MICRO MILLS DIE/MOLDS

FMT® Tooling Systems

Standard micro mills for steel machining on the mold and die industry.
Small diameter end mills for the most detailed machining operations.

FREZITE Group

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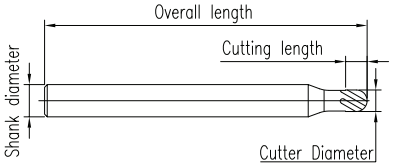
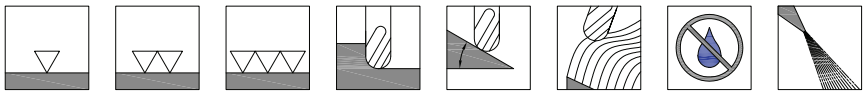
MICRO MILLS DIE/MOLDS

BALL NOSE



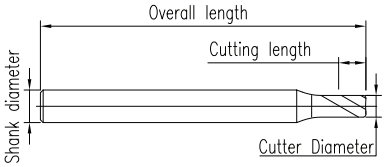


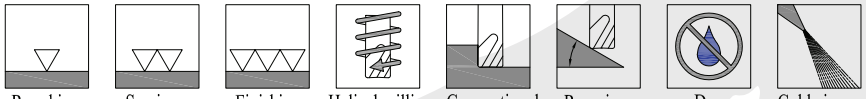
TiAIN Coating	Cutting diameter (mm)	Cutting length (mm)	Overall height (mm)	Shank Diameter h6 (mm)	Cutting edges (Z)	Feed per tooth (mm)			Cutting Speed Vc (m/min)		
						30-40HRc	40-50HRc	50-60HRc	30-40HRc	40-50HRc	50-60HRc
9100061.000120	1,2	1,2	60	6	2	0,020-0,024	0,016-0,020	0,012-0,010	180-240	150-240	120-180
9100061.000150	1,5	1,5	60	6	2	0,030-0,036	0,024-0,030	0,018-0,020	180-240	150-240	120-180
9100061.000200	2	2	60	6	2	0,040-0,048	0,032-0,040	0,024-0,030	180-240	150-240	120-180
9100061.000300	3	3	60	6	2	0,060-0,072	0,048-0,060	0,036-0,040	180-240	150-240	120-180
9100061.000400	4	4	60	6	2	0,080-0,096	0,064-0,080	0,048-0,060	180-240	150-240	120-180
9100061.000500	5	5	60	6	2	0,100-0,120	0,080-0,100	0,060-0,070	180-240	150-240	120-180
9100061.000600	6	6	60	6	2	0,120-0,144	0,096-0,120	0,072-0,090	180-240	150-240	120-180

Guidelines:
- Special diameters and lengths on demand;
- Use air or mist cooling with steels over 40HRc;
- Use a step over fewer than 40% of the tool diameter
- For finishing multiply Fz by 0.8 and apply required step over

Axial depth:
- Up to 40 HRc 10% of tool diameter;
- 40 to 50 HRc 5% of tool diameter;
- 50 to 60 HRc 4% of tool diameter.

CORNER RADIUS





TiAIN Coating	Cutting diameter (mm)	Cutting length (mm)	Overall height (mm)	Shank Diameter h6 (mm)	Cutting edges (Z)	Feed per tooth (mm)			Cutting Speed Vc (m/min)		
						30-40HRc	40-50HRc	50-60HRc	30-40HRc	40-50HRc	50-60HRc
9100062.000120	1,2	1,8	60	6	2	0,010 - 0,014	0,008 - 0,011	0,007 - 0,008	75 - 200	75 - 170	75 - 130
9100062.100120	1,2	1,8	80	6	2	0,010 - 0,014	0,008 - 0,011	0,007 - 0,008	75 - 200	75 - 170	75 - 130
9100062.000150	1,5	2	60	6	2	0,012 - 0,018	0,011 - 0,014	0,009 - 0,011	95 - 200	95 - 170	75 - 130
9100062.100150	1,5	2	80	6	2	0,012 - 0,018	0,011 - 0,014	0,009 - 0,011	95 - 200	95 - 170	75 - 130
9100062.000200	2	2	60	6	2	0,016 - 0,024	0,014 - 0,018	0,012 - 0,014	125 - 200	125 - 170	75 - 130
9100062.100200	2	2	80	6	2	0,016 - 0,024	0,014 - 0,018	0,012 - 0,014	125 - 200	125 - 170	75 - 130
9100062.000300	3	4	60	6	2	0,018 - 0,024	0,017 - 0,021	0,014 - 0,019	170 - 200	130 - 170	75 - 130
9100062.100300	3	4	80	6	2	0,018 - 0,024	0,017 - 0,021	0,014 - 0,019	170 - 200	130 - 170	75 - 130
9100062.000400	4	5	60	6	2	0,024 - 0,032	0,022 - 0,029	0,018 - 0,026	170 - 200	130 - 170	75 - 130
9100062.100400	4	5	80	6	2	0,024 - 0,032	0,022 - 0,029	0,018 - 0,026	170 - 200	130 - 170	75 - 130
9100062.000500	5	6	60	6	2	0,030 - 0,040	0,028 - 0,036	0,023 - 0,032	180 - 210	130 - 170	75 - 130
9100062.100500	5	6	80	6	2	0,030 - 0,040	0,028 - 0,036	0,023 - 0,032	180 - 210	130 - 170	75 - 130
9100062.000600	6	6	60	6	2	0,036 - 0,048	0,033 - 0,043	0,028 - 0,038	180 - 210	130 - 170	75 - 130
9100062.100600	6	6	80	6	2	0,036 - 0,048	0,033 - 0,043	0,028 - 0,038	180 - 210	130 - 170	75 – 130

Guidelines:
- Special diameters and lengths on demand;
- Use air or mist cooling with steels over 40HRc;
- Use climb milling to increase tool life and increase finish;
- Facing width equal to 25% and axial depth equal to 2% of tool diameter

Formulas: $N = \frac{(1000 \times Vc)}{(\pi * Ø)}$ (rev/min) $Vf = fz \times z \times N$ (mm/min)

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