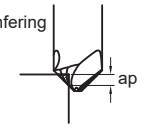
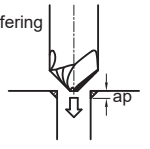
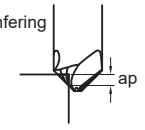
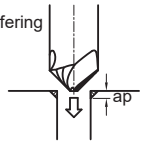
Recommended Cutting Conditions

■ Corner and Hole Chamfering

(inch)

Workpiece Material		Carbon Steel, Ductile Cast Iron, Non-alloy Steel (C≥0.55%)				Alloy Steel (325HB) (38—45HRC)			
Dia. DC		Revolution n	Feed Rate vf	Corner Chamfering	Hole Chamfering	Revolution n	Feed Rate vf	Corner Chamfering	Hole Chamfering
(mm)	(inch)	(min^{-1})	(IPM)	ap	ap	(min^{-1})	(IPM)	ap	ap
2	**.079**	16000	55.1	≤.024	≤.016	11000	35.0	≤.024	≤.016
4	**.157**	8000	28.3	≤.047	≤.031	5600	17.7	≤.047	≤.031
6	**.236**	5300	18.9	≤.071	≤.047	3700	11.8	≤.071	≤.047
8	**.315**	4000	14.2	≤.094	≤.063	2800	9.1	≤.094	≤.063
10	**.394**	3200	11.4	≤.098	≤.079	2200	7.1	≤.098	≤.079
12	**.472**	2700	9.4	≤.098	≤.094	1900	5.9	≤.098	≤.094
Depth of Cut		Corner Chamfering 				Hole Chamfering 			

Workpiece Material		Austenitic Stainless, Titanium Alloys				Hardened Steel (45—55HRC)			
Dia. DC		Revolution n	Feed Rate vf	Corner Chamfering	Hole Chamfering	Revolution n	Feed Rate vf	Corner Chamfering	Hole Chamfering
(mm)	(inch)	(min^{-1})	(IPM)	ap	ap	(min^{-1})	(IPM)	ap	ap
2	**.079**	9500	26.8	≤.024	≤.016	8000	18.9	≤.024	≤.016
4	**.157**	4800	13.8	≤.047	≤.031	4000	9.4	≤.047	≤.031
6	**.236**	3200	9.1	≤.071	≤.047	2700	6.3	≤.071	≤.047
8	**.315**	2400	6.7	≤.094	≤.063	2000	4.7	≤.094	≤.063
10	**.394**	1900	5.5	≤.098	≤.079	1600	3.8	≤.098	≤.079
12	**.472**	1600	4.7	≤.098	≤.094	1300	3.1	≤.098	≤.094
Depth of Cut		Corner Chamfering 				Hole Chamfering 			

(Note 1) For austenitic stainless steel the use of water-soluble coolant is effective.
(Note 2) The revolution and feed rate can be increased with a smaller depth of cut.
(Note 3) Vibration may occur if the rigidity of machine or workpiece material is low. In this case, please reduce the revolution and feed rate proportionately.

■V-Grooving

(inch)

Workpiece Material		Carbon Steel, Ductile Cast Iron, Non-alloy Steel (C≥0.55%)			Alloy Steel (325HB) (38—45HRC)			Austenitic Stainless, Titanium Alloys			Hardened Steel (45—55HRC)		
DC		Revolution n	Feed Rate vf	Depth of Cut	Revolution n	Feed Rate vf	Depth of Cut	Revolution n	Feed Rate vf	Depth of Cut	Revolution n	Feed Rate vf	Depth of Cut
(mm)	(inch)	(min^{-1})	(IPM)	ap	(min^{-1})	(IPM)	ap	(min^{-1})	(IPM)	ap	(min^{-1})	(IPM)	ap
2	**.079**	13000	37.0	≤.055	9500	24.4	≤.055	8000	18.1	≤.055	6400	12.2	≤.055
4	**.157**	6400	18.1	≤.110	4800	12.2	≤.110	4000	9.1	≤.110	3200	5.9	≤.110
6	**.236**	4200	11.8	≤.165	3200	8.3	≤.165	2700	6.3	≤.165	2100	3.9	≤.165
8	**.315**	3200	9.1	≤.220	2400	6.3	≤.220	2000	4.7	≤.220	1600	3.0	≤.220
10	**.394**	2500	7.1	≤.276	1900	4.7	≤.276	1600	3.6	≤.276	1300	2.4	≤.276
12	**.472**	2100	5.9	≤.331	1600	3.9	≤.331	1300	3.0	≤.331	1100	2.1	≤.331

Depth of Cut

(Note 1) For austenitic stainless steel the use of water-soluble coolant is effective.
(Note 2) The revolution and feed rate can be increased with a smaller depth of cut.
(Note 3) Vibration may occur if the rigidity of machine or workpiece material is low. In this case, please reduce the revolution and feed rate proportionately.