

Series ARC

NEW SERIES

.1575" - .3750"
(4.000mm - 9.525mm)



TOLERANCES

d_1	+0.000" - .002" (+0.000 - .050mm)
d_2	h6
d_3	+0.000" - .005" (+0.000 - .127mm)

Recommended for aluminum and non-ferrous materials

3-Flute (Aluminum Rough Cut)

Bright finish - Uncoated

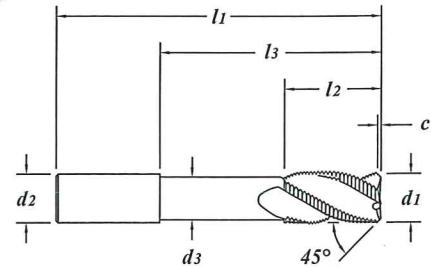
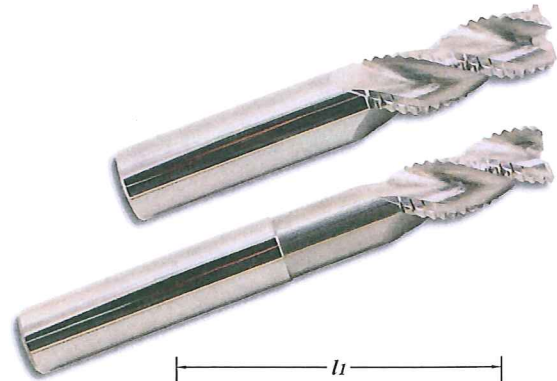
Solid submicron grain carbide end mill - center cutting

Wave knuckle design to break up chips

Each flute has individual helix angle to break up harmonics

Reduces tool pressure requiring less machine power

Designed for roughing Aluminum Alloys



MATERIAL HARDNESS (RC) 70 35 0

EDP#	d_1 † Diameter		d_2 Shank Diameter	l_1 Overall Length	l_2 Flute Length	c Chamfer Length	l_3 Reach Length	d_3 Neck Diameter	1-11	12-24	25-49	50-100
	Decimal	Metric										
46219	.1575	4.000	6.0	50	8	0.3	-	-	31.29	29.93	28.57	27.21
46222	.1575	4.000	6.0	50	12	0.3	-	-	31.29	29.93	28.57	27.21
46225	.1575	4.000	6.0	65	10	0.3	30	3.2	35.81	34.25	32.70	31.14
46228	.1575	4.000	6.0	75	15	0.3	40	3.2	47.14	45.09	43.04	40.99
46231	.1875	3/16"	4.763	2"	5/16"	.015"	-	-	26.55	25.40	24.24	23.09
46234	.1875	3/16"	4.763	2"	9/16"	.015"	-	-	26.55	25.40	24.24	23.09
46237	.1875	3/16"	4.763	3"	1"	.015"	-	-	37.15	35.53	33.92	32.30
46240	.1875	3/16"	4.763	3"	1/2"	.015"	1-1/2"	.160"	40.42	38.66	36.91	35.15
46243	.2362	6.000	6.0	50	12	0.5	-	-	31.05	29.70	28.35	27.00
46246	.2362	6.000	6.0	65	19	0.5	-	-	33.63	32.17	30.71	29.24
46249	.2362	6.000	6.0	100	20	0.5	60	5.2	47.69	45.62	43.54	41.47
46252	.2500	1/4"	6.350	1/4"	2"	3/8"	.020"	-	29.68	28.39	27.10	25.81
46255	.2500	1/4"	6.350	1/4"	2-1/2"	3/4"	.020"	-	33.22	31.78	30.33	28.89
46258	.2500	1/4"	6.350	1/4"	4"	1-1/2"	.020"	-	42.88	41.02	39.15	37.29
46261	.2500	1/4"	6.350	1/4"	4"	1"	.020"	2"	46.16	44.15	42.15	40.14
46264	.3125	5/16"	7.938	5/16"	2"	7/16"	.020"	-	35.42	33.88	32.34	30.80
46267	.3125	5/16"	7.938	5/16"	2-1/2"	13/16"	.020"	-	36.77	35.17	33.57	31.97
46270	.3125	5/16"	7.938	5/16"	4"	1-1/2"	.020"	-	52.67	50.38	48.09	45.80
46273	.3125	5/16"	7.938	5/16"	4"	1"	.020"	2"	55.95	53.52	51.08	48.65
46276	.3150	8.000	8.0	50	12	0.5	-	-	36.27	34.69	33.12	31.54
46279	.3150	8.000	8.0	65	22	0.5	-	-	37.69	36.05	34.41	32.77
46282	.3150	8.000	8.0	100	40	0.5	-	-	54.52	52.15	49.78	47.41
46285	.3150	8.000	8.0	100	20	0.5	60	7.2	57.80	55.29	52.77	50.26
46288	.3150	8.000	8.0	150	40	0.5	100	7.2	76.71	73.37	70.04	66.70
46291	.3750	3/8"	9.525	3/8"	2"	1/2"	.025"	-	41.33	39.53	37.74	35.94
46294	.3750	3/8"	9.525	3/8"	2-1/2"	7/8"	.025"	-	45.92	43.92	41.93	39.93
46297	.3750	3/8"	9.525	3/8"	3"	1-1/4"	.025"	-	53.67	51.34	49.00	46.67
46300	.3750	3/8"	9.525	3/8"	4"	1-5/8"	.025"	-	57.70	55.19	52.68	50.17
46303	.3750	3/8"	9.525	3/8"	4"	1"	.025"	2"	60.97	58.32	55.67	53.02
46306	.3750	3/8"	9.525	3/8"	6"	1-1/2"	.025"	4"	78.30	74.90	71.49	68.09

Series ARC (continued)

.3937" - 1.000"
(10.000mm - 25.400mm)

HIGH PERFORMANCE
END MILLS

EDP#	d_1 † Diameter		d_2 Shank Diameter	l_1 Overall Length	l_2 Flute Length	c Chamfer Length	l_3 Reach Length	d_3 Neck Diameter	1-11	12-24	25-49	50-100
	Decimal	Metric										
46309	.3937	10.000	10.0	50	16	0.5	-	-	51.11	48.89	46.67	44.44
46312	.3937	10.000	10.0	70	22	0.5	-	-	53.89	51.55	49.20	46.86
46315	.3937	10.000	10.0	100	40	0.5	-	-	67.13	64.21	61.29	58.37
46318	.3937	10.000	10.0	100	20	0.5	60	9.2	70.40	67.34	64.28	61.22
46321	.3937	10.000	10.0	150	40	0.5	100	9.2	88.30	84.46	80.62	76.78
46324	.4724	12.000	12.0	65	19	0.8	-	-	58.75	56.20	53.64	51.09
46327	.4724	12.000	12.0	75	32	0.8	-	-	66.42	63.53	60.64	57.76
46330	.4724	12.000	12.0	100	50	0.8	-	-	77.87	74.48	71.10	67.71
46333	.4724	12.000	12.0	100	25	0.8	60	11.2	81.14	77.61	74.08	70.56
46336	.4724	12.000	12.0	150	40	0.8	100	11.2	109.91	105.13	100.35	95.57
46339	.5000	1/2"	12.700	1/2"	2-1/2"	5/8"	.030"	-	55.92	53.49	51.06	48.63
46342	.5000	1/2"	12.700	1/2"	3"	1-1/4"	.030"	-	63.38	60.62	57.87	55.11
46345	.5000	1/2"	12.700	1/2"	4"	2"	.030"	-	74.11	70.89	67.67	64.44
46348	.5000	1/2"	12.700	1/2"	4"	1"	.030"	2"	77.38	74.02	70.65	67.29
46351	.5000	1/2"	12.700	1/2"	6"	1-1/2"	.030"	4"	108.22	103.51	98.81	94.10
46354	.6250	5/8"	15.875	5/8"	3"	3/4"	.035"	-	99.21	94.90	90.58	86.27
46357	.6250	5/8"	15.875	5/8"	3-1/2"	1-1/4"	.035"	-	102.12	97.68	93.24	88.80
46360	.6250	5/8"	15.875	5/8"	4"	1-5/8"	.035"	-	108.18	103.48	98.77	94.07
46363	.6250	5/8"	15.875	5/8"	4"	1"	.035"	2"	111.46	106.61	101.77	96.92
46366	.6250	5/8"	15.875	5/8"	6"	1-1/2"	.035"	3"	156.56	149.75	142.95	136.14
46369	.6250	5/8"	15.875	5/8"	6"	1-1/2"	.035"	4"	156.56	149.75	142.95	136.14
46372	.6299	16.000	16.0	75	19	1.0	-	-	104.41	99.87	95.33	90.79
46375	.6299	16.000	16.0	88	32	1.0	-	-	107.10	102.44	97.79	93.13
46378	.6299	16.000	16.0	100	50	1.0	-	-	114.66	109.67	104.69	99.70
46381	.6299	16.000	16.0	100	20	1.0	50	15.2	117.93	112.80	107.67	102.55
46384	.6299	16.000	16.0	150	40	1.0	100	15.2	158.24	151.36	144.48	137.60
46387	.7500	3/4"	19.050	3/4"	4"	1-5/8"	.040"	-	149.35	142.86	136.36	129.87
46390	.7500	3/4"	19.050	3/4"	5"	2-1/4"	.040"	-	209.29	200.19	191.09	181.99
46393	.7500	3/4"	19.050	3/4"	4"	7/8"	.040"	2"	152.63	145.99	139.36	132.72
46396	.7500	3/4"	19.050	3/4"	6"	1-1/2"	.040"	3"	251.98	241.02	230.07	219.11
46399	.7500	3/4"	19.050	3/4"	6"	1-1/2"	.040"	4"	251.98	241.02	230.07	219.11
46402	.7874	20.000	20.0	100	22	1.0	-	-	210.73	201.57	192.40	183.24
46405	.7874	20.000	20.0	100	40	1.0	-	-	210.73	201.57	192.40	183.24
46408	.7874	20.000	20.0	100	30	1.0	50	19.2	214.00	204.70	195.39	186.09
46411	.7874	20.000	20.0	150	40	1.0	100	19.2	261.38	250.02	238.65	227.29
46414	1.000	1"	25.400	1"	4"	1-1/2"	.040"	-	253.59	242.56	231.54	220.51
46417	1.000	1"	25.400	1"	5"	2"	.040"	-	313.80	300.16	286.51	272.87
46420	1.000	1"	25.400	1"	6"	2"	.040"	3-1/2"	421.65	403.32	384.98	366.65
46423	1.000	1"	25.400	1"	7"	2"	.040"	4-1/2"	554.48	530.37	506.26	482.16

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MATERIAL HARDNESS (Rc)

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ARC Series 3-Flute Roughers

GARR TOOL Application Guide

Fractional

	Aluminum	Non-Ferrous (Copper, Brass, Bronze)	Titanium Alloys	Carbon Steels
	SFM = 700 - 1000	SFM = 300 - 500	SFM = 150 - 250	SFM = 200 - 300
Diameter	CPT (Fz)	CPT (Fz)	CPT (Fz)	CPT (Fz)
3/16"	.0010" - .0020"	.0008" - .0013"	.0005" - .0008"	.0008" - .0010"
1/4"	.0015" - .0025"	.0012" - .0018"	.0007" - .0010"	.0010" - .0015"
5/16"	.0020" - .0030"	.0015" - .0023"	.0008" - .0013"	.0012" - .0020"
3/8"	.0025" - .0035"	.0018" - .0028"	.0012" - .0018"	.0013" - .0022"
1/2"	.0030" - .0040"	.0020" - .0035"	.0015" - .0023"	.0015" - .0025"
5/8"	.0040" - .0050"	.0025" - .0045"	.0018" - .0028"	.0018" - .0030"
3/4"	.0050" - .0060"	.0030" - .0050"	.0020" - .0035"	.0022" - .0035"
1"	.0060" - .0070"	.0040" - .0060"	.0025" - .0045"	.0025" - .0040"

Metric

	Aluminum	Non-Ferrous (Copper, Brass, Bronze)	Titanium Alloys	Carbon Steels
	SMM = 200 - 350	SMM = 80 - 150	SMM = 40 - 80	SMM = 70 - 90
Diameter	CPT (Fz)	CPT (Fz)	CPT (Fz)	CPT (Fz)
4.0	.025 - .050	.020 - .035	.010 - .020	.020 - .025
6.0	.040 - .065	.025 - .050	.015 - .025	.025 - .040
8.0	.050 - .075	.035 - .055	.020 - .035	.025 - .050
10.0	.060 - .090	.045 - .075	.025 - .050	.025 - .060
12.0	.075 - .100	.050 - .090	.035 - .055	.035 - .060
16.0	.100 - .125	.060 - .115	.045 - .075	.050 - .075
20.0	.125 - .150	.075 - .125	.050 - .090	.050 - .090
25.0	.150 - .180	.100 - .150	.060 - .115	.060 - .100

ARC SERIES TOOLS ARE NOT DESIGNED FOR OVER 28Rc MATERIALS

CPT (Fz) = Chipload per flute

NOTE - ABOVE ARE STARTING PARAMETERS ONLY. HIGHER RESULTS MAY BE ACHIEVED WITH OPTIMUM CONDITIONS.