

Niagara Cutter



HIGH PERFORMANCE END MILLS

METRIC SERIES

METRIC HIGH PERFORMANCE END MILLS

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**STR440M
STB440M**
**STABILIZER™ HT
HIGH PERFORMANCE END MILLS**
**METRIC 4 FLUTE
RADIUS OR BALL-END
SOLID CARBIDE WITH STABILIZED FLUTES**

Features

- Variable Helix
- Variable Pitch Technology
- Corner Radius
- Asymmetrical Cutting Edges
- US Patent # 6,991,409
- Extra-Fine Grade Carbide
- Eccentric OD Relief
- Center-Cutting
- Niagara Microshield™ AlTiN & AlCrN Coating

Applications

- Stainless Steel
- High Temp Alloys
- Nickel Based Alloys
- Titanium & Titanium Alloys



Price Code E				STR440M with Radius			STB440M Ball-End	
Flute Dia	Shank Dia	Length of Cut	Overall Length	Corner Radius	AlTiN EDP	AlCrN EDP	AlTiN EDP	AlCrN EDP
3mm	6mm	3mm	58mm	0.25	68665	68550	57593	68584
3mm	6mm	6mm	58mm	0.25	68666	68551	57594	68585
4mm	6mm	4mm	58mm	0.25	68667	68552	57595	68586
4mm	6mm	8mm	58mm	0.25	68668	68553	57596	68587
5mm	6mm	5mm	58mm	0.25	68669	68554	57597	68588
5mm	6mm	10mm	58mm	0.25	68670	68555	57598	68589
6mm	6mm	6mm	58mm	0.50	68671	68556	57599	68590
6mm	6mm	12mm	58mm	0.50	68672	68557	57600	68591
7mm	8mm	7mm	64mm	0.50	68673	68558	57601	68592
7mm	8mm	14mm	64mm	0.50	68674	68559	57602	68593
8mm	8mm	8mm	64mm	0.50	68675	68560	57603	68594
8mm	8mm	16mm	64mm	0.50	68676	68561	57604	68595
9mm	10mm	9mm	63mm	0.50	68677	68562	57605	68596
9mm	10mm	18mm	73mm	0.50	68678	68563	57606	68597
10mm	10mm	10mm	63mm	0.50	68679	68564	57607	68598
10mm	10mm	20mm	73mm	0.50	68680	68565	57608	68599
11mm	12mm	11mm	74mm	0.50	68681	68566	57609	68600
11mm	12mm	22mm	84mm	0.50	68682	68567	57610	68601
12mm	12mm	12mm	74mm	0.75	68683	68568	57611	68602
12mm	12mm	24mm	84mm	0.75	68684	68569	57612	68603
13mm	14mm	13mm	76mm	0.75	68685	68570	57613	68604
13mm	14mm	26mm	84mm	0.75	68686	68571	57614	68605
14mm	14mm	14mm	76mm	0.75	68687	68572	57615	68606
14mm	14mm	28mm	84mm	0.75	68688	68573	57616	68607
15mm	16mm	15mm	83mm	0.75	68689	68574	57617	68608
15mm	16mm	30mm	93mm	0.75	68690	68575	57618	68609
16mm	16mm	16mm	83mm	0.75	68691	68576	57619	68610
16mm	16mm	32mm	93mm	0.75	68692	68577	57620	68611
18mm	18mm	18mm	85mm	0.75	68693	68578	57621	68612
18mm	18mm	36mm	93mm	0.75	68694	68579	57622	68613
20mm	20mm	20mm	93mm	0.75	68695	68580	57623	68614
20mm	20mm	40mm	105mm	0.75	68696	68581	57624	68615
25mm	25mm	25mm	115mm	0.75	68697	68582	57625	68616
25mm	25mm	50mm	115mm	0.75	68698	68583	57626	68617

STABILIZER HT - Recommended Starting Point Speed & Feeds (Slotting) METRIC																
Material	m/min	6mm Diameter			10mm Diameter			12mm Diameter			20mm Diameter			25mm Diameter		
		RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min
Inconel																
625	41	2,182	0.015	133.0	1,309	0.023	119.7	1,091	0.030	133.0	655	0.038	99.8	524	0.046	95.8
718	27	1,455	0.013	73.9	873	0.019	66.5	727	0.025	73.9	436	0.032	55.4	349	0.038	53.2
Other Nickel Based																
Waspalloy	27	1,455	0.013	73.9	873	0.019	66.5	727	0.025	73.9	436	0.032	55.4	349	0.038	53.2
Hastelloy	27	1,455	0.013	73.9	873	0.019	66.5	727	0.025	73.9	436	0.032	55.4	349	0.038	53.2
A-286	34	1,778	0.013	90.3	1,067	0.019	81.3	889	0.025	90.3	533	0.032	67.7	427	0.038	65.0
Titanium																
6AL-4V/Comm. Pure.	84	4,444	0.019	338.7	2,667	0.029	304.8	2,222	0.038	338.7	1,333	0.048	254.0	1,067	0.057	243.8
Stainless Steel																
303	122	6,465	0.022	558.3	3,879	0.032	502.5	3,232	0.043	558.3	1,939	0.054	418.7	1,551	0.065	402.0
304	122	6,465	0.022	558.3	3,879	0.032	502.5	3,232	0.043	558.3	1,939	0.054	418.7	1,551	0.065	402.0
316	122	6,465	0.022	558.3	3,879	0.032	502.5	3,232	0.043	558.3	1,939	0.054	418.7	1,551	0.065	402.0
15/5	107	5,657	0.022	488.5	3,394	0.032	439.6	2,828	0.043	488.5	1,697	0.054	366.4	1,358	0.065	351.7
17/4	107	5,657	0.022	488.5	3,394	0.032	439.6	2,828	0.043	488.5	1,697	0.054	366.4	1,358	0.065	351.7
416	107	5,657	0.022	488.5	3,394	0.032	439.6	2,828	0.043	488.5	1,697	0.054	366.4	1,358	0.065	351.7
Kovar/Invar	69	3,636	0.022	314.0	2,182	0.032	282.6	1,818	0.043	314.0	1,091	0.054	235.5	873	0.065	226.1

Speeds and Feeds are based upon: ADOC = 1 x Diameter, RDOC = 1 x Diameter
For Profiling with 25% of the tool diameter increase speed by 25% and feed by 15%



Niagara Cutter

**STABILIZER™ GP
HIGH PERFORMANCE END MILLS**

**STR430M
STS430M
STB430M**



**METRIC 4 FLUTE
SOLID CARBIDE END MILL
WITH STABILIZED FLUTES**

Features

- Variable Helix
- Variable Pitch Technology
- Asymmetrical Cutting Edges
- US Patent # 6,991,409
- Extra-Fine Grade Carbide
- Eccentric OD Relief
- Center-Cutting
- Niagara Microshield™ AITiN & AICrN Coating

Applications

- Profiling
- Roughing
- Slotting
- Carbon Steel
- Tool Steel
- Alloy Steel
- Cast Iron
- Copper



Price Code E				STR430M with Radius			STS430M Square-End		STB430M Ball-End	
Flute Dia	Shank Dia	Length of Cut	Overall Length	Corner Radius	AITiN EDP	AICrN EDP	AITiN EDP	AICrN EDP	AITiN EDP	AICrN EDP
3mm	6mm	3mm	58mm	0.25	57385	68376	57351	68342	57419	68410
3mm	6mm	6mm	58mm	0.25	57386	68377	57352	68343	57420	68411
4mm	6mm	4mm	58mm	0.25	57387	68378	57353	68344	57421	68412
4mm	6mm	8mm	58mm	0.25	57388	68379	57354	68345	57422	68413
5mm	6mm	5mm	58mm	0.25	57389	68380	57355	68346	57423	68414
5mm	6mm	10mm	58mm	0.25	57390	68381	57356	68347	57424	68415
6mm	6mm	6mm	58mm	0.50	57391	68382	57357	68348	57425	68416
6mm	6mm	12mm	58mm	0.50	57392	68383	57358	68349	57426	68417
7mm	8mm	7mm	64mm	0.50	57393	68384	57359	68350	57427	68418
7mm	8mm	14mm	64mm	0.50	57394	68385	57360	68351	57428	68419
8mm	8mm	8mm	64mm	0.50	57395	68386	57361	68352	57429	68420
8mm	8mm	16mm	64mm	0.50	57396	68387	57362	68353	57430	68421
9mm	10mm	9mm	63mm	0.50	57397	68388	57363	68354	57431	68422
9mm	10mm	18mm	73mm	0.50	57398	68389	57364	68355	57432	68423
10mm	10mm	10mm	63mm	0.50	57399	68390	57365	68356	57433	68424
10mm	10mm	20mm	73mm	0.50	57400	68391	57366	68357	57434	68425
11mm	12mm	11mm	74mm	0.50	57401	68392	57367	68358	57435	68426
11mm	12mm	22mm	84mm	0.50	57402	68393	57368	68359	57436	68427
12mm	12mm	12mm	74mm	0.75	57403	68394	57369	68360	57437	68428
12mm	12mm	24mm	84mm	0.75	57404	68395	57370	68361	57438	68429
13mm	14mm	13mm	76mm	0.75	57405	68396	57371	68362	57439	68430
13mm	14mm	26mm	84mm	0.75	57406	68397	57372	68363	57440	68431
14mm	14mm	14mm	76mm	0.75	57407	68398	57373	68364	57441	68432
14mm	14mm	28mm	84mm	0.75	57408	68399	57374	68365	57442	68433
15mm	16mm	15mm	83mm	0.75	57409	68400	57375	68366	57443	68434
15mm	16mm	30mm	93mm	0.75	57410	68401	57376	68367	57444	68435
16mm	16mm	16mm	83mm	0.75	57411	68402	57377	68368	57445	68436
16mm	16mm	32mm	93mm	0.75	57412	68403	57378	68369	57446	68437
18mm	18mm	18mm	85mm	0.75	57413	68404	57379	68370	57447	68438
18mm	18mm	36mm	93mm	0.75	57414	68405	57380	68371	57448	68439
20mm	20mm	20mm	93mm	0.75	57415	68406	57381	68372	57449	68440
20mm	20mm	40mm	105mm	0.75	57416	68407	57382	68373	57450	68441
25mm	25mm	25mm	115mm	0.75	57417	68408	57383	68374	57451	68442
25mm	25mm	50mm	115mm	0.75	57418	68409	57384	68375	57452	68443

STABILIZER GP - Recommended Starting Point Speed & Feeds (Slotting) METRIC																
Material	m/min	6mm Diameter			10mm Diameter			12mm Diameter			20mm Diameter			25mm Diameter		
		RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min
Steels																
1018/1020	183	9,697	0.032	1,231.5	5,818	0.048	1,108.4	4,848	0.064	1,231.5	2,909	0.079	923.6	2,327	0.095	886.7
1045	168	8,889	0.025	903.1	5,333	0.038	812.8	4,444	0.051	903.1	2,667	0.064	677.3	2,133	0.076	650.2
4140	152	8,081	0.025	821.0	4,848	0.038	738.9	4,040	0.051	821.0	2,424	0.064	615.8	1,939	0.076	591.1
4340	145	7,677	0.025	780.0	4,606	0.038	702.0	3,838	0.051	780.0	2,303	0.064	585.0	1,842	0.076	561.6
Cast Iron																
Ductile	130	6,869	0.032	872.3	4,121	0.048	785.1	3,434	0.064	872.3	2,061	0.079	654.2	1,648	0.095	628.1
Gray	168	8,889	0.032	1,128.9	5,333	0.048	1,016.0	4,444	0.064	1,128.9	2,667	0.079	846.7	2,133	0.095	812.8
Tool Steel																
A2	130	6,869	0.025	697.9	4,121	0.038	628.1	3,434	0.051	697.9	2,061	0.064	523.4	1,648	0.076	502.5
D2	107	5,657	0.025	574.7	3,394	0.038	517.2	2,828	0.051	574.7	1,697	0.064	431.0	1,358	0.076	413.8
H13	130	6,869	0.025	697.9	4,121	0.038	628.1	3,434	0.051	697.9	2,061	0.064	523.4	1,648	0.076	502.5
P20	114	6,061	0.032	769.7	3,636	0.048	692.7	3,030	0.064	769.7	1,818	0.079	577.3	1,455	0.095	554.2
S7	122	6,465	0.025	656.8	3,879	0.038	591.1	3,232	0.051	656.8	1,939	0.064	492.6	1,551	0.076	472.9

Speeds and Feeds are based upon: ADOC = 1 x Diameter, RDOC = 1 x Diameter
For Profiling with 25% of the tool diameter increase speed and feed by 25%



HIGH PERFORMANCE SOLID CARBIDE END MILLS

S335M

METRIC 3 FLUTE



Features

- Flute Shape Designed for Optimal Chip Formation and Evacuation
- Corner Radius
- Center-Cutting

Applications

- Designed for Slotting and Pocketing
- For Steels, Stainless Steels & High Temp Alloys



Price Code E						S335M	
Flute Dia	Shank Dia	Length of Cut	Overall Length	Corner Radius	Unc EDP	AITIN EDP	
3mm	3mm	6mm	39mm	0.20	47763	47764	
3mm	3mm	12mm	39mm	0.20	47765	47766	
4mm	4mm	6mm	51mm	0.20	47767	47768	
4mm	4mm	12mm	51mm	0.20	47769	47770	
5mm	5mm	14mm	51mm	0.20	47771	47772	
6mm	6mm	8mm	51mm	0.50	47773	47774	
6mm	6mm	16mm	58mm	0.50	47775	47776	
8mm	8mm	10mm	59mm	0.50	47777	47778	
8mm	8mm	20mm	64mm	0.50	47779	47780	
10mm	10mm	11mm	67mm	0.50	47781	47782	
10mm	10mm	22mm	73mm	0.50	47783	47784	
12mm	12mm	12mm	74mm	1.00	47785	47786	
12mm	12mm	32mm	84mm	1.00	47787	47788	
14mm	14mm	16mm	76mm	1.00	47789	47790	
14mm	14mm	32mm	84mm	1.00	47791	47792	
16mm	16mm	16mm	83mm	1.00	47793	47794	
16mm	16mm	36mm	93mm	1.00	47795	47796	
18mm	18mm	38mm	85mm	1.00	47797	47798	
18mm	18mm	45mm	100mm	1.00	47799	47800	
20mm	20mm	38mm	100mm	1.00	47801	47802	
20mm	20mm	50mm	105mm	1.00	47803	47804	
25mm	25mm	38mm	115mm	1.00	47805	47806	
25mm	25mm	60mm	140mm	1.00	47807	47808	

S335M - Recommended Starting Point Speed & Feeds (Slotting) METRIC																
Material	m/min	6mm Diameter			10mm Diameter			12mm Diameter			20mm Diameter			25mm Diameter		
		RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min
Inconel																
625	33	1,745	0.015	80	1,047	0.025	79	873	0.030	80	524	0.038	60	419	0.046	57
718	22	1,164	0.013	44	698	0.021	44	582	0.025	44	349	0.032	33	279	0.038	32
Other Nickel Based																
Waspalloy	22	1,164	0.013	44	698	0.021	44	582	0.025	44	349	0.032	33	279	0.038	32
Hastelloy	2	1,164	0.013	44	698	0.021	44	582	0.025	44	349	0.032	33	279	0.038	32
A-286	27	1,422	0.013	54	853	0.021	54	711	0.025	54	427	0.032	41	341	0.038	39
Titanium																
6AL-4V/Comm. Pure	55	2,909	0.019	166	1,745	0.032	166	1,455	0.038	166	873	0.048	125	698	0.057	120
Stainless Steel																
303	79	4,202	0.022	272	2,521	0.036	271	2,101	0.043	272	1,261	0.054	204	1,008	0.065	196
304	79	4,202	0.022	272	2,521	0.036	271	2,101	0.043	272	1,261	0.054	204	1,008	0.065	196
316	79	4,202	0.022	272	2,521	0.036	271	2,101	0.043	272	1,261	0.054	204	1,008	0.065	196
15/5	69	3,677	0.022	238	2,206	0.036	237	1,838	0.043	238	1,103	0.054	179	882	0.065	171
17/4	69	3,677	0.022	238	2,206	0.036	237	1,838	0.043	238	1,103	0.054	179	882	0.065	171
416	69	3,677	0.022	238	2,206	0.036	237	1,838	0.043	238	1,103	0.054	179	882	0.065	171
Kovar/Invar	45	2,364	0.022	153	1,418	0.036	152	1,182	0.043	153	709	0.054	115	567	0.065	110
Steels																
1018/1020	117	6,222	0.033	607	3,733	0.054	604	3,111	0.065	607	1,867	0.081	455	1,493	0.098	437
1045	117	6,222	0.028	513	3,733	0.046	511	3,111	0.055	513	1,867	0.069	385	1,493	0.083	370
4140	107	5,657	0.028	467	3,394	0.046	465	2,828	0.055	467	1,697	0.069	350	1,358	0.083	336
4340	101	5,374	0.028	443	3,224	0.046	442	2,687	0.055	443	1,612	0.069	332	1,290	0.083	319
Cast Iron																
Ductile	104	5,495	0.038	618	3,297	0.062	616	2,747	0.075	618	1,645	0.094	464	1,319	0.113	445
Gray	117	6,222	0.038	700	3,733	0.062	697	3,111	0.075	700	1,867	0.094	525	1,493	0.113	504
Tool Steel																
A2	85	4,525	0.033	441	2,715	0.054	439	2,263	0.065	441	1,358	0.081	331	1,086	0.098	318
D2	75	3,960	0.033	386	2,376	0.054	385	1,980	0.065	386	1,188	0.081	290	950	0.098	278
H13	85	4,525	0.033	441	2,715	0.054	439	2,263	0.065	441	1,358	0.081	331	1,086	0.098	318
P20	80	4,242	0.038	477	2,545	0.062	475	2,121	0.075	477	1,273	0.094	358	1,018	0.113	344
S7	80	4,242	0.033	414	2,545	0.054	412	2,121	0.065	414	1,273	0.081	310	1,018	0.098	298

Speeds and Feeds are based upon: ADOC = 1 x Diameter, RDOC = 1 x Diameter



HIGH PERFORMANCE SOLID CARBIDE END MILLS

S645M



METRIC 6 FLUTE

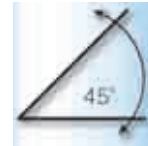
Price Code E				S645M	
Flute Dia	Shank Dia	Length of Cut	Overall Length	Unc EDP	AITiN EDP
3mm	3mm	6mm	39mm	47855	47856
3mm	3mm	12mm	39mm	47857	47858
4mm	4mm	6mm	51mm	47859	47860
4mm	4mm	12mm	51mm	47861	47862
5mm	5mm	14mm	51mm	47863	47864
6mm	6mm	8mm	51mm	47865	47866
6mm	6mm	16mm	58mm	47867	47868
8mm	8mm	10mm	59mm	47869	47870
8mm	8mm	20mm	64mm	47871	47872
10mm	10mm	11mm	67mm	47873	47874
10mm	10mm	22mm	73mm	47875	47876
12mm	12mm	12mm	74mm	47877	47878
12mm	12mm	32mm	84mm	47879	47880
14mm	14mm	16mm	76mm	47881	47882
14mm	14mm	32mm	84mm	47883	47884
16mm	16mm	16mm	83mm	47885	47886
16mm	16mm	36mm	93mm	47887	47888
18mm	18mm	38mm	85mm	47889	47890
18mm	18mm	45mm	100mm	47891	47892
20mm	20mm	38mm	100mm	47893	47894
20mm	20mm	50mm	105mm	47895	47896
25mm	25mm	38mm	115mm	47897	47898
25mm	25mm	60mm	140mm	47899	47900

Features

- Advanced Flute Geometries
- Eccentric Primary Relief
- Center-Cutting
- Ultra High Transverse Rupture Strength

Applications

- Designed for Profiling Applications
- Excellent for High Speed Milling Applications
- For Steels, Stainless Steels & High Temp Alloys



S645M - Recommended Starting Point Speed and Feeds (Profiling) METRIC																
Material	m/min	6mm Diameter			10mm Diameter			12mm Diameter			20mm Diameter			25mm Diameter		
		RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min
Inconel																
625	37	1,964	0.014	165	1,178	0.023	164	982	0.028	165	589	0.035	124	471	0.042	119
718	25	1,309	0.013	98	785	0.021	98	655	0.025	98	393	0.031	74	314	0.038	71
Other Nickel Based																
Waspalloy	25	1,309	0.013	98	785	0.021	98	655	0.025	98	393	0.031	74	314	0.038	71
Hastelloy	25	1,309	0.013	98	785	0.021	98	655	0.025	98	393	0.031	74	314	0.038	71
A-286	30	1,600	0.013	120	960	0.021	120	800	0.025	120	480	0.031	90	384	0.038	86
Titanium																
6AL-4V/Comm. Pure	67	3,556	0.019	405	2,133	0.032	404	1,778	0.038	405	1,067	0.048	304	853	0.057	292
Stainless Steel																
303	85	4,525	0.014	380	2,715	0.023	379	2,263	0.028	380	1,358	0.035	285	1,086	0.042	274
304	85	4,525	0.014	380	2,715	0.023	379	2,263	0.028	380	1,358	0.035	285	1,086	0.042	274
316	85	4,525	0.014	380	2,715	0.023	379	2,263	0.028	380	1,358	0.035	285	1,086	0.042	274
15/5	75	3,960	0.014	333	2,376	0.023	331	1,980	0.028	333	1,188	0.035	249	950	0.042	239
17/4	75	3,960	0.014	333	2,376	0.023	331	1,980	0.028	333	1,188	0.035	249	950	0.042	239
416	75	3,960	0.014	333	2,376	0.023	331	1,980	0.028	333	1,188	0.035	249	950	0.042	239
Kovar/Invar	55	2,909	0.014	244	1,745	0.023	243	1,455	0.028	244	873	0.035	183	698	0.042	176
Steels																
1018/1020	122	6,465	0.019	737	3,879	0.032	734	3,232	0.038	737	1,939	0.048	553	1,551	0.057	531
1045	122	6,465	0.019	737	3,879	0.032	734	3,232	0.038	737	1,939	0.048	553	1,551	0.057	531
4140	122	6,465	0.019	737	3,879	0.032	734	3,232	0.038	737	1,939	0.048	553	1,551	0.057	531
4340	116	6,141	0.019	700	3,685	0.032	697	3,071	0.038	700	1,842	0.048	525	1,474	0.057	504
Cast Iron																
Ductile	104	5,495	0.018	577	3,297	0.029	575	2,747	0.035	577	1,648	0.044	433	1,319	0.053	415
Gray	134	7,111	0.015	640	4,267	0.025	637	3,556	0.030	640	2,133	0.038	480	1,707	0.045	461
Tool Steel																
A2	104	5,495	0.015	495	3,297	0.025	493	2,747	0.030	495	1,648	0.038	371	1,319	0.045	356
D2	85	4,525	0.015	407	2,715	0.025	406	2,263	0.030	407	1,358	0.038	305	1,086	0.045	293
H13	104	5,495	0.015	495	3,297	0.025	493	2,747	0.030	495	1,648	0.038	371	1,319	0.045	356
P20	91	4,848	0.015	436	2,909	0.025	435	2,424	0.030	436	1,455	0.038	327	1,164	0.045	314
S7	98	5,172	0.015	465	3,103	0.025	464	2,586	0.030	465	1,551	0.038	349	1,241	0.045	335

Speeds and Feeds are based upon: ADOC = 1 x Diameter, RDOC = 1 x Diameter



HIGH PERFORMANCE
SOLID CARBIDE END MILLS

SR420M

METRIC 4 FLUTE / 5 FLUTE
FINE-PITCH ROUGHER
WITH CHAMFER



Features

- Advanced Flute Geometries
- Ultra-High Transverse Rupture Strength
- Extra-Fine Grade Carbide
- Corner Chamfer
- Center-Cutting

Applications

- Ideal for Slotting
- For Steel & Stainless Steel



Price Code E						SR420M
Flute Dia	Shank Dia	Length of Cut	Overall Length	# F	Corner Chamfer	AITIN EDP
6mm	6mm	8mm	51mm	4	0.50	47901
6mm	6mm	16mm	58mm	4	0.50	47902
8mm	8mm	10mm	59mm	4	0.50	47903
8mm	8mm	20mm	64mm	4	0.50	47904
10mm	10mm	11mm	67mm	4	0.50	47905
10mm	10mm	22mm	73mm	4	0.50	47906
12mm	12mm	12mm	74mm	4	1.00	47907
12mm	12mm	32mm	84mm	4	1.00	47908
14mm	14mm	16mm	76mm	4	1.00	47909
14mm	14mm	32mm	84mm	4	1.00	47910
16mm	16mm	16mm	83mm	4	1.00	47911
16mm	16mm	36mm	93mm	4	1.00	47912
18mm	18mm	38mm	85mm	4	1.00	47913
18mm	18mm	45mm	100mm	4	1.00	47914
20mm	20mm	38mm	100mm	4	1.00	47915
20mm	20mm	50mm	105mm	4	1.00	47916
25mm	25mm	38mm	115mm	5	1.00	47917
25mm	25mm	60mm	140mm	5	1.00	47918

SR420M - Recommended Starting Point Speed & Feeds (Slotting) METRIC																
Material	m/min	6mm Diameter			10mm Diameter			12mm Diameter			20mm Diameter			25mm Diameter		
		RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min
Stainless Steel																
303	91	4,848	0.014	262	2,909	0.022	261	2,424	0.027	262	1,455	0.034	196	1,164	0.041	189
304	91	4,848	0.014	262	2,909	0.022	261	2,424	0.027	262	1,455	0.034	196	1,164	0.041	189
316	91	4,848	0.013	242	2,909	0.021	241	2,424	0.025	242	1,455	0.031	182	1,164	0.038	175
15/5	80	4,242	0.013	212	2,545	0.021	211	2,121	0.025	212	1,273	0.031	159	1,018	0.038	153
17/4	80	4,242	0.011	187	2,545	0.018	186	2,121	0.022	187	1,273	0.028	140	1,018	0.033	134
416	80	4,242	0.011	187	2,545	0.018	186	2,121	0.022	187	1,273	0.028	140	1,018	0.033	134
Kovar/Invar	51	2,727	0.013	136	1,636	0.021	136	1,364	0.025	136	818	0.031	102	655	0.038	98
Steels																
1018/1020	146	7,757	0.015	465	4,654	0.025	464	3,879	0.030	465	2,327	0.038	349	1,862	0.045	335
1045	134	7,111	0.013	356	4,267	0.021	354	3,556	0.025	356	2,133	0.031	267	1,707	0.038	256
4140	122	6,465	0.013	323	3,879	0.021	322	3,232	0.025	323	1,939	0.031	242	1,551	0.038	233
4340	116	6,141	0.013	307	3,685	0.021	306	3,071	0.025	307	1,842	0.031	230	1,474	0.038	221
Cast Iron																
Ductile	97	5,151	0.018	361	3,091	0.029	359	2,576	0.035	361	1,545	0.044	270	1,236	0.053	260
Gray	126	6,667	0.018	467	4,000	0.029	465	3,333	0.035	467	2,000	0.044	350	1,600	0.053	336
Tool Steel																
A2	97	5,151	0.016	330	3,091	0.027	328	2,576	0.032	330	1,545	0.040	247	1,236	0.048	237
D2	80	4,242	0.016	272	2,545	0.027	270	2,121	0.032	272	1,273	0.040	204	1,018	0.048	195
H13	97	5,151	0.016	330	3,091	0.027	328	2,576	0.032	330	1,545	0.040	247	1,236	0.048	237
P20	86	4,545	0.018	318	2,727	0.029	317	2,273	0.035	318	1,364	0.044	239	1,091	0.053	229
S7	91	4,848	0.016	310	2,909	0.027	309	2,424	0.032	310	1,455	0.040	233	1,164	0.048	223

Speeds and Feeds are based upon: ADOC = 1 x Diameter, RDOC = 1 x Diameter



COBALT ROUGHING END MILLS

REC350M



METRIC MULTI FLUTE
SUPER FINE-PITCH
ROUGHER

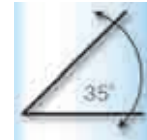
Features

- Super Fine-Pitch Profile
- Center-Cutting
- Corner Chamfer

Applications

- All Materials / High Temp Alloys
- Profile / Slotting

Price Code B						REC350M		
Flute Dia	Shank Dia	Length of Cut	Overall Length	#F	Corner Chamfer	Unc EDP	TiAlN EDP	AlCrN EDP
6mm	6mm	13mm	57mm	3	0.50	48044	48045	48046
8mm	8mm	19mm	69mm	3	0.50	48047	48048	48049
10mm	10mm	22mm	72mm	4	0.50	48050	48051	48052
12mm	12mm	26mm	83mm	4	0.50	48053	48054	48055
14mm	12mm	26mm	83mm	4	0.50	48056	48057	48058
16mm	16mm	32mm	92mm	4	0.75	48059	48060	48061
18mm	16mm	32mm	92mm	4	0.75	48062	48063	48064
20mm	20mm	38mm	104mm	4	0.75	48065	48066	48067
22mm	20mm	38mm	104mm	5	0.75	48068	48069	48070
25mm	25mm	45mm	121mm	5	1.00	48071	48072	48073
32mm	25mm	45mm	121mm	6	1.00	48074	48075	48076
32mm	32mm	45mm	121mm	6	1.00	48077	48078	48079



REC350M - Recommended Starting Point Speed & Feeds (Slotting) METRIC

Material	6mm Diameter			10mm Diameter			12mm Diameter			20mm Diameter			25mm Diameter			
	m/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min
Steels																
1018 / 1020	46	2,424	0.015	148	1,455	0.023	133	1,212	0.030	148	727	0.038	111	582	0.046	106
1045	40	2,101	0.013	107	1,261	0.019	96	1,050	0.025	107	630	0.032	80	504	0.038	77
4140	38	2,020	0.013	103	1,212	0.019	92	1,010	0.025	103	606	0.032	77	485	0.038	74
4340	38	2,020	0.013	103	1,212	0.019	92	1,010	0.25	103	606	0.032	77	485	0.038	74
Plastics																
Polycarbonate	91	4,848	0.064	1,232	2,909	0.095	1,108	2,424	0.127	1,232	1,455	0.159	924	1,164	0.191	887
Copper																
High Silicon Bronze	122	6,465	0.038	985	3,879	0.057	887	3,232	0.076	985	1,939	0.095	739	1,551	0.114	709
Copper Alloys																
Beryllium Copper	107	5,657	0.038	862	3,394	0.057	776	2,828	0.076	862	1,697	0.095	647	1,358	0.114	621
Cast Iron																
Ductile	46	2,424	0.019	185	1,455	0.029	166	1,212	0.038	185	727	0.048	139	582	0.057	133
Gray	42	2,747	0.025	279	1,648	0.038	251	1,374	0.051	279	824	0.064	209	659	0.076	201
Inconel																
625	18	970	0.013	49	582	0.019	44	485	0.025	49	291	0.032	37	233	0.038	35
718	11	566	0.013	29	339	0.019	26	283	0.025	29	170	0.032	22	136	0.038	21
Titanium																
6AL-4V/Comm Pure	18	970	0.015	59	582	0.023	53	485	0.030	59	291	0.038	44	233	0.046	43
Tool Steel (Annealed)																
A2	23	1,212	0.013	62	727	0.019	55	606	0.025	62	364	0.032	46	291	0.038	44
D2	20	1,050	0.013	53	630	0.019	48	525	0.025	53	315	0.032	40	252	0.038	38
H13	21	1,131	0.013	57	679	0.019	52	566	0.025	57	339	0.032	43	272	0.038	41
P20	18	970	0.013	49	582	0.019	44	485	0.025	49	291	0.032	37	233	0.038	35
S7	20	1,050	0.013	53	630	0.019	48	525	0.025	53	315	0.032	40	252	0.038	38
Stainless Steel																
303	18	970	0.013	49	582	0.019	44	485	0.025	49	291	0.032	37	233	0.038	35
304	20	1,050	0.013	53	630	0.019	48	525	0.025	53	315	0.032	40	252	0.038	38
316	17	889	0.013	45	533	0.019	41	444	0.025	45	267	0.032	34	213	0.038	33
15/5	17	889	0.013	45	533	0.019	41	444	0.025	45	267	0.032	34	213	0.038	33
17/4	15	808	0.013	41	485	0.019	37	404	0.025	41	242	0.032	31	194	0.038	30
416	15	808	0.013	41	485	0.019	37	404	0.025	41	242	0.032	31	194	0.038	30

Speeds and Feeds are based upon ADOC = 1/2 x Diameter, RDOC = 1 x Diameter
For Profiling with 25% of the tool diameter increase speed by 15% and feed by 15%

VFP635M

COBALT END MILLS

METRIC MULTI FLUTE



Features

- Variable Face Profile
- Polished Flute Faces
- Center-Cutting
- Corner Chamfer

Applications

- Aerospace Materials
- For Stainless Steels, Titanium & Titanium Alloys

Price Code B

Price Code B						VFP635M		
Flute Dia	Shank Dia	Length of Cut	Overall Length	#F	Corner Chamfer	Unc EDP	TiAlN EDP	AlCrN EDP
16mm	16mm	32mm	92mm	4	0.50	68921	68922	68923
18mm	16mm	32mm	92mm	4	0.50	68924	68925	68926
20mm	20mm	38mm	114mm	4	0.75	68927	68928	68929
25mm	25mm	45mm	121mm	4	0.75	68930	68931	68932
25mm	25mm	45mm	121mm	6	0.75	68933	68934	68935
30mm	30mm	45mm	121mm	4	1.00	68936	68937	68938
30mm	30mm	45mm	121mm	6	1.00	68939	68940	68941
32mm	32mm	53mm	132mm	4	1.00	68942	68943	68944
32mm	32mm	53mm	132mm	6	1.00	68945	68946	68947



VFP635M - Recommended Starting Point Speed & Feeds (Slotting) METRIC														
Material	16mm Diameter				20mm Diameter			25mm Diameter			32mm Diameter			Axial Depth
	m/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min	Maximum
Titanium 6Al4V														
<38 Rc	23	419	0.084	141	335	0.097	130	268	0.122	196	209	0.142	178	1 x Dia
>38 Rc	17	309	0.051	63	248	0.017	70	198	0.091	108	155	0.102	95	0.75 x Dia

VFP635M - Recommended Starting Point Speed & Feeds (Profiling) METRIC															
Material	16mm Diameter				20mm Diameter			25mm Diameter			32mm Diameter			Radial Depth	Axial Depth
	m/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min	Maximum	Maximu
Titanium 6Al4V															
<38 Rc	23	419	0.102	171	335	0.119	150	268	0.152	244	209	0.178	223	0.4 x Dia	1.5 x Dia
>38 Rc	17	309	0.071	88	248	0.089	88	198	0.114	135	155	0.127	118	0.25 x Dia	1 x Dia



HIGH PERFORMANCE SOLID CARBIDE END MILLS

A345M



METRIC 3 FLUTE

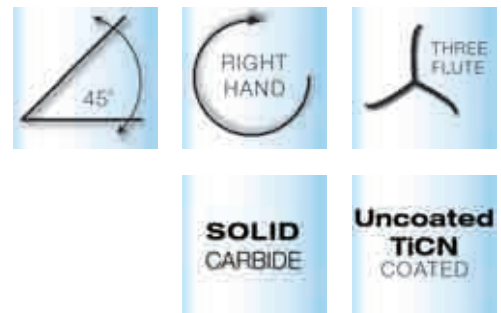
Price Code E				A345M	
Flute Dia	Shank Dia	Length of Cut	Overall Length	Unc EDP	TiCN EDP
3mm	3mm	6mm	39mm	47809	47810
3mm	3mm	12mm	39mm	47811	47812
4mm	4mm	6mm	51mm	47813	47814
4mm	4mm	12mm	51mm	47815	47816
5mm	5mm	14mm	51mm	47817	47818
6mm	6mm	8mm	51mm	47819	47820
6mm	6mm	16mm	58mm	47821	47822
8mm	8mm	10mm	59mm	47823	47824
8mm	8mm	20mm	64mm	47825	47826
10mm	10mm	11mm	67mm	47827	47828
10mm	10mm	22mm	73mm	47829	47830
12mm	12mm	12mm	74mm	47831	47832
12mm	12mm	32mm	84mm	47833	47834
14mm	14mm	16mm	76mm	47835	47836
14mm	14mm	32mm	84mm	47837	47838
16mm	16mm	16mm	83mm	47839	47840
16mm	16mm	36mm	93mm	47841	47842
18mm	18mm	38mm	85mm	47843	47844
18mm	18mm	45mm	100mm	47845	47846
20mm	20mm	38mm	100mm	47847	47848
20mm	20mm	50mm	105mm	47849	47850
25mm	25mm	38mm	115mm	47851	47852
25mm	25mm	60mm	140mm	47853	47854

Features

- Designed for Smoother & Quieter Milling Operations
- Both Roughing & Finishing Capabilities
- Cylindrical OD Land to Eliminate Chatter
- Unique Flute Shape for Optimal Chip Formation & Evacuation
- Center-Cutting

Applications

- Designed for Aluminum Alloys



A345M - Recommended Starting Point Speed & Feeds (Slotting) METRIC																
Material	m/min	6mm Diameter			10mm Diameter			12mm Diameter			20mm Diameter			25mm Diameter		
		RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min
Aluminum																
6061-T6	457	24,242	0.150	10,909	14,545	0.249	10,865	12,121	0.300	10,909	7,273	0.375	8,182	5,818	0.450	7,854
7075-T6	427	22,626	0.125	8,485	13,576	0.208	8,451	11,313	0.250	8,485	6,788	0.313	6,364	5,430	0.375	6,109

Speeds and Feeds are based upon: ADOC = 1 x Diameter, RDOC = 1 x Diameter

A345M - Recommended Starting Point Speed & Feeds (Profiling) METRIC																
Material	m/min	6mm Diameter			10mm Diameter			12mm Diameter			20mm Diameter			25mm Diameter		
		RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min
Aluminum																
6061-T6	503	26,666	0.180	14,400	16,000	0.299	14,342	13,333	0.360	14,400	8,000	0.450	10,800	6,400	0.540	10,368
7075-T6	470	24,889	0.150	11,200	14,933	0.249	11,155	12,444	0.300	11,200	7,467	0.375	8,400	5,973	0.450	8,064

Speeds and Feeds are based upon: ADOC = 1 x Diameter, RDOC = 0.25 x Diameter



HIGH PERFORMANCE SOLID CARBIDE END MILLS

**MB215M
MBZ215M**

**METRIC 2 FLUTE
BALL-END**



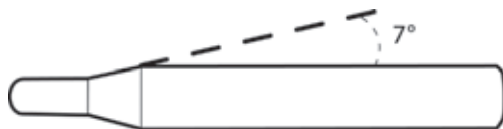
Features

- 7° Draft Angle
- AlTiN Coating

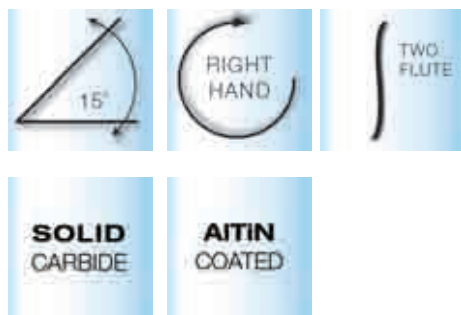
Applications

- Rough & Finish Milling of Contours & Complex Shapes
- Two Options: Materials up to 52 HRc or 62 HRc

Price Code E					MB215M for materials up to 52 HRc		MBZ215M for materials up to 62 HRc	
Flute Dia	Shank Dia	Length of Cut	Neck Dia	Neck Length	Overall Length	AlTiN EDP	Overall Length	AlTiN EDP
*1mm	6mm	1mm	0.9mm	1mm	64mm	76660	60mm	76680
*2mm	6mm	2mm	1.9mm	2mm	64mm	76661	60mm	76681
*3mm	6mm	3mm	2.9mm	3mm	75mm	76662	75mm	76682
*4mm	6mm	4mm	3.9mm	4mm	75mm	76663	75mm	76683
*5mm	6mm	5mm	4.9mm	5mm	75mm	76664	75mm	76684
6mm	6mm	6mm	5.9mm	6mm	75mm	76665	75mm	76685
8mm	8mm	8mm	7.8mm	8mm	82mm	76666	80mm	76686
10mm	10mm	10mm	9.8mm	10mm	82mm	76667	80mm	76687
12mm	12mm	12mm	11.8mm	12mm	100mm	76668	100mm	76688
16mm	16mm	16mm	15.8mm	16mm	120mm	76669	105mm	76689



* 7° draft angle is used to blend the shank to the cutting diameter



TOLERANCE INFORMATION	
MB215M	MBZ215M
Flute Dia: +0/-0.025	Flute Dia: +0/-0.025
Shank Dia: ISO h6	Shank Dia: 3mm to 10mm -.0025/-0.0076mm 12mm to 16mm -.0025/-0.0089mm

MBZ215M - Recommended Starting Point Speed & Feeds METRIC													
Material	3mm Diameter			6mm Diameter			10mm Diameter			12mm Diameter			
	m/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	
30 - 45 HRc	183	19,394	0.050	1,939	9,697	0.100	1,969	5,818	0.166	1,932	4,848	0.200	1,939
45 - 52 HRc	160	16,970	0.043	1,442	8,485	0.085	1,442	5,091	0.141	1,437	4,242	0.170	1,442
52 - 62 HRc	130	13,737	0.030	824	6,869	0.060	824	4,121	0.100	821	3,434	0.120	824

Work Material	30 - 45 HRc		45 - 52 HRc		52 - 62 HRc	
		Axial depth of cut up to 10% of tool diameter		Axial depth of cut up to 5% of tool diameter		Axial depth of cut up to 3% of tool diameter
	Radial depth of cut up to 30% of tool diameter		Radial depth of cut up to 20% of tool diameter		Radial depth of cut up to 10% of tool diameter	
	Reduce radial stepover for finishing		Reduce radial stepover for finishing		Reduce radial stepover for finishing	



HIGH PERFORMANCE SOLID CARBIDE END MILLS

**MZR645M
MZ645M**



**METRIC 6 FLUTE
FOR HARDENED MATERIALS**

Price Code E				MZR645M for materials up to 62 HRc	MZ645M for materials up to 62 HRc	
Flute Dia	Shank Dia	Length of Cut	Overall Length	Corner Radius	AITiN EDP	AITiN EDP
3mm	6mm	3mm	75mm	0.50	76710	76716
3mm	6mm	9mm	75mm	0.50	76644	76645
4mm	6mm	12mm	75mm	0.50	76646	76647
5mm	6mm	5mm	75mm	0.50	76711	76717
5mm	6mm	15mm	75mm	0.50	76648	76649
6mm	6mm	6mm	75mm	0.50	76712	76718
6mm	6mm	15mm	75mm	0.50	76650	76651
8mm	8mm	8mm	80mm	0.50	76713	76719
8mm	8mm	20mm	80mm	0.50	76652	76653
10mm	10mm	10mm	80mm	0.50	76714	76720
10mm	10mm	25mm	80mm	0.80	76654	76655
12mm	12mm	12mm	100mm	0.80	76715	76721
12mm	12mm	30mm	100mm	0.80	76656	76657
16mm	16mm	40mm	105mm	0.80	76658	76659

Features

- Ultra-Fine Premium Solid Carbide
- Available in Square or Radius

Applications

- Designed for Profiling Applications
- Excellent for HSM Applications
- For Materials up to 62 HRc



TOLERANCE INFORMATION	
MZ645M / MZR645M	
Flute Dia: +0/-0.025	
Shank Dia:	3mm to 10mm -.0025/-0.0076mm 12mm to 16mm -.0025/-0.0089mm

MZ645M - Recommended Starting Point Speed & Feeds METRIC													
Material	m/min	3mm Diameter			6mm Diameter			10mm Diameter			12mm Diameter		
		RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min
30 - 45 HRc	168	17,778	0.019	2,000	8,889	0.038	2,000	5,333	0.062	1,992	4,444	0.075	2,000
45 - 52 HRc	137	14,545	0.015	1,309	7,273	0.030	1,309	4,364	0.050	1,304	3,636	0.060	1,309
52 - 62 HRc	122	12,929	0.010	776	6,465	0.020	776	3,879	0.033	773	3,232	0.040	776

Work Material	30 - 45 HRc			45 - 52 HRc			52 - 62 HRc		
		Axial depth of cut up to 150% of tool diameter			Axial depth of cut up to 100% of tool diameter			Axial depth of cut up to 100% of tool diameter	
	Radial depth of cut up to 10% of tool diameter			Radial depth of cut up to 5% of tool diameter			Radial depth of cut up to 2% of tool diameter		

**DIA230M / DIAB230M
DIA430M / DIAB430M**
**CVD DIAMOND COATED
SOLID CARBIDE END MILL**
METRIC 2 FLUTE SQUARE & BALL-END
METRIC 4 FLUTE SQUARE & BALL-END

Features

- Center-Cutting
- Diameter Tolerances +/- 0.025mm
- Shank Tolerances ISO h6

Applications

- Designed for Carbon Fiber, Composites, Graphite & Green Ceramics



Price Code E				DIA230M 2F Metric	DIAB230M 2F Metric	DIA430M 4F Metric	DIAB430M 4F Metric
Flute Dia	Shank Dia	Length of Cut	Overall Length	Square EDP	Ball-End EDP	Square End	Ball-End EDP
1mm	3mm	4mm	45mm	77259	77267	77275	77283
2mm	3mm	10mm	45mm	77260	77268	77276	77284
3mm	3mm	15mm	45mm	77261	77269	77277	77285
4mm	4mm	15mm	55mm	77262	77270	77278	77286
6mm	6mm	20mm	64mm	77263	77271	77279	77287
8mm	8mm	20mm	64mm	77264	77272	77280	77288
10mm	10mm	25mm	63mm	77265	77273	77281	77289
12mm	12mm	30mm	76mm	77266	77274	77282	77290

DIA230M & DIAB230M - Recommended Starting Point Speed & Feeds (Slotting) METRIC																
Material	2mm Diameter			4mm Diameter			6mm Diameter			10mm Diameter			12mm Diameter			
	m/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min
Graphite (Poco)	550	87,466	0.025	4,427	43,733	0.051	4,434	29,155	0.076	4,432	17,493	0.095	3,324	14,578	0.114	3,324
Carbon Fiber Composites	350	55,660	0.025	2,817	27,830	0.051	2,822	18,553	0.076	2,820	11,132	0.095	2,115	9,277	0.114	2,115
Reinforced Plastic	100	15,903	0.025	805	7,951	0.051	806	5,301	0.076	806	3,181	0.095	604	2,650	0.114	604
Copper Alloys	250	39,757	0.025	1,986	19,879	0.050	1,989	13,252	0.075	1,988	7,951	0.094	1,491	6,626	0.113	1,491
High Silicon Aluminum (>15%)	200	31,806	0.023	1,483	15,903	0.047	1,485	10,602	0.070	1,484	6,361	0.088	1,113	5,301	0.105	1,113
Green Ceramics	61	9,697	0.023	452	4,848	0.047	453	3,232	0.070	453	1,939	0.088	339	1,616	0.105	339
Brass Magnesium	250	39,757	0.012	927	19,879	0.023	928	13,252	0.035	928	7,951	0.044	696	6,626	0.053	696

Speeds and Feeds are based upon: ADOC = 0.75 x Diameter, RDOC = 1 x Diameter

DIA430M & DIAB430M - Recommended Starting Point Speed & Feeds (Profiling) METRIC																
Material	2mm Diameter			4mm Diameter			6mm Diameter			10mm Diameter			12mm Diameter			
	m/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min
Graphite (Poco)	550	87,466	0.017	5,825	43,733	0.033	5,834	29,155	0.050	5,831	17,493	0.063	4,373	14,578	0.075	4,373
Carbon Fiber Composites	350	55,660	0.017	3,707	27,830	0.033	3,713	18,553	0.050	3,711	11,132	0.063	2,783	9,277	0.075	2,783
Reinforced Plastic	100	15,903	0.015	953	7,951	0.030	955	5,301	0.045	954	3,181	0.056	716	2,650	0.068	716
Copper Alloys	250	39,757	0.013	2,118	19,879	0.027	2,121	13,252	0.040	2,120	7,951	0.050	1,590	6,626	0.060	1,590
High Silicon Aluminum (>15%)	200	31,806	0.013	1,695	15,903	0.027	1,697	10,602	0.040	1,696	6,361	0.050	1,272	5,301	0.060	1,272
Green Ceramics	60	9,600	0.015	575	4,800	0.030	576	3,200	0.045	576	1,920	0.056	432	1,600	0.068	432
Brass Magnesium	250	39,757	0.007	1,059	19,879	0.013	1,061	13,252	0.020	1,060	7,951	0.025	795	6,626	0.030	795

Speeds and Feeds are based upon: ADOC = 1 x Diameter, RDOC = 0.5 x Diameter



Niagara Cutter

**CVD DIAMOND COATED
SOLID CARBIDE END MILLS**

DIACR430M



**METRIC 4 FLUTE
WITH RADIUS**

Price Code E				DIACR430M 4F Metric with Corner Radius			
Flute Dia	Shank Dia	Length of Cut	Overall Length	Corner Radius	EDP	Corner Radius	EDP
3mm	3mm	15mm	45mm	0.30mm	77291	0.50mm	77292
4mm	4mm	15mm	55mm	0.30mm	77293	0.50mm	77294
6mm	6mm	20mm	64mm	0.50mm	77295	1.00mm	77296
8mm	8mm	20mm	64mm	0.50mm	77297	1.00mm	77298
10mm	10mm	25mm	63mm	0.50mm	77299	1.00mm	77300
12mm	12mm	30mm	76mm	0.50mm	77301	1.00mm	77302

Features

- Center-Cutting
- Diameter Tolerances +/- 0.025mm
- Shank Tolerances ISO h6

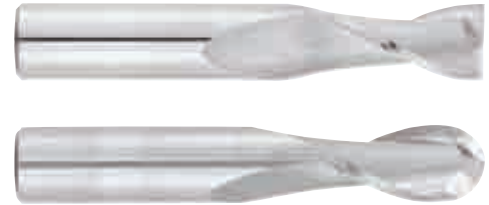
Applications

- Designed for Carbon Fiber, Composites, Graphite & Green Ceramics



DIACR430M - Recommended Starting Point Speed & Feeds (Profiling) METRIC																
Material	2mm Diameter			4mm Diameter			6mm Diameter			10mm Diameter			12mm Diameter			
	m/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	
Graphite (Poco)	550	87,466	0.017	5,825	43,733	0.033	5,834	29,155	0.050	5,831	17,493	0.063	4,373	14,578	0.075	4,373
Carbon Fiber Composites	350	55,660	0.017	3,707	27,830	0.033	3,713	18,553	0.050	3,711	11,132	0.063	2,783	9,277	0.075	2,783
Reinforced Plastic	100	15,903	0.015	953	7,951	0.030	955	5,301	0.045	954	3,181	0.056	716	2,650	0.068	716
Copper Alloys	250	39,757	0.013	2,118	19,879	0.027	2,121	13,252	0.040	2,120	7,951	0.050	1,590	6,626	0.060	1,590
High Silicon Aluminum (>15%)	200	31,806	0.013	1,695	15,903	0.027	1,697	10,602	0.040	1,696	6,361	0.050	1,272	5,301	0.060	1,272
Green Ceramics	60	9,600	0.015	575	4,800	0.030	576	3,200	0.045	576	1,920	0.056	432	1,600	0.068	432
Brass Magnesium	250	39,757	0.007	1,059	19,879	0.013	1,061	13,252	0.020	1,060	7,951	0.025	795	6,626	0.030	795

Speeds and Feeds are based upon: ADOC = 1 x Diameter, RDOC = 0.5 x Diameter

**C230M
CB230M**
SOLID CARBIDE END MILLS
METRIC 2 FLUTE

Features

- Center-Cutting
- Extra-Fine Grade Carbide
- Niagara Microshield™ AlTiN Coating

Applications

- General Purpose
- Slotting
- Pocketing
- All Materials



Price Code C				C230M Square-End		CB230M Ball-End	
Flute Dia	Shank Dia	Length of Cut	Overall Length	Unc EDP	AlTiN EDP	Unc EDP	AlTiN EDP
1mm	3mm	4mm	39mm	46327	46328	46369	46370
1.5mm	3mm	4.5mm	39mm	46329	46330	46371	46372
2mm	3mm	6.3mm	39mm	46331	46332	46373	46374
2.5mm	3mm	9.5mm	39mm	46333	46334	46375	46376
3mm	3mm	6mm	39mm	47667	47668	47919	47920
3mm	3mm	12mm	39mm	46335	46336	46377	46378
3.5mm	4mm	12mm	51mm	46337	46338	46379	46380
4mm	4mm	6mm	51mm	47669	47670	47921	47922
4mm	4mm	14mm	51mm	46339	46340	46381	46382
4.5mm	6mm	16mm	51mm	46341	46342	46383	46384
5mm	6mm	16mm	51mm	46343	46344	46385	46386
6mm	6mm	9mm	51mm	47671	47672	47923	47924
6mm	6mm	19mm	51mm	46345	46346	46387	46388
7mm	8mm	19mm	64mm	46347	46348	46389	46390
8mm	8mm	10mm	64mm	47673	47674	47925	47926
8mm	8mm	20mm	64mm	46349	46350	46391	46392
9mm	10mm	22mm	73mm	46351	46352	46393	46394
10mm	10mm	10mm	73mm	47675	47676	47927	47928
10mm	10mm	22mm	73mm	46353	46354	46395	46396
11mm	12mm	25mm	74mm	46355	46356	46397	46398
12mm	12mm	12mm	74mm	47677	47678	47929	47930
12mm	12mm	25mm	74mm	46357	46358	46399	46400
14mm	14mm	32mm	84mm	46359	46360	46401	46402
16mm	16mm	16mm	93mm	47679	47680	47931	47932
16mm	16mm	32mm	93mm	46361	46362	46403	46404
18mm	18mm	19mm	100mm	47681	47682	47933	47934
18mm	18mm	38mm	100mm	46363	46364	46405	46406
20mm	20mm	19mm	100mm	47683	47684	47935	47936
20mm	20mm	38mm	100mm	46365	46366	46407	46408
25mm	25mm	38mm	101mm	46367	46368	46409	46410

C230M & CB230M - TiAlN Coated Recommended Starting Point Speed & Feeds (Slotting) METRIC																
Material	6mm Diameter			10mm Diameter			12mm Diameter			20mm Diameter			25mm Diameter			
	m/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min
Steels																
1018/1020	91	4,848	0.023	222	2,909	0.038	221	2,424	0.046	222	1,455	0.057	166	1,164	0.069	160
1045	84	4,444	0.017	147	2,667	0.027	146	2,222	0.033	147	1,333	0.041	110	1,067	0.050	106
4140	76	4,040	0.017	133	2,424	0.027	133	2,020	0.033	133	1,212	0.041	100	970	0.050	96
4340	76	4,040	0.017	133	2,424	0.027	133	2,020	0.033	133	1,212	0.041	100	970	0.050	96
Plastics																
Polycarbonate	152	8,081	0.064	1,026	4,848	0.105	1,022	4,040	0.127	1,026	2,424	0.159	770	1,939	0.191	739
Copper																
High Silicon Bronze	183	9,697	0.038	739	5,818	0.063	736	4,848	0.076	739	2,909	0.095	554	2,327	0.114	532
Copper Alloys																
Beryllium Copper	183	9,697	0.038	739	5,818	0.063	736	4,848	0.076	739	2,909	0.095	554	2,327	0.114	532
Cast Iron																
Ductile	91	4,848	0.019	185	2,909	0.032	184	2,424	0.038	185	1,455	0.048	139	1,164	0.057	133
Gray	114	6,061	0.025	308	3,636	0.042	307	3,030	0.051	308	1,818	0.064	231	1,455	0.076	222
Inconel																
625	30	1,616	0.019	62	970	0.032	61	808	0.038	62	485	0.048	46	388	0.057	44
718	20	1,050	0.019	40	630	0.032	40	525	0.038	40	315	0.048	30	252	0.057	29
Titanium																
6AL-4V / Comm. Pure	56	2,990	0.019	114	1,794	0.032	113	1,495	0.038	114	897	0.048	85	718	0.057	82
Tool Steel (Annealed)																
A2	69	3,636	0.019	139	2,182	0.032	138	1,818	0.038	139	1,091	0.048	104	873	0.057	100
D2	53	2,828	0.019	108	1,697	0.032	107	1,414	0.038	108	848	0.048	81	679	0.057	78
H13	66	3,475	0.019	132	2,085	0.032	132	1,737	0.038	132	1,042	0.048	99	834	0.057	95
P20	56	2,990	0.019	114	1,794	0.032	113	1,495	0.038	114	897	0.048	85	718	0.057	82
S7	61	3,232	0.019	123	1,939	0.032	123	1,616	0.038	123	970	0.048	92	776	0.057	89
Stainless Steel																
303	53	2,828	0.019	108	1,697	0.032	107	1,414	0.038	108	848	0.048	81	679	0.057	78
304	53	2,828	0.019	108	1,697	0.032	107	1,414	0.038	108	848	0.048	81	679	0.057	78
316	50	2,667	0.019	102	1,600	0.032	101	1,333	0.038	102	800	0.048	76	640	0.057	73
15 / 5	50	2,667	0.019	102	1,600	0.032	101	1,333	0.038	102	800	0.048	76	640	0.057	73
17 / 4	46	2,424	0.019	92	1,455	0.032	92	1,212	0.038	92	727	0.048	69	582	0.057	67
416	46	2,424	0.019	92	1,455	0.032	92	1,212	0.038	92	727	0.048	69	582	0.057	67

Speeds and Feeds are based upon: ADOC = 1/2 x Diameter, RDOC = 1 x Diameter



SOLID CARBIDE END MILLS

C330M



METRIC 3 FLUTE

Price Code C				C330M Square-End	
Flute Dia	Shank Dia	Length of Cut	Overall Length	Unc EDP	AlTiN EDP
1mm	3mm	4mm	39mm	47703	47704
1.5mm	3mm	4.5mm	39mm	47705	47706
2mm	3mm	6.3mm	39mm	47707	47708
2.5mm	3mm	9.5mm	39mm	47709	47710
3mm	3mm	6mm	39mm	47711	47712
3mm	3mm	12mm	39mm	47713	47714
3.5mm	4mm	12mm	51mm	47715	47716
4mm	4mm	6mm	51mm	47717	47718
4mm	4mm	14mm	51mm	47719	47720
4.5mm	6mm	16mm	51mm	47721	47722
5mm	6mm	16mm	51mm	47723	47724
6mm	6mm	9mm	51mm	47725	47726
6mm	6mm	19mm	51mm	47727	47728
7mm	8mm	19mm	64mm	47729	47730
8mm	8mm	10mm	64mm	47731	47732
8mm	8mm	20mm	64mm	47733	47734
9mm	10mm	22mm	73mm	47735	47736
10mm	10mm	10mm	73mm	47737	47738
10mm	10mm	22mm	73mm	47739	47740
11mm	12mm	25mm	74mm	47741	47742
12mm	12mm	12mm	74mm	47743	47744
12mm	12mm	25mm	74mm	47745	47746
14mm	14mm	32mm	84mm	47747	47748
16mm	16mm	16mm	93mm	47749	47750
16mm	16mm	32mm	93mm	47751	47752
18mm	18mm	19mm	100mm	47753	47754
18mm	18mm	38mm	100mm	47755	47756
20mm	20mm	19mm	100mm	47757	47758
20mm	20mm	38mm	100mm	47759	47760
25mm	25mm	38mm	101mm	47761	47762

Features

- Center-Cutting
- Extra-Fine Grade Carbide
- Niagara Microshield™ AlTiN Coating

Applications

- General Purpose
- Slotting
- Pocketing
- Profiling
- All Materials



C330M - Recommended Starting Point Speed & Feeds (Slotting) METRIC																
Material	m/min	6mm Diameter			10mm Diameter			12mm Diameter			20mm Diameter			25mm Diameter		
		RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min
Steels																
1018 / 1020	91	4,848	0.019	277	2,909	0.032	276	2,424	0.038	277	1,455	0.048	208	1,164	0.057	200
1045	84	4,444	0.013	169	2,667	0.021	169	2,222	0.025	169	1,333	0.032	127	1,067	0.038	122
4140	76	4,040	0.013	154	2,424	0.021	153	2,020	0.025	154	1,212	0.032	115	970	0.038	111
4340	76	4,040	0.013	154	2,424	0.021	153	2,020	0.025	154	1,212	0.032	115	970	0.038	111
Plastics																
Polycarbonate	152	8,081	0.064	1,539	4,848	0.105	1,533	4,040	0.127	1,539	2,424	0.159	1,155	1,939	0.191	1,108
Copper																
High Silicon Bronze	183	9,697	0.038	1,108	5,818	0.063	1,104	4,848	0.076	1,108	2,909	0.095	831	2,327	0.114	798
Copper Alloys																
Beryllium Copper	183	9,697	0.038	1,108	5,818	0.063	1,104	4,848	0.076	1,108	2,909	0.095	831	2,327	0.114	798
Cast Iron																
Ductile	91	4,848	0.019	277	2,909	0.032	276	2,424	0.038	277	1,455	0.048	208	1,164	0.057	200
Gray	114	6,061	0.025	462	3,636	0.042	460	3,030	0.051	462	1,818	0.064	346	1,455	0.076	333
Inconel																
625	30	1,616	0.013	62	970	0.021	61	808	0.025	62	485	0.032	46	388	0.038	44
718	20	1,050	0.013	40	630	0.021	40	525	0.025	40	315	0.032	30	252	0.038	29
Titanium																
6AL-4V/Comm Pure	56	2,990	0.019	171	1,794	0.032	170	1,495	0.038	171	897	0.048	128	718	0.057	123
Tool Steel (Annealed)																
A2	69	3,636	0.013	139	2,182	0.021	138	1,818	0.025	139	1,091	0.032	104	873	0.038	100
D2	53	2,828	0.013	108	1,697	0.021	107	1,414	0.025	108	848	0.032	81	679	0.038	78
H13	66	3,475	0.013	132	2,085	0.021	132	1,737	0.025	132	1,042	0.032	99	834	0.038	95
P20	56	2,990	0.013	114	1,794	0.021	113	1,495	0.025	114	897	0.032	85	718	0.038	82
S7	61	3,232	0.013	123	1,939	0.021	123	1,616	0.025	123	970	0.032	92	776	0.038	89
Stainless Steel																
303	53	2,828	0.013	108	1,697	0.021	107	1,414	0.025	108	848	0.032	81	679	0.038	78
304	53	2,828	0.013	108	1,697	0.021	107	1,414	0.025	108	848	0.032	81	679	0.038	78
316	50	2,667	0.013	102	1,600	0.021	101	1,333	0.025	102	800	0.032	76	640	0.038	73
15/5	50	2,667	0.013	102	1,600	0.021	101	1,333	0.025	102	800	0.032	76	640	0.038	73
17/4	46	2,424	0.013	92	1,455	0.021	92	1,212	0.025	92	727	0.032	69	582	0.038	67
416	46	2,424	0.013	92	1,455	0.021	92	1,212	0.025	92	727	0.032	69	582	0.038	67

Speeds and Feeds are based upon ADOC = 1/2 x Diameter, RDOC = 1 x Diameter
For Profiling with 25% of the tool diameter increase speed by 15% and feed by 15%

**C430M
CB430M**
METRIC 4 FLUTE

SOLID CARBIDE END MILLS



Features

- Center-Cutting
- Extra-Fine Grade Carbide
- Niagara Microshield™ AlTiN Coating

Applications

- General Purpose
- Slotting
- Pocketing
- All Materials



Price Code C				C430M Square-End		CB430M Ball-End	
Flute Dia	Shank Dia	Length of Cut	Overall Length	Unc EDP	AlTiN EDP	Unc EDP	AlTiN EDP
1mm	3mm	4mm	39mm	46411	46412	46453	46454
1.5mm	3mm	4.5mm	39mm	46413	46414	46455	46456
2mm	3mm	6.3mm	39mm	46415	46416	46457	46458
2.5mm	3mm	9.5mm	39mm	46417	46418	46459	46460
3mm	3mm	6mm	39mm	47685	47686	47937	47938
3mm	3mm	12mm	39mm	46419	46420	46461	46462
3.5mm	4mm	12mm	51mm	46421	46422	46463	46464
4mm	4mm	6mm	51mm	47687	47688	47939	47940
4mm	4mm	14mm	51mm	46423	46424	46465	46466
4.5mm	6mm	16mm	51mm	46425	46426	46467	46468
5mm	6mm	16mm	51mm	46427	46428	46469	46470
6mm	6mm	9mm	51mm	47689	47690	47941	47942
6mm	6mm	19mm	51mm	46429	46430	46471	46472
7mm	8mm	19mm	64mm	46431	46432	46473	46474
8mm	8mm	10mm	64mm	47691	47692	47943	47944
8mm	8mm	20mm	64mm	46433	46434	46475	46476
9mm	10mm	22mm	73mm	46435	46436	46477	46478
10mm	10mm	10mm	73mm	47693	47694	47945	47946
10mm	10mm	22mm	73mm	46437	46438	46479	46480
11mm	12mm	25mm	74mm	46439	46440	46481	46482
12mm	12mm	12mm	74mm	47695	47696	47947	47948
12mm	12mm	25mm	74mm	46441	46442	46483	46484
14mm	14mm	32mm	84mm	46443	46444	46485	46486
16mm	16mm	16mm	93mm	47697	47698	47949	47950
16mm	16mm	32mm	93mm	46445	46446	46487	46488
18mm	18mm	19mm	100mm	47699	47700	47951	47952
18mm	18mm	38mm	100mm	46447	46448	46489	46490
20mm	20mm	19mm	100mm	47701	47702	47953	47954
20mm	20mm	38mm	100mm	46449	46450	46491	46492
25mm	25mm	38mm	101mm	46451	46452	46493	46494

C430M & CB430M - TiAlN Coated Recommended Starting Point Speed & Feeds (Slotting) METRIC																
Material	m/min	6mm Diameter			10mm Diameter			12mm Diameter			20mm Diameter			25mm Diameter		
		RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min
Steels																
1018/1020	91	4,848	0.015	296	2,909	0.023	266	2,424	0.030	296	1,455	0.038	222	1,164	0.046	213
1045	84	4,444	0.013	226	2,667	0.019	203	2,222	0.025	226	1,333	0.032	169	1,067	0.038	163
4140	76	4,040	0.013	205	2,424	0.019	185	2,020	0.025	205	1,212	0.032	154	970	0.038	148
4340	76	4,040	0.013	205	2,424	0.019	185	2,020	0.025	205	1,212	0.032	154	970	0.038	148
Plastics																
Polycarbonate	152	8,081	0.064	2,053	4,848	0.095	1,847	4,040	0.127	2,053	2,424	0.159	1,539	1,939	0.191	1,478
Copper																
High Silicon Bronze	183	9,697	0.038	1,478	5,818	0.057	1,330	4,848	0.076	1,478	2,909	0.095	1,108	2,327	0.114	1,064
Copper Alloys																
Beryllium Copper	183	9,697	0.038	1,478	5,818	0.057	1,330	4,848	0.076	1,478	2,909	0.095	1,108	2,327	0.114	1,064
Cast Iron																
Ductile	91	4,848	0.019	369	2,909	0.029	333	2,424	0.038	369	1,455	0.048	277	1,164	0.057	266
Gray	114	6,061	0.025	616	3,636	0.038	554	3,030	0.051	616	1,818	0.064	462	1,455	0.076	443
Inconel																
625	30	1,616	0.013	82	970	0.019	74	808	0.025	82	485	0.032	62	388	0.038	59
718	20	1,050	0.013	53	630	0.019	48	525	0.025	53	315	0.032	40	252	0.038	38
Titanium																
6AL-4V / Comm. Pure	56	2,990	0.015	182	1,794	0.023	164	1,495	0.030	182	897	0.038	137	718	0.046	131
Tool Steel (Annealed)																
A2	69	3,636	0.013	185	2,182	0.019	166	1,818	0.025	185	1,091	0.032	139	873	0.038	133
D2	53	2,828	0.013	144	1,697	0.019	129	1,414	0.025	144	848	0.032	108	679	0.038	103
H13	66	3,475	0.013	177	2,085	0.019	159	1,737	0.025	177	1,042	0.032	132	834	0.038	127
P20	56	2,990	0.031	152	1,794	0.019	137	1,495	0.025	152	897	0.032	114	718	0.038	109
S7	61	3,232	0.013	164	1,939	0.019	148	1,616	0.025	164	970	0.032	123	776	0.038	118
Stainless Steel																
303	53	2,828	0.013	144	1,697	0.019	129	1,414	0.025	144	848	0.032	108	679	0.038	103
304	53	2,828	0.013	144	1,697	0.019	129	1,414	0.025	144	848	0.032	108	679	0.038	103
316	50	2,667	0.013	135	1,600	0.019	122	1,333	0.025	135	800	0.032	102	640	0.038	98
15 / 5	50	2,667	0.013	135	1,600	0.019	122	1,333	0.025	135	800	0.032	102	640	0.038	98
17 / 4	46	2,424	0.013	123	1,455	0.019	111	1,212	0.025	123	727	0.032	92	582	0.038	89
416	46	2,424	0.013	123	1,455	0.019	111	1,212	0.025	123	727	0.032	92	582	0.038	89

Speeds and Feeds are based upon: ADOC = 1/2 x Diameter, RDOC = 1 x Diameter
For Profiling with 25% of the tool diameter increase speed by 15% and feed by 15%



SOLID CARBIDE END MILLS

CN430M



METRIC 4 FLUTE WITH REACH

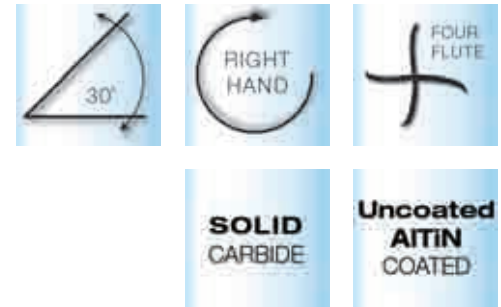
Price Code C					CN430M Square-End	
Flute Dia	Shank Dia	Length of Cut	Overall Length	Reach	Unc EDP	AlTiN EDP
6mm	6mm	9mm	64mm	18mm	47955	47956
6mm	6mm	9mm	64mm	27mm	47957	47958
8mm	8mm	12mm	80mm	24mm	47959	47960
8mm	8mm	12mm	80mm	32mm	47961	47962
10mm	10mm	15mm	89mm	30mm	47963	47964
10mm	10mm	15mm	89mm	40mm	47965	47966
12mm	12mm	18mm	100mm	36mm	47967	47968
12mm	12mm	18mm	100mm	48mm	47969	47970
16mm	16mm	24mm	125mm	48mm	47971	47972
16mm	16mm	24mm	125mm	60mm	47973	47974
20mm	20mm	30mm	140mm	50mm	47975	47976
20mm	20mm	30mm	140mm	65mm	47977	47978
25mm	25mm	38mm	150mm	65mm	47979	47980
25mm	25mm	38mm	150mm	75mm	47981	47982

Features

- Center-Cutting
- Extra-Fine Grade Carbide
- Niagara Microshield™ AlTiN Coating

Applications

- General Purpose
- Slotting
- Pocketing
- All Materials



CN430M - Recommended Starting Point Speed & Feeds (Slotting) METRIC																
Material	6mm Diameter			10mm Diameter			12mm Diameter			20mm Diameter			25mm Diameter			
	m/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min	RPM	CPT	mm/min
Steels																
1018 / 1020	73	3,879	0.015	236	2,327	0.023	213	1,939	0.030	236	1,164	0.038	177	931	0.046	170
1045	67	3,556	0.013	181	2,133	0.019	163	1,778	0.025	181	1,067	0.032	135	853	0.038	130
4140	61	3,232	0.013	164	1,939	0.019	148	1,616	0.025	164	970	0.032	123	776	0.038	118
4340	61	3,232	0.013	164	1,939	0.019	148	1,616	0.025	164	970	0.032	123	776	0.038	118
Plastics																
Polycarbonate	122	6,465	0.064	1,642	3,879	0.095	1,478	3,232	0.127	1,642	1,939	0.159	1,232	1,551	0.191	1,182
Copper																
High Silicon Bronze	146	7,757	0.038	1,182	4,654	0.057	1,064	3,879	0.076	1,182	2,327	0.095	887	1,862	0.114	851
Copper Alloys																
Beryllium Copper	146	7,757	0.038	1,182	4,654	0.057	1,064	3,879	0.076	1,182	2,327	0.095	887	1,862	0.114	851
Cast Iron																
Ductile	73	3,879	0.019	296	2,327	0.029	266	1,939	0.038	296	1,164	0.048	222	931	0.057	213
Gray	114	6,061	0.025	616	3,636	0.038	554	3,030	0.051	616	1,818	0.064	462	1,455	0.076	443
Inconel																
625	24	1,293	0.013	66	776	0.019	59	646	0.025	66	388	0.032	49	310	0.038	47
718	16	840	0.013	43	504	0.019	38	420	0.025	43	252	0.032	32	202	0.038	31
Titanium																
6AL-4V/Comm Pure	45	2,392	0.015	146	1,435	0.023	131	1,196	0.030	146	718	0.038	109	574	0.046	105
Tool Steel (Annealed)																
A2	55	2,909	0.013	148	1,745	0.019	133	1,455	0.025	148	873	0.032	111	698	0.038	106
D2	53	2,828	0.013	144	1,697	0.019	129	1,414	0.025	144	848	0.032	108	679	0.038	103
H13	52	2,780	0.013	141	1,668	0.019	127	1,390	0.025	141	834	0.032	106	667	0.038	102
P20	45	2,392	0.013	122	1,435	0.019	109	1,196	0.025	122	718	0.032	91	574	0.038	87
S7	49	2,586	0.013	131	1,551	0.019	118	1,293	0.025	131	776	0.032	99	621	0.038	95
Stainless Steel																
303	43	2,263	0.013	115	1,358	0.019	103	1,131	0.025	115	679	0.032	86	543	0.038	83
304	43	2,263	0.013	115	1,358	0.019	103	1,131	0.025	115	679	0.032	86	543	0.038	83
316	40	2,133	0.013	108	1,280	0.019	98	1,067	0.025	108	640	0.032	81	512	0.038	78
15/5	40	2,133	0.013	108	1,280	0.019	98	1,067	0.025	108	640	0.032	81	512	0.038	78
17/4	37	1,939	0.013	99	1,164	0.019	89	970	0.025	99	582	0.032	74	465	0.038	71
416	37	1,939	0.013	99	1,164	0.019	89	970	0.025	99	582	0.032	74	465	0.038	71

Speeds and Feeds are based upon ADOC = 1/3 x Diameter, RDOC = 1 x Diameter
For Profiling with 15% of the tool diameter increase speed by 15% and feed by 15%

Leading in High Performance Cutting Tools



Innovation / Technology / Quality / Service

Tomorrow's Technology ... Timeless Values Today

Founded in 1954, as a family owned business, Niagara Cutter has grown to become one of the world's largest and most sophisticated manufacturers of cutting tools. While application engineering, advanced manufacturing technologies and a focused vision have made that growth possible, the business has been built on a cornerstone of tradition and values. Niagara Cutter is still owned and operated by its founder's family and on his legacy of uncompromising quality. Customer satisfaction and ethical practices remain the guiding principles by which Niagara Cutter operates today.

A Test For Ourselves & A Promise To Our Customers

In the cutting tool industry, quality over time is assumed but not always achieved. No one in the industry pays more attention to the consistent quality of manufactured products than Niagara Cutter. Quality begins in our dedicated engineering, manufacturing and test facilities. Our in-plant machining laboratory, scanning electron microscope and fully equipped and staffed metallurgical laboratory are just a few of the resources to help guarantee that the promise we make is the promise we keep ... to provide the highest value cutting tools in the world.





Leading in High Performance Cutting Tools

Application Engineering

It starts with listening and learning and then culminates with a product that does not just perform, but outperforms that which previously existed. Between initial concept and final product there is application engineering, prototype development and exhaustive product testing and critical analysis – a truly innovative, and comprehensive, systems approach to world-class products. Niagara Cutter has not only dedicated itself to this process of constant improvement, but is proud of its record of significant innovation and industry advancements.

Manufacturing Technology

Niagara Cutter has, and continues to, invest heavily in automated processes, but in the final analysis, these machines are only as capable as their programming and maintenance allows and the final products are only as consistent as the parameters set by Niagara's machinists. It is in these areas where no machine can match the human contribution. Niagara Cutter aggressively pursues continuous improvement, in its automated operations, and its people. Therefore, the perfect operation between man and machine at Niagara Cutter results in a company that is far greater than the sum of the parts in achieving consistency and accuracy.

Products - High Performance Milling Solutions

Niagara Cutter offers over 300 product styles, including milling cutter, saws, and end mills in high speed steel, cobalt and carbide, as well as special cutting tools to customer blue prints. With multiple material substrates, tool geometries and thin film coatings, we provide a complete product range to meet your milling requirements. Our job is not just producing millions of premium cutting tools; it is producing premium cutting tools specifically for your application and for absolute optimum performance, by asking the critical questions and quickly responding with the most effective solution.

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