



Datasheet

AEROS S

Coordinate Measuring Machine

40.30.20

50.30.20

60.30.20



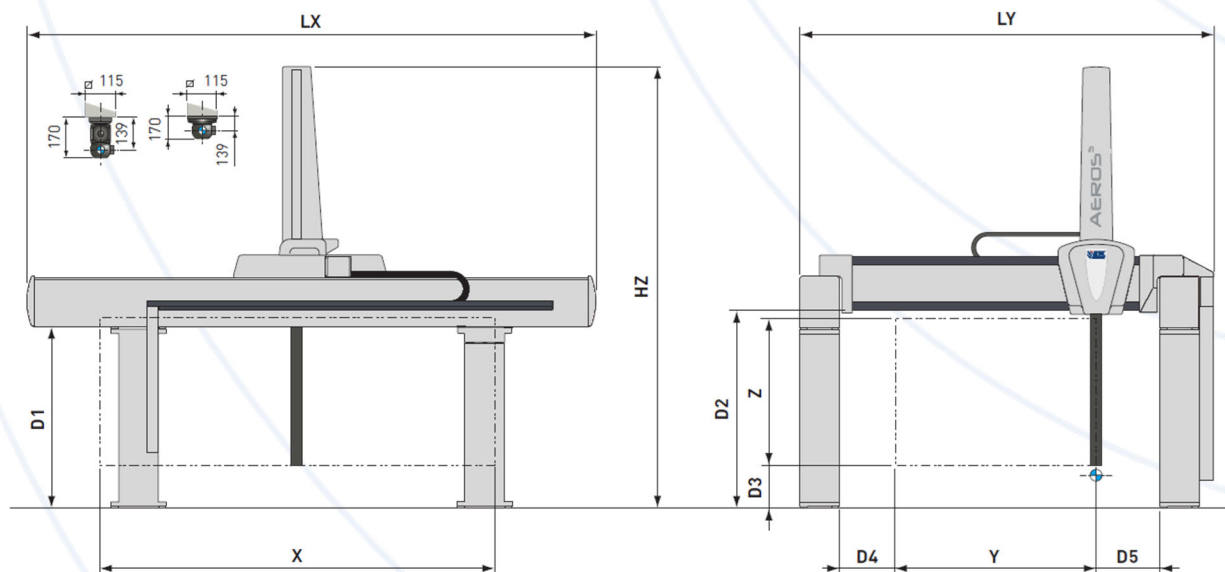
TECHNICAL DATA | Dimension

AEROS S

40.30.20

50.30.20

60.30.20



	Travels			Overall			Daylights					No. of Pillars	Max. Part Weight	CMM Weight
	X	Y	Z	LX	LY	HZ	D1	D2	D3	D4	D5			
40.30.20	4000 (157)	3000 (118)	2000 (79)	5750 (226)	5154 (203)	5387 (212)	2242 (88)	2412 (95)	332 (13)	567 (22)	642 (25)	2 + 2	10000 (22046)	on request
50.30.20	5000 (197)	3000 (118)	2000 (79)	5750 (226)	5154 (203)	5387 (212)	2242 (88)	2412 (95)	332 (13)	567 (22)	642 (25)	3 + 3	10000 (22046)	on request
60.30.20	6000 (236)	3000 (118)	2000 (79)	7750 (305)	5154 (203)	5387 (212)	2242 (88)	2412 (95)	332 (13)	567 (22)	642 (25)	3 + 3	10000 (22046)	on request

TECHNICAL DATA | Specification

TOUCH PROBE ACCURACY ¹ (TS/DD twin scale/dual drive)			TP20 ² PH10T/M/MQ PLUS	T200 ³ PH10T/M/MQ PLUS	SP25M ⁴ PH10M/MQ PLUS	RSP2 ⁵ REVO2	RSP3 ⁶ REVO2
ISO 10360 -2:2009							
Length measurement at 18°C to 22°C	E0 MPE E150 MPE		9.0 + 10.0 L/1000	8.5 + 10.0 L/1000	8.5 + 10.0 L/1000	8.5 + 10.0 L/1000	8.5 + 10.0 L/1000
ISO 10360 -4:2001							
Probing accuracy scanning mode	form MPE T _{ij} time MPT t		-	-	17.0 120 sec	17.0 120 sec	17.0 120 sec
ISO 10360 -5:2010							
Probing accuracy touch mode	form PFTU MPE		9.0	8.5	8.5	8.5	8.5

DYNAMICS

Acceleration	800 mm/sec ²
Velocity	530 mm/sec

Conformance is proven when all errors of indication lie within or on the accuracy specification limits MPE/MPL.

Conformance is unproven when one or more errors of indication lie outside the accuracy specification limits MPE/MPL.

¹ Touch probe accuracy specifications using manufacturer specified test lengths and test sphere with empirical qualification.

E0 MPE E150 MPE

Maximum volumetric length measurement error in microns where L is the measured length in millimetres.

MPE T_{ij} MPT t

Maximum single stylus form error in microns using scanning mode with time taken in seconds.

PFTU MPE

Maximum single stylus form error in microns using touch point mode.

² TP20 standard force 5-way module, Ø4x10 mm stainless steel shaft stylus.

³ TP200 standard force module, Ø4x10 mm stainless steel shaft stylus.

⁴ SP25M SM25-1 module, SH25-1 stylus holder, Ø5x50 mm stylus.

⁵ REVO2 RSP2 module, RSH175 holder, stylus length 20mm.

⁶ REVO2 RSP3 module, SH25-1 holder, stylus length 20mm.

TECHNICAL DATA | Probing

AEROS S

40.30.20

50.30.20

60.30.20

PROBE HEADS	PH10M/MQ PLUS			PH10T PLUS	REVO2
					

Head type	Indexing head			5-axis head	
Head positions	720			Infinite	
Angular tilt	0° to +105° in 7.5° steps			-100° to +120°	
Angular rotation	0° to ±180° in 7.5° steps			Continuous	
Probe change rack	MRS			-	

TOUCH PROBES	TP20	TP200	SP25M	TP20	TP200	RSP2	RSP3
Probe type	Touch trigger	Touch trigger	Scanning	Touch trigger	Touch trigger	Tip sensing	Scanning
Min. stylus diameter	0.3 (0.012)	0.3 (0.012)	0.5 (0.02)	0.3 (0.012)	0.3 (0.012)	0.3 (0.012)	0.5 (0.02)
Max. stylus length	60 (2.4)	100 (3.9)	400 (15.7)	60 (2.4)	100 (3.9)	400 (15.7)	800 (31.5)
Max. probe extension	300 (11.8)	300 (11.8)	100 (3.9)	300 (11.8)	300 (11.8)	-	-
Min. probing force	0.055 N	0.02 N	0.1 N	0.055 N	0.02 N	0.05 N	0.1 N
Stylus change rack	MCR20	SCR200	FCR25	MCR20	SCR200	RCP2	FCR25

LASER SCANNERS	LC15Dx	LC60Dx	XC65Dx/-LS	L100	-	-
Laser line width	15 (0.6)	60 (2.4)	3x 65 (2.6)	100 (3.9)		
Points/sec	70k	75k	75k	200k		
Resolution	22 µm	60 µm	65 µm	42 µm		
Standoff	68	125	107/202	135		

PERIPHERALS					
Controller	NMC300			UCC S5	
Controller mounting	Cabinet			Cabinet	
Handbox	SOLO			MCU 5	
Rotary Table	●			●	
Automation	●			-	

● Optional

- Not available

mm (inch)

TECHNICAL DATA | Design

AEROS S

40.30.20

50.30.20

60.30.20

TECHNICAL FEATURES

X axis guideway	Stabilised welded steel beams
Y axis guideway	Stabilised welded steel beams
Z axis guideway	Micromachined anodized light alloy extrusion
X axis friction drive	Rack and pinion system, optional dual drive
Y axis friction drive	Rack and pinion system
Z axis friction drive	Zero hysteresis friction drive
Linear encoders	0.1µm resolution optical linear transducers
Air bearings	Air bearings on all axes
Temperature compensation	Automatic temperature compensation for work piece and all axes

ENVIRONMENTAL REQUIREMENTS

Ambient temperature	Standard temperature range: 18°C to 22°C
Temperature gradient	Standard temperature range: 1°C/h 2°C/24h 1°C/m
Operating temperature	15°C to 35°C
Relative humidity	40% to 80% non-condensing
Acceptable Vibration (acceleration between peaks)	30 mm/s ² from 1 and 10 Hz 15 mm/s ² from 10 and 20 Hz 50 mm/s ² from 20 and 100Hz

SUPPLY REQUIREMENTS

Power supply	Voltage: 230 V Frequency: 50Hz Max. Current: 16 A Installed Power: 1600 W
Air consumption	Max. 300 NI/min
Air supply	Min. air supply pressure 6.0 bar (87.0 psi)

WARRANTY

	12 months warranty as standard, extended warranty available on request Terms and conditions apply see LK Metrology website for full details
--	--