



## XMHN Series Recommended Cutting Data - Profile Milling - Metric

Workpiece Material Group	ISO	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](http://www.P65Warnings.ca.gov).

