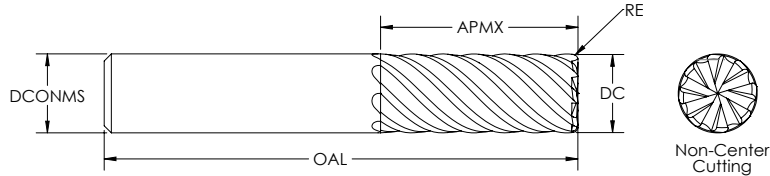
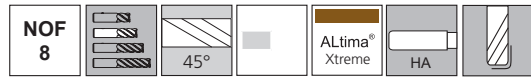


TuffCut® XM Series XMH



For HEM & finishing applications in hardened steels between 45-65 HRC.

Features

- Nano-grain carbide grade
- 45° helix, negative radial rake geometry
- High flute count (8-flute)
- High-precision diameter & corner radius tolerance

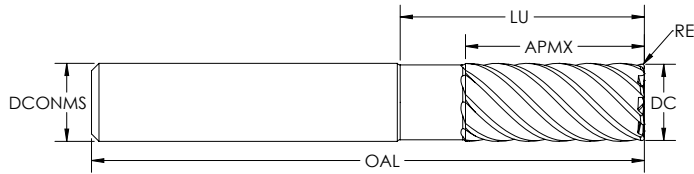
Benefits

- Optimum high hardness & fracture toughness
- Optimum balance of edge strength & shear power
- High feedrates & reduced tool wear
- Excellent dimensional accuracy on high-precision components / features

ALtima® Xtreme		DC		DCONMS	OAL	APMX	RE
Tool Number	EDP	Inch	Decimal	Inch	Inch	Inch	Inch
XMH25021AX	29500	1/4	.2500	1/4	2-1/2	3/4	.010
XMH25024AX	29501	1/4	.2500	1/4	2-1/2	3/4	.030
XMH37521AX	29502	3/8	.3750	3/8	2-1/2	1	.010
XMH37524AX	29503	3/8	.3750	3/8	2-1/2	1	.030
XMH50021AX	29504	1/2	.5000	1/2	3	1-1/4	.010
XMH50024AX	29505	1/2	.5000	1/2	3	1-1/4	.030
XMH62524AX	29506	5/8	.6250	5/8	4	1-5/8	.030
XMH75024AX	29507	3/4	.7500	3/4	4	1-5/8	.030

Tolerance (inch)		
DC	RE	DCONMS
+0/- .0008	±.0008	h6

TuffCut® XM Series XMHN



For HEM & finishing applications in hardened steels between 45-65 HRC.

Features

- Nano-grain carbide grade
- 45° helix, negative radial rake geometry
- High flute count (8-flute)
- High-precision diameter & corner radius tolerance

Benefits

- Optimum high hardness & fracture toughness
- Optimum balance of edge strength & shear power
- High feedrates & reduced tool wear
- Excellent dimensional accuracy on high-precision components / features

ALtima® Xtreme		DC		DCONMS	OAL	APMX	LU	RE
Tool Number	EDP	mm	Decimal	mm	mm	mm	mm	mm
XMHM0602N3-R0.2AX	29508	6	.2362	6	63	13	20	0.2
XMHM0602N3-R0.5AX	29509	6	.2362	6	63	13	20	0.5
XMHM0802N3-R0.2AX	29510	8	.3150	8	65	19	26	0.2
XMHM0802N3-R0.5AX	29511	8	.3150	8	65	19	26	0.5
XMHM1002N3-R0.2AX	29512	10	.3937	10	75	22	32	0.2
XMHM1002N3-R0.5AX	29513	10	.3937	10	75	22	32	0.5
XMHM1202N3-R0.2AX	29514	12	.4724	12	85	26	38	0.2
XMHM1202N3-R0.5AX	29515	12	.4724	12	85	26	38	0.5
XMHM1602N3-R0.5AX	29516	16	.6299	16	100	34	50	0.5

Tolerance (mm)		
DC	RE	DCONMS
+0/-0.02	±0.02	h6

XMH Series Recommended Cutting Data - Profile Milling - Inch

Workpiece Material Group	I S O	Coolant			RWOC (Ae) 			Tool Diameter (inch)						
		Emulsion	Air	MQL	2%	3%	5%	1/4	3/8	1/2	5/8	3/4		
					 Multiply fz by this factor based on ae. When finishing, use the standard fz per chart below. Only add chip thinning when roughing or semi-finishing.									
										Vc - SFM				
Hardened Steels 45-50 HRC	H	○	●	○	820	755	490	.0008	.0011	.0015	.0019	.0023		
Hardened Steels 50-55 HRC		x	●	○	755	655	395	.0007	.0010	.0014	.0017	.0020		
Hardened Steels 55-60 HRC		x	●	○	590	490	260	.0005	.0008	.0010	.0013	.0015		
Hardened Steels 60-65 HRC		x	●	○	490	395	200	.0005	.0008	.0010	.0013	.0015		

● Preferred ○ Possible x Not Possible

Notes:

- Technical data provided should be considered advisory only as variations may be necessary depending on the particular application.
- For extended tool life, or if chatter occurs, start by reducing the speed and feed by 20-30% simultaneously.
- Recommended guidelines for flat face machining:
 - Reduce cutting speed by 30-50% and feed at fz listed above in chart
 - Ae (RWOC) = 30-50% of the tool diameter, depending on tool stability and machine rigidity
 - For hardened steels ≤ 55 HRC, Ap (ADOC) = ≤ 2% of the tool diameter
 - For hardened steels > 55 HRC, Ap (ADOC) = ≤ 1% of the tool diameter
 - For finishing operations, Ap (ADOC) = 0.5% of the tool diameter

XMHN Series Recommended Cutting Data - Profile Milling - Metric

Workpiece Material Group	I S O	Coolant			RWOC (Ae) 			End Mill Diameter (mm)				
		Emulsion	Air	MQL	2%	3%	5%	6	8	10	12	16
					3.57	2.93	2.3	 Multiply fz by this factor based on ae. When finishing, use the standard fz per chart below. Only add chip thinning when roughing or semi-finishing.				
					Vc - M/Min							
					fz - mm/tooth							
Hardened Steels 45-50 HRC	H	○	●	○	250	230	150	0.018	0.024	0.030	0.036	0.048
Hardened Steels 50-55 HRC		x	●	○	230	200	120	0.016	0.022	0.027	0.032	0.043
Hardened Steels 55-60 HRC		x	●	○	180	150	80	0.012	0.016	0.020	0.024	0.032
Hardened Steels 60-65 HRC		x	●	○	150	120	60	0.012	0.016	0.020	0.024	0.032

● Preferred ○ Possible x Not Possible

Notes:

- Technical data provided should be considered advisory only as variations may be necessary depending on the particular application.
- For extended tool life, or if chatter occurs, start by reducing the speed and feed by 20-30% simultaneously.
- Recommended guidelines for flat face machining:
 - Reduce cutting speed by 30-50% and feed at fz listed above in chart
 - Ae (RWOC) = 30-50% of the tool diameter, depending on tool stability and machine rigidity
 - For hardened steels ≤ 55 HRC, Ap (ADOC) = ≤ 2% of the tool diameter
 - For hardened steels > 55 HRC, Ap (ADOC) = ≤ 1% of the tool diameter
 - For finishing operations, Ap (ADOC) = 0.5% of the tool diameter

Safety Note

Always wear the appropriate personal protective equipment such as safety glasses and protective clothing when using solid carbide or HSS cutting tools. Machines should be fully guarded.



WARNING: This product can expose you to chemicals including cobalt, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

