FREEDOM arm V3

portable measuring arm

Updated 29th April 2024

...we are metrology

FREEDOM arm

MULTI-FUNCTIONAL by design

- Design for **PRODUCTIVITY** so manufacturing processes can stay on schedule.
- Design for **PRACTICALITY** so users can measure in almost any manufacturing environment.
- Design for **FLEXIBILITY** so the demands of any metrology challenge can be overcome.

6-AXIS FREEDOM arm

Optimised for **TOUCH PROBE** measurement with WiFI and battery options for measurement freedom.

7-AXIS FREEDOM arm

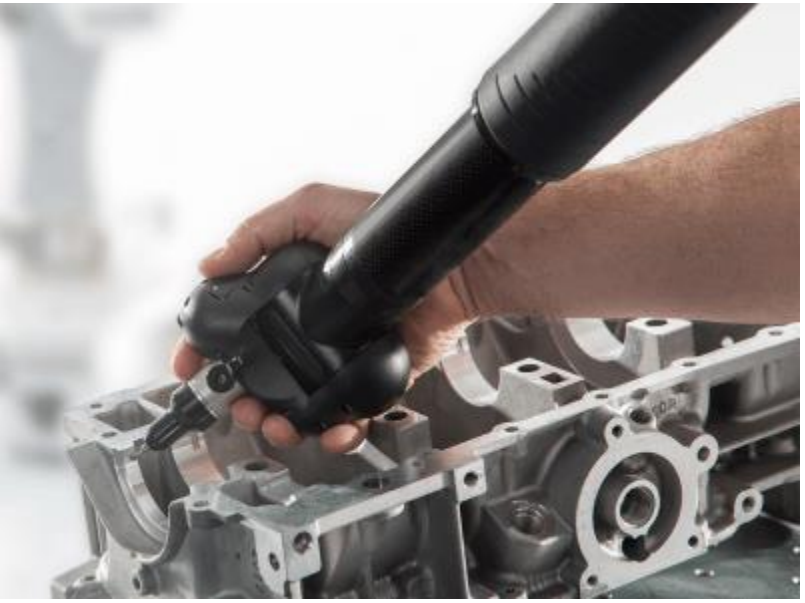
Multi-sensor **TOUCH PROBE & LASER SCANNING** for greater performance and wider range of applications

FREEDOM 7-axis arm

FREEDOM arm

ADVANCED TECHNOLOGY

from 35 years of experience



FREEDOM 6-axis arm

Accuracy

The probing accuracy of every FREEDOM arm is certified before delivery to ISO 10360-12 as standard.

Efficiency

The only portable arm to eliminate encoder referencing - allowing the user to simply turn on and start measuring.

Versatility

Repeatable probe connection allows probe and laser swapping quickly and easily, with no need to recalibrate.

Convenience

Multi-function wrist display puts measurement control directly in the user's hands aided by acoustic and haptic feedback

FREEDOM *SELECT SCAN*

Stability

High-tech carbon-fibre tube construction ensures strength and stability under the most challenging conditions.

Effortless

Infinite rotation and unique Zero-G counter balance makes every movement light and easy to handle, including the challenging to reach.

Portable

WiFi connectivity and battery power for completely portable probe and laser measurement.

Security

HomeDock and SmartLock features allow the arm to be stowed and locked in place between measurements and during set-up.

FREEDOM arm

Collect quality data in less time

PRODUCTIVITY by design

- **START IMMEDIATELY** no warm-up time, no encoder referencing, no probe or laser calibrations required on start-up.
- **SWITCH QUICKLY** between probe and laser without interrupting the measurement process to recalibrate and without any loss of data integrity.
- **SPIN GRIPS** for easier handling of the arm on larger parts.

FREEDOM 7-axis arm

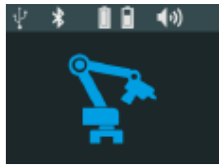
FREEDOM arm

Maximise operator performance

PRACTICALITY by design

- **QUICK ACCESS MENU** puts the most useful information right at the point of measurement, exactly where it's needed most, in the users hand.
- Immediate visual, acoustic and haptic feedback functions provide **EFFICIENT COMMUNICATION** to keep the process running at full speed.
- Infinite rotation and zero-G counterbalance helps **REDUCE USER FATIGUE** and maintains accuracy.

Connections



Status

Settings

Operations

FREEDOM arm

Measure anything, anywhere

FLEXIBILITY by design

- Wireless connectivity and battery power for **COMPLETELY PORTABLE** probe and laser measurements.
- Even the largest FREEDOM arm weighs less than 11 kilograms, making set up and repositioning a **QUICK AND EASY** process.
- HomeDock and SmartLock allow the arm to be **STOWED AND LOCKED** in place between measurements, for greater security during transport and set-up.

FREEDOM 6-axis arm

FREEDOM

classic

- **Standard accuracy**
- **Touch probes**
- **6-axis portable arm**
- **IP54 ingress protection**

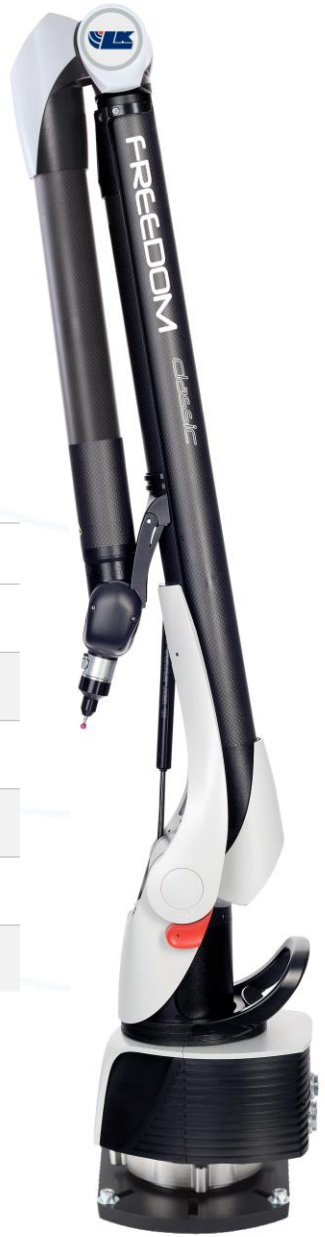
Accuracy

	TOUCH PROBE[4]			
	LENGTH E UNI	**SIZE** P SIZE	**POSITION** L DIA	**FORM** P FORM
FREEDOM *CLASSIC 20*	0.033 (0.0013)	0.012 (0.0005)	0.040 (0.0016)	0.024 (0.0009)
FREEDOM *CLASSIC 25*	0.042 (0.0017)	0.017 (0.0007)	0.047 (0.0019)	0.034 (0.0013)
FREEDOM *CLASSIC 30*	0.056 (0.0022)	0.022 (0.0009)	0.062 (0.0024)	0.048 (0.0019)
FREEDOM *CLASSIC 35*	0.070 (0.0028)	0.030 (0.0012)	0.079 (0.0031)	0.059 (0.0023)
FREEDOM *CLASSIC 40*	0.085 (0.0033)	0.037 (0.0015)	0.095 (0.0037)	0.069 (0.0027)
FREEDOM *CLASSIC 45*	0.105 (0.0041)	0.048 (0.0019)	0.110 (0.0043)	0.086 (0.0034)

FREEDOM arm accuracy specifications applicable only when the arm is mounted on the standard base plate mounting ring or optional base magnetic fixing with mounting ring with stable environmental conditions - accuracy is not guaranteed with all other stands and volume extension products.

[4] Touch probe accuracy specification - applicable only when using the probes supplied in the standard accessory kit.

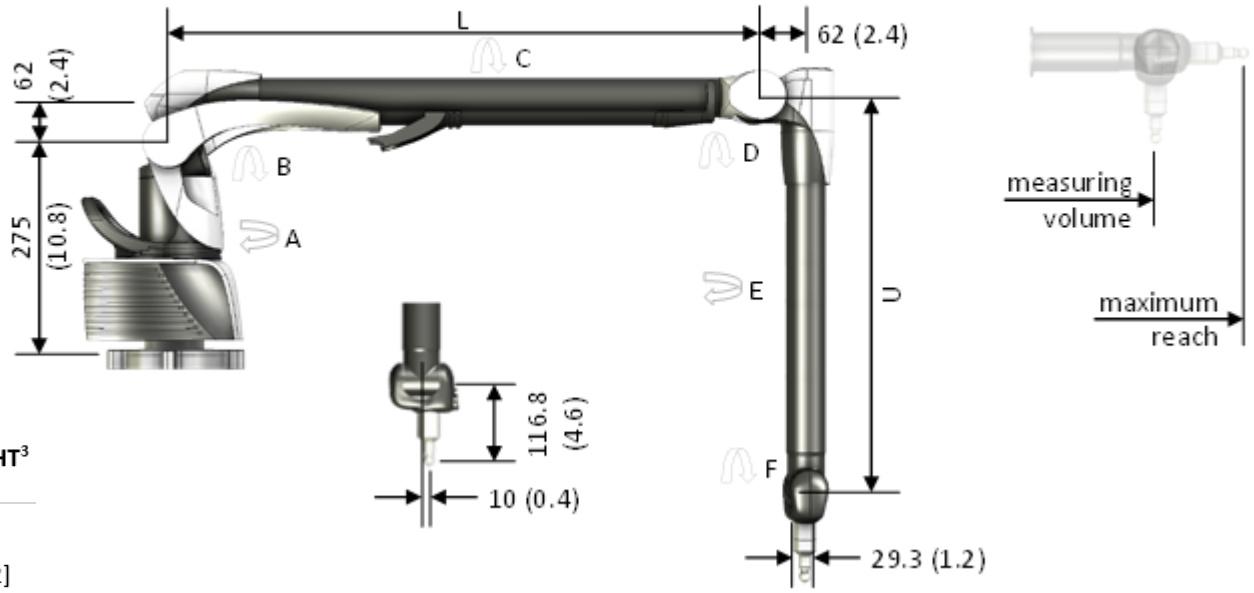
- E UNI — Maximum permissible longitudinal error of measurement according to ISO 10360-12:2016
- P SIZE — Maximum permissible probe deviation of size according to ISO 10360-12:2016.
- L DIA — Maximum permissible probe deviation of position according to ISO 10360-12:2016
- P FORM — Maximum permissible probe deviation of shape according to ISO 10360-12:2016



FREEDOM ARM package:
- CLASSIC v3 measuring arm
- tactile probe interface
- wrist display and haptic feedback
- palm grip and zero-G counterbalance
- smart lock and home dock
- accessory kit
  - diam. 3mm ruby x 50mm fixed probe
  - diam. 6mm ruby x 50mm fixed probe
  - diam. 15mm stainless steel x 50mm fixed probe
  - accessory case
- interface software RDS
- base plate with 4.5 inch mounting ring
- ethernet cable 3m
- gigabit ethernet adaptor
- power supply
- transit and storage case
- tactile probe calibration sphere with ISO17025 certificate
- ISO10360-12 certificate for tactile measurement
- 12 months standard warranty (inc. return shipping only)

FREEDOM

classic



Dimensions and Weights

	VOLUME[1]	REACH[1]	AXIS ROTATION[2]						SECTIONS		WEIGHT[3]
			A	B	C	D	E	F	L	U	
FREEDOM *CLASSIC 20*	2000 (78.7)	2230 (87.8)	∞	-0.94 +1.42	∞	-1.35 +1.22	∞	-1.71 +1.71	600 (23.6)	400 (15.7)	7.8 [17.2]
FREEDOM *CLASSIC 25*	2500 (98.4)	2730 (107.5)	∞	-0.94 +1.42	∞	-1.35 +1.22	∞	-1.71 +1.71	750 (29.5)	500 (19.7)	8.1 [17.9]
FREEDOM *CLASSIC 30*	3000 (118.1)	3230 (127.2)	∞	-0.94 +1.42	∞	-1.35 +1.22	∞	-1.71 +1.71	900 (35.4)	600 (23.6)	8.4 [18.5]
FREEDOM *CLASSIC 35*	3500 (137.8)	3730 (146.9)	∞	-0.94 +1.42	∞	-1.35 +1.22	∞	-1.71 +1.71	1050 (41.3)	700 (27.6)	8.7 [19.2]
FREEDOM *CLASSIC 40*	4000 (157.5)	4230 (166.5)	∞	-0.94 +1.42	∞	-1.35 +1.22	∞	-1.71 +1.71	1200 (47.2)	800 (31.5)	9.0 [19.8]
FREEDOM *CLASSIC 45*	4500 (177.2)	4730 (186.2)	∞	-0.94 +1.42	∞	-1.35 +1.22	∞	-1.71 +1.71	1350 (53.1)	900 (35.4)	9.3 [20.5]

[1]Measuring Volume and Maximum Reach specified as a spherical diameter using 50mm long probe.
[2]Axis Rotation angles measured in Radians.
[3]Arm weight excluding mounting base, control pack and probe.

Distance measurement calculated using 105 length measurements over the volume of the measuring arm using two spheres.

Feature measurement calculated as the difference between the calibrated sphere diameter and 25 point measured sphere diameter.

Repeatability of a sphere position when measured using 5 different arm orientations and repeated for two sphere positions.

Total variation of 25 measured points compared to the diameter of the least squares sphere, worst value from two sphere positions.

FREEDOM

select

- High accuracy
- 6-axis portable arm
- Twist grip & twist knob
- Touch probes
- IP54 ingress protection

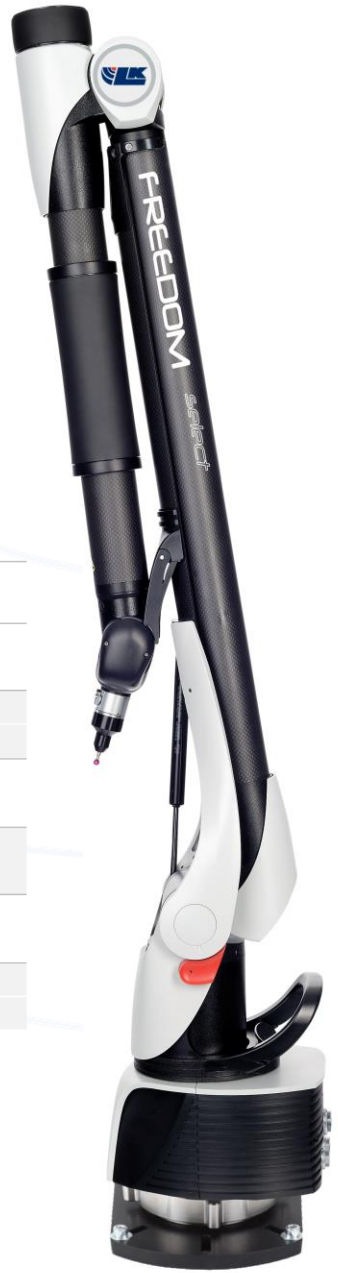
Accuracy

	TOUCH PROBE[4]			
	LENGTH E UNI	SIZE P SIZE	POSITION L DIA	FORM P FORM
FREEDOM *SELECT 20*	0.023 (0.0009)	0.008 (0.0003)	0.030 (0.0012)	0.017 (0.0007)
FREEDOM *SELECT 25*	0.028 (0.0011)	0.010 (0.0004)	0.035 (0.0014)	0.020 (0.0008)
FREEDOM *SELECT 30*	0.040 (0.0016)	0.014 (0.0006)	0.049 (0.0019)	0.028 (0.0011)
FREEDOM *SELECT 35*	0.053 (0.0021)	0.018 (0.0007)	0.066 (0.0026)	0.036 (0.0014)
FREEDOM *SELECT 40*	0.065 (0.0026)	0.022 (0.0009)	0.082 (0.0032)	0.041 (0.0016)
FREEDOM *SELECT 45*	0.080 (0.0031)	0.028 (0.0011)	0.102 (0.0040)	0.050 (0.0020)

FREEDOM arm accuracy specifications applicable only when the arm is mounted on the standard base plate mounting ring or optional base magnetic fixing with mounting ring with stable environmental conditions - accuracy is not guaranteed with all other stands and volume extension products.

[4] Touch probe accuracy specification - applicable only when using the probes supplied in the standard accessory kit.

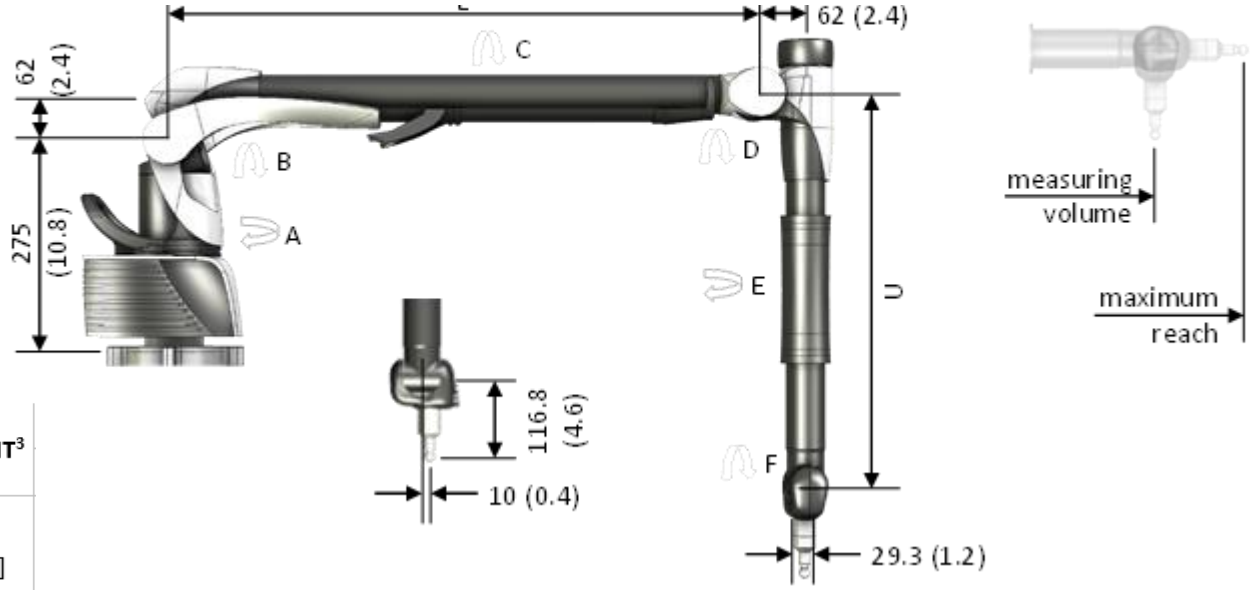
E UNI Maximum permissible longitudinal error of measurement according to ISO 10360-12:2016
P SIZE Maximum permissible probe deviation of size according to ISO 10360-12:2016.
L DIA Maximum permissible probe deviation of position according to ISO 10360-12:2016
P FORM Maximum permissible probe deviation of shape according to ISO 10360-12:2016



FREEDOM ARM package:
- SELECT v3 measuring arm
- wrist display and haptic feedback
- rotating spin grip and spin knob
- palm grip and zero-G counterbalance
- smart lock and home dock
- accessory kit
  - diam. 3mm ruby x 50mm fixed probe
  - diam. 6mm ruby x 50mm fixed probe
  - diam. 15mm stainless steel x 50mm fixed probe
  - accessory case
- interface software RDS
- base plate with 4.5 inch mounting ring
- ethernet cable 3m
- gigabit ethernet adaptor
- power supply
- transit and storage case
- tactile probe calibration sphere with ISO17025 certificate
- ISO10360-12 certificate for tactile measurement
- 12 months standard warranty (inc. return shipping only)

FREEDOM

select



Dimensions and Weights

	VOLUME[1]	REACH[1]	AXIS ROTATION[2]						SECTIONS		WEIGHT[3]
			A	B	C	D	E	F	L	U	
FREEDOM *SELECT 20*	2000 (78.7)	2230 (87.8)	∞	-0.94 +1.42	∞	-1.35 +1.22	∞	-1.71 +1.71	600 (23.6)	400 (15.7)	8.0 [17.6]
FREEDOM *SELECT 25*	2500 (98.4)	2730 (107.5)	∞	-0.94 +1.42	∞	-1.35 +1.22	∞	-1.71 +1.71	750 (29.5)	500 (19.7)	8.3 [18.3]
FREEDOM *SELECT 30*	3000 (118.1)	3230 (127.2)	∞	-0.94 +1.42	∞	-1.35 +1.22	∞	-1.71 +1.71	900 (35.4)	600 (23.6)	8.6 [19.0]
FREEDOM *SELECT 35*	3500 (137.8)	3730 (146.9)	∞	-0.94 +1.42	∞	-1.35 +1.22	∞	-1.71 +1.71	1050 (41.3)	700 (27.6)	8.9 [19.6]
FREEDOM *SELECT 40*	4000 (157.5)	4230 (166.5)	∞	-0.94 +1.42	∞	-1.35 +1.22	∞	-1.71 +1.71	1200 (47.2)	800 (31.5)	9.2 [20.3]
FREEDOM *SELECT 45*	4500 (177.2)	4730 (186.2)	∞	-0.94 +1.42	∞	-1.35 +1.22	∞	-1.71 +1.71	1350 (53.1)	900 (35.4)	9.5 [20.9]

[1]Measuring Volume and Maximum Reach specified as a spherical diameter using 50mm long probe.
[2]Axis Rotation angles measured in Radians.
[3]Arm weight excluding mounting base, control pack and probe.

Distance measurement calculated using 105 length measurements over the volume of the measuring arm using two spheres.

Feature measurement calculated as the difference between the calibrated sphere diameter and 25 point measured sphere diameter.

Repeatability of a sphere position when measured using 5 different arm orientations and repeated for two sphere positions.

Total variation of 25 measured points compared to the diameter of the least squares sphere, worst value from two sphere positions.

FREEDOM

ultimate

- Ultra accuracy
- 6-axis portable arm
- Twist grip & twist knob
- Touch probes
- IP54 ingress protection

Accuracy

	TOUCH PROBE [4]			
	LENGTH E UNI	**SIZE** P SIZE	**POSITION** L DIA	**FORM** P FORM
FREEDOM *ULTIMATE 25*	0.025 (0.0010)	0.009 (0.0004)	0.028 (0.0011)	0.017 (0.0007)
FREEDOM *ULTIMATE 30*	0.036 (0.0014)	0.012 (0.0005)	0.044 (0.0017)	0.025 (0.0010)
FREEDOM *ULTIMATE 35*	0.048 (0.0019)	0.015 (0.0006)	0.061 (0.0024)	0.032 (0.0013)
FREEDOM *ULTIMATE 40*	0.061 (0.0024)	0.019 (0.0007)	0.075 (0.0030)	0.036 (0.0014)
FREEDOM *ULTIMATE 45*	0.074 (0.0029)	0.026 (0.0010)	0.094 (0.0037)	0.046 (0.0018)

FREEDOM arm accuracy specifications applicable only when the arm is mounted on the standard base plate mounting ring or optional base magnetic fixing with mounting ring with stable environmental conditions - accuracy is not guaranteed with all other stands and volume extension products.

[4] Touch probe accuracy specification - applicable only when using the probes supplied in the standard accessory kit.

E UNI Maximum permissible longitudinal error of measurement according to ISO 10360-12:2016
P SIZE Maximum permissible probe deviation of size according to ISO 10360-12:2016.
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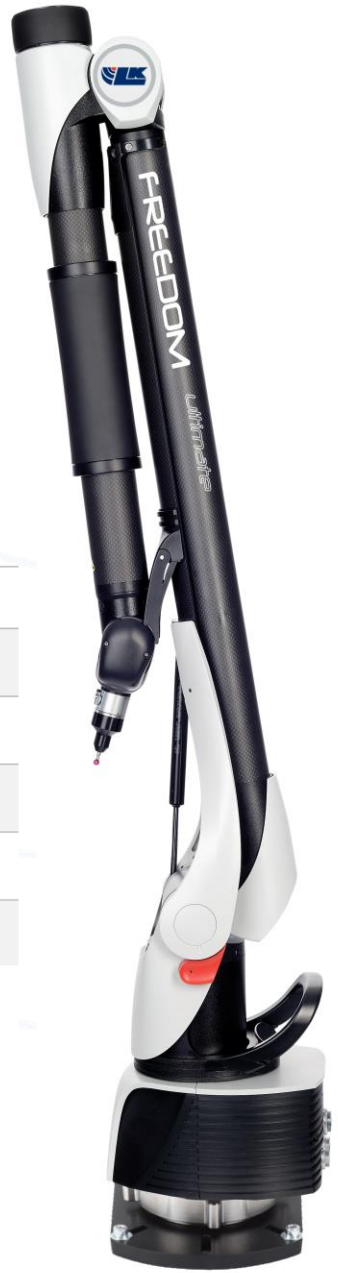
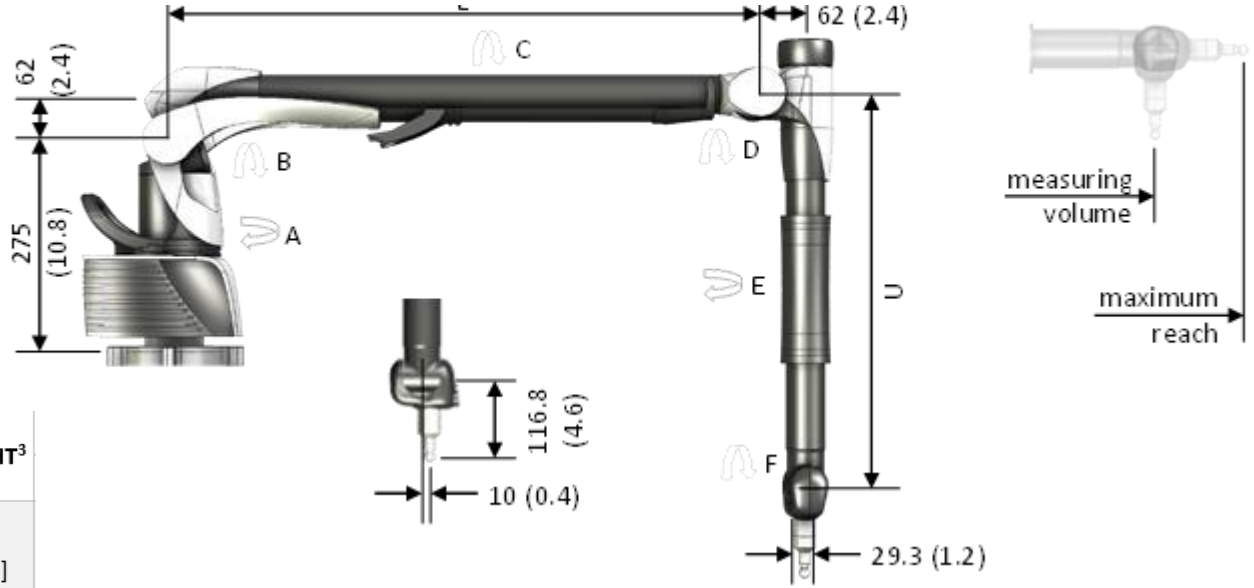
P FORM Maximum permissible probe deviation of shape according to ISO 10360-12:2016



FREEDOM ARM package:
- ULTIMATE v3 measuring arm
- wrist display and haptic feedback
- rotating spin grip and spin knob
- palm grip and zero-G counterbalance
- smart lock and home dock
- accessory kit
  - diam. 3mm ruby x 50mm fixed probe
  - diam. 6mm ruby x 50mm fixed probe
  - diam. 15mm stainless steel x 50mm fixed probe
  - accessory case
- interface software RDS
- base plate with 4.5 inch mounting ring
- ethernet cable 3m
- gigabit ethernet adaptor
- power supply
- transit and storage case
- tactile probe calibration sphere with ISO17025 certificate
- ISO10360-12 certificate for tactile measurement
- 12 months standard warranty (inc. return shipping only)

FREEDOM

ultimate



Dimensions and Weights

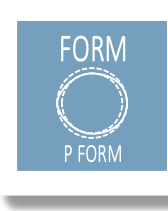
	VOLUME[1]	REACH[1]	AXIS ROTATION[2]						SECTIONS		WEIGHT[3]
			A	B	C	D	E	F	L	U	
FREEDOM *ULTIMATE 25*	2500 (98.4)	2730 (107.5)	∞	-0.94 +1.42	∞	-1.35 +1.22	∞	-1.71 +1.71	750 (29.5)	500 (19.7)	8.3 [18.3]
FREEDOM *ULTIMATE 30*	3000 (118.1)	3230 (127.2)	∞	-0.94 +1.42	∞	-1.35 +1.22	∞	-1.71 +1.71	900 (35.4)	600 (23.6)	8.6 [19.0]
FREEDOM *ULTIMATE 35*	3500 (137.8)	3730 (146.9)	∞	-0.94 +1.42	∞	-1.35 +1.22	∞	-1.71 +1.71	1050 (41.3)	700 (27.6)	8.9 [19.6]
FREEDOM *ULTIMATE 40*	4000 (157.5)	4230 (166.5)	∞	-0.94 +1.42	∞	-1.35 +1.22	∞	-1.71 +1.71	1200 (47.2)	800 (31.5)	9.2 [20.3]
FREEDOM *ULTIMATE 45*	4500 (177.2)	4730 (186.2)	∞	-0.94 +1.42	∞	-1.35 +1.22	∞	-1.71 +1.71	1350 (53.1)	900 (35.4)	9.5 [20.9]

[1]Measuring Volume and Maximum Reach specified as a spherical diameter using 50mm long probe.
[2]Axis Rotation angles measured in Radians.
[3]Arm weight excluding mounting base, control pack and probe.

Distance measurement calculated using 105 length measurements over the volume of the measuring arm using two spheres.

Feature measurement calculated as the difference between the calibrated sphere diameter and 25 point measured sphere diameter.

Repeatability of a sphere position when measured using 5 different arm orientations and repeated for two sphere positions.



Total variation of 25 measured points compared to the diameter of the least squares sphere, worst value from two sphere positions.

FREEDOM

- Standard accuracy
- 7-axis portable arm
- Touch screen display
- Touch probes
- Laser scanning

Accuracy

	TOUCH PROBE[4]				LASER SCANNER[5]
	LENGTH E UNI	SIZE P SIZE	POSITION L DIA	FORM P FORM	POSITION L DIA
FREEDOM *CLASSIC SCAN 20*	0.039 (0.0015)	0.015 (0.0006)	0.048 (0.0019)	0.033 (0.0013)	0.057 (0.0022)
FREEDOM *CLASSIC SCAN 25*	0.048 (0.0019)	0.019 (0.0007)	0.057 (0.0022)	0.038 (0.0015)	0.0 (0.002[illegible])
FREEDOM *CLASSIC SCAN 30*	0.064 (0.0025)	0.027 (0.0011)	0.086 (0.0034)	0.049 (0.0019)	0.078 (0.0031)
FREEDOM *CLASSIC SCAN 35*	0.082 (0.0032)	0.035 (0.0014)	0.108 (0.0043)	0.060 (0.0024)	0.095 (0.0037)
FREEDOM *CLASSIC SCAN 40*	0.104 (0.0041)	0.043 (0.0017)	0.134 (0.0053)	0.073 (0.0029)	0.113 (0.0044)
FREEDOM *CLASSIC SCAN 45*	0.135 (0.0053)	0.053 (0.0021)	0.168 (0.0066)	0.090 (0.0035)	0.155 (0.0061)

FREEDOM arm accuracy specifications applicable only when the arm is mounted on the standard base plate mounting ring or optional base magnetic fixing with mounting ring with stable environmental conditions - accuracy is not guaranteed with all other stands and volume extension products.

[4] Touch probe accuracy specification - applicable only when using the probes supplied in the standard accessory kit.

- E UNI — Maximum permissible longitudinal error of measurement according to ISO 10360-12:2016
- P SIZE — Maximum permissible probe deviation of size according to ISO 10360-12:2016.
- L DIA — Maximum permissible probe deviation of position according to ISO 10360-12:2016
- P FORM — Maximum permissible probe deviation of shape according to ISO 10360-12:2016

[5] Laser scanner H120 accuracy specification.

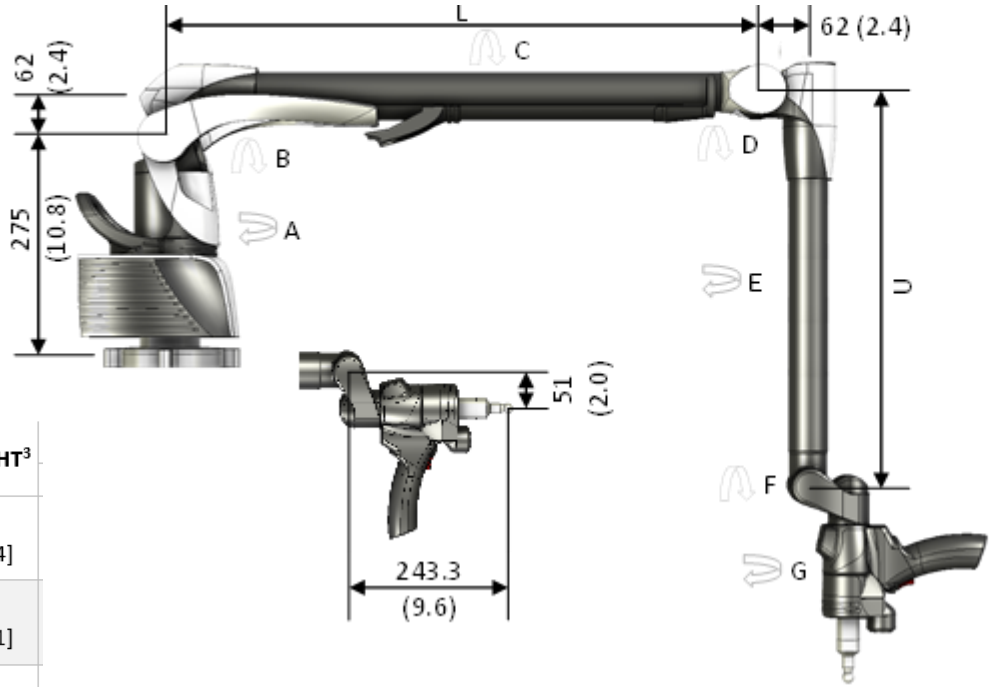
- L DIA — Maximum permissible optical deviation of position according to ISO 10360-8:2013

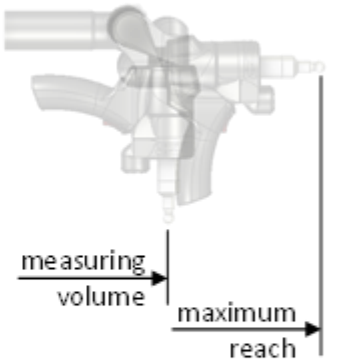
FREEDOM ARM package:

- CLASSIC SCAN v3 measuring arm
- tactile probe interface
- laser scanner interface
- pistol grip with touch screen display and haptic feedback
- palm grip and zero-G counterbalance
- smart lock and home dock
- accessory kit
  - diam. 3mm ruby x 50mm fixed probe
  - diam. 6mm ruby x 50mm fixed probe
  - diam. 15mm stainless steel x 50mm fixed probe
  - accessory case
- interface software RDS
- base plate with 4.5 inch mounting ring
- ethernet cable 3m
- gigabit ethernet adaptor
- power supply
- transit and storage case
- tactile probe calibration sphere with ISO17025 certificate
- ISO10360-12 certificate for tactile measurement
- 12 months standard warranty (inc. return shipping only)

FREEDOM

classic scan





Dimensions and Weights

	VOLUME[1]	REACH[1]		AXIS ROTATION[2]							SECTIONS		WEIGHT[3]
		PROBE	LASER	A	B	C	D	E	F	G	L	U	
FREEDOM *CLASSIC SCAN 20*	2000 (78.7)	2480 (97.6)	2750 (108.3)	∞	-0.94 +1.42	∞	-1.35 +1.22	∞	-1.71 +1.71	∞	600 (23.6)	400 (15.7)	8.8 [19.4]
FREEDOM *CLASSIC SCAN 25*	2500 (98.4)	2980 (117.3)	3250 (128.0)	∞	-0.94 +1.42	∞	-1.35 +1.22	∞	-1.71 +1.71	∞	750 (29.5)	500 (19.7)	9.1 [20.1]
FREEDOM *CLASSIC SCAN 30*	3000 (118.1)	3480 (137.0)	3750 (147.6)	∞	-0.94 +1.42	∞	-1.35 +1.22	∞	-1.71 +1.71	∞	900 (35.4)	600 (23.6)	9.4 [20.7]
FREEDOM *CLASSIC SCAN 35*	3500 (137.8)	3980 (156.7)	4250 (167.3)	∞	-0.94 +1.42	∞	-1.35 +1.22	∞	-1.71 +1.71	∞	1050 (41.3)	700 (27.6)	9.7 [21.4]
FREEDOM *CLASSIC SCAN 40*	4000 (157.5)	4480 (176.4)	4750 (187.0)	∞	-0.94 +1.42	∞	-1.35 +1.22	∞	-1.71 +1.71	∞	1200 (47.2)	800 (31.5)	10.0 [22.0]
FREEDOM *CLASSIC SCAN 45*	4500 (177.2)	4980 (196.1)	5250 (206.7)	∞	-0.94 +1.42	∞	-1.35 +1.22	∞	-1.71 +1.71	∞	1350 (53.1)	900 (35.4)	10.3 [22.7]

[1]Measuring Volume and Maximum Reach specified as a spherical diameter using 50mm long probe / laser scanner field of view.
[2]Axis Rotation angles measured in Radians.
[3]Arm weight excluding mounting base, control pack, probe and optional laser scanner.

Distance measurement calculated using 105 length measurements over the volume of the measuring arm using two spheres.

Feature measurement calculated as the difference between the calibrated sphere diameter and 25 point measured sphere diameter.

Repeatability of a sphere position when measured using 5 different arm orientations and repeated for two sphere positions.

Total variation of 25 measured points compared to the diameter of the least squares sphere, worst value from two sphere positions.

FREEDOM

- High accuracy
- 7-axis portable arm
- Touch screen display
- Twist grip & twist knob
- Touch probes
- Laser scanning

Accuracy

	TOUCH PROBE[4]				LASER SCANNER[5]
	LENGTH E UNI	SIZE P SIZE	POSITION L DIA	FORM P FORM	POSITION L DIA
FREEDOM *SELECT SCAN 20*	0.029 (0.0011)	0.010 (0.0004)	0.038 (0.0015)	0.021 (0.0008)	0.039 (0.0015)
FREEDOM *SELECT SCAN 25*	0.031 (0.0012)	0.012 (0.0005)	0.048 (0.0019)	0.025 (0.0010)	0.045 (0.0018)
FREEDOM *SELECT SCAN 30*	0.053 (0.0021)	0.020 (0.0008)	0.080 (0.0031)	0.035 (0.0014)	0.061 (0.0024)
FREEDOM *SELECT SCAN 35*	0.064 (0.0025)	0.024 (0.0009)	0.096 (0.0038)	0.043 (0.0017)	0.075 (0.0030)
FREEDOM *SELECT SCAN 40*	0.081 (0.0032)	0.029 (0.0011)	0.117 (0.0046)	0.050 (0.0020)	0.085 (0.0033)
FREEDOM *SELECT SCAN 45*	0.113 (0.0044)	0.040 (0.0016)	0.140 (0.0055)	0.065 (0.0026)	0.134 (0.0053)

FREEDOM arm accuracy specifications applicable only when the arm is mounted on the standard base plate mounting ring or optional base magnetic fixing with mounting ring with stable environmental conditions - accuracy is not guaranteed with all other stands and volume extension products.

[4] Touch probe accuracy specification - applicable only when using the probes supplied in the standard accessory kit.

- E UNI Maximum permissible longitudinal error of measurement according to ISO 10360-12:2016
- P SIZE Maximum permissible probe deviation of size according to ISO 10360-12:2016.
- L DIA Maximum permissible probe deviation of position according to ISO 10360-12:2016
- P FORM Maximum permissible probe deviation of shape according to ISO 10360-12:2016

[5] Laser scanner H120 accuracy specification.

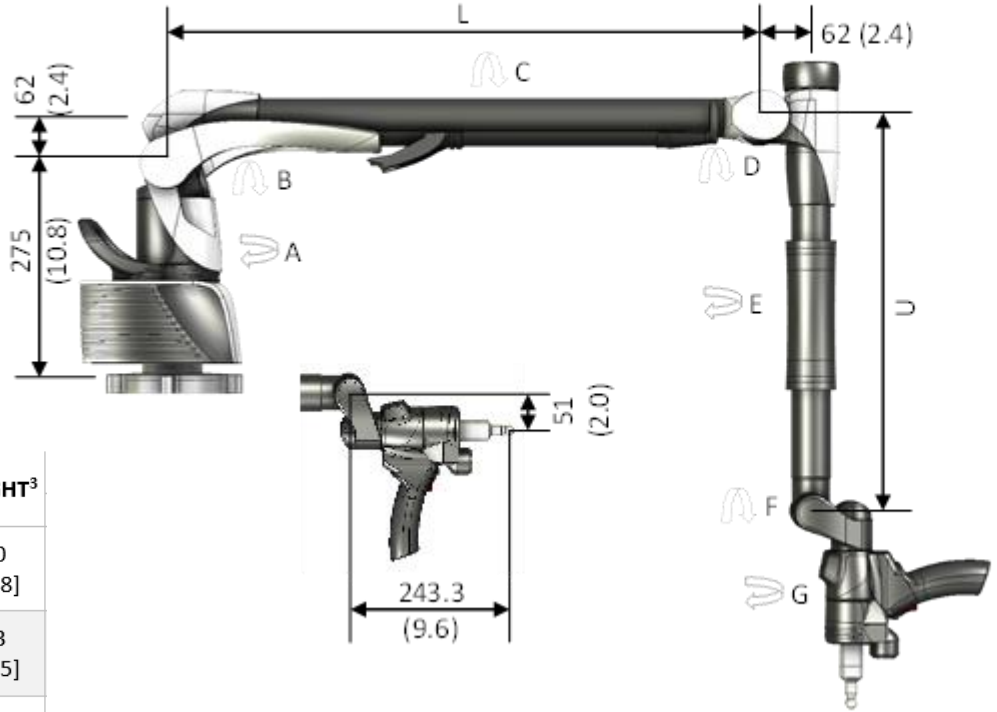
- L DIA Maximum permissible optical deviation of position according to ISO 10360-8:2013

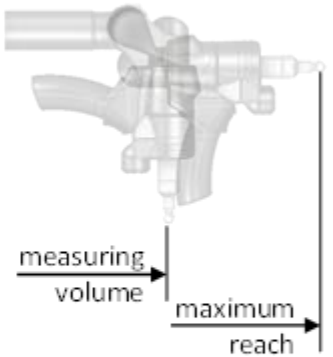
FREEDOM ARM package:

- SELECT SCAN v3 measuring arm
- tactile probe interface
- laser scanner interface
- pistol grip with touch screen display and haptic feedback
- rotating spin grip and spin knob
- palm grip and zero-G counterbalance
- smart lock and home dock
- accessory kit
  - diam. 3mm ruby x 50mm fixed probe
  - diam. 6mm ruby x 50mm fixed probe
  - diam. 15mm stainless steel x 50mm fixed probe
  - accessory case
- interface software RDS
- base plate with 4.5 inch mounting ring
- ethernet cable 3m
- gigabit ethernet adaptor
- power supply
- transit and storage case
- tactile probe calibration sphere with ISO17025 certificate
- ISO10360-12 certificate for tactile measurement
- 12 months standard warranty (inc. return shipping only)

FREEDOM

select scan





Dimensions and Weights

	VOLUME[1]	REACH[1]		AXIS ROTATION[2]							SECTIONS		WEIGHT[3]
		PROBE	LASER	A	B	C	D	E	F	G	L	U	
FREEDOM *SELECT SCAN 20*	2000 (78.7)	2480 (97.6)	2750 (108.3)	∞	-0.94 +1.42	∞	-1.35 +1.22	∞	-1.71 +1.71	∞	600 (23.6)	400 (15.7)	9.0 [19.8]
FREEDOM *SELECT SCAN 25*	2500 (98.4)	2980 (117.3)	3250 (128.0)	∞	-0.94 +1.42	∞	-1.35 +1.22	∞	-1.71 +1.71	∞	750 (29.5)	500 (19.7)	9.3 [20.5]
FREEDOM *SELECT SCAN 30*	3000 (118.1)	3480 (137.0)	3750 (147.6)	∞	-0.94 +1.42	∞	-1.35 +1.22	∞	-1.71 +1.71	∞	900 (35.4)	600 (23.6)	9.6 [21.2]
FREEDOM *SELECT SCAN 35*	3500 (137.8)	3980 (156.7)	4250 (167.3)	∞	-0.94 +1.42	∞	-1.35 +1.22	∞	-1.71 +1.71	∞	1050 (41.3)	700 (27.6)	9.9 [21.8]
FREEDOM *SELECT SCAN 40*	4000 (157.5)	4480 (176.4)	4750 (187.0)	∞	-0.94 +1.42	∞	-1.35 +1.22	∞	-1.71 +1.71	∞	1200 (47.2)	800 (31.5)	10.2 [22.5]
FREEDOM *SELECT SCAN 45*	4500 (177.2)	4980 (196.1)	5250 (206.7)	∞	-0.94 +1.42	∞	-1.35 +1.22	∞	-1.71 +1.71	∞	1350 (53.1)	900 (35.4)	10.5 [23.1]

[1]Measuring Volume and Maximum Reach specified as a spherical diameter using 50mm long probe / laser scanner field of view.
[2]Axis Rotation angles measured in Radians.
[3]Arm weight excluding mounting base, control pack, probe and optional laser scanner.

Distance measurement calculated using 105 length measurements over the volume of the measuring arm using two spheres.

Feature measurement calculated as the difference between the calibrated sphere diameter and 25 point measured sphere diameter.

Repeatability of a sphere position when measured using 5 different arm orientations and repeated for two sphere positions.

Total variation of 25 measured points compared to the diameter of the least squares sphere, worst value from two sphere positions.

FREEDOM

- Ultra accuracy
- 7-axis portable arm
- Touch screen display
- Twist grip & twist knob
- Touch probes
- Laser scanning

Accuracy

	TOUCH PROBE[4]				LASER SCANNER[5]
	LENGTH E UNI	SIZE P SIZE	POSITION L DIA	FORM P FORM	POSITION L DIA
FREEDOM *ULTIMATE SCAN 25*	0.027 (0.0011)	0.011 (0.0004)	0.042 (0.0017)	0.021 (0.0008)	0.041 (0.0016)
FREEDOM *ULTIMATE SCAN 30*	0.048 (0.0019)	0.016 (0.0006)	0.072 (0.0028)	0.032 (0.0013)	0.054 (0.0021)
FREEDOM *ULTIMATE SCAN 35*	0.060 (0.0024)	0.019 (0.0007)	0.087 (0.0034)	0.038 (0.0015)	0.065 (0.0026)
FREEDOM *ULTIMATE SCAN 40*	0.075 (0.0030)	0.025 (0.0010)	0.106 (0.0042)	0.043 (0.0017)	0.076 (0.0030)
FREEDOM *ULTIMATE SCAN 45*	0.104 (0.0041)	0.035 (0.0014)	0.125 (0.0049)	0.050 (0.0020)	0.115 (0.0045)

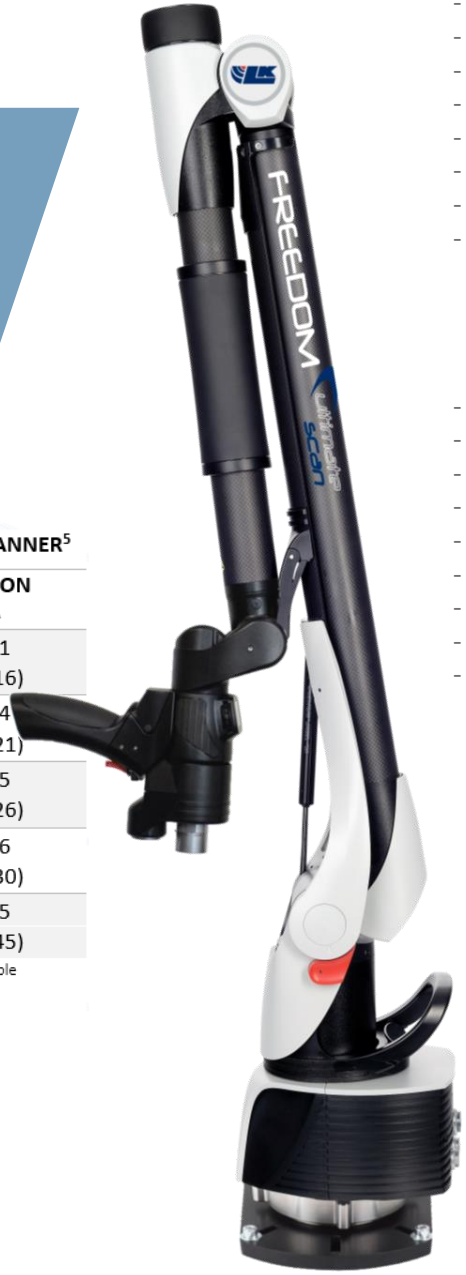
FREEDOM arm accuracy specifications applicable only when the arm is mounted on the standard base plate mounting ring or optional base magnetic fixing with mounting ring with stable environmental conditions - accuracy is not guaranteed with all other stands and volume extension products.

[4] Touch probe accuracy specification - applicable only when using the probes supplied in the standard accessory kit.

- E UNI Maximum permissible longitudinal error of measurement according to ISO 10360-12:2016
- P SIZE Maximum permissible probe deviation of size according to ISO 10360-12:2016.
- L DIA Maximum permissible probe deviation of position according to ISO 10360-12:2016
- P FORM Maximum permissible probe deviation of shape according to ISO 10360-12:2016

[5] Laser scanner H120 accuracy specification.

- L DIA Maximum permissible optical deviation of position according to ISO 10360-8:2013



FREEDOM ARM package:

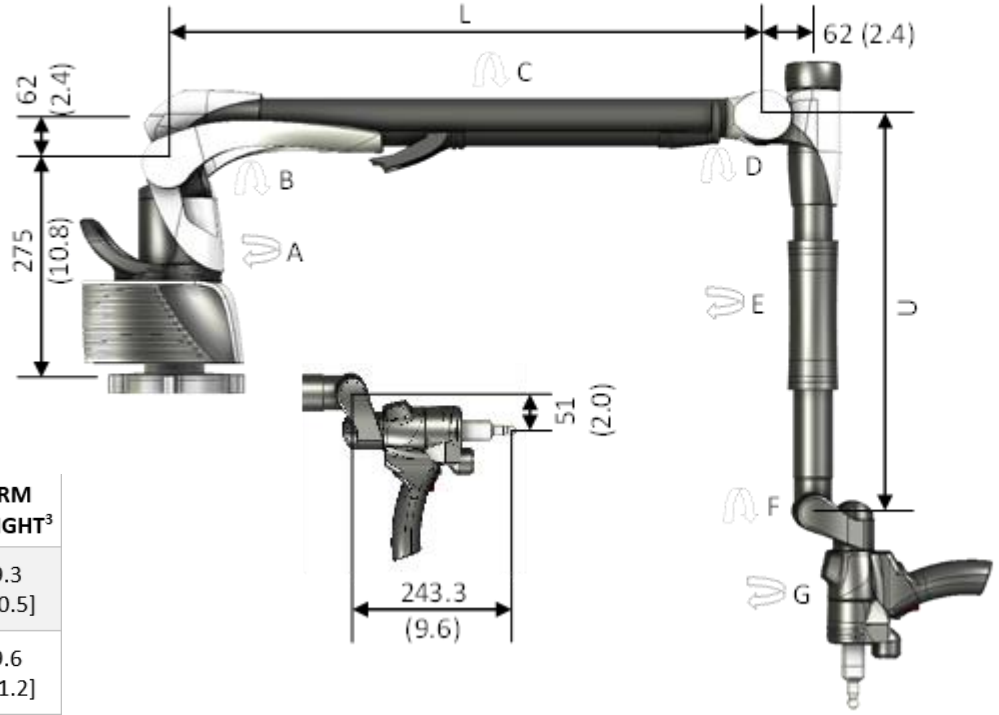
- ULTIMATE SCAN v3 measuring arm
- tactile probe interface
- laser scanner interface
- pistol grip with touch screen display and haptic feedback
- rotating spin grip and spin knob
- palm grip and zero-G counterbalance
- smart lock and home dock
- accessory kit
  - diam. 3mm ruby x 50mm fixed probe
  - diam. 6mm ruby x 50mm fixed probe
  - diam. 15mm stainless steel x 50mm fixed probe
  - accessory case
- interface software RDS
- base plate with 4.5 inch mounting ring
- ethernet cable 3m
- gigabit ethernet adaptor
- power supply
- transit and storage case
- tactile probe calibration sphere with ISO17025 certificate
- ISO10360-12 certificate for tactile measurement
- 12 months standard warranty (inc. return shipping only)

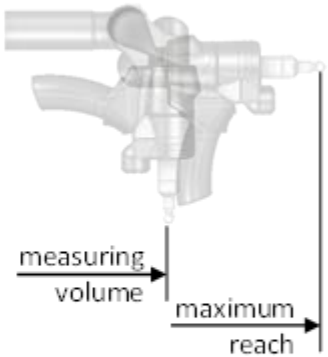
FREEDOM

Dimensions and Weights

	VOLUME[1]	REACH[1]		AXIS ROTATION[2]							SECTIONS		ARM WEIGHT[3]
		PROBE	LASER	A	B	C	D	E	F	G	L	U	
FREEDOM *ULTIMATE SCAN 25*	2500 (98.4)	2980 (117.3)	3250 (128.0)	∞	-0.94 +1.42	∞	-1.35 +1.22	∞	-1.71 +1.71	∞	750 (29.5)	500 (19.7)	9.3 [20.5]
FREEDOM *ULTIMATE SCAN 30*	3000 (118.1)	3480 (137.0)	3750 (147.6)	∞	-0.94 +1.42	∞	-1.35 +1.22	∞	-1.71 +1.71	∞	900 (35.4)	600 (23.6)	9.6 [21.2]
FREEDOM *ULTIMATE SCAN 35*	3500 (137.8)	3980 (156.7)	4250 (167.3)	∞	-0.94 +1.42	∞	-1.35 +1.22	∞	-1.71 +1.71	∞	1050 (41.3)	700 (27.6)	9.9 [21.8]
FREEDOM *ULTIMATE SCAN 40*	4000 (157.5)	4480 (176.4)	4750 (187.0)	∞	-0.94 +1.42	∞	-1.35 +1.22	∞	-1.71 +1.71	∞	1200 (47.2)	800 (31.5)	10.2 [22.5]
FREEDOM *ULTIMATE SCAN 45*	4500 (177.2)	4980 (196.1)	5250 (206.7)	∞	-0.94 +1.42	∞	-1.35 +1.22	∞	-1.71 +1.71	∞	1350 (53.1)	900 (35.4)	10.5 [23.1]

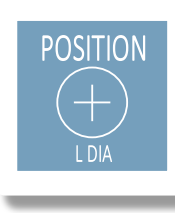
[1]Measuring Volume and Maximum Reach specified as a spherical diameter using 50mm long probe / laser scanner field of view.
[2]Axis Rotation angles measured in Radians.
[3]Arm weight excluding mounting base, control pack, probe and optional laser scanner .



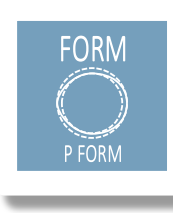


Distance measurement calculated using 105 length measurements over the volume of the measuring arm using two spheres.

Feature measurement calculated as the difference between the calibrated sphere diameter and 25 point measured sphere diameter.



Repeatability of a sphere position when measured using 5 different arm orientations and repeated for two sphere positions.



Total variation of 25 measured points compared to the diameter of the least squares sphere, worst value from two sphere positions.

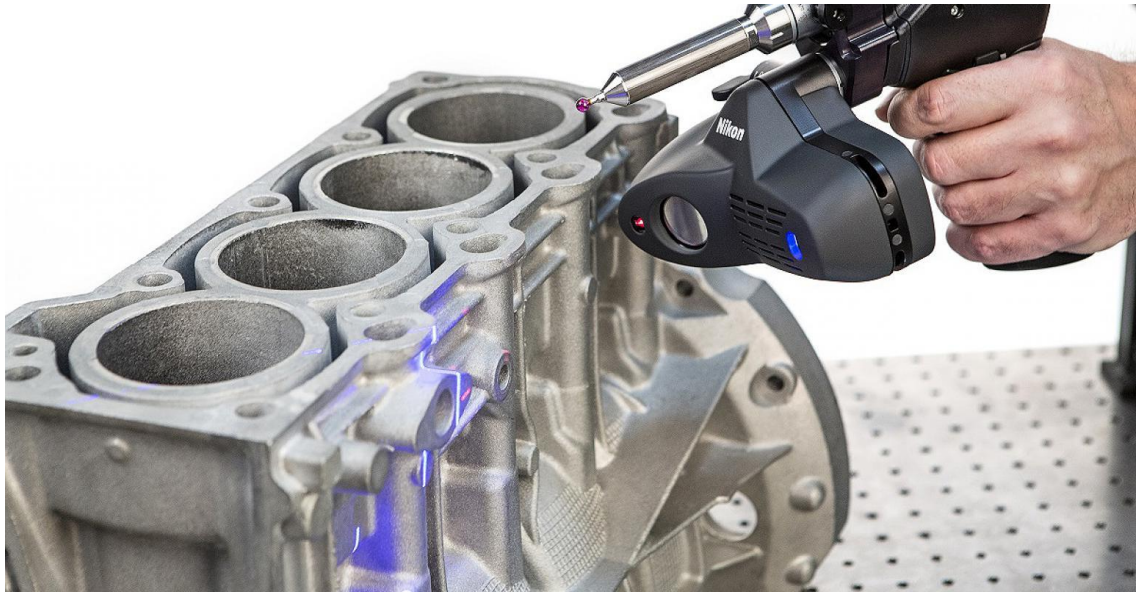
H120 laser scanner

Ultra-fast, high definition laser scanner

Accuracy[6]	7 µm	0.00028 inch
Laser line width	120 mm	4.7 inch
Measuring range	100 mm	4.1 inch
Stand-off (min.)	80 mm	3.1 inch
Resolution (min.)	35 µm	0.0014 inch
Frame rate (max.)	450 Hz	
Points per line (max.)	2,000	
Laser power adjustment	ESP4 each point in real-time	
Warm-up	0 seconds	
Weight	0.5 kg	1.1 lbs
Laser type	Class 2	
Maximum output	2.01mW 450nm 1mW 650nm	

[6] Laser scanner accuracy according to manufacturer's test procedure determined by scanning a plane from various directions, each time using the entire sensor field of view depth, width and diagonal. The result is the maximum 1σ deviation of the scan data to fitted plane features.

- New generation blue-light laser scanner
- Advanced optics and electronics
- Real-time laser power optimisation
- Projected field-of-view for precision handheld scanning
- High quality data in any challenging environment
- Scan all materials and finishes without pre-coating



CONTROL PACKS

The control pack defines the connection and power supply capabilities of the arm.

CONTROL PACK	SENSOR	CONNECTION			POWER	
		Ethernet cable	USB* cable	wireless	mains	battery
CP-C	PROBE / LASER	✓	✓	-	✓	-
CP-B	PROBE / LASER	✓	✓	-	✓	✓
CP-W	PROBE / LASER	✓	✓	✓	✓	✓

*USB connection via included USB to Ethernet cable adapter.

Rechargeable batteries provide up to 4 hours continuous power when using a probe and/or laser scanner, before recharging or hot swapping. Battery hot swapping enables a battery to be removed for charging or replacement, while the arm continues to operate on battery power.

PROBE kits

Probe kit short body

- ⌀2 / 3 / 4 / 5 / 6mm (0.08 / 0.12 / 0.16 / 0.20 / 0.24") ruby tips M3
- 50 / 60 / 70 / 85 / 100mm (1.97 / 2.36 / 2.76 / 3.35 / 3.94") aluminium body
- x2 TKJ male connector
- tools
- storage box

Probe kit long body

- ⌀2 / 3 / 4 / 5 / 6mm (0.08 / 0.12 / 0.16 / 0.20 / 0.24"") ruby tips M3
- 130 / 150 / 180 / 200mm (5.12 / 5.91 / 7.09 / 7.87") aluminium body
- x2 TKJ male connector
- tools
- storage box

TOUCH TRIGGER PROBE kits

TP20 touch trigger probe kit

- ⦰3 / 6mm (0.12 / 0.24") ruby stylus M2
- extended force module
- male TKJ adaptor
- tools
- storage box

HP-T-EF touch trigger probe kit

- ⦰3 / 6mm (0.12 / 0.24") ruby stylus M2
- extended force module
- male TKJ adaptor
- tools
- storage box

MOUNTING kits

Base plate with mounting ring

- Compatible with accuracy specifications - for all arm sizes

Base magnetic fixing with mounting ring

- Compatible with accuracy specifications - for all arm sizes
- Magnetic force 3x1000N

Base vacuum fixing with mounting ring

- For arms up to 2.5m
- Weight of vacuum base 6.3Kg
- Includes storage case, rechargeable battery and charger

Mounting ring kit

- Includes mounting ring, 6 fixing screws and hex key
- 3.5 to 4.5 mounting ring adaptor

TRIPOD stands

Lightweight Portable Tripod

- All Aluminium Construction
- 3½” -8 Universal Mount Ring
- Max Height = 1240mm (49”)
- Min. Height = 660mm (26”)
- Weight = 27 lbs

Storage case available

Metrology Portable Tripod

- Tripod Tensioning System (Patent Pending)
- Bubble Gauge Level
- Column Base Weight Hook
- Aircraft Grade Aluminium
- 3½” -8 Universal Mount Ring
- Max Height = 1140mm (45”)
- Min. Height = 780mm (31”)

Storage case available

ROLLING stands

Rolling Stand

- Lightweight Construction
- Robust Design
- Air Cushioned Cylinder (free fall prevention)
- Foot-pedal Lock
- Height Adjustments
  - 710mm - 1060mm (28" - 42")
  - 910mm - 1440mm (36" - 57")
- 3½” -8 Universal Mount Ring
- Weight = 67.1kgs (148lbs)

Rolling Stand laptop arm option

Heavy Duty Rolling Stand

- Heavy Duty Construction
- Double-Lock Column
- Extended Height Column
- Cast Iron Base
- Air Cushioned Cylinder (free fall prevention)
- Foot-pedal Lock
- Height Adjustments
  - 710mm - 1060mm (28" - 42")
  - 910mm - 1440mm (36" - 57")
- 3½” -8 Universal Mount Ring

MOBILE workstations

Midi

- 600mm x 800mm (23” x 31”)
- Aluminium top
- M8 fixing holes
- Storage draw
- Lockable cupboard doors
- Cart handles
- Laptop arm
- Nylon break casters

Large

- 700mm x 1200mm (27” x 47”)
- Aluminium top
- M8 fixing holes
- Storage draw
- Lockable cupboard doors
- Cart handles
- Laptop arm
- Nylon break casters

Large workstation shown

VOLUME extension

Leap-Frog Kit

Used to extend the usable measuring volume of the FREEDOM arm when measuring large workpieces.

- x4 magnets
- x1 magnet bar

VERIFICATION bars

Length standard 305mm (12")

- Recommended for 1.2m arms
- Indicative lengths 170mm – 310mm (6.7” – 12.2”)
- Supplied with manufactures calibration certificate

Length standard 711mm (28")

- Recommended for 2.0m – 2.5m arms
- Indicative lengths 361.95mm – 711.20mm (14.25” – 28”)
- Supplied with manufactures calibration certificate

Length standard 1016mm (40")

- Recommended for 3.0m – 4.5m arms
- Indicative lengths 514.35mm – 1016mm (20.25” – 40”)
- Supplied with manufactures calibration certificate

CALIBRATION spheres

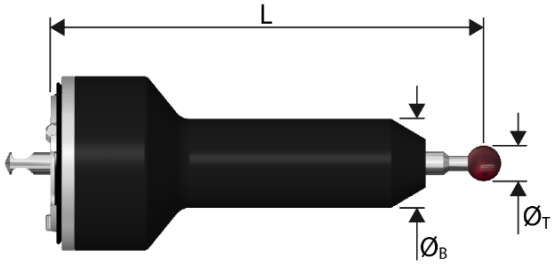
For touch probes - sphere ⌀25.4mm (1")

- High chrome, high carbon stainless steel
- Supplied with manufactures calibration certificate

For laser scanners and touch probes - sphere ⌀25.4mm (1")

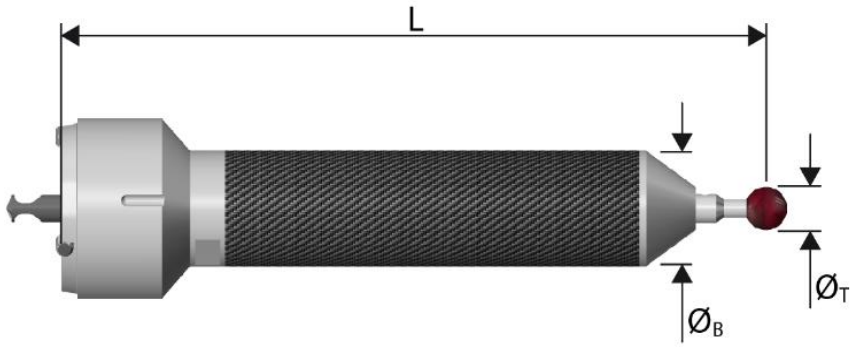
- Includes base plate
- Supplied with manufactures calibration certificate

PROBE aluminium body



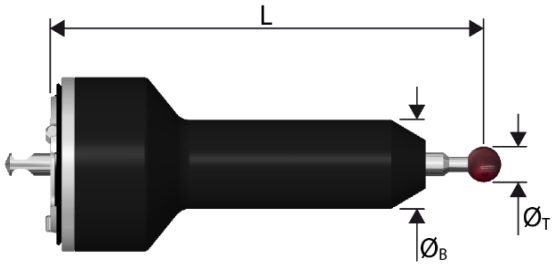
CODE	DESCRIPTION	TIP ⌀	TIP MATERIAL	LENGTH L
0085535	Probe aluminium 50mm (1.97") pointed tip	Point	Tungsten Carbide	50mm(1.97”)
0085536	Probe aluminium 75mm (2.95") pointed tip	Point	Tungsten Carbide	75mm(2.95”)
0085537	Probe aluminium 100mm (3.94") pointed tip	Point	Tungsten Carbide	100mm(3.94”)
0085538	Probe aluminium 50mm (1.97") ⌀3mm (0.12") ruby tip	3mm (0.12”)	Synthetic Ruby	50mm(1.97”)
0085539	Probe aluminium 75mm (2.95") ⌀3mm (0.12") ruby tip	3mm (0.12”)	Synthetic Ruby	75mm(2.95”)
0085540	Probe aluminium 100mm (3.94") ⌀3mm (0.12") ruby tip	3mm (0.12”)	Synthetic Ruby	100mm(3.94”)
0085541	Probe aluminium 50mm (1.97") ⌀6mm (0.24") ruby tip	6mm (0.24”)	Synthetic Ruby	50mm(1.97”)
0085542	Probe aluminium 75mm (2.95") ⌀6mm (0.24") ruby tip	6mm (0.24”)	Synthetic Ruby	75mm(2.95”)
0085543	Probe aluminium 100mm (3.94") ⌀6mm (0.24") ruby tip	6mm (0.24”)	Synthetic Ruby	100mm(3.94”)

PROBE carbon fibre body



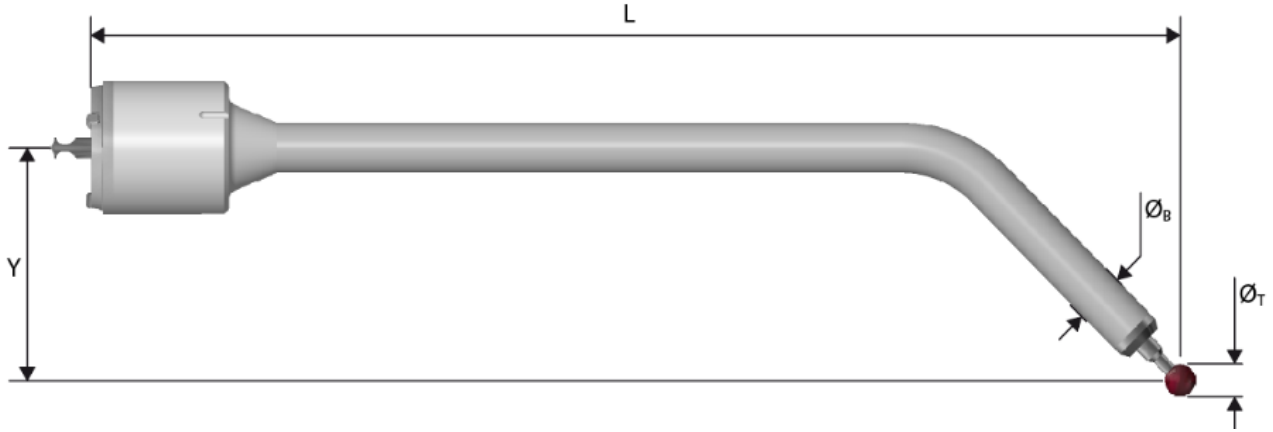
CODE	DESCRIPTION	TIP ⌀	TIP MATERIAL	LENGTH L
0085544	Probe carbon fibre 85mm (3.35") pointed tip	Point	Tungsten Carbide	85mm (3.35”)
0085545	Probe carbon fibre 100mm (3.94") pointed tip	Point	Tungsten Carbide	100mm (3.94”)
0085546	Probe carbon fibre 130mm (5.12") pointed tip	Point	Tungsten Carbide	130mm (5.12”)
0085547	Probe carbon fibre 150mm (5.91") pointed tip	Point	Tungsten Carbide	150mm (5.91”)
0085548	Probe carbon fibre 180mm (7.09") pointed tip	Point	Tungsten Carbide	180mm (7.09”)
0085549	Probe carbon fibre 200mm (7.87") pointed tip	Point	Tungsten Carbide	200mm (7.87”)
0085550	Probe carbon fibre 85mm (3.35") ⌀3mm (0.12") ruby tip	3mm (0.12”)	Synthetic Ruby	85mm (3.35”)
0085551	Probe carbon fibre 100mm (3.94") ⌀3mm (0.12") ruby tip	3mm (0.12”)	Synthetic Ruby	100mm (3.94”)
0085552	Probe carbon fibre 130mm (5.12") ⌀3mm (0.12") ruby tip	3mm (0.12”)	Synthetic Ruby	130mm (5.12”)
0085553	Probe carbon fibre 150mm (5.91") ⌀3mm (0.12") ruby tip	3mm (0.12”)	Synthetic Ruby	150mm (5.91”)
0085554	Probe carbon fibre 180mm (7.09") ⌀3mm (0.12") ruby tip	3mm (0.12”)	Synthetic Ruby	180mm (7.09”)
0085555	Probe carbon fibre 200mm (7.87") ⌀3mm (0.12") ruby tip	3mm (0.12”)	Synthetic Ruby	200mm (7.87”)
0085556	Probe carbon fibre 85mm (3.35") ⌀6mm (0.24") ruby tip	6mm (0.24”)	Synthetic Ruby	85mm (3.35”)
0085557	Probe carbon fibre 100mm (3.94") ⌀6mm (0.24") ruby tip	6mm (0.24”)	Synthetic Ruby	100mm (3.94”)
0085558	Probe carbon fibre 130mm (5.12") ⌀6mm (0.24") ruby tip	6mm (0.24”)	Synthetic Ruby	130mm (5.12”)
0085559	Probe carbon fibre 150mm (5.91") ⌀6mm (0.24") ruby tip	6mm (0.24”)	Synthetic Ruby	150mm (5.91”)
0085560	Probe carbon fibre 180mm (7.09") ⌀6mm (0.24") ruby tip	6mm (0.24”)	Synthetic Ruby	180mm (7.09”)
0085561	Probe carbon fibre 200mm (7.87") ⌀6mm (0.24") ruby tip	6mm (0.24”)	Synthetic Ruby	200mm (7.87”)

PROBE stainless steel body



CODE	DESCRIPTION	TIP ⌀	TIP MATERIAL	LENGTH L
0505703	Probe stainless steel 50mm (1.97") stainless steel tip	9.5mm (0.37")	Stainless steel	50mm(1.97”)
0505712	Probe stainless steel 50mm (1.97") stainless steel tip	15mm (0.59")	Stainless steel	50mm(1.97”)

PROBE offset tip



CODE	DESCRIPTION	TIP ⦸	TIP MATERIAL	LENGTH L & Y
0085562	FREEDOM probe aluminium 45° offset 149x38mm (5.87x1.50") pointed tip	Point	Tungsten Carbide	149x38mm (5.87x1.50")
0085563	FREEDOM probe aluminium 45° offset 149x38mm (5.87x1.50") ⦸3mm (0.12") ruby tip	3mm (0.12”)	Synthetic Ruby	149x38mm (5.87x1.50")
0085564	FREEDOM probe aluminium 45° offset 149x38mm (5.87x1.50") ⦸4mm (0.16") ruby tip	4mm (0.16”)	Synthetic Ruby	149x38mm (5.87x1.50")
0085565	FREEDOM probe aluminium 45° offset 149x38mm (5.87x1.50") ⦸6mm (0.24") ruby tip	6mm (0.24”)	Synthetic Ruby	149x38mm (5.87x1.50")
0085566	FREEDOM probe aluminium 60° offset 149x57mm (5.87x2.24") pointed tip	Point	Tungsten Carbide	149x57mm (5.87x2.24")
0085567	FREEDOM probe aluminium 60° offset 149x57mm (5.87x2.24") ⦸3mm (0.12") ruby tip	3mm (0.12”)	Synthetic Ruby	149x57mm (5.87x2.24")
0085568	FREEDOM probe aluminium 60° offset 149x57mm (5.87x2.24") ⦸4mm (0.16") ruby tip	4mm (0.16”)	Synthetic Ruby	149x57mm (5.87x2.24")
0085569	FREEDOM probe aluminium 60° offset 149x57mm (5.87x2.24") ⦸6mm (0.24") ruby tip	6mm (0.24”)	Synthetic Ruby	149x57mm (5.87x2.24")
0085570	FREEDOM probe aluminium 90° offset 173x43mm (6.81x1.69") pointed tip	Point	Tungsten Carbide	173x43mm (6.81x1.69")
0085571	FREEDOM probe aluminium 90° offset 173x43mm (6.81x1.69") ⦸3mm (0.12") ruby tip	3mm (0.12”)	Synthetic Ruby	173x43mm (6.81x1.69")
0085572	FREEDOM probe aluminium 90° offset 173x43mm (6.81x1.69") ⦸4mm (0.16") ruby tip	4mm (0.16”)	Synthetic Ruby	173x43mm (6.81x1.69")
0085573	FREEDOM probe aluminium 90° offset 173x43mm (6.81x1.69") ⦸6mm (0.24") ruby tip	6mm (0.24”)	Synthetic Ruby	173x43mm (6.81x1.69")

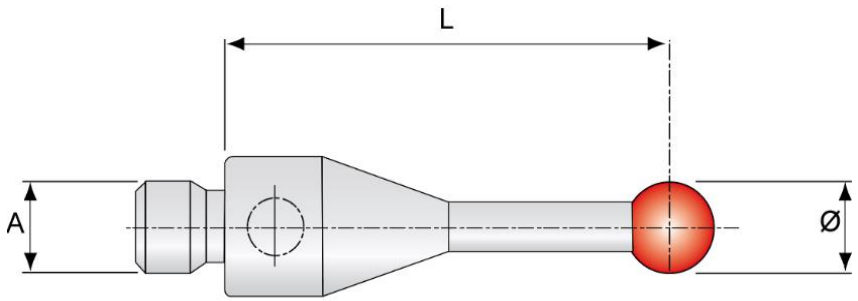
PROBE body & adaptor

- Probe body 50mm (1.97") aluminium

- Probe body 100mm (3.94") aluminium

- Probe adaptor universal M8

STYLUS tip



CODE	DESCRIPTION	THREAD A	TIP ⦸	TIP MATERIAL	LENGTH L & Y
0085613	FREEDOM stylus 10mm (0.39") pointed tip	M3	Point	Tungsten Carbide	10mm (0.39")
0085608	FREEDOM stylus 10mm (0.39") ⦸2mm (0.08") ruby tip	M3	2mm (0.08”)	Synthetic Ruby	10mm (0.39")
0085609	FREEDOM stylus 10mm (0.39") ⦸3mm (0.12") ruby tip	M3	3mm (0.12”)	Synthetic Ruby	10mm (0.39")
0085610	FREEDOM stylus 10mm (0.39") ⦸4mm (0.16") ruby tip	M3	4mm (0.16”)	Synthetic Ruby	10mm (0.39")
0085611	FREEDOM stylus 10mm (0.39") ⦸5mm (0.20") ruby tip	M3	5mm (0.20”)	Synthetic Ruby	10mm (0.39")
0085612	FREEDOM stylus 10mm (0.39") ⦸6mm (0.24") ruby tip	M3	6mm (0.24)	Synthetic Ruby	10mm (0.39")
0108949	FREEDOM stylus 20mm (0.79") ⦸2mm (0.08") ruby tip	M3	2mm (0.08”)	Synthetic Ruby	20mm (0.79")
0108950	FREEDOM stylus 20mm (0.79") ⦸3mm (0.12") ruby tip	M3	3mm (0.12”)	Synthetic Ruby	20mm (0.79")
0108951	FREEDOM stylus 20mm (0.79") ⦸6mm (0.24") ruby tip	M3	6mm (0.24)	Synthetic Ruby	20mm (0.79")

LAPTOP specifications

Touch Probe only – CMM-Manager

PC Laptop – Silver Specification

For use with touch probes only, maximum CAD file 50 MB

- PC Make & Model:
- CPU: Intel i7 / AMD FX 3.0 GHz or above
- RAM: 8 GB
- Hard disc: 500MB
- Keyboard: UK QWERTY / DE QWERTZ / FR AZERTY / IT / UK QWERTY
- Power Cord: UK / EU / US
- Graphics card: 1920 x 1080 - onboard or dedicated - NVidia / AMD / Intel
- Operating system: 64-bit Windows 10, Professional Edition
- Input device: Two-button mouse with wheel

Touch Probe only - PolyWorks

PC Laptop – Gold Specification

For use touch probes, laser scanners and larger CAD files

- PC Make & Model:
- CPU: Quad-core CPU
- RAM: 32 GB
- Hard disc: 1TB
- Keyboard: UK QWERTY / DE QWERTZ / FR AZERTY / IT / UK QWERTY
- Power Cord: UK / EU / US
- Graphics card: NVIDIA Quadro series graphics card equipped with 2 GB of memory (**NVIDIA certified cards and drivers**)
- Operating system: 64-bit Windows 10, Professional Edition
- Input device: Two-button mouse with wheel

TECHNICAL details

ENVIRONMENT	
Operating temperature	+5^{O}C to +40^{O}C
Storage temperature	-30^{O}C to +70^{O}C
Operating elevation	up to 2000m
Relative humidity	10% to 90% non-condensing
SUPPLY	
Power supply	110-240V single phase
CONFORMITY	
Freedom Arm	Probing accuracy certified according to ISO 10360-12 CE – FCC - IC
Modelmaker H120 Laser Scanner	CE – Complies with 21 CFR 1040.10 and 1040.11, Laser Notice No. 50 dated June 24, 2007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