

FENN TOOL

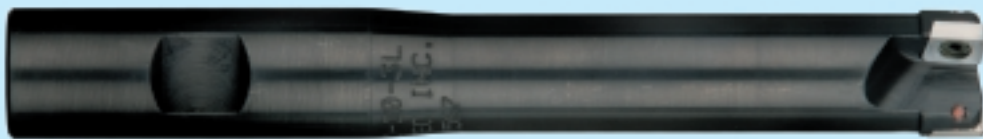
Presents

New Product Release

High Velocity End Mill

"Expectations limitless"

The new Mil-Tec **HV Series** High Velocity End Mills successfully bridges the performance gap between solid carbide end mills and indexable carbide face mills. The combination of **positive axial & radial rake** geometries, **precision & polished** grinding technology, hardened cutter bodies and the most state of the art **super hard coatings**, gives Mil-Tec and more importantly the end user the edge in a multitude of shop floor applications.



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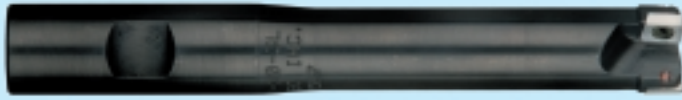
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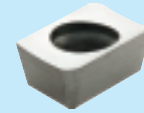
Mil-Tec High Velocity End Mills

HV3HD

HV3HD Series: Available in 16, 20 & 25mm diameter, short and long reach, thro' and non-thro' coolant



Insert Size:
6.3mm wide x 9.0 mm long



Standard series (Add C to the code for Coolant fed)

Code	Diameter	Shank	OAL	No of teeth	Price Standard	Price Coolant fed
HV3HD16-2	16mm	16mm	90mm	2	£75.00	£98.00
HV3HD20-2	20mm	20mm	90mm	2	£75.00	£98.00
HV3HD20-3	20mm	20mm	90mm	3	£75.00	£110.00
HV3HD25-3	25mm	25mm	110mm	3	£79.00	£115.00

Long series (Add C to the code for Coolant fed)

Code	Diameter	Shank	OAL	No of teeth	Price Standard	Price Coolant fed
HV3HD16-2L	16mm	16mm	150mm	2	£85.00	£125.00
HV3HD20-3L	20mm	20mm	150mm	3	£85.00	£130.00
HV3HD25-3L	25mm	25mm	200mm	3	£99.00	£143.00

HV3HD Inserts: All £5.45
SuperShear High Polished Geometry
Uncoated for Aluminum
Grade: **MTC 20**

Radius	SuperShear
.5 mm	HV3HD.5SMM MTC20
1mm	HV3HD1SMM MTC20
2mm	HV3HD2SMM MTC20
3mm	HV3HD3SMM MTC20

HV3HD Inserts: All £6.50
PowerShear TiAlN Coated
High wear, for St/Steels, Steel & High Temp Alloys
Grade: **MTC 357**

Radius	Edge Prep
.5mm	HV3HD.5PMM MTC357
1mm	HV3HD1PMM MTC357
2mm	HV3HD2PMM MTC357
3mm	HV3HD3PMM MTC357

Inserts: 6.3mm wide x 9.0mm long

Spare Parts

Screws: HVS-440 £10.00 per 9 pc. Package

Wrench: HVW-062 £1.00 per pc.

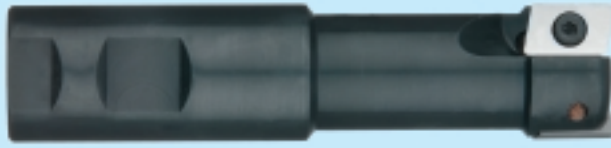
T Wrench: HVWT-092 £4.00 per pc.

Note: The **HV3HD** is not designed for plunge milling. Ramp milling or starter hole necessary for pocket milling

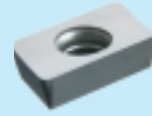
Mil-Tec High Velocity End Mills

HV5HD

HV5HD Series: Available in 25, 32 & 40mm diameter, short and long reach, thro' and non-thro' coolant



Insert Size:
9.5mm wide x 15.3 mm long



Standard series (Add C to the code for Coolant fed)

Code	Diameter	Shank	OAL	No of teeth	Price Standard	Price Coolant fed
HV5HD25-2	25mm	25mm	110mm	2	£ 79.00	£ 109.00
HV5HD32-3	32mm	32mm	110mm	3	£ 85.00	£ 129.00
HV5HD40-4	40mm	40mm	115mm	4	£ 95.00	£ 145.00

Long series (Add C to the code for Coolant fed)

Code	Diameter	Shank	OAL	No of teeth	Price Standard	Price Coolant fed
HV5HD25-2L	25mm	25mm	200mm	2	£ 105.00	£ 145.00
HV5HD32-3L	32mm	32mm	200mm	3	£ 118.50	£ 165.00
HV5HD40-4L	40mm	40mm	200mm	4	£ 145.00	£ 180.00

HV5HD Inserts: All £6.15

SuperShear High Polished Geometry
Uncoated for Aluminum
Grade: **MTC 20**

Radius	SuperShear
.5mm	HV5HD.5SMM MTC20
1mm	HV5HD1SMM MTC20
2mm	HV5HD2SMM MTC20
3mm	HV5HD3SMM MTC20
4mm	HV5HD4SMM MTC20
5mm	HV5HD5SMM MTC20

HV5HD Inserts: All £6.90

PowerShear TiAlN Coated
High wear, for St/Steels, Steel & High Temp Alloys
Grade: **MTC 357**

Radius	Edge Prep
.5mm	HV5HD.5PMM MTC357
1mm	HV5HD1PMM MTC357
2mm	HV5HD2PMM MTC357
3mm	HV5HD3PMM MTC357
4mm	HV5HD4PMM MTC357
5mm	HV5HD5PMM MTC357

HV5HD Inserts: All £6.15

SuperShear High Polished Geometry
Uncoated for Steel
Grade: **MTC 20**

Radius	SuperShear
.5mm	HV5HD.5PMM MTC20
1mm	HV5HD1PMM MTC20
2mm	HV5HD2PMM MTC20
3mm	HV5HD3PMM MTC20
4mm	HV5HD4PMM MTC20
5mm	HV5HD5PMM MTC20

HV5HD Inserts: All £6.90

PowerShear TiAlN Coated
TiAlN Coated for Steel, Cast Iron and Titanium
Grade: **MTC 327**

Radius	Edge Prep
.5mm	HV5HD.5PMM MTC327
1mm	HV5HD1PMM MTC327
2mm	HV5HD2PMM MTC327
3mm	HV5HD3PMM MTC327
4mm	HV5HD4PMM MTC-327
5mm	HV5HD5PMM MTC327

Inserts: 9.5mm wide x 15.3mm long

Spare Parts

Screws: HVS-440 £10.00 per 9 pc. Package

Wrench: HVW-062 £1.00 per pc.

T Wrench: HVWT-092 £4.00 per pc.

Note: The **HV5HD** is not designed for plunge milling. Ramp milling or starter hole necessary for pocket milling

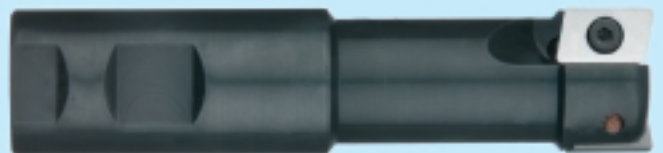
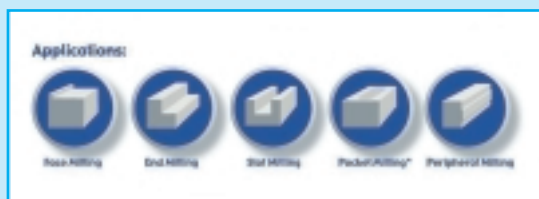
Speeds and Feeds for HV3HD and HV5HD

Material group	Material	Speed	Feed per tooth	Preferred grade	Coolant
Non-ferrous	Aluminum	300-1000	0.07-0.30	MTC20	YES
	Copper, Brass	260-500	0.07-0.25	MTC20	YES
	Plastics	160-1000	0.07-0.38	MTC20	N/A
Steels	1018, 1020	260-500	0.05-0.20	MTC357	NO
	4140, 4340, P20	260-400	0.05-0.18	MTC357	NO
	A2, D2, H13	230-400	0.05-0.15	MTC357	NO
Stainless Steels	15-5, 17-4	260-400	0.05-0.15	MTC357	NO
	303, 304, 316	260-430	0.05-0.15	MTC357	NO
	420, 440C	260-500	0.05-0.1	MTC357	NO
High Temp Alloys	Inconel 625	65-100	0.05-0.10	MTC327/MTC357	YES
	Inconel 718	35-85	0.05-0.10	MTC327/MTC357	YES
	6Al-4V Titanium	25-85	0.05-0.10	MTC327/MTC357	YES
Cast Iron	Grey cast iron	200-400	0.07-0.15	MTC327	NO
	Ductile iron	260-400	0.05-0.15	MTC327	NO

About the Mil-Tec HV3/5HD End Mill:

The new Mil-Tec HV3/5HD successfully bridges the performance gap between solid carbide end mills and indexable carbide face mills. The combination of positive axial & radial rake geometries, precision & polished grinding, hardened cutter bodies, and SuperNitride PVD hard coatings makes the HV3/5HD run like a solid carbide end mill, yet the inherent modular makeup allows for flexibility in design, application, and diameter. The HV3/5HD can be made in special sizes & configurations, including coolant-thru.

- **Positive Axial Geometry** = Free cutting with maximized work piece engagement.
- **Positive Radial Geometry** = Superb chip formation transfers heat away from tool and work piece.
- **100% Precision Ground Insert** = Sharp cutting edges, tight tolerances, and excellent coating adhesion.



Note: The HV3/5HD is not designed for plunge milling. Ramp milling or starter hole necessary for pocket milling



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