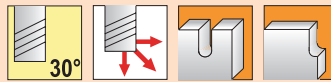


720MA (740MA metric) / z = 2
723MA (743MA metric) / z = 3
730MA (750MA metric) / z = 4
 .1181" - .3150"
 (3,00mm - 8,00mm)

Technical information:
 page 200, 202



TOLERANCES

d_1	+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")

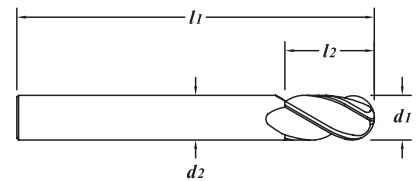
Extra Length - Ball End - TiALN Coated
Extra Lang - Vollradius - TiALN-Beschichtet
Longitud Extra - Cabeza Esférica - Recubrimiento de TiALN
Extra Longue - Hemispherique - Revêtement TiALN
Lunghezza Extra - Sferica - Rivestimento in TiALN
超长 - 球头 - TiALN 涂层



END MILLS



Solid submicron grain carbide end mill - center cutting
 Extended reach
 Dry or semi-dry machining
 Up to 40% faster than uncoated
 Can be modified with a neck within 48 hours
 Extremely versatile
 Uncoated - page 172
 TiCN Coated - page 174



Vollhartmetallfräser aus Feinkornhartmetall - Zentrumschnitt
 Erweiterte Reichweite
 Trocken oder Halbtrockene Bearbeitung
 Bis zu 40% schneller als unbeschichtete Werkzeuge
 Kann innerhalb 48 Stunden am Schaft verjüngt werden
 Extrem Vielseitig
 Radius Toleranz: +0,000 / -0,025 (+,000" -,.001")
 Unbeschichtet - Seite 172
 TiCN-Beschichtet - Seite 174



Fresa de submicrongrano sólido carburo - corte centrado
 Mayor alcance
 Mecanizado seco o semisecco
 Hasta un 40% más rápido que sin recubrimiento
 Puede ser modificado con un cuello en 48 horas
 Extremadamente versátil
 Tolerancia de la cabeza esférica +0,000 / -0,025 (+,000" -,.001")
 Sin recubrimiento - Página 172
 Recubrimiento de TiCN - Página 174



Fraises carbure submicrograin - coupe au centre
 Extension supplémentaire
 Usinage a sec ou avec l'air
 40% plus rapide que le non revetu
 Peut etre modifier avec un col degage sous un delai de 48 heures
 Utilisations variables
 Tolerance du rayon de hemispherique +0,000 / -0,025 (+,000" -,.001")
 Sans revêtement - Page 172
 Revêtement TiCN - Page 174



Super sub-micrograno metallo duro - taglio al centro
 Estensione più grande
 Lavorazione a secco o a umido
 40% più veloce rispetto non rivestito
 Può essere modificata in 48 ore
 Estremamente versatile
 Tolleranza del raggio +0,000 / -0,025 (+,000" -,.001")
 Non Rivestito - Pagina 172
 Rivestimento in TiCN - Pagina 174



超细晶粒整体硬质合金立铣刀 - 中心切削
 加长
 干式或半干式机加工
 跟无涂层刀具相比可提高速度高达40%
 可以在48小时内用轴颈进行修正
 功能极多
 半径公差 +0,000 / -0,025 (+,000" -,.001")
 未涂层 - 172页
 TiCN 涂层 - 174页

z = 2 EDP#	z = 3 EDP#	z = 4 EDP#	$d1$ †			$d2$ Shank Diameter	$l1$ Overall Length	$l2$ Flute Length
			Decimal	Diameter	Metric			
97017	98017	99017	.1181		3,00	3,0	50	16
97027	98027	99027	.1181		3,00	3,0	75	20
97037	98037	99037	.1181		3,00	3,0	75	25
43017	55517	44017	.1250	1/8"	3,17	1/8"	2"	5/8"
43027	55527	44027	.1250	1/8"	3,17	1/8"	3"	3/4"
43037	55537	44037	.1250	1/8"	3,17	1/8"	3"	1"
97047	98047	99047	.1575		4,00	4,0	50	16
97057	98057	99057	.1575		4,00	4,0	75	20
97067	98067	99067	.1575		4,00	4,0	75	25
43047	55547	44047	.1875	3/16"	4,76	3/16"	3"	1"
43057	55557	44057	.1875	3/16"	4,76	3/16"	3"	1-1/8"
43067	55567	44067	.1875	3/16"	4,76	3/16"	4"	1"
97077	98077	99077	.1969		5,00	5,0	50	16
97087	98087	99087	.1969		5,00	5,0	75	20
97097	98097	99097	.1969		5,00	5,0	75	25
97107	98107	99107	.2362		6,00	6,0	75	25
97117	98117	99117	.2362		6,00	6,0	100	25
97127	98127	99127	.2362		6,00	6,0	100	32
97137	98137	99137	.2362		6,00	6,0	150	38
43077	55577	44077	.2500	1/4"	6,35	1/4"	3"	1"
43087	55587	44087	.2500	1/4"	6,35	1/4"	4"	1"
43097	55597	44097	.2500	1/4"	6,35	1/4"	4"	1-1/2"
43107	55607	44107	.2500	1/4"	6,35	1/4"	6"	1-1/2"
43117	55617	44117	.3125	5/16"	7,94	5/16"	3"	1"
43127	55627	44127	.3125	5/16"	7,94	5/16"	4"	1"
43137	55637	44137	.3125	5/16"	7,94	5/16"	4"	1-5/8"
43147	55647	44147	.3125	5/16"	7,94	5/16"	6"	1-1/2"
97147	98147	99147	.3150		8,00	8,0	75	25
97157	98157	99157	.3150		8,00	8,0	100	25
97167	98167	99167	.3150		8,00	8,0	100	41
97177	98177	99177	.3150		8,00	8,0	150	50

continued →

720MA (740MA metric) / z = 2 (continued)**723MA (743MA metric) / z = 3 (continued)****730MA (750MA metric) / z = 4 (continued)**

.3750" - 1.000"

(9,52mm - 25,40mm)

z = 2 EDP#	z = 3 EDP#	z = 4 EDP#	d_1 † Diameter			d_2 Shank Diameter	l_1 Overall Length	l_2 Flute Length
			Decimal		Metric			
43157	55657	44157	.3750	3/8"	9,52	3/8"	3"	1"
43167	55667	44167	.3750	3/8"	9,52	3/8"	4"	1"
43177	55677	44177	.3750	3/8"	9,52	3/8"	4"	2"
43187	55687	44187	.3750	3/8"	9,52	3/8"	6"	1-1/2"
43197	55697	44197	.3750	3/8"	9,52	3/8"	6"	3"
97187	98187	99187	.3937		10,00	10,0	76	25
97197	98197	99197	.3937		10,00	10,0	100	25
97207	98207	99207	.3937		10,00	10,0	100	50
97217	98217	99217	.3937		10,00	10,0	150	38
97227	98227	99227	.3937		10,00	10,0	150	75
43207	55707	44207	.4375	7/16"	11,11	7/16"	4"	1"
43217	55717	44217	.4375	7/16"	11,11	7/16"	4"	2"
43227	55727	44227	.4375	7/16"	11,11	7/16"	6"	1-1/2"
43237	55737	44237	.4375	7/16"	11,11	7/16"	6"	3"
97237	98237	99237	.4724		12,00	12,0	100	25
97247	98247	99247	.4724		12,00	12,0	100	50
97257	98257	99257	.4724		12,00	12,0	150	50
97267	98267	99267	.4724		12,00	12,0	150	75
43247	55747	44247	.5000	1/2"	12,70	1/2"	4"	1"
43257	55757	44257	.5000	1/2"	12,70	1/2"	4"	2"
43267	55767	44267	.5000	1/2"	12,70	1/2"	6"	1-1/2"
43277	55777	44277	.5000	1/2"	12,70	1/2"	6"	3"
97277	98277	99277	.5512		14,00	14,0	100	25
97287	98287	99287	.5512		14,00	14,0	100	50
97297	98297	99297	.5512		14,00	14,0	150	50
97307	98307	99307	.5512		14,00	14,0	150	75
43287	55787	44287	.5625	9/16"	14,29	9/16"	6"	2"
43297	55797	44297	.5625	9/16"	14,29	9/16"	6"	3"
43307	55807	44307	.6250	5/8"	15,87	5/8"	6"	2"
43317	55817	44317	.6250	5/8"	15,87	5/8"	6"	3"
97317	98317	99317	.6299		16,00	16,0	150	50
97327	98327	99327	.6299		16,00	16,0	150	75
97337	98337	99337	.7087		18,00	18,0	150	50
97347	98347	99347	.7087		18,00	18,0	150	75
43327	55827	44327	.7500	3/4"	19,05	3/4"	6"	2"
43337	55837	44337	.7500	3/4"	19,05	3/4"	6"	3"
97357	98357	99357	.7874		20,00	20,0	150	50
97367	98367	99367	.7874		20,00	20,0	150	75
97377	98377	99377	.9843		25,00	25,0	150	50
97387	98387	99387	.9843		25,00	25,0	150	75
43347	55847	44347	1.000	1"	25,40	1"	6"	2"
43357	55857	44357	1.000	1"	25,40	1"	6"	3"