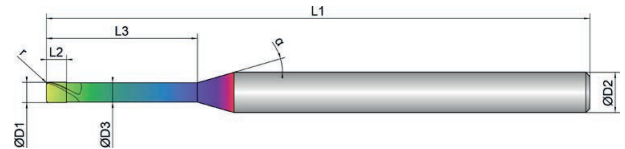


Cooling	
Tolerance	d04
Coating	AlphaSlide Rainbow

Strategy	HSC
Application	
Features	HA



- Optimized face geometry for excellent surfaces and highest dimensional accuracy
- Defined microbevel for support and stabilization
- Polished chip space for ideal chip evacuation



- Multipass milling of 3D contours
- Tolerance D1: -0.001/-0.006 mm
- Tolerance D3: 0/-0.02 mm
- Radius tolerance r: 0/-0.003 mm (measured from 0-90°)

Roughing

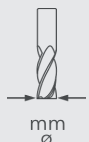
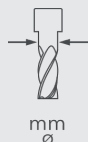
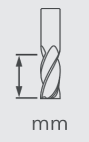









Finishing

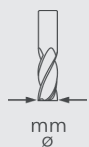
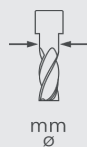
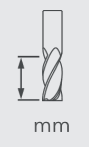









VEXN1-M16-0103	D1 mm Ø	D3 mm Ø	L2 mm	L3 mm	L1 mm	D2 mm Ø	z #	r mm	 °	α °
0,8X2	0.8	0.78	0.8	2.0	50.0	4.0	2	0.20	30	16
0,8X4	0.8	0.78	0.8	4.0	50.0	4.0	2	0.20	30	16
0,8X6	0.8	0.78	0.8	6.0	50.0	4.0	2	0.20	30	16
0,8X8	0.8	0.78	0.8	8.0	50.0	4.0	2	0.20	30	16
0,8X10	0.8	0.78	0.8	10.0	50.0	4.0	2	0.20	30	16
0,8X12	0.8	0.78	0.8	12.0	50.0	4.0	2	0.20	30	16
1X2	1.0	0.95	1.0	2.0	50.0	4.0	2	0.20	30	16
1X3	1.0	0.95	1.0	3.0	50.0	4.0	2	0.20	30	16
1X4	1.0	0.95	1.0	4.0	50.0	4.0	2	0.20	30	16
1X5	1.0	0.95	1.0	5.0	50.0	4.0	2	0.20	30	16
1X6	1.0	0.95	1.0	6.0	50.0	4.0	2	0.20	30	16
1X8	1.0	0.95	1.0	8.0	50.0	4.0	2	0.20	30	16
1X10	1.0	0.95	1.0	10.0	50.0	4.0	2	0.20	30	16

VEXN1-M16-0103

VEXN1-M16-0103	 mm ∅	 mm ∅	 mm	 mm	 mm	 mm ∅	 #	 mm	 °	 °
1X12	1.0	0.95	1.0	12.0	54.0	4.0	2	0.20	30	16
1X15	1.0	0.95	1.0	15.0	60.0	4.0	2	0.20	30	16
1X20	1.0	0.95	1.0	20.0	60.0	4.0	2	0.20	30	16
1X25	1.0	0.95	1.0	25.0	70.0	4.0	2	0.20	30	16
1X30	1.0	0.95	1.0	30.0	70.0	4.0	2	0.20	30	16
1,2X5	1.2	1.14	1.2	5.0	50.0	4.0	2	0.20	30	16
1,2X10	1.2	1.14	1.2	10.0	50.0	4.0	2	0.20	30	16
1,2X15	1.2	1.14	1.2	15.0	54.0	4.0	2	0.20	30	16
1,2X20	1.2	1.14	1.2	20.0	60.0	4.0	2	0.20	30	16
1,5X4	1.5	1.44	1.5	4.0	50.0	4.0	2	0.20	30	16
1,5X6	1.5	1.44	1.5	6.0	50.0	4.0	2	0.20	30	16
1,5X8	1.5	1.44	1.5	8.0	50.0	4.0	2	0.20	30	16
1,5X10	1.5	1.44	1.5	10.0	50.0	4.0	2	0.20	30	16
1,5X12	1.5	1.44	1.5	12.0	54.0	4.0	2	0.20	30	16
1,5X15	1.5	1.44	1.5	15.0	54.0	4.0	2	0.20	30	16
1,5X20	1.5	1.44	1.5	20.0	60.0	4.0	2	0.20	30	16
1,5X25	1.5	1.44	1.5	25.0	60.0	4.0	2	0.20	30	16
1,5X30	1.5	1.44	1.5	30.0	70.0	4.0	2	0.20	30	16
1,8X8	1.8	1.74	1.8	8.0	50.0	4.0	2	0.20	30	16
1,8X10	1.8	1.74	1.8	10.0	50.0	4.0	2	0.20	30	16
1,8X15	1.8	1.74	1.8	15.0	50.0	4.0	2	0.20	30	16
1,8X20	1.8	1.74	1.8	20.0	54.0	4.0	2	0.20	30	16
2X4	2.0	1.91	2.0	4.0	50.0	4.0	2	0.20	30	16
2X6	2.0	1.91	2.0	6.0	50.0	4.0	2	0.20	30	16
2X8	2.0	1.91	2.0	8.0	50.0	4.0	2	0.20	30	16

VEXN1-M16-0103

VEXN1-M16-0103	D1	D3	L2	L3	L1	D2	z	r		α
	 mm \varnothing	 mm \varnothing	 mm	 mm	 mm	 mm \varnothing	 #	 mm	 °	 °
2X10	2.0	1.91	2.0	10.0	50.0	4.0	2	0.20	30	16
2X12	2.0	1.91	2.0	12.0	54.0	4.0	2	0.20	30	16
2X15	2.0	1.91	2.0	15.0	54.0	4.0	2	0.20	30	16
2X20	2.0	1.91	2.0	20.0	60.0	4.0	2	0.20	30	16
2X25	2.0	1.91	2.0	25.0	70.0	4.0	2	0.20	30	16
2X30	2.0	1.91	2.0	30.0	70.0	4.0	2	0.20	30	16
2X35	2.0	1.91	2.0	35.0	80.0	4.0	2	0.20	30	16
2X40	2.0	1.91	2.0	40.0	80.0	4.0	2	0.20	30	16
2,5X15	2.5	2.41	2.5	15.0	54.0	4.0	2	0.20	30	16
2,5X20	2.5	2.41	2.5	20.0	54.0	4.0	2	0.20	30	16
2,5X25	2.5	2.41	2.5	25.0	60.0	4.0	2	0.20	30	16
2,5X30	2.5	2.41	2.5	30.0	70.0	4.0	2	0.20	30	16
3X6	3.0	2.91	4.5	6.0	50.0	4.0	2	0.20	30	16
3X8	3.0	2.91	4.5	8.0	50.0	4.0	2	0.20	30	16
3X10	3.0	2.91	4.5	10.0	50.0	4.0	2	0.20	30	16
3X12	3.0	2.91	4.5	12.0	50.0	4.0	2	0.20	30	16
3X15	3.0	2.91	4.5	15.0	54.0	4.0	2	0.20	30	16
3X20	3.0	2.91	4.5	20.0	54.0	4.0	2	0.20	30	16
3X25	3.0	2.91	4.5	25.0	60.0	4.0	2	0.20	30	16
3X30	3.0	2.91	4.5	30.0	70.0	4.0	2	0.20	30	16
3X35	3.0	2.91	4.5	35.0	80.0	4.0	2	0.20	30	16
3X40	3.0	2.91	4.5	40.0	80.0	4.0	2	0.20	30	16
3X45	3.0	2.91	4.5	45.0	90.0	4.0	2	0.20	30	16

VEXN1-M16-0103

Material	Strength (N/mm ²)	Feed (mm/Z)	Ø 0.8x2			Ø 0.8x12			Ø 1x2			Ø 1x30			
			ae=1xD ap=0.2xD	ae=0.25xD ap=L2 max	ae=0.1xD	ae=1xD ap=0.05xD	ae=0.06xD ap=L2 max	ae=0.03xD	ae=1xD ap=0.2xD	ae=0.25xD ap=L2 max	ae=0.1xD	ae=1xD ap=0.01xD	ae=0.015xD ap=L2 max	ae=0.01xD	
		Application													
N	Vc (m/min)			fz	fz	fz	fz	fz	fz	fz	fz	fz	fz	fz	
1.1	Aluminium, alloyed	<500	500	0.016	0.02	0.022	0.012	0.015	0.017	0.025	0.03	0.035	0.01	0.015	0.02
1.2	Aluminium, alloyed	<600	480	0.016	0.02	0.022	0.012	0.015	0.017	0.025	0.03	0.035	0.01	0.015	0.02
2.1-2.3	Aluminium, casted	<600	450	0.015	0.018	0.021	0.011	0.014	0.016	0.022	0.027	0.032	0.008	0.013	0.017
3.1-3.3	Cooper, alloyed	<650	220	0.014	0.016	0.02	0.01	0.013	0.015	0.019	0.024	0.029	0.006	0.011	0.014
4.1	Magnesium, alloyed	<250	500	0.016	0.02	0.022	0.012	0.015	0.017	0.025	0.03	0.035	0.01	0.015	0.02
5.1	Thermoplastic	<100	400	0.015	0.018	0.021	0.011	0.014	0.016	0.022	0.027	0.032	0.008	0.013	0.017
5.2	Duroplastic	<150	350	0.014	0.016	0.02	0.01	0.013	0.015	0.019	0.024	0.029	0.006	0.011	0.014

Material	Strength (N/mm ²)	Feed (mm/Z)	Ø 1.2x5			Ø 1.2x20			Ø 1.5x4			Ø 1.5x30			
			ae=1xD ap=0.2xD	ae=0.25xD ap=L2 max	ae=0.1xD	ae=1xD ap=0.03xD	ae=0.04xD ap=L2 max	ae=0.015xD	ae=1xD ap=0.2xD	ae=0.25xD ap=L2 max	ae=0.1xD	ae=1xD ap=0.02xD	ae=0.03xD ap=L2 max	ae=0.01xD	
		Application													
N	Vc (m/min)			fz	fz	fz	fz	fz	fz	fz	fz	fz	fz	fz	
1.1	Aluminium, alloyed	<500	500	0.025	0.03	0.035	0.02	0.025	0.03	0.025	0.03	0.035	0.015	0.02	0.025
1.2	Aluminium, alloyed	<600	480	0.025	0.03	0.035	0.02	0.025	0.03	0.025	0.03	0.035	0.015	0.02	0.025
2.1-2.3	Aluminium, casted	<600	450	0.022	0.027	0.032	0.017	0.022	0.027	0.022	0.027	0.032	0.013	0.017	0.022
3.1-3.3	Cooper, alloyed	<650	220	0.019	0.024	0.029	0.014	0.019	0.024	0.019	0.024	0.029	0.011	0.014	0.019
4.1	Magnesium, alloyed	<250	500	0.025	0.03	0.035	0.02	0.025	0.03	0.025	0.03	0.035	0.015	0.02	0.025
5.1	Thermoplastic	<100	400	0.022	0.027	0.032	0.017	0.022	0.027	0.022	0.027	0.032	0.013	0.017	0.022
5.2	Duroplastic	<150	350	0.019	0.024	0.029	0.014	0.019	0.024	0.019	0.024	0.029	0.011	0.014	0.019

Material	Strength (N/mm ²)	Feed (mm/Z)	Ø 1.8x8			Ø 1.8x20			Ø 2x4			Ø 2x40			
			ae=1xD ap=0.2xD	ae=0.25xD ap=L2 max	ae=0.1xD	ae=1xD ap=0.1xD	ae=0.13xD ap=L2 max	ae=0.05xD	ae=1xD ap=0.2xD	ae=0.25xD ap=L2 max	ae=0.1xD	ae=1xD ap=0.01xD	ae=0.015xD ap=L2 max	ae=0.01xD	
		Application													
N	Vc (m/min)			fz	fz	fz	fz	fz	fz	fz	fz	fz	fz	fz	
1.1	Aluminium, alloyed	<500	500	0.03	0.035	0.04	0.025	0.03	0.035	0.03	0.035	0.04	0.02	0.025	0.03
1.2	Aluminium, alloyed	<600	480	0.03	0.035	0.04	0.025	0.03	0.035	0.03	0.035	0.04	0.02	0.025	0.03
2.1-2.3	Aluminium, casted	<600	450	0.027	0.031	0.035	0.022	0.026	0.03	0.027	0.031	0.035	0.017	0.021	0.025
3.1-3.3	Cooper, alloyed	<650	220	0.024	0.027	0.03	0.019	0.022	0.025	0.024	0.027	0.03	0.014	0.017	0.02
4.1	Magnesium, alloyed	<250	500	0.03	0.035	0.04	0.025	0.03	0.035	0.03	0.035	0.04	0.02	0.025	0.03
5.1	Thermoplastic	<100	400	0.027	0.031	0.035	0.022	0.026	0.03	0.027	0.031	0.035	0.017	0.021	0.025
5.2	Duroplastic	<150	350	0.024	0.027	0.03	0.019	0.022	0.025	0.024	0.027	0.03	0.014	0.017	0.02

NOTE | Values in the table are the shortest and the longest overhang length (L3) of each dimension; please calculate fz, ap and ae depending on the given values.



ae/ap(max) = 0.5x corner radius!

		Dimension	Ø 2.5x15			Ø 2.5x30			Ø 3x6			Ø 3x45			
		Infeed in mm	ae= 1xD	ae= 0.25xD	ae= 0.1xD	ae= 1xD	ae= 0.09xD	ae= 0.04xD	ae= 1xD	ae= 0.25xD	ae= 0.1xD	ae= 1xD	ae= 0.05xD	ae= 0.02xD	
		Application	ap= 0.2xD	ap= L2 max	ap= 0.1xD	ap= 0.07xD	ap= L2 max	ap= 0.04xD	ap= 0.2xD	ap= L2 max	ap= 0.1xD	ap= 0.04xD	ap= L2 max	ap= 0.02xD	
		Application													
Material	Strength (N/mm ²)	Feed (mm/Z)	fz	fz	fz	fz	fz	fz	fz	fz	fz	fz	fz	fz	
N		Vc (m/min)													
1.1	Aluminium, alloyed	<500	500	0.03	0.035	0.04	0.025	0.03	0.035	0.033	0.038	0.043	0.025	0.03	0.035
1.2	Aluminium, alloyed	<600	480	0.03	0.035	0.04	0.025	0.03	0.035	0.033	0.038	0.043	0.025	0.03	0.035
2.1-2.3	Aluminium, casted	<600	450	0.027	0.031	0.035	0.022	0.026	0.03	0.03	0.034	0.038	0.022	0.026	0.03
3.1-3.3	Cooper, alloyed	<650	220	0.024	0.027	0.03	0.019	0.022	0.025	0.027	0.03	0.033	0.019	0.022	0.025
4.1	Magnesium, alloyed	<250	500	0.03	0.035	0.04	0.025	0.03	0.035	0.033	0.038	0.043	0.025	0.03	0.035
5.1	Thermoplastic	<100	400	0.027	0.031	0.035	0.022	0.026	0.03	0.03	0.034	0.038	0.022	0.026	0.03
5.2	Duroplastic	<150	350	0.024	0.027	0.03	0.019	0.022	0.025	0.027	0.03	0.033	0.019	0.022	0.025

NOTE | Values in the table are the shortest and the longest overhang length (L3) of each dimension; please calculate fz, ap and ae depending on the given values.
 ae/ap(max) = 0.5x corner radius!