EASYMill

The New Universal Endmill

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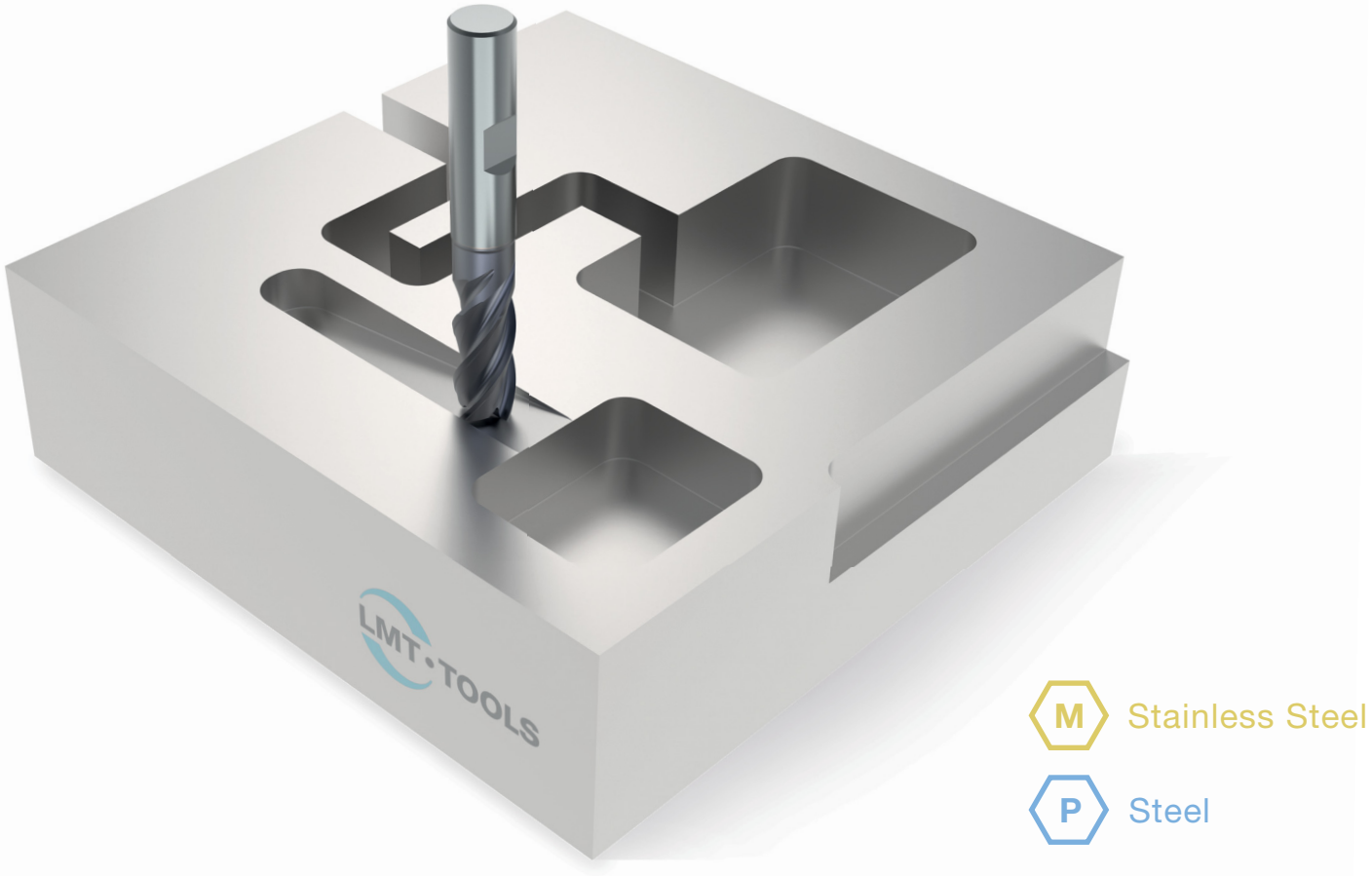
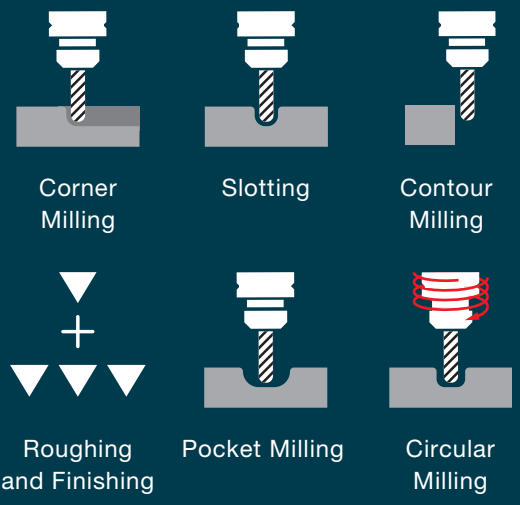
EASY.

The product range for highest efficiency and universal application. Easy to handle.



One Milling Cutter, Full Flexibility
For All Milling Operations

With the EASYMill, all common milling operations can be perfectly covered, such as roughing, finishing, slotting, ramping or helical plunging. The EASYMill can efficiently be used in steel and stainless steel materials.



The Universal Endmill for Low-Alloy, Medium-Alloy and Stainless Steels

With its geometry perfectly optimized for steel and stainless steel, the EASYMill cuts through all materials without any problems. Cutting pressure and cutting forces are effectively reduced by the unequal helix pitch. This makes the EASYMill ideally suited for use on turning-milling machines.

The adapted sharp cutting edge effectively prevents chip build up and tool breakage. This enables reliable machining of materials such as construction steels, case-hardened steels and austenitic stainless steels (CrNi steels). A malleable strength of 300–900 N/mm² is particularly suitable.

Features:

Cylindrical shank – with and without clamping surface

Neck relief

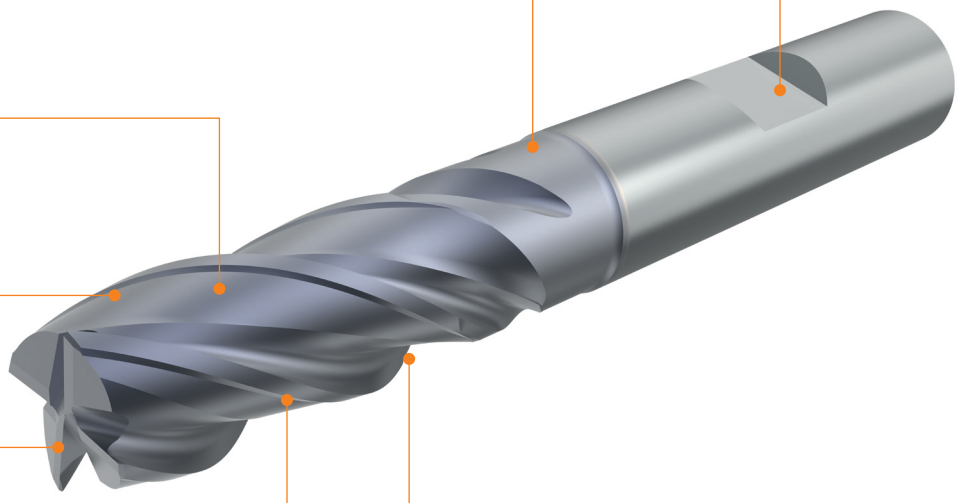
Coating optimised for steel and stainless steel

Different helix angles

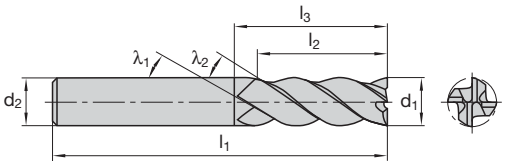
Cutting to the centre

Increased stability through reinforcement of the „back“

Positive cutting edge geometry, for soft and tough steels of class ISO P, ISO M

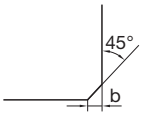


LMT Tools Standard | 35° 38° | h12 | LCPM 30M | + | DIN 6535 HA | DIN 6535 HB



Cat.-No.						EMC01-PM-A		EMC01-PM-B	
P						■		■	
M						■		■	
K									
N									
S									
H									
O									
d_1	l_2	l_1	l_3	d_2	z	Ident No.	LMT-Code	Ident No.	LMT-Code
3	6	54	9	6	4	7429329	EM-EMC01 PM3.0x6/9 4C0.075HA	7429338	EM-EMC01 PM3.0x6/9 4C0.075HB
4	8	54	12	6	4	7429330	EM-EMC01 PM4.0x8/12 4C0.1HA	7429339	EM-EMC01 PM4.0x8/12 4C0.1HB
5	10	54	15	6	4	7429331	EM-EMC01 PM5.0x10/15 4C0.15HA	7429340	EM-EMC01 PM5.0x10/15 4C0.15HB
6	13	57	21	6	4	7429332	EM-EMC01 PM6.0x13/21 4C0.2HA	7429341	EM-EMC01 PM6.0x13/21 4C0.2HB
8	19	63	27	8	4	7429333	EM-EMC01 PM8.0x19/27 4C0.2HA	7429342	EM-EMC01 PM8.0x19/27 4C0.2HB
10	22	72	32	10	4	7429334	EM-EMC01 PM10.0x22/32 4C0.2HA	7429343	EM-EMC01 PM10.0x22/32 4C0.2HB
12	26	83	38	12	4	7429335	EM-EMC01 PM12.0x26/38 4C0.2HA	7429344	EM-EMC01 PM12.0x26/38 4C0.2HB
16	32	92	44	16	4	7429336	EM-EMC01 PM16.0x32/44 4C0.3HA	7429345	EM-EMC01 PM16.0x32/44 4C0.3HB
20	38	104	54	20	4	7429337	EM-EMC01 PM20.0x38/54 4C0.3HA	7429346	EM-EMC01 PM20.0x38/54 4C0.3HB

■ = First choice
☐ = Second choice

Edge protection chamfer	d_1	b
	3	0,075
	4	0,1
	5	0,15
	6	0,2
	8	0,2
	10	0,2
	12	0,2
	16	0,3
	20	0,3

Cutting data recommendations starting page 6

EASYMill
Cutting data recommendations

Material		Material No.	R_m/UTS (N/mm²)	DIN Description	Coolant
P	Plain carbon steel	1.0715	–700	11SMn30	
	Free cutting steel	1.0570		S355J2+N	
	Low alloy steel	1.1206		C50E	
	Case hardening steel	1.7131		16MnCr5	
		1.7147		20MnCr5	
		1.1191		C45E	
	Heat-treatment steel, medium strength	1.7219	–900	26CrMo4	
		1.5752		15NiCr13	
		1.7225		42CrMo4	
		1.3505		100Cr6	
M	Stainless steel, austenitic	1.4301	–700	X5CrNi18-10	
		1.4571		X6CrNiMoTi17-12-2	
		1.4404		X2CrNiMo17-12-2	
	Stainless steel, ferritic, martensitic	1.4122	–900	X39CrMo17-1	
		1.4024		X15Cr13	
		1.4057		X17CrNi16-2	
		1.4512		X2CrTi12	

Dry machining, air-blast cooling is advantageous

Wet machining, sufficient emulsion volume required

Calculation formulas and feed correction factors

Speed n (min⁻¹):

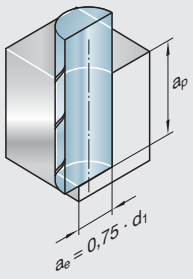
$$n = \frac{v_c \cdot 1000}{\pi \cdot d_1}$$

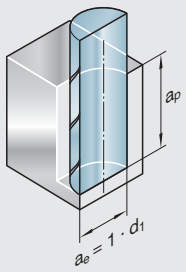
Feed rate v_f (mm/min):

$$v_f = f_z \cdot z \cdot n \cdot f_1$$

a_e = Width of cut in mm
a_p = Depth of cut in mm
d_1 = Cutter diameter in mm
f_1 = Correction factor for v_f
f_z = Feed per tooth in mm
n = Speed in min⁻¹
v_f = Feed rate in mm/min
z = No. of teeth

Feed correction f_1					
a_e	a_p	f_1	a_e	a_p	f_1
0,75 · d_1	1 x d_1	0,8	1 · d_1	0,5 x d_1	0,6
	1,5 x d_1	0,7		1 x d_1	0,5
	2 x d_1 [1)]	0,6		2 x d_1 [1)]	0,4





[1)] 1,8 x d_1 for diameter 20

Cutting speed v_c (m/min)	Cutting diameter (mm) / Feed per tooth f_z (mm/z.)[1)]								
	Ø 3	Ø 4	Ø 5	Ø 6	Ø 8	Ø 10	Ø 12	Ø 16	Ø 20
200	0,03	0,04	0,05	0,06	0,09	0,1	0,12	0,16	0,2
160	0,025	0,03	0,035	0,045	0,065	0,075	0,09	0,12	0,15
90	0,02	0,02	0,02	0,025	0,04	0,045	0,05	0,07	0,08
80	0,015	0,015	0,015	0,02	0,03	0,04	0,045	0,06	0,07

The cutting data above are starting values and must be adjusted to the existing conditions.

Plunge angle α for ramping and helix milling	
Cutting diameter (mm)	Angle α
3–10	3°
12–20	5°

Publication details
Publisher: LMT Tools Global Operations GmbH & Co. KG,
Vogesenstrasse 23, 77933 Lahr, Germany, Phone: +49 7821 943-0
Responsible for the content: Norman Winter, LMT Tool Systems GmbH & Co. KG
Design: deckermedia GbR, Rostock
Printing: Druckerei Weidner GmbH, Rostock

Printed in Germany SAP-Nr. 7433353

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