

STARTEC-HP

Application Data

max. Profiltiefe a_p [mm]	Vorschub v_f [mm/min]											
	30	40	50	60	70	80	100	120	140	160	180	200
2,6	1,3	1,7	2,2	2,6	3,0	3,5	4,3	5,2	6,1	6,9	7,8	8,7
2,8	1,4	1,9	2,3	2,8	3,3	3,7	4,7	5,6	6,5	7,5	8,4	9,3
3,0	1,5	2,0	2,5	3,0	3,5	4,0	5,0	6,0	7,0	8,0	9,0	10,0
3,2	1,6	2,1	2,7	3,2	3,7	4,3	5,3	6,4	7,5	8,5	9,6	10,7
3,4	1,7	2,3	2,8	3,4	4,0	4,5	5,7	6,8	7,9	9,1	10,2	11,3
3,6	1,8	2,4	3,0	3,6	4,2	4,8	6,0	7,2	8,4	9,6	10,8	12,0
3,8	1,9	2,5	3,1	3,8	4,4	5,1	6,3	7,6	8,9	10,1	11,4	12,7
4,0	2,0	2,7	3,3	4,0	4,7	5,3	6,7	8,0	9,3	10,7	12,0	13,3
4,2	2,1	2,8	3,5	4,2	4,9	5,6	7,0	8,4	9,8	11,2	12,6	14,0
4,4	2,2	2,9	3,7	4,4	5,1	5,9	7,3	8,8	10,3	11,7	13,2	14,7
4,6	2,3	3,1	3,8	4,6	5,4	6,1	7,7	9,2	10,7	12,3	13,8	15,3
4,8	2,4	3,2	4,0	4,8	5,6	6,4	8,0	9,6	11,2	12,8	14,4	16,0
5,0	2,5	3,3	4,2	5,0	5,8	6,7	8,3	10,0	11,7	13,3	15,0	16,7
5,5	2,8	3,7	4,6	5,5	6,4	7,3	9,2	11,0	12,8	14,7	16,5	18,3
6,0	3,0	4,0	5,0	6,0	7,0	8,0	10,0	12,0	14,0	16,0	18,0	20,0
6,5	3,3	4,3	5,4	6,5	7,6	8,7	10,8	13,0	15,2	17,3	19,5	21,7
7,0	3,5	4,7	5,8	7,0	8,2	9,3	11,7	14,0	16,3	18,7	21,0	23,3

cutting speed $v_c = 15 - 18$ m/s

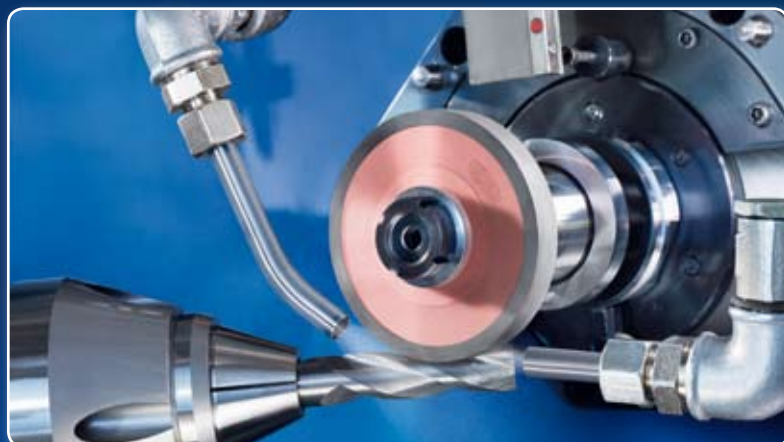
$$Q_w' = \frac{a_p \times v_f}{60}$$

■ v_f startvalue
■ v_f Optimierungspotential

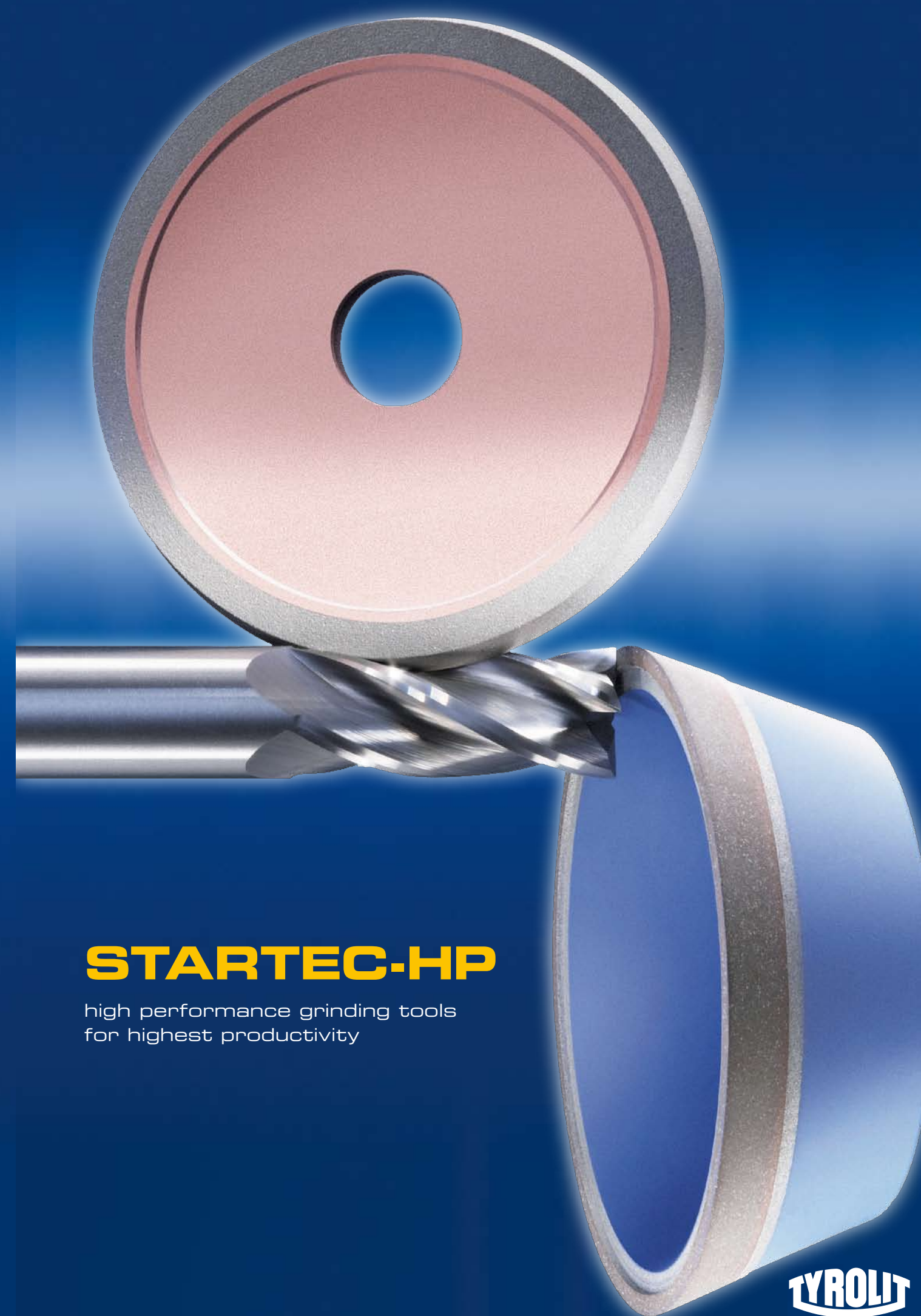
APPLICATION EXAMPLE

High Performance Startec-HP

- Workpiece:
Carbide Drill: D = 10,6 mm
Flute Length: L = 90 mm
Material: K40
- Machine: Reinecker WZS500CNC
- Coolant: oil 40 bar
- Parameter:
 $v_c = 16$ m/s
 $a_p = 4,8$ mm
 v_f alt = 25 mm/min $\Rightarrow Q_w' = 2,0$
 v_f neu = 50 mm/min $\Rightarrow Q_w' = 4,0$



- Dressing after 40 flutes ground necessary!
- Wheel wear 0,003 mm per piece!
- Grinding time reduction 2'42"!



STARTEC-HP

high performance grinding tools
for highest productivity

T5272-M-1-GB-01-0705-Tiroler Repro



ISO 9001:2000
VDA 6.4
ISO 14001

Nr. 265/1
Nr. 004/1
Nr. 162/1

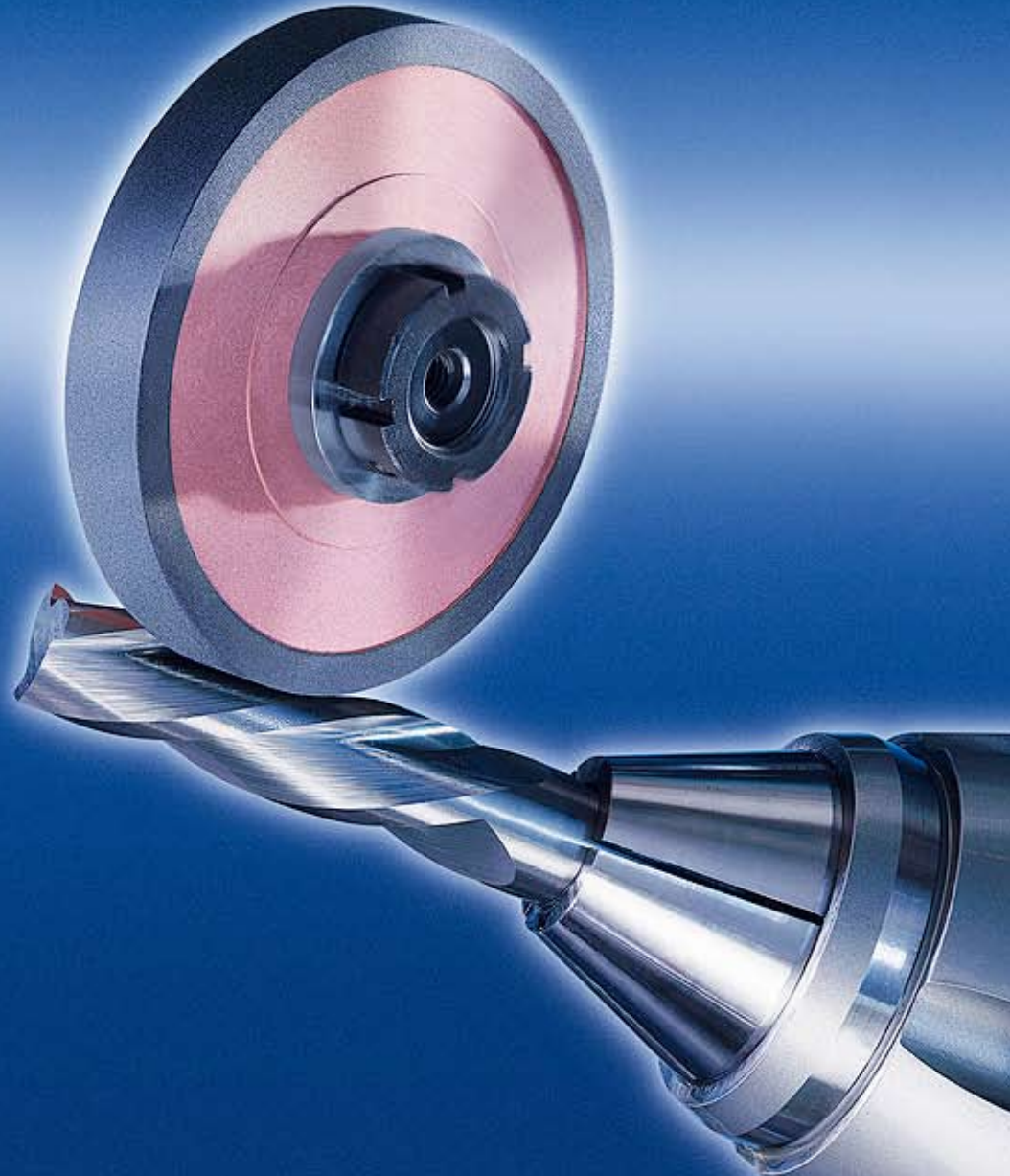
TYROLIT SCHLEIFMITTELWERKE SWAROVSKI K.G.
Swarovskistraße 33, A-6130 Schwaz/Austria
Telefon +43/5242/606-0, Fax +43/5242/633 98
www.tyrolit.com



STARTEC-HP

HP – „High Performance“ with creepfeed flute grinding of carbide tools

- Traverse speed improvement about 50 %
- Reduction of flute grinding time about 40 %
- Low cutting forces
- No thermal damage to the tool
- Optimized core material
- Minimal wheel wear
- Long dressing interval
- Easily dressed
- Wide selection of wheels available from stock



HIGH PRODUCTIVITY AT THE LOWEST COST!

High productivity and good quality components at the lowest cost are the main requirements from today's leading manufacturers. The costs associated with flute grinding are the highest of all manufacturing steps for producers of drills and cutters, so there is always a need for improvement. This means the selection of the right wheel for the job is essential.

The new STARTEC-HP wheel from TYROLIT offers the

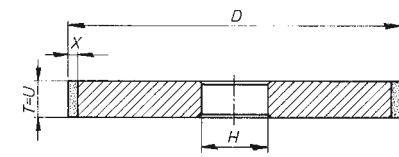
user a range of benefits. The new product features an improved bond system, new abrasive types and a new core material.

The combination of the features deliver high material removal rates, low wheel wear, low cutting forces, low power consumption and low frictional heat in the contact zone. In turn the surface finish and edge quality of the cutting tools are excellent.

STOCK PROGRAM

STARTEC-HP for carbide tools

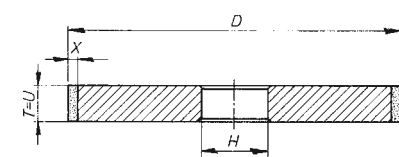
Form 1A1



D	T (U)	X	H	Spezifikation	Materialnummer
75	4	6	20	DN 763 MH	358546
75	6	6	20	DN 763 MH	358547
75	10	6	20	DN 763 MH	358548
100	6	6	20	DN 763 MH	356763
100	6	6	31,75	DN 763 MH	356765
100	10	6	20	DN 763 MH	354835
100	10	6	31,75	DN 763 MH	354766
100	15	6	20	DN 763 MH	320034
100	15	6	31,75	DN 763 MH	356768
100	12	6	20	DN 763 MH	357526
125	6	6	20	DN 763 MH	356771
125	10	6	20	DN 763 MH	347911
125	15	6	20	DN 763 MH	356772
125	15	6	31,75	DN 763 MH	356777
150	6	6	20	DN 763 MH	356778
150	10	6	20	DN 763 MH	356781
150	15	6	20	DN 763 MH	356779

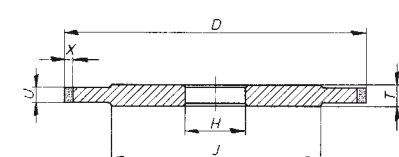
STANDARD PROGRAM

Form 1A1



D	T (U)	X	H
75	6-20	6	state bore size when ordering
100	6-20	6/10	
125	6-20	6/10	
150	8-20	6/10	
175	8-20	6/10	
200	10-20	6/10	

Form 14A1

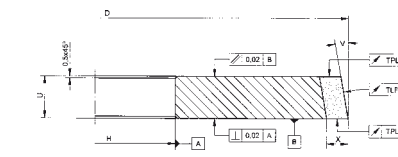


D	U	X	T _{max}	H
75	4-10	6	U+6	state bore size when ordering
100	4-20	6/10	U+6	
125	4-20	6/10	U+6	
150	6-15	6/10	U+6	
175	6-15	6/10	U+6	
200	8-20	6/10	U+6	

STOCK PROGRAM

STARTEC-HP for carbide tools

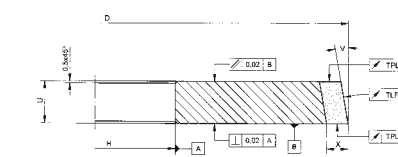
Form 1V1



D	T (U)	X	V	H	Spezifikation	Materialnummer
75	6	6	15	20	DN 763 MH	358549
100	6	6	15	20	DN 763 MH	356820
100	6	6	15	31,75	DN 763 MH	356821
100	10	6	15	20	DN 763 MH	356822
100	10	6	15	31,75	DN 763 MH	356823
100	15	6	15	20	DN 763 MH	356825
100	15	6	15	31,75	DN 763 MH	356824
100	12	6	45	20	DN 763 MH	356826
100	12	6	15	20	DN 763 MH	356828
125	6	6	15	20	DN 763 MH	356830
125	6	6	15	31,75	DN 763 MH	356832
125	10	6	15	20	DN 763 MH	356833
125	10	6	15	31,75	DN 763 MH	356834
125	15	6	15	20	DN 763 MH	356835
125	15	6	15	31,75	DN 763 MH	356838
125	12	6	45	20	DN 763 MH	356842
125	12	6	15	20	DN 763 MH	356848

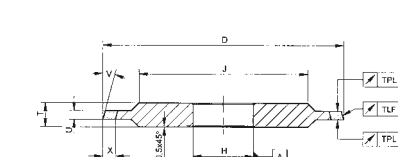
STANDARD PROGRAM

Form 1V1



D	T (U)	X	H
75	6-20	6	state bore size when ordering
100	6-20	6/10	
125	6-20	6/10	
150	8-20	6/10	

Form 14V1



D	U	X	T _{max}	H
75	4-10	6	U+6	state bore size when ordering
100	4-20	6/10	U+6	
125	4-20	6/10	U+6	
150	8-20	6/10	U+6	

Weitere Formen für alle Schleifscheiben auf Anfrage möglich.

STARTEC-HP:

Application with oil coolant and $V_c = 16\text{m/s}$

TYROLIT