

Jongen Werkzeugtechnik

VHM 308W AL05

**The Roughing-Finishing
Cutters for non-ferrous metals**



The Tools

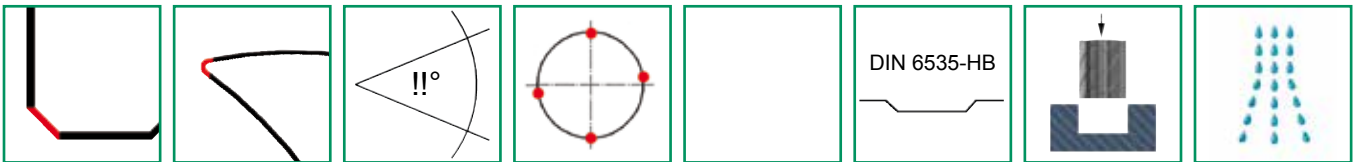
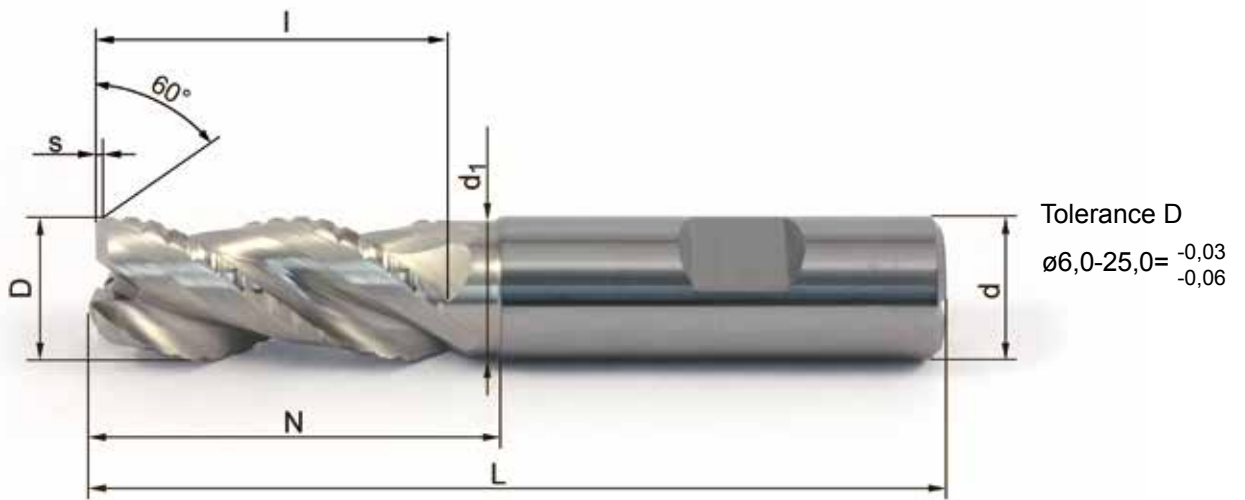
The Jongen UNI-MILL solid carbide cutters VHM 308W have been especially designed for the roughing and finishing of non-ferrous metals.

These tools distinguish themselves by granting excellent engine smoothness with high productivity.

Product characteristics	Your advantages
Flat-faced roughing and finishing cutters with internal coolant passages	Universally applicable by maintaining highest cutting volume
3 Cutting edges	Highest productivity full slot milling up to 2 x \varnothing
Twisted cooling channels Coolant discharge on the front surface	Optimal cooling Benefit to chip flow
Spiral-slot angle variable	Soft cutting manner
Special cut for the machining of non-ferrous metals	Highest cutting volume Long tool life
Cutting edges over centre	Applicable for boring
Differential tooth pitch	High running smoothness Excellent surface finish
Optimized macro geometry	Optimal designed geometry for high stability and long tool life
Optimized micro geometry	Reduction of micro-eruptions for long tool life
Chamfer on cutting edge	Stabilised cutting edge for longer tool life
Increasing neck length up to norm clamping length.	Universally applicable for all application fields
Holding shaft made to DIN 6535-HB (Weldon)	Stable mounting of the tool*
Hard metal	Finest grain carbide in the ISO field K05-K10 for highest wear resistance
Coating type	<ul style="list-style-type: none"> → low friction coefficient → prevention of gluing and build-up material → optimal chip flow → high cutting parameters → high protection against wearing
Hard metal + coating type = Quality AL05	Long life time with high operational parameters Universally applicable
Regrinding capability of the tools	High cost-benefit factor

* Please clamp absolutely in Weldon holder!

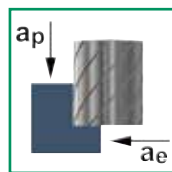
Technical Data VHM 308W AL05



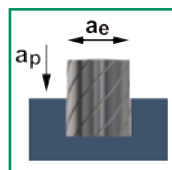
Order-No.	D	s	l	N	d ₁	d _{h6}	L	Z
VHM 308W-06 AL05	6	0,20x60°	14	20	5,7	6	58	3
VHM 308W-08 AL05	8	0,25x60°	21	26	7,4	8	64	3
VHM 308W-10 AL05	10	0,30x60°	23	31	9,2	10	73	3
VHM 308W-12 AL05	12	0,35x60°	27	37	11,0	12	84	3
VHM 308W-16 AL05	16	0,40x60°	36	43	15,0	16	93	3
VHM 308W-20 AL05	20	0,50x60°	41	52	19,0	20	104	3
VHM 308W-25 AL05	25	0,50x60°	51	67	24,0	25	125	3



Cutting Data Recommendation



Material	D [mm]	V _c [m/min]	f _z [mm]	a _p [mm]	a _e [mm]	n [min ⁻¹]	V _f [mm/min]	Q [cm ³ /min]
Alu long chipping	6	500 (460-600)	0,10 (0,07-0,15)	13	2,4	26.530	7.960	248,4
	8	500 (460-600)	0,10 (0,07-0,15)	20	3,2	19.890	5.965	381,8
	10	500 (460-600)	0,11 (0,08-0,16)	22	4,0	15.920	5.255	462,4
	12	500 (460-600)	0,11 (0,08-0,16)	26	4,8	13.260	4.375	546,0
	16	500 (460-600)	0,13 (0,10-0,18)	25	6,4	9.950	3.880	620,8
	20	500 (460-600)	0,16 (0,13-0,21)	40	8,0	7.960	3.820	1.222,4
Alu short chipping >6% Si	25	500 (460-600)	0,18 (0,15-0,23)	50	10,0	6.370	3.440	1.720,0
	6	480 (400-600)	0,10 (0,07-0,15)	13	2,4	25.460	7.640	238,4
	8	480 (400-600)	0,10 (0,07-0,15)	20	3,2	19.100	5.730	366,7
	10	480 (400-600)	0,11 (0,08-0,16)	22	4,0	15.280	5.040	443,5
	12	480 (400-600)	0,11 (0,08-0,16)	26	4,8	12.730	4.200	524,2
	16	480 (460-600)	0,13 (0,10-0,18)	25	6,4	9.550	3.725	596,0
Cast aluminium >10% Si	20	480 (460-600)	0,16 (0,13-0,21)	40	8,0	7.640	3.665	1.172,8
	25	480 (460-600)	0,18 (0,15-0,23)	50	10,0	6.110	3.300	1.650,0
	6	250 (200-400)	0,09 (0,06-0,14)	13	2,4	13.260	3.580	111,7
	8	250 (200-400)	0,09 (0,06-0,14)	20	3,2	9.950	2.685	171,8
	10	250 (200-400)	0,10 (0,07-0,15)	22	4,0	7.960	2.390	210,3
	12	250 (200-400)	0,10 (0,07-0,15)	26	4,8	6.630	1.990	248,4
CuZn alloys	16	250 (200-400)	0,12 (0,09-0,17)	25	6,4	4.970	1.790	286,4
	20	250 (200-400)	0,15 (0,12-0,20)	40	8,0	3.980	1.790	572,8
	25	250 (200-400)	0,17 (0,14-0,22)	50	10,0	3.180	1.620	810,0
	6	270 (230-400)	0,08 (0,05-0,13)	13	2,4	14.320	3.435	107,2
	8	270 (230-400)	0,08 (0,05-0,13)	20	3,2	10.740	2.580	165,1
	10	270 (230-400)	0,09 (0,06-0,14)	22	4,0	8.590	2.320	204,2



Material	D [mm]	V _c [m/min]	f _z [mm]	a _p [mm]	a _e [mm]	n [min ⁻¹]	V _f [mm/min]	Q [cm ³ /min]
Alu long chipping	6	500 (460-600)	0,08 (0,05-0,13)	12	6	26.530	6.365	458,3
	8	500 (460-600)	0,08 (0,05-0,13)	16	8	19.890	4.775	611,2
	10	500 (460-600)	0,09 (0,06-0,14)	20	10	15.920	4.300	860,0
	12	500 (460-600)	0,09 (0,06-0,14)	24	12	13.260	3.580	1.031,0
	16	500 (460-600)	0,11 (0,08-0,16)	32	16	9.950	3.285	1.681,9
	20	500 (460-600)	0,14 (0,11-0,19)	40	20	7.960	3.345	2.676,0
Alu short chipping >6% Si	25	500 (460-600)	0,16 (0,13-0,21)	50	25	6.370	3.060	3.825,0
	6	480 (400-600)	0,06 (0,03-0,11)	12	6	25.460	4.585	330,1
	8	480 (400-600)	0,06 (0,03-0,11)	16	8	19.100	3.440	440,3
	10	480 (400-600)	0,06 (0,03-0,11)	20	10	15.280	2.750	550,0
	12	480 (400-600)	0,06 (0,03-0,11)	24	12	12.730	2.290	659,5
	16	500 (460-600)	0,09 (0,06-0,14)	32	16	9.950	2.685	1.374,7
Cast aluminium >10% Si	20	500 (460-600)	0,16 (0,13-0,21)	40	20	7.960	3.820	3.056,0
	25	500 (460-600)	0,18 (0,15-0,23)	50	25	6.370	3.440	4.300,0
	6	250 (200-400)	0,07 (0,04-0,12)	12	6	13.260	2.785	200,5
	8	250 (200-400)	0,07 (0,04-0,12)	16	8	9.950	2.090	267,5
	10	250 (200-400)	0,08 (0,05-0,13)	20	10	7.960	1.910	382,0
	12	250 (200-400)	0,08 (0,05-0,13)	24	12	6.630	1.590	457,9
CuZn alloys	16	250 (200-400)	0,10 (0,07-0,15)	32	16	4.970	1.490	762,9
	20	250 (200-400)	0,13 (0,10-0,18)	40	20	3.980	1.550	1.240,0
	25	250 (200-400)	0,15 (0,12-0,20)	50	25	3.180	1.430	1.787,5
	6	270 (230-400)	0,06 (0,03-0,11)	12	6	14.320	2.580	185,8
	8	270 (230-400)	0,06 (0,03-0,11)	16	8	10.740	1.935	247,7
	10	270 (230-400)	0,07 (0,04-0,12)	20	10	8.590	1.805	361,0

The above-mentioned data are standard values that may vary depending on processing, type of machine and material grade. For processing use a machine with the highest preciseness and rigidity. Should the available cutting speed be lower of that given in the table, reduce feed rate proportionally.