


Preview Edition: **WIDIA™ VariMill II™ Long Line**

ADVANCES 2012

WIDIA™

For semi-finishing and finishing operations •

WIDIA™ VariMill II™ Long Line

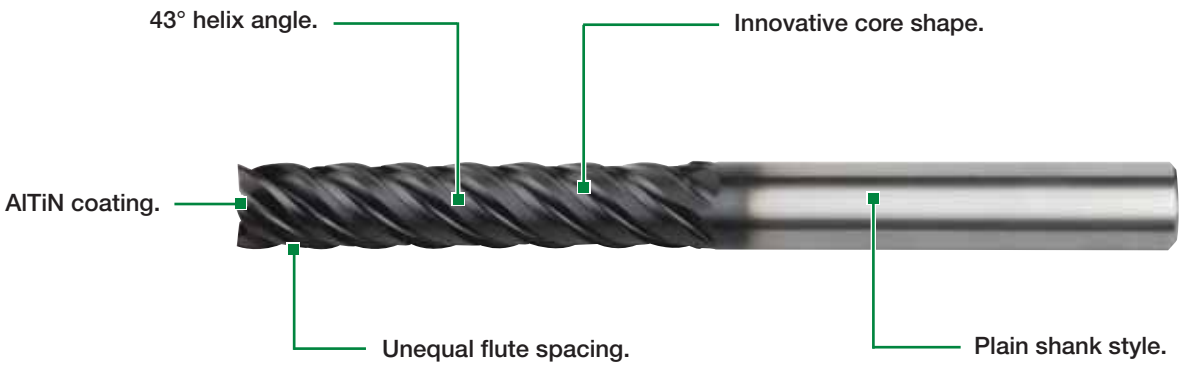
WIDIA is proud to introduce the next expansion of our well known VariMill II line. The new VariMill II long portfolio is covering the 4 x D length of cut from stock. This product line is designed to work on titanium, stainless steels, and steels.

VariMill II™ Long

Features	Functions
Unequal flute spacing.	Less vibration.
4 x D length of cut.	Maximise axial cutting depth.
AlTiN coating.	Heat absorption into the chips.
43° helix angle.	Smooth cut.
Innovative core shape.	Maximum stability of the tool.

WIDIA™ VariMill II™ Long Line

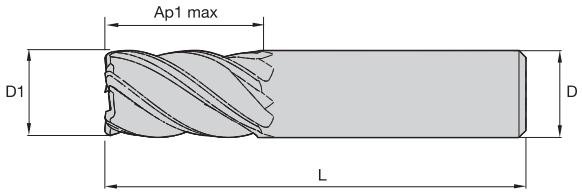
- Excellent surface finish.
- Recommended for thin wall machining.



Benefits

- Better surface finish and tool life.
- Reduce number of cuts.
- Improved tool life.
- Excellent surface finish at maximum MRR.
- Excellent for thin wall semi-finishing and finishing operations.

- Unequal flute spacing.
- Non-centre cutting.
- Standard items listed. Additional styles and coatings made to order.
- For information about Reconditioning Services, see page F4.



End Mill Tolerances

D1	Tolerance e8 + / -	D	Tolerance h6 + / -
≤3	0/0,006	≤3	0/0,006
>3–6	0/0,008	>3–6	0/0,008
>6–10	0/0,009	>6–10	0/0,009
>10–18	0/0,011	>10–18	0/0,011
>18–30	0/0,013	>18–30	0/0,013

	P						M			K			S				H
	1	2	3	4	5	6	1	2	3	1	2	3	1	2	3	4	1
AlTiN	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

P — Steel *K — Cast Iron* *S — High-Temp Alloys*

M — Stainless Steel *N — Non-Ferrous Materials* *H — Hard Materials*

For application data, see page C5.

List 5718 • VariMill II Long

AlTiN-MT	D1	D	length of cut Ap1 max	length L
571810004MT	10,0	10	40,00	100
571812005MT	12,0	12	48,00	125
571814014MT	14,0	14	56,00	120
571816006MT	16,0	16	64,00	141
571818018MT	18,0	18	72,00	150
571820007MT	20,0	20	80,00	150
571825008MT	25,0	25	100,00	170

													
		A		AlTiN-MT		Feed per tooth — fz info is for side milling (A). For slotting (B), reduce fz by 20%							
				Cutting Speed—vc m/min			D1 — Diameter						
Group		ap	ae	min	max	mm	10,0	12,0	14,0	16,0	18,0	20,0	25,0
P	1	Ap1 max	0,05 x D*	300	400	fz	0,060	0,072	0,083	0,092	0,101	0,114	0,124
	2	Ap1 max	0,05 x D*	280	380	fz	0,060	0,072	0,083	0,092	0,101	0,114	0,124
	3	Ap1 max	0,05 x D*	240	320	fz	0,050	0,061	0,070	0,079	0,087	0,101	0,114
	4	Ap1 max	0,05 x D*	180	300	fz	0,045	0,054	0,062	0,070	0,077	0,088	0,098
	5	Ap1 max	0,05 x D*	120	200	fz	0,040	0,048	0,056	0,063	0,070	0,081	0,091
	6	Ap1 max	0,05 x D*	100	150	fz	0,034	0,040	0,047	0,052	0,057	0,065	0,071
M	1	Ap1 max	0,05 x D*	180	230	fz	0,050	0,061	0,070	0,079	0,087	0,101	0,114
	2	Ap1 max	0,05 x D*	120	160	fz	0,040	0,048	0,056	0,063	0,070	0,081	0,091
	3	Ap1 max	0,05 x D*	120	140	fz	0,034	0,040	0,047	0,052	0,057	0,065	0,071
K	1	Ap1 max	0,05 x D*	240	300	fz	0,060	0,072	0,083	0,092	0,101	0,114	0,124
	2	Ap1 max	0,05 x D*	220	260	fz	0,050	0,061	0,070	0,079	0,087	0,101	0,114
	3	Ap1 max	0,05 x D*	200	260	fz	0,040	0,048	0,056	0,063	0,070	0,081	0,091
S	1	Ap1 max	0,05 x D*	100	180	fz	0,050	0,061	0,070	0,079	0,087	0,101	0,114
	2	Ap1 max	0,05 x D*	100	180	fz	0,050	0,061	0,070	0,079	0,087	0,101	0,114
	3	Ap1 max	0,05 x D*	50	80	fz	0,026	0,032	0,037	0,042	0,046	0,054	0,061
	4	Ap1 max	0,05 x D*	100	120	fz	0,037	0,045	0,052	0,058	0,064	0,074	0,084
H	1	Ap1 max	0,05 x D*	160	140	fz	0,045	0,054	0,062	0,070	0,077	0,088	0,098

** For the above cutting data, do not exceed an overall ae of 0,8mm.*
Lower value of cutting speed is used for high stock removal applications or for higher hardness (machinability) within group.
Higher value of cutting speed is used for finishing applications or for lower hardness (machinability) within group.
Above parameters are based on ideal conditions. For smaller taper machinining centers, please adjust parameters accordingly on >0,5mm diameter.