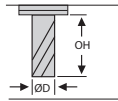


TuffCut DM®

158 Series Recommended Cutting Data - High Feed Roughing - Inch



					Tool Diameter and Corner Radius (inch)																														
Workpiece Material Group		Material Type	Coolant		OH	Vc-SFM	.0787 x R.0197			.1181 x R.0315			.1575 x R.0394																						
							2.0 x R0.5			3.0 x R0.8			4.0 x R1.0																						
			Compressed Air	Emulsion			Ap	Ae	Fz	Ap	Ae	Fz	Ap	Ae	Fz																				
Steel	P	Alloy & Tool Steel Below 260HB	●	○	3D	395	.0039	.020	.0039	.0063	.028	.0063	.0079	.039	.0079																				
					4D	360	.0035									.0039	.0055	.0063	.0071																
					5D	330	.0035													.0039	.0055	.0063	.0067												
					6D	310	.0028																	.0039	.0043	.0063	.0055								
					8D	280	.0024																					.0039	.0039	.0063	.0047				
					10D	230	.0020																									.0039	.0031	.0063	.0039
	3D	310	.0031	.020	.0035	.0051	.028	.0055	.0063	.039	.0071																								
	4D	280	.0028									.0035	.0047	.0055	.0055	.0071																			
	5D	260	.0028														.0035	.0043	.0055	.0055	.0071														
	6D	245	.0020																			.0035	.0035	.0055	.0043	.0071									
	8D	215	.0020																								.0035	.0031	.0055	.0039	.0071				
	10D	180	.0016																													.0035	.0024	.0055	.0031
Stainless Steel	M	Stainless Steel 300 & PH series	x	●	3D	230	.0031	.020	.0035	.0051	.028																								
					4D	215	.0028					.0035	.0047	.0055	.0055	.0071																			
					5D	200	.0028										.0035	.0043	.0055	.0055	.0071														
					6D	180	.0020															.0035	.0035	.0055	.0043	.0071									
					8D	165	.0020																				.0035	.0031	.0055	.0039	.0071				
					10D	130	.0016																									.0035	.0024	.0055	.0031
Special Alloys	S	High Temp Alloys	x	●	3D	100	.0012	.016	.0020	.0016	.024																								
					4D	80	.0008					.0020	.0016	.0031	.0016	.0039																			
					5D	80	.0008										.0020	.0012	.0031	.0012	.0039														
					6D	80	.0008															.0020	.0012	.0031	.0012	.0039									
					8D	65	.0008																				.0020	.0008	.0031	.0012	.0039				
					10D	65	.0004																									.0020	.0008	.0031	.0012
	Titanium Alloys	x	●	3D	230	.0024	.016	.0031	.0035	.024	.0047																								
				4D	215	.0020						.0031	.0031	.0047	.0039	.0059																			
				5D	200	.0020											.0031	.0028	.0047	.0035	.0059														
				6D	180	.0016																.0031	.0024	.0047	.0028	.0059									
				8D	165	.0012																					.0031	.0020	.0047	.0028	.0059				
				10D	130	.0012																										.0031	.0016	.0047	.0024
Cast Iron	K	GG, GGG	●	●	3D	395	.0039	.020	.0039	.0063	.028																								
					4D	360	.0035					.0039	.0055	.0063	.0071	.0079																			
					5D	330	.0035										.0039	.0055	.0063	.0067	.0079														
					6D	310	.0028															.0039	.0043	.0063	.0055	.0079									
					8D	280	.0024																				.0039	.0039	.0063	.0047	.0079				
					10D	230	.0020																									.0039	.0031	.0063	.0039
Hardened Steels	H	Hardened Steels Rc45-50	●	○	3D	260	.0024	.020	.0028	.0039	.028																								
					4D	230	.0020					.0028	.0035	.0043	.0043	.0055																			
					5D	230	.0020										.0028	.0031	.0043	.0039	.0055														
					6D	215	.0016															.0028	.0028	.0043	.0031	.0055									
					8D	180	.0016																				.0028	.0024	.0043	.0028	.0055				
					10D	165	.0012																									.0028	.0020	.0043	.0024
	Hardened Steels Rc50-55	●	x	3D	200	.0020	.016	.0020	.0031	.024	.0031																								
				4D	180	.0020						.0020	.0028	.0031	.0035	.0039																			
				5D	165	.0016											.0020	.0028	.0031	.0035	.0039														
				6D	165	.0012																.0020	.0020	.0031	.0028	.0039									
				8D	130	.0012																					.0020	.0020	.0031	.0024	.0039				
				10D	115	.0012																										.0020	.0016	.0031	.0020

Coolant: • Preferred o Possible x Not Possible

Technical data provided should be considered advisory only as variations may be necessary depending on the particular application.

TuffCut DM®

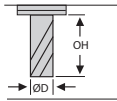
158 Series Recommended Cutting Data - High Feed Roughing - Inch

Tool Diameter and Corner Radius (inch)														
.2362 x R.059			.3150 x R.0787			.3937 x R.0787			.4724 X R.0787			.6299 x R.1181		
6.0 x R1.5			8.0 x R2.0			10.0 x R2.0			12 x R2.0			16 x R3.0		
Ap	Ae	Fz	Ap	Ae	Fz	Ap	Ae	Fz	Ap	Ae	Fz	Ap	Ae	Fz
.0118	.059	.0118	.0157	.079	.0157	.0157	.118	.0157	.0157	.157	.0157	.0236	.197	.0236
.0106		.0118	.0142		.0157	.0142		.0157	.0142		.0157	.0213		.0236
.0102		.0118	.0134		.0157	.0134		.0157	.0134		.0157	.0201		.0236
.0079		.0118	.0106		.0157	.0106		.0157	.0106		.0157	.0161		.0236
.0071		.0118	.0094		.0157	.0094		.0157	.0094		.0157	.0142		.0236
.0059		.0118	.0079		.0157	.0079		.0157	.0079		.0157	.0118		.0236
.0094	.059	.0106	.0126	.079	.0142	.0126	.118	.0142	.0126	.157	.0142	.0189	.197	.0213
.0087		.0106	.0114		.0142	.0114		.0142	.0114		.0142	.0169		.0213
.0079		.0106	.0106		.0142	.0106		.0142	.0106		.0142	.0161		.0213
.0063		.0106	.0087		.0142	.0087		.0142	.0087		.0142	.0130		.0213
.0055		.0106	.0075		.0142	.0075		.0142	.0075		.0142	.0114		.0213
.0047		.0106	.0063		.0142	.0063		.0142	.0063		.0142	.0110		.0213
.0094	.059	.0106	.0126	.079	.0142	.0126	.118	.0142	.0126	.157	.0142	.0189	.197	.0213
.0087		.0106	.0114		.0142	.0114		.0142	.0114		.0142	.0169		.0213
.0079		.0106	.0106		.0142	.0106		.0142	.0106		.0142	.0161		.0213
.0063		.0106	.0087		.0142	.0087		.0142	.0087		.0142	.0130		.0213
.0055		.0106	.0075		.0142	.0075		.0142	.0075		.0142	.0114		.0213
.0047		.0106	.0063		.0142	.0063		.0142	.0063		.0142	.0094		.0213
.0031	.048	.0059	.0039	.063	.0079	.0039	.098	.0079	.0039	.138	.0079	.0059	.169	.0118
.0028		.0059	.0035		.0079	.0035		.0079	.0035		.0079	.0055		.0118
.0024		.0059	.0035		.0079	.0035		.0079	.0035		.0079	.0051		.0118
.0020		.0059	.0028		.0079	.0028		.0079	.0028		.0079	.0039		.0118
.0020		.0059	.0024		.0079	.0024		.0079	.0024		.0079	.0035		.0118
.0016		.0059	.0020		.0079	.0020		.0079	.0020		.0079	.0031		.0118
.0067	.048	.0091	.0087	.063	.0118	.0087	.098	.0118	.0087	.138	.0118	.0130	.169	.0177
.0059		.0091	.0079		.0118	.0079		.0118	.0079		.0118	.0118		.0177
.0055		.0091	.0075		.0118	.0075		.0118	.0075		.0118	.0110		.0177
.0043		.0091	.0059		.0118	.0059		.0118	.0059		.0118	.0087		.0177
.0039		.0091	.0051		.0118	.0051		.0118	.0051		.0118	.0079		.0177
.0031		.0091	.0043		.0118	.0043		.0118	.0043		.0118	.0067		.0177
.0118	.059	.0118	.0157	.079	.0157	.0157	.118	.0157	.0157	.157	.0157	.0236	.197	.0236
.0106		.0118	.0142		.0157	.0142		.0157	.0142		.0157	.0213		.0236
.0102		.0118	.0134		.0157	.0134		.0157	.0134		.0157	.0201		.0236
.0079		.0118	.0106		.0157	.0106		.0157	.0106		.0157	.0161		.0236
.0071		.0118	.0094		.0157	.0094		.0157	.0094		.0157	.0142		.0236
.0059		.0118	.0079		.0157	.0079		.0157	.0079		.0157	.0118		.0236
.0071	.059	.0083	.0094	.079	.0110	.0094	.118	.0110	.0094	.157	.0110	.0142	.197	.0165
.0063		.0083	.0087		.0110	.0087		.0110	.0087		.0110	.0126		.0165
.0059		.0083	.0079		.0110	.0079		.0110	.0079		.0110	.0122		.0165
.0047		.0083	.0063		.0110	.0063		.0110	.0063		.0110	.0094		.0165
.0043		.0083	.0055		.0110	.0055		.0110	.0055		.0110	.0087		.0165
.0035		.0083	.0047		.0110	.0047		.0110	.0047		.0110	.0071		.0165
.0059	.048	.0059	.0079	.063	.0079	.0079	.098	.0079	.0079	.138	.0079	.0118	.169	.0118
.0055		.0059	.0071		.0079	.0071		.0079	.0071		.0079	.0106		.0118
.0051		.0059	.0067		.0079	.0067		.0079	.0067		.0079	.0102		.0118
.0039		.0059	.0055		.0079	.0055		.0079	.0055		.0079	.0079		.0118
.0035		.0059	.0047		.0079	.0047		.0079	.0047		.0079	.0071		.0118
.0031		.0059	.0039		.0079	.0039		.0079	.0039		.0079	.0059		.0118

Technical data provided should be considered advisory only as variations may be necessary depending on the particular application.

TuffCut DM®

158 Series Recommended Cutting Data - High Feed Roughing - Metric



Workpiece Material Group		Material Type	Coolant		OH	Vc- M/Min	Tool Diameter and Corner Radius (mm)									
			Compressed Air	Emulsion			2.0 x R0.5			3.0 x R0.8			4.0 x R1.0			
							Ap	Ae	Fz	Ap	Ae	Fz	Ap	Ae	Fz	
Steel	P	Alloy & Tool Steel Below 260HB	●	○	3D	120	0.10	0.5		0.10	0.16	0.7	0.16	0.20	1.0	0.20
					4D	110	0.09			0.10	0.14		0.16	0.18		0.20
					5D	100	0.09			0.10	0.14		0.16	0.17		0.20
					6D	95	0.07			0.10	0.11		0.16	0.14		0.20
					8D	85	0.06			0.10	0.10		0.16	0.12		0.20
					10D	70	0.05			0.10	0.08		0.16	0.10		0.20
		Pre-hardened Tool Steel Rc30-40	●	○	3D	95	0.08	0.5		0.09	0.13	0.7	0.14	0.16	1.0	0.18
					4D	85	0.07			0.09	0.12		0.14	0.14		0.18
					5D	80	0.07			0.09	0.11		0.14	0.14		0.18
					6D	75	0.05			0.09	0.09		0.14	0.11		0.18
					8D	65	0.05			0.09	0.08		0.14	0.10		0.18
					10D	55	0.04			0.09	0.06		0.14	0.08		0.18
Stainless Steel	M	Stainless Steel 300 & PH series	x	●	3D	70	0.08	0.5		0.09	0.13	0.7	0.14	0.16	1.0	0.18
					4D	65	0.07			0.09	0.12		0.14	0.14		0.18
					5D	60	0.07			0.09	0.11		0.14	0.14		0.18
					6D	55	0.05			0.09	0.09		0.14	0.11		0.18
					8D	50	0.05			0.09	0.08		0.14	0.10		0.18
					10D	40	0.04			0.09	0.06		0.14	0.08		0.18
Special Alloys		High Temp Alloys	x	●	3D	30	0.03	0.4		0.05	0.04	0.6	0.08	0.05	0.8	0.10
					4D	25	0.02			0.05	0.04		0.08	0.05		0.10
					5D	25	0.02			0.05	0.03		0.08	0.04		0.10
					6D	25	0.02			0.05	0.03		0.08	0.03		0.10
					8D	20	0.02			0.05	0.02		0.08	0.03		0.10
					10D	20	0.01			0.05	0.02		0.08	0.03		0.10
		Titanium Alloys	x	●	3D	70	0.06	0.4		0.08	0.09	0.6	0.12	0.11	0.8	0.15
					4D	65	0.05			0.08	0.08		0.12	0.10		0.15
					5D	60	0.05			0.08	0.07		0.12	0.09		0.15
					6D	55	0.04			0.08	0.06		0.12	0.07		0.15
					8D	50	0.03			0.08	0.05		0.12	0.07		0.15
					10D	40	0.03			0.08	0.04		0.12	0.06		0.15
Cast Iron	K	GG, GGG	●	●	3D	120	0.10	0.5		0.10	0.16	0.7	0.16	0.20	1.0	0.20
					4D	110	0.09			0.10	0.14		0.16	0.18		0.20
					5D	100	0.09			0.10	0.14		0.16	0.17		0.20
					6D	95	0.07			0.10	0.11		0.16	0.14		0.20
					8D	85	0.06			0.10	0.10		0.16	0.12		0.20
					10D	70	0.05			0.10	0.08		0.16	0.10		0.20
Hardened Steels		Hardened Steels Rc45-50	●	○	3D	80	0.06	0.5		0.07	0.10	0.7	0.11	0.12	1.0	0.14
					4D	70	0.05			0.07	0.09		0.11	0.11		0.14
					5D	70	0.05			0.07	0.08		0.11	0.10		0.14
					6D	65	0.04			0.07	0.07		0.11	0.08		0.14
					8D	55	0.04			0.07	0.06		0.11	0.07		0.14
					10D	50	0.03			0.07	0.05		0.11	0.06		0.14
		Hardened Steels Rc50-55	●	x	3D	60	0.05	0.4		0.05	0.08	0.6	0.08	0.10	0.8	0.10
					4D	55	0.05			0.05	0.07		0.08	0.09		0.10
					5D	50	0.04			0.05	0.07		0.08	0.09		0.10
					6D	50	0.03			0.05	0.05		0.08	0.07		0.10
					8D	40	0.03			0.05	0.05		0.08	0.06		0.10
					10D	35	0.03			0.05	0.04		0.08	0.05		0.10

Coolant: • Preferred o Possible x Not Possible

Technical data provided should be considered advisory only as variations may be necessary depending on the particular application.

TuffCut DM®

158 Series Recommended Cutting Data - High Feed Roughing - Metric

Tool Diameter and Corner Radius (mm)														
6.0 x R1.5			8.0 x R2.0			10.0 x R2.0			12 x R2.0			16 x R3.0		
Ap	Ae	Fz	Ap	Ae	Fz	Ap	Ae	Fz	Ap	Ae	Fz	Ap	Ae	Fz
0.30	1.5	0.30	0.40	2.0	0.40	0.40	3.0	0.40	0.40	4.0	0.40	0.60	5.0	0.60
0.27		0.30	0.36		0.40	0.36		0.40	0.36		0.40	0.54		0.60
0.26		0.30	0.34		0.40	0.34		0.40	0.34		0.40	0.51		0.60
0.20		0.30	0.27		0.40	0.27		0.40	0.27		0.40	0.41		0.60
0.18		0.30	0.24		0.40	0.24		0.40	0.24		0.40	0.36		0.60
0.15		0.30	0.20		0.40	0.20		0.40	0.20		0.40	0.30		0.60
0.24	1.5	0.27	0.32	2.0	0.36	0.32	3.0	0.36	0.32	4.0	0.36	0.48	5.0	0.54
0.22		0.27	0.29		0.36	0.29		0.36	0.29		0.36	0.43		0.54
0.20		0.27	0.27		0.36	0.27		0.36	0.27		0.36	0.41		0.54
0.16		0.27	0.22		0.36	0.22		0.36	0.22		0.36	0.33		0.54
0.14		0.27	0.19		0.36	0.19		0.36	0.19		0.36	0.29		0.54
0.12		0.27	0.16		0.36	0.16		0.36	0.16		0.36	1.28		0.54
0.24	1.5	0.27	0.32	2.0	0.36	0.32	3.0	0.36	0.32	4.0	0.36	0.48	5.0	0.54
0.22		0.27	0.29		0.36	0.29		0.36	0.29		0.36	0.43		0.54
0.20		0.27	0.27		0.36	0.27		0.36	0.27		0.36	0.41		0.54
0.16		0.27	0.22		0.36	0.22		0.36	0.22		0.36	0.33		0.54
0.14		0.27	0.19		0.36	0.19		0.36	0.19		0.36	0.29		0.54
0.12		0.27	0.16		0.36	0.16		0.36	0.16		0.36	0.24		0.54
0.08	1.2	0.15	0.10	1.6	0.20	0.10	2.5	0.20	0.10	3.5	0.20	0.15	4.3	0.30
0.07		0.15	0.09		0.20	0.09		0.20	0.09		0.20	0.14		0.30
0.06		0.15	0.09		0.20	0.09		0.20	0.09		0.20	0.13		0.30
0.05		0.15	0.07		0.20	0.07		0.20	0.07		0.20	0.10		0.30
0.05		0.15	0.06		0.20	0.06		0.20	0.06		0.20	0.09		0.30
0.04		0.15	0.05		0.20	0.05		0.20	0.05		0.20	0.08		0.30
0.17	1.2	0.23	0.22	1.6	0.30	0.22	2.5	0.30	0.22	3.5	0.30	0.33	4.3	0.45
0.15		0.23	0.20		0.30	0.20		0.30	0.20		0.30	0.30		0.45
0.14		0.23	0.19		0.30	0.19		0.30	0.19		0.30	0.28		0.45
0.11		0.23	0.15		0.30	0.15		0.30	0.15		0.30	0.22		0.45
0.10		0.23	0.13		0.30	0.13		0.30	0.13		0.30	0.20		0.45
0.08		0.23	0.11		0.30	0.11		0.30	0.11		0.30	0.17		0.45
0.30	1.5	0.30	0.40	2.0	0.4	0.40	3.0	0.40	0.40	4.0	0.40	0.60	5.0	0.6
0.27		0.30	0.36		0.4	0.36		0.40	0.36		0.40	0.54		0.6
0.26		0.30	0.34		0.4	0.34		0.40	0.34		0.40	0.51		0.6
0.20		0.30	0.27		0.4	0.27		0.40	0.27		0.40	0.41		0.6
0.18		0.30	0.24		0.4	0.24		0.40	0.24		0.40	0.36		0.6
0.15		0.30	0.20		0.4	0.20		0.40	0.20		0.40	0.30		0.6
0.18	1.5	0.21	0.24	2.0	0.28	0.24	3.0	0.28	0.24	4.0	0.28	0.36	5.0	0.42
0.16		0.21	0.22		0.28	0.22		0.28	0.22		0.28	0.32		0.42
0.15		0.21	0.20		0.28	0.20		0.28	0.20		0.28	0.31		0.42
0.12		0.21	0.16		0.28	0.16		0.28	0.16		0.28	0.24		0.42
0.11		0.21	0.14		0.28	0.14		0.28	0.14		0.28	0.22		0.42
0.09		0.21	0.12		0.28	0.12		0.28	0.12		0.28	0.18		0.42
0.15	1.2	0.15	0.20	1.6	0.20	0.20	2.5	0.20	0.20	3.5	0.20	0.30	4.3	0.30
0.14		0.15	0.18		0.20	0.18		0.20	0.18		0.20	0.27		0.30
0.13		0.15	0.17		0.20	0.17		0.20	0.17		0.20	0.26		0.30
0.10		0.15	0.14		0.20	0.14		0.20	0.14		0.20	0.20		0.30
0.09		0.15	0.12		0.20	0.12		0.20	0.12		0.20	0.18		0.30
0.08		0.15	0.10		0.20	0.10		0.20	0.10		0.20	0.15		0.30

Technical data provided should be considered advisory only as variations may be necessary depending on the particular application.

TuffCut DM®

158 Series Recommended Cutting Data - Inch

Workpiece Material Group		Material Type	Coolant ● Preferred ○ Possible x Not Possible				
					Slotting	Profiling	2D/3D HSC
			Compressed Air	Emulsion	Vc-SFM		
Steels	P	Alloy & Tool Steels Below 260HB	●	○	330	590	655
		Pre-hardened Tools Steel Rc30-40	●	●	230	395	590
Stainless Steels	M	Stainless Steels 300 & PH series	x	●	260	330	490
Special Alloys	S	High Temp Alloys	x	●	80	165	230
		Titanium Alloys	x	●	195	330	395
Cast Irons	K	GG, GGG	●	●	330	655	720
Hardened Steels	H	Hardened Steels Rc45-50	●	○	245	295	460
		Hardened Steels Rc50-55	●	○	130	230	395

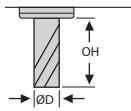
Workpiece Material Group		Material Type	Operation	Tool Diameter (inch)							
				.0787	.1181	.1575	.2362	.3150	.3937	.4724	.6299
				2.0	3.0	4.0	6.0	8.0	10.0	12.0	16.0
				fz-in/tooth							
Steels	P	Alloy & Tool Steels Below 260HB	Slotting	.0004	.0006	.0008	.0012	.0016	.0020	.0024	.0031
			Profiling	.0008	.0012	.0016	.0024	.0031	.0039	.0047	.0063
			HSC 2D/3D	.0024	.0035	.0047	.0071	.0094	.0118	.0142	.0189
		Pre-hardened Tool Steels Rc30-40	Slotting	.0003	.0005	.0006	.0009	.0013	.0016	.0019	.0025
			Profiling	.0006	.0009	.0013	.0019	.0025	.0031	.0038	.0050
			HSC 2D/3D	.0020	.0030	.0039	.0059	.0079	.0098	.0118	.0157
Stainless Steels	M	Stainless Steel 300 & PH series	Slotting	.0003	.0004	.0005	.0008	.0010	.0013	.0016	.0021
			Profiling	.0005	.0008	.0010	.0016	.0021	.0026	.0031	.0042
			HSC 2D/3D	.0016	.0024	.0031	.0047	.0063	.0079	.0094	.0126
Special Alloys	S	High Temp Alloys	Slotting	.0002	.0002	.0003	.0005	.0007	.0008	.0010	.0013
			Profiling	.0003	.0005	.0007	.0010	.0013	.0017	.0020	.0026
			HSC 2D/3D	.0008	.0012	.0016	.0024	.0031	.0039	.0047	.0063
		Titanium Alloys	Slotting	.0002	.0004	.0005	.0007	.0009	.0012	.0014	.0019
			Profiling	.0005	.0007	.0009	.0014	.0019	.0024	.0028	.0038
			HSC 2D/3D	.0016	.0024	.0031	.0047	.0063	.0079	.0094	.0126
Cast Irons	K	GG, GGG	Slotting	.0004	.0006	.0008	.0012	.0016	.0020	.0024	.0031
			Profiling	.0008	.0012	.0016	.0024	.0031	.0039	.0047	.0063
			HSC 2D/3D	.0024	.0035	.0047	.0071	.0094	.0118	.0142	.0189
Hardened Steels	H	Hardened Steels Rc45-50	Slotting	.0003	.0004	.0005	.0008	.0010	.0013	.0016	.0021
			Profiling	.0005	.0008	.0010	.0016	.0021	.0026	.0031	.0042
			HSC 2D/3D	.0016	.0024	.0031	.0047	.0063	.0079	.0094	.0126
		Hardened Steels Rc50-55	Slotting	.0002	.0003	.0004	.0006	.0008	.0010	.0012	.0016
			Profiling	.0004	.0006	.0008	.0012	.0016	.0020	.0024	.0031
			HSC 2D/3D	.0012	.0018	.0024	.0035	.0047	.0059	.0071	.0094

Technical data provided should be considered advisory only as variations may be necessary depending on the particular application.

TuffCut DM®

158 Series Recommended Cutting Data - Inch

Depth of Cut
High Feed Roughing 2D/3D Axial & Radial



Workpiece Material Group		Material Type	OH	Tool Diameter (inch)							
				.0787	.1181	.1575	.2362	.3150	.3937	.4724	.6299
				2.0	3.0	4.0	6.0	8.0	10.0	12.0	16.0
				Ap-in / Ae-in							
Steels	P	Alloy & Tool Steels Below 260HB	3D-4D	.0024	.0035	.0047	.0071	.0094	.0118	.0142	.0189
			5D-6D	.0020	.0028	.0039	.0055	.0075	.0094	.0114	.0150
			8D-10D	.0016	.0020	.0028	.0043	.0055	.0071	.0087	.0114
		Pre-hardened Tool Steels Rc30-40	3D-4D	.0024	.0035	.0047	.0071	.0094	.0118	.0142	.0189
			5D-6D	.0020	.0028	.0039	.0055	.0075	.0094	.0114	.0150
			8D-10D	.0016	.0020	.0028	.0043	.0055	.0071	.0087	.0114
Stainless Steels	M	Stainless Steel 300 & PH series	3D-4D	.0024	.0035	.0047	.0071	.0094	.0118	.0142	.0189
			5D-6D	.0020	.0028	.0039	.0055	.0075	.0094	.0114	.0150
			8D-10D	.0016	.0020	.0028	.0043	.0055	.0071	.0087	.0114
Special Alloys	S	High Temp Alloys	3D-4D	.0016	.0024	.0031	.0047	.0063	.0079	.0094	.0126
			5D-6D	.0012	.0020	.0024	.0039	.0051	.0063	.0075	.0102
			8D-10D	.0008	.0016	.0020	.0028	.0039	.0047	.0055	.0075
		Titanium Alloys	3D-4D	.0024	.0035	.0047	.0071	.0094	.0118	.0142	.0189
			5D-6D	.0020	.0028	.0039	.0055	.0075	.0094	.0114	.0150
			8D-10D	.0016	.0020	.0028	.0043	.0055	.0071	.0087	.0114
Cast Irons	K	GG, GGG	3D-4D	.0024	.0035	.0047	.0071	.0094	.0118	.0142	.0189
			5D-6D	.0020	.0028	.0039	.0055	.0075	.0094	.0114	.0150
			8D-10D	.0016	.0020	.0028	.0043	.0055	.0071	.0087	.0114
Hardened Steels	H	Hardened Steels Rc45-50	3D-4D	.0020	.0031	.0039	.0059	.0079	.0098	.0118	.0157
			5D-6D	.0016	.0024	.0031	.0047	.0063	.0079	.0094	.0126
			8D-10D	.0012	.0020	.0024	.0035	.0047	.0059	.0071	.0094
		Hardened Steels Rc50-55	3D-4D	.0016	.0024	.0031	.0047	.0063	.0079	.0094	.0126
			5D-6D	.0012	.0020	.0024	.0039	.0051	.0063	.0075	.0102
			8D-10D	.0008	.0016	.0020	.0028	.0039	.0047	.0055	.0075

Notes:

For profile machining
adjust radial cut (Ae)

OH	Ae (x Ø)
3D-4D	0.10
5D-6D	0.07
8D-10D	0.05

For slotting
adjust axial cut (Ap)

OH	Ap (x Ø)
3D-4D	0.10
5D-6D	0.07
8D-10D	0.05

Radial Cut (Ae)	Chip thickness Compensation factor
30%	1.10
20%	1.20
15%	1.40
10%	1.80
5%	2.30
1%	5.00

Technical data provided should be considered advisory only as variations may be necessary depending on the particular application.

TuffCut DM®

158 Series Recommended Cutting Data - Metric

Workpiece Material Group		Material Type	Coolant ● Preferred ○ Possible x Not Possible				
					Slotting	Profiling	2D/3D HSC
			Compressed Air	Emulsion	Vc-M/Min		
Steels	P	Alloy & Tool Steels Below 260HB	●	○	100	180	200
		Pre-hardened Tools Steel Rc30-40	●	●	70	120	180
Stainless Steels	M	Stainless Steels 300 & PH series	x	●	80	100	150
Special Alloys	S	High Temp Alloys	x	●	25	50	70
		Titanium Alloys	x	●	60	100	120
Cast Irons	K	GG, GGG	●	●	100	200	220
Hardened Steels	H	Hardened Steels Rc45-50	●	○	75	90	140
		Hardened Steels Rc50-55	●	○	40	70	120

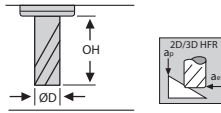
Workpiece Material Group		Material Type	Operation	Tool Diameter (mm)							
				2.0	3.0	4.0	6.0	8.0	10.0	12.0	16.0
				fz-mm/tooth							
Steels	P	Alloy & Tool Steels Below 260HB	Slotting	0.010	0.015	0.020	0.030	0.040	0.050	0.060	0.080
			Profiling	0.020	0.030	0.040	0.060	0.080	0.100	0.120	0.160
			HSC 2D/3D	0.060	0.090	0.120	0.180	0.240	0.300	0.360	0.480
	Pre-hardened Tool Steels Rc30-40	Slotting	0.008	0.012	0.016	0.024	0.032	0.040	0.048	0.064	
		Profiling	0.016	0.024	0.032	0.048	0.064	0.080	0.096	0.128	
		HSC 2D/3D	0.050	0.075	0.100	0.150	0.200	0.250	0.300	0.400	
Stainless Steels	M	Stainless Steel 300 & PH series	Slotting	0.007	0.010	0.013	0.020	0.026	0.033	0.040	0.053
			Profiling	0.013	0.020	0.026	0.040	0.053	0.066	0.079	0.106
			HSC 2D/3D	0.040	0.060	0.080	0.120	0.160	0.200	0.240	0.320
Special Alloys	S	High Temp Alloys	Slotting	0.004	0.006	0.008	0.013	0.017	0.021	0.025	0.034
			Profiling	0.008	0.013	0.017	0.025	0.034	0.042	0.050	0.067
			HSC 2D/3D	0.020	0.030	0.040	0.060	0.080	0.100	0.120	0.160
		Titanium Alloys	Slotting	0.006	0.009	0.012	0.018	0.024	0.030	0.036	0.048
			Profiling	0.012	0.018	0.024	0.036	0.048	0.060	0.072	0.096
			HSC 2D/3D	0.040	0.060	0.080	0.120	0.160	0.200	0.240	0.320
Cast Irons	K	GG, GGG	Slotting	0.010	0.015	0.020	0.030	0.040	0.050	0.060	0.080
			Profiling	0.020	0.030	0.040	0.060	0.080	0.100	0.120	0.160
			HSC 2D/3D	0.060	0.090	0.120	0.180	0.240	0.300	0.360	0.480
Hardened Steels	H	Hardened Steels Rc45-50	Slotting	0.007	0.010	0.013	0.020	0.026	0.033	0.040	0.053
			Profiling	0.013	0.020	0.026	0.040	0.053	0.066	0.079	0.106
			HSC 2D/3D	0.040	0.060	0.080	0.120	0.160	0.200	0.240	0.320
		Hardened Steels Rc50-55	Slotting	0.005	0.008	0.010	0.015	0.020	0.025	0.030	0.040
			Profiling	0.010	0.015	0.020	0.030	0.040	0.050	0.060	0.080
			HSC 2D/3D	0.030	0.045	0.060	0.090	0.120	0.150	0.180	0.240

Technical data provided should be considered advisory only as variations may be necessary depending on the particular application.

TuffCut DM®

158 Series Recommended Cutting Data - Metric

Depth of Cut
High Feed Roughing 2D/3D Axial & Radial



Workpiece Material Group		Material Type	OH	Tool Diameter (mm)							
				2.0	3.0	4.0	6.0	8.0	10.0	12.0	16.0
				Ap-mm / Ae-mm							
Steels	P	Alloy & Tool Steels Below 260HB	3D-4D	0.06	0.09	0.12	0.18	0.24	0.30	0.36	0.48
			5D-6D	0.05	0.07	0.10	0.14	0.19	0.24	0.29	0.38
			8D-10D	0.04	0.05	0.07	0.11	0.14	0.18	0.22	0.29
		Pre-hardened Tool Steels Rc30-40	3D-4D	0.06	0.09	0.12	0.18	0.24	0.30	0.36	0.48
			5D-6D	0.05	0.07	0.10	0.14	0.19	0.24	0.29	0.38
			8D-10D	0.04	0.05	0.07	0.11	0.14	0.18	0.22	0.29
Stainless Steels	M	Stainless Steel 300 & PH series	3D-4D	0.06	0.09	0.12	0.18	0.24	0.30	0.36	0.48
			5D-6D	0.05	0.07	0.10	0.14	0.19	0.24	0.29	0.38
			8D-10D	0.04	0.05	0.07	0.11	0.14	0.18	0.22	0.29
Special Alloys	S	High Temp Alloys	3D-4D	0.04	0.06	0.08	0.12	0.16	0.20	0.24	0.32
			5D-6D	0.03	0.05	0.06	0.10	0.13	0.16	0.19	0.26
			8D-10D	0.02	0.04	0.05	0.07	0.10	0.12	0.14	0.19
		Titanium Alloys	3D-4D	0.06	0.09	0.12	0.18	0.24	0.30	0.36	0.48
			5D-6D	0.05	0.07	0.10	0.14	0.19	0.24	0.29	0.38
			8D-10D	0.04	0.05	0.07	0.11	0.14	0.18	0.22	0.29
Cast Irons	K	GG, GGG	3D-4D	0.06	0.09	0.12	0.18	0.24	0.30	0.36	0.48
			5D-6D	0.05	0.07	0.10	0.14	0.19	0.24	0.29	0.38
			8D-10D	0.04	0.05	0.07	0.11	0.14	0.18	0.22	0.29
Hardened Steels	H	Hardened Steels Rc45-50	3D-4D	0.05	0.08	0.10	0.15	0.20	0.25	0.30	0.40
			5D-6D	0.04	0.06	0.08	0.12	0.16	0.20	0.24	0.32
			8D-10D	0.03	0.05	0.06	0.09	0.12	0.15	0.18	0.24
		Hardened Steels Rc50-55	3D-4D	0.04	0.06	0.08	0.12	0.16	0.20	0.24	0.32
			5D-6D	0.03	0.05	0.06	0.10	0.13	0.16	0.19	0.26
			8D-10D	0.02	0.04	0.05	0.07	0.10	0.12	0.14	0.19

Notes:

For profile machining
adjust radial cut (Ae)

OH	Ae (x Ø)
3D-4D	0.10
5D-6D	0.07
8D-10D	0.05

For slotting
adjust axial cut (Ap)

OH	Ap (x Ø)
3D-4D	0.10
5D-6D	0.07
8D-10D	0.05

Radial Cut (Ae)	Chip thickness Compensation factor
30%	1.10
20%	1.20
15%	1.40
10%	1.80
5%	2.30
1%	5.00

Technical data provided should be considered advisory only as variations may be necessary depending on the particular application.