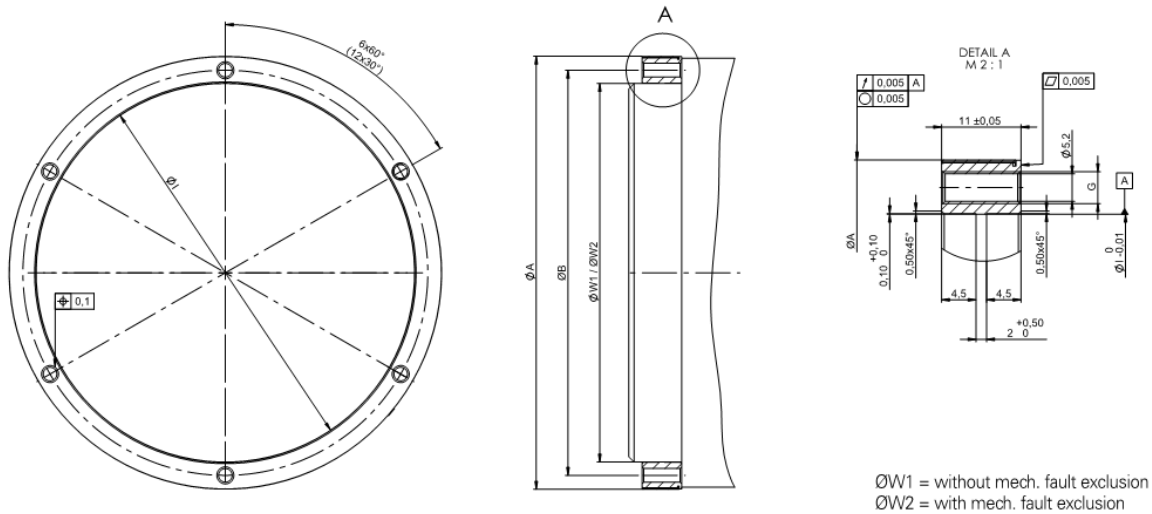


Incremental scale tape ring on flange WMF 1005 A

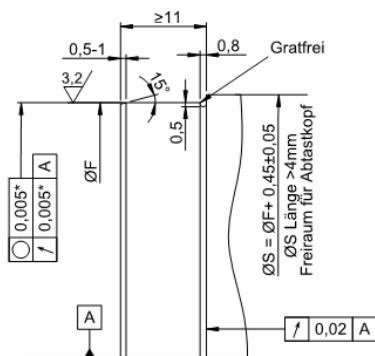
- In combination with the scanning head WMK 2005 / WMK 1005
- Grating period 500µm



ØW1 = without mech. fault exclusion
 ØW2 = with mech. fault exclusion

Line count	Type of graduation carrier	Ø A	Ø 1	ØW1	ØW2	Ø B	G
512	AA51	81,85	60 +0/-0,01	60 +0,02/+0,01	60 +0,05/+0,04	70	6 x M6
720	AA52	115,02	60 +0/-0,01	60 +0,02/+0,01	60 +0,05/+0,04	75	6 x M6
720	AA53		95 +0/-0,01	95 +0,02/+0,01	95 +0,05/+0,04	105	6 x M6
1024	AA54	163,44	105 +0/-0,01	105 +0,02/+0,01	105 +0,05/+0,04	120	6 x M6
1024	AA55		143 +0/-0,01	143 +0,02/+0,01	143 +0,05/+0,04	153	6 x M6
1440	AA56	229,68	180 +0/-0,01	180 +0,02/+0,01	180 +0,05/+0,04	195	6 x M6
1440	AA57		209 +0/-0,01	209 +0,02/+0,01	209 +0,05/+0,04	219	6 x M6
1800	AA58	286,98	180 +0/-0,01	180 +0,02/+0,01	180 +0,05/+0,04	195	12 x M6
1800	AA59		266 +0/-0,01	266 +0,02/+0,01	266 +0,05/+0,04	276	12 x M6
2048	AA60	326,45	220 +0/-0,01	220 +0,02/+0,01	220 +0,05/+0,04	235	12 x M6
2048	AA61		296 +0/-0,01	296 +0,02/+0,01	296 +0,05/+0,04	311	12 x M6

Mechanical requirements for customer specific graduation carrier WMF 1005A / WMB 1005A



*) Recommended eccentricity: Greater eccentricities up to ~0,05mm do not affect the function of the device, but cause a proportional loss in positioning accuracy.

Recommended material: 1.4104 (X14CrMoS17) or 1.7225 (42CrMo4)
 If you are using a different soft magnetic material please contact AMO.

Line count	ØF [mm]
512 to 719	$N/2\pi - 0,14 \pm 0,01$
720 to 1023	$N/2\pi - 0,07 \pm 0,01$
1024 to 1439	$N/2\pi - 0,03 \pm 0,02$
1440 to 2049	$N/2\pi - 0,00 \pm 0,02$
2050 to 3000	$N/2\pi + 0,02 \pm 0,03$
3001 to 4000	$N/2\pi + 0,05 \pm 0,06$
4001 to 6000	$N/2\pi + 0,08 \pm 0,07$
6001 to 10000	$N/2\pi + 0,10 \pm 0,10$

Tolerance principle in accordance with ISO 8015
 General tolerances in accordance with ISO 2768-fH
 All dimensions in mm



Technical data

Scale tape ring on flange WMF 1005A/WMB 1005A 500µm												
Line count	512		720		1024		1440		1800		2048	
Reference mark	Single or distance coded											
Position error per grating period ¹⁾												
Standard	± 7,6 "		± 5,4 "		± 3,8 "		± 2,7 "		± 2,2 "		± 1,8 "	
High Accuracy	± 1,6 "		± 1,1 "		± 0,8 "		± 0,6 "		± 0,5 "		± 0,4 "	
Grating period accuracy ¹⁾												
± 10µm arc length	± 51 "		± 36 "		± 26 "		± 18 "		± 15 "		± 13 "	
± 5µm arc length	± 26 "		± 18 "		± 13 "		± 9,0 "		± 7,5 "		± 6,5 "	
± 3µm arc length	± 16 "		± 11 "		± 8,0 "		± 5,5 "		± 4,5 "		± 4,0 "	
Outside diameter [mm]	81,85		115,02		163,44		229,68		286,98		326,45	
Inside diameter [mm]	60	60	95	105	143	180	209	180	266	220	296	
Max. angle acceleration [rad/s ²] ²⁾	4000						2200	400	1700	4000	1250	3800
Mech. speed [min ⁻¹] ²⁾	11700		8300		15000		4100		3300		2900	

¹⁾ The position error per grating period and the accuracy of the grating result together in the encoder specific error; additional deviations caused by mounting and bearing are not considered in this error.

²⁾ Values should be considered to ensure a mechanical fault exclusion.

