



Speeds & Feeds

Product Table: End Mills for Hardened Steels - Finishers - Tight Tolerance - Ball
Characteristics: 2 Flutes, Reached, Finishers

Series or Item	Unalloyed Steels <850 N/mm²					Heat-Treated Steels <35 HRC (1200 N/mm²)					Chip Load (MMPT) by Material					Stainless Steels Austenitic/Ferritic 35 - 45 HRC					Hardened Steels 45 - 55 HRC					Hardened Steels 55 - 70 HRC				
	RPM	Feed Rate (mm/min)	Feed (mm/tooth)	Axial DOC (mm)	Radial DOC (mm)	RPM	Feed Rate (mm/min)	Feed (mm/tooth)	Axial DOC (mm)	Radial DOC (mm)	RPM	Feed Rate (mm/min)	Feed (mm/tooth)	Axial DOC (mm)	Radial DOC (mm)	RPM	Feed Rate (mm/min)	Feed (mm/tooth)	Axial DOC (mm)	Radial DOC (mm)	RPM	Feed Rate (mm/min)	Feed (mm/tooth)	Axial DOC (mm)	Radial DOC (mm)	RPM	Feed Rate (mm/min)	Feed (mm/tooth)	Axial DOC (mm)	Radial DOC (mm)
687606-C12	50,000	2,250	.023	.020	.060	45,000	2,000	.022	.018	.050	43,000	1,700	.020	.015	.040	38,000	1,350	.018	.014	.040	37,500	1,350	.018	.012	.040					
688206-C12	50,000	2,250	.023	.020	.060	45,000	2,000	.022	.018	.050	43,000	1,700	.020	.015	.040	38,000	1,350	.018	.014	.040	37,500	1,350	.018	.012	.040					
687409-C12	40,000	2,400	.030	.025	.080	36,000	2,100	.029	.025	.070	34,000	1,800	.027	.020	.060	30,000	1,450	.024	.018	.050	30,000	1,450	.024	.018	.050					
688009-C12	40,000	2,400	.030	.025	.080	36,000	2,100	.029	.025	.070	34,000	1,800	.027	.020	.060	30,000	1,450	.024	.018	.050	30,000	1,450	.024	.018	.050					
687511-C12	40,000	2,400	.030	.030	.100	36,000	2,100	.030	.030	.090	34,000	1,800	.027	.026	.080	30,000	1,450	.024	.020	.060	30,000	1,450	.024	.020	.060					
688111-C12	40,000	2,400	.030	.030	.100	36,000	2,100	.030	.030	.090	34,000	1,800	.027	.026	.080	30,000	1,450	.024	.020	.060	30,000	1,450	.024	.020	.060					
687613-C12	40,000	3,000	.038	.040	.120	36,000	2,700	.038	.035	.110	34,000	2,300	.034	.032	.090	30,000	1,800	.030	.025	.080	28,000	1,450	.025	.025	.060					
688213-C12	40,000	3,000	.038	.040	.120	36,000	2,700	.038	.035	.110	34,000	2,300	.034	.032	.090	30,000	1,800	.030	.025	.080	28,000	1,450	.025	.025	.060					
687413-C12	36,000	2,400	.034	.022	.070	36,000	2,700	.038	.026	.080	34,000	2,300	.034	.025	.065	30,000	1,800	.030	.020	.060	28,000	1,450	.025	.018	.050					
688013-C12	36,000	2,400	.034	.022	.070	36,000	2,700	.038	.026	.080	34,000	2,300	.034	.025	.065	30,000	1,800	.030	.020	.060	28,000	1,450	.025	.018	.050					
687313-C12	36,000	2,400	.034	.022	.065	32,500	2,200	.034	.022	.060	30,500	2,000	.033	.018	.050	27,000	1,600	.030	.015	.040	25,000	1,300	.025	.014	.040					
687718-C12	40,000	3,000	.038	.080	.200	36,000	2,700	.038	.070	.200	34,000	2,300	.034	.060	.180	30,000	1,800	.030	.050	.140	28,000	1,460	.025	.045	.120					
688318-C12	40,000	3,000	.038	.080	.220	36,000	2,700	.038	.070	.200	34,000	2,300	.034	.060	.180	30,000	1,800	.030	.050	.140	28,000	1,460	.025	.045	.120					
687418-C12	40,000	3,000	.038	.050	.160	36,000	2,700	.038	.050	.150	34,000	2,300	.034	.040	.130	30,000	1,800	.030	.035	.100	28,000	1,460	.025	.030	.100					
688018-C12	40,000	3,000	.038	.050	.160	36,000	2,700	.038	.050	.150	34,000	2,300	.034	.040	.130	30,000	1,800	.030	.035	.100	28,000	1,460	.025	.030	.100					
687018-C12	32,000	1,900	.030	.020	.060	29,000	1,700	.030	.018	.045	27,000	1,400	.025	.015	.040	24,000	1,250	.025	.010	.030	22,500	1,000	.022	.010	.030					
687622-C12	36,000	3,200	.045	.100	.300	32,500	2,900	.045	.090	.260	30,500	2,400	.040	.080	.220	27,000	1,950	.035	.060	.180	25,000	1,600	.032	.050	.150					
688222-C12	36,000	3,200	.045	.100	.300	32,500	2,900	.045	.090	.260	30,500	2,400	.040	.080	.220	27,000	1,950	.035	.060	.180	25,000	1,600	.032	.050	.150					
687522-C12	36,000	3,200	.045	.070	.200	32,500	2,900	.045	.060	.180	30,500	2,400	.040	.050	.160	27,000	1,950	.035	.040	.120	25,000	1,600	.032	.040	.120					
688122-C12	36,000	3,200	.045	.070	.200	32,500	2,900	.045	.060	.180	30,500	2,400	.040	.050	.160	27,000	1,950	.035	.040	.120	25,000	1,600	.032	.040	.120					
687422-C12	32,000	2,600	.040	.040	.100	29,000	2,300	.040	.035	.100	30,500	2,400	.040	.040	.100	27,000	1,950	.035	.025	.080	25,000	1,600	.032	.030	.080					
688022-C12	32,000	2,600	.040	.040	.100	29,000	2,300	.040	.035	.100	30,500	2,400	.040	.040	.100	27,000	1,950	.035	.025	.080	25,000	1,600	.032	.030	.080					
687322-C12	32,000	2,600	.040	.040	.100	29,000	2,300	.040	.035	.100	27,500	2,200	.040	.030	.080	24,000	1,750	.035	.025	.070	23,000	1,400	.030	.020	.060					
687922-C12	32,000	2,600	.040	.040	.100	29,000	2,300	.040	.035	.100	27,500	2,200	.040	.030	.080	24,000	1,750	.035	.025	.070	23,000	1,400	.030	.020	.060					
687122-C12	32,000	2,600	.040	.030	.100	29,000	2,300	.040	.030	.090	27,500	2,200	.040	.030	.080	24,000	1,750	.035	.025	.070	23,000	1,400	.030	.020	.050					
687822-C12	32,000	2,600	.040	.030	.100	29,000	2,300	.040	.030	.090	27,500	2,200	.040	.030	.080	24,000	1,750	.035	.025	.070	23,000	1,400	.030	.020	.050					
687022-C12	32,000	2,600	.040	.025	.075	29,000	2,300	.040	.022	.060	27,500	2,200	.040	.020	.050	24,000	1,750	.035	.015	.045	23,000	1,400	.030	.015	.040					
686922-C12	29,000	2,000	.035	.025	.070	26,000	1,800	.036	.022	.060	24,500	1,500	.032	.020	.050	21,500	1,350	.032	.015	.040	20,000	1,000	.025	.015	.040					
687533-C12	28,000	2,500	.045	.100	.250	25,000	2,200	.045	.080	.240	24,000	1,900	.040	.080	.200	21,000	1,500	.035	.060	.170	17,500	900	.026	.040	.080					
688133-C12	28,000	2,500	.045	.100	.250	25,000	2,200	.045	.080	.240	24,000	1,900	.040	.080	.200	21,000	1,500	.035	.060	.170	17,500	900	.026	.040	.080					
687433-C12	25,000	2,000	.040	.060	.160	25,000	2,200	.045	.080	.240	21,500	1,700	.040	.040	.120	19,000	1,350	.035	.040	.100	17,500	900	.026	.030	.070					
688033-C12	25,000	2,000	.040	.060	.160	23,000	1,800	.040	.050	.150	21,500	1,700	.040	.040	.120	19,000	1,350	.035	.040	.100	17,500	900	.026	.030	.070					
687333-C12	25,000	2,000	.040	.060	.150	23,000	1,800	.040	.050	.150	21,500	1,700	.040	.040	.100	19,000	1,350	.035	.040	.100	17,500	1,100	.026	.030	.070					
687133-C12	25,000	2,000	.040	.050	.140	23,000	1,800	.040	.050	.120	21,500	1,700	.040	.030	.100	19,000	1,350	.035	.040	.100	17,500	1,100	.026	.030	.070					
687033-C12	22,000	1,540	.035	.035	.100	20,000	1,400	.035	.030	.100	19,000	1,200	.032	.030	.080	17,000	1,050	.032	.020	.070	15,500	800	.026	.020	.050					
687645-C12	21,000	3,100	.070	.200	.600	19,000	2,800	.075	.180	.500	18,000	2,600	.072	.150	.450	16,000	1,900	.060	.120	.350	14,500	1,500	.050	.100	.300					
687545-C12	21,000	3,100	.070	.140	.400	19,000	2,800	.075	.120	.350	18,000	2,600	.072	.100	.300	16,000	1,900	.060	.080	.250	14,500	1,500	.050	.080	.250					
688145-C12	21,000	3,100	.070</																											