

FGT SOLID CARBIDE END MILLS



☉ FGT BALL NOSE- AND CORNER RADIUS END MILLS



PRODUCT INFORMATION FGT SOLID CARBIDE END MILLS

Innovations – for 3-D-machining of shallow contours and profiles:

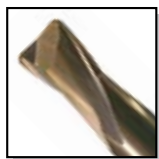
- ⊕ new ball- and corner-radius geometry
- ⊕ improved transition curves between shank and cutting edge
- ⊕ new coating PVTiH
- ⊕ new carbide substrate UMGC
- ⊕ reduced diameter- and radius-tolerances
- ⊕ avoiding vibrations
- ⊕ remarkably increased tool-life
- ⊕ better rigidity

for machining of:

- ⊕ tool steels
- ⊕ die steels
- ⊕ hardened steels up to 58 HRC



17 22 85



07 22 85



EXAMPLES FOR APPLICATIONS FROM PRACTICE

customers data: 3-D-milling of male and female mould, finishing

material: 1.2312

machine: Mikron

tool: 1722 85 100

tool diam.: Ø 10 mm

ae (width of cut): 0,20 mm

ap (depth of cut): 0,20 mm

Vf (feed/min.): 1700 mm/min

n: 8500 1/min

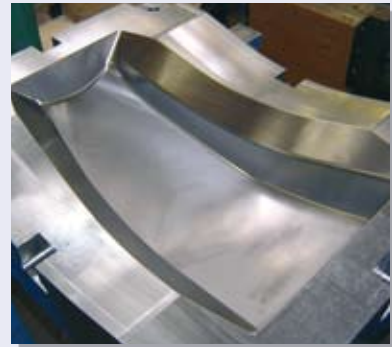
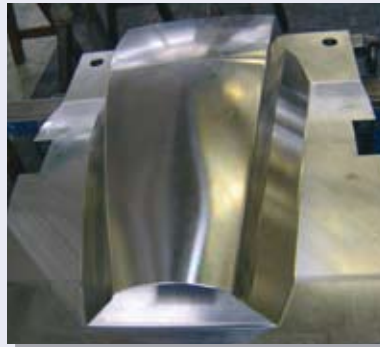
Vc (speed): 267 m/min

machining time: 15 hours

result: very economic

surface: clean and good (Ra=0,25)

wear: none



Operation data

OPERATION DATA 1722 85 0722 85	Dim. 0,4 - 0,8 mm	Dim. 1 - 3 mm	Dim. 4 - 6 mm	Dim. 8 - 12 mm
tool steel				
fz (mm)	0,005 - 0,02	0,01 - 0,05	0,05 - 0,1	0,08 - 0,12
ap (mm)	0,01 - 0,05	0,01 - 0,1	0,1 - 0,25	0,1 - 0,35
Vc (m/min)	150 - 300	150 - 300	150 - 300	150 - 300
high-temperature alloys				
fz (mm)	0,005 - 0,02	0,01 - 0,05	0,05 - 0,1	0,08 - 0,12
ap (mm)	0,01 - 0,05	0,01 - 0,1	0,1 - 0,25	0,1 - 0,35
Vc (m/min)	60 - 100	60 - 100	60 - 100	60 - 100
hardened steel up to 58 HRC				
fz (mm)	0,005 - 0,02	0,01 - 0,05	0,05 - 0,1	0,08 - 0,12
ap (mm)	0,01 - 0,03	0,01 - 0,1	0,1 - 0,25	0,1 - 0,35
Vc (m/min)	150 - 300	150 - 300	150 - 300	150 - 300

DIMENSIONS

Ball Nose End Mills FGT

2 teeth, for steel | without working depth | high-precision

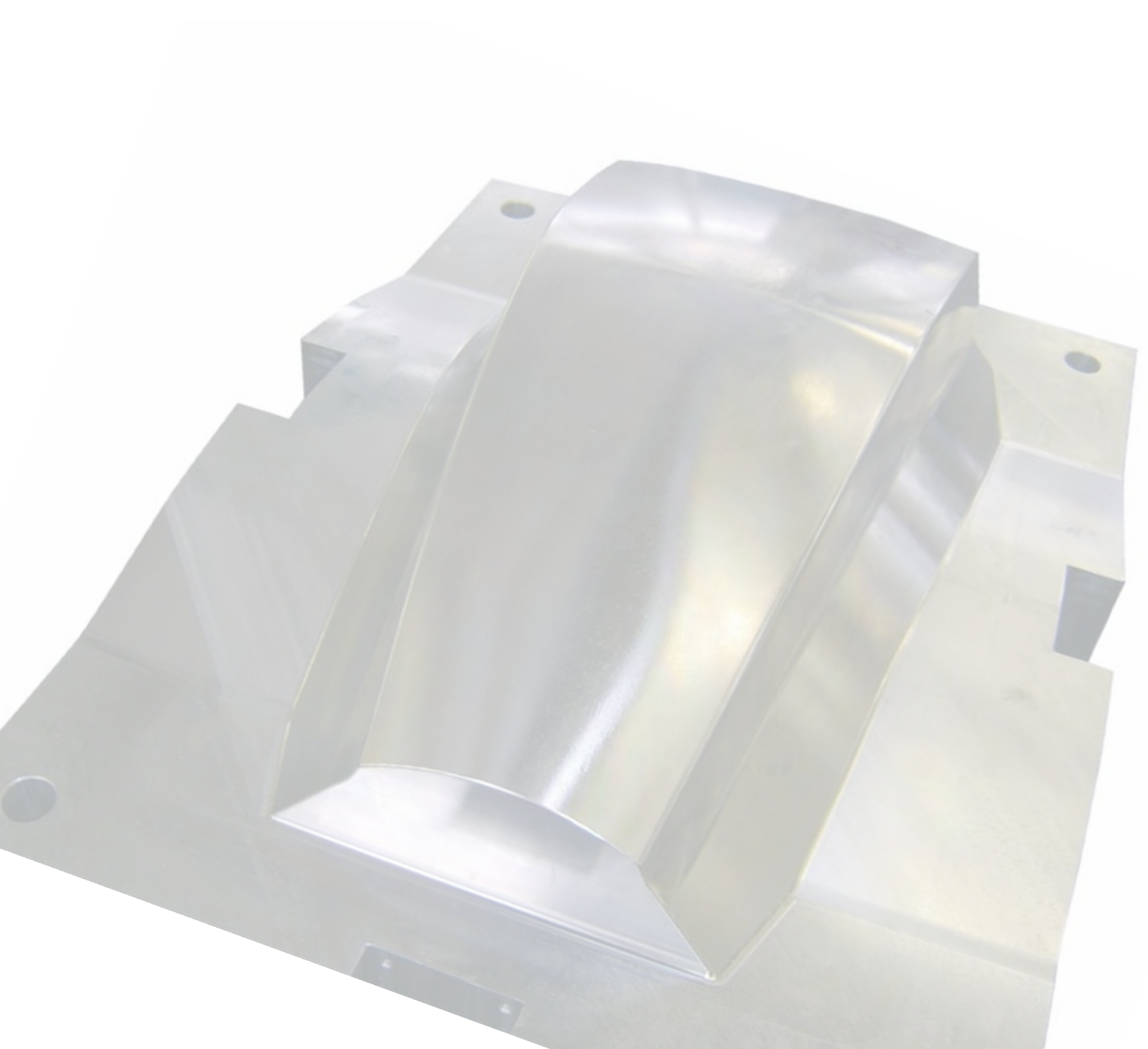
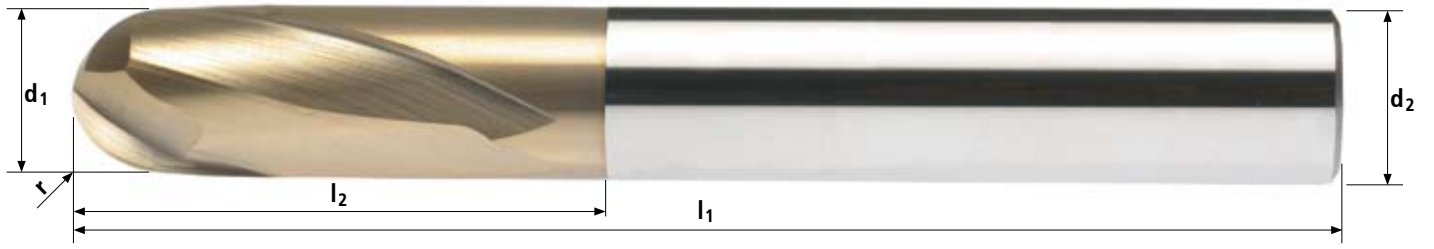
1722

2 teeth, plain shank, ball nose,
centre cutting, right hand helix,
PVTiH-coated

- ⊕ new ultra-micrograin carbide
- ⊕ modified coating
- ⊕ optimized geometry

⊖ high precision, $r = \pm 0,005$,
 $d1 = - 0,015$

SOLID CARBIDE END MILLS										
	Catalogue-No.									Characteristics
		d_1	l_2	l_3	d_3	l_1	r	d_2	z	
	1722 85 004	0,4	0,4	-	-	50	0,2	4	2	HSC
	1722 85 005	0,5	0,5	-	-	50	0,25	4	2	HSC
	1722 85 006	0,6	0,6	-	-	50	0,3	4	2	HSC
	1722 85 008	0,8	0,8	-	-	50	0,4	4	2	HSC
	1722 85 010	1	1	-	-	50	0,5	4	2	HSC
	1722 85 0101	1	1	-	-	75	0,5	4	2	HSC
	1722 85 015	1,5	1,5	-	-	50	0,75	4	2	HSC
	1722 85 0151	1,5	1,5	-	-	75	0,75	4	2	HSC
	1722 85 020	2	2	-	-	50	1	4	2	HSC
	1722 85 0201	2	2	-	-	75	1	4	2	HSC
	1722 85 030	3	3	-	-	57	1,5	6	2	HSC
	1722 85 0301	3	3	-	-	75	1,5	6	2	HSC
	1722 85 040	4	4	-	-	57	2	6	2	HSC
	1722 85 0401	4	4	-	-	75	2	6	2	HSC
	1722 85 050	5	5	-	-	57	2,5	6	2	HSC
	1722 85 0501	5	5	-	-	75	2,5	6	2	HSC
	1722 85 060	6	6	-	-	57	3	6	2	HSC
	1722 85 0601	6	6	-	-	75	3	6	2	HSC
	1722 85 080	8	8	-	-	63	4	8	2	HSC
	1722 85 0801	8	8	-	-	90	4	8	2	HSC
1722 85 100	10	10	-	-	72	5	10	2	HSC	
1722 85 1001	10	10	-	-	100	5	10	2	HSC	
1722 85 120	12	12	-	-	83	6	12	2	HSC	
1722 85 1201	12	12	-	-	110	6	12	2	HSC	



DIMENSIONS

Corner Radius End Mills FGT

2 teeth, for steel | without working depth | high-precision

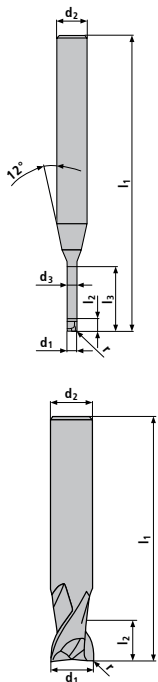
0722

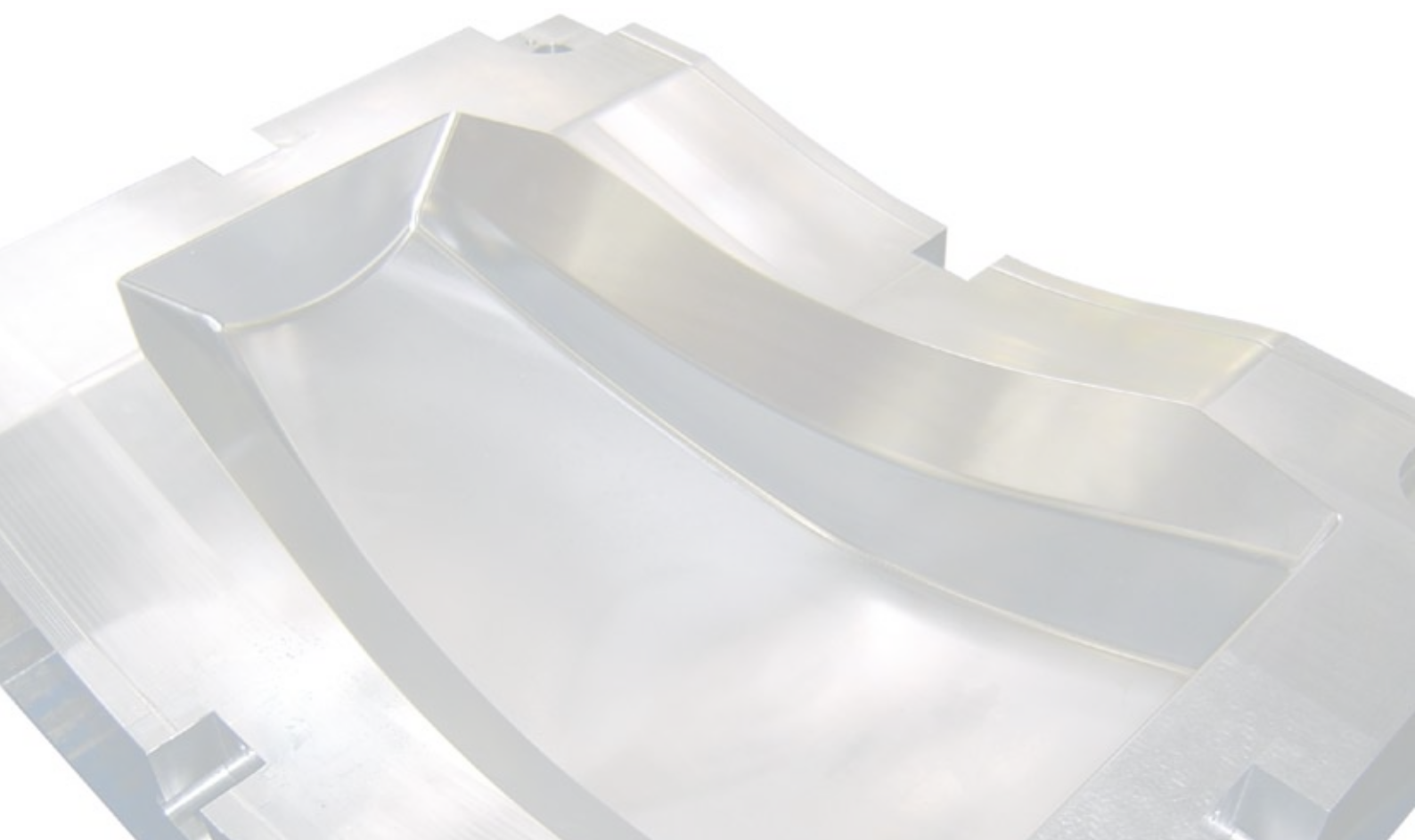
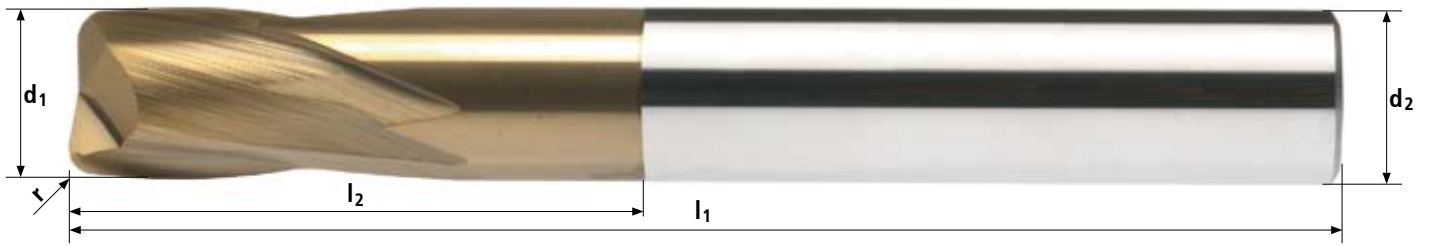
2 teeth, plain shank, corner radius,
centre cutting, right hand helix,
PVTiH-coated

- ⊕ new ultra-micrograin carbide
- ⊕ modified coating
- ⊕ optimized geometry

- ⊖ high precision, $r = \pm 0,005$,
 $d1 = - 0,015$

SOLID CARBIDE END MILLS										
	Catalogue-No.									Characteristics
		d_1	l_2	l_3	d_3	l_1	r	d_2	z	
	0722 85 004	0,4	0,4	-	-	50	0,1	4	2	HSC
	0722 85 005	0,5	0,5	-	-	50	0,1	4	2	HSC
	0722 85 006	0,6	0,6	-	-	50	0,1	4	2	HSC
	0722 85 008	0,8	0,8	-	-	50	0,1	4	2	HSC
	0722 85 010	1	1	-	-	50	0,2	4	2	HSC
	0722 85 0101	1	1	-	-	75	0,2	4	2	HSC
	0722 85 015	1,5	1,5	-	-	50	0,2	4	2	HSC
	0722 85 0151	1,5	1,5	-	-	75	0,2	4	2	HSC
	0722 85 02002	2	2	-	-	50	0,2	4	2	HSC
	0722 85 02102	2	2	-	-	75	0,2	4	2	HSC
	0722 85 02005	2	2	-	-	50	0,5	4	2	HSC
	0722 85 02105	2	2	-	-	75	0,5	4	2	HSC
	0722 85 03002	3	3	-	-	57	0,2	6	2	HSC
	0722 85 03102	3	3	-	-	75	0,2	6	2	HSC
	0722 85 03005	3	3	-	-	57	0,5	6	2	HSC
	0722 85 03105	3	3	-	-	75	0,5	6	2	HSC
	0722 85 04002	4	4	-	-	57	0,2	6	2	HSC
	0722 85 04102	4	4	-	-	75	0,2	6	2	HSC
	0722 85 04005	4	4	-	-	57	0,5	6	2	HSC
	0722 85 04105	4	4	-	-	75	0,5	6	2	HSC
	0722 85 05002	5	5	-	-	57	0,2	6	2	HSC
	0722 85 05102	5	5	-	-	75	0,2	6	2	HSC
	0722 85 05005	5	5	-	-	57	0,5	6	2	HSC
	0722 85 05105	5	5	-	-	75	0,5	6	2	HSC
	0722 85 06002	6	6	-	-	57	0,2	6	2	HSC
	0722 85 06102	6	6	-	-	75	0,2	6	2	HSC
	0722 85 06005	6	6	-	-	57	0,5	6	2	HSC
	0722 85 06105	6	6	-	-	75	0,5	6	2	HSC
	0722 85 06010	6	6	-	-	57	1	6	2	HSC
	0722 85 06110	6	6	-	-	75	1	6	2	HSC
	0722 85 08005	8	8	-	-	63	0,5	8	2	HSC
	0722 85 08105	8	8	-	-	90	0,5	8	2	HSC
	0722 85 08010	8	8	-	-	63	1	8	2	HSC
	0722 85 08110	8	8	-	-	90	1	8	2	HSC
	0722 85 10010	10	10	-	-	72	1	10	2	HSC
	0722 85 10110	10	10	-	-	100	1	10	2	HSC
	0722 85 10015	10	10	-	-	72	1,5	10	2	HSC
	0722 85 10115	10	10	-	-	100	1,5	10	2	HSC
	0722 85 12010	12	12	-	-	83	1	12	2	HSC





SOLID CARBIDE END MILLS		Catalogue-No.								Characteristics	
		d ₁	l ₂	l ₃	d ₃	l ₁	r	d ₂	z		
	0722 85 12110	12	12	-	-	110	1	12	2	HSC	
	0722 85 12020	12	12	-	-	83	2	12	2	HSC	
	0722 85 12120	12	12	-	-	110	2	12	2	HSC	

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P-F-FGT-E 0311

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