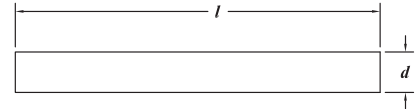


Centerless Ground  
Solid submicron grain carbide



EDP#	$d$ † Diameter		$l$ Overall Length	1-11	12-24	25-49	50-100
	Decimal	Metric					
95010	.1181	3.000	38	2.70	2.59	2.47	2.35
53010	.1250	3.175	1-1/2"	2.60	2.49	2.37	2.26
53020	.1250	3.175	2"	4.53	4.33	4.14	3.94
53030	.1250	3.175	3"	5.08	4.86	4.64	4.42
53040	.1250	3.175	4"	8.68	8.31	7.93	7.55
53050	.1250	3.175	6"	13.65	13.06	12.46	11.87
53060	.1250	3.175	12"	30.69	29.36	28.02	26.69
95070	.1575	4.000	50	6.66	6.37	6.08	5.79
53070	.1875	4.763	2"	5.74	5.49	5.24	4.99
53080	.1875	4.763	2-1/2"	8.07	7.72	7.37	7.02
53090	.1875	4.763	3"	11.28	10.79	10.30	9.81
53100	.1875	4.763	4"	13.74	13.15	12.55	11.95
53110	.1875	4.763	6"	20.52	19.62	18.73	17.84
53120	.1875	4.763	12"	34.99	33.47	31.95	30.43
95130	.1969	5.000	65	8.61	8.24	7.86	7.49
95190	.2362	6.000	65	9.23	8.83	8.43	8.03
53130	.2500	6.350	2"	7.60	7.27	6.94	6.61
53140	.2500	6.350	2-1/2"	8.80	8.42	8.03	7.65
53150	.2500	6.350	3"	13.83	13.23	12.63	12.03
53160	.2500	6.350	4"	21.86	20.91	19.96	19.01
53170	.2500	6.350	6"	29.33	28.05	26.78	25.50
53180	.2500	6.350	12"	55.72	53.30	50.87	48.45
53190	.3125	7.938	2-1/2"	14.19	13.57	12.96	12.34
53200	.3125	7.938	3"	23.22	22.21	21.20	20.19
53210	.3125	7.938	4"	26.52	25.37	24.21	23.06
53220	.3125	7.938	6"	43.22	41.34	39.46	37.58
53230	.3125	7.938	12"	72.92	69.75	66.58	63.41
95250	.3150	8.000	65	14.19	13.57	12.96	12.34
53240	.3750	9.525	2-1/2"	19.11	18.28	17.45	16.62
53250	.3750	9.525	3"	25.67	24.55	23.44	22.32
53260	.3750	9.525	3-1/2"	27.38	26.19	25.00	23.81
53270	.3750	9.525	4"	30.05	28.74	27.44	26.13
53280	.3750	9.525	6"	51.09	48.87	46.65	44.43
53290	.3750	9.525	12"	84.76	81.07	77.39	73.70
95320	.3937	10.000	70	20.98	20.06	19.15	18.24
53300	.4375	11.113	2-1/2"	23.39	22.37	21.36	20.34
53310	.4375	11.113	3"	30.64	29.30	27.97	26.64
53320	.4375	11.113	4"	42.14	40.30	38.47	36.64
53330	.4375	11.113	6"	61.12	58.47	55.81	53.15
53340	.4375	11.113	12"	125.86	120.38	114.91	109.44
95380	.4724	12.000	75	33.40	31.94	30.49	29.04
53350	.5000	12.700	3"	31.30	29.94	28.58	27.22
53360	.5000	12.700	4"	43.17	41.29	39.42	37.54
53370	.5000	12.700	6"	72.77	69.61	66.44	63.28
53380	.5000	12.700	12"	161.81	154.77	147.74	140.70
53390	.6250	15.875	3-1/2"	60.48	57.85	55.22	52.59
53400	.6250	15.875	4"	83.97	80.32	76.67	73.02
53410	.6250	15.875	6"	132.87	127.09	121.32	115.54
53420	.6250	15.875	12"	282.53	270.25	257.96	245.68
95440	.6299	16.000	88	60.48	57.85	55.22	52.59
53430	.7500	19.050	4"	89.76	85.86	81.95	78.05
53440	.7500	19.050	6"	177.03	169.33	161.64	153.94
53450	.7500	19.050	12"	338.72	323.99	309.27	294.54
95490	.7874	20.000	100	112.98	108.06	103.15	98.24
95530	.9843	25.000	100	140.98	134.85	128.72	122.59
53460	1.000	25.400	4"	137.51	131.53	125.55	119.57
53470	1.000	25.400	6"	307.30	293.94	280.58	267.22
53480	1.000	25.400	12"	541.48	517.94	494.39	470.85

TOLERANCES

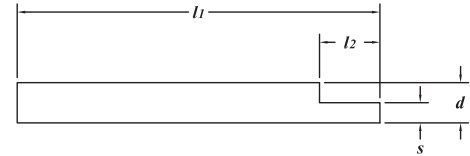
<i>d</i>	h6
<i>s</i>	+0.001" -0.000" (+.025 - .000mm) from centerline

### Centerless Ground Engraving - Split Single End

Solid submicron grain carbide

For use in engraving or single flute milling

Ready to be finished - blank is non-cutting



EDP#	<i>d</i> † Diameter		<i>l</i> <sub>1</sub> Overall Length	<i>l</i> <sub>2</sub> Split Length	<i>s</i> Split Depth	1-11	12-24	25-49	50-100	
	Decimal	Metric								
54010	.1250	1/8"	3.175	1-1/2"	3/8"	1/16"	4.75	4.54	4.34	4.13
54020	.1250	1/8"	3.175	2"	3/8"	1/16"	6.69	6.40	6.11	5.82
54030	.1250	1/8"	3.175	3"	3/8"	1/16"	7.48	7.15	6.83	6.50
54040	.1250	1/8"	3.175	4"	3/8"	1/16"	10.88	10.41	9.93	9.46
54050	.1250	1/8"	3.175	6"	3/8"	1/16"	15.86	15.17	14.48	13.79
54060	.1875	3/16"	4.763	2"	1/2"	3/32"	9.07	8.68	8.28	7.89
54070	.1875	3/16"	4.763	2-1/2"	1/2"	3/32"	11.41	10.91	10.42	9.92
54080	.1875	3/16"	4.763	3"	1/2"	3/32"	14.63	13.99	13.36	12.72
54090	.1875	3/16"	4.763	4"	1/2"	3/32"	17.08	16.34	15.59	14.85
54100	.1875	3/16"	4.763	6"	1/2"	3/32"	23.83	22.79	21.76	20.72
54110	.2500	1/4"	6.350	2"	1/2"	1/8"	12.77	12.21	11.66	11.10
54120	.2500	1/4"	6.350	2-1/2"	1/2"	1/8"	13.95	13.34	12.74	12.13
54130	.2500	1/4"	6.350	3"	1/2"	1/8"	19.02	18.19	17.37	16.54
54140	.2500	1/4"	6.350	4"	1/2"	1/8"	27.05	25.87	24.70	23.52
54150	.2500	1/4"	6.350	6"	1/2"	1/8"	34.52	33.02	31.52	30.02
54160	.3125	5/16"	7.938	2-1/2"	1/2"	5/32"	19.69	18.83	17.98	17.12
54170	.3125	5/16"	7.938	3"	1/2"	5/32"	28.74	27.49	26.24	24.99
54180	.3125	5/16"	7.938	4"	1/2"	5/32"	32.02	30.62	29.23	27.84
54190	.3125	5/16"	7.938	6"	1/2"	5/32"	48.73	46.61	44.49	42.37
54200	.3750	3/8"	9.525	2-1/2"	1/2"	3/16"	26.66	25.50	24.34	23.18
54210	.3750	3/8"	9.525	3"	1/2"	3/16"	33.15	31.71	30.27	28.83
54220	.3750	3/8"	9.525	4"	1/2"	3/16"	37.57	35.94	34.30	32.67
54230	.3750	3/8"	9.525	6"	1/2"	3/16"	58.64	56.09	53.54	50.99
54240	.4375	7/16"	11.113	2-1/2"	5/8"	7/32"	31.72	30.34	28.96	27.58
54250	.4375	7/16"	11.113	3"	5/8"	7/32"	38.95	37.26	35.56	33.87
54260	.4375	7/16"	11.113	4"	5/8"	7/32"	50.49	48.29	46.10	43.90
54270	.4375	7/16"	11.113	6"	5/8"	7/32"	69.44	66.42	63.40	60.38
54280	.5000	1/2"	12.700	3"	5/8"	1/4"	42.45	40.60	38.76	36.91
54290	.5000	1/2"	12.700	4"	5/8"	1/4"	54.34	51.98	49.61	47.25
54300	.5000	1/2"	12.700	6"	5/8"	1/4"	83.93	80.28	76.63	72.98

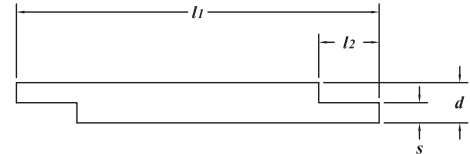
TOLERANCES	
<i>d</i>	h6
<i>s</i>	+0.001" -0.000" (+0.025 -0.000mm) from centerline

### Centerless Ground Engraving - Split Double End

Solid submicron grain carbide

For use in engraving or single flute milling

Ready to be finished - blank is non-cutting



EDP#	<i>d</i> <sub>1</sub> † Diameter		<i>l</i> <sub>1</sub> Overall Length	<i>l</i> <sub>2</sub> Split Length	<i>s</i> Split Depth	1-11	12-24	25-49	50-100	
	Decimal	Metric								
55010	.1250	1/8"	3.175	1-1/2"	3/8"	1/16"	6.96	6.66	6.35	6.05
55020	.1250	1/8"	3.175	2"	3/8"	1/16"	8.87	8.48	8.10	7.71
55030	.1250	1/8"	3.175	3"	3/8"	1/16"	9.64	9.22	8.80	8.38
55040	.1250	1/8"	3.175	4"	3/8"	1/16"	13.06	12.50	11.93	11.36
55050	.1250	1/8"	3.175	6"	3/8"	1/16"	17.96	17.18	16.40	15.62
55060	.1875	3/16"	4.763	2"	1/2"	3/32"	12.42	11.88	11.34	10.80
55070	.1875	3/16"	4.763	2-1/2"	1/2"	3/32"	14.72	14.08	13.44	12.80
55080	.1875	3/16"	4.763	3"	1/2"	3/32"	17.92	17.14	16.36	15.58
55090	.1875	3/16"	4.763	4"	1/2"	3/32"	20.42	19.54	18.65	17.76
55100	.1875	3/16"	4.763	6"	1/2"	3/32"	27.17	25.99	24.81	23.63
55110	.2500	1/4"	6.350	2"	1/2"	1/8"	17.92	17.14	16.36	15.58
55120	.2500	1/4"	6.350	2-1/2"	1/2"	1/8"	19.11	18.28	17.45	16.62
55130	.2500	1/4"	6.350	3"	1/2"	1/8"	24.17	23.12	22.07	21.02
55140	.2500	1/4"	6.350	4"	1/2"	1/8"	32.18	30.78	29.38	27.98
55150	.2500	1/4"	6.350	6"	1/2"	1/8"	39.68	37.95	36.23	34.50
55160	.3125	5/16"	7.938	2-1/2"	1/2"	5/32"	25.21	24.11	23.02	21.92
55170	.3125	5/16"	7.938	3"	1/2"	5/32"	34.22	32.74	31.25	29.76
55180	.3125	5/16"	7.938	4"	1/2"	5/32"	37.54	35.90	34.27	32.64
55190	.3125	5/16"	7.938	6"	1/2"	5/32"	54.19	51.83	49.48	47.12
55200	.3750	3/8"	9.525	2-1/2"	1/2"	3/16"	34.13	32.65	31.16	29.68
55210	.3750	3/8"	9.525	3"	1/2"	3/16"	40.66	38.90	37.13	35.36
55220	.3750	3/8"	9.525	4"	1/2"	3/16"	45.05	43.09	41.13	39.17
55230	.3750	3/8"	9.525	6"	1/2"	3/16"	66.11	63.24	60.36	57.49
55240	.4375	7/16"	11.113	2-1/2"	5/8"	7/32"	40.05	38.31	36.57	34.83
55250	.4375	7/16"	11.113	3"	5/8"	7/32"	47.32	45.27	43.21	41.15
55260	.4375	7/16"	11.113	4"	5/8"	7/32"	58.81	56.25	53.70	51.14
55270	.4375	7/16"	11.113	6"	5/8"	7/32"	77.77	74.39	71.01	67.63
55280	.5000	1/2"	12.700	3"	5/8"	1/4"	53.64	51.30	48.97	46.64
55290	.5000	1/2"	12.700	4"	5/8"	1/4"	65.47	62.62	59.78	56.93
55300	.5000	1/2"	12.700	6"	5/8"	1/4"	95.11	90.97	86.84	82.70