NIAGARA CUTTER™

S638 / S638R
S738 / S738R
S938 / S938R

SOLID CARBIDE END MILLS MULTI FLUTE

Niagara Cutter

MULTI FLUTE
S638 / S638R

Niagara Cutter

- Eccentric O.D. relief creating a stronger cutting edge
- AlTiN Coated for high heat resistance
- Variable indexing to reduce harmonics providing smoother cutting and improved surface finish
- Designed for Peripheral Roughing and Finishing for Stainless Steel, Titanium, and high temperature alloys
- Excellent in High Speed Milling, Trochoidal (Peel) milling techniques
- Designed for increased radial depths as compared to the S738 and S938
- High performance with minimal deflection

EDP	DESCRIPTION	FLUTE DIA	SHANK DIA	LENGTH OF CUT	OVERALL LENGTH	NO. OF FLUTES	COATING	RADIUS
N00524	S638-0.375-D1-S.0-Z6	3/8	3/8	1	2-1/2	6	AlTiN	-
N00457	S638-0.500-D1-S.0-Z6	1/2	1/2	1-1/4	3	6	AlTiN	-
N00465	S638-0.625-D1-S.0-Z6	5/8	5/8	1-5/8	3-1/2	6	AlTiN	-
N00473	S638-0.750-D1-S.0-Z6	3/4	3/4	1-3/4	4	6	AlTiN	-
N00479	S638-1.000-D1-S.0-Z6	1	1	2	5	6	AlTiN	-

EDP	DESCRIPTION	FLUTE DIA	SHANK DIA	LENGTH OF CUT	OVERALL LENGTH	NO. OF FLUTES	COATING	RADIUS
N00455	S638R-0.375-D1-R015.0-Z6	3/8	3/8	1	2-1/2	6	AlTiN	0.015
N00456	S638R-0.375-D1-R030.0-Z6	3/8	3/8	1	2-1/2	6	AlTiN	0.030
N00458	S638R-0.500-D1-R015.0-Z6	1/2	1/2	1-1/4	3	6	AlTiN	0.015
N00459	S638R-0.500-D1-R030.0-Z6	1/2	1/2	1-1/4	3	6	AlTiN	0.030
N00462	S638R-0.500-D1-R060.0-Z6	1/2	1/2	1-1/4	3	6	AlTiN	0.060
N00463	S638R-0.500-D1-R090.0-Z6	1/2	1/2	1-1/4	3	6	AlTiN	0.090
N00464	S638R-0.500-D1-R120.0-Z6	1/2	1/2	1-1/4	3	6	AlTiN	0.120
N00466	S638R-0.625-D1-R015.0-Z6	5/8	5/8	1-5/8	3-1/2	6	AlTiN	0.015
N00467	S638R-0.625-D1-R030.0-Z6	5/8	5/8	1-5/8	3-1/2	6	AlTiN	0.030
N00468	S638R-0.625-D1-R060.0-Z6	5/8	5/8	1-5/8	3-1/2	6	AlTiN	0.060
N00469	S638R-0.625-D1-R090.0-Z6	5/8	5/8	1-5/8	3-1/2	6	AlTiN	0.090
N00472	S638R-0.625-D1-R120.0-Z6	5/8	5/8	1-5/8	3-1/2	6	AlTiN	0.120
N00474	S638R-0.750-D1-R030.0-Z6	3/4	3/4	1-3/4	4	6	AlTiN	0.030
N00475	S638R-0.750-D1-R060.0-Z6	3/4	3/4	1-3/4	4	6	AlTiN	0.060
N00476	S638R-0.750-D1-R090.0-Z6	3/4	3/4	1-3/4	4	6	AlTiN	0.090
N00477	S638R-0.750-D1-R120.0-Z6	3/4	3/4	1-3/4	4	6	AlTiN	0.120
N00478	S638R-0.750-D1-R190.0-Z6	3/4	3/4	1-3/4	4	6	AlTiN	0.190
N00482	S638R-1.000-D1-R030.0-Z6	1	1	2	5	6	AlTiN	0.030
N00483	S638R-1.000-D1-R060.0-Z6	1	1	2	5	6	AlTiN	0.060
N00484	S638R-1.000-D1-R090.0-Z6	1	1	2	5	6	AlTiN	0.090
N00485	S638R-1.000-D1-R120.0-Z6	1	1	2	5	6	AlTiN	0.120
N00486	S638R-1.000-D1-R190.0-Z6	1	1	2	5	6	AlTiN	0.190
N00487	S638R-1.000-D1-R250.0-Z6	1	1	2	5	6	AlTiN	0.250

DISCOUNT CODE D43

MULTI FLUTE
S738 / S738R

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- Eccentric O.D. relief creating a stronger cutting edge
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- Designed for Peripheral Roughing and Finishing for Stainless Steel, Titanium, and high temperature alloys
- Excellent in High Speed Milling, Trochoidal (Peel) milling techniques
- High performance with minimal deflection

EDP	DESCRIPTION	FLUTE DIA	SHANK DIA	LENGTH OF CUT	OVERALL LENGTH	NO. OF FLUTES	COATING	CHAMFER
N58244	S738-0.250-D2-C003.0-Z7	1/4	1/4	3/8	2	7	AlTiN	0.003
N58247	S738-0.250-D3-C003.0-Z7	1/4	1/4	3/4	2-1/2	7	AlTiN	0.003
N58250	S738-0.250-D5-C003.0-Z7	1/4	1/4	1-1/4	3	7	AlTiN	0.003
N58253	S738-0.375-D1-C005.0-Z7	3/8	3/8	1/2	2-1/2	7	AlTiN	0.005
N58256	S738-0.375-D3-C005.0-Z7	3/8	3/8	1	3	7	AlTiN	0.005
N58259	S738-0.375-D4-C005.0-Z7	3/8	3/8	1-1/2	3-1/2	7	AlTiN	0.005
N58262	S738-0.500-D2-C006.0-Z7	1/2	1/2	3/4	3	7	AlTiN	0.006
N58266	S738-0.500-D3-C006.0-Z7	1/2	1/2	1-1/4	3	7	AlTiN	0.006
N58270	S738-0.500-D4-C006.0-Z7	1/2	1/2	2	4	7	AlTiN	0.006

EDP	DESCRIPTION	FLUTE DIA	SHANK DIA	LENGTH OF CUT	OVERALL LENGTH	NO. OF FLUTES	COATING	RADIUS
N58245	S738R-0.250-D2-R015.0-Z7	1/4	1/4	3/8	2	7	AlTiN	0.015
N58246	S738R-0.250-D2-R030.0-Z7	1/4	1/4	3/8	2	7	AlTiN	0.030
N58248	S738R-0.250-D3-R015.0-Z7	1/4	1/4	3/4	2-1/2	7	AlTiN	0.015
N58249	S738R-0.250-D3-R030.0-Z7	1/4	1/4	3/4	2-1/2	7	AlTiN	0.030
N58251	S738R-0.250-D5-R015.0-Z7	1/4	1/4	1-1/4	3	7	AlTiN	0.015
N58252	S738R-0.250-D5-R030.0-Z7	1/4	1/4	1-1/4	3	7	AlTiN	0.030
N58254	S738R-0.375-D1-R015.0-Z7	3/8	3/8	1/2	2-1/2	7	AlTiN	0.015
N58255	S738R-0.375-D1-R030.0-Z7	3/8	3/8	1/2	2-1/2	7	AlTiN	0.030
N58257	S738R-0.375-D3-R015.0-Z7	3/8	3/8	1	3	7	AlTiN	0.015
N58258	S738R-0.375-D3-R030.0-Z7	3/8	3/8	1	3	7	AlTiN	0.030
N58260	S738R-0.375-D4-R015.0-Z7	3/8	3/8	1-1/2	3-1/2	7	AlTiN	0.015
N58261	S738R-0.375-D4-R030.0-Z7	3/8	3/8	1-1/2	3-1/2	7	AlTiN	0.030
N58263	S738R-0.500-D2-R015.0-Z7	1/2	1/2	3/4	3	7	AlTiN	0.015
N58264	S738R-0.500-D2-R030.0-Z7	1/2	1/2	3/4	3	7	AlTiN	0.030
N58265	S738R-0.500-D2-R060.0-Z7	1/2	1/2	3/4	3	7	AlTiN	0.060
N58267	S738R-0.500-D3-R015.0-Z7	1/2	1/2	1-1/4	3	7	AlTiN	0.015
N58268	S738R-0.500-D3-R030.0-Z7	1/2	1/2	1-1/4	3	7	AlTiN	0.030
N58269	S738R-0.500-D3-R060.0-Z7	1/2	1/2	1-1/4	3	7	AlTiN	0.060
N58271	S738R-0.500-D4-R015.0-Z7	1/2	1/2	2	4	7	AlTiN	0.015
N58272	S738R-0.500-D4-R030.0-Z7	1/2	1/2	2	4	7	AlTiN	0.030
N58273	S738R-0.500-D4-R060.0-Z7	1/2	1/2	2	4	7	AlTiN	0.060

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EDP	DESCRIPTION	FLUTE DIA	SHANK DIA	LENGTH OF CUT	OVERALL LENGTH	NO. OF FLUTES	COATING	CHAMFER
N58274	S938-0.625-D1-C008.0-Z9	5/8	5/8	3/4	3	9	AlTiN	0.008
N58279	S938-0.625-D3-C008.0-Z9	5/8	5/8	1-5/8	4	9	AlTiN	0.008
N58284	S938-0.625-D4-C008.0-Z9	5/8	5/8	2-1/2	5	9	AlTiN	0.008
N58289	S938-0.750-D2-C010.0-Z9	3/4	3/4	1-5/8	4	9	AlTiN	0.010
N58294	S938-0.750-D3-C010.0-Z9	3/4	3/4	2-1/4	5	9	AlTiN	0.010
N58299	S938-0.750-D4-C010.0-Z9	3/4	3/4	3-1/4	6	9	AlTiN	0.010
N58304	S938-1.000-D2-C012.0-Z9	1	1	2	5	9	AlTiN	0.012
N58309	S938-1.000-D3-C012.0-Z9	1	1	3-1/4	6	9	AlTiN	0.012
N58314	S938-1.000-D4-C012.0-Z9	1	1	4-1/8	7	9	AlTiN	0.012

EDP	DESCRIPTION	FLUTE DIA	SHANK DIA	LENGTH OF CUT	OVERALL LENGTH	NO. OF FLUTES	COATING	RADIUS
N58275	S938R-0.625-D1-R030.0-Z9	5/8	5/8	3/4	3	9	AlTiN	0.030
N58276	S938R-0.625-D1-R060.0-Z9	5/8	5/8	3/4	3	9	AlTiN	0.060
N58277	S938R-0.625-D1-R090.0-Z9	5/8	5/8	3/4	3	9	AlTiN	0.090
N58278	S938R-0.625-D1-R120.0-Z9	5/8	5/8	3/4	3	9	AlTiN	0.120
N58280	S938R-0.625-D3-R030.0-Z9	5/8	5/8	1-5/8	4	9	AlTiN	0.030
N58281	S938R-0.625-D3-R060.0-Z9	5/8	5/8	1-5/8	4	9	AlTiN	0.060
N58282	S938R-0.625-D3-R090.0-Z9	5/8	5/8	1-5/8	4	9	AlTiN	0.090
N58283	S938R-0.625-D3-R120.0-Z9	5/8	5/8	1-5/8	4	9	AlTiN	0.120
N58285	S938R-0.625-D4-R030.0-Z9	5/8	5/8	2-1/2	5	9	AlTiN	0.030
N58286	S938R-0.625-D4-R060.0-Z9	5/8	5/8	2-1/2	5	9	AlTiN	0.060
N58287	S938R-0.625-D4-R090.0-Z9	5/8	5/8	2-1/2	5	9	AlTiN	0.090
N58288	S938R-0.625-D4-R120.0-Z9	5/8	5/8	2-1/2	5	9	AlTiN	0.120
N58290	S938R-0.750-D2-R030.0-Z9	3/4	3/4	1-5/8	4	9	AlTiN	0.030
N58291	S938R-0.750-D2-R060.0-Z9	3/4	3/4	1-5/8	4	9	AlTiN	0.060

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EDP	DESCRIPTION	FLUTE DIA	SHANK DIA	LENGTH OF CUT	OVERALL LENGTH	NO. OF FLUTES	COATING	RADIUS
N58292	S938R-0.750-D2-R090.0-Z9	3/4	3/4	1-5/8	4	9	AlTiN	0.090
N58293	S938R-0.750-D2-R120.0-Z9	3/4	3/4	1-5/8	4	9	AlTiN	0.120
N58295	S938R-0.750-D3-R030.0-Z9	3/4	3/4	2-1/4	5	9	AlTiN	0.030
N58296	S938R-0.750-D3-R060.0-Z9	3/4	3/4	2-1/4	5	9	AlTiN	0.060
N58297	S938R-0.750-D3-R090.0-Z9	3/4	3/4	2-1/4	5	9	AlTiN	0.090
N58298	S938R-0.750-D3-R120.0-Z9	3/4	3/4	2-1/4	5	9	AlTiN	0.120
N58300	S938R-0.750-D4-R030.0-Z9	3/4	3/4	3-1/4	6	9	AlTiN	0.030
N58301	S938R-0.750-D4-R060.0-Z9	3/4	3/4	3-1/4	6	9	AlTiN	0.060
N58302	S938R-0.750-D4-R090.0-Z9	3/4	3/4	3-1/4	6	9	AlTiN	0.090
N58303	S938R-0.750-D4-R120.0-Z9	3/4	3/4	3-1/4	6	9	AlTiN	0.120
N58305	S938R-1.000-D2-R030.0-Z9	1	1	2	5	9	AlTiN	0.030
N58306	S938R-1.000-D2-R060.0-Z9	1	1	2	5	9	AlTiN	0.060
N58307	S938R-1.000-D2-R090.0-Z9	1	1	2	5	9	AlTiN	0.090
N58308	S938R-1.000-D2-R120.0-Z9	1	1	2	5	9	AlTiN	0.120
N58310	S938R-1.000-D3-R030.0-Z9	1	1	3-1/4	6	9	AlTiN	0.030
N58311	S938R-1.000-D3-R060.0-Z9	1	1	3-1/4	6	9	AlTiN	0.060
N58312	S938R-1.000-D3-R090.0-Z9	1	1	3-1/4	6	9	AlTiN	0.090
N58313	S938R-1.000-D3-R120.0-Z9	1	1	3-1/4	6	9	AlTiN	0.120
N58315	S938R-1.000-D4-R030.0-Z9	1	1	4-1/8	7	9	AlTiN	0.030
N58316	S938R-1.000-D4-R060.0-Z9	1	1	4-1/8	7	9	AlTiN	0.060
N58317	S938R-1.000-D4-R090.0-Z9	1	1	4-1/8	7	9	AlTiN	0.090
N58318	S938R-1.000-D4-R120.0-Z9	1	1	4-1/8	7	9	AlTiN	0.120

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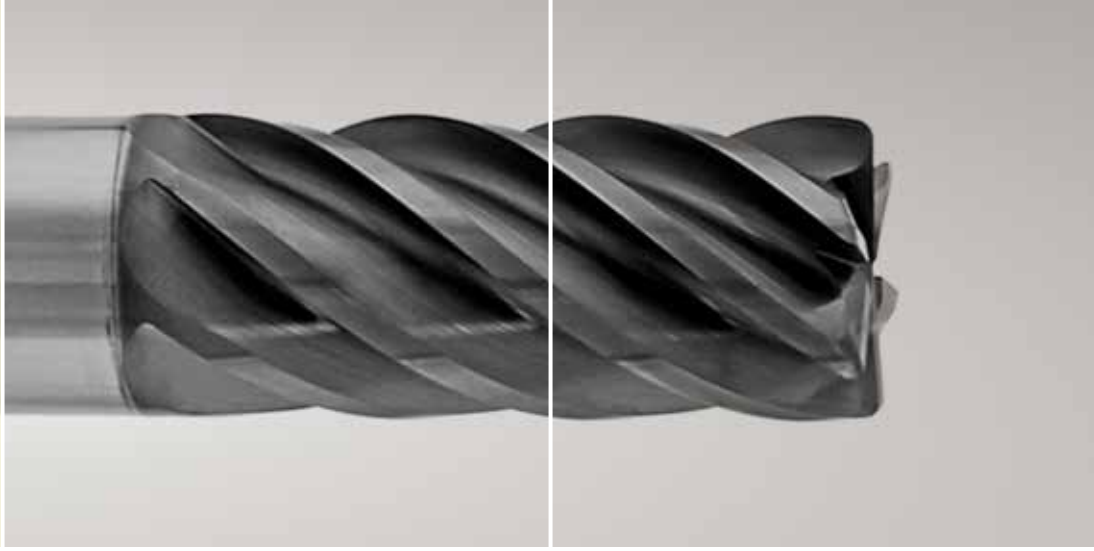
SPEEDS & FEEDS S638 / S638R



S638 / S638R - ALL CUTTING DATA ARE START VALUES

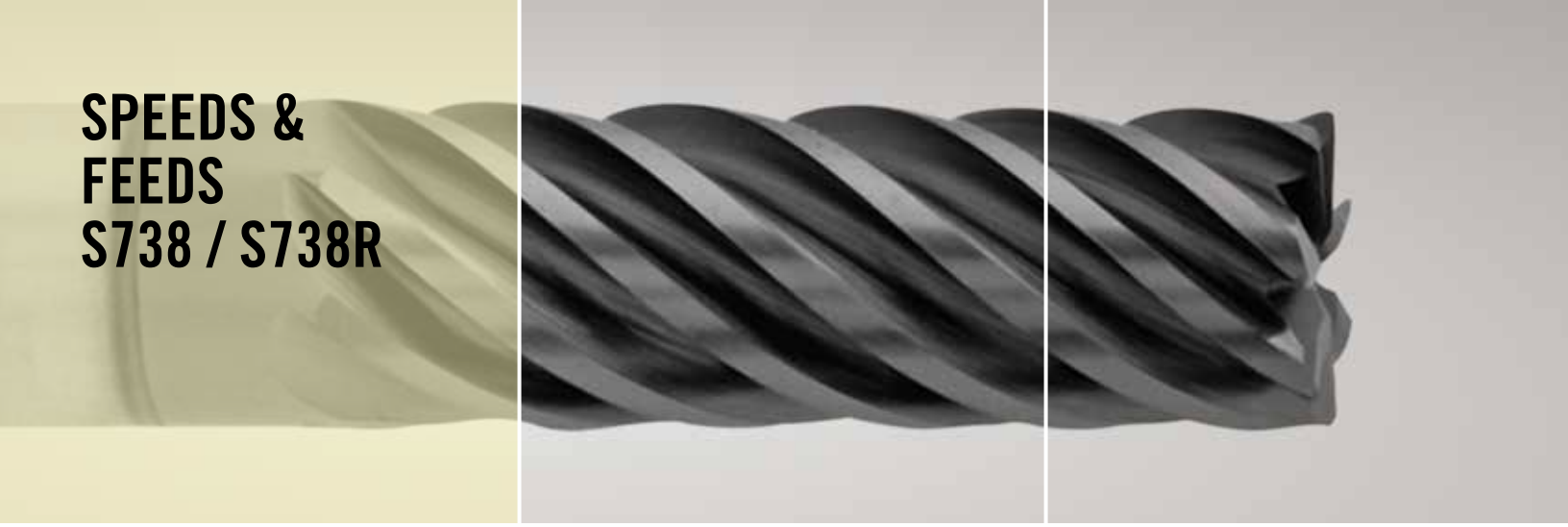
SIDE MILLING - ROUGHING

ISO GROUP	SMG	a_p x Dc (max)	a_e x Dc (max)	v_c (sf / min)				$Z_n = 6$ 3/8	1/2	5/8	3/4	1
P	E 1 - 2	2.0	0.12		700		n [rev/min]	7131	5348	4278	3565	2674
							fz [in]	0.0030	0.0040	0.0050	0.0060	0.0080
				525	-	875	vf [in/min]	128	128	128	128	128
	E 3 - 4	2.0	0.12		645		n [rev/min]	6570	4928	3942	3285	2464
							fz [in]	0.0030	0.0040	0.0050	0.0060	0.0080
				484	-	806	vf [in/min]	118	118	118	118	118
	E 5 - 6	2.0	0.10		525		n [rev/min]	5348	4011	3209	2674	2006
							fz [in]	0.0024	0.0033	0.0041	0.0049	0.0065
				394	-	656	vf [in/min]	78	78	78	78	78
M	E 8 - 9	2.0	0.12		600		n [rev/min]	6112	4584	3667	3056	2292
							fz [in]	0.0028	0.0038	0.0047	0.0056	0.0075
				450	-	750	vf [in/min]	103	103	103	103	103
	E 10 - 11	2.0	0.10		565		n [rev/min]	5755	4317	3453	2878	2158
							fz [in]	0.0024	0.0033	0.0041	0.0049	0.0065
				424	-	706	vf [in/min]	84	84	84	84	84
K	E 12 - 13	2.0	0.10		495		n [rev/min]	5042	3782	3025	2521	1891
							fz [in]	0.0026	0.0035	0.0044	0.0053	0.0070
				371	-	619	vf [in/min]	79	79	79	79	79
	E 14 - 15	2.0	0.10		430		n [rev/min]	4380	3285	2628	2190	1643
							fz [in]	0.0019	0.0025	0.0031	0.0038	0.0050
				323	-	538	vf [in/min]	49	49	49	49	49
S	E 19	2.0	0.07		150		n [rev/min]	1528	1146	917	764	573
							fz [in]	0.0019	0.0025	0.0031	0.0038	0.0050
				113	-	188	vf [in/min]	17	17	17	17	17
	E 20	2.0	0.06		120		n [rev/min]	1222	917	733	611	458
							fz [in]	0.0017	0.0023	0.0029	0.0035	0.0046
				90	-	150	vf [in/min]	13	13	13	13	13
	E 21	2.0	0.06		100		n [rev/min]	1019	764	611	509	382
							fz [in]	0.0017	0.0023	0.0029	0.0035	0.0046
				75	-	125	vf [in/min]	11	11	11	11	11
	E 22	2.0	0.10		270		n [rev/min]	2750	2063	1650	1375	1031
							fz [in]	0.0024	0.0033	0.0041	0.0049	0.0065
				203	-	338	vf [in/min]	40	40	40	40	40

S638 / S638R - ALL CUTTING DATA ARE START VALUES

SIDE MILLING - FINISHING												
ISO GROUP	SMG	a_p x Dc (max)	a_e x Dc (max)	v_c (sf / min)				$Z_n = 6$ 3/8	1/2	5/8	3/4	1
P	E 1 - 2	2.0	0.02		805		n [rev/min]	8200	6150	4920	4100	3075
							fz [in]	0.0019	0.0025	0.0031	0.0038	0.0050
				604	-	1006	vf [in/min]	92	92	92	92	92
	E 3 - 4	2.0	0.02		742		n [rev/min]	7556	5667	4534	3778	2833
							fz [in]	0.0019	0.0025	0.0031	0.0038	0.0050
				556	-	927	vf [in/min]	85	85	85	85	85
	E 5 - 6	2.0	0.02		604		n [rev/min]	6150	4613	3690	3075	2306
							fz [in]	0.0019	0.0025	0.0031	0.0038	0.0050
				453	-	755	vf [in/min]	69	69	69	69	69
M	E 8 - 9	2.0	0.02		690		n [rev/min]	7029	5272	4217	3514	2636
							fz [in]	0.0019	0.0025	0.0031	0.0038	0.0050
				518	-	863	vf [in/min]	79	79	79	79	79
	E 10 - 11	2.0	0.02		650		n [rev/min]	6619	4964	3971	3309	2482
							fz [in]	0.0019	0.0025	0.0031	0.0038	0.0050
				487	-	812	vf [in/min]	74	74	74	74	74
K	E 12 - 13	2.0	0.02		569		n [rev/min]	5799	4349	3479	2899	2175
							fz [in]	0.0019	0.0025	0.0031	0.0038	0.0050
				427	-	712	vf [in/min]	65	65	65	65	65
	E 14 - 15	2.0	0.02		495		n [rev/min]	5037	3778	3022	2519	1889
							fz [in]	0.0015	0.0020	0.0025	0.0030	0.0040
				371	-	618	vf [in/min]	45	45	45	45	45
S	E 19	2.0	0.02		173		n [rev/min]	1757	1318	1054	879	659
							fz [in]	0.0015	0.0020	0.0025	0.0030	0.0040
				129	-	216	vf [in/min]	16	16	16	16	16
	E 20	2.0	0.02		138		n [rev/min]	1406	1054	843	703	527
							fz [in]	0.0015	0.0020	0.0025	0.0030	0.0040
				104	-	173	vf [in/min]	13	13	13	13	13
	E 21	2.0	0.02		115		n [rev/min]	1171	879	703	586	439
							fz [in]	0.0015	0.0020	0.0025	0.0030	0.0040
				86	-	144	vf [in/min]	11	11	11	11	11
	E 22	2.0	0.02		311		n [rev/min]	3163	2372	1898	1581	1186
							fz [in]	0.0019	0.0025	0.0031	0.0038	0.0050
				233	-	388	vf [in/min]	36	36	36	36	36

SPEEDS & FEEDS S738 / S738R



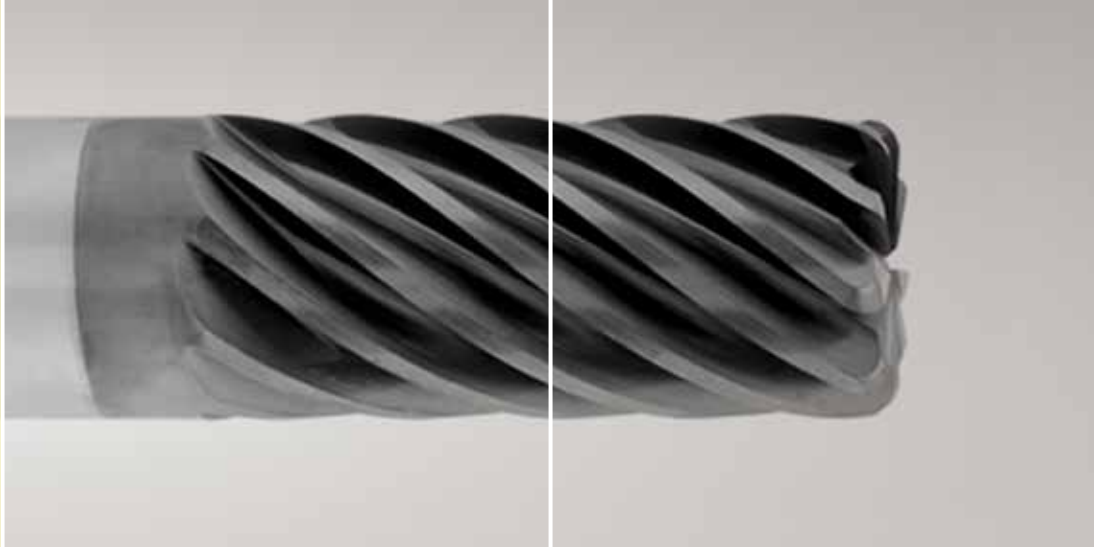
S738 / S738R - ALL CUTTING DATA ARE START VALUES

SIDE MILLING - ROUGHING										
ISO GROUP	SMG	a_p x Dc (max)	a_e x Dc (max)	v_c (sf / min)				$Z_n = 7$ 1/4	3/8	1/2
P	E 1 - 2	2.0	0.07		800		n [rev/min]	12224	8149	6112
							fz [in]	0.0025	0.0038	0.0050
				600	-	1000	vf [in/min]	214	214	214
	E 3 - 4	2.0	0.07		740		n [rev/min]	11307	7538	5654
							fz [in]	0.0025	0.0038	0.0050
				555	-	925	vf [in/min]	198	198	198
	E 5 - 6	2.0	0.06		605		n [rev/min]	9244	6163	4622
							fz [in]	0.0020	0.0030	0.0040
				454	-	756	vf [in/min]	129	129	129
M	E 8 - 9	2.0	0.07		680		n [rev/min]	10390	6927	5195
							fz [in]	0.0020	0.0030	0.0040
				510	-	850	vf [in/min]	145	145	145
	E 10 - 11	2.0	0.06		630		n [rev/min]	9626	6418	4813
							fz [in]	0.0018	0.0026	0.0035
				473	-	788	vf [in/min]	118	118	118
K	E 12 - 13	2.0	0.07		550		n [rev/min]	8404	5603	4202
							fz [in]	0.0020	0.0030	0.0040
				413	-	688	vf [in/min]	118	118	118
	E 14 - 15	2.0	0.06		490		n [rev/min]	7487	4991	3744
							fz [in]	0.0018	0.0026	0.0035
				368	-	613	vf [in/min]	92	92	92
S	E 19	2.0	0.04		170		n [rev/min]	2598	1732	1299
							fz [in]	0.0015	0.0023	0.0030
				128	-	213	vf [in/min]	27	27	27
	E 20	2.0	0.04		135		n [rev/min]	2063	1375	1031
							fz [in]	0.0014	0.0021	0.0028
				101	-	169	vf [in/min]	20	20	20
	E 21	2.0	0.04		115		n [rev/min]	1757	1171	879
							fz [in]	0.0014	0.0021	0.0028
				86	-	144	vf [in/min]	17	17	17
	E 22	2.0	0.06		310		n [rev/min]	4737	3158	2368
							fz [in]	0.0015	0.0023	0.0030
				233	-	388	vf [in/min]	50	50	50

S738 / S738R - ALL CUTTING DATA ARE START VALUES

SIDE MILLING - FINISHING										
ISO GROUP	SMG	a_p x Dc (max)	a_e x Dc (max)	v_c (sf / min)				$Z_n = 7$ 1/4	3/8	1/2
P	E 1 - 2	2.0	0.02		920		n [rev/min]	14058	9372	7029
							fz [in]	0.0013	0.0019	0.0025
				690	-	1150	vf [in/min]	123	123	123
	E 3 - 4	2.0	0.02		851		n [rev/min]	13003	8669	6502
							fz [in]	0.0013	0.0019	0.0025
				638	-	1064	vf [in/min]	114	114	114
	E 5 - 6	2.0	0.02		696		n [rev/min]	10631	7087	5316
							fz [in]	0.0013	0.0019	0.0025
				522	-	870	vf [in/min]	93	93	93
M	E 8 - 9	2.0	0.02		782		n [rev/min]	11949	7966	5974
							fz [in]	0.0013	0.0019	0.0025
				587	-	978	vf [in/min]	105	105	105
	E 10 - 11	2.0	0.02		725		n [rev/min]	11070	7380	5535
							fz [in]	0.0013	0.0019	0.0025
				543	-	906	vf [in/min]	97	97	97
K	E 12 - 13	2.0	0.02		633		n [rev/min]	9665	6443	4832
							fz [in]	0.0013	0.0019	0.0025
				474	-	791	vf [in/min]	85	85	85
	E 14 - 15	2.0	0.02		564		n [rev/min]	8610	5740	4305
							fz [in]	0.0010	0.0015	0.0020
				423	-	704	vf [in/min]	60	60	60
S	E 19	2.0	0.02		196		n [rev/min]	2987	1991	1494
							fz [in]	0.0010	0.0015	0.0020
				147	-	244	vf [in/min]	21	21	21
	E 20	2.0	0.02		155		n [rev/min]	2372	1581	1186
							fz [in]	0.0010	0.0015	0.0020
				116	-	194	vf [in/min]	17	17	17
	E 21	2.0	0.02		132		n [rev/min]	2021	1347	1010
							fz [in]	0.0010	0.0015	0.0020
				99	-	165	vf [in/min]	14	14	14
	E 22	2.0	0.02		357		n [rev/min]	5447	3632	2724
							fz [in]	0.0013	0.0019	0.0025
				267	-	446	vf [in/min]	48	48	48

SPEEDS & FEEDS S938 / S938R



S938 / S938R - ALL CUTTING DATA ARE START VALUES

SIDE MILLING - ROUGHING											
ISO GROUP	SMG	a_p x Dc (max)	a_e x Dc (max)	v_c (sf / min)				$Z_n = 9$ 5/8	3/4	1
P	E 1 - 2	2.0	0.07		800		n [rev/min]	4890	4075	3056
							fz [in]	0.0063	0.0075	0.0100
				600	-	1000	vf [in/min]	275	275	275
	E 3 - 4	2.0	0.07		740		n [rev/min]	4523	3769	2827
							fz [in]	0.0063	0.0075	0.0100
				555	-	925	vf [in/min]	254	254	254
	E 5 - 6	2.0	0.06		605		n [rev/min]	3698	3081	2311
							fz [in]	0.0050	0.0060	0.0080
				454	-	756	vf [in/min]	166	166	166
M	E 8 - 9	2.0	0.07		680		n [rev/min]	4156	3463	2598
							fz [in]	0.0056	0.0068	0.0090
				510	-	850	vf [in/min]	210	210	210
	E 10 - 11	2.0	0.06		630		n [rev/min]	3851	3209	2407
							fz [in]	0.0050	0.0060	0.0080
				473	-	788	vf [in/min]	173	173	173
K	E 12 - 13	2.0	0.07		550		n [rev/min]	3362	2801	2101
							fz [in]	0.0050	0.0060	0.0080
				413	-	688	vf [in/min]	151	151	151
	E 14 - 15	2.0	0.06		490		n [rev/min]	2995	2496	1872
							fz [in]	0.0044	0.0053	0.0070
				368	-	613	vf [in/min]	118	118	118
S	E 19	2.0	0.04		170		n [rev/min]	1039	866	649
							fz [in]	0.0038	0.0045	0.0060
				128	-	213	vf [in/min]	35	35	35
	E 20	2.0	0.04		135		n [rev/min]	825	688	516
							fz [in]	0.0034	0.0041	0.0055
				101	-	169	vf [in/min]	26	26	26
	E 21	2.0	0.04		115		n [rev/min]	703	586	439
							fz [in]	0.0034	0.0041	0.0055
				86	-	144	vf [in/min]	22	22	22
	E 22	2.0	0.06		310		n [rev/min]	1895	1579	1184
							fz [in]	0.0041	0.0049	0.0065
				233	-	388	vf [in/min]	69	69	69

S938 / S938R - ALL CUTTING DATA ARE START VALUES

SIDE MILLING - FINISHING											
ISO GROUP	SMG	a_p x Dc (max)	a_e x Dc (max)	v_c (sf / min)				Z_n = 9 5/8	Z_n = 9 3/4	Z_n = 9 1
P	E 1 - 2	2.0	0.02		920		n [rev/min]	5623	4686	3514
							fz [in]	0.0031	0.0038	0.0050
				755	-	1315	vf [in/min]	158	158	158
	E 3 - 4	2.0	0.02		950		n [rev/min]	5201	4334	3251
							fz [in]	0.0031	0.0038	0.0050
				638	-	1200	vf [in/min]	146	146	146
	E 5 - 6	2.0	0.02		800		n [rev/min]	4252	3544	2658
							fz [in]	0.0031	0.0038	0.0050
				585	-	1010	vf [in/min]	120	120	120
M	E 8 - 9	2.0	0.02		520		n [rev/min]	4780	3983	2987
							fz [in]	0.0031	0.0038	0.0050
				587	-	660	vf [in/min]	134	134	134
	E 10 - 11	2.0	0.02		415		n [rev/min]	4428	3690	2768
							fz [in]	0.0031	0.0038	0.0050
				300	-	525	vf [in/min]	125	125	125
K	E 12 - 13	2.0	0.02		605		n [rev/min]	3866	3222	2416
							fz [in]	0.0031	0.0038	0.0050
				445	-	791	vf [in/min]	109	109	109
	E 14 - 15	2.0	0.02		525		n [rev/min]	3444	2870	2153
							fz [in]	0.0025	0.0030	0.0040
				423	-	660	vf [in/min]	77	77	77
S	E 19	2.0	0.02		205		n [rev/min]	1195	996	747
							fz [in]	0.0025	0.0030	0.0040
				147	-	244	vf [in/min]	27	27	27
	E 20	2.0	0.02		160		n [rev/min]	949	791	593
							fz [in]	0.0025	0.0030	0.0040
				116	-	200	vf [in/min]	21	21	21
	E 21	2.0	0.02		160		n [rev/min]	808	674	505
							fz [in]	0.0025	0.0030	0.0040
				99	-	200	vf [in/min]	18	18	18
	E 22	2.0	0.02		357		n [rev/min]	2179	1816	1362
							fz [in]	0.0031	0.0038	0.0050
				275	-	480	vf [in/min]	61	61	61

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