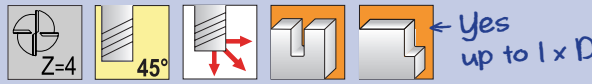


NEW SERIES



TOLERANCES	
$d1$	+0.000" - .002" (+.000mm - .050mm)
$d2$	h6
r	+0.001" - .001" (+.025 - .025mm)

Recommended for Light Depths of Cut at High Feed Rates

Corner Radius AlTiN Coating

Can be used in 28Rc - 62Rc materials

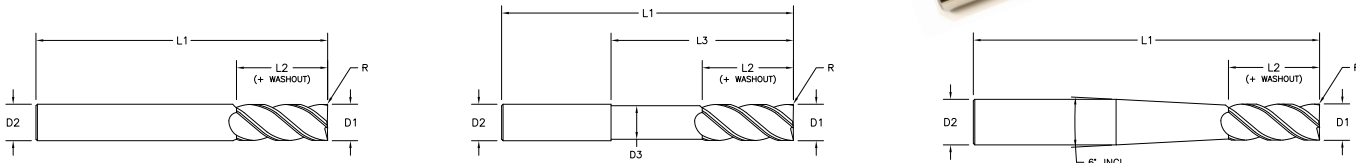
Solid submicron grain carbide end mill - center cutting
High performance tool for use on light axial depths of cut
Modified reach lengths available within 48 hours



Toroid Style

UNIQUE DESIGN

- * - tool has 3° blend angle to shank
- * - tool has reduced diameter shank



70

EDP#	$d1$ † Diameter		$d2$ Shank Diameter	$l1$ Overall Length	$l2$ Flute Length	r Corner Radius	$l3$ Reach Length	$d3$ Neck Diameter	1-11	12-24	25-49	50-100
	Decimal	Metric										
48300	.1181	3.000	6.0	65	3	0.75	15.0	2.80	35.37	33.83	32.29	30.76
48305	.1250	3.175	1/8"	3"	1/8"	.015"	-	-	26.73	25.57	24.41	23.24
48310	.1250	3.175	1/8"	3"	1/8"	.030"	-	-	26.73	25.57	24.41	23.24
48315	.1250	3.175	3/16"	2-1/2"	1/8"	.010"	3/4"	.115"	31.40	30.03	28.67	27.30
48320	.1250	3.175	3/16"	2-1/2"	1/8"	.015"	3/4"	.115"	31.40	30.03	28.67	27.30
48325	.1250	3.175	3/16"	2-1/2"	1/8"	.020"	3/4"	.115"	31.40	30.03	28.67	27.30
* 48330	.1250	3.175	3/16"	3"	1/8"	.030"	*	-	28.65	27.40	26.16	24.91
48335	.1575	4.000	6.0	65	4	1.00	20.0	3.70	33.96	32.48	31.01	29.53
48340	.1875	4.763	3/16"	3"	3/16"	.015"	-	-	30.82	29.48	28.14	26.80
48345	.1875	4.763	3/16"	3"	3/16"	.030"	-	-	30.82	29.48	28.14	26.80
48350	.1875	4.763	3/16"	3"	3/16"	.060"	-	-	30.82	29.48	28.14	26.80
48355	.1875	4.763	1/4"	2-1/2"	3/16"	.020"	7/8"	.175"	32.99	31.56	30.12	28.69
48360	.1875	4.763	1/4"	2-1/2"	3/16"	.030"	7/8"	.175"	32.99	31.56	30.12	28.69
48365	.1875	4.763	1/4"	2-1/2"	3/16"	.060"	7/8"	.175"	32.99	31.56	30.12	28.69
48370	.1875	4.763	1/4"	4"	3/16"	.020"	1-1/2"	.175"	47.69	45.62	43.54	41.47
48375	.1875	4.763	1/4"	4"	3/16"	.030"	1-1/2"	.175"	47.69	45.62	43.54	41.47
* 48380	.1875	4.763	1/4"	4"	3/16"	.030"	*	-	47.69	45.62	43.54	41.47
* 48385	.1969	5.000	6.0	100	5	1.20	* 10.0	5.00	49.43	47.28	45.13	42.98
48390	.2362	6.000	6.0	100	6	1.50	30.0	5.70	46.89	44.85	42.81	40.77
48395	.2500	6.350	1/4"	3"	1/4"	.015"	-	-	35.62	34.07	32.52	30.97
48400	.2500	6.350	1/4"	3"	1/4"	.030"	-	-	35.62	34.07	32.52	30.97
48405	.2500	6.350	1/4"	3"	1/4"	.060"	-	-	35.62	34.07	32.52	30.97
* 48410	.2756	7.000	6.0	100	7	1.50	*	-	74.18	70.95	67.73	64.50
48415	.3125	7.938	5/16"	2-1/2"	5/16"	.020"	-	-	32.90	31.47	30.04	28.61
48420	.3125	7.938	5/16"	3"	5/16"	.078"	1-5/8"	.300"	52.51	50.23	47.94	45.66
48425	.3125	7.938	5/16"	3"	5/16"	.094"	1-5/8"	.300"	52.51	50.23	47.94	45.66
48430	.3150	8.000	8.0	75	8	2.00	-	-	47.27	45.21	43.16	41.10
48435	.3150	8.000	8.0	100	8	2.00	40.0	7.70	61.31	58.64	55.98	53.31
48440	.3750	9.525	3/8"	3"	3/8"	.015"	-	-	49.94	47.77	45.60	43.43
48445	.3750	9.525	3/8"	3"	3/8"	.030"	-	-	49.94	47.77	45.60	43.43
48450	.3750	9.525	3/8"	3"	3/8"	.060"	-	-	49.94	47.77	45.60	43.43
48455	.3750	9.525	3/8"	3"	3/8"	.094"	2.00"	.365"	57.07	54.59	52.11	49.63
48460	.3750	9.525	3/8"	4"	3/8"	.030"	2-1/2"	.365"	63.53	60.77	58.01	55.24
48465	.3750	9.525	3/8"	4"	3/8"	.094"	2-1/2"	.365"	63.53	60.77	58.01	55.24
48470	.3937	10.000	10.0	100	10	2.00	50.0	9.70	78.43	75.02	71.61	68.20
48475	.4724	12.000	12.0	100	12	3.00	60.0	11.70	87.10	83.31	79.53	75.74
48480	.5000	12.700	1/2"	3"	1/2"	.015"	-	-	64.92	62.10	59.27	56.45
48485	.5000	12.700	1/2"	3"	1/2"	.030"	-	-	64.92	62.10	59.27	56.45
48490	.5000	12.700	1/2"	3"	1/2"	.060"	-	-	64.92	62.10	59.27	56.45
48495	.5000	12.700	1/2"	3"	1/2"	.125"	-	-	64.92	62.10	59.27	56.45
48500	.5000	12.700	1/2"	4"	1/2"	.125"	-	-	76.90	73.56	70.21	66.87

35

0

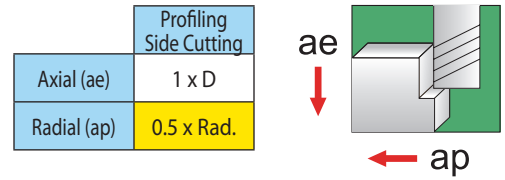
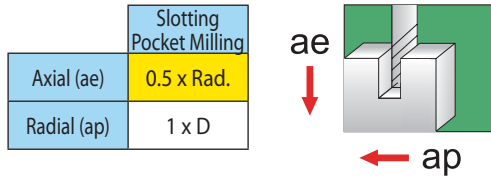
MATERIAL HARDNESS (Rc)

NEW SERIES
HIGH FEED
END MILLS

* for 3-axis, high-speed, and multi-axis CNC machining



Run DRY, AIR BLAST, or MQL



DIAMETER	UP TO 40 HRC			40 to 45 HRC			45 TO 55 HRC			55 TO 60 HRC		
	SPEED RPM	FEED IN/MIN	FEED MM/MIN	SPEED RPM	FEED IN/MIN	FEED MM/MIN	SPEED RPM	FEED IN/MIN	FEED MM/MIN	SPEED RPM	FEED IN/MIN	FEED MM/MIN
3.0	16000	120	3100	13000	80	2032	11300	70	1778	9700	35	889
1/8"	15200	120	3100	12000	80	2000	10700	70	1800	9200	35	900
4.0	12100	145	3700	9700	100	2540	8500	85	2159	7300	40	1016
3/16"	10200	160	4100	8200	110	2800	7100	90	2300	6100	45	1200
5.0	9700	155	4000	7700	105	2667	6800	90	2286	5800	45	1143
6.0	8100	180	4600	6500	120	3048	5700	100	2540	4900	50	1270
1/4"	7650	180	4600	6100	120	3100	5400	100	2600	4600	50	1300
5/16"	6100	195	4950	4900	130	3300	4300	110	2800	3700	55	1400
8.0	6050	195	4950	4850	130	3302	4300	110	2794	3650	55	1397
3/8"	5100	200	5200	4100	135	3400	3600	115	3000	3100	60	1550
10.0	4850	200	5100	3900	135	3429	3400	115	2921	2900	60	1524
12.0	4050	250	6400	3200	160	4064	2800	135	3429	2400	65	1651
1/2"	3800	240	6100	3100	160	4100	2700	135	3500	2300	65	1700

"We have been using the 12mm diameter solid carbide high feed mill in our R&D projects. It really saves time doing those jobs that you cannot get an insert cutter into. Great find!"

- Lee H. - Machine Shop Manager, Utah, USA

NOTE: ABOVE ARE STARTING PARAMETERS ONLY.

To some, these numbers are fast, and for others, these numbers are slow. No matter where you are on this scale, we all started somewhere.