

Made in ITALY

12



UTENSILI
PER FRESATURA
MILLING TOOLS



12

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INSERTI
per FRESATURA

MILLING
INSERTS

LEGENDA / KEY

Simbolo / Insert shape			
S	A	R	Ø del cerchio inserito Incircle diameter (mm)
		07	7.00
	10	10	10.00
		12	12.00
12			12.70
	16	16	16.00

CODE	Spessore Thickness (mm)
02	2.38
03	3.18
T3	3.97
04	4.76

5 Lunghezza di taglio / Cutting edge length

6 Spessore dell'inserto / Insert thickness

5 **10** **6** **03** **7** **PD**

7 Codice rompitruciolo / Chipbreaker code	
Direzione di taglio / Cutting direction	
Code	Direzione di taglio Cutting direction
R	Destra / Right
L	Sinistra / Left
N	Neutro / Neutral
Condizioni di taglio / Cutting edge	
Code	Forma / Shape
S	Spigolo arrotondato e smussato Chamfered and rounded

RIVESTIMENTO - RACCOMANDAZIONI D'USO GRADES OVERVIEW - APPLICATION RECOMMENDATION

P25M

Rivestito in PVD (carburo rivestito) particolarmente adatto per elevate velocità di taglio su lavorazioni a secco e a umido in condizioni stabili.

Grado multiuso per la fresatura di acciaio legati ed inossidabili.

Multi purpose grade for milling unalloyed, low alloyed, high alloyed and stainless steel. The PVD coated grade is especially suitable for high cutting speeds on dry / wet machining under stable conditions.

P35M

Rivestito in PVD (carburo rivestito) per fresatura universale dell'acciaio in combinazione con un angolo di avvicinamento di 90°. Particolarmente adatto per la fresatura a secco a velocità di taglio medio-basse in condizioni difficili.

Universal steel milling grade in combination with 90° approach angle. A PVD layer and a tough carbide grade for milling of the most usual steel qualities. Especially good suitable for dry milling at low to medium cutting speeds under difficult conditions.

AVANZAMENTI (FORMULE) / FEED (FORMULAS)

N° giri mandrino Spindle speed	Velocità di taglio Cutting speed	v_c Velocità di taglio Cutting speed
n (min^{-1}): $n = \frac{v_c \cdot 1000}{\pi \cdot d_1}$	v_c (m/min): $v_c = \frac{n \cdot \pi \cdot d_1}{1000}$	n N° giri mandrino Spindle speed
Velocità di avanzamento Feed rate	Avanzamento per dente Feed per tooth	d_1 Ø di taglio cutter Ø
V_f (mm/min): $V_f = f_z \cdot z \cdot n$	f_z (mm): $f_z = \frac{V_f}{z \cdot n}$	v_f Velocità di avanzamento Feed rate
		f_z Avanzamento per dente Feed per tooth
		z N° di denti Number of teeth

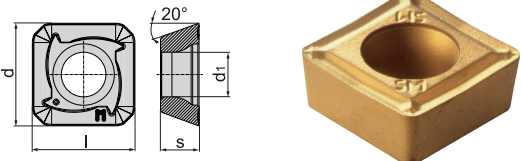
INSERTI PER FRESATURA 45° / 45° MILLING INSERTS

SE.. 12..

Geometria inserto Insert geometry	Profondità di taglio Cutting depth (mm) a_p max	Avanzamenti Feed (mm) f_z
LP	1 4 6	0,16 0,25 0,35

RACCOMANDAZIONI SULLA VELOCITÀ DI TAGLIO PER FRESATURA A 45° CUTTING SPEED RECOMMENDATIONS FOR MILLING CUTTER 45°

Materiale Material	Lavorazione a secco Dry machining	Vc m/min	
		P25M	P35M
P Acciaio strutturale Structural steel	•	190-290	150-230
Acciaio trattato termicamente Heat treated steel	•	160-230	130-180
Acciaio per utensili Tool steel	•	145-210	110-160
Acciaio trattato termicamente (alta resistenza) Heat treated steel (high strength)	•	110-170	

ART.	l	d	s	d_1	Rivestimento Coated	
					P	
					P25M	P35M
SEKT1204AFSN-LP-P25M	12,70	12,70	4,76	5,5	•	

AVANZAMENTI (FORMULE) / FEED (FORMULAS)

N° giri mandrino Spindle speed	Velocità di taglio Cutting speed	V_c Velocità di taglio Cutting speed
n (min ⁻¹): $n = \frac{V_c \cdot 1000}{\pi \cdot d_1}$	v_c (m/min): $v_c = \frac{n \cdot \pi \cdot d_1}{1000}$	n N° giri mandrino Spindle speed
Velocità di avanzamento Feed rate	Avanzamento per dente Feed per tooth	d_1 Ø di taglio cutter Ø
V_f (mm/min): $V_f = f_z \cdot z \cdot n$	f_z (mm): $f_z = \frac{V_f}{z \cdot n}$	V_f Velocità di avanzamento Feed rate
		f_z Avanzamento per dente Feed per tooth
		z N° di denti Number of teeth

INSERTI PER FRESATURA 90° / 90° MILLING INSERTS

APT 10..

Geometria inserto Insert geometry	Profondità di taglio Cutting depth (mm) a_p max	Avanzamenti Feed (mm) f_z
LP2	0,5 3 9	0,1 0,15 0,2

APT 16..

Geometria inserto Insert geometry	Profondità di taglio Cutting depth (mm) a_p max	Avanzamenti Feed (mm) f_z
LP2	1 8 15	0,1 0,15 0,2

RACCOMANDAZIONI SULLA VELOCITÀ DI TAGLIO PER FRESATURA A 90° CUTTING SPEED RECOMMENDATIONS FOR MILLING CUTTER 90°

	Materiale Material	Lavorazione a secco Dry machining	V_c m/min	
			P25M	P35M
P	Acciaio strutturale Structural steel	•	190-290	150-230
	Acciaio trattato termicamente Heat treated steel	•	160-230	130-180
	Acciaio per utensili Tool steel	•	145-210	110-160
	Acciaio trattato termicamente (alta resistenza) Heat treated steel (high strength)	•	110-170	

ART.	l	d	s	d_1	r	Rivestimento Coated	
						P	
						P25M	P35M
APKT1003PDSR-LP-P35M	10	6,7	3,5	2,8	0,5		•
APKT1604PDSR-LP-P35M	16	9,52	5,26	4,5	0,8		•



AVANZAMENTI (FORMULE) / FEED (FORMULAS)

N° giri mandrino Spindle speed	Velocità di taglio Cutting speed	v_c Velocità di taglio Cutting speed
n (min ⁻¹): $n = \frac{v_c \cdot 1000}{\pi \cdot d_1}$	v_c (m/min): $v_c = \frac{n \cdot \pi \cdot d_1}{1000}$	n N° giri mandrino Spindle speed
Velocità di avanzamento Feed rate	Avanzamento per dente Feed per tooth	d_1 Ø di taglio cutter Ø
V_f (mm/min): $V_f = f_z \cdot z \cdot n$	f_z (mm): $f_z = \frac{V_f}{z \cdot n}$	v_f Velocità di avanzamento Feed rate
		f_z Avanzamento per dente Feed per tooth
		z N° di denti Number of teeth

INSERTI PER FRESATURA 3D / 3D MILLING INSERTS

RD.. 0702..

Geometria inserto Insert geometry	Profondità di taglio Cutting depth (mm) a_p max	Avanzamenti Feed (mm) f_z
LP	0,25 1 1,7	0,14 0,27 0,6

RD.. 1003..

Geometria inserto Insert geometry	Profondità di taglio Cutting depth (mm) a_p max	Avanzamenti Feed (mm) f_z
LP	0,28 1,5 2,5	0,15 0,28 0,64

RD.. 12T3..

Geometria inserto Insert geometry	Profondità di taglio Cutting depth (mm) a_p max	Avanzamenti Feed (mm) f_z
LP	0,3 1,8 3	0,16 0,29 0,7

RD.. 1604..

Geometria inserto Insert geometry	Profondità di taglio Cutting depth (mm) a_p max	Avanzamenti Feed (mm) f_z
LP	0,3 2,4 4	0,18 0,3 0,75

RACCOMANDAZIONI SULLA VELOCITÀ DI TAGLIO PER FRESATURA 3D CUTTING SPEED RECOMMENDATIONS FOR 3D MILLING CUTTER

	Materiale Material	Lavorazione a secco Dry machining	Vc m/min	
			P25M	P35M
P	Acciaio strutturale Structural steel	•	200-300	170-260
	Acciaio trattato termicamente Heat treated steel	•	180-280	150-240
	Acciaio per utensili Tool steel	•	160-250	140-220
	Acciaio trattato termicamente (alta resistenza) Heat treated steel (high strength)	•	130-180	

ART.	d	s	d ₁	Rivestimento Coated		
				P		
				P25M	P35M	
	RDKW0702MOS-LP-P25M	7	2,38	2,7	•	
	RDKW1003MOS-LP-P25M	10	3,18	3,9	•	
	RDKW12T3MOS-LP-P25M	12	3,97	3,9	•	
	RDKW1604MOS-LP-P25M	16	4,76	5,2	•	



UTENSILI
per FRESATURA

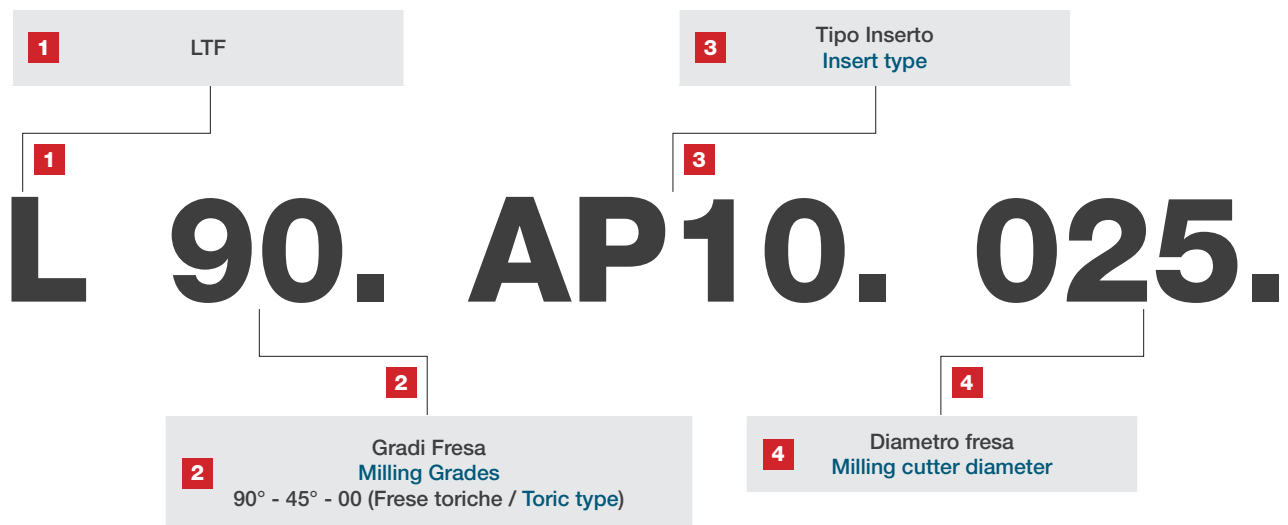
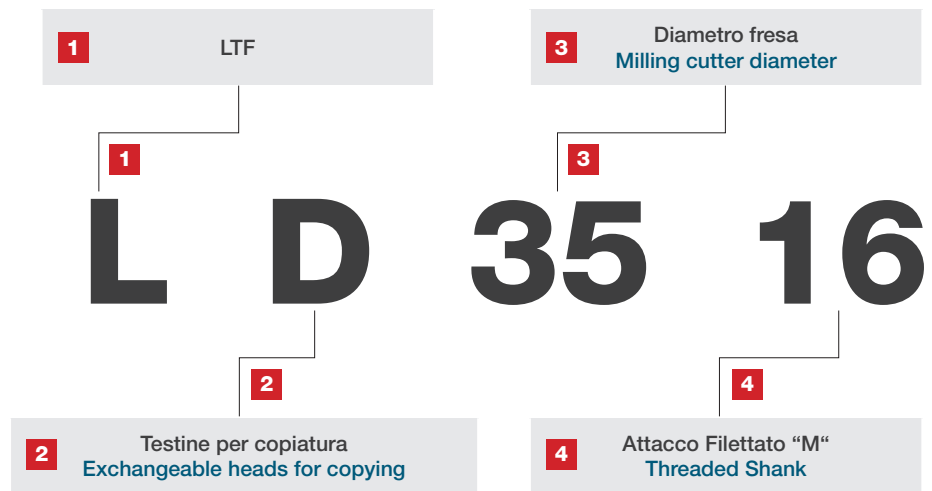
MILLING
TOOLS

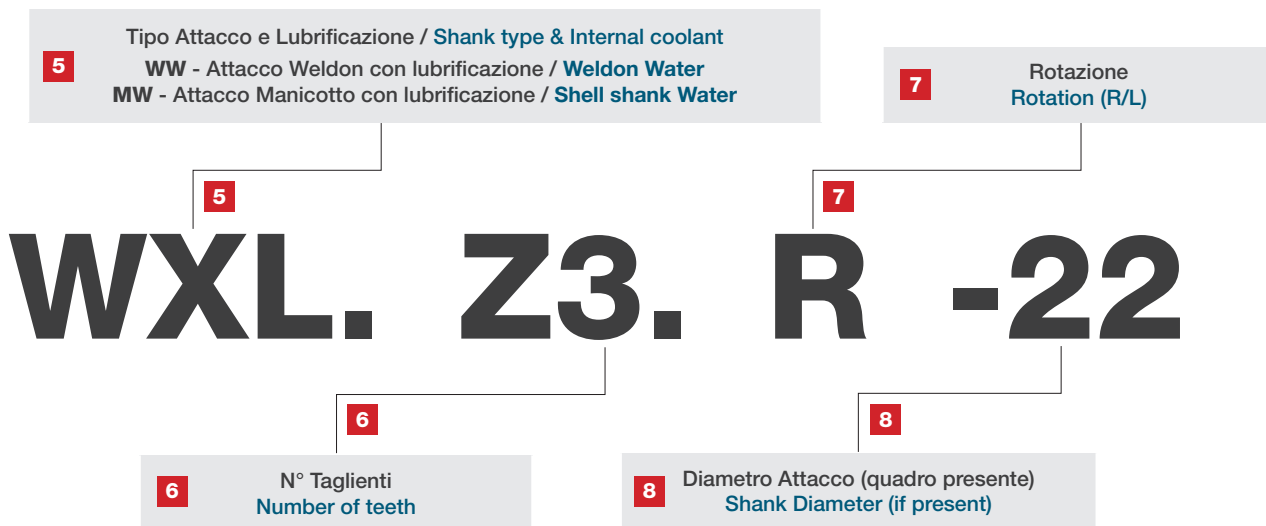
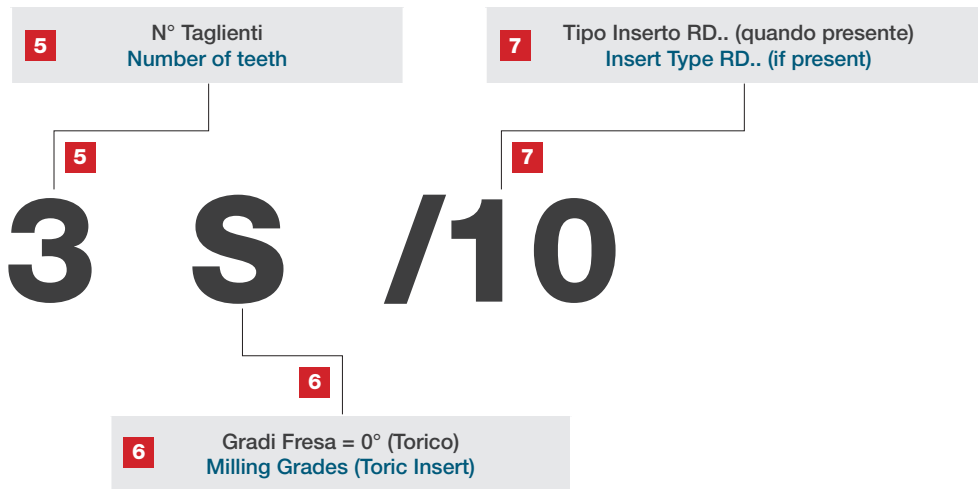
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LEGENDA / KEY

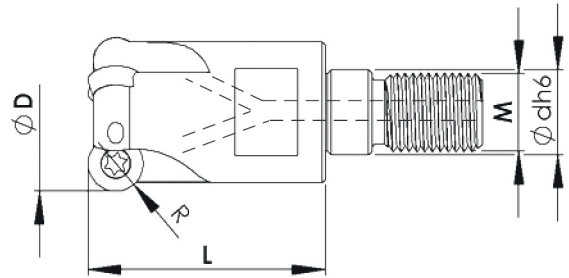
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STANDARD MILLING CUTTERS CODIFICATION SYSTEM**

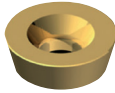

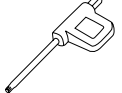
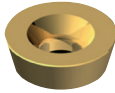

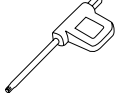
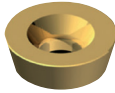

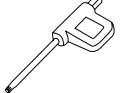
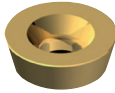

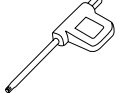
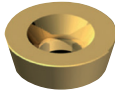

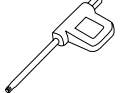


LEGENDA / KEY


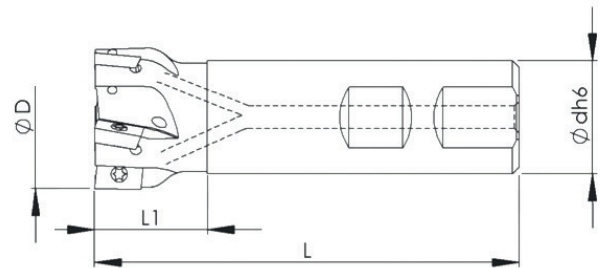
UTENSILI PER FRESATURA / MILLING TOOLS

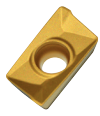


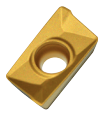


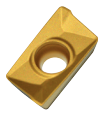


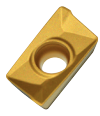


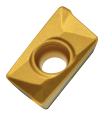


TESTINE PER FRESATURE EXCHANGEABLE HEADS FOR MILLING



ART.	Attacco filettato / Threaded Shank						Inserti (non inclusi) Insert (not included)	Vite di fissaggio Fixing screw	Torx Key
	Ø D	L	M	Ø dh6	Z	R			
LD1683S	16	23	8	8,5	3	3,5			
LD20104S	20	30	10	10,5	4	3,5			
LD20102S	20	30	10	10,5	2	5			
LD25123S	25	35	12	12,5	3	5			
LD35163S/10	35	43	16	17	3	5			

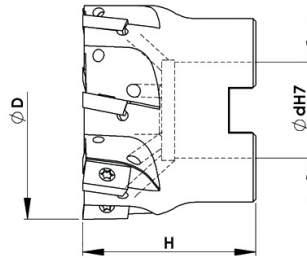
FRESE PER SPALLAMENTI 90° SHOULDER MILLING CUTTERS 90°

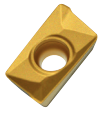

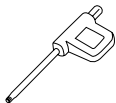


ART.	Serie normale attacco Weldon Standard Series Weldon Shank					Inserti (non inclusi) Insert (not included)	Vite Screw	Torx Key
	Ø D	L1	L	Ø dh6	Z			
L90AP10012WWZ1R	12	24	80	16	1			
L90AP10016WWZ2R	16	25	85	16	2			
L90AP10020WWZ3R	20	25	90	20	3			
L90AP10025WWZ4R	25	25	95	25	4			
L90AP10032WWZ5R	32	26	95	25	5			

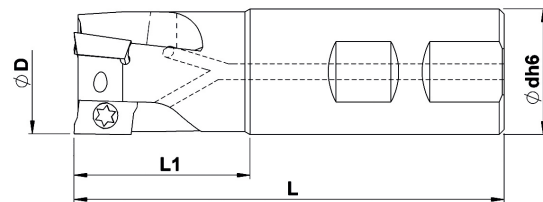
UTENSILI PER FRESATURA / MILLING TOOLS

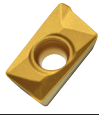


FRESE PER SPALLAMENTI 90° SHOULDER MILLING CUTTERS 90°



ART.	Attacco a manicotto Shell Shank				Inserti (non inclusi) Insert (not included)	Vite Screw	Torx Key
	Ø D	H	Ø dh7	Z			
L90AP10040MWZ6R-22	40	40	22	6			
L90AP10050MWZ5R	50	40	22	5	AP..1003	LVM2506	T08
L90AP10063MWZ6R	63	40	22	6	AP..1003	LVM2506	T08

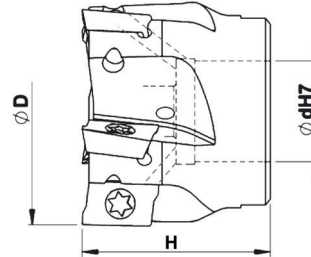
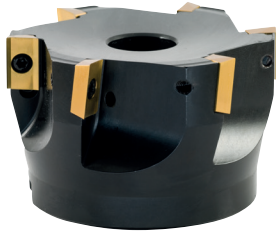
FRESE PER SPALLAMENTI 90° SHOULDER MILLING CUTTERS 90°



ART.	Serie normale attacco Weldon Standard Series Weldon Shank					Inserti (non inclusi) Insert (not included)	Vite Screw	Torx Key
	Ø D	L1	L	Ø dh6	Z			
L90AP16025WWZ2R	25	44	100	25	2			
L90AP16032WWZ3R	32	50	110	32	3	AP..1604	LVM4010	T15

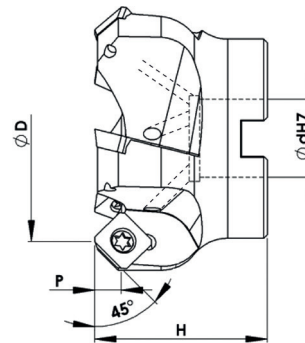
UTENSILI PER FRESATURA / MILLING TOOLS

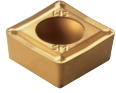


FRESE PER SPALLAMENTI 90° SHOULDER MILLING CUTTERS 90°



ART.	Attacco a manicotto Shell Shank				Inserti (non inclusi) Insert (not included)	Vite Screw	Torx Key
	Ø D	H	Ø dh7	Z			
L90AP16040MWZ4R	40	40	16	4			
L90AP16050MWZ5R	50	40	22	5	AP..1604	LVM4010	T15
L90AP16063MWZ5R	63	40	22	5	AP..1604	LVM4010	T15
L90AP16080MWZ6R	80	50	27	6	AP..1604	LVM4010	T15

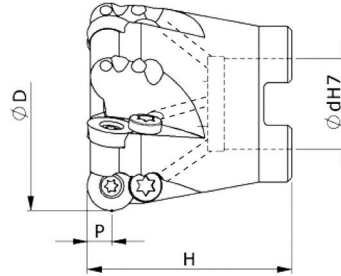
FRESE PER SPIANATURE 45° FACE MILLING CUTTERS 45°



ART.	Attacco a manicotto Shell Shank					Inserti (non inclusi) Insert (not included)	Vite Screw	Torx Key
	Ø D	H	Ø dh7	P	Z			
L45SE12050MWZ4R	50	48	22	6	4			
L45SE12063MWZ5R	63	48	22	6	5	SE..1204	LVM5010	T20
L45SE12080MWZ6R	80	50	27	6	6	SE..1204	LVM5010	T20

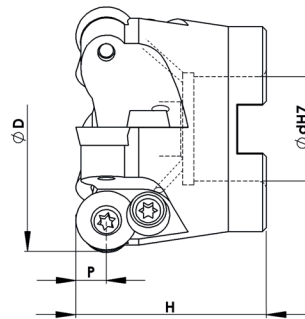
UTENSILI PER FRESATURA / MILLING TOOLS

FRESE TORICHE PER SPIANATURE E COPIATURE TORIC MILLING CUTTERS FOR FACING AND COPYING



ART.	Attacco a manicotto Shell Shank					Inserti (non inclusi) Insert (not included)	Vite Screw	Vite di fissaggio Fixing screw	Torx Key
	Ø D	H	Ø dh7	P	Z				
L00RD12T3040MWZ4R	40	40	16	6	4	RD..12T3	LVM358	OM3505	T15
L00RD12T3050MWZ5R	50	50	22	6	5	RD..12T3	LVM358	OM3505	T15
L00RD12T3063MWZ6R	63	50	22	6	6	RD..12T3	LVM358	OM3505	T15
L00RD12T3080MWZ7R	80	50	27	6	7	RD..12T3	LVM358	OM3505	T15

FRESE TORICHE PER SPIANATURE E COPIATURE TORIC MILLING CUTTERS FOR FACING AND COPYING



ART.	Attacco a manicotto Shell Shank					Inserti (non inclusi) Insert (not included)	Vite per inserto Screw for Insert	Rondella Lock Washer	Vite per rondella Screw Lock Washer	Torx Key
	Ø D	H	Ø dh7	P	Z					
L00RD16052MWZ4R	52	50	22	8	4	RD..1604	LVM4511	RO1104	LVM4511	T20
L00RD16063MWZ5R	63	50	27	8	5	RD..1604	LVM4511	RO1104	LVM4511	T20
L00RD16066MWZ5R	66	50	27	8	5	RD..1604	LVM4511	RO1104	LVM4511	T20
L00RD16080MWZ6R	80	50	27	8	6	RD..1604	LVM4511	RO1104	LVM4511	T20

