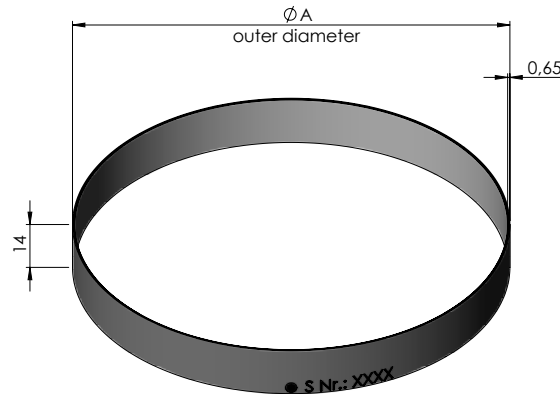


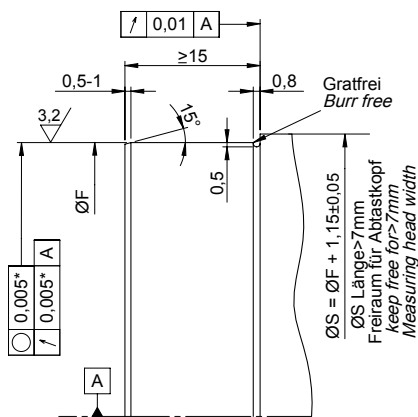
Absolute scale tape ring for outside scanning WMRA 1010 A

- In combination with the scanning head WMKA 2010
- Grating period 1000µm



WMRA 1010A

Mechanical requirements on the carrier flange



Line count	ØF [mm]
256	80,65 ±0,01
360	113,82 ±0,01
512	162,24 ±0,02
720	228,48 ±0,02
900	285,78 ±0,02
1024	325,25 ±0,02
1440	457,69 ±0,03
1800	572,31 ±0,06
2048	651,28 ±0,07

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

Technical data

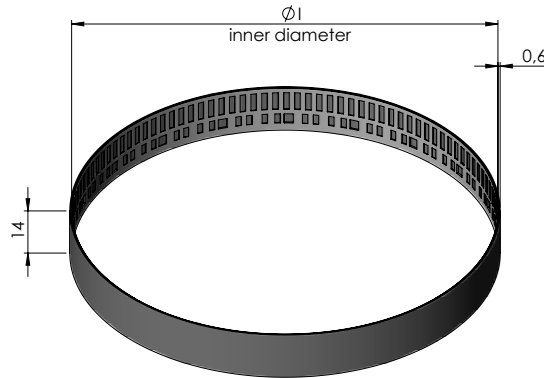
Scale tape ring WMRA 1010A 1000µm									
Line count	256	360	512	720	900	1024	1440	1800	2048
Grating period accuracy ¹⁾									
±10µm arc length	±51"	±36"	±26"	±18"	±15"	±13"	±9"	±7,5"	±6,5"
± 5µm arc length	±26"	±18"	±13"	±9,0"	±7,5"	±6,5"	±4,5"	±4,0"	±3,5"
± 3µm arc length	±16,0"	±11"	±8,0"	±5,5"	±4,5"	±4,0"	±3,0"	±2,5"	±2,0"
Outside diameter [mm]	81,95	115,12	163,54	229,78	287,08	326,55	458,99	573,61	652,58
Mech. speed [min ⁻¹] ₂₎	46800	33300	23400	16600	13300	11700	8300	6600	5800
Max. angle acceleration [rad/s ²] ₂₎	4000					3400	1400	1000	500

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.

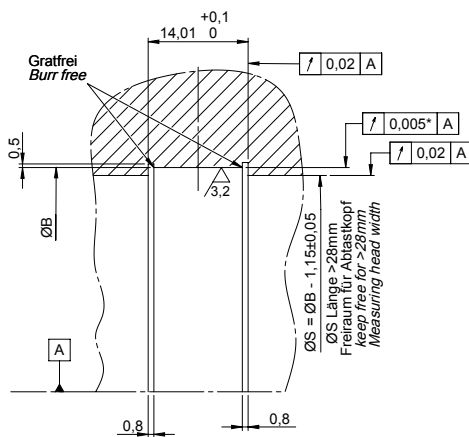
Absolute scale tape ring ring for inside scanning WMRA 1110 I

- In combination with the scanning head WMKA 2110
- Grating period 1000µm



WMRA 1110I

Mechanical requirements on the carrier flange



Line count	$\varnothing B$ [mm]
1024	326,62 ±0,02
1440	459,01 ±0,03
1800	573,56 ±0,06
2048	652,47 ±0,07

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

Technical data

Scale tape ring WMRA 1110I 1000µm				
Line count	1024	1440	1800	2048
Grating period accuracy ¹⁾				
±10µm arc length	±13"	±9"	±7,5"	±6,5"
± 5µm arc length	±6,5"	±4,5"	±4,0"	±3,5"
± 3µm arc length	±4,0"	±3,0"	±2,5"	±2,0"
Outside diameter ring [mm]	325,42	457,81	572,36	651,27
Mech. speed [min ⁻¹] ²⁾	11700	8300	6600	5800
Max. angle acceleration [rad/s ²] ²⁾	3400	1400	1000	500

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.

Ordering code

- WMRA - Scale tape ring for absolute angle encoder
- Grating period 1000µm

