



Standard cutting conditions

Work Material	Grade	SFM	Roughing (Depth of cut: > .039 in)					
			Feed per tooth f_z (ipt)					
			MJ	ML	HJ	MS	Without Chipbreaker	AJ
Mild Steel, Unhardened Steels (<180 HB)	AH120	330-890	.002-.012	.002-.010	.008-.024	-	.002-.012	-
	T3130	500-985	.002-.012	-	.008-.024	-	.002-.012	-
	AH140	260-590	.002-.012	-	-	.004-.010	-	-
	NS740	330-985	.002-.009	-	-	-	.002-.009	-
Carbon Steels, Alloy Steels (<300 HB)	AH120	330-760	.002-.010	.002-.008	.008-.020	-	.002-.010	-
	T3130	490-920	.002-.010	-	.008-.020	-	.002-.010	-
	AH140	260-490	.002-.010	-	.008-.020	-	-	-
	NS740	330-760	.002-.008	-	-	-	.002-.008	-
Die Steels, Prehardened Steels (<30 HRC)	AH120	330-590	.002-.008	.002-.006	.008-.016	-	.002-.008	-
	T3130	330-590	.002-.008	-	.008-.016	-	.002-.008	-
Stainless Steels (<250 HB)	AH120	490-820	.004-.010	.004-.008	.008-.020	-	.004-.010	-
	AH130	330-760	.004-.010	.004-.008	.008-.020	.004-.008	-	-
	AH140	260-660	.004-.010	-	.008-.020	.004-.008	-	-
Cast Irons, Ductile Irons	T1115	330-820	.002-.010	-	.008-.024	-	.002-.010	-
	AH120	330-820	.002-.010	.002-.008	.008-.024	-	.002-.010	-
Aluminum Alloys (Si<12%)	KS05F	985-3300	-	-	-	-	-	.002-.008
Aluminum Alloys (Si>13%)	KS05F	260-985	-	-	-	-	-	.002-.008
Copper Alloys	KS05F	660-1650	-	-	-	-	-	.002-.008

Work Material	Grade	SFM	Light cutting to finishing (Depth of cut: < .039 in)					
			Feed per tooth f_z (ipt)					
			MJ	ML	HJ	MS	Without Chipbreaker	AJ
Mild Steel, Unhardened Steels (<180 HB)	AH120	330-890	.002-.010	.002-.008	.008-.024	-	.002-.010	-
	T3130	500-985	.002-.010	-	.008-.024	-	.002-.010	-
	AH140	260-590	.002-.010	-	-	.002-.008	-	-
	NS740	330-985	.002-.008	-	-	-	.002-.008	-
Carbon Steels, Alloy Steels (<300 HB)	AH120	330-760	.002-.008	.002-.006	.008-.020	-	.002-.008	-
	T3130	490-920	.002-.008	-	.008-.020	-	.002-.008	-
	AH140	260-490	.002-.008	-	.008-.020	-	-	-
	NS740	330-760	.002-.007	-	-	-	.002-.007	-
Die Steels, Prehardened Steels (<30 HRC)	AH120	330-590	.002-.007	.002-.005	.008-.016	-	.002-.007	-
	T3130	330-590	.002-.007	-	.008-.016	-	.002-.007	-
Stainless Steels (<250 HB)	AH120	490-820	.004-.008	.004-.007	.008-.020	-	.004-.008	-
	AH130	330-760	.004-.010	.004-.007	.008-.020	.004-.007	-	-
	AH140	260-660	.004-.008	-	.008-.020	.004-.007	-	-
Cast Irons, Ductile Irons	T1115	330-820	.002-.008	-	.008-.024	-	.002-.008	-
	AH120	330-820	.002-.008	.002-.007	.008-.024	-	.002-.008	-
Aluminum Alloys (Si<12%)	KS05F	985-3300	-	-	-	-	-	.002-.008
Aluminum Alloys (Si>13%)	KS05F	260-985	-	-	-	-	-	.002-.008
Copper Alloys	KS05F	660-1650	-	-	-	-	-	.002-.008

Notes: • When cutting at a large depth of cut or a large cutting width, the cutting speed (v_c) and feed (f_z) should be set to the lower side of the values shown in the above table.

- Dry cutting (or air-blowing) is generally recommended. However, when chips tend to excessively adhere to the cutting edges such as when machining stainless steel, use a water soluble cutting fluid. In this case, use AH140 grade at speeds lower than $v_c = 400$ SFM.
- When wet machining mild steels, carbon steels, and alloy steels, use T3130 at lower cutting conditions.
- TAW13 type TAC mills can not be used for axial-feed cutting such as ramping, plunging, and drilling.