

FUNCTIONS

- mm/inch
- TOL (Tolerance and Warning Limits Input)
- PRESET (for entering a numerical value)
- Mastering 1 and 2 point
- MAX/MIN memory for searching the reversal point
- MAX-MIN for testing flatness and concentricity
- HOLD (storage of measured values)
- Selectable resolution
- Factor (adjustable)
- Reversal of counting direction
- Control input programmable
- Measuring sequence with time control
- DATA (data transmission)
- Menu interlock

FEATURES

- Versatility for a wide range of measuring tasks
- N 1700 modules as measuring channels for inductive and incremental probes or for pneumatic measuring equipment
- High-resolution, high-contrast color display
- Fully adjustable display for ideal viewing angle
- Measurement values can be displayed in three ways: as a number, pointer or bar
- 1 – 3 features can be displayed at once
- Extremely easy to operate
- Several measuring tasks can be stored on the memory card
- Compact housing
- Suitable for wall-mounting
- **Package contains:** power source, micro SD memory card, instruction manual, without N 1700 module (necessary optional accessory)
- **Software:** MarCom Professional free download: www.mahr.com/marcom (only for Mahr data cables and wireless systems with USB and RS–232 interface)



Applications:

Indicating instrument for precise length measurements

- For connecting different sensors by way of N1700 measuring modules
 - For connecting up to 2 measuring sensors
- Please note:**
N1700 measuring modules are necessary additional accessories

TECHNICAL DATA

Order no.		5312025
Type		C 1202
Display		TFT color display, 110 mm (4.3"), 480 x 272 pixels
Range of digital display	µm	± 999 999.9
Range of digital display	inch	± 39"
Range of analog display	µm	± 5000, ± 2000, ± 1000, ± 300, ± 100, ± 30, ± 10, ± 3
Range of analog display	inch	± .19", ± .07", ± .03", ± .01", ± .003", ± .001", ± .0004", ± .0001"
Resolution	µm	0.01, 0.1, 1
Resolution	inch	.000005"
Scale graduation value	µm	500, 200, 100, 20, 10, 2, 1, 0.2
Scale graduation value	inch	.019", .007", .002", .001", .0002", .0001", .00002", .00001"
Angle units		degrees, radians
Measuring combination		+A, -A, +B, -B, A+B, +A-B, -A+B, -A-B
Features		3
Dynamic functions		Max, Min, TIR (Max-Min), (Max+Min)/2, Average
Statistical functions		Length, Angle
Configuration		Keyboard
Data transmission rate	Hz	30
Refresh rate	fps	30
Error limit, digital display		0.3% (min. 0.2 µm); 0.3% (min. 0.04 µm)* * (with N 1702 M-HR)
Error limit, analog display		0.25% of the end scale value / 0.3% of the displayed value
Data interface		USB
Control inputs		Control input programmable (functions and function sequences)
Energy supply		Power source, 230 V/115 V; 50/60 Hz
IP protection category		IP 42

ACCESSORIES

Order no.	Description	Type
5331120	Module for inductive probes	N 1702 M
5331125	Module for inductive probes	N 1702 M-HR
5331121	Module for inductive probes	N 1702 T
5331122	Module for inductive probes	N 1702 U
5331161	Module for incremental sensors	N 1702 VPP
5331155	Module for pneumatic gages	N 1701 PF–2500/5000
5331157	Module for pneumatic gages	N 1701 PF–10000
5312950	Extension rail for Millimar C 1202 to fit two N 1701 PF/PM modules	
4102603	Data cable USB bidirectional (2 m)	DK-U1
4102606	Interface adapter with data cable Digimatic (2 m)	DK-D1
4102058	Foot switch to trigger data transmission	16 ESf
2258471	Air filter/precision pressure regulator kit for measuring module N 1701 PF	



Millimar S 1840 M / S 1840 F

Compact column amplifier



FEATURES

- Easy-to-read 3-color analog display
- Measurement in conjunction with inductive probes (e. g. Mahr P2004) or electronic plug gages, etc.
- 2 inputs for inductive probes (compatible with probes from Mahr, Federal)
- Extensive calculation of input signals; $\pm A$, $\pm B$ and all combinations
- Dynamic measurements; Max, Min, Max-Min, Average
- Programmable either via the integrated keypad or the RS-232 interface by means of MS - Windows® configuration software
- Programmable warning and tolerance limits (exceeding the limit causes the color to change from yellow to red)
- Backlit, two-line LCD for displaying measured values, help texts and units of measurement
- 1 analog output
- 3 digital inputs (e.g. measurement start, master measurement)
- 3 digital outputs for good – reject – rework, measuring time
- **Package contains:** instruction manual, power source
- **Software:** MarCom Professional free download: www.mahr.com/marcom (only for Mahr data cables and wireless systems with USB and RS-232 interface)



TECHNICAL DATA

Order no.		5318400	5318402
Type		S 1840 M	S 1840 F
Display		101 LED elements, 3 colors	
Range of digital display	μm	± 2000 , ± 10000	
Range of analog display	μm	± 10 , ± 30 , ± 100 , ± 300 , ± 1000 , ± 3000 , ± 10000 , tolerance related	
Range of analog display	inch	$\pm .0003$ ", $\pm .001$ ", $\pm .003$ ", $\pm .01$ ", $\pm .03$ ", $\pm .1$ ", $\pm .3$ ", tolerance related	
Resolution	μm	0.01, 0.1	
Resolution	inch	.000001", .000005"	
Tolerance display		Via color changes in the analog display	
Measuring range, inductive probe	μm	± 200 , ± 2000	
Probe inputs		2	
Compatibility		Mahr	Federal
Measuring combination		+A, -A, +B, -B, A+B, +A-B, -A+B, -A-B	
Features		2	
Dynamic functions		Max, Min, Max-Min, (Max+Min)/2, Mean	
Configuration		PC, keyboard	
Data transmission rate	Hz	40	
Error limit, digital display		0.3% (min. 0.2 μm)	
Error limit, analog display		1% (101 LEDs)	
Data interface		RS-232C, wireless	
Control inputs		3 optocoupler inputs, 24 V, 10 mA	
Control outputs		3 optocoupler outputs, 24 V, 100 mA	
Analog output		Max. ± 5 V, sensitivity adjustable	Max. ± 5 V, sensitivity adjustable
Energy supply		Power source, 230 V/115 V; 50/60 Hz	
IP protection category		IP 42	

Order no.	Width	Height	Depth
	mm	mm	mm
5318400	47	487	144
5318402	47	487	144

ACCESSORIES

Order no.	Description	Type
5330901	Base plate for up to 3 columns	
5318430	Control unit with 3 push buttons	
5330955	Foot switch for input 1	
5330956	Foot switch for input 2	
5330957	Foot switch for input 3	
7032401	25 pin connector, non-wired for I/O port	
7024634	Data connection cable RS232C (3 m)	
4102331	Millimar - USB adapter cable RS-232-USB (0.2 m)	Millimar - USB
4102233	RS-232 e transmitter for e-Stick	RS-232 e
4102230	e-Stick receiver	e-Stick



Millimar S 1840 PE/F

Compact column measuring instrument



FEATURES

- Measuring results can be determined and addressed at a glance
- Suitable for measurements with pneumatic measuring equipment
- Offers a wide range of functions for the combined evaluation of signals from static and dynamic measurements
- Measuring results are displayed with 101 three color LEDs if programmable warning and tolerance limits are exceeded, LED segments on display change color accordingly from green to yellow or red
- When using pneumatic compact amplifiers, it is recommended at all times to use both a pressure regulator and a supply filter (see accessories)
- Clear, three color analog light bar display of warning and tolerance limits
- Backlit, two line LCD for displaying measured values, help texts and units of measurement
- 1 channel
- RS-232 interface
- Analog output
- 3 digital inputs for measurement start, master measurement, etc.
- 3 digital outputs for good, reject, rework classification, measuring time, etc.
- **Dynamic measurements:** Max, Min, Max-Min, Max+Min, Average
- Can either be programmed via the integrated membrane keypad using the menu driven interface or via the configuration software for MS Windows®
- 1-point or 2-point master measurement
- Password block in setup mode
- **Package contains:** instruction manual, power source
- **Software:** MarCom Professional free download: www.mahr.com/marcom (only for Mahr data cables and wireless systems with USB and RS-232 interface)



TECHNICAL DATA

Order no.	5318455	5318457
Type	S 1840 PE/F	
Display	101 LED elements, 3 color	
Range of analog display	µm	± 3, ± 10, ± 30, ± 100, ± 300, ± 1000, ± 3000, ± 10000, tolerance related
Range of analog display	inch	± .0001", ± .0003", ± .001", ± .003", ± .01", ± .03", ± .1", ± .3", tolerance related
Resolution	µm	0.1
Resolution	inch	.000005"
Tolerance display	Via color change of the analog display	
Inputs for pneumatic measuring equipment	1	
Compatibility	Federal	
Magnification	2500:1	10000:1
Measuring combination	+A, -A	
Features	1	
Dynamic functions	Max, Min, Max-Min, (Max+Min)/2, Average	
Configuration	PC, keyboard	
Zero setter	Electrical	
Error limit	0.5 – 1%	
Error limit, digital display	+/-1 place	
Error limit, analog display	1% (101 LEDs)	
Air supply connection	Ø 8mm	
Air pressure	2.1 bar ± 5%	
Air consumption m³/h	Approx. 1–2 m³	
Data interface	RS-232C, wireless	
Control inputs	3 optocoupler inputs, 24 V, 10 mA	
Control outputs	3 optocoupler outputs, 24 V, 100 mA	
Analog output	1 V/mm	
Energy supply	Power source, 230 V/115 V; 50/60 Hz	
IP protection category	IP 43	

Order no.	Width	Height	Depth
	mm	mm	mm
5318455	47	487	144
5318456	47	487	144
5318457	47	487	144

ACCESSORIES

Order no.	Description	Type
5330914	Base foot with 1 pressure regulator	
5330915	Base foot with 2 pressure regulators	
5330916	Base foot with 3 pressure regulators	
2121236	Supply filter with adapter kit	
5318430	Control unit with 3 push buttons	
5330955	Foot switch for input 1	
5330956	Foot switch for input 2	
5330957	Foot switch for input 3	
7024634	Data connection cable RS232C (3 m)	
4102331	Millimar - USB adapter cable RS-232-USB (0.2 m)	Millimar - USB
4102233	RS-232 e transmitter for e-Stick	RS-232 e
4102230	e-Stick receiver	e-Stick



Millimar C 1750 PC

Measuring computer

FEATURES

- Robust 10.1" touch PC with i5 processor
- 8GB memory, industrial 256GB SSD
- IP65 front housing
- Interactive, touch-sensitive software
- Very simple and intuitive to use
- User-friendly creation of measuring tasks
- Access to predefined wizards for maximum ease of use
- Management of measuring tasks (save and load function)
- Measuring task linked to images or drawings
- Static and dynamic recording of measuring values
- Supported by graphical operating elements
- Live visualization of measuring values
- Simultaneous display of 128 digital or analog measurement values
- The Millimar N 1700 modules support a wide range of inductive measuring probes as well as Mahr instruments with a data interface
- Connection of Mahr measuring technologies via Integrated Wireless
- Data export to MS Excel or in qs-Stat format (dfq or dfx/dfd format)
- Password-protected user levels (3 levels)
- Online help (operating instructions) can be accessed directly from the software
- **Battery type:** CR 2032 (3V Lithium)
- **Package contains:** Millimar Cockpit software incl. 10.1" Touch-PC, preinstalled Windows 10 IoT "Value", Mahr license key, Recovery-Stick 16 GB, operating instructions (online help), power source, VESA 100 standard stand



Application:

- Convenient measuring computer with smart and universal software for complex measuring tasks in the manufacturing sector

TECHNICAL DATA

Order no.		5312870
Type		C 1750 PC
Display		Vertical bar graph, horizontal bar graph, analog display or circular scale, digital display, any combination of display types can be chosen for each feature
Range of analog display	µm	± 10000, ± 5000, ± 2000, ± 1000, ± 500, ± 200, ± 100, ± 50, ± 20, ± 10, tolerance related
Range of analog display	inch	± .5", ± .2", ± .1", ± .05", ± .02", ± .01", ± .005", ± .002", ± .001", ± .0005", tolerance related
Resolution	µm	0.01
Resolution	inch	.0000001"
Tolerance display		Upper and lower tolerance limit (per feature) Upper and lower warning limit (per feature) Dependent on measuring instrument
Measuring range	mm	
Angle units		Degrees, radians
Compatibility		USB, Integrated Wireless, Millimar N 1700
Measuring combination		Predefined formula templates for standard features Links entered via comprehensive formula editor
Features		128
Dynamic functions		Max, Min, Max-Min, Max+Min
Classification		Max. 20 classes
Control inputs		Via N 1704 I/O
Control outputs		Via N 1704 I/O
Energy supply		100–240V ACDC active switching; 12V DC-Out
IP protection category		IP 65 (front panel)

Order no.	Width	Height	Depth
	mm	mm	mm
5312870	278	203	49

ACCESSORIES

Order no.	Description	Type
5312802	Software option: measure history	
5331130	USB connecting module	N 1701 USB
5331120	Module for inductive probes	N 1702 M
5331125	Module for inductive probes	N 1702 M-HR
5331140	Module for inductive probes	N 1704 M
5331121	Module for inductive probes	N 1702 T
5331141	Module for inductive probes	N 1704 T
5331122	Module for inductive probes	N 1702 U
5331142	Module for inductive probes	N 1704 U
5331155	Module for pneumatic gages	N 1701 PF–2500/5000
5331133	Power supply module	N 1701 PS
5331134	I/O module	N 1704 I/O
4102220	Receiver for instruments with Integrated Wireless	i-Stick
4102357	16 EXu data connection cable USB (2 m)	16 EXu
4346023	2000 USB data connection cable USB (2 m)	2000 USB
4102331	Millimar - USB adapter cable RS–232-USB (0.2 m)	Millimar - USB





FEATURES

- Value for money
- Versatile
- Innovative
- Robust
- Can be used as a handheld device, a stationary table-top device or even directly on the machine tool
- 54 protection rating - suitable for use in harsh workshop environments
- The compressed air flowing out of the measuring equipment removes any contaminations from the testpiece to ensure reliable measuring results directly and clearly readable measuring results
- With its fixed ratio and controlled compressed air supply, this sturdy, reliable measuring instrument is ideal for use in manufacturing environments

The μ Dimensionair II offers:

- Choice of setup with one standard or with Min/Max standards
- All other functions of the μ Max μ II digital dial comparator:
 - Dynamic measurement: Min, Max, measuring span
 - Multiplication factor and hold function ("freeze")
 - Choice of data transfer with serial number
- MarConnect data output: USB, Opto RS-232C, and Digimatic Versatility
- Interchangeable handle can be mounted on the base of the instrument (pistol grip) or as a regular bar handle flush with the measuring attachment, allowing the measuring equipment to be used on the workpiece in any situation
- If large, heavy measuring attachments are used, the handle can be mounted between the measuring attachment and the display (dumbbell grip), to provide a balanced, ergonomic measuring system
- Can be operated in a static position on a workbench using the optional measuring stand
- **Package contains:** instruction manual, supply hose AHO-2
- **Software:** MarCom Professional free download: www.mahr.com/marcom (only for Mahr data cables and wireless systems with USB and RS-232 interface)

Application:

- Applications with pneumatic measuring equipment requiring mobile measurement and evaluation.



TECHNICAL DATA

Order no.	2103200	
Type	μ Dimensionair II	
Display	Analog display with one line digital display	
Digital display	Rotates through 270°	
Scale graduation value	μ m	0.5, 1, 2
Scale graduation value	inch	.00002", .00005", .0001"
Tolerance display	Two - over / under (3 class)	
Measuring range	mm	± 0.020 mm, ± 0.040 mm, ± 0.080 mm
Inputs for pneumatic measuring equipment	1	
Compatibility	Federal	
Magnification	5000:1, 2500:1, 1260:1	
Features	1	
Dynamic functions	MAX, MIN, MAX-MIN	
Statistical functions	Difference, Nominal Average	
Error limit	$\pm 1\%$ of the total range	
Compressed air setting duration	Approximately 1 s	
Air pressure	2.10 $\pm$.01 bar	
Repeatability [μ m]	± 1 numerical increment	
Data interface	Digimatic, Opto RS-232C, USB, wireless	
Energy supply	Battery operation, approximately 3000 h	
IP protection category	IP 54	

Order no.	Width	Height	Length	Depth
	mm	mm	mm	mm
2103200	70	3	100	60

ACCESSORIES

Order no.	Description	Type
2238020	Pressure regulator with filter	
2095924	Pressure meter	
2239307	Universal bench mount	
2237666	Standard plastic handle	
2240993	Shut off slide valve	
2241109	Table stand for μ Dimensionair	
2240594	Swivel coupling adapter for rotating tooling	
2201994	Oil and water separator trap	AFL-24
2237713	Connecting hose, 6 m	
2202076	Supply hose, 1.5 m	AHO-2
4102520	Battery 3 V, CR 2032	
4346023	2000 USB data connection cable USB (2 m)	2000 USB
4346021	Interface adapter with data cable Digimatic (2 m)	2000 d
4346020	Data connection cable RS232C (2 m)	2000 r



Metrological characteristics

Millimar evaluation devices work according to the principle of differential pressure measurement. The pressure difference between two pressure chambers is measured. While one of the two chambers supplies a constant reference pressure, the pressure of the other chamber (measuring chamber) is determined by the distance of the measuring nozzles of a pneumatic transducer to the test specimen. Millimar evaluation units have two connection points, each of which is directly connected to one of the two pressure chambers. As a result, the measured value is measured directly via a piezo pressure sensor without conversion and then digitized.

Ratios from 2500:1 to 10000:1 are realized by exchangeable unit nozzles.

Millimar gages must be supplied with constant air pressure via a fine pressure reducer. Gages with a fine pressure reducer can be connected to all compressed air lines with operating pressures from 3.5 bar to 10 bar gage pressure, whereby an air filter should be interposed.

The compressed air must be dry and oil-free.

- Universal, reliable, proven, particularly powerful
- High measuring accuracy and reproducibility of measuring results: 0.5 μm to 2 μm depending on transmission ratio
- Non-contact measurement with measuring nozzles, no damage to workpieces
- Reliable measurement even of uncleaned, oiled, greased or lapped workpieces. Cleaning of the measuring points by the measuring air
- Robust design for workshop use
- Wide range of models for all applications
- Special designs for special applications



Millimar | Air gaging equipment



N 1701 PF-xxx



Jet air ring gage

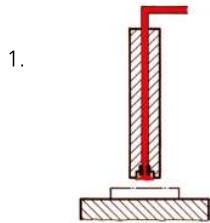


Jet air plug gages

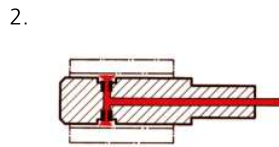
Millimar | Air gages

Precision begins at the start of the measuring process

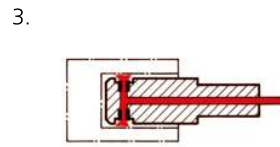
Air gages use the measuring effect of the change in pressure when a workpiece approaches a measuring jet. As the distance between jets and work surface decreases, the pressure increases while the velocity of flow and the respective volume flow decrease. The air measuring procedure has a relatively short but very linear measuring range.



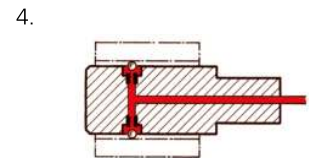
Thickness or wall thickness measurements with jet air gage.



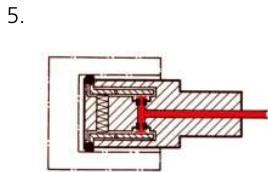
Diameter measurement of cylindrical through bores with jet air plug gage.



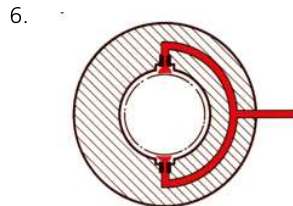
Diameter measurement of cylindrical blind bores with jet air plug gage.



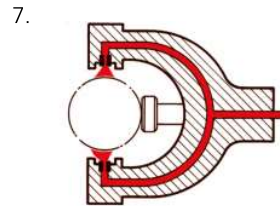
Diameter measurement of cylindrical through bores with ball contact plug gage.



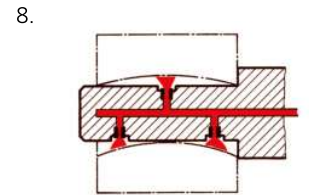
Diameter measurement of cylindrical blind bores with lever contact plug gage.



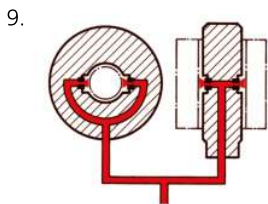
Diameter measurement of cylindrical shafts with jet air ring gage.



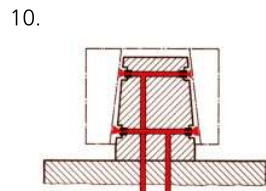
Diameter or thickness measurement with adjustable jet air caliper gage.



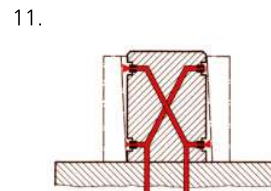
Straightness measurement of a cylindrical bore with special jet air plug gage.



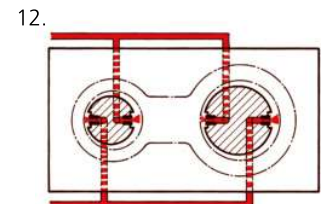
Mating measurement between bore and shaft with jet air plug gage and jet air ring gage.



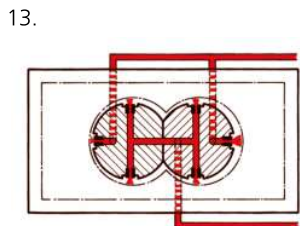
Taper pitch measurement of an inside taper with taper jet air plug gage measurement as per the differential measuring method.



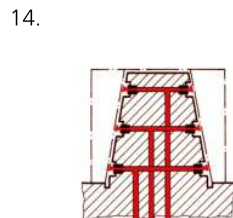
Measurement of a perpendicular position of a cylindrical bore to the front face with a special jet air plug gage measurement as per the differential measuring method.



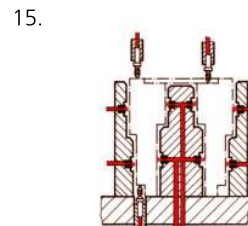
Measurement of hole distances of separated cylindrical bores with jet air plug gage measurement as per the differential measuring method.



Measurement of hole distances of truncated cylindrical bores with jet air plug gages measurement as per the differential measuring method.



Taper pitch measurement as well as form and diameter measurement of an inside taper with taper jet air plug gage.



Multiple inside and outside measurements with measuring jet air gages and contact probes in connection with a seven-column unit.

Millimar DP20 / DP50 / DP60

2-jet through-hole air plug gage

FEATURES

- Calibrated ID tooling for the Dimensionair® air gaging systems
- Tooling is interchangeable without adjusting system magnification
- Federal air plugs have large clearance (see table below), allowing easy entrance into the hole being measured and a greater measuring range
- Long life - wide clearance and PVD coated (optional) body extends life of the air plug
- Air jets are recessed into the plug body, protecting them from damage
- Large jet size eliminates clogging from dirt and oils.
- Other lengths for air plug body (L2) and position of measuring jets (B) on request

Please always state when ordering:

- Transmission ratio of the display unit (e.g. DP50 / 2500:1)
- The nominal size to be measured
- The specified workpiece tolerance
- Whether the air plug body is to be finished without or with PVD coating

Application:

- Measurement of through holes



TECHNICAL DATA

Order no.	Type	Nominal size	Nominal size	Model	Magnification	Measuring span	Compatibility	Connection thread	Minimum bore length	Including handle
		mm	inch			µm			mm	
2115000	DP20 DP50 DP60	3.000 –6.000	.118 –.236"	hardened steel	5000:1, 2500:1, 1260:1	13 –25 (DP20) 25 –51 (DP50) 51 –102 (DP60) depending on diameter	Federal	3/8"–32	4.75	
2115000PVD	DP20 DP50 DP60	3.000 –6.000	.118 –.236"	PVD coated based on AlCrN	5000:1, 2500:1, 1260:1	13 –25 (DP20) 25 –51 (DP50) 51 –102 (DP60) depending on diameter	Federal	3/8"–32	4.75	
2115001	DP20 DP50 DP60	6.000 –10.000	.236 –.394"	hardened steel	5000:1, 2500:1, 1260:1	38 (DP20) 76 (DP50) 152 (DP60)	Federal	3/8"–32	6.35	
2115001PVD	DP20 DP50 DP60	6.000 –10.000	.236 –.394"	PVD coated based on AlCrN	5000:1, 2500:1, 1260:1	38 (DP20) 76 (DP50) 152 (DP60)	Federal	3/8"–32	6.35	
2115002	DP20 DP50 DP60	10.000 –13.000	.394 –.512"	hardened steel	5000:1, 2500:1, 1260:1	38 (DP20) 76 (DP50) 152 (DP60)	Federal	3/8"–32	6.35	
2115002PVD	DP20 DP50 DP60	10.000 –13.000	.394 –.512"	PVD coated based on AlCrN	5000:1, 2500:1, 1260:1	38 (DP20) 76 (DP50) 152 (DP60)	Federal	3/8"–32	6.35	
2115003	DP20 DP50 DP60	13.000 –15.000	.512 –.590"	hardened steel	5000:1, 2500:1, 1260:1	38 (DP20) 76 (DP50) 152 (DP60)	Federal	3/8"–32	6.35	
2115003PVD	DP20 DP50 DP60	13.000 –15.000	.512 –.590"	PVD coated based on AlCrN	5000:1, 2500:1, 1260:1	38 (DP20) 76 (DP50) 152 (DP60)	Federal	3/8"–32	6.35	
2115004	DP20 DP50 DP60	15.000 –40.000	.590 –1.575"	hardened steel	5000:1, 2500:1, 1260:1	38 (DP20) 76 (DP50) 152 (DP60)	Federal	3/8"–32	6.35	
2115004PVD	DP20 DP50 DP60	15.000 –40.000	.590 –1.575"	PVD coated based on AlCrN	5000:1, 2500:1, 1260:1	38 (DP20) 76 (DP50) 152 (DP60)	Federal	3/8"–32	6.35	
2115005	DP20 DP50 DP60	40.000 –60.000	1.575 –2.362"	hardened steel	5000:1, 2500:1, 1260:1	38 (DP20) 76 (DP50) 152 (DP60)	Federal	3/8"–32	6.35	
2115005PVD	DP20 DP50 DP60	40.000 –60.000	1.575 –2.362"	PVD coated based on AlCrN	5000:1, 2500:1, 1260:1	38 (DP20) 76 (DP50) 152 (DP60)	Federal	3/8"–32	6.35	

Millimar DP20 / DP50 / DP60

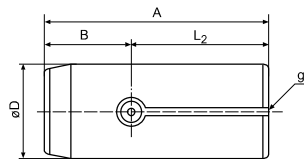
2-jet through-hole air plug gage

Order no.	Type	Nominal size	Nominal size	Model	Magnification	Measuring span	Compatibility	Connection thread	Minimum bore length	Including handle
		mm	inch			µm			mm	
2115006	DP20 DP50 DP60	60.000 –75.000	2.362–2.953"	hardened steel	5000:1, 2500:1, 1260:1	38 (DP20) 76 (DP50) 152 (DP60)	Mahr	3/8"–32	6.35	
2115006PVD	DP20 DP50 DP60	60.000 –75.000	2.362–2.953"	PVD coated based on AlCrN	5000:1, 2500:1, 1260:1	38 (DP20) 76 (DP50) 152 (DP60)	Mahr	3/8"–32	6.35	
2115027	DP20 DP50 DP60	75.000 –90.000	2.953–3.543"	hardened steel	5000:1, 2500:1, 1260:1	38 (DP20) 76 (DP50) 152 (DP60)	Mahr	3/8"–32	6.35	•
2115027PVD	DP20 DP50 DP60	75.000 –90.000	2.953–3.543"	PVD coated based on AlCrN	5000:1, 2500:1, 1260:1	38 (DP20) 76 (DP50) 152 (DP60)	Mahr	3/8"–32	6.35	•
2115028	DP20 DP50 DP60	90.000 –100.000	3.543–3.937"	hardened steel	5000:1, 2500:1, 1260:1	38 (DP20) 76 (DP50) 152 (DP60)	Mahr	3/8"–32	6.35	•
2115028PVD	DP20 DP50 DP60	90.000 –100.000	3.543–3.937"	PVD coated based on AlCrN	5000:1, 2500:1, 1260:1	38 (DP20) 76 (DP50) 152 (DP60)	Mahr	3/8"–32	6.35	•
2115029	DP20 DP50 DP60	100.000 –115.000	3.937–4.528"	hardened steel	5000:1, 2500:1, 1260:1	38 (DP20) 76 (DP50) 152 (DP60)	Mahr	3/8"–32	6.35	•
2115029PVD	DP20 DP50 DP60	100.000 –115.000	3.937–4.528"	PVD coated based on AlCrN	5000:1, 2500:1, 1260:1	38 (DP20) 76 (DP50) 152 (DP60)	Mahr	3/8"–32	6.35	•

Millimar DP20 / DP50 / DP60

2-jet through-hole air plug gage

Order no.	A	B	L ₂	Nominal size	Nominal size	Connection thread
	mm	mm	mm	mm	inch	
2115000	38.1	12.70	25.4	3.000 – 6.000	.118 – .236"	3/8"–32
2115000PVD	38.1	12.70	25.4	3.000 – 6.000	.118 – .236"	3/8"–32
2115001	38.1	12.70	25.4	6.000 – 10.000	.236 – .394"	3/8"–32
2115001PVD	38.1	12.70	25.4	6.000 – 10.000	.236 – .394"	3/8"–32
2115002	38.1	12.70	25.4	10.000 – 13.000	.394 – .512"	3/8"–32
2115002PVD	38.1	12.70	25.4	10.000 – 13.000	.394 – .512"	3/8"–32
2115003	44.5	19.10	25.4	13.000 – 15.000	.512 – .590"	3/8"–32
2115003PVD	44.5	19.10	25.4	13.000 – 15.000	.512 – .590"	3/8"–32
2115004	44.5	19.10	25.4	15.000 – 40.000	.590 – 1.575"	3/8"–32
2115004PVD	44.5	19.10	25.4	15.000 – 40.000	.590 – 1.575"	3/8"–32
2115005	44.5	19.10	25.4	40.000 – 60.000	1.575 – 2.362"	3/8"–32
2115005PVD	44.5	19.10	25.4	40.000 – 60.000	1.575 – 2.362"	3/8"–32
2115006	44.5	19.10	25.4	60.000 – 75.000	2.362 – 2.953"	3/8"–32
2115006PVD	44.5	19.10	25.4	60.000 – 75.000	2.362 – 2.953"	3/8"–32
2115027	44.5	19.10	25.4	75.000 – 90.000	2.953 – 3.543"	3/8"–32
2115027PVD	44.5	19.10	25.4	75.000 – 90.000	2.953 – 3.543"	3/8"–32
2115028	44.5	19.10	25.4	90.000 – 100.000	3.543 – 3.937"	3/8"–32
2115028PVD	44.5	19.10	25.4	90.000 – 100.000	3.543 – 3.937"	3/8"–32
2115029	44.5	19.10	25.4	100.000 – 115.000	3.937 – 4.528"	3/8"–32
2115029PVD	44.5	19.10	25.4	100.000 – 115.000	3.937 – 4.528"	3/8"–32



ACCESSORIES

Order no.	Description	Type	Connection thread
2260835	Connecting hose set, complete, 2 m		3/8"–32
2261280	Connecting hose set, complete, 4 m		3/8"–32
2202010	Extension for nominal sizes up to 76.3 mm, D = 12 mm, L = 102 mm	AHA-4	3/8"–32
2202011	Extension for nominal sizes up to 76.3 mm, D = 12 mm, L = 51 mm	AHA-5	3/8"–32
2237666	Standard plastic handle		3/8"–32
2237873	Depth stop ring for Mahr nozzle plug gage		
2239307	Universal bench mount		3/8"–32
2240993	Shut off slide valve		3/8"–32



Millimar DP20 / DP50 / DP60

2-jet blind-hole air plug gage

FEATURES

- Calibrated ID tooling for the Dimensionair® air gaging systems
- Tooling is interchangeable without adjusting system magnification
- Federal air plugs have large clearance (see table below), allowing easy entrance into the hole being measured and a greater measuring range
- Long life - wide clearance and PVD coated (optional) body extends life of the air plug
- Air jets are recessed into the plug body, protecting them from damage
- Large jet size eliminates clogging from dirt and oils
- Other lengths for air plug body (L2) and position of measuring jets (B) on request

Please always state when ordering:

- Transmission ratio of the display unit (e.g. DP50 / 2500:1)
- The nominal size to be measured
The specified workpiece tolerance
- Whether the air plug body is to be finished without or with PVD coating

Application:

- Measurement of blind holes



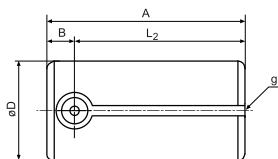
TECHNICAL DATA

Order no.	Type	Nominal size	Nominal size	Model	Magnification	Measuring span	Compatibility	Connection thread	Minimum bore length	Including handle
		mm	inch			µm			mm	
2115007	DP20 DP50 DP60	3.000 –6.000	.118 –.236"	hardened steel	5000:1, 2500:1, 1260:1	13 –25 (DP20) 25 –51 (DP50) 51 –102 (DP60) depending on diameter	Federal	3/8"–32	6.35	
2115007PVD	DP20 DP50 DP60	3.000 –6.000	.118 –.236"	PVD coated based on AlCrN	5000:1, 2500:1, 1260:1	13 –25 (DP20) 25 –51 (DP50) 51 –102 (DP60) depending on diameter	Federal	3/8"–32	6.35	
2115008	DP20 DP50 DP60	6.000 –10.000	.236 –.394"	hardened steel	5000:1, 2500:1, 1260:1	38 (DP20) 76 (DP50) 152 (DP60)	Federal	3/8"–32	6.35	
2115008PVD	DP20 DP50 DP60	6.000 –10.000	.236 –.394"	PVD coated based on AlCrN	5000:1, 2500:1, 1260:1	38 (DP20) 76 (DP50) 152 (DP60)	Federal	3/8"–32	6.35	
2115009	DP20 DP50 DP60	10.000 –13.000	.394 –.512"	hardened steel	5000:1, 2500:1, 1260:1	38 (DP20) 76 (DP50) 152 (DP60)	Federal	3/8"–32	6.35	
2115009PVD	DP20 DP50 DP60	10.000 –13.000	.394 –.512"	PVD coated based on AlCrN	5000:1, 2500:1, 1260:1	38 (DP20) 76 (DP50) 152 (DP60)	Federal	3/8"–32	6.35	
2115010	DP20 DP50 DP60	13.000 –15.000	.512 –.590"	hardened steel	5000:1, 2500:1, 1260:1	38 (DP20) 76 (DP50) 152 (DP60)	Federal	3/8"–32	6.35	
2115010PVD	DP20 DP50 DP60	13.000 –15.000	.512 –.590"	PVD coated based on AlCrN	5000:1, 2500:1, 1260:1	38 (DP20) 76 (DP50) 152 (DP60)	Federal	3/8"–32	6.35	
2115011	DP20 DP50 DP60	15.000 –40.000	.590 –1.575"	hardened steel	5000:1, 2500:1, 1260:1	38 (DP20) 76 (DP50) 152 (DP60)	Federal	3/8"–32	6.35	
2115011PVD	DP20 DP50 DP60	15.000 –40.000	.590 –1.575"	PVD coated based on AlCrN	5000:1, 2500:1, 1260:1	38 (DP20) 76 (DP50) 152 (DP60)	Federal	3/8"–32	6.35	
2115012	DP20 DP50 DP60	40.000 –60.000	1.575 –2.362"	hardened steel	5000:1, 2500:1, 1260:1	38 (DP20) 76 (DP50) 152 (DP60)	Federal	3/8"–32	6.35	
2115012PVD	DP20 DP50 DP60	40.000 –60.000	1.575 –2.362"	PVD coated based on AlCrN	5000:1, 2500:1, 1260:1	38 (DP20) 76 (DP50) 152 (DP60)	Federal	3/8"–32	6.35	
2115013	DP20 DP50 DP60	60.000 –75.000	2.362 –2.953"	hardened steel	5000:1, 2500:1, 1260:1	38 (DP20) 76 (DP50) 152 (DP60)	Federal	3/8"–32	6.35	
2115013PVD	DP20 DP50 DP60	60.000 –75.000	2.362 –2.953"	PVD coated based on AlCrN	5000:1, 2500:1, 1260:1	38 (DP20) 76 (DP50) 152 (DP60)	Federal	3/8"–32	6.35	
2115030	DP20 DP50 DP60	75.000 –90.000	2.953 –3.543"	hardened steel	5000:1, 2500:1, 1260:1	38 (DP20) 76 (DP50) 152 (DP60)	Federal	3/8"–32	6.35	•
2115030PVD	DP20 DP50 DP60	75.000 –90.000	2.953 –3.543"	PVD coated based on AlCrN	5000:1, 2500:1, 1260:1	38 (DP20) 76 (DP50) 152 (DP60)	Federal	3/8"–32	6.35	•

Millimar DP20 / DP50 /DP60

2-jet blind-hole air plug gage

Order no.	Type	Nominal size	Nominal size	Model	Magnification	Measuring span	Compatibility	Connection thread	Minimum bore length	Including handle
		mm	inch			µm			mm	
2115031	DP20 DP50 DP60	90.000 -100.000	3.543 -3.937"	hardened steel	5000:1, 2500:1, 1260:1	38 (DP20) 76 (DP50) 152 (DP60)	Federal	3/8"-32	6.35	•
2115031PVD	DP20 DP50 DP60	90.000 -100.000	3.543 -3.937"	PVD coated based on AlCrN	5000:1, 2500:1, 1260:1	38 (DP20) 76 (DP50) 152 (DP60)	Federal	3/8"-32	6.35	•
2115032	DP20 DP50 DP60	100.000 -115.000	3.937 -4.528"	hardened steel	5000:1, 2500:1, 1260:1	38 (DP20) 76 (DP50) 152 (DP60)	Federal	3/8"-32	6.35	•
2115032PVD	DP20 DP50 DP60	100.000 -115.000	3.937 -4.528"	PVD coated based on AlCrN	5000:1, 2500:1, 1260:1	38 (DP20) 76 (DP50) 152 (DP60)	Federal	3/8"-32	6.35	•



Order no.	A	B	L ₂	Nominal size	Nominal size	Connection thread
	mm	mm	mm	mm	inch	
2115007	29.4	4.00	25.4	3.000-6.000	.118-.236"	3/8"-32
2115007PVD	29.4	4.00	25.4	3.000-6.000	.118-.236"	3/8"-32
2115008	29.4	4.00	25.4	6.000-10.000	.236-.394"	3/8"-32
2115008PVD	29.4	4.00	25.4	6.000-10.000	.236-.394"	3/8"-32
2115009	29.4	4.00	25.4	10.000-13.000	.394-.512"	3/8"-32
2115009PVD	29.4	4.00	25.4	10.000-13.000	.394-.512"	3/8"-32
2115010	29.4	4.00	25.4	13.000-15.000	.512-.590"	3/8"-32
2115010PVD	29.4	4.00	25.4	13.000-15.000	.512-.590"	3/8"-32
2115011	29.4	4.00	25.4	15.000-40.000	.590-1.575"	3/8"-32
2115011PVD	29.4	4.00	25.4	15.000-40.000	.590-1.575"	3/8"-32
2115012	29.4	4.00	25.4	40.000-60.000	1.575-2.362"	3/8"-32
2115012PVD	29.4	4.00	25.4	40.000-60.000	1.575-2.362"	3/8"-32
2115013	29.4	4.00	25.4	60.000-75.000	2.362-2.953"	3/8"-32
2115013PVD	29.4	4.00	25.4	60.000-75.000	2.362-2.953"	3/8"-32
2115030	29.4	4.00	25.4	75.000-90.000	2.953-3.543"	3/8"-32
2115030PVD	29.4	4.00	25.4	75.000-90.000	2.953-3.543"	3/8"-32
2115031	29.4	4.00	25.4	90.000-100.000	3.543-3.937"	3/8"-32
2115031PVD	29.4	4.00	25.4	90.000-100.000	3.543-3.937"	3/8"-32
2115032	29.4	4.00	25.4	100.000-115.000	3.937-4.528"	3/8"-32
2115032PVD	29.4	4.00	25.4	100.000-115.000	3.937-4.528"	3/8"-32

ACCESSORIES

Order no.	Description	Type	Connection thread
2260835	Connecting hose set, complete, 2 m		3/8"-32
2261280	Connecting hose set, complete, 4 m		3/8"-32
2202010	Extension for nominal sizes up to 76.3 mm, D = 12 mm, L = 102 mm	AHA-4	3/8"-32
2202011	Extension for nominal sizes up to 76.3 mm, D = 12 mm, L = 51 mm	AHA-5	3/8"-32
2237666	Standard plastic handle		3/8"-32
2237873	Depth stop ring for Mahr nozzle plug gage		
2239307	Universal bench mount		3/8"-32
2240993	Shut off slide valve		3/8"-32



Millimar DR50 / DR20

2-jet air ring gage

FEATURES

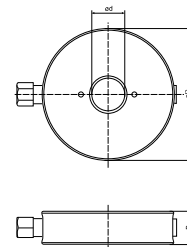
- Mahr / Mahr Federal nozzle ring gages have a large clearance tolerance. This allows larger measuring ranges and the workpiece can be inserted more easily into the nozzle ring for measuring.
- Due to a larger plug gage spacing and (optional) hard chrome-plated finish to the body, the nozzle ring gage has a long service life
- The recessed measuring nozzles are located deep in the body of the ring gage, protecting them from damage
- Large nozzle dimensions prevent clogging with dirt and oil
- **When ordering always specify:** Magnification of the display unit (e.g. 2500:1), nominal dimension to be measured and the specified workpiece tolerance



TECHNICAL DATA

Order no.	Type	Nominal size	Nominal size	Model	Magnification	Measuring span	Compatibility
		mm	inch			µm	
2093005	DR50	6.299 – 7.592	.2480 – .3000	hardened steel	2500:1	76	Federal
2093006	DR50	7.595 – 9.294	.3001 – .3650	hardened steel	2500:1	76	Federal
2093007	DR50	9.296 – 13.002	.3651 – .5100	hardened steel	2500:1	76	Federal
2093008	DR50	13.005 – 21.003	.5101 – .8250	hardened steel	2500:1	76	Federal
2093009	DR50	21.006 – 25.400	.8251 – 1.0000	hardened steel	2500:1	76	Federal
2093010	DR50	25.403 – 38.351	1.0001 – 1.5100	hardened steel	2500:1	76	Federal
2093011	DR50	38.354 – 44.450	1.5101 – 1.7500	hardened steel	2500:1	76	Federal
2093012	DR50	44.453 – 50.797	1.75001 – 2.0000	hardened steel	2500:1	76	Federal
2093013	DR50	50.800 – 63.500	2.0001 – 2.5000	hardened steel	2500:1	76	Federal
2093025	DR20	6.299 – 7.592	.2480 – .3000	hardened steel	5000:1	38	Federal
2093026	DR20	7.595 – 9.294	.3001 – .3650	hardened steel	5000:1	38	Federal
2093027	DR20	9.296 – 13.002	.3651 – .5100	hardened steel	5000:1	38	Federal
2093028	DR20	13.005 – 21.003	.5101 – .8250	hardened steel	5000:1	38	Federal
2093029	DR20	21.006 – 25.400	.8251 – 1.0000	hardened steel	5000:1	38	Federal
2093030	DR20	25.403 – 38.351	1.0001 – 1.5100	hardened steel	5000:1	38	Federal
2093031	DR20	38.354 – 44.450	1.5101 – 1.7500	hardened steel	5000:1	38	Federal
2093032	DR20	44.453 – 50.797	1.75001 – 2.0000	hardened steel	5000:1	38	Federal
2093033	DR20	50.800 – 63.500	2.0001 – 2.5000	hardened steel	5000:1	38	Federal

Order no.	B	D	Nominal size	Nominal size
	mm	mm	mm	inch
2093005	25.40	76,2	6.299 – 7.592	.2480 – .3000
2093006	25.40	76,2	7.595 – 9.294	.3001 – .3650
2093007	25.40	76,2	9.296 – 13.002	.3651 – .5100
2093008	25.40	76,2	13.005 – 21.003	.5101 – .8250
2093009	25.40	76,2	21.006 – 25.400	.8251 – 1.0000
2093010	25.40	101.6	25.403 – 38.351	1.0001 – 1.5100
2093011	25.40	101.6	38.354 – 44.450	1.5101 – 1.7500
2093012	25.40	127	44.453 – 50.797	1.75001 – 2.0000
2093013	25.40	127	50.800 – 63.500	2.0001 – 2.5000
2093025	25.40	76,2	6.299 – 7.592	.2480 – .3000
2093026	25.40	76,2	7.595 – 9.294	.3001 – .3650
2093027	25.40	76,2	9.296 – 13.002	.3651 – .5100
2093028	25.40	76,2	13.005 – 21.003	.5101 – .8250
2093029	25.40	76,2	21.006 – 25.400	.8251 – 1.0000
2093030	25.40	101.6	25.403 – 38.351	1.0001 – 1.5100
2093031	25.40	101.6	38.354 – 44.450	1.5101 – 1.7500
2093032	25.40	127	44.453 – 50.797	1.75001 – 2.0000
2093033	25.40	127	50.800 – 63.500	2.0001 – 2.5000



ACCESSORIES

Order no.	Description	Connection thread
2260835	Connecting hose set, complete, 2 m	3/8"–32
2237666	Standard plastic handle	3/8"–32
2240993	Shut off slide valve	3/8"–32
2239307	Universal bench mount	3/8"–32



Millimar DR50-3 / DR20-3

3-jet air ring gage

FEATURES

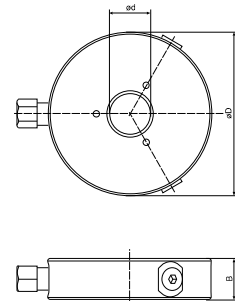
- Mahr / Mahr Federal nozzle ring gages have a large clearance tolerance. This allows larger measuring ranges and the workpiece can be inserted more easily into the nozzle ring for measuring.
- Due to a larger plug gage spacing and (optional) hard chrome-plated finish to the body, the nozzle ring gage has a long service life
- The recessed measuring nozzles are located deep in the body of the ring gage, protecting them from damage
- Large nozzle dimensions prevent clogging with dirt and oil
- **When ordering always specify:** Magnification of the display unit (e.g. 2500:1), nominal dimension to be measured and the specified workpiece tolerance



TECHNICAL DATA

Order no.	Type	Nominal size	Nominal size	Model	Magnification	Measuring span	Compatibility
		mm	inch			µm	
2093015	DR50-3	6.299 – 7.592	.2480 – .3000	hardened steel	2500:1	76	Federal
2093016	DR50-3	7.595 – 9.294	.3001 – .3650	hardened steel	2500:1	76	Federal
2093017	DR50-3	9.296 – 13.002	.3651 – .5100	hardened steel	2500:1	76	Federal
2093018	DR50-3	13.005 – 21.003	.5101 – .8250	hardened steel	2500:1	76	Federal
2093019	DR50-3	21.006 – 25.400	.8251 – 1.0000	hardened steel	2500:1	76	Federal
2093020	DR50-3	25.403 – 38.351	1.0001 – 1.5100	hardened steel	2500:1	76	Federal
2093021	DR50-3	38.354 – 44.450	1.5101 – 1.7500	hardened steel	2500:1	76	Federal
2093022	DR50-3	44.453 – 50.797	1.75001 – 2.0000	hardened steel	2500:1	76	Federal
2093023	DR50-3	50.800 – 63.500	2.0001 – 2.5000	hardened steel	2500:1	76	Federal
2093035	DR20-3	6.299 – 7.592	.2480 – .3000	hardened steel	5000:1	38	Federal
2093036	DR20-3	7.595 – 9.294	.3001 – .3650	hardened steel	5000:1	38	Federal
2093037	DR20-3	9.296 – 13.002	.3651 – .5100	hardened steel	5000:1	38	Federal
2093038	DR20-3	13.005 – 21.003	.5101 – .8250	hardened steel	5000:1	38	Federal
2093039	DR20-3	21.006 – 25.400	.8251 – 1.0000	hardened steel	5000:1	38	Federal
2093040	DR20-3	25.403 – 38.351	1.0001 – 1.5100	hardened steel	5000:1	38	Federal
2093041	DR20-3	38.354 – 44.450	1.5101 – 1.7500	hardened steel	5000:1	38	Federal
2093042	DR20-3	44.453 – 50.797	1.75001 – 2.0000	hardened steel	5000:1	38	Federal
2093043	DR20-3	50.800 – 63.500	2.0001 – 2.5000	hardened steel	5000:1	38	Federal

Order no.	B	D	Nominal size	Nominal size
	mm	mm	inch	mm
2093015	25.40	76.2	.2480 – .3000	6.299 – 7.592
2093016	25.40	76.2	.3001 – .3650	7.595 – 9.294
2093017	25.40	76.2	.3651 – .5100	9.296 – 13.002
2093018	25.40	76.2	.5101 – .8250	13.005 – 21.003
2093019	25.40	76.2	.8251 – 1.0000	21.006 – 25.400
2093020	25.40	101.6	1.0001 – 1.5100	25.403 – 38.351
2093021	25.40	101.6	1.5101 – 1.7500	38.354 – 44.450
2093022	25.40	127	1.75001 – 2.0000	44.453 – 50.797
2093023	25.40	127	2.0001 – 2.5000	50.800 – 63.500
2093035	25.40	76.2	.2480 – .3000	6.299 – 7.592
2093036	25.40	76.2	.3001 – .3650	7.595 – 9.294
2093037	25.40	76.2	.3651 – .5100	9.296 – 13.002
2093038	25.40	76.2	.5101 – .8250	13.005 – 21.003
2093039	25.40	76.2	.8251 – 1.0000	21.006 – 25.400
2093040	25.40	101.6	1.0001 – 1.5100	25.403 – 38.351
2093041	25.40	101.6	1.5101 – 1.7500	38.354 – 44.450
2093042	25.40	127	1.75001 – 2.0000	44.453 – 50.797
2093043	25.40	127	2.0001 – 2.5000	50.800 – 63.500



ACCESSORIES

Order no.	Description	Connection thread
2237666	Standard plastic handle	3/8"–32
2239307	Universal bench mount	3/8"–32
2240993	Shut off slide valve	3/8"–32
2260835	Connecting hose set, complete, 2 m	3/8"–32



Millimar AAT-19 / AAT-20

Single jet probe

FEATURES

- Jet probes provide convenient modular gageheads for use in handheld gages and for designing gage fixtures
- 9.5 mm / .375" bodies provide standardized mounting configurations
- Compact size allows easy access to hard-to-reach dimensions
- Jet probes are calibrated for instant use with Dimensionair® systems - just set zero and measure!
- Available in single-probe and matched-probe configurations
- Jet probes are similar to air probes, except they have an open jet at the end instead of a contacting spindle
- Ideal for measuring flatness of surfaces which cannot be touched, or for building into fixture designs where air gaging is called for
- Can be used with 2500:1, 5000:1 Dimensionair® (supplied singly or in matched pairs)
- Supplied with AHO-1 air hose, a zero setting valve, and hardware for mounting to the Dimensionair



TECHNICAL DATA

Order no.	2086612	2086613
Type	AAT-19	AAT-20
Magnification	2500:1	
Design	Single jet probe	Matched jet probe pair

Millimar 6105 N

Master setting rings

FEATURES

- Meticulously hardened, aged, ground and lapped
- Manufacturing tolerance JS3
- Uncertainty of the labeled actual size: 0.5 x IT1
- Setting of pneumatic measuring instruments (nozzle plug gages)
- **Order information:** It is recommended you use the average tolerance of the specified workpiece tolerance as the nominal diameter of the master setting ring



TECHNICAL DATA

Order no.	Ø	Cylindricity tolerance
2105300	2 –3	0.1 x IT4
2105301	3.001 –4	0.1 x IT4
2105302	4.001 –6	0.1 x IT4
2105303	6.001 –7	0.1 x IT4
2105304	7.001 –10	0.1 x IT4
2105305	10.001 –11	0.1 x IT4
2105306	11.001 –18	0.1 x IT4
2105307	18.001 –21	0.1 x IT4
2105308	21.001 –28	0.1 x IT4
2105309	28.001 –32	0.1 x IT4
2105310	32.001 –40	0.1 x IT4
2105311	40.001 –47	0.1 x IT4
2105312	47.001 –50	0.1 x IT4
2105313	50.001 –55	0.1 x IT4
2105314	55.001 –58	0.1 x IT4
2105315	58.001 –60	0.1 x IT4
2105316	60.001 –65	0.1 x IT4
2105317	65.001 –68	0.1 x IT4
2105318	68.001 –70	0.1 x IT4
2105319	70.001 –72	0.1 x IT4
2105320	72.001 –75	0.1 x IT4
2105321	75.001 –78	0.1 x IT4
2105322	78.001 –80	0.1 x IT4
2105323	80.001 –82	0.1 x IT4
2105324	82.001 –85	0.1 x IT4
2105325	85.001 –88	0.1 x IT4
2105326	88.001 –90	0.1 x IT4
2105327	90.001 –92	0.1 x IT4
2105328	92.001 –95	0.1 x IT4
2105329	95.001 –98	0.1 x IT4
2105330	98.001 –100	0.1 x IT4
2105331	100.001 –105	0.1 x IT4
2105332	105.001 –110	0.1 x IT4
2105333	110.001 –115	0.1 x IT4
2105334	115.001 –120	0.1 x IT4
2105335	120.001 –125	0.1 x IT4
2105336	125.001 –130	0.1 x IT4
2105337	130.001 –135	0.1 x IT4
2105338	135.001 –140	0.1 x IT4
2105339	140.001 –145	0.1 x IT4
2105340	145.001 –150	0.1 x IT4
2105341	150.001 –155	0.1 x IT4
2105342	155.001 –160	0.1 x IT4
2105343	160.001 –165	0.1 x IT4
2105344	165.001 –170	0.1 x IT4
2105345	170.001 –175	0.1 x IT4
2105346	175.001 –180	0.1 x IT4
2105347	180.001 –185	0.1 x IT4

Millimar 6107 S

Master setting rings

FEATURES

- Meticulously hardened, aged, ground and lapped
- Manufacturing tolerance JS3
- Uncertainty of the labeled actual size: 0.5 x IT1
- Setting of pneumatic measuring instruments (nozzle plug gages)
- **Order information:** It is recommended you use the average tolerance of the specified workpiece tolerance as the nominal diameter of the master setting ring



TECHNICAL DATA

Order no.	Ø	Cylindricity tolerance
2105400	3 –4	0.1 x IT3
2105401	4.001 –6	0.1 x IT3
2105402	6.001 –8	0.1 x IT3
2105403	8.001 –10	0.1 x IT3
2105404	10.001 –18	0.1 x IT3
2105405	18.001 –23	0.1 x IT3
2105406	23.001 –24	0.1 x IT3
2105407	24.001 –25	0.1 x IT3
2105408	25.001 –26	0.1 x IT3
2105409	26.001 –27	0.1 x IT3
2105410	27.001 –28	0.1 x IT3
2105411	28.001 –30	0.1 x IT3
2105412	30.001 –32	0.1 x IT3
2105413	32.001 –34	0.1 x IT3
2105414	34.001 –37	0.1 x IT3
2105415	37.001 –42	0.1 x IT3
2105416	42.001 –44	0.1 x IT3
2105417	44.001 –45	0.1 x IT3
2105418	45.001 –46	0.1 x IT3
2105419	46.001 –48	0.1 x IT3
2105420	48.001 –50	0.1 x IT3
2105421	50.001 –52	0.1 x IT3
2105422	52.001 –55	0.1 x IT3
2105423	55.001 –58	0.1 x IT3
2105424	58.001 –60	0.1 x IT3
2105425	60.001 –62	0.1 x IT3
2105426	62.001 –65	0.1 x IT3
2105427	65.001 –68	0.1 x IT3
2105428	68.001 –70	0.1 x IT3
2105429	70.001 –72	0.1 x IT3
2105430	72.001 –75	0.1 x IT3
2105431	75.001 –78	0.1 x IT3
2105432	78.001 –80	0.1 x IT3
2105433	80.001 –82	0.1 x IT3
2105434	82.001 –85	0.1 x IT3
2105435	85.001 –88	0.1 x IT3
2105436	88.001 –90	0.1 x IT3
2105437	90.001 –92	0.1 x IT3
2105438	92.001 –95	0.1 x IT3
2105439	95.001 –98	0.1 x IT3
2105440	98.001 –100	0.1 x IT3
2105441	100.001 –102	0.1 x IT3