

# TOLERANCES

## HAKAflex MMP



Article	Dimension	Aluminium	Ø Outer	Tolerance	Ø Inner	Tolerance	Wall thickness	Tolerance	Ovality bars *)	Ovality coils *)
	Nominal dimension	Nominal thickness	Pipe Test		Pipe Test		Pipe Test		Pipe Test	Pipe Test
MMP HAKAflex	10.0 x 1.30	0.20	10.00	+0.20 / -0	7.20	+0.20 / -0	1.30	+0.20 / -0	max. 0.35	max. 0.50
	11.6 x 1.50	0.20	11.40	+0.20 / -0	8.20	+0.20 / -0	1.50	+0.20 / -0	max. 0.35	max. 0.50
	12.0 x 1.80	0.20	12.00	+0.20 / -0	8.20	+0.20 / -0	1.80	+0.20 / -0	max. 0.35	max. 0.50
	14.0 x 2.00	0.18	14.00	+0.20 / -0	9.80	+0.20 / -0	2.00	+0.20 / -0	max. 0.60	max. 0.75
	16.0 x 2.00	0.15	16.00	+0.30 / -0	11.70	+0.30 / -0	2.00	+0.30 / -0	max. 0.75	max. 0.90
	16.0 x 2.00	0.18	16.00	+0.20 / -0	11.80	+0.20 / -0	2.00	+0.20 / -0	max. 0.75	max. 0.90
	16.0 x 2.00	0.20	16.00	+0.20 / -0	11.80	+0.20 / -0	2.00	+0.20 / -0	max. 0.75	max. 0.90
	16.0 x 2.00	0.40	16.00	+0.20 / -0	11.80	+0.20 / -0	2.00	+0.20 / -0	max. 0.75	max. 0.90
	16.0 x 2.25	0.20	16.00	+0.20 / -0	11.30	+0.20 / -0	2.25	+0.20 / -0	max. 0.75	max. 0.90
	16.0 x 2.25	0.40	16.00	+0.20 / -0	11.30	+0.20 / -0	2.25	+0.20 / -0	max. 0.75	max. 0.90
	17.0 x 2.00	0.20	17.00	+0.20 / -0	12.80	+0.20 / -0	2.00	+0.20 / -0	max. 0.80	max. 1.00
	18.0 x 2.00	0.25	18.00	+0.20 / -0	13.80	+0.20 / -0	2.00	+0.20 / -0	max. 0.90	max. 1.10
	20.0 x 2.00	0.25	20.00	+0.20 / -0	15.80	+0.20 / -0	2.00	+0.20 / -0	max. 1.00	max. 1.20
	20.0 x 2.00	0.40	20.00	+0.20 / -0	15.80	+0.20 / -0	2.00	+0.20 / -0	max. 1.00	max. 1.20
	20.0 x 2.25	0.25	20.00	+0.20 / -0	15.30	+0.20 / -0	2.25	+0.20 / -0	max. 1.00	max. 1.20
	20.0 x 2.25	0.40	20.00	+0.20 / -0	15.30	+0.20 / -0	2.25	+0.20 / -0	max. 1.00	max. 1.20
	20.0 x 2.50	0.25	20.00	+0.20 / -0	14.80	+0.20 / -0	2.50	+0.20 / -0	max. 1.00	max. 1.20
	20.0 x 2.50	0.40	20.00	+0.20 / -0	14.80	+0.20 / -0	2.50	+0.20 / -0	max. 1.00	max. 1.20
	25.0 x 2.50	0.35	25.00	+0.25 / -0	19.80	+0.30 / -0	2.50	+0.25 / -0	max. 1.10	max. 1.40
	25.0 x 2.50	0.50	25.00	+0.25 / -0	19.80	+0.30 / -0	2.50	+0.25 / -0	max. 1.10	max. 1.40
26.0 x 3.00	0.35	26.00	+0.25 / -0	19.80	+0.30 / -0	3.00	+0.25 / -0	max. 1.10	max. 1.60	
26.0 x 3.00	0.50	26.00	+0.25 / -0	19.80	+0.30 / -0	3.00	+0.25 / -0	max. 1.20	max. 1.60	
32.0 x 3.00	0.50	32.00	+0.25 / -0	25.80	+0.30 / -0	3.00	+0.25 / -0	max. 1.30	max. 1.80	
40.0 x 3.50	0.50	40.00	+0.25 / -0	32.80	+0.30 / -0	3.50	+0.25 / -0	max. 1.40	max. 2.00	
50.0 x 4.00	0.60	50.00	+0.40 / -0	41.80	+0.40 / -0	4.00	+0.40 / -0	max. 1.50	---	
63.0 x 4.50	0.80	62.80	+0.40 / -0	53.30	+0.60 / -0	4.50	+0.40 / -0	max. 1.60	---	

\*) Reference values

All dimensions and tolerances measured according to HakaGerodr / Gerodur guidelines