EXPANDED LINE

V4 SERIES

GARR TOOL®

SUPPLEMENT 13.1

V4B

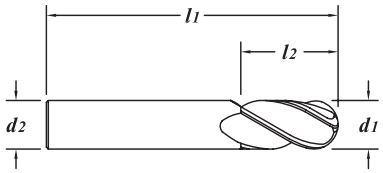
TOLERANCES	
d_1	+.000" –.002" (+.000mm –.050mm)
d_2	h6
ball radius	+.000" –.001" (+.000 –.025mm)

Recommended for Titanium, Inconel, and Steels (< 40Rc)

Variable Helix End Mill - 4 Flute - Ball End
AlCrN Coated

Solid submicron grain carbide end mill - center cutting
PCT (Polish Carbide Treatment) enhances tool life by 20%
Minimizes burr on part
Helix geometry varies over length of flutes
Variable flute design helps with chip evacuation in slots and pockets
Variable rake aids in chip formation
12mm and larger tools offered with weldon flat
Smaller diameters can be modified with a flat within 48 hours

The combination of an extended flute length with a weldon flat may cause the flute washout to reach inside some end mill holders



	EDP# (plain)	EDP# (weldon)	d_1 † Diameter Decimal	d_1 † Diameter	d_1 † Diameter Metric	d_2 Shank Diameter	l_1 Overall Length	l_2 Flute Length	1-11	12-24	25-49	50-100
	50252	-	.2362"		6.000	6.0	65	12	25.74	24.62	23.50	22.38
	50253	-	.2362"		6.000	6.0	65	19	25.74	24.62	23.50	22.38
NEW	50560	-	.2500"	1/4"	6.350	1/4"	2"	3/8"	22.34	21.37	20.40	19.43
	50254	-	.2500"	1/4"	6.350	1/4"	2-1/2"	3/4"	24.75	23.67	22.60	21.52
NEW	50561	-	.3125"	5/16"	7.937	5/16"	2"	7/16"	30.51	29.18	27.86	26.53
	50255	-	.3125"	5/16"	7.937	5/16"	2-1/2"	13/16"	33.52	32.07	30.61	29.15
	50256	-	.3150"		8.000	8.0	65	22	34.79	33.28	31.76	30.25
NEW	50562	-	.3750"	3/8"	9.525	3/8"	2"	1/2"	36.02	34.45	32.89	31.32
	50257	-	.3750"	3/8"	9.525	3/8"	2-1/2"	1"	39.16	37.46	35.75	34.05
	50258	-	.3937"		10.000	10.0	70	22	47.28	45.22	43.17	41.11
	50470	50469	.4724"		12.000	12.0	75	26	69.64	66.62	63.59	60.56
	50259	50291	.4724"		12.000	12.0	75	32	69.64	66.62	63.59	60.56
NEW	50563	-	.5000"	1/2"	12.700	1/2"	2-1/2"	5/8"	59.85	57.25	54.65	52.04
	50472	50473	.5000"	1/2"	12.700	1/2"	3"	1"	66.80	63.90	60.99	58.09
	50260	50292	.5000"	1/2"	12.700	1/2"	3"	1-1/4"	66.80	63.90	60.99	58.09
	50261	50293	.5000"	1/2"	12.700	1/2"	4"	2-1/8"	78.96	75.53	72.09	68.66
	50262	50294	.6250"	5/8"	15.875	5/8"	3-1/2"	1-1/4"	106.35	101.73	97.10	92.48
	50263	50295	.6299"		16.000	16.0	88	32	110.99	106.16	101.34	96.51
	50264	50296	.7500"	3/4"	19.050	3/4"	4"	1-1/2"	152.51	145.88	139.25	132.62
	50265	50297	.7874"		20.000	20.0	100	38	215.86	206.47	197.09	187.70
	50266	50298	1.000"	1"	25.400	1"	4"	1-1/2"	260.38	249.06	237.74	226.42

MATERIAL HARDNESS (Rc)
70
0

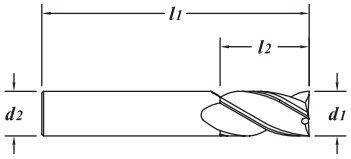
† *Metric equivalents are for reference only*

TOLERANCES	
d_1	+.000" –.002" (+.000mm –.050mm)
d_2	h6

Recommended for Titanium, Inconel, and Steels (< 40Rc)

Variable Helix End Mill - 4 Flute - Square End
AlCrN Coated

Solid submicron grain carbide end mill - center cutting
PCT (Polish Carbide Treatment) enhances tool life by 20%
Minimizes burr on part
Helix geometry varies over length of flutes
Variable flute design helps with chip evacuation in slots and pockets
Variable rake aids in chip formation
12mm and larger tools offered with weldon flat
Smaller diameters can be modified with a flat within 48 hours
The combination of an extended flute length with a weldon flat may cause the flute washout to reach inside some end mill holders



	EDP# (plain)	EDP# (weldon)	d_1 † Diameter Decimal	d_1 † Diameter	d_1 † Diameter Metric	d_2 Shank Diameter	l_1 Overall Length	l_2 Flute Length	1-11	12-24	25-49	50-100
	50236	-	.2362"		6.000	6.0	65	12	22.64	21.66	20.67	19.69
	50237	-	.2362"		6.000	6.0	65	19	22.64	21.66	20.67	19.69
NEW	50540	-	.2500"	1/4"	6.350	1/4"	2"	3/8"	19.37	18.53	17.69	16.84
	50238	-	.2500"	1/4"	6.350	1/4"	2-1/2"	3/4"	21.85	20.90	19.95	19.00
NEW	50541	-	.3125"	5/16"	7.937	5/16"	2"	7/16"	26.75	25.59	24.42	23.26
	50239	-	.3125"	5/16"	7.937	5/16"	2-1/2"	13/16"	31.15	29.80	28.44	27.09
	50240	-	.3150"		8.000	8.0	65	22	32.28	30.88	29.47	28.07
NEW	50542	-	.3750"	3/8"	9.525	3/8"	2"	1/2"	31.56	30.19	28.82	27.44
	50241	-	.3750"	3/8"	9.525	3/8"	2-1/2"	1"	36.77	35.17	33.57	31.97
	50242	-	.3937"		10.000	10.0	70	22	44.07	42.15	40.24	38.32
	50450	50449	.4724"		12.000	12.0	75	26	57.27	54.78	52.29	49.80
	50243	50283	.4724"		12.000	12.0	75	32	57.27	54.78	52.29	49.80
NEW	50543	-	.5000"	1/2"	12.700	1/2"	2-1/2"	5/8"	51.59	49.35	47.10	44.86
	50452	50453	.5000"	1/2"	12.700	1/2"	3"	1"	54.98	52.59	50.20	47.81
	50244	50284	.5000"	1/2"	12.700	1/2"	3"	1-1/4"	54.98	52.59	50.20	47.81
	50245	50285	.5000"	1/2"	12.700	1/2"	4"	2-1/8"	74.39	71.16	67.92	64.69
NEW	50545	50546	.6250"	5/8"	15.875	5/8"	3"	3/4"	95.93	91.76	87.59	83.42
	50246	50286	.6250"	5/8"	15.875	5/8"	3-1/2"	1-1/4"	101.44	97.03	92.62	88.21
NEW	50547	-	.6299"		16.000	16.0	75	19	100.30	95.94	91.58	87.22
	50247	50287	.6299"		16.000	16.0	88	32	105.83	101.23	96.63	92.03
NEW	50549	50550	.7500"	3/4"	19.050	3/4"	4"	1"	144.80	138.50	132.21	125.91
	50248	50288	.7500"	3/4"	19.050	3/4"	4"	1-1/2"	144.80	138.50	132.21	125.91
NEW	50551	50552	.7500"	3/4"	19.050	3/4"	4"	1-3/4"	144.80	138.50	132.21	125.91
NEW	50553	50554	.7500"	3/4"	19.050	3/4"	5"	2-1/8"	194.35	185.90	177.45	169.00
NEW	50555	-	.7874"		20.000	20.0	100	25	195.64	187.13	178.63	170.12
	50249	50289	.7874"		20.000	20.0	100	38	195.64	187.13	178.63	170.12
	50250	50290	1.000"	1"	25.400	1"	4"	1-1/2"	216.33	206.92	197.52	188.11

V4R

.2362" - .3937"
(6.000mm - 10.000mm)

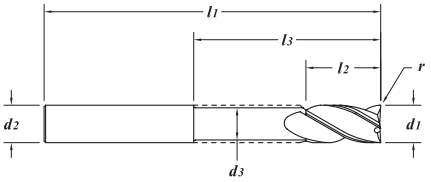
TOLERANCES	
d_1	+.000" –.002" (+.000mm –.050mm)
d_2	h6
r	+.001" –.001" (+.025 –.025mm)

Recommended for Titanium, Inconel, and Steels (< 40Rc)

Variable Helix End Mill - 4 Flute - Corner Radius
AlCrN Coated

Solid submicron grain carbide end mill - center cutting
PCT (Polish Carbide Treatment) enhances tool life by 20%
Minimizes burr on part
Helix geometry varies over length of flutes
Variable flute design helps with chip evacuation in slots and pockets
Variable rake aids in chip formation
12mm and larger tools offered with weldon flat
Smaller diameters can be modified with a flat within 48 hours

The combination of an extended flute length with a weldon flat may cause the flute washout to reach inside some end mill holders



MATERIAL HARDNESS (Rc)
70
0

	EDP# (plain)	EDP# (weldon)	d_1 † Diameter Decimal	Diameter	Metric	d_2 Shank Diameter	l_1 Overall Length	l_2 Flute Length	r Corner Radius	l_3 Reach Length	d_3 Neck Diameter	1-11	12-24	25-49	50-100
	50199	-	.2362"		6.000	6.0	65	12	0.3	-	-	25.74	24.62	23.50	22.38
	50200	-	.2362"		6.000	6.0	65	12	0.5	-	-	25.74	24.62	23.50	22.38
	50201	-	.2362"		6.000	6.0	65	12	0.75	-	-	25.74	24.62	23.50	22.38
	50202	-	.2362"		6.000	6.0	65	12	1.0	-	-	25.74	24.62	23.50	22.38
	50203	-	.2362"		6.000	6.0	65	12	1.5	-	-	25.74	24.62	23.50	22.38
	50204	-	.2362"		6.000	6.0	65	19	0.3	-	-	25.74	24.62	23.50	22.38
	50205	-	.2362"		6.000	6.0	65	19	0.5	-	-	25.74	24.62	23.50	22.38
	50206	-	.2362"		6.000	6.0	65	19	1.0	-	-	25.74	24.62	23.50	22.38
NEW	50490	-	.2500"	1/4"	6.350	1/4"	2"	3/8"	.015"	-	-	22.34	21.37	20.40	19.43
	50207	-	.2500"	1/4"	6.350	1/4"	2-1/2"	3/4"	.010"	-	-	24.75	23.67	22.60	21.52
	50208	-	.2500"	1/4"	6.350	1/4"	2-1/2"	3/4"	.015"	-	-	24.75	23.67	22.60	21.52
	50209	-	.2500"	1/4"	6.350	1/4"	2-1/2"	3/4"	.030"	-	-	24.75	23.67	22.60	21.52
	50210	-	.2500"	1/4"	6.350	1/4"	2-1/2"	3/4"	.060"	-	-	24.75	23.67	22.60	21.52
	50211	-	.2500"	1/4"	6.350	1/4"	4"	3/8"	.015"	1-1/4"	.230"	47.96	45.87	43.79	41.70
NEW	50492	-	.3125"	5/16"	7.938	5/16"	2"	7/16"	.020"	-	-	30.51	29.18	27.86	26.53
	50212	-	.3125"	5/16"	7.938	5/16"	2-1/2"	13/16"	.020"	-	-	33.52	32.07	30.61	29.15
	50213	-	.3125"	5/16"	7.938	5/16"	2-1/2"	13/16"	.030"	-	-	33.52	32.07	30.61	29.15
	50214	-	.3150"		8.000	8.0	65	22	0.5	-	-	34.79	33.28	31.76	30.25
	50356	-	.3150"		8.000	8.0	65	22	0.75	-	-	34.79	33.28	31.76	30.25
	50215	-	.3150"		8.000	8.0	65	22	1.0	-	-	34.79	33.28	31.76	30.25
	50357	-	.3150"		8.000	8.0	65	22	1.5	-	-	34.79	33.28	31.76	30.25
	50358	-	.3150"		8.000	8.0	65	22	2.0	-	-	34.79	33.28	31.76	30.25
NEW	50494	-	.3750"	3/8"	9.525	3/8"	2"	1/2"	.020"	-	-	36.02	34.45	32.89	31.32
	50216	-	.3750"	3/8"	9.525	3/8"	2-1/2"	1"	.010"	-	-	39.16	37.46	35.75	34.05
	50217	-	.3750"	3/8"	9.525	3/8"	2-1/2"	1"	.020"	-	-	39.16	37.46	35.75	34.05
	50218	-	.3750"	3/8"	9.525	3/8"	2-1/2"	1"	.030"	-	-	39.16	37.46	35.75	34.05
	50219	-	.3750"	3/8"	9.525	3/8"	2-1/2"	1"	.060"	-	-	39.16	37.46	35.75	34.05
	50220	-	.3750"	3/8"	9.525	3/8"	4"	1/2"	.020"	1-7/8"	.350"	69.21	66.20	63.19	60.18
	50221	-	.3937"		10.000	10.0	70	22	0.5	-	-	47.28	45.22	43.17	41.11
	50359	-	.3937"		10.000	10.0	70	22	0.75	-	-	47.28	45.22	43.17	41.11
	50360	-	.3937"		10.000	10.0	70	22	1.0	-	-	47.28	45.22	43.17	41.11
	50361	-	.3937"		10.000	10.0	70	22	1.5	-	-	47.28	45.22	43.17	41.11
	50362	-	.3937"		10.000	10.0	70	22	2.0	-	-	47.28	45.22	43.17	41.11

† *Metric equivalents are for reference only*

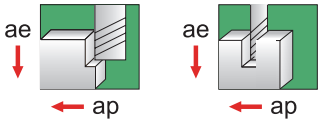
	EDP# (plain)	EDP# (weldon)	d_1 † Diameter Decimal	Diameter	Metric	d_2 Shank Diameter	l_1 Overall Length	l_2 Flute Length	r Corner Radius	l_3 Reach Length	d_3 Neck Diameter	1-11	12-24	25-49	50-100
	50363	50369	.4724"		12.000	12.0	75	26	0.3	-	-	69.64	66.62	63.59	60.56
	50364	50370	.4724"		12.000	12.0	75	26	0.5	-	-	69.64	66.62	63.59	60.56
	50365	50366	.4724"		12.000	12.0	75	26	0.75	-	-	69.64	66.62	63.59	60.56
	50367	50371	.4724"		12.000	12.0	75	26	1.0	-	-	69.64	66.62	63.59	60.56
	50372	50373	.4724"		12.000	12.0	75	26	1.5	-	-	69.64	66.62	63.59	60.56
	50374	50375	.4724"		12.000	12.0	75	26	2.0	-	-	69.64	66.62	63.59	60.56
	50222	50270	.4724"		12.000	12.0	75	32	0.5	-	-	69.64	66.62	63.59	60.56
	50223	50271	.4724"		12.000	12.0	75	32	1.0	-	-	69.64	66.62	63.59	60.56
NEW	50496	50497	.5000"	1/2"	12.700	1/2"	2-1/2"	5/8"	.020"	-	-	59.85	57.25	54.65	52.04
	50379	50380	.5000"	1/2"	12.700	1/2"	3"	1"	.010"	-	-	66.80	63.90	60.99	58.09
	50381	50382	.5000"	1/2"	12.700	1/2"	3"	1"	.020"	-	-	66.80	63.90	60.99	58.09
	50383	50384	.5000"	1/2"	12.700	1/2"	3"	1"	.030"	-	-	66.80	63.90	60.99	58.09
	50385	50386	.5000"	1/2"	12.700	1/2"	3"	1"	.060"	-	-	66.80	63.90	60.99	58.09
	50224	50272	.5000"	1/2"	12.700	1/2"	3"	1-1/4"	.010"	-	-	66.80	63.90	60.99	58.09
	50225	50273	.5000"	1/2"	12.700	1/2"	3"	1-1/4"	.020"	-	-	66.80	63.90	60.99	58.09
	50226	50274	.5000"	1/2"	12.700	1/2"	3"	1-1/4"	.030"	-	-	66.80	63.90	60.99	58.09
	50227	50275	.5000"	1/2"	12.700	1/2"	3"	1-1/4"	.060"	-	-	66.80	63.90	60.99	58.09
	50228	50276	.5000"	1/2"	12.700	1/2"	4"	5/8"	.020"	2-1/4"	.470"	90.13	86.21	82.29	78.37
NEW	50498	50499	.6250"	5/8"	15.875	5/8"	3"	3/4"	.020"	-	-	103.48	98.98	94.48	89.98
NEW	50500	50501	.6250"	5/8"	15.875	5/8"	3"	3/4"	.030"	-	-	103.48	98.98	94.48	89.98
NEW	50502	50503	.6250"	5/8"	15.875	5/8"	3"	3/4"	.060"	-	-	103.48	98.98	94.48	89.98
	50229	50277	.6250"	5/8"	15.875	5/8"	3-1/2"	1-1/4"	.020"	-	-	106.35	101.73	97.10	92.48
	50230	50278	.6250"	5/8"	15.875	5/8"	3-1/2"	1-1/4"	.120"	-	-	106.35	101.73	97.10	92.48
NEW	50504	-	.6299"		16.000	16.0	75	19	0.5	-	-	108.02	103.32	98.63	93.93
NEW	50506	-	.6299"		16.000	16.0	75	19	1.0	-	-	108.02	103.32	98.63	93.93
NEW	50508	-	.6299"		16.000	16.0	75	19	3.0	-	-	108.02	103.32	98.63	93.93
	50231	50279	.6299"		16.000	16.0	88	32	0.5	-	-	110.99	106.16	101.34	96.51
	50409	50410	.6299"		16.000	16.0	88	32	0.75	-	-	110.99	106.16	101.34	96.51
	50411	50412	.6299"		16.000	16.0	88	32	1.0	-	-	110.99	106.16	101.34	96.51
	50413	50414	.6299"		16.000	16.0	88	32	1.5	-	-	110.99	106.16	101.34	96.51
	50415	50416	.6299"		16.000	16.0	88	32	2.0	-	-	110.99	106.16	101.34	96.51
	50417	50418	.6299"		16.000	16.0	88	32	3.0	-	-	110.99	106.16	101.34	96.51
NEW	50510	50511	.7500"	3/4"	19.050	3/4"	4"	1"	.020"	-	-	152.51	145.88	139.25	132.62
NEW	50512	50513	.7500"	3/4"	19.050	3/4"	4"	1"	.030"	-	-	152.51	145.88	139.25	132.62
NEW	50514	50515	.7500"	3/4"	19.050	3/4"	4"	1"	.060"	-	-	152.51	145.88	139.25	132.62
NEW	50516	50517	.7500"	3/4"	19.050	3/4"	4"	1-1/2"	.020"	-	-	152.51	145.88	139.25	132.62
	50232	50280	.7500"	3/4"	19.050	3/4"	4"	1-1/2"	.030"	-	-	152.51	145.88	139.25	132.62
NEW	50518	50519	.7500"	3/4"	19.050	3/4"	4"	1-1/2"	.060"	-	-	152.51	145.88	139.25	132.62
NEW	50520	50521	.7500"	3/4"	19.050	3/4"	4"	1-1/2"	.120"	-	-	152.51	145.88	139.25	132.62
NEW	50522	50523	.7500"	3/4"	19.050	3/4"	4"	1-3/4"	.020"	-	-	152.51	145.88	139.25	132.62
NEW	50524	50525	.7500"	3/4"	19.050	3/4"	4"	1-3/4"	.030"	-	-	152.51	145.88	139.25	132.62
NEW	50526	50527	.7500"	3/4"	19.050	3/4"	4"	1-3/4"	.060"	-	-	152.51	145.88	139.25	132.62
NEW	50528	-	.7874"		20.000	20.0	100	38	1.0	-	-	215.86	206.47	197.09	187.70
NEW	50530	-	.7874"		20.000	20.0	100	38	2.0	-	-	215.86	206.47	197.09	187.70
NEW	50532	-	.7874"		20.000	20.0	100	38	3.0	-	-	215.86	206.47	197.09	187.70
	50233	50281	1.000"	1"	25.400	1"	4"	1-1/2"	.030"	-	-	260.38	249.06	237.74	226.42
	50234	50282	1.000"	1"	25.400	1"	5"	2-1/8"	.030"	-	-	320.38	306.45	292.52	278.59

GARR TOOL Milling Guide for V4 End Mills in Titanium, Inconel, and Stainless

Fractional

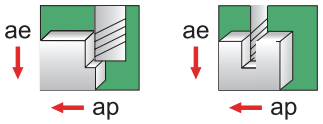
	Titanium Alloys	Nickel or Cobalt-based Material	Stainless (400 Series, pH Series)	Carbon Steels
	SFM = 100 - 200	SFM = 50 - 100	SFM = 100 - 225	SFM = 250 - 400
DIAMETER	CPT (Fz)	CPT (Fz)	CPT (Fz)	CPT (Fz)
.1575" - .2755"	.0004" - .0008"	.0003" - .0006"	.0005" - .0010"	.0008" - .0010"
.2756" - .3124"	.0005" - .0010"	.0004" - .0008"	.0007" - .0012"	.0010" - .0015"
.3125" - .3749"	.0007" - .0012"	.0005" - .0010"	.0008" - .0015"	.0012" - .0020"
.3750" - .4999"	.0008" - .0015"	.0007" - .0012"	.0010" - .0018"	.0013" - .0022"
.5000" - .6249"	.0010" - .0018"	.0008" - .0015"	.0012" - .0020"	.0015" - .0025"
.6250" - .7499"	.0012" - .0020"	.0010" - .0018"	.0015" - .0022"	.0018" - .0030"
.7500" - .8749"	.0015" - .0022"	.0012" - .0020"	.0018" - .0025"	.0022" - .0035"
.8750" - 1.000"	.0018" - .0025"	.0015" - .0022"	.0022" - .0030"	.0025" - .0040"

	Profiling Side Cutting	Slotting Pocket Milling
Axial (ae)	1xD	100% of Dia.
Radial (ap)	100% of Dia.	1xD



	Titanium Alloys	Nickel or Cobalt-based Material	Stainless (400 Series, pH Series)	Carbon Steels
	SFM = 150 - 250	SFM = 60 - 125	SFM = 150 - 300	SFM = 300 - 450
DIAMETER	CPT (Fz)	CPT (Fz)	CPT (Fz)	CPT (Fz)
.1575" - .2755"	.0008" - .0011"	.0004" - .0008"	.0008" - .0012"	.0010" - .0015"
.2756" - .3124"	.0010" - .0015"	.0005" - .0010"	.0010" - .0018"	.0012" - .0020"
.3125" - .3749"	.0012" - .0018"	.0007" - .0012"	.0012" - .0020"	.0015" - .0023"
.3750" - .4999"	.0012" - .0021"	.0008" - .0015"	.0015" - .0022"	.0018" - .0027"
.5000" - .6249"	.0015" - .0025"	.0010" - .0018"	.0018" - .0030"	.0020" - .0032"
.6250" - .7499"	.0018" - .0030"	.0012" - .0020"	.0020" - .0033"	.0025" - .0035"
.7500" - .8749"	.0020" - .0032"	.0015" - .0022"	.0023" - .0037"	.0030" - .0042"
.8750" - 1.000"	.0025" - .0035"	.0018" - .0025"	.0027" - .0040"	.0032" - .0050"

	Profiling Side Cutting	Slotting Pocket Milling
Axial (ae)	1xD	50% of Dia.
Radial (ap)	50% of Dia.	1xD



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

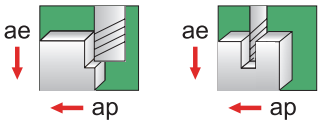
† *Metric equivalents are for reference only*

GARR TOOL Milling Guide for V4 End Mills in Titanium, Inconel, and Stainless

Metric

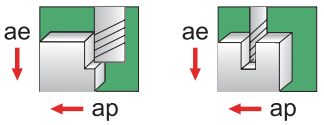
	Titanium Alloys	Nickel or Cobalt-based Material	Stainless (400 Series, pH Series)	Carbon Steels
	SMM = 30 - 60	SMM = 15 - 30	SMM = 30 - 70	SMM = 75 - 120
DIAMETER	CPT (Fz)	CPT (Fz)	CPT (Fz)	CPT (Fz)
4.0 - 7.0	.010 - .020	.005 - .008	.010 - .025	.020 - .030
7.0 - 8.0	.012 - .025	.010 - .020	.015 - .030	.025 - .045
8.0 - 10.0	.015 - .030	.012 - .025	.020 - .040	.030 - .050
10.0 - 13.0	.020 - .040	.015 - .030	.025 - .045	.035 - .055
13.0 - 16.0	.025 - .045	.020 - .040	.030 - .050	.045 - .075
16.0 - 19.0	.030 - .050	.025 - .045	.035 - .055	.050 - .080
19.0 - 22.0	.035 - .055	.030 - .050	.045 - .065	.055 - .095
22.0 - 25.0	.045 - .065	.035 - .055	.055 - .075	.065 - .105

	Profiling Side Cutting	Slotting Pocket Milling
Axial (ae)	1xD	100% of Dia.
Radial (ap)	100% of Dia.	1xD



	Titanium Alloys	Nickel or Cobalt-based Material	Stainless (400 Series, pH Series)	Carbon Steels
	SMM = 45 - 75	SMM = 20 - 40	SMM = 45 - 90	SMM = 90 - 130
DIAMETER	CPT (Fz)	CPT (Fz)	CPT (Fz)	CPT (Fz)
4.0 - 7.0	.020 - .030	.010 - .020	.020 - .030	.025 - .040
7.0 - 8.0	.025 - .040	.013 - .025	.025 - .045	.030 - .045
8.0 - 10.0	.030 - .045	.018 - .030	.030 - .050	.035 - .050
10.0 - 13.0	.030 - .050	.020 - .040	.035 - .055	.040 - .055
13.0 - 16.0	.035 - .060	.025 - .045	.045 - .075	.050 - .080
16.0 - 19.0	.045 - .075	.030 - .050	.050 - .080	.055 - .090
19.0 - 22.0	.050 - .080	.035 - .055	.055 - .095	.060 - .105
22.0 - 25.0	.060 - .090	.045 - .065	.065 - .105	.070 - .110

	Profiling Side Cutting	Slotting Pocket Milling
Axial (ae)	1xD	50% of Dia.
Radial (ap)	50% of Dia.	1xD



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

GARR TOOL®

7800 N Alger Road
Alma, Michigan 48801
800-248-9003
989-463-6171
Fax 989-463-3609

Supplement 13.1
V4 SERIES EXPANDED

www.garrtool.com

Sold through select industrial distributors

Prices subject to change without notice