

New products for machining technicians

NEW WPC – Change



≤ 3xD

≤ 5xD

- ▲ The new modular WPC Change drilling system with replaceable cutting heads and thro' coolant enables cost-effective machining of even large holes with the performance of solid carbide drills. The drilling system is also characterised by its easy handling.



- ▲ Replaceable cutting head type UNI with wear-resistant TPX74S coating for usage on steel and cast iron materials.

→ Page [104+105](#)



Solid drilling and bore machining

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2 Solid carbide drilling

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WNT \ Performance

Premium quality tools for high performance.

The premium quality tools from the **WNT Performance** product line have been designed for specific applications and are distinguished by their outstanding performance. If you make high demands on the performance of your production and want to achieve the very best results, we recommend the Premium tools in this product line.

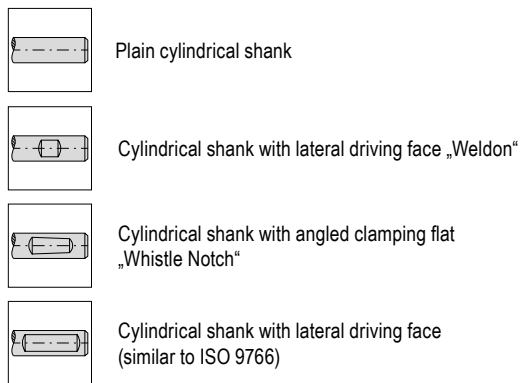
WNT \ Standard

Quality tools for standard applications.

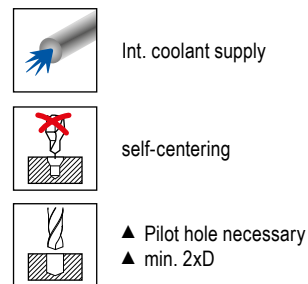
The quality tools of the **WNT Standard** product line are high quality, powerful and reliable and enjoy the highest trust of our customers worldwide. Tools from this product line are the first choice for many standard applications and guarantee optimal results.

Symbol explanation

Shank



Version



Tool types












HFDS An explanation of the tool types can be found on → **Page 158**.

- = Main Application
- = Extended application

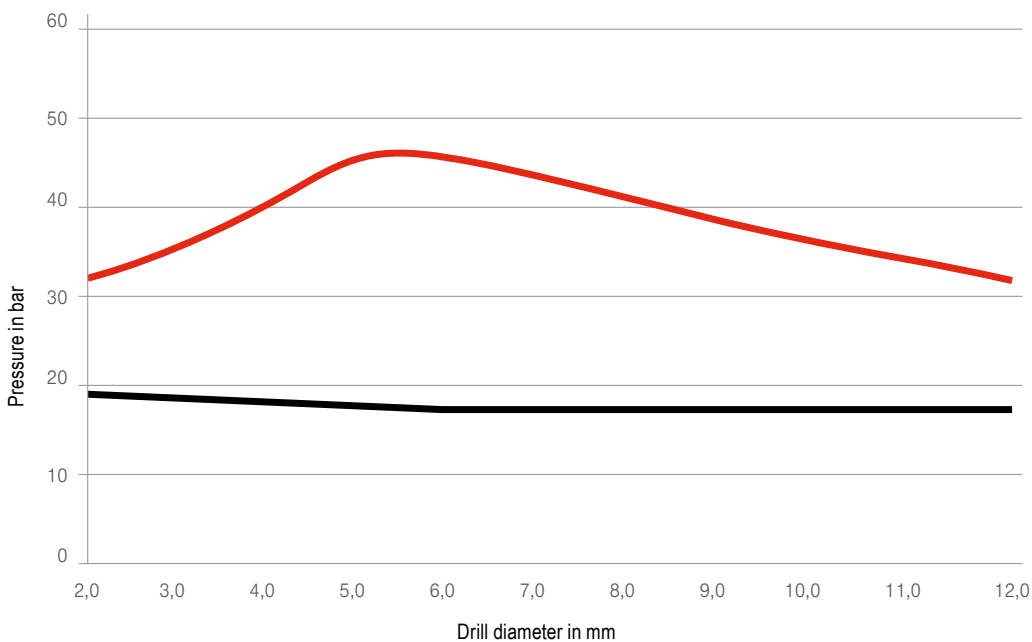


Recommended application – WTX Performance Tools


● = Main Application
○ = Extended application

WTX – Type		Solid drilling	Flat bottom hole	High-feed machining	High speed machining	Stack plate drilling	Drilling through a transverse hole	Angled hole entrance	Angled drill exit	Drilling a precise fit	deep holes	miniature holes
												
Monobloc Tool	WTX – UNI	●				●	●					
	WTX – Speed UNI	●			●	●						
	WTX – HFDS	●		●		●	●					
	WTX – Feed UNI	●		●		●	●	●	●			
	WTX – Speed VA	●			●							
	WTX – VA	●										
	WTX – Ti	●					●					
	WTX – AL	●										
	WTX – 180	●	●				●	●	●			
	WTX – Quattro 4F	●							○			
	WTX – Feed BR	●		●		○	○	○	○	●		
	WTX – H	●										
	WTX – TB	●									●	
	WTX – Micro	●									●	●
	WTX – Mini	●										●
Modular	WTX – Change Feed UNI	●		●				●	●			
	WTX – Change Drill heads	●										

Coolant diagram



— Recommended coolant pressure
— Minimum coolant Pressure

 Additional application criteria for WTX drills can be found on → [page 159](#).

Toolfinder

Product name	Tool type	Description	Int. coolant supply	Replaceable cutting heads	1xD	3xD	5xD	8xD	12xD	Video
Solid carbide drilling										
WTX	UNI	▲ highest performance for all materials up to 1200 N/mm ² ▲ suitable for volume production	✗ ✓			13-17 24-27	36-39 42-46	60-63		▶
	UNI	▲ Quality tool for standard applications ▲ Attractive price-performance ratio	✗ ✓			18-21 28-31	40 51-54	64	72	▶
WTX	Speed UNI	▲ High-performance drill for high cutting speeds ▲ Innovative DPX14S Dragonskin ▲ New cutting edge geometry	✓			24-27	42-46	60-63		▶
WTX	HFDS	▲ High-feed drill with four cutting edges ▲ Innovative cutting edge geometry enables maximum positioning accuracy ▲ Optimal cooling with four spiral coolant holes	✓			35	59			▶
WTX	Feed UNI	▲ High-feed drill with three cutting edges ▲ Suitable for difficult drilling applications ▲ High positioning accuracy	✓				58	68	73	▶
WTX	Quattro 4F	▲ with additional guide land for best alignment accuracy, concentricity and positional accuracy	✓				42-46	60-63	69-71	
WTX	180	▲ for inclined surfaces up to 45° and flat bottom holes	✓			34	57			
	N	▲ uncoated solid carbide drills ▲ universal application	✗			23	41			
Mini-drill										
WTX	MINI	▲ Available from Ø 0.1 mm ▲ Standard shank Ø 3.0 mm for use in heat shrink adapters	✗				78			
WTX	MICRO	▲ Universal high-performance micro drill ▲ Specialised geometry and coating ▲ WTX – Micro (5xD) pilot drill for deep hole twist drill	✓				79	79	80	▶
Drill Reamers										
WTX	Feed BR/BR100	▲ solid carbide high performance drill reamer ▲ excellent surface quality ▲ for blind and through holes	✓			83+85	84+85			
Stepped drills										
WTX	SB	▲ Solid carbide short step drill for core hole plus countersink for thread cutting and thread forming	✗ ✓			86 87				
NC Spot Drill										
	NC-A	▲ spiral fluted ▲ 90°, 120°, 142°	✗		88+89					
Centre drills										
	ZB	▲ spiral fluted ▲ 120°	✗		90					
Drill with replaceable cutting heads										
WTX	Change Feed UNI	▲ three-edged exchangeable head drill with solid carbide drill head type Feed UNI from Ø 14.0 mm to 32.0 mm ▲ universal application (steel, cast iron)	✓	91+92	93	93	94			▶
WTX	Change UNI	▲ exchangeable head drill with type UNI solid carbide drill head from Ø 12.0 mm to 41.0 mm ▲ for steels <700 N/mm ²	✓	95-100	101	101	102	102	103	▶
WTX	Change P	▲ exchangeable head drill with type P solid carbide drill head from Ø 12.0 mm to 41.0 mm ▲ for steels >700 N/mm ²	✓	95-100	101	101	102	102	103	▶
WPC	Change UNI	▲ Indexable insert drill with solid carbide indexable insert type UNI from Ø 14.0 to 30.0 mm ▲ Universal application on steel and cast iron materials	✓	104	105	105				
Exchangeable head NC spot drill										
	NC-A	▲ NC spot drill – exchange head system ▲ 90°, 120°, 142°	✗	107						

✗ = without through coolant

✓ = with thro' coolant

Toolfinder

	Product name	Tool type	Description	Int. coolant supply	Replaceable cutting heads	1xD	3xD	5xD	8xD	12xD	Video
Solid carbide drilling											
Stainless steel	WTX	VA	<ul style="list-style-type: none"> ▲ highest performance for corrosion and acid resistant steels and aluminium ▲ for volume production 	✗ ✓			13-17 24-27	36-39 47-50		65-67	
		VA	<ul style="list-style-type: none"> ▲ Quality tool for corrosion-resistant and acid-resistant steels and aluminium ▲ Attractive price-performance ratio 	✗ ✓			18-21 28-31			51-54	
	WTX	Speed VA	<ul style="list-style-type: none"> ▲ double the cutting speed in corrosion and acid-resistant steels and aluminium 	✓					47-50		69-71
Drill with replaceable cutting heads											
	WTX	Change VA	<ul style="list-style-type: none"> ▲ exchangeable head drill with solid carbide drill head type VA from Ø 12.0 mm to 32.0 mm 	✓	95-100	101	101	102	102	103	▶
Solid carbide drilling											
Cast iron	WTX	UNI	<ul style="list-style-type: none"> ▲ highest performance for all materials up to 1200 N/mm² ▲ suitable for volume production 	✗ ✓			13-17 24-27	36-39 42-46		60-63	▶
	Drill with replaceable cutting heads										
	WTX	Change GG	<ul style="list-style-type: none"> ▲ exchangeable head drill with solid carbide drill head type GG from Ø 12.0 mm to 32.0 mm 	✓	95-100	101	101	102	102	103	▶
Solid carbide drilling											
Non-ferrous metals	WTX	AL	<ul style="list-style-type: none"> ▲ solid carbide high performance drill, especially for the machining of aluminum, copper and brass ▲ for volume production 	✓				47-50	65-67	69-71	
	Drill with replaceable cutting heads										
	WTX	Change AL	<ul style="list-style-type: none"> ▲ exchangeable head drill with solid carbide drill head type AL from Ø 12.0 mm to 32.0 mm 	✓	95-100	101	101	102	102	103	▶
Solid carbide drilling											
Heat-resistant	WTX	Ti	<ul style="list-style-type: none"> ▲ highest performance in titanium, titanium alloys and heat resistant alloys 	✓			32+33	55+56			
Solid carbide drilling											
Tempered steel	WTX	H	<ul style="list-style-type: none"> ▲ highest performance in hardened steel from 46 to 70 HRC 	✗			22				▶
Deep Hole Drills											
	Product name	Tool type	Description	Int. coolant supply	16xD	20xD	25xD	30xD	40xD	50xD	Video
Steel/Universal	WTX	MICRO	<ul style="list-style-type: none"> ▲ Available from Ø 0.8 mm ▲ Universal high-performance micro deep hole twist drill ▲ Specialised geometry and coating ▲ Hole depths up to 30xD possible 	✓	80	81	81	82			▶
	WTX	CP 20 UNI	<ul style="list-style-type: none"> ▲ Ensures an even safer deep hole drilling process ▲ Excellent alignment precision ▲ For optimal guidance of the deep hole twist drill for hole depths > 30xD 	✓		74					
	WTX	TB UNI	<ul style="list-style-type: none"> ▲ solid carbide deep hole drill to 50xD without peck ▲ 4 facet geometry for excellent alignment accuracy 	✓	75	75	76	76	77	77	
Non-ferrous metals	WTX	TB ALU	<ul style="list-style-type: none"> ▲ solid carbide deep hole drills, up to 30xD without pecking ▲ 6-facet head geometry for excellent alignment accuracy 	✓	75	75	76	76			

✗ = without through coolant ✓ = with thro' coolant

Overview Solid Carbide Drills

Product name	Tool type	Boring depth	Diameter in mm Ø DC	Material compatibility	Coating	Performance	Page No.
				Steel (P) Stainless steel (M) Cast iron (K) Non-ferrous metals (N) Heat-resistant (S) Tempered steel (H) Non metal materials (O)	<input checked="" type="checkbox"/> coated <input type="checkbox"/> uncoated	WNT / Performance WNT / Standard	
3xD without thro' coolant							
	WTX	UNI	≤ 3xD	3-25	<input checked="" type="checkbox"/>		13-17
	WTX	VA	≤ 3xD	2-20	<input checked="" type="checkbox"/>		13-17
		UNI	≤ 3xD	1-20	<input checked="" type="checkbox"/>		18-21
		VA	≤ 3xD	1-20	<input checked="" type="checkbox"/>		18-21
	WTX	H	≤ 3xD	2,55-14	<input checked="" type="checkbox"/>	up to 70 HRC	22
		N	≤ 3xD	0,5-20	<input type="checkbox"/>		23
3xD with thro' coolant							
	WTX	Speed UNI	≤ 3xD	3-20	<input checked="" type="checkbox"/>		24-27
	WTX	UNI	≤ 3xD	3-25	<input checked="" type="checkbox"/>		24-27
	WTX	VA	≤ 3xD	3-20	<input checked="" type="checkbox"/>		24-27
		UNI	≤ 3xD	1-20	<input checked="" type="checkbox"/>		28-31
		VA	≤ 3xD	1-20	<input checked="" type="checkbox"/>		28-31
	WTX	Ti	≤ 3xD	3-20	<input checked="" type="checkbox"/>		32+33
	WTX	180	≤ 3xD	3-20	<input checked="" type="checkbox"/>	180° Point angle	34
	WTX	HFDS	≤ 3xD	6-16	<input checked="" type="checkbox"/>	4 flute	35
5xD without thro' coolant							
	WTX	UNI	≤ 5xD	3-20	<input checked="" type="checkbox"/>		36-39
	WTX	VA	≤ 5xD	3-20	<input checked="" type="checkbox"/>		36-39
		UNI	≤ 5xD	3-20	<input checked="" type="checkbox"/>		40
		N	≤ 5xD	0,5-16	<input type="checkbox"/>		41

Overview Solid Carbide Drills

Product name	Tool type	Boring depth	Ø DC	Diameter in mm	Material	Coating	Performance	Standard	
					Steel Stainless steel Cast iron Non-ferrous metals Heat-resistant Tempered steel Non metal materials	<input checked="" type="checkbox"/> coated <input type="checkbox"/> uncoated	WNT / Performance WNT / Standard	Page No.	
5xD with thro' coolant									
	WTX	Speed UNI	≤ 5xD	3-18	Steel, Cast iron, Non-ferrous metals	<input checked="" type="checkbox"/>			42-46
	WTX	UNI	≤ 5xD	3-25	Steel, Cast iron, Non-ferrous metals, Heat-resistant	<input checked="" type="checkbox"/>			42-46
	WTX	Quattro 4F	≤ 5xD	3-18	Steel, Cast iron, Non-ferrous metals, Heat-resistant	<input checked="" type="checkbox"/>			42-46
	WTX	Speed VA	≤ 5xD	3-20	Steel, Cast iron, Non-ferrous metals, Heat-resistant	<input checked="" type="checkbox"/>			47-50
	WTX	VA	≤ 5xD	3-20	Steel, Cast iron, Non-ferrous metals, Heat-resistant	<input checked="" type="checkbox"/>			47-50
	WTX	AL	≤ 5xD	2,5-20	Steel, Cast iron, Non-ferrous metals, Heat-resistant	<input checked="" type="checkbox"/>			47-50
		UNI	≤ 5xD	1-20	Steel, Cast iron, Non-ferrous metals, Heat-resistant	<input checked="" type="checkbox"/>			51-54
		VA	≤ 5xD	1-20	Steel, Cast iron, Non-ferrous metals, Heat-resistant	<input checked="" type="checkbox"/>			51-54
	WTX	Ti	≤ 5xD	3-20	Steel, Cast iron, Non-ferrous metals, Heat-resistant	<input checked="" type="checkbox"/>			55+56
	WTX	180	≤ 5xD	3-20	Steel, Cast iron, Non-ferrous metals, Heat-resistant	<input checked="" type="checkbox"/>	180° Point angle		57
	WTX	Feed UNI	≤ 5xD	4-20	Steel, Cast iron, Non-ferrous metals, Heat-resistant	<input checked="" type="checkbox"/>	3 flute		58
	WTX	HFDS	≤ 5xD	6-16	Steel, Cast iron, Non-ferrous metals, Heat-resistant	<input checked="" type="checkbox"/>	4 flute		59
8xD with thro' coolant									
	WTX	Speed UNI	≤ 8xD	3-18	Steel, Cast iron, Non-ferrous metals	<input checked="" type="checkbox"/>			60-63
	WTX	UNI	≤ 8xD	3-20	Steel, Cast iron, Non-ferrous metals, Heat-resistant	<input checked="" type="checkbox"/>			60-63
	WTX	Quattro 4F	≤ 8xD	3-18	Steel, Cast iron, Non-ferrous metals, Heat-resistant	<input checked="" type="checkbox"/>			60-63
		UNI	≤ 8xD	3-20	Steel, Cast iron, Non-ferrous metals, Heat-resistant	<input checked="" type="checkbox"/>			64
	WTX	VA	≤ 8xD	3-20	Steel, Cast iron, Non-ferrous metals, Heat-resistant	<input checked="" type="checkbox"/>			65-67
	WTX	AL	≤ 8xD	3-20	Steel, Cast iron, Non-ferrous metals, Heat-resistant	<input checked="" type="checkbox"/>			65-67
	WTX	Feed UNI	≤ 8xD	4-20	Steel, Cast iron, Non-ferrous metals, Heat-resistant	<input checked="" type="checkbox"/>	3 flute		68


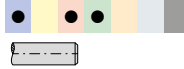

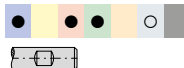

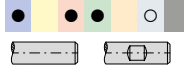

















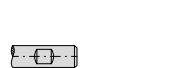



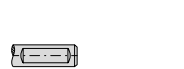


Overview Solid Carbide Drills

	Product name	Tool type	Boring depth	Diameter in mm Ø DC	Steel Stainless steel Cast iron Non-ferrous metals Heat-resistant Tempered steel Non metal materials	<input checked="" type="checkbox"/> coated <input type="checkbox"/> uncoated	WNT / Performance WNT / Standard	Page No.
12xD with thro' coolant								
	WTX	Speed VA	≤ 12xD	3-17,5		<input checked="" type="checkbox"/>		69-71
	WTX	Quattro 4F	≤ 12xD	3-18		<input checked="" type="checkbox"/>		69-71
	WTX	AL	≤ 12xD	3-20		<input checked="" type="checkbox"/>		69-71
		UNI	≤ 12xD	3-20		<input checked="" type="checkbox"/>		72
	WTX	Feed UNI	≤ 12xD	4-20		<input checked="" type="checkbox"/>	3 flute	73
Deep hole twist drill 16xD to 50xD								
	WTX	CP 20 UNI	≤ 20xD	3-9		<input checked="" type="checkbox"/>	Co-pilot drill	74
	WTX	TB UNI	≤ 16xD ≤ 20xD	2-12		<input checked="" type="checkbox"/>		75
	WTX	TB UNI	≤ 25xD ≤ 30xD	2-12		<input checked="" type="checkbox"/>		76
	WTX	TB UNI	≤ 40xD	3-9		<input checked="" type="checkbox"/>		77
	WTX	TB UNI	≤ 50xD	3-6,8		<input checked="" type="checkbox"/>		77
	WTX	TB ALU	≤ 16xD ≤ 20xD	2-12		<input checked="" type="checkbox"/>		75
	WTX	TB ALU	≤ 25xD ≤ 30xD	2-12		<input checked="" type="checkbox"/>		76

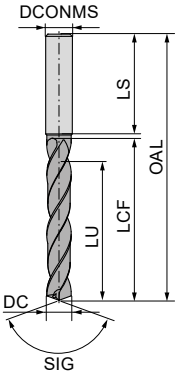
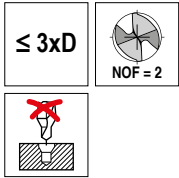
Overview Solid Carbide Drills

Product name	Tool type	Boring depth	Diameter in mm Ø DC	Material compatibility	Coating	Performance	Standard
				Steel Stainless steel Cast iron Non-ferrous metals Heat-resistant Tempered steel Non metal materials	<input checked="" type="checkbox"/> coated <input type="checkbox"/> uncoated	WNT / Performance WNT / Standard	Page No.
Micro drill 5xD to 30xD							
	WTX	MINI	≤ 5xD	0,1–2,9	<input type="checkbox"/>		78
	WTX	MICRO	≤ 5xD	0,8–2,9	<input checked="" type="checkbox"/>	with thro' coolant	79
	WTX	MICRO	≤ 8xD	0,8–2,9	<input checked="" type="checkbox"/>	with thro' coolant	79
	WTX	MICRO	≤ 12xD	0,8–2,9	<input checked="" type="checkbox"/>	with thro' coolant	80
	WTX	MICRO	≤ 16xD	0,8–2,9	<input checked="" type="checkbox"/>	with thro' coolant	80
	WTX	MICRO	≤ 20xD	0,8–2,9	<input checked="" type="checkbox"/>	with thro' coolant	81
	WTX	MICRO	≤ 25xD	0,8–2,9	<input checked="" type="checkbox"/>	with thro' coolant	81
	WTX	MICRO	≤ 30xD	0,8–2,9	<input checked="" type="checkbox"/>	with thro' coolant	82
Drill Reamers							
	WTX	Feed BR100	≤ 3xD ≤ 5xD	3,97 12,02	<input checked="" type="checkbox"/>	1/100 3 flute	83+84
	WTX	Feed BR	≤ 3xD	4–16	<input checked="" type="checkbox"/>	Tolerance H7 3 flute	85
	WTX	Feed BR	≤ 5xD	4–20	<input checked="" type="checkbox"/>	Tolerance H7 3 flute	85
Stepped drills							
	WTX	SB		2,5–14	<input checked="" type="checkbox"/>	Thread cutting	86
	WTX	SB		2,8–15	<input checked="" type="checkbox"/>	Thread forming	86
	WTX	SB		3,3–14	<input checked="" type="checkbox"/>	Thread cutting with thro' coolant	87
	WTX	SB		3,7–15	<input checked="" type="checkbox"/>	Thread forming with thro' coolant	87

Overview Solid Carbide Drills

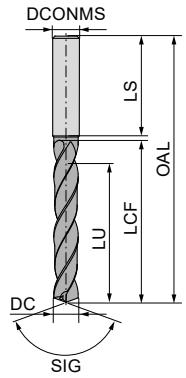
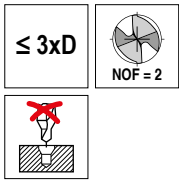
Product name	Tool type	Point angle	Diameter in mm	Material compatibility	Coating	Performance	Standard
SIG	Ø DC	90° 120° 142°	Steel Stainless steel Cast iron Non-ferrous metals Heat-resistant Tempered steel Non metal materials	coated uncoated	WNT / Performance WNT / Standard	Page No.	
NC Spot Drill							
	NC-A	90° 120° 142°	2-20		<input type="checkbox"/>		88
	NC-A	90° 120° 142°	2-20		<input checked="" type="checkbox"/>		88
	NC-A	90° 120° 142°	3-16		<input checked="" type="checkbox"/>	long version	89
Centre drills							
	ZB	120°	0,5-6,3		<input type="checkbox"/>		90
Drill with replaceable cutting heads							
Replaceable cutting heads							
	WTX	Change Feed	14-32		<input checked="" type="checkbox"/>	3 Edges	91+92
	WTX	Change UNI	12-41		<input checked="" type="checkbox"/>		95-100
	WTX	Change P	12-41		<input checked="" type="checkbox"/>		95-100
	WTX	Change VA	12-32		<input checked="" type="checkbox"/>		95-100
	WTX	Change GG	12-32		<input checked="" type="checkbox"/>		95-100
	WTX	Change ALU	12-32		<input checked="" type="checkbox"/>		95-100
	WPC	Change UNI	14-30		<input checked="" type="checkbox"/>		104
Tool holder							
	WTX	Change Feed	14-32			3xD / 5xD / 8xD	93+94
	WTX	Change	12-41			1xD / 3xD / 5xD / 8xD / 12xD	101-103
	WPC	Change	14-30			3xD / 5xD	105
MultiChange NC spot drill							
	NC-A	90° 120° 142°	8-20		<input checked="" type="checkbox"/>		107

WTX – High Performance Drill, DIN 6537



DC _{m7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	11 777 ...		11 778 ...		11 776 ...		10 731 ...	
						£ T7	03000	£ T7	03000	£ T7	03000	£ T5	020
2.00	6	58	16	11	36							59.44	020
2.10	6	58	16	11	36							59.44	021
2.20	6	58	16	11	36							59.44	022
2.30	6	58	16	11	36							59.44	023
2.33	6	58	16	11	36							59.44	823
2.40	6	58	16	11	36							59.44	024
2.43	6	58	16	11	36							59.44	824
2.50	6	58	16	11	36							59.44	025
2.55	6	58	16	11	36							59.44	825
2.60	6	58	16	11	36							59.44	026
2.62	6	58	16	11	36							59.44	826
2.70	6	58	16	11	36							59.44	027
2.80	6	58	16	11	36							59.44	028
2.90	6	58	16	11	36							59.44	029
3.00	6	62	20	14	36	38.38	03000	38.38	03000	38.38	03000	78.51	030
3.10	6	62	20	14	36	38.38	03100	38.38	03100	38.38	03100	78.51	031
3.15	6	62	20	14	36	38.38	03150	38.38	03150	38.38	03150	78.51	831
3.20	6	62	20	14	36	38.38	03200	38.38	03200	38.38	03200	78.51	032
3.22	6	62	20	14	36	38.38	03220	38.38	03220	38.38	03220	78.51	832
3.25	6	62	20	14	36	38.38	03250	38.38	03250	38.38	03250	78.51	890
3.30	6	62	20	14	36	38.38	03300	38.38	03300	38.38	03300	78.51	033
3.40	6	62	20	14	36	38.38	03400	38.38	03400	38.38	03400	78.51	034
3.50	6	62	20	14	36	38.38	03500	38.38	03500	38.38	03500	78.51	035
3.60	6	62	20	14	36	38.38	03600	38.38	03600	38.38	03600	78.51	036
3.70	6	62	20	14	36	38.38	03700	38.38	03700	38.38	03700	78.51	037
3.80	6	66	24	17	36	38.38	03800	38.38	03800	38.38	03800	78.51	038
3.85	6	66	24	17	36	38.38	03850	38.38	03850	38.38	03850	78.51	838
3.90	6	66	24	17	36	38.38	03900	38.38	03900	38.38	03900	78.51	039
4.00	6	66	24	17	36	38.38	04000	38.38	04000	38.38	04000	78.51	040
4.10	6	66	24	17	36	38.38	04100	38.38	04100	38.38	04100	78.51	041
4.20	6	66	24	17	36	38.38	04200	38.38	04200	38.38	04200	78.51	042
4.25	6	66	24	17	36	38.38	04250	38.38	04250	38.38	04250		
4.30	6	66	24	17	36	38.38	04300	38.38	04300	38.38	04300	78.51	043
4.35	6	66	24	17	36	38.38	04350	38.38	04350	38.38	04350	78.51	843
4.40	6	66	24	17	36	38.38	04400	38.38	04400	38.38	04400	78.51	044
4.45	6	66	24	17	36	38.38	04450	38.38	04450	38.38	04450	78.51	844
4.50	6	66	24	17	36	38.38	04500	38.38	04500	38.38	04500	78.51	045
4.60	6	66	24	17	36	38.38	04600	38.38	04600	38.38	04600	78.51	046
4.65	6	66	24	17	36	38.38	04650	38.38	04650	38.38	04650	78.51	900
4.70	6	66	24	17	36	38.38	04700	38.38	04700	38.38	04700	78.51	047
4.80	6	66	28	20	36	38.38	04800	38.38	04800	38.38	04800	78.51	048
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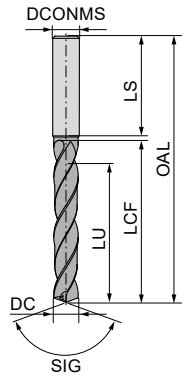
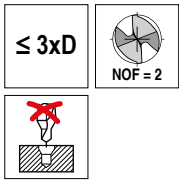
WTX – High Performance Drill, DIN 6537



DC _{m7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	11 777 ...		11 778 ...		11 776 ...		10 731 ...	
						£ T7	04900	£ T7	04900	£ T7	04900	£ T5	049
4.90	6	66	28	20	36	38.38	04900	38.38	04900	38.38	04900	78.51	049
4.95	6	66	28	20	36	38.38	04950	38.38	04950	38.38	04950		
5.00	6	66	28	20	36	38.38	05000	38.38	05000	38.38	05000	78.51	050
5.05	6	66	28	20	36	38.38	05050	38.38	05050	38.38	05050		
5.10	6	66	28	20	36	38.38	05100	38.38	05100	38.38	05100	78.51	051
5.20	6	66	28	20	36	38.38	05200	38.38	05200	38.38	05200	78.51	052
5.30	6	66	28	20	36	38.38	05300	38.38	05300	38.38	05300	78.51	053
5.40	6	66	28	20	36	38.38	05400	38.38	05400	38.38	05400	78.51	054
5.50	6	66	28	20	36	38.38	05500	38.38	05500	38.38	05500	78.51	055
5.55	6	66	28	20	36	38.38	05550	38.38	05550	38.38	05550	78.51	902
5.60	6	66	28	20	36	38.38	05600	38.38	05600	38.38	05600	78.51	056
5.70	6	66	28	20	36	38.38	05700	38.38	05700	38.38	05700	78.51	057
5.75	6	66	28	20	36	38.38	05750	38.38	05750	38.38	05750	78.51	916
5.80	6	66	28	20	36	38.38	05800	38.38	05800	38.38	05800	78.51	058
5.90	6	66	28	20	36	38.38	05900	38.38	05900	38.38	05900	78.51	059
5.95	6	66	28	20	36	38.38	05950	38.38	05950	38.38	05950	78.51	959
6.00	6	66	28	20	36	38.38	06000	38.38	06000	38.38	06000	78.51	060
6.10	8	79	34	24	36	41.39	06100	41.39	06100	41.39	06100	99.72	061
6.20	8	79	34	24	36	41.39	06200	41.39	06200	41.39	06200	99.72	062
6.30	8	79	34	24	36	41.39	06300	41.39	06300	41.39	06300	99.72	063
6.40	8	79	34	24	36	41.39	06400	41.39	06400	41.39	06400	99.72	064
6.50	8	79	34	24	36	41.39	06500	41.39	06500	41.39	06500	99.72	065
6.60	8	79	34	24	36	41.39	06600	41.39	06600	41.39	06600	99.72	066
6.70	8	79	34	24	36	41.39	06700	41.39	06700	41.39	06700	99.72	067
6.80	8	79	34	24	36	41.39	06800	41.39	06800	41.39	06800	99.72	068
6.90	8	79	34	24	36	41.39	06900	41.39	06900	41.39	06900	99.72	069
7.00	8	79	34	24	36	41.39	07000	41.39	07000	41.39	07000	99.72	070
7.10	8	79	41	29	36	41.39	07100	41.39	07100	41.39	07100	99.72	071
7.20	8	79	41	29	36	41.39	07200	41.39	07200	41.39	07200	99.72	072
7.30	8	79	41	29	36	41.39	07300	41.39	07300	41.39	07300	99.72	073
7.40	8	79	41	29	36	41.39	07400	41.39	07400	41.39	07400	99.72	074
7.45	8	79	41	29	36	41.39	07450	41.39	07450	41.39	07450	99.72	924
7.50	8	79	41	29	36	41.39	07500	41.39	07500	41.39	07500	99.72	075
7.60	8	79	41	29	36	41.39	07600	41.39	07600	41.39	07600	99.72	076
7.70	8	79	41	29	36	41.39	07700	41.39	07700	41.39	07700	99.72	077
7.80	8	79	41	29	36	41.39	07800	41.39	07800	41.39	07800	99.72	078
7.90	8	79	41	29	36	41.39	07900	41.39	07900	41.39	07900	99.72	079
8.00	8	79	41	29	36	41.39	08000	41.39	08000	41.39	08000	99.72	080
8.10	10	89	47	35	40	45.40	08100	45.40	08100	45.40	08100	118.87	081
8.20	10	89	47	35	40	45.40	08200	45.40	08200	45.40	08200	118.87	082
8.30	10	89	47	35	40	45.40	08300	45.40	08300	45.40	08300	118.87	083

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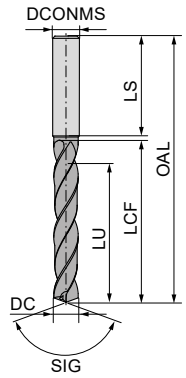
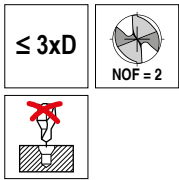
WTX – High Performance Drill, DIN 6537



DC _{m7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	11 777 ...		11 778 ...		11 776 ...		10 731 ...	
						£ T7	08400	£ T7	08400	£ T7	08400	£ T5	084
8.40	10	89	47	35	40	45.40	08400	45.40	08400	45.40	08400	118.87	084
8.50	10	89	47	35	40	45.40	08500	45.40	08500	45.40	08500	118.87	085
8.60	10	89	47	35	40	45.40	08600	45.40	08600	45.40	08600	118.87	086
8.70	10	89	47	35	40	45.40	08700	45.40	08700	45.40	08700	118.87	087
8.80	10	89	47	35	40	45.40	08800	45.40	08800	45.40	08800	118.87	088
8.90	10	89	47	35	40	45.40	08900	45.40	08900	45.40	08900	118.87	089
9.00	10	89	47	35	40	45.40	09000	45.40	09000	45.40	09000	118.87	090
9.10	10	89	47	35	40	45.40	09100	45.40	09100	45.40	09100	118.87	091
9.20	10	89	47	35	40	45.40	09200	45.40	09200	45.40	09200	118.87	092
9.30	10	89	47	35	40	45.40	09300	45.40	09300	45.40	09300	118.87	093
9.35	10	89	47	35	40	45.40	09350	45.40	09350	45.40	09350	118.87	930
9.40	10	89	47	35	40	45.40	09400	45.40	09400	45.40	09400	118.87	094
9.45	10	89	47	35	40	45.40	09450	45.40	09450	45.40	09450	118.87	994
9.50	10	89	47	35	40	45.40	09500	45.40	09500	45.40	09500	118.87	095
9.60	10	89	47	35	40	45.40	09600	45.40	09600	45.40	09600	118.87	096
9.70	10	89	47	35	40	45.40	09700	45.40	09700	45.40	09700	118.87	097
9.80	10	89	47	35	40	45.40	09800	45.40	09800	45.40	09800	118.87	098
9.90	10	89	47	35	40	45.40	09900	45.40	09900	45.40	09900	118.87	099
10.00	10	89	47	35	40	45.40	10000	45.40	10000	45.40	10000	118.87	100
10.10	12	102	55	40	45	65.79	10100	65.79	10100	65.79	10100	168.65	101
10.20	12	102	55	40	45	65.79	10200	65.79	10200	65.79	10200	168.65	102
10.30	12	102	55	40	45	65.79	10300	65.79	10300	65.79	10300	168.65	103
10.40	12	102	55	40	45	65.79	10400	65.79	10400	65.79	10400	168.65	104
10.50	12	102	55	40	45	65.79	10500	65.79	10500	65.79	10500	168.65	105
10.55	12	102	55	40	45	65.79	10550	65.79	10550	65.79	10550	168.65	932
10.60	12	102	55	40	45	65.79	10600	65.79	10600	65.79	10600	168.65	106
10.70	12	102	55	40	45	65.79	10700	65.79	10700	65.79	10700	168.65	107
10.75	12	102	55	40	45	65.79	10750	65.79	10750	65.79	10750		
10.80	12	102	55	40	45	65.79	10800	65.79	10800	65.79	10800	168.65	108
10.90	12	102	55	40	45	65.79	10900	65.79	10900	65.79	10900	168.65	109
11.00	12	102	55	40	45	65.79	11000	65.79	11000	65.79	11000	168.65	110
11.10	12	102	55	40	45	65.79	11100	65.79	11100	65.79	11100	168.65	111
11.20	12	102	55	40	45	65.79	11200	65.79	11200	65.79	11200	168.65	112
11.25	12	102	55	40	45	65.79	11250	65.79	11250	65.79	11250	168.65	912
11.30	12	102	55	40	45	65.79	11300	65.79	11300	65.79	11300	168.65	113
11.35	12	102	55	40	45	65.79	11350	65.79	11350	65.79	11350	168.65	913
11.40	12	102	55	40	45	65.79	11400	65.79	11400	65.79	11400	168.65	114
11.45	12	102	55	40	45	65.79	11450	65.79	11450	65.79	11450	168.65	914
11.50	12	102	55	40	45	65.79	11500	65.79	11500	65.79	11500	168.65	115
11.60	12	102	55	40	45	65.79	11600	65.79	11600	65.79	11600	168.65	116
11.70	12	102	55	40	45	65.79	11700	65.79	11700	65.79	11700	168.65	117

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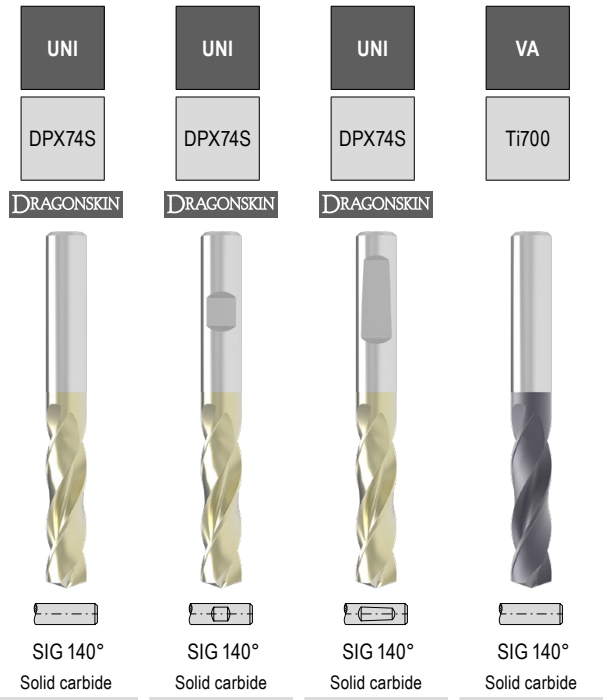
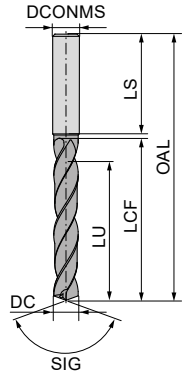
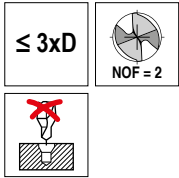
WTX – High Performance Drill, DIN 6537



DC _{m7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	11 777 ...		11 778 ...		11 776 ...		10 731 ...	
						£ T7	11800	£ T7	11800	£ T7	11800	£ T5	118
11.80	12	102	55	40	45	65.79	11800	65.79	11800	65.79	11800	168.65	118
11.90	12	102	55	40	45	65.79	11900	65.79	11900	65.79	11900	168.65	119
12.00	12	102	55	40	45	65.79	12000	65.79	12000	65.79	12000	168.65	120
12.15	14	107	60	43	45	85.81	12150	85.81	12150	85.81	12150	223.35	921
12.25	14	107	60	43	45	85.81	12250	85.81	12250	85.81	12250		
12.50	14	107	60	43	45	85.81	12500	85.81	12500	85.81	12500	223.35	125
12.55	14	107	60	43	45	85.81	12550	85.81	12550	85.81	12550	223.35	925
12.70	14	107	60	43	45	85.81	12700	85.81	12700	85.81	12700		
12.80	14	107	60	43	45	85.81	12800	85.81	12800	85.81	12800	223.35	128
12.90	14	107	60	43	45	85.81	12900	85.81	12900	85.81	12900		
13.00	14	107	60	43	45	85.81	13000	85.81	13000	85.81	13000	223.35	130
13.10	14	107	60	43	45	85.81	13100	85.81	13100	85.81	13100		
13.30	14	107	60	43	45	85.81	13300	85.81	13300	85.81	13300		
13.35	14	107	60	43	45	85.81	13350	85.81	13350	85.81	13350	223.35	933
13.50	14	107	60	43	45	85.81	13500	85.81	13500	85.81	13500	223.35	135
13.70	14	107	60	43	45	85.81	13700	85.81	13700	85.81	13700		
13.80	14	107	60	43	45	85.81	13800	85.81	13800	85.81	13800	223.35	138
14.00	14	107	60	43	45	85.81	14000	85.81	14000	85.81	14000	223.35	140
14.20	16	115	65	45	48	111.87	14200	111.87	14200	111.87	14200		
14.50	16	115	65	45	48	111.87	14500	111.87	14500	111.87	14500	275.53	145
14.80	16	115	65	45	48	111.87	14800	111.87	14800	111.87	14800	275.53	148
15.00	16	115	65	45	48	111.87	15000	111.87	15000	111.87	15000	275.53	150
15.10	16	115	65	45	48	111.87	15100	111.87	15100	111.87	15100		
15.25	16	115	65	45	48	111.87	15250	111.87	15250	111.87	15250		
15.30	16	115	65	45	48	111.87	15300	111.87	15300	111.87	15300		
15.35	16	115	65	45	48	111.87	15350	111.87	15350	111.87	15350	275.53	953
15.50	16	115	65	45	48	111.87	15500	111.87	15500	111.87	15500	275.53	155
15.60	16	115	65	45	48	111.87	15600	111.87	15600	111.87	15600		
15.80	16	115	65	45	48	111.87	15800	111.87	15800	111.87	15800	275.53	158
16.00	16	115	65	45	48	111.87	16000	111.87	16000	111.87	16000	275.53	160
16.05	18	123	73	51	48	218.25	16050	218.25	16050	218.25	16050	403.80	960
16.50	18	123	73	51	48	218.25	16500	218.25	16500	218.25	16500	403.80	165
16.80	18	123	73	51	48	218.25	16800	218.25	16800	218.25	16800	403.80	168
16.90	18	123	73	51	48	218.25	16900	218.25	16900	218.25	16900		
17.00	18	123	73	51	48	218.25	17000	218.25	17000	218.25	17000	403.80	170
17.50	18	123	73	51	48	218.25	17500	218.25	17500	218.25	17500	403.80	175
17.60	18	123	73	51	48	218.25	17600	218.25	17600	218.25	17600		
17.80	18	123	73	51	48	218.25	17800	218.25	17800	218.25	17800	403.80	178
18.00	18	123	73	51	48	218.25	18000	218.25	18000	218.25	18000	403.80	180
18.50	20	131	79	55	50	242.47	18500	242.47	18500	242.47	18500	534.43	185
18.80	20	131	79	55	50	242.47	18800	242.47	18800	242.47	18800	534.43	188

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WTX – High Performance Drill, DIN 6537

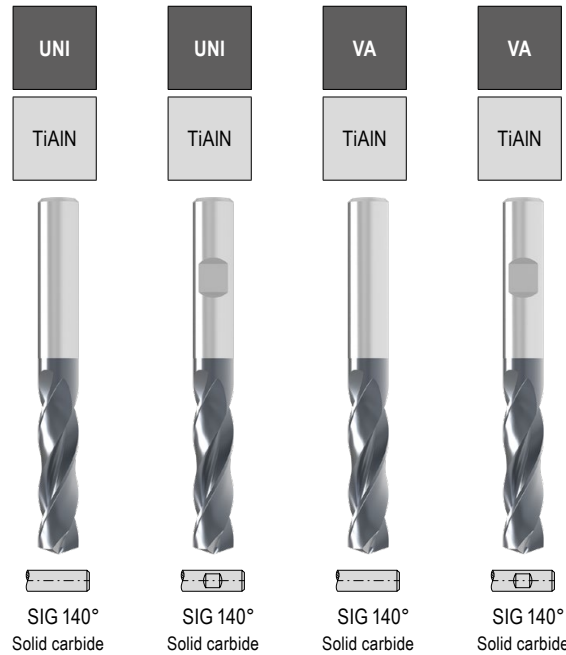
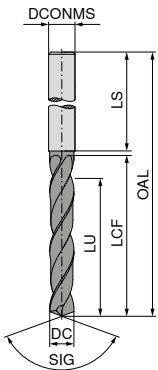


DC _{m7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	11 777 ...		11 778 ...		11 776 ...		10 731 ...	
						£ T7	18900	£ T7	18900	£ T7	18900	£ T5	190
18.90	20	131	79	55	50	242.47	18900	242.47	18900	242.47	18900	534.43	190
19.00	20	131	79	55	50	242.47	19000	242.47	19000	242.47	19000	534.43	993
19.35	20	131	79	55	50	242.47	19350	242.47	19350	242.47	19350	534.43	195
19.50	20	131	79	55	50	242.47	19500	242.47	19500	242.47	19500	534.43	198
19.60	20	131	79	55	50	242.47	19600	242.47	19600	242.47	19600	534.43	200
19.80	20	131	79	55	50	242.47	19800	242.47	19800	242.47	19800	534.43	
20.00	20	131	79	55	50	242.47	20000	242.47	20000	242.47	20000	534.43	
20.50	25	151	93	66	56	438.14	20500	438.14	20500	438.14	20500		
21.00	25	151	93	66	56	438.14	21000	438.14	21000	438.14	21000		
21.50	25	151	93	66	56	438.14	21500	438.14	21500	438.14	21500		
22.00	25	151	93	66	56	438.14	22000	438.14	22000	438.14	22000		
22.50	25	153	96	72	56	438.14	22500	438.14	22500	438.14	22500		
23.00	25	153	96	72	56	438.14	23000	438.14	23000	438.14	23000		
23.50	25	153	96	72	56	438.14	23500	438.14	23500	438.14	23500		
24.00	25	153	96	72	56	438.14	24000	438.14	24000	438.14	24000		
24.50	25	153	96	75	56	438.14	24500	438.14	24500	438.14	24500		
25.00	25	153	96	75	56	438.14	25000	438.14	25000	438.14	25000		

P	●	●	●	○
M	●	●	●	●
K	●	●	●	○
N	○	○	○	○
S	○	○	○	●
H	○	○	○	○
O	○	○	○	○

→ v_c Page 110+112

High Performance Drill, DIN 6537



11 706 ...		11 707 ...		11 711 ...		11 712 ...	
£	T1/9C	£	T1/9C	£	T1/9C	£	T1/9C
29.17	01000			33.40	01000		
29.17	01100			33.40	01100		
29.17	01200			33.40	01200		
29.17	01300			33.40	01300		
29.17	01400			33.40	01400		
29.17	01500			33.40	01500		
29.17	01600			33.40	01600		
29.17	01700			33.40	01700		
29.17	01800			33.40	01800		
29.17	01900			33.40	01900		
26.64	02000			30.43	02000		
26.64	02100			30.43	02100		
26.64	02200			30.43	02200		
26.64	02300			30.43	02300		
26.64	02400			30.43	02400		
26.64	02500			30.43	02500		
26.64	02600			30.43	02600		
26.64	02700			30.43	02700		
26.64	02800			30.43	02800		
26.64	02900			30.43	02900		
25.38	03000	25.38	03000	29.50	03000	29.50	03000
25.38	03100	25.38	03100	29.50	03100	29.50	03100
25.38	03200	25.38	03200	29.50	03200	29.50	03200
25.38	03250	25.38	03250				
25.38	03300	25.38	03300	29.50	03300	29.50	03300
25.38	03400	25.38	03400	29.50	03400	29.50	03400
25.38	03500	25.38	03500	29.50	03500	29.50	03500
25.38	03600	25.38	03600	29.50	03600	29.50	03600
25.38	03700	25.38	03700	29.50	03700	29.50	03700
25.38	03800	25.38	03800	29.50	03800	29.50	03800
25.38	03900	25.38	03900	29.50	03900	29.50	03900
25.38	04000	25.38	04000	29.50	04000	29.50	04000
25.38	04100	25.38	04100	29.50	04100	29.50	04100
25.38	04200	25.38	04200	29.50	04200	29.50	04200
25.38	04300	25.38	04300	29.50	04300	29.50	04300
25.38	04400	25.38	04400	29.50	04400	29.50	04400
25.38	04500	25.38	04500	29.50	04500	29.50	04500
25.38	04600	25.38	04600	29.50	04600	29.50	04600
25.38	04650	25.38	04650				
25.38	04700	25.38	04700	29.50	04700	29.50	04700

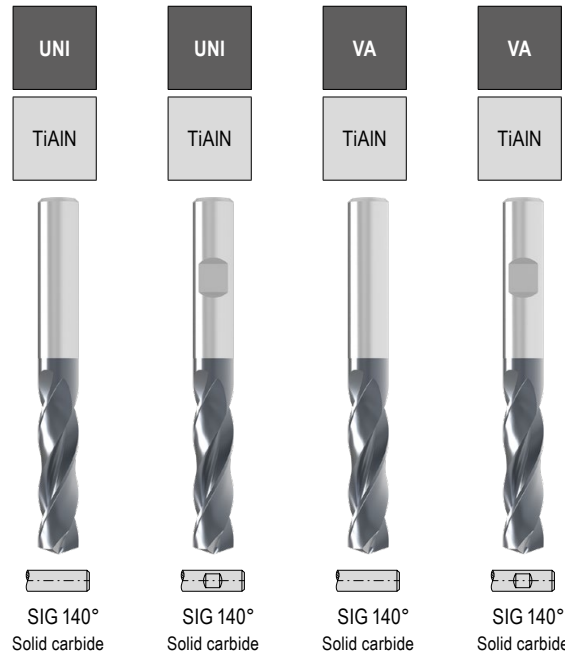
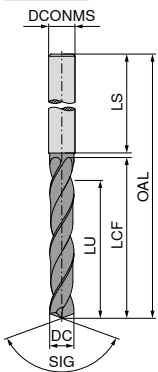
DC _{mT/h7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm
1.00	4	45	7	5.5	28
1.10	4	45	7	5.3	28
1.20	4	45	7	5.2	28
1.30	4	45	7	5.0	28
1.40	4	45	7	4.9	28
1.50	4	55	14	11.7	28
1.60	4	55	14	11.6	28
1.70	4	55	14	11.4	28
1.80	4	55	14	11.3	28
1.90	4	55	14	11.1	28
2.00	4	55	20	17.0	28
2.10	4	55	20	16.8	28
2.20	4	55	20	16.7	28
2.30	4	55	20	16.5	28
2.40	4	55	20	16.4	28
2.50	4	55	20	16.2	28
2.60	4	55	20	16.1	28
2.70	4	55	20	15.9	28
2.80	4	55	20	15.8	28
2.90	4	55	20	15.6	28
3.00	6	62	20	15.5	36
3.10	6	62	20	15.3	36
3.20	6	62	20	15.2	36
3.25	6	62	20	15.1	36
3.30	6	62	20	15.0	36
3.40	6	62	20	14.9	36
3.50	6	62	20	14.7	36
3.60	6	62	20	14.6	36
3.70	6	62	20	14.4	36
3.80	6	66	24	18.3	36
3.90	6	66	24	18.1	36
4.00	6	66	24	18.0	36
4.10	6	66	24	17.8	36
4.20	6	66	24	17.7	36
4.30	6	66	24	17.5	36
4.40	6	66	24	17.4	36
4.50	6	66	24	17.2	36
4.60	6	66	24	17.1	36
4.65	6	66	24	17.0	36
4.70	6	66	24	16.9	36

P	●	●	○	○
M			●	●
K	●	●		
N			○	○
S			○	○
H				
O			○	○

→ v_c Page 128+132

Ø DC_{h7} for Type UNI / Ø DC_{m7} for Type VA

High Performance Drill, DIN 6537



11 706 ...		11 707 ...		11 711 ...		11 712 ...	
£		£		£		£	
T1/9C		T1/9C		T1/9C		T1/9C	
25.38	04800	25.38	04800	29.50	04800	29.50	04800
25.38	04900	25.38	04900	29.50	04900	29.50	04900
25.38	05000	25.38	05000	29.50	05000	29.50	05000
25.38	05100	25.38	05100	29.50	05100	29.50	05100
25.38	05200	25.38	05200	29.50	05200	29.50	05200
25.38	05300	25.38	05300	29.50	05300	29.50	05300
25.38	05400	25.38	05400	29.50	05400	29.50	05400
25.38	05500	25.38	05500	29.50	05500	29.50	05500
25.38	05600	25.38	05600	29.50	05600	29.50	05600
25.38	05650	25.38	05650				
25.38	05700	25.38	05700	29.50	05700	29.50	05700
25.38	05800	25.38	05800	29.50	05800	29.50	05800
25.38	05900	25.38	05900	29.50	05900	29.50	05900
25.38	06000	25.38	06000	29.50	06000	29.50	06000
25.38	06100	25.38	06100	29.60	06100	29.60	06100
25.38	06200	25.38	06200	29.60	06200	29.60	06200
25.38	06300	25.38	06300	29.60	06300	29.60	06300
25.38	06400	25.38	06400	29.60	06400	29.60	06400
25.38	06500	25.38	06500	29.60	06500	29.60	06500
25.38	06600	25.38	06600	29.60	06600	29.60	06600
25.38	06700	25.38	06700	29.60	06700	29.60	06700
25.38	06800	25.38	06800	29.60	06800	29.60	06800
25.38	06900	25.38	06900	29.60	06900	29.60	06900
25.38	07000	25.38	07000	29.60	07000	29.60	07000
25.38	07100	25.38	07100	29.60	07100	29.60	07100
25.38	07200	25.38	07200	29.60	07200	29.60	07200
25.38	07300	25.38	07300	29.60	07300	29.60	07300
25.38	07400	25.38	07400	29.60	07400	29.60	07400
25.38	07500	25.38	07500	29.60	07500	29.60	07500
25.38	07550	25.38	07550				
25.38	07600	25.38	07600	29.60	07600	29.60	07600
25.38	07650	25.38	07650				
25.38	07700	25.38	07700	29.60	07700	29.60	07700
25.38	07800	25.38	07800	29.60	07800	29.60	07800
25.38	07900	25.38	07900	29.60	07900	29.60	07900
25.38	08000	25.38	08000	29.60	08000	29.60	08000
29.17	08100	29.17	08100	33.13	08100	33.13	08100
29.17	08200	29.17	08200	33.13	08200	33.13	08200
29.17	08300	29.17	08300	33.13	08300	33.13	08300

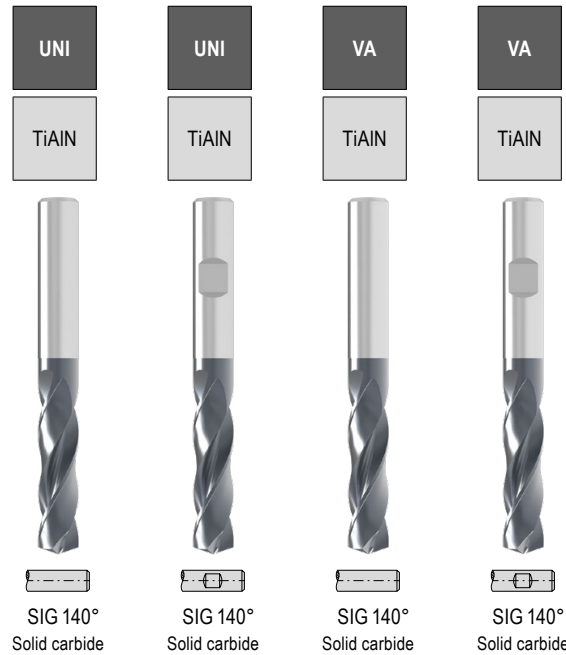
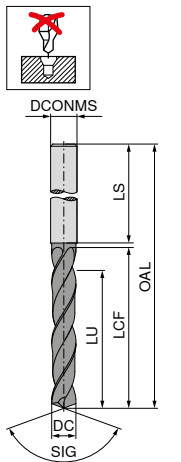
DC _{m7} ^{m7}	DCONMS _{h6}	OAL	LCF	LU	LS
mm	mm	mm	mm	mm	mm
4.80	6	66	28	20.8	36
4.90	6	66	28	20.6	36
5.00	6	66	28	20.5	36
5.10	6	66	28	20.3	36
5.20	6	66	28	20.2	36
5.30	6	66	28	20.0	36
5.40	6	66	28	19.9	36
5.50	6	66	28	19.7	36
5.55	6	66	28	19.6	36
5.60	6	66	28	19.6	36
5.65	6	66	28	19.5	36
5.70	6	66	28	19.4	36
5.80	6	66	28	19.3	36
5.90	6	66	28	19.1	36
6.00	6	66	28	19.0	36
6.10	8	79	34	24.8	36
6.20	8	79	34	24.7	36
6.30	8	79	34	24.5	36
6.40	8	79	34	24.4	36
6.50	8	79	34	24.2	36
6.60	8	79	34	24.1	36
6.70	8	79	34	23.9	36
6.80	8	79	34	23.8	36
6.90	8	79	34	23.6	36
7.00	8	79	34	23.5	36
7.10	8	79	41	30.3	36
7.20	8	79	41	30.2	36
7.30	8	79	41	30.0	36
7.40	8	79	41	29.9	36
7.50	8	79	41	29.7	36
7.55	8	79	41	29.6	36
7.60	8	79	41	29.6	36
7.65	8	79	41	29.5	36
7.70	8	79	41	29.4	36
7.80	8	79	41	29.3	36
7.90	8	79	41	29.1	36
8.00	8	79	41	29.0	36
8.10	10	89	47	34.8	40
8.20	10	89	47	34.7	40
8.30	10	89	47	34.5	40

P	●	●	○	○
M	●	●	●	●
K	●	●		
N			○	○
S			○	○
H				
O			○	○

→ v_c Page 128+132

Ø DC_{h7} for Type UNI / Ø DC_{m7} for Type VA

High Performance Drill, DIN 6537



DC _{m7h7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm
8.40	10	89	47	34.4	40
8.50	10	89	47	34.2	40
8.60	10	89	47	34.1	40
8.70	10	89	47	33.9	40
8.80	10	89	47	33.8	40
8.90	10	89	47	33.6	40
9.00	10	89	47	33.5	40
9.10	10	89	47	33.3	40
9.20	10	89	47	33.2	40
9.30	10	89	47	33.0	40
9.40	10	89	47	32.9	40
9.50	10	89	47	32.7	40
9.60	10	89	47	32.6	40
9.70	10	89	47	32.4	40
9.80	10	89	47	32.3	40
9.90	10	89	47	32.1	40
10.00	10	89	47	32.0	40
10.10	12	102	55	39.8	45
10.20	12	102	55	39.7	45
10.30	12	102	55	39.5	45
10.40	12	102	55	39.4	45
10.50	12	102	55	39.2	45
10.60	12	102	55	39.1	45
10.70	12	102	55	38.9	45
10.80	12	102	55	38.8	45
10.90	12	102	55	38.6	45
11.00	12	102	55	38.5	45
11.10	12	102	55	38.3	45
11.20	12	102	55	38.2	45
11.30	12	102	55	38.0	45
11.40	12	102	55	37.9	45
11.50	12	102	55	37.7	45
11.60	12	102	55	37.6	45
11.70	12	102	55	37.4	45
11.80	12	102	55	37.3	45
11.90	12	102	55	37.1	45
12.00	12	102	55	37.0	45
12.20	14	107	60	41.7	45
12.50	14	107	60	41.2	45
12.70	14	107	60	40.9	45

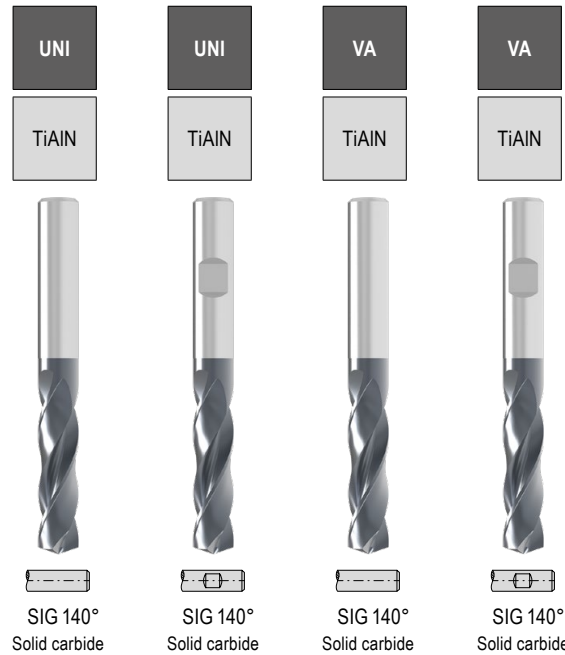
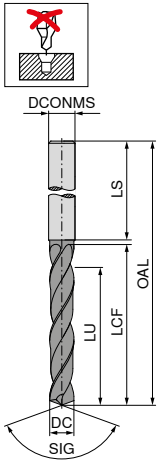
11 706 ...		11 707 ...		11 711 ...		11 712 ...	
£	T1/9C	£	T1/9C	£	T1/9C	£	T1/9C
29.17	08400	29.17	08400	33.13	08400	33.13	08400
29.17	08500	29.17	08500	33.13	08500	33.13	08500
29.17	08600	29.17	08600	33.13	08600	33.13	08600
29.17	08700	29.17	08700	33.13	08700	33.13	08700
29.17	08800	29.17	08800	33.13	08800	33.13	08800
29.17	08900	29.17	08900	33.13	08900	33.13	08900
29.17	09000	29.17	09000	33.13	09000	33.13	09000
29.17	09100	29.17	09100	33.13	09100	33.13	09100
29.17	09200	29.17	09200	33.13	09200	33.13	09200
29.17	09300	29.17	09300	33.13	09300	33.13	09300
29.17	09400	29.17	09400	33.13	09400	33.13	09400
29.17	09500	29.17	09500	33.13	09500	33.13	09500
29.17	09600	29.17	09600	33.13	09600	33.13	09600
29.17	09700	29.17	09700	33.13	09700	33.13	09700
29.17	09800	29.17	09800	33.13	09800	33.13	09800
29.17	09900	29.17	09900	33.13	09900	33.13	09900
29.17	10000	29.17	10000	33.13	10000	33.13	10000
44.40	10100	44.40	10100	49.97	10100	49.97	10100
44.40	10200	44.40	10200	49.97	10200	49.97	10200
44.40	10300	44.40	10300	49.97	10300	49.97	10300
44.40	10400	44.40	10400	49.97	10400	49.97	10400
44.40	10500	44.40	10500	49.97	10500	49.97	10500
44.40	10600	44.40	10600	49.97	10600	49.97	10600
44.40	10700	44.40	10700	49.97	10700	49.97	10700
44.40	10800	44.40	10800	49.97	10800	49.97	10800
44.40	10900	44.40	10900	49.97	10900	49.97	10900
44.40	11000	44.40	11000	49.97	11000	49.97	11000
44.40	11100	44.40	11100	49.97	11100	49.97	11100
44.40	11200	44.40	11200	49.97	11200	49.97	11200
44.40	11300	44.40	11300	49.97	11300	49.97	11300
44.40	11400	44.40	11400	49.97	11400	49.97	11400
44.40	11500	44.40	11500	49.97	11500	49.97	11500
44.40	11600	44.40	11600	49.97	11600	49.97	11600
44.40	11700	44.40	11700	49.97	11700	49.97	11700
44.40	11800	44.40	11800	49.97	11800	49.97	11800
44.40	11900	44.40	11900	49.97	11900	49.97	11900
44.40	12000	44.40	12000	49.97	12000	49.97	12000
59.63	12200	59.63	12200	66.95	12200	66.95	12200
59.63	12500	59.63	12500	66.95	12500	66.95	12500
65.57	12700	65.57	12700	66.95	12700	66.95	12700

P	●	●	○	○
M	●	●	●	●
K	●	●		
N			○	○
S			○	○
H				
O			○	○

→ v_c Page 128+132

Ø DC_{h7} for Type UNI / Ø DC_{m7} for Type VA

High Performance Drill, DIN 6537



DC _{mT/h7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm
12.80	14	107	60	40.8	45
13.00	14	107	60	40.5	45
13.10	14	107	60	40.3	45
13.50	14	107	60	39.7	45
13.70	14	107	60	39.4	45
13.80	14	107	60	39.3	45
14.00	14	107	60	39.0	45
14.20	16	115	65	43.7	48
14.40	16	115	65	43.4	48
14.50	16	115	65	43.2	48
14.70	16	115	65	42.9	48
14.80	16	115	65	42.8	48
15.00	16	115	65	42.5	48
15.10	16	115	65	42.3	48
15.20	16	115	65	42.2	48
15.50	16	115	65	41.7	48
15.70	16	115	65	41.4	48
15.80	16	115	65	41.3	48
16.00	16	115	65	41.0	48
16.50	18	123	73	48.2	48
17.00	18	123	73	47.5	48
17.50	18	123	73	46.7	48
18.00	18	123	73	46.0	48
18.50	20	131	79	51.2	50
18.90	20	131	79	50.6	50
19.00	20	131	79	50.5	50
19.50	20	131	79	49.7	50
20.00	20	131	79	49.0	50

11 706 ...		11 707 ...		11 711 ...		11 712 ...	
£	12800	£	13000	£	12800	£	12800
T1/9C		T1/9C		T1/9C		T1/9C	
59.63	12800	59.63	13000	66.95	12800	66.95	12800
59.63	13100	59.63	13100	66.95	13000	66.95	13000
59.63	13500	59.63	13500	66.95	13100	66.95	13100
				66.95	13500	66.95	13500
				66.95	13700	66.95	13700
59.63	13800	59.63	13800	66.95	13800	66.95	13800
59.63	14000	59.63	14000	66.95	14000	66.95	14000
76.13	14200	76.13	14200	87.01	14200	87.01	14200
76.13	14400	76.13	14400	87.01	14400	87.01	14400
76.13	14500	76.13	14500	87.01	14500	87.01	14500
				87.01	14700	87.01	14700
76.13	14800	76.13	14800	87.01	14800	87.01	14800
76.13	15000	76.13	15000	87.01	15000	87.01	15000
76.13	15100	76.13	15100	87.01	15100	87.01	15100
76.13	15200	76.13	15200	87.01	15200	87.01	15200
76.13	15500	76.13	15500	87.01	15500	87.01	15500
				87.01	15700	87.01	15700
76.13	15800	76.13	15800	87.01	15800	87.01	15800
76.13	16000	76.13	16000	87.01	16000	87.01	16000
130.67	16500	130.67	16500	147.50	16500	147.50	16500
130.67	17000	130.67	17000	147.50	17000	147.50	17000
130.67	17500	130.67	17500	147.50	17500	147.50	17500
130.67	18000	130.67	18000	147.50	18000	147.50	18000
143.36	18500	143.36	18500	161.38	18500	161.38	18500
143.36	18900	143.36	18900	161.38	18900	161.38	18900
143.36	19000	143.36	19000	161.38	19000	161.38	19000
143.36	19500	143.36	19500	161.38	19500	161.38	19500
143.36	20000	143.36	20000	161.38	20000	161.38	20000

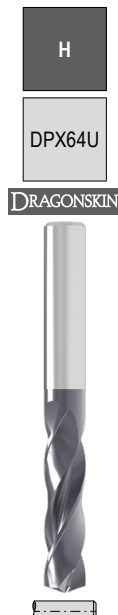
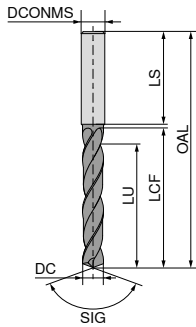
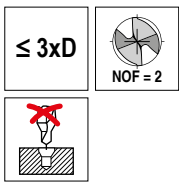
P	●	●	○	○
M	●	●	●	●
K	●	●		
N			○	○
S			○	○
H				
O			○	○

→ v_c Page 128+132

Ø DC_{h7} for Type UNI / Ø DC_{m7} for Type VA

WTX – High Performance Drill, factory standard

- ▲ Special cutting edge geometry
 - ▲ Special flute geometry
 - ▲ Optimised core thickness
- ▲ 46 to 70 HRC



SIG 140°
Solid carbide

10 777 ...

DC _{h7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	£ T4/9F	
2.55	4	55	20	16.1	28	66.25	02550
2.60	4	55	20	16.1	28	66.25	02600
2.70	4	55	20	15.9	28	66.25	02700
2.80	4	55	20	15.8	28	66.25	02800
2.90	4	55	20	15.6	28	66.25	02900
3.00	6	62	20	15.5	36	95.54	03000
3.10	6	62	20	15.3	36	95.54	03100
3.20	6	62	20	15.2	36	95.54	03200
3.30	6	62	20	15.0	36	95.54	03300
3.40	6	62	20	14.9	36	95.54	03400
3.50	6	62	20	14.7	36	95.54	03500
3.60	6	62	20	14.6	36	95.54	03600
3.70	6	62	20	14.4	36	95.54	03700
3.80	6	66	24	18.3	36	95.54	03800
3.90	6	66	24	18.1	36	95.54	03900
4.00	6	66	24	18.0	36	95.54	04000
4.10	6	66	24	17.8	36	95.54	04100
4.20	6	66	24	17.7	36	95.54	04200
4.30	6	66	24	17.5	36	95.54	04300
4.40	6	66	24	17.4	36	95.54	04400
4.50	6	66	24	17.2	36	95.54	04500
4.60	6	66	24	17.1	36	95.54	04600
4.70	6	66	24	16.9	36	95.54	04700
4.80	6	66	28	20.8	36	95.54	04800
4.90	6	66	28	20.6	36	95.54	04900
5.00	6	66	28	20.5	36	95.54	05000
5.10	6	66	28	20.3	36	95.54	05100
5.20	6	66	28	20.2	36	95.54	05200
5.30	6	66	28	20.0	36	95.54	05300
5.40	6	66	28	19.9	36	95.54	05400
5.50	6	66	28	19.7	36	95.54	05500
5.60	6	66	28	19.6	36	95.54	05600
5.70	6	66	28	19.4	36	95.54	05700
5.80	6	66	28	19.3	36	95.54	05800
5.90	6	66	28	19.1	36	95.54	05900
6.00	6	66	28	19.0	36	95.54	06000
6.10	8	79	34	24.8	36	124.16	06100
6.20	8	79	34	24.7	36	124.16	06200
6.30	8	79	34	24.5	36	124.16	06300
6.40	8	79	34	24.4	36	124.16	06400
6.50	8	79	34	24.2	36	124.16	06500
6.60	8	79	34	24.1	36	124.16	06600
6.70	8	79	34	23.9	36	124.16	06700
6.80	8	79	34	23.8	36	124.16	06800
6.90	8	79	34	23.6	36	124.16	06900
7.00	8	79	34	23.5	36	124.16	07000
7.10	8	79	41	30.3	36	124.16	07100
7.20	8	79	41	30.2	36	124.16	07200
7.30	8	79	41	30.0	36	124.16	07300
7.40	8	79	41	29.9	36	124.16	07400
7.50	8	79	41	29.7	36	124.16	07500

10 777 ...

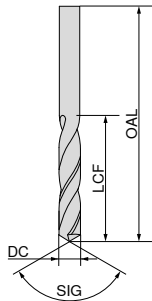
DC _{h7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	£ T4/9F	
7.60	8	79	41	29.6	36	124.16	07600
7.70	8	79	41	29.4	36	124.16	07700
7.80	8	79	41	29.3	36	124.16	07800
7.90	8	79	41	29.1	36	124.16	07900
8.00	8	79	41	29.0	36	124.16	08000
8.10	10	89	47	34.8	40	140.34	08100
8.20	10	89	47	34.7	40	140.34	08200
8.30	10	89	47	34.5	40	140.34	08300
8.40	10	89	47	34.4	40	140.34	08400
8.50	10	89	47	34.2	40	140.34	08500
8.60	10	89	47	34.1	40	140.34	08600
8.70	10	89	47	33.9	40	140.34	08700
8.80	10	89	47	33.8	40	140.34	08800
8.90	10	89	47	33.6	40	140.34	08900
9.00	10	89	47	33.5	40	140.34	09000
9.10	10	89	47	33.3	40	140.34	09100
9.20	10	89	47	33.2	40	140.34	09200
9.30	10	89	47	33.0	40	140.34	09300
9.40	10	89	47	32.9	40	140.34	09400
9.50	10	89	47	32.7	40	140.34	09500
9.60	10	89	47	32.6	40	140.34	09600
9.70	10	89	47	32.4	40	140.34	09700
9.80	10	89	47	32.3	40	140.34	09800
9.90	10	89	47	32.1	40	140.34	09900
10.00	10	89	47	32.0	40	140.34	10000
10.10	12	102	55	39.8	45	182.24	10100
10.20	12	102	55	39.7	45	182.24	10200
10.30	12	102	55	39.5	45	182.24	10300
10.40	12	102	55	39.4	45	182.24	10400
10.50	12	102	55	39.2	45	182.24	10500
10.60	12	102	55	39.1	45	182.24	10600
10.70	12	102	55	38.9	45	182.24	10700
10.80	12	102	55	38.8	45	182.24	10800
10.90	12	102	55	38.6	45	182.24	10900
11.00	12	102	55	38.5	45	182.24	11000
11.10	12	102	55	38.3	45	182.24	11100
11.20	12	102	55	38.2	45	182.24	11200
11.30	12	102	55	38.0	45	182.24	11300
11.40	12	102	55	37.9	45	182.24	11400
11.50	12	102	55	37.7	45	182.24	11500
11.60	12	102	55	37.6	45	182.24	11600
11.70	12	102	55	37.4	45	182.24	11700
11.80	12	102	55	37.3	45	182.24	11800
11.90	12	102	55	37.1	45	182.24	11900
12.00	12	102	55	37.0	45	182.24	12000
12.10	14	107	60	41.8	45	215.34	12100
12.20	14	107	60	41.7	45	215.34	12200
12.30	14	107	60	41.5	45	215.34	12300
12.40	14	107	60	41.4	45	215.34	12400
12.50	14	107	60	41.2	45	215.34	12500
12.60	14	107	60	41.1	45	215.34	12600
12.70	14	107	60	40.9	45	215.34	12700
12.80	14	107	60	40.8	45	215.34	12800
12.90	14	107	60	40.6	45	215.34	12900
13.00	14	107	60	40.5	45	215.34	13000
13.10	14	107	60	40.3	45	215.34	13100
13.20	14	107	60	40.2	45	215.34	13200
13.30	14	107	60	40.0	45	215.34	13300
13.40	14	107	60	39.9	45	215.34	13400
13.50	14	107	60	39.7	45	215.34	13500
13.60	14	107	60	39.6	45	215.34	13600
13.70	14	107	60	39.4	45	215.34	13700
13.80	14	107	60	39.3	45	215.34	13800
13.90	14	107	60	39.1	45	215.34	13900
14.00	14	107	60	39.0	45	215.34	14000

P	○
K	●
S	●
H.1.1	●
H.1.2	●
H.1.3	●
H.1.4	●

→ v_c Page 119

Twist drill similar to DIN 1897

- ▲ Helix angle 30°
- ▲ Shank Ø h7



SIG 118°
Solid carbide

DC _{h7} mm	OAL mm	LCF mm	£ T3	
0.5	20	3.0	7.57	005
0.6	21	3.5	7.96	006
0.7	23	4.5	7.96	007
0.8	24	5.0	7.96	008
0.9	25	5.5	7.96	009
1.0	26	6.0	7.96	010
1.2	30	8.0	7.96	012
1.3	30	8.0	7.96	013
1.4	32	9.0	7.96	014
1.5	32	9.0	7.96	015
1.6	34	10.0	7.96	016
1.7	34	10.0	7.96	017
1.8	36	11.0	7.96	018
1.9	36	11.0	7.96	019
2.0	38	12.0	10.68	020
2.1	38	12.0	11.01	021
2.2	40	13.0	11.01	022
2.3	40	13.0	11.01	023
2.4	43	14.0	11.01	024
2.5	43	14.0	12.36	025
2.6	43	14.0	12.36	026
2.7	46	16.0	12.98	027
2.8	46	16.0	12.98	028
2.9	46	16.0	12.98	029
3.0	46	16.0	13.88	030
3.1	49	18.0	13.88	031
3.2	49	18.0	13.88	032
3.3	49	18.0	16.24	033
3.4	52	20.0	16.24	034
3.5	52	20.0	17.51	035
3.6	52	20.0	17.51	036
3.7	52	20.0	17.51	037
3.8	55	22.0	18.05	038
3.9	55	22.0	18.05	039
4.0	55	22.0	20.82	040
4.1	55	22.0	20.82	041
4.2	55	22.0	22.67	042
4.3	58	24.0	22.67	043
4.4	58	24.0	22.67	044
4.5	58	24.0	24.53	045
4.6	58	24.0	24.53	046
4.7	58	24.0	24.53	047
4.8	62	26.0	24.53	048
4.9	62	26.0	24.53	049
5.0	62	26.0	27.47	050
5.1	62	26.0	27.47	051
5.2	62	26.0	28.31	052
5.3	62	26.0	28.31	053
5.4	66	28.0	28.31	054
5.5	66	28.0	31.90	055
5.6	66	28.0	31.90	056
5.7	66	28.0	31.90	057

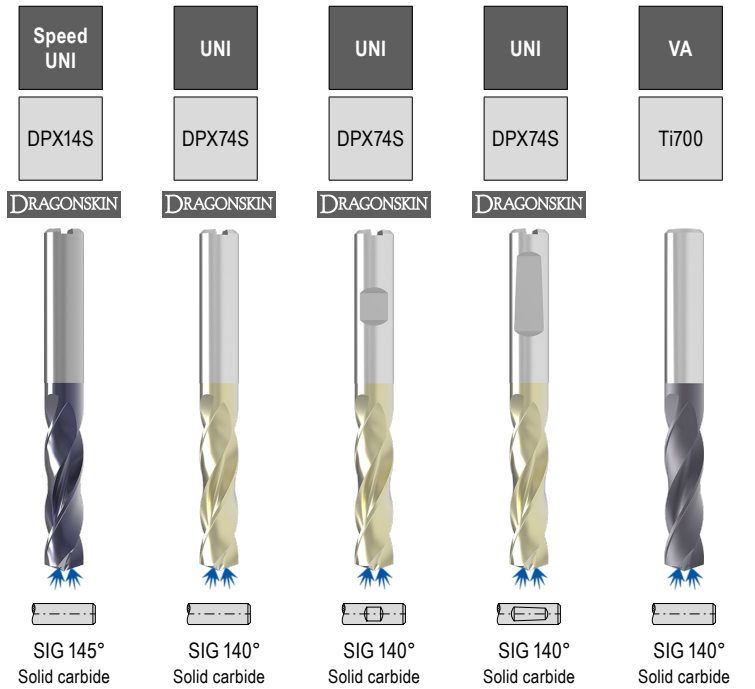
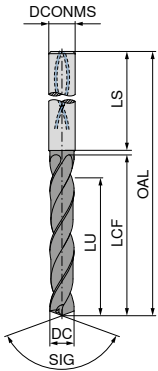
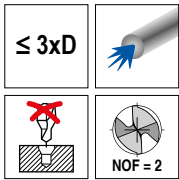
10 700 ...

DC _{h7} mm	OAL mm	LCF mm	£ T3	
5.8	66	28.0	31.90	058
5.9	66	28.0	31.90	059
6.0	66	28.0	35.40	060
6.1	70	31.0	36.47	061
6.2	70	31.0	36.47	062
6.3	70	31.0	36.47	063
6.4	70	31.0	36.47	064
6.5	70	31.0	39.47	065
6.6	70	31.0	43.49	066
6.7	70	31.0	43.49	067
6.8	74	34.0	43.49	068
6.9	74	34.0	43.49	069
7.0	74	34.0	43.49	070
7.1	74	34.0	43.49	071
7.2	74	34.0	43.49	072
7.3	74	34.0	43.49	073
7.4	74	34.0	43.49	074
7.5	74	34.0	50.32	075
7.6	79	37.0	50.32	076
7.7	79	37.0	50.32	077
7.8	79	37.0	50.32	078
7.9	79	37.0	50.32	079
8.0	79	37.0	51.67	080
8.1	79	37.0	56.66	081
8.2	79	37.0	56.66	082
8.3	79	37.0	56.66	083
8.4	79	37.0	56.66	084
8.5	79	37.0	58.67	085
8.6	84	40.0	59.82	086
8.7	84	40.0	59.82	087
8.8	84	40.0	65.43	088
8.9	84	40.0	65.43	089
9.0	84	40.0	65.43	090
9.1	84	40.0	65.43	091
9.2	84	40.0	65.43	092
9.3	84	40.0	65.43	093
9.4	84	40.0	65.43	094
9.5	84	40.0	70.43	095
9.6	89	43.0	70.43	096
9.7	89	43.0	70.43	097
9.8	89	43.0	70.43	098
9.9	89	43.0	70.43	099
10.0	89	43.0	78.17	100
10.2	89	43.0	83.35	102
10.5	89	43.0	83.35	105
10.8	95	47.0	83.35	108
11.0	95	47.0	92.88	110
11.2	95	47.0	101.74	112
11.5	95	47.0	103.16	115
11.8	95	47.0	103.16	118
12.0	102	51.0	115.73	120
12.5	102	51.0	126.26	125
13.0	102	51.0	141.48	130
13.5	107	54.0	161.00	135
14.0	107	54.0	174.76	140
14.5	111	56.0	186.98	145
15.0	111	56.0	202.77	150
15.5	115	58.0	218.87	155
16.0	115	58.0	230.70	160
18.0	123	62.0	309.56	180
20.0	131	66.0	414.77	200

P	○
M	○
K	●
N	●
S	○
H	○
O	○

→ v. Page 134

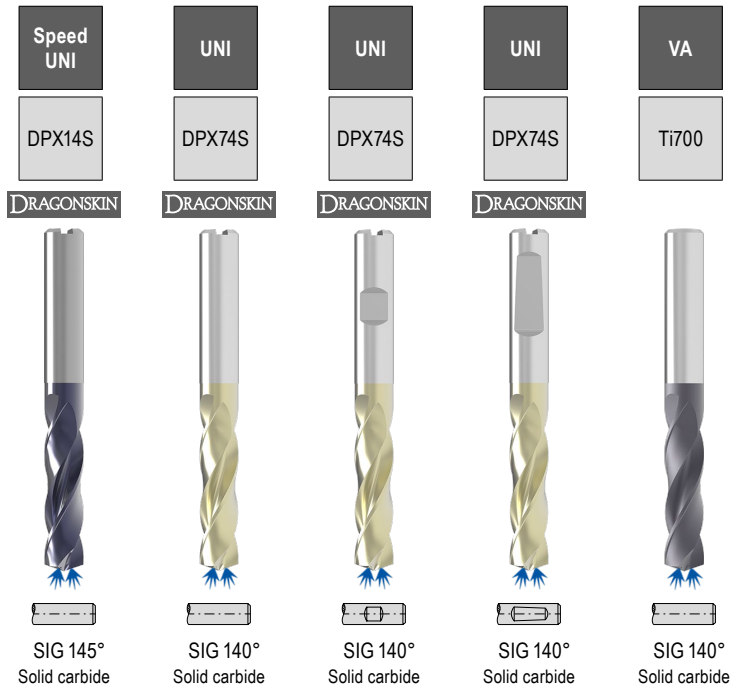
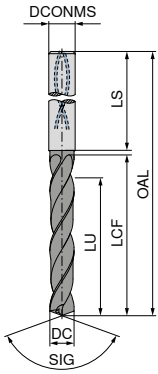
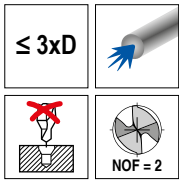
WTX – High Performance Drill, DIN 6537



DC _{m7h7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	10 781 ...		11 780 ...		11 781 ...		11 779 ...		10 734 ...	
						£	T4	£	T7	£	T7	£	T7	£	T5
3.00	6	62	20	14	36	122.02	03000	57.50	03000	57.50	03000	57.50	03000	111.68	030
3.10	6	62	20	14	36	122.02	03100	57.50	03100	57.50	03100	57.50	03100	111.68	031
3.15	6	62	20	14	36			57.50	03150	57.50	03150	57.50	03150	111.68	831
3.20	6	62	20	14	36	122.02	03200	57.50	03200	57.50	03200	57.50	03200	111.68	032
3.22	6	62	20	14	36			57.50	03220	57.50	03220	57.50	03220	111.68	832
3.25	6	62	20	14	36			57.50	03250	57.50	03250	57.50	03250	111.68	890
3.30	6	62	20	14	36	122.02	03300	57.50	03300	57.50	03300	57.50	03300	111.68	033
3.40	6	62	20	14	36	122.02	03400	57.50	03400	57.50	03400	57.50	03400	111.68	034
3.50	6	62	20	14	36	122.02	03500	57.50	03500	57.50	03500	57.50	03500	111.68	035
3.60	6	62	20	14	36	122.02	03600	57.50	03600	57.50	03600	57.50	03600	111.68	036
3.70	6	62	20	14	36	122.02	03700	57.50	03700	57.50	03700	57.50	03700	111.68	037
3.80	6	66	24	17	36	122.02	03800	57.50	03800	57.50	03800	57.50	03800	111.68	038
3.85	6	66	24	17	36			57.50	03850	57.50	03850	57.50	03850	111.68	838
3.90	6	66	24	17	36	122.02	03900	57.50	03900	57.50	03900	57.50	03900	111.68	039
4.00	6	66	24	17	36	122.02	04000	57.50	04000	57.50	04000	57.50	04000	111.68	040
4.10	6	66	24	17	36	122.02	04100	57.50	04100	57.50	04100	57.50	04100	111.68	041
4.20	6	66	24	17	36	122.02	04200	57.50	04200	57.50	04200	57.50	04200	111.68	042
4.25	6	66	24	17	36			57.50	04250	57.50	04250	57.50	04250		
4.30	6	66	24	17	36	122.02	04300	57.50	04300	57.50	04300	57.50	04300	111.68	043
4.35	6	66	24	17	36			57.50	04350	57.50	04350	57.50	04350	111.68	843
4.40	6	66	24	17	36	122.02	04400	57.50	04400	57.50	04400	57.50	04400	111.68	044
4.45	6	66	24	17	36			57.50	04450	57.50	04450	57.50	04450	111.68	844
4.50	6	66	24	17	36	122.02	04500	57.50	04500	57.50	04500	57.50	04500	111.68	045
4.60	6	66	24	17	36	122.02	04600	57.50	04600	57.50	04600	57.50	04600	111.68	046
4.65	6	66	24	17	36	122.02	04650	57.50	04650	57.50	04650	57.50	04650	111.68	900
4.70	6	66	24	17	36	122.02	04700	57.50	04700	57.50	04700	57.50	04700	111.68	047
4.80	6	66	28	20	36	122.02	04800	57.50	04800	57.50	04800	57.50	04800	111.68	048
4.90	6	66	28	20	36	122.02	04900	57.50	04900	57.50	04900	57.50	04900	111.68	049
4.95	6	66	28	20	36			57.50	04950	57.50	04950	57.50	04950		
5.00	6	66	28	20	36	122.02	05000	57.50	05000	57.50	05000	57.50	05000	111.68	050
5.05	6	66	28	20	36			57.50	05050	57.50	05050	57.50	05050		
5.10	6	66	28	20	36	122.02	05100	57.50	05100	57.50	05100	57.50	05100	111.68	051
5.20	6	66	28	20	36	122.02	05200	57.50	05200	57.50	05200	57.50	05200	111.68	052
5.30	6	66	28	20	36	122.02	05300	57.50	05300	57.50	05300	57.50	05300	111.68	053
5.40	6	66	28	20	36	122.02	05400	57.50	05400	57.50	05400	57.50	05400	111.68	054
5.50	6	66	28	20	36	122.02	05500	57.50	05500	57.50	05500	57.50	05500	111.68	055
5.55	6	66	28	20	36	122.02	05550	57.50	05550	57.50	05550	57.50	05550	111.68	902
5.60	6	66	28	20	36	122.02	05600	57.50	05600	57.50	05600	57.50	05600	111.68	056
5.70	6	66	28	20	36	122.02	05700	57.50	05700	57.50	05700	57.50	05700	111.68	057
5.75	6	66	28	20	36			57.50	05750	57.50	05750	57.50	05750	111.68	916
5.80	6	66	28	20	36	122.02	05800	57.50	05800	57.50	05800	57.50	05800	111.68	058
5.90	6	66	28	20	36	122.02	05900	57.50	05900	57.50	05900	57.50	05900	111.68	059

P	●	●	●	●	○
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WTX – High Performance Drill, DIN 6537



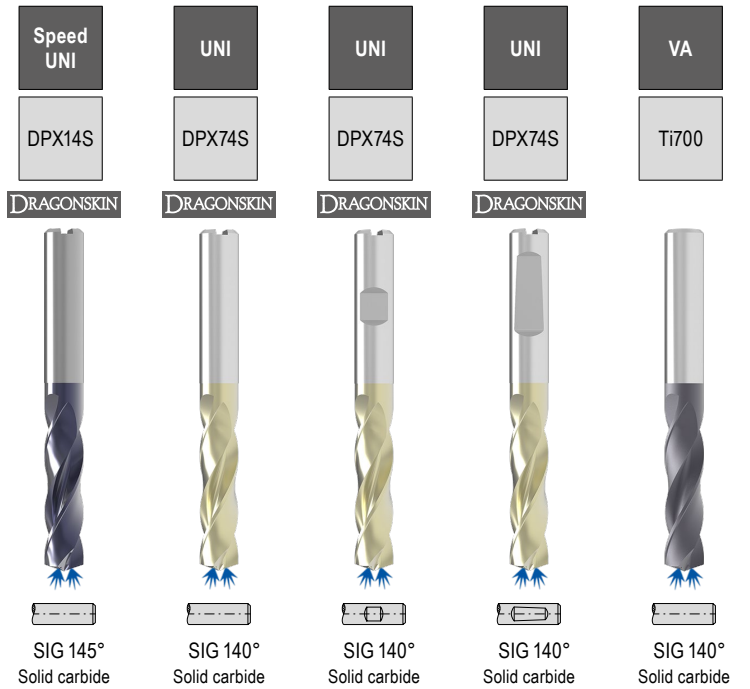
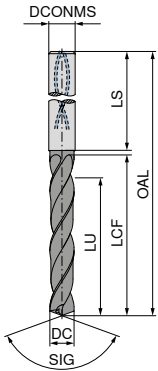
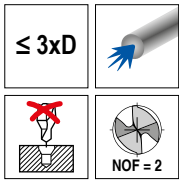
DC _{mT7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	10 781 ... £ T4	11 780 ... £ T7	11 781 ... £ T7	11 779 ... £ T7	10 734 ... £ T5
5.95	6	66	28	20	36					
6.00	6	66	28	20	36	122.02 06000	57.50 05950	57.50 05950	57.50 05950	111.68 060
6.10	8	79	34	24	36	149.13 06100	75.10 06100	75.10 06100	75.10 06100	137.85 061
6.20	8	79	34	24	36	149.13 06200	75.10 06200	75.10 06200	75.10 06200	137.85 062
6.30	8	79	34	24	36	149.13 06300	75.10 06300	75.10 06300	75.10 06300	137.85 063
6.40	8	79	34	24	36	149.13 06400	75.10 06400	75.10 06400	75.10 06400	137.85 064
6.50	8	79	34	24	36	149.13 06500	75.10 06500	75.10 06500	75.10 06500	137.85 065
6.60	8	79	34	24	36	149.13 06600	75.10 06600	75.10 06600	75.10 06600	137.85 066
6.70	8	79	34	24	36	149.13 06700	75.10 06700	75.10 06700	75.10 06700	137.85 067
6.80	8	79	34	24	36	149.13 06800	75.10 06800	75.10 06800	75.10 06800	137.85 068
6.90	8	79	34	24	36	149.13 06900	75.10 06900	75.10 06900	75.10 06900	137.85 069
7.00	8	79	34	24	36	149.13 07000	75.10 07000	75.10 07000	75.10 07000	137.85 070
7.10	8	79	41	29	36	149.13 07100	75.10 07100	75.10 07100	75.10 07100	137.85 071
7.20	8	79	41	29	36	149.13 07200	75.10 07200	75.10 07200	75.10 07200	137.85 072
7.30	8	79	41	29	36	149.13 07300	75.10 07300	75.10 07300	75.10 07300	137.85 073
7.40	8	79	41	29	36	149.13 07400	75.10 07400	75.10 07400	75.10 07400	137.85 074
7.45	8	79	41	29	36		75.10 07450	75.10 07450	75.10 07450	137.85 924
7.50	8	79	41	29	36	149.13 07500	75.10 07500	75.10 07500	75.10 07500	137.85 075
7.60	8	79	41	29	36	149.13 07600	75.10 07600	75.10 07600	75.10 07600	137.85 076
7.70	8	79	41	29	36	149.13 07700	75.10 07700	75.10 07700	75.10 07700	137.85 077
7.80	8	79	41	29	36	149.13 07800	75.10 07800	75.10 07800	75.10 07800	137.85 078
7.90	8	79	41	29	36	149.13 07900	75.10 07900	75.10 07900	75.10 07900	137.85 079
8.00	8	79	41	29	36	149.13 08000	75.10 08000	75.10 08000	75.10 08000	136.95 080
8.10	10	89	47	35	40	205.67 08100	85.81 08100	85.81 08100	85.81 08100	137.85 081
8.20	10	89	47	35	40	205.67 08200	85.81 08200	85.81 08200	85.81 08200	137.85 082
8.30	10	89	47	35	40	205.67 08300	85.81 08300	85.81 08300	85.81 08300	137.85 083
8.40	10	89	47	35	40	205.67 08400	85.81 08400	85.81 08400	85.81 08400	137.85 084
8.50	10	89	47	35	40	205.67 08500	85.81 08500	85.81 08500	85.81 08500	137.85 085
8.60	10	89	47	35	40	205.67 08600	85.81 08600	85.81 08600	85.81 08600	137.85 086
8.70	10	89	47	35	40	205.67 08700	85.81 08700	85.81 08700	85.81 08700	137.85 087
8.80	10	89	47	35	40	205.67 08800	85.81 08800	85.81 08800	85.81 08800	137.85 088
8.90	10	89	47	35	40	205.67 08900	85.81 08900	85.81 08900	85.81 08900	137.85 089
9.00	10	89	47	35	40	205.67 09000	85.81 09000	85.81 09000	85.81 09000	137.85 090
9.10	10	89	47	35	40	205.67 09100	85.81 09100	85.81 09100	85.81 09100	137.85 091
9.20	10	89	47	35	40	205.67 09200	85.81 09200	85.81 09200	85.81 09200	159.26 092
9.30	10	89	47	35	40	205.67 09300	85.81 09300	85.81 09300	85.81 09300	159.26 093
9.35	10	89	47	35	40		85.81 09350	85.81 09350	85.81 09350	159.26 930
9.40	10	89	47	35	40	205.67 09400	85.81 09400	85.81 09400	85.81 09400	159.26 094
9.45	10	89	47	35	40		85.81 09450	85.81 09450	85.81 09450	159.26 994
9.50	10	89	47	35	40	205.67 09500	85.81 09500	85.81 09500	85.81 09500	159.26 095
9.60	10	89	47	35	40	205.67 09600	85.81 09600	85.81 09600	85.81 09600	159.26 096
9.70	10	89	47	35	40	205.67 09700	85.81 09700	85.81 09700	85.81 09700	159.26 097

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M	●	●	●	●	●
K	●	●	●	●	○
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S					●
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O					

→ v_c Page 110–114

Ø DC_{mT7} for Type UNI and VA / Ø DC_{hT7} for Type Speed UNI

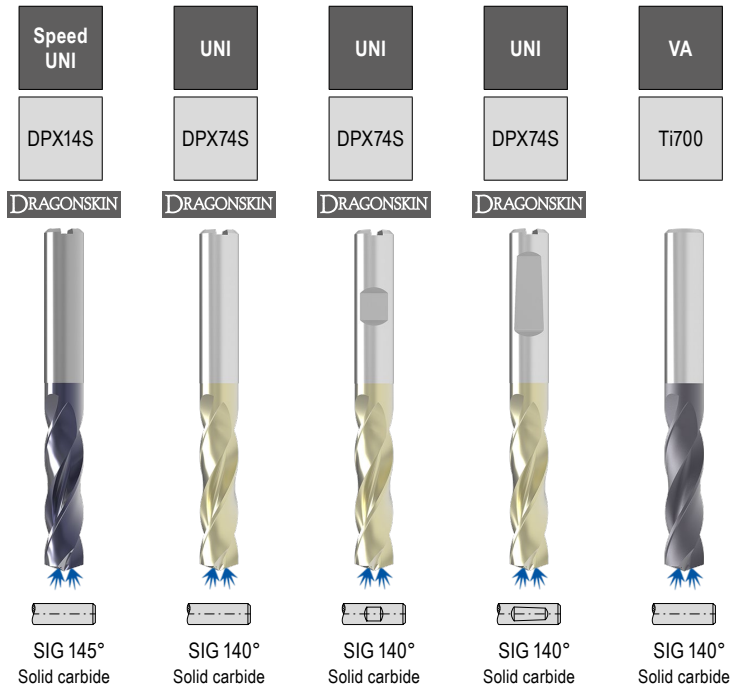
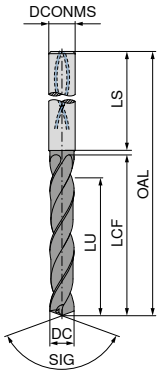
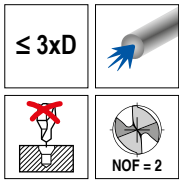
WTX – High Performance Drill, DIN 6537



DC _{m7h7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	10 781 ...		11 780 ...		11 781 ...		11 779 ...		10 734 ...	
						£	09800	£	09800	£	09800	£	09800	£	09800
9.80	10	89	47	35	40	205.67	09800	85.81	09800	85.81	09800	85.81	09800	159.26	098
9.90	10	89	47	35	40	205.67	09900	85.81	09900	85.81	09900	85.81	09900	159.26	099
10.00	10	89	47	35	40	205.67	10000	85.81	10000	85.81	10000	85.81	10000	159.26	100
10.10	12	102	55	40	45	259.07	10100	119.81	10100	119.81	10100	119.81	10100	220.96	101
10.20	12	102	55	40	45	259.07	10200	119.81	10200	119.81	10200	119.81	10200	220.96	102
10.30	12	102	55	40	45	259.07	10300	119.81	10300	119.81	10300	119.81	10300	220.96	103
10.40	12	102	55	40	45	259.07	10400	119.81	10400	119.81	10400	119.81	10400	220.96	104
10.50	12	102	55	40	45	259.07	10500	119.81	10500	119.81	10500	119.81	10500	220.96	105
10.55	12	102	55	40	45			119.81	10550	119.81	10550	119.81	10550	220.96	932
10.60	12	102	55	40	45	259.07	10600	119.81	10600	119.81	10600	119.81	10600	220.96	106
10.70	12	102	55	40	45	259.07	10700	119.81	10700	119.81	10700	119.81	10700	220.96	107
10.75	12	102	55	40	45			119.81	10750	119.81	10750	119.81	10750		
10.80	12	102	55	40	45	259.07	10800	119.81	10800	119.81	10800	119.81	10800	220.96	108
10.90	12	102	55	40	45	259.07	10900	119.81	10900	119.81	10900	119.81	10900	220.96	109
11.00	12	102	55	40	45	259.07	11000	119.81	11000	119.81	11000	119.81	11000	220.96	110
11.10	12	102	55	40	45	259.07	11100	119.81	11100	119.81	11100	119.81	11100	220.96	111
11.20	12	102	55	40	45	259.07	11200	119.81	11200	119.81	11200	119.81	11200	220.96	112
11.25	12	102	55	40	45			119.81	11250	119.81	11250	119.81	11250	220.96	912
11.30	12	102	55	40	45	259.07	11300	119.81	11300	119.81	11300	119.81	11300	220.96	113
11.35	12	102	55	40	45			119.81	11350	119.81	11350	119.81	11350	220.96	913
11.40	12	102	55	40	45	259.07	11400	119.81	11400	119.81	11400	119.81	11400	220.96	114
11.45	12	102	55	40	45			119.81	11450	119.81	11450	119.81	11450	220.96	914
11.50	12	102	55	40	45	259.07	11500	119.81	11500	119.81	11500	119.81	11500	220.96	115
11.60	12	102	55	40	45	259.07	11600	119.81	11600	119.81	11600	119.81	11600	220.96	116
11.70	12	102	55	40	45	259.07	11700	119.81	11700	119.81	11700	119.81	11700	220.96	117
11.80	12	102	55	40	45	259.07	11800	119.81	11800	119.81	11800	119.81	11800	220.96	118
11.90	12	102	55	40	45	259.07	11900	119.81	11900	119.81	11900	119.81	11900	220.96	119
12.00	12	102	55	40	45	259.07	12000	119.81	12000	119.81	12000	119.81	12000	220.96	120
12.15	14	107	60	43	45			169.70	12150	169.70	12150	169.70	12150	311.09	921
12.25	14	107	60	43	45			169.70	12250	169.70	12250	169.70	12250		
12.50	14	107	60	43	45	423.21	12500	169.70	12500	169.70	12500	169.70	12500	311.09	125
12.55	14	107	60	43	45			169.70	12550	169.70	12550	169.70	12550	311.09	925
12.70	14	107	60	43	45			169.70	12700	169.70	12700	169.70	12700		
12.80	14	107	60	43	45	423.21	12800	169.70	12800	169.70	12800	169.70	12800	311.09	128
12.90	14	107	60	43	45			169.70	12900	169.70	12900	169.70	12900		
13.00	14	107	60	43	45	423.21	13000	169.70	13000	169.70	13000	169.70	13000	311.09	130
13.10	14	107	60	43	45			169.70	13100	169.70	13100	169.70	13100		
13.30	14	107	60	43	45			169.70	13300	169.70	13300	169.70	13300		
13.35	14	107	60	43	45			169.70	13350	169.70	13350	169.70	13350	311.09	933
13.50	14	107	60	43	45	423.21	13500	169.70	13500	169.70	13500	169.70	13500	311.09	135
13.70	14	107	60	43	45			169.70	13700	169.70	13700	169.70	13700		
13.80	14	107	60	43	45	423.21	13800	169.70	13800	169.70	13800	169.70	13800	311.09	138

P	●	●	●	●	○
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O					

WTX – High Performance Drill, DIN 6537



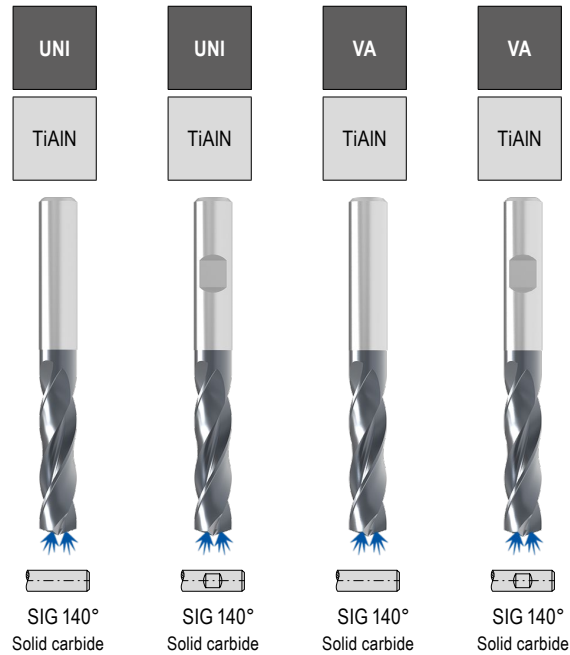
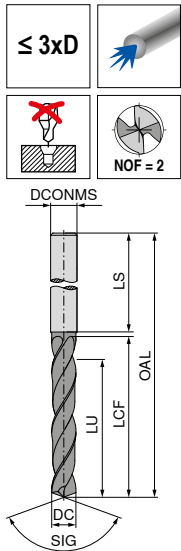
DC mm _{m7h7}	DCONMS mm _{h6}	OAL mm	LCF mm	LU mm	LS mm	10 781 ...		11 780 ...		11 781 ...		11 779 ...		10 734 ...	
						£	T4	£	T7	£	T7	£	T7	£	T5
14.00	14	107	60	43	45	423.21	14000	169.70	14000	169.70	14000	169.70	14000	311.09	140
14.20	16	115	65	45	48			199.71	14200	199.71	14200	199.71	14200		
14.50	16	115	65	45	48	531.96	14500	199.71	14500	199.71	14500	199.71	14500	394.22	145
14.80	16	115	65	45	48	531.96	14800	199.71	14800	199.71	14800	199.71	14800	394.22	148
15.00	16	115	65	45	48	531.96	15000	199.71	15000	199.71	15000	199.71	15000	394.22	150
15.10	16	115	65	45	48			199.71	15100	199.71	15100	199.71	15100		
15.25	16	115	65	45	48			199.71	15250	199.71	15250	199.71	15250		
15.30	16	115	65	45	48			199.71	15300	199.71	15300	199.71	15300		
15.35	16	115	65	45	48			199.71	15350	199.71	15350	199.71	15350	394.22	953
15.50	16	115	65	45	48	531.96	15500	199.71	15500	199.71	15500	199.71	15500	394.22	155
15.60	16	115	65	45	48			199.71	15600	199.71	15600	199.71	15600		
15.80	16	115	65	45	48	531.96	15800	199.71	15800	199.71	15800	199.71	15800	394.22	158
16.00	16	115	65	45	48	531.96	16000	199.71	16000	199.71	16000	199.71	16000	394.22	160
16.05	18	123	73	51	48			324.12	16050	324.12	16050	324.12	16050	541.26	960
16.50	18	123	73	51	48	715.88	16500	324.12	16500	324.12	16500	324.12	16500	541.26	165
16.80	18	123	73	51	48	715.88	16800	324.12	16800	324.12	16800	324.12	16800	541.26	168
16.90	18	123	73	51	48			324.12	16900	324.12	16900	324.12	16900		
17.00	18	123	73	51	48	715.88	17000	324.12	17000	324.12	17000	324.12	17000	541.26	170
17.50	18	123	73	51	48	715.88	17500	324.12	17500	324.12	17500	324.12	17500	541.26	175
17.60	18	123	73	51	48			324.12	17600	324.12	17600	324.12	17600		
17.80	18	123	73	51	48	715.88	17800	324.12	17800	324.12	17800	324.12	17800	541.26	178
18.00	18	123	73	51	48	715.88	18000	324.12	18000	324.12	18000	324.12	18000	541.26	180
18.50	20	131	79	55	50	872.13	18500	349.09	18500	349.09	18500	349.09	18500	671.94	185
18.80	20	131	79	55	50	872.13	18800	349.09	18800	349.09	18800	349.09	18800	671.94	188
18.90	20	131	79	55	50			349.09	18900	349.09	18900	349.09	18900		
19.00	20	131	79	55	50	872.13	19000	349.09	19000	349.09	19000	349.09	19000	671.94	190
19.35	20	131	79	55	50			349.09	19350	349.09	19350	349.09	19350	671.94	993
19.50	20	131	79	55	50	872.13	19500	349.09	19500	349.09	19500	349.09	19500	671.94	195
19.60	20	131	79	55	50			349.09	19600	349.09	19600	349.09	19600		
19.80	20	131	79	55	50	872.13	19800	349.09	19800	349.09	19800	349.09	19800	671.94	198
20.00	20	131	79	55	50	872.13	20000	349.09	20000	349.09	20000	349.09	20000	671.94	200
20.50	25	151	93	66	56			770.72	20500	770.72	20500	770.72	20500		
21.00	25	151	93	66	56			770.72	21000	770.72	21000	770.72	21000		
21.50	25	151	93	66	56			770.72	21500	770.72	21500	770.72	21500		
22.00	25	151	93	66	56			770.72	22000	770.72	22000	770.72	22000		
22.50	25	153	96	72	56			770.72	22500	770.72	22500	770.72	22500		
23.00	25	153	96	72	56			770.72	23000	770.72	23000	770.72	23000		
23.50	25	153	96	72	56			770.72	23500	770.72	23500	770.72	23500		
24.00	25	153	96	72	56			770.72	24000	770.72	24000	770.72	24000		
24.50	25	153	96	75	56			770.72	24500	770.72	24500	770.72	24500		
25.00	25	153	96	75	56			770.72	25000	770.72	25000	770.72	25000		

P	•	•	•	•	○
M	•	•	•	•	•
K	•	•	•	•	○
N	•	•	•	•	○
S	•	•	•	•	•
H	○	○	○	○	○
O	○	○	○	○	○

→ v_c Page 110-114

Ø DC_{m7} for Type UNI and VA / Ø DC_{h7} for Type Speed UNI

High Performance Drill, DIN 6537



DC _{mTn7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm
1.00	4	45	7	5.5	28
1.10	4	45	7	5.3	28
1.20	4	45	7	5.2	28
1.30	4	45	7	5.0	28
1.40	4	45	7	4.9	28
1.50	4	55	14	11.7	28
1.60	4	55	14	11.6	28
1.70	4	55	14	11.4	28
1.80	4	55	14	11.3	28
1.90	4	55	14	11.1	28
2.00	4	55	20	17.0	28
2.10	4	55	20	16.8	28
2.20	4	55	20	16.7	28
2.30	4	55	20	16.5	28
2.40	4	55	20	16.4	28
2.50	4	55	20	16.2	28
2.60	4	55	20	16.1	28
2.70	4	55	20	15.9	28
2.80	4	55	20	15.8	28
2.90	4	55	20	15.6	28
3.00	6	62	20	15.5	36
3.10	6	62	20	15.3	36
3.20	6	62	20	15.2	36
3.25	6	62	20	15.1	36
3.30	6	62	20	15.0	36
3.40	6	62	20	14.9	36
3.50	6	62	20	14.7	36
3.60	6	62	20	14.6	36
3.70	6	62	20	14.4	36
3.80	6	66	24	18.3	36
3.90	6	66	24	18.1	36
4.00	6	66	24	18.0	36
4.10	6	66	24	17.8	36
4.20	6	66	24	17.7	36
4.30	6	66	24	17.5	36
4.40	6	66	24	17.4	36
4.50	6	66	24	17.2	36
4.60	6	66	24	17.1	36
4.65	6	66	24	17.0	36
4.70	6	66	24	16.9	36
4.80	6	66	28	20.8	36

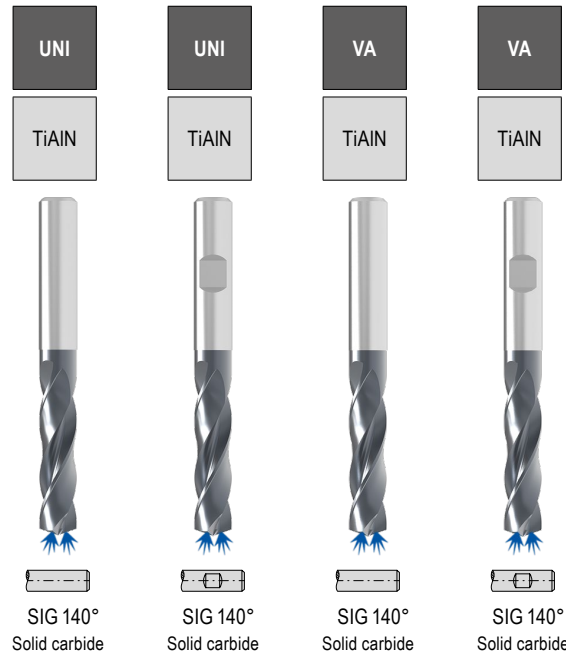
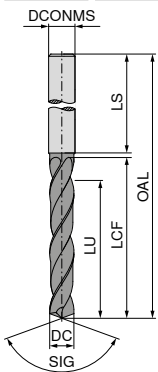
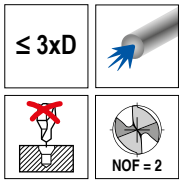
11 700 ...		11 701 ...		11 713 ...		11 714 ...	
£	01000	£	01000	£	01000	£	01000
T1/9C		T1/9C		T1/9C		T1/9C	
32.99	01100			38.75	01100		
32.99	01200			38.75	01200		
32.99	01300			38.75	01300		
32.99	01400			38.75	01400		
32.99	01500			38.75	01500		
32.99	01600			38.75	01600		
32.99	01700			38.75	01700		
32.99	01800			38.75	01800		
32.99	01900			38.75	01900		
32.99	02000			38.75	02000		
32.99	02100			38.75	02100		
32.99	02200			38.75	02200		
32.99	02300			38.75	02300		
32.99	02400			38.75	02400		
32.99	02500			38.75	02500		
32.99	02600			38.75	02600		
32.99	02700			38.75	02700		
32.99	02800			38.75	02800		
32.99	02900			38.75	02900		
27.90	03000	27.90	03000	33.69	03000	33.69	03000
27.90	03100	27.90	03100	33.69	03100	33.69	03100
27.90	03200	27.90	03200	33.69	03200	33.69	03200
27.90	03250	27.90	03250				
27.90	03300	27.90	03300	33.69	03300	33.69	03300
27.90	03400	27.90	03400	33.69	03400	33.69	03400
27.90	03500	27.90	03500	33.69	03500	33.69	03500
27.90	03600	27.90	03600	33.69	03600	33.69	03600
27.90	03700	27.90	03700	33.69	03700	33.69	03700
27.90	03800	27.90	03800	33.69	03800	33.69	03800
27.90	03900	27.90	03900	33.69	03900	33.69	03900
27.90	04000	27.90	04000	33.69	04000	33.69	04000
27.90	04100	27.90	04100	33.69	04100	33.69	04100
27.90	04200	27.90	04200	33.69	04200	33.69	04200
27.90	04300	27.90	04300	33.69	04300	33.69	04300
27.90	04400	27.90	04400	33.69	04400	33.69	04400
27.90	04500	27.90	04500	33.69	04500	33.69	04500
27.90	04600	27.90	04600	33.69	04600	33.69	04600
27.90	04650	27.90	04650				
27.90	04700	27.90	04700	33.69	04700	33.69	04700
27.90	04800	27.90	04800	33.69	04800	33.69	04800

P	●	●	○	○
M	●	●	●	●
K	●	●		
N	○	○	●	●
S			○	○
H				
O			○	○

→ v_c Page 129+133

Ø DC_{h7} for Type UNI / Ø DC_{m7} for Type VA

High Performance Drill, DIN 6537



11 700 ...		11 701 ...		11 713 ...		11 714 ...	
£		£		£		£	
T1/9C		T1/9C		T1/9C		T1/9C	
27.90	04900	27.90	04900	33.69	04900	33.69	04900
27.90	05000	27.90	05000	33.69	05000	33.69	05000
27.90	05100	27.90	05100	33.69	05100	33.69	05100
27.90	05200	27.90	05200	33.69	05200	33.69	05200
27.90	05300	27.90	05300	33.69	05300	33.69	05300
27.90	05400	27.90	05400	33.69	05400	33.69	05400
27.90	05500	27.90	05500	33.69	05500	33.69	05500
27.90	05600	27.90	05600	33.69	05600	33.69	05600
27.90	05650	27.90	05650				
27.90	05700	27.90	05700	33.69	05700	33.69	05700
27.90	05800	27.90	05800	33.69	05800	33.69	05800
27.90	05900	27.90	05900	33.69	05900	33.69	05900
27.90	06000	27.90	06000	33.69	06000	33.69	06000
39.33	06100	39.33	06100	46.03	06100	46.03	06100
39.33	06200	39.33	06200	46.03	06200	46.03	06200
39.33	06300	39.33	06300	46.03	06300	46.03	06300
39.33	06400	39.33	06400	46.03	06400	46.03	06400
39.33	06500	39.33	06500	46.03	06500	46.03	06500
39.33	06600	39.33	06600	46.03	06600	46.03	06600
39.33	06700	39.33	06700	46.03	06700	46.03	06700
39.33	06800	39.33	06800	46.03	06800	46.03	06800
39.33	06900	39.33	06900	46.03	06900	46.03	06900
39.33	07000	39.33	07000	46.03	07000	46.03	07000
39.33	07100	39.33	07100	46.03	07100	46.03	07100
39.33	07200	39.33	07200	46.03	07200	46.03	07200
39.33	07300	39.33	07300	46.03	07300	46.03	07300
39.33	07400	39.33	07400	46.03	07400	46.03	07400
39.33	07500	39.33	07500	46.03	07500	46.03	07500
39.33	07550	39.33	07550				
39.33	07600	39.33	07600	46.03	07600	46.03	07600
39.33	07650	39.33	07650				
39.33	07700	39.33	07700	46.03	07700	46.03	07700
39.33	07800	39.33	07800	46.03	07800	46.03	07800
39.33	07900	39.33	07900	46.03	07900	46.03	07900
39.33	08000	39.33	08000	46.03	08000	46.03	08000
44.40	08100	44.40	08100	52.17	08100	52.17	08100
44.40	08200	44.40	08200	52.17	08200	52.17	08200
44.40	08300	44.40	08300	52.17	08300	52.17	08300
44.40	08400	44.40	08400	52.17	08400	52.17	08400
44.40	08500	44.40	08500	52.17	08500	52.17	08500

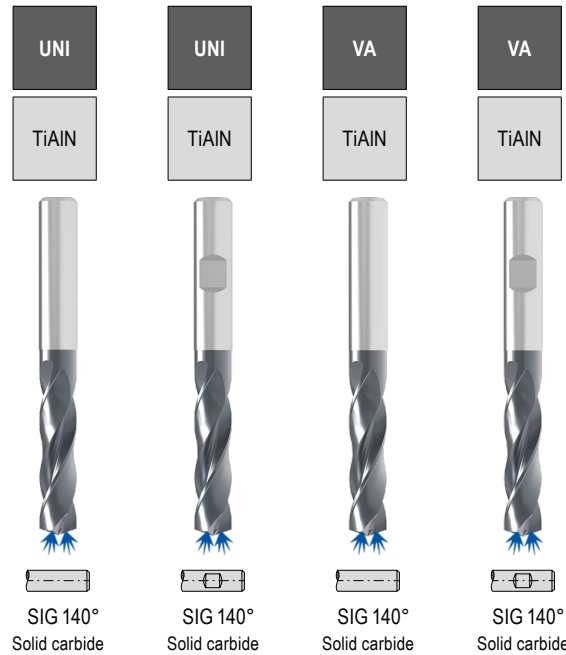
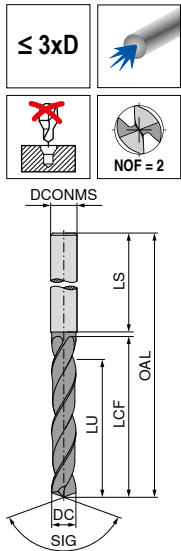
DC _{mTn7}	DCONMS _{h6}	OAL	LCF	LU	LS
mm	mm	mm	mm	mm	mm
4.90	6	66	28	20.6	36
5.00	6	66	28	20.5	36
5.10	6	66	28	20.3	36
5.20	6	66	28	20.2	36
5.30	6	66	28	20.0	36
5.40	6	66	28	19.9	36
5.50	6	66	28	19.7	36
5.55	6	66	28	19.6	36
5.60	6	66	28	19.6	36
5.65	6	66	28	19.5	36
5.70	6	66	28	19.4	36
5.80	6	66	28	19.3	36
5.90	6	66	28	19.1	36
6.00	6	66	28	19.0	36
6.10	8	79	34	24.8	36
6.20	8	79	34	24.7	36
6.30	8	79	34	24.5	36
6.40	8	79	34	24.4	36
6.50	8	79	34	24.2	36
6.60	8	79	34	24.1	36
6.70	8	79	34	23.9	36
6.80	8	79	34	23.8	36
6.90	8	79	34	23.6	36
7.00	8	79	34	23.5	36
7.10	8	79	41	30.3	36
7.20	8	79	41	30.2	36
7.30	8	79	41	30.0	36
7.40	8	79	41	29.9	36
7.50	8	79	41	29.7	36
7.55	8	79	41	29.6	36
7.60	8	79	41	29.6	36
7.65	8	79	41	29.5	36
7.70	8	79	41	29.4	36
7.80	8	79	41	29.3	36
7.90	8	79	41	29.1	36
8.00	8	79	41	29.0	36
8.10	10	89	47	34.8	40
8.20	10	89	47	34.7	40
8.30	10	89	47	34.5	40
8.40	10	89	47	34.4	40
8.50	10	89	47	34.2	40

P	●	●	○	○
M	●	●	●	●
K	●	●		
N	○	○	●	●
S			○	○
H				
O			○	○

→ v_c Page 129+133

Ø DC_{h7} for Type UNI / Ø DC_{m7} for Type VA

High Performance Drill, DIN 6537



DC _{m7h7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm
8.60	10	89	47	34.1	40
8.70	10	89	47	33.9	40
8.80	10	89	47	33.8	40
8.90	10	89	47	33.6	40
9.00	10	89	47	33.5	40
9.10	10	89	47	33.3	40
9.20	10	89	47	33.2	40
9.30	10	89	47	33.0	40
9.40	10	89	47	32.9	40
9.50	10	89	47	32.7	40
9.60	10	89	47	32.6	40
9.70	10	89	47	32.4	40
9.80	10	89	47	32.3	40
9.90	10	89	47	32.1	40
10.00	10	89	47	32.0	40
10.10	12	102	55	39.8	45
10.20	12	102	55	39.7	45
10.30	12	102	55	39.5	45
10.40	12	102	55	39.4	45
10.50	12	102	55	39.2	45
10.60	12	102	55	39.1	45
10.70	12	102	55	38.9	45
10.80	12	102	55	38.8	45
10.90	12	102	55	38.6	45
11.00	12	102	55	38.5	45
11.10	12	102	55	38.3	45
11.20	12	102	55	38.2	45
11.30	12	102	55	38.0	45
11.40	12	102	55	37.9	45
11.50	12	102	55	37.7	45
11.60	12	102	55	37.6	45
11.70	12	102	55	37.4	45
11.80	12	102	55	37.3	45
11.90	12	102	55	37.1	45
12.00	12	102	55	37.0	45
12.20	14	107	60	41.7	45
12.30	14	107	60	41.5	45
12.50	14	107	60	41.2	45
12.70	14	107	60	40.9	45
12.80	14	107	60	40.8	45
12.90	14	107	60	40.6	45

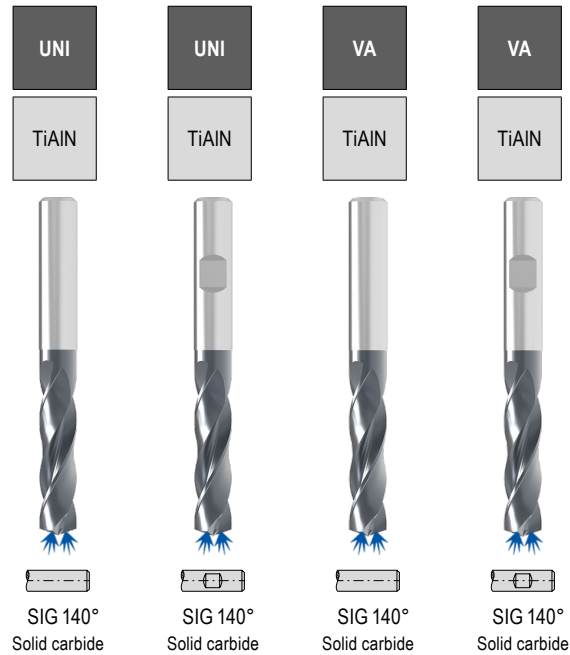
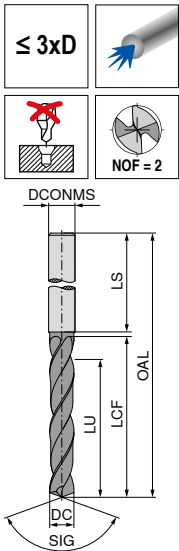
11 700 ...		11 701 ...		11 713 ...		11 714 ...	
£		£		£		£	
T1/9C		T1/9C		T1/9C		T1/9C	
44.40	08600	44.40	08600	52.17	08600	52.17	08600
44.40	08700	44.40	08700	52.17	08700	52.17	08700
44.40	08800	44.40	08800	52.17	08800	52.17	08800
44.40	08900	44.40	08900	52.17	08900	52.17	08900
44.40	09000	44.40	09000	52.17	09000	52.17	09000
44.40	09100	44.40	09100	52.17	09100	52.17	09100
44.40	09200	44.40	09200	52.17	09200	52.17	09200
44.40	09300	44.40	09300	52.17	09300	52.17	09300
44.40	09400	44.40	09400	52.17	09400	52.17	09400
44.40	09500	44.40	09500	52.17	09500	52.17	09500
44.40	09600	44.40	09600	52.17	09600	52.17	09600
44.40	09700	44.40	09700	52.17	09700	52.17	09700
44.40	09800	44.40	09800	52.17	09800	52.17	09800
44.40	09900	44.40	09900	52.17	09900	52.17	09900
44.40	10000	44.40	10000	52.17	10000	52.17	10000
63.43	10100	63.43	10100	75.17	10100	75.17	10100
63.43	10200	63.43	10200	75.17	10200	75.17	10200
63.43	10300	63.43	10300	75.17	10300	75.17	10300
63.43	10400	63.43	10400	75.17	10400	75.17	10400
63.43	10500	63.43	10500	75.17	10500	75.17	10500
63.43	10600	63.43	10600	75.17	10600	75.17	10600
63.43	10700	63.43	10700	75.17	10700	75.17	10700
63.43	10800	63.43	10800	75.17	10800	75.17	10800
63.43	10900	63.43	10900	75.17	10900	75.17	10900
63.43	11000	63.43	11000	75.17	11000	75.17	11000
63.43	11100	63.43	11100	75.17	11100	75.17	11100
63.43	11200	63.43	11200	75.17	11200	75.17	11200
63.43	11300	63.43	11300	75.17	11300	75.17	11300
63.43	11400	63.43	11400	75.17	11400	75.17	11400
63.43	11500	63.43	11500	75.17	11500	75.17	11500
63.43	11600	63.43	11600	75.17	11600	75.17	11600
63.43	11700	63.43	11700	75.17	11700	75.17	11700
63.43	11800	63.43	11800	75.17	11800	75.17	11800
63.43	11900	63.43	11900	75.17	11900	75.17	11900
63.43	12000	63.43	12000	75.17	12000	75.17	12000
85.00	12200	85.00	12200	100.71	12200	100.71	12200
85.00	12300	85.00	12300	100.71	12300	100.71	12300
85.00	12500	85.00	12500	100.71	12500	100.71	12500
85.00	12700	85.00	12700	100.71	12700	100.71	12700
85.00	12800	85.00	12800	100.71	12800	100.71	12800
85.00	12900	85.00	12900	100.71	12900	100.71	12900

P	●	●	○	○
M	●	●	●	●
K	●	●	○	○
N	○	○	●	●
S	○	○	○	○
H				
O			○	○

→ v_c Page 129+133

Ø DC_{h7} for Type UNI / Ø DC_{m7} for Type VA

High Performance Drill, DIN 6537



DC _{mTn7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	11 700 ...		11 701 ...		11 713 ...		11 714 ...	
						£ T1/9C	13000	£ T1/9C	13000	£ T1/9C	13000	£ T1/9C	13000
13.00	14	107	60	40.5	45	85.00	13000	85.00	13000	100.71	13000	100.71	13000
13.50	14	107	60	39.7	45	85.00	13500	85.00	13500	100.71	13500	100.71	13500
13.70	14	107	60	39.4	45	85.00	13800	85.00	13800	100.71	13700	100.71	13700
13.80	14	107	60	39.3	45	85.00	14000	85.00	14000	100.71	13800	100.71	13800
14.00	14	107	60	39.0	45	85.00	14000	85.00	14000	100.71	14000	100.71	14000
14.20	16	115	65	43.7	48	110.38	14200	110.38	14200	130.06	14200	130.06	14200
14.40	16	115	65	43.4	48	110.38	14400	110.38	14400	130.06	14400	130.06	14400
14.50	16	115	65	43.2	48	110.38	14500	110.38	14500	130.06	14500	130.06	14500
14.70	16	115	65	42.9	48	110.38	14800	110.38	14800	130.06	14700	130.06	14700
14.80	16	115	65	42.8	48	110.38	15000	110.38	15000	130.06	14800	130.06	14800
15.00	16	115	65	42.5	48	110.38	15000	110.38	15000	130.06	15000	130.06	15000
15.10	16	115	65	42.3	48	110.38	15100	110.38	15100	130.06	15100	130.06	15100
15.20	16	115	65	42.2	48	110.38	15200	110.38	15200	130.06	15200	130.06	15200
15.50	16	115	65	41.7	48	110.38	15500	110.38	15500	130.06	15500	130.06	15500
15.70	16	115	65	41.4	48	110.38	15800	110.38	15800	130.06	15700	130.06	15700
15.80	16	115	65	41.3	48	110.38	16000	110.38	16000	130.06	15800	130.06	15800
16.00	16	115	65	41.0	48	110.38	16000	110.38	16000	130.06	16000	130.06	16000
16.50	18	123	73	48.2	48	166.19	16500	166.19	16500	197.32	16500	197.32	16500
17.00	18	123	73	47.5	48	166.19	17000	166.19	17000	197.32	17000	197.32	17000
17.50	18	123	73	46.7	48	166.19	17500	166.19	17500	197.32	17500	197.32	17500
18.00	18	123	73	46.0	48	166.19	18000	166.19	18000	197.32	18000	197.32	18000
18.50	20	131	79	51.2	50	183.95	18500	183.95	18500	217.41	18500	217.41	18500
18.90	20	131	79	50.6	50	183.95	18900	183.95	18900	217.41	18900	217.41	18900
19.00	20	131	79	50.5	50	183.95	19000	183.95	19000	217.41	19000	217.41	19000
19.30	20	131	79	50.0	50	183.95	19300	183.95	19300	217.41	19300	217.41	19300
19.50	20	131	79	49.7	50	183.95	19500	183.95	19500	217.41	19500	217.41	19500
20.00	20	131	79	49.0	50	183.95	20000	183.95	20000	217.41	20000	217.41	20000

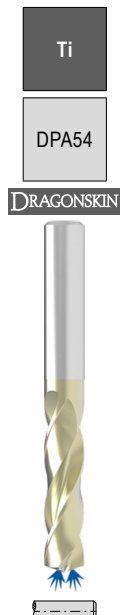
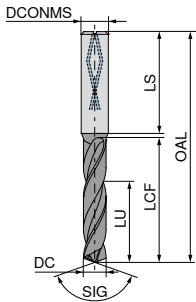
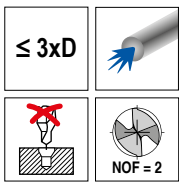
P	●	●	○	○
M	●	●	●	●
K	●	●	○	○
N	○	○	●	●
S	○	○	○	○
H	○	○	○	○
O	○	○	○	○

→ v_c Page 129+133

Ø DC_{h7} for Type UNI / Ø DC_{m7} for Type VA

WTX – High-performance drill, DIN 6537

▲ Specialist for difficult to machine materials



SIG 140°
Solid carbide

10 786 ...

DC _{m7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	£ T4/9F	
3.00	6	62	20	14	36	75.84	030
3.10	6	62	20	14	36	75.84	031
3.20	6	62	20	14	36	75.84	032
3.30	6	62	20	14	36	75.84	033
3.40	6	62	20	14	36	75.84	034
3.50	6	62	20	14	36	75.84	035
3.60	6	62	20	14	36	75.84	036
3.70	6	62	20	14	36	75.84	037
3.80	6	66	24	17	36	75.84	038
3.90	6	66	24	17	36	75.84	039
3.97	6	66	24	17	36	75.84	900
4.00	6	66	24	17	36	75.84	040
4.10	6	66	24	17	36	75.84	041
4.20	6	66	24	17	36	75.84	042
4.23	6	66	24	17	36	75.84	901
4.30	6	66	24	17	36	75.84	043
4.40	6	66	24	17	36	75.84	044
4.50	6	66	24	17	36	75.84	045
4.60	6	66	24	17	36	75.84	046
4.70	6	66	24	17	36	75.84	047
4.80	6	66	28	20	36	75.84	048
4.90	6	66	28	20	36	75.84	049
5.00	6	66	28	20	36	75.84	050
5.10	6	66	28	20	36	75.84	051
5.20	6	66	28	20	36	75.84	052
5.30	6	66	28	20	36	75.84	053
5.40	6	66	28	20	36	75.84	054
5.50	6	66	28	20	36	75.84	055
5.56	6	66	28	20	36	75.84	902
5.60	6	66	28	20	36	75.84	056
5.70	6	66	28	20	36	75.84	057
5.80	6	66	28	20	36	75.84	058
5.90	6	66	28	20	36	75.84	059
6.00	6	66	28	20	36	75.84	060
6.10	8	79	34	24	36	101.76	061
6.20	8	79	34	24	36	101.76	062
6.30	8	79	34	24	36	101.76	063
6.35	8	79	34	24	36	101.76	903
6.40	8	79	34	24	36	101.76	064
6.50	8	79	34	24	36	101.76	065
6.60	8	79	34	24	36	101.76	066
6.70	8	79	34	24	36	101.76	067
6.80	8	79	34	24	36	101.76	068
6.90	8	79	34	24	36	101.76	069
7.00	8	79	34	24	36	101.76	070
7.10	8	79	41	29	36	101.76	071
7.20	8	79	41	29	36	101.76	072
7.30	8	79	41	29	36	101.76	073
7.40	8	79	41	29	36	101.76	074
7.50	8	79	41	29	36	101.76	075
7.60	8	79	41	29	36	101.76	076

10 786 ...

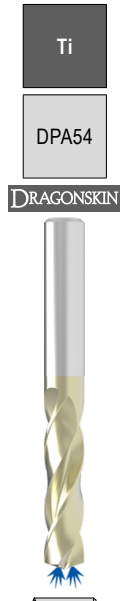
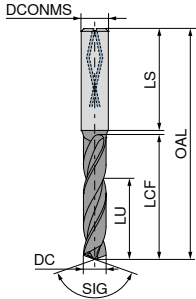
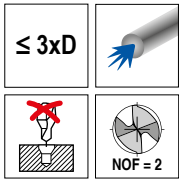
DC _{m7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	£ T4/9F	
7.70	8	79	41	29	36	101.76	077
7.80	8	79	41	29	36	101.76	078
7.90	8	79	41	29	36	101.76	079
7.94	8	79	41	29	36	101.76	904
8.00	8	79	41	29	36	101.76	080
8.10	10	89	47	35	40	123.05	081
8.20	10	89	47	35	40	123.05	082
8.30	10	89	47	35	40	123.05	083
8.40	10	89	47	35	40	123.05	084
8.50	10	89	47	35	40	123.05	085
8.60	10	89	47	35	40	123.05	086
8.70	10	89	47	35	40	123.05	087
8.80	10	89	47	35	40	123.05	088
8.90	10	89	47	35	40	123.05	089
9.00	10	89	47	35	40	123.05	090
9.10	10	89	47	35	40	123.05	091
9.20	10	89	47	35	40	123.05	092
9.30	10	89	47	35	40	123.05	093
9.40	10	89	47	35	40	123.05	094
9.50	10	89	47	35	40	123.05	095
9.53	10	89	47	35	40	123.33	905
9.60	10	89	47	35	40	123.05	096
9.70	10	89	47	35	40	123.05	097
9.80	10	89	47	35	40	123.05	098
9.90	10	89	47	35	40	123.05	099
10.00	10	89	47	35	40	123.05	100
10.10	12	102	55	40	45	177.60	101
10.20	12	102	55	40	45	177.60	102
10.30	12	102	55	40	45	177.60	103
10.40	12	102	55	40	45	177.60	104
10.50	12	102	55	40	45	177.60	105
10.60	12	102	55	40	45	177.60	106
10.70	12	102	55	40	45	177.60	107
10.80	12	102	55	40	45	177.60	108
10.90	12	102	55	40	45	177.60	109
11.00	12	102	55	40	45	177.60	110
11.10	12	102	55	40	45	177.60	111
11.11	12	102	55	40	45	177.60	906
11.20	12	102	55	40	45	177.60	112
11.30	12	102	55	40	45	177.60	113
11.40	12	102	55	40	45	177.60	114
11.50	12	102	55	40	45	177.60	115
11.60	12	102	55	40	45	177.60	116
11.70	12	102	55	40	45	177.60	117
11.80	12	102	55	40	45	177.60	118
11.90	12	102	55	40	45	177.60	119
12.00	12	102	55	40	45	177.60	120
12.10	14	107	60	43	45	230.40	121
12.20	14	107	60	43	45	230.40	122
12.30	14	107	60	43	45	230.40	123
12.40	14	107	60	43	45	230.40	124
12.50	14	107	60	43	45	230.40	125
12.60	14	107	60	43	45	230.40	126
12.70	14	107	60	43	45	230.40	907
12.80	14	107	60	43	45	230.40	128
12.90	14	107	60	43	45	230.40	129
13.00	14	107	60	43	45	230.40	130
13.10	14	107	60	43	45	230.40	131
13.20	14	107	60	43	45	230.40	132
13.30	14	107	60	43	45	230.40	133
13.40	14	107	60	43	45	230.40	134
13.50	14	107	60	43	45	230.40	135
13.60	14	107	60	43	45	230.40	136
13.70	14	107	60	43	45	230.40	137
13.80	14	107	60	43	45	230.40	138
13.90	14	107	60	43	45	230.40	139

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→ v. Page 109

WTX – High-performance drill, DIN 6537

▲ Specialist for difficult to machine materials



SIG 140°
Solid carbide

10 786 ...

DC _{m7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	£ T4/9F	
19.1	20	131	79	55	50	480.01	191
19.2	20	131	79	55	50	480.01	192
19.3	20	131	79	55	50	480.01	193
19.4	20	131	79	55	50	480.01	194
19.5	20	131	79	55	50	480.01	195
19.6	20	131	79	55	50	480.01	196
19.7	20	131	79	55	50	480.01	197
19.8	20	131	79	55	50	480.01	198
19.9	20	131	79	55	50	480.01	199
20.0	20	131	79	55	50	480.01	200

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→ v_c Page 109

10 786 ...

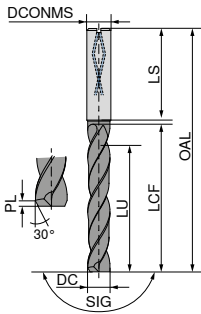
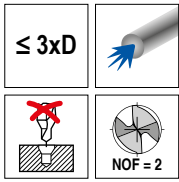
DC _{m7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	£ T4/9F	
14.0	14	107	60	43	45	230.40	140
14.1	16	115	65	45	48	273.60	141
14.2	16	115	65	45	48	273.60	142
14.3	16	115	65	45	48	273.60	143
14.4	16	115	65	45	48	273.60	144
14.5	16	115	65	45	48	273.60	145
14.6	16	115	65	45	48	273.60	146
14.7	16	115	65	45	48	273.60	147
14.8	16	115	65	45	48	273.60	148
14.9	16	115	65	45	48	273.60	149
15.0	16	115	65	45	48	273.60	150
15.1	16	115	65	45	48	273.60	151
15.2	16	115	65	45	48	273.60	152
15.3	16	115	65	45	48	273.60	153
15.4	16	115	65	45	48	273.60	154
15.5	16	115	65	45	48	273.60	155
15.6	16	115	65	45	48	273.60	156
15.7	16	115	65	45	48	273.60	157
15.8	16	115	65	45	48	273.60	158
15.9	16	115	65	45	48	273.60	159
16.0	16	115	65	45	48	273.60	160
16.1	18	123	73	51	48	273.60	161
16.2	18	123	73	51	48	273.60	162
16.3	18	123	73	51	48	273.60	163
16.4	18	123	73	51	48	273.60	164
16.5	18	123	73	51	48	384.00	165
16.6	18	123	73	51	48	384.00	166
16.7	18	123	73	51	48	384.00	167
16.8	18	123	73	51	48	384.00	168
16.9	18	123	73	51	48	384.00	169
17.0	18	123	73	51	48	384.00	170
17.1	18	123	73	51	48	384.00	171
17.2	18	123	73	51	48	384.00	172
17.3	18	123	73	51	48	384.00	173
17.4	18	123	73	51	48	384.00	174
17.5	18	123	73	51	48	384.00	175
17.6	18	123	73	51	48	384.00	176
17.7	18	123	73	51	48	384.00	177
17.8	18	123	73	51	48	384.00	178
17.9	18	123	73	51	48	384.00	179
18.0	18	123	73	51	48	384.00	180
18.1	20	131	79	55	50	480.01	181
18.2	20	131	79	55	50	480.01	182
18.3	20	131	79	55	50	480.01	183
18.4	20	131	79	55	50	480.01	184
18.5	20	131	79	55	50	480.01	185
18.6	20	131	79	55	50	480.01	186
18.7	20	131	79	55	50	480.01	187
18.8	20	131	79	55	50	480.01	188
18.9	20	131	79	55	50	480.01	189
19.0	20	131	79	55	50	480.01	190

WTX – High Performance Drill, DIN 6537

▲ universal application
▲ four guidance lands

▲ polished chip flutes
▲ Type ALU 3xD on request

▲ PL = corner chamfers



180
Ti800



SIG 180°
Solid carbide

10 720 ...

DC _{m7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	PL mm	£ T4	
3.00	6	62	20	14	36	0.15	98.41	030
3.10	6	62	20	14	36	0.16	98.41	031
3.20	6	62	20	14	36	0.16	98.41	032
3.30	6	62	20	14	36	0.17	98.41	033
3.40	6	62	20	14	36	0.17	98.41	034
3.50	6	62	20	14	36	0.18	98.41	035
3.60	6	62	20	14	36	0.18	98.41	036
3.70	6	62	20	14	36	0.19	98.41	037
3.80	6	66	24	17	36	0.19	98.41	038
3.90	6	66	24	17	36	0.20	98.41	039
4.00	6	66	24	17	36	0.20	98.41	040
4.10	6	66	24	17	36	0.21	98.41	041
4.20	6	66	24	17	36	0.21	98.41	042
4.30	6	66	24	17	36	0.22	98.41	043
4.40	6	66	24	17	36	0.22	98.41	044
4.50	6	66	24	17	36	0.23	98.41	045
4.60	6	66	24	17	36	0.23	98.41	046
4.65	6	66	24	17	36	0.23	98.41	900
4.70	6	66	24	17	36	0.24	98.41	047
4.80	6	66	28	20	36	0.24	98.41	048
4.90	6	66	28	20	36	0.25	98.41	049
5.00	6	66	28	20	36	0.25	98.41	050
5.10	6	66	28	20	36	0.26	98.41	051
5.20	6	66	28	20	36	0.26	98.41	052
5.30	6	66	28	20	36	0.27	98.41	053
5.40	6	66	28	20	36	0.27	98.41	054
5.50	6	66	28	20	36	0.28	98.41	055
5.55	6	66	28	20	36	0.28	98.41	902
5.60	6	66	28	20	36	0.28	98.41	056
5.70	6	66	28	20	36	0.29	98.41	057
5.80	6	66	28	20	36	0.29	98.41	058
5.90	6	66	28	20	36	0.30	98.41	059
6.00	6	66	28	20	36	0.30	98.41	060
6.10	8	79	34	24	36	0.31	120.72	061
6.20	8	79	34	24	36	0.31	120.72	062
6.30	8	79	34	24	36	0.32	120.72	063
6.40	8	79	34	24	36	0.32	120.72	064
6.50	8	79	34	24	36	0.33	120.72	065
6.60	8	79	34	24	36	0.33	120.72	066
6.70	8	79	34	24	36	0.34	120.72	067
6.80	8	79	34	24	36	0.34	120.72	068
6.90	8	79	34	24	36	0.35	120.72	069
7.00	8	79	34	24	36	0.35	120.72	070
7.10	8	79	41	29	36	0.36	120.72	071
7.20	8	79	41	29	36	0.36	120.72	072
7.30	8	79	41	29	36	0.37	120.72	073
7.40	8	79	41	29	36	0.37	120.72	074
7.50	8	79	41	29	36	0.38	120.72	075
7.60	8	79	41	29	36	0.38	120.72	076
7.70	8	79	41	29	36	0.39	120.72	077
7.80	8	79	41	29	36	0.39	120.72	078
7.90	8	79	41	29	36	0.40	120.72	079
8.00	8	79	41	29	36	0.40	120.72	080
8.10	10	89	47	35	40	0.41	166.79	081

10 720 ...

DC _{m7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	PL mm	£ T4	
8.20	10	89	47	35	40	0.41	166.79	082
8.30	10	89	47	35	40	0.42	166.79	083
8.40	10	89	47	35	40	0.42	166.79	084
8.50	10	89	47	35	40	0.43	166.79	085
8.60	10	89	47	35	40	0.43	166.79	086
8.70	10	89	47	35	40	0.44	166.79	087
8.80	10	89	47	35	40	0.44	166.79	088
8.90	10	89	47	35	40	0.45	166.79	089
9.00	10	89	47	35	40	0.45	166.79	090
9.10	10	89	47	35	40	0.46	166.79	091
9.20	10	89	47	35	40	0.46	166.79	092
9.30	10	89	47	35	40	0.47	166.79	093
9.40	10	89	47	35	40	0.47	166.79	094
9.50	10	89	47	35	40	0.48	166.79	095
9.60	10	89	47	35	40	0.48	166.79	096
9.70	10	89	47	35	40	0.49	166.79	097
9.80	10	89	47	35	40	0.49	166.79	098
9.90	10	89	47	35	40	0.50	166.79	099
10.00	10	89	47	35	40	0.50	166.79	100
10.10	12	100	53	38	45	0.51	174.90	101
10.20	12	100	53	38	45	0.51	210.10	102
10.30	12	100	53	38	45	0.52	210.10	103
10.40	12	100	53	38	45	0.52	210.10	104
10.50	12	100	53	38	45	0.53	210.10	105
10.60	12	100	53	38	45	0.53	210.10	106
10.70	12	100	53	38	45	0.54	210.10	107
10.80	12	100	53	38	45	0.54	210.10	108
10.90	12	100	53	38	45	0.55	210.10	109
11.00	12	100	53	38	45	0.55	210.10	110
11.10	12	100	53	38	45	0.56	210.10	111
11.20	12	100	53	38	45	0.56	210.10	112
11.30	12	100	53	38	45	0.57	210.10	113
11.40	12	100	53	38	45	0.57	210.10	114
11.50	12	100	53	38	45	0.58	210.10	115
11.60	12	100	53	38	45	0.58	210.10	116
11.70	12	100	53	38	45	0.59	210.10	117
11.80	12	100	53	38	45	0.59	210.10	118
11.90	12	100	53	38	45	0.60	210.10	119
12.00	12	100	53	38	45	0.60	210.10	120
12.50	14	105	58	41	45	0.63	340.95	125
12.80	14	105	58	41	45	0.64	340.95	128
13.00	14	105	58	41	45	0.65	340.95	130
13.50	14	105	58	41	45	0.68	340.95	135
13.80	14	105	58	41	45	0.69	340.95	138
14.00	14	105	58	41	45	0.70	340.95	140
14.50	16	113	63	43	48	0.73	357.50	145
14.80	16	113	63	43	48	0.74	444.16	148
15.00	16	113	63	43	48	0.75	444.16	150
15.50	16	113	63	43	48	0.78	444.16	155
15.80	16	113	63	43	48	0.79	444.16	158
16.00	16	113	63	43	48	0.80	444.16	160
16.50	18	121	71	49	48	0.83	474.34	165
16.80	18	121	71	49	48	0.84	578.69	168
17.00	18	121	71	49	48	0.85	578.69	170
17.50	18	121	71	49	48	0.88	578.69	175
17.80	18	121	71	49	48	0.89	578.69	178
18.00	18	121	71	49	48	0.90	578.69	180
18.50	20	129	77	53	50	0.93	578.69	185
18.80	20	129	77	53	50	0.94	578.69	188
19.00	20	129	77	53	50	0.95	578.69	190
19.50	20	129	77	53	50	0.98	578.69	195
19.80	20	129	77	53	50	0.99	578.69	198
20.00	20	129	77	53	50	1.00	578.69	200

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N	●
S	●
H	●
O	●

→ v_c Page 126

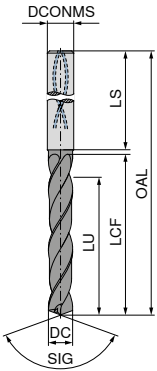
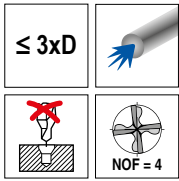
→ Machining information: Page 127

WTX – High-feed drills, DIN 6537

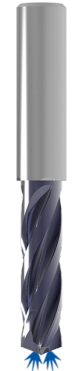
- ▲ Four fluted high-feed drill
- ▲ Specially designed for steel and cast iron machining

- ▲ Has four spiral coolant holes
- ▲ Innovative cutting edge geometry guarantees high positioning accuracy

- ▲ Outstanding drilling quality in terms of tolerance, surface finish and position



HFDS
DPX14S
DRAGONSKIN



SIG 130°
Solid carbide

10 797 ...

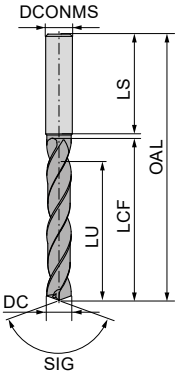
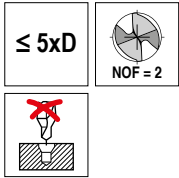
DC _{m7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	£ T4	
6.0	8	79	41	29	36	108.25	06000
6.1	10	89	47	35	40	147.55	06100
6.2	10	89	47	35	40	147.55	06200
6.3	10	89	47	35	40	147.55	06300
6.4	10	89	47	35	40	147.55	06400
6.5	10	89	47	35	40	147.55	06500
6.6	10	89	47	35	40	147.55	06600
6.7	10	89	47	35	40	147.55	06700
6.8	10	89	47	35	40	147.55	06800
6.9	10	89	47	35	40	147.55	06900
7.0	10	89	47	35	40	147.55	07000
7.1	10	89	47	35	40	147.55	07100
7.2	10	89	47	35	40	147.55	07200
7.3	10	89	47	35	40	147.55	07300
7.4	10	89	47	35	40	147.55	07400
7.5	10	89	47	35	40	147.55	07500
7.6	10	89	47	35	40	147.55	07600
7.7	10	89	47	35	40	147.55	07700
7.8	10	89	47	35	40	147.55	07800
7.9	10	89	47	35	40	147.55	07900
8.0	10	89	47	35	40	147.55	08000
8.1	12	102	55	40	45	200.16	08100
8.2	12	102	55	40	45	200.16	08200
8.3	12	102	55	40	45	200.16	08300
8.4	12	102	55	40	45	200.16	08400
8.5	12	102	55	40	45	200.16	08500
8.6	12	102	55	40	45	200.16	08600
8.7	12	102	55	40	45	200.16	08700
8.8	12	102	55	40	45	200.16	08800
8.9	12	102	55	40	45	200.16	08900
9.0	12	102	55	40	45	200.16	09000
9.1	12	102	55	40	45	200.16	09100
9.2	12	102	55	40	45	200.16	09200
9.3	12	102	55	40	45	200.16	09300
9.4	12	102	55	40	45	200.16	09400
9.5	12	102	55	40	45	200.16	09500
9.6	12	102	55	40	45	200.16	09600
9.7	12	102	55	40	45	200.16	09700
9.8	12	102	55	40	45	200.16	09800
9.9	12	102	55	40	45	200.16	09900
10.0	12	102	55	40	45	200.16	10000
10.2	14	107	60	43	45	265.65	10200
10.5	14	107	60	43	45	265.65	10500
11.0	14	107	60	43	45	265.65	11000
11.5	14	107	60	43	45	265.65	11500
12.0	14	107	60	43	45	265.65	12000
12.5	16	115	65	45	48	360.75	12500
13.0	16	115	65	45	48	360.75	13000

DC _{m7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	£ T4	
14.0	16	115	65	45	48	360.75	14000
14.3	18	123	73	51	48	449.41	14300
14.5	18	123	73	51	48	449.41	14500
15.0	18	123	73	51	48	449.41	15000
16.0	18	123	73	51	48	449.41	16000

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→ v_c Page 125

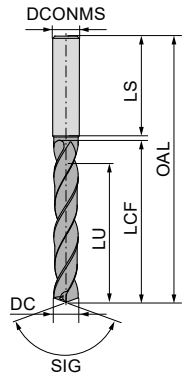
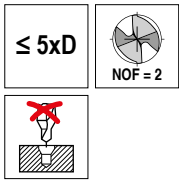
WTX – High Performance Drill, DIN 6537



DC _{m7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	11 783 ...		11 784 ...		11 782 ...		10 740 ...	
						£ T7	03000	£ T7	03000	£ T7	03000	£ T4	030
3.00	6	66	28	23	36	47.92	03000	47.92	03100	47.92	03100	92.31	030
3.10	6	66	28	23	36	47.92	03100	47.92	03150	47.92	03150	92.31	031
3.15	6	66	28	23	36	47.92	03200	47.92	03200	47.92	03200	92.31	032
3.20	6	66	28	23	36	47.92	03220	47.92	03220	47.92	03220		
3.22	6	66	28	23	36	47.92	03250	47.92	03250	47.92	03250		
3.25	6	66	28	23	36	47.92	03300	47.92	03300	47.92	03300	92.31	033
3.30	6	66	28	23	36	47.92	03400	47.92	03400	47.92	03400	92.31	034
3.40	6	66	28	23	36	47.92	03500	47.92	03500	47.92	03500	92.31	035
3.50	6	66	28	23	36	47.92	03600	47.92	03600	47.92	03600	92.31	036
3.60	6	66	28	23	36	47.92	03700	47.92	03700	47.92	03700	92.31	037
3.70	6	66	28	23	36	47.92	03800	47.92	03800	47.92	03800	92.31	038
3.80	6	74	36	29	36	47.92	03850	47.92	03850	47.92	03850		
3.85	6	74	36	29	36	47.92	03900	47.92	03900	47.92	03900	92.31	039
3.90	6	74	36	29	36	47.92	04000	47.92	04000	47.92	04000	92.31	040
4.00	6	74	36	29	36	47.92	04100	47.92	04100	47.92	04100	92.31	041
4.10	6	74	36	29	36	47.92	04200	47.92	04200	47.92	04200	92.31	042
4.20	6	74	36	29	36	47.92	04250	47.92	04250	47.92	04250		
4.25	6	74	36	29	36	47.92	04300	47.92	04300	47.92	04300	92.31	043
4.30	6	74	36	29	36	47.92	04350	47.92	04350	47.92	04350		
4.35	6	74	36	29	36	47.92	04400	47.92	04400	47.92	04400	92.31	044
4.40	6	74	36	29	36	47.92	04450	47.92	04450	47.92	04450		
4.45	6	74	36	29	36	47.92	04500	47.92	04500	47.92	04500	92.31	045
4.50	6	74	36	29	36	47.92	04600	47.92	04600	47.92	04600	92.31	046
4.60	6	74	36	29	36	47.92	04650	47.92	04650	47.92	04650		
4.65	6	74	36	29	36	47.92	04700	47.92	04700	47.92	04700	92.31	047
4.70	6	74	36	29	36	47.92	04800	47.92	04800	47.92	04800	92.31	048
4.80	6	82	44	35	36	47.92	04900	47.92	04900	47.92	04900	92.31	049
4.90	6	82	44	35	36	47.92	04950	47.92	04950	47.92	04950		
4.95	6	82	44	35	36	47.92	05000	47.92	05000	47.92	05000	92.31	050
5.00	6	82	44	35	36	47.92	05050	47.92	05050	47.92	05050		
5.05	6	82	44	35	36	47.92	05100	47.92	05100	47.92	05100	92.31	051
5.10	6	82	44	35	36	47.92	05200	47.92	05200	47.92	05200	92.31	052
5.20	6	82	44	35	36	47.92	05300	47.92	05300	47.92	05300	92.31	053
5.30	6	82	44	35	36	47.92	05400	47.92	05400	47.92	05400	92.31	054
5.40	6	82	44	35	36	47.92	05500	47.92	05500	47.92	05500	92.31	055
5.50	6	82	44	35	36	47.92	05550	47.92	05550	47.92	05550		
5.55	6	82	44	35	36	47.92	05600	47.92	05600	47.92	05600	92.31	056
5.60	6	82	44	35	36	47.92	05700	47.92	05700	47.92	05700	92.31	057
5.70	6	82	44	35	36	47.92	05750	47.92	05750	47.92	05750		
5.75	6	82	44	35	36	47.92	05800	47.92	05800	47.92	05800	92.31	058
5.80	6	82	44	35	36	47.92	05900	47.92	05900	47.92	05900	92.31	059
5.90	6	82	44	35	36	47.92		47.92		47.92			

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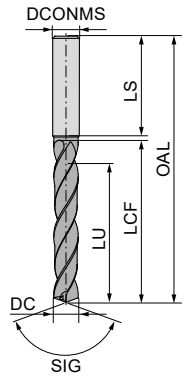
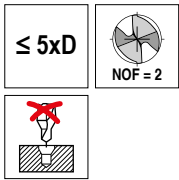
WTX – High Performance Drill, DIN 6537



DC _{m7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	11 783 ...		11 784 ...		11 782 ...		10 740 ...	
						£ T7	05950	£ T7	05950	£ T7	05950	£ T4	
5.95	6	82	44	35	36	47.92	05950	47.92	06000	47.92	06000		
6.00	6	82	44	35	36	47.92	06000	47.92	06000	47.92	06000	111.68	060
6.10	8	91	53	43	36	52.05	06100	52.05	06100	52.05	06100	111.68	061
6.20	8	91	53	43	36	52.05	06200	52.05	06200	52.05	06200	111.68	062
6.30	8	91	53	43	36	52.05	06300	52.05	06300	52.05	06300	111.68	063
6.40	8	91	53	43	36	52.05	06400	52.05	06400	52.05	06400	111.68	064
6.50	8	91	53	43	36	52.05	06500	52.05	06500	52.05	06500	111.68	065
6.60	8	91	53	43	36	52.05	06600	52.05	06600	52.05	06600	111.68	066
6.70	8	91	53	43	36	52.05	06700	52.05	06700	52.05	06700	111.68	067
6.80	8	91	53	43	36	52.05	06800	52.05	06800	52.05	06800	111.68	068
6.90	8	91	53	43	36	52.05	06900	52.05	06900	52.05	06900	111.68	069
7.00	8	91	53	43	36	52.05	07000	52.05	07000	52.05	07000	111.68	070
7.10	8	91	53	43	36	52.05	07100	52.05	07100	52.05	07100	111.68	071
7.20	8	91	53	43	36	52.05	07200	52.05	07200	52.05	07200	111.68	072
7.30	8	91	53	43	36	52.05	07300	52.05	07300	52.05	07300	111.68	073
7.40	8	91	53	43	36	52.05	07400	52.05	07400	52.05	07400	111.68	074
7.45	8	91	53	43	36	52.05	07450	52.05	07450	52.05	07450		
7.50	8	91	53	43	36	52.05	07500	52.05	07500	52.05	07500	111.68	075
7.60	8	91	53	43	36	52.05	07600	52.05	07600	52.05	07600	111.68	076
7.70	8	91	53	43	36	52.05	07700	52.05	07700	52.05	07700	111.68	077
7.80	8	91	53	43	36	52.05	07800	52.05	07800	52.05	07800	111.68	078
7.90	8	91	53	43	36	52.05	07900	52.05	07900	52.05	07900	111.68	079
8.00	8	91	53	43	36	52.05	08000	52.05	08000	52.05	08000	111.68	080
8.10	10	103	61	49	40	55.96	08100	55.96	08100	55.96	08100	130.66	081
8.20	10	103	61	49	40	55.96	08200	55.96	08200	55.96	08200	130.66	082
8.30	10	103	61	49	40	55.96	08300	55.96	08300	55.96	08300	130.66	083
8.40	10	103	61	49	40	55.96	08400	55.96	08400	55.96	08400	130.66	084
8.50	10	103	61	49	40	55.96	08500	55.96	08500	55.96	08500	130.66	085
8.60	10	103	61	49	40	55.96	08600	55.96	08600	55.96	08600	130.66	086
8.70	10	103	61	49	40	55.96	08700	55.96	08700	55.96	08700	130.66	087
8.80	10	103	61	49	40	55.96	08800	55.96	08800	55.96	08800	130.66	088
8.90	10	103	61	49	40	55.96	08900	55.96	08900	55.96	08900	130.66	089
9.00	10	103	61	49	40	55.96	09000	55.96	09000	55.96	09000	130.66	090
9.10	10	103	61	49	40	55.96	09100	55.96	09100	55.96	09100	130.66	091
9.20	10	103	61	49	40	55.96	09200	55.96	09200	55.96	09200	130.66	092
9.30	10	103	61	49	40	55.96	09300	55.96	09300	55.96	09300	130.66	093
9.35	10	103	61	49	40	55.96	09350	55.96	09350	55.96	09350		
9.40	10	103	61	49	40	55.96	09400	55.96	09400	55.96	09400	130.66	094
9.45	10	103	61	49	40	55.96	09450	55.96	09450	55.96	09450		
9.50	10	103	61	49	40	55.96	09500	55.96	09500	55.96	09500	130.66	095
9.60	10	103	61	49	40	55.96	09600	55.96	09600	55.96	09600	130.66	096
9.70	10	103	61	49	40	55.96	09700	55.96	09700	55.96	09700	130.66	097

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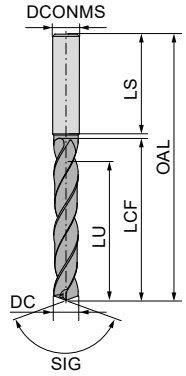
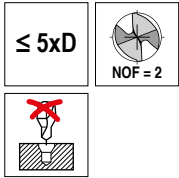
WTX – High Performance Drill, DIN 6537



DC _{m7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	11 783 ...		11 784 ...		11 782 ...		10 740 ...	
						£ T7	09800	£ T7	09800	£ T7	09800	£ T4	098
9.80	10	103	61	49	40	55.96	09800	55.96	09800	55.96	09800	130.66	098
9.90	10	103	61	49	40	55.96	09900	55.96	09900	55.96	09900	130.66	099
10.00	10	103	61	49	40	55.96	10000	55.96	10000	55.96	10000	130.66	100
10.10	12	118	71	56	45	81.21	10100	81.21	10100	81.21	10100	185.22	101
10.20	12	118	71	56	45	81.21	10200	81.21	10200	81.21	10200	185.22	102
10.30	12	118	71	56	45	81.21	10300	81.21	10300	81.21	10300	185.22	103
10.40	12	118	71	56	45	81.21	10400	81.21	10400	81.21	10400	185.22	104
10.50	12	118	71	56	45	81.21	10500	81.21	10500	81.21	10500	185.22	105
10.55	12	118	71	56	45	81.21	10550	81.21	10550	81.21	10550		
10.60	12	118	71	56	45	81.21	10600	81.21	10600	81.21	10600	185.22	106
10.70	12	118	71	56	45	81.21	10700	81.21	10700	81.21	10700	185.22	107
10.75	12	118	71	56	45	81.21	10750	81.21	10750	81.21	10750		
10.80	12	118	71	56	45	81.21	10800	81.21	10800	81.21	10800	185.22	108
10.90	12	118	71	56	45	81.21	10900	81.21	10900	81.21	10900	185.22	109
11.00	12	118	71	56	45	81.21	11000	81.21	11000	81.21	11000	185.22	110
11.10	12	118	71	56	45	81.21	11100	81.21	11100	81.21	11100	185.22	111
11.20	12	118	71	56	45	81.21	11200	81.21	11200	81.21	11200	185.22	112
11.25	12	118	71	56	45	81.21	11250	81.21	11250	81.21	11250		
11.30	12	118	71	56	45	81.21	11300	81.21	11300	81.21	11300	185.22	113
11.35	12	118	71	56	45	81.21	11350	81.21	11350	81.21	11350		
11.40	12	118	71	56	45	81.21	11400	81.21	11400	81.21	11400	185.22	114
11.45	12	118	71	56	45	81.21	11450	81.21	11450	81.21	11450		
11.50	12	118	71	56	45	81.21	11500	81.21	11500	81.21	11500	185.22	115
11.60	12	118	71	56	45	81.21	11600	81.21	11600	81.21	11600	185.22	116
11.70	12	118	71	56	45	81.21	11700	81.21	11700	81.21	11700	185.22	117
11.80	12	118	71	56	45	81.21	11800	81.21	11800	81.21	11800	185.22	118
11.90	12	118	71	56	45	81.21	11900	81.21	11900	81.21	11900	185.22	119
12.00	12	118	71	56	45	81.21	12000	81.21	12000	81.21	12000	185.22	120
12.15	14	124	77	60	45	108.95	12150	108.95	12150	108.95	12150		
12.25	14	124	77	60	45	108.95	12250	108.95	12250	108.95	12250		
12.50	14	124	77	60	45	108.95	12500	108.95	12500	108.95	12500	244.78	125
12.55	14	124	77	60	45	108.95	12550	108.95	12550	108.95	12550		
12.70	14	124	77	60	45	108.95	12700	108.95	12700	108.95	12700		
12.80	14	124	77	60	45	108.95	12800	108.95	12800	108.95	12800	244.78	128
12.90	14	124	77	60	45	108.95	12900	108.95	12900	108.95	12900		
13.00	14	124	77	60	45	108.95	13000	108.95	13000	108.95	13000	244.78	130
13.10	14	124	77	60	45	108.95	13100	108.95	13100	108.95	13100		
13.30	14	124	77	60	45	108.95	13300	108.95	13300	108.95	13300		
13.35	14	124	77	60	45	108.95	13350	108.95	13350	108.95	13350		
13.50	14	124	77	60	45	108.95	13500	108.95	13500	108.95	13500	244.78	135
13.70	14	124	77	60	45	108.95	13700	108.95	13700	108.95	13700		
13.80	14	124	77	60	45	108.95	13800	108.95	13800	108.95	13800	244.78	138

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WTX – High Performance Drill, DIN 6537

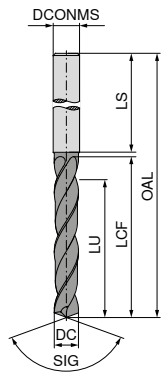


DC _{m7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	11 783 ...		11 784 ...		11 782 ...		10 740 ...	
						£ T7	14000	£ T7	14200	£ T7	14000	£ T4	140
14.00	14	124	77	60	45	108.95	14000	108.95	14200	108.95	14000	304.07	140
14.20	16	133	83	63	48	139.87	14200	139.87	14200	139.87	14200		
14.50	16	133	83	63	48	139.87	14500	139.87	14500	139.87	14500	319.28	145
14.80	16	133	83	63	48	139.87	14800	139.87	14800	139.87	14800	319.28	148
15.00	16	133	83	63	48	139.87	15000	139.87	15000	139.87	15000	319.28	150
15.10	16	133	83	63	48	139.87	15100	139.87	15100	139.87	15100		
15.25	16	133	83	63	48	139.87	15250	139.87	15250	139.87	15250		
15.30	16	133	83	63	48	139.87	15300	139.87	15300	139.87	15300		
15.35	16	133	83	63	48	139.87	15350	139.87	15350	139.87	15350		
15.50	16	133	83	63	48	139.87	15500	139.87	15500	139.87	15500	319.28	155
15.60	16	133	83	63	48	139.87	15600	139.87	15600	139.87	15600		
15.80	16	133	83	63	48	139.87	15800	139.87	15800	139.87	15800	319.28	158
16.00	16	133	83	63	48	139.87	16000	139.87	16000	139.87	16000	319.28	160
16.05	18	143	93	71	48	237.66	16050	237.66	16050	237.66	16050		
16.50	18	143	93	71	48	237.66	16500	237.66	16500	237.66	16500	466.17	165
16.80	18	143	93	71	48	237.66	16800	237.66	16800	237.66	16800	466.17	168
16.90	18	143	93	71	48	237.66	16900	237.66	16900	237.66	16900		
17.00	18	143	93	71	48	237.66	17000	237.66	17000	237.66	17000	466.17	170
17.50	18	143	93	71	48	237.66	17500	237.66	17500	237.66	17500	466.17	175
17.60	18	143	93	71	48	237.66	17600	237.66	17600	237.66	17600		
17.80	18	143	93	71	48	237.66	17800	237.66	17800	237.66	17800	466.17	178
18.00	18	143	93	71	48	237.66	18000	237.66	18000	237.66	18000	586.40	180
18.50	20	153	101	77	50	266.65	18500	266.65	18500	266.65	18500	615.76	185
18.80	20	153	101	77	50	266.65	18800	266.65	18800	266.65	18800	615.76	188
18.90	20	153	101	77	50	266.65	18900	266.65	18900	266.65	18900		
19.00	20	153	101	77	50	266.65	19000	266.65	19000	266.65	19000	615.76	190
19.35	20	153	101	77	50	266.65	19350	266.65	19350	266.65	19350		
19.50	20	153	101	77	50	266.65	19500	266.65	19500	266.65	19500	615.76	195
19.60	20	153	101	77	50	266.65	19600	266.65	19600	266.65	19600		
19.80	20	153	101	77	50	266.65	19800	266.65	19800	266.65	19800	615.76	198
20.00	20	153	101	77	50	266.65	20000	266.65	20000	266.65	20000	858.61	200

P	●	●	●	○
M				●
K	●	●	●	○
N				○
S				●
H	○	○	○	
O				

→ v_c Page 111+112

High Performance Drill, DIN 6537



SIG 140°
Solid carbide



SIG 140°
Solid carbide

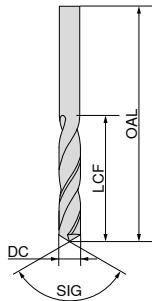
DC _{h7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	11 710 ...		11 709 ...	
						£ T1/9C	03000	£ T1/9C	03000
3.00	6	66	28	23.5	36	31.72	03000	31.72	03000
3.10	6	66	28	23.3	36	31.72	03100	31.72	03100
3.20	6	66	28	23.2	36	31.72	03200	31.72	03200
3.25	6	66	28	23.1	36	31.72	03250	31.72	03250
3.30	6	66	28	23.0	36	31.72	03300	31.72	03300
3.40	6	66	28	22.9	36	31.72	03400	31.72	03400
3.50	6	66	28	22.7	36	31.72	03500	31.72	03500
3.60	6	66	28	22.6	36	31.72	03600	31.72	03600
3.70	6	66	28	22.4	36	31.72	03700	31.72	03700
3.80	6	74	36	30.3	36	31.72	03800	31.72	03800
3.90	6	74	36	30.1	36	31.72	03900	31.72	03900
4.00	6	74	36	30.0	36	31.72	04000	31.72	04000
4.10	6	74	36	29.8	36	31.72	04100	31.72	04100
4.20	6	74	36	29.7	36	31.72	04200	31.72	04200
4.30	6	74	36	29.5	36	31.72	04300	31.72	04300
4.40	6	74	36	29.4	36	31.72	04400	31.72	04400
4.50	6	74	36	29.2	36	31.72	04500	31.72	04500
4.60	6	74	36	29.1	36	31.72	04600	31.72	04600
4.65	6	74	36	29.0	36	31.72	04650	31.72	04650
4.70	6	74	36	28.9	36	31.72	04700	31.72	04700
4.80	6	82	44	36.8	36	31.72	04800	31.72	04800
4.90	6	82	44	36.6	36	31.72	04900	31.72	04900
5.00	6	82	44	36.5	36	31.72	05000	31.72	05000
5.10	6	82	44	36.3	36	31.72	05100	31.72	05100
5.20	6	82	44	36.2	36	31.72	05200	31.72	05200
5.30	6	82	44	36.0	36	31.72	05300	31.72	05300
5.40	6	82	44	35.9	36	31.72	05400	31.72	05400
5.50	6	82	44	35.7	36	31.72	05500	31.72	05500
5.55	6	82	44	35.6	36	31.72	05550	31.72	05550
5.60	6	82	44	35.6	36	31.72	05600	31.72	05600
5.65	6	82	44	35.5	36	31.72	05650	31.72	05650
5.70	6	82	44	35.4	36	31.72	05700	31.72	05700
5.80	6	82	44	35.3	36	31.72	05800	31.72	05800
5.90	6	82	44	35.1	36	31.72	05900	31.72	05900
6.00	6	82	44	35.0	36	31.72	06000	31.72	06000
6.10	8	91	53	43.8	36	31.72	06100	31.72	06100
6.20	8	91	53	43.7	36	31.72	06200	31.72	06200
6.30	8	91	53	43.5	36	31.72	06300	31.72	06300
6.40	8	91	53	43.4	36	31.72	06400	31.72	06400
6.50	8	91	53	43.2	36	31.72	06500	31.72	06500
6.60	8	91	53	43.1	36	31.72	06600	31.72	06600
6.70	8	91	53	42.9	36	31.72	06700	31.72	06700
6.80	8	91	53	42.8	36	31.72	06800	31.72	06800
6.90	8	91	53	42.6	36	31.72	06900	31.72	06900
7.00	8	91	53	42.5	36	31.72	07000	31.72	07000
7.10	8	91	53	42.3	36	31.72	07100	31.72	07100
7.20	8	91	53	42.2	36	31.72	07200	31.72	07200
7.30	8	91	53	42.0	36	31.72	07300	31.72	07300
7.40	8	91	53	41.9	36	31.72	07400	31.72	07400
7.50	8	91	53	41.7	36	31.72	07500	31.72	07500
7.55	8	91	53	41.6	36	31.72	07550	31.72	07550
7.60	8	91	53	41.6	36	31.72	07600	31.72	07600
7.65	8	91	53	41.5	36	31.72	07650	31.72	07650
7.70	8	91	53	41.4	36	31.72	07700	31.72	07700
7.80	8	91	53	41.3	36	31.72	07800	31.72	07800
7.90	8	91	53	41.1	36	31.72	07900	31.72	07900
8.00	8	91	53	41.0	36	31.72	08000	31.72	08000
8.10	10	103	61	48.8	40	34.25	08100	34.25	08100

DC _{h7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	11 710 ...		11 709 ...	
						£ T1/9C	08200	£ T1/9C	08200
8.20	10	103	61	48.7	40	34.25	08200	34.25	08200
8.30	10	103	61	48.5	40	34.25	08300	34.25	08300
8.40	10	103	61	48.4	40	34.25	08400	34.25	08400
8.50	10	103	61	48.2	40	34.25	08500	34.25	08500
8.60	10	103	61	48.1	40	34.25	08600	34.25	08600
8.70	10	103	61	47.9	40	34.25	08700	34.25	08700
8.80	10	103	61	47.8	40	34.25	08800	34.25	08800
8.90	10	103	61	47.6	40	34.25	08900	34.25	08900
9.00	10	103	61	47.5	40	34.25	09000	34.25	09000
9.10	10	103	61	47.3	40	34.25	09100	34.25	09100
9.20	10	103	61	47.2	40	34.25	09200	34.25	09200
9.30	10	103	61	47.0	40	34.25	09300	34.25	09300
9.40	10	103	61	46.9	40	34.25	09400	34.25	09400
9.50	10	103	61	46.7	40	34.25	09500	34.25	09500
9.60	10	103	61	46.6	40	34.25	09600	34.25	09600
9.70	10	103	61	46.4	40	34.25	09700	34.25	09700
9.80	10	103	61	46.3	40	34.25	09800	34.25	09800
9.90	10	103	61	46.1	40	34.25	09900	34.25	09900
10.00	10	103	61	46.0	40	34.25	10000	34.25	10000
10.10	12	118	71	55.8	45	52.02	10100	52.02	10100
10.20	12	118	71	55.7	45	52.02	10200	52.02	10200
10.30	12	118	71	55.5	45	52.02	10300	52.02	10300
10.40	12	118	71	55.4	45	52.02	10400	52.02	10400
10.50	12	118	71	55.2	45	52.02	10500	52.02	10500
10.60	12	118	71	55.1	45	52.02	10600	52.02	10600
10.70	12	118	71	54.9	45	52.02	10700	52.02	10700
10.80	12	118	71	54.8	45	52.02	10800	52.02	10800
10.90	12	118	71	54.6	45	52.02	10900	52.02	10900
11.00	12	118	71	54.5	45	52.02	11000	52.02	11000
11.10	12	118	71	54.3	45	52.02	11100	52.02	11100
11.20	12	118	71	54.2	45	52.02	11200	52.02	11200
11.30	12	118	71	54.0	45	52.02	11300	52.02	11300
11.40	12	118	71	53.9	45	52.02	11400	52.02	11400
11.50	12	118	71	53.7	45	52.02	11500	52.02	11500
11.60	12	118	71	53.6	45	52.02	11600	52.02	11600
11.70	12	118	71	53.4	45	52.02	11700	52.02	11700
11.80	12	118	71	53.3	45	52.02	11800	52.02	11800
11.90	12	118	71	53.1	45	52.02	11900	52.02	11900
12.00	12	118	71	53.0	45	52.02	12000	52.02	12000
12.10	14	124	77	58.8	45	68.51	12100	68.51	12100
12.20	14	124	77	58.7	45	68.51	12200	68.51	12200
12.50	14	124	77	58.2	45	68.51	12500	68.51	12500
12.70	14	124	77	57.9	45	75.77	12700	75.77	12700
12.80	14	124	77	57.8	45	68.51	12800	68.51	12800
13.00	14	124	77	57.5	45	68.51	13000	68.51	13000
13.20	14	124	77	57.2	45	68.51	13200	68.51	13200
13.50	14	124	77	56.7	45	68.51	13500	68.51	13500
13.80	14	124	77	56.3	45	68.51	13800	68.51	13800
14.00	14	124	77	56.0	45	68.51	14000	68.51	14000
14.20	16	133	83	61.7	48	88.81	14200	88.81	14200
14.40	16	133	83	61.4	48	88.81	14400	88.81	14400
14.50	16	133	83	61.2	48	88.81	14500	88.81	14500
14.80	16	133	83	60.8	48	88.81	14800	88.81	14800
15.00	16	133	83	60.5	48	88.81	15000	88.81	15000
15.20	16	133	83	60.2	48	88.81	15200	88.81	15200
15.50	16	133	83	59.7	48	88.81	15500	88.81	15500
15.80	16	133	83	59.3	48	88.81	15800	88.81	15800
16.00	16	133	83	59.0	48	88.81	16000	88.81	16000
16.50	18	143	93	68.2	48	144.64	16500	144.64	16500
17.00	18	143	93	67.5	48	144.64	17000	144.64	17000
17.50	18	143	93	66.7	48	144.64	17500	144.64	17500
18.00	18	143	93	66.0	48	144.64	18000	144.64	18000
18.50	20	153	101	73.2	50	154.78	18500	154.78	18500
18.90	20	153	101	72.6	50	154.78	18900	154.78	18900
19.00	20	153	101	72.5	50	154.78	19000	154.78	19000

Twist drill similar to DIN 338

- ▲ Helix angle 30°
- ▲ Shank Ø h7

≤ 5xD



N



SIG 118°
Solid carbide

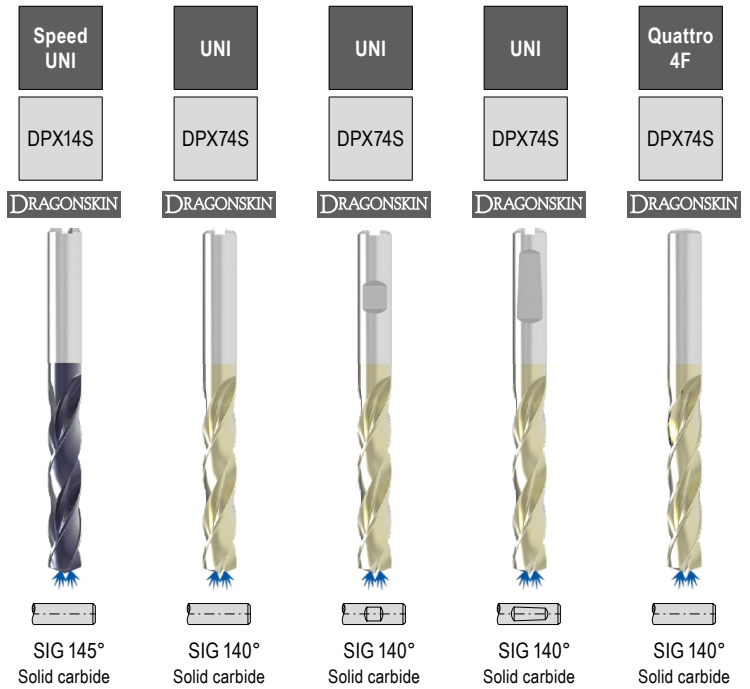
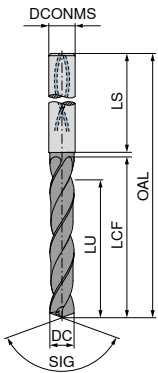
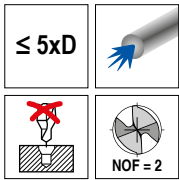
DC _{h7} mm	OAL mm	LCF mm	£ T3	10 710 ...
0.5	22	6	7.57	005
0.6	24	7	7.57	006
0.7	28	9	7.57	007
0.8	30	10	7.57	008
0.9	32	11	7.57	009
1.0	34	12	7.57	010
1.1	36	14	8.73	011
1.2	38	16	8.73	012
1.3	38	16	8.73	013
1.4	40	18	8.73	014
1.5	40	18	8.73	015
1.6	43	20	8.73	016
1.7	43	20	9.66	017
1.8	46	22	10.26	018
1.9	46	22	10.26	019
2.0	49	24	12.55	020
2.1	49	24	12.89	021
2.2	53	27	12.89	022
2.3	53	27	12.89	023
2.4	57	30	12.89	024
2.5	57	30	15.00	025
2.6	57	30	15.00	026
2.7	61	33	16.48	027
2.8	61	33	17.48	028
2.9	61	33	17.48	029
3.0	61	33	17.42	030
3.1	65	36	17.42	031
3.2	65	36	17.42	032
3.3	65	36	19.34	033
3.4	70	39	19.34	034
3.5	70	39	21.29	035
3.6	70	39	21.29	036
3.7	70	39	21.29	037
3.8	75	43	21.29	038
3.9	75	43	21.29	039
4.0	75	43	25.38	040
4.1	75	43	24.16	041
4.2	75	43	26.17	042
4.3	80	47	27.48	043
4.4	80	47	27.48	044
4.5	80	47	29.46	045
4.6	80	47	29.46	046
4.7	80	47	29.46	047
4.8	86	52	30.00	048
4.9	86	52	30.00	049
5.0	86	52	35.05	050
5.1	86	52	35.05	051
5.2	86	52	35.05	052
5.3	86	52	36.70	053

DC _{h7} mm	OAL mm	LCF mm	£ T3	10 710 ...
5.4	93	57	43.17	054
5.5	93	57	43.17	055
5.6	93	57	43.17	056
5.7	93	57	43.17	057
5.8	93	57	43.17	058
5.9	93	57	43.17	059
6.0	93	57	47.05	060
6.1	101	63	49.27	061
6.2	101	63	49.27	062
6.3	101	63	49.27	063
6.4	101	63	49.27	064
6.5	101	63	56.32	065
6.6	109	69	56.32	066
6.8	109	69	64.38	068
7.0	109	69	64.38	070
7.5	109	69	69.69	075
7.8	117	75	76.84	078
8.0	117	75	76.84	080
8.5	117	75	86.37	085
8.8	125	81	104.71	088
9.0	125	81	104.71	090
9.5	125	81	113.77	095
9.8	133	87	125.64	098
10.0	133	87	125.64	100
10.2	133	87	131.94	102
10.5	133	87	137.08	105
11.0	142	94	159.84	110
11.5	142	94	177.51	115
12.0	151	101	207.05	120
13.0	151	101	225.04	130
14.0	160	108	241.22	140
16.0	178	120	327.60	160

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WTX – High Performance Drill, DIN 6537



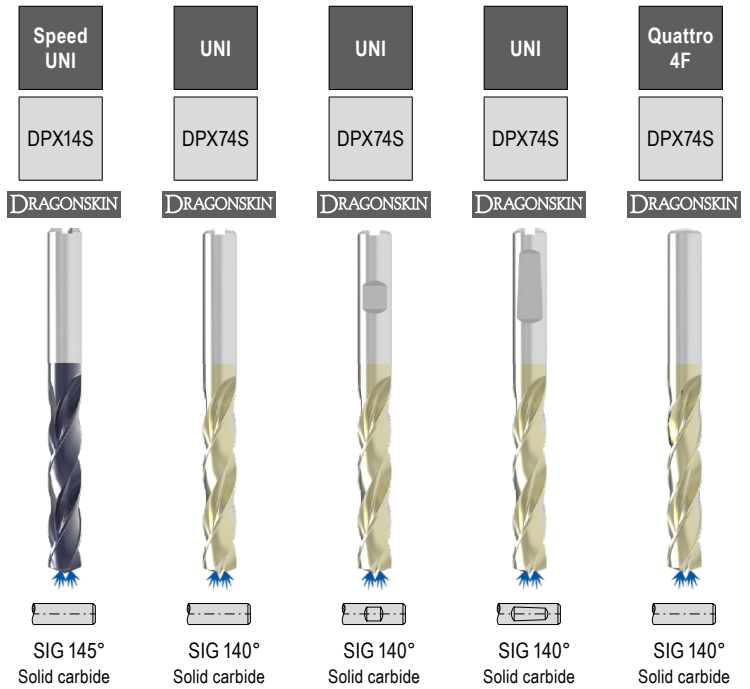
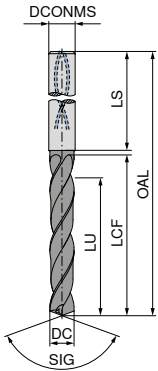
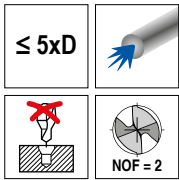
DC _{m7h7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	10 771 ...		11 786 ...		11 787 ...		11 785 ...		10 735 ...	
						£ T4	03000	£ T7	03000	£ T7	03000	£ T7	03000	£ T4	03000
3.00	6	66	28	23	36	147.07	03000	75.41	03000	75.41	03000	71.14	03000	147.27	03000
3.10	6	66	28	23	36	147.07	03100	75.41	03100	75.41	03100	71.14	03100	147.27	03100
3.15	6	66	28	23	36			75.41	03150	75.41	03150	71.14	03150		
3.20	6	66	28	23	36	147.07	03200	75.41	03200	75.41	03200	71.14	03200	147.27	03200
3.22	6	66	28	23	36			75.41	03220	75.41	03220	71.14	03220		
3.25	6	66	28	23	36			75.41	03250	75.41	03250	71.14	03250		
3.30	6	66	28	23	36	147.07	03300	75.41	03300	75.41	03300	71.14	03300	147.27	03300
3.40	6	66	28	23	36	147.07	03400	75.41	03400	75.41	03400	71.14	03400	147.27	03400
3.50	6	66	28	23	36	147.07	03500	75.41	03500	75.41	03500	71.14	03500	147.27	03500
3.60	6	66	28	23	36	147.07	03600	75.41	03600	75.41	03600	71.14	03600	147.27	03600
3.70	6	66	28	23	36	147.07	03700	75.41	03700	75.41	03700	71.14	03700	147.27	03700
3.80	6	74	36	29	36	147.07	03800	75.41	03800	75.41	03800	71.14	03800	147.27	03800
3.85	6	74	36	29	36			75.41	03850	75.41	03850	71.14	03850		
3.90	6	74	36	29	36	147.07	03900	75.41	03900	75.41	03900	71.14	03900	147.27	03900
4.00	6	74	36	29	36	147.07	04000	75.41	04000	75.41	04000	71.14	04000	147.27	04000
4.10	6	74	36	29	36	147.07	04100	75.41	04100	75.41	04100	71.14	04100	147.27	04100
4.20	6	74	36	29	36	147.07	04200	75.41	04200	75.41	04200	71.14	04200	147.27	04200
4.25	6	74	36	29	36			75.41	04250	75.41	04250	71.14	04250		
4.30	6	74	36	29	36	147.07	04300	75.41	04300	75.41	04300	71.14	04300	147.27	04300
4.35	6	74	36	29	36			75.41	04350	75.41	04350	71.14	04350		
4.40	6	74	36	29	36	147.07	04400	75.41	04400	75.41	04400	71.14	04400	147.27	04400
4.45	6	74	36	29	36			75.41	04450	75.41	04450	71.14	04450		
4.50	6	74	36	29	36	147.07	04500	75.41	04500	75.41	04500	71.14	04500	147.27	04500
4.60	6	74	36	29	36	147.07	04600	75.41	04600	75.41	04600	71.14	04600	147.27	04600
4.65	6	74	36	29	36	147.07	04650	75.41	04650	75.41	04650	71.14	04650		
4.70	6	74	36	29	36	147.07	04700	75.41	04700	75.41	04700	71.14	04700	147.27	04700
4.80	6	82	44	35	36	147.07	04800	75.41	04800	75.41	04800	71.14	04800	147.27	04800
4.90	6	82	44	35	36	147.07	04900	75.41	04900	75.41	04900	71.14	04900	147.27	04900
4.95	6	82	44	35	36			75.41	04950	75.41	04950	71.14	04950		
5.00	6	82	44	35	36	147.07	05000	75.41	05000	75.41	05000	71.14	05000	147.27	05000
5.05	6	82	44	35	36			75.41	05050	75.41	05050	71.14	05050		
5.10	6	82	44	35	36	147.07	05100	75.41	05100	75.41	05100	71.14	05100	147.27	05100
5.20	6	82	44	35	36	147.07	05200	75.41	05200	75.41	05200	71.14	05200	147.27	05200
5.30	6	82	44	35	36	147.07	05300	75.41	05300	75.41	05300	71.14	05300	147.27	05300

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K	●	●	●	●	●
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S					
H		○	○	○	○
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Ø DC_{m7} for Type UNI and Quattro 4F/ Ø DC_{h7} for Type Speed UNI

WTX – High Performance Drill, DIN 6537



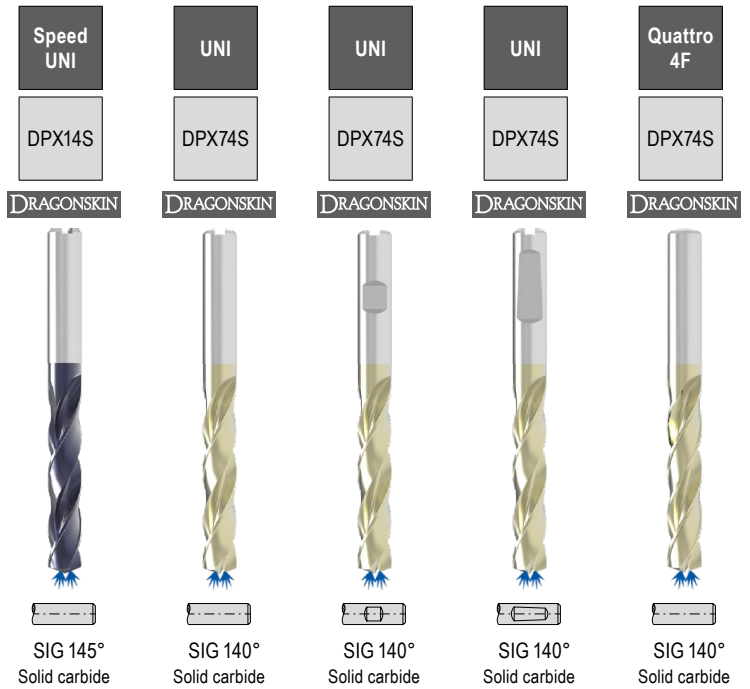
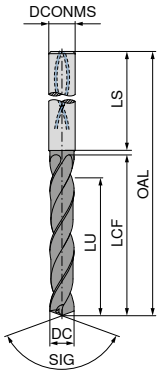
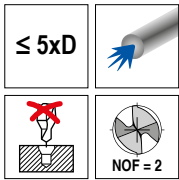
DC _{m7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	10 771 ...		11 786 ...		11 787 ...		11 785 ...		10 735 ...	
						£ T4	05400	£ T7	05400	£ T7	05400	£ T7	05400	£ T4	05400
5.40	6	82	44	35	36	147.07	05400	75.41	05400	75.41	05400	71.14	05400	147.27	05400
5.50	6	82	44	35	36	147.07	05500	75.41	05500	75.41	05500	71.14	05500	147.27	05500
5.55	6	82	44	35	36	147.07	05550	88.28	05550	88.28	05550	71.14	05550		
5.60	6	82	44	35	36	147.07	05600	75.41	05600	75.41	05600	71.14	05600	147.27	05600
5.70	6	82	44	35	36	147.07	05700	75.41	05700	75.41	05700	71.14	05700	147.27	05700
5.75	6	82	44	35	36			75.41	05750	75.41	05750	71.14	05750		
5.80	6	82	44	35	36	147.07	05800	75.41	05800	75.41	05800	71.14	05800	147.27	05800
5.90	6	82	44	35	36	147.07	05900	75.41	05900	75.41	05900	71.14	05900	147.27	05900
5.95	6	82	44	35	36			75.41	05950	75.41	05950	71.14	05950		
6.00	6	82	44	35	36	147.07	06000	75.41	06000	75.41	06000	71.14	06000	147.27	06000
6.10	8	91	53	43	36	164.47	06100	85.01	06100	85.01	06100	81.21	06100	172.21	06100
6.20	8	91	53	43	36	164.47	06200	85.01	06200	85.01	06200	81.21	06200	172.21	06200
6.30	8	91	53	43	36	164.47	06300	85.01	06300	85.01	06300	81.21	06300	172.21	06300
6.40	8	91	53	43	36	164.47	06400	85.01	06400	85.01	06400	81.21	06400	172.21	06400
6.50	8	91	53	43	36	164.47	06500	85.01	06500	85.01	06500	81.21	06500	172.21	06500
6.60	8	91	53	43	36	164.47	06600	85.01	06600	85.01	06600	81.21	06600	172.21	06600
6.70	8	91	53	43	36	164.47	06700	85.01	06700	85.01	06700	81.21	06700	172.21	06700
6.80	8	91	53	43	36	164.47	06800	85.01	06800	85.01	06800	81.21	06800	172.21	06800
6.90	8	91	53	43	36	164.47	06900	85.01	06900	85.01	06900	81.21	06900	172.21	06900
7.00	8	91	53	43	36	164.47	07000	85.01	07000	85.01	07000	81.21	07000	172.21	07000
7.10	8	91	53	43	36	164.47	07100	85.01	07100	85.01	07100	81.21	07100	172.21	07100
7.20	8	91	53	43	36	164.47	07200	85.01	07200	85.01	07200	81.21	07200	172.21	07200
7.30	8	91	53	43	36	164.47	07300	85.01	07300	85.01	07300	81.21	07300	172.21	07300
7.40	8	91	53	43	36	164.47	07400	85.01	07400	85.01	07400	81.21	07400	172.21	07400
7.45	8	91	53	43	36			85.01	07450	85.01	07450	85.01	07450		
7.50	8	91	53	43	36	164.47	07500	85.01	07500	85.01	07500	81.21	07500	172.21	07500
7.60	8	91	53	43	36	164.47	07600	85.01	07600	85.01	07600	81.21	07600	172.21	07600
7.70	8	91	53	43	36	164.47	07700	85.01	07700	85.01	07700	81.21	07700	172.21	07700
7.80	8	91	53	43	36	164.47	07800	85.01	07800	85.01	07800	81.21	07800	172.21	07800
7.90	8	91	53	43	36	164.47	07900	85.01	07900	85.01	07900	81.21	07900	172.21	07900
8.00	8	91	53	43	36	164.47	08000	85.01	08000	85.01	08000	81.21	08000	172.21	08000
8.10	10	103	61	49	40	236.11	08100	98.53	08100	98.53	08100	91.65	08100	214.43	08100
8.20	10	103	61	49	40	236.11	08200	98.53	08200	98.53	08200	91.65	08200	214.43	08200
8.30	10	103	61	49	40	236.11	08300	98.53	08300	98.53	08300	91.65	08300	214.43	08300

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Ø DC_{m7} for Type UNI and Quattro 4F/ Ø DC_{h7} for Type Speed UNI

WTX – High Performance Drill, DIN 6537



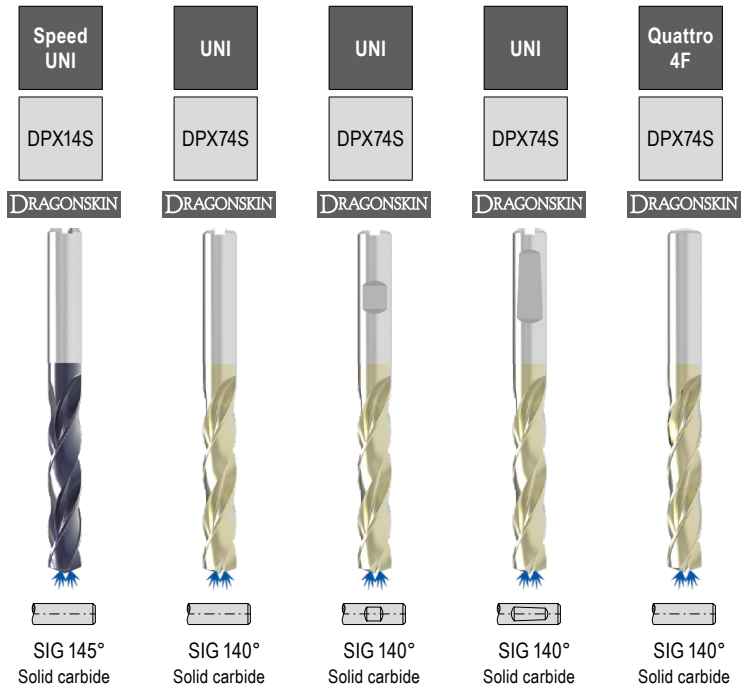
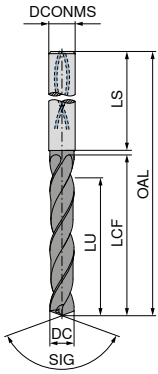
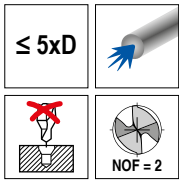
DC _{m7h7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	10 771 ...		11 786 ...		11 787 ...		11 785 ...		10 735 ...	
						£	T4	£	T7	£	T7	£	T7	£	T4
8.40	10	103	61	49	40	236.11	08400	98.53	08400	98.53	08400	91.65	08400	214.43	08400
8.50	10	103	61	49	40	236.11	08500	98.53	08500	98.53	08500	91.65	08500	214.43	08500
8.60	10	103	61	49	40	236.11	08600	98.53	08600	98.53	08600	91.65	08600	214.43	08600
8.70	10	103	61	49	40	236.11	08700	98.53	08700	98.53	08700	91.65	08700	214.43	08700
8.80	10	103	61	49	40	236.11	08800	98.53	08800	98.53	08800	91.65	08800	214.43	08800
8.90	10	103	61	49	40	236.11	08900	98.53	08900	98.53	08900	91.65	08900	214.43	08900
9.00	10	103	61	49	40	236.11	09000	98.53	09000	98.53	09000	91.65	09000	214.43	09000
9.10	10	103	61	49	40	236.11	09100	98.53	09100	98.53	09100	91.65	09100	214.43	09100
9.20	10	103	61	49	40	236.11	09200	98.53	09200	98.53	09200	91.65	09200	214.43	09200
9.30	10	103	61	49	40	236.11	09300	98.53	09300	98.53	09300	91.65	09300	214.43	09300
9.35	10	103	61	49	40			98.53	09350	98.53	09350	91.65	09350		
9.40	10	103	61	49	40	236.11	09400	98.53	09400	98.53	09400	91.65	09400	214.43	09400
9.45	10	103	61	49	40			98.53	09450	98.53	09450	91.65	09450		
9.50	10	103	61	49	40	236.11	09500	98.53	09500	98.53	09500	91.65	09500	214.43	09500
9.60	10	103	61	49	40	236.11	09600	98.53	09600	98.53	09600	91.65	09600	214.43	09600
9.70	10	103	61	49	40	236.11	09700	98.53	09700	98.53	09700	91.65	09700	214.43	09700
9.80	10	103	61	49	40	236.11	09800	98.53	09800	98.53	09800	91.65	09800	214.43	09800
9.90	10	103	61	49	40	236.11	09900	98.53	09900	98.53	09900	91.65	09900	214.43	09900
10.00	10	103	61	49	40	236.11	10000	98.53	10000	98.53	10000	91.65	10000	214.43	10000
10.10	12	118	71	56	45	332.83	10100	139.55	10100	139.55	10100	131.96	10100	304.19	10100
10.20	12	118	71	56	45	332.83	10200	139.55	10200	139.55	10200	131.96	10200	304.19	10200
10.30	12	118	71	56	45	332.83	10300	139.55	10300	139.55	10300	131.96	10300	304.19	10300
10.40	12	118	71	56	45	332.83	10400	139.55	10400	139.55	10400	131.96	10400	304.19	10400
10.50	12	118	71	56	45	332.83	10500	139.55	10500	139.55	10500	131.96	10500	304.19	10500
10.55	12	118	71	56	45			139.55	10550	139.55	10550	131.96	10550		
10.60	12	118	71	56	45	332.83	10600	139.55	10600	139.55	10600	131.96	10600	304.19	10600
10.70	12	118	71	56	45	332.83	10700	139.55	10700	139.55	10700	131.96	10700	304.19	10700
10.75	12	118	71	56	45			139.55	10750	139.55	10750	131.96	10750		
10.80	12	118	71	56	45	332.83	10800	139.55	10800	139.55	10800	131.96	10800	304.19	10800
10.90	12	118	71	56	45	332.83	10900	139.55	10900	139.55	10900	131.96	10900	304.19	10900
11.00	12	118	71	56	45	332.83	11000	139.55	11000	139.55	11000	131.96	11000	304.19	11000
11.10	12	118	71	56	45	332.83	11100	139.55	11100	139.55	11100	131.96	11100	304.19	11100
11.20	12	118	71	56	45	332.83	11200	139.55	11200	139.55	11200	131.96	11200	304.19	11200
11.25	12	118	71	56	45			139.55	11250	139.55	11250	131.96	11250		

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Ø DC_{m7} for Type UNI and Quattro 4F/ Ø DC_{h7} for Type Speed UNI

WTX – High Performance Drill, DIN 6537



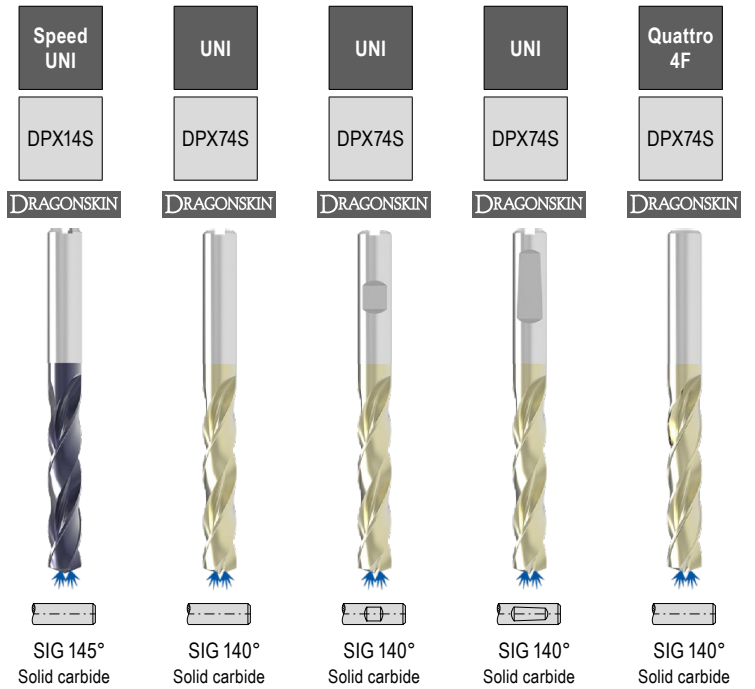
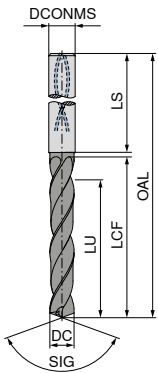
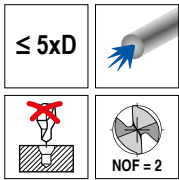
DC _{m7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	10 771 ...		11 786 ...		11 787 ...		11 785 ...		10 735 ...	
						£ T4	11300	£ T7	11300	£ T7	11300	£ T7	11300	£ T4	11300
11.30	12	118	71	56	45	332.83	11300	139.55	11300	139.55	11300	131.96	11300	304.19	11300
11.35	12	118	71	56	45			139.55	11350	139.55	11350	131.96	11350		
11.40	12	118	71	56	45	332.83	11400	139.55	11400	139.55	11400	131.96	11400	304.19	11400
11.45	12	118	71	56	45			139.55	11450	139.55	11450	131.96	11450		
11.50	12	118	71	56	45	332.83	11500	139.55	11500	139.55	11500	131.96	11500	304.19	11500
11.60	12	118	71	56	45	332.83	11600	139.55	11600	139.55	11600	131.96	11600	304.19	11600
11.70	12	118	71	56	45	332.83	11700	139.55	11700	139.55	11700	131.96	11700	304.19	11700
11.80	12	118	71	56	45	332.83	11800	139.55	11800	139.55	11800	131.96	11800	304.19	11800
11.90	12	118	71	56	45	332.83	11900	139.55	11900	139.55	11900	131.96	11900	304.19	11900
12.00	12	118	71	56	45	332.83	12000	139.55	12000	139.55	12000	131.96	12000	304.19	12000
12.15	14	124	77	60	45			188.13	12150	188.13	12150	174.76	12150		
12.20	14	124	77	60	45	452.80	12200								
12.25	14	124	77	60	45			188.13	12250	188.13	12250	174.76	12250		
12.50	14	124	77	60	45	452.80	12500	188.13	12500	188.13	12500	174.76	12500	411.38	12500
12.55	14	124	77	60	45			188.13	12550	188.13	12550	174.76	12550		
12.70	14	124	77	60	45			188.13	12700	188.13	12700	174.76	12700		
12.80	14	124	77	60	45	452.80	12800	188.13	12800	188.13	12800	174.76	12800	411.38	12800
12.90	14	124	77	60	45			174.76	12900	174.76	12900	174.76	12900		
13.00	14	124	77	60	45	452.80	13000	188.13	13000	188.13	13000	174.76	13000	411.38	13000
13.10	14	124	77	60	45			188.13	13100	188.13	13100	174.76	13100		
13.30	14	124	77	60	45			174.76	13300	174.76	13300	174.76	13300		
13.35	14	124	77	60	45			174.76	13350	174.76	13350	174.76	13350		
13.50	14	124	77	60	45	452.80	13500	188.13	13500	188.13	13500	174.76	13500	411.38	13500
13.70	14	124	77	60	45			188.13	13700	188.13	13700	174.76	13700		
13.80	14	124	77	60	45	452.80	13800	188.13	13800	188.13	13800	174.76	13800	411.38	13800
14.00	14	124	77	60	45	452.80	14000	188.13	14000	188.13	14000	174.76	14000	411.38	14000
14.20	16	133	83	63	48	565.05	14200	218.25	14200	218.25	14200	218.25	14200		
14.50	16	133	83	63	48	565.05	14500	235.16	14500	235.16	14500	218.25	14500	513.58	14500
14.80	16	133	83	63	48	565.05	14800	235.16	14800	235.16	14800	218.25	14800	513.58	14800
15.00	16	133	83	63	48	565.05	15000	235.16	15000	235.16	15000	218.25	15000	513.58	15000
15.10	16	133	83	63	48			235.16	15100	235.16	15100	218.25	15100		
15.20	16	133	83	63	48	565.05	15200								
15.25	16	133	83	63	48			235.16	15250	235.16	15250	218.25	15250		
15.30	16	133	83	63	48			228.64	15300	228.64	15300	218.25	15300		

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Ø DC_{m7} for Type UNI and Quattro 4F/ Ø DC_{h7} for Type Speed UNI

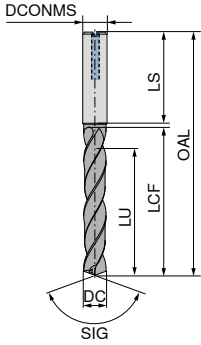
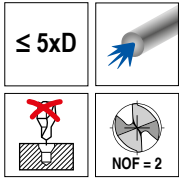
WTX – High Performance Drill, DIN 6537



DC _{m7h7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	10 771 ...		11 786 ...		11 787 ...		11 785 ...		10 735 ...	
						£ T4		£ T7		£ T7		£ T7		£ T4	
15.35	16	133	83	63	48			228.64	15350	228.64	15350	218.25	15350		
15.50	16	133	83	63	48	565.05	15500	235.16	15500	235.16	15500	218.25	15500	513.58	15500
15.60	16	133	83	63	48			235.16	15600	235.16	15600	218.25	15600		
15.80	16	133	83	63	48	565.05	15800	235.16	15800	235.16	15800	218.25	15800	513.58	15800
16.00	16	133	83	63	48	565.05	16000	235.16	16000	235.16	16000	218.25	16000	513.58	16000
16.05	18	143	93	71	48			365.72	16050	365.72	16050	339.42	16050		
16.50	18	143	93	71	48	743.07	16500	365.72	16500	365.72	16500	339.42	16500	675.55	16500
16.80	18	143	93	71	48	743.07	16800	365.72	16800	365.72	16800	339.42	16800	675.55	16800
16.90	18	143	93	71	48			365.72	16900	365.72	16900	339.42	16900		
17.00	18	143	93	71	48	743.07	17000	365.72	17000	365.72	17000	339.42	17000	675.55	17000
17.50	18	143	93	71	48	743.07	17500	365.72	17500	365.72	17500	339.42	17500	675.55	17500
17.60	18	143	93	71	48			365.72	17600	365.72	17600	339.42	17600		
17.80	18	143	93	71	48	743.07	17800	365.72	17800	365.72	17800	339.42	17800	675.55	17800
18.00	18	143	93	71	48	743.07	18000	365.72	18000	365.72	18000	339.42	18000	675.55	18000
18.50	20	153	101	77	50			423.45	18500	423.45	18500	375.79	18500		
18.80	20	153	101	77	50			423.45	18800	423.45	18800	375.79	18800		
18.90	20	153	101	77	50			423.45	18900	423.45	18900	375.79	18900		
19.00	20	153	101	77	50			423.45	19000	423.45	19000	375.79	19000		
19.35	20	153	101	77	50			423.45	19350	423.45	19350	375.79	19350		
19.50	20	153	101	77	50			423.45	19500	423.45	19500	375.79	19500		
19.60	20	153	101	77	50			423.45	19600	423.45	19600	375.79	19600		
19.80	20	153	101	77	50			423.45	19800	423.45	19800	375.79	19800		
20.00	20	153	101	77	50			423.45	20000	423.45	20000	375.79	20000		
20.50	25	200	135	110	56			1,088.35	20500	1,088.35	20500	727.37	20500		
21.00	25	200	135	110	56			1,088.35	21000	1,088.35	21000	727.37	21000		
21.50	25	200	135	110	56			1,088.35	21500	1,088.35	21500	727.37	21500		
22.00	25	200	135	110	56			1,088.35	22000	1,088.35	22000	727.37	22000		
22.50	25	200	140	120	56			1,088.35	22500	1,088.35	22500	727.37	22500		
23.00	25	200	140	120	56			1,088.35	23000	1,088.35	23000	727.37	23000		
23.50	25	200	140	120	56			1,088.35	23500	1,088.35	23500	727.37	23500		
24.00	25	200	140	120	56			1,088.35	24000	1,088.35	24000	727.37	24000		
24.50	25	200	140	120	56			1,088.35	24500	1,088.35	24500	727.37	24500		
25.00	25	200	140	120	56			1,088.35	25000	1,088.35	25000	727.37	25000		

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WTX – High Performance Drill, DIN 6537



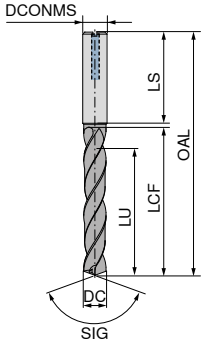
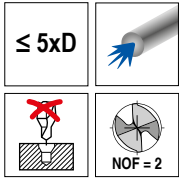
DC _{h7/m7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	10 773 ... £ T4	10 745 ... £ T4	10 791 ... £ T4/9F	
2.50	4	57	21	17	28			108.60	02500
2.60	4	57	21	17	28			108.60	02600
2.70	4	57	21	17	28			108.60	02700
2.80	4	57	21	17	28			108.60	02800
2.90	4	57	21	17	28			108.60	02900
3.00	6	66	28	23	36	148.92	130.66	108.60	03000
3.10	6	66	28	23	36	148.92	130.66	108.60	03100
3.15	6	66	28	23	36		130.66		
3.20	6	66	28	23	36	148.92	130.66	108.60	03200
3.22	6	66	28	23	36		130.66		
3.25	6	66	28	23	36		130.66		
3.30	6	66	28	23	36	148.92	130.66	108.60	03300
3.40	6	66	28	23	36	148.92	130.66	108.60	03400
3.50	6	66	28	23	36	148.92	130.66	108.60	03500
3.60	6	66	28	23	36	148.92	130.66	108.60	03600
3.70	6	66	28	23	36	148.92	130.66	108.60	03700
3.80	6	74	36	29	36	148.92	130.66	104.80	03800
3.85	6	74	36	29	36		130.66		
3.90	6	74	36	29	36	148.92	130.66	104.80	03900
4.00	6	74	36	29	36	148.92	130.66	104.80	04000
4.10	6	74	36	29	36	148.92	130.66	104.80	04100
4.20	6	74	36	29	36	148.92	130.66	104.80	04200
4.30	6	74	36	29	36	148.92	130.66	104.80	04300
4.35	6	74	36	29	36		130.66		
4.40	6	74	36	29	36	148.92	130.66	104.80	04400
4.45	6	74	36	29	36		130.66		
4.50	6	74	36	29	36	148.92	130.66	104.80	04500
4.60	6	74	36	29	36	148.92	130.66	104.80	04600
4.65	6	74	36	29	36	148.92	130.66		
4.70	6	74	36	29	36	148.92	130.66	104.80	04700
4.80	6	82	44	35	36	148.92	130.66	105.28	04800
4.90	6	82	44	35	36	148.92	130.66	105.28	04900
5.00	6	82	44	35	36	148.92	130.66	105.28	05000
5.10	6	82	44	35	36	148.92	130.66	105.28	05100
5.20	6	82	44	35	36	148.92	130.66	105.28	05200
5.30	6	82	44	35	36	148.92	130.66	105.28	05300
5.40	6	82	44	35	36	148.92	130.66	105.28	05400

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→ v. Page 112-122

Ø DC_{m7} for Type VA / Ø DC_{h7} for Type Speed VA and AL

WTX – High Performance Drill, DIN 6537



DC _{h7/m7}	DCONMS _{h6}	OAL	LCF	LU	LS
mm	mm	mm	mm	mm	mm
5.50	6	82	44	35	36
5.55	6	82	44	35	36
5.60	6	82	44	35	36
5.70	6	82	44	35	36
5.75	6	82	44	35	36
5.80	6	82	44	35	36
5.90	6	82	44	35	36
5.95	6	82	44	35	36
6.00	6	82	44	35	36
6.10	8	91	53	43	36
6.20	8	91	53	43	36
6.30	8	91	53	43	36
6.40	8	91	53	43	36
6.50	8	91	53	43	36
6.60	8	91	53	43	36
6.70	8	91	53	43	36
6.80	8	91	53	43	36
6.90	8	91	53	43	36
7.00	8	91	53	43	36
7.10	8	91	53	43	36
7.20	8	91	53	43	36
7.30	8	91	53	43	36
7.40	8	91	53	43	36
7.45	8	91	53	43	36
7.50	8	91	53	43	36
7.60	8	91	53	43	36
7.70	8	91	53	43	36
7.80	8	91	53	43	36
7.90	8	91	53	43	36
8.00	8	91	53	43	36
8.10	10	103	61	49	40
8.20	10	103	61	49	40
8.30	10	103	61	49	40
8.40	10	103	61	49	40
8.50	10	103	61	49	40
8.60	10	103	61	49	40
8.70	10	103	61	49	40

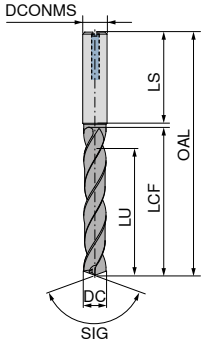
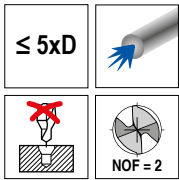
10 773 ...		10 745 ...		10 791 ...	
£		£		£	
148.92	055	130.66	055	105.28	05500
148.92	902				
148.92	056	130.66	056	105.28	05600
148.92	057	130.66	057	105.28	05700
		130.66	916		
148.92	058	130.66	058	105.28	05800
148.92	059	130.66	059	105.28	05900
		130.66	959		
148.92	060	130.66	060	105.28	06000
166.71	061	154.45	061	117.49	06100
166.71	062	154.45	062	117.49	06200
166.71	063	154.45	063	117.49	06300
166.71	064	154.45	064	117.49	06400
166.71	065	154.45	065	117.49	06500
166.71	066	154.45	066	117.49	06600
166.71	067	154.45	067	117.49	06700
166.71	068	154.45	068	117.49	06800
166.71	069	154.45	069	117.49	06900
166.71	070	154.45	070	117.49	07000
166.71	071	154.45	071	117.49	07100
166.71	072	154.45	072	117.49	07200
166.71	073	154.45	073	117.49	07300
166.71	074	154.45	074	117.49	07400
		154.45	924		
166.71	075	154.45	075	117.49	07500
166.71	076	154.45	076	117.49	07600
166.71	077	154.45	077	117.49	07700
166.71	078	154.45	078	117.49	07800
166.71	079	154.45	079	117.49	07900
166.71	080	154.45	080	117.49	08000
241.25	081	194.52	081	137.59	08100
241.25	082	194.52	082	137.59	08200
241.25	083	194.52	083	137.59	08300
241.25	084	194.52	084	137.59	08400
241.25	085	194.52	085	137.59	08500
241.25	086	194.52	086	137.59	08600
241.25	087	194.52	087	137.59	08700

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→ v. Page 112-122

Ø DC_{m7} for Type VA / Ø DC_{h7} for Type Speed VA and AL

WTX – High Performance Drill, DIN 6537



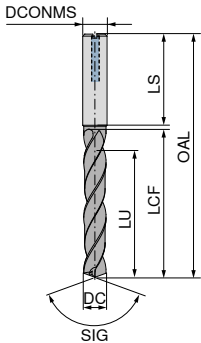
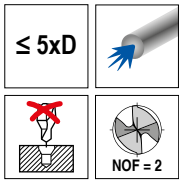
DC _{h7/m7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	10 773 ...		10 745 ...		10 791 ...	
						£		£		£	
8.80	10	103	61	49	40	241.25	088	194.52	088	137.59	08800
8.90	10	103	61	49	40	241.25	089	194.52	089	137.59	08900
9.00	10	103	61	49	40	241.25	090	194.52	090	137.59	09000
9.10	10	103	61	49	40	241.25	091	194.52	091	137.59	09100
9.20	10	103	61	49	40	241.25	092	194.52	092	137.59	09200
9.30	10	103	61	49	40	241.25	093	194.52	093	137.59	09300
9.35	10	103	61	49	40			194.52	930		
9.40	10	103	61	49	40	241.25	094	194.52	094	137.59	09400
9.45	10	103	61	49	40			194.52	994		
9.50	10	103	61	49	40	241.25	095	194.52	095	137.59	09500
9.60	10	103	61	49	40	241.25	096	194.52	096	137.59	09600
9.70	10	103	61	49	40	241.25	097	194.52	097	137.59	09700
9.80	10	103	61	49	40	241.25	098	194.52	098	137.59	09800
9.90	10	103	61	49	40	241.25	099	194.52	099	137.59	09900
10.00	10	103	61	49	40	241.25	100	194.52	100	137.59	10000
10.10	12	118	71	56	45	338.16	101	264.16	101	191.98	10100
10.20	12	118	71	56	45	338.16	102	264.16	102	191.98	10200
10.30	12	118	71	56	45	338.16	103	264.16	103	191.98	10300
10.40	12	118	71	56	45	338.16	104	264.16	104	191.98	10400
10.50	12	118	71	56	45	338.16	105	264.16	105	191.98	10500
10.55	12	118	71	56	45			264.16	932		
10.60	12	118	71	56	45	338.16	106	264.16	106	191.98	10600
10.70	12	118	71	56	45	338.16	107	264.16	107	191.98	10700
10.80	12	118	71	56	45	338.16	108	264.16	108	191.98	10800
10.90	12	118	71	56	45	338.16	109	264.16	109		
11.00	12	118	71	56	45	338.16	110	264.16	110	191.98	11000
11.10	12	118	71	56	45	338.16	111	264.16	111	191.98	11100
11.20	12	118	71	56	45	338.16	112	264.16	112	191.98	11200
11.25	12	118	71	56	45			264.16	912		
11.30	12	118	71	56	45	338.16	113	264.16	113	191.98	11300
11.35	12	118	71	56	45			264.16	913		
11.40	12	118	71	56	45	338.16	114	264.16	114	191.98	11400
11.45	12	118	71	56	45			264.16	914		
11.50	12	118	71	56	45	338.16	115	264.16	115	191.98	11500
11.60	12	118	71	56	45	338.16	116	264.16	116		
11.70	12	118	71	56	45	338.16	117	264.16	117	191.98	11700
11.80	12	118	71	56	45	338.16	118	264.16	118	191.98	11800

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→ v. Page 112-122

Ø DC_{m7} for Type VA / Ø DC_{h7} for Type Speed VA and AL

WTX – High Performance Drill, DIN 6537



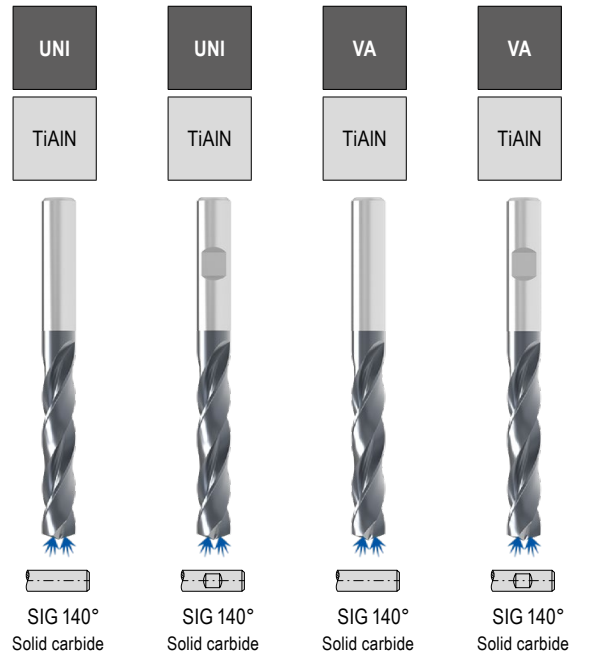
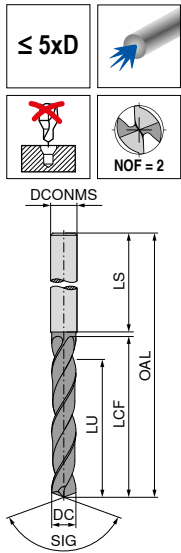
DC _{h7/m7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	10 773 ...		10 745 ...		10 791 ...	
						£	T4	£	T4	£	T4/9F
11.90	12	118	71	56	45	338.16	119	264.16	119		
12.00	12	118	71	56	45	338.16	120	264.16	120	191.98	12000
12.15	14	124	77	60	45			364.01	921		
12.20	14	124	77	60	45	458.80	12200			266.47	12200
12.50	14	124	77	60	45	458.80	125	364.01	125	266.47	12500
12.55	14	124	77	60	45			364.01	925		
12.60	14	124	77	60	45					266.47	12600
12.80	14	124	77	60	45	458.80	128	364.01	128	266.47	12800
13.00	14	124	77	60	45	458.80	130	364.01	130	266.47	13000
13.35	14	124	77	60	45			364.01	933		
13.50	14	124	77	60	45	458.80	135	364.01	135	266.47	13500
13.80	14	124	77	60	45	458.80	138	364.01	138	266.47	13800
14.00	14	124	77	60	45	458.80	140	364.01	140	266.47	14000
14.20	16	133	83	63	48					325.84	14200
14.50	16	133	83	63	48	573.50	145	458.60	145	325.84	14500
14.80	16	133	83	63	48	573.50	148	458.60	148	325.84	14800
15.00	16	133	83	63	48	573.50	150	458.60	150	325.84	15000
15.20	16	133	83	63	48					325.84	15200
15.35	16	133	83	63	48			458.60	953		
15.50	16	133	83	63	48	573.50	155	458.60	155	325.84	15500
15.80	16	133	83	63	48	573.50	158	458.60	158	325.84	15800
16.00	16	133	83	63	48	573.50	160	458.60	160	325.84	16000
16.05	18	143	93	71	48			633.16	960		
16.50	18	143	93	71	48	755.45	165	633.16	165	452.40	16500
16.80	18	143	93	71	48	755.45	168	633.16	168		
17.00	18	143	93	71	48	755.45	170	633.16	170	452.40	17000
17.50	18	143	93	71	48	755.45	175	633.16	175	452.40	17500
17.80	18	143	93	71	48	755.45	178	633.16	178		
18.00	18	143	93	71	48	755.45	180	633.16	180	452.40	18000
18.50	20	153	101	77	50	976.93	185	750.23	185	558.66	18500
18.80	20	153	101	77	50	976.93	188	750.23	188		
19.00	20	153	101	77	50	976.93	190	750.23	190	558.66	19000
19.35	20	153	101	77	50			750.23	993		
19.50	20	153	101	77	50	976.93	195	750.23	195	558.66	19500
19.80	20	153	101	77	50	976.93	198	750.23	198		
20.00	20	153	101	77	50	976.93	200	750.23	200	558.66	20000

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→ v_c Page 112-122

Ø DC_{m7} for Type VA / Ø DC_{h7} for Type Speed VA and AL

High Performance Drill, DIN 6537



DC _{m7n7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm
1.00	4	55	8	6.5	28
1.10	4	55	12	10.3	28
1.20	4	55	12	10.2	28
1.30	4	55	12	10.0	28
1.40	4	55	12	9.9	28
1.50	4	55	12	9.7	28
1.60	4	55	16	13.6	28
1.70	4	55	16	13.4	28
1.80	4	55	16	13.3	28
1.90	4	55	16	13.1	28
2.00	4	57	21	18.0	28
2.10	4	57	21	17.8	28
2.20	4	57	21	17.7	28
2.30	4	57	21	17.5	28
2.40	4	57	21	17.4	28
2.50	4	57	21	17.2	28
2.60	4	57	21	17.1	28
2.70	4	57	21	16.9	28
2.80	4	57	21	16.8	28
2.90	4	57	21	16.6	28
3.00	6	66	28	23.5	36
3.10	6	66	28	23.3	36
3.20	6	66	28	23.2	36
3.25	6	66	28	23.1	36
3.30	6	66	28	23.0	36
3.40	6	66	28	22.9	36
3.50	6	66	28	22.7	36
3.60	6	66	28	22.6	36
3.70	6	66	28	22.4	36
3.80	6	74	36	30.3	36
3.85	6	74	36	30.2	36
3.90	6	74	36	30.1	36
4.00	6	74	36	30.0	36
4.10	6	74	36	29.8	36
4.20	6	74	36	29.7	36
4.30	6	74	36	29.5	36
4.40	6	74	36	29.4	36
4.50	6	74	36	29.2	36
4.60	6	74	36	29.1	36
4.65	6	74	36	29.0	36
4.70	6	74	36	28.9	36
4.80	6	82	44	36.8	36
4.90	6	82	44	36.6	36
5.00	6	82	44	36.5	36
5.10	6	82	44	36.3	36

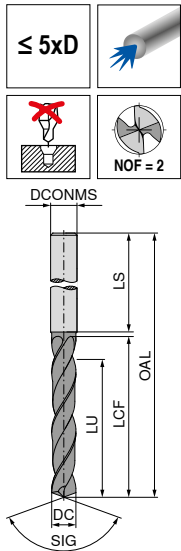
11 702 ...		11 703 ...		11 715 ...		11 716 ...	
£	01000	£	01000	£	01000	£	01000
T1/9C		T1/9C		T1/9C		T1/9C	
38.06	01000			45.15	01000		
38.06	01100			45.15	01100		
38.06	01200			45.15	01200		
38.06	01300			45.15	01300		
38.06	01400			45.15	01400		
38.06	01500			45.15	01500		
38.06	01600			45.15	01600		
38.06	01700			45.15	01700		
38.06	01800			45.15	01800		
38.06	01900			45.15	01900		
38.06	02000			45.15	02000		
38.06	02100			45.15	02100		
38.06	02200			45.15	02200		
38.06	02300			45.15	02300		
38.06	02400			45.15	02400		
38.06	02500			45.15	02500		
38.06	02600			45.15	02600		
38.06	02700			45.15	02700		
38.06	02800			45.15	02800		
38.06	02900			45.15	02900		
38.06	03000	38.06	03000	44.41	03000	44.41	03000
38.06	03100	38.06	03100	44.41	03100	44.41	03100
38.06	03200	38.06	03200	44.41	03200	44.41	03200
38.06	03250	38.06	03250				
38.06	03300	38.06	03300	44.41	03300	44.41	03300
38.06	03400	38.06	03400	44.41	03400	44.41	03400
38.06	03500	38.06	03500	44.41	03500	44.41	03500
38.06	03600	38.06	03600	44.41	03600	44.41	03600
38.06	03700	38.06	03700	44.41	03700	44.41	03700
38.06	03800	38.06	03800	44.41	03800	44.41	03800
38.06	03850	38.06	03850				
38.06	03900	38.06	03900	44.41	03900	44.41	03900
38.06	04000	38.06	04000	44.41	04000	44.41	04000
38.06	04100	38.06	04100	44.41	04100	44.41	04100
38.06	04200	38.06	04200	44.41	04200	44.41	04200
38.06	04300	38.06	04300	44.41	04300	44.41	04300
38.06	04400	38.06	04400	44.41	04400	44.41	04400
38.06	04500	38.06	04500	44.41	04500	44.41	04500
38.06	04600	38.06	04600	44.41	04600	44.41	04600
38.06	04650	38.06	04650				
38.06	04700	38.06	04700	44.41	04700	44.41	04700
38.06	04800	38.06	04800	44.41	04800	44.41	04800
38.06	04900	38.06	04900	44.41	04900	44.41	04900
38.06	05000	38.06	05000	44.41	05000	44.41	05000
38.06	05100	38.06	05100	44.41	05100	44.41	05100

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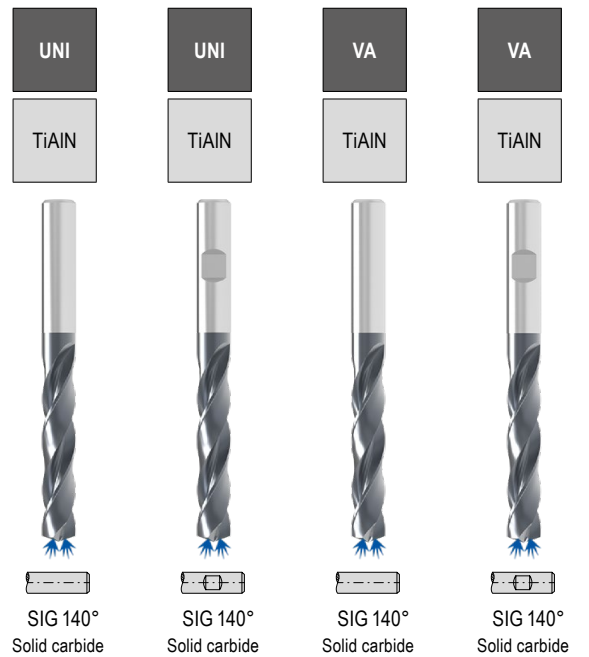
→ v. Page 129+133

1 Ø DC_{h7} for Type UNI / Ø DC_{m7} for Type VA

High Performance Drill, DIN 6537



DC _{mTn7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm
5.20	6	82	44	36.2	36
5.30	6	82	44	36.0	36
5.40	6	82	44	35.9	36
5.50	6	82	44	35.7	36
5.55	6	82	44	35.6	36
5.60	6	82	44	35.6	36
5.65	6	82	44	35.5	36
5.70	6	82	44	35.4	36
5.80	6	82	44	35.3	36
5.90	6	82	44	35.1	36
6.00	6	82	44	35.0	36
6.10	8	91	53	43.8	36
6.20	8	91	53	43.7	36
6.30	8	91	53	43.5	36
6.40	8	91	53	43.4	36
6.50	8	91	53	43.2	36
6.60	8	91	53	43.1	36
6.70	8	91	53	42.9	36
6.80	8	91	53	42.8	36
6.90	8	91	53	42.6	36
7.00	8	91	53	42.5	36
7.10	8	91	53	42.3	36
7.20	8	91	53	42.2	36
7.30	8	91	53	42.0	36
7.40	8	91	53	41.9	36
7.45	8	91	53	41.8	36
7.50	8	91	53	41.7	36
7.55	8	91	53	41.6	36
7.60	8	91	53	41.6	36
7.65	8	91	53	41.5	36
7.70	8	91	53	41.4	36
7.80	8	91	53	41.3	36
7.90	8	91	53	41.1	36
8.00	8	91	53	41.0	36
8.10	10	103	61	48.8	40
8.20	10	103	61	48.7	40
8.30	10	103	61	48.5	40
8.40	10	103	61	48.4	40
8.50	10	103	61	48.2	40
8.60	10	103	61	48.1	40
8.70	10	103	61	47.9	40
8.80	10	103	61	47.8	40
8.90	10	103	61	47.6	40
9.00	10	103	61	47.5	40
9.10	10	103	61	47.3	40



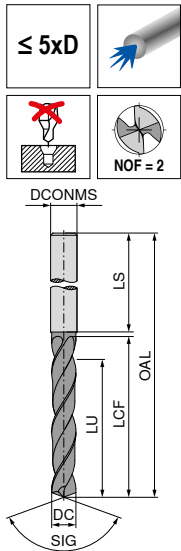
11 702 ...		11 703 ...		11 715 ...		11 716 ...	
£	T1/9C	£	T1/9C	£	T1/9C	£	T1/9C
38.06	05200	38.06	05200	44.41	05200	44.41	05200
38.06	05300	38.06	05300	44.41	05300	44.41	05300
38.06	05400	38.06	05400	44.41	05400	44.41	05400
38.06	05500	38.06	05500	44.41	05500	44.41	05500
38.06	05550	38.06	05550				
38.06	05600	38.06	05600	44.41	05600	44.41	05600
38.06	05650	38.06	05650				
38.06	05700	38.06	05700	44.41	05700	44.41	05700
38.06	05800	38.06	05800	44.41	05800	44.41	05800
38.06	05900	38.06	05900	44.41	05900	44.41	05900
38.06	06000	38.06	06000	44.41	06000	44.41	06000
43.13	06100	43.13	06100	51.03	06100	51.03	06100
43.13	06200	43.13	06200	51.03	06200	51.03	06200
43.13	06300	43.13	06300	51.03	06300	51.03	06300
43.13	06400	43.13	06400	51.03	06400	51.03	06400
43.13	06500	43.13	06500	51.03	06500	51.03	06500
43.13	06600	43.13	06600	51.03	06600	51.03	06600
43.13	06700	43.13	06700	51.03	06700	51.03	06700
43.13	06800	43.13	06800	51.03	06800	51.03	06800
43.13	06900	43.13	06900	51.03	06900	51.03	06900
43.13	07000	43.13	07000	51.03	07000	51.03	07000
43.13	07100	43.13	07100	51.03	07100	51.03	07100
43.13	07200	43.13	07200	51.03	07200	51.03	07200
43.13	07300	43.13	07300	51.03	07300	51.03	07300
43.13	07400	43.13	07400	51.03	07400	51.03	07400
				51.03	07450	51.03	07450
43.13	07500	43.13	07500	51.03	07500	51.03	07500
43.13	07550	43.13	07550	51.03	07550	51.03	07550
43.13	07600	43.13	07600	51.03	07600	51.03	07600
43.13	07650	43.13	07650				
43.13	07700	43.13	07700	51.03	07700	51.03	07700
43.13	07800	43.13	07800	51.03	07800	51.03	07800
43.13	07900	43.13	07900	51.03	07900	51.03	07900
43.13	08000	43.13	08000	51.03	08000	51.03	08000
49.48	08100	49.48	08100	58.35	08100	58.35	08100
49.48	08200	49.48	08200	58.35	08200	58.35	08200
49.48	08300	49.48	08300	58.35	08300	58.35	08300
49.48	08400	49.48	08400	58.35	08400	58.35	08400
49.48	08500	49.48	08500	58.35	08500	58.35	08500
49.48	08600	49.48	08600	58.35	08600	58.35	08600
49.48	08700	49.48	08700	58.35	08700	58.35	08700
49.48	08800	49.48	08800	58.35	08800	58.35	08800
49.48	08900	49.48	08900	58.35	08900	58.35	08900
49.48	09000	49.48	09000	58.35	09000	58.35	09000
49.48	09100	49.48	09100	58.35	09100	58.35	09100

P	●	●	○	○
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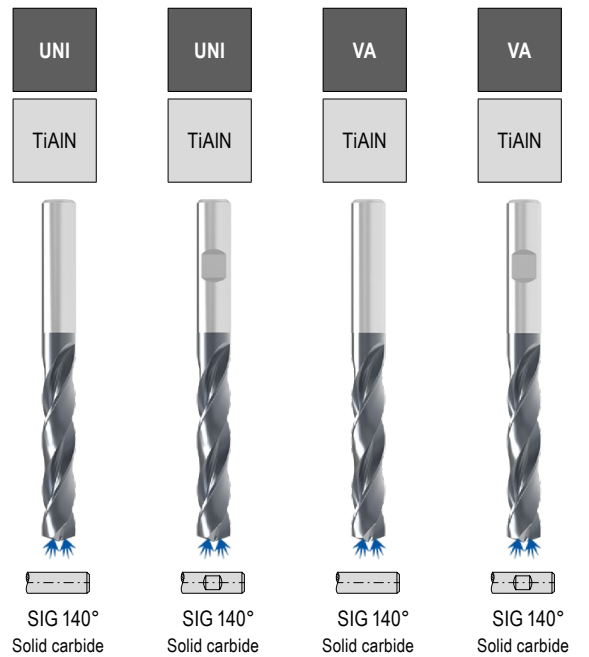
→ v_c Page 129+133

Ø DC_{h7} for Type UNI / Ø DC_{m7} for Type VA

High Performance Drill, DIN 6537



DC _{mTn7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm
9.20	10	103	61	47.2	40
9.30	10	103	61	47.0	40
9.40	10	103	61	46.9	40
9.50	10	103	61	46.7	40
9.55	10	103	61	46.6	40
9.60	10	103	61	46.6	40
9.70	10	103	61	46.4	40
9.80	10	103	61	46.3	40
9.90	10	103	61	46.1	40
10.00	10	103	61	46.0	40
10.10	12	118	71	55.8	45
10.20	12	118	71	55.7	45
10.30	12	118	71	55.5	45
10.40	12	118	71	55.4	45
10.50	12	118	71	55.2	45
10.60	12	118	71	55.1	45
10.70	12	118	71	54.9	45
10.80	12	118	71	54.8	45
10.90	12	118	71	54.6	45
11.00	12	118	71	54.5	45
11.10	12	118	71	54.3	45
11.20	12	118	71	54.2	45
11.30	12	118	71	54.0	45
11.40	12	118	71	53.9	45
11.50	12	118	71	53.7	45
11.60	12	118	71	53.6	45
11.70	12	118	71	53.4	45
11.80	12	118	71	53.3	45
11.90	12	118	71	53.1	45
12.00	12	118	71	53.0	45
12.10	14	124	77	58.8	45
12.20	14	124	77	58.7	45
12.40	14	124	77	58.4	45
12.50	14	124	77	58.2	45
12.60	14	124	77	58.1	45
12.70	14	124	77	57.9	45
12.80	14	124	77	57.8	45
13.00	14	124	77	57.5	45
13.10	14	124	77	57.3	45
13.20	14	124	77	57.2	45
13.30	14	124	77	57.0	45
13.50	14	124	77	56.7	45
13.70	14	124	77	56.4	45
13.80	14	124	77	56.3	45
14.00	14	124	77	56.0	45



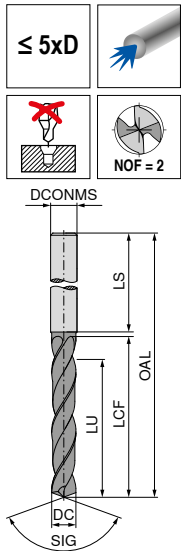
11 702 ...		11 703 ...		11 715 ...		11 716 ...	
£	09200	£	09200	£	09200	£	09200
T1/9C		T1/9C		T1/9C		T1/9C	
49.48	09200	49.48	09200	58.35	09200	58.35	09200
49.48	09300	49.48	09300	58.35	09300	58.35	09300
49.48	09400	49.48	09400	58.35	09400	58.35	09400
49.48	09500	49.48	09500	58.35	09500	58.35	09500
49.48	09550	49.48	09550				
49.48	09600	49.48	09600	58.35	09600	58.35	09600
49.48	09700	49.48	09700	58.35	09700	58.35	09700
49.48	09800	49.48	09800	58.35	09800	58.35	09800
49.48	09900	49.48	09900	58.35	09900	58.35	09900
49.48	10000	49.48	10000	58.35	10000	58.35	10000
73.58	10100	73.58	10100	86.82	10100	86.82	10100
73.58	10200	73.58	10200	86.82	10200	86.82	10200
73.58	10300	73.58	10300	86.82	10300	86.82	10300
73.58	10400	73.58	10400	86.82	10400	86.82	10400
73.58	10500	73.58	10500	86.82	10500	86.82	10500
73.58	10600	73.58	10600	86.82	10600	86.82	10600
73.58	10700	73.58	10700	86.82	10700	86.82	10700
73.58	10800	73.58	10800	86.82	10800	86.82	10800
73.58	10900	73.58	10900	86.82	10900	86.82	10900
73.58	11000	73.58	11000	86.82	11000	86.82	11000
73.58	11100	73.58	11100	86.82	11100	86.82	11100
73.58	11200	73.58	11200	86.82	11200	86.82	11200
73.58	11300	73.58	11300	86.82	11300	86.82	11300
73.58	11400	73.58	11400	86.82	11400	86.82	11400
73.58	11500	73.58	11500	86.82	11500	86.82	11500
73.58	11600	73.58	11600	86.82	11600	86.82	11600
73.58	11700	73.58	11700	86.82	11700	86.82	11700
73.58	11800	73.58	11800	86.82	11800	86.82	11800
73.58	11900	73.58	11900	86.82	11900	86.82	11900
73.58	12000	73.58	12000	86.82	12000	86.82	12000
93.89	12100	93.89	12100	110.69	12100	110.69	12100
93.89	12200	93.89	12200	110.69	12200	110.69	12200
93.89	12400	93.89	12400	110.69	12400	110.69	12400
93.89	12500	93.89	12500	110.69	12500	110.69	12500
93.89	12600	93.89	12600	110.69	12600	110.69	12600
108.40	12700	108.40	12700	110.69	12700	110.69	12700
93.89	12800	93.89	12800	110.69	12800	110.69	12800
93.89	13000	93.89	13000	110.69	13000	110.69	13000
93.89	13100	93.89	13100	110.69	13100	110.69	13100
93.89	13200	93.89	13200	110.69	13200	110.69	13200
93.89	13300	93.89	13300	110.69	13300	110.69	13300
93.89	13500	93.89	13500	110.69	13500	110.69	13500
93.89	13700	93.89	13700	110.69	13700	110.69	13700
93.89	13800	93.89	13800	110.69	13800	110.69	13800
93.89	14000	93.89	14000	110.69	14000	110.69	14000

P	●	●	○	○
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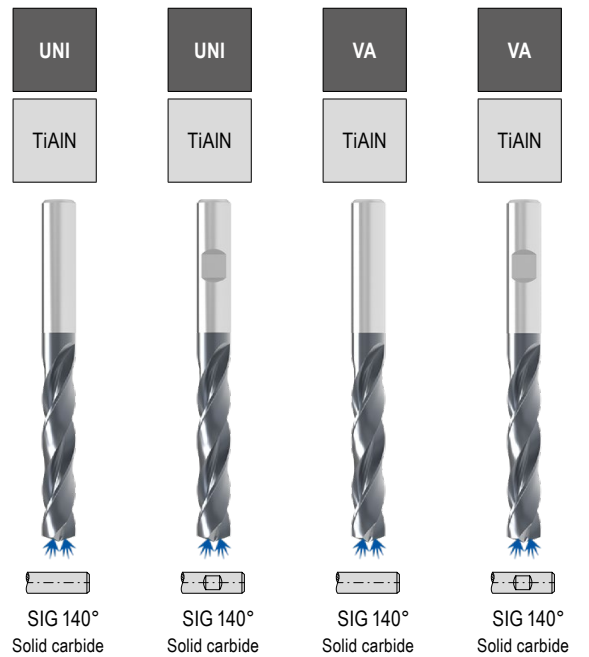
→ v_c Page 129+133

Ø DC_{h7} for Type UNI / Ø DC_{m7} for Type VA

High Performance Drill, DIN 6537



DC _{mT/h7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm
14.20	16	133	83	61.7	48
14.30	16	133	83	61.5	48
14.40	16	133	83	61.4	48
14.50	16	133	83	61.2	48
14.70	16	133	83	60.9	48
14.80	16	133	83	60.8	48
15.00	16	133	83	60.5	48
15.10	16	133	83	60.3	48
15.20	16	133	83	60.2	48
15.25	16	133	83	60.1	48
15.30	16	133	83	60.0	48
15.50	16	133	83	59.7	48
15.70	16	133	83	59.4	48
15.80	16	133	83	59.3	48
16.00	16	133	83	59.0	48
16.20	18	143	93	68.7	48
16.30	18	143	93	68.5	48
16.50	18	143	93	68.2	48
16.80	18	143	93	67.8	48
17.00	18	143	93	67.5	48
17.30	18	143	93	67.0	48
17.50	18	143	93	66.7	48
18.00	18	143	93	66.0	48
18.50	20	153	101	73.2	50
18.90	20	153	101	72.6	50
19.00	20	153	101	72.5	50
19.20	20	153	101	72.2	50
19.30	20	153	101	72.0	50
19.50	20	153	101	71.7	50
19.70	20	153	101	71.4	50
20.00	20	153	101	71.0	50



11 702 ...		11 703 ...		11 715 ...		11 716 ...	
£		£		£		£	
T1/9C		T1/9C		T1/9C		T1/9C	
120.52	14200	120.52	14200	141.98	14200	141.98	14200
120.52	14300	120.52	14300	141.98	14300	141.98	14300
120.52	14400	120.52	14400	141.98	14400	141.98	14400
120.52	14500	120.52	14500	141.98	14500	141.98	14500
120.52	14800	120.52	14800	141.98	14700	141.98	14700
120.52	15000	120.52	15000	141.98	14800	141.98	14800
120.52	15100	120.52	15100	141.98	15000	141.98	15000
120.52	15200	120.52	15200	141.98	15100	141.98	15100
120.52	15250	120.52	15250	141.98	15200	141.98	15200
120.52	15300	120.52	15300	141.98	15300	141.98	15300
120.52	15500	120.52	15500	141.98	15500	141.98	15500
120.52	15800	120.52	15800	141.98	15700	141.98	15700
120.52	16000	120.52	16000	141.98	15800	141.98	15800
185.22	16200	185.22	16200	219.58	16000	219.58	16000
185.22	16300	185.22	16300	219.58	16200	219.58	16200
185.22	16500	185.22	16500	219.58	16300	219.58	16300
185.22	16800	185.22	16800	219.58	16500	219.58	16500
185.22	17000	185.22	17000	219.58	16800	219.58	16800
185.22	17300	185.22	17300	219.58	17000	219.58	17000
185.22	17500	185.22	17500	219.58	17300	219.58	17300
185.22	17700	185.22	17700	219.58	17500	219.58	17500
185.22	18000	185.22	18000	219.58	17700	219.58	17700
201.71	18500	201.71	18500	238.86	18000	238.86	18000
201.71	18900	201.71	18900	238.86	18500	238.86	18500
201.71	19000	201.71	19000	238.86	18900	238.86	18900
201.71	19200	201.71	19200	238.86	19000	238.86	19000
201.71	19300	201.71	19300	238.86	19200	238.86	19200
201.71	19500	201.71	19500	238.86	19300	238.86	19300
201.71	19700	201.71	19700	238.86	19500	238.86	19500
201.71	20000	201.71	20000	238.86	19700	238.86	19700
201.71	20000	201.71	20000	238.86	20000	238.86	20000

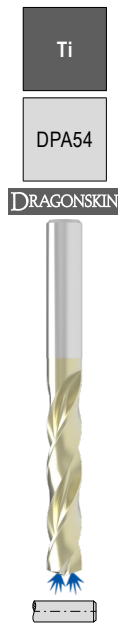
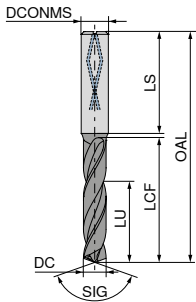
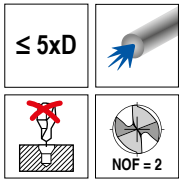
P	●	●	○	○
M	●	●	●	●
K	●	●	●	●
N	○	○	●	●
S	○	○	○	○
H				
O			○	○

→ v_c Page 129+133

Ø DC_{h7} for Type UNI / Ø DC_{m7} for Type VA

WTX – High-performance drill, DIN 6537

▲ Specialist for difficult to machine materials



SIG 140°
Solid carbide

10 787 ...

DC _{m7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	£ T4/9F	
3.00	6	66	28	23	36	96.49	030
3.10	6	66	28	23	36	96.49	031
3.20	6	66	28	23	36	96.49	032
3.30	6	66	28	23	36	96.49	033
3.40	6	66	28	23	36	96.49	034
3.50	6	66	28	23	36	96.49	035
3.60	6	66	28	23	36	96.49	036
3.70	6	66	28	23	36	96.49	037
3.80	6	74	36	29	36	96.49	038
3.90	6	74	36	29	36	96.49	039
3.97	6	74	36	29	36	96.49	900
4.00	6	74	36	29	36	96.49	040
4.10	6	74	36	29	36	96.49	041
4.20	6	74	36	29	36	96.49	042
4.23	6	74	36	29	36	96.49	901
4.30	6	74	36	29	36	96.49	043
4.40	6	74	36	29	36	96.49	044
4.50	6	74	36	29	36	96.49	045
4.60	6	74	36	29	36	96.49	046
4.70	6	74	36	29	36	96.49	047
4.80	6	82	44	35	36	96.49	048
4.90	6	82	44	35	36	96.49	049
5.00	6	82	44	35	36	96.49	050
5.10	6	82	44	35	36	96.49	051
5.20	6	82	44	35	36	96.49	052
5.30	6	82	44	35	36	96.49	053
5.40	6	82	44	35	36	96.49	054
5.50	6	82	44	35	36	96.49	055
5.56	6	82	44	35	36	96.49	902
5.60	6	82	44	35	36	96.49	056
5.70	6	82	44	35	36	96.49	057
5.80	6	82	44	35	36	96.49	058
5.90	6	82	44	35	36	96.49	059
6.00	6	82	44	35	36	96.49	060
6.10	8	91	53	43	36	107.67	061
6.20	8	91	53	43	36	107.67	062
6.30	8	91	53	43	36	107.67	063
6.35	8	91	53	43	36	107.67	903
6.40	8	91	53	43	36	107.67	064
6.50	8	91	53	43	36	107.67	065
6.60	8	91	53	43	36	107.67	066
6.70	8	91	53	43	36	107.67	067
6.80	8	91	53	43	36	107.67	068
6.90	8	91	53	43	36	107.67	069
7.00	8	91	53	43	36	107.67	070
7.10	8	91	53	43	36	107.67	071
7.20	8	91	53	43	36	107.67	072
7.30	8	91	53	43	36	107.67	073
7.40	8	91	53	43	36	107.67	074
7.50	8	91	53	43	36	107.67	075
7.60	8	91	53	43	36	107.67	076

10 787 ...

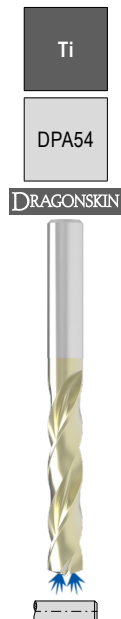
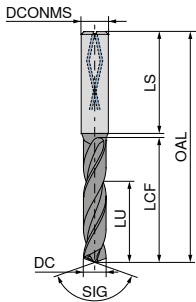
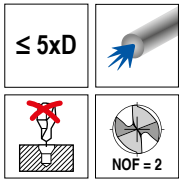
DC _{m7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	£ T4/9F	
7.70	8	91	53	43	36	107.67	077
7.80	8	91	53	43	36	107.67	078
7.90	8	91	53	43	36	107.67	079
7.94	8	91	53	43	36	107.67	904
8.00	8	91	53	43	36	107.67	080
8.10	10	103	61	49	40	126.08	081
8.20	10	103	61	49	40	126.08	082
8.30	10	103	61	49	40	126.08	083
8.40	10	103	61	49	40	126.08	084
8.50	10	103	61	49	40	126.08	085
8.60	10	103	61	49	40	126.08	086
8.70	10	103	61	49	40	126.08	087
8.80	10	103	61	49	40	126.08	088
8.90	10	103	61	49	40	126.08	089
9.00	10	103	61	49	40	126.08	090
9.10	10	103	61	49	40	126.08	091
9.20	10	103	61	49	40	126.08	092
9.30	10	103	61	49	40	126.08	093
9.40	10	103	61	49	40	126.08	094
9.50	10	103	61	49	40	126.08	095
9.53	10	103	61	49	40	126.08	905
9.60	10	103	61	49	40	126.08	096
9.70	10	103	61	49	40	126.08	097
9.80	10	103	61	49	40	126.08	098
9.90	10	103	61	49	40	126.08	099
10.00	10	103	61	49	40	126.08	100
10.10	12	118	71	54	45	176.02	101
10.20	12	118	71	54	45	176.02	102
10.30	12	118	71	54	45	176.02	103
10.40	12	118	71	54	45	176.02	104
10.50	12	118	71	54	45	176.02	105
10.60	12	118	71	54	45	176.02	106
10.70	12	118	71	54	45	176.02	107
10.80	12	118	71	54	45	176.02	108
10.90	12	118	71	54	45	176.02	109
11.00	12	118	71	54	45	176.02	110
11.10	12	118	71	54	45	176.02	111
11.11	12	118	71	54	45	176.02	906
11.20	12	118	71	54	45	176.02	112
11.30	12	118	71	54	45	176.02	113
11.40	12	118	71	54	45	176.02	114
11.50	12	118	71	54	45	176.02	115
11.60	12	118	71	54	45	176.02	116
11.70	12	118	71	54	45	176.02	117
11.80	12	118	71	54	45	176.02	118
11.90	12	118	71	54	45	176.02	119
12.00	12	118	71	54	45	176.02	120
12.10	14	124	77	58	45	244.82	121
12.20	14	124	77	58	45	244.82	122
12.30	14	124	77	58	45	244.82	123
12.40	14	124	77	58	45	244.82	124
12.50	14	124	77	58	45	244.82	125
12.60	14	124	77	58	45	244.82	126
12.70	14	124	77	58	45	244.82	907
12.80	14	124	77	58	45	244.82	128
12.90	14	124	77	58	45	244.82	129
13.00	14	124	77	58	45	244.82	130
13.10	14	124	77	58	45	244.82	131
13.20	14	124	77	58	45	244.82	132
13.30	14	124	77	58	45	244.82	133
13.40	14	124	77	58	45	244.82	134
13.50	14	124	77	58	45	244.82	135
13.60	14	124	77	58	45	244.82	136
13.70	14	124	77	58	45	244.82	137
13.80	14	124	77	58	45	244.82	138
13.90	14	124	77	58	45	244.82	139

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→ v. Page 109

WTX – High-performance drill, DIN 6537

▲ Specialist for difficult to machine materials



SIG 140°
Solid carbide

10 787 ...

DC _{m7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	£ T4/9F	
14.0	14	124	77	58	45	244.82	140
14.1	16	133	83	61	48	299.19	141
14.2	16	133	83	61	48	299.19	142
14.3	16	133	83	61	48	299.19	143
14.4	16	133	83	61	48	299.19	144
14.5	16	133	83	61	48	299.19	145
14.6	16	133	83	61	48	299.19	146
14.7	16	133	83	61	48	299.19	147
14.8	16	133	83	61	48	299.19	148
14.9	16	133	83	61	48	299.19	149
15.0	16	133	83	61	48	299.19	150
15.1	16	133	83	61	48	299.19	151
15.2	16	133	83	61	48	299.19	152
15.3	16	133	83	61	48	299.19	153
15.4	16	133	83	61	48	299.19	154
15.5	16	133	83	61	48	299.19	155
15.6	16	133	83	61	48	299.19	156
15.7	16	133	83	61	48	299.19	157
15.8	16	133	83	61	48	299.19	158
15.9	16	133	83	61	48	299.19	159
16.0	16	133	83	61	48	299.19	160
16.1	18	143	93	69	48	299.19	161
16.2	18	143	93	69	48	299.19	162
16.3	18	143	93	69	48	299.19	163
16.4	18	143	93	69	48	299.19	164
16.5	18	143	93	69	48	414.40	165
16.6	18	143	93	69	48	414.40	166
16.7	18	143	93	69	48	414.40	167
16.8	18	143	93	69	48	414.40	168
16.9	18	143	93	69	48	414.40	169
17.0	18	143	93	69	48	414.40	170
17.1	18	143	93	69	48	414.40	171
17.2	18	143	93	69	48	414.40	172
17.3	18	143	93	69	48	414.40	173
17.4	18	143	93	69	48	414.40	174
17.5	18	143	93	69	48	414.40	175
17.6	18	143	93	69	48	414.40	176
17.7	18	143	93	69	48	414.40	177
17.8	18	143	93	69	48	414.40	178
17.9	18	143	93	69	48	414.40	179
18.0	18	143	93	69	48	414.40	180
18.1	20	153	101	75	50	511.99	181
18.2	20	153	101	75	50	511.99	182
18.3	20	153	101	75	50	511.99	183
18.4	20	153	101	75	50	511.99	184
18.5	20	153	101	75	50	511.99	185
18.6	20	153	101	75	50	511.99	186
18.7	20	153	101	75	50	511.99	187
18.8	20	153	101	75	50	511.99	188
18.9	20	153	101	75	50	511.99	189
19.0	20	153	101	75	50	511.99	190

10 787 ...

DC _{m7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	£ T4/9F	
19.1	20	153	101	75	50	511.99	191
19.2	20	153	101	75	50	511.99	192
19.3	20	153	101	75	50	511.99	193
19.4	20	153	101	75	50	511.99	194
19.5	20	153	101	75	50	511.99	195
19.6	20	153	101	75	50	511.99	196
19.7	20	153	101	75	50	511.99	197
19.8	20	153	101	75	50	511.99	198
19.9	20	153	101	75	50	511.99	199
20.0	20	153	101	75	50	511.99	200

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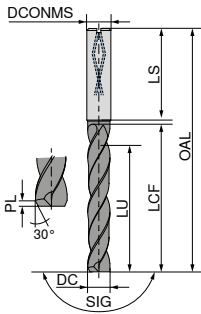
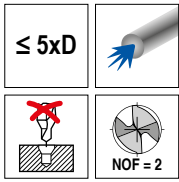
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WTX – High Performance Drill, DIN 6537

▲ universal application
▲ four guidance lands

▲ polished chip flutes
▲ Type ALU 5xD on request

▲ PL = corner chamfers



180
Ti800



SIG 180°
Solid carbide

10 721 ...

DC _{m7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	PL mm	£ T4	
3.00	6	66	28	23	36	0.15	120.92	030
3.10	6	66	28	23	36	0.16	120.92	031
3.20	6	66	28	23	36	0.16	120.92	032
3.30	6	66	28	23	36	0.17	120.92	033
3.40	6	66	28	23	36	0.17	120.92	034
3.50	6	66	28	23	36	0.18	120.92	035
3.60	6	66	28	23	36	0.18	120.92	036
3.70	6	66	28	23	36	0.19	120.92	037
3.80	6	74	36	29	36	0.19	120.92	038
3.90	6	74	36	29	36	0.20	120.92	039
4.00	6	74	36	29	36	0.20	120.92	040
4.10	6	74	36	29	36	0.21	120.92	041
4.20	6	74	36	29	36	0.21	120.92	042
4.30	6	74	36	29	36	0.22	120.92	043
4.40	6	74	36	29	36	0.22	120.92	044
4.50	6	74	36	29	36	0.23	120.92	045
4.60	6	74	36	29	36	0.23	120.92	046
4.65	6	74	36	29	36	0.23	120.92	900
4.70	6	74	36	29	36	0.24	120.92	047
4.80	6	82	44	35	36	0.24	120.92	048
4.90	6	82	44	35	36	0.25	120.92	049
5.00	6	82	44	35	36	0.25	120.92	050
5.10	6	82	44	35	36	0.26	120.92	051
5.20	6	82	44	35	36	0.26	120.92	052
5.30	6	82	44	35	36	0.27	120.92	053
5.40	6	82	44	35	36	0.27	120.92	054
5.50	6	82	44	35	36	0.28	120.92	055
5.55	6	82	44	35	36	0.28	120.92	902
5.60	6	82	44	35	36	0.28	120.92	056
5.70	6	82	44	35	36	0.29	120.92	057
5.80	6	82	44	35	36	0.29	120.92	058
5.90	6	82	44	35	36	0.30	120.92	059
6.00	6	82	44	35	36	0.30	120.92	060
6.10	8	91	53	43	36	0.31	135.29	061
6.20	8	91	53	43	36	0.31	135.29	062
6.30	8	91	53	43	36	0.32	135.29	063
6.40	8	91	53	43	36	0.32	135.29	064
6.50	8	91	53	43	36	0.33	135.29	065
6.60	8	91	53	43	36	0.33	135.29	066
6.70	8	91	53	43	36	0.34	135.29	067
6.80	8	91	53	43	36	0.34	135.29	068
6.90	8	91	53	43	36	0.35	135.29	069
7.00	8	91	53	43	36	0.35	135.29	070
7.10	8	91	53	43	36	0.36	135.29	071
7.20	8	91	53	43	36	0.36	135.29	072
7.30	8	91	53	43	36	0.37	135.29	073
7.40	8	91	53	43	36	0.37	135.29	074
7.50	8	91	53	43	36	0.38	135.29	075
7.60	8	91	53	43	36	0.38	135.29	076
7.70	8	91	53	43	36	0.39	135.29	077
7.80	8	91	53	43	36	0.39	135.29	078
7.90	8	91	53	43	36	0.40	135.29	079
8.00	8	91	53	43	36	0.40	135.29	080
8.10	10	103	61	49	40	0.41	195.55	081

DC _{m7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	PL mm	£ T4	
8.20	10	103	61	49	40	0.41	195.55	082
8.30	10	103	61	49	40	0.42	195.55	083
8.40	10	103	61	49	40	0.42	195.55	084
8.50	10	103	61	49	40	0.43	195.55	085
8.60	10	103	61	49	40	0.43	195.55	086
8.70	10	103	61	49	40	0.44	195.55	087
8.80	10	103	61	49	40	0.44	195.55	088
8.90	10	103	61	49	40	0.45	195.55	089
9.00	10	103	61	49	40	0.45	195.55	090
9.10	10	103	61	49	40	0.46	195.55	091
9.20	10	103	61	49	40	0.46	195.55	092
9.30	10	103	61	49	40	0.47	195.55	093
9.40	10	103	61	49	40	0.47	195.55	094
9.50	10	103	61	49	40	0.48	195.55	095
9.60	10	103	61	49	40	0.48	195.55	096
9.70	10	103	61	49	40	0.49	195.55	097
9.80	10	103	61	49	40	0.49	195.55	098
9.90	10	103	61	49	40	0.50	195.55	099
10.00	10	103	61	49	40	0.50	195.55	100
10.10	12	116	69	54	45	0.51	273.50	101
10.20	12	116	69	54	45	0.51	273.50	102
10.30	12	116	69	54	45	0.52	273.50	103
10.40	12	116	69	54	45	0.52	273.50	104
10.50	12	116	69	54	45	0.53	273.50	105
10.60	12	116	69	54	45	0.53	273.50	106
10.70	12	116	69	54	45	0.54	273.50	107
10.80	12	116	69	54	45	0.54	273.50	108
10.90	12	116	69	54	45	0.55	273.50	109
11.00	12	116	69	54	45	0.55	273.50	110
11.10	12	116	69	54	45	0.56	273.50	111
11.20	12	116	69	54	45	0.56	273.50	112
11.30	12	116	69	54	45	0.57	273.50	113
11.40	12	116	69	54	45	0.57	273.50	114
11.50	12	116	69	54	45	0.58	273.50	115
11.60	12	116	69	54	45	0.58	273.50	116
11.70	12	116	69	54	45	0.59	273.50	117
11.80	12	116	69	54	45	0.59	273.50	118
11.90	12	116	69	54	45	0.60	273.50	119
12.00	12	116	69	54	45	0.60	273.50	120
12.50	14	122	75	58	45	0.63	371.90	125
12.80	14	122	75	58	45	0.64	371.90	128
13.00	14	122	75	58	45	0.65	371.90	130
13.50	14	122	75	58	45	0.68	371.90	135
13.80	14	122	75	58	45	0.69	371.90	138
14.00	14	122	75	58	45	0.70	371.90	140
14.50	16	131	81	61	48	0.73	464.25	145
14.80	16	131	81	61	48	0.74	464.25	148
15.00	16	131	81	61	48	0.75	464.25	150
15.50	16	131	81	61	48	0.78	464.25	155
15.80	16	131	81	61	48	0.79	464.25	158
16.00	16	131	81	61	48	0.80	464.25	160
16.50	18	141	91	69	48	0.83	612.05	165
16.80	18	141	91	69	48	0.84	612.05	168
17.00	18	141	91	69	48	0.85	612.05	170
17.50	18	141	91	69	48	0.88	612.05	175
17.80	18	141	91	69	48	0.89	612.05	178
18.00	18	141	91	69	48	0.90	612.05	180
18.50	20	151	99	75	50	0.93	791.54	185
18.80	20	151	99	75	50	0.94	791.54	188
19.00	20	151	99	75	50	0.95	791.54	190
19.50	20	151	99	75	50	0.98	791.54	195
19.80	20	151	99	75	50	0.99	791.54	198
20.00	20	151	99	75	50	1.00	791.54	200

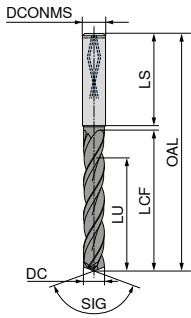
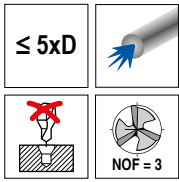
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→ Machining information: Page 127

WTX – High Feed Drill, factory standard

- ▲ Three fluted high-feed drill
- ▲ Universal application

- ▲ High positioning accuracy
- ▲ Suitable for difficult drilling applications



Feed UNI
DPX74S
DRAGONSKIN



SIG 140°
Solid carbide

10 789 ...

DC _{m7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	£ T4	
4.00	6	74	36	29	36	119.92	04000
4.10	6	74	36	29	36	119.92	04100
4.20	6	74	36	29	36	119.92	04200
4.30	6	74	36	29	36	119.92	04300
4.40	6	74	36	29	36	119.92	04400
4.50	6	74	36	29	36	119.92	04500
4.60	6	74	36	29	36	119.92	04600
4.70	6	74	36	29	36	119.92	04700
4.80	6	82	44	35	36	119.92	04800
4.90	6	82	44	35	36	119.92	04900
5.00	6	82	44	35	36	119.92	05000
5.10	6	82	44	35	36	119.92	05100
5.20	6	82	44	35	36	119.92	05200
5.30	6	82	44	35	36	119.92	05300
5.40	6	82	44	35	36	119.92	05400
5.50	6	82	44	35	36	119.92	05500
5.55	6	82	44	35	36	119.92	05550
5.60	6	82	44	35	36	119.92	05600
5.70	6	82	44	35	36	119.92	05700
5.80	6	82	44	35	36	119.92	05800
5.90	6	82	44	35	36	119.92	05900
6.00	6	82	44	35	36	119.92	06000
6.10	8	91	53	43	36	134.22	06100
6.20	8	91	53	43	36	134.22	06200
6.30	8	91	53	43	36	134.22	06300
6.40	8	91	53	43	36	134.22	06400
6.50	8	91	53	43	36	134.22	06500
6.60	8	91	53	43	36	134.22	06600
6.70	8	91	53	43	36	134.22	06700
6.80	8	91	53	43	36	134.22	06800
6.90	8	91	53	43	36	134.22	06900
7.00	8	91	53	43	36	134.22	07000
7.10	8	91	53	43	36	134.22	07100
7.20	8	91	53	43	36	134.22	07200
7.30	8	91	53	43	36	134.22	07300
7.40	8	91	53	43	36	134.22	07400
7.50	8	91	53	43	36	134.22	07500
7.60	8	91	53	43	36	134.22	07600
7.70	8	91	53	43	36	134.22	07700
7.80	8	91	53	43	36	134.22	07800
7.90	8	91	53	43	36	134.22	07900
8.00	8	91	53	43	36	134.22	08000
8.10	10	103	61	49	40	194.16	08100
8.20	10	103	61	49	40	194.16	08200
8.30	10	103	61	49	40	194.16	08300
8.40	10	103	61	49	40	194.16	08400
8.50	10	103	61	49	40	194.16	08500
8.60	10	103	61	49	40	194.16	08600
8.70	10	103	61	49	40	194.16	08700
8.80	10	103	61	49	40	194.16	08800
8.90	10	103	61	49	40	194.16	08900
9.00	10	103	61	49	40	194.16	09000

10 789 ...

DC _{m7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	£ T4	
9.10	10	103	61	49	40	194.16	09100
9.20	10	103	61	49	40	194.16	09200
9.30	10	103	61	49	40	194.16	09300
9.40	10	103	61	49	40	194.16	09400
9.50	10	103	61	49	40	194.16	09500
9.60	10	103	61	49	40	194.16	09600
9.70	10	103	61	49	40	194.16	09700
9.80	10	103	61	49	40	194.16	09800
9.90	10	103	61	49	40	194.16	09900
10.00	10	103	61	49	40	194.16	10000
10.10	12	118	71	56	45	271.83	10100
10.20	12	118	71	56	45	271.83	10200
10.30	12	118	71	56	45	271.83	10300
10.40	12	118	71	56	45	271.83	10400
10.50	12	118	71	56	45	271.83	10500
10.60	12	118	71	56	45	271.83	10600
10.70	12	118	71	56	45	271.83	10700
10.80	12	118	71	56	45	271.83	10800
10.90	12	118	71	56	45	271.83	10900
11.00	12	118	71	56	45	271.83	11000
11.10	12	118	71	56	45	271.83	11100
11.20	12	118	71	56	45	271.83	11200
11.30	12	118	71	56	45	271.83	11300
11.40	12	118	71	56	45	271.83	11400
11.50	12	118	71	56	45	271.83	11500
11.60	12	118	71	56	45	271.83	11600
11.70	12	118	71	56	45	271.83	11700
11.80	12	118	71	56	45	271.83	11800
11.90	12	118	71	56	45	271.83	11900
12.00	12	118	71	56	45	271.83	12000
12.20	14	124	77	60	45	369.72	12200
12.50	14	124	77	60	45	369.72	12500
12.80	14	124	77	60	45	369.72	12800
13.00	14	124	77	60	45	369.72	13000
13.50	14	124	77	60	45	369.72	13500
13.80	14	124	77	60	45	369.72	13800
14.00	14	124	77	60	45	369.72	14000
14.50	16	133	83	63	48	461.35	14500
14.80	16	133	83	63	48	461.35	14800
15.00	16	133	83	63	48	461.35	15000
15.50	16	133	83	63	48	461.35	15500
15.80	16	133	83	63	48	461.35	15800
16.00	16	133	83	63	48	461.35	16000
16.50	18	143	93	71	48	607.38	16500
16.80	18	143	93	71	48	607.38	16800
17.00	18	143	93	71	48	607.38	17000
17.50	18	143	93	71	48	607.38	17500
17.80	18	143	93	71	48	607.38	17800
18.00	18	143	93	71	48	607.38	18000
18.50	20	153	101	77	50	786.02	18500
18.80	20	153	101	77	50	786.02	18800
19.00	20	153	101	77	50	786.02	19000
19.50	20	153	101	77	50	786.02	19500
19.80	20	153	101	77	50	786.02	19800
20.00	20	153	101	77	50	786.02	20000

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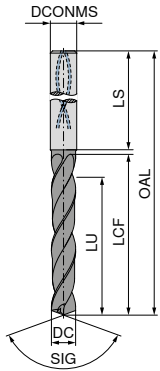
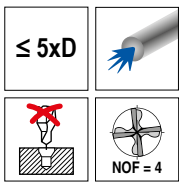
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WTX – High-feed drills, DIN 6537

- ▲ Four fluted high-feed drill
- ▲ Specially designed for steel and cast iron machining

- ▲ Has four spiral coolant holes
- ▲ Innovative cutting edge geometry guarantees high positioning accuracy

- ▲ Outstanding drilling quality in terms of tolerance, surface finish and position



SIG 130°
Solid carbide

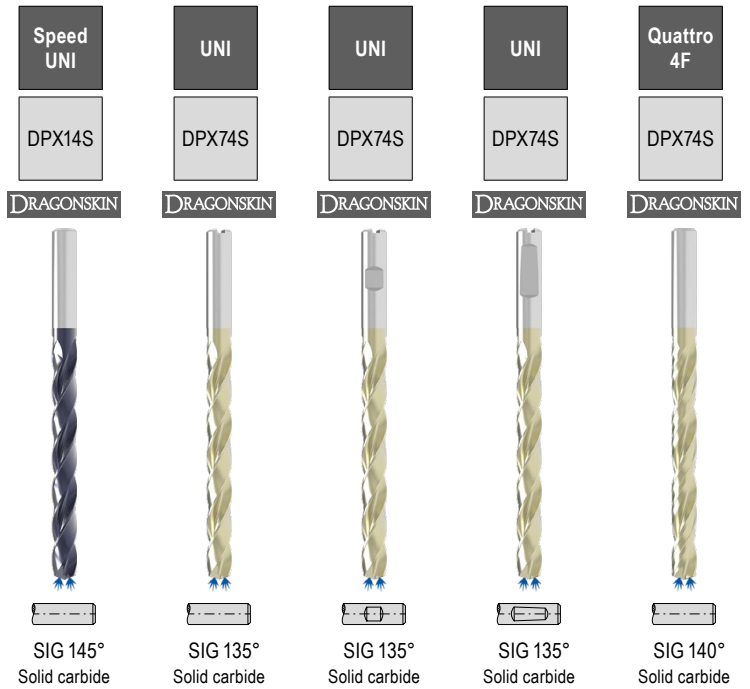
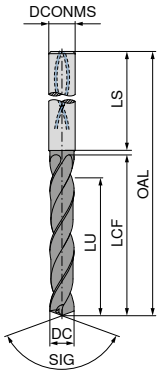
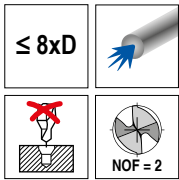
DC _{m7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	£ T4	10 798 ...
14.0	16	142	91	73	48	433.00	14000
14.3	16	142	91	73	48	539.23	14300
14.5	16	142	91	73	48	539.23	14500
15.0	18	142	91	73	48	539.23	15000
16.0	18	142	91	73	48	539.23	16000

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→ v_c Page 125

DC _{m7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	£ T4	10 798 ...
6.0	8	89	51	40	36	127.92	06000
6.1	10	102	59	47	40	170.56	06100
6.2	10	102	59	47	40	170.56	06200
6.3	10	102	59	47	40	170.56	06300
6.4	10	102	59	47	40	170.56	06400
6.5	10	102	59	47	40	170.56	06500
6.6	10	102	59	47	40	170.56	06600
6.7	10	102	59	47	40	170.56	06700
6.8	10	102	59	47	40	170.56	06800
6.9	10	102	59	47	40	170.56	06900
7.0	10	102	59	47	40	170.56	07000
7.1	10	102	59	47	40	170.56	07100
7.2	10	102	59	47	40	170.56	07200
7.3	10	102	59	47	40	170.56	07300
7.4	10	102	59	47	40	170.56	07400
7.5	10	102	59	47	40	170.56	07500
7.6	10	102	59	47	40	170.56	07600
7.7	10	102	59	47	40	170.56	07700
7.8	10	102	59	47	40	170.56	07800
7.9	10	102	59	47	40	170.56	07900
8.0	10	102	59	47	40	170.56	08000
8.1	12	118	70	55	45	240.16	08100
8.2	12	118	70	55	45	240.16	08200
8.3	12	118	70	55	45	240.16	08300
8.4	12	118	70	55	45	240.16	08400
8.5	12	118	70	55	45	240.16	08500
8.6	12	118	70	55	45	240.16	08600
8.7	12	118	70	55	45	240.16	08700
8.8	12	118	70	55	45	240.16	08800
8.9	12	118	70	55	45	240.16	08900
9.0	12	118	70	55	45	240.16	09000
9.1	12	118	70	55	45	240.16	09100
9.2	12	118	70	55	45	240.16	09200
9.3	12	118	70	55	45	240.16	09300
9.4	12	118	70	55	45	240.16	09400
9.5	12	118	70	55	45	240.16	09500
9.6	12	118	70	55	45	240.16	09600
9.7	12	118	70	55	45	240.16	09700
9.8	12	118	70	55	45	240.16	09800
9.9	12	118	70	55	45	240.16	09900
10.0	12	118	70	55	45	240.16	10000
10.2	14	124	76	60	45	318.85	10200
10.5	14	124	76	60	45	318.85	10500
11.0	14	124	76	60	45	318.85	11000
11.5	14	124	76	60	45	318.85	11500
12.0	14	124	76	60	45	318.85	12000
12.5	16	142	91	73	48	433.00	12500
13.0	16	142	91	73	48	433.00	13000

WTX – High Performance Drill, factory standard



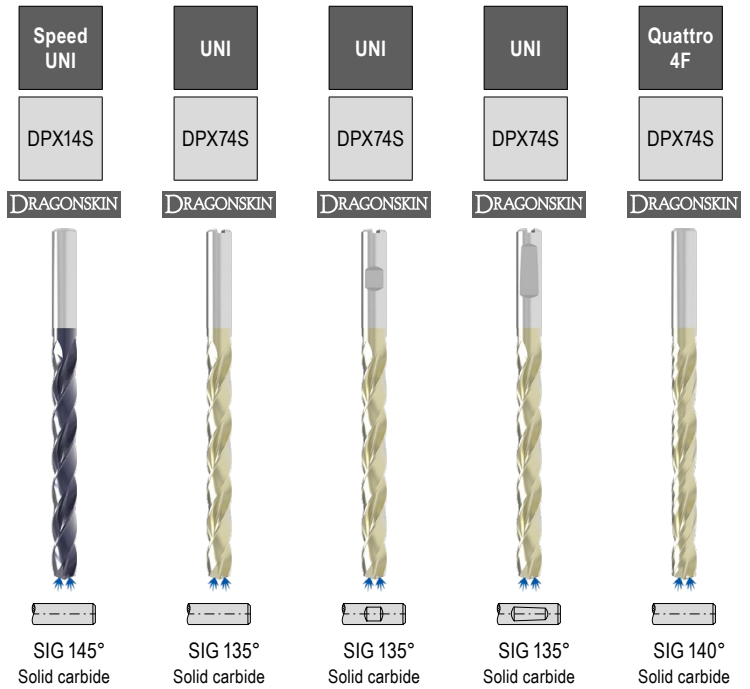
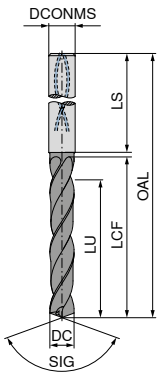
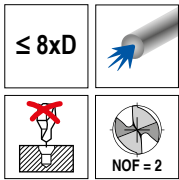
DC _{mTn7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	10 782 ...		11 789 ...		11 790 ...		11 788 ...		10 736 ...	
						£ T4	03000	£ T7	030	£ T7	030	£ T7	030	£ T4	03000
3.00	6	72	34	29	36	225.45	03000	164.68	030	164.68	030	164.68	030	247.14	03000
3.10	6	72	34	29	36	225.45	03100	164.68	031	164.68	031	164.68	031	247.14	03100
3.20	6	72	34	29	36	225.45	03200	164.68	032	164.68	032	164.68	032	247.14	03200
3.30	6	72	34	29	36	225.45	03300	164.68	033	164.68	033	164.68	033	247.14	03300
3.40	6	72	34	29	36	225.45	03400	164.68	034	164.68	034	164.68	034	247.14	03400
3.50	6	72	34	29	36	225.45	03500	164.68	035	164.68	035	164.68	035	247.14	03500
3.60	6	72	34	29	36	225.45	03600	164.68	036	164.68	036	164.68	036	247.14	03600
3.70	6	72	34	29	36	225.45	03700	164.68	037	164.68	037	164.68	037	247.14	03700
3.80	6	81	43	36	36	225.45	03800	164.68	038	164.68	038	164.68	038	247.14	03800
3.90	6	81	43	36	36	225.45	03900	164.68	039	164.68	039	164.68	039	247.14	03900
4.00	6	81	43	36	36	225.45	04000	164.68	040	164.68	040	164.68	040	247.14	04000
4.10	6	81	43	36	36	225.45	04100	164.68	041	164.68	041	164.68	041	247.14	04100
4.20	6	81	43	36	36	225.45	04200	164.68	042	164.68	042	164.68	042	247.14	04200
4.30	6	81	43	36	36	225.45	04300	164.68	043	164.68	043	164.68	043	247.14	04300
4.40	6	81	43	36	36	225.45	04400	164.68	044	164.68	044	164.68	044	247.14	04400
4.50	6	81	43	36	36	225.45	04500	164.68	045	164.68	045	164.68	045	247.14	04500
4.60	6	81	43	36	36	225.45	04600	164.68	046	164.68	046	164.68	046	247.14	04600
4.65	6	81	43	36	36	225.45	04650								
4.70	6	81	43	36	36	225.45	04700	164.68	047	164.68	047	164.68	047	247.14	04700
4.80	6	95	57	48	36	225.45	04800	164.68	048	164.68	048	164.68	048	247.14	04800
4.90	6	95	57	48	36	225.45	04900	164.68	049	164.68	049	164.68	049	247.14	04900
5.00	6	95	57	48	36	225.45	05000	164.68	050	164.68	050	164.68	050	247.14	05000
5.10	6	95	57	48	36	225.45	05100	164.68	051	164.68	051	164.68	051	247.14	05100
5.20	6	95	57	48	36	225.45	05200	164.68	052	164.68	052	164.68	052	247.14	05200
5.30	6	95	57	48	36	225.45	05300	164.68	053	164.68	053	164.68	053	247.14	05300
5.40	6	95	57	48	36	225.45	05400	164.68	054	164.68	054	164.68	054	247.14	05400
5.50	6	95	57	48	36	225.45	05500	164.68	055	164.68	055	164.68	055	247.14	05500
5.55	6	95	57	48	36	225.45	05550								
5.60	6	95	57	48	36	225.45	05600	164.68	056	164.68	056	164.68	056	247.14	05600
5.70	6	95	57	48	36	225.45	05700	164.68	057	164.68	057	164.68	057	247.14	05700
5.80	6	95	57	48	36	225.45	05800	164.68	058	164.68	058	164.68	058	247.14	05800
5.90	6	95	57	48	36	225.45	05900	164.68	059	164.68	059	164.68	059	247.14	05900
6.00	6	95	57	48	36	225.45	06000	164.68	060	164.68	060	164.68	060	247.14	06000
6.10	8	114	76	64	36	302.55	06100	199.71	061	199.71	061	199.71	061	271.89	06100

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→ v_c Page 115–120

Ø DC_{m7} for Type UNI and Quattro 4F / Ø DC_{h7} for Type Speed UNI

WTX – High Performance Drill, factory standard



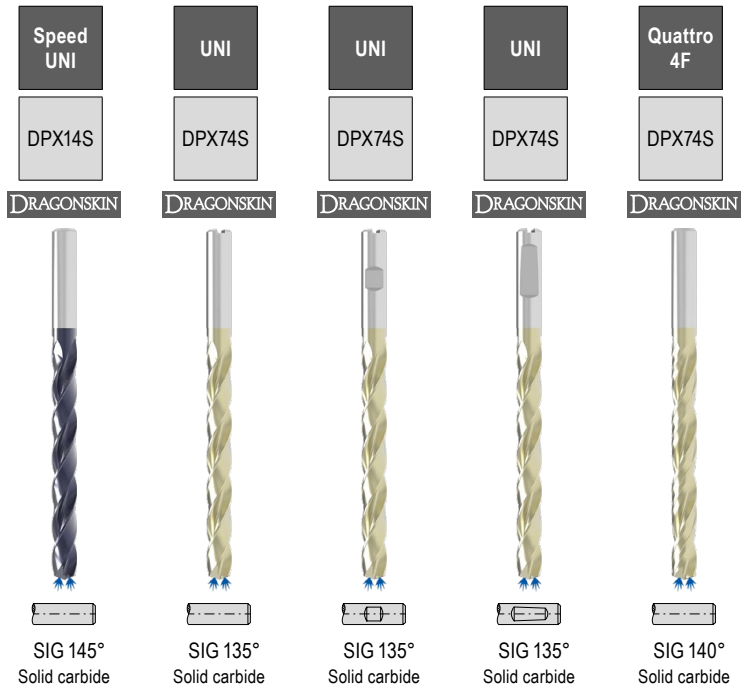
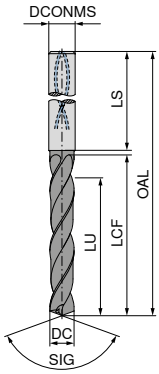
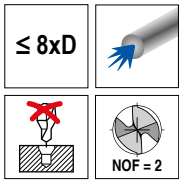
DC _{mT7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	10 782 ...		11 789 ...		11 790 ...		11 788 ...		10 736 ...	
						£	T4	£	T7	£	T7	£	T7	£	T4
6.20	8	114	76	64	36	302.55	06200	199.71	062	199.71	062	199.71	062	271.89	06200
6.30	8	114	76	64	36	302.55	06300	199.71	063	199.71	063	199.71	063	271.89	06300
6.40	8	114	76	64	36	302.55	06400	199.71	064	199.71	064	199.71	064	271.89	06400
6.50	8	114	76	64	36	302.55	06500	199.71	065	199.71	065	199.71	065	271.89	06500
6.60	8	114	76	64	36	302.55	06600	199.71	066	199.71	066	199.71	066	271.89	06600
6.70	8	114	76	64	36	302.55	06700	199.71	067	199.71	067	199.71	067	271.89	06700
6.80	8	114	76	64	36	302.55	06800	199.71	068	199.71	068	199.71	068	271.89	06800
6.90	8	114	76	64	36	302.55	06900	199.71	069	199.71	069	199.71	069	271.89	06900
7.00	8	114	76	64	36	302.55	07000	199.71	070	199.71	070	199.71	070	271.89	07000
7.10	8	114	76	64	36	302.55	07100	199.71	071	199.71	071	199.71	071	271.89	07100
7.20	8	114	76	64	36	302.55	07200	199.71	072	199.71	072	199.71	072	271.89	07200
7.30	8	114	76	64	36	302.55	07300	199.71	073	199.71	073	199.71	073	271.89	07300
7.40	8	114	76	64	36	302.55	07400	199.71	074	199.71	074	199.71	074	271.89	07400
7.50	8	114	76	64	36	302.55	07500	199.71	075	199.71	075	199.71	075	271.89	07500
7.60	8	114	76	64	36	302.55	07600	199.71	076	199.71	076	199.71	076	271.89	07600
7.70	8	114	76	64	36	302.55	07700	199.71	077	199.71	077	199.71	077	271.89	07700
7.80	8	114	76	64	36	302.55	07800	199.71	078	199.71	078	199.71	078	271.89	07800
7.90	8	114	76	64	36	302.55	07900	199.71	079	199.71	079	199.71	079	271.89	07900
8.00	8	114	76	64	36	302.55	08000	199.71	080	199.71	080	199.71	080	271.89	08000
8.10	10	142	95	80	40	437.02	08100	241.88	081	241.88	081	241.88	081	391.67	08100
8.20	10	142	95	80	40	437.02	08200	241.88	082	241.88	082	241.88	082	391.67	08200
8.30	10	142	95	80	40	437.02	08300	241.88	083	241.88	083	241.88	083	391.67	08300
8.40	10	142	95	80	40	437.02	08400	241.88	084	241.88	084	241.88	084	391.67	08400
8.50	10	142	95	80	40	437.02	08500	241.88	085	241.88	085	241.88	085	391.67	08500
8.60	10	142	95	80	40	437.02	08600	241.88	086	241.88	086	241.88	086	391.67	08600
8.70	10	142	95	80	40	437.02	08700	241.88	087	241.88	087	241.88	087	391.67	08700
8.80	10	142	95	80	40	437.02	08800	241.88	088	241.88	088	241.88	088	391.67	08800
8.90	10	142	95	80	40	437.02	08900	241.88	089	241.88	089	241.88	089	391.67	08900
9.00	10	142	95	80	40	437.02	09000	241.88	090	241.88	090	241.88	090	391.67	09000
9.10	10	142	95	80	40	437.02	09100	241.88	091	241.88	091	241.88	091	391.67	09100
9.20	10	142	95	80	40	437.02	09200	241.88	092	241.88	092	241.88	092	391.67	09200
9.30	10	142	95	80	40	437.02	09300	241.88	093	241.88	093	241.88	093	391.67	09300
9.40	10	142	95	80	40	437.02	09400	241.88	094	241.88	094	241.88	094	391.67	09400
9.50	10	142	95	80	40	437.02	09500	241.88	095	241.88	095	241.88	095	391.67	09500

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→ v_c Page 115–120

Ø DC_{m7} for Type UNI and Quattro 4F / Ø DC_{h7} for Type Speed UNI

WTX – High Performance Drill, factory standard



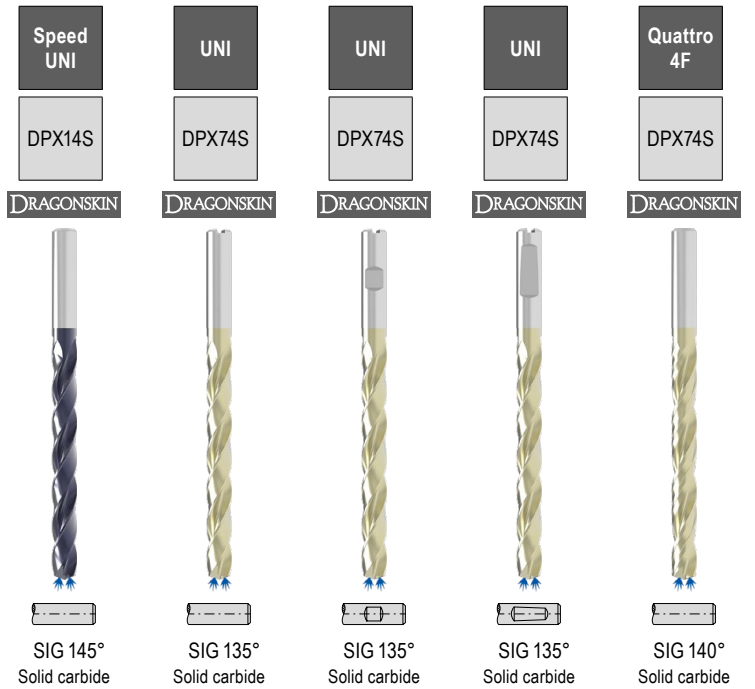
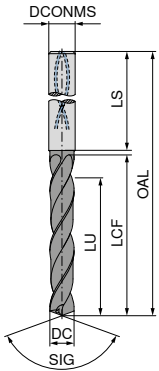
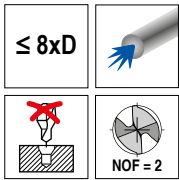
DC _{m7h7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	10 782 ...		11 789 ...		11 790 ...		11 788 ...		10 736 ...	
						£	T4	£	T7	£	T7	£	T7	£	T4
9.60	10	142	95	80	40	437.02	09600	241.88	096	241.88	096	241.88	096	391.67	09600
9.70	10	142	95	80	40	437.02	09700	241.88	097	241.88	097	241.88	097	391.67	09700
9.80	10	142	95	80	40	437.02	09800	241.88	098	241.88	098	241.88	098	391.67	09800
9.90	10	142	95	80	40	437.02	09900	241.88	099	241.88	099	241.88	099	391.67	09900
10.00	10	142	95	80	40	437.02	10000	241.88	100	241.88	100	241.88	100	391.67	10000
10.10	12	162	114	96	45	563.63	10100	319.28	101	319.28	101	319.28	101	503.50	10100
10.20	12	162	114	96	45	563.63	10200	319.28	102	319.28	102	319.28	102	503.50	10200
10.30	12	162	114	96	45	563.63	10300	319.28	103	319.28	103	319.28	103	503.50	10300
10.40	12	162	114	96	45	563.63	10400	319.28	104	319.28	104	319.28	104	503.50	10400
10.50	12	162	114	96	45	563.63	10500	319.28	105	319.28	105	319.28	105	503.50	10500
10.60	12	162	114	96	45	563.63	10600	319.28	106	319.28	106	319.28	106	503.50	10600
10.70	12	162	114	96	45	563.63	10700	319.28	107	319.28	107	319.28	107	503.50	10700
10.80	12	162	114	96	45	563.63	10800	319.28	108	319.28	108	319.28	108	503.50	10800
10.90	12	162	114	96	45	563.63	10900	319.28	109	319.28	109	319.28	109	503.50	10900
11.00	12	162	114	96	45	563.63	11000	319.28	110	319.28	110	319.28	110	503.50	11000
11.10	12	162	114	96	45	563.63	11100	319.28	111	319.28	111	319.28	111	503.50	11100
11.20	12	162	114	96	45	563.63	11200	319.28	112	319.28	112	319.28	112	503.50	11200
11.30	12	162	114	96	45	563.63	11300	319.28	113	319.28	113	319.28	113	503.50	11300
11.40	12	162	114	96	45	563.63	11400	319.28	114	319.28	114	319.28	114	503.50	11400
11.50	12	162	114	96	45	563.63	11500	319.28	115	319.28	115	319.28	115	503.50	11500
11.60	12	162	114	96	45	563.63	11600	319.28	116	319.28	116	319.28	116	503.50	11600
11.70	12	162	114	96	45	563.63	11700	319.28	117	319.28	117	319.28	117	503.50	11700
11.80	12	162	114	96	45	563.63	11800	319.28	118	319.28	118	319.28	118	503.50	11800
11.90	12	162	114	96	45	563.63	11900	319.28	119	319.28	119	319.28	119	503.50	11900
12.00	12	162	114	96	45	563.63	12000	319.28	120	319.28	120	319.28	120	503.50	12000
12.50	14	178	131	112	45	676.36	12500	391.67	125	391.67	125	391.67	125	690.89	12500
12.80	14	178	131	112	45	676.36	12800	391.67	128	391.67	128	391.67	128	690.89	12800
13.00	14	178	131	112	45	676.36	13000	391.67	130	391.67	130	391.67	130	690.89	13000
13.50	14	178	131	112	45	676.36	13500	391.67	135	391.67	135	391.67	135	690.89	13500
13.80	14	178	131	112	45	676.36	13800	391.67	138	391.67	138	391.67	138	690.89	13800
14.00	14	178	131	112	45	676.36	14000	391.67	140	391.67	140	391.67	140	690.89	14000
14.50	16	203	152	128	48	911.68	14500	486.09	145	486.09	145	486.09	145	871.34	14500
14.80	16	203	152	128	48	911.68	14800	486.09	148	486.09	148	486.09	148	871.34	14800
15.00	16	203	152	128	48	911.68	15000	486.09	150	486.09	150	486.09	150	871.34	15000

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O					

→ v_c Page 115–120

Ø DC_{m7} for Type UNI and Quattro 4F / Ø DC_{h7} for Type Speed UNI

WTX – High Performance Drill, factory standard

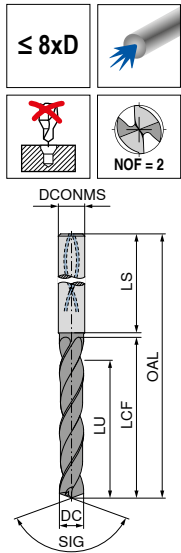


DC _{mTn7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	10 782 ...		11 789 ...		11 790 ...		11 788 ...		10 736 ...	
						£	T4	£	T7	£	T7	£	T7	£	T4
15.50	16	203	152	128	48	911.68	15500	486.09	155	486.09	155	486.09	155	871.34	15500
15.80	16	203	152	128	48	911.68	15800	486.09	158	486.09	158	486.09	158	871.34	15800
16.00	16	203	152	128	48	911.68	16000	486.09	160	486.09	160	486.09	160	871.34	16000
16.50	18	222	171	144	48	1,279.52	16500	615.76	165	615.76	165	615.76	165	1,250.93	16500
16.80	18	222	171	144	48	1,279.52	16800	615.76	168	615.76	168	615.76	168	1,250.93	16800
17.00	18	222	171	144	48	1,279.52	17000	615.76	170	615.76	170	615.76	170	1,250.93	17000
17.50	18	222	171	144	48	1,279.52	17500	615.76	175	615.76	175	615.76	175	1,250.93	17500
17.80	18	222	171	144	48	1,279.52	17800	615.76	178	615.76	178	615.76	178	1,250.93	17800
18.00	18	222	171	144	48	1,279.52	18000	615.76	180	615.76	180	615.76	180	1,250.93	18000
18.50	20	243	190	160	50			722.76	185	722.76	185	722.76	185		
18.80	20	243	190	160	50			722.76	188	722.76	188	722.76	188		
19.00	20	243	190	160	50			722.76	190	722.76	190	722.76	190		
19.50	20	243	190	160	50			722.76	195	722.76	195	722.76	195		
19.80	20	243	190	160	50			722.76	198	722.76	198	722.76	198		
20.00	20	243	190	160	50			722.76	200	722.76	200	722.76	200		
P															
M															
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S															
H															
O															

→ v_c Page 115–120

Ø DC_{m7} for Type UNI and Quattro 4F / Ø DC_{h7} for Type Speed UNI

High Performance Drill, factory standard



UNI
TiAlN



SIG 135°
Solid carbide

11 704 ...

DC _{h7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	£ T1/9C	
3.0	6	72	34	29.5	36	74.86	03000
3.1	6	72	34	29.3	36	74.86	03100
3.2	6	72	34	29.2	36	74.86	03200
3.3	6	72	34	29.0	36	74.86	03300
3.4	6	72	34	28.9	36	74.86	03400
3.5	6	72	34	28.7	36	74.86	03500
3.6	6	72	34	28.6	36	74.86	03600
3.7	6	72	34	28.4	36	74.86	03700
3.8	6	81	43	37.3	36	74.86	03800
3.9	6	81	43	37.1	36	74.86	03900
4.0	6	81	43	37.0	36	74.86	04000
4.1	6	81	43	36.8	36	74.86	04100
4.2	6	81	43	36.7	36	74.86	04200
4.3	6	81	43	36.5	36	74.86	04300
4.4	6	81	43	36.4	36	74.86	04400
4.5	6	81	43	36.2	36	74.86	04500
4.6	6	81	43	36.1	36	74.86	04600
4.7	6	81	43	35.9	36	74.86	04700
4.8	6	95	57	49.8	36	74.86	04800
4.9	6	95	57	49.6	36	74.86	04900
5.0	6	95	57	49.5	36	74.86	05000
5.1	6	95	57	49.3	36	74.86	05100
5.2	6	95	57	49.2	36	74.86	05200
5.3	6	95	57	49.0	36	74.86	05300
5.4	6	95	57	48.9	36	74.86	05400
5.5	6	95	57	48.7	36	74.86	05500
5.6	6	95	57	48.6	36	74.86	05600
5.7	6	95	57	48.4	36	74.86	05700
5.8	6	95	57	48.3	36	74.86	05800
5.9	6	95	57	48.1	36	74.86	05900
6.0	6	95	57	48.0	36	74.86	06000
6.1	8	114	76	66.8	36	92.62	06100
6.2	8	114	76	66.7	36	92.62	06200
6.3	8	114	76	66.5	36	92.62	06300
6.4	8	114	76	66.4	36	92.62	06400
6.5	8	114	76	66.2	36	92.62	06500
6.6	8	114	76	66.1	36	92.62	06600
6.7	8	114	76	65.9	36	92.62	06700
6.8	8	114	76	65.8	36	92.62	06800
6.9	8	114	76	65.6	36	92.62	06900
7.0	8	114	76	65.5	36	92.62	07000
7.1	8	114	76	65.3	36	92.62	07100
7.2	8	114	76	65.2	36	92.62	07200
7.3	8	114	76	65.0	36	92.62	07300
7.4	8	114	76	64.9	36	92.62	07400
7.5	8	114	76	64.7	36	92.62	07500
7.6	8	114	76	64.6	36	92.62	07600
7.7	8	114	76	64.4	36	92.62	07700
7.8	8	114	76	64.3	36	92.62	07800
7.9	8	114	76	64.1	36	92.62	07900
8.0	8	114	76	64.0	36	92.62	08000
8.1	10	142	95	82.8	40	112.91	08100

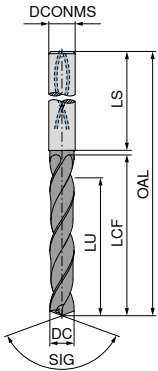
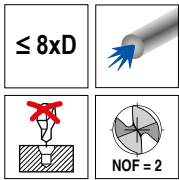
11 704 ...

DC _{h7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	£ T1/9C	
8.2	10	142	95	82.7	40	112.91	08200
8.3	10	142	95	82.5	40	112.91	08300
8.4	10	142	95	82.4	40	112.91	08400
8.5	10	142	95	82.2	40	112.91	08500
8.6	10	142	95	82.1	40	112.91	08600
8.7	10	142	95	81.9	40	112.91	08700
8.8	10	142	95	81.8	40	112.91	08800
8.9	10	142	95	81.6	40	112.91	08900
9.0	10	142	95	81.5	40	112.91	09000
9.1	10	142	95	81.3	40	112.91	09100
9.2	10	142	95	81.2	40	112.91	09200
9.3	10	142	95	81.0	40	112.91	09300
9.4	10	142	95	80.9	40	112.91	09400
9.5	10	142	95	80.7	40	112.91	09500
9.6	10	142	95	80.6	40	112.91	09600
9.7	10	142	95	80.4	40	112.91	09700
9.8	10	142	95	80.3	40	112.91	09800
9.9	10	142	95	80.1	40	112.91	09900
10.0	10	142	95	80.0	40	112.91	10000
10.2	12	162	114	98.7	45	150.96	10200
10.5	12	162	114	98.2	45	150.96	10500
10.8	12	162	114	97.8	45	150.96	10800
11.0	12	162	114	97.5	45	150.96	11000
11.5	12	162	114	96.7	45	150.96	11500
11.8	12	162	114	96.3	45	150.96	11800
12.0	12	162	114	96.0	45	150.96	12000
12.2	14	178	131	112.7	45	225.82	12200
12.5	14	178	131	112.2	45	225.82	12500
12.7	14	178	131	111.9	45	261.83	12700
13.0	14	178	131	111.5	45	225.82	13000
13.5	14	178	131	110.7	45	225.82	13500
14.0	14	178	131	110.0	45	225.82	14000
14.5	16	203	152	130.2	48	295.60	14500
15.0	16	203	152	129.5	48	295.60	15000
15.5	16	203	152	128.7	48	295.60	15500
16.0	16	203	152	128.0	48	295.60	16000
16.5	18	222	171	146.2	48	381.87	16500
17.0	18	222	171	145.5	48	381.87	17000
17.5	18	222	171	144.7	48	381.87	17500
18.0	18	222	171	144.0	48	381.87	18000
18.5	20	243	190	162.2	50	425.00	18500
19.0	20	243	190	161.5	50	425.00	19000
19.5	20	243	190	160.7	50	425.00	19500
20.0	20	243	190	160.0	50	425.00	20000

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→ v_c Page 130

WTX – High Performance Drill, factory standard



DC _{h7/m7}	DCONMS _{h6}	OAL	LCF	LU	LS
mm	mm	mm	mm	mm	mm
3.0	6	72	34	29	36
3.1	6	72	34	29	36
3.2	6	72	34	29	36
3.3	6	72	34	29	36
3.4	6	72	34	29	36
3.5	6	72	34	29	36
3.6	6	72	34	29	36
3.7	6	72	34	29	36
3.8	6	81	43	36	36
3.9	6	81	43	36	36
4.0	6	81	43	36	36
4.1	6	81	43	36	36
4.2	6	81	43	36	36
4.3	6	81	43	36	36
4.4	6	81	43	36	36
4.5	6	81	43	36	36
4.6	6	81	43	36	36
4.7	6	81	43	36	36
4.8	6	95	57	48	36
4.9	6	95	57	48	36
5.0	6	95	57	48	36
5.1	6	95	57	48	36
5.2	6	95	57	48	36
5.3	6	95	57	48	36
5.4	6	95	57	48	36
5.5	6	95	57	48	36
5.6	6	95	57	48	36
5.7	6	95	57	48	36
5.8	6	95	57	48	36
5.9	6	95	57	48	36
6.0	6	95	57	48	36
6.1	8	114	76	64	36
6.2	8	114	76	64	36
6.3	8	114	76	64	36
6.4	8	114	76	64	36
6.5	8	114	76	64	36
6.6	8	114	76	64	36
6.7	8	114	76	64	36
6.8	8	114	76	64	36
6.9	8	114	76	64	36
7.0	8	114	76	64	36
7.1	8	114	76	64	36
7.2	8	114	76	64	36
7.3	8	114	76	64	36
7.4	8	114	76	64	36

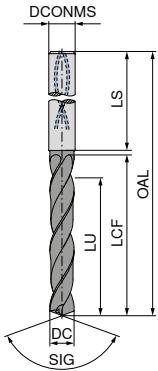
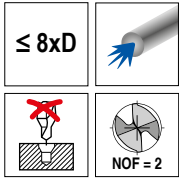
10 770 ...		10 792 ...	
£		£	
T4		T4/9F	
186.32	030	183.46	03000
186.32	031	183.46	03100
186.32	032	183.46	03200
186.32	033	183.46	03300
186.32	034	183.46	03400
186.32	035	183.46	03500
186.32	036	183.46	03600
186.32	037	183.46	03700
186.32	038	183.46	03800
186.32	039	183.46	03900
186.32	040	183.46	04000
186.32	041	183.46	04100
186.32	042	183.46	04200
186.32	043	183.46	04300
186.32	044	183.46	04400
186.32	045	183.46	04500
186.32	046	183.46	04600
186.32	047	183.46	04700
186.32	048	183.46	04800
186.32	049	183.46	04900
186.32	050	183.46	05000
186.32	051	183.46	05100
186.32	052	183.46	05200
186.32	053	183.46	05300
186.32	054	183.46	05400
186.32	055	183.46	05500
186.32	056	183.46	05600
186.32	057	183.46	05700
186.32	058	183.46	05800
186.32	059	183.46	05900
186.32	060	183.46	06000
224.37	061	230.48	06100
224.37	062	230.48	06200
224.37	063	230.48	06300
224.37	064	230.48	06400
224.37	065	230.48	06500
224.37	066	230.48	06600
224.37	067	230.48	06700
224.37	068	230.48	06800
224.37	069	230.48	06900
224.37	070	230.48	07000
224.37	071	230.48	07100
224.37	072	230.48	07200
224.37	073	230.48	07300
224.37	074	230.48	07400

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→ v. Page 113+123

Ø DC_{m7} for Type VA / Ø DC_{h7} for Type AL

WTX – High Performance Drill, factory standard



DC _{h7/m7}	DCONMS _{h6}	OAL	LCF	LU	LS
mm	mm	mm	mm	mm	mm
7.5	8	114	76	64	36
7.6	8	114	76	64	36
7.7	8	114	76	64	36
7.8	8	114	76	64	36
7.9	8	114	76	64	36
8.0	8	114	76	64	36
8.1	10	142	95	80	40
8.2	10	142	95	80	40
8.3	10	142	95	80	40
8.4	10	142	95	80	40
8.5	10	142	95	80	40
8.6	10	142	95	80	40
8.7	10	142	95	80	40
8.8	10	142	95	80	40
8.9	10	142	95	80	40
9.0	10	142	95	80	40
9.1	10	142	95	80	40
9.2	10	142	95	80	40
9.3	10	142	95	80	40
9.4	10	142	95	80	40
9.5	10	142	95	80	40
9.6	10	142	95	80	40
9.7	10	142	95	80	40
9.8	10	142	95	80	40
9.9	10	142	95	80	40
10.0	10	142	95	80	40
10.1	12	162	114	96	45
10.2	12	162	114	96	45
10.3	12	162	114	96	45
10.4	12	162	114	96	45
10.5	12	162	114	96	45
10.6	12	162	114	96	45
10.7	12	162	114	96	45
10.8	12	162	114	96	45
10.9	12	162	114	96	45
11.0	12	162	114	96	45
11.1	12	162	114	96	45
11.2	12	162	114	96	45
11.3	12	162	114	96	45
11.4	12	162	114	96	45
11.5	12	162	114	96	45
11.6	12	162	114	96	45
11.7	12	162	114	96	45
11.8	12	162	114	96	45
11.9	12	162	114	96	45

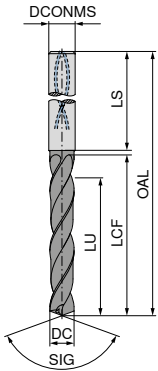
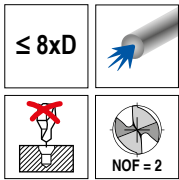
10 770 ...		10 792 ...	
£		£	
T4		T4/9F	
224.37	075	230.48	07500
224.37	076	230.48	07600
224.37	077	230.48	07700
224.37	078	230.48	07800
224.37	079	230.48	07900
224.37	080	230.48	08000
324.55	081	292.59	08100
324.55	082	292.59	08200
324.55	083	292.59	08300
324.55	084	292.59	08400
324.55	085	292.59	08500
324.55	086	292.59	08600
324.55	087	292.59	08700
324.55	088	292.59	08800
324.55	089	292.59	08900
324.55	090	292.59	09000
324.55	091	292.59	09100
324.55	092	292.59	09200
324.55	093	292.59	09300
324.55	094	292.59	09400
324.55	095	292.59	09500
324.55	096	292.59	09600
324.55	097	292.59	09700
324.55	098	292.59	09800
324.55	099	292.59	09900
324.55	100	292.59	10000
416.86	101		
416.86	102	373.49	10200
416.86	103	373.49	10300
416.86	104	373.49	10400
416.86	105	373.49	10500
416.86	106		
416.86	107	373.49	10700
416.86	108	373.49	10800
416.86	109		
416.86	110	373.49	11000
416.86	111		
416.86	112	373.49	11200
416.86	113		
416.86	114		
416.86	115	373.49	11500
416.86	116	373.49	11600
416.86	117		
416.86	118	373.49	11800
416.86	119		

P	○
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→ v. Page 113+123

Ø DC_{m7} for Type VA / Ø DC_{h7} for Type AL

WTX – High Performance Drill, factory standard



DC _{h7/m7}	DCONMS _{h6}	OAL	LCF	LU	LS
mm	mm	mm	mm	mm	mm
12.0	12	162	114	96	45
12.2	14	178	131	112	45
12.5	14	178	133	112	45
12.5	14	178	131	112	45
12.8	14	178	133	112	45
12.8	14	178	131	112	45
13.0	14	178	133	112	45
13.0	14	178	131	112	45
13.2	14	178	131	112	45
13.5	14	178	131	112	45
13.5	14	178	133	112	45
13.8	14	178	131	112	45
13.8	14	178	133	112	45
14.0	14	178	133	112	45
14.0	14	178	131	112	45
14.2	16	203	152	128	48
14.5	16	203	152	128	48
14.8	16	203	152	128	48
15.0	16	203	152	128	48
15.2	16	203	152	128	48
15.5	16	203	152	128	48
15.8	16	203	152	128	48
16.0	16	203	152	128	48
16.2	18	222	171	144	48
16.5	18	222	171	144	48
16.8	18	222	171	144	48
17.0	18	222	171	144	48
17.2	18	222	171	144	48
17.5	18	222	171	144	48
17.8	18	222	171	144	48
18.0	18	222	171	144	48
18.2	20	243	190	160	50
18.5	20	243	190	160	50
18.8	20	243	190	160	50
19.0	20	243	190	160	50
19.1	20	243	190	160	50
19.2	20	243	190	160	50
19.5	20	243	190	160	50
19.8	20	243	190	160	50
20.0	20	243	190	160	50

10 770 ...		10 792 ...	
£		£	
T4		T4/9F	
416.86	120	373.49	12000
		473.32	12200
500.66	125	473.32	12500
500.66	128	473.32	12800
500.66	130	473.32	13000
		473.32	13200
		473.32	13500
500.66	135	473.32	13800
500.66	138		
500.66	140	473.32	14000
		675.55	14200
676.96	145	675.55	14500
676.96	148	675.55	14800
676.96	150	675.55	15000
		675.55	15200
676.96	155	675.55	15500
676.96	158	675.55	15800
676.96	160	675.55	16000
		827.23	16200
947.10	165	827.23	16500
947.10	168	827.23	16800
947.10	170	827.23	17000
		827.23	17200
947.10	175	827.23	17500
947.10	178	827.23	17800
947.10	180	827.23	18000
		1,008.93	18200
1,194.71	185	1,008.93	18500
1,194.71	188	1,008.93	18800
1,194.71	190	1,008.93	19000
		1,008.93	19100
		1,008.93	19200
1,194.71	195	1,008.93	19500
1,194.71	198	1,008.93	19800
1,194.71	200	1,008.93	20000

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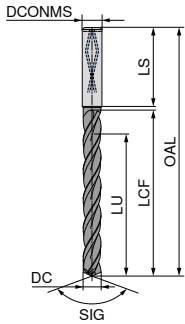
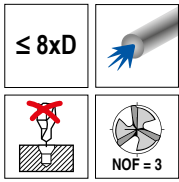
→ v. Page 113+123

Ø DC_{m7} for Type VA / Ø DC_{n7} for Type AL

WTX – High Feed Drill, factory standard

- ▲ Three fluted high-feed drill
- ▲ Universal application

- ▲ High positioning accuracy
- ▲ Suitable for difficult drilling applications



Feed UNI
DPX74S
DRAGONSKIN



SIG 135°
Solid carbide
10 794 ...

DC _{m7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	£ T4	
4.00	6	81	43	36	36	189.51	04000
4.10	6	81	43	36	36	189.51	04100
4.20	6	81	43	36	36	189.51	04200
4.30	6	81	43	36	36	189.51	04300
4.40	6	81	43	36	36	189.51	04400
4.50	6	81	43	36	36	189.51	04500
4.60	6	81	43	36	36	189.51	04600
4.70	6	81	43	36	36	189.51	04700
4.80	6	95	57	48	36	189.51	04800
4.90	6	95	57	48	36	189.51	04900
5.00	6	95	57	48	36	189.51	05000
5.10	6	95	57	48	36	189.51	05100
5.20	6	95	57	48	36	189.51	05200
5.30	6	95	57	48	36	189.51	05300
5.40	6	95	57	48	36	189.51	05400
5.50	6	95	57	48	36	189.51	05500
5.55	6	95	57	48	36	189.51	05550
5.60	6	95	57	48	36	189.51	05600
5.70	6	95	57	48	36	189.51	05700
5.80	6	95	57	48	36	189.51	05800
5.90	6	95	57	48	36	189.51	05900
6.00	6	95	57	48	36	189.51	06000
6.10	8	114	76	64	36	253.20	06100
6.20	8	114	76	64	36	253.20	06200
6.30	8	114	76	64	36	253.20	06300
6.40	8	114	76	64	36	253.20	06400
6.50	8	114	76	64	36	253.20	06500
6.60	8	114	76	64	36	253.20	06600
6.70	8	114	76	64	36	253.20	06700
6.80	8	114	76	64	36	253.20	06800
6.90	8	114	76	64	36	253.20	06900
7.00	8	114	76	64	36	253.20	07000
7.10	8	114	76	64	36	253.20	07100
7.20	8	114	76	64	36	253.20	07200
7.30	8	114	76	64	36	253.20	07300
7.40	8	114	76	64	36	253.20	07400
7.50	8	114	76	64	36	253.20	07500
7.60	8	114	76	64	36	253.20	07600
7.70	8	114	76	64	36	253.20	07700
7.80	8	114	76	64	36	253.20	07800
7.90	8	114	76	64	36	253.20	07900
8.00	8	114	76	64	36	253.20	08000
8.10	10	142	95	80	40	365.04	08100
8.20	10	142	95	80	40	365.04	08200
8.30	10	142	95	80	40	365.04	08300
8.40	10	142	95	80	40	365.04	08400
8.50	10	142	95	80	40	365.04	08500
8.60	10	142	95	80	40	365.04	08600
8.70	10	142	95	80	40	365.04	08700
8.80	10	142	95	80	40	365.04	08800
8.90	10	142	95	80	40	365.04	08900
9.00	10	142	95	80	40	365.04	09000

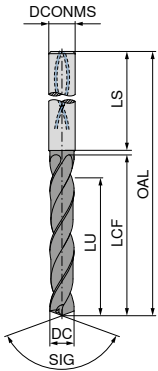
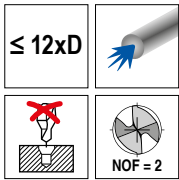
10 794 ...

DC _{m7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	£ T4	
9.10	10	142	95	80	40	365.04	09100
9.20	10	142	95	80	40	365.04	09200
9.30	10	142	95	80	40	365.04	09300
9.40	10	142	95	80	40	365.04	09400
9.50	10	142	95	80	40	365.04	09500
9.60	10	142	95	80	40	365.04	09600
9.70	10	142	95	80	40	365.04	09700
9.80	10	142	95	80	40	365.04	09800
9.90	10	142	95	80	40	365.04	09900
10.00	10	142	95	80	40	365.04	10000
10.10	12	162	114	96	45	472.25	10100
10.20	12	162	114	96	45	472.25	10200
10.30	12	162	114	96	45	472.25	10300
10.40	12	162	114	96	45	472.25	10400
10.50	12	162	114	96	45	472.25	10500
10.60	12	162	114	96	45	472.25	10600
10.70	12	162	114	96	45	472.25	10700
10.80	12	162	114	96	45	472.25	10800
10.90	12	162	114	96	45	472.25	10900
11.00	12	162	114	96	45	472.25	11000
11.10	12	162	114	96	45	472.25	11100
11.20	12	162	114	96	45	472.25	11200
11.30	12	162	114	96	45	472.25	11300
11.40	12	162	114	96	45	472.25	11400
11.50	12	162	114	96	45	472.25	11500
11.60	12	162	114	96	45	472.25	11600
11.70	12	162	114	96	45	472.25	11700
11.80	12	162	114	96	45	472.25	11800
11.90	12	162	114	96	45	472.25	11900
12.00	12	162	114	96	45	472.25	12000
12.20	14	178	131	112	45	566.98	12200
12.50	14	178	131	112	45	566.98	12500
12.80	14	178	131	112	45	566.98	12800
13.00	14	178	131	112	45	566.98	13000
13.50	14	178	131	112	45	566.98	13500
13.80	14	178	131	112	45	566.98	13800
14.00	14	178	131	112	45	566.98	14000
14.50	16	203	152	128	48	764.27	14500
14.80	16	203	152	128	48	764.27	14800
15.00	16	203	152	128	48	764.27	15000
15.50	16	203	152	128	48	764.27	15500
15.80	16	203	152	128	48	764.27	15800
16.00	16	203	152	128	48	764.27	16000
16.50	18	222	171	144	48	1,071.84	16500
16.80	18	222	171	144	48	1,071.84	16800
17.00	18	222	171	144	48	1,071.84	17000
17.50	18	222	171	144	48	1,071.84	17500
17.80	18	222	171	144	48	1,071.84	17800
18.00	18	222	171	144	48	1,071.84	18000
18.50	20	243	190	160	50	1,349.92	18500
18.80	20	243	190	160	50	1,349.92	18800
19.00	20	243	190	160	50	1,349.92	19000
19.50	20	243	190	160	50	1,349.92	19500
19.80	20	243	190	160	50	1,349.92	19800
20.00	20	243	190	160	50	1,349.92	20000

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→ v. Page 117

WTX – High Performance Drill, factory standard



DC _{h7/m7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm
3.0	6	92	54	48	36
3.1	6	92	54	48	36
3.2	6	92	54	48	36
3.3	6	92	54	48	36
3.4	6	92	54	48	36
3.5	6	92	54	48	36
3.6	6	92	54	48	36
3.7	6	92	54	48	36
3.8	6	102	64	58	36
3.9	6	102	64	58	36
4.0	6	102	64	58	36
4.1	6	102	64	58	36
4.2	6	102	64	58	36
4.3	6	102	64	58	36
4.4	6	102	64	58	36
4.5	6	102	64	58	36
4.6	6	102	64	58	36
4.7	6	102	64	58	36
4.8	6	116	78	70	36
4.9	6	116	78	70	36
5.0	6	116	78	70	36
5.1	6	116	78	70	36
5.2	6	116	78	70	36
5.3	6	116	78	70	36
5.4	6	116	78	70	36
5.5	6	116	78	70	36
5.6	6	116	78	70	36
5.7	6	116	78	70	36
5.8	6	116	78	70	36
5.9	6	116	78	70	36
6.0	6	116	78	70	36
6.1	8	146	108	94	36
6.2	8	146	108	94	36
6.3	8	146	108	94	36
6.4	8	146	108	94	36
6.5	8	146	108	94	36
6.6	8	146	108	94	36
6.7	8	146	108	94	36
6.8	8	146	108	94	36
6.9	8	146	108	94	36
7.0	8	146	108	94	36
7.1	8	146	108	94	36
7.2	8	146	108	94	36

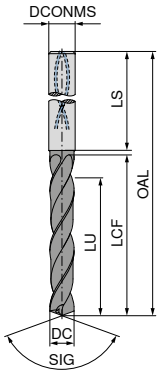
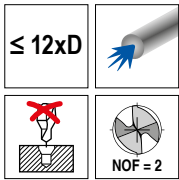
10 774 ...		10 737 ...		10 793 ...	
£	T4	£	T4	£	T4/9F
225.27	03000	301.87	03000	221.79	03000
225.27	03100	301.87	03100	221.79	03100
225.27	03200	301.87	03200	221.79	03200
225.27	03300	301.87	03300	221.79	03300
225.27	03400	301.87	03400	221.79	03400
225.27	03500	301.87	03500	221.79	03500
225.27	03600	301.87	03600	221.79	03600
225.27	03700	301.87	03700	221.79	03700
225.27	03800	301.87	03800	221.79	03800
225.27	03900	301.87	03900	221.79	03900
225.27	04000	301.87	04000	221.79	04000
225.27	04100	301.87	04100	221.79	04100
225.27	04200	301.87	04200	221.79	04200
225.27	04300	301.87	04300	221.79	04300
225.27	04400	301.87	04400	221.79	04400
225.27	04500	301.87	04500	221.79	04500
225.27	04600	301.87	04600	221.79	04600
225.27	04700	301.87	04700	221.79	04700
225.27	04800	301.87	04800	221.79	04800
225.27	04900	301.87	04900	221.79	04900
225.27	05000	301.87	05000	221.79	05000
225.27	05100	301.87	05100	221.79	05100
225.27	05200	301.87	05200	221.79	05200
225.27	05300	301.87	05300	221.79	05300
225.27	05400	301.87	05400	221.79	05400
225.27	05500	301.87	05500	221.79	05500
225.27	05600	301.87	05600	221.79	05600
225.27	05700	301.87	05700	221.79	05700
225.27	05800	301.87	05800	221.79	05800
225.27	05900	301.87	05900	221.79	05900
225.27	06000	301.87	06000	221.79	06000
258.80	06100	316.58	06100	306.54	06100
258.80	06200	316.58	06200	306.54	06200
258.80	06300	316.58	06300	306.54	06300
258.80	06400	316.58	06400	306.54	06400
258.80	06500	316.58	06500	306.54	06500
258.80	06600	316.58	06600	306.54	06600
258.80	06700	316.58	06700	306.54	06700
258.80	06800	316.58	06800	306.54	06800
258.80	06900	316.58	06900	306.54	06900
258.80	07000	316.58	07000	306.54	07000
258.80	07100	316.58	07100	306.54	07100
258.80	07200	316.58	07200	306.54	07200

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→ v_c Page 118–124

① Ø DC_{h7} for Type Speed VA and AL / Ø DC_{m7} for Type Quattro 4F

WTX – High Performance Drill, factory standard



DC _{h7/m7}	DCONMS _{h6}	OAL	LCF	LU	LS
mm	mm	mm	mm	mm	mm
7.3	8	146	108	94	36
7.4	8	146	108	94	36
7.5	8	146	108	94	36
7.6	8	146	108	94	36
7.7	8	146	108	94	36
7.8	8	146	108	94	36
7.9	8	146	108	94	36
8.0	8	146	108	94	36
8.1	10	162	120	110	40
8.2	10	162	120	110	40
8.3	10	162	120	110	40
8.4	10	162	120	110	40
8.5	10	162	120	110	40
8.6	10	162	120	110	40
8.7	10	162	120	110	40
8.8	10	162	120	110	40
8.9	10	162	120	110	40
9.0	10	162	120	110	40
9.1	10	162	120	110	40
9.2	10	162	120	110	40
9.3	10	162	120	110	40
9.4	10	162	120	110	40
9.5	10	162	120	110	40
9.6	10	162	120	110	40
9.7	10	162	120	110	40
9.8	10	162	120	110	40
9.9	10	162	120	110	40
10.0	10	162	120	110	40
10.1	12	204	156	142	45
10.2	12	204	156	142	45
10.3	12	204	156	142	45
10.4	12	204	156	142	45
10.5	12	204	156	142	45
10.6	12	204	156	142	45
10.7	12	204	156	142	45
10.8	12	204	156	142	45
10.9	12	204	156	142	45
11.0	12	204	156	142	45
11.1	12	204	156	142	45
11.2	12	204	156	142	45
11.3	12	204	156	142	45
11.4	12	204	156	142	45
11.5	12	204	156	142	45

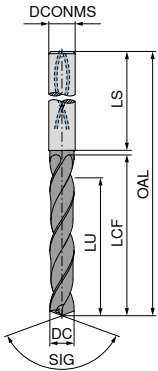
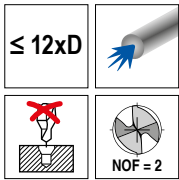
10 774 ...		10 737 ...		10 793 ...	
£	T4	£	T4	£	T4/9F
258.80	07300	316.58	07300	306.54	07300
258.80	07400	316.58	07400	306.54	07400
258.80	07500	316.58	07500	306.54	07500
258.80	07600	316.58	07600	306.54	07600
258.80	07700	316.58	07700	306.54	07700
258.80	07800	316.58	07800	306.54	07800
258.80	07900	316.58	07900	306.54	07900
258.80	08000	316.58	08000	306.54	08000
337.52	08100	431.33	08100	389.17	08100
337.52	08200	431.33	08200	389.17	08200
337.52	08300	431.33	08300	389.17	08300
337.52	08400	431.33	08400	389.17	08400
337.52	08500	431.33	08500	389.17	08500
337.52	08600	431.33	08600	389.17	08600
337.52	08700	431.33	08700	389.17	08700
337.52	08800	431.33	08800	389.17	08800
337.52	08900	431.33	08900	389.17	08900
337.52	09000	431.33	09000	389.17	09000
337.52	09100	431.33	09100	389.17	09100
337.52	09200	431.33	09200	389.17	09200
337.52	09300	431.33	09300	389.17	09300
337.52	09400	431.33	09400	389.17	09400
337.52	09500	431.33	09500	389.17	09500
337.52	09600	431.33	09600	389.17	09600
337.52	09700	431.33	09700	389.17	09700
337.52	09800	431.33	09800	389.17	09800
337.52	09900	431.33	09900	389.17	09900
337.52	10000	431.33	10000	389.17	10000
460.02	10100	533.47	10100		
460.02	10200	533.47	10200	527.32	10200
460.02	10300	533.47	10300		
460.02	10400	533.47	10400		
460.02	10500	533.47	10500	527.32	10500
460.02	10600	533.47	10600		
460.02	10700	533.47	10700	527.32	10700
460.02	10800	533.47	10800	527.32	10800
460.02	10900	533.47	10900		
460.02	11000	533.47	11000	527.32	11000
460.02	11100	533.47	11100		
460.02	11200	533.47	11200	527.32	11200
460.02	11300	533.47	11300	527.32	11300
460.02	11400	533.47	11400		
460.02	11500	533.47	11500	527.32	11500

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→ v_c Page 118–124

Ø DC_{h7} for Type Speed VA and AL / Ø DC_{m7} for Type Quattro 4F

WTX – High Performance Drill, factory standard



DC _{h7/m7}	DCONMS _{h6}	OAL	LCF	LU	LS
mm	mm	mm	mm	mm	mm
11.6	12	204	156	142	45
11.7	12	204	156	142	45
11.8	12	204	156	142	45
11.9	12	204	156	142	45
12.0	12	204	156	142	45
12.1	14	230	182	166	45
12.2	14	230	182	166	45
12.5	14	230	182	166	45
12.8	14	230	182	166	45
13.0	14	230	182	166	45
13.2	14	230	182	166	45
13.5	14	230	182	166	45
13.8	14	230	182	166	45
14.0	14	230	182	166	45
14.2	16	260	208	192	48
14.5	16	260	208	192	48
14.7	16	260	208	192	48
14.8	16	260	208	192	48
15.0	16	260	208	192	48
15.1	16	260	208	192	48
15.2	16	260	208	192	48
15.5	16	260	208	192	48
15.7	16	260	208	192	48
15.8	16	260	208	192	48
16.0	16	260	208	192	48
16.2	18	285	234	216	48
16.5	18	285	234	216	48
16.8	18	285	234	216	48
17.0	18	285	234	216	48
17.2	18	285	234	216	48
17.5	18	285	234	216	48
17.8	18	285	234	216	48
18.0	18	285	234	216	48
18.2	20	310	258	240	50
18.5	20	310	258	240	50
18.7	20	310	258	240	50
18.8	20	310	258	240	50
19.0	20	310	258	240	50
19.2	20	310	258	240	50
19.5	20	310	258	240	50
19.8	20	310	258	240	50
20.0	20	310	258	240	50

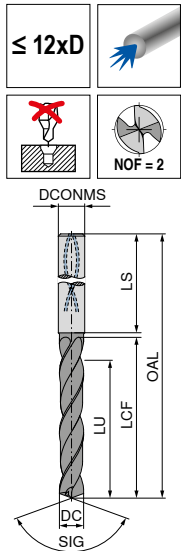
10 774 ...		10 737 ...		10 793 ...	
£	T4	£	T4	£	T4/9F
460.02	11600	533.47	11700		
460.02	11700	533.47	11700		
460.02	11800	533.47	11800	527.32	11800
460.02	11900	533.47	11900		
460.02	12000	533.47	12000	527.32	12000
				743.27	12100
653.75	12200			743.27	12200
653.75	12500	780.03	12500	743.27	12500
653.75	12800	780.03	12800	743.27	12800
653.75	13000	780.03	13000	743.27	13000
				743.27	13200
653.75	13500	780.03	13500	743.27	13500
653.75	13800	780.03	13800	743.27	13800
653.75	14000	780.03	14000	743.27	14000
838.77	14200			901.19	14200
838.77	14500	1,019.38	14500	901.19	14500
				901.19	14700
		1,019.38	14800	901.19	14800
838.77	15000	1,019.38	15000	901.19	15000
838.77	15100				
838.77	15200			901.19	15200
838.77	15500	1,019.38	15500	901.19	15500
				901.19	15700
838.77	15800	1,019.38	15800	901.19	15800
838.77	16000	1,019.38	16000	901.19	16000
				1,002.37	16200
		1,408.13	16500	1,002.37	16500
		1,408.13	16800	1,002.37	16800
1,153.35	17000	1,408.13	17000	1,002.37	17000
				1,002.37	17200
1,153.35	17500	1,408.13	17500	1,002.37	17500
		1,408.13	17800	1,002.37	17800
		1,408.13	18000	1,002.37	18000
				1,269.22	18200
				1,269.22	18500
				1,269.22	18700
				1,269.22	18800
				1,269.22	19000
				1,269.22	19200
				1,269.22	19500
				1,269.22	19800
				1,269.22	20000

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→ v_c Page 118-124

Ø DC_{h7} for Type Speed VA and AL / Ø DC_{m7} for Type Quattro 4F

High Performance Drill, factory standard



UNI
TiAlN



SIG 135°
Solid carbide

11 705 ...
£
T1/9C

DC _{h7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	£ T1/9C	
3.0	6	92	54	49.5	36	100.22	03000
3.1	6	92	54	49.3	36	100.22	03100
3.2	6	92	54	49.2	36	100.22	03200
3.3	6	92	54	49.0	36	100.22	03300
3.4	6	92	54	48.9	36	100.22	03400
3.5	6	92	54	48.7	36	100.22	03500
3.6	6	92	54	48.6	36	100.22	03600
3.7	6	92	54	48.4	36	100.22	03700
3.8	6	102	64	58.3	36	100.22	03800
3.9	6	102	64	58.1	36	100.22	03900
4.0	6	102	64	58.0	36	100.22	04000
4.1	6	102	64	57.8	36	100.22	04100
4.2	6	102	64	57.7	36	100.22	04200
4.3	6	102	64	57.5	36	100.22	04300
4.4	6	102	64	57.4	36	100.22	04400
4.5	6	102	64	57.2	36	100.22	04500
4.6	6	102	64	57.1	36	100.22	04600
4.7	6	102	64	56.9	36	100.22	04700
4.8	6	116	78	70.8	36	100.22	04800
4.9	6	116	78	70.6	36	100.22	04900
5.0	6	116	78	70.5	36	100.22	05000
5.1	6	116	78	70.3	36	100.22	05100
5.2	6	116	78	70.2	36	100.22	05200
5.3	6	116	78	70.0	36	100.22	05300
5.4	6	116	78	69.9	36	100.22	05400
5.5	6	116	78	69.7	36	100.22	05500
5.6	6	116	78	69.6	36	100.22	05600
5.7	6	116	78	69.4	36	100.22	05700
5.8	6	116	78	69.3	36	100.22	05800
5.9	6	116	78	69.1	36	100.22	05900
6.0	6	116	78	69.0	36	100.22	06000
6.1	8	146	108	98.8	36	111.65	06100
6.2	8	146	108	98.7	36	111.65	06200
6.3	8	146	108	98.5	36	111.65	06300
6.4	8	146	108	98.4	36	111.65	06400
6.5	8	146	108	98.2	36	111.65	06500
6.6	8	146	108	98.1	36	111.65	06600
6.7	8	146	108	97.9	36	111.65	06700
6.8	8	146	108	97.8	36	111.65	06800
6.9	8	146	108	97.6	36	111.65	06900
7.0	8	146	108	97.5	36	111.65	07000
7.1	8	146	108	97.3	36	111.65	07100
7.2	8	146	108	97.2	36	111.65	07200
7.3	8	146	108	97.0	36	111.65	07300
7.4	8	146	108	96.9	36	111.65	07400
7.5	8	146	108	96.7	36	111.65	07500

11 705 ...

DC _{h7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	£ T1/9C	
7.6	8	146	108	96.6	36	111.65	07600
7.7	8	146	108	96.4	36	111.65	07700
7.8	8	146	108	96.3	36	111.65	07800
7.9	8	146	108	96.1	36	111.65	07900
8.0	8	146	108	96.0	36	111.65	08000
8.1	10	162	120	107.8	40	156.05	08100
8.2	10	162	120	107.7	40	156.05	08200
8.3	10	162	120	107.5	40	156.05	08300
8.4	10	162	120	107.4	40	156.05	08400
8.5	10	162	120	107.2	40	156.05	08500
8.6	10	162	120	107.1	40	156.05	08600
8.7	10	162	120	106.9	40	156.05	08700
8.8	10	162	120	106.8	40	156.05	08800
8.9	10	162	120	106.6	40	156.05	08900
9.0	10	162	120	106.5	40	156.05	09000
9.1	10	162	120	106.3	40	156.05	09100
9.2	10	162	120	106.2	40	156.05	09200
9.3	10	162	120	106.0	40	156.05	09300
9.4	10	162	120	105.9	40	156.05	09400
9.5	10	162	120	105.7	40	156.05	09500
9.6	10	162	120	105.6	40	156.05	09600
9.7	10	162	120	105.4	40	156.05	09700
9.8	10	162	120	105.3	40	156.05	09800
9.9	10	162	120	105.1	40	156.05	09900
10.0	10	162	120	105.0	40	156.05	10000
10.2	12	204	156	140.7	45	215.67	10200
10.5	12	204	156	140.2	45	215.67	10500
10.8	12	204	156	139.8	45	215.67	10800
11.0	12	204	156	139.5	45	215.67	11000
11.5	12	204	156	138.7	45	215.67	11500
11.8	12	204	156	138.3	45	215.67	11800
12.0	12	204	156	138.0	45	215.67	12000
12.5	14	230	182	163.2	45	277.84	12500
12.7	14	230	182	162.9	45	277.84	12700
12.8	14	230	182	162.8	45	277.84	12800
13.0	14	230	182	162.5	45	277.84	13000
13.5	14	230	182	161.7	45	277.84	13500
13.8	14	230	182	161.3	45	277.84	13800
14.0	14	230	182	161.0	45	277.84	14000
14.5	16	260	208	186.2	48	366.65	14500
14.8	16	260	208	185.8	48	366.65	14800
15.0	16	260	208	185.5	48	366.65	15000
15.5	16	260	208	184.7	48	366.65	15500
15.8	16	260	208	184.3	48	366.65	15800
16.0	16	260	208	184.0	48	366.65	16000
16.5	18	285	234	209.2	48	437.68	16500
17.0	18	285	234	208.5	48	437.68	17000
17.5	18	285	234	207.7	48	437.68	17500
18.0	18	285	234	207.0	48	437.68	18000
18.5	20	310	258	230.2	50	437.68	18500
19.0	20	310	258	229.5	50	437.68	19000
19.5	20	310	258	228.7	50	437.68	19500
20.0	20	310	258	228.0	50	437.68	20000

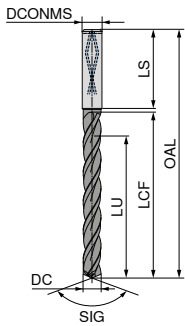
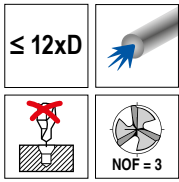
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→ v_c Page 131

WTX – High Feed Drill, factory standard

- ▲ Three fluted high-feed drill
- ▲ Universal application

- ▲ High positioning accuracy
- ▲ Suitable for difficult drilling applications



Feed UNI

DPX74S

DRAGONSKIN



SIG 135°
Solid carbide

10 796 ...

DC _{m7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	£ T4	
4.0	6	102	64	58	36	254.27	04000
4.1	6	102	64	58	36	254.27	04100
4.2	6	102	64	58	36	254.27	04200
4.3	6	102	64	58	36	254.27	04300
4.4	6	102	64	58	36	254.27	04400
4.5	6	102	64	58	36	254.27	04500
4.6	6	102	64	58	36	254.27	04600
4.7	6	102	64	58	36	254.27	04700
4.8	6	116	78	70	36	254.27	04800
4.9	6	116	78	70	36	254.27	04900
5.0	6	116	78	70	36	254.27	05000
5.1	6	116	78	70	36	254.27	05100
5.2	6	116	78	70	36	254.27	05200
5.3	6	116	78	70	36	254.27	05300
5.4	6	116	78	70	36	254.27	05400
5.5	6	116	78	70	36	254.27	05500
5.6	6	116	78	70	36	254.27	05600
5.7	6	116	78	70	36	254.27	05700
5.8	6	116	78	70	36	254.27	05800
5.9	6	116	78	70	36	254.27	05900
6.0	6	116	78	70	36	254.27	06000
6.1	8	146	108	94	36	327.48	06100
6.2	8	146	108	94	36	327.48	06200
6.3	8	146	108	94	36	327.48	06300
6.4	8	146	108	94	36	327.48	06400
6.5	8	146	108	94	36	327.48	06500
6.6	8	146	108	94	36	327.48	06600
6.7	8	146	108	94	36	327.48	06700
6.8	8	146	108	94	36	327.48	06800
6.9	8	146	108	94	36	327.48	06900
7.0	8	146	108	94	36	327.48	07000
7.1	8	146	108	94	36	327.48	07100
7.2	8	146	108	94	36	327.48	07200
7.3	8	146	108	94	36	327.48	07300
7.4	8	146	108	94	36	327.48	07400
7.5	8	146	108	94	36	327.48	07500
7.6	8	146	108	94	36	327.48	07600
7.7	8	146	108	94	36	327.48	07700
7.8	8	146	108	94	36	327.48	07800
7.9	8	146	108	94	36	327.48	07900
8.0	8	146	108	94	36	327.48	08000
8.1	10	162	120	110	40	426.73	08100
8.2	10	162	120	110	40	426.73	08200
8.3	10	162	120	110	40	426.73	08300
8.4	10	162	120	110	40	426.73	08400
8.5	10	162	120	110	40	426.73	08500
8.6	10	162	120	110	40	426.73	08600
8.7	10	162	120	110	40	426.73	08700
8.8	10	162	120	110	40	426.73	08800
8.9	10	162	120	110	40	426.73	08900
9.0	10	162	120	110	40	426.73	09000
9.1	10	162	120	110	40	426.73	09100

10 796 ...

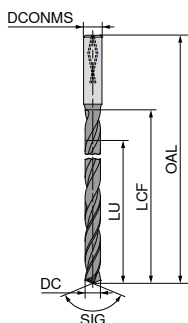
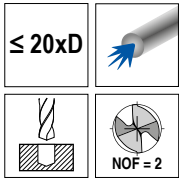
DC _{m7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	£ T4	
9.2	10	162	120	110	40	426.73	09200
9.3	10	162	120	110	40	426.73	09300
9.4	10	162	120	110	40	426.73	09400
9.5	10	162	120	110	40	426.73	09500
9.6	10	162	120	110	40	426.73	09600
9.7	10	162	120	110	40	426.73	09700
9.8	10	162	120	110	40	426.73	09800
9.9	10	162	120	110	40	426.73	09900
10.0	10	162	120	110	40	426.73	10000
10.1	12	204	156	142	45	556.63	10100
10.2	12	204	156	142	45	556.63	10200
10.3	12	204	156	142	45	556.63	10300
10.4	12	204	156	142	45	556.63	10400
10.5	12	204	156	142	45	556.63	10500
10.6	12	204	156	142	45	556.63	10600
10.7	12	204	156	142	45	556.63	10700
10.8	12	204	156	142	45	556.63	10800
10.9	12	204	156	142	45	556.63	10900
11.0	12	204	156	142	45	556.63	11000
11.1	12	204	156	142	45	556.63	11100
11.2	12	204	156	142	45	556.63	11200
11.3	12	204	156	142	45	556.63	11300
11.4	12	204	156	142	45	556.63	11400
11.5	12	204	156	142	45	556.63	11500
11.6	12	204	156	142	45	556.63	11600
11.7	12	204	156	142	45	556.63	11700
11.8	12	204	156	142	45	556.63	11800
11.9	12	204	156	142	45	556.63	11900
12.0	12	204	156	142	45	556.63	12000
12.2	14	230	182	166	45	713.54	12200
12.5	14	230	182	166	45	713.54	12500
12.8	14	230	182	166	45	713.54	12800
13.0	14	230	182	166	45	713.54	13000
13.5	14	230	182	166	45	713.54	13500
13.8	14	230	182	166	45	713.54	13800
14.0	14	230	182	166	45	713.54	14000
14.5	16	260	208	192	48	927.69	14500
14.8	16	260	208	192	48	927.69	14800
15.0	16	260	208	192	48	927.69	15000
15.5	16	260	208	192	48	927.69	15500
15.8	16	260	208	192	48	927.69	15800
16.0	16	260	208	192	48	927.69	16000
16.5	18	285	234	216	48	1,197.38	16500
16.8	18	285	234	216	48	1,197.38	16800
17.0	18	285	234	216	48	1,197.38	17000
17.5	18	285	234	216	48	1,197.38	17500
17.8	18	285	234	216	48	1,197.38	17800
18.0	18	285	234	216	48	1,197.38	18000
18.5	20	310	258	240	50	1,464.01	18500
18.8	20	310	258	240	50	1,464.01	18800
19.0	20	310	258	240	50	1,464.01	19000
19.5	20	310	258	240	50	1,464.01	19500
19.8	20	310	258	240	50	1,464.01	19800
20.0	20	310	258	240	50	1,464.01	20000

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→ v_c Page 117

WTX – Co-pilot deep hole twist drills

- ▲ Cutting tolerance j6 optimally coordinated as an intermediate tolerance between the pilot drill and deep hole twist drill
- ▲ For optimal guidance and reduction of the cutting time of the deep hole twist drill for hole depths > 30xD
- ▲ Pilot hole necessary
- ▲ up to 20xD without peck drilling
- ▲ Excellent alignment precision
- ▲ Reliable chip removal



CP 20
UNI
TiAlN



SIG 137°
Solid carbide

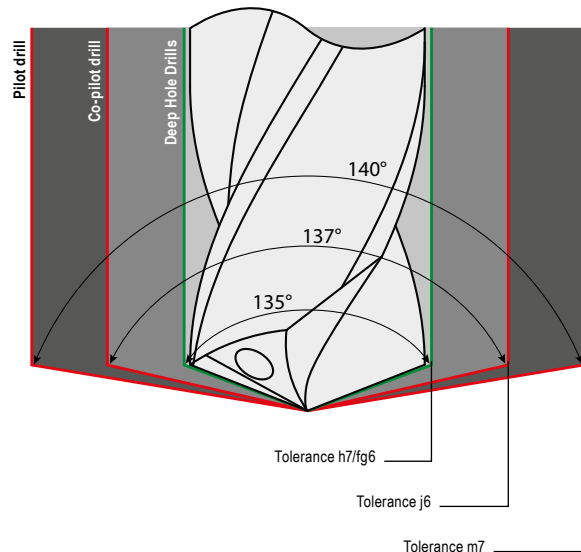
11 018 ...

£
T7/9G

DC j6 mm	DCONMS _{h5} mm	OAL mm	LCF mm	LU mm	
3.0	6	120	80	60	224.03 03000
4.0	6	130	90	80	233.27 04000
4.2	6	160	110	84	252.55 04200
4.5	6	160	110	90	252.55 04500
4.8	6	160	120	96	268.77 04800
5.0	6	160	120	100	268.77 05000
5.5	6	185	140	110	279.13 05500
5.8	6	185	140	116	279.13 05800
6.0	6	185	140	120	279.13 06000
6.5	8	210	160	130	318.84 06500
6.8	8	210	160	136	318.84 06800
7.0	8	210	160	140	318.84 07000
7.5	8	230	180	150	354.36 07500
7.8	8	230	180	156	354.36 07800
8.0	8	230	180	160	354.36 08000
8.5	10	260	195	170	391.14 08500
8.8	10	290	230	176	436.88 08800
9.0	10	290	230	180	436.88 09000

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Tolerances and angles



Tolerance table

ISO tolerances for shafts and holes

of Ø	3	6	10	18	
up to and including	6	10	18	30	
p6	20	24	29	35	
	12	15	18	22	
h7	0	0	0	0	Deep hole twist drill 16xD to 30xD
	-12	-15	-18	-21	
j6	6	7	8	9	Co-pilot drill
	-2	-2	-3	-4	
fg6	-6	-8			Deep hole twist drill > 30xD
	-14	-17			
m6	12	15	18	21	
	4	6	7	8	
m7	16	21	25	29	WTX UNI / WTX VA
	4	6	7	8	

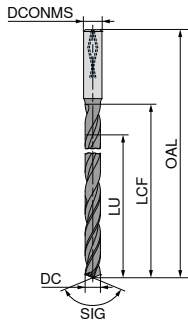
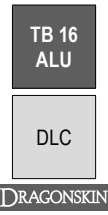
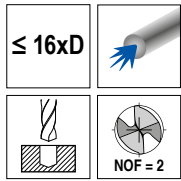


Pilot drill for WTX deep hole twist drill:

- ▲ WTX-TB UNI: WTX-UNI 3xD / 5xD
- ▲ WTX-TB ALU: WTX-VA 3xD / 5xD

WTX – High performance deep hole drills

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



SIG 135°
Solid carbide

11 016 ...

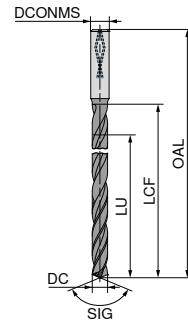
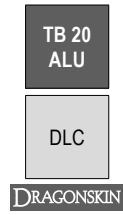
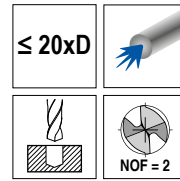
DC _{h7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	£ T7/9G	
2.0	4	84	42	39	133.60	020
2.2	4	84	42	39	133.60	022
2.3	4	84	42	39	133.60	023
2.4	4	96	54	50	149.14	024
2.5	4	96	54	50	149.14	025
2.7	4	96	54	50	149.14	027
2.8	4	96	54	50	149.14	028
3.0	6	100	60	55	189.51	030
3.2	6	100	60	55	189.51	032
3.3	6	100	60	55	189.51	033
3.5	6	100	60	55	189.51	035
3.8	6	115	75	69	197.30	038
4.0	6	115	75	69	197.30	040
4.2	6	115	75	69	212.82	042
4.5	6	130	90	83	212.82	045
4.8	6	130	90	83	225.23	048
5.0	6	130	90	83	225.23	050
5.5	6	150	108	99	234.56	055
5.8	6	150	108	99	234.56	058
6.0	6	150	108	99	234.56	060
6.5	8	165	125	115	250.10	065
6.8	8	165	125	115	268.75	068
7.0	8	165	125	115	268.75	070
7.5	8	180	140	128	301.37	075
7.8	8	180	140	128	301.37	078
8.0	8	180	140	128	301.37	080
8.5	10	205	160	147	332.42	085
8.8	10	205	160	147	369.72	088
9.0	10	205	160	147	369.72	090
9.8	10	225	180	165	369.72	098
10.0	10	225	180	165	369.72	100
10.2	12	240	190	174	413.21	102
10.8	12	240	190	174	413.21	108
11.8	12	265	215	197	413.21	118
12.0	12	265	215	197	413.21	120

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→ v_c Page 143+146
→ Machining information: Page 160

WTX – High performance deep hole drills

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



SIG 135°
Solid carbide

11 020 ...

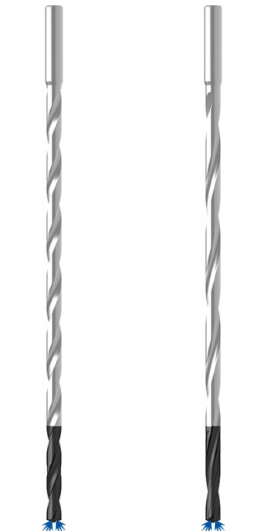
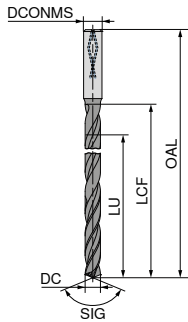
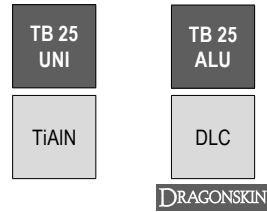
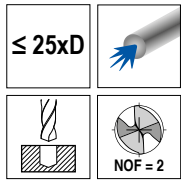
DC _{h7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	£ T7/9G	
2.0	4	92	50	47	141.35	020
2.2	4	92	50	47	136.57	022
2.3	4	92	50	47	141.35	023
2.4	4	112	70	66	153.09	024
2.5	4	112	70	66	158.44	025
2.7	4	112	70	66	153.09	027
2.8	4	112	70	66	158.44	028
3.0	6	120	80	75	204.11	030
3.2	6	120	80	75	211.27	032
3.3	6	120	80	75	204.11	033
3.5	6	120	80	75	211.27	035
3.8	6	130	90	84	213.11	038
4.0	6	130	90	84	220.56	040
4.2	6	160	110	103	228.12	042
4.5	6	160	110	103	236.12	045
4.8	6	160	120	113	241.63	048
5.0	6	160	120	113	250.10	050
5.5	6	185	140	131	252.15	055
5.8	6	185	140	131	260.99	058
6.0	6	185	140	131	260.99	060
6.5	8	210	160	150	278.07	065
6.8	8	210	160	150	299.81	068
7.0	8	210	160	150	299.81	070
7.5	8	230	180	168	333.98	075
7.8	8	230	180	168	333.98	078
8.0	8	230	180	168	333.98	080
8.5	10	260	195	182	368.15	085
8.8	10	290	230	216	413.21	088
9.0	10	290	230	216	413.21	090
9.8	10	290	230	216	413.21	098
10.0	10	290	230	216	413.21	100
10.2	12	315	268	251	453.60	102
10.8	12	315	268	251	453.60	108
11.8	12	315	268	251	453.60	118
12.0	12	315	268	251	453.60	120

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→ v_c Page 143+146
→ Machining information: Page 160

WTX – High performance deep hole drills

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



SIG 135°
Solid carbide

11 025 ... 11 026 ...

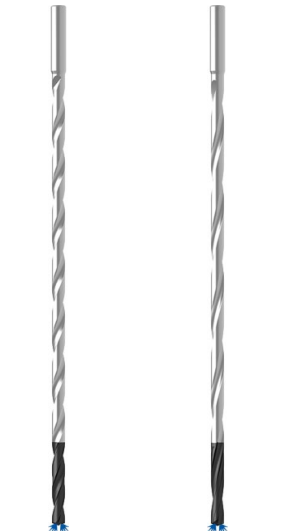
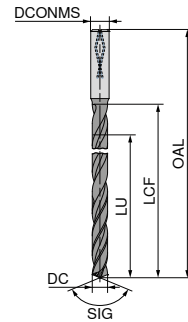
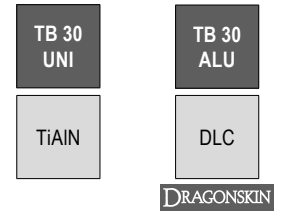
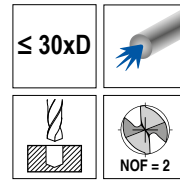
DC _{h7}	DCONMS _{h6}	OAL	LCF	LU	£	T7/9G
2.0	4	104	60	57	150.69	020
2.2	4	104	60	57	150.69	022
2.3	4	104	60	57	150.69	023
2.4	4	125	80	76	170.87	024
2.5	4	125	80	76	170.87	025
2.7	4	125	80	76	170.87	027
2.8	4	125	80	76	170.87	028
3.0	6	135	98	93	245.42	030
3.2	6	135	98	93	245.42	032
3.3	6	150	110	105	271.83	033
3.5	6	150	110	105	271.83	035
3.8	6	160	120	114	279.61	038
4.0	6	160	120	114	279.61	040
4.2	6	160	120	114	279.61	042
4.5	6	180	135	128	292.04	045
4.8	6	180	135	128	292.04	048
5.0	6	180	135	128	292.04	050
5.5	6	205	168	159	313.80	055
5.8	6	205	168	159	313.80	058
6.0	6	205	168	159	313.80	060
6.5	8	240	200	190	349.54	065
6.8	8	240	200	190	349.54	068
7.0	8	240	200	190	349.54	070
7.5	8	260	220	208	388.36	075
7.8	8	260	220	208	388.36	078
8.0	8	260	220	208	388.36	080
8.5	10	285	240	227	438.03	085
8.8	10	310	268	254	475.33	088
9.0	10	310	268	254	475.33	090
9.8	10	310	268	254	475.33	098
10.0	10	310	268	254	475.33	100
10.2	12	375	325	308	571.66	102
10.8	12	375	325	308	571.66	108
11.8	12	375	325	308	571.66	118
12.0	12	375	325	308	571.66	120

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→ v_c Page 144+147
→ Machining information: Page 160

WTX – High performance deep hole drills

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



SIG 135°
Solid carbide

11 030 ... 11 031 ...

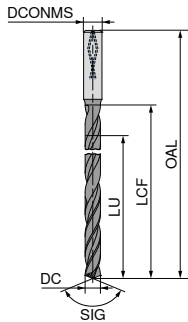
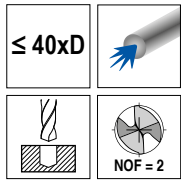
DC _{h7}	DCONMS _{h6}	OAL	LCF	LU	£	T7/9G
2.0	4	115	70	67	160.02	020
2.2	4	115	70	67	160.02	022
2.3	4	115	70	67	160.02	023
2.4	4	138	90	86	186.42	024
2.5	4	138	90	86	186.42	025
2.7	4	138	90	86	186.42	027
2.8	4	138	90	86	186.42	028
3.0	6	150	105	100	313.80	030
3.2	6	150	105	100	313.80	032
3.3	6	185	135	130	323.12	033
3.5	6	185	135	130	323.12	035
3.8	6	185	135	130	323.12	038
4.0	6	185	135	130	323.12	040
4.2	6	185	135	130	323.12	042
4.5	6	215	165	158	332.42	045
4.8	6	215	165	158	332.42	048
5.0	6	215	165	158	332.42	050
5.5	6	230	180	171	347.96	055
5.8	6	230	180	171	347.96	058
6.0	6	230	180	171	347.96	060
6.5	8	280	215	205	382.13	065
6.8	8	280	230	220	399.21	068
7.0	8	280	230	220	399.21	070
7.5	8	280	230	220	399.21	075
7.8	8	315	265	253	444.27	078
8.0	8	315	265	253	444.27	080
8.5	10	350	295	282	512.64	085
8.8	10	380	330	316	539.02	088
9.0	10	380	330	316	539.02	090
9.8	10	380	330	316	539.02	098
10.0	10	380	330	316	539.02	100
10.2	12	430	380	365	688.16	102
10.8	12	430	380	365	688.16	108
11.8	12	430	380	365	688.16	118
12.0	12	430	380	365	688.16	120

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→ v_c Page 144+147
→ Machining information: Page 160

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

11 040 ...

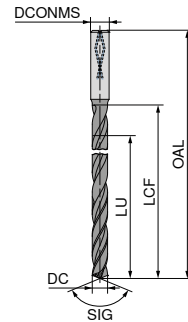
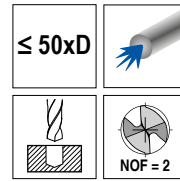
DC _{fg6} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	£	
3.0	6	195	150	146	399.21	030
4.0	6	220	175	169	399.21	040
4.2	6	245	200	194	441.18	042
4.5	6	245	200	194	441.18	045
4.8	6	275	230	223	470.69	048
5.0	6	275	230	223	470.69	050
5.5	6	305	260	251	506.42	055
5.8	6	305	260	251	506.42	058
6.0	6	305	260	251	506.42	060
6.5	8	345	300	290	545.25	065
6.8	8	345	300	290	545.25	068
7.0	8	345	300	290	545.25	070
7.5	8	385	340	328	605.83	075
7.8	8	385	340	328	605.83	078
8.0	8	385	340	328	605.83	080
8.5	10	430	380	367	667.96	085
8.8	10	430	380	367	667.96	088
9.0	10	430	380	367	667.96	090

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→ v_c Page 145
→ Machining information: Page 160

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

11 050 ...

DC _{fg6} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	£	
3.0	6	220	175	170	542.15	030
4.0	6	265	220	214	542.15	040
4.2	6	290	245	238	602.70	042
4.5	6	290	245	238	602.70	045
4.8	6	320	275	268	680.39	048
5.0	6	320	275	268	680.39	050
5.5	6	355	310	302	765.83	055
5.8	6	355	315	306	776.71	058
6.0	6	355	315	306	776.71	060
6.5	8	395	350	340	863.70	065
6.8	8	425	380	370	936.72	068

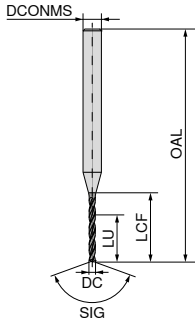
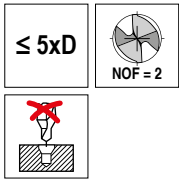
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→ v_c Page 145
→ Machining information: Page 160

The deep hole twist drills are also available in other dimensions on request.

WTX – High Performance Drills

▲ standard shank Ø 3 mm h6 for use
in heat shrink adapters



MINI
TiAIN



SIG 140°
Solid carbide

11 770 ...

DC ^{+0,004} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	£ T7/9G	
0.10	3	38	1.2	1.0	50.56	00100
0.15	3	38	2.0	1.7	44.66	00150
0.20	3	38	3.5	3.0	39.04	00200
0.25	3	38	3.5	3.0	33.26	00250
0.30	3	38	5.5	5.0	27.36	00300
0.35	3	38	5.5	5.0	27.36	00350
0.40	3	38	7.0	6.0	27.36	00400
0.45	3	38	7.0	6.0	27.36	00450
0.50	3	38	7.0	6.0	27.36	00500
0.55	3	38	7.0	6.0	27.36	00550
0.60	3	38	7.0	6.0	27.36	00600
0.65	3	38	7.0	6.0	27.36	00650
0.70	3	38	10.5	8.0	27.36	00700
0.75	3	38	10.5	8.0	27.36	00750
0.80	3	38	10.5	8.0	27.36	00800
0.85	3	38	10.5	8.0	27.36	00850
0.90	3	38	10.5	8.0	27.36	00900
0.95	3	38	10.5	8.0	27.36	00950
0.97	3	38	10.5	8.0	27.36	00970
0.98	3	38	10.5	8.0	27.36	00980
0.99	3	38	10.5	8.0	27.36	00990
1.00	3	38	10.5	8.0	27.36	01000
1.01	3	38	10.5	8.0	27.36	01010
1.02	3	38	10.5	8.0	27.36	01020
1.03	3	38	10.5	8.0	27.36	01030
1.05	3	38	10.5	8.0	27.36	01050
1.10	3	38	10.5	8.0	27.36	01100
1.15	3	38	10.5	8.0	27.36	01150
1.20	3	38	10.5	8.0	27.36	01200
1.25	3	38	10.5	8.0	27.36	01250
1.30	3	38	10.5	8.0	27.36	01300
1.35	3	38	10.5	8.0	27.36	01350
1.40	3	38	10.5	8.0	27.36	01400
1.45	3	38	10.5	8.0	27.36	01450
1.47	3	38	10.5	8.0	27.36	01470
1.48	3	38	10.5	8.0	27.36	01480
1.49	3	38	10.5	8.0	27.36	01490
1.50	3	38	10.5	8.0	27.36	01500
1.51	3	38	10.5	8.0	27.36	01510
1.52	3	38	10.5	8.0	27.36	01520
1.53	3	38	10.5	8.0	27.36	01530
1.55	3	38	10.5	8.0	27.36	01550
1.60	3	38	10.5	8.0	27.36	01600
1.65	3	38	10.5	8.0	27.36	01650
1.70	3	38	10.5	8.0	27.36	01700
1.75	3	38	10.5	8.0	27.36	01750

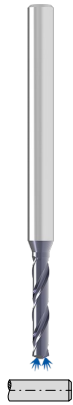
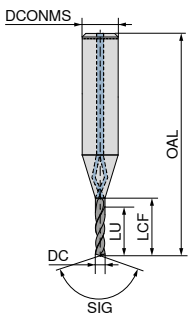
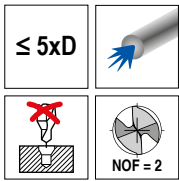
DC ^{+0,004} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	£ T7/9G	
1.80	3	38	10.5	8.0	27.36	01800
1.85	3	38	12.0	8.0	27.36	01850
1.90	3	38	12.0	8.0	27.36	01900
1.95	3	38	12.0	8.0	27.36	01950
1.97	3	38	12.0	8.0	27.36	01970
1.98	3	38	12.0	8.0	27.36	01980
1.99	3	38	12.0	8.0	27.36	01990
2.00	3	42	13.0	9.0	39.22	02000
2.01	3	42	13.0	9.0	39.22	02010
2.02	3	42	13.0	9.0	39.22	02020
2.03	3	42	13.0	9.0	39.22	02030
2.05	3	42	13.0	9.0	39.22	02050
2.10	3	42	13.0	9.0	39.22	02100
2.15	3	42	13.0	9.0	39.22	02150
2.20	3	46	15.0	10.0	44.16	02200
2.25	3	46	15.0	10.0	44.16	02250
2.30	3	46	15.0	10.0	44.16	02300
2.35	3	46	15.0	10.0	44.16	02350
2.40	3	46	15.0	10.0	44.16	02400
2.45	3	46	15.0	10.0	44.16	02450
2.47	3	46	15.0	10.0	44.16	02470
2.48	3	46	15.0	10.0	44.16	02480
2.49	3	46	15.0	10.0	44.16	02490
2.50	3	46	15.0	10.0	44.16	02500
2.51	3	46	15.0	10.0	44.16	02510
2.52	3	46	15.0	10.0	44.16	02520
2.53	3	46	15.0	10.0	44.16	02530
2.60	3	46	15.0	10.0	44.16	02600
2.70	3	46	15.0	10.0	44.16	02700
2.80	3	46	15.0	10.0	44.16	02800
2.90	3	46	15.0	10.0	44.16	02900

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→ v. Page 136

WTX – High Performance Drills

- ▲ Specialised micro drill
- ▲ Universal application
- ▲ Extremely high process security
- ▲ Pilot drill for WTX Micro – high-performance deep hole drill



SIG 135°
Solid carbide

10 693 ...

DC _{ms} mm	DCONMS _{hs} mm	OAL mm	LCF mm	LU mm	£ T4/9F
0.8	3	39	5.6	4.0	121.81 00800
0.9	3	39	6.3	4.5	121.81 00900
1.0	3	40	7.0	5.0	108.13 01000
1.1	3	41	7.7	5.5	108.13 01100
1.2	3	41	8.4	6.0	108.13 01200
1.3	3	42	9.1	6.5	108.13 01300
1.4	3	42	9.8	7.0	108.13 01400
1.5	3	43	10.5	7.5	108.13 01500
1.6	3	44	11.2	8.0	113.84 01600
1.7	3	44	11.9	8.5	113.84 01700
1.8	3	45	12.6	9.0	113.84 01800
1.9	3	45	13.3	9.5	113.84 01900
2.0	3	46	14.0	10.0	113.84 02000
2.1	3	47	14.7	10.5	117.33 02100
2.2	3	47	15.4	11.0	117.33 02200
2.3	3	48	16.1	11.5	117.33 02300
2.4	3	48	16.8	12.0	117.33 02400
2.5	3	49	17.5	12.5	117.33 02500
2.6	3	50	18.2	13.0	123.53 02600
2.7	3	50	18.9	13.5	123.53 02700
2.8	3	51	19.6	14.0	123.53 02800
2.9	3	51	20.3	14.5	123.53 02900

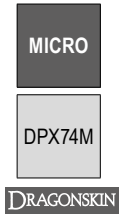
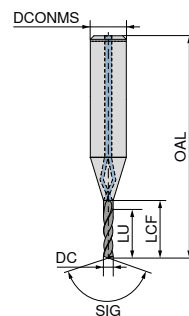
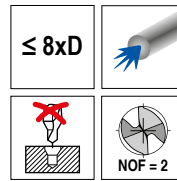
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→ v_c Page 137
→ Machining information: Page 161

Minimum coolant pressure: 30 bar

WTX – High Performance Drills

- ▲ Specialised micro drill
- ▲ Universal application
- ▲ Extremely high process security



SIG 128°
Solid carbide

10 694 ...

DC _{hs} mm	DCONMS _{hs} mm	OAL mm	LCF mm	LU mm	£ T4/9F
0.8	3	41	8	6.4	127.77 00800
0.9	3	42	9	7.2	127.77 00900
1.0	3	43	10	8.0	114.03 01000
1.1	3	44	11	8.8	114.03 01100
1.2	3	45	12	9.6	114.03 01200
1.3	3	46	13	10.4	114.03 01300
1.4	3	47	14	11.2	114.03 01400
1.5	3	47	15	12.0	114.03 01500
1.6	3	48	16	12.8	122.66 01600
1.7	3	49	17	13.6	122.66 01700
1.8	3	50	18	14.4	122.66 01800
1.9	3	51	19	15.2	122.66 01900
2.0	3	52	20	16.0	122.66 02000
2.1	3	53	21	16.8	124.61 02100
2.2	3	54	22	17.6	124.61 02200
2.3	3	55	23	18.4	124.61 02300
2.4	3	56	24	19.2	124.61 02400
2.5	3	56	25	20.0	124.61 02500
2.6	3	57	26	20.8	128.62 02600
2.7	3	58	27	21.6	128.62 02700
2.8	3	59	28	22.4	128.62 02800
2.9	3	60	29	23.2	128.62 02900

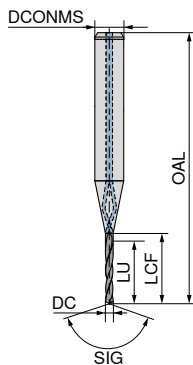
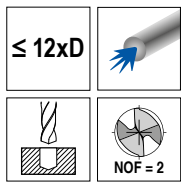
P	●
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→ v_c Page 138
→ Machining information: Page 161

Minimum coolant pressure: 30 bar

WTX – High Performance Drills

- ▲ Specialised micro drill
- ▲ Universal application
- ▲ Extremely high process security
- ▲ Pilot drill: 5xD WTX Micro – high-performance drill



10 695 ...

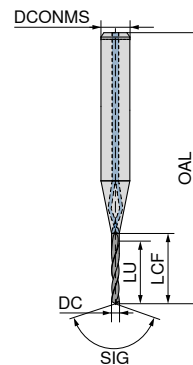
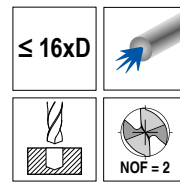
DC _{h6} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	£ T4/9F
0.8	3	44	11.2	9.6	142.30 00800
0.9	3	46	12.6	10.8	142.30 00900
1.0	3	47	14.0	12.0	128.62 01000
1.1	3	48	15.4	13.2	128.62 01100
1.2	3	50	16.8	14.4	128.62 01200
1.3	3	51	18.2	15.6	128.62 01300
1.4	3	52	19.6	16.8	128.62 01400
1.5	3	53	21.0	18.0	128.62 01500
1.6	3	55	22.4	19.2	135.39 01600
1.7	3	56	23.8	20.4	135.39 01700
1.8	3	57	25.2	21.6	135.39 01800
1.9	3	59	26.6	22.8	135.39 01900
2.0	3	60	28.0	24.0	135.39 02000
2.1	3	61	29.4	25.2	138.43 02100
2.2	3	63	30.8	26.4	138.43 02200
2.3	3	64	32.2	27.6	138.43 02300
2.4	3	65	33.6	28.8	138.43 02400
2.5	3	67	35.0	30.0	138.43 02500
2.6	3	68	36.4	31.2	141.31 02600
2.7	3	69	37.8	32.4	141.31 02700
2.8	3	70	39.2	33.6	141.31 02800
2.9	3	72	40.6	34.8	141.31 02900

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→ v_c Page 138
→ Machining information: Page 161

WTX – High performance deep hole drills

- ▲ Specialised micro deep hole drill
- ▲ Universal application
- ▲ Extremely high process security
- ▲ Pilot drill: 5xD WTX Micro – high-performance drill



10 696 ...

DC _{h6} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	£ T4/9F
0.8	3	48	14.4	12.8	180.92 00800
0.9	3	49	16.2	14.4	180.92 00900
1.0	3	51	18.0	16.0	167.24 01000
1.1	3	53	19.8	17.6	167.24 01100
1.2	3	54	21.6	19.2	167.24 01200
1.3	3	56	23.4	20.8	167.24 01300
1.4	3	58	25.2	22.4	167.24 01400
1.5	3	60	27.0	24.0	167.24 01500
1.6	3	61	28.8	25.6	176.07 01600
1.7	3	63	30.6	27.2	176.07 01700
1.8	3	65	32.4	28.8	176.07 01800
1.9	3	66	34.2	30.4	176.07 01900
2.0	3	68	36.0	32.0	176.07 02000
2.1	3	70	37.8	33.6	179.83 02100
2.2	3	71	39.6	35.2	179.83 02200
2.3	3	73	41.4	36.8	179.83 02300
2.4	3	75	43.2	38.4	179.83 02400
2.5	3	77	45.0	40.0	179.83 02500
2.6	3	78	46.8	41.6	183.71 02600
2.7	3	80	48.6	43.2	183.71 02700
2.8	3	82	50.4	44.8	183.71 02800
2.9	3	83	52.2	46.4	183.71 02900

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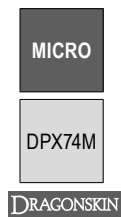
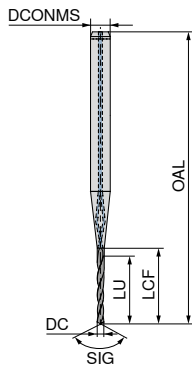
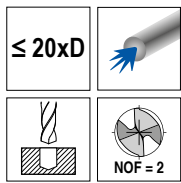
→ v_c Page 139
→ Machining information: Page 161

Minimum coolant pressure: 30 bar

Minimum coolant pressure: 30 bar

WTX – High performance deep hole drills

- ▲ Specialised micro deep hole drill
- ▲ Universal application
- ▲ Extremely high process security
- ▲ Pilot drill: 5xD WTX Micro – high-performance drill



SIG 128°
Solid carbide

10 697 ...

DC _{h6} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	£ T4/9F
0.8	3	51	17.6	16	198.84 00800
0.9	3	53	19.8	18	198.84 00900
1.0	3	55	22.0	20	185.16 01000
1.1	3	57	24.2	22	185.16 01100
1.2	3	59	26.4	24	185.16 01200
1.3	3	61	28.6	26	185.16 01300
1.4	3	63	30.8	28	185.16 01400
1.5	3	66	33.0	30	185.16 01500
1.6	3	68	35.2	32	194.97 01600
1.7	3	70	37.4	34	194.97 01700
1.8	3	72	39.6	36	194.97 01800
1.9	3	74	41.8	38	194.97 01900
2.0	3	76	44.0	40	194.97 02000
2.1	3	78	46.2	42	199.08 02100
2.2	3	80	48.4	44	199.08 02200
2.3	3	82	50.6	46	199.08 02300
2.4	3	85	52.8	48	199.08 02400
2.5	3	87	55.0	50	199.08 02500
2.6	3	89	57.2	52	203.45 02600
2.7	3	91	59.4	54	203.45 02700
2.8	3	93	61.6	56	203.45 02800
2.9	3	95	63.8	58	203.45 02900

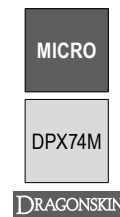
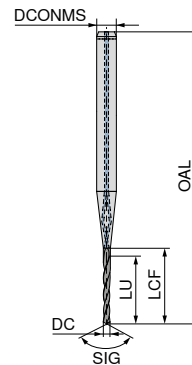
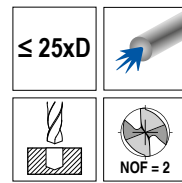
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→ v_c Page 139
→ Machining information: Page 161

Minimum coolant pressure: 30 bar

WTX – High performance deep hole drills

- ▲ Specialised micro deep hole drill
- ▲ Universal application
- ▲ Extremely high process security
- ▲ Pilot drill: 5xD WTX Micro – high-performance drill



SIG 128°
Solid carbide

10 698 ...

DC _{h6} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	£ T4/9F
0.8	3	54	21.6	16.0	227.85 00800
0.9	3	57	24.3	20.5	227.85 00900
1.0	3	60	27.0	25.0	204.90 01000
1.1	3	63	29.7	27.5	204.90 01100
1.2	3	65	32.4	30.0	204.90 01200
1.3	3	68	35.1	32.5	204.90 01300
1.4	3	71	37.8	35.0	204.90 01400
1.5	3	73	40.5	37.5	204.90 01500
1.6	3	76	43.2	40.0	215.80 01600
1.7	3	78	45.9	42.5	215.80 01700
1.8	3	81	48.6	45.0	215.80 01800
1.9	3	84	51.3	47.5	215.80 01900
2.0	3	86	54.0	50.0	215.80 02000
2.1	3	89	56.7	52.5	220.39 02100
2.2	3	91	59.4	55.0	220.39 02200
2.3	3	94	62.1	57.5	220.39 02300
2.4	3	97	64.8	60.0	220.39 02400
2.5	3	99	67.5	62.5	220.39 02500
2.6	3	102	70.2	65.0	225.12 02600
2.7	3	104	72.9	67.5	225.12 02700
2.8	3	107	75.6	70.0	225.12 02800
2.9	3	110	78.3	72.5	225.12 02900

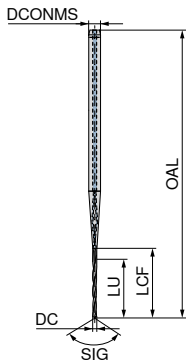
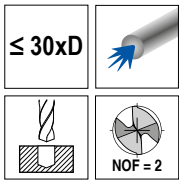
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→ v_c Page 139
→ Machining information: Page 161

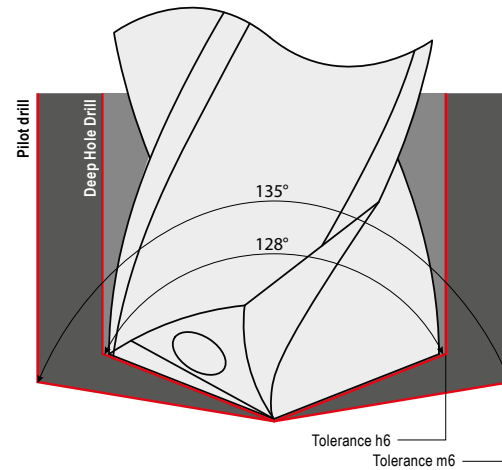
Minimum coolant pressure: 30 bar

WTX – High performance deep hole drills

- ▲ Specialised micro deep hole drill
- ▲ Universal application
- ▲ Extremely high process security
- ▲ Pilot drill: 5xD WTX Micro – high-performance drill



Tolerances and angles



DC _{h6} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	
0.8	3	59	25.6	19.2	252.29 00800
0.9	3	62	28.8	24.5	252.29 00900
1.0	3	65	32.0	30.0	226.81 01000
1.1	3	68	35.2	33.0	226.81 01100
1.2	3	71	38.4	36.0	226.81 01200
1.3	3	74	41.6	39.0	226.81 01300
1.4	3	78	44.8	42.0	226.81 01400
1.5	3	81	48.0	45.0	226.81 01500
1.6	3	84	51.2	48.0	238.93 01600
1.7	3	87	54.4	51.0	238.93 01700
1.8	3	90	57.6	54.0	238.93 01800
1.9	3	93	60.8	57.0	238.93 01900
2.0	3	96	64.0	60.0	238.93 02000
2.1	3	99	67.2	63.0	244.02 02100
2.2	3	102	70.4	66.0	244.02 02200
2.3	3	106	73.6	69.0	244.02 02300
2.4	3	109	76.8	72.0	244.02 02400
2.5	3	112	80.0	75.0	244.02 02500
2.6	3	115	83.2	78.0	249.21 02600
2.7	3	118	86.4	81.0	249.21 02700
2.8	3	121	89.6	84.0	249.21 02800
2.9	3	124	92.8	87.0	249.21 02900

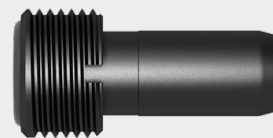
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→ v_c Page 139

→ Machining information: Page 161

Coolant transfer pipe with strainer

HSK-A 63 / HSK-A 100

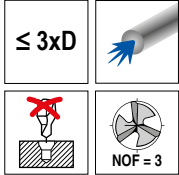


With the help of the new coolant transfer pipe, it is possible to filter very small chips and impurities out of the coolant. More information on this can be found in the → **Catalogue Clamping Technology, chapter 16, page 156.**

Minimum coolant pressure: 30 bar

WTX – Drill-Reamer 1/100

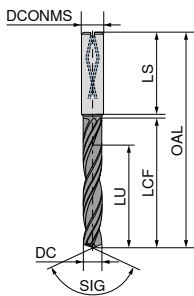
- ▲ Solid carbide high-performance drill-reaming tool
- ▲ Drilling and reaming in one operation
- ▲ 3 drilling edges
- ▲ 6 reaming edges
- ▲ High feeds
- ▲ Good surface quality
- ▲ For blind holes and through holes



Feed
BR100

DPX14S

DRAGONSKIN



SIG 140°
Solid carbide

10 707 ...

DC $\pm 0,003$	DCONMS h_6	OAL	LCF	LU	LS	£	T4
mm	mm	mm	mm	mm	mm		
3.97	6	66	24	17	36	174.13	03970
3.98	6	66	24	17	36	174.13	03980
3.99	6	66	24	17	36	174.13	03990
4.00	6	66	24	17	36	174.13	04000
4.01	6	66	24	17	36	174.13	04010
4.02	6	66	24	17	36	174.13	04020
4.97	6	66	28	20	36	174.13	04970
4.98	6	66	28	20	36	174.13	04980
4.99	6	66	28	20	36	174.13	04990
5.00	6	66	28	20	36	174.13	05000
5.01	6	66	28	20	36	174.13	05010
5.02	6	66	28	20	36	174.13	05020
5.97	6	66	28	20	36	174.13	05970
5.98	6	66	28	20	36	174.13	05980
5.99	6	66	28	20	36	174.13	05990
6.00	6	66	28	20	36	174.13	06000
6.01	6	66	28	20	36	174.13	06010
6.02	6	66	28	20	36	174.13	06020
7.97	8	79	41	29	36	174.13	07970
7.98	8	79	41	29	36	174.13	07980
7.99	8	79	41	29	36	174.13	07990
8.00	8	79	41	29	36	174.13	08000
8.01	8	79	41	29	36	174.13	08010
8.02	8	79	41	29	36	174.13	08020
9.97	10	89	47	35	40	198.18	09970
9.98	10	89	47	35	40	198.18	09980
9.99	10	89	47	35	40	198.18	09990
10.00	10	89	47	35	40	198.18	10000
10.01	10	89	47	35	40	198.18	10010
10.02	10	89	47	35	40	198.18	10020
11.97	12	102	55	40	45	271.57	11970
11.98	12	102	55	40	45	271.57	11980
11.99	12	102	55	40	45	271.57	11990
12.00	12	102	55	40	45	271.57	12000
12.01	12	102	55	40	45	271.57	12010
12.02	12	102	55	40	45	271.57	12020

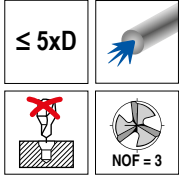
P	●
M	●
K	●
N	●
S	●
H	●
O	●

		Tolerances					
		e.g. Ø 8 F7 = 8.02 mm					
Ø 4	3.97	U 7	X 7				
	3.98	N 10	N 11	R 7			
	3.99	M 8	N 7	N 8	N 9		
	4.00	J 7	J 8	JS 7	JS 8	JS 9	
	4.01	G 7	H 8				
Ø 5	4.02	F 8	H 9				
	4.97	U 7	X 7				
	4.98	N 10	N 11	R 7			
	4.99	M 8	N 7	N 8	N 9		
	5.00	J 7	J 8	JS 7	JS 8	JS 9	
Ø 6	5.01	G 7	H 8				
	5.02	F 8	H 9				
	5.97	U 7	X 7				
	5.98	N 10	N 11	R 7			
	5.99	M 8	N 7	N 8	N 9		
Ø 8	6.00	J 7	J 8	JS 7	JS 8	JS 9	
	6.01	G 7	H 8				
	6.02	F 8	H 9				
	7.97	S 7	U 7				
	7.98	N 8	N 10	N 11	P 7	R 7	
Ø 10	7.99	K 8	M 6	M 7	M 8	N 9	
	8.00	J 7	J 8	JS 7	JS 8	JS 9	
	8.01	G 7	H 8				
	8.02	F 7	F 8	H 9			
	9.97	S 7	U 7				
Ø 12	9.98	N 8	N 10	N 11	P 7	R 7	
	9.99	K 8	M 6	M 7	M 8	N 9	
	10.00	J 7	J 8	JS 7	JS 8	JS 9	
	10.01	G 7	H 8				
	10.02	F 7	F 8	H 9			
Ø 12	11.97	N 11	R 7	S 7			
	11.98	N 8	N 9	N 10	P 7		
	11.99	K 8	M 6	M 7	M 8	N 7	
	12.00	J 7	J 8	JS 7	JS 8		
	12.01	G 6	H 7	H 8	JS 9		
12.02	F 7						

Tolerance classes written in standard print are not optimally positioned in the tolerance field.

WTX – Drill-Reamer 1/100

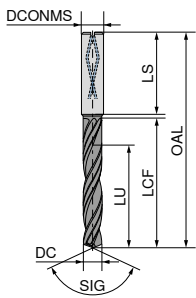
- ▲ Solid carbide high-performance drill-reaming tool
- ▲ Drilling and reaming in one operation
- ▲ 3 drilling edges
- ▲ 6 reaming edges
- ▲ High feeds
- ▲ Good surface quality
- ▲ For blind holes and through holes



Feed
BR100

DPX14S

DRAGONSKIN



SIG 140°
Solid carbide

10 713 ...

DC $\pm 0,003$	DCONMS h_6	OAL	LCF	LU	LS	£	
mm	mm	mm	mm	mm	mm	T4	
3.97	6	74	36	29	36	217.16	03970
3.98	6	74	36	29	36	217.16	03980
3.99	6	74	36	29	36	217.16	03990
4.00	6	74	36	29	36	217.16	04000
4.01	6	74	36	29	36	217.16	04010
4.02	6	74	36	29	36	217.16	04020
4.97	6	82	44	35	36	217.16	04970
4.98	6	82	44	35	36	217.16	04980
4.99	6	82	44	35	36	217.16	04990
5.00	6	82	44	35	36	217.16	05000
5.01	6	82	44	35	36	217.16	05010
5.02	6	82	44	35	36	217.16	05020
5.97	6	82	44	35	36	217.16	05970
5.98	6	82	44	35	36	217.16	05980
5.99	6	82	44	35	36	217.16	05990
6.00	6	82	44	35	36	217.16	06000
6.01	6	82	44	35	36	217.16	06010
6.02	6	82	44	35	36	217.16	06020
7.97	8	91	53	43	36	217.16	07970
7.98	8	91	53	43	36	217.16	07980
7.99	8	91	53	43	36	217.16	07990
8.00	8	91	53	43	36	217.16	08000
8.01	8	91	53	43	36	217.16	08010
8.02	8	91	53	43	36	217.16	08020
9.97	10	103	61	49	40	297.63	09970
9.98	10	103	61	49	40	297.63	09980
9.99	10	103	61	49	40	297.63	09990
10.00	10	103	61	49	40	297.63	10000
10.01	10	103	61	49	40	297.63	10010
10.02	10	103	61	49	40	297.63	10020
11.97	12	118	71	56	45	418.37	11970
11.98	12	118	71	56	45	418.37	11980
11.99	12	118	71	56	45	418.37	11990
12.00	12	118	71	56	45	418.37	12000
12.01	12	118	71	56	45	418.37	12010
12.02	12	118	71	56	45	418.37	12020

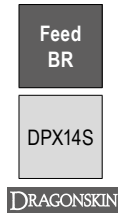
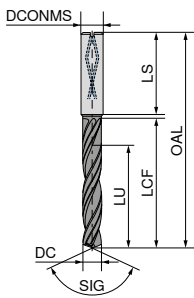
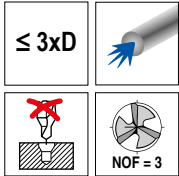
P	●
M	●
K	●
N	●
S	●
H	●
O	●

		Tolerances					
		e.g. Ø 8 F7 = 8.02 mm					
Ø 4	3.97	U 7	X 7				
	3.98	N 10	N 11	R 7			
	3.99	M 8	N 7	N 8	N 9		
	4.00	J 7	J 8	JS 7	JS 8	JS 9	
	4.01	G 7	H 8				
	4.02	F 8	H 9				
Ø 5	4.97	U 7	X 7				
	4.98	N 10	N 11	R 7			
	4.99	M 8	N 7	N 8	N 9		
	5.00	J 7	J 8	JS 7	JS 8	JS 9	
	5.01	G 7	H 8				
	5.02	F 8	H 9				
Ø 6	5.97	U 7	X 7				
	5.98	N 10	N 11	R 7			
	5.99	M 8	N 7	N 8	N 9		
	6.00	J 7	J 8	JS 7	JS 8	JS 9	
	6.01	G 7	H 8				
	6.02	F 8	H 9				
Ø 8	7.97	S 7	U 7				
	7.98	N 8	N 10	N 11	P 7	R 7	
	7.99	K 8	M 6	M 7	M 8	N 9	
	8.00	J 7	J 8	JS 7	JS 8	JS 9	
	8.01	G 7	H 8				
	8.02	F 7	F 8	H 9			
Ø 10	9.97	S 7	U 7				
	9.98	N 8	N 10	N 11	P 7	R 7	
	9.99	K 8	M 6	M 7	M 8	N 9	
	10.00	J 7	J 8	JS 7	JS 8	JS 9	
	10.01	G 7	H 8				
	10.02	F 7	F 8	H 9			
Ø 12	11.97	N 11	R 7	S 7			
	11.98	N 8	N 9	N 10	P 7		
	11.99	K 8	M 6	M 7	M 8	N 7	
	12.00	J 7	J 8	JS 7	JS 8		
	12.01	G 6	H 7	H 8	JS 9		
	12.02	F 7					

Tolerance classes written in standard print are not optimally positioned in the tolerance field.

WTX – Drill-Reamer H7

- ▲ Solid carbide high-performance drill-reaming tool
- ▲ Drilling and reaming to tolerance H7 in one operation
- ▲ 3 drilling edges
- ▲ 6 reaming edges
- ▲ High feeds
- ▲ Good surface quality
- ▲ For blind holes and through holes
- ▲ Optimum roundness – tolerance H7



SIG 140°
Solid carbide

10 711 ...

DC _{H7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	£ T4
4	6	66	24	17	36	174.13 04000
5	6	66	28	20	36	174.13 05000
6	6	66	28	20	36	174.13 06000
8	8	79	41	29	36	174.13 08000
10	10	89	47	35	40	198.18 10000
12	12	102	55	40	45	271.57 12000
14	14	107	60	43	45	363.18 14000
16	16	115	65	45	48	504.93 16000

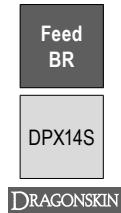
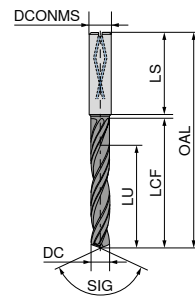
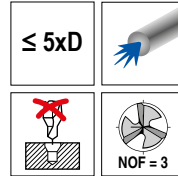
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→ v_c Page 140

Special dimensions available upon request

WTX – Drill-Reamer H7

- ▲ Solid carbide high-performance drill-reaming tool
- ▲ Drilling and reaming to tolerance H7 in one operation
- ▲ 3 drilling edges
- ▲ 6 reaming edges
- ▲ High feeds
- ▲ Good surface quality
- ▲ For blind holes and through holes
- ▲ Optimum roundness – tolerance H7



SIG 140°
Solid carbide

10 719 ...

DC _{H7} mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	LS mm	£ T4
4	6	74	36	29	36	217.16 04000
5	6	82	44	35	36	217.16 05000
6	6	82	44	35	36	217.16 06000
8	8	91	53	43	36	217.16 08000
10	10	103	61	49	40	297.63 10000
12	12	118	71	56	45	418.37 12000
14	14	124	77	60	45	567.57 14000
16	16	133	83	63	48	682.85 16000
18	18	143	93	71	48	819.91 18000
20	20	153	101	77	50	985.94 20000

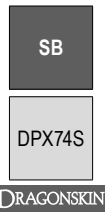
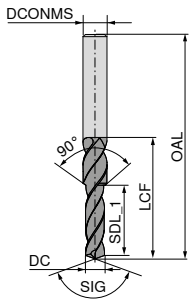
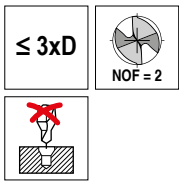
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→ v_c Page 141

Special dimensions available upon request

WTX – Short 90° step drill

▲ for core hole plus countersink for thread cutting



SIG 140°

Solid carbide

10 767 ...

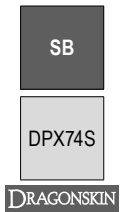
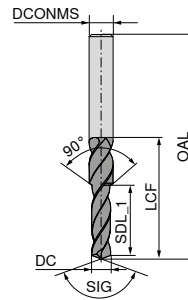
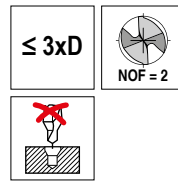
For threads	DC _{m7} mm	DCONMS _{h6} mm	OAL mm	SDL_1 mm	LCF mm	£ T4	
M3	2.5	6	62	8.8	20	68.55	02500
M4	3.3	6	62	11.4	24	84.00	03300
M5	4.2	6	66	13.6	28	86.52	04200
M6	5.0	8	79	16.5	34	122.46	05000
M8	6.8	10	89	21.0	47	177.47	06800
M10	8.5	12	102	25.5	55	234.90	08500
M12	10.2	14	107	30.0	60	302.27	10200
M14	12.0	16	115	34.5	65	345.20	12000
M16	14.0	18	123	38.5	73	388.39	14000

P	●
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→ v_c Page 135

WTX – Short 90° step drill

▲ for core hole plus countersink for thread forming



SIG 140°

Solid carbide

10 772 ...

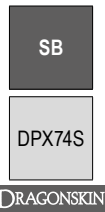
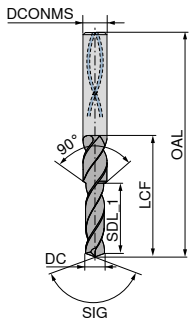
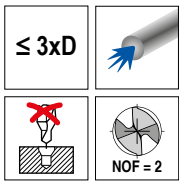
For threads	DC _{m7} mm	DCONMS _{h6} mm	OAL mm	SDL_1 mm	LCF mm	£ T4	
M3	2.80	6	62	8.8	20	68.55	02800
M4	3.70	6	62	11.4	24	84.00	03700
M5	4.65	6	66	13.6	28	86.52	04650
M6	5.55	8	79	16.5	34	122.46	05550
M8	7.45	10	89	21.0	47	177.47	07450
M10	9.30	12	102	25.5	55	234.90	09300
M12	11.20	14	107	30.0	60	302.27	11200
M14	13.00	16	115	34.5	65	345.20	13000
M16	15.00	18	123	38.5	73	388.39	15000

P	●
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→ v_c Page 135

WTX – Short 90° step drill

▲ for core hole plus countersink for thread cutting



Solid carbide

10 783 ...

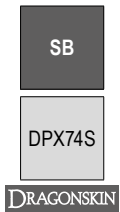
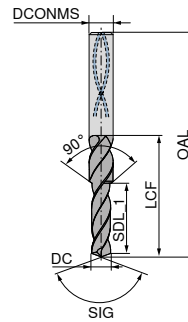
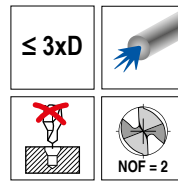
For threads	DC _{m7} mm	DCONMS _{h6} mm	OAL mm	SDL_1 mm	LCF mm	£ T4	
M4	3.3	6	62	11.4	24	88.35	03300
M5	4.2	6	66	13.6	28	92.87	04200
M6	5.0	8	79	16.5	34	117.80	05000
M8	6.8	10	89	21.0	47	191.19	06800
M10	8.5	12	102	25.5	55	235.92	08500
M12	10.2	14	107	30.0	60	330.89	10200
M14	12.0	16	115	34.5	65	401.83	12000
M16	14.0	18	123	38.5	73	415.45	14000

P	●
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→ v_c Page 135

WTX – Short 90° step drill

▲ for core hole plus countersink for thread forming



Solid carbide

10 788 ...

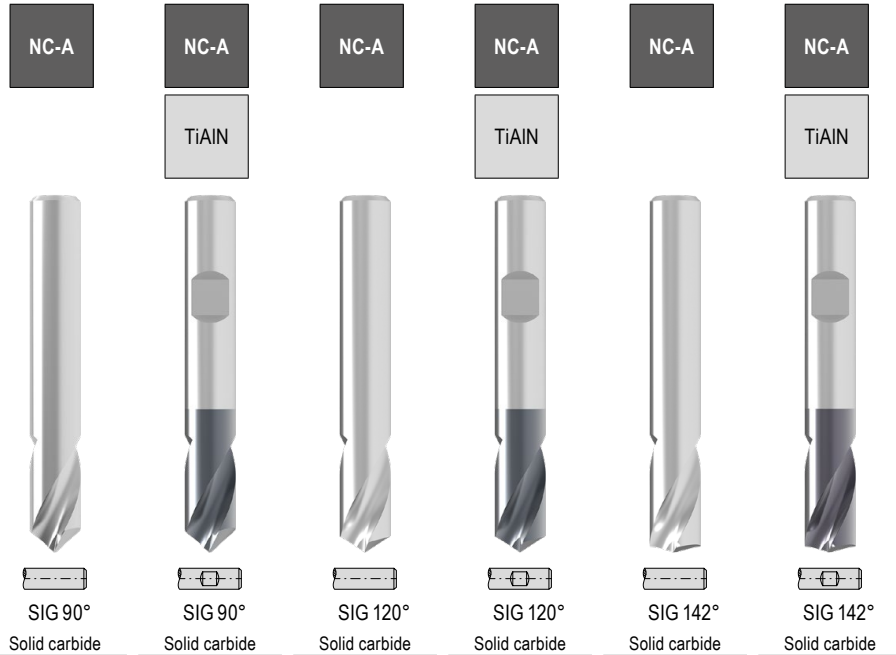
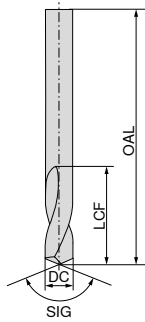
For threads	DC _{m7} mm	DCONMS _{h6} mm	OAL mm	SDL_1 mm	LCF mm	£ T4	
M4	3.70	6	62	11.4	24	88.35	03700
M5	4.65	6	66	13.6	28	92.87	04650
M6	5.55	8	79	16.5	34	117.80	05550
M8	7.45	10	89	21.0	47	191.19	07450
M10	9.30	12	102	25.5	55	235.92	09300
M12	11.20	14	107	30.0	60	330.89	11200
M14	13.00	16	115	34.5	65	401.83	13000
M16	15.00	18	123	38.5	73	415.45	15000

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→ v_c Page 135

NC Spot Drill, factory standard

▲ spiral flute

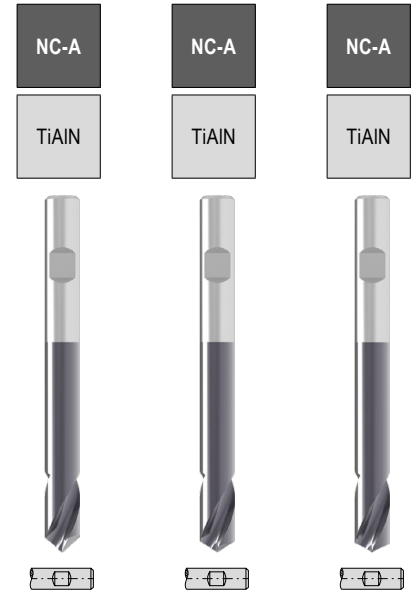
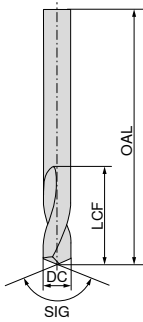


DC _{js8} mm	OAL mm	LCF mm	10 702 ...		10 716 ...		10 703 ...		10 717 ...		10 704 ...		10 718 ...	
			£ T3	002	£ T3	002	£ T3	002	£ T3	002	£ T3	002	£ T3	002
2	32	6	29.31	002	28.82	002 ¹⁾	29.31	002	28.82	002 ¹⁾	29.31	002	28.82	002 ¹⁾
3	32	8	29.31	003	28.82	003 ¹⁾	29.31	003	28.82	003 ¹⁾	29.31	003	28.82	003 ¹⁾
4	40	10	22.98	004	30.39	004 ¹⁾	22.98	004	30.39	004 ¹⁾	22.98	004	30.39	004 ¹⁾
5	50	13	26.40	005	33.60	005 ¹⁾	26.40	005	33.60	005 ¹⁾	26.40	005	33.60	005 ¹⁾
6	50	13	29.46	006	36.79	006	29.46	006	36.79	006	29.46	006	36.79	006
8	60	23	45.26	008	51.20	008	45.26	008	51.20	008	45.26	008	51.20	008
10	70	24	63.47	010	67.21	010	63.47	010	67.21	010	63.47	010	67.21	010
12	70	24	91.56	012	88.00	012	91.56	012	88.00	012	91.56	012	88.00	012
14	75	26	105.28	014	129.59	014	105.28	014	129.59	014	105.28	014	129.59	014
16	75	29	153.66	016	150.42	016	153.66	016	150.42	016	153.66	016	150.42	016
18	100	35	298.03	018	270.41	018	298.03	018	270.41	018	298.03	018	270.41	018
20	100	35	250.20	020	284.79	020	250.20	020	284.79	020	250.20	020	284.79	020
P			•		•		•		•		•		•	
M														
K			•		•		•		•		•		•	
N			•		•		•		•		•		•	
S														
H					○				○				○	
O														

1) DIN 6535 HA Shank

NC Spot Drill, factory standard, long

▲ spiral flutes



SIG 90° Solid carbide SIG 120° Solid carbide SIG 142° Solid carbide

DC _{js8} mm	OAL mm	LCF mm
3	66	8
4	74	10
6	82	13
8	91	23
10	103	24
12	118	24
16	133	29

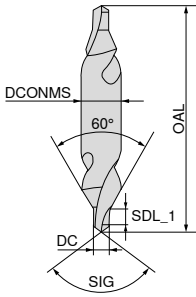
10 724 ...		10 726 ...		10 727 ...	
£		£		£	
T3		T3		T3	
30.39	003 ¹⁾	30.39	003 ¹⁾	30.39	003 ¹⁾
35.19	004 ¹⁾	35.19	004 ¹⁾	35.19	004 ¹⁾
44.80	006	44.80	006	44.80	006
65.60	008	65.60	008	65.60	008
91.20	010	91.20	010	91.20	010
137.61	012	137.61	012	137.61	012
257.60	016	257.60	016	257.60	016

P	●	●	●
M	●	●	●
K	●	●	●
N	●	●	●
S	●	●	●
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1) DIN 6535 HA Shank

Centre drills, DIN 333, form A

- ▲ Spiral-fluted
- ▲ Up to and including diameter DC of 0.8 mm suitable for use on one side only



SIG 120°
Solid carbide

10 708 ...

DC _{k13} mm	DCONMS _{h6} mm	OAL mm	SDL_1 mm	£ T3	
0.50	3.15	20.0	0.76	49.65	050 ¹⁾
0.80	3.15	20.0	1.07	49.65	080 ¹⁾
1.00	3.15	31.5	1.31	48.40	100
1.25	3.15	31.5	1.54	48.40	125
1.60	4.00	35.5	1.94	51.29	160
2.00	5.00	40.0	2.32	54.15	200
2.50	6.30	45.0	2.88	61.02	250
3.15	8.00	50.0	3.49	71.23	315
4.00	10.00	56.0	4.45	85.76	400
5.00	12.50	63.0	5.46	127.54	500
6.30	16.00	71.0	6.78	193.91	630

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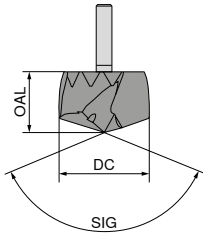
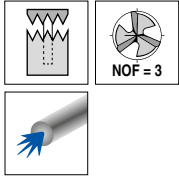
1) Single ended

WTX – Drilling Head for Exchangeable drills

- ▲ extra long head type
- ▲ three-edged

Scope of supply:

Drill head incl. differential screw



SIG 140°
Solid carbide

DC _{m7} mm	OAL mm	£ W2	10 925 ...
14.0	13.5	136.17	140
14.1	13.5	136.17	141
14.2	13.5	136.17	142
14.3	13.5	136.17	143
14.4	13.5	136.17	144
14.5	14.0	136.17	145
14.6	14.0	136.17	146
14.7	14.0	136.17	147
14.8	14.0	136.17	148
14.9	14.0	136.17	149
15.0	14.4	136.17	150
15.1	14.4	136.17	151
15.2	14.4	136.17	152
15.3	14.4	136.17	153
15.4	14.4	136.17	154
15.5	15.4	152.50	155
15.6	15.4	152.50	156
15.7	15.4	152.50	157
15.8	15.4	152.50	158
15.9	15.4	152.50	159
16.0	15.4	152.50	160
16.1	15.4	152.50	161
16.2	15.4	152.50	162
16.3	15.4	152.50	163
16.4	15.4	152.50	164
16.5	16.3	152.50	165
16.6	16.3	152.50	166
16.7	16.3	152.50	167
16.8	16.3	152.50	168
16.9	16.3	152.50	169
17.0	16.3	152.50	170
17.1	16.3	152.50	171
17.2	16.3	152.50	172
17.3	16.3	152.50	173
17.4	16.3	152.50	174
17.5	17.2	173.11	175
17.6	17.2	173.11	176
17.7	17.2	173.11	177
17.8	17.2	173.11	178
17.9	17.2	173.11	179
18.0	17.2	173.11	180
18.1	17.2	173.11	181
18.2	17.2	173.11	182
18.3	17.2	173.11	183
18.4	17.2	173.11	184
18.5	18.2	173.11	185
18.6	18.2	173.11	186
18.7	18.2	173.11	187
18.8	18.2	173.11	188
18.9	18.2	173.11	189

DC _{m7} mm	OAL mm	£ W2	10 925 ...
19.0	18.2	173.11	190
19.1	18.2	173.11	191
19.2	18.2	173.11	192
19.3	18.2	173.11	193
19.4	18.2	173.11	194
19.5	19.1	198.63	195
19.6	19.1	198.63	196
19.7	19.1	198.63	197
19.8	19.1	198.63	198
19.9	19.1	198.63	199
20.0	19.1	198.63	200
20.1	19.1	198.63	201
20.2	19.1	198.63	202
20.3	19.1	198.63	203
20.4	19.1	198.63	204
20.5	20.0	198.63	205
20.6	20.0	198.63	206
20.7	20.0	198.63	207
20.8	20.0	198.63	208
20.9	20.0	198.63	209
21.0	20.0	198.63	210
21.1	20.0	198.63	211
21.2	20.0	198.63	212
21.3	20.0	198.63	213
21.4	20.0	198.63	214
21.5	21.0	198.63	215
21.6	21.0	198.63	216
21.7	21.0	198.63	217
21.8	21.0	198.63	218
21.9	21.0	198.63	219
22.0	21.0	198.63	220
22.1	21.0	198.63	221
22.2	21.0	198.63	222
22.3	21.0	198.63	223
22.4	21.0	198.63	224
22.5	21.9	220.96	225
22.6	21.9	220.96	226
22.7	21.9	220.96	227
22.8	21.9	220.96	228
22.9	21.9	220.96	229
23.0	21.9	220.96	230
23.1	21.9	220.96	231
23.2	21.9	220.96	232
23.3	21.9	220.96	233
23.4	21.9	220.96	234
23.5	22.8	220.96	235
23.6	22.8	220.96	236
23.7	22.8	220.96	237
23.8	22.8	220.96	238
23.9	22.8	220.96	239
24.0	22.8	220.96	240
24.1	22.8	220.96	241
24.2	22.8	220.96	242
24.3	22.8	220.96	243
24.4	22.8	220.96	244
24.5	23.8	250.46	245
24.6	23.8	250.46	246
24.7	23.8	250.46	247
24.8	23.8	250.46	248
24.9	23.8	250.46	249
25.0	23.8	250.46	250

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→ v_c Page 156

→ Application recommendation on page 162

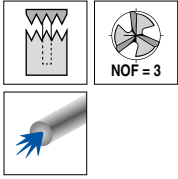
When changing the head, please observe the specified tightening torque.

WTX – Drilling Head for Exchangeable drills

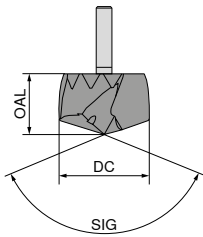
- ▲ extra long head type
- ▲ three-edged

Scope of supply:

Drill head incl. differential screw



Change Feed UNI
Ti750



SIG 140°
Solid carbide

DC _{m7} mm	OAL mm	£ W2	10 925 ...
25.1	23.8	250.46	251
25.2	23.8	250.46	252
25.3	23.8	250.46	253
25.4	23.8	250.46	254
25.5	24.7	250.46	255
25.6	24.7	250.46	256
25.7	24.7	250.46	257
25.8	24.7	250.46	258
25.9	24.7	250.46	259
26.0	24.7	250.46	260
26.1	24.7	250.46	261
26.2	24.7	250.46	262
26.3	24.7	250.46	263
26.4	24.7	250.46	264
26.5	25.6	270.18	265
26.6	25.6	270.18	266
26.7	25.6	270.18	267
26.8	25.6	270.18	268
26.9	25.6	270.18	269
27.0	25.6	270.18	270
27.1	25.6	270.18	271
27.2	25.6	270.18	272
27.3	25.6	270.18	273
27.4	25.6	270.18	274
27.5	26.6	270.18	275
27.6	26.6	270.18	276
27.7	26.6	270.18	277
27.8	26.6	270.18	278
27.9	26.6	270.18	279
28.0	26.6	270.18	280
28.1	26.6	270.18	281
28.2	26.6	270.18	282
28.3	26.6	270.18	283
28.4	26.6	270.18	284
28.5	27.5	298.02	285
28.6	27.5	298.02	286
28.7	27.5	298.02	287
28.8	27.5	298.02	288
28.9	27.5	298.02	289
29.0	27.5	298.02	290
29.1	27.5	298.02	291
29.2	27.5	298.02	292
29.3	27.5	298.02	293
29.4	27.5	298.02	294
29.5	28.4	298.02	295
29.6	28.4	298.02	296
29.7	28.4	298.02	297
29.8	28.4	298.02	298
29.9	28.4	298.02	299
30.0	28.4	298.02	300

DC _{m7} mm	OAL mm	£ W2	10 925 ...
30.1	28.4	298.02	301
30.2	28.4	298.02	302
30.3	28.4	298.02	303
30.4	28.4	298.02	304
30.5	29.3	325.33	305
30.6	29.3	325.33	306
30.7	29.3	325.33	307
30.8	29.3	325.33	308
30.9	29.3	325.33	309
31.0	29.3	325.33	310
31.1	29.3	325.33	311
31.2	29.3	325.33	312
31.3	29.3	325.33	313
31.4	29.3	325.33	314
31.5	30.3	325.33	315
31.6	30.3	325.33	316
31.7	30.3	325.33	317
31.8	30.3	325.33	318
31.9	30.3	325.33	319
32.0	30.3	325.33	320

P	•
M	
K	•
N	
S	
H	
O	

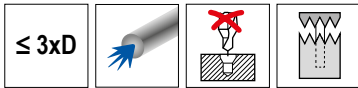
→ v_c Page 156
→ Application recommendation on page 162

i When changing the head, please observe the specified tightening torque.

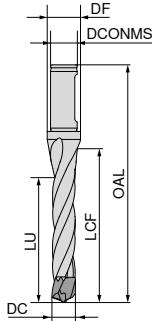
WTX – Holder for Exchangeable drills

Scope of supply:

Holder incl. blade holder and interchangeable blade



Change Feed



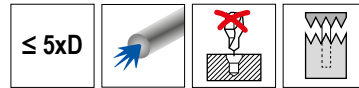
10 914 ...

DC mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	DF mm	torque moment Nm	£ W1	
14,00 - 14,49	16	120	72	48	20	0,7	355.49	140
14,50 - 14,99	16	122	74	49	20	0,7	355.49	145
15,00 - 15,49	16	124	76	51	25	0,7	355.49	150
15,50 - 16,49	20	131	81	54	25	0,7	367.31	155
16,50 - 17,49	20	135	85	58	25	0,7	367.31	165
17,50 - 18,49	20	140	90	61	25	1,3	367.31	175
18,50 - 19,49	25	150	94	64	31	1,3	432.68	185
19,50 - 20,49	25	155	99	68	31	2,0	436.59	195
20,50 - 21,49	25	159	103	71	31	2,0	478.05	205
21,50 - 22,49	25	164	108	74	31	2,0	478.05	215
22,50 - 23,49	25	168	112	78	31	2,0	523.87	225
23,50 - 24,49	25	173	117	81	31	2,0	523.87	235
24,50 - 25,49	32	182	122	84	38	3,1	589.55	245
25,50 - 26,49	32	186	126	87	38	3,1	589.55	255
26,50 - 27,49	32	191	131	91	38	3,1	589.55	265
27,50 - 28,49	32	195	135	94	38	3,1	589.55	275
28,50 - 29,49	32	200	140	97	38	5,6	679.43	285
29,50 - 30,49	32	204	144	101	38	5,6	679.43	295
30,50 - 31,49	32	209	149	104	38	5,6	743.24	305
31,50 - 32,49	32	213	153	107	38	5,6	743.24	315

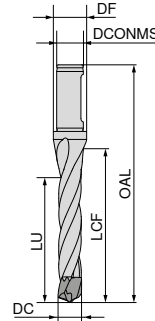
WTX – Holder for Exchangeable drills

Scope of supply:

Holder incl. blade holder and interchangeable blade



Change Feed

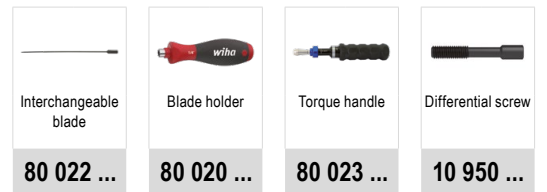


10 916 ...

DC mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	DF mm	torque moment Nm	£ W1	
14,00 - 14,49	16	149	101	77	20	0,7	392.65	140
14,50 - 14,99	16	152	104	79	20	0,7	392.65	145
15,00 - 15,49	16	155	107	82	25	0,7	392.65	150
15,50 - 16,49	20	164	114	87	25	0,7	425.20	155
16,50 - 17,49	20	170	120	93	25	0,7	425.20	165
17,50 - 18,49	20	177	127	98	25	1,3	425.20	175
18,50 - 19,49	25	189	133	103	31	1,3	486.42	185
19,50 - 20,49	25	196	140	109	31	2,0	490.18	195
20,50 - 21,49	25	202	146	114	31	2,0	534.95	205
21,50 - 22,49	25	209	153	119	31	2,0	534.95	215
22,50 - 23,49	25	215	159	124	31	2,0	576.16	225
23,50 - 24,49	25	222	166	130	31	2,0	576.16	235
24,50 - 25,49	32	233	173	135	38	3,1	640.53	245
25,50 - 26,49	32	239	179	140	38	3,1	640.53	255
26,50 - 27,49	32	246	186	146	38	3,1	640.53	265
27,50 - 28,49	32	252	192	151	38	3,1	640.53	275
28,50 - 29,49	32	259	199	156	38	5,6	728.82	285
29,50 - 30,49	32	265	205	162	38	5,6	728.82	295
30,50 - 31,49	32	272	212	167	38	5,6	791.49	305
31,50 - 32,49	32	278	218	172	38	5,6	791.49	315

Spare parts

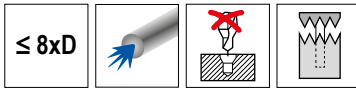
DC	80 022 ...		80 020 ...		80 023 ...		10 950 ...	
	£ W1		£ Y7		£ W1		£ W2	
14,00 - 14,49	27.29	007	44.66	025	455.83	012	8.94	064
14,50 - 14,99	27.29	007	44.66	025	455.83	012	8.94	064
15,00 - 15,49	27.29	007	44.66	025	455.83	012	8.94	064
15,50 - 16,49	27.29	007	44.66	025	455.83	012	8.94	064
16,50 - 17,49	27.29	007	44.66	025	455.83	012	8.94	064
17,50 - 18,49	27.29	008	44.66	025	487.89	060	8.94	065
18,50 - 19,49	27.29	008	44.66	025	487.89	060	8.94	065
19,50 - 20,49	31.75	010	44.66	025	487.89	060	8.94	066
20,50 - 21,49	31.75	010	44.66	025	487.89	060	8.94	066
21,50 - 22,49	31.75	010	44.66	025	487.89	060	8.94	066
22,50 - 23,49	31.75	010	44.66	025	487.89	060	8.94	066
23,50 - 24,49	31.75	010	44.66	025	487.89	060	8.94	066
24,50 - 25,49	51.30	015	44.66	025	487.89	060	8.94	067
25,50 - 26,49	51.30	015	44.66	025	487.89	060	8.94	067
26,50 - 27,49	51.30	015	44.66	025	487.89	060	8.94	067
27,50 - 28,49	51.30	015	44.66	025	487.89	060	8.94	067
28,50 - 29,49	51.30	015	44.66	025	487.89	060	8.94	068
29,50 - 30,49	51.30	015	44.66	025	487.89	060	8.94	068
30,50 - 31,49	51.30	015	44.66	025	487.89	060	8.94	068
31,50 - 32,49	51.30	015	44.66	025	487.89	060	8.94	068



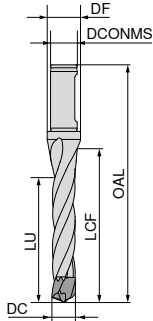
WTX – Holder for Exchangeable drills

Scope of supply:

Holder incl. blade holder and interchangeable blade



Change Feed

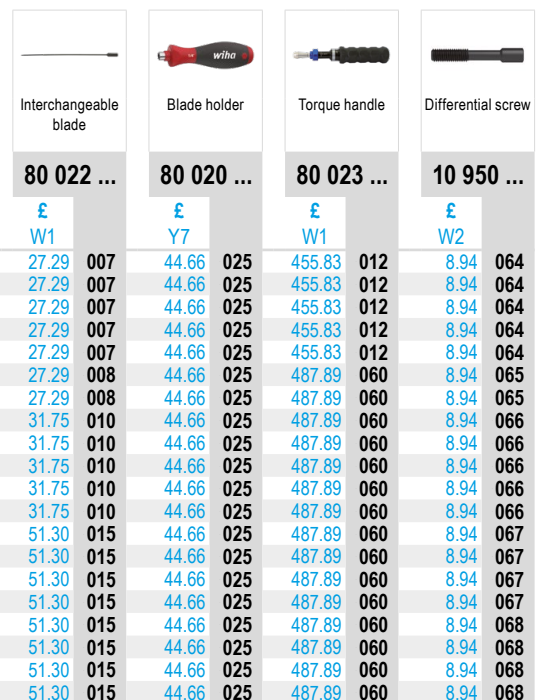


10 917 ...

DC mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	DF mm	torque moment Nm	£ W1	
14,00 - 14,49	16	192	144	120	20	0,7	513.80	14000
14,50 - 14,99	16	197	149	124	20	0,7	513.80	14500
15,00 - 15,49	16	202	154	129	25	0,7	513.80	15000
15,50 - 16,49	20	213	163	137	25	0,7	551.95	15500
16,50 - 17,49	20	223	173	145	25	0,7	551.95	16500
17,50 - 18,49	20	232	182	153	25	1,3	551.95	17500
18,50 - 19,49	25	248	192	162	31	1,3	621.46	18500
19,50 - 20,49	25	257	201	170	31	2,0	629.99	19500
20,50 - 21,49	25	267	211	178	31	2,0	672.37	20500
21,50 - 22,49	25	276	220	187	31	2,0	672.37	21500
22,50 - 23,49	25	286	230	195	31	2,0	745.77	22500
23,50 - 24,49	25	295	239	203	31	2,0	745.77	23500
24,50 - 25,49	32	309	249	212	38	3,1	804.92	24500
25,50 - 26,49	32	319	259	220	38	3,1	804.92	25500
26,50 - 27,49	32	328	268	228	38	3,1	804.92	26500
27,50 - 28,49	32	338	278	236	38	3,1	804.92	27500
28,50 - 29,49	32	342	282	245	38	5,6	923.80	28500
29,50 - 30,49	32	352	292	253	38	5,6	923.80	29500
30,50 - 31,49	32	361	301	261	38	5,6	1,018.88	30500
31,50 - 32,49	32	371	311	270	38	5,6	1,018.88	31500

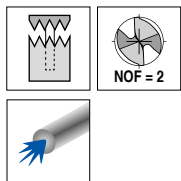
Spare parts

DC	80 022 ...		80 020 ...		80 023 ...		10 950 ...	
	£ W1		£ Y7		£ W1		£ W2	
14,00 - 14,49	27.29	007	44.66	025	455.83	012	8.94	064
14,50 - 14,99	27.29	007	44.66	025	455.83	012	8.94	064
15,00 - 15,49	27.29	007	44.66	025	455.83	012	8.94	064
15,50 - 16,49	27.29	007	44.66	025	455.83	012	8.94	064
16,50 - 17,49	27.29	007	44.66	025	455.83	012	8.94	064
17,50 - 18,49	27.29	008	44.66	025	487.89	060	8.94	065
18,50 - 19,49	27.29	008	44.66	025	487.89	060	8.94	065
19,50 - 20,49	31.75	010	44.66	025	487.89	060	8.94	066
20,50 - 21,49	31.75	010	44.66	025	487.89	060	8.94	066
21,50 - 22,49	31.75	010	44.66	025	487.89	060	8.94	066
22,50 - 23,49	31.75	010	44.66	025	487.89	060	8.94	066
23,50 - 24,49	31.75	010	44.66	025	487.89	060	8.94	066
24,50 - 25,49	51.30	015	44.66	025	487.89	060	8.94	067
25,50 - 26,49	51.30	015	44.66	025	487.89	060	8.94	067
26,50 - 27,49	51.30	015	44.66	025	487.89	060	8.94	067
27,50 - 28,49	51.30	015	44.66	025	487.89	060	8.94	067
28,50 - 29,49	51.30	015	44.66	025	487.89	060	8.94	068
29,50 - 30,49	51.30	015	44.66	025	487.89	060	8.94	068
30,50 - 31,49	51.30	015	44.66	025	487.89	060	8.94	068
31,50 - 32,49	51.30	015	44.66	025	487.89	060	8.94	068



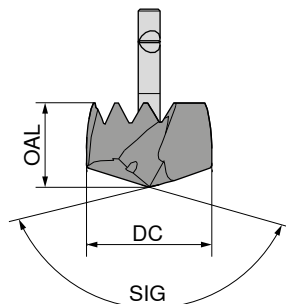
WTX – Drilling Head for Exchangeable drills

▲ extra long head type



Change UNI	Change P	Change VA	Change GG	Change AL
DPX74S	Ti750	Ti700	TiSi	TiB

DRAGONSKIN



DC _{h7/m7} mm	OAL mm	10 919 ... Solid carbide		10 923 ... Solid carbide		10 921 ... Solid carbide		10 924 ... Solid carbide		10 922 ... Solid carbide	
		£	W2	£	W2	£	W2	£	W2	£	W2
12.0	10.7	160.61	12000	160.61	120	160.61	120	160.61	120	160.61	120
12.1	10.7	160.61	12100	160.61	121	160.61	121	160.61	121	160.61	121
12.2	10.7	160.61	12200	160.61	122	160.61	122	160.61	122	160.61	122
12.3	10.7	160.61	12300	160.61	123	160.61	123	160.61	123	160.61	123
12.4	10.7	160.61	12400	160.61	124	160.61	124	160.61	124	160.61	124
12.5	10.7	160.61	12500	160.61	125	160.61	125	160.61	125	160.61	125
12.6	10.7	160.61	12600	160.61	126	160.61	126	160.61	126	160.61	126
12.7	10.7	160.61	12700	160.61	127	160.61	127	160.61	127	160.61	127
12.8	10.7	160.61	12800	160.61	128	160.61	128	160.61	128	160.61	128
12.9	10.7	160.61	12900	160.61	129	160.61	129	160.61	129	160.61	129
13.0	10.7	160.61	13000	160.61	130	160.61	130	160.61	130	160.61	130
13.1	10.7	160.61	13100	160.61	131	160.61	131	160.61	131	160.61	131
13.2	10.7	160.61	13200	160.61	132	160.61	132	160.61	132	160.61	132
13.3	10.7	160.61	13300	160.61	133	160.61	133	160.61	133	160.61	133
13.4	10.7	160.61	13400	160.61	134	160.61	134	160.61	134	160.61	134
13.5	11.3	160.61	13500	160.61	135	160.61	135	160.61	135	160.61	135
13.6	11.3	160.61	13600	160.61	136	160.61	136	160.61	136	160.61	136
13.7	11.3	160.61	13700	160.61	137	160.61	137	160.61	137	160.61	137
13.8	11.3	160.61	13800	160.61	138	160.61	138	160.61	138	160.61	138
13.9	11.3	160.61	13900	160.61	139	160.61	139	160.61	139	160.61	139
14.0	11.3	160.61	14000	160.61	140	160.61	140	160.61	140	160.61	140
14.1	11.3	160.61	14100	160.61	141	160.61	141	160.61	141	160.61	141
14.2	11.3	160.61	14200	160.61	142	160.61	142	160.61	142	160.61	142
14.3	11.3	160.61	14300	160.61	143	160.61	143	160.61	143	160.61	143
14.4	11.3	160.61	14400	160.61	144	160.61	144	160.61	144	160.61	144
14.5	11.3	160.61	14500	160.61	145	160.61	145	160.61	145	160.61	145
14.6	11.3	160.61	14600	160.61	146	160.61	146	160.61	146	160.61	146
14.7	11.3	160.61	14700	160.61	147	160.61	147	160.61	147	160.61	147
14.8	11.3	160.61	14800	160.61	148	160.61	148	160.61	148	160.61	148
14.9	11.3	160.61	14900	160.61	149	160.61	149	160.61	149	160.61	149
15.0	11.3	160.61	15000	160.61	150	160.61	150	160.61	150	160.61	150
15.1	11.3	160.61	15100	160.61	151	160.61	151	160.61	151	160.61	151
15.2	11.3	160.61	15200	160.61	152	160.61	152	160.61	152	160.61	152
15.3	11.3	160.61	15300	160.61	153	160.61	153	160.61	153	160.61	153
15.4	11.3	160.61	15400	160.61	154	160.61	154	160.61	154	160.61	154
15.5	11.9	160.61	15500	160.61	155	160.61	155	160.61	155	160.61	155
15.6	11.9	160.61	15600	160.61	156	160.61	156	160.61	156	160.61	156
15.7	11.9	160.61	15700	160.61	157	160.61	157	160.61	157	160.61	157

P	●	●	○
M			●
K	●	●	●
N			●
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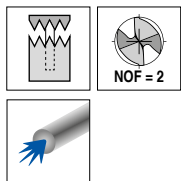
→ v_c Page 152–155

→ Application recommendation on page 162

Ø DC_{m7} for Type UNI, P, GG und AL / Ø DC_{h7} for Type VA

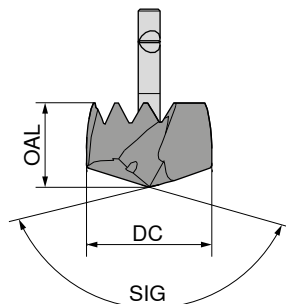
WTX – Drilling Head for Exchangeable drills

▲ extra long head type



Change UNI	Change P	Change VA	Change GG	Change AL
DPX74S	Ti750	Ti700	TiSi	TiB

DRAGONSKIN



DC _{h7/m7} mm	OAL mm	10 919 ... Solid carbide		10 923 ... Solid carbide		10 921 ... Solid carbide		10 924 ... Solid carbide		10 922 ... Solid carbide	
		£	W2	£	W2	£	W2	£	W2	£	W2
15.8	11.9	160.61	15800	160.61	158	160.61	158	160.61	158	160.61	158
15.9	11.9	160.61	15900	160.61	159	160.61	159	160.61	159	160.61	159
16.0	11.9	160.61	16000	160.61	160	160.61	160	160.61	160	160.61	160
16.1	11.9	160.61	16100	160.61	161	160.61	161	160.61	161	160.61	161
16.2	11.9	160.61	16200	160.61	162	160.61	162	160.61	162	160.61	162
16.3	11.9	160.61	16300	160.61	163	160.61	163	160.61	163	160.61	163
16.4	11.9	160.61	16400	160.61	164	160.61	164	160.61	164	160.61	164
16.5	13.4	160.61	16500	160.61	165	160.61	165	160.61	165	160.61	165
16.6	13.4	160.61	16600	160.61	166	160.61	166	160.61	166	160.61	166
16.7	13.4	160.61	16700	160.61	167	160.61	167	160.61	167	160.61	167
16.8	13.4	160.61	16800	160.61	168	160.61	168	160.61	168	160.61	168
16.9	13.4	160.61	16900	160.61	169	160.61	169	160.61	169	160.61	169
17.0	13.4	160.61	17000	160.61	170	160.61	170	160.61	170	160.61	170
17.1	13.4	160.61	17100	160.61	171	160.61	171	160.61	171	160.61	171
17.2	13.4	160.61	17200	160.61	172	160.61	172	160.61	172	160.61	172
17.3	13.4	160.61	17300	160.61	173	160.61	173	160.61	173	160.61	173
17.4	13.4	160.61	17400	160.61	174	160.61	174	160.61	174	160.61	174
17.5	13.4	160.61	17500	160.61	175	160.61	175	160.61	175	160.61	175
17.6	13.4	160.61	17600	160.61	176	160.61	176	160.61	176	160.61	176
17.7	13.4	160.61	17700	160.61	177	160.61	177	160.61	177	160.61	177
17.8	13.4	160.61	17800	160.61	178	160.61	178	160.61	178	160.61	178
17.9	13.4	160.61	17900	160.61	179	160.61	179	160.61	179	160.61	179
18.0	13.4	160.61	18000	160.61	180	160.61	180	160.61	180	160.61	180
18.1	13.4	174.76	18100	174.76	181	174.76	181	174.76	181	174.76	181
18.2	13.4	174.76	18200	174.76	182	174.76	182	174.76	182	174.76	182
18.3	13.4	174.76	18300	174.76	183	174.76	183	174.76	183	174.76	183
18.4	13.4	174.76	18400	174.76	184	174.76	184	174.76	184	174.76	184
18.5	13.4	174.76	18500	174.76	185	174.76	185	174.76	185	174.76	185
18.6	13.4	174.76	18600	174.76	186	174.76	186	174.76	186	174.76	186
18.7	13.4	174.76	18700	174.76	187	174.76	187	174.76	187	174.76	187
18.8	13.4	174.76	18800	174.76	188	174.76	188	174.76	188	174.76	188
18.9	13.4	174.76	18900	174.76	189	174.76	189	174.76	189	174.76	189
19.0	13.4	174.76	19000	174.76	190	174.76	190	174.76	190	174.76	190
19.1	13.4	174.76	19100	174.76	191	174.76	191	174.76	191	174.76	191
19.2	13.4	174.76	19200	174.76	192	174.76	192	174.76	192	174.76	192
19.3	13.4	174.76	19300	174.76	193	174.76	193	174.76	193	174.76	193
19.4	13.4	174.76	19400	174.76	194	174.76	194	174.76	194	174.76	194
19.5	13.4	174.76	19500	174.76	195	174.76	195	174.76	195	174.76	195

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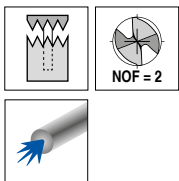
→ v_c Page 152–155

→ Application recommendation on page 162

Ø DC_{m7} for Type UNI, P, GG und AL / Ø DC_{h7} for Type VA

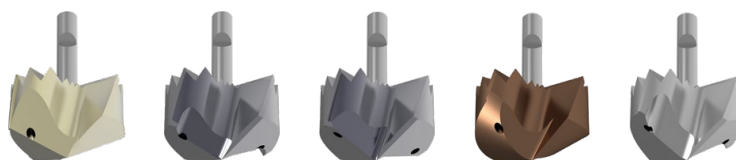
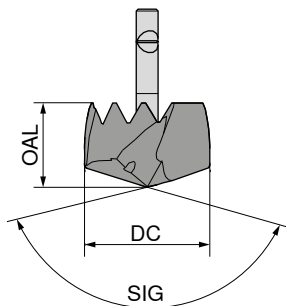
WTX – Drilling Head for Exchangeable drills

▲ extra long head type



Change UNI	Change P	Change VA	Change GG	Change AL
DPX74S	Ti750	Ti700	TiSi	TiB

DRAGONSKIN



DC _{h7/m7} mm	OAL mm	10 919 ... Solid carbide		10 923 ... Solid carbide		10 921 ... Solid carbide		10 924 ... Solid carbide		10 922 ... Solid carbide	
		£ W2		£ W2		£ W2		£ W2		£ W2	
19.6	13.4	174.76	19600	174.76	196	174.76	196	174.76	196	174.76	196
19.7	13.4	174.76	19700	174.76	197	174.76	197	174.76	197	174.76	197
19.8	13.4	174.76	19800	174.76	198	174.76	198	174.76	198	174.76	198
19.9	13.4	174.76	19900	174.76	199	174.76	199	174.76	199	174.76	199
20.0	13.4	174.76	20000	174.76	200	174.76	200	174.76	200	174.76	200
20.1	13.4	193.12	20100	193.12	201	193.12	201	193.12	201	145.62	201
20.2	13.4	193.12	20200	193.12	202	193.12	202	193.12	202	193.12	202
20.3	13.4	193.12	20300	193.12	203	193.12	203	193.12	203	193.12	203
20.4	13.4	193.12	20400	193.12	204	193.12	204	193.12	204	193.12	204
20.5	15.4	193.12	20500	193.12	205	193.12	205	193.12	205	193.12	205
20.6	15.4	193.12	20600	193.12	206	193.12	206	193.12	206	193.12	206
20.7	15.4	193.12	20700	193.12	207	193.12	207	193.12	207	193.12	207
20.8	15.4	193.12	20800	193.12	208	193.12	208	193.12	208	193.12	208
20.9	15.4	193.12	20900	193.12	209	193.12	209	193.12	209	193.12	209
21.0	15.4	193.12	21000	193.12	210	193.12	210	193.12	210	193.12	210
21.1	15.4	193.12	21100	193.12	211	193.12	211	193.12	211	193.12	211
21.2	15.4	193.12	21200	193.12	212	193.12	212	193.12	212	193.12	212
21.3	15.4	193.12	21300	193.12	213	193.12	213	193.12	213	193.12	213
21.4	15.4	193.12	21400	193.12	214	193.12	214	193.12	214	193.12	214
21.5	15.4	193.12	21500	193.12	215	193.12	215	193.12	215	193.12	215
21.6	15.4	193.12	21600	193.12	216	193.12	216	193.12	216	193.12	216
21.7	15.4	193.12	21700	193.12	217	193.12	217	193.12	217	193.12	217
21.8	15.4	193.12	21800	193.12	218	193.12	218	193.12	218	193.12	218
21.9	15.4	193.12	21900	193.12	219	193.12	219	193.12	219	193.12	219
22.0	15.4	193.12	22000	193.12	220	193.12	220	193.12	220	193.12	220
22.1	15.4	207.27	22100	207.27	221	207.27	221	207.27	221	207.27	221
22.2	15.4	207.27	22200	207.27	222	207.27	222	207.27	222	207.27	222
22.3	15.4	207.27	22300	207.27	223	207.27	223	207.27	223	207.27	223
22.4	15.4	207.27	22400	207.27	224	207.27	224	207.27	224	207.27	224
22.5	15.4	207.27	22500	207.27	225	207.27	225	207.27	225	207.27	225
22.6	15.4	207.27	22600	207.27	226	207.27	226	207.27	226	207.27	226
22.7	15.4	207.27	22700	207.27	227	207.27	227	207.27	227	207.27	227
22.8	15.4	207.27	22800	207.27	228	207.27	228	207.27	228	207.27	228
22.9	15.4	207.27	22900	207.27	229	207.27	229	207.27	229	207.27	229
23.0	15.4	207.27	23000	207.27	230	207.27	230	207.27	230	207.27	230
23.1	15.4	207.27	23100	207.27	231	207.27	231	207.27	231	207.27	231
23.2	15.4	207.27	23200	207.27	232	207.27	232	207.27	232	207.27	232
23.3	15.4	207.27	23300	207.27	233	207.27	233	207.27	233	207.27	233

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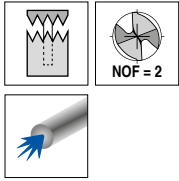
→ v_c Page 152–155

→ Application recommendation on page 162

Ø DC_{m7} for Type UNI, P, GG und AL / Ø DC_{h7} for Type VA

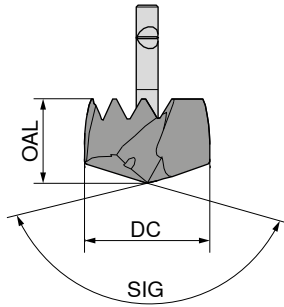
WTX – Drilling Head for Exchangeable drills

▲ extra long head type



Change UNI	Change P	Change VA	Change GG	Change AL
DPX74S	Ti750	Ti700	TiSi	TiB

DRAGONSKIN



DC _{h7/m7} mm	OAL mm	10 919 ...		10 923 ...		10 921 ...		10 924 ...		10 922 ...	
		£	W2	£	W2	£	W2	£	W2	£	W2
23.4	15.4	207.27	23400	207.27	234	207.27	234	207.27	234	207.27	234
23.5	15.4	207.27	23500	207.27	235	207.27	235	207.27	235	207.27	235
23.6	15.4	207.27	23600	207.27	236	207.27	236	207.27	236	207.27	236
23.7	15.4	207.27	23700	207.27	237	207.27	237	207.27	237	207.27	237
23.8	15.4	207.27	23800	207.27	238	207.27	238	207.27	238	207.27	238
23.9	15.4	207.27	23900	207.27	239	207.27	239	207.27	239	207.27	239
24.0	15.4	207.27	24000	207.27	240	207.27	240	207.27	240	207.27	240
24.1	15.4	225.64	24100	217.12	241	239.76	241	217.12	241	239.76	241
24.2	15.4	225.64	24200	217.12	242	239.76	242	217.12	242	239.76	242
24.3	15.4	225.64	24300	217.12	243	239.76	243	217.12	243	239.76	243
24.4	15.4	225.64	24400	217.12	244	239.76	244	217.12	244	239.76	244
24.5	17.4	225.64	24500	225.64	245	239.76	245	225.64	245	239.76	245
24.6	17.4	225.64	24600	225.64	246	239.76	246	225.64	246	239.76	246
24.7	17.4	225.64	24700	225.64	247	239.76	247	225.64	247	239.76	247
24.8	17.4	225.64	24800	225.64	248	239.76	248	225.64	248	239.76	248
24.9	17.4	225.64	24900	225.64	249	239.76	249	225.64	249	239.76	249
25.0	17.4	225.64	25000	225.64	250	239.76	250	225.64	250	239.76	250
25.1	17.4	225.64	25100	225.64	251	239.76	251	225.64	251	239.76	251
25.2	17.4	225.64	25200	225.64	252	239.76	252	225.64	252	239.76	252
25.3	17.4	225.64	25300	225.64	253	239.76	253	225.64	253	239.76	253
25.4	17.4	225.64	25400	225.64	254	239.76	254	225.64	254	239.76	254
25.5	17.4	225.64	25500	225.64	255	239.76	255	225.64	255	239.76	255
25.6	17.4	239.76	25600	239.76	256	239.76	256	239.76	256	239.76	256
25.7	17.4	239.76	25700	239.76	257	239.76	257	239.76	257	239.76	257
25.8	17.4	239.76	25800	239.76	258	239.76	258	239.76	258	239.76	258
25.9	17.4	239.76	25900	239.76	259	239.76	259	239.76	259	239.76	259
26.0	17.4	239.76	26000	239.76	260	239.76	260	239.76	260	239.76	260
26.1	17.4	239.76	26100	239.76	261	239.76	261	239.76	261	239.76	261
26.2	17.4	239.76	26200	239.76	262	239.76	262	239.76	262	239.76	262
26.3	17.4	239.76	26300	239.76	263	239.76	263	239.76	263	239.76	263
26.4	17.4	239.76	26400	239.76	264	239.76	264	239.76	264	239.76	264
26.5	17.4	239.76	26500	239.76	265	239.76	265	239.76	265	239.76	265
26.6	17.4	239.76	26600	239.76	266	239.76	266	239.76	266	239.76	266
26.7	17.4	239.76	26700	239.76	267	239.76	267	239.76	267	239.76	267
26.8	17.4	239.76	26800	239.76	268	239.76	268	239.76	268	239.76	268
26.9	17.4	239.76	26900	239.76	269	239.76	269	239.76	269	239.76	269
27.0	17.4	239.76	27000	239.76	270	239.76	270	239.76	270	239.76	270
27.1	17.4	239.76	27100	239.76	271	239.76	271	239.76	271	239.76	271

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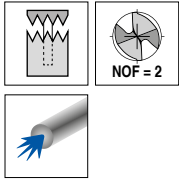
→ v_c Page 152–155

→ Application recommendation on page 162

Ø DC_{m7} for Type UNI, P, GG und AL / Ø DC_{h7} for Type VA

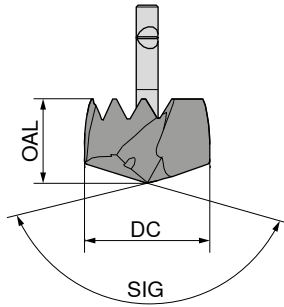
WTX – Drilling Head for Exchangeable drills

▲ extra long head type



Change UNI	Change P	Change VA	Change GG	Change AL
DPX74S	Ti750	Ti700	TiSi	TiB

DRAGONSKIN



DC _{h7/m7} mm	OAL mm	10 919 ... Solid carbide		10 923 ... Solid carbide		10 921 ... Solid carbide		10 924 ... Solid carbide		10 922 ... Solid carbide	
		£ W2		£ W2		£ W2		£ W2		£ W2	
27.2	17.4	239.76	27200	239.76	272	239.76	272	239.76	272	239.76	272
27.3	17.4	239.76	27300	239.76	273	239.76	273	239.76	273	239.76	273
27.4	17.4	239.76	27400	239.76	274	239.76	274	239.76	274	239.76	274
27.5	17.4	239.76	27500	239.76	275	239.76	275	239.76	275	239.76	275
27.6	17.4	239.76	27600	239.76	276	239.76	276	239.76	276	239.76	276
27.7	17.4	239.76	27700	239.76	277	239.76	277	239.76	277	239.76	277
27.8	17.4	239.76	27800	239.76	278	239.76	278	239.76	278	239.76	278
27.9	17.4	239.76	27900	239.76	279	239.76	279	239.76	279	239.76	279
28.0	17.4	239.76	28000	239.76	280	239.76	280	239.76	280	239.76	280
28.1	17.4	262.21	28100	262.21	281	262.21	281	262.21	281	262.21	281
28.2	17.4	262.21	28200	262.21	282	262.21	282	262.21	282	262.21	282
28.3	17.4	262.21	28300	262.21	283	262.21	283	262.21	283	262.21	283
28.4	17.4	262.21	28400	262.21	284	262.21	284	262.21	284	262.21	284
28.5	18.4	262.21	28500	262.21	285	262.21	285	262.21	285	262.21	285
28.6	18.4	262.21	28600	262.21	286	262.21	286	262.21	286	262.21	286
28.7	18.4	262.21	28700	262.21	287	262.21	287	262.21	287	262.21	287
28.8	18.4	262.21	28800	262.21	288	262.21	288	262.21	288	262.21	288
28.9	18.4	262.21	28900	262.21	289	262.21	289	262.21	289	262.21	289
29.0	18.4	262.21	29000	262.21	290	262.21	290	262.21	290	262.21	290
29.1	18.4	262.21	29100	262.21	291	262.21	291	262.21	291	262.21	291
29.2	18.4	262.21	29200	262.21	292	262.21	292	262.21	292	262.21	292
29.3	18.4	262.21	29300	262.21	293	262.21	293	262.21	293	262.21	293
29.4	18.4	262.21	29400	262.21	294	262.21	294	262.21	294	262.21	294
29.5	18.4	262.21	29500	262.21	295	262.21	295	262.21	295	262.21	295
29.6	18.4	262.21	29600	262.21	296	262.21	296	262.21	296	262.21	296
29.7	18.4	262.21	29700	262.21	297	262.21	297	262.21	297	262.21	297
29.8	18.4	262.21	29800	262.21	298	262.21	298	262.21	298	262.21	298
29.9	18.4	262.21	29900	262.21	299	262.21	299	262.21	299	262.21	299
30.0	18.4	262.21	30000	262.21	300	262.21	300	262.21	300	262.21	300
30.1	18.4	292.59	30100	292.59	301	292.59	301	292.59	301	292.59	301
30.2	18.4	292.59	30200	292.59	302	292.59	302	292.59	302	292.59	302
30.3	18.4	292.59	30300	292.59	303	292.59	303	292.59	303	292.59	303
30.4	18.4	292.59	30400	292.59	304	292.59	304	292.59	304	292.59	304
30.5	18.4	292.59	30500	292.59	305	292.59	305	292.59	305	292.59	305
30.6	18.4	292.59	30600	292.59	306	292.59	306	292.59	306	292.59	306
30.7	18.4	292.59	30700	292.59	307	292.59	307	292.59	307	292.59	307
30.8	18.4	292.59	30800	292.59	308	292.59	308	292.59	308	292.59	308
30.9	18.4	292.59	30900	292.59	309	292.59	309	292.59	309	292.59	309

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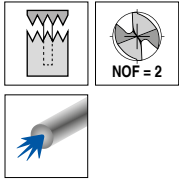
→ v_c Page 152–155

→ Application recommendation on page 162

Ø DC_{m7} for Type UNI, P, GG und AL / Ø DC_{h7} for Type VA

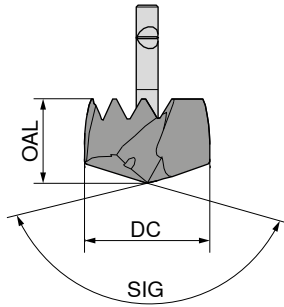
WTX – Drilling Head for Exchangeable drills

▲ extra long head type



Change UNI	Change P	Change VA	Change GG	Change AL
DPX74S	Ti750	Ti700	TiSi	TiB

DRAGONSKIN



DC _{m7/m7} mm	OAL mm	SIG 140° Solid carbide		SIG 138° Solid carbide		SIG 138° Solid carbide		SIG 140° Solid carbide		SIG 140° Solid carbide	
		10 919 ...	10 923 ...	10 921 ...	10 924 ...	10 922 ...					
		£ W2	£ W2	£ W2	£ W2	£ W2	£ W2	£ W2	£ W2	£ W2	£ W2
31.0	18.4	292.59	31000	292.59	310	292.59	310	292.59	310	292.59	310
31.1	18.4	292.59	31100	292.59	311	292.59	311	292.59	311	292.59	311
31.2	18.4	292.59	31200	292.59	312	292.59	312	292.59	312	292.59	312
31.3	18.4	292.59	31300	292.59	313	292.59	313	292.59	313	292.59	313
31.4	18.4	292.59	31400	292.59	314	292.59	314	292.59	314	292.59	314
31.5	18.4	292.59	31500	292.59	315	292.59	315	292.59	315	292.59	315
31.6	18.4	292.59	31600	292.59	316	292.59	316	292.59	316	292.59	316
31.7	18.4	292.59	31700	292.59	317	292.59	317	292.59	317	292.59	317
31.8	18.4	292.59	31800	292.59	318	292.59	318	292.59	318	292.59	318
31.9	18.4	292.59	31900	292.59	319	292.59	319	292.59	319	292.59	319
32.0	18.4	292.59	32000	292.59	320	292.59	320	292.59	320	292.59	320
32.5	24.3	313.19	32500	313.19	325						
33.0	24.3	313.19	33000	313.19	330						
33.5	24.3	313.19	33500	313.19	335						
34.0	24.3	313.19	34000	313.19	340						
34.5	24.3	313.19	34500	313.19	345						
35.0	24.3	313.19	35000	313.19	350						
35.5	26.3	358.21	35500	358.21	355						
36.0	26.3	358.21	36000	358.21	360						
36.5	26.3	358.21	36500	358.21	365						
37.0	26.3	358.21	37000	358.21	370						
37.5	26.3	358.21	37500	358.21	375						
38.0	26.3	358.21	38000	358.21	380						
38.5	26.3	389.36	38500	389.36	385						
39.0	26.3	389.36	39000	389.36	390						
39.5	26.3	389.36	39500	389.36	395						
40.0	26.3	389.36	40000	389.36	400						
40.5	26.3	389.36	40500	389.36	405						
41.0	26.3	389.36	41000	389.36	410						

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→ v_c Page 152–155
→ Application recommendation on page 162

Ø DC_{m7} for Type UNI, P, GG und AL / Ø DC_{n7} for Type VA

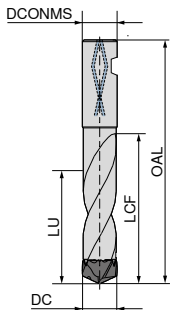
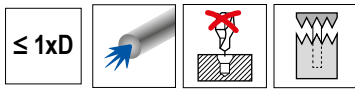
When changing the head, please observe the specified tightening torque.

WTX – Holder for Exchangeable drills

▲ with radial teeth

Scope of supply:

Holder incl. screw driver

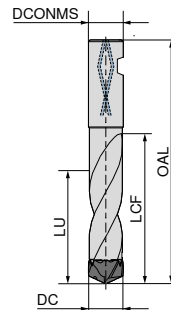
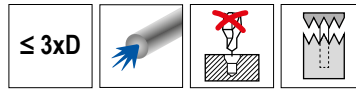


WTX – Holder for Exchangeable drills

▲ with radial teeth

Scope of supply:

Holder incl. screw driver



10 911 ...

DC mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	torque moment Nm	£ W1	
12,00 - 12,49	14	81	29	12.5	1.0	313.19	120
12,50 - 12,99	14	81	29	13.0	1.0	313.19	125
13,00 - 13,49	14	81	31	13.5	1.0	313.19	130
13,50 - 13,99	16	86	32	14.0	1.3	313.19	135
14,00 - 14,49	16	86	33	14.5	1.3	313.19	140
14,50 - 14,99	16	91	34	15.0	1.3	313.19	145
15,00 - 15,49	16	91	36	15.5	1.3	313.19	150
15,50 - 16,49	20	97	38	16.5	1.3	323.59	161
15,50 - 16,49	18	92	38	16.5	1.3	323.59	160
16,50 - 17,49	20	99	40	17.5	3.5	323.59	166
16,50 - 17,49	18	94	40	17.5	3.5	323.59	165
17,50 - 18,49	20	104	43	18.5	3.5	323.59	176
17,50 - 18,49	18	99	43	18.5	3.5	323.59	175
18,50 - 19,49	20	99	45	19.5	3.5	382.42	185
19,50 - 20,49	20	104	47	20.5	3.5	382.42	195
20,50 - 21,49	25	111	49	21.5	3.5	423.94	205
21,50 - 22,49	25	116	52	22.5	3.5	423.94	215
22,50 - 23,49	25	116	54	23.5	3.5	463.77	225
23,50 - 24,49	25	121	56	24.5	4.0	463.77	235
24,50 - 25,49	25	123	59	25.5	4.0	503.54	245
25,50 - 26,49	25	123	61	26.5	4.0	503.54	255
26,50 - 27,49	25	128	63	27.5	4.0	503.54	265
27,50 - 28,49	25	128	66	28.5	4.0	503.54	275
28,50 - 29,49	32	134	68	29.5	4.0	584.87	285
29,50 - 30,49	32	139	70	30.5	4.0	584.87	295
30,50 - 31,49	32	139	75	31.5	4.0	645.44	305
31,50 - 32,49	32	139	75	32.5	4.0	645.44	315
32,50 - 33,49	32	150	78	33.5	6.0	695.62	325
33,50 - 34,49	32	150	79	34.5	6.0	695.62	335
34,50 - 35,49	32	150	82	35.5	6.0	695.62	345
35,50 - 37,49	32	152	86	37.5	6.0	801.17	355
37,50 - 39,49	32	157	91	39.5	6.0	830.61	375
39,50 - 41,00	32	167	95	41.5	6.0	851.37	395

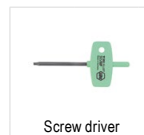
10 913 ...

DC mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	torque moment Nm	£ W1	
12,00 - 12,49	14	100	53	38.0	1.0	354.12	120
12,50 - 12,99	14	105	55	39.0	1.0	354.12	125
13,00 - 13,49	14	105	57	40.0	1.0	354.12	130
13,50 - 13,99	16	110	59	42.0	1.3	354.12	135
14,00 - 14,49	16	115	61	43.0	1.3	354.12	140
14,50 - 14,99	16	115	63	45.0	1.3	354.12	145
15,00 - 15,49	16	115	65	46.0	1.3	354.12	150
15,50 - 16,49	18	120	70	50.0	1.3	345.43	160
15,50 - 16,49	20	125	70	50.0	1.3	345.43	161
16,50 - 17,49	18	125	74	53.0	3.5	345.43	165
16,50 - 17,49	20	130	74	50.0	3.5	345.43	166
17,50 - 18,49	18	130	78	55.0	3.5	345.43	175
17,50 - 18,49	20	135	78	50.0	3.5	345.43	176
18,50 - 19,49	20	135	82	58.0	3.5	408.50	185
19,50 - 20,49	20	140	87	62.0	3.5	408.50	195
20,50 - 21,49	25	150	91	65.0	3.5	451.08	205
21,50 - 22,49	25	155	95	67.0	3.5	451.08	215
22,50 - 23,49	25	160	99	70.0	3.5	493.84	225
23,50 - 24,49	25	165	103	73.0	3.5	493.84	235
24,50 - 25,49	25	165	108	77.0	4.0	536.37	245
25,50 - 26,49	25	175	112	80.0	4.0	536.37	255
26,50 - 27,49	25	175	116	82.0	4.0	536.37	265
27,50 - 28,49	25	180	120	85.0	4.0	536.37	275
28,50 - 29,49	32	190	124	88.0	4.0	621.74	285
29,50 - 30,49	32	195	129	92.0	4.0	621.74	295
30,50 - 31,49	32	195	133	94.0	4.0	686.76	305
31,50 - 32,49	32	200	137	97.0	4.0	686.76	315
32,50 - 33,49	32	210	144	100.5	6.0	809.83	325
33,50 - 34,49	32	215	148	103.5	6.0	809.83	335
34,50 - 35,49	32	220	153	106.5	6.0	809.83	345
35,50 - 37,49	32	227	161	112.5	6.0	930.96	355
37,50 - 39,49	32	237	170	118.5	6.0	965.58	375
39,50 - 41,00	32	247	178	124.5	6.0	989.80	395



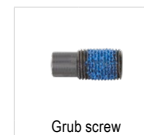
80 950 ...

Spare parts	DC	SW	£ Y7	
	12,00 - 12,49	SW 1,3	4.78	132
	12,50 - 13,49	SW 1,3	4.78	132
	13,50 - 14,49			
	14,50 - 16,49			
	16,50 - 20,49			
	20,50 - 24,49			
	24,50 - 28,49			
	28,50 - 32,49			
	32,50 - 35,49			
	35,50 - 39,49			
	39,50 - 41,00			



80 950 ...

SW	£ Y7	
SW 1,5	6.22	133
SW 1,5	6.22	133
SW 2	5.92	134
SW 2	5.92	134
SW 2,5	5.56	135
SW 2,5	5.56	135
SW 3	5.56	136
SW 3	5.56	136
SW 3	5.56	136



10 950 ...

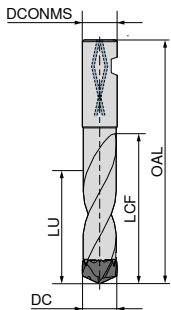
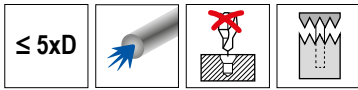
Metric	£ W1	
M2,5 x 0,45 x 5	5.54	025
M2,5 x 0,45 x 6	5.54	026
M3 x 0,5 x 6	5.54	031
M3 x 0,5 x 7	5.72	030
M4 x 0,5 x 7,5	5.72	040
M4 x 0,5 x 10	5.72	041
M5 x 0,5 x 11	5.72	050
M5 x 0,5 x 14	5.72	051
M6 x 0,5 x 16	10.21	060
M6 x 0,5 x 18	10.21	061
M6 x 0,5 x 20	10.21	062

WTX – Holder for Exchangeable drills

▲ with radial teeth

Scope of supply:

Holder incl. screw driver



10 915 ...

DC mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	torque moment Nm	£ W1	
12,00 - 12,49	14	125	78	62,0	1,0	398.64	120
12,50 - 12,99	14	130	81	65,0	1,0	398.64	125
13,00 - 13,49	14	130	84	67,0	1,0	398.64	130
13,50 - 13,99	16	140	88	70,0	1,3	398.64	135
14,00 - 14,49	16	140	90	72,0	1,3	398.64	140
14,50 - 14,99	16	145	94	75,0	1,3	398.64	145
15,00 - 15,49	16	145	96	77,0	1,3	398.64	150
15,50 - 16,49	18	155	103	82,0	1,3	408.50	160
15,50 - 16,49	20	160	103	82,0	1,3	408.50	161
16,50 - 17,49	18	160	109	87,0	3,5	408.50	165
16,50 - 17,49	20	165	109	87,0	3,5	408.50	166
17,50 - 18,49	18	165	115	92,0	3,5	408.50	175
17,50 - 18,49	20	170	115	92,0	3,5	408.50	176
18,50 - 19,49	20	175	121	97,0	3,5	473.51	185
19,50 - 20,49	20	180	128	102,0	3,5	473.51	195
20,50 - 21,49	25	195	134	107,0	3,5	514.16	205
21,50 - 22,49	25	200	140	112,0	3,5	514.16	215
22,50 - 23,49	25	205	146	117,0	3,5	558.84	225
23,50 - 24,49	25	210	152	122,0	3,5	558.84	235
24,50 - 25,49	25	220	159	127,0	4,0	601.43	245
25,50 - 26,49	25	225	165	132,0	4,0	601.43	255
26,50 - 27,49	25	230	171	137,0	4,0	601.43	265
27,50 - 28,49	25	240	177	142,0	4,0	601.43	275
28,50 - 29,49	32	250	183	146,0	4,0	686.76	285
29,50 - 30,49	32	255	190	152,0	4,0	686.76	295
30,50 - 31,49	32	260	196	157,0	4,0	749.81	305
31,50 - 32,49	32	265	202	162,0	4,0	749.81	315
32,50 - 33,49	32	275	210	167,5	6,0	915.38	325
33,50 - 34,49	32	285	217	172,5	6,0	915.38	335
34,50 - 35,49	32	290	224	177,5	6,0	915.38	345
35,50 - 37,49	32	302	236	187,5	6,0	1,029.57	355
37,50 - 39,49	32	317	249	197,5	6,0	1,067.68	375
39,50 - 41,00	32	327	261	207,5	6,0	1,091.86	395

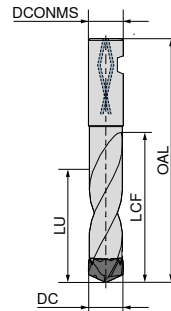
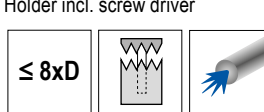
WTX – Holder for Exchangeable drills

▲ Pilot hole is recommended

▲ With radial teeth

Scope of supply:

Holder incl. screw driver



10 918 ...

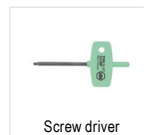
DC mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	torque moment Nm	£ W1	
12,00 - 12,49	14	165	116	100	1,0	506.99	120
12,50 - 12,99	14	170	121	104	1,0	506.99	125
13,00 - 13,49	14	175	126	108	1,0	506.99	130
13,50 - 13,99	16	180	129	111	1,3	506.99	135
14,00 - 14,49	16	185	134	115	1,3	506.99	140
14,50 - 14,99	16	190	139	120	1,3	506.99	145
15,00 - 15,49	16	195	144	124	1,3	506.99	150
15,50 - 16,49	18	205	152	131	1,3	516.66	160
15,50 - 16,49	20	210	152	131	1,3	516.66	161
16,50 - 17,49	18	215	161	138	3,5	516.66	165
16,50 - 17,49	20	220	161	138	3,5	516.66	166
17,50 - 18,49	18	220	171	147	3,5	516.66	175
17,50 - 18,49	20	225	171	147	3,5	516.66	176
18,50 - 19,49	20	235	180	155	3,5	594.07	185
19,50 - 20,49	20	240	189	163	3,5	594.07	195
20,50 - 21,49	25	260	198	170	3,5	646.31	205
21,50 - 22,49	25	270	207	178	3,5	646.31	215
22,50 - 23,49	25	275	217	187	3,5	725.66	225
23,50 - 24,49	25	285	226	194	3,5	725.66	235
24,50 - 25,49	25	295	235	202	4,0	830.13	245
25,50 - 26,49	25	305	244	210	4,0	830.13	255
26,50 - 27,49	25	315	253	218	4,0	830.13	265
27,50 - 28,49	25	325	263	226	4,0	830.13	275
28,50 - 29,49	32	340	272	234	4,0	959.78	285
29,50 - 30,49	32	345	281	242	4,0	959.78	295
30,50 - 31,49	32	355	290	249	4,0	1,064.29	305
31,50 - 32,00	32	360	299	257	4,0	1,064.29	315



Screw driver

80 950 ...

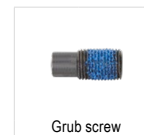
Spare parts	DC	SW	£ Y7	
12,00 - 12,49	SW 1,3	4.78	132	
12,50 - 13,49	SW 1,3	4.78	132	
13,50 - 14,49				
14,50 - 16,49				
16,50 - 20,49				
20,50 - 24,49				
24,50 - 28,49				
28,50 - 32,49				
32,50 - 35,49				
35,50 - 39,49				
39,50 - 41,00				



Screw driver

80 950 ...

Spare parts	SW	£ Y7	
SW 1,5	6.22	133	
SW 1,5	6.22	133	
SW 2	5.92	134	
SW 2	5.92	134	
SW 2,5	5.56	135	
SW 2,5	5.56	135	
SW 3	5.56	136	
SW 3	5.56	136	
SW 3	5.56	136	



Grub screw

10 950 ...

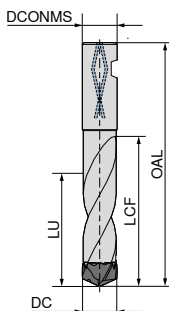
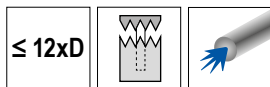
Spare parts	£ W1	
M2,5 x 0,45 x 5	5.54	025
M2,5 x 0,45 x 6	5.54	026
M3 x 0,5 x 6	5.54	031
M3 x 0,5 x 7	5.72	030
M4 x 0,5 x 7,5	5.72	040
M4 x 0,5 x 10	5.72	041
M5 x 0,5 x 11	5.72	050
M5 x 0,5 x 14	5.72	051
M6 x 0,5 x 16	10.21	060
M6 x 0,5 x 18	10.21	061
M6 x 0,5 x 20	10.21	062

WTX – Holder for Exchangeable drills

- ▲ Pilot hole is recommended
- ▲ With radial teeth

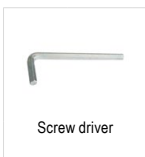
Scope of supply:

Holder incl. screw driver

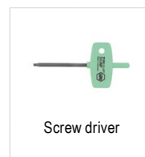


10 912 ...

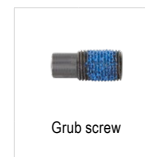
DC mm	DCONMS _{h6} mm	OAL mm	LCF mm	LU mm	torque moment Nm	£ W1
12,00 - 12,49	14	210	162	150	1,0	669.77 12000
12,50 - 12,99	14	216	168	156	1,0	669.77 12500
13,00 - 13,49	14	223	175	162	1,0	669.77 13000
13,50 - 13,99	16	235	182	168	1,3	669.77 13500
14,00 - 14,49	16	242	189	174	1,3	669.77 14000
14,50 - 14,99	16	248	195	180	1,3	669.77 14500
15,00 - 15,49	16	255	202	186	1,3	669.77 15000
15,50 - 16,49	18	262	209	198	1,3	729.61 15500
16,50 - 17,49	18	275	222	210	3,5	729.61 16500
17,50 - 18,49	18	289	236	222	3,5	729.61 17500
18,50 - 19,49	20	304	249	234	3,5	884.03 18500
19,50 - 20,49	20	318	263	246	3,5	884.03 19500
20,50 - 21,49	25	337	276	258	3,5	954.96 20500
21,50 - 22,49	25	351	290	270	3,5	954.96 21500
22,50 - 23,49	25	364	303	282	3,5	1,061.09 22500
23,50 - 24,49	25	378	317	294	3,5	1,061.09 23500
24,50 - 25,49	25	391	330	306	4,0	1,202.77 24500
25,50 - 26,49	25	405	344	318	4,0	1,202.77 25500
26,50 - 27,49	25	418	357	330	4,0	1,202.77 26500
27,50 - 28,49	25	432	371	342	4,0	1,202.77 27500
28,50 - 29,49	32	449	384	354	4,0	1,379.35 28500
29,50 - 30,49	32	463	398	366	4,0	1,379.35 29500
30,50 - 31,49	32	476	411	378	4,0	1,521.19 30500
31,50 - 32,00	32	490	425	390	4,0	1,521.19 31500



80 950 ...



80 950 ...



10 950 ...

Spare parts

DC	SW	£ Y7	£ W1
12,00 - 12,49	SW 1,3	4.78	5.54 025
12,50 - 13,49	SW 1,3	4.78	5.54 026
13,50 - 14,49			5.54 031
14,50 - 16,49			5.72 030
16,50 - 20,49			5.72 040
20,50 - 24,49			5.72 041
24,50 - 28,49			5.72 050
28,50 - 32,49			5.72 051
32,50 - 35,49			10.21 060
35,50 - 39,49			10.21 061
39,50 - 41,00			10.21 062

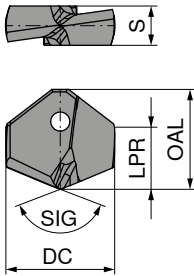
WPC – Indexable insert for indexable insert drill

Scope of supply:

Indexable insert (clamping screws can be ordered separately, if necessary)



NEW
Change UNI
TPX74S



SIG 135°
HM

11 910 ...

DC _{m7} mm	OAL mm	LPR mm	S mm	£ TS
14.0	12.8	7.73	5.00	89.44 14000
14.1	12.8	7.73	5.00	89.44 14100
14.2	12.8	7.73	5.00	89.44 14200
14.3	12.8	7.73	5.00	89.44 14300
14.4	12.8	7.73	5.00	89.44 14400
14.5	13.1	7.84	5.00	89.44 14500
14.6	13.1	7.84	5.00	89.44 14600
14.7	13.1	7.84	5.00	89.44 14700
14.8	13.1	7.84	5.00	90.82 14800
14.9	13.1	7.84	5.00	90.82 14900
15.0	13.4	7.95	5.00	90.82 15000
15.1	13.4	7.95	5.00	90.82 15100
15.2	13.4	7.95	5.00	90.82 15200
15.3	13.4	7.95	5.00	90.82 15300
15.4	13.4	7.95	5.00	90.82 15400
15.5	13.7	8.05	5.00	90.82 15500
15.6	13.7	8.05	5.00	90.82 15600
15.7	13.7	8.05	5.00	90.82 15700
15.8	13.7	8.05	5.00	96.34 15800
15.9	13.7	8.05	5.00	96.34 15900
16.0	14.4	9.06	5.80	96.34 16000
16.1	14.4	9.06	5.80	96.34 16100
16.2	14.4	9.06	5.80	96.34 16200
16.3	14.4	9.06	5.80	96.34 16300
16.4	14.4	9.06	5.80	96.34 16400
16.5	14.7	9.17	5.80	96.34 16500
16.6	14.7	9.17	5.80	96.34 16600
16.7	14.7	9.17	5.80	96.34 16700
16.8	14.7	9.17	5.80	98.64 16800
16.9	14.7	9.17	5.80	98.64 16900
17.0	15.0	9.28	5.80	98.64 17000
17.1	15.0	9.28	5.80	98.64 17100
17.2	15.0	9.28	5.80	98.64 17200
17.3	15.0	9.28	5.80	98.64 17300
17.4	15.0	9.28	5.80	98.64 17400
17.5	15.3	9.39	5.80	98.64 17500
17.6	15.3	9.39	5.80	98.64 17600
17.7	15.3	9.39	5.80	98.64 17700
17.8	15.3	9.39	5.80	100.95 17800
17.9	15.3	9.39	5.80	100.95 17900
18.0	16.3	10.19	6.50	100.95 18000
18.1	16.3	10.19	6.50	100.95 18100
18.2	16.3	10.19	6.50	100.95 18200
18.3	16.3	10.19	6.50	100.95 18300
18.4	16.3	10.19	6.50	100.95 18400
18.5	16.6	10.30	6.50	100.95 18500
18.6	16.6	10.30	6.50	100.95 18600
18.7	16.6	10.30	6.50	100.95 18700
18.8	16.6	10.30	6.50	103.91 18800
18.9	16.6	10.30	6.50	103.91 18900
19.0	16.9	10.41	6.50	103.91 19000
19.1	16.9	10.41	6.50	103.91 19100
19.2	16.9	10.41	6.50	103.91 19200
19.3	16.9	10.41	6.50	103.91 19300
19.4	16.9	10.41	6.50	103.91 19400
19.5	17.2	10.52	6.50	103.91 19500
19.6	17.2	10.52	6.50	103.91 19600
19.7	17.2	10.52	6.50	103.91 19700
19.8	17.2	10.52	6.50	107.34 19800
19.9	17.2	10.52	6.50	107.34 19900

11 910 ...

DC _{m7} mm	OAL mm	LPR mm	S mm	£ TS
20.0	18.2	11.33	7.20	107.34 20000
20.1	18.2	11.33	7.20	107.34 20100
20.2	18.2	11.33	7.20	107.34 20200
20.3	18.2	11.33	7.20	107.34 20300
20.4	18.2	11.33	7.20	107.34 20400
20.5	18.5	11.43	7.20	107.34 20500
20.6	18.5	11.43	7.20	107.34 20600
20.7	18.5	11.43	7.20	107.34 20700
20.8	18.5	11.43	7.20	110.35 20800
20.9	18.5	11.43	7.20	110.35 20900
21.0	18.8	11.54	7.20	110.35 21000
21.1	18.8	11.54	7.20	110.35 21100
21.2	18.8	11.54	7.20	110.35 21200
21.3	18.8	11.54	7.20	110.35 21300
21.4	18.8	11.54	7.20	110.35 21400
21.5	19.1	11.65	7.20	110.35 21500
21.6	19.1	11.65	7.20	110.35 21600
21.7	19.1	11.65	7.20	110.35 21700
21.8	19.1	11.65	7.20	112.94 21800
21.9	19.1	11.65	7.20	112.94 21900
22.0	20.2	12.56	7.90	112.94 22000
22.1	20.2	12.56	7.90	112.94 22100
22.2	20.2	12.56	7.90	112.94 22200
22.3	20.2	12.56	7.90	112.94 22300
22.4	20.2	12.56	7.90	112.94 22400
22.5	20.5	12.67	7.90	112.94 22500
22.6	20.5	12.67	7.90	112.94 22600
22.7	20.5	12.67	7.90	112.94 22700
22.8	20.5	12.67	7.90	117.20 22800
22.9	20.5	12.67	7.90	117.20 22900
23.0	20.8	12.78	7.90	117.20 23000
23.1	20.8	12.78	7.90	117.20 23100
23.2	20.8	12.78	7.90	117.20 23200
23.3	20.8	12.78	7.90	117.20 23300
23.4	20.8	12.78	7.90	117.20 23400
23.5	21.1	12.88	7.90	117.20 23500
23.6	21.1	12.88	7.90	117.20 23600
23.7	21.1	12.88	7.90	117.20 23700
23.8	21.1	12.88	7.90	123.53 23800
23.9	21.1	12.88	7.90	123.53 23900
24.0	22.1	13.69	8.60	123.53 24000
24.1	22.1	13.69	8.60	123.53 24100
24.2	22.1	13.69	8.60	123.53 24200
24.3	22.1	13.69	8.60	123.53 24300
24.4	22.1	13.69	8.60	123.53 24400
24.5	22.4	13.80	8.60	123.53 24500
24.6	22.4	13.80	8.60	123.53 24600
24.7	22.4	13.80	8.60	123.53 24700
24.8	22.4	13.80	8.60	130.62 24800
24.9	22.4	13.80	8.60	130.62 24900
25.0	22.7	13.91	8.60	130.62 25000
25.1	22.7	13.91	8.60	130.62 25100
25.2	22.7	13.91	8.60	130.62 25200
25.3	22.7	13.91	8.60	130.62 25300
25.4	22.7	13.91	8.60	130.62 25400
25.5	23.0	14.02	8.60	130.62 25500
25.6	23.0	14.02	8.60	130.62 25600
25.7	23.0	14.02	8.60	130.62 25700
25.8	23.0	14.02	8.60	137.39 25800
25.9	23.0	14.02	8.60	137.39 25900
26.0	24.1	14.92	9.40	137.39 26000
26.5	24.4	15.03	9.40	137.39 26500
27.0	24.7	15.14	9.40	147.75 27000
27.5	25.0	15.25	9.40	147.75 27500
28.0	25.3	15.36	9.40	147.75 28000
28.5	25.6	15.47	9.40	154.07 28500
29.0	25.9	15.57	9.40	154.07 29000
29.5	26.2	15.68	9.40	159.82 29500
30.0	26.2	15.49	9.40	159.82 30000

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→ Application recommendation on page 163

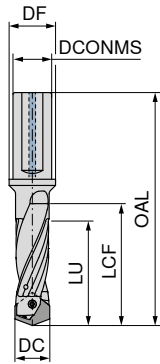
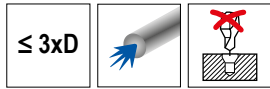
When changing inserts, please observe the specified tightening torque.

WPC – Holder for indexable insert drill

- ▲ Easy handling
- ▲ Insert can be changed in the machine
- ▲ Precise and stable insert seat, clamping via Torx Plus® screw

Scope of supply:

Holder incl. clamping screw



11 903 ...

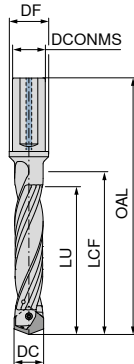
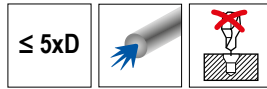
DC mm	DCONMS mm	OAL mm	LCF mm	LU mm	DF mm	torque moment Nm	£ TT
14,00 - 14,49	16	108.9	50.8	43.5	20	0.9	263.49 14000
14,50 - 14,99	16	111.0	52.5	45.0	20	0.9	263.49 14500
15,00 - 15,49	20	115.1	54.3	46.5	25	0.9	263.49 15000
15,50 - 15,99	20	117.2	56.0	48.0	25	0.9	263.49 15500
16,00 - 16,49	20	119.3	57.8	49.5	25	1.2	289.10 16000
16,50 - 16,99	20	121.4	59.5	51.0	25	1.2	289.10 16500
17,00 - 17,49	20	123.5	61.3	52.5	25	1.2	289.10 17000
17,50 - 17,99	20	125.6	63.0	54.0	25	1.2	289.10 17500
18,00 - 18,49	20	127.7	64.8	55.5	25	2.2	308.22 18000
18,50 - 18,99	20	129.8	66.5	57.0	25	2.2	308.22 18500
19,00 - 19,49	25	137.9	68.3	58.5	30	2.2	308.22 19000
19,50 - 19,99	25	140.0	70.0	60.0	30	2.2	308.22 19500
20,00 - 20,49	25	142.1	71.8	61.5	30	2.2	327.33 20000
20,50 - 20,99	25	144.2	73.5	63.0	30	2.2	327.33 20500
21,00 - 21,49	25	146.3	75.3	64.5	30	2.2	356.01 21000
21,50 - 21,99	25	148.4	77.0	66.0	30	2.2	361.16 21500
22,00 - 22,49	25	150.5	78.8	67.5	30	3.2	366.20 22000
22,50 - 22,99	25	152.6	80.5	69.0	30	3.2	371.21 22500
23,00 - 23,49	25	154.7	82.3	70.5	30	3.2	376.48 23000
23,50 - 23,99	25	156.8	84.0	72.0	30	3.2	381.51 23500
24,00 - 24,49	32	162.9	85.8	73.5	39	5	386.54 24000
24,50 - 24,99	32	165.0	87.5	75.0	39	5	391.67 24500
25,00 - 25,49	32	167.1	89.3	76.5	39	5	396.69 25000
25,50 - 25,99	32	169.2	91.0	78.0	39	5	401.85 25500
26,00 - 26,49	32	171.3	92.8	79.5	39	6	406.88 26000
26,50 - 26,99	32	173.4	94.5	81.0	39	6	412.02 26500
27,00 - 27,49	32	175.5	96.3	82.5	39	6	417.04 27000
27,50 - 27,99	32	177.6	98.0	84.0	39	6	422.07 27500
28,00 - 28,49	32	179.7	99.8	85.5	39	6	427.33 28000
28,50 - 28,99	32	181.8	101.5	87.0	39	6	432.37 28500
29,00 - 29,49	32	183.9	103.3	88.5	39	6	437.38 29000
29,50 - 30,00	32	186.0	105.0	90.0	39	6	442.53 29500

WPC – Holder for indexable insert drill

- ▲ Easy handling
- ▲ Insert can be changed in the machine
- ▲ Precise and stable insert seat, clamping via Torx Plus® screw

Scope of supply:

Holder incl. clamping screw



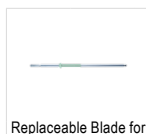
11 905 ...

DC mm	DCONMS mm	OAL mm	LCF mm	LU mm	DF mm	torque moment Nm	£ TT
14,00 - 14,49	16	137.9	79.8	72.5	20	0.9	285.55 14000
14,50 - 14,99	16	141.0	82.5	75.0	20	0.9	285.55 14500
15,00 - 15,49	20	146.1	85.3	77.5	25	0.9	285.55 15000
15,50 - 15,99	20	149.2	88.0	80.0	25	0.9	285.55 15500
16,00 - 16,49	20	152.3	90.8	82.5	25	1.2	310.90 16000
16,50 - 16,99	20	155.4	93.5	85.0	25	1.2	310.90 16500
17,00 - 17,49	20	158.5	96.3	87.5	25	1.2	310.90 17000
17,50 - 17,99	20	161.6	99.0	90.0	25	1.2	310.90 17500
18,00 - 18,49	20	164.7	101.8	92.5	25	2.2	330.77 18000
18,50 - 18,99	20	167.8	104.5	95.0	25	2.2	330.77 18500
19,00 - 19,49	25	176.9	107.3	97.5	30	2.2	330.77 19000
19,50 - 19,99	25	180.0	110.0	100.0	30	2.2	330.77 19500
20,00 - 20,49	25	183.1	112.8	102.5	30	2.2	349.39 20000
20,50 - 20,99	25	186.2	115.5	105.0	30	2.2	349.39 20500
21,00 - 21,49	25	189.3	118.3	107.5	30	2.2	379.17 21000
21,50 - 21,99	25	192.4	121.0	110.0	30	2.2	384.20 21500
22,00 - 22,49	25	195.5	123.8	112.5	30	3.2	389.22 22000
22,50 - 22,99	25	198.6	126.5	115.0	30	3.2	394.38 22500
23,00 - 23,49	25	201.7	129.3	117.5	30	3.2	399.51 23000
23,50 - 23,99	25	204.8	132.0	120.0	30	3.2	404.54 23500
24,00 - 24,49	32	211.9	134.8	122.5	39	5	409.70 24000
24,50 - 24,99	32	215.0	137.5	125.0	39	5	414.72 24500
25,00 - 25,49	32	218.1	140.3	127.5	39	5	419.85 25000
25,50 - 25,99	32	221.2	143.0	130.0	39	5	425.01 25500
26,00 - 26,49	32	224.3	145.8	132.5	39	6	430.04 26000
26,50 - 26,99	32	227.4	148.5	135.0	39	6	435.06 26500
27,00 - 27,49	32	230.5	151.3	137.5	39	6	440.20 27000
27,50 - 27,99	32	233.6	154.0	140.0	39	6	445.35 27500
28,00 - 28,49	32	236.7	156.8	142.5	39	6	450.38 28000
28,50 - 28,99	32	239.8	159.5	145.0	39	6	455.40 28500
29,00 - 29,49	32	242.9	162.3	147.5	39	6	460.56 29000
29,50 - 30,00	32	246.0	165.0	150.0	39	6	465.58 29500



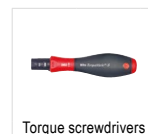
Screwdriver

80 950 ...



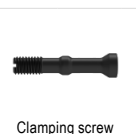
Replaceable Blade for TORX PLUS®

80 950 ...



Torque screwdrivers

80 950 ...



Clamping screw

11 950 ...

Spare parts

DC	£ Y7	£ Y7	£ Y7	£ TT
14,00 - 15,99	T08 - IP 11.07 060	T08 - IP 8.91 043	0.5 - 2,0 Nm 217.91 191	M2,2x13 - 08IP 11.54 00100
16,00 - 17,99	T08 - IP 11.07 060	T08 - IP 8.91 043	0.5 - 2,0 Nm 217.91 191	M2,5x15 - 08IP 11.54 00200
18,00 - 21,99	T10 - IP 10.85 062	T10 - IP 8.91 053	2,0 - 7,0 Nm 244.07 193	M3,0x17 - 10IP 12.34 00300
22,00 - 23,99	T10 - IP 10.85 062	T10 - IP 8.91 053	2,0 - 7,0 Nm 244.07 193	M3,5x21 - 10IP 12.34 00400
24,00 - 25,99	T15 - IP 11.44 063	T15 - IP 8.91 054	2,0 - 7,0 Nm 244.07 193	M4,0x23 - 15IP 12.34 00500
26,00 - 30,00	T20 - IP 12.73 064	T20 - IP 8.91 055	2,0 - 7,0 Nm 244.07 193	M4,5x25 - 20IP 14.54 00600

MultiChange – Programme Overview

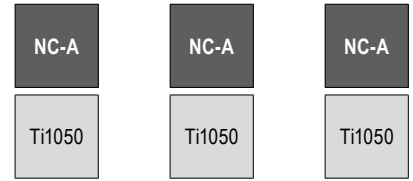
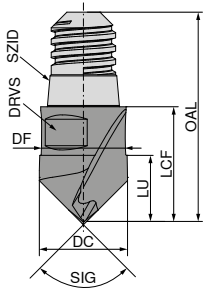
The "MultiChange" interchangeable head system enables an extremely fast and problem free tool change. Provides quick changeover and concentricity with the highest stability at the same time. For a multitude of applications, the suitable interchangeable heads are available in the following chapters.

Exchangeable heads	
<p>→ Chapter 2, Solid carbide drilling</p> <p>Solid Carbide NC Spot Drills</p> <p>Ø 8, 10, 12, 16, 20 mm NOF 2</p> <p>SIG 90° SIG 120° SIG 142°</p>	<p>Page No. 2 107</p>
<p>→ Chapter 4, Reaming and countersinking</p> <p>Replaceable reaming heads</p> <p>Ø 8,00 – 30,20 mm</p> <p>Through hole</p> <p>Ø 12,20 – 30,20 mm</p> <p>Blind hole</p>	<p>Page No. 4 18 + 4 19</p>
<p>→ Chapter 14, Solid carbide milling cutters</p> <p>Solid carbide shoulder mills</p> <p>Ø 8, 10, 12, 16, 20 mm / ZEFP 3+4</p> <p>Type PCR-UNI Type PCR-ALU Type N</p> <p>Solid carbide torus bull nose milling cutters</p> <p>Ø 8, 10, 12, 16, 20 mm / ZEFP 3+4</p> <p>Type W Type N</p> <p>Solid carbide rough and finish milling cutters</p> <p>Ø 8, 10, 12, 16, 20 mm / ZEFP 4+6</p> <p>Type NF</p> <p>Solid carbide finish milling cutters</p> <p>Ø 8, 10, 12, 16, 20 mm / ZEFP 6</p> <p>Type N</p> <p>Solid carbide ball-nosed end mills</p> <p>Ø 10, 12, 16, 20 mm / ZEFP 4</p> <p>Type N</p> <p>Solid carbide high-feed cutters</p> <p>Ø 8, 10, 12, 16, 20 mm / ZEFP 6</p> <p>Type N</p> <p>Solid carbide quarter round cutter</p> <p>Ø 8, 10, 12, 16, 20 mm / ZEFP 6</p> <p>Type N</p> <p>Solid carbide deburring cutters</p> <p>Ø 10, 12, 16, 20 mm / ZEFP 4+6</p> <p>Type N Type N</p>	<p>Page No. 14 198 – 14 202</p>
<p>NOF / ZEFP = Number of cutting edges</p>	

Tool holder	
<p>→ Catalogue – Clamping technology, Chapter 16 Accessories</p> <p>OAL 60 – 90 mm</p> <p>Tapered 87° / Steel Cylindrical* / Steel</p> <p>OAL 85 – 120 mm</p> <p>Tapered 87° / Steel Cylindrical* / Steel</p> <p>Tapered 87° / Solid carbide Cylindrical* / Solid carbide</p> <p>OAL 110 – 150 mm</p> <p>Tapered 87° / Solid carbide Cylindrical* / Solid carbide</p> <p>OAL 150 – 200 mm</p> <p>Tapered 87° / Solid carbide Cylindrical* / Steel</p> <p>Cylindrical* / Solid carbide</p> <p>OAL 200 – 250 mm</p> <p>Cylindrical* / Steel Cylindrical* / Solid carbide</p>	<p>Page No. 16 259 – 16 261</p>
<p>* only conditionally suitable for milling</p>	

MultiChange – NC Spot Drill

▲ SZID = Coupling Size
▲ NOF = No. of cutting edges



SIG 90° Solid carbide		SIG 120° Solid carbide		SIG 142° Solid carbide	
10 709 ...		10 712 ...		10 714 ...	
£	T7	£	T7	£	T7
43.04	080	43.04	080	43.04	080
47.69	100	47.69	100	47.69	100
61.19	120	61.19	120	61.19	120
86.54	160	86.54	160	86.54	160
125.89	200	125.89	200	125.89	200

DC mm	SZID	LU mm	DF mm	LCF mm	OAL mm	NOF	DRVS mm	torque moment Nm	a _{p max} mm
8	06	6.0	7.8	11	20.4	2	6	5	4
10	08	7.5	9.8	13	26.9	2	8	12,5	5
12	10	9.0	11.8	16	30.1	2	10	15	6
16	12	12.0	15.8	20	37.3	2	13	20	8
20	16	15.0	19.8	25	47.2	2	16	25	10

P	●	●	●
M	●	●	●
K	●	●	●
N	●	●	●
S			
H			
O			

→ v. Page 148

i Torque wrench should be used for coupling sizes 06 and 08
For unstable applications, the cutting data should be reduced.

Material examples for cutting data tables

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

* Tensile strength

Cutting data standard values – WTX – Ti

Index	10 786 ..., 10 787 ...											
	with through coolant v _c (m/min)	3xD / 5xD										
		> Ø 2,5-3	> 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
		f (mm/rev)										
P.1.1												
P.1.2	130	0,08	0,10	0,13	0,15	0,18	0,20	0,23	0,26	0,30	0,34	0,38
P.1.3	130	0,08	0,10	0,13	0,15	0,18	0,20	0,23	0,26	0,30	0,34	0,38
P.1.4	115	0,08	0,10	0,13	0,15	0,18	0,20	0,23	0,26	0,30	0,34	0,38
P.1.5	115	0,08	0,10	0,13	0,15	0,18	0,20	0,23	0,26	0,30	0,34	0,38
P.2.1												
P.2.2												
P.2.3	115	0,08	0,10	0,13	0,15	0,18	0,20	0,23	0,26	0,30	0,34	0,38
P.2.4	90	0,08	0,10	0,13	0,15	0,18	0,20	0,23	0,26	0,30	0,34	0,38
P.3.1												
P.3.2												
P.3.3	55	0,08	0,10	0,13	0,15	0,18	0,20	0,23	0,26	0,30	0,34	0,38
P.4.1	75	0,05	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25
P.4.2	65	0,05	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25
M.1.1	70	0,05	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25
M.2.1	70	0,05	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25
M.3.1	70	0,05	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25
K.1.1												
K.1.2												
K.2.1												
K.2.2												
K.3.1												
K.3.2												
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	45	0,02	0,04	0,05	0,07	0,09	0,11	0,13	0,16	0,18	0,20	0,22
S.1.2	45	0,02	0,04	0,05	0,07	0,09	0,11	0,13	0,16	0,18	0,20	0,22
S.2.1	40	0,02	0,04	0,05	0,07	0,09	0,11	0,13	0,16	0,18	0,20	0,22
S.2.2	40	0,02	0,04	0,05	0,07	0,09	0,11	0,13	0,16	0,18	0,20	0,22
S.2.3	40	0,02	0,04	0,05	0,07	0,09	0,11	0,13	0,16	0,18	0,20	0,22
S.3.1	55	0,02	0,04	0,05	0,07	0,09	0,11	0,13	0,16	0,18	0,20	0,22
S.3.2	45	0,02	0,04	0,05	0,07	0,09	0,11	0,13	0,16	0,18	0,20	0,22
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 – UNI

Index	11 776 ..., 11 777 ..., 11 778 ..., 11 779 ..., 11 780 ..., 11 781 ...							
			3xD					
	without through coolant	with through coolant	Ø 3–5	Ø 5–8	Ø 8–12	Ø 12–16	Ø 16–20	Ø 20–25
	v _c (m/min)		f (mm/rev)					
P.1.1	110	120	0,13	0,18	0,25	0,30	0,34	0,37
P.1.2	105	115	0,12	0,18	0,24	0,29	0,33	0,36
P.1.3	100	110	0,12	0,17	0,23	0,28	0,31	0,34
P.1.4	95	105	0,11	0,16	0,21	0,26	0,30	0,32
P.1.5	90	100	0,11	0,15	0,20	0,25	0,28	0,30
P.2.1	105	120	0,15	0,22	0,29	0,36	0,41	0,44
P.2.2	95	110	0,14	0,20	0,27	0,33	0,37	0,40
P.2.3	85	100	0,13	0,18	0,24	0,29	0,33	0,36
P.2.4	65	75	0,12	0,16	0,21	0,26	0,29	0,32
P.3.1	70	85	0,12	0,18	0,24	0,29	0,33	0,36
P.3.2	60	65	0,11	0,15	0,20	0,24	0,27	0,29
P.3.3	50	65	0,09	0,12	0,15	0,19	0,21	0,23
P.4.1	50	65	0,08	0,12	0,16	0,19	0,22	0,24
P.4.2	50	65	0,08	0,12	0,16	0,19	0,22	0,24
M.1.1								
M.2.1								
M.3.1								
K.1.1	85	120	0,17	0,26	0,36	0,45	0,52	0,56
K.1.2	75	100	0,15	0,22	0,29	0,36	0,41	0,45
K.2.1	100	160	0,17	0,25	0,34	0,42	0,48	0,52
K.2.2	75	100	0,15	0,22	0,29	0,36	0,41	0,45
K.3.1	80	90	0,16	0,23	0,32	0,39	0,44	0,48
K.3.2	70	80	0,14	0,19	0,25	0,31	0,35	0,38
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	25	25	0,06	0,08	0,11	0,14	0,15	0,17
H.1.2								
H.1.3								
H.1.4								
H.2.1	35	35	0,08	0,11	0,14	0,18	0,20	0,22
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.

Index	11 782 ..., 11 783 ..., 11 784 ..., 11 785 ..., 11 786 ..., 11 787 ...									11 788 ..., 11 789 ..., 11 790 ...						
			5xD									8xD				
	without coolant	with coolant	Ø 3-5	Ø 5-8	Ø 8-12	Ø 12-16	Ø 16-20	Ø 20-25	with coolant	Ø 3-5	Ø 5-8	Ø 8-12	Ø 12-16	Ø 16-20		
	v _c (m/min)		f (mm/rev)							v _c (m/min)		f (mm/rev)				
P.1.1	110	120	0,13	0,18	0,25	0,30	0,34	0,37	110	0,13	0,18	0,25	0,30	0,34		
P.1.2	105	115	0,12	0,18	0,24	0,29	0,33	0,36	105	0,12	0,18	0,24	0,29	0,33		
P.1.3	100	110	0,12	0,17	0,23	0,28	0,31	0,34	100	0,12	0,17	0,23	0,28	0,31		
P.1.4	95	105	0,11	0,16	0,21	0,26	0,30	0,32	95	0,11	0,16	0,21	0,26	0,30		
P.1.5	90	100	0,11	0,15	0,20	0,25	0,28	0,30	90	0,11	0,15	0,20	0,25	0,28		
P.2.1	105	120	0,15	0,22	0,29	0,36	0,41	0,44	105	0,15	0,22	0,29	0,36	0,41		
P.2.2	95	110	0,14	0,20	0,27	0,33	0,37	0,40	95	0,14	0,20	0,27	0,33	0,37		
P.2.3	85	100	0,13	0,18	0,24	0,29	0,33	0,36	85	0,13	0,18	0,24	0,29	0,33		
P.2.4	65	75	0,12	0,16	0,21	0,26	0,29	0,32	65	0,12	0,16	0,21	0,26	0,29		
P.3.1	70	85	0,12	0,18	0,24	0,29	0,33	0,36	70	0,12	0,18	0,24	0,29	0,33		
P.3.2	60	65	0,11	0,15	0,20	0,24	0,27	0,29	60	0,11	0,15	0,20	0,24	0,27		
P.3.3	50	65	0,09	0,12	0,15	0,19	0,21	0,23	50	0,09	0,12	0,15	0,19	0,21		
P.4.1	50	65	0,08	0,12	0,16	0,19	0,22	0,24	50	0,08	0,12	0,16	0,19	0,22		
P.4.2	50	65	0,08	0,12	0,16	0,19	0,22	0,24	50	0,08	0,12	0,16	0,19	0,22		
M.1.1																
M.2.1																
M.3.1																
K.1.1	85	120	0,17	0,26	0,36	0,45	0,52	0,56	85	0,17	0,26	0,36	0,45	0,52		
K.1.2	75	100	0,15	0,22	0,29	0,36	0,41	0,45	75	0,15	0,22	0,29	0,36	0,41		
K.2.1	100	160	0,17	0,25	0,34	0,42	0,48	0,52	100	0,17	0,25	0,34	0,42	0,48		
K.2.2	75	100	0,15	0,22	0,29	0,36	0,41	0,45	75	0,15	0,22	0,29	0,36	0,41		
K.3.1	80	90	0,16	0,23	0,32	0,39	0,44	0,48	80	0,16	0,23	0,32	0,39	0,44		
K.3.2	70	80	0,14	0,19	0,25	0,31	0,35	0,38	70	0,14	0,19	0,25	0,31	0,35		
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	25	25	0,06	0,08	0,11	0,14	0,15	0,17	25	0,06	0,08	0,11	0,14	0,15		
H.1.2																
H.1.3																
H.1.4																
H.2.1	35	35	0,08	0,11	0,14	0,18	0,20	0,22	35	0,08	0,11	0,14	0,18	0,20		
H.3.1																
O.1.1																
O.1.2																
O.2.1																
O.2.2																
O.3.1																

Cutting data standard values – WTX – VA

Index	10 731 ..., 10 734 ...							10 740 ..., 10 745 ...						
			3xD							5xD				
	without through coolant	with through coolant	Ø 2-5	Ø 5-8	Ø 8-12	Ø 12-16	Ø 16-20	without through coolant	with through coolant	Ø 2-5	Ø 5-8	Ø 8-12	Ø 12-16	Ø 16-20
	v _c (m/min)		f (mm/rev)					v _c (m/min)		f (mm/rev)				
P.1.1	100	110	0,09	0,13	0,18	0,22	0,25	100	110	0,09	0,13	0,18	0,22	0,25
P.1.2	95	105	0,09	0,13	0,17	0,21	0,24	95	105	0,09	0,13	0,17	0,21	0,24
P.1.3	90	100	0,09	0,12	0,16	0,20	0,23	90	100	0,09	0,12	0,16	0,20	0,23
P.1.4	85	95	0,08	0,12	0,16	0,19	0,22	85	95	0,08	0,12	0,16	0,19	0,22
P.1.5	80	90	0,08	0,11	0,15	0,18	0,20	80	90	0,08	0,11	0,15	0,18	0,20
P.2.1	95	110	0,11	0,16	0,21	0,26	0,29	95	110	0,11	0,16	0,21	0,26	0,29
P.2.2	85	100	0,10	0,14	0,19	0,24	0,27	85	100	0,10	0,14	0,19	0,24	0,27
P.2.3	75	90	0,09	0,13	0,17	0,21	0,24	75	90	0,09	0,13	0,17	0,21	0,24
P.2.4	60	70	0,09	0,12	0,16	0,19	0,21	60	70	0,09	0,12	0,16	0,19	0,21
P.3.1	65	75	0,09	0,13	0,17	0,21	0,24	65	75	0,09	0,13	0,17	0,21	0,24
P.3.2	55	60	0,08	0,11	0,14	0,17	0,20	55	60	0,08	0,11	0,14	0,17	0,20
P.3.3	45	60	0,06	0,09	0,11	0,14	0,15	45	60	0,06	0,09	0,11	0,14	0,15
P.4.1	45	60	0,06	0,09	0,11	0,14	0,16	45	60	0,06	0,09	0,11	0,14	0,16
P.4.2	45	60	0,06	0,09	0,11	0,14	0,16	45	60	0,06	0,09	0,11	0,14	0,16
M.1.1	35	55	0,08	0,11	0,14	0,18	0,20	35	55	0,08	0,11	0,14	0,18	0,20
M.2.1	30	50	0,06	0,09	0,12	0,15	0,17	30	50	0,06	0,09	0,12	0,15	0,17
M.3.1	30	50	0,06	0,09	0,12	0,15	0,17	30	50	0,06	0,09	0,12	0,15	0,17
K.1.1	85	120	0,15	0,24	0,33	0,41	0,47	85	120	0,15	0,24	0,33	0,41	0,47
K.1.2	75	100	0,14	0,20	0,27	0,33	0,37	75	100	0,14	0,20	0,27	0,33	0,37
K.2.1	100	160	0,15	0,22	0,31	0,38	0,43	100	160	0,15	0,22	0,31	0,38	0,43
K.2.2	75	100	0,14	0,20	0,27	0,33	0,37	75	100	0,14	0,20	0,27	0,33	0,37
K.3.1	80	90	0,15	0,21	0,29	0,35	0,40	80	90	0,15	0,21	0,29	0,35	0,40
K.3.2	70	80	0,12	0,17	0,23	0,28	0,32	70	80	0,12	0,17	0,23	0,28	0,32
N.1.1	220	330	0,10	0,16	0,22	0,30	0,33	220	330	0,10	0,16	0,22	0,30	0,33
N.1.2	200	300	0,09	0,12	0,20	0,25	0,30	200	300	0,09	0,12	0,20	0,25	0,30
N.2.1	180	250	0,11	0,15	0,26	0,33	0,39	180	250	0,11	0,15	0,26	0,33	0,39
N.2.2	150	220	0,11	0,15	0,26	0,33	0,39	150	220	0,11	0,15	0,26	0,33	0,39
N.2.3	120	180	0,11	0,15	0,26	0,33	0,39	120	180	0,11	0,15	0,26	0,33	0,39
N.3.1	160	200	0,15	0,24	0,33	0,41	0,47	160	200	0,15	0,24	0,33	0,41	0,47
N.3.2	90	120	0,14	0,20	0,27	0,33	0,37	90	120	0,14	0,20	0,27	0,33	0,37
N.3.3	100	140	0,12	0,15	0,21	0,25	0,28	100	140	0,12	0,15	0,21	0,25	0,28
N.4.1														
S.1.1	20	30	0,06	0,09	0,11	0,14	0,16	20	30	0,06	0,09	0,11	0,14	0,16
S.1.2	15	20	0,04	0,06	0,08	0,10	0,11	15	20	0,04	0,06	0,08	0,10	0,11
S.2.1	15	20	0,04	0,06	0,08	0,10	0,11	15	20	0,04	0,06	0,08	0,10	0,11
S.2.2	10	15	0,05	0,08	0,10	0,13	0,14	10	15	0,05	0,08	0,10	0,13	0,14
S.2.3	10	15	0,04	0,06	0,08	0,10	0,11	10	15	0,04	0,06	0,08	0,10	0,11
S.3.1														
S.3.2	20	30	0,06	0,09	0,12	0,15	0,17	20	30	0,06	0,09	0,12	0,15	0,17
S.3.3	15	25	0,05	0,08	0,10	0,13	0,14	15	25	0,05	0,08	0,10	0,13	0,14
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.

Index	10 770 ...					
	with through coolant v _c (m/min)	8xD				
		Ø 3-5	Ø 5-8	Ø 8-12	Ø 12-16	Ø 16-20
f (mm/rev)						
P.1.1	110	0,09	0,13	0,18	0,22	0,25
P.1.2	105	0,09	0,13	0,17	0,21	0,24
P.1.3	100	0,09	0,12	0,16	0,20	0,23
P.1.4	95	0,08	0,12	0,16	0,19	0,22
P.1.5	90	0,08	0,11	0,15	0,18	0,20
P.2.1	110	0,11	0,16	0,21	0,26	0,29
P.2.2	100	0,10	0,14	0,19	0,24	0,27
P.2.3	90	0,09	0,13	0,17	0,21	0,24
P.2.4	70	0,09	0,12	0,16	0,19	0,21
P.3.1	75	0,09	0,13	0,17	0,21	0,24
P.3.2	60	0,08	0,11	0,14	0,17	0,20
P.3.3	60	0,06	0,09	0,11	0,14	0,15
P.4.1	60	0,06	0,09	0,11	0,14	0,16
P.4.2	60	0,06	0,09	0,11	0,14	0,16
M.1.1	55	0,08	0,11	0,14	0,18	0,20
M.2.1	50	0,06	0,09	0,12	0,15	0,17
M.3.1	50	0,06	0,09	0,12	0,15	0,17
K.1.1	120	0,15	0,24	0,33	0,41	0,47
K.1.2	100	0,14	0,20	0,27	0,33	0,37
K.2.1	160	0,15	0,22	0,31	0,38	0,43
K.2.2	100	0,14	0,20	0,27	0,33	0,37
K.3.1	90	0,15	0,21	0,29	0,35	0,40
K.3.2	80	0,12	0,17	0,23	0,28	0,32
N.1.1	330	0,10	0,16	0,22	0,30	0,33
N.1.2	300	0,09	0,12	0,20	0,25	0,30
N.2.1	250	0,11	0,15	0,26	0,33	0,39
N.2.2	220	0,11	0,15	0,26	0,33	0,39
N.2.3	180	0,11	0,15	0,26	0,33	0,39
N.3.1	200	0,15	0,24	0,33	0,41	0,47
N.3.2	120	0,14	0,20	0,27	0,33	0,37
N.3.3	140	0,12	0,15	0,21	0,25	0,28
N.4.1						
S.1.1	30	0,06	0,09	0,11	0,14	0,16
S.1.2	20	0,04	0,06	0,08	0,10	0,11
S.2.1	20	0,04	0,06	0,08	0,10	0,11
S.2.2	15	0,05	0,08	0,10	0,13	0,14
S.2.3	15	0,04	0,06	0,08	0,10	0,11
S.3.1						
S.3.2	30	0,06	0,09	0,12	0,15	0,17
S.3.3	25	0,05	0,08	0,10	0,13	0,14
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						

Cutting data standard values – WTX – Speed UNI

Index	10 781 ...						10 771 ...					
	with through coolant v _c (m/min)	3xD					with through coolant v _c (m/min)	5xD				
		Ø 3–5	Ø 5–8	Ø 8–12	Ø 12–16	Ø 16–20		Ø 3–5	Ø 5–8	Ø 8–12	Ø 12–16	Ø 16–20
		f (mm/rev)						f (mm/rev)				
P.1.1	185	0,17	0,24	0,33	0,40	0,45	185	0,17	0,24	0,33	0,40	0,45
P.1.2	180	0,16	0,23	0,31	0,38	0,43	180	0,16	0,23	0,31	0,38	0,43
P.1.3	170	0,16	0,22	0,30	0,36	0,41	170	0,16	0,22	0,30	0,36	0,41
P.1.4	160	0,15	0,21	0,28	0,35	0,39	160	0,15	0,21	0,28	0,35	0,39
P.1.5	155	0,14	0,20	0,27	0,33	0,37	155	0,14	0,20	0,27	0,33	0,37
P.2.1	185	0,20	0,29	0,39	0,47	0,53	185	0,20	0,29	0,39	0,47	0,53
P.2.2	170	0,18	0,26	0,35	0,43	0,49	170	0,18	0,26	0,35	0,43	0,49
P.2.3	155	0,17	0,24	0,32	0,39	0,44	155	0,17	0,24	0,32	0,39	0,44
P.2.4	120	0,16	0,21	0,28	0,34	0,38	120	0,16	0,21	0,28	0,34	0,38
P.3.1	130	0,16	0,23	0,32	0,39	0,44	130	0,16	0,23	0,32	0,39	0,44
P.3.2	100	0,14	0,20	0,26	0,32	0,36	100	0,14	0,20	0,26	0,32	0,36
P.3.3	100	0,12	0,16	0,20	0,25	0,28	100	0,12	0,16	0,20	0,25	0,28
P.4.1	100	0,11	0,16	0,21	0,25	0,29	100	0,11	0,16	0,21	0,25	0,29
P.4.2	100	0,11	0,16	0,21	0,25	0,29	100	0,11	0,16	0,21	0,25	0,29
M.1.1	65	0,08	0,12	0,16	0,19	0,22	65	0,08	0,12	0,16	0,19	0,22
M.2.1	60	0,07	0,10	0,14	0,17	0,19	60	0,07	0,10	0,14	0,17	0,19
M.3.1	60	0,07	0,10	0,14	0,17	0,19	60	0,07	0,10	0,14	0,17	0,19
K.1.1	150	0,18	0,28	0,40	0,49	0,56	150	0,18	0,28	0,40	0,49	0,56
K.1.2	125	0,16	0,24	0,32	0,39	0,45	125	0,16	0,24	0,32	0,39	0,45
K.2.1	200	0,18	0,27	0,37	0,46	0,52	200	0,18	0,27	0,37	0,46	0,52
K.2.2	125	0,16	0,24	0,32	0,39	0,45	125	0,16	0,24	0,32	0,39	0,45
K.3.1	115	0,18	0,25	0,34	0,42	0,48	115	0,18	0,25	0,34	0,42	0,48
K.3.2	100	0,15	0,21	0,28	0,34	0,38	100	0,15	0,21	0,28	0,34	0,38
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.

Index	10 782 ...						
	with through coolant v _c (m/min)	8xD					Ø 16-20
		Ø 3-5	Ø 5-8	Ø 8-12	Ø 12-16		
		f (mm/rev)					
P.1.1	185	0,17	0,24	0,33	0,40	0,45	
P.1.2	180	0,16	0,23	0,31	0,38	0,43	
P.1.3	170	0,16	0,22	0,30	0,36	0,41	
P.1.4	160	0,15	0,21	0,28	0,35	0,39	
P.1.5	155	0,14	0,20	0,27	0,33	0,37	
P.2.1	185	0,20	0,29	0,39	0,47	0,53	
P.2.2	170	0,18	0,26	0,35	0,43	0,49	
P.2.3	155	0,17	0,24	0,32	0,39	0,44	
P.2.4	120	0,16	0,21	0,28	0,34	0,38	
P.3.1	130	0,16	0,23	0,32	0,39	0,44	
P.3.2	100	0,14	0,20	0,26	0,32	0,36	
P.3.3	100	0,12	0,16	0,20	0,25	0,28	
P.4.1	100	0,11	0,16	0,21	0,25	0,29	
P.4.2	100	0,11	0,16	0,21	0,25	0,29	
M.1.1	65	0,08	0,12	0,16	0,19	0,22	
M.2.1	60	0,07	0,10	0,14	0,17	0,19	
M.3.1	60	0,07	0,10	0,14	0,17	0,19	
K.1.1	150	0,18	0,28	0,40	0,49	0,56	
K.1.2	125	0,16	0,24	0,32	0,39	0,45	
K.2.1	200	0,18	0,27	0,37	0,46	0,52	
K.2.2	125	0,16	0,24	0,32	0,39	0,45	
K.3.1	115	0,18	0,25	0,34	0,42	0,48	
K.3.2	100	0,15	0,21	0,28	0,34	0,38	
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							

Cutting data standard values – WTX – Feed UNI

Index	10 789 ...								
	with through coolant v_c (m/min)	5xD							
		\varnothing 4–6	\varnothing 6–7	\varnothing 7–8	\varnothing 8–10	\varnothing 10–12	\varnothing 12–15	\varnothing 15–17	\varnothing 17–20
f (mm/rev)									
P.1.1	125	0,28	0,34	0,37	0,42	0,48	0,54	0,59	0,63
P.1.2	120	0,27	0,32	0,35	0,40	0,46	0,52	0,56	0,60
P.1.3	115	0,25	0,31	0,34	0,38	0,44	0,49	0,54	0,57
P.1.4	110	0,24	0,29	0,32	0,36	0,41	0,47	0,51	0,54
P.1.5	105	0,23	0,27	0,30	0,34	0,39	0,44	0,48	0,52
P.2.1	125	0,33	0,40	0,44	0,50	0,57	0,64	0,70	0,75
P.2.2	115	0,30	0,36	0,40	0,45	0,51	0,58	0,63	0,68
P.2.3	105	0,27	0,32	0,36	0,41	0,46	0,52	0,57	0,61
P.2.4	80	0,25	0,29	0,32	0,36	0,41	0,46	0,50	0,54
P.3.1	85	0,27	0,32	0,36	0,41	0,46	0,52	0,57	0,61
P.3.2	70	0,23	0,27	0,30	0,33	0,38	0,43	0,47	0,50
P.3.3	70	0,18	0,22	0,24	0,26	0,30	0,33	0,36	0,38
P.4.1	70	0,18	0,21	0,24	0,27	0,30	0,34	0,38	0,40
P.4.2	70	0,18	0,21	0,24	0,27	0,30	0,34	0,38	0,40
M.1.1	55	0,13	0,16	0,18	0,20	0,23	0,26	0,28	0,30
M.2.1	50	0,11	0,14	0,15	0,17	0,20	0,22	0,24	0,26
M.3.1	50	0,11	0,14	0,15	0,17	0,20	0,22	0,24	0,26
K.1.1	140	0,38	0,47	0,53	0,61	0,70	0,80	0,89	0,95
K.1.2	115	0,32	0,39	0,44	0,50	0,57	0,64	0,70	0,75
K.2.1	185	0,37	0,45	0,50	0,57	0,66	0,75	0,82	0,88
K.2.2	115	0,32	0,39	0,44	0,50	0,57	0,64	0,70	0,75
K.3.1	105	0,35	0,42	0,47	0,53	0,61	0,69	0,76	0,81
K.3.2	90	0,29	0,35	0,38	0,43	0,49	0,55	0,60	0,64
N.1.1	380	0,28	0,34	0,37	0,42	0,48	0,54	0,59	0,63
N.1.2	345	0,25	0,31	0,34	0,38	0,44	0,49	0,54	0,57
N.2.1	290	0,32	0,39	0,44	0,50	0,57	0,64	0,70	0,75
N.2.2	255	0,32	0,39	0,44	0,50	0,57	0,64	0,70	0,75
N.2.3	205	0,32	0,39	0,44	0,50	0,57	0,64	0,70	0,75
N.3.1	230	0,38	0,47	0,53	0,61	0,70	0,80	0,89	0,95
N.3.2	140	0,24	0,29	0,33	0,37	0,43	0,48	0,53	0,57
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.

Index	10 794 ..., 10 796 ...									
	8xD / 12xD									
	with through coolant v _c (m/min)	Ø 4-6	Ø 6-7	Ø 7-8	Ø 8-10	Ø 10-12	Ø 12-15	Ø 15-17	Ø 17-20	
	f (mm/rev)									
P.1.1	125	0,28	0,34	0,37	0,42	0,48	0,54	0,59	0,63	
P.1.2	120	0,27	0,32	0,35	0,40	0,46	0,52	0,56	0,60	
P.1.3	115	0,25	0,31	0,34	0,38	0,44	0,49	0,54	0,57	
P.1.4	110	0,24	0,29	0,32	0,36	0,41	0,47	0,51	0,54	
P.1.5	105	0,23	0,27	0,30	0,34	0,39	0,44	0,48	0,52	
P.2.1	125	0,33	0,40	0,44	0,50	0,57	0,64	0,70	0,75	
P.2.2	115	0,30	0,36	0,40	0,45	0,51	0,58	0,63	0,68	
P.2.3	105	0,27	0,32	0,36	0,41	0,46	0,52	0,57	0,61	
P.2.4	80	0,25	0,29	0,32	0,36	0,41	0,46	0,50	0,54	
P.3.1	85	0,27	0,32	0,36	0,41	0,46	0,52	0,57	0,61	
P.3.2	70	0,23	0,27	0,30	0,33	0,38	0,43	0,47	0,50	
P.3.3	70	0,18	0,22	0,24	0,26	0,30	0,33	0,36	0,38	
P.4.1	70	0,18	0,21	0,24	0,27	0,30	0,34	0,38	0,40	
P.4.2	70	0,18	0,21	0,24	0,27	0,30	0,34	0,38	0,40	
M.1.1	55	0,13	0,16	0,18	0,20	0,23	0,26	0,28	0,30	
M.2.1	50	0,11	0,14	0,15	0,17	0,20	0,22	0,24	0,26	
M.3.1	50	0,11	0,14	0,15	0,17	0,20	0,22	0,24	0,26	
K.1.1	140	0,38	0,47	0,53	0,61	0,70	0,80	0,89	0,95	
K.1.2	115	0,32	0,39	0,44	0,50	0,57	0,64	0,70	0,75	
K.2.1	185	0,37	0,45	0,50	0,57	0,66	0,75	0,82	0,88	
K.2.2	115	0,32	0,39	0,44	0,50	0,57	0,64	0,70	0,75	
K.3.1	105	0,35	0,42	0,47	0,53	0,61	0,69	0,76	0,81	
K.3.2	90	0,29	0,35	0,38	0,43	0,49	0,55	0,60	0,64	
N.1.1	380	0,28	0,34	0,37	0,42	0,48	0,54	0,59	0,63	
N.1.2	345	0,25	0,31	0,34	0,38	0,44	0,49	0,54	0,57	
N.2.1	290	0,32	0,39	0,44	0,50	0,57	0,64	0,70	0,75	
N.2.2	255	0,32	0,39	0,44	0,50	0,57	0,64	0,70	0,75	
N.2.3	205	0,32	0,39	0,44	0,50	0,57	0,64	0,70	0,75	
N.3.1	230	0,38	0,47	0,53	0,61	0,70	0,80	0,89	0,95	
N.3.2	140	0,24	0,29	0,33	0,37	0,43	0,48	0,53	0,57	
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										

Cutting data standard values – WTX – Speed VA

Index	10 773 ...						10 774 ...					
	with through coolant v_c (m/min)	5xD					with through coolant v_c (m/min)	12xD				
		Ø 3–5	Ø 5–8	Ø 8–12	Ø 12–16	Ø 16–20		Ø 3–5	Ø 5–8	Ø 8–12	Ø 12–16	Ø 16–20
		f (mm/rev)						f (mm/rev)				
P.1.1	165	0,12	0,17	0,23	0,28	0,31	110	0,09	0,13	0,18	0,22	0,25
P.1.2	160	0,11	0,16	0,22	0,26	0,30	105	0,09	0,13	0,17	0,21	0,24
P.1.3	150	0,11	0,15	0,20	0,25	0,28	100	0,09	0,12	0,16	0,20	0,23
P.1.4	145	0,10	0,15	0,19	0,24	0,27	95	0,08	0,12	0,16	0,19	0,22
P.1.5	135	0,10	0,14	0,18	0,23	0,26	90	0,08	0,11	0,15	0,18	0,20
P.2.1	165	0,14	0,20	0,27	0,33	0,37	110	0,11	0,16	0,21	0,26	0,29
P.2.2	150	0,13	0,18	0,24	0,30	0,34	100	0,10	0,14	0,19	0,24	0,27
P.2.3	135	0,11	0,16	0,22	0,27	0,30	90	0,09	0,13	0,17	0,21	0,24
P.2.4	105	0,11	0,15	0,19	0,24	0,27	70	0,09	0,12	0,16	0,19	0,21
P.3.1	115	0,11	0,16	0,22	0,27	0,30	75	0,09	0,13	0,17	0,21	0,24
P.3.2	90	0,10	0,13	0,18	0,22	0,25	60	0,08	0,11	0,14	0,17	0,20
P.3.3	90	0,08	0,11	0,14	0,17	0,19	60	0,06	0,09	0,11	0,14	0,15
P.4.1	70	0,08	0,11	0,14	0,18	0,20	60	0,06	0,09	0,11	0,14	0,16
P.4.2	70	0,08	0,11	0,14	0,18	0,20	60	0,06	0,09	0,11	0,14	0,16
M.1.1	80	0,09	0,13	0,18	0,22	0,25	55	0,08	0,11	0,14	0,18	0,20
M.2.1	75	0,08	0,11	0,15	0,19	0,21	50	0,06	0,09	0,12	0,15	0,17
M.3.1	75	0,08	0,11	0,15	0,19	0,21	50	0,06	0,09	0,12	0,15	0,17
K.1.1	150	0,15	0,24	0,33	0,41	0,47	120	0,15	0,24	0,33	0,41	0,47
K.1.2	125	0,14	0,20	0,27	0,33	0,37	100	0,14	0,20	0,27	0,33	0,37
K.2.1	200	0,15	0,22	0,31	0,38	0,43	160	0,15	0,22	0,31	0,38	0,43
K.2.2	125	0,14	0,20	0,27	0,33	0,37	100	0,14	0,20	0,27	0,33	0,37
K.3.1	115	0,15	0,21	0,29	0,35	0,40	90	0,15	0,21	0,29	0,35	0,40
K.3.2	100	0,12	0,17	0,23	0,28	0,32	80	0,12	0,17	0,23	0,28	0,32
N.1.1												
N.1.2												
N.2.1												
N.2.2												
N.2.3												
N.3.1							200	0,15	0,24	0,33	0,41	0,47
N.3.2	145	0,14	0,20	0,27	0,33	0,37	120	0,14	0,20	0,27	0,33	0,37
N.3.3												
N.4.1												
S.1.1	35	0,07	0,10	0,14	0,17	0,19	30	0,06	0,09	0,11	0,14	0,16
S.1.2	25	0,05	0,07	0,10	0,12	0,14	20	0,04	0,06	0,08	0,10	0,11
S.2.1	25	0,05	0,07	0,10	0,12	0,14	20	0,04	0,06	0,08	0,10	0,11
S.2.2	20	0,06	0,09	0,12	0,15	0,17	15	0,05	0,08	0,10	0,13	0,14
S.2.3	20	0,05	0,07	0,10	0,12	0,14	15	0,04	0,06	0,08	0,10	0,11
S.3.1												
S.3.2	35	0,08	0,11	0,15	0,18	0,20	30	0,06	0,09	0,12	0,15	0,17
S.3.3	30	0,06	0,09	0,12	0,15	0,17	25	0,05	0,08	0,10	0,13	0,14
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 – H

2

Index	10 777 ...								
	without through coolant v_c (m/min)	3xD							
		\emptyset 2-3	\emptyset 3-4	\emptyset 4-5	\emptyset 5-6	\emptyset 6-8	\emptyset 8-10	\emptyset 10-12	\emptyset 12-14
		f (mm/rev)							
P.1.1	80	0,05	0,07	0,08	0,10	0,14	0,18	0,21	0,24
P.1.2	70	0,04	0,05	0,07	0,08	0,12	0,15	0,18	0,21
P.1.3	70	0,04	0,05	0,07	0,08	0,12	0,15	0,18	0,21
P.1.4	70	0,04	0,05	0,07	0,08	0,12	0,15	0,18	0,21
P.1.5	80	0,05	0,07	0,08	0,10	0,14	0,18	0,21	0,24
P.2.1	75	0,05	0,07	0,08	0,10	0,14	0,18	0,21	0,24
P.2.2	70	0,05	0,06	0,08	0,09	0,13	0,16	0,19	0,22
P.2.3	70	0,04	0,05	0,07	0,08	0,12	0,15	0,18	0,21
P.2.4	70	0,04	0,05	0,07	0,08	0,12	0,15	0,18	0,21
P.3.1									
P.3.2									
P.3.3									
P.4.1									
P.4.2									
M.1.1									
M.2.1									
M.3.1									
K.1.1	85	0,08	0,10	0,13	0,15	0,19	0,23	0,27	0,34
K.1.2	80	0,08	0,10	0,13	0,15	0,19	0,23	0,27	0,34
K.2.1	85	0,06	0,08	0,10	0,13	0,16	0,18	0,22	0,25
K.2.2	80	0,06	0,08	0,10	0,13	0,16	0,18	0,22	0,25
K.3.1	85	0,06	0,08	0,10	0,13	0,16	0,18	0,22	0,25
K.3.2	80	0,06	0,08	0,10	0,13	0,16	0,18	0,22	0,25
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	0,04	0,05	0,05	0,06	0,07	0,08	0,09	0,10
H.1.2	15	0,04	0,05	0,05	0,06	0,07	0,08	0,09	0,10
H.1.3	10	0,03	0,04	0,04	0,05	0,06	0,06	0,07	0,07
H.1.4	10	0,03	0,04	0,04	0,05	0,06	0,06	0,07	0,07
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 – Quattro 4F

Index	10 735 ...						10 736 ...					
	with through coolant v_c (m/min)	5xD					with through coolant v_c (m/min)	8xD				
		Ø 3–5	Ø 5–8	Ø 8–12	Ø 12–16	Ø 16–20		Ø 3–5	Ø 5–8	Ø 8–12	Ø 12–16	Ø 16–20
		f (mm/rev)						f (mm/rev)				
P.1.1	110	0,12	0,17	0,23	0,28	0,31	110	0,12	0,17	0,23	0,28	0,31
P.1.2	105	0,11	0,16	0,22	0,26	0,30	105	0,11	0,16	0,22	0,26	0,30
P.1.3	100	0,11	0,15	0,20	0,25	0,28	100	0,11	0,15	0,20	0,25	0,28
P.1.4	95	0,10	0,15	0,19	0,24	0,27	95	0,10	0,15	0,19	0,24	0,27
P.1.5	90	0,10	0,14	0,18	0,23	0,26	90	0,10	0,14	0,18	0,23	0,26
P.2.1	110	0,14	0,20	0,27	0,33	0,37	110	0,14	0,20	0,27	0,33	0,37
P.2.2	100	0,13	0,18	0,24	0,30	0,34	100	0,13	0,18	0,24	0,30	0,34
P.2.3	90	0,11	0,16	0,22	0,27	0,30	90	0,11	0,16	0,22	0,27	0,30
P.2.4	70	0,11	0,15	0,19	0,24	0,27	70	0,11	0,15	0,19	0,24	0,27
P.3.1	75	0,11	0,16	0,22	0,27	0,30	75	0,11	0,16	0,22	0,27	0,30
P.3.2	60	0,10	0,13	0,18	0,22	0,25	60	0,10	0,13	0,18	0,22	0,25
P.3.3	60	0,08	0,11	0,14	0,17	0,19	60	0,08	0,11	0,14	0,17	0,19
P.4.1	60	0,08	0,11	0,14	0,18	0,20	60	0,08	0,11	0,14	0,18	0,20
P.4.2	60	0,08	0,11	0,14	0,18	0,20	60	0,08	0,11	0,14	0,18	0,20
M.1.1												
M.2.1												
M.3.1												
K.1.1	120	0,15	0,24	0,33	0,41	0,47	120	0,15	0,24	0,33	0,41	0,47
K.1.2	100	0,14	0,20	0,27	0,33	0,37	100	0,14	0,20	0,27	0,33	0,37
K.2.1	160	0,15	0,22	0,31	0,38	0,43	160	0,15	0,22	0,31	0,38	0,43
K.2.2	100	0,14	0,20	0,27	0,33	0,37	100	0,14	0,20	0,27	0,33	0,37
K.3.1	90	0,15	0,21	0,29	0,35	0,40	90	0,15	0,21	0,29	0,35	0,40
K.3.2	80	0,12	0,17	0,23	0,28	0,32	80	0,12	0,17	0,23	0,28	0,32
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	25	0,05	0,07	0,09	0,12	0,13	25	0,05	0,07	0,09	0,12	0,13
H.1.2												
H.1.3												
H.1.4												
H.2.1	30	0,06	0,09	0,12	0,15	0,17	30	0,06	0,09	0,12	0,15	0,17
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.

Index	10 737 ...						
	with through coolant v _c (m/min)	12xD					Ø 16-20
		Ø 3-5	Ø 5-8	Ø 8-12	Ø 12-16	f (mm/rev)	
P.1.1	110	0,12	0,17	0,23	0,28	0,31	
P.1.2	105	0,11	0,16	0,22	0,26	0,30	
P.1.3	100	0,11	0,15	0,20	0,25	0,28	
P.1.4	95	0,10	0,15	0,19	0,24	0,27	
P.1.5	90	0,10	0,14	0,18	0,23	0,26	
P.2.1	110	0,14	0,20	0,27	0,33	0,37	
P.2.2	100	0,13	0,18	0,24	0,30	0,34	
P.2.3	90	0,11	0,16	0,22	0,27	0,30	
P.2.4	70	0,11	0,15	0,19	0,24	0,27	
P.3.1	75	0,11	0,16	0,22	0,27	0,30	
P.3.2	60	0,10	0,13	0,18	0,22	0,25	
P.3.3	60	0,08	0,11	0,14	0,17	0,19	
P.4.1	60	0,08	0,11	0,14	0,18	0,20	
P.4.2	60	0,08	0,11	0,14	0,18	0,20	
M.1.1							
M.2.1							
M.3.1							
K.1.1	120	0,15	0,24	0,33	0,41	0,47	
K.1.2	100	0,14	0,20	0,27	0,33	0,37	
K.2.1	160	0,15	0,22	0,31	0,38	0,43	
K.2.2	100	0,14	0,20	0,27	0,33	0,37	
K.3.1	90	0,15	0,21	0,29	0,35	0,40	
K.3.2	80	0,12	0,17	0,23	0,28	0,32	
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	25	0,05	0,07	0,09	0,12	0,13	
H.1.2							
H.1.3							
H.1.4							
H.2.1	30	0,06	0,09	0,12	0,15	0,17	
H.3.1							
O.1.1							
O.1.2							
O.2.1							
O.2.2							
O.3.1							

Cutting data standard values – WTX – AL

Index	10 791 ...											
	with through coolant v _c (m/min)	5xD										
		Ø 2-3	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
f (mm/rev)												
P.1.1												
P.1.2												
P.1.3												
P.1.4												
P.1.5												
P.2.1												
P.2.2												
P.2.3												
P.2.4												
P.3.1												
P.3.2												
P.3.3												
P.4.1												
P.4.2												
M.1.1												
M.2.1												
M.3.1												
K.1.1												
K.1.2												
K.2.1												
K.2.2												
K.3.1												
K.3.2												
N.1.1	360	0,15	0,20	0,23	0,25	0,29	0,32	0,35	0,40	0,45	0,50	0,55
N.1.2	400	0,15	0,20	0,23	0,25	0,29	0,32	0,35	0,40	0,45	0,50	0,55
N.2.1	360	0,20	0,23	0,25	0,28	0,32	0,35	0,38	0,45	0,50	0,55	0,60
N.2.2	400	0,20	0,23	0,25	0,28	0,32	0,35	0,38	0,45	0,50	0,55	0,60
N.2.3	350	0,15	0,20	0,23	0,25	0,29	0,32	0,35	0,40	0,45	0,50	0,55
N.3.1	200	0,08	0,11	0,13	0,15	0,19	0,23	0,26	0,30	0,34	0,38	0,42
N.3.2	200	0,08	0,11	0,13	0,15	0,19	0,23	0,26	0,30	0,34	0,38	0,42
N.3.3	160	0,08	0,11	0,13	0,15	0,19	0,23	0,26	0,30	0,34	0,38	0,42
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.

Index	10 792 ...											
	with through coolant v _c (m/min)	8xD										
		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	
		f (mm/rev)										
P.1.1												
P.1.2												
P.1.3												
P.1.4												
P.1.5												
P.2.1												
P.2.2												
P.2.3												
P.2.4												
P.3.1												
P.3.2												
P.3.3												
P.4.1												
P.4.2												
M.1.1												
M.2.1												
M.3.1												
K.1.1												
K.1.2												
K.2.1												
K.2.2												
K.3.1												
K.3.2												
N.1.1	320	0,20	0,23	0,25	0,29	0,32	0,35	0,40	0,45	0,50	0,55	0,55
N.1.2	360	0,20	0,23	0,25	0,29	0,32	0,35	0,40	0,45	0,50	0,55	0,55
N.2.1	320	0,23	0,25	0,28	0,32	0,35	0,38	0,45	0,50	0,55	0,60	0,60
N.2.2	360	0,23	0,25	0,28	0,32	0,35	0,38	0,45	0,50	0,55	0,60	0,60
N.2.3	310	0,20	0,23	0,25	0,29	0,32	0,35	0,40	0,45	0,50	0,55	0,55
N.3.1	160	0,11	0,13	0,15	0,19	0,23	0,26	0,30	0,34	0,38	0,42	0,42
N.3.2	160	0,11	0,13	0,15	0,19	0,23	0,26	0,30	0,34	0,38	0,42	0,42
N.3.3	140	0,11	0,13	0,15	0,19	0,23	0,26	0,30	0,34	0,38	0,42	0,42
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												

Cutting data standard values – WTX – AL

Index	10 793 ...										
	with through coolant v_c (m/min)	12xD									
		\varnothing 3–4	\varnothing 4–5	\varnothing 5–6	\varnothing 6–8	\varnothing 8–10	\varnothing 10–12	\varnothing 12–14	\varnothing 14–16	\varnothing 16–18	\varnothing 18–20
f (mm/rev)											
P.1.1											
P.1.2											
P.1.3											
P.1.4											
P.1.5											
P.2.1											
P.2.2											
P.2.3											
P.2.4											
P.3.1											
P.3.2											
P.3.3											
P.4.1											
P.4.2											
M.1.1											
M.2.1											
M.3.1											
K.1.1											
K.1.2											
K.2.1											
K.2.2											
K.3.1											
K.3.2											
N.1.1	250	0,20	0,23	0,25	0,29	0,32	0,35	0,40	0,45	0,50	0,55
N.1.2	280	0,20	0,23	0,25	0,29	0,32	0,35	0,40	0,45	0,50	0,55
N.2.1	250	0,23	0,25	0,28	0,32	0,35	0,38	0,45	0,50	0,55	0,60
N.2.2	280	0,23	0,25	0,28	0,32	0,35	0,38	0,45	0,50	0,55	0,60
N.2.3	245	0,20	0,23	0,25	0,29	0,32	0,35	0,40	0,45	0,50	0,55
N.3.1	150	0,11	0,13	0,15	0,19	0,23	0,26	0,30	0,34	0,38	0,42
N.3.2	150	0,11	0,13	0,15	0,19	0,23	0,26	0,30	0,34	0,38	0,42
N.3.3	120	0,11	0,13	0,15	0,19	0,23	0,26	0,30	0,34	0,38	0,42
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 – HFDS – high-feed drill

Index	10 797 ...						10 798 ...					
	with through coolant v _c (m/min)	3xD					with through coolant v _c (m/min)	5xD				
		Ø 6–8	Ø 8–10	Ø 10–12	Ø 12–14	Ø 14–16		Ø 6–8	Ø 8–10	Ø 10–12	Ø 12–14	Ø 14–16
		f (mm/rev)						f (mm/rev)				
P.1.1	100	0,3–0,4	0,5–0,6	0,7–0,8	0,8–0,9	0,8–0,9	100	0,3–0,4	0,5–0,6	0,7–0,8	0,8–0,9	0,8–0,9
P.1.2	100	0,3–0,4	0,5–0,6	0,7–0,8	0,8–0,9	0,8–0,9	100	0,3–0,4	0,5–0,6	0,7–0,8	0,8–0,9	0,8–0,9
P.1.3	100	0,3–0,4	0,5–0,6	0,7–0,8	0,8–0,9	0,8–0,9	100	0,3–0,4	0,5–0,6	0,7–0,8	0,8–0,9	0,8–0,9
P.1.4	100	0,3–0,4	0,5–0,6	0,7–0,8	0,8–0,9	0,8–0,9	100	0,3–0,4	0,5–0,6	0,7–0,8	0,8–0,9	0,8–0,9
P.1.5	100	0,3–0,4	0,5–0,6	0,7–0,8	0,8–0,9	0,8–0,9	100	0,3–0,4	0,5–0,6	0,7–0,8	0,8–0,9	0,8–0,9
P.2.1	100	0,3–0,4	0,5–0,6	0,7–0,8	0,8–0,9	0,8–0,9	100	0,3–0,4	0,5–0,6	0,7–0,8	0,8–0,9	0,8–0,9
P.2.2	100	0,3–0,4	0,5–0,6	0,7–0,8	0,8–0,9	0,8–0,9	100	0,3–0,4	0,5–0,6	0,7–0,8	0,8–0,9	0,8–0,9
P.2.3	90	0,3–0,4	0,5–0,6	0,7–0,8	0,8–0,9	0,8–0,9	90	0,3–0,4	0,5–0,6	0,7–0,8	0,8–0,9	0,8–0,9
P.2.4	90	0,3–0,4	0,5–0,6	0,7–0,8	0,8–0,9	0,8–0,9	90	0,3–0,4	0,5–0,6	0,7–0,8	0,8–0,9	0,8–0,9
P.3.1	85	0,2–0,3	0,3–0,4	0,5–0,6	0,6–0,7	0,6–0,7	85	0,2–0,3	0,3–0,4	0,5–0,6	0,6–0,7	0,6–0,7
P.3.2	70	0,2–0,3	0,3–0,4	0,5–0,6	0,6–0,7	0,6–0,7	70	0,2–0,3	0,3–0,4	0,5–0,6	0,6–0,7	0,6–0,7
P.3.3	70	0,2–0,3	0,3–0,4	0,5–0,6	0,6–0,7	0,6–0,7	70	0,2–0,3	0,3–0,4	0,5–0,6	0,6–0,7	0,6–0,7
P.4.1	65	0,2–0,3	0,3–0,4	0,5–0,6	0,6–0,7	0,6–0,7	65	0,2–0,3	0,3–0,4	0,5–0,6	0,6–0,7	0,6–0,7
P.4.2	65	0,2–0,3	0,3–0,4	0,5–0,6	0,6–0,7	0,6–0,7	65	0,2–0,3	0,3–0,4	0,5–0,6	0,6–0,7	0,6–0,7
M.1.1	65	0,2–0,25	0,3–0,4	0,5–0,6	0,6–0,6	0,6–0,6	65	0,2–0,25	0,3–0,4	0,5–0,6	0,6–0,6	0,6–0,6
M.2.1	65	0,2–0,25	0,3–0,4	0,5–0,6	0,6–0,6	0,6–0,6	65	0,2–0,25	0,3–0,4	0,5–0,6	0,6–0,6	0,6–0,6
M.3.1	55	0,2–0,25	0,3–0,4	0,5–0,6	0,6–0,6	0,6–0,6	55	0,2–0,25	0,3–0,4	0,5–0,6	0,6–0,6	0,6–0,6
K.1.1	130	0,4–0,6	0,5–0,7	0,6–0,8	0,7–0,9	0,7–0,9	130	0,4–0,6	0,5–0,7	0,6–0,8	0,7–0,9	0,7–0,9
K.1.2	130	0,4–0,6	0,5–0,7	0,6–0,8	0,7–0,9	0,7–0,9	130	0,4–0,6	0,5–0,7	0,6–0,8	0,7–0,9	0,7–0,9
K.2.1	130	0,4–0,6	0,5–0,7	0,6–0,8	0,7–0,9	0,7–0,9	130	0,4–0,6	0,5–0,7	0,6–0,8	0,7–0,9	0,7–0,9
K.2.2	130	0,4–0,6	0,5–0,7	0,6–0,8	0,7–0,9	0,7–0,9	130	0,4–0,6	0,5–0,7	0,6–0,8	0,7–0,9	0,7–0,9
K.3.1	130	0,4–0,6	0,5–0,7	0,6–0,8	0,7–0,9	0,7–0,9	130	0,4–0,6	0,5–0,7	0,6–0,8	0,7–0,9	0,7–0,9
K.3.2	130	0,4–0,6	0,5–0,7	0,6–0,8	0,7–0,9	0,7–0,9	130	0,4–0,6	0,5–0,7	0,6–0,8	0,7–0,9	0,7–0,9
N.1.1												
N.1.2												
N.2.1												
N.2.2												
N.2.3												
N.3.1	130	0,4–0,6	0,5–0,7	0,6–0,8	0,7–0,9	0,7–0,9	130	0,4–0,6	0,5–0,7	0,6–0,8	0,7–0,9	0,7–0,9
N.3.2	130	0,4–0,6	0,5–0,7	0,6–0,8	0,7–0,9	0,7–0,9	130	0,4–0,6	0,5–0,7	0,6–0,8	0,7–0,9	0,7–0,9
N.3.3	130	0,4–0,6	0,5–0,7	0,6–0,8	0,7–0,9	0,7–0,9	130	0,4–0,6	0,5–0,7	0,6–0,8	0,7–0,9	0,7–0,9
N.4.1	130	0,4–0,6	0,5–0,7	0,6–0,8	0,7–0,9	0,7–0,9	130	0,4–0,6	0,5–0,7	0,6–0,8	0,7–0,9	0,7–0,9
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	110	0,6	0,6	0,8	0,9	1,0	110	0,6	0,6	0,8	0,9	1,0



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 – 180

Index	10 720 ...					
	3xD					
	with through coolant	Ø 3–5	Ø 5–8	Ø 8–12	Ø 12–16	Ø 16–20
	v_c (m/min)	f (mm/rev)				
P.1.1	90	0,09	0,13	0,18	0,22	0,25
P.1.2	85	0,09	0,13	0,17	0,21	0,24
P.1.3	80	0,09	0,12	0,16	0,20	0,23
P.1.4	75	0,08	0,12	0,16	0,19	0,22
P.1.5	70	0,08	0,11	0,15	0,18	0,20
P.2.1	90	0,11	0,16	0,21	0,26	0,29
P.2.2	80	0,10	0,14	0,19	0,24	0,27
P.2.3	70	0,09	0,13	0,17	0,21	0,24
P.2.4	55	0,09	0,12	0,16	0,19	0,21
P.3.1	60	0,09	0,13	0,17	0,21	0,24
P.3.2	50	0,08	0,11	0,14	0,17	0,20
P.3.3	50	0,06	0,09	0,11	0,14	0,15
P.4.1	50	0,06	0,09	0,11	0,14	0,16
P.4.2	50	0,06	0,09	0,11	0,14	0,16
M.1.1	45	0,06	0,09	0,11	0,14	0,16
M.2.1	40	0,05	0,07	0,10	0,12	0,14
M.3.1	40	0,05	0,07	0,10	0,12	0,14
K.1.1	95	0,12	0,19	0,26	0,33	0,38
K.1.2	80	0,11	0,16	0,21	0,26	0,30
K.2.1	130	0,12	0,18	0,25	0,30	0,35
K.2.2	80	0,11	0,16	0,21	0,26	0,30
K.3.1	70	0,12	0,17	0,23	0,28	0,32
K.3.2	65	0,10	0,14	0,18	0,22	0,25
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						

Index	10 721 ...					
	with through coolant v _c (m/min)	5xD				
		Ø 3-5	Ø 5-8	Ø 8-12	Ø 12-16	Ø 16-20
f (mm/rev)						
P.1.1	90	0,09	0,13	0,18	0,22	0,25
P.1.2	85	0,09	0,13	0,17	0,21	0,24
P.1.3	80	0,09	0,12	0,16	0,20	0,23
P.1.4	75	0,08	0,12	0,16	0,19	0,22
P.1.5	70	0,08	0,11	0,15	0,18	0,20
P.2.1	90	0,11	0,16	0,21	0,26	0,29
P.2.2	80	0,10	0,14	0,19	0,24	0,27
P.2.3	70	0,09	0,13	0,17	0,21	0,24
P.2.4	55	0,09	0,12	0,16	0,19	0,21
P.3.1	60	0,09	0,13	0,17	0,21	0,24
P.3.2	50	0,08	0,11	0,14	0,17	0,20
P.3.3	50	0,06	0,09	0,11	0,14	0,15
P.4.1	50	0,06	0,09	0,11	0,14	0,16
P.4.2	50	0,06	0,09	0,11	0,14	0,16
M.1.1	45	0,06	0,09	0,11	0,14	0,16
M.2.1	40	0,05	0,07	0,10	0,12	0,14
M.3.1	40	0,05	0,07	0,10	0,12	0,14
K.1.1	95	0,12	0,19	0,26	0,33	0,38
K.1.2	80	0,11	0,16	0,21	0,26	0,30
K.2.1	130	0,12	0,18	0,25	0,30	0,35
K.2.2	80	0,11	0,16	0,21	0,26	0,30
K.3.1	70	0,12	0,17	0,23	0,28	0,32
K.3.2	65	0,10	0,14	0,18	0,22	0,25
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						



Application Note:

Spot drilling with reduced feedrate

1. Feedrate f [mm/U] should be multiplied by correction factor A_k
2. Drill with reduced feed rate until tool is fully engaged in workpiece by approximately 0.25 x D
3. Retract from the hole at double the feed rate f in mm/U – only with inclined surfaces

This operation is necessary in order to achieve maximum performance of the drill!
4. Drill the hole with feed rate f [mm/U] without pecking for chip evacuation

Correction factor A_k for f [mm/U] when spot drilling

Inclination workpiece surface	A _k to 3xD (10 720 ...)	A _k to 5xD (10 721 ...)
15°	0,5	0,25
30°	0,4	not recommended
45°	0,25	not recommended



For drilling on flat surfaces (inclination 0 °) with the WTX – 180 5xD, we recommend the use of a pilot drill. (WTX – UNI 3xD)

Cutting data standard values – type UNI

Index	11 706 ..., 11 707 ..., 11 709 ..., 11 710 ...																
	without through coolant v_c (m/min)	3xD / 5xD															
		$\leq \emptyset 1$	$\emptyset 1-1,25$	$\emptyset 1,25-1,5$	$\emptyset 1,5-2$	$\emptyset 2-2,5$	$\emptyset 2,5-3$	$\emptyset 3-4$	$\emptyset 4-5$	$\emptyset 5-6$	$\emptyset 6-8$	$\emptyset 8-10$	$\emptyset 10-12$	$\emptyset 12-14$	$\emptyset 14-16$	$\emptyset 16-18$	$\emptyset 18-20$
		f (mm/rev)															
P.1.1	90	0,03	0,04	0,05	0,06	0,08	0,09	0,13	0,16	0,19	0,22	0,25	0,28	0,31	0,34	0,36	0,38
P.1.2	75	0,03	0,03	0,04	0,05	0,07	0,08	0,12	0,15	0,18	0,21	0,24	0,27	0,30	0,32	0,35	0,37
P.1.3	75	0,03	0,03	0,04	0,05	0,07	0,08	0,12	0,15	0,18	0,21	0,24	0,27	0,30	0,32	0,35	0,37
P.1.4	70	0,02	0,02	0,03	0,03	0,04	0,05	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25
P.1.5	70	0,02	0,02	0,03	0,03	0,04	0,05	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25
P.2.1	80	0,03	0,04	0,05	0,06	0,08	0,09	0,13	0,16	0,19	0,22	0,25	0,28	0,31	0,34	0,36	0,38
P.2.2	70	0,03	0,03	0,04	0,05	0,07	0,08	0,12	0,15	0,18	0,21	0,24	0,27	0,30	0,32	0,35	0,37
P.2.3	70	0,02	0,02	0,03	0,03	0,04	0,05	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25
P.2.4	55	0,02	0,02	0,03	0,03	0,04	0,05	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25
P.3.1	70	0,02	0,02	0,03	0,03	0,04	0,05	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25
P.3.2	55	0,02	0,02	0,03	0,03	0,04	0,05	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25
P.3.3																	
P.4.1																	
P.4.2																	
M.1.1																	
M.2.1																	
M.3.1																	
K.1.1	90	0,04	0,05	0,06	0,08	0,10	0,13	0,16	0,18	0,22	0,25	0,29	0,33	0,37	0,40	0,43	0,46
K.1.2	75	0,04	0,05	0,06	0,08	0,10	0,13	0,16	0,18	0,22	0,25	0,29	0,33	0,37	0,40	0,43	0,46
K.2.1	75	0,03	0,03	0,04	0,05	0,06	0,08	0,10	0,13	0,15	0,18	0,20	0,23	0,26	0,30	0,34	0,38
K.2.2	70	0,03	0,03	0,04	0,05	0,06	0,08	0,10	0,13	0,15	0,18	0,20	0,23	0,26	0,30	0,34	0,38
K.3.1	75	0,03	0,03	0,04	0,05	0,06	0,08	0,10	0,13	0,15	0,18	0,20	0,23	0,26	0,30	0,34	0,38
K.3.2	70	0,03	0,03	0,04	0,05	0,06	0,08	0,10	0,13	0,15	0,18	0,20	0,23	0,26	0,30	0,34	0,38
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 is strongly influenced by external conditions, such as the stability of the tool and workpiece clamping, material and type of machine. The specified values represent guideline cutting data that must be corrected according to the usage conditions.

Index	11 700 ..., 11 701 ..., 11 702 ..., 11 703 ...																	
	with through coolant v _c (m/min)	3xD / 5xD																
		≤ Ø 1	Ø 1-1,25	Ø 1,25-1,5	Ø 1,5-2	Ø 2-2,5	Ø 2,5-3	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	
		f (mm/rev)																
P.1.1	115	0,03	0,04	0,05	0,06	0,08	0,09	0,13	0,16	0,19	0,22	0,25	0,28	0,31	0,34	0,36	0,38	
P.1.2	95	0,03	0,03	0,04	0,05	0,07	0,08	0,12	0,15	0,18	0,21	0,24	0,27	0,30	0,32	0,35	0,37	
P.1.3	95	0,03	0,03	0,04	0,05	0,07	0,08	0,12	0,15	0,18	0,21	0,24	0,27	0,30	0,32	0,35	0,37	
P.1.4	85	0,02	0,02	0,03	0,03	0,04	0,05	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25	
P.1.5	85	0,02	0,02	0,03	0,03	0,04	0,05	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25	
P.2.1	95	0,03	0,04	0,05	0,06	0,08	0,09	0,13	0,16	0,19	0,22	0,25	0,28	0,31	0,34	0,36	0,38	
P.2.2	85	0,03	0,03	0,04	0,05	0,07	0,08	0,12	0,15	0,18	0,21	0,24	0,27	0,30	0,32	0,35	0,37	
P.2.3	85	0,02	0,02	0,03	0,03	0,04	0,05	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25	
P.2.4	70	0,02	0,02	0,03	0,03	0,04	0,05	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25	
P.3.1	85	0,02	0,02	0,03	0,03	0,04	0,05	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25	
P.3.2	70	0,02	0,02	0,03	0,03	0,04	0,05	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25	
P.3.3	40	0,02	0,02	0,03	0,03	0,04	0,05	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25	
P.4.1	50	0,02	0,02	0,03	0,03	0,04	0,05	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25	
P.4.2	30	0,02	0,02	0,03	0,03	0,04	0,05	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25	
M.1.1	35	0,02	0,02	0,03	0,03	0,04	0,05	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25	
M.2.1	35	0,02	0,02	0,03	0,03	0,04	0,05	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25	
M.3.1	35	0,02	0,02	0,03	0,03	0,04	0,05	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25	
K.1.1	115	0,04	0,05	0,06	0,08	0,10	0,13	0,16	0,18	0,22	0,25	0,29	0,33	0,37	0,40	0,43	0,46	
K.1.2	95	0,04	0,05	0,06	0,08	0,10	0,13	0,16	0,18	0,22	0,25	0,29	0,33	0,37	0,40	0,43	0,46	
K.2.1	95	0,03	0,03	0,04	0,05	0,06	0,08	0,10	0,13	0,15	0,18	0,20	0,23	0,26	0,30	0,34	0,38	
K.2.2	90	0,03	0,03	0,04	0,05	0,06	0,08	0,10	0,13	0,15	0,18	0,20	0,23	0,26	0,30	0,34	0,38	
K.3.1	95	0,03	0,03	0,04	0,05	0,06	0,08	0,10	0,13	0,15	0,18	0,20	0,23	0,26	0,30	0,34	0,38	
K.3.2	90	0,03	0,03	0,04	0,05	0,06	0,08	0,10	0,13	0,15	0,18	0,20	0,23	0,26	0,30	0,34	0,38	
N.1.1	200	0,03	0,03	0,04	0,05	0,07	0,08	0,12	0,15	0,18	0,21	0,24	0,27	0,30	0,32	0,35	0,37	
N.1.2	200	0,03	0,03	0,04	0,05	0,07	0,08	0,12	0,15	0,18	0,21	0,24	0,27	0,30	0,32	0,35	0,37	
N.2.1	160	0,03	0,03	0,04	0,05	0,06	0,08	0,10	0,11	0,13	0,15	0,18	0,20	0,23	0,26	0,29	0,33	
N.2.2	160	0,03	0,03	0,04	0,05	0,06	0,08	0,10	0,11	0,13	0,15	0,18	0,20	0,23	0,26	0,29	0,33	
N.2.3	140	0,02	0,02	0,03	0,03	0,04	0,05	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25	
N.3.1	120	0,02	0,02	0,03	0,03	0,04	0,05	0,07	0,08	0,10	0,11	0,12	0,13	0,14	0,15	0,16	0,18	
N.3.2	120	0,02	0,02	0,03	0,03	0,04	0,05	0,07	0,08	0,10	0,11	0,12	0,13	0,14	0,15	0,16	0,18	
N.3.3	100	0,02	0,02	0,03	0,03	0,04	0,05	0,07	0,08	0,10	0,11	0,12	0,13	0,14	0,15	0,16	0,18	
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																		

Cutting data standard values – type UNI


Index	11 704 ...										
	with through coolant v _c (m/min)	8xD									
		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
		f (mm/rev)									
P.1.1	100	0,13	0,16	0,19	0,22	0,25	0,28	0,31	0,34	0,36	0,38
P.1.2	80	0,12	0,15	0,18	0,21	0,24	0,27	0,30	0,32	0,35	0,37
P.1.3	80	0,12	0,15	0,18	0,21	0,24	0,27	0,30	0,32	0,35	0,37
P.1.4	75	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25
P.1.5	75	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25
P.2.1	80	0,13	0,16	0,19	0,22	0,25	0,28	0,31	0,34	0,36	0,38
P.2.2	75	0,12	0,15	0,18	0,21	0,24	0,27	0,30	0,32	0,35	0,37
P.2.3	75	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25
P.2.4	60	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25
P.3.1	75	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25
P.3.2	60	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25
P.3.3	35	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25
P.4.1	40	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25
P.4.2	25	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25
M.1.1	30	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25
M.2.1	30	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25
M.3.1	30	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25
K.1.1	100	0,16	0,18	0,22	0,25	0,29	0,33	0,37	0,40	0,43	0,46
K.1.2	80	0,16	0,18	0,22	0,25	0,29	0,33	0,37	0,40	0,43	0,46
K.2.1	80	0,10	0,13	0,15	0,18	0,20	0,23	0,26	0,30	0,34	0,38
K.2.2	75	0,10	0,13	0,15	0,18	0,20	0,23	0,26	0,30	0,34	0,38
K.3.1	80	0,10	0,13	0,15	0,18	0,20	0,23	0,26	0,30	0,34	0,38
K.3.2	75	0,10	0,13	0,15	0,18	0,20	0,23	0,26	0,30	0,34	0,38
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 is highly dependent on external conditions, such as stability of the tool and workpiece clamping, material and machine type!
The values indicated represent possible cutting data which may need to be corrected depending on operating conditions !

Index	11 705 ...											
	with through coolant v _c (m/min)	12xD										
		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	
		f (mm/rev)										
P.1.1	90	0,13	0,16	0,19	0,22	0,25	0,28	0,31	0,34	0,36	0,38	
P.1.2	75	0,12	0,15	0,18	0,21	0,24	0,27	0,30	0,32	0,35	0,37	
P.1.3	75	0,12	0,15	0,18	0,21	0,24	0,27	0,30	0,32	0,35	0,37	
P.1.4	70	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25	
P.1.5	70	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25	
P.2.1	80	0,13	0,16	0,19	0,22	0,25	0,28	0,31	0,34	0,36	0,38	
P.2.2	70	0,12	0,15	0,18	0,21	0,24	0,27	0,30	0,32	0,35	0,37	
P.2.3	70	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25	
P.2.4	55	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25	
P.3.1	70	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25	
P.3.2	55	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25	
P.3.3	35	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25	
P.4.1	40	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25	
P.4.2	25	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25	
M.1.1	30	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25	
M.2.1	30	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25	
M.3.1	30	0,06	0,08	0,10	0,12	0,14	0,15	0,18	0,20	0,23	0,25	
K.1.1	90	0,16	0,18	0,22	0,25	0,29	0,33	0,37	0,40	0,43	0,46	
K.1.2	75	0,16	0,18	0,22	0,25	0,29	0,33	0,37	0,40	0,43	0,46	
K.2.1	75	0,10	0,13	0,15	0,18	0,20	0,23	0,26	0,30	0,34	0,38	
K.2.2	70	0,10	0,13	0,15	0,18	0,20	0,23	0,26	0,30	0,34	0,38	
K.3.1	75	0,10	0,13	0,15	0,18	0,20	0,23	0,26	0,30	0,34	0,38	
K.3.2	70	0,10	0,13	0,15	0,18	0,20	0,23	0,26	0,30	0,34	0,38	
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												

Cutting data standard values – type VA

Index	11 711 ..., 11 712 ...																
	without through coolant v_c (m/min)	3xD															
		$\leq \varnothing 1$	$\varnothing 1-1,25$	$\varnothing 1,25-1,5$	$\varnothing 1,5-2$	$\varnothing 2-2,5$	$\varnothing 2,5-3$	$\varnothing 3-4$	$\varnothing 4-5$	$\varnothing 5-6$	$\varnothing 6-8$	$\varnothing 8-10$	$\varnothing 10-12$	$\varnothing 12-14$	$\varnothing 14-16$	$\varnothing 16-18$	$\varnothing 18-20$
		f (mm/rev)															
P.1.1	75	0,03	0,03	0,04	0,05	0,07	0,08	0,10	0,11	0,12	0,15	0,18	0,20	0,23	0,24	0,26	0,27
P.1.2																	
P.1.3																	
P.1.4																	
P.1.5																	
P.2.1	65	0,03	0,03	0,04	0,05	0,07	0,08	0,10	0,11	0,12	0,15	0,18	0,20	0,23	0,24	0,26	0,27
P.2.2	60	0,03	0,03	0,04	0,05	0,07	0,08	0,10	0,11	0,12	0,15	0,18	0,20	0,23	0,24	0,26	0,27
P.2.3																	
P.2.4																	
P.3.1																	
P.3.2																	
P.3.3																	
P.4.1	45	0,03	0,03	0,04	0,05	0,07	0,08	0,10	0,11	0,12	0,15	0,18	0,20	0,23	0,24	0,26	0,27
P.4.2	30	0,01	0,02	0,02	0,03	0,04	0,05	0,06	0,08	0,09	0,11	0,13	0,15	0,17	0,19	0,20	0,21
M.1.1	35	0,01	0,02	0,02	0,03	0,04	0,05	0,06	0,08	0,09	0,11	0,13	0,15	0,17	0,19	0,20	0,21
M.2.1	35	0,01	0,02	0,02	0,03	0,04	0,05	0,06	0,08	0,09	0,11	0,13	0,15	0,17	0,19	0,20	0,21
M.3.1	35	0,01	0,02	0,02	0,03	0,04	0,05	0,06	0,08	0,09	0,11	0,13	0,15	0,17	0,19	0,20	0,21
K.1.1																	
K.1.2																	
K.2.1																	
K.2.2																	
K.3.1																	
K.3.2																	
N.1.1	160	0,04	0,05	0,06	0,08	0,09	0,11	0,13	0,15	0,16	0,20	0,24	0,27	0,31	0,32	0,34	0,36
N.1.2	160	0,04	0,05	0,06	0,08	0,09	0,11	0,13	0,15	0,16	0,20	0,24	0,27	0,31	0,32	0,34	0,36
N.2.1	130	0,04	0,05	0,06	0,08	0,09	0,11	0,13	0,15	0,16	0,20	0,24	0,27	0,31	0,32	0,34	0,36
N.2.2	130	0,04	0,05	0,06	0,08	0,09	0,11	0,13	0,15	0,16	0,20	0,24	0,27	0,31	0,32	0,34	0,36
N.2.3	110	0,03	0,04	0,04	0,05	0,07	0,08	0,10	0,11	0,12	0,15	0,18	0,20	0,23	0,24	0,26	0,27
N.3.1	160	0,04	0,05	0,06	0,08	0,09	0,11	0,13	0,15	0,16	0,20	0,24	0,27	0,31	0,32	0,34	0,36
N.3.2	160	0,04	0,05	0,06	0,08	0,09	0,11	0,13	0,15	0,16	0,20	0,24	0,27	0,31	0,32	0,34	0,36
N.3.3	225	0,03	0,04	0,04	0,05	0,07	0,08	0,10	0,11	0,12	0,15	0,18	0,20	0,23	0,24	0,26	0,27
N.4.1																	
S.1.1																	
S.1.2																	
S.2.1																	
S.2.2																	
S.2.3																	
S.3.1	30	0,002	0,004	0,01	0,01	0,01	0,02	0,03	0,03	0,04	0,06	0,07	0,09	0,10	0,11	0,12	0,12
S.3.2	20	0,002	0,004	0,01	0,01	0,01	0,02	0,03	0,03	0,04	0,06	0,07	0,09	0,10	0,11	0,12	0,12
S.3.3																	
H.1.1																	
H.1.2																	
H.1.3																	
H.1.4																	
H.2.1																	
H.3.1																	
O.1.1	100	0,01	0,02	0,02	0,03	0,04	0,05	0,06	0,08	0,09	0,11	0,13	0,15	0,17	0,19	0,2	0,21
O.1.2	80	0,002	0,004	0,01	0,01	0,02	0,02	0,03	0,04	0,05	0,07	0,09	0,11	0,13	0,13	0,14	0,15
O.2.1																	
O.2.2																	
O.3.1																	

 The cutting data is strongly influenced by external conditions, such as the stability of the tool and workpiece clamping, material and type of machine. The specified values represent guideline cutting data that must be corrected according to the usage conditions.

Index	11 713 ..., 11 714 ..., 11 715 ..., 11 716 ...																	
	with through coolant v _c (m/min)	3xD / 5xD																
		≤ Ø 1	Ø 1-1,25	Ø 1,25-1,5	Ø 1,5-2	Ø 2-2,5	Ø 2,5-3	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	
		f (mm/rev)																
P.1.1	85	0,03	0,03	0,04	0,05	0,07	0,08	0,10	0,11	0,12	0,15	0,18	0,20	0,23	0,24	0,26	0,27	
P.1.2																		
P.1.3																		
P.1.4																		
P.1.5																		
P.2.1	75	0,03	0,03	0,04	0,05	0,07	0,08	0,10	0,11	0,12	0,15	0,18	0,20	0,23	0,24	0,26	0,27	
P.2.2	65	0,03	0,03	0,04	0,05	0,07	0,08	0,10	0,11	0,12	0,15	0,18	0,20	0,23	0,24	0,26	0,27	
P.2.3																		
P.2.4																		
P.3.1																		
P.3.2																		
P.3.3																		
P.4.1	55	0,03	0,03	0,04	0,05	0,07	0,08	0,10	0,11	0,12	0,15	0,18	0,20	0,23	0,24	0,26	0,27	
P.4.2	40	0,01	0,02	0,02	0,03	0,04	0,05	0,06	0,08	0,09	0,11	0,13	0,15	0,17	0,19	0,20	0,21	
M.1.1	45	0,01	0,02	0,02	0,03	0,04	0,05	0,06	0,08	0,09	0,11	0,13	0,15	0,17	0,19	0,20	0,21	
M.2.1	45	0,01	0,02	0,02	0,03	0,04	0,05	0,06	0,08	0,09	0,11	0,13	0,15	0,17	0,19	0,20	0,21	
M.3.1	45	0,01	0,02	0,02	0,03	0,04	0,05	0,06	0,08	0,09	0,11	0,13	0,15	0,17	0,19	0,20	0,21	
K.1.1																		
K.1.2																		
K.2.1																		
K.2.2																		
K.3.1																		
K.3.2																		
N.1.1	200	0,04	0,05	0,06	0,08	0,09	0,11	0,13	0,15	0,16	0,20	0,24	0,27	0,31	0,32	0,34	0,36	
N.1.2	200	0,04	0,05	0,06	0,08	0,09	0,11	0,13	0,15	0,16	0,20	0,24	0,27	0,31	0,32	0,34	0,36	
N.2.1	160	0,04	0,05	0,06	0,08	0,09	0,11	0,13	0,15	0,16	0,20	0,24	0,27	0,31	0,32	0,34	0,36	
N.2.2	160	0,04	0,05	0,06	0,08	0,09	0,11	0,13	0,15	0,16	0,20	0,24	0,27	0,31	0,32	0,34	0,36	
N.2.3	140	0,03	0,03	0,04	0,05	0,07	0,08	0,10	0,11	0,12	0,15	0,18	0,2	0,23	0,24	0,26	0,27	
N.3.1	200	0,04	0,05	0,06	0,08	0,09	0,11	0,13	0,15	0,16	0,20	0,24	0,27	0,31	0,32	0,34	0,36	
N.3.2	200	0,04	0,05	0,06	0,08	0,09	0,11	0,13	0,15	0,16	0,20	0,24	0,27	0,31	0,32	0,34	0,36	
N.3.3	280	0,03	0,03	0,04	0,05	0,07	0,08	0,10	0,11	0,12	0,15	0,18	0,20	0,23	0,24	0,26	0,27	
N.4.1																		
S.1.1																		
S.1.2																		
S.2.1	15	0,002	0,004	0,01	0,01	0,01	0,02	0,03	0,03	0,04	0,06	0,07	0,09	0,10	0,11	0,12	0,12	
S.2.2	15	0,002	0,004	0,01	0,01	0,01	0,02	0,03	0,03	0,04	0,06	0,07	0,09	0,10	0,11	0,12	0,12	
S.2.3	15	0,002	0,004	0,01	0,01	0,01	0,02	0,03	0,03	0,04	0,06	0,07	0,09	0,10	0,11	0,12	0,12	
S.3.1	35	0,002	0,004	0,01	0,01	0,01	0,02	0,03	0,03	0,04	0,06	0,07	0,09	0,10	0,11	0,12	0,12	
S.3.2	25	0,002	0,004	0,01	0,01	0,01	0,02	0,03	0,03	0,04	0,06	0,07	0,09	0,10	0,11	0,12	0,12	
S.3.3																		
H.1.1																		
H.1.2																		
H.1.3																		
H.1.4																		
H.2.1																		
H.3.1																		
O.1.1	120	0,01	0,02	0,02	0,03	0,04	0,05	0,06	0,08	0,09	0,11	0,13	0,15	0,17	0,19	0,20	0,21	
O.1.2	100	0,002	0,004	0,01	0,01	0,02	0,02	0,03	0,04	0,05	0,07	0,09	0,11	0,13	0,13	0,14	0,15	
O.2.1																		
O.2.2																		
O.3.1																		

Cutting data standard values – Type N – Twist drills

Index	10 700 ..., 10 710 ...														
	without through coolant v _c (m/min)	3xD / 5xD													
		≤ Ø 1	Ø 1–1,5	Ø 1,5–2	Ø 2–3	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
f (mm/rev)															
P.1.1	75	0,03	0,05	0,07	0,10	0,12	0,14	0,16	0,2	0,24	0,28	0,31	0,35	0,40	0,45
P.1.2	65	0,03	0,05	0,07	0,10	0,12	0,14	0,16	0,2	0,24	0,28	0,31	0,35	0,40	0,45
P.1.3	65	0,03	0,05	0,07	0,10	0,12	0,14	0,16	0,2	0,24	0,28	0,31	0,35	0,40	0,45
P.1.4	65	0,03	0,04	0,05	0,08	0,10	0,11	0,13	0,15	0,18	0,20	0,23	0,26	0,29	0,33
P.1.5	65	0,03	0,04	0,05	0,08	0,10	0,11	0,13	0,15	0,18	0,20	0,23	0,26	0,29	0,33
P.2.1	70	0,03	0,05	0,07	0,10	0,12	0,14	0,16	0,20	0,24	0,28	0,31	0,35	0,40	0,45
P.2.2	65	0,03	0,04	0,05	0,08	0,10	0,11	0,13	0,15	0,18	0,20	0,23	0,26	0,29	0,33
P.2.3	65	0,03	0,04	0,05	0,08	0,10	0,11	0,13	0,15	0,18	0,20	0,23	0,26	0,29	0,33
P.2.4	50	0,03	0,04	0,05	0,08	0,10	0,11	0,13	0,15	0,18	0,20	0,23	0,26	0,29	0,33
P.3.1	65	0,03	0,04	0,05	0,08	0,10	0,11	0,13	0,15	0,18	0,20	0,23	0,26	0,29	0,33
P.3.2	50	0,03	0,04	0,05	0,08	0,10	0,11	0,13	0,15	0,18	0,20	0,23	0,26	0,29	0,33
P.3.3															
P.4.1															
P.4.2															
M.1.1															
M.2.1															
M.3.1															
K.1.1	70	0,03	0,04	0,05	0,08	0,10	0,11	0,13	0,15	0,18	0,20	0,23	0,26	0,29	0,33
K.1.2	70	0,03	0,04	0,05	0,08	0,10	0,11	0,13	0,15	0,18	0,20	0,23	0,26	0,29	0,33
K.2.1	70	0,03	0,04	0,05	0,08	0,10	0,11	0,13	0,15	0,18	0,20	0,23	0,26	0,29	0,33
K.2.2	70	0,03	0,04	0,05	0,08	0,10	0,11	0,13	0,15	0,18	0,20	0,23	0,26	0,29	0,33
K.3.1	70	0,03	0,04	0,05	0,08	0,10	0,11	0,13	0,15	0,18	0,20	0,23	0,26	0,29	0,33
K.3.2	70	0,03	0,04	0,05	0,08	0,10	0,11	0,13	0,15	0,18	0,20	0,23	0,26	0,29	0,33
N.1.1	200	0,01	0,01	0,01	0,02	0,03	0,04	0,05	0,07	0,09	0,11	0,13	0,15	0,18	0,20
N.1.2	200	0,01	0,01	0,01	0,02	0,03	0,04	0,05	0,07	0,09	0,11	0,13	0,15	0,18	0,20
N.2.1	160	0,01	0,01	0,01	0,02	0,03	0,04	0,05	0,07	0,09	0,11	0,13	0,15	0,18	0,20
N.2.2	160	0,01	0,01	0,01	0,02	0,03	0,04	0,05	0,07	0,09	0,11	0,13	0,15	0,18	0,20
N.2.3	130	0,01	0,01	0,01	0,02	0,03	0,04	0,05	0,07	0,09	0,11	0,13	0,15	0,18	0,20
N.3.1	160	0,003	0,01	0,01	0,01	0,02	0,03	0,04	0,06	0,09	0,11	0,14	0,16	0,18	0,20
N.3.2	160	0,003	0,01	0,01	0,01	0,02	0,03	0,04	0,06	0,09	0,11	0,14	0,16	0,18	0,20
N.3.3	100	0,003	0,01	0,01	0,01	0,02	0,03	0,04	0,06	0,09	0,11	0,14	0,16	0,18	0,20
N.4.1	200	0,01	0,01	0,01	0,02	0,03	0,04	0,05	0,07	0,09	0,11	0,13	0,15	0,18	0,20
S.1.1															
S.1.2															
S.2.1															
S.2.2															
S.2.3															
S.3.1	30	0,002	0,003	0,003	0,01	0,01	0,02	0,03	0,04	0,05	0,06	0,07	0,08	0,09	0,10
S.3.2	20	0,002	0,003	0,003	0,01	0,01	0,02	0,03	0,04	0,05	0,06	0,07	0,08	0,09	0,10
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 is highly dependent on external conditions, such as stability of the tool and workpiece clamping, material and machine type!
The values indicated represent possible cutting data which may need to be corrected depending on operating conditions !

Cutting data standard values – WTX – SB

Index	10 767 ..., 10 772 ..., 10 783 ..., 10 788 ...					
			3xD			
	without through coolant	with through coolant	Ø 2-5	Ø 5-8	Ø 8-12	Ø 12-16
	v _c (m/min)		f (mm/rev)			
P.1.1	110	120	0,13	0,18	0,25	0,30
P.1.2	105	115	0,12	0,18	0,24	0,29
P.1.3	100	110	0,12	0,17	0,23	0,28
P.1.4	95	105	0,11	0,16	0,21	0,26
P.1.5	90	100	0,11	0,15	0,20	0,25
P.2.1	105	120	0,15	0,22	0,29	0,36
P.2.2	95	110	0,14	0,20	0,27	0,33
P.2.3	85	100	0,13	0,18	0,24	0,29
P.2.4	65	75	0,12	0,16	0,21	0,26
P.3.1	70	85	0,12	0,18	0,24	0,29
P.3.2	60	65	0,11	0,15	0,20	0,24
P.3.3	50	65	0,09	0,12	0,15	0,19
P.4.1	50	65	0,08	0,12	0,16	0,19
P.4.2	50	65	0,08	0,12	0,16	0,19
M.1.1						
M.2.1						
M.3.1						
K.1.1	85	120	0,17	0,26	0,36	0,45
K.1.2	75	100	0,15	0,22	0,29	0,36
K.2.1	100	160	0,17	0,25	0,34	0,42
K.2.2	75	100	0,15	0,22	0,29	0,36
K.3.1	80	90	0,16	0,23	0,32	0,39
K.3.2	70	80	0,14	0,19	0,25	0,31
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	25	25	0,06	0,08	0,11	0,14
H.1.2						
H.1.3						
H.1.4						
H.2.1	35	35	0,08	0,11	0,14	0,18
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 – Mini

Index	11 770 ...				
	without through coolant v_c (m/min)	5xD			
		$\leq \varnothing 1,0$	$> \varnothing 1,0-1,5$	$> \varnothing 1,5-2,0$	$> \varnothing 2,0-2,9$
		f (mm/rev)			
P.1.1	75	0,01	0,01	0,013	0,015
P.1.2	65	0,02	0,02	0,025	0,03
P.1.3	65	0,01	0,01	0,013	0,015
P.1.4	65	0,01	0,01	0,013	0,015
P.1.5	70	0,01	0,01	0,013	0,015
P.2.1	70	0,01	0,01	0,013	0,015
P.2.2	65	0,01	0,01	0,013	0,015
P.2.3	65	0,02	0,02	0,025	0,03
P.2.4	65	0,01	0,01	0,013	0,015
P.3.1					
P.3.2					
P.3.3					
P.4.1					
P.4.2					
M.1.1					
M.2.1					
M.3.1					
K.1.1	70	0,01	0,01	0,013	0,015
K.1.2	70	0,01	0,01	0,013	0,015
K.2.1	70	0,01	0,01	0,013	0,015
K.2.2	70	0,01	0,01	0,013	0,015
K.3.1	70	0,01	0,01	0,013	0,015
K.3.2	70	0,01	0,01	0,013	0,015
N.1.1	200	0,01	0,01	0,013	0,015
N.1.2	200	0,01	0,01	0,013	0,015
N.2.1	160	0,01	0,01	0,013	0,015
N.2.2	180	0,01	0,01	0,013	0,015
N.2.3	130	0,01	0,01	0,013	0,015
N.3.1	160	0,01	0,01	0,013	0,015
N.3.2	160	0,01	0,01	0,013	0,015
N.3.3	100	0,01	0,01	0,013	0,015
N.4.1	200	0,01	0,01	0,013	0,015
S.1.1					
S.1.2					
S.2.1					
S.2.2					
S.2.3					
S.3.1	30	0,01	0,01	0,013	0,015
S.3.2	20	0,01	0,01	0,013	0,015
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 – Micro

2

Index	10 693 ...							
	with through coolant v_c (m/min)	MMS	5xD					
			$\leq \varnothing 1,0$	$> \varnothing 1,0-1,25$	$> \varnothing 1,25-1,5$	$> \varnothing 1,5-2,0$	$> \varnothing 2,0-2,5$	$> \varnothing 2,5-3,0$
			f (mm/rev)					
P.1.1	70	51	0,028	0,034	0,045	0,070	0,095	0,115
P.1.2	60	43	0,028	0,034	0,045	0,070	0,095	0,115
P.1.3	60	43	0,028	0,034	0,045	0,070	0,095	0,115
P.1.4	60	43	0,028	0,034	0,045	0,070	0,095	0,115
P.1.5	60	43	0,028	0,034	0,045	0,070	0,095	0,115
P.2.1	70	51	0,028	0,034	0,045	0,070	0,095	0,115
P.2.2	60	43	0,028	0,034	0,045	0,070	0,095	0,115
P.2.3	60	43	0,028	0,034	0,045	0,070	0,095	0,115
P.2.4								
P.3.1	60	43	0,028	0,034	0,045	0,070	0,095	0,115
P.3.2	50	34	0,028	0,034	0,045	0,070	0,095	0,115
P.3.3								
P.4.1	50		0,015	0,018	0,024	0,040	0,060	0,080
P.4.2	35		0,015	0,018	0,024	0,040	0,060	0,080
M.1.1	40		0,015	0,018	0,024	0,040	0,060	0,080
M.2.1	40		0,015	0,018	0,024	0,040	0,060	0,080
M.3.1	40		0,015	0,018	0,024	0,040	0,060	0,080
K.1.1	70	51	0,028	0,034	0,045	0,070	0,095	0,115
K.1.2	70	51	0,028	0,034	0,045	0,070	0,095	0,115
K.2.1	70	51	0,028	0,034	0,045	0,070	0,095	0,115
K.2.2	70	51	0,028	0,034	0,045	0,070	0,095	0,115
K.3.1	70	51	0,028	0,034	0,045	0,070	0,095	0,115
K.3.2	70	51	0,028	0,034	0,045	0,070	0,095	0,115
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	15		0,015	0,018	0,024	0,040	0,060	0,080
S.1.2	15		0,015	0,018	0,024	0,040	0,060	0,080
S.2.1	10		0,015	0,018	0,024	0,040	0,060	0,080
S.2.2	10		0,015	0,018	0,024	0,040	0,060	0,080
S.2.3								
S.3.1	30		0,015	0,018	0,024	0,040	0,060	0,080
S.3.2	20		0,015	0,018	0,024	0,040	0,060	0,080
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								


Cutting data standard values – WTX – Micro

Index	10 694 ..., 10 695 ...							
	8xD / 12xD							
	with through coolant	MMS	≤ Ø 1,0	> Ø 1,0–1,25	> Ø 1,25–1,5	> Ø 1,5–2,0	> Ø 2,0–2,5	> Ø 2,5–3,0
	v_c (m/min)		f (mm/rev)					
P.1.1	70	51	0,028	0,034	0,045	0,070	0,095	0,115
P.1.2	60	43	0,028	0,034	0,045	0,070	0,095	0,115
P.1.3	60	43	0,028	0,034	0,045	0,070	0,095	0,115
P.1.4	60	43	0,028	0,034	0,045	0,070	0,095	0,115
P.1.5	60	43	0,028	0,034	0,045	0,070	0,095	0,115
P.2.1	70	51	0,028	0,034	0,045	0,070	0,095	0,115
P.2.2	60	43	0,028	0,034	0,045	0,070	0,095	0,115
P.2.3	60	43	0,028	0,034	0,045	0,070	0,095	0,115
P.2.4								
P.3.1	60	43	0,028	0,034	0,045	0,070	0,095	0,115
P.3.2	50	34	0,028	0,034	0,045	0,070	0,095	0,115
P.3.3								
P.4.1	50		0,015	0,018	0,024	0,040	0,060	0,080
P.4.2	35		0,015	0,018	0,024	0,040	0,060	0,080
M.1.1	40		0,015	0,018	0,024	0,040	0,060	0,080
M.2.1	40		0,015	0,018	0,024	0,040	0,060	0,080
M.3.1	40		0,015	0,018	0,024	0,040	0,060	0,080
K.1.1	70	51	0,028	0,034	0,045	0,070	0,095	0,115
K.1.2	70	51	0,028	0,034	0,045	0,070	0,095	0,115
K.2.1	70	51	0,028	0,034	0,045	0,070	0,095	0,115
K.2.2	70	51	0,028	0,034	0,045	0,070	0,095	0,115
K.3.1	70	51	0,028	0,034	0,045	0,070	0,095	0,115
K.3.2	70	51	0,028	0,034	0,045	0,070	0,095	0,115
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	15		0,015	0,018	0,024	0,040	0,060	0,080
S.1.2	15		0,015	0,018	0,024	0,040	0,060	0,080
S.2.1	10		0,015	0,018	0,024	0,040	0,060	0,080
S.2.2	10		0,015	0,018	0,024	0,040	0,060	0,080
S.2.3								
S.3.1	30		0,015	0,018	0,024	0,040	0,060	0,080
S.3.2	20		0,015	0,018	0,024	0,040	0,060	0,080
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.

Index	10 696 ..., 10 697 ..., 10 698 ..., 10 699 ...							
	16xD / 20xD / 25xD / 30xD							
	with through coolant v _c (m/min)	≤ Ø 1,0	> Ø 1,0–1,25	> Ø 1,25–1,5	> Ø 1,5–2,0	> Ø 2,0–2,5	> Ø 2,5–3,0	
	f (mm/rev)							
P.1.1	58	0,028	0,034	0,045	0,070	0,095	0,115	
P.1.2	50	0,028	0,034	0,045	0,070	0,095	0,115	
P.1.3	50	0,028	0,034	0,045	0,070	0,095	0,115	
P.1.4	50	0,028	0,034	0,045	0,070	0,095	0,115	
P.1.5	50	0,028	0,034	0,045	0,070	0,095	0,115	
P.2.1	58	0,028	0,034	0,045	0,070	0,095	0,115	
P.2.2	50	0,028	0,034	0,045	0,070	0,095	0,115	
P.2.3	50	0,028	0,034	0,045	0,070	0,095	0,115	
P.2.4								
P.3.1	50	0,028	0,034	0,045	0,070	0,095	0,115	
P.3.2	42	0,028	0,034	0,045	0,070	0,095	0,115	
P.3.3								
P.4.1	42	0,015	0,018	0,024	0,040	0,060	0,080	
P.4.2	30	0,015	0,018	0,024	0,040	0,060	0,080	
M.1.1	34	0,015	0,018	0,024	0,040	0,060	0,080	
M.2.1	34	0,015	0,018	0,024	0,040	0,060	0,080	
M.3.1	34	0,015	0,018	0,024	0,040	0,060	0,080	
K.1.1	58	0,028	0,034	0,045	0,070	0,095	0,115	
K.1.2	58	0,028	0,034	0,045	0,070	0,095	0,115	
K.2.1	58	0,028	0,034	0,045	0,070	0,095	0,115	
K.2.2	58	0,028	0,034	0,045	0,070	0,095	0,115	
K.3.1	58	0,028	0,034	0,045	0,070	0,095	0,115	
K.3.2	58	0,028	0,034	0,045	0,070	0,095	0,115	
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								

 Pilot hole required for WTX – Micro deep hole twist drill – see recommended application for WTX – Micro on → page 161

Cutting data standard values – WTX – Feed BR

Index	10 707 ..., 10 711 ...										
	with through coolant	With external coolant <i>v_c</i> (m/min)	MMS	3xD							
				Ø 4	Ø 5	Ø 6	Ø 8	Ø 10	Ø 12	Ø 14	Ø 16
				f (mm/rev)							
P.1.1	75	70	70	0,19	0,22	0,25	0,31	0,36	0,40	0,44	0,47
P.1.2	75	65	65	0,18	0,21	0,24	0,30	0,34	0,39	0,42	0,45
P.1.3	70	65	65	0,17	0,20	0,23	0,28	0,33	0,37	0,40	0,43
P.1.4	65	60	60	0,16	0,19	0,22	0,27	0,31	0,35	0,38	0,41
P.1.5	65	55	55	0,16	0,18	0,21	0,25	0,29	0,33	0,36	0,39
P.2.1	75	65	65	0,22	0,26	0,30	0,37	0,43	0,48	0,52	0,56
P.2.2	70	60	60	0,20	0,24	0,27	0,33	0,39	0,43	0,47	0,51
P.2.3	65	55	55	0,18	0,22	0,25	0,30	0,35	0,39	0,43	0,46
P.2.4	50	40	40	0,17	0,20	0,22	0,27	0,31	0,35	0,38	0,40
P.3.1	55	45	45	0,18	0,21	0,24	0,30	0,35	0,39	0,43	0,46
P.3.2	40	40	40	0,15	0,18	0,20	0,25	0,29	0,32	0,35	0,37
P.3.3	40	30	35	0,13	0,15	0,16	0,20	0,23	0,25	0,27	0,29
P.4.1	40	30	35	0,12	0,14	0,16	0,20	0,23	0,26	0,28	0,30
P.4.2	40	30	35	0,12	0,14	0,16	0,20	0,23	0,26	0,28	0,30
M.1.1	40	25	25	0,09	0,11	0,12	0,15	0,17	0,19	0,21	0,23
M.2.1	35	20	20	0,08	0,09	0,10	0,13	0,15	0,17	0,18	0,19
M.3.1	35	20	20	0,08	0,09	0,10	0,13	0,15	0,17	0,18	0,19
K.1.1	100	70	70	0,25	0,30	0,35	0,45	0,53	0,60	0,66	0,71
K.1.2	85	65	65	0,22	0,26	0,30	0,37	0,43	0,48	0,53	0,56
K.2.1	135	85	100	0,24	0,29	0,34	0,42	0,49	0,56	0,61	0,66
K.2.2	85	65	65	0,22	0,26	0,30	0,37	0,43	0,48	0,53	0,56
K.3.1	75	70	70	0,23	0,28	0,32	0,39	0,46	0,52	0,57	0,61
K.3.2	70	60	60	0,20	0,23	0,26	0,32	0,37	0,41	0,45	0,48
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 is highly dependent on external conditions, such as stability of the tool and workpiece clamping, material and machine type!
The values indicated represent possible cutting data which may need to be corrected depending on operating conditions !

Index	10 713 ..., 10 719 ...													
	5xD													
	with through coolant	With external coolant v _c (m/min)	MMS	Ø 4	Ø 5	Ø 6	Ø 8	Ø 10	Ø 12	Ø 14	Ø 16	Ø 18	Ø 20	
	f (mm/rev)													
P.1.1	75	70	70	0,19	0,22	0,25	0,31	0,36	0,40	0,44	0,47	0,50	0,52	
P.1.2	75	65	65	0,18	0,21	0,24	0,30	0,34	0,39	0,42	0,45	0,48	0,50	
P.1.3	70	65	65	0,17	0,20	0,23	0,28	0,33	0,37	0,40	0,43	0,45	0,47	
P.1.4	65	60	60	0,16	0,19	0,22	0,27	0,31	0,35	0,38	0,41	0,43	0,45	
P.1.5	65	55	55	0,16	0,18	0,21	0,25	0,29	0,33	0,36	0,39	0,41	0,43	
P.2.1	75	65	65	0,22	0,26	0,30	0,37	0,43	0,48	0,52	0,56	0,59	0,62	
P.2.2	70	60	60	0,20	0,24	0,27	0,33	0,39	0,43	0,47	0,51	0,54	0,56	
P.2.3	65	55	55	0,18	0,22	0,25	0,30	0,35	0,39	0,43	0,46	0,48	0,50	
P.2.4	50	40	40	0,17	0,20	0,22	0,27	0,31	0,35	0,38	0,40	0,42	0,44	
P.3.1	55	45	45	0,18	0,21	0,24	0,30	0,35	0,39	0,43	0,46	0,48	0,50	
P.3.2	40	40	40	0,15	0,18	0,20	0,25	0,29	0,32	0,35	0,37	0,39	0,41	
P.3.3	40	30	35	0,13	0,15	0,16	0,20	0,23	0,25	0,27	0,29	0,30	0,32	
P.4.1	40	30	35	0,12	0,14	0,16	0,20	0,23	0,26	0,28	0,30	0,32	0,33	
P.4.2	40	30	35	0,12	0,14	0,16	0,20	0,23	0,26	0,28	0,30	0,32	0,33	
M.1.1	40	25	25	0,09	0,11	0,12	0,15	0,17	0,19	0,21	0,23	0,24	0,25	
M.2.1	35	20	20	0,08	0,09	0,10	0,13	0,15	0,17	0,18	0,19	0,20	0,21	
M.3.1	35	20	20	0,08	0,09	0,10	0,13	0,15	0,17	0,18	0,19	0,20	0,21	
K.1.1	100	70	70	0,25	0,30	0,35	0,45	0,53	0,60	0,66	0,71	0,75	0,79	
K.1.2	85	65	65	0,22	0,26	0,30	0,37	0,43	0,48	0,53	0,56	0,60	0,62	
K.2.1	135	85	100	0,24	0,29	0,34	0,42	0,49	0,56	0,61	0,66	0,69	0,72	
K.2.2	85	65	65	0,22	0,26	0,30	0,37	0,43	0,48	0,53	0,56	0,60	0,62	
K.3.1	75	70	70	0,23	0,28	0,32	0,39	0,46	0,52	0,57	0,61	0,64	0,67	
K.3.2	70	60	60	0,20	0,23	0,26	0,32	0,37	0,41	0,45	0,48	0,51	0,53	
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														

Cutting data standard values – WTX – Co-pilot deep hole twist drills

Index	11 018 ...					
	20xD					
	with through coolant	Ø 3-4	Ø > 4-5	Ø > 5-6	Ø > 6-8	Ø > 8-10
	v _c (m/min)	f (mm/rev)				
P.1.1	100	0,07	0,08	0,10	0,12	0,14
P.1.2	90	0,07	0,08	0,10	0,12	0,14
P.1.3	90	0,05	0,06	0,08	0,10	0,11
P.1.4	90	0,05	0,06	0,08	0,10	0,11
P.1.5	95	0,05	0,06	0,08	0,10	0,11
P.2.1	95	0,07	0,08	0,10	0,12	0,14
P.2.2	90	0,05	0,06	0,08	0,10	0,11
P.2.3	90	0,07	0,08	0,10	0,12	0,14
P.2.4	90	0,05	0,06	0,08	0,10	0,11
P.3.1	45	0,03	0,04	0,05	0,06	0,08
P.3.2	70	0,05	0,06	0,08	0,10	0,11
P.3.3	70	0,05	0,06	0,08	0,10	0,11
P.4.1	70	0,03	0,04	0,05	0,06	0,08
P.4.2	45	0,03	0,04	0,05	0,06	0,08
M.1.1	50	0,03	0,04	0,05	0,06	0,08
M.2.1	50	0,03	0,04	0,05	0,06	0,08
M.3.1	50	0,03	0,04	0,05	0,06	0,08
K.1.1	100	0,10	0,13	0,15	0,19	0,23
K.1.2	95	0,10	0,13	0,15	0,19	0,23
K.2.1	100	0,08	0,10	0,13	0,16	0,18
K.2.2	95	0,08	0,10	0,13	0,16	0,18
K.3.1	100	0,08	0,10	0,13	0,16	0,18
K.3.2	95	0,08	0,10	0,13	0,16	0,18
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	70	0,05	0,06	0,08	0,10	0,11
S.3.1	30	0,01	0,02	0,02	0,03	0,04
S.3.2	20	0,01	0,02	0,02	0,03	0,04
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 – TB UNI

Index	11 016 ...									11 020 ...								
	with through coolant v _c (m/min)	16xD								with through coolant v _c (m/min)	20xD							
		Ø 2-3	Ø > 3-4	Ø > 4-5	Ø > 5-6	Ø > 6-8	Ø > 8-10	Ø > 10-12	Ø 2-3		Ø > 3-4	Ø > 4-5	Ø > 5-6	Ø > 6-8	Ø > 8-10	Ø > 10-12		
f (mm/rev)																		
P.1.1	105	0,05	0,07	0,08	0,10	0,12	0,14	0,16	100	0,05	0,07	0,08	0,10	0,12	0,14	0,16		
P.1.2	95	0,05	0,07	0,08	0,10	0,12	0,14	0,16	90	0,05	0,07	0,08	0,10	0,12	0,14	0,16		
P.1.3	95	0,04	0,05	0,06	0,08	0,10	0,11	0,13	90	0,04	0,05	0,06	0,08	0,10	0,11	0,13		
P.1.4	95	0,04	0,05	0,06	0,08	0,10	0,11	0,13	90	0,04	0,05	0,06	0,08	0,10	0,11	0,13		
P.1.5	100	0,04	0,05	0,06	0,01	0,10	0,11	0,13	95	0,04	0,05	0,06	0,08	0,10	0,11	0,13		
P.2.1	100	0,05	0,07	0,08	0,10	0,12	0,14	0,16	95	0,05	0,07	0,08	0,10	0,12	0,14	0,16		
P.2.2	95	0,04	0,05	0,06	0,10	0,10	0,11	0,13	90	0,04	0,05	0,06	0,08	0,10	0,11	0,13		
P.2.3	95	0,05	0,07	0,08	0,10	0,12	0,14	0,16	90	0,05	0,07	0,08	0,10	0,12	0,14	0,16		
P.2.4	95	0,04	0,05	0,06	0,10	0,10	0,11	0,13	90	0,04	0,05	0,06	0,08	0,10	0,11	0,13		
P.3.1	50	0,03	0,03	0,04	0,05	0,06	0,08	0,10	45	0,03	0,03	0,04	0,05	0,06	0,08	0,10		
P.3.2	75	0,04	0,05	0,06	0,10	0,10	0,11	0,13	70	0,04	0,05	0,06	0,08	0,10	0,11	0,13		
P.3.3	75	0,04	0,05	0,06	0,10	0,10	0,11	0,13	70	0,04	0,05	0,06	0,08	0,10	0,11	0,13		
P.4.1	75	0,03	0,03	0,04	0,05	0,06	0,08	0,10	70	0,03	0,03	0,04	0,05	0,06	0,08	0,10		
P.4.2	50	0,03	0,03	0,04	0,05	0,06	0,08	0,10	45	0,03	0,03	0,04	0,05	0,06	0,08	0,10		
M.1.1	55	0,03	0,03	0,04	0,05	0,06	0,08	0,10	50	0,03	0,03	0,04	0,05	0,06	0,08	0,10		
M.2.1	55	0,03	0,03	0,04	0,05	0,06	0,08	0,10	50	0,03	0,03	0,04	0,05	0,06	0,08	0,10		
M.3.1	55	0,03	0,03	0,04	0,05	0,06	0,08	0,10	50	0,03	0,03	0,04	0,05	0,06	0,08	0,10		
K.1.1	105	0,08	0,10	0,13	0,15	0,19	0,23	0,27	100	0,08	0,10	0,13	0,15	0,19	0,23	0,27		
K.1.2	100	0,08	0,10	0,13	0,15	0,19	0,23	0,27	95	0,08	0,10	0,13	0,15	0,19	0,23	0,27		
K.2.1	105	0,06	0,08	0,10	0,13	0,16	0,18	0,22	100	0,06	0,08	0,10	0,13	0,16	0,18	0,22		
K.2.2	100	0,06	0,08	0,10	0,13	0,16	0,18	0,22	95	0,06	0,08	0,10	0,13	0,16	0,18	0,22		
K.3.1	105	0,06	0,08	0,10	0,13	0,16	0,18	0,22	100	0,06	0,08	0,10	0,13	0,16	0,18	0,22		
K.3.2	100	0,06	0,08	0,10	0,13	0,16	0,18	0,22	95	0,06	0,08	0,10	0,13	0,16	0,18	0,22		
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	75	0,04	0,05	0,06	0,08	0,10	0,11	0,13	70	0,04	0,05	0,06	0,08	0,10	0,11	0,13		
S.3.1	35	0,01	0,01	0,02	0,02	0,03	0,04	0,05	30	0,01	0,01	0,02	0,02	0,03	0,04	0,05		
S.3.2	25	0,01	0,01	0,02	0,02	0,03	0,04	0,05	20	0,01	0,01	0,02	0,02	0,03	0,04	0,05		
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																		



All solid carbide WTX deep hole drills must be used with a pilot bore. The tool must never be run at high speed while not engaged in a material. Please refer to the strategy for the production of deep holes on → Page 160.

Cutting data standard values – WTX – TB UNI

Index	11 025 ...								11 030 ...							
	with through coolant v_c (m/min)	25xD							with through coolant v_c (m/min)	30xD						
		\emptyset 2-3	\emptyset >3-4	\emptyset >4-5	\emptyset >5-6	\emptyset >6-8	\emptyset >8-10	\emptyset >10-12		\emptyset 2-3	\emptyset >3-4	\emptyset >4-5	\emptyset >5-6	\emptyset >6-8	\emptyset >8-10	\emptyset >10-12
f (mm/rev)																
P.1.1	90	0,05	0,07	0,09	0,10	0,12	0,14	0,16	85	0,05	0,07	0,09	0,10	0,12	0,14	0,16
P.1.2	80	0,05	0,07	0,09	0,10	0,12	0,14	0,16	75	0,05	0,07	0,09	0,10	0,12	0,14	0,16
P.1.3	80	0,04	0,05	0,06	0,08	0,10	0,11	0,13	75	0,04	0,05	0,06	0,08	0,10	0,11	0,13
P.1.4	80	0,04	0,05	0,06	0,08	0,10	0,11	0,13	75	0,04	0,05	0,06	0,08	0,10	0,11	0,13
P.1.5	85	0,04	0,05	0,06	0,08	0,10	0,11	0,13	80	0,04	0,05	0,06	0,08	0,10	0,11	0,13
P.2.1	85	0,05	0,07	0,09	0,10	0,12	0,14	0,16	80	0,05	0,07	0,09	0,10	0,12	0,14	0,16
P.2.2	80	0,04	0,05	0,06	0,08	0,10	0,11	0,13	75	0,04	0,05	0,06	0,08	0,10	0,11	0,13
P.2.3	80	0,05	0,07	0,09	0,10	0,12	0,14	0,16	75	0,05	0,07	0,09	0,10	0,12	0,14	0,16
P.2.4	80	0,04	0,05	0,06	0,08	0,10	0,11	0,13	75	0,04	0,05	0,06	0,08	0,10	0,11	0,13
P.3.1	45	0,03	0,03	0,04	0,05	0,06	0,08	0,10	40	0,03	0,03	0,04	0,05	0,06	0,08	0,10
P.3.2	65	0,04	0,05	0,06	0,08	0,10	0,11	0,13	60	0,04	0,05	0,06	0,08	0,10	0,11	0,13
P.3.3	65	0,04	0,05	0,06	0,08	0,10	0,11	0,13	60	0,04	0,05	0,06	0,08	0,10	0,11	0,13
P.4.1	65	0,03	0,03	0,04	0,05	0,06	0,08	0,10	60	0,03	0,03	0,04	0,05	0,06	0,08	0,10
P.4.2	45	0,03	0,03	0,04	0,05	0,06	0,08	0,10	40	0,03	0,03	0,04	0,05	0,06	0,08	0,10
M.1.1	50	0,03	0,03	0,04	0,05	0,06	0,08	0,10	45	0,03	0,03	0,04	0,05	0,06	0,08	0,10
M.2.1	50	0,03	0,03	0,04	0,05	0,06	0,08	0,10	45	0,03	0,03	0,04	0,05	0,06	0,08	0,10
M.3.1	50	0,03	0,03	0,04	0,05	0,06	0,08	0,10	45	0,03	0,03	0,04	0,05	0,06	0,08	0,10
K.1.1	90	0,08	0,10	0,13	0,15	0,19	0,23	0,27	85	0,08	0,10	0,13	0,15	0,19	0,23	0,27
K.1.2	85	0,08	0,10	0,13	0,15	0,19	0,23	0,27	80	0,08	0,10	0,13	0,15	0,19	0,23	0,27
K.2.1	90	0,06	0,08	0,10	0,13	0,16	0,18	0,22	85	0,06	0,08	0,10	0,13	0,16	0,18	0,22
K.2.2	85	0,06	0,08	0,10	0,13	0,16	0,18	0,22	80	0,06	0,08	0,10	0,13	0,16	0,18	0,22
K.3.1	90	0,06	0,08	0,10	0,13	0,16	0,18	0,22	85	0,06	0,08	0,10	0,13	0,16	0,18	0,22
K.3.2	85	0,06	0,08	0,10	0,13	0,16	0,18	0,22	80	0,06	0,08	0,10	0,13	0,16	0,18	0,22
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	65	0,04	0,05	0,06	0,08	0,10	0,11	0,13	60	0,04	0,05	0,06	0,08	0,10	0,11	0,13
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.

Index	11 040 ...							11 050 ...				
	with through coolant v _c (m/min)	40xD					with through coolant v _c (m/min)	50xD				
		Ø 3-4	Ø > 4-5	Ø > 5-6	Ø > 6-8	Ø > 8-10		Ø 3-4	Ø > 4-5	Ø > 5-6	Ø > 6-8	
		f (mm/rev)						f (mm/rev)				
P.1.1	70	0,05	0,06	0,08	0,10	0,11	70	0,05	0,06	0,08	0,10	
P.1.2	60	0,05	0,06	0,08	0,10	0,11	60	0,05	0,06	0,08	0,10	
P.1.3	60	0,03	0,04	0,05	0,06	0,08	60	0,03	0,04	0,05	0,06	
P.1.4	60	0,03	0,04	0,05	0,06	0,08	60	0,03	0,04	0,05	0,06	
P.1.5	65	0,03	0,04	0,05	0,06	0,08	65	0,03	0,04	0,05	0,06	
P.2.1	65	0,05	0,06	0,08	0,10	0,11	65	0,05	0,06	0,08	0,10	
P.2.2	60	0,03	0,04	0,05	0,06	0,08	60	0,03	0,04	0,05	0,06	
P.2.3	60	0,05	0,06	0,08	0,10	0,11	60	0,05	0,06	0,08	0,10	
P.2.4	60	0,03	0,04	0,05	0,06	0,08	60	0,03	0,04	0,05	0,06	
P.3.1	35	0,03	0,03	0,04	0,05	0,06	35	0,03	0,03	0,04	0,05	
P.3.2	50	0,03	0,04	0,05	0,06	0,08	50	0,03	0,04	0,05	0,06	
P.3.3	50	0,03	0,04	0,05	0,06	0,08	50	0,03	0,04	0,05	0,06	
P.4.1	50	0,03	0,03	0,04	0,05	0,06	50	0,03	0,03	0,04	0,05	
P.4.2	35	0,03	0,03	0,04	0,05	0,06	35	0,03	0,03	0,04	0,05	
M.1.1	40	0,03	0,03	0,04	0,05	0,06	40	0,03	0,03	0,04	0,05	
M.2.1	40	0,03	0,03	0,04	0,05	0,06	40	0,03	0,03	0,04	0,05	
M.3.1	40	0,03	0,03	0,04	0,05	0,06	40	0,03	0,03	0,04	0,05	
K.1.1	70	0,08	0,10	0,13	0,16	0,18	70	0,08	0,10	0,13	0,16	
K.1.2	65	0,08	0,10	0,13	0,16	0,18	65	0,08	0,10	0,13	0,16	
K.2.1	70	0,07	0,09	0,10	0,12	0,14	70	0,07	0,09	0,10	0,12	
K.2.2	65	0,07	0,09	0,10	0,12	0,14	65	0,07	0,09	0,10	0,12	
K.3.1	70	0,07	0,09	0,10	0,12	0,14	70	0,07	0,09	0,10	0,12	
K.3.2	65	0,07	0,09	0,10	0,12	0,14	65	0,07	0,09	0,10	0,12	
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	50	0,03	0,04	0,05	0,06	0,08	50	0,03	0,04	0,05	0,06	
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												



All solid carbide WTX deep hole drills must be used with a pilot bore. The tool must never be run at high speed while not engaged in a material. Please refer to the strategy for the production of deep holes on → Page 160.

Cutting data standard values – WTX – TB ALU

Index	11 017 ...								11 021 ...							
	with through coolant v_c (m/min)	16xD							with through coolant v_c (m/min)	20xD						
		\emptyset 2-3	\emptyset >3-4	\emptyset >4-5	\emptyset >5-6	\emptyset >6-8	\emptyset >8-10	\emptyset >10-12		\emptyset 2-3	\emptyset >3-4	\emptyset >4-5	\emptyset >5-6	\emptyset >6-8	\emptyset >8-10	\emptyset >10-12
f (mm/rev)								f (mm/rev)								
P.1.1																
P.1.2																
P.1.3																
P.1.4																
P.1.5																
P.2.1																
P.2.2																
P.2.3																
P.2.4																
P.3.1																
P.3.2																
P.3.3																
P.4.1																
P.4.2																
M.1.1																
M.2.1																
M.3.1																
K.1.1																
K.1.2																
K.2.1																
K.2.2																
K.3.1																
K.3.2																
N.1.1	160	0,06	0,08	0,10	0,13	0,16	0,18	0,22	150	0,06	0,08	0,10	0,13	0,16	0,18	0,22
N.1.2	180	0,06	0,08	0,10	0,13	0,16	0,18	0,22	170	0,06	0,08	0,10	0,13	0,16	0,18	0,22
N.2.1	160	0,08	0,11	0,13	0,15	0,19	0,23	0,26	150	0,08	0,11	0,13	0,15	0,19	0,23	0,26
N.2.2	190	0,08	0,11	0,13	0,15	0,19	0,23	0,26	180	0,08	0,11	0,13	0,15	0,19	0,23	0,26
N.2.3	140	0,06	0,08	0,10	0,13	0,16	0,18	0,22	130	0,06	0,08	0,10	0,13	0,16	0,18	0,22
N.3.1	115	0,06	0,08	0,10	0,13	0,16	0,18	0,22	100	0,06	0,08	0,10	0,13	0,16	0,18	0,22
N.3.2	115	0,06	0,08	0,10	0,13	0,16	0,18	0,22	100	0,06	0,08	0,10	0,13	0,16	0,18	0,22
N.3.3	90	0,06	0,08	0,10	0,13	0,16	0,18	0,22	80	0,06	0,08	0,10	0,13	0,16	0,18	0,22
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.

Index	11 026 ...									11 031 ...							
	with through coolant v _c (m/min)	25xD							with through coolant v _c (m/min)	30xD							
		∅ 2-3	∅ >3-4	∅ >4-5	∅ >5-6	∅ >6-8	∅ >8-10	∅ >10-12		∅ 2-3	∅ >3-4	∅ >4-5	∅ >5-6	∅ >6-8	∅ >8-10	∅ >10-12	
f (mm/rev)									f (mm/rev)								
P.1.1																	
P.1.2																	
P.1.3																	
P.1.4																	
P.1.5																	
P.2.1																	
P.2.2																	
P.2.3																	
P.2.4																	
P.3.1																	
P.3.2																	
P.3.3																	
P.4.1																	
P.4.2																	
M.1.1																	
M.2.1																	
M.3.1																	
K.1.1																	
K.1.2																	
K.2.1																	
K.2.2																	
K.3.1																	
K.3.2																	
N.1.1	130	0,06	0,08	0,10	0,13	0,16	0,18	0,22	120	0,04	0,05	0,07	0,08	0,12	0,15	0,18	
N.1.2	150	0,06	0,08	0,10	0,13	0,16	0,18	0,22	140	0,04	0,05	0,07	0,08	0,12	0,15	0,18	
N.2.1	130	0,08	0,11	0,13	0,15	0,19	0,23	0,26	120	0,08	0,11	0,13	0,15	0,19	0,23	0,26	
N.2.2	160	0,08	0,11	0,13	0,15	0,19	0,23	0,26	150	0,08	0,11	0,13	0,15	0,19	0,23	0,26	
N.2.3	120	0,06	0,08	0,10	0,13	0,16	0,18	0,22	110	0,04	0,05	0,07	0,08	0,12	0,15	0,18	
N.3.1	90	0,06	0,08	0,10	0,13	0,16	0,18	0,22	80	0,04	0,05	0,07	0,08	0,12	0,15	0,18	
N.3.2	90	0,06	0,08	0,10	0,13	0,16	0,18	0,22	80	0,04	0,05	0,07	0,08	0,12	0,15	0,18	
N.3.3	75	0,06	0,08	0,10	0,13	0,16	0,18	0,22	70	0,01	0,01	0,02	0,02	0,03	0,04	0,05	
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																	



All solid carbide WTX deep hole drills must be used with a pilot bore. The tool must never be run at high speed while not engaged in a material. Please refer to the strategy for the production of deep holes on → Page 160.

		10 702 ..., 10 703 ..., 10 704 ...											
Index	without through coolant v _c (m/min)	NC-A											
		Ø 2-3	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	
		f (mm/rev)											
P.1.1	75	0,05	0,07	0,08	0,10	0,12	0,14	0,16	0,20	0,24	0,28	0,31	
P.1.2	65	0,05	0,07	0,08	0,10	0,12	0,14	0,16	0,20	0,24	0,28	0,31	
P.1.3	65	0,04	0,05	0,06	0,08	0,10	0,11	0,13	0,15	0,18	0,20	0,23	
P.1.4	65	0,04	0,05	0,06	0,08	0,10	0,11	0,13	0,15	0,18	0,20	0,23	
P.1.5	70	0,04	0,05	0,06	0,08	0,10	0,11	0,13	0,15	0,18	0,20	0,23	
P.2.1	70	0,05	0,07	0,08	0,10	0,12	0,14	0,16	0,20	0,24	0,28	0,31	
P.2.2	65	0,04	0,05	0,06	0,08	0,10	0,11	0,13	0,15	0,18	0,20	0,23	
P.2.3	65	0,05	0,07	0,08	0,10	0,12	0,14	0,16	0,20	0,24	0,28	0,31	
P.2.4	65	0,04	0,05	0,06	0,08	0,10	0,11	0,13	0,15	0,18	0,20	0,23	
P.3.1													
P.3.2													
P.3.3													
P.4.1													
P.4.2													
M.1.1													
M.2.1													
M.3.1													
K.1.1	70	0,04	0,05	0,06	0,08	0,10	0,13	0,15	0,18	0,20	0,23	0,27	
K.1.2	70	0,04	0,05	0,06	0,08	0,10	0,11	0,13	0,15	0,18	0,20	0,23	
K.2.1	70	0,04	0,05	0,06	0,08	0,10	0,11	0,13	0,15	0,18	0,20	0,23	
K.2.2	70	0,04	0,05	0,06	0,08	0,10	0,11	0,13	0,15	0,18	0,20	0,23	
K.3.1	70	0,04	0,05	0,06	0,08	0,10	0,11	0,13	0,15	0,18	0,20	0,23	
K.3.2	70	0,04	0,05	0,06	0,08	0,10	0,11	0,13	0,15	0,18	0,20	0,23	
N.1.1	200	0,01	0,01	0,02	0,02	0,03	0,04	0,05	0,07	0,09	0,11	0,13	
N.1.2	200	0,01	0,01	0,02	0,02	0,03	0,04	0,05	0,07	0,09	0,11	0,13	
N.2.1	160	0,01	0,01	0,02	0,02	0,03	0,04	0,05	0,07	0,09	0,11	0,13	
N.2.2	180	0,01	0,01	0,02	0,02	0,03	0,04	0,05	0,07	0,09	0,11	0,13	
N.2.3	130	0,01	0,01	0,02	0,02	0,03	0,04	0,05	0,07	0,09	0,11	0,13	
N.3.1	160	0,01	0,01	0,01	0,01	0,02	0,03	0,04	0,06	0,09	0,11	0,14	
N.3.2	160	0,01	0,01	0,01	0,01	0,02	0,03	0,04	0,06	0,09	0,11	0,14	
N.3.3	100	0,01	0,01	0,01	0,01	0,02	0,03	0,04	0,06	0,09	0,11	0,14	
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													

Cutting data standard values – Solid Carbide NC-A TiAlN

Index	10 716 ..., 10 717 ..., 10 718 ...											
	NC-A TiAlN											
	without through coolant v_c (m/min)	Ø 2–3	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
	f (mm/rev)											
P.1.1	75	0,05	0,07	0,08	0,10	0,12	0,14	0,16	0,20	0,24	0,28	0,31
P.1.2	65	0,05	0,07	0,08	0,10	0,12	0,14	0,16	0,20	0,24	0,28	0,31
P.1.3	65	0,04	0,05	0,06	0,08	0,10	0,11	0,13	0,15	0,18	0,20	0,23
P.1.4	65	0,04	0,05	0,06	0,08	0,10	0,11	0,13	0,15	0,18	0,20	0,23
P.1.5	70	0,04	0,05	0,06	0,08	0,10	0,11	0,13	0,15	0,18	0,20	0,23
P.2.1	70	0,05	0,07	0,08	0,10	0,12	0,14	0,16	0,20	0,24	0,28	0,31
P.2.2	65	0,04	0,05	0,06	0,08	0,10	0,11	0,13	0,15	0,18	0,20	0,23
P.2.3	65	0,05	0,07	0,08	0,10	0,12	0,14	0,16	0,20	0,24	0,28	0,31
P.2.4	65	0,04	0,05	0,06	0,08	0,10	0,11	0,13	0,15	0,18	0,20	0,23
P.3.1												
P.3.2												
P.3.3												
P.4.1												
P.4.2												
M.1.1												
M.2.1												
M.3.1												
K.1.1	70	0,04	0,05	0,06	0,08	0,10	0,13	0,15	0,18	0,20	0,23	0,26
K.1.2	70	0,04	0,05	0,06	0,08	0,10	0,11	0,13	0,15	0,18	0,20	0,23
K.2.1	70	0,04	0,05	0,06	0,08	0,10	0,11	0,13	0,15	0,18	0,20	0,23
K.2.2	70	0,04	0,05	0,06	0,08	0,10	0,11	0,13	0,15	0,18	0,20	0,23
K.3.1	70	0,04	0,05	0,06	0,08	0,10	0,11	0,13	0,15	0,18	0,20	0,23
K.3.2	70	0,04	0,05	0,06	0,08	0,10	0,11	0,13	0,15	0,18	0,20	0,23
N.1.1	200	0,01	0,01	0,02	0,02	0,03	0,04	0,05	0,07	0,09	0,11	0,13
N.1.2	200	0,01	0,01	0,02	0,02	0,03	0,04	0,05	0,07	0,09	0,11	0,13
N.2.1	160	0,01	0,01	0,02	0,02	0,03	0,04	0,05	0,07	0,09	0,11	0,13
N.2.2	180	0,01	0,01	0,02	0,02	0,03	0,04	0,05	0,07	0,09	0,11	0,13
N.2.3	130	0,01	0,01	0,02	0,02	0,03	0,04	0,05	0,07	0,09	0,11	0,13
N.3.1	160	0,01	0,01	0,01	0,01	0,02	0,03	0,04	0,06	0,09	0,11	0,14
N.3.2	160	0,01	0,01	0,01	0,01	0,02	0,03	0,04	0,06	0,09	0,11	0,14
N.3.3	100	0,01	0,01	0,01	0,01	0,02	0,03	0,04	0,06	0,09	0,11	0,14
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	28	0,02	0,03	0,04	0,04	0,05	0,06	0,06	0,07	0,07	0,08	0,08
H.1.2	16	0,02	0,03	0,04	0,04	0,05	0,06	0,06	0,07	0,07	0,08	0,08
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 is highly dependent on external conditions, such as stability of the tool and workpiece clamping, material and machine type!
The values indicated represent possible cutting data which may need to be corrected depending on operating conditions !

Index	10 724 ..., 10 726 ..., 10 727 ...									
	without through coolant v _c (m/min)	NC-A TiAlN								
		Ø 3-4	Ø 4-5	Ø 5-6	Ø 6-8	Ø 8-10	Ø 10-12	Ø 12-14	Ø 14-16	f (mm/rev)
P.1.1	75	0,07	0,08	0,10	0,12	0,14	0,16	0,20	0,24	
P.1.2	65	0,07	0,08	0,10	0,12	0,14	0,16	0,20	0,24	
P.1.3	65	0,05	0,06	0,08	0,10	0,11	0,13	0,15	0,18	
P.1.4	65	0,05	0,06	0,08	0,10	0,11	0,13	0,15	0,18	
P.1.5	70	0,05	0,06	0,08	0,10	0,11	0,13	0,15	0,18	
P.2.1	70	0,07	0,08	0,10	0,12	0,14	0,16	0,20	0,24	
P.2.2	65	0,05	0,06	0,08	0,10	0,11	0,13	0,15	0,18	
P.2.3	65	0,07	0,08	0,10	0,12	0,14	0,16	0,20	0,24	
P.2.4	65	0,05	0,06	0,08	0,10	0,11	0,13	0,15	0,18	
P.3.1										
P.3.2										
P.3.3										
P.4.1										
P.4.2										
M.1.1										
M.2.1										
M.3.1										
K.1.1	70	0,05	0,06	0,08	0,10	0,13	0,15	0,18	0,20	
K.1.2	70	0,05	0,06	0,08	0,10	0,11	0,13	0,15	0,18	
K.2.1	70	0,05	0,06	0,08	0,10	0,11	0,13	0,15	0,18	
K.2.2	70	0,05	0,06	0,08	0,10	0,11	0,13	0,15	0,18	
K.3.1	70	0,05	0,06	0,08	0,10	0,11	0,13	0,15	0,18	
K.3.2	70	0,05	0,06	0,08	0,10	0,11	0,13	0,15	0,18	
N.1.1	200	0,01	0,02	0,02	0,03	0,04	0,05	0,07	0,09	
N.1.2	200	0,01	0,02	0,02	0,03	0,04	0,05	0,07	0,09	
N.2.1	160	0,01	0,02	0,02	0,03	0,04	0,05	0,07	0,09	
N.2.2	180	0,01	0,02	0,02	0,03	0,04	0,05	0,07	0,09	
N.2.3	130	0,01	0,02	0,02	0,03	0,04	0,05	0,07	0,09	
N.3.1	160	0,01	0,01	0,01	0,02	0,03	0,04	0,06	0,09	
N.3.2	160	0,01	0,01	0,01	0,02	0,03	0,04	0,06	0,09	
N.3.3	100	0,01	0,01	0,01	0,02	0,03	0,04	0,06	0,09	
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	0,03	0,04	0,04	0,05	0,06	0,06	0,07	0,07	
H.1.2	15	0,03	0,04	0,04	0,05	0,06	0,06	0,07	0,07	
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										

Cutting data standard values – WTX – Change

Index	10 919 ...					
	with through coolant v _c (m/min)	UNI				
		≥ Ø 12–15,7	> Ø 15,7–20	> Ø 20–25	> Ø 25–32	> Ø 32–41
		f (mm/rev)				
P.1.1	120	0,27	0,31	0,34	0,36	0,36
P.1.2	115	0,26	0,30	0,32	0,34	0,35
P.1.3	110	0,25	0,28	0,31	0,32	0,33
P.1.4	105	0,24	0,27	0,29	0,31	0,31
P.1.5	100	0,22	0,25	0,28	0,29	0,30
P.2.1	120	0,32	0,37	0,40	0,42	0,43
P.2.2	110	0,29	0,33	0,36	0,38	0,39
P.2.3	100	0,26	0,30	0,33	0,35	0,35
P.2.4	75	0,23	0,26	0,29	0,30	0,31
P.3.1	85	0,26	0,30	0,33	0,35	0,35
P.3.2	65	0,22	0,25	0,27	0,28	0,29
P.3.3	65	0,17	0,19	0,21	0,22	0,22
P.4.1	65	0,17	0,20	0,22	0,23	0,23
P.4.2	65	0,17	0,20	0,22	0,23	0,23
M.1.1						
M.2.1						
M.3.1						
K.1.1	110	0,37	0,42	0,46	0,49	0,50
K.1.2	90	0,29	0,33	0,36	0,38	0,39
K.2.1	145	0,34	0,39	0,42	0,45	0,46
K.2.2	90	0,29	0,33	0,36	0,38	0,39
K.3.1	80	0,35	0,40	0,44	0,46	0,47
K.3.2	70	0,28	0,32	0,34	0,36	0,37
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 is highly dependent on external conditions, such as stability of the tool and workpiece clamping, material and machine type!
The values indicated represent possible cutting data which may need to be corrected depending on operating conditions !

Index	10 923 ...					
	with through coolant v _c (m/min)	P				
		≥ Ø 12–15,7	> Ø 15,7–20	> Ø 20–25	> Ø 25–32	> Ø 32–41
		f (mm/rev)				
P.1.1	120	0,32	0,36	0,39	0,41	0,42
P.1.2	115	0,30	0,34	0,37	0,39	0,40
P.1.3	110	0,29	0,32	0,35	0,37	0,38
P.1.4	105	0,27	0,31	0,34	0,35	0,36
P.1.5	100	0,26	0,29	0,32	0,34	0,34
P.2.1	120	0,37	0,42	0,46	0,49	0,49
P.2.2	110	0,34	0,38	0,42	0,44	0,45
P.2.3	100	0,30	0,35	0,38	0,40	0,40
P.2.4	75	0,27	0,30	0,33	0,35	0,35
P.3.1	85	0,30	0,35	0,38	0,40	0,40
P.3.2	65	0,25	0,28	0,31	0,32	0,33
P.3.3	65	0,19	0,22	0,24	0,25	0,25
P.4.1	65	0,20	0,23	0,25	0,26	0,27
P.4.2	65	0,20	0,23	0,25	0,26	0,27
M.1.1						
M.2.1						
M.3.1						
K.1.1	110	0,41	0,47	0,51	0,54	0,55
K.1.2	90	0,33	0,37	0,41	0,43	0,43
K.2.1	145	0,38	0,43	0,47	0,50	0,51
K.2.2	90	0,33	0,37	0,41	0,43	0,43
K.3.1	80	0,35	0,40	0,44	0,46	0,47
K.3.2	70	0,28	0,32	0,34	0,36	0,37
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						



For through holes, the feed must be reduced by approx. 30% when exiting the hole. For more accurate positioning, precentre with a 142° NC spot drill. With Type VA 5xD and 8xD, enter the hole with reduced feed of 0.05 – 0.06 mm/revolution.

Cutting data standard values – WTX – Change

Index	10 921 ...					10 924 ...				
	with through coolant v _c (m/min)	VA				with through coolant v _c (m/min)	GG			
		≥ Ø 12–15,7	> Ø 15,7–20	> Ø 20–25	> Ø 25–32		≥ Ø 12–15,7	> Ø 15,7–20	> Ø 20–25	> Ø 25–32
		f (mm/rev)					f (mm/rev)			
P.1.1	110	0,25	0,28	0,30	0,32					
P.1.2	105	0,24	0,27	0,29	0,31					
P.1.3	100	0,22	0,25	0,28	0,29					
P.1.4	95	0,21	0,24	0,26	0,28					
P.1.5	90	0,20	0,23	0,25	0,26					
P.2.1	110	0,29	0,33	0,36	0,38					
P.2.2	100	0,26	0,30	0,33	0,35					
P.2.3	90	0,24	0,27	0,29	0,31					
P.2.4	70	0,21	0,24	0,26	0,27					
P.3.1	75	0,24	0,27	0,30	0,31					
P.3.2	60	0,19	0,22	0,24	0,25					
P.3.3	60	0,15	0,17	0,18	0,19					
P.4.1	60	0,16	0,18	0,19	0,20					
P.4.2	60	0,16	0,18	0,19	0,20					
M.1.1	55	0,20	0,23	0,25	0,26					
M.2.1	50	0,17	0,19	0,21	0,22					
M.3.1	50	0,17	0,19	0,21	0,22					
K.1.1	95	0,37	0,42	0,46	0,49	120	0,49	0,56	0,62	0,65
K.1.2	80	0,29	0,33	0,36	0,38	100	0,39	0,45	0,49	0,51
K.2.1	130	0,34	0,39	0,42	0,45	160	0,45	0,52	0,57	0,60
K.2.2	80	0,29	0,33	0,36	0,38	100	0,39	0,45	0,49	0,51
K.3.1	70	0,32	0,36	0,39	0,41	90	0,42	0,48	0,52	0,55
K.3.2	65	0,25	0,28	0,31	0,33	80	0,34	0,38	0,41	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	30	0,14	0,16	0,17	0,18					
S.1.2	20	0,10	0,11	0,12	0,13					
S.2.1	20	0,10	0,11	0,12	0,13					
S.2.2	15	0,12	0,14	0,15	0,16					
S.2.3	15	0,10	0,11	0,12	0,13					
S.3.1	40	0,17	0,20	0,22	0,23					
S.3.2	30	0,15	0,17	0,18	0,19					
S.3.3	25	0,12	0,14	0,15	0,16					
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 is highly dependent on external conditions, such as stability of the tool and workpiece clamping, material and machine type!
The values indicated represent possible cutting data which may need to be corrected depending on operating conditions !


Index	10 922 ...				
	with through coolant v _c (m/min)	AL			
		≥ Ø 12–15,7	> Ø 15,7–20	> Ø 20–25	> Ø 25–32
f (mm/rev)					
P.1.1					
P.1.2					
P.1.3					
P.1.4					
P.1.5					
P.2.1					
P.2.2					
P.2.3					
P.2.4					
P.3.1					
P.3.2					
P.3.3					
P.4.1					
P.4.2					
M.1.1					
M.2.1					
M.3.1					
K.1.1					
K.1.2					
K.2.1					
K.2.2					
K.3.1					
K.3.2					
N.1.1	330	0,27	0,31	0,34	0,36
N.1.2	300	0,25	0,28	0,31	0,32
N.2.1	250	0,33	0,37	0,41	0,43
N.2.2	220	0,33	0,37	0,41	0,43
N.2.3	180	0,33	0,37	0,41	0,43
N.3.1	200	0,41	0,47	0,51	0,54
N.3.2	120	0,33	0,37	0,41	0,43
N.3.3	140	0,25	0,28	0,31	0,32
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					



With through-holes the feedrate should be reduced at the break out by approx. 30 %. Use 142° NC Spot Drill to ensure positional accuracy. Use reduced feedrate of 0.05 – 0.06 mm/U when using type VA 5xD and 8xD drill.

Cutting data standard values – WTX – Change Feed

Index	10 925 ...							
	UNI							
	with through coolant	With external coolant v_c (m/min)	MMS	$\geq \varnothing 14,0$	$> \varnothing 17,5$	$> \varnothing 21,5$	$> \varnothing 26,0$	$\varnothing 32,0$
	f (mm/rev)							
P.1.1	100	90	90	0,45	0,51	0,55	0,58	0,60
P.1.2	95	85	85	0,43	0,48	0,53	0,55	0,57
P.1.3	90	80	80	0,41	0,46	0,50	0,53	0,54
P.1.4	85	75	75	0,39	0,44	0,48	0,50	0,51
P.1.5	80	75	75	0,37	0,42	0,45	0,47	0,49
P.2.1	100	85	85	0,54	0,60	0,65	0,69	0,71
P.2.2	90	75	75	0,49	0,55	0,59	0,62	0,64
P.2.3	80	70	70	0,44	0,49	0,53	0,56	0,58
P.2.4	65	55	55	0,39	0,43	0,47	0,49	0,51
P.3.1	70	60	60	0,44	0,49	0,53	0,56	0,58
P.3.2	55	50	50	0,36	0,40	0,43	0,46	0,47
P.3.3	55	40	45	0,28	0,31	0,33	0,35	0,36
P.4.1	55	40	45	0,29	0,32	0,35	0,37	0,38
P.4.2	55	40	45	0,29	0,32	0,35	0,37	0,38
M.1.1								
M.2.1								
M.3.1								
K.1.1	110	75	75	0,68	0,77	0,83	0,88	0,90
K.1.2	90	70	70	0,54	0,61	0,66	0,69	0,71
K.2.1	145	90	110	0,63	0,71	0,77	0,81	0,83
K.2.2	90	70	70	0,54	0,61	0,66	0,69	0,71
K.3.1	80	70	70	0,58	0,65	0,71	0,75	0,77
K.3.2	70	65	65	0,46	0,52	0,56	0,59	0,61
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 is highly dependent on external conditions, such as stability of the tool and workpiece clamping, material and machine type!
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Cutting data standard values – WPC – Change

2


Index	11 910 ...				
	with through coolant v_c (m/min)	UNI			
		\varnothing 14–16	$> \varnothing$ 16–20	$> \varnothing$ 20–25	$> \varnothing$ 25–30
		f (mm/rev)			
P.1.1	100	0,22	0,25	0,28	0,32
P.1.2	100	0,27	0,31	0,35	0,39
P.1.3	100	0,27	0,31	0,35	0,39
P.1.4	90	0,25	0,28	0,32	0,35
P.1.5	90	0,25	0,28	0,32	0,35
P.2.1	100	0,25	0,28	0,32	0,35
P.2.2	100	0,25	0,28	0,32	0,35
P.2.3	100	0,25	0,28	0,32	0,35
P.2.4	80	0,21	0,24	0,27	0,30
P.3.1	70	0,20	0,22	0,25	0,28
P.3.2	70	0,18	0,21	0,24	0,26
P.3.3	60	0,17	0,19	0,22	0,24
P.4.1	55	0,17	0,19	0,22	0,24
P.4.2	55	0,17	0,19	0,22	0,24
M.1.1					
M.2.1					
M.3.1					
K.1.1	110	0,37	0,42	0,47	0,53
K.1.2	100	0,31	0,35	0,39	0,44
K.2.1	100	0,37	0,42	0,47	0,53
K.2.2	90	0,31	0,35	0,39	0,44
K.3.1	100	0,37	0,42	0,47	0,53
K.3.2	90	0,31	0,35	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					
S.3.2					
S.3.3					
H.1.1					
H.1.2					
H.1.3					
H.1.4					
H.2.1					
H.3.1					
O.1.1					
O.1.2					
O.2.1					
O.2.2					
O.3.1					







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Type overview – WTX High performance drilling tools

- ▲ good self-centring
- ▲ optimum swarf control
- ▲ precise radial run-out
- ▲ excellent alignment precision
- ▲ high-quality surface finish
- ▲ close drilling tolerances
- ▲ limited hardening of peripheral zones of the material
- ▲ good chip evacuation even with large drilling depths

 For all products that are marked with the video icon, a relevant product video can be viewed at cuttingtools.gb/en/type-overview-wtx



UNI		<ul style="list-style-type: none"> ▲ high-performance solid carbide drill for universal application, for all materials up to 1200 N/mm² 	DRAGONSKIN	
Feed UNI		<ul style="list-style-type: none"> ▲ solid carbide high feed drills with 3 cutting edges ▲ very good positional accuracy 	DRAGONSKIN	
Speed UNI		<ul style="list-style-type: none"> ▲ for double the cutting speed ▲ asymmetric point geometry permits performance improvement when drilling steel and cast iron by up to 60 % 	DRAGONSKIN	
Quattro 4F		<ul style="list-style-type: none"> ▲ with additional guide land for best alignment accuracy, concentricity and positional accuracy 	DRAGONSKIN	
180		<ul style="list-style-type: none"> ▲ for inclined surfaces up to 45° and flat bottom holes 		
TB		<ul style="list-style-type: none"> ▲ solid carbide deep hole drill, up to 50xD without peck drilling ▲ 4 or 6 facet head geometry for excellent alignment accuracy 		
CP		<ul style="list-style-type: none"> ▲ Ensures an even safer deep hole drilling process ▲ For optimal guidance of the deep hole twist drill for hole depths > 30xD 		
VA		<ul style="list-style-type: none"> ▲ first choice for corrosion and acid resistant steels ▲ for volume production 		
Speed VA		<ul style="list-style-type: none"> ▲ Designed for high cutting speeds in corrosion and acid-resistant steels 		
AL		<ul style="list-style-type: none"> ▲ solid carbide high performance drill specially for the machining of aluminium, copper and brass ▲ 6 facet geometry for excellent hole quality 	DRAGONSKIN	
Ti		<ul style="list-style-type: none"> ▲ Specialist for the cost-effective machining of titanium, titanium alloys and heat-resistant alloys ▲ Also suitable for machining corrosion-resistant and acid-resistant steels 	DRAGONSKIN	
H		<ul style="list-style-type: none"> ▲ high-performance drill for hardened steels from 45 to 70 HRC 	DRAGONSKIN	
HFDS		<ul style="list-style-type: none"> ▲ Four fluted high-feed drill ▲ Specially designed for steel processing ▲ Innovative cutting edge geometry guarantees high positioning accuracy 	DRAGONSKIN	
MINI		<ul style="list-style-type: none"> ▲ solid carbide micro drill for the precise manufacture of very small holes from Ø 0.1 to 2.9 mm 		
MICRO		<ul style="list-style-type: none"> ▲ Universal high-performance micro drill ▲ Specialised geometry and coating ▲ Pilot drill for WTX Micro deep hole twist drill 	DRAGONSKIN	
Change		<ul style="list-style-type: none"> ▲ replaceable head drills with the performance level of a solid carbide drill, from Ø 12.0 mm to 41.0 mm 		
Change Feed		<ul style="list-style-type: none"> ▲ exchangeable head drill with three cutting edges for even greater performance, from Ø 14.0 mm to 32.0 mm 		
Feed BR		<ul style="list-style-type: none"> ▲ Solid carbide high-performance drill reamer ▲ Drilling and reaming in one operation ▲ Three drilling edges and six reaming edges 	DRAGONSKIN	
SB		<ul style="list-style-type: none"> ▲ Solid carbide short step drill for steels and cast iron materials ▲ For core hole plus countersink for thread cutting and forming 	DRAGONSKIN	

Important application criteria for WTX drills

Offset

The axial run-out of the axis between a rotating work piece and a stationary tool must not exceed 0.04 mm. A larger run-out reduces tool life and drilling quality and can lead to tool breakage.

Run-out

The concentricity error when the tool is rotating should not exceed 0.015 mm.

Cooling lubricant

With internally cooled tools the coolant pressure should be min. 20 bar.

High-quality semi-synthetic or emulsion coolants with min. 10 % oil content and EP additives are recommended. This allows better life, and achieves higher tolerance accuracy and better surface quality. A fine filter system is recommended to prevent possible clogging of the coolant channels.

Drilling into full material

Due to the geometric design of the solid carbide drills, they are suitable for drilling into solid material.

With solid carbide drills $\leq 12xD$ drilling can be carried out in solid material without the need for centering and spot drilling operations.

Flute run-out

When using WTX drills a safety margin of at least 1 to 1.5 x D must be maintained between the work piece and the flute outlet groove of the drill to ensure optimum chip evacuation and prevent chip clogging and tool fracture.

Peck drilling

Pecking should be avoided as there is a very high risk of fracture caused by chips left behind or flushed into the hole.

Secondary tools

If a smaller diameter WTX drill is used as a following tool in the same hole, it should have a smaller drill point angle to ensure that it centres properly.

Interrupted cut

Reduce the feedrate on entry to and from cross holes

Drill exit

To avoid severe burr formation, reduce v_c and f .

Workpiece clamping

To avoid tool breakages, care must be taken to ensure a proper workpiece clamping without vibration or workpiece deflection.

Tool Clamping

With optimum clamping high alignment accuracy and tolerances (IT7-8) are possible.

Due to the high surface quality reaming operations can often be dispensed with.

Machine Requirements

Please note the performance diagram

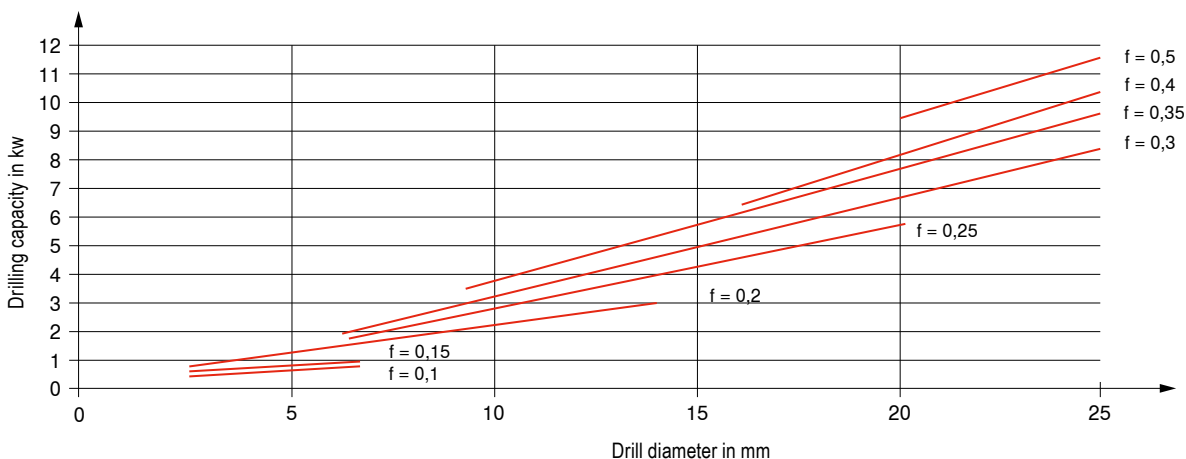
Cutting data table

To control the chip length (comma chip) the feed rates should be no lower than the lower limits quoted in the cutting data table.

Feed rate f in mm/rev.

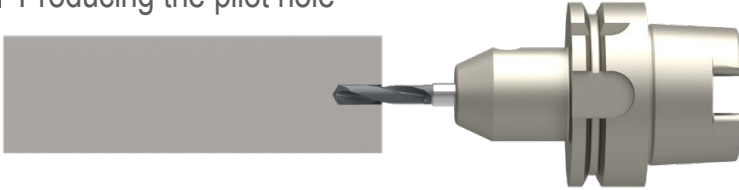
Drilling capacity relative to the diameter: $v_c = 80$ m/min.

Tensile strength of the material = 600 N/mm²



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

1 Producing the pilot hole



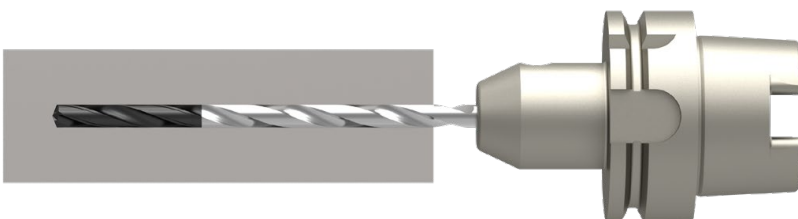
- ▲ For the pilot hole, we recommend a WTX drill 3xD / 5xD with the same nominal diameter
- ▲ The pilot hole should be 0.01–0.03 mm larger in diameter and at least 3xD deep.
- ▲ It is essential to ensure that the point angle of the pilot drill is bigger than the point angle of the deep hole drill.
- ▲ From a hole depth of 40xD, we recommend a pilot hole with our Co-Pilot deep hole twist drill CP 20 UNI.

2 Movement of the deep hole drill into the pilot hole



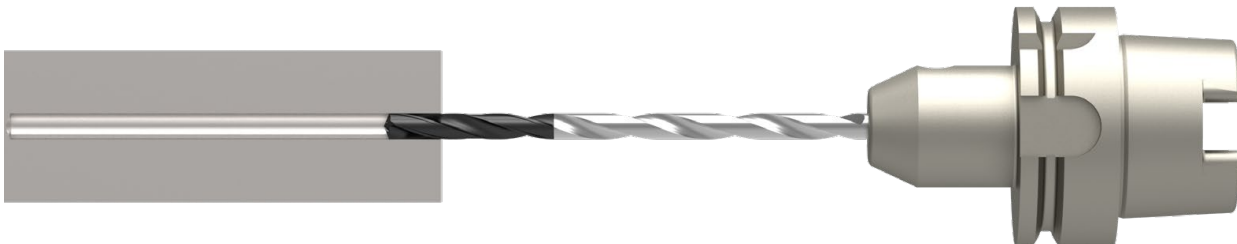
- ▲ Move the WTX deep hole drill without coolant pressure and with reduced speed ($n = 200\text{--}300$ 1/min) into the pilot hole at a feed of $v_f = 1.000$ mm/min
- ▲ Approx. 2 mm before reaching the bottom of the hole (end of the pilot hole), stop the feed, switch on the coolant and wait for a short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

3 Drilling to required depth without pecking



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

4 Retracting the drill



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



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



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

WTX – Micro – recommended application

General references

- ▲ During vertical machining, a pilot hole is not required for regular and straight surfaces from Ø 1.0 mm up to a length of 12xD due to the excellent self-centring. During horizontal drilling, a pilot drill must be used for irregular and angled surfaces.
The WTX Micro 5xD is recommended as a pilot drill.
- ▲ To guarantee problem-free insertion of the deep hole twist drill in the pilot hole, during horizontal machining 90° countersinking with suitable NC countersink is recommended.
- ▲ During vertical machining, drills from Ø 1.0 mm up to a length of 12xD can also be operated outside the pilot hole without a reduction in speed.
- ▲ For through holes, the feed per revolution must be reduced by 50% before exiting the hole.
- ▲ For long-chipping materials, pecking may be required every 3xD from a hole depth of 10xD. Peck drilling (retraction) should occur at the pilot hole depth.
- ▲ Due to the small thro' coolant Ø during micro drilling, effective filtration of the cooling medium is of the utmost importance.
Drill < Ø 2.0 mm Filter ≤ 0.010 mm
Drill < Ø 3.0 mm Filter ≤ 0.020 mm
- ▲ The longer the coolant is in the machine, suspended particles and particulate matter in the cooling medium prevent effective coolant flow. Regular replacement of the coolant is therefore recommended.
- ▲ A suitable clamping device with maximum radial run-out accuracy and balance quality is required for process-secure production.
Radial run-out accuracy ≤ 0.003 mm
Suitable for high-speed areas
- ▲ To guarantee a process-secure drilling process, a minimum pressure of 30 bar must be present.

1 Producing the pilot hole



- ▲ Pilot hole depth: min. 3xD
- ▲ It must be ensured that the prepared pilot hole is free from chips to avoid blocking of the micro deep hole twist drill cutting edges

2 Entering the pilot hole with a deep hole twist drill



- ▲ Speed 300 1/min (reverse rotation sometimes possible)
- ▲ Entry speed approx. 1.000 mm/min
- ▲ Switch on cooling
- ▲ Increase parameters 0.5–1.0 mm before reaching the bottom of the pilot hole

3 Deep hole drilling



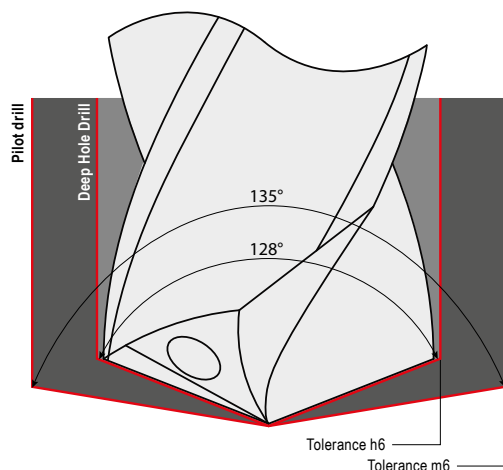
- ▲ At hole depth without pecking

4 Retracting the drill

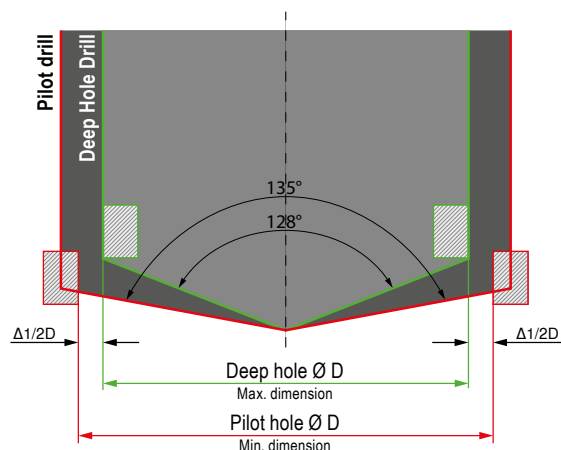


- ▲ Retract drill approx. 1xD
- ▲ Reduce speed to 300 1/min
- ▲ Exit speed approx. 1.000 mm/min
- ▲ Switch off emulsion before exiting the hole

Tolerances and angles



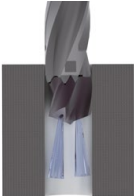
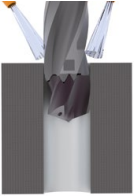
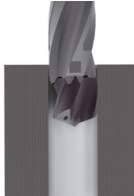
The following must apply to use the pilot and deep hole twist drill consecutively and without collisions:
 $\Delta D = \text{ØD (pilot hole)} - \text{ØD (deep hole)} > 0$



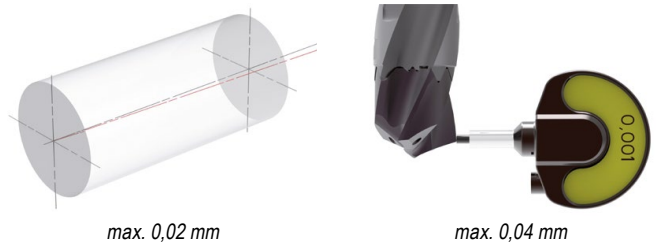
Application notes for WTX – Change Feed and WTX – Change exchangeable head drills

Coolant conditions

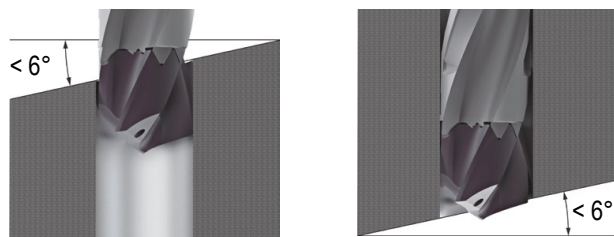
Coolant pressure dependent on drilling depth:

with thro' coolant	with external cooling	without coolant supply
		
1xD: 8 bar ✓	1xD: 8 bar ✓	max. bore depth: 3xD
3xD: 8 bar ✓	3xD: 8 bar ✓	
5xD: 12 bar ✓	5xD: 12 bar ✗	
8xD: 25 bar ✓	8xD: 25 bar ✗	
12xD: 25 bar ✓	12xD: 25 bar ✗	

Runout accuracy

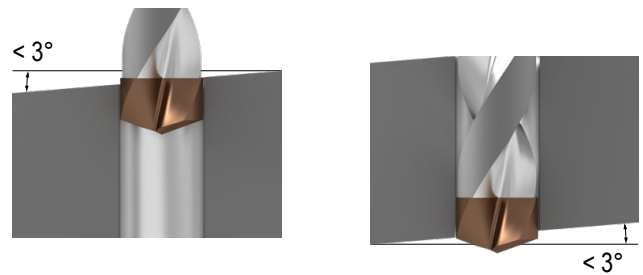


Max. entry and exit angle for the WTX – Change Feed



When entering and exiting angled surfaces, reduce v_f by 50 %.

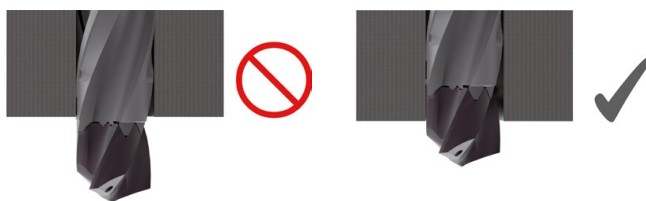
Max. entry and exit angle for the WTX – Change



When entering and exiting angled surfaces, reduce v_f by 50 %.

Exiting a through hole

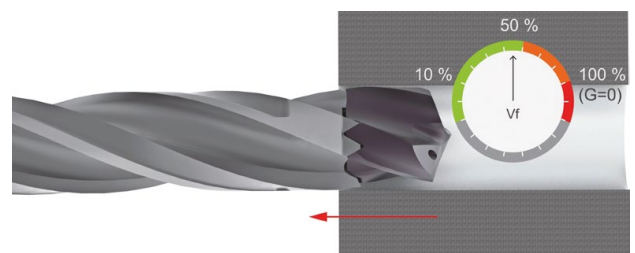
▲ WTX – Change Feed and WTX – Change



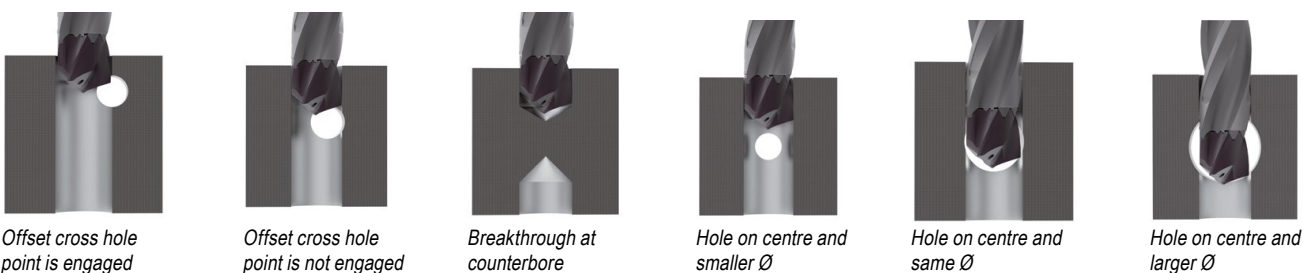
For through holes, it must be ensured that the exchangeable head does not fully protrude from the hole.

Do not retract at rapid feedrate

For withdrawal, a rate of 5 times the value of the feed rate is recommended.



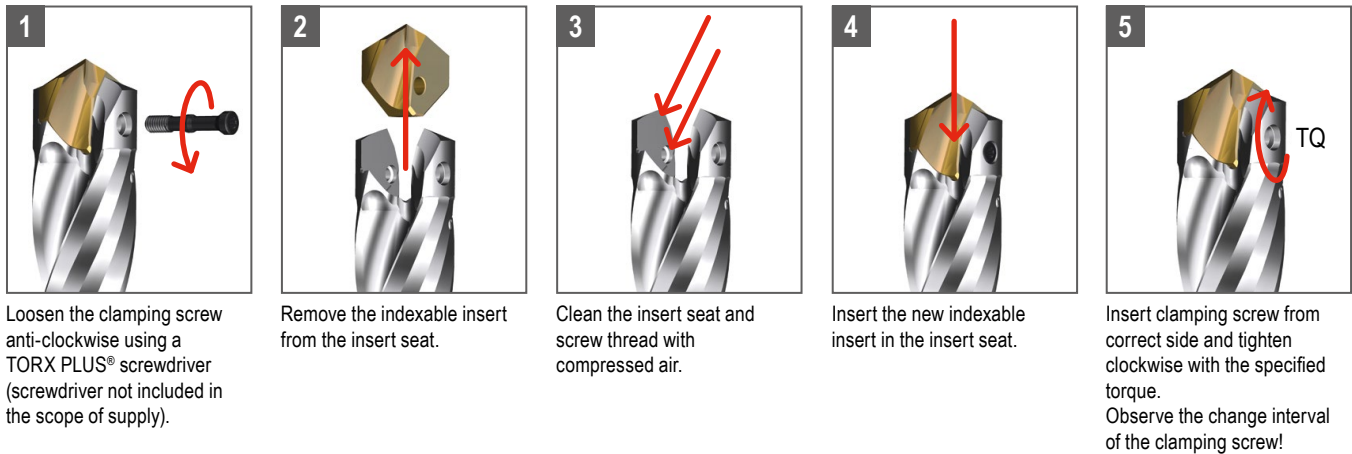
Machining situations



WTX – Change Feed ✓	WTX – Change Feed ✗	WTX – Change Feed ✓	WTX – Change Feed ✓	WTX – Change Feed ✗	WTX – Change Feed ✗
WTX – Change ✓	WTX – Change ✗	WTX – Change ✗	WTX – Change ✓	WTX – Change ✗	WTX – Change ✗

Application notes for WPC – Change indexable insert drill

Assembly of the indexable insert



Notes

- ▲ Only insert indexable inserts in the diameter range designated for the respective holder.
- ▲ The clamping screw must also be replaced upon every fifth replacement of the indexable insert.
- ▲ The tightening torque and item number of the clamping screw are labelled on the holder.
- ▲ Use only original spare parts.

Clamping screws and tightening torques

Diameter range	Article no. Clamping screw	Drive	Torque moment TQ
14,00–15,99 mm	11 950 00100	08IP	0,9 Nm
16,00–17,99 mm	11 950 00200	08IP	1,2 Nm
18,00–21,99 mm	11 950 00300	10IP	2,2 Nm
22,00–23,99 mm	11 950 00400	10IP	3,2 Nm
24,00–25,99 mm	11 950 00500	15IP	5,0 Nm
26,00–30,00 mm	11 950 00600	20IP	6,0 Nm

Notes on drilling technology



Solid drilling



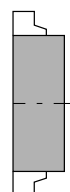
Stack plate drilling: stable clamping of closely spaced stack plates required.



When drilling into angled surfaces $< 3^\circ$, reduce the feed by approx. 50%.
For an angled drill entrance $> 3^\circ$, prior spot facing is required.



When exiting at an angle $< 3^\circ$, reduce the feed by approx. 50%.
Machining angled drill exits $> 3^\circ$ is not recommended.



When machining with a stationary tool (turning machines), a precise centre position of the tool in relation to the rotational axis of the workpiece must be ensured. Maximum permissible offset ± 0.02 mm.



To achieve the optimal results, it is recommended to use the tool with thro' coolant only.
The recommended minimum coolant pressure should be 12 bar.

Recommendations for solid carbide drilling operations

Reasons for ...

Solutions ...

... Built-up edge

v_c too low
Too much material taken off at main cutting edge
Uncoated cutting edge



Increase v_c
Reduce cut
Coating

... Corners broken off

Unstable conditions
Run out too high
Interrupted cut



Change clamping
Optimise runout
Reduce feed

... Heavy flank wear

v_c too low
Feed rate too low
Clearance angle too small



Reduce v_c
Increase feed rate
Increase clearance angle

... Scoring on the tool flanks

Unstable conditions
Run out too high
Interrupted cut
Abrasive materials



Change clamping
Correct runout
Reduce feed
Thicker emulsion or oil

... Round chamfer wear

Unstable conditions
Run out too high
Back taper too small
Wrong emulsion or too thin emulsion



More stable clamping
Check radial run-out
Increase back taper
Thicker emulsion or oil

... Material broken off at main cutting edge

Unstable conditions
Interrupted cut
Wrong type of tool
Max. tool life has been exceeded



More stable clamping
Reduce feed
Optimise tool
Change tool earlier

... Heavy wear at chisel edge

v_c too low
Feed rate too high
Too much material taken off at main cutting edge



Increase v_c
Reduce feed
Optimise cutting edge

... Material broken off at intersections, drill point and main cutting edge

Clearance angle too small
Too much material taken off at main cutting edge
Wrong tool



Increase clearance angle
Optimize cutting edge
Other tool

... Plastic deformation of cutting corner

v_c too high
Insufficient emulsion
Wrong or no corner chamfer



Reduce v_c
Increase amount of coolant
Correct corner chamfer

... Poor surface quality

Excessive runout error
Cooling too low
Unstable conditions



Check radial run-out
More emulsion
Change toolholding

... Heavy burring on hole exit

Feed too high
Excessive honing of main cutting edge



Reduce feed
Minimise cutting edge

Further information

cutting.tools/en/en/tips-solid-carbide-drilling



Coatings

Ti800

- ▲ AlTiN nanolayer coating
- ▲ Maximum application temperature: 1100 °C

Ti700

- ▲ TiAlN multilayer coating
- ▲ Maximum application temperature: 1100 °C

TiAlN

- ▲ TiAlN multilayer coating
- ▲ Maximum application temperature: 900 °C

TiB

- ▲ TiB monolayer coating
- ▲ Specially for aluminium machining
- ▲ Maximum application temperature: 900 °C

TiSi

- ▲ TiSi multilayer coating
- ▲ Maximum application temperature: 800 °C

Ti1050

- ▲ Ti multilayer coating
- ▲ $HV_{0.005} = 3300$
- ▲ Coefficient of friction (against steel) = 0.3 – 0.5
- ▲ Maximum application temperature: 900 °C

Ti750

- ▲ TiAlN nanolayer coating
- ▲ Maximum application temperature: 1000 °C

TPX74S

- ▲ TiAlN-based PVD multilayer coating
- ▲ Universally applicable grade with high wear-resistance
- ▲ Maximum application temperature: 900 °C

DPX74S

- ▲ Special TiAlN nanolayer coating
- ▲ Maximum application temperature: 1000 °C

DRAGONSKIN

DPA54

- ▲ Special multilayer coating
- ▲ High hardness and heat resistance
- ▲ Maximum application temperature: 800 °C

DRAGONSKIN

DLC

- ▲ Diamond-like carbon coating
- ▲ Specially for machining non-ferrous metals
- ▲ Maximum application temperature: 400 °C

DRAGONSKIN

DPX14S

- ▲ TiAlN nanolayer coating
- ▲ Coefficient of friction (dry, against steel) = 0.35
- ▲ Maximum application temperature: 1000 °C

DRAGONSKIN

DPX64U

- ▲ Special TiAlN monolayer coating
- ▲ Perfected for hardened materials
- ▲ Optimised coating and surface structure
- ▲ Maximum application temperature: 800 °C

DRAGONSKIN

DPX74M

- ▲ Universal AlCrN-based monolayer coating developed for micro tools
- ▲ High oxidation, heat and wear resistance
- ▲ Maximum application temperature 1100 °C

DRAGONSKIN