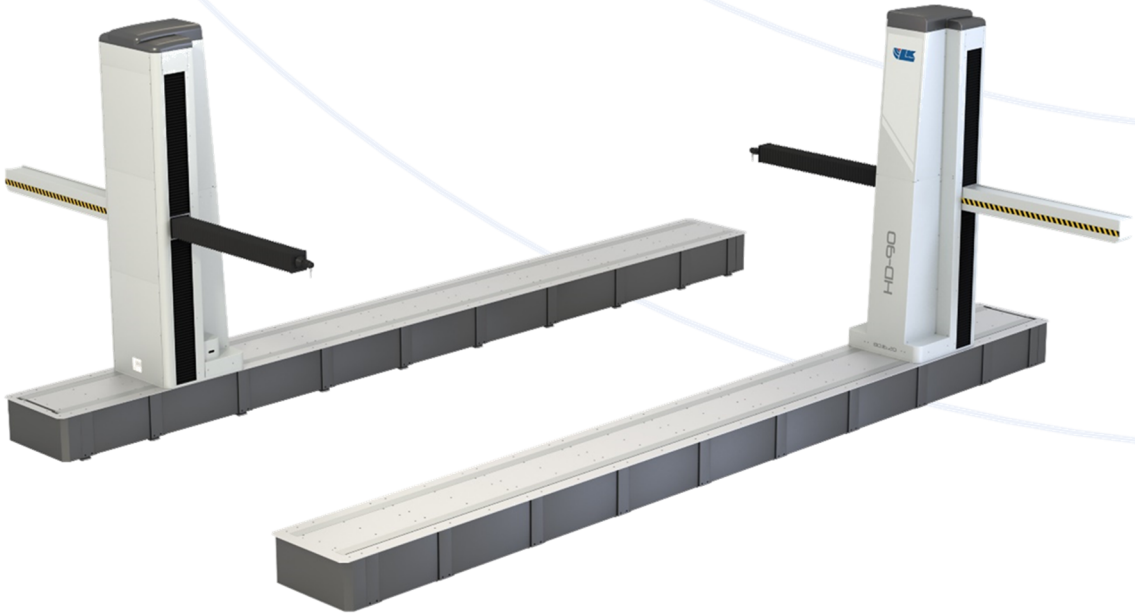
Datasheet

HD-90R/TR

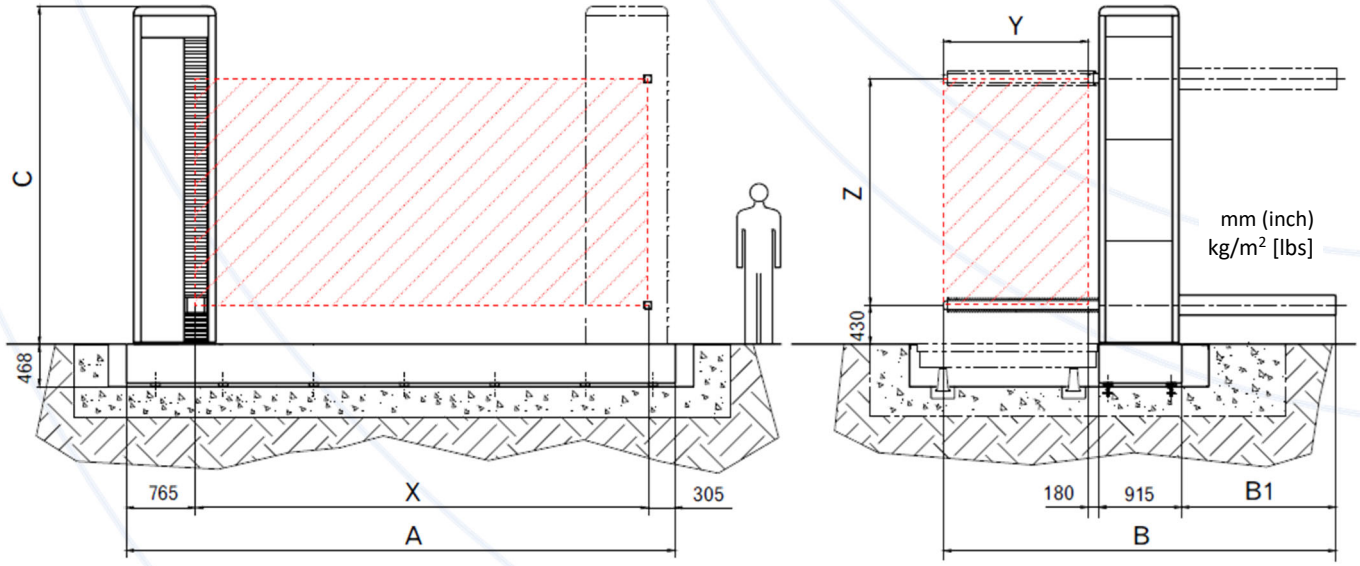
Coordinate Measuring Machine – horizontal arm on rail/twin rails

80.16.30



TECHNICAL DATA | **Dimensions**

HD-90R/TR
80.16.30



	Travels			Overall					CMM Weight	
	X	Y	Z	A single(R)	A twin(TR)	B single(R)	B twin (TR)	C	single(R)	twin(TR)
80.16.30	8000	1600	3000	9070	9556	4318	8741	4227	4545	9090
	(315)	(63)	(118)	(357)	(376)	(170)	(344)	(166)	(10020)	(20040)

TECHNICAL DATA | **Performance**

		TOUCH PROBE ACCURACY[1]				**DYNAMICS**	
		ISO 10360 -2:2009[2] Length measurement at 18°C to 22°C E0/150 MPE		**ISO 10360 -5:2010**[2] Probing accuracy touch probe form PFTU MPE		Acceleration mm/s²	Velocity mm/s
		TP20 PH10MQ PLUS	**TP20 PHS-2**	**TP20² PH10MQ PLUS**	**TP20 PHS-2**		
80.16.30	R	18 + 22 L/1000 ≤ 70	25 + 22L/1000 ≤ 75	15.0	20	1500	580
	TR	35 + 25 L/1000 ≤ 90	50 + 25L/1000 ≤ 105				

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.
PFTU MPE Maximum single stylus form error in microns using touch point mode.
[2] TP20 standard force 5-way module, Ø4x10mm stainless steel shaft stylus.

PROBE HEADS	**PH10MQ PLUS**	**PHS-2**
	 	 
Head type	Indexing head	5-axis wrist
Head positions	720	Infinite
Angular tilt	0° to +105° in 7.5° steps	-184° to +184° in 1µm steps at 100mm radius
Angular rotation	0° to ±180° in 7.5° steps	-184° to +184° in 1µm steps at 100mm radius
Probe change rack	MRS2	MRS2

TOUCH PROBES	**TP20**	**TP200**	**SP25M**	**TP20**	**TP200**
Probe type	Touch trigger	Touch trigger	Scanning	Touch trigger	Touch trigger
Min. stylus diameter	0.3 (0.012)	0.3 (0.012)	0.5 (0.02)	0.3 (0.012)	0.3 (0.012)
Max. stylus length	60 (2.4)	100 (3.9)	400 (15.7)	60 (2.4)	100 (3.9)
Max. probe extension	300 (11.8)	300 (11.8)	100 (3.9)	750 (29.5)	750 (29.5)
Min. probing force	0.055 N	0.02 N	0.1 N	0.055 N	0.02 N
Stylus change rack	MCR20	SCR200	FCR25	MCR20	SCR200

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

PERIPHERALS	
Controller	NMC300
Controller mounting	Cabinet
Handbox	SOLO
Rotary Table	●
Automation	●

● Optional

mm (inch)

TECHNICAL DATA | **Design**

TECHNICAL FEATURES

Linear encoders	0.1µm optical read-head Renishaw TONiC™ system
Counterbalance	Z axis counterbalance with safety brake
Motion control	D.C. servo motors
Guideway Bearings	Air bearings on Y and Z axes Mechanical bearings on X axis
Temperature compensation	Automatic temperature compensation for work piece and all axes
Anti-vibration	Passive elastomer anti-vibration as standard

ENVIRONMENTAL REQUIREMENTS

Ambient temperature	Standard temperature range: $18^{O}C$ to $22^{O}C$
Temperature gradient	Standard temperature range: 1˚C/h 2˚C/24h 0.5˚C/m
Relative humidity	20% 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: 10 A Installed Power: 1400 W
Air consumption	150 normal litres per minute (23 l/min at 0.55 MPa)
Air supply	Min. air supply pressure 0.55 MPa / 5.5 Bar / 80 psi

WARRANTY

	12 months warranty as standard Terms and conditions apply see LK Metrology website for full details