DC $_{m7}$ mm	DC inch	DCONMS $_{h6}$ mm	OAL mm	LCF mm	LU mm	LS mm	SIG 140° Solid carbide **10 603 ...**	SIG 140° Solid carbide **10 604 ...**	SIG 140° Solid carbide **10 605 ...**
12,550		14	107	60	43	45	12550	12550[1)]	12550[1)]
12,700	1/2	14	107	60	43	45	12700	12700[1)]	12700[1)]
12,800		14	107	60	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)]
P							●	●	●
M							●	●	●
K							●	●	●
N									
S									
H							○	○	○
O									

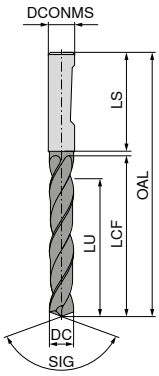
1) Not ex-stock

→ 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





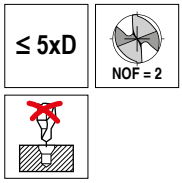
SIG 140°
Solid carbide

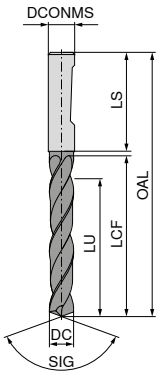
DC m7 mm	DC inch	DCONMS h6 mm	OAL mm	LCF mm	LU mm	LS mm	10 606 ...	10 607 ...	10 608 ...
3,00		6	66	28	23	36	03000	03000	03000
3,10		6	66	28	23	36	03100	03100	03100
3,15		6	66	28	23	36	03150	03150	03150
3,20		6	66	28	23	36	03200	03200	03200
3,25		6	66	28	23	36	03250	03250	03250
3,30		6	66	28	23	36	03300	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
P							●	●	●
M									
K							●	●	●
N									
S									
H							○	○	○
O									

→ 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





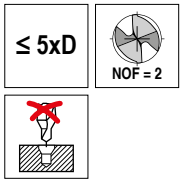
SIG 140°
Solid carbide

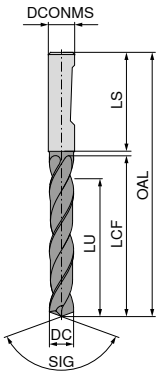
DC m7 mm	DC inch	DCONMS h6 mm	OAL mm	LCF mm	LU mm	LS mm	10 606 ...	10 607 ...	10 608 ...
5,95	15/64	6	82	44	35	36	05950	05950	05950
6,00		6	82	44	35	36	06000	06000	06000
6,10		8	91	53	43	36	06100	06100	06100
6,20		8	91	53	43	36	06200	06200	06200
6,40		8	91	53	43	36	06400	06400	06400
6,50		8	91	53	43	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
P							●	●	●
M									
K							●	●	●
N									
S									
H							○	○	○
O									

→ 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





SIG 140°
Solid carbide

SIG 140°
Solid carbide

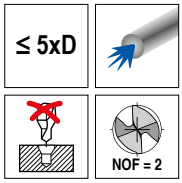
SIG 140°
Solid carbide

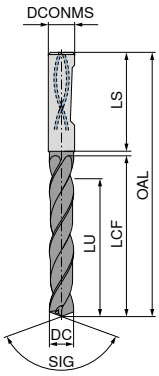
DC m7 mm	DC inch	DCONMS h6 mm	OAL mm	LCF mm	LU mm	LS mm	10 606 ...	10 607 ...	10 608 ...
11,30		12	118	71	56	45	11300	11300	11300
11,50		12	118	71	56	45	11500	11500	11500
11,80		12	118	71	56	45	11800	11800	11800
12,00		12	118	71	56	45	12000	12000	12000
12,15		14	124	77	60	45	12150	12150	12150
12,25		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
P							●	●	●
M									
K							●	●	●
N									
S									
H							○	○	○
O									

→ 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





SIG 140°
Solid carbide

SIG 140°
Solid carbide

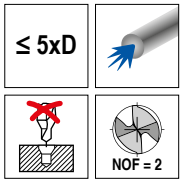
SIG 140°
Solid carbide

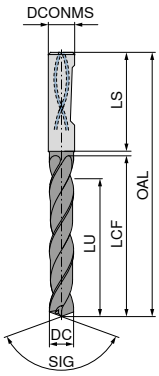
DC $_{m7}$ mm	DC inch	DCONMS $_{h6}$ mm	OAL mm	LCF mm	LU mm	LS mm	10 609 ...	10 610 ...	10 611 ...
3,000		6	66	28	23	36	03000	03000	03000
3,100		6	66	28	23	36	03100	03100	03100
3,150		6	66	28	23	36	03150	03150	03150
3,175	1/8	6	66	28	23	36	03175		
3,200		6	66	28	23	36	03200	03200	03200
3,250		6	66	28	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	5/32	6	74	36	29	36	03970		
4,000		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
P							●	●	●
M							●	●	●
K							●	●	●
N									
S									
H							○	○	○
O									

→ 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





SIG 140°
Solid carbide

SIG 140°
Solid carbide

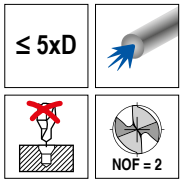
SIG 140°
Solid carbide

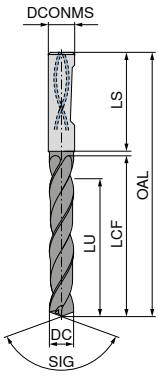
DC $_{m7}$ mm	DC inch	DCONMS $_{h6}$ mm	OAL mm	LCF mm	LU mm	LS mm	10 609 ...	10 610 ...	10 611 ...
5,200		6	82	44	35	36	05200	05200	05200
5,300		6	82	44	35	36	05300	05300	05300
5,400		6	82	44	35	36	05400	05400	05400
5,500		6	82	44	35	36	05500	05500	05500
5,550		6	82	44	35	36	05550	05550	05550
5,560	7/32	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
P							●	●	●
M							●	●	●
K							●	●	●
N									
S									
H							○	○	○
O									

→ 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





SIG 140°
Solid carbide

SIG 140°
Solid carbide

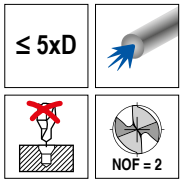
SIG 140°
Solid carbide

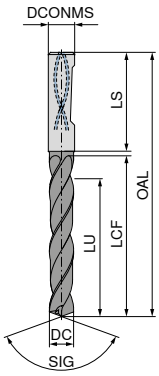
DC $_{m7}$ mm	DC inch	DCONMS $_{h6}$ mm	OAL mm	LCF mm	LU mm	LS mm	10 609 ...	10 610 ...	10 611 ...
7,800		8	91	53	43	36	07800	07800	07800
7,900		8	91	53	43	36	07900	07900	07900
7,940	5/16	8	91	53	43	36	07940		
8,000		8	91	53	43	36	08000	08000	08000
8,100		10	103	61	49	40	08100	08100	08100
8,200		10	103	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
P							●	●	●
M							●	●	●
K							●	●	●
N									
S									
H							○	○	○
O									

→ 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





SIG 140°
Solid carbide

SIG 140°
Solid carbide

SIG 140°
Solid carbide

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
P							●	●	●
M							●	●	●
K							●	●	●
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S									
H							○	○	○
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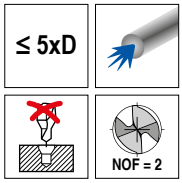
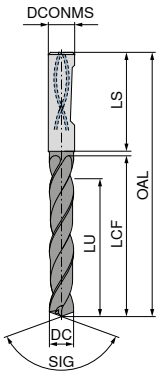
→ v_c Page 31

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





							SIG 140°		SIG 140°		SIG 140°	
							Solid carbide		Solid carbide		Solid carbide	
							10 609 ...		**10 610 ...**		**10 611 ...**	
DC $_{m7}$ **mm**	DC inch	DCONMS $_{h6}$ mm	OAL mm	LCF mm	LU mm	LS mm						
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**	
P							●		●		●	
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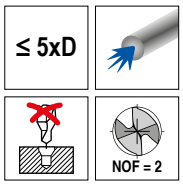
H							○		○		○	
O												

→ 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

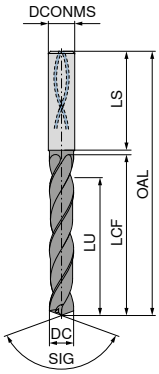


Quattro

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
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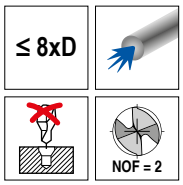
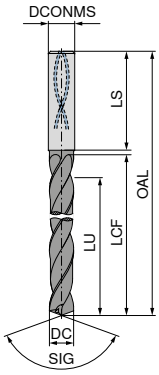


Quattro

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

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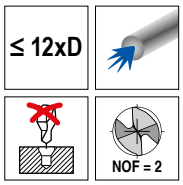
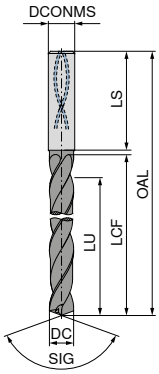


Quattro

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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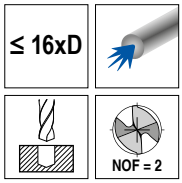
WTX – High performance deep hole drills

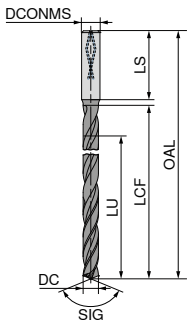
- ▲ up to 16xD without peck drilling
- ▲ pilot hole necessary
- ▲ excellent alignment precision
- ▲ secure chip evacuation



Deep UNI

DPA74S

DRAGONSKIN



SIG 138°

Solid carbide

11 116 ...

DC h7 mm	DC inch	DCONMS h6 mm	OAL mm	LCF mm	LU mm	LS 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

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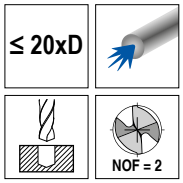
WTX – High performance deep hole drills

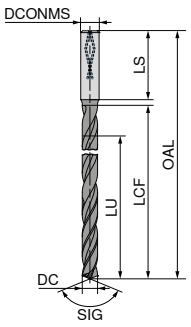
- ▲ up to 20xD without peck drilling
- ▲ pilot hole necessary
- ▲ excellent alignment precision
- ▲ secure chip evacuation



Deep UNI

DPA74S

DRAGONSKIN



SIG 138°

Solid carbide

11 120 ...

DC h7 mm	DCONMS h6 mm	OAL mm	LCF mm	LU mm	LS 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

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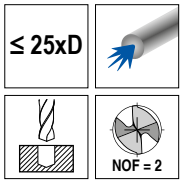
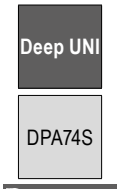
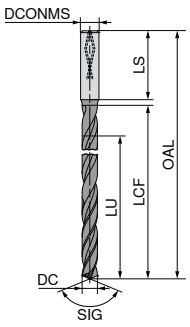
WTX – High performance deep hole drills

- ▲ 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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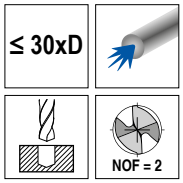
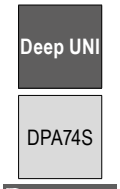
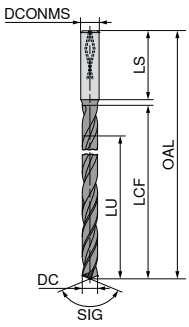
WTX – High performance deep hole drills

- ▲ 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

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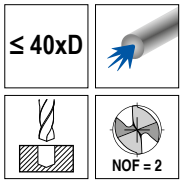
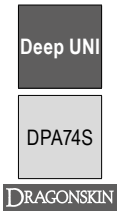
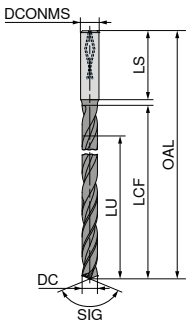
WTX – High performance deep hole drills

- ▲ 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**

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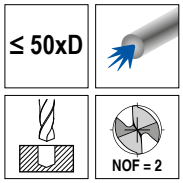
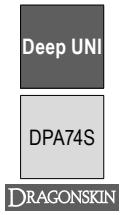
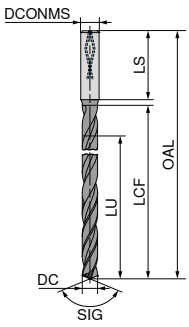
WTX – High performance deep hole drills

- ▲ 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**

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Material examples for cutting data tables

	Material sub-group	Index	Composition / Structure / Heat treatment		Tensile strength N/mm²* / HB / HRC	Material number	Material designation	Material number	Material designation
P	Unalloyed steel	P.1.1	< 0,15 % C	Annealed	420 N/mm² / 125 HB	1.0401	C15	1.1141	Ck15
		P.1.2	< 0,45 % C	Annealed	640 N/mm² / 190 HB	1.1191	C45E	1.0718	9SMnPb28
		P.1.3		Tempered	840 N/mm² / 250 HB	1.1191	C45E	1.0535	C55
		P.1.4	< 0,75 % C	Annealed	910 N/mm² / 270 HB	1.1223	C60R	1.0535	C55
		P.1.5		Tempered	1010 N/mm² / 300 HB	1.1223	C60R	1.0727	45S20
	Low-alloy steel	P.2.1		Annealed	610 N/mm² / 180 HB	1.7131	16MnCr5	1.6587	17CrNiMo6
		P.2.2		Tempered	930 N/mm² / 275 HB	1.7131	16MnCr5	1.6587	17CrNiMo6
		P.2.3		Tempered	1010 N/mm² / 300 HB	1.7225	42CrMo4	1.3505	100Cr6
		P.2.4		Tempered	1200 N/mm² / 375 HB	1.7225	42CrMo4	1.3505	100Cr6
	High-alloy steel and high-alloy tool steel	P.3.1		Annealed	680 N/mm² / 200 HB	1.4021	X20Cr13	1.4034	X46Cr13
		P.3.2		Hardened and tempered	1100 N/mm² / 300 HB	1.2343	X38CrMoV5-1	1.4034	X46Cr13
		P.3.3		Hardened and tempered	1300 N/mm² / 400 HB	1.2343	X38CrMoV5-1	1.4034	X46Cr13
	Stainless steel	P.4.1	Ferritic / martensitic	Annealed	680 N/mm² / 200 HB	1.4016	X6Cr17	1.2316	X36CrMo16
		P.4.2	Martensitic	Tempered	1010 N/mm² / 300 HB	1.4112	X90CrMoV18	1.2316	X36CrMo16
M	Stainless steel	M.1.1	Austenitic / austenitic-ferritic	Quenched	610 N/mm² / 180 HB	1.4301	X5CrNi18-10	1.4571	X6CrNiMoTi17-12-2
		M.2.1	Austenitic	Tempered	300 HB	1.4841	X15CrNiSi25-21	1.4539	X1NiCrMoCu25-20-5
		M.3.1	Austenitic / ferritic (Duplex)		780 N/mm² / 230 HB	1.4462	X2CrNiMoN22-5-3	1.4501	X2CrNiMoCuWN25-7-4
K	Grey cast iron	K.1.1	Pearlitic / ferritic		350 N/mm² / 180 HB	0.6010	GG-10	0.6025	GG-25
		K.1.2	Pearlitic (martensitic)		500 N/mm² / 260 HB	0.6030	GG-30	0.6045	GG-45
	Spherulitic graphite cast iron	K.2.1	Ferritic		540 N/mm² / 160 HB	0.7040	GGG-40	0.7060	GGG-60
		K.2.2	Pearlitic		845 N/mm² / 250 HB	0.7070	GGG-70	0.7080	GGG-80
	Malleable iron	K.3.1	Ferritic		440 N/mm² / 130 HB	0.8035	GTW-35-04	0.8045	GTW-45
		K.3.2	Pearlitic		780 N/mm² / 230 HB	0.8165	GTS-65-02	0.8170	GTS-70-02
N	Aluminium wrought alloy	N.1.1	Non-hardenable		60 HB	3.0255	Al99,5	3.3315	AlMg1
		N.1.2	Hardenable	Age-hardened	340 N/mm² / 100 HB	3.1355	AlCuMg2	3.2315	AlMgSi1
	Cast aluminium alloy	N.2.1	≤ 12 % Si, non-hardenable		250 N/mm² / 75 HB	3.2581	G-AlSi12	3.2163	G-AlSi9Cu3
		N.2.2	≤ 12 % Si, hardenable	Age-hardened	300 N/mm² / 90 HB	3.2134	G-AlSi5Cu1Mg	3.2373	G-AlSi9Mg
		N.2.3	> 12 % Si, non-hardenable		440 N/mm² / 130 HB		G-AlSi17Cu4Mg		G-AlSi18CuNiMg
	Copper and copper alloys (bronze/brass)	N.3.1	Free-machining alloys, PB > 1 %		375 N/mm² / 110 HB	2.0380	CuZn39Pb2 (Ms58)	2.0410	CuZn44Pb2
		N.3.2	CuZn, CuSnZn		300 N/mm² / 90 HB	2.0331	CuZn15	2.4070	CuZn28Sn1As
		N.3.3	CuSn, lead-free copper and electrolytic copper		340 N/mm² / 100 HB	2.0060	E-Cu57	2.0590	CuZn40Fe
	Magnesium alloys	N.4.1	Magnesium and magnesium alloys		70 HB	3.5612	MgAl6Zn	3.5312	MgAl3Zn
S	Heat-resistant alloys	S.1.1	Fe - basis	Annealed	680 N/mm² / 200 HB	1.4864	X12NiCrSi 36-16	1.4865	G-X40NiCrSi38-18
		S.1.2		Age-hardened	950 N/mm² / 280 HB	1.4980	X6NiCrTiMoVB25-15-2	1.4876	X10NiCrAlTi32-20
		S.2.1	Ni or Co basis	Annealed	840 N/mm² / 250 HB	2.4631	NiCr20TiAl (Nimonic80A)	3.4856	NiCr22Mo9Nb
		S.2.2		Age-hardened	1180 N/mm² / 350 HB	2.4668	NiCr19Nb5Mo3 (Inconel 718)	2.4955	NiFe25Cr20NbTi
		S.2.3		Cast	1080 N/mm² / 320 HB	2.4765	CoCr20W15Ni	1.3401	G-X120Mn12
	Titanium alloys	S.3.1	Pure titanium		400 N/mm²	3.7025	Ti99,8	3.7034	Ti99,7
		S.3.2	Alpha + beta alloys	Age-hardened	1050 N/mm² / 320 HB	3.7165	TiAl6V4	Ti-6246	Ti-6Al-2Sn-4Zr-6Mo
		S.3.3	Beta alloys		1400 N/mm² / 410 HB	Ti555.3	Ti-5Al-5V-5Mo-3Cr	R56410	Ti-10V-2Fe-3Al
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		≤ 150 N/mm²				
		O.1.2	Plastics, thermoplastic		≤ 100 N/mm²				
		O.2.1	Aramid fibre-reinforced		≤ 1000 N/mm²				
		O.2.2	Glass/carbon-fibre reinforced		≤ 1000 N/mm²				
		O.3.1	Graphite						

*** Tensile strength**

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 ...											
		3xD / 5xD										
	with through coolant	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	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 through coolant	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 ...											
	8xD / 12xD											
	with through coolant	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	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												
S.2.1												
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												

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 ...								
	16xD									20xD								
	with through coolant	Ø ≤3	Ø >3–4	Ø >4–5	Ø >5–6	Ø >6–8	Ø >8–10	Ø >10–12	Ø >12–14	with through coolant	Ø ≤3	Ø >3–4	Ø >4–5	Ø >5–6	Ø >6–8	Ø >8–10	Ø >10–12	Ø >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 ...								
	25xD									30xD								
	with through coolant	Ø ≤3	Ø >3–4	Ø >4–5	Ø >5–6	Ø >6–8	Ø >8–10	Ø >10–12	Ø >12–14	with through coolant	Ø ≤3	Ø >3–4	Ø >4–5	Ø >5–6	Ø >6–8	Ø >8–10	Ø >10–12	Ø >12–14
	v_c (m/min)	f (mm/rev)								v_c (m/min)	f (mm/rev)							
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																		
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S.3.2																		
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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.

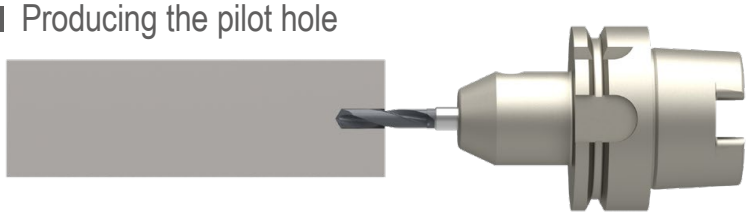
Cutting data standard values – WTX – Deep UNI

Index	11 140 ...						11 150 ...					
	40xD						50xD					
	with through coolant	Ø ≤3	Ø >3–4	Ø >4–5	Ø >5–6	Ø >6–8	with through coolant	Ø ≤3	Ø >3–4	Ø >4–5	Ø >5–6	Ø >6–8
	v_c (m/min)	f (mm/rev)					v_c (m/min)	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												
S.2.1												
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												

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.

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

1 Producing the pilot hole

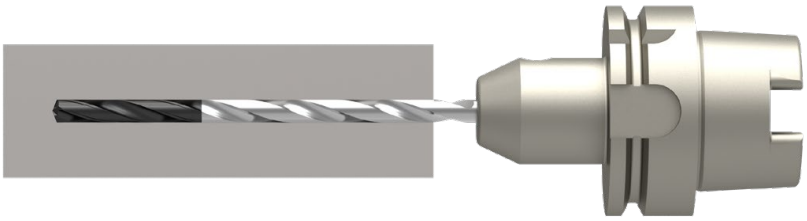


- For the pilot hole, we recommend a WTX drill 3xD / 5xD with the same nominal diameter
- The pilot hole should be 0.01–0.03 mm larger in diameter and at least 3xD deep.
- It is essential to ensure that the point angle of the pilot drill is bigger than the point angle of the deep hole drill.

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 = 200–300 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 = 200–300 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 !

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

CERATIZIT GROUP

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