

LK V HA XX.10.8

LK V HA ceramic bridge and spindle components coupled with proven air-bearing design provide the ultimate in stiffness and stability, altogether delivering significantly improved repeatability.

Designed and manufactured using only the highest quality materials, they carry a heritage of over 45 years experience and expertise. LK CMMs deliver the ability to perform dimensional, positional and surface measurement in a single system. Combined with a complete range of contact and non-contact sensors, Nikon Metrology CMM s provide true multi-sensor capability.

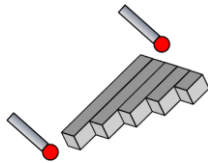
KEY BENEFITS

- Premium performance
- High velocities/accelerations for low cycle times
- Excellent accuracy and repeatability
- Total solution for probing, scanning and digital inspection



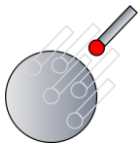
MACHINE PERFORMANCE

Accuracy Verification and Acceptance Tests



ISO 10360-2:2001 MPE_L : maximum permissible length error

- Five different length gauges are measured three times in seven different locations on the CMM, 105 measurements in total.
- The shortest gauge is less than 30mm and longest at least 66% of the longest diagonal of the CMM, up to a maximum of 2m.
- The difference between the measured length and calibrated length, traceable to National Standards, is taken as the error.
- The error of all 105 measurements must not exceed the MPE_L value quoted by the CMM manufacture.



ISO 10360-2:2001 MPE_P : maximum permissible probing error

- A test sphere is measured using 25 touch points while in a single location on the CMM.
- The nominal diameter of the test sphere must be between 10mm and 50mm.
- All 25 touch points are used to calculate a best-fit sphere and the radial distance of each touch point to that sphere centre.
- The difference, between the minimum radial distance and maximum radial distance, must not exceed the MPE_P value quoted by the CMM manufacture.



ISO 10360-4:2000 MPE_{THP} and MPE_{time} : maximum permissible scanning error, and time taken to perform the test

- A test sphere is measured using 4 scans while in a single location on the CMM.
- The nominal diameter of the test sphere must be 25mm and calibrated sphere radius traceable to National Standards.
- All 4 scans are used to calculate a best-fit sphere and the radial distance of each measured point to that sphere centre.
- The maximum absolute difference, between the individual radial distances and calibrated sphere radius, must not exceed the MPE_{THP} value quoted by the CMM manufacture.
- The time taken MPE_{THP} to complete the test must be stated if the test results are to be considered valid.

MACHINE PERFORMANCE : LK V HA 10.10.8, 15.10.8, 20.10.8, 25.10.8 AND 30.10.8

Tactile Probes	Probing						MPE _p (μm) according to ISO 10360-2:2001	
	Length Measurement			MPE _E (μm, L/mm) according to ISO 10360-2:2001				
	Scanning						MPETHP/time (μm/s) according to ISO 10360-4:2000	
EDD MS 2.0 Rev C1 12/04/13v C1 12/04/13 Probe System	¹ Standard Temperature Range 18-22°C			² Extended Temperature Range 16-26°C			Max. 3D Speed (mm/s)	Max. 3D Acc (mm/s ²)
	MPE _p	MPE _E	MPE THP/time	MPE _p	MPE _E	MPE THP/time		
³ PH10MQ PLUS / TP20	3.5	1.6+L/375	-	3.5	1.6+3L/375	-	833	1639
³ PH10MQ PLUS / TP200	1.6	1.6+L/375	-	1.6	1.6+3L/375	-		
³ PH20	3.5	1.6+L/375	-	3.5	1.6+3L/375	-		
⁴ PH10MQ PLUS / SP25M	1.4	1.6+L/375	2.7/59	1.4	1.6+3L/375	2.7/59		
⁵ SP80	1.3	1.5+L/375	2.2/65	-	-	-		
⁶ REVO / RSP2	2.4	2.6+L/375	3.0/9	-	-	-		
⁷ REVO / RSP3	1.8	1.6+L/375	3.0/59	-	-	-		

¹ Standard environment temperature variation 1°C/hour, 2°C/8 hours, gradient 1°C/metre (vertically and horizontally)

² Extended environment temperature variation 2°C/hour, 5°C/24 hours, gradient 1°C/metre

³ Stylus assembly with standard force module, maximum length 20mm or maximum of 1g weight

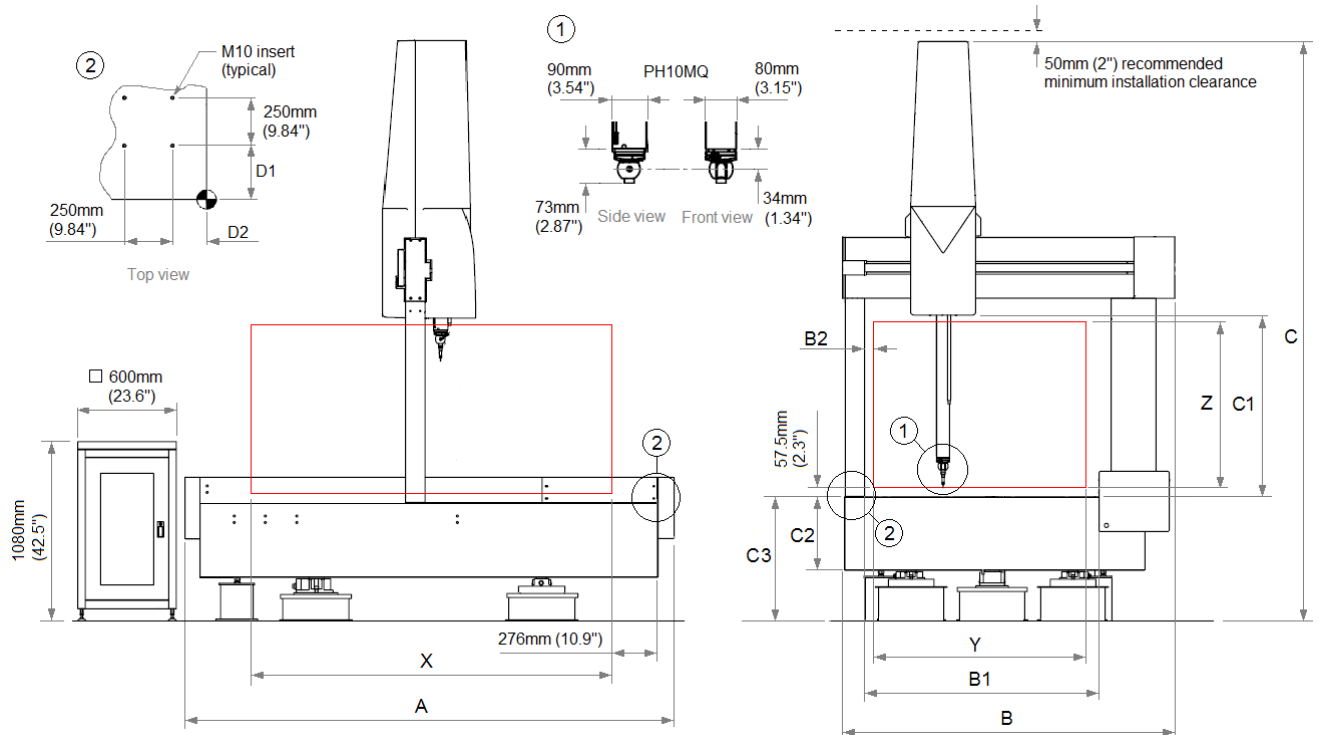
⁴ Stylus assembly with SM25-2/SH25-2, maximum length 50mm

⁵ Stylus assembly for MPE_E and MPE_p length 150mm and diameter 8mm, for MPE_{THP/time} length 80mm and diameter 3mm.

⁶ REVO tested with RSP250 module. DIN EN ISO 10360-4 derived test with helix scan at probe head angle A45B45, filtered to 30 UPR

⁷ REVO tested with RSP3-3 probe. DIN EN ISO 10360-4 test with standard ISO scan path at probe head angle A45B45, filtered to 30 UPR

WEIGHTS AND DIMENSIONS: LK V HA 10.10.8, 15.10.8, 20.10.8, 25.10.8 AND 30.10.8



Metric units

Models	Strokes (mm)			Overall dimensions (mm)			Daylights (mm)			Table (mm)		Inserts (mm)		Max. part weight (kg)	Machine weight (kg)
	X	Y	¹ Z	A	B	C	B1	B2	C1	C2	C3	D1	D2		
10.10.8	1016	1016	813	2210	1845	3098	1238	146	913	300	710	281	165	700	2299
15.10.8	1525	1016	813	2718	1845	3098	1238	146	913	300	710	281	169	950	2980
20.10.8	2032	1016	813	3225	1845	3098	1238	146	913	350	710	281	172	1300	4213
25.10.8	2540	1016	813	3735	1845	3098	1238	146	913	400	710	281	168	1850	5683
30.10.8	3048	1016	813	4435	1845	3098	1238	146	913	500	710	281	168	2406	8195

¹For REVO, reduce the given stroke by 120mm and for PH20, reduce the given stroke by 60mm Imperial / English units