



Milling

New End Mills for High-Feed Milling

NEW!

Specifically engineered to machine hardened steel up to 67 HRC at high speeds and feeds.

- Unique tool with new 6-flute style for high productivity!
- Necked shanks provide extended reach in deep cavities!
- Long tool life and high-feed rates, up to 0,6mm (.024") per tooth on a 20mm (3/4") tool!
- Machine hardened materials at 2x to 3x the metal removal rate of competitive end mills!

Contact your local Authorized Hanita Distributor for the complete line of Hanita high-performance carbide end mills.

➤ DISTRIBUTED BY:



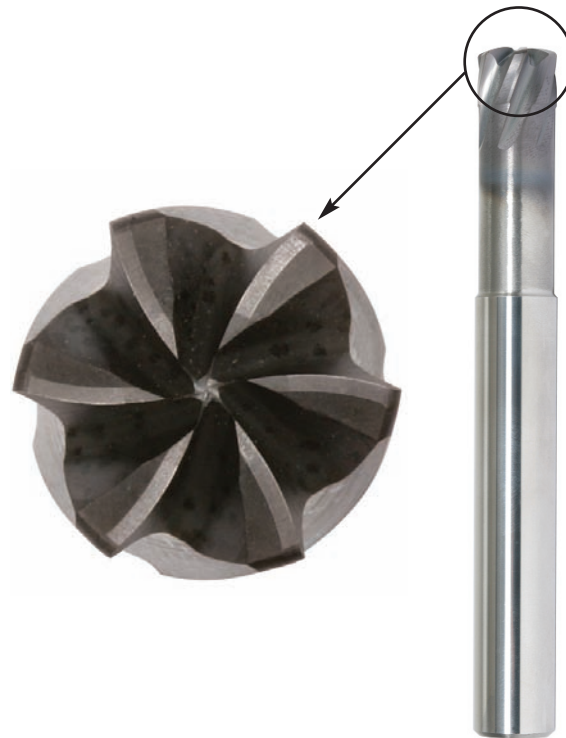
Markets and Applications

- Exceptional performance in Die and Mold and Medical markets.
- Ideal for roughing and semi-finishing in hardened steels (37 HRC to 67 HRC).
- Effective in 3-D machining, helical ramping, circular interpolation, face-milling, and pocketing.

Featured Application:

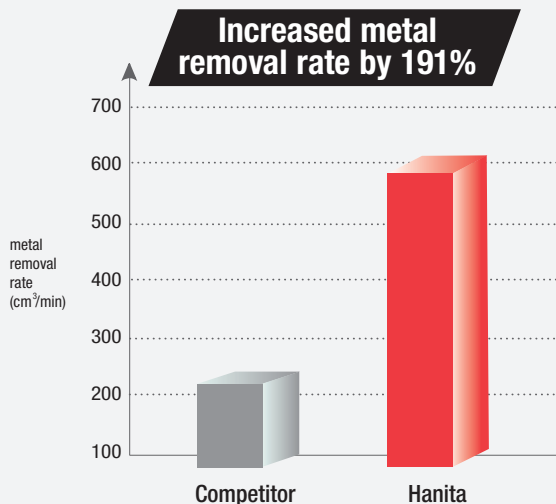
- Operation: Pocket Milling
 Customer: Die & Mold Manufacturer
 Material: AISI 4340 hardened steel (52 HRC)
 Workpiece: Mold
- Results:
- 3x better metal removal rate than competitive tool!
 - Machined at more than 3x faster feed!

	COMPETITOR	HANITA
<i>tool:</i>	4-flute H/P for die & mold	TM7FN613005
<i>material:</i>	medium hardened steel (52 HRC)	medium hardened steel (52 HRC)
<i>surface speed:</i>	120m/min (400 SFM)	160m/min (530 SFM)
<i>feed per tooth:</i>	0,34mm (.013")	0,6mm (.023")
<i>depth of cut:</i>	0,8mm (.031")	0,6mm (.023")
<i>table feed:</i>	4331mm/min (170 in/min)	15287mm/min (600 in/min)
<i>metal removal rate:</i>	22.8 cm ³ (1.4 in ³)	60.5 cm ³ (3.7 in ³)



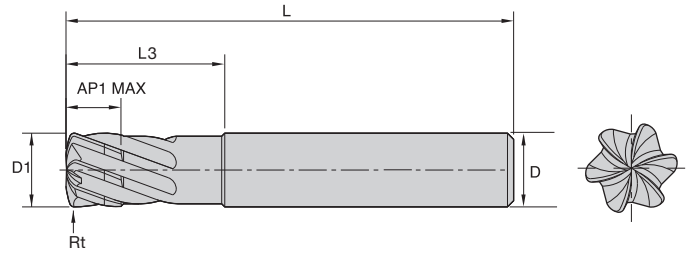
Our new offering provides:

- Six flutes for high productivity.
- Wide range of cutting diameters: down to 6mm (.250") for small and medium pocket work.
- Innovative new geometry maximizes metal removal.
- High metal removal rates lower manufacturing costs.



Have you received your copy of the HANITA CATALOG? Call your local Authorized Hanita Distributor today to request the Inch version (AD06-08) or the Metric version (AD06-09)!

■ Solid-Carbide End Mills — Metric



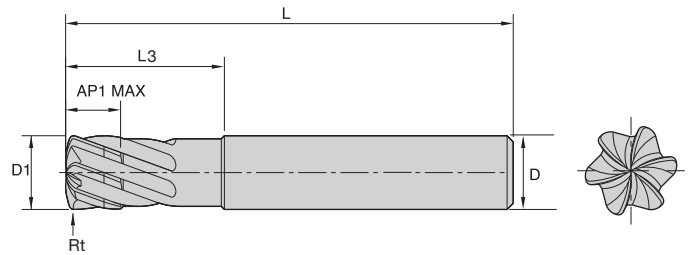
Series 70N7 for steels with hardness >50 HRC

cutting diameter D1 (mm)	shank diameter D (mm)	maximum axial cutting depth Ap1 max (mm)	reach length L3 (mm)	overall length L (mm)	programming radius Rt (mm)	# of flutes Z	catalog number
6	6	0,20	18	63	0,58	6	70N706002MT
8	8	0,27	24	76	0,77	6	70N708003MT
10	10	0,33	30	89	0,96	6	70N710004MT
12	12	0,40	36	100	1,15	6	70N712005MT
16	16	0,54	48	110	1,54	6	70N716006MT
20	20	0,67	60	125	1,92	6	70N720007MT

Series 70N6 for steels with hardness 40 HRC to 52 HRC

cutting diameter D1 (mm)	shank diameter D (mm)	maximum axial cutting depth Ap1 max (mm)	reach length L3 (mm)	overall length L (mm)	programming radius Rt (mm)	# of flutes Z	catalog number
6	6	0,32	18	63	0,63	6	70N606002MT
8	8	0,42	24	76	0,83	6	70N608003MT
10	10	0,53	30	89	1,04	6	70N610004MT
12	12	0,63	36	100	1,24	6	70N612005MT
16	16	0,84	48	110	1,66	6	70N616006MT
20	20	1,05	60	125	2,07	6	70N620007MT

■ Solid Carbide End Mills — Inch



Series 7FN7 for steels with hardness >50 HRC

cutting diameter D1 (inch)	shank diameter D (inch)	maximum axial cutting depth Ap1 max (inch)	reach length L3 (inch)	overall length L (inch)	programming radius Rt (inch)	# of flutes Z	catalog number
1/4	1/4	0.0082	0.750	2.500	0.024	6	TM7FN707002
5/16	5/16	0.0103	1.000	3.000	0.030	6	TM7FN708003
3/8	3/8	0.0123	1.250	3.500	0.036	6	TM7FN710004
1/2	1/2	0.0164	1.500	4.000	0.048	6	TM7FN713005
5/8	5/8	0.0205	2.000	4.500	0.061	6	TM7FN716006
3/4	3/4	0.0246	2.500	5.000	0.072	6	TM7FN719007

Series 7FN6 for steels with hardness 40 HRC to 52 HRC

cutting diameter D1 (inch)	shank diameter D (inch)	maximum axial cutting depth Ap1 max (inch)	reach length L3 (inch)	overall length L (inch)	programming radius Rt (inch)	# of flutes Z	catalog number
1/4	1/4	0.0133	0.750	2.500	0.027	6	TM7FN607002
5/16	5/16	0.0166	1.000	3.000	0.034	6	TM7FN608003
3/8	3/8	0.0200	1.250	3.500	0.040	6	TM7FN610004
1/2	1/2	0.0266	1.500	4.000	0.054	6	TM7FN613005
5/8	5/8	0.0333	2.000	4.500	0.067	6	TM7FN616006
3/4	3/4	0.0399	2.500	5.000	0.080	6	TM7FN619007

■ Recommended Cutting Conditions — Metric
For a radial depth (Ae) of 55% of diameter.

Series 70N7 for steels with hardness >50 HRC

workpiece material	catalog number	cutting diameter D1 (mm)	# of flutes Z	cutting speed Vc (mm/min)	feed per tooth Fz (mm/tooth)	RPM N	feed rate Vf (mm/min)	programming radius Rt (mm)	maximum axial cutting depth (mm)
D2 62 HRC.	70N706003MT	6	6	70	0,15	3714	3342	0,58	0,20
	70N708003MT	8	6	70	0,20	2785	3342	0,77	0,27
	70N710004MT	10	6	70	0,25	2228	3342	0,96	0,33
	70N712005MT	12	6	70	0,30	1857	3342	1,15	0,40
	70N716006MT	16	6	70	0,40	1393	3342	1,54	0,54
	70N720007MT	20	6	70	0,50	1114	3342	1,92	0,67
P20 52 HRC.	70N706003MT	6	6	120	0,20	6366	7639	0,58	0,20
	70N708003MT	8	6	120	0,25	4775	7162	0,77	0,27
	70N710004MT	10	6	120	0,30	3820	6875	0,96	0,33
	70N712005MT	12	6	120	0,40	3183	7639	1,15	0,40
	70N716006MT	16	6	120	0,50	2387	7162	1,54	0,54
	70N720007MT	20	6	120	0,60	1910	6875	1,92	0,67

Series 70N6 for steels with hardness 40 HRC to 50 HRC

workpiece material	catalog number	cutting diameter D1 (mm)	# of flutes Z	cutting speed Vc (mm/min)	feed per tooth Fz (mm/tooth)	RPM N	feed rate Vf (mm/min)	programming radius Rt (mm)	maximum axial cutting depth (mm)
P20 52 HRC.	70N606003MT	6	6	120	0,20	6366	7639	0,62	0,32
	70N608003MT	8	6	120	0,25	4775	7162	0,83	0,42
	70N610004MT	10	6	120	0,30	3820	6875	1,04	0,53
	70N612005MT	12	6	120	0,40	3183	7639	1,24	0,63
	70N616006MT	16	6	120	0,50	2387	7162	1,66	0,84
	70N620007MT	20	6	120	0,60	1910	6875	2,07	1,05
4340 45 HRC.	70N606003MT	6	6	160	0,30	8488	15279	0,62	0,32
	70N608003MT	8	6	160	0,40	6366	15279	0,83	0,42
	70N610004MT	10	6	160	0,50	5093	15279	1,04	0,53
	70N612005MT	12	6	160	0,50	4244	12732	1,24	0,63
	70N616006MT	16	6	160	0,60	3183	11459	1,66	0,84
	70N620007MT	20	6	160	0,70	2546	10695	2,07	1,05

■ Recommended Cutting Conditions — Inch
For a radial depth (Ae) of 55% of diameter.

Series 7FN7 for steels with hardness >50 HRC

workpiece material	catalog number	cutting diameter D1 (inch)	# of flutes Z	cutting speed Vc (sfm)	feed per tooth Fz (inch)	RPM N	feed rate Vf (inch/min)	programming radius Rt (inch)	maximum axial cutting depth (inch)
D2 62 HRC.	TM7FN707002	1/4	6	230	0.006	3509	130	0.024	0.0082
	TM7FN708003	5/16	6	230	0.008	2807	130	0.030	0.0103
	TM7FN710004	3/8	6	230	0.009	2339	130	0.036	0.0123
	TM7FN713005	1/2	6	230	0.013	1754	130	0.048	0.0164
	TM7FN716006	5/8	6	230	0.016	1404	130	0.061	0.0205
	TM7FN719007	3/4	6	230	0.019	1170	130	0.072	0.0246
P20 52 HRC.	TM7FN707002	1/4	6	395	0.008	6015	270	0.024	0.0082
	TM7FN708003	5/16	6	395	0.009	4812	270	0.030	0.0103
	TM7FN710004	3/8	6	395	0.011	4010	270	0.036	0.0123
	TM7FN713005	1/2	6	395	0.015	3008	270	0.048	0.0164
	TM7FN716006	5/8	6	395	0.019	2406	270	0.061	0.0205
	TM7FN719007	3/4	6	395	0.023	2005	270	0.072	0.0246

Series 7FN6 for steels with hardness 40 HRC to 50 HRC

workpiece material	catalog number	cutting diameter D1 (inch)	# of flutes Z	cutting speed Vc (sfm)	feed per tooth Fz (inch)	RPM N	feed rate Vf (inch/min)	programming radius Rt (inch)	maximum axial cutting depth (inch)
P20 52 HRC.	TM7FN607002	1/4	6	395	0.008	6015	270	0.027	0.0133
	TM7FN608003	5/16	6	395	0.009	4812	270	0.034	0.0166
	TM7FN610004	3/8	6	395	0.011	4010	270	0.040	0.0200
	TM7FN613005	1/2	6	395	0.015	3008	270	0.054	0.0266
	TM7FN616006	5/8	6	395	0.019	2406	270	0.067	0.0333
	TM7FN619007	3/4	6	395	0.023	2005	270	0.080	0.0399
4340 45 HRC.	TM7FN607002	1/4	6	525	0.013	8020	600	0.027	0.0133
	TM7FN608003	5/16	6	525	0.016	6416	600	0.034	0.0166
	TM7FN610004	3/8	6	525	0.019	5347	600	0.040	0.0200
	TM7FN613005	1/2	6	525	0.025	4010	600	0.054	0.0266
	TM7FN616006	5/8	6	525	0.026	3208	500	0.067	0.0333
	TM7FN619007	3/4	6	525	0.028	2673	450	0.080	0.0399