



REM445 - Multi Flute Single-End Non-Center Cutting Fine-Pitch Roughing Cobalt End Mills



September 2005 Pricing

Flute	Shank	Length	Overall	#	Uncoated	Uncoated	TiN	TiN	TiCN	TiCN	TiAlN	TiAlN
Dia	Dia	of Cut	Length	F	EDP	List	EDP	List	EDP	List	EDP	List
3/16	3/8	1/2	2 3/8	4	44501	\$24.42	44500	\$25.65	88388	\$26.88	75655	\$26.88
1/4	3/8	5/8	2 7/16	4	44503	\$24.42	44502	\$25.65	88389	\$26.88	75656	\$26.88
1/4	3/8	1 1/4	3 1/16	4	44505	\$29.12	44504	\$30.58	88390	\$32.03	75657	\$32.03
5/16	3/8	3/4	2 1/2	4	44507	\$24.42	44506	\$25.65	88391	\$26.88	75658	\$26.88
5/16	3/8	1 3/8	3 1/8	4	44509	\$29.12	44508	\$30.58	88392	\$32.03	75659	\$32.03
3/8	3/8	3/4	2 1/2	4	44511	\$24.42	44510	\$25.65	88393	\$26.88	75660	\$26.88
3/8	3/8	1 1/2	3 1/4	4	44513	\$29.12	44512	\$30.58	88394	\$32.03	75661	\$32.03
7/16	3/8	1	2 11/16	4	44515	\$36.74	44514	\$38.53	88395	\$40.43	75662	\$40.43
1/2	1/2	1	3	4	45415	\$32.14	45414	\$33.71	79589	\$35.39	75663	\$35.39
1/2	1/2	1 1/4	3 1/4	4	44517	\$32.03	44516	\$33.60	88396	\$35.28	75664	\$35.28
1/2	1/2	1 5/8	3 5/8	4	45417	\$38.98	45416	\$40.88	79590	\$42.90	75665	\$42.90
1/2	1/2	2	4	4	44519	\$42.67	44518	\$44.80	88397	\$46.93	75666	\$46.93
1/2	1/2	2 1/2	4 1/2	4	45419	\$49.28	45418	\$51.74	79591	\$54.21	75667	\$54.21
1/2	1/2	3	5	4	45421	\$53.20	45420	\$55.89	79592	\$58.58	75668	\$58.58
9/16	1/2	1 3/8	3 3/8	4	44521	\$38.98	44520	\$40.88	88398	\$42.90	75669	\$42.90
5/8	5/8	3/4	2 7/8	4	45423	\$36.96	45422	\$38.86	79593	\$40.66	75670	\$40.66
5/8	5/8	1 1/4	3 3/8	4	45425	\$38.19	45424	\$40.10	79594	\$42.00	75671	\$42.00
5/8	5/8	1 5/8	3 3/4	4	44523	\$38.86	44522	\$40.77	88399	\$42.78	75672	\$42.78
5/8	5/8	2 1/8	4 1/4	4	45427	\$46.37	45426	\$48.72	79595	\$50.96	75673	\$50.96
5/8	5/8	2 1/2	4 5/8	4	44525	\$50.18	44524	\$52.64	88400	\$55.22	75674	\$55.22
5/8	5/8	3 1/8	5 1/4	4	45429	\$61.82	45428	\$64.96	79596	\$67.98	75675	\$67.98
11/16	5/8	1 5/8	3 3/4	4	45431	\$49.50	45430	\$51.97	79597	\$54.43	75676	\$54.43
3/4	5/8	1 5/8	3 3/4	4	44533	\$49.50	44532	\$51.97	88404	\$54.43	75677	\$54.43
3/4	3/4	3/4	3	4	44531	\$46.37	44530	\$48.72	88403	\$50.96	75678	\$50.96
3/4	3/4	1 1/4	3 1/2	4	45433	\$43.57	45432	\$45.70	79598	\$47.94	75679	\$47.94
3/4	3/4	1 1/2	3 3/4	4	45435	\$48.05	45434	\$50.40	79599	\$52.86	75680	\$52.86
3/4	3/4	1 5/8	3 7/8	4	44527	\$44.58	44526	\$46.82	88401	\$49.06	75681	\$49.06
3/4	3/4	2	4 1/4	4	45437	\$53.31	45436	\$56.00	79600	\$58.69	75682	\$58.69
3/4	3/4	2 1/2	4 3/4	4	45439	\$57.01	45438	\$59.81	79601	\$62.72	75683	\$62.72
3/4	3/4	3	5 1/4	4	44529	\$58.35	44528	\$61.26	88402	\$64.18	75684	\$64.18
3/4	3/4	4 1/8	6 3/8	4	45441	\$77.62	45440	\$81.54	79602	\$85.34	75685	\$85.34
13/16	3/4	1 7/8	4 1/8	5	45443	\$50.62	45442	\$53.20	79603	\$55.66	75686	\$55.66
7/8	3/4	1 1/8	3 3/8	5	45445	\$55.10	45444	\$57.90	79604	\$60.59	75687	\$60.59
7/8	3/4	1 1/2	3 3/4	5	45447	\$61.15	45446	\$64.18	79605	\$67.31	75688	\$67.31
7/8	3/4	1 7/8	4 1/8	5	44535	\$63.95	44534	\$67.20	88405	\$70.34	75689	\$70.34
7/8	3/4	3 1/2	5 3/4	5	44537	\$74.59	44536	\$78.29	88406	\$82.10	75690	\$82.10
7/8	7/8	1 1/8	3 3/8	5	45449	\$61.15	45448	\$64.18	79606	\$67.31	75691	\$67.31
7/8	7/8	1 7/8	4 1/8	5	44539	\$61.49	44538	\$64.51	88407	\$67.65	75692	\$67.65
7/8	7/8	3 1/2	5 3/4	5	44541	\$71.01	44540	\$74.59	88408	\$78.06	75693	\$78.06
1	3/4	3/4	3	5	44553	\$58.80	44552	\$61.71	88414	\$64.74	75694	\$64.74
1	3/4	1 1/8	3 3/8	5	45451	\$56.78	45450	\$59.58	79607	\$62.50	75695	\$62.50
1	3/4	1 1/2	3 3/4	5	44551	\$71.01	44550	\$74.59	88413	\$78.06	75696	\$78.06
1	3/4	2	4 1/4	5	45453	\$70.22	45452	\$73.70	79608	\$77.28	75697	\$77.28
1	3/4	3	5 1/4	5	45455	\$83.66	45454	\$87.81	79609	\$92.06	75698	\$92.06
1	3/4	4	6 1/4	5	45457	\$87.25	45456	\$91.62	79610	\$95.98	75699	\$95.98
1	1	1 1/8	3 5/8	5	45459	\$64.62	45458	\$67.87	79611	\$71.12	75700	\$71.12
1	1	1 5/8	4 1/8	5	45461	\$67.76	45460	\$71.12	79612	\$74.59	75701	\$74.59
1	1	2	4 1/2	5	44543	\$67.09	44542	\$70.45	88409	\$73.81	75702	\$73.81
1	1	3	5 1/2	5	44545	\$85.90	44544	\$90.16	88410	\$94.53	75703	\$94.53
1	1	4	6 1/2	5	44547	\$90.94	44546	\$95.54	88411	\$100.02	75704	\$100.02
1	1	6	8 1/2	5	44549	\$124.21	44548	\$130.37	88412	\$136.64	75705	\$136.64
1 1/8	3/4	1 1/8	3 3/8	6	45463	\$90.61	45462	\$95.09	79613	\$99.68	75706	\$99.68
1 1/8	3/4	2	4 1/4	6	45465	\$95.76	45464	\$100.58	79614	\$105.39	75707	\$105.39

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Continued

Flute	Shank	Length	Overall	#	Uncoated	Uncoated	TiN	TiN	TiCN	TiCN	TiAlN	TiAlN
Dia	Dia	of Cut	Length	F	EDP	List	EDP	List	EDP	List	EDP	List
1 1/8	1	2	4 1/2	6	44555	\$95.98	44554	\$100.80	88415	\$105.62	75708	\$105.62
1 1/8	1	3 1/2	6	6	45467	\$102.03	45466	\$107.18	79615	\$112.22	75709	\$112.22
1 1/4	3/4	3/4	3	6	44567	\$97.33	44566	\$102.14	88421	\$107.07	75710	\$107.07
1 1/4	3/4	1 1/8	3 3/8	6	45471	\$100.02	45470	\$105.06	79616	\$109.98	75711	\$109.98
1 1/4	3/4	1 1/2	3 3/4	6	44565	\$91.62	44564	\$96.21	88420	\$100.80	75712	\$100.80
1 1/4	3/4	2	4 1/4	6	45475	\$95.98	45474	\$100.80	79617	\$105.62	75713	\$105.62
1 1/4	1 1/4	1 3/8	3 7/8	6	45477	\$93.86	45476	\$98.56	79618	\$103.26	75714	\$103.26
1 1/4	1 1/4	2	4 1/2	6	44557	\$89.04	44556	\$93.52	88416	\$98.00	75715	\$98.00
1 1/4	1 1/4	3	5 1/2	6	44559	\$117.26	44558	\$123.09	88417	\$129.02	75716	\$129.02
1 1/4	1 1/4	4	6 1/2	6	44561	\$131.71	44560	\$138.32	88418	\$144.93	75717	\$144.93
1 1/4	1 1/4	6	8 1/2	6	44563	\$188.16	44562	\$197.57	88419	\$206.98	75718	\$206.98
1 3/8	3/4	1 1/8	3 3/8	6	45479	\$95.87	45478	\$100.69	79619	\$105.50	75719	\$105.50
1 3/8	3/4	2	4 1/4	6	45481	\$121.74	45480	\$127.79	79620	\$133.95	75720	\$133.95
1 1/2	3/4	3/4	3	6	44583	\$90.16	44582	\$94.64	88429	\$99.23	75721	\$99.23
1 1/2	3/4	1 1/8	3 3/8	6	45483	\$97.78	45482	\$102.70	79621	\$107.52	75722	\$107.52
1 1/2	3/4	1 1/2	3 3/4	6	44581	\$121.18	44580	\$127.23	88428	\$133.28	75723	\$133.28
1 1/2	3/4	2	4 1/4	6	45485	\$125.44	45484	\$131.71	79622	\$137.98	75724	\$137.98
1 1/2	1 1/4	2	4 1/2	6	44569	\$119.17	44568	\$125.10	88422	\$131.04	75725	\$131.04
1 1/2	1 1/4	3	5 1/2	6	44571	\$153.66	44570	\$161.39	88423	\$169.01	75726	\$169.01
1 1/2	1 1/4	4	6 1/2	6	44573	\$171.25	44572	\$179.76	88424	\$188.38	75727	\$188.38
1 1/2	1 1/4	5	7 1/2	6	44575	\$202.38	44574	\$212.46	88425	\$222.66	75728	\$222.66
1 1/2	1 1/4	6	8 1/2	6	44577	\$251.55	44576	\$264.10	88426	\$276.75	75729	\$276.75
1 1/2	1 1/4	8	10 1/2	6	44579	\$284.03	44578	\$298.26	88427	\$312.48	75730	\$312.48
1 3/4	3/4	1 1/8	3 3/8	6	45487	\$156.02	45486	\$163.86	79623	\$171.58	75731	\$171.58
1 3/4	3/4	2	4 1/4	6	45489	\$167.44	45488	\$175.84	79624	\$184.24	75732	\$184.24
1 3/4	1 1/4	2	4 1/2	6	44633	\$153.66	44632	\$161.39	88454	\$169.01	75733	\$169.01
1 3/4	1 1/4	4	6 1/2	6	44635	\$191.97	44634	\$201.60	88455	\$211.12	75734	\$211.12
1 3/4	1 1/2	2 1/2	5 3/8	6	44585	\$153.66	44584	\$161.39	88430	\$169.01	75735	\$169.01
1 3/4	1 1/2	4 1/2	7 3/8	6	44587	\$191.97	44586	\$201.60	88431	\$211.12	75736	\$211.12
2	3/4	3/4	3	8	44589	\$180.21	44588	\$189.17	88432	\$198.24	75737	\$198.24
2	3/4	1 1/8	3 3/8	8	45491	\$158.37	45490	\$166.32	79625	\$174.16	75738	\$174.16
2	3/4	2	4 1/4	8	45493	\$169.79	45492	\$178.30	79626	\$186.82	75739	\$186.82
2	1 1/4	2	4 1/2	8	44591	\$179.42	44590	\$188.38	88433	\$197.34	75740	\$197.34
2	1 1/4	4	6 1/2	8	44593	\$220.19	44592	\$231.17	88434	\$242.26	75741	\$242.26
2	1 1/4	6 1/8	8 5/8	8	45495	\$281.57	45494	\$295.68	79627	\$309.68	75742	\$309.68
2	2	2	5 3/4	8	44595	\$200.03	44594	\$210.00	88435	\$220.08	75743	\$220.08
2	2	3	6 3/4	8	44597	\$213.92	44596	\$224.67	88436	\$235.31	75744	\$235.31
2	2	4	7 3/4	8	44599	\$247.07	44598	\$259.39	88437	\$271.82	75745	\$271.82
2	2	5	8 3/4	8	44601	\$281.57	44600	\$295.68	88438	\$309.68	75746	\$309.68
2	2	6	9 3/4	8	44603	\$305.42	44602	\$320.66	88439	\$336.00	75747	\$336.00
2	2	7	10 3/4	8	44605	\$379.79	44604	\$398.83	88440	\$417.76	75748	\$417.76
2	2	8	11 3/4	8	44607	\$393.23	44606	\$412.94	88441	\$432.54	75749	\$432.54
2	2	10	13 3/4	8	44609	\$542.53	44608	\$569.63	88442	\$596.74	75750	\$596.74
2	2	12	15 3/4	8	44611	\$647.36	44610	\$679.73	88443	\$712.10	75751	\$712.10
2 1/2	2	4	7 3/4	8	44613	\$418.99	44612	\$439.94	88444	\$460.88	75752	\$460.88
2 1/2	2	6	9 3/4	8	44615	\$558.88	44614	\$586.88	88445	\$614.77	75753	\$614.77
2 1/2	2	8	11 3/4	8	44617	\$646.69	44616	\$679.06	88446	\$711.31	75754	\$711.31
2 1/2	2	10	13 3/4	8	44619	\$761.15	44618	\$799.23	88447	\$837.31	75755	\$837.31
2 1/2	2	12	15 3/4	8	44621	\$912.91	44620	\$958.61	88448	\$1,004.19	75756	\$1,004.19
3	2 1/2	4	7 3/4	10	44623	\$787.81	44622	\$827.23	88449	\$866.54	75757	\$866.54
3	2 1/2	6	9 3/4	10	44625	\$937.55	44624	\$984.48	88450	\$1,031.30	75758	\$1,031.30
3	2 1/2	8	11 3/4	10	44627	\$1,132.32	44626	\$1,188.99	88451	\$1,245.55	75759	\$1,245.55
3	2 1/2	10	13 3/4	10	44629	\$1,262.02	44628	\$1,325.07	88452	\$1,388.24	75760	\$1,388.24
3	2 1/2	12	15 3/4	10	44631	\$1,301.66	44630	\$1,366.74	88453	\$1,431.81	75761	\$1,431.81
Flute Dia		+0.003" -0.000 1" & under / +0.006" -0.000" over 1"									Helix Angle 30°	
Shank Dia		-0.0001" -0.0005"		Overall Length			+0.062" -0.000"		Length of Cut		+0.031" -0.000"	