



FLUTE - SPEED®

FS-H6 & FS-H7

NEW-GENERATION HYBRID BONDS FOR PRODUCTIVE GRINDING

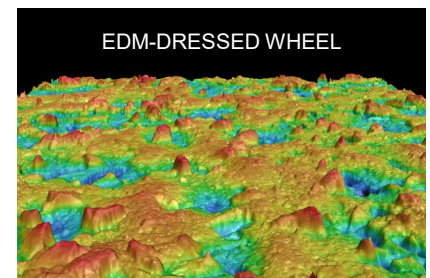
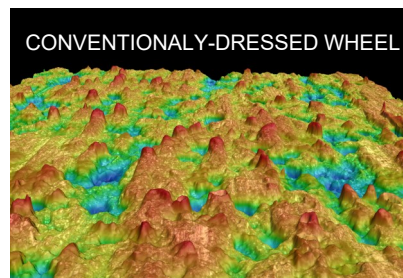
We are introducing the newest additions to our *Flute – Speed*® family of hybrid bonds: *FS-H6* and *FS-H7*. These bonds are a step-up of our game in the world of high-productivity grinding:

- Eligible for EDM (*Electrical Discharge Machining*) dressing and profiling / truing
- Increased productivity due to higher achievable feedrate, or infeed

MORE AGGRESSIVE THANKS TO EDM

In an EDM-dressed wheel, sharp diamond, or CBN grits protrude more significantly from the bond than they protrude in a wheel that's been dressed by conventional SiC / Al₂O₃ wheels.

This allows the EDM-dressed wheels to grind more aggressively.



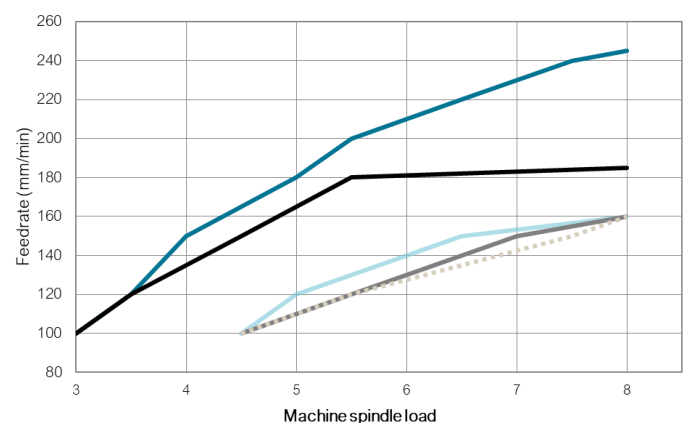
Internal testing shows:

1,5x higher maximal feedrate compared to previous versions of our bond FS-H4 (240 vs. 160 mm/min)

- Walter Helitronic Minipower cooled with oil,
- 1A1; 100-10/10; D54
- Tungsten carbide (K30-40)
- $V_c = 16$ m/s, $a_e = 4$ mm, $v_w =$ see chart on the right

Tested bonds

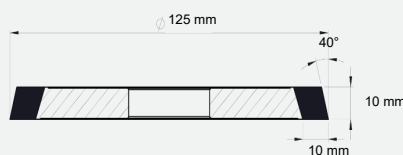
- FS-H7 EDM
- FS-H6 EDM
- FS-H7
- FS-H6
- FS-H4



CASE STUDY: END MILL FLUTING

WHEEL:

- Grit D46
- FS-H7
- EDM-dressed



WORKPIECE:

- Ø 16 mm 4-flute end mill from tungsten carbide

MACHINE & COOLANT:

- Reinecker WZS 70, cooled by oil

GRINDING CONDITIONS:





- Cutting Speed (v_c): 18 m/s
- Infeed (a_e): 3,65 mm
- Feedrate (v_w): 120 mm/min
- Material removal rate (Q'_w): 7,3 mm³/(mm*s)

RESULTS:

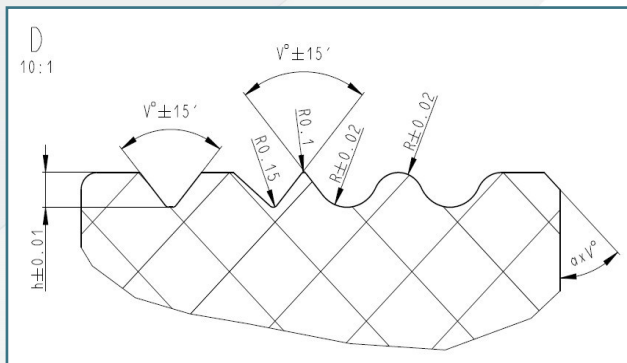
- **Improved feedrate by 50%** compared to previous standard grinding conditions (from 80 to 120 mm/min)
- Managed to produce 170 new tools before re-dressing
- Spindle load at 30% after 170 pcs

AVAILABLE SHAPES AND SIZES

Below is a list of available FEPA shapes and dimensions. If you don't find your desired combination, do not worry: tailor-made products are also available. Just reach out to us and we will find the best solution together with you.

WHEEL TYPE	\varnothing (mm)	X (mm)*	U (mm)*	V (°)*
1A1 	50 / 75 / 100 / 125 / 150 / 175 / 200	6 / 10 / 15 / 20	5 – 20	–
1V1 	50 / 55 / 75 / 100 / 125 / 150	6 / 10 / 15 / 20	5 – 22	2 – 75
11V9 	75 / 100 / 125	3	10	70
12V9 	75 / 100 / 125	3	6 / 10	35 / 45

*Not all combinations of wheel's dimensions are available. Send us your requirements and we will come back to you.



PRECISE WHEEL GEOMETRY

- EDM machining allows achieving tight tolerances on radiuses (more below) and other dimensions
- Wheel diameter tolerance: $\pm 0,02$ mm
- Contact us for individual consultancy

NOTES



CONTACT US TO GET A QUOTATION

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