XMH Series Recommended Cutting Data - Profile Milling - **Inch**

Workpiece Material Group	ISO	Coolant			RWOC (Ae)			Tool Diameter (inch)				
								1/4	3/8	1/2	5/8	3/4
		Emulsion	Air	MQL	2%	3%	5%	← 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.				
					3.57	2.93	2.3					
					Vc - SFM			fz - in/tooth				
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:

- Techincal 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 machinining:
  - 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