HOMMEL ETAMIC

Technical data

Waveline W800 and W900

Measuring systems

Model	W800				W900			
Traverse unit XM120 | XM200								
Traverse length	120 mm | 200 mm				120 mm | 200 mm			
Straightness	0.4 µm | 0.6 µm				0.2 µm | 0.4 µm			
Positioning repeatability	<50 µm				<10 µm			
X-axis scale resolution	0.1 µm				0.01 µm			
Max. positioning speed	20 mm/s				200 mm/s			
Max. basic disturbance Rz (0.2 mm/s)	<50 nm				<30 nm			
Number of probe system interfaces	1, bottom				2, bottom & front			
Measuring column ZM500 | ZM800								
Vertical travel	500 mm | 800 mm				500 mm | 800 mm			
Positioning repeatability	<50 µm				<10 µm			
Max. positioning speed	20 mm/s				80 mm/s			
Scale resolution	–				0.1 µm			
Vertical distance measurement	–				absolute angle, inner/outer diameter			
Tilt unit								
Tilt range[1]	± 45°				± 45°			
Fine adjustment (optional)	± 5°				± 5°			
Probe system accuracy	TKU400	Digiscan	Surfscan	Nanoscan	TKU400	Digiscan	Surfscan	Nanoscan
Rz min. tolerance cg/cgk ≥ 1.33	0.8 µm	–	0.8 µm	0.5 µm	0.5 µm	–	0.5 µm	0.15 µm
Radius measurement R = 15 mm	–	±5 µm	±5 µm	±3 µm	–	±3 µm	±3 µm	±1 µm
Radius form deviation	–	3 µm	3 µm	1.5 µm	–	1.5 µm	1.5 µm	0.8 µm

Probe systems

Probe system	TKU400	Digiscan	Surfscan	Nanoscan
Measurement of	roughness	contour	roughness & contour	roughness & contour
Measuring range/resolution (Standard probe arm length)	± 400 µm/1 nm[2]	60 mm/10 nm[2]	8 mm / 3 nm	24 mm/0.3 nm
Measuring range/resolution (1.5x probe arm length)	± 600 µm/1.5 nm[2]	90 mm/15 nm[2]	–	–
Measuring range/resolution (2x probe arm length)	± 800 µm/2 nm[2]	–	16 mm/6 nm	48 mm/0.6 nm
Top/bottom measurement	no	optional	optional	yes
Measuring principle	analog	digital	digital	digital
Probe identification	yes	yes	yes	yes
Probe force setting	fixed	electronic	electronic	electronic
Probe arm identification	no	yes	yes	yes
Probe arm interface	magnetic	magnetic	magnetic	magnetic

System configurations

System configuration	Description
W800R | W900R	roughness measuring station with TKU400 probe system
W800C Digiscan | W900C Digiscan	contour measuring station with Digiscan probe system
W800RC Digiscan | W900RC Digiscan	roughness and contour measuring station with separate TKU400 and Digiscan probe systems
W800RC Surfscan | W900RC Surfscan	combined roughness and contour measuring station with Surfscan probe system
W800RC Nanoscan | W900RC Nanoscan	combined roughness and contour measuring station with Nanoscan probe system
Optional for all system configurations	traverse unit 120 mm or 200 mm measuring column 500 mm or 800 mm granite plate 700 x 520 mm or 1000 x 520 mm desktop, instrument table, measuring cabin

1) The technical data of the whole system can change depending on the tilt angle.
2) Resolution across the entire measuring range.

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