FREEDOM arm

Portable go-to measurement where it benefits you most

Advanced technology with multi-functional capability

The FREEDOM arm range of 6 axis and 7 axis portable arms are designed for practicality and versatility - with touch probe and laser scanner technology for quality control, on-machine verification, reverse engineering or 3D modelling.

Model shown: FREEDOM Classic Scan 7 axis portable measuring arm.

Contact us now to book your demonstration

www.LKmetrology.com

TECHNICAL DATA | **Portable Arm**

	FREEDOM CLASSIC 6 axis - touch probe only **standard accuracy**		**FREEDOM SELECT** 6 axis - touch probe only **high accuracy**		**FREEDOM ULTIMATE** 6 axis - touch probe only **ultra accuracy**		**FREEDOM CLASSIC** *SCAN* 7 axis - probe and laser **standard accuracy**			**FREEDOM SELECT** *SCAN* 7 axis - probe and laser **high accuracy**			**FREEDOM ULTIMATE** *SCAN* 7 axis - probe and laser **ultra accuracy**		
Size	Reach[1]	Probe[2]	Reach[1]	Probe[2]	Reach[1]	Probe[2]	Reach[1]	Probe[2]	Laser[3]	Reach[1]	Probe[2]	Laser[3]	Reach[1]	Probe[2]	Laser[3]
20	2230	0.040	2230	0.023	-	-	2480	0.043	0.059	2480	0.029	0.041	-	-	-
	(87.8)	(0.0016)	(87.8)	(0.0009)	-	-	(97.6)	(0.0017)	(0.0023)	(97.6)	(0.0011)	(0.0016)	-	-	-
25	2730	0.046	2730	0.028	2730	0.026	2980	0.048	0.065	2980	0.031	0.047	2980	0.029	0.043
	(107.5)	(0.0018)	(107.5)	(0.0011)	(107.5)	(0.0010)	(117.3)	(0.0019)	(0.0026)	(117.3)	(0.0012)	(0.0019)	(117.3)	(0.0011)	(0.0017)
30	3230	0.067	3230	0.042	3230	0.039	3480	0.078	0.082	3480	0.057	0.064	3480	0.053	0.056
	(127.2)	(0.0026)	(127.2)	(0.0017)	(127.2)	(0.0015)	(137.0)	(0.0031)	(0.0032)	(137.0)	(0.0022)	(0.0025)	(137.0)	(0.0021)	(0.0022)
35	3730	0.085	3730	0.055	3730	0.052	3980	0.092	0.099	3980	0.069	0.078	3980	0.064	0.068
	(146.9)	(0.0033)	(146.9)	(0.0022)	(146.9)	(0.0020)	(156.7)	(0.0036)	(0.0039)	(156.7)	(0.0027)	(0.0031)	(156.7)	(0.0025)	(0.0027)
40	4230	0.100	4230	0.067	4230	0.063	4480	0.114	0.118	4480	0.084	0.089	4480	0.078	0.080
	(166.5)	(0.0039)	(166.5)	(0.0026)	(166.5)	(0.0025)	(176.4)	(0.0045)	(0.0046)	(176.4)	(0.0033)	(0.0035)	(176.4)	(0.0031)	(0.0031)
45	4730	0.120	4730	0.080	4730	0.074	4980	0.158	0.163	4980	0.113	0.141	4980	0.104	0.121
	(186.2)	(0.0047)	(186.2)	(0.0031)	(186.2)	(0.0029)	(196.1)	(0.0062)	(0.0064)	(196.1)	(0.0044)	(0.0056)	(196.1)	(0.0041)	(0.0048)

[1] Maximum reach specified as a spherical diameter using a 50mm long probe.
[2] Arm and touch probe system accuracy specification: E UNI maximum permissible longitudinal error of measurement according to ISO 10360-12:2016.
[3] Arm and laser scanner system accuracy specification: L DIA maximum permissible optical deviation of position according to ISO 10360-8:2013.
Refer to FREEDOM arm datasheets for other Technical Data. FREEDOM ULTIMATE and FREEDOM ULTIMATE SCAN not available in 2.0m size.

mm (inch)

TECHNICAL DATA | **Laser Scanner**

MODELMAKER H120

Accuracy[4]	7 µm	0.00028 inch
Line width	120 mm	4.7 inch
Measuring range	100 mm	4.1 inch
Stand-off	80 mm	3.1 inch
Resolution (min.)	35 µm	0.0014 inch
Frame rate (max.)	450 Hz	
Point per line (max.)	2,000	
Laser adjustment	ESP4 each point in real-time	
Warm-up	0 seconds	
Weight	0.5kg	1.1lbs
Laser type	Class 2	

[4] Laser scanner accuracy according to manufacturer's test procedure.

TECHNICAL DATA | **Control Pack**

	CP-C Cable Control Pack	**CP-B** Battery Control Pack	**CP-W** Wireless Control Pack
Probe	√	√	√
Laser scanner	√	√	√
Ethernet connection	√	√	√
USB* connection	√	√	√
Wireless connection			√
Mains power	√	√	√
Battery power		√	√

*USB connection via included USB to Ethernet cable adapter.

TECHNICAL DATA | **Supports**

Portable Metrology Tripod

- Ultra-stable tensioned tripod
- Working height 737mm - 1143mm (29" - 45")
- Aircraft grade aluminium tubes
- Level gauge
- Bottom weight hook

Rolling Metrology Stand

- Heavy duty mobile stand
- Range of sizes 762mm - 1905mm (30" – 75")
- Air cushioned cylinder
- Foot pedal lock
- Laptop arm option

Mobile Workstation

- Large: 700mm x 1200mm (27" x 47")
- Midi: 600mm x 800mm (23" x 31")
- Aluminium worktop with M8 holes
- Storage drawer and lockable cupboard
- Cart handles and laptop arm
- Nylon break casters

...we are metrology

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