

Our Van Hoorn Classic Tools are solid carbide uncoated endmills. This product programme contains 2 flute, 3 flute and 4 flute endmills in both sharp and ballnose types. The Classic Tools can be used in various applications such as slotting and deburring, in a wide range of materials. On request, these endmills can also be supplied with various coatings.

Classic tools

VHAF Deburring endmills 63

VHSF 2 Flute endmills 64

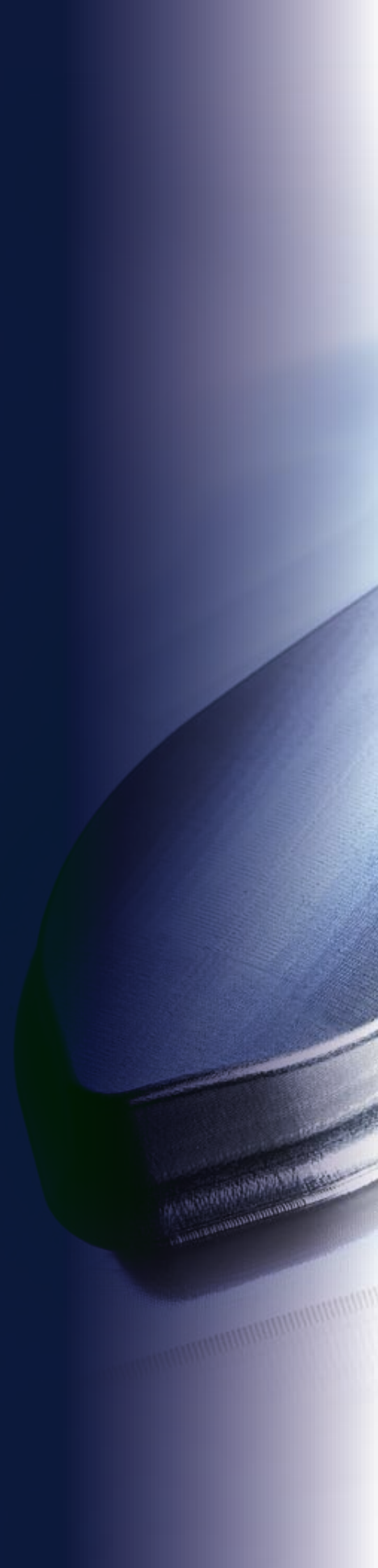
VHSFB 2 Flute ballnose endmills 65

VHSF 3 Flute endmills 66

VHSFB 3 Flute ballnose endmills 67

VHSF 4 Flute endmills 68

VHSFB 4 Flute ballnose endmills 69



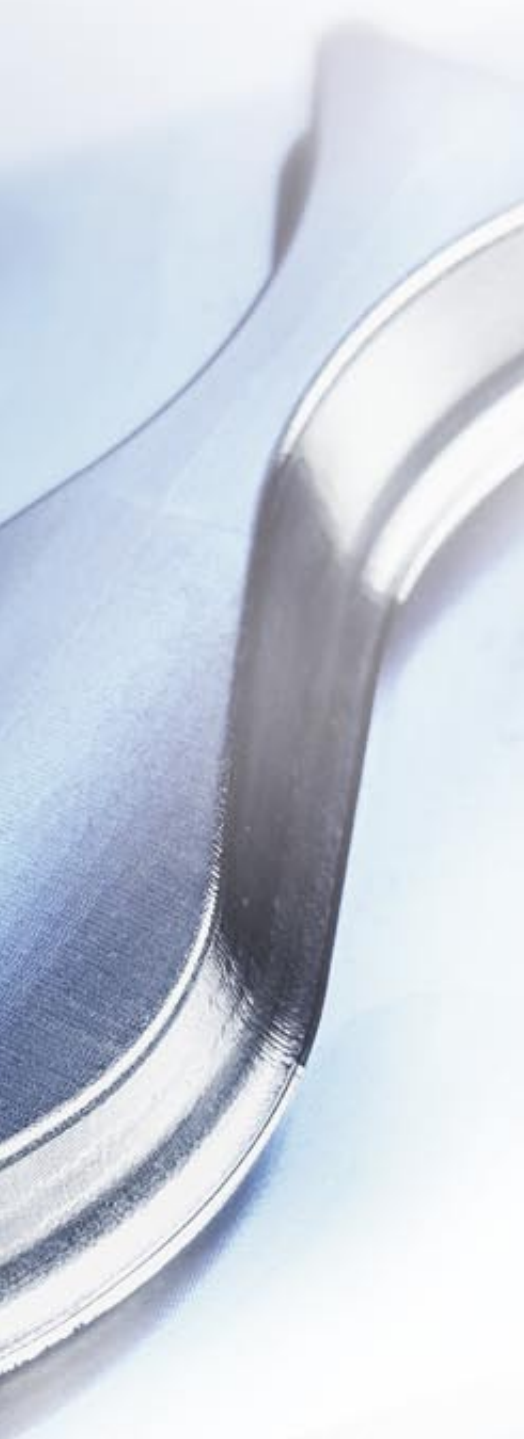
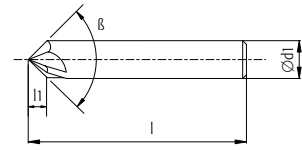
Solid carbide deburring endmills, straight flutes.

TiAlN Coated

Tolerances

| Diameter range | Shank $\varnothing d1-h5$ |
|------------------|---------------------------|
| $3 < d \leq 6$ | 0 -0,005 |
| $6 < d \leq 10$ | 0 -0,006 |
| $10 < d \leq 18$ | 0 -0,008 |

Standard

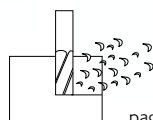


Point Angle 90°

| Article Number | $\varnothing d$ (mm) | β (°) | $\varnothing d1$ (mm) | L (mm) | L1 (mm) | L2 (mm) | a (mm) | z |
|----------------------|----------------------|-------------|-----------------------|--------|---------|---------|--------|---|
| VHAF 4 040 051 04 01 | 4 | 90 | 4 | 51 | 2 | - | - | 4 |
| VHAF 4 060 064 06 01 | 6 | 90 | 6 | 64 | 3 | - | - | 4 |
| VHAF 4 080 064 08 01 | 8 | 90 | 8 | 64 | 4 | - | - | 4 |
| VHAF 4 100 070 10 01 | 10 | 90 | 10 | 70 | 5 | - | - | 4 |
| VHAF 4 120 078 12 01 | 12 | 90 | 12 | 78 | 6 | - | - | 4 |

Point Angle 120°

| Article Number | $\varnothing d$ (mm) | β (°) | $\varnothing d1$ (mm) | L (mm) | L1 (mm) | L2 (mm) | a (mm) | z |
|---------------------------|----------------------|-------------|-----------------------|--------|---------|---------|--------|---|
| VHAF 4 040 051 04 01 B060 | 4 | 120 | 4 | 51 | 1,0 | - | - | 4 |
| VHAF 4 060 064 06 01 B060 | 6 | 120 | 6 | 64 | 1,5 | - | - | 4 |
| VHAF 4 080 064 08 01 B060 | 8 | 120 | 8 | 64 | 2,0 | - | - | 4 |
| VHAF 4 100 070 10 01 B060 | 10 | 120 | 10 | 70 | 2,5 | - | - | 4 |
| VHAF 4 120 078 12 01 B060 | 12 | 120 | 12 | 78 | 3,2 | - | - | 4 |



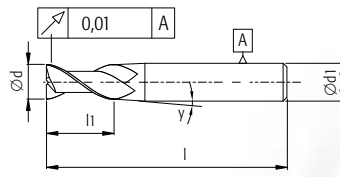
Solid carbide endmills, 30 degree helix angle.

Uncoated

Tolerances

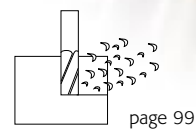
| Diameter range | Cutting diameter $\varnothing d-h9$ | Shank $\varnothing d1-h5$ |
|------------------|-------------------------------------|---------------------------|
| $d \leq 3$ | 0 -0,025 | 0 -0,004 |
| $3 < d \leq 6$ | 0 -0,030 | 0 -0,005 |
| $6 < d \leq 10$ | 0 -0,036 | 0 -0,006 |
| $10 < d \leq 18$ | 0 -0,043 | 0 -0,008 |
| $18 < d \leq 30$ | 0 -0,052 | 0 -0,009 |

Standard



| Article Number | $\varnothing d$ (mm) | r (mm) | $\varnothing d1$ (mm) | L (mm) | L1 (mm) | L2 (mm) | a (mm) | z | γ (°) |
|----------------------|----------------------|--------|-----------------------|--------|---------|---------|--------|---|--------------|
| VHSF 2 010 039 03 10 | 1,0 | - | 3 | 39 | 3 | - | - | 2 | 15 |
| VHSF 2 015 039 03 10 | 1,5 | - | 3 | 39 | 5 | - | - | 2 | 15 |
| VHSF 2 020 039 03 10 | 2,0 | - | 3 | 39 | 7 | - | - | 2 | 15 |
| VHSF 2 025 039 03 10 | 2,5 | - | 3 | 39 | 7 | - | - | 2 | 15 |
| VHSF 2 030 039 03 10 | 3,0 | - | 3 | 39 | 9 | - | - | 2 | - |
| VHSF 2 035 051 04 10 | 3,5 | - | 4 | 51 | 12 | - | - | 2 | 15 |
| VHSF 2 040 051 04 10 | 4,0 | - | 4 | 51 | 14 | - | - | 2 | - |
| VHSF 2 045 051 05 10 | 4,5 | - | 5 | 51 | 14 | - | - | 2 | 15 |
| VHSF 2 050 051 05 10 | 5,0 | - | 5 | 51 | 16 | - | - | 2 | - |
| VHSF 2 060 064 06 10 | 6,0 | - | 6 | 64 | 19 | - | - | 2 | - |
| VHSF 2 070 064 08 10 | 7,0 | - | 8 | 64 | 19 | - | - | 2 | 15 |
| VHSF 2 080 064 08 10 | 8,0 | - | 8 | 64 | 21 | - | - | 2 | - |
| VHSF 2 090 070 10 10 | 9,0 | - | 10 | 70 | 22 | - | - | 2 | 15 |
| VHSF 2 100 070 10 10 | 10,0 | - | 10 | 70 | 22 | - | - | 2 | - |
| VHSF 2 110 070 11 10 | 11,0 | - | 11 | 70 | 25 | - | - | 2 | - |
| VHSF 2 120 078 12 10 | 12,0 | - | 12 | 78 | 25 | - | - | 2 | - |
| VHSF 2 140 089 14 10 | 14,0 | - | 14 | 89 | 30 | - | - | 2 | - |
| VHSF 2 160 089 16 10 | 16,0 | - | 16 | 89 | 32 | - | - | 2 | - |
| VHSF 2 180 102 18 10 | 18,0 | - | 18 | 102 | 35 | - | - | 2 | - |
| VHSF 2 200 102 20 10 | 20,0 | - | 20 | 102 | 38 | - | - | 2 | - |

The endmills can also be supplied with various coatings.



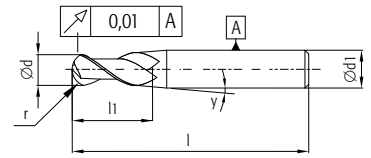
Solid carbide ballnose endmills, 30 degree helix angle.

Uncoated

Tolerances

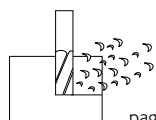
| Diameter range | Cutting diameter $\varnothing d-h9$ | Shank $\varnothing d1-h5$ |
|------------------|-------------------------------------|---------------------------|
| $d \leq 3$ | 0 -0,025 | 0 -0,004 |
| $3 < d \leq 6$ | 0 -0,030 | 0 -0,005 |
| $6 < d \leq 10$ | 0 -0,036 | 0 -0,006 |
| $10 < d \leq 18$ | 0 -0,043 | 0 -0,008 |
| $18 < d \leq 30$ | 0 -0,052 | 0 -0,009 |

Standard



| Article Number | $\varnothing d$ (mm) | r (mm) | $\varnothing d1$ (mm) | L (mm) | L1 (mm) | L2 (mm) | a (mm) | z | γ (°) |
|-----------------------|----------------------|--------|-----------------------|--------|---------|---------|--------|---|--------------|
| VHSFB 2 010 039 03 10 | 1,0 | 0,50 | 3 | 39 | 3 | - | - | 2 | 15 |
| VHSFB 2 015 039 03 10 | 1,5 | 0,75 | 3 | 39 | 5 | - | - | 2 | 15 |
| VHSFB 2 020 039 03 10 | 2,0 | 1,00 | 3 | 39 | 7 | - | - | 2 | 15 |
| VHSFB 2 025 039 03 10 | 2,5 | 1,25 | 3 | 39 | 7 | - | - | 2 | 15 |
| VHSFB 2 030 039 03 10 | 3,0 | 1,50 | 3 | 39 | 9 | - | - | 2 | - |
| VHSFB 2 035 051 04 10 | 3,5 | 1,75 | 4 | 51 | 12 | - | - | 2 | 15 |
| VHSFB 2 040 051 04 10 | 4,0 | 2,00 | 4 | 51 | 14 | - | - | 2 | - |
| VHSFB 2 045 051 05 10 | 4,5 | 2,25 | 5 | 51 | 14 | - | - | 2 | 15 |
| VHSFB 2 050 051 05 10 | 5,0 | 2,50 | 5 | 51 | 16 | - | - | 2 | - |
| VHSFB 2 060 064 06 10 | 6,0 | 3,00 | 6 | 64 | 19 | - | - | 2 | - |
| VHSFB 2 070 064 08 10 | 7,0 | 3,50 | 8 | 64 | 19 | - | - | 2 | 15 |
| VHSFB 2 080 064 08 10 | 8,0 | 4,00 | 8 | 64 | 21 | - | - | 2 | - |
| VHSFB 2 090 070 10 10 | 9,0 | 4,50 | 10 | 70 | 22 | - | - | 2 | 15 |
| VHSFB 2 100 070 10 10 | 10,0 | 5,00 | 10 | 70 | 22 | - | - | 2 | - |
| VHSFB 2 110 070 11 10 | 11,0 | 5,50 | 11 | 70 | 25 | - | - | 2 | - |
| VHSFB 2 120 078 12 10 | 12,0 | 6,00 | 12 | 78 | 25 | - | - | 2 | - |
| VHSFB 2 140 089 14 10 | 14,0 | 7,00 | 14 | 89 | 30 | - | - | 2 | - |
| VHSFB 2 160 089 16 10 | 16,0 | 8,00 | 16 | 89 | 32 | - | - | 2 | - |
| VHSFB 2 180 102 18 10 | 18,0 | 9,00 | 18 | 102 | 35 | - | - | 2 | - |
| VHSFB 2 200 102 20 10 | 20,0 | 10,00 | 20 | 102 | 38 | - | - | 2 | - |

The endmills can also be supplied with various coatings.



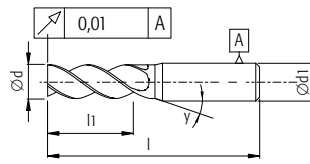
Solid carbide endmills, 30 degree helix angle.

Uncoated

Tolerances

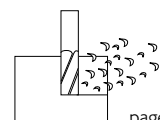
| Diameter range | Cutting diameter $\varnothing d-h9$ | Shank $\varnothing d1-h5$ |
|------------------|-------------------------------------|---------------------------|
| $d \leq 3$ | 0 -0,025 | 0 -0,004 |
| $3 < d \leq 6$ | 0 -0,030 | 0 -0,005 |
| $6 < d \leq 10$ | 0 -0,036 | 0 -0,006 |
| $10 < d \leq 18$ | 0 -0,043 | 0 -0,008 |
| $18 < d \leq 30$ | 0 -0,052 | 0 -0,009 |

Standard



| Article Number | $\varnothing d$ (mm) | r (mm) | $\varnothing d1$ (mm) | L (mm) | L1 (mm) | L2 (mm) | a (mm) | z | γ (°) |
|----------------------|----------------------|--------|-----------------------|--------|---------|---------|--------|---|--------------|
| VHSF 3 010 039 03 10 | 1,0 | - | 3 | 39 | 3 | - | - | 3 | 15 |
| VHSF 3 015 039 03 10 | 1,5 | - | 3 | 39 | 5 | - | - | 3 | 15 |
| VHSF 3 020 039 03 10 | 2,0 | - | 3 | 39 | 7 | - | - | 3 | 15 |
| VHSF 3 025 039 03 10 | 2,5 | - | 3 | 39 | 7 | - | - | 3 | 15 |
| VHSF 3 030 039 03 10 | 3,0 | - | 3 | 39 | 9 | - | - | 3 | - |
| VHSF 3 035 051 04 10 | 3,5 | - | 4 | 51 | 12 | - | - | 3 | 15 |
| VHSF 3 040 051 04 10 | 4,0 | - | 4 | 51 | 14 | - | - | 3 | - |
| VHSF 3 045 051 05 10 | 4,5 | - | 5 | 51 | 14 | - | - | 3 | 15 |
| VHSF 3 050 051 05 10 | 5,0 | - | 5 | 51 | 16 | - | - | 3 | - |
| VHSF 3 060 064 06 10 | 6,0 | - | 6 | 64 | 19 | - | - | 3 | - |
| VHSF 3 070 064 08 10 | 7,0 | - | 8 | 64 | 19 | - | - | 3 | 15 |
| VHSF 3 080 064 08 10 | 8,0 | - | 8 | 64 | 21 | - | - | 3 | - |
| VHSF 3 090 070 10 10 | 9,0 | - | 10 | 70 | 22 | - | - | 3 | 15 |
| VHSF 3 100 070 10 10 | 10,0 | - | 10 | 70 | 22 | - | - | 3 | - |
| VHSF 3 110 070 11 10 | 11,0 | - | 11 | 70 | 25 | - | - | 3 | - |
| VHSF 3 120 078 12 10 | 12,0 | - | 12 | 78 | 25 | - | - | 3 | - |
| VHSF 3 140 089 14 10 | 14,0 | - | 14 | 89 | 30 | - | - | 3 | - |
| VHSF 3 160 089 16 10 | 16,0 | - | 16 | 89 | 32 | - | - | 3 | - |
| VHSF 3 180 102 18 10 | 18,0 | - | 18 | 102 | 35 | - | - | 3 | - |
| VHSF 3 200 102 20 10 | 20,0 | - | 20 | 102 | 38 | - | - | 3 | - |

The endmills can also be supplied with various coatings.



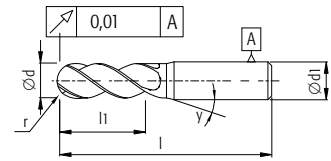
Solid carbide ballnose endmills, 30 degree helix angle.

Uncoated

Tolerances

| Diameter range | Cutting diameter $\varnothing d-h9$ | Shank $\varnothing d1-h5$ |
|------------------|-------------------------------------|---------------------------|
| $d \leq 3$ | 0 -0,025 | 0 -0,004 |
| $3 < d \leq 6$ | 0 -0,030 | 0 -0,005 |
| $6 < d \leq 10$ | 0 -0,036 | 0 -0,006 |
| $10 < d \leq 18$ | 0 -0,043 | 0 -0,008 |
| $18 < d \leq 30$ | 0 -0,052 | 0 -0,009 |

Standard



| Article Number | $\varnothing d$ (mm) | r (mm) | $\varnothing d1$ (mm) | L (mm) | L1 (mm) | L2 (mm) | a (mm) | z | γ (°) |
|-----------------------|----------------------|--------|-----------------------|--------|---------|---------|--------|---|--------------|
| VHSFB 3 010 039 03 10 | 1,0 | 0,50 | 3 | 39 | 3 | - | - | 3 | 15 |
| VHSFB 3 015 039 03 10 | 1,5 | 0,75 | 3 | 39 | 5 | - | - | 3 | 15 |
| VHSFB 3 020 039 03 10 | 2,0 | 1,00 | 3 | 39 | 7 | - | - | 3 | 15 |
| VHSFB 3 025 039 03 10 | 2,5 | 1,25 | 3 | 39 | 7 | - | - | 3 | 15 |
| VHSFB 3 030 039 03 10 | 3,0 | 1,50 | 3 | 39 | 9 | - | - | 3 | - |
| VHSFB 3 035 051 04 10 | 3,5 | 1,75 | 4 | 51 | 12 | - | - | 3 | 15 |
| VHSFB 3 040 051 04 10 | 4,0 | 2,00 | 4 | 51 | 14 | - | - | 3 | - |
| VHSFB 3 045 051 05 10 | 4,5 | 2,25 | 5 | 51 | 14 | - | - | 3 | 15 |
| VHSFB 3 050 051 05 10 | 5,0 | 2,50 | 5 | 51 | 16 | - | - | 3 | - |
| VHSFB 3 060 064 06 10 | 6,0 | 3,00 | 6 | 64 | 19 | - | - | 3 | - |
| VHSFB 3 070 064 08 10 | 7,0 | 3,50 | 8 | 64 | 19 | - | - | 3 | 15 |
| VHSFB 3 080 064 08 10 | 8,0 | 4,00 | 8 | 64 | 21 | - | - | 3 | - |
| VHSFB 3 090 070 10 10 | 9,0 | 4,50 | 10 | 70 | 22 | - | - | 3 | 15 |
| VHSFB 3 100 070 10 10 | 10,0 | 5,00 | 10 | 70 | 22 | - | - | 3 | - |
| VHSFB 3 110 070 11 10 | 11,0 | 5,50 | 11 | 70 | 25 | - | - | 3 | - |
| VHSFB 3 120 078 12 10 | 12,0 | 6,00 | 12 | 78 | 25 | - | - | 3 | - |
| VHSFB 3 140 089 14 10 | 14,0 | 7,00 | 14 | 89 | 30 | - | - | 3 | - |
| VHSFB 3 160 089 16 10 | 16,0 | 8,00 | 16 | 89 | 32 | - | - | 3 | - |
| VHSFB 3 180 102 18 10 | 18,0 | 9,00 | 18 | 102 | 35 | - | - | 3 | - |
| VHSFB 3 200 102 20 10 | 20,0 | 10,00 | 20 | 102 | 38 | - | - | 3 | - |

The endmills can also be supplied with various coatings.



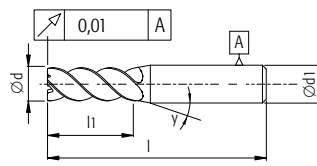
Solid carbide endmills, 30 degree helix angle.

Uncoated

Tolerances

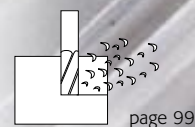
| Diameter range | Cutting diameter $\varnothing d-h9$ | Shank $\varnothing d1-h5$ |
|------------------|-------------------------------------|---------------------------|
| $d \leq 3$ | 0 -0,025 | 0 -0,004 |
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Standard



| Article Number | $\varnothing d$ (mm) | r (mm) | $\varnothing d1$ (mm) | L (mm) | L1 (mm) | L2 (mm) | a (mm) | z | γ (°) |
|----------------------|----------------------|--------|-----------------------|--------|---------|---------|--------|---|--------------|
| VHSF 4 010 039 03 10 | 1,0 | - | 3 | 39 | 3 | - | - | 4 | 15 |
| VHSF 4 015 039 03 10 | 1,5 | - | 3 | 39 | 5 | - | - | 4 | 15 |
| VHSF 4 020 039 03 10 | 2,0 | - | 3 | 39 | 7 | - | - | 4 | 15 |
| VHSF 4 025 039 03 10 | 2,5 | - | 3 | 39 | 7 | - | - | 4 | 15 |
| VHSF 4 030 039 03 10 | 3,0 | - | 3 | 39 | 9 | - | - | 4 | - |
| VHSF 4 035 051 04 10 | 3,5 | - | 4 | 51 | 12 | - | - | 4 | 15 |
| VHSF 4 040 051 04 10 | 4,0 | - | 4 | 51 | 14 | - | - | 4 | - |
| VHSF 4 045 051 05 10 | 4,5 | - | 5 | 51 | 14 | - | - | 4 | 15 |
| VHSF 4 050 051 05 10 | 5,0 | - | 5 | 51 | 16 | - | - | 4 | - |
| VHSF 4 060 064 06 10 | 6,0 | - | 6 | 64 | 19 | - | - | 4 | - |
| VHSF 4 070 064 08 10 | 7,0 | - | 8 | 64 | 19 | - | - | 4 | 15 |
| VHSF 4 080 064 08 10 | 8,0 | - | 8 | 64 | 21 | - | - | 4 | - |
| VHSF 4 090 070 10 10 | 9,0 | - | 10 | 70 | 22 | - | - | 4 | 15 |
| VHSF 4 100 070 10 10 | 10,0 | - | 10 | 70 | 22 | - | - | 4 | - |
| VHSF 4 110 070 11 10 | 11,0 | - | 11 | 70 | 25 | - | - | 4 | - |
| VHSF 4 120 078 12 10 | 12,0 | - | 12 | 78 | 25 | - | - | 4 | - |
| VHSF 4 140 089 14 10 | 14,0 | - | 14 | 89 | 30 | - | - | 4 | - |
| VHSF 4 160 089 16 10 | 16,0 | - | 16 | 89 | 32 | - | - | 4 | - |
| VHSF 4 180 102 18 10 | 18,0 | - | 18 | 102 | 35 | - | - | 4 | - |
| VHSF 4 200 102 20 10 | 20,0 | - | 20 | 102 | 38 | - | - | 4 | - |

The endmills can also be supplied with various coatings.



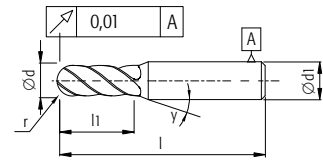
Solid carbide ballnose endmills, 30 degree helix angle.

Uncoated

Tolerances

| Diameter range | Cutting diameter $\varnothing d-h9$ | Shank $\varnothing d1-h5$ |
|------------------|-------------------------------------|---------------------------|
| $d \leq 3$ | 0 -0,025 | 0 -0,004 |
| $3 < d \leq 6$ | 0 -0,030 | 0 -0,005 |
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Standard



| Article Number | $\varnothing d$ (mm) | r (mm) | $\varnothing d1$ (mm) | L (mm) | L1 (mm) | L2 (mm) | a (mm) | z | γ (°) |
|-----------------------|----------------------|--------|-----------------------|--------|---------|---------|--------|---|--------------|
| VHSFB 4 010 039 03 10 | 1,0 | 0,50 | 3 | 39 | 3 | - | - | 4 | 15 |
| VHSFB 4 015 039 03 10 | 1,5 | 0,75 | 3 | 39 | 5 | - | - | 4 | 15 |
| VHSFB 4 020 039 03 10 | 2,0 | 1,00 | 3 | 39 | 7 | - | - | 4 | 15 |
| VHSFB 4 025 039 03 10 | 2,5 | 1,25 | 3 | 39 | 7 | - | - | 4 | 15 |
| VHSFB 4 030 039 03 10 | 3,0 | 1,50 | 3 | 39 | 9 | - | - | 4 | - |
| VHSFB 4 035 051 04 10 | 3,5 | 1,75 | 4 | 51 | 12 | - | - | 4 | 15 |
| VHSFB 4 040 051 04 10 | 4,0 | 2,00 | 4 | 51 | 14 | - | - | 4 | - |
| VHSFB 4 045 051 05 10 | 4,5 | 2,25 | 5 | 51 | 14 | - | - | 4 | 15 |
| VHSFB 4 050 051 05 10 | 5,0 | 2,50 | 5 | 51 | 16 | - | - | 4 | - |
| VHSFB 4 060 064 06 10 | 6,0 | 3,00 | 6 | 64 | 19 | - | - | 4 | - |
| VHSFB 4 070 064 08 10 | 7,0 | 3,50 | 8 | 64 | 19 | - | - | 4 | 15 |
| VHSFB 4 080 064 08 10 | 8,0 | 4,00 | 8 | 64 | 21 | - | - | 4 | - |
| VHSFB 4 090 070 10 10 | 9,0 | 4,50 | 10 | 70 | 22 | - | - | 4 | 15 |
| VHSFB 4 100 070 10 10 | 10,0 | 5,00 | 10 | 70 | 22 | - | - | 4 | - |
| VHSFB 4 110 070 11 10 | 11,0 | 5,50 | 11 | 70 | 25 | - | - | 4 | - |
| VHSFB 4 120 078 12 10 | 12,0 | 6,00 | 12 | 78 | 25 | - | - | 4 | - |
| VHSFB 4 140 089 14 10 | 14,0 | 7,00 | 14 | 89 | 30 | - | - | 4 | - |
| VHSFB 4 160 089 16 10 | 16,0 | 8,00 | 16 | 89 | 32 | - | - | 4 | - |
| VHSFB 4 180 102 18 10 | 18,0 | 9,00 | 18 | 102 | 35 | - | - | 4 | - |
| VHSFB 4 200 102 20 10 | 20,0 | 10,00 | 20 | 102 | 38 | - | - | 4 | - |

The endmills can also be supplied with various coatings.

