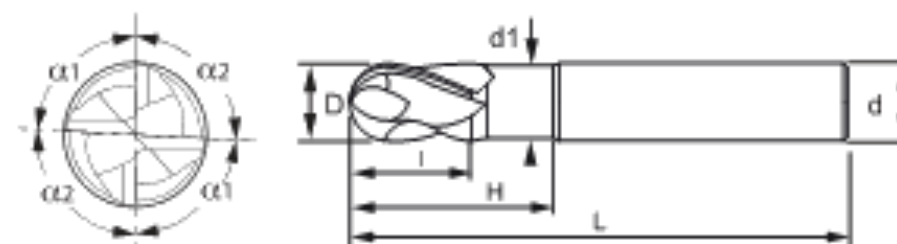


WIDIA HANITA BALL NOSE END MILLS VARIABLE PITCH Z4



ITEM: A4340

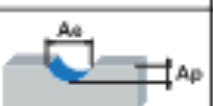
Material Micro-grain Integral hard metal
Standard Factory standard
Tolerance e8
Shank Cylindrical
Helix Right-hand 38° variable pitch
Surface treatment AITiN
Application Roughing and finishing on all materials



< 500	< 850	< 1200	< 600	< 850	Duplex	< 240	< 300	< 10% Si	> 10% Si	Brass Copper	Ti6Al4V	HTA	< 45	< 60	< 65
●	●	●	●	●	○	●	●				○		●	○	

FACTORY STANDARD

A4340	Tech. Code	D mm	L mm	I mm	H mm	d1 mm	d mm	Z	
4T - 38° - VARIABLE	A434005	5	57	9	15	4,70	6	4	1
	A434006	6		10		5,64			
	A434008	8	63	12	20	7,52	8		
	A434010	10	72	14	25	9,40	10		
	A434012	12	83	16	30	11,28	12		
	A434016	16	92	22	38	15,04	16		
	A434020	20	104	26	50	18,80	20		

		Profiling		Slotting	RANGE									
					A4340									
Material	Feature	Ap	Ae	Ap	Vc m/min. min.	Vc m/min. max.	mm	D/mm 5	D/mm 6	D/mm 8	D/mm 10	D/mm 12	D/mm 16	D/mm 20
CARBON STEEL	< 500 N/mm²	1.25 x D	0.50 x D	1.0 x D	150	200	fz/mm	0.036	0.044	0.060	0.072	0.083	0.101	0.114
	< 850 N/mm²	1.25 x D	0.50 x D	1.0 x D	120	160	fz/mm	0.030	0.036	0.050	0.061	0.070	0.087	0.101
	< 1200 N/mm²	1.25 x D	0.50 x D	0.75 x D	60	100	fz/mm	0.024	0.029	0.040	0.048	0.056	0.070	0.081
STAINLESS STEEL	< 600 N/mm²	1.25 x D	0.50 x D	1.0 x D	90	115	fz/mm	0.030	0.036	0.050	0.061	0.070	0.087	0.101
	< 800 N/mm²	1.25 x D	0.50 x D	1.0 x D	60	80	fz/mm	0.024	0.029	0.040	0.048	0.056	0.070	0.081
	< 800 N/mm²	1.25 x D	0.50 x D	1.0 x D	60	70	fz/mm	0.020	0.025	0.034	0.040	0.047	0.057	0.065
CAST IRON	< 240 HB	1.25 x D	0.50 x D	1.0 x D	120	150	fz/mm	0.036	0.044	0.060	0.072	0.083	0.101	0.114
	< 300 HB	1.25 x D	0.50 x D	1.0 x D	110	140	fz/mm	0.030	0.036	0.050	0.061	0.070	0.087	0.101
SUPER ALLOY	Ti6Al4V	1.25 x D	0.50 x D	1.0 x D	50	90	fz/mm	0.030	0.036	0.050	0.061	0.070	0.087	0.101
	HTA	1.25 x D	0.50 x D	0.3 x D	25	40	fz/mm	0.016	0.019	0.026	0.032	0.037	0.046	0.054
HARDENED	< 45 HRC	1.25 x D	0.50 x D	0.75 x D	80	140	fz/mm	0.027	0.033	0.045	0.054	0.062	0.077	0.088

Recommended "fz" values for side milling.
For slotting, adjust the cutting parameters. (ex: fz x 0.8)