

S M P K

High Performance End Mills

X7C BALIQ® ALCRONOS Coating (AlCrN)

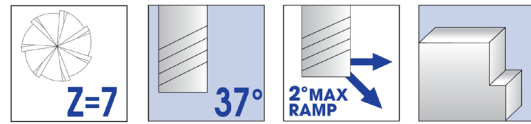
G7C BALIQ® TISINOS PRO Coating (AlTiSiN)

X7C Target Materials:

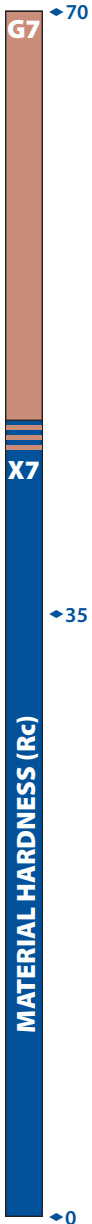
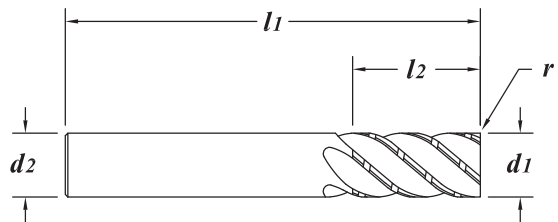
Stainless Steel (Inox, Austenitic/Martensitic)
Carbon Tools Steels (Up to 50 HRC)
Cast Iron

G7C Target Materials:

Heat Resistant Super Alloys
PH Stainless Steels (Inox, 13-8, 15-5, 17-4, Martensitic)
Conditioned Tool Steels (50-70 HRC)



CALCULATE IDEAL PARAMETERS
FOR THE X7C AND G7C IN YOUR
APPLICATION WITH THE GARR
TECHNICAL ADVISOR



X7C

G7C



← View the X7C

View the G7C →

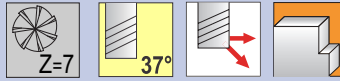


TOLERANCES

<i>d1</i>	+0.000" - .002" (+.000mm - .050mm)
<i>d2</i>	h6
<i>r</i>	+0.001" - .001" (+.025 - .025mm)

HIGH EFFICIENCY MILLING

Series X7C, G7C



.3750" - .4724"
(9.525mm - 12.000mm)

X7C Recommended for Low, Medium, and High Carbon Tool Steels (up to 50 HRC), cast iron, and stainless steel (Inox).

G7C Recommended for tough machining materials such as Heat Resistant Super Alloys, PH Stainless steels (Inox), and conditioned tool steels. (50-70 HRC)

7 Flute High Performance End Mills

X7C* BALIQ® ALCRONOS Coating (AlCrN-based)

G7C BALIQ® TISINOS PRO Coating (AlTiSiN)

Solid submicron grain carbide - non-center cutting

Chip splitters

h6 shank tolerance

Engineered for High Efficiency Milling

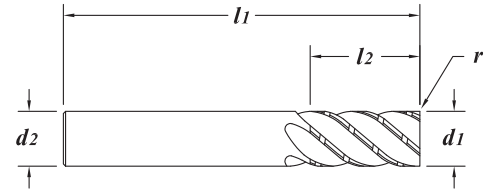
Variable flute grind

Honed edge treatment

Polished fluting

Material and condition specific coatings

*Previously named VX-7C; now polished.



X7C EDP#	G7C EDP#	<i>d1</i> † Diameter		<i>d2</i> Shank Diameter	<i>l1</i> Overall Length	<i>l2</i> Flute Length	<i>r</i> Corner Radius	<i>l3</i> Reach Length	<i>d3</i> Neck Diameter	1-11	12-24	25-49	50-100	
		Decimal	Metric											
64300	64700	.3750"	3/8"	9.525	3/8"	2-1/2"	1"	-	-	-	65.50	62.65	59.80	56.96
64302	64701	.3750"	3/8"	9.525	3/8"	2-1/2"	1"	.020"	-	-	71.08	67.99	64.90	61.81
64304	64702	.3750"	3/8"	9.525	3/8"	2-1/2"	1"	.030"	-	-	71.08	67.99	64.90	61.81
64900	64703	.3750"	3/8"	9.525	3/8"	3"	1-1/2"	-	-	-	77.33	73.97	70.61	67.24
64901	64704	.3750"	3/8"	9.525	3/8"	3"	1-1/2"	.020"	-	-	84.72	81.04	77.35	73.67
64902	64705	.3750"	3/8"	9.525	3/8"	3"	1-1/2"	.030"	-	-	84.72	81.04	77.35	73.67
64903	64706	.3750"	3/8"	9.525	3/8"	3"	1-1/2"	.060"	-	-	84.72	81.04	77.35	73.67
64904	64707	.3750"	3/8"	9.525	3/8"	4"	7/8"	.015"	1-7/8"	.365"	108.28	103.57	98.86	94.16
64905	64708	.3937"		10.000	10	70	25	-	-	-	76.10	72.79	69.48	66.17
64906	64709	.3937"		10.000	10	70	25	0.50	-	-	83.23	79.61	75.99	72.37
64907	64710	.3937"		10.000	10	70	25	1.00	-	-	83.23	79.61	75.99	72.37
64908	64711	.4724"		12.000	12	75	26	-	-	-	90.69	86.75	82.80	78.86
64909	64712	.4724"		12.000	12	75	26	0.50	-	-	108.63	103.91	99.18	94.46
64910	64713	.4724"		12.000	12	75	26	1.00	-	-	108.63	103.91	99.18	94.46
64911	64714	.4724"		12.000	12	75	32	-	-	-	90.69	86.75	82.80	78.86
64912	64715	.4724"		12.000	12	75	32	0.50	-	-	108.63	103.91	99.18	94.46
64913	64716	.4724"		12.000	12	75	32	1.00	-	-	108.63	103.91	99.18	94.46
64914	64717	.4724"		12.000	12	100	42	1.00	-	-	130.35	124.68	119.01	113.35
64915	64718	.4724"		12.000	12	100	50	-	-	-	118.98	113.81	108.63	103.46
64310	64719	.4724"		12.000	12	100	50	0.50	-	-	130.35	124.68	119.01	113.35
64916	64720	.4724"		12.000	12	100	50	1.00	-	-	130.35	124.68	119.01	113.35

HIGH PERFORMANCE
END MILLS

G7

X7

35

MATERIAL HARDNESS (RC)

0

continued →

Series X7C, G7C (continued)

.5000" - .6250"
(12.700mm - 15.875mm)

X7C EDP#	G7C EDP#	$d1$ † Diameter		$d2$ Shank Diameter	$l1$ Overall Length	$l2$ Flute Length	r Corner Radius	1-11	12-24	25-49	50-100	
		Decimal	Metric									
64917	64721	.5000"	1/2"	12.700	1/2"	2-1/2"	5/8"	-	85.28	81.57	77.86	74.16
64918	64722	.5000"	1/2"	12.700	1/2"	2-1/2"	5/8"	.015"	98.35	94.07	89.80	85.52
64316	64723	.5000"	1/2"	12.700	1/2"	2-1/2"	5/8"	.030"	98.35	94.07	89.80	85.52
64318	64724	.5000"	1/2"	12.700	1/2"	2-1/2"	5/8"	.060"	98.35	94.07	89.80	85.52
64919	64725	.5000"	1/2"	12.700	1/2"	3"	1"	-	88.32	84.48	80.64	76.80
64920	64726	.5000"	1/2"	12.700	1/2"	3"	1"	.015"	105.81	101.21	96.61	92.01
64322	64727	.5000"	1/2"	12.700	1/2"	3"	1"	.030"	105.81	101.21	96.61	92.01
64921	64728	.5000"	1/2"	12.700	1/2"	3"	1-1/4"	-	88.32	84.48	80.64	76.80
64922	64729	.5000"	1/2"	12.700	1/2"	3"	1-1/4"	.015"	105.81	101.21	96.61	92.01
64923	64730	.5000"	1/2"	12.700	1/2"	3"	1-1/4"	.020"	105.81	101.21	96.61	92.01
64330	64731	.5000"	1/2"	12.700	1/2"	3"	1-1/4"	.030"	105.81	101.21	96.61	92.01
64332	64732	.5000"	1/2"	12.700	1/2"	3"	1-1/4"	.060"	105.81	101.21	96.61	92.01
64924	64733	.5000"	1/2"	12.700	1/2"	3"	1-1/4"	.125"	105.81	101.21	96.61	92.01
64338	64734	.5000"	1/2"	12.700	1/2"	3-1/2"	1-1/2"	-	112.71	107.81	102.91	98.01
64342	64735	.5000"	1/2"	12.700	1/2"	3-1/2"	1-1/2"	.030"	123.36	118.00	112.63	107.27
64925	64736	.5000"	1/2"	12.700	1/2"	3-1/2"	1-1/2"	.060"	123.36	118.00	112.63	107.27
64926	64737	.5000"	1/2"	12.700	1/2"	4"	1-5/8"	-	115.41	110.39	105.37	100.36
64927	64738	.5000"	1/2"	12.700	1/2"	4"	1-5/8"	.015"	126.06	120.58	115.10	109.62
64928	64739	.5000"	1/2"	12.700	1/2"	4"	1-5/8"	.030"	126.06	120.58	115.10	109.62
64929	64740	.5000"	1/2"	12.700	1/2"	4"	1-5/8"	.060"	126.06	120.58	115.10	109.62
64346	64741	.5000"	1/2"	12.700	1/2"	4"	2"	-	115.41	110.39	105.37	100.36
64930	64742	.5000"	1/2"	12.700	1/2"	4"	2"	.015"	126.06	120.58	115.10	109.62
64348	64743	.5000"	1/2"	12.700	1/2"	4"	2"	.030"	126.06	120.58	115.10	109.62
64931	64744	.5000"	1/2"	12.700	1/2"	4"	2"	.060"	126.06	120.58	115.10	109.62
64352	64745	.5000"	1/2"	12.700	1/2"	4"	2"	.125"	126.06	120.58	115.10	109.62
64932	64746	.5512"		14.000	14	88	32	0.50	130.17	124.51	118.85	113.19
64933	64747	.6250"	5/8"	15.875	5/8"	3"	1"	-	141.06	134.93	128.79	122.66
64934	64748	.6250"	5/8"	15.875	5/8"	3"	1"	.015"	153.51	146.84	140.16	133.49
64935	64749	.6250"	5/8"	15.875	5/8"	3"	1"	.030"	153.51	146.84	140.16	133.49
64936	64750	.6250"	5/8"	15.875	5/8"	3-1/2"	1-1/4"	-	145.85	139.51	133.17	126.83
64937	64751	.6250"	5/8"	15.875	5/8"	3-1/2"	1-1/4"	.015"	158.50	151.61	144.72	137.83
65006	64829	.6250"	5/8"	15.875	5/8"	3-1/2"	1-1/4"	.020"	158.50	151.61	144.72	137.83
64938	64752	.6250"	5/8"	15.875	5/8"	3-1/2"	1-1/4"	.030"	158.50	151.61	144.72	137.83
64939	64753	.6250"	5/8"	15.875	5/8"	3-1/2"	1-1/4"	.060"	158.50	151.61	144.72	137.83
64940	64754	.6250"	5/8"	15.875	5/8"	3-1/2"	1-1/4"	.120"	158.50	151.61	144.72	137.83
64941	64755	.6250"	5/8"	15.875	5/8"	3-1/2"	1-1/2"	-	145.85	139.51	133.17	126.83
64942	64756	.6250"	5/8"	15.875	5/8"	3-1/2"	1-1/2"	.015"	158.50	151.61	144.72	137.83
64943	64757	.6250"	5/8"	15.875	5/8"	3-1/2"	1-1/2"	.030"	158.50	151.61	144.72	137.83
64944	64758	.6250"	5/8"	15.875	5/8"	3-1/2"	1-1/2"	.060"	158.50	151.61	144.72	137.83
64945	64759	.6250"	5/8"	15.875	5/8"	3-1/2"	1-5/8"	-	145.85	139.51	133.17	126.83
64946	64760	.6250"	5/8"	15.875	5/8"	3-1/2"	1-5/8"	.015"	158.50	151.61	144.72	137.83
64947	64761	.6250"	5/8"	15.875	5/8"	3-1/2"	1-5/8"	.030"	158.50	151.61	144.72	137.83
64948	64762	.6250"	5/8"	15.875	5/8"	3-1/2"	1-5/8"	.060"	158.50	151.61	144.72	137.83
64360	64763	.6250"	5/8"	15.875	5/8"	4"	1-3/4"	-	153.43	146.76	140.09	133.42
64949	64764	.6250"	5/8"	15.875	5/8"	4"	1-3/4"	.015"	166.96	159.70	152.44	145.18
64364	64765	.6250"	5/8"	15.875	5/8"	4"	1-3/4"	.030"	166.96	159.70	152.44	145.18
64950	64766	.6250"	5/8"	15.875	5/8"	4"	1-3/4"	.060"	166.96	159.70	152.44	145.18
64951	64767	.6250"	5/8"	15.875	5/8"	4"	1-3/4"	.090"	166.96	159.70	152.44	145.18
64952	64768	.6250"	5/8"	15.875	5/8"	4"	1-3/4"	.120"	166.96	159.70	152.44	145.18
64953	64769	.6250"	5/8"	15.875	5/8"	4"	2"	-	153.43	146.76	140.09	133.42
64954	64770	.6250"	5/8"	15.875	5/8"	4"	2"	.015"	166.96	159.70	152.44	145.18
64955	64771	.6250"	5/8"	15.875	5/8"	4"	2"	.030"	166.96	159.70	152.44	145.18
64956	64772	.6250"	5/8"	15.875	5/8"	4"	2"	.060"	166.96	159.70	152.44	145.18
64957	64773	.6250"	5/8"	15.875	5/8"	4"	2"	.120"	166.96	159.70	152.44	145.18
65007	64830	.6250"	5/8"	15.875	5/8"	4"	2-1/8"	.125"	166.96	159.70	152.44	145.18
65008	64831	.6250"	5/8"	15.875	5/8"	5"	2-1/2"	-	197.19	188.62	180.04	171.47
65009	64832	.6250"	5/8"	15.875	5/8"	5"	2-1/2"	.125"	214.54	205.21	195.88	186.56

G7 70

X7

MATERIAL HARDNESS (Rc)

35

0

Series X7C, G7C (continued)

.6299" - 1.000"
(16.000mm - 25.400mm)

HIGH PERFORMANCE
END MILLS

X7C EDP#	G7C EDP#	d1 † Diameter		d2 Shank Diameter	l1 Overall Length	l2 Flute Length	r Corner Radius	1-11	12-24	25-49	50-100	
		Decimal	Metric									
64958	64774	.6299"	16.000	16	88	32	-	155.37	148.61	141.86	135.10	
64959	64775	.6299"	16.000	16	88	32	0.50	168.51	161.18	153.86	146.53	
64960	64776	.6299"	16.000	16	88	32	1.00	168.51	161.18	153.86	146.53	
64961	64777	.6299"	16.000	16	88	32	2.00	168.51	161.18	153.86	146.53	
64962	64778	.6299"	16.000	16	100	40	-	161.49	154.47	147.45	140.43	
64963	64779	.6299"	16.000	16	100	40	0.50	176.73	169.05	161.36	153.68	
64368	64780	.6299"	16.000	16	100	40	0.75	176.73	169.05	161.36	153.68	
64369	64781	.6299"	16.000	16	100	40	1.00	176.73	169.05	161.36	153.68	
64964	64782	.6299"	16.000	16	100	40	1.50	176.73	169.05	161.36	153.68	
64965	64783	.6299"	16.000	16	100	50	-	161.49	154.47	147.45	140.43	
64966	64784	.6299"	16.000	16	100	50	0.50	176.73	169.05	161.36	153.68	
64372	64785	.6299"	16.000	16	100	50	1.00	176.73	169.05	161.36	153.68	
64967	64786	.6299"	16.000	16	125	65	0.50	219.19	209.66	200.13	190.60	
64968	64787	.6299"	16.000	16	125	65	3.00	219.19	209.66	200.13	190.60	
64969	64788	.7500"	3/4"	19.050	3/4"	3"	1"	-	187.17	179.03	170.89	162.76
64970	64789	.7500"	3/4"	19.050	3/4"	3"	1"	.030"	205.34	196.41	187.48	178.56
64971	64790	.7500"	3/4"	19.050	3/4"	4"	1-1/2"	-	196.49	187.95	179.40	170.86
64380	64791	.7500"	3/4"	19.050	3/4"	4"	1-1/2"	.030"	215.41	206.04	196.68	187.31
64972	64792	.7500"	3/4"	19.050	3/4"	4"	1-1/2"	.060"	215.41	206.04	196.68	187.31
64973	64793	.7500"	3/4"	19.050	3/4"	4"	1-1/2"	.120"	215.41	206.04	196.68	187.31
64974	64794	.7500"	3/4"	19.050	3/4"	4"	1-5/8"	-	196.49	187.95	179.40	170.86
64975	64795	.7500"	3/4"	19.050	3/4"	4"	1-5/8"	.015"	215.41	206.04	196.68	187.31
64976	64796	.7500"	3/4"	19.050	3/4"	4"	1-5/8"	.030"	215.41	206.04	196.68	187.31
64977	64797	.7500"	3/4"	19.050	3/4"	4"	1-5/8"	.060"	215.41	206.04	196.68	187.31
64978	64798	.7500"	3/4"	19.050	3/4"	4"	1-5/8"	.090"	215.41	206.04	196.68	187.31
64979	64799	.7500"	3/4"	19.050	3/4"	4"	1-5/8"	.125"	215.41	206.04	196.68	187.31
64980	64800	.7500"	3/4"	19.050	3/4"	4"	1-5/8"	.190"	215.41	206.04	196.68	187.31
64981	64801	.7500"	3/4"	19.050	3/4"	4"	1-5/8"	.250"	215.41	206.04	196.68	187.31
64982	64802	.7500"	3/4"	19.050	3/4"	4"	1-3/4"	-	196.49	187.95	179.40	170.86
64983	64803	.7500"	3/4"	19.050	3/4"	4"	1-3/4"	.030"	215.41	206.04	196.68	187.31
64984	64804	.7500"	3/4"	19.050	3/4"	5"	2-1/4"	-	255.50	244.39	233.28	222.17
64985	64805	.7500"	3/4"	19.050	3/4"	5"	2-1/4"	.030"	287.53	275.03	262.53	250.03
64986	64806	.7500"	3/4"	19.050	3/4"	5"	2-1/4"	.060"	287.53	275.03	262.53	250.03
64987	64807	.7500"	3/4"	19.050	3/4"	5"	2-1/4"	.120"	287.53	275.03	262.53	250.03
64988	64808	.7500"	3/4"	19.050	3/4"	5"	2-1/4"	.125"	287.53	275.03	262.53	250.03
64989	64809	.7500"	3/4"	19.050	3/4"	5"	2-1/2"	.060"	287.53	275.03	262.53	250.03
64990	64810	.7500"	3/4"	19.050	3/4"	6"	3-1/4"	-	297.31	284.38	271.46	258.53
64386	64811	.7500"	3/4"	19.050	3/4"	6"	3-1/4"	.030"	336.48	321.85	307.22	292.59
64991	64812	.7500"	3/4"	19.050	3/4"	6"	3-1/4"	.060"	336.48	321.85	307.22	292.59
64992	64813	.7500"	3/4"	19.050	3/4"	6"	3-1/4"	.125"	336.48	321.85	307.22	292.59
64993	64814	.7874"	20.000	20	100	38	-	261.51	250.14	238.77	227.40	
64389	64815	.7874"	20.000	20	100	38	0.50	297.88	284.93	271.98	259.03	
64994	64816	.7874"	20.000	20	100	38	1.00	297.88	284.93	271.98	259.03	
64995	64817	.7874"	20.000	20	100	50	-	261.51	250.14	238.77	227.40	
64996	64818	.7874"	20.000	20	100	50	0.50	297.88	284.93	271.98	259.03	
64997	64819	.7874"	20.000	20	100	50	1.00	297.88	284.93	271.98	259.03	
64998	64820	1.000"	1"	25.400	1.00"	4"	1-1/2"	-	283.13	270.82	258.51	246.20
64999	64821	1.000"	1"	25.400	1.00"	4"	1-1/2"	.030"	346.37	331.31	316.25	301.19
65000	64822	1.000"	1"	25.400	1.0"	4"	1-1/2"	.060"	346.37	331.31	316.25	301.19
65001	64823	1.000"	1"	25.400	1.00"	4"	1-1/2"	.125"	346.37	331.31	316.25	301.19
65002	64824	1.000"	1"	25.400	1.00"	5"	2"	-	365.70	349.80	333.90	318.00
65003	64825	1.000"	1"	25.400	1.00"	5"	2-1/2"	-	365.70	349.80	333.90	318.00
64400	64826	1.000"	1"	25.400	1.00"	5"	2-1/2"	.030"	419.38	401.15	382.91	364.68
65004	64827	1.000"	1"	25.400	1.00"	6"	3-1/4"	-	462.79	442.67	422.55	402.43
65005	64828	1.000"	1"	25.400	1.00"	6"	3-1/4"	.030"	528.28	505.31	482.34	459.37

70 ← G7

X7

35 →

MATERIAL HARDNESS (Rc)

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