

320M (920M metric) / z = 2
323M (923M metric) / z = 3
330M (930M metric) / z = 4
 .0100" - .2656"
 (0,25mm - 6,75mm)

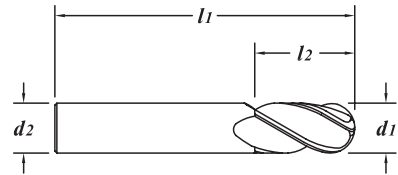
Technical information:
 page 200, 202



TOLERANCES

d_1	$\leq .030"$	+0,0100 -0,0100mm (+.0004" -.0004")
	$\geq 1/32"$	+0,000 -0,050mm (+.000" -.002")
d_2	3mm - 6mm	-0,0000 -0,0075mm (+.0000" -.0003")
	1/4" - 1"	-0,0025 -0,0100mm (-.0001" -.0004")
Ball radius	+0,000 -0,025mm (+.000" -.001")	

Standard Length - Ball End
Standard Länge - Vollradius
Longitud Estándar - Cabeza Esférica
Longueur Standart - Hemispherique
Lunghezza Standard - Sferica
标准长度 - 球头



Solid submicron grain carbide end mill - center cutting
 Extremely versatile
 TiN Coated - page 144
 TiCN Coated - page 145
 TiALN Coated - page 146



Vollhartmetallfräser aus Feinkornhartmetall - Zentrumschnitt
 Extrem Vielseitig
 Radius Toleranz: +0,000 / -0,025 (+.000" -.001")
 TiN-Beschichtet - Seite 144
 TiCN-Beschichtet - Seite 145
 TiALN-Beschichtet - Seite 146



Fresa de submicrograno sólido carburo - corte centrado
 Extremadamente versátil
 Tolerancia de la cabeza esférica +0,000 / -0,025 (+.000" -.001")
 Recubrimiento de TiN - Página 144
 Recubrimiento de TiCN - Página 145
 Recubrimiento de TiALN - Página 146



Fraises carbure submicrograin - coupe au centre
 Utilisations variables
 Tolerance du rayon de hemispherique +0,000 / -0,025 (+.000" -.001")
 Revêtement TiN - Page 144
 Revêtement TiCN - Page 145
 Revêtement TiALN - Page 146



Super sub-micrograno metallo duro - taglio al centro
 Estremamente versatile
 Tolleranza del raggio +0,000 / -0,025 (+.000" -.001")
 Rivestimento in TiN - Pagina 144
 Rivestimento in TiCN - Pagina 145
 Rivestimento in TiALN - Pagina 146



超细晶粒整体硬质合金立铣刀 - 中心切削
 功能极多
 半径允差 +0,000 / -0,025 (+.000" -.001")
 TiN 涂层 - 144页
 TiCN 涂层 - 145页
 TiALN 涂层 - 146页

z = 2 EDP#	z = 3 EDP#	z = 4 EDP#	d_1 †		d_2 Shank Diameter	l_1 Overall Length	l_2 Flute Length	
			Decimal	Metric				
16550	-	-	.0100	.0100"	0,25	1/8"	1-1/2"	.030"
16600	-	-	.0150	.0150"	0,38	1/8"	1-1/2"	.045"
16650	-	-	.0200	.0200"	0,51	1/8"	1-1/2"	.060"
16700	-	-	.0250	.0250"	0,64	1/8"	1-1/2"	.075"
16750	-	-	.0300	.0300"	0,76	1/8"	1-1/2"	.090"
16010	17010	18010	.0312	1/32"	0,79	1/8"	1-1/2"	3/32"
47010	38010	48010	.0394		1,00	3,0	38	4
16020	17020	18020	.0469	3/64"	1,19	1/8"	1-1/2"	1/8"
47020	38020	48020	.0591		1,50	3,0	38	6
16030	17030	18030	.0625	1/16"	1,59	1/8"	1-1/2"	1/4"
16040	17040	18040	.0781	5/64"	1,98	1/8"	1-1/2"	1/4"
47030	38030	48030	.0787		2,00	3,0	38	8
16050	17050	18050	.0938	3/32"	2,38	1/8"	1-1/2"	3/8"
47040	38040	48040	.0984		2,50	3,0	38	12
16060	17060	18060	.1094	7/64"	2,78	1/8"	1-1/2"	3/8"
47050	38050	48050	.1181		3,00	3,0	38	12
16070	17070	18070	.1250	1/8"	3,17	1/8"	1-1/2"	1/2"
47060	38060	48060	.1378		3,50	4,0	50	12
16080	17080	18080	.1406	9/64"	3,57	3/16"	2"	9/16"
16090	17090	18090	.1562	5/32"	3,97	3/16"	2"	9/16"
47070	38070	48070	.1575		4,00	4,0	50	14
16100	17100	18100	.1719	11/64"	4,37	3/16"	2"	9/16"
47080	38080	48080	.1772		4,50	5,0	50	14
16110	17110	18110	.1875	3/16"	4,76	3/16"	2"	5/8"
47090	38090	48090	.1969		5,00	5,0	65	16
16120	17120	18120	.2031	13/64"	5,16	1/4"	2-1/2"	5/8"
16130	17130	18130	.2188	7/32"	5,56	1/4"	2-1/2"	5/8"
16140	17140	18140	.2344	15/64"	5,95	1/4"	2-1/2"	3/4"
47100	38100	48100	.2362		6,00	6,0	65	19
16150	17150	18150	.2500	1/4"	6,35	1/4"	2-1/2"	3/4"
16160	17160	18160	.2656	17/64"	6,75	5/16"	2-1/2"	7/8"

320M (920M metric) / z = 2 (continued)

323M (923M metric) / z = 3 (continued)

330M (930M metric) / z = 4 (continued)

.2756" - 1.000"

(7,00mm - 25,40mm)

z = 2 EDP#	z = 3 EDP#	z = 4 EDP#	$d1^{\dagger}$ Diameter		$d2$ Shank Diameter	$l1$ Overall Length	$l2$ Flute Length	
			Decimal	Metric				
47110	38110	48110	.2756		7,00	7,0	65	22
16170	17170	18170	.2812	9/32"	7,14	5/16"	2-1/2"	7/8"
16180	17180	18180	.2969	19/64"	7,54	5/16"	2-1/2"	7/8"
16190	17190	18190	.3125	5/16"	7,94	5/16"	2-1/2"	7/8"
47120	38120	48120	.3150		8,00	8,0	65	22
16200	17200	18200	.3281	21/64"	8,33	3/8"	2-1/2"	7/8"
16210	17210	18210	.3438	11/32"	8,73	3/8"	2-1/2"	7/8"
47130	38130	48130	.3543		9,00	9,0	65	22
16220	17220	18220	.3594	23/64"	9,13	3/8"	2-1/2"	7/8"
16230	17230	18230	.3750	3/8"	9,52	3/8"	2-1/2"	7/8"
16240	17240	18240	.3906	25/64"	9,92	7/16"	2-3/4"	7/8"
47140	38140	48140	.3937		10,00	10,0	70	25
16250	17250	18250	.4062	13/32"	10,32	7/16"	2-3/4"	7/8"
16260	17260	18260	.4219	27/64"	10,72	7/16"	2-3/4"	7/8"
47150	38150	48150	.4331		11,00	11,0	75	25
16270	17270	18270	.4375	7/16"	11,11	7/16"	2-3/4"	1"
16280	17280	18280	.4531	29/64"	11,51	1/2"	3"	1"
16290	17290	18290	.4688	15/32"	11,91	1/2"	3"	1"
47160	38160	48160	.4724		12,00	12,0	75	25
16300	17300	18300	.4844	31/64"	12,30	1/2"	3"	1"
16310	17310	18310	.5000	1/2"	12,70	1/2"	3"	1"
47170	38170	48170	.5512		14,00	14,0	88	32
16320	17320	18320	.5625	9/16"	14,29	9/16"	3-1/2"	1-1/4"
16330	17330	18330	.6250	5/8"	15,87	5/8"	3-1/2"	1-1/4"
47180	38180	48180	.6299		16,00	16,0	88	38
16340	17340	18340	.6875	11/16"	17,46	3/4"	4"	1-1/2"
47190	38190	48190	.7087		18,00	18,0	100	38
16350	17350	18350	.7500	3/4"	19,05	3/4"	4"	1-1/2"
47200	38200	48200	.7874		20,00	20,0	100	38
47210	38210	48210	.8661		22,00	22,0	100	38
16360	17360	18360	.8750	7/8"	22,22	7/8"	4"	1-1/2"
47220	38220	48220	.9843		25,00	25,0	100	38
16370	17370	18370	1.000	1"	25,40	1"	4"	1-1/2"