

DIMENSIONAL METROLOGY NEW PRODUCTS

To ensure that you are always up-to-date,
Mahr continuously invests in new developments.

This is what EXACTLY means to us!

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EXACTLY

Millimar C 1700 PC | Gaging Computer

Functions

- Interactive, touchscreen software
- Simple and intuitive user interface
- User-friendly setup of measuring tasks
- Access to predefined formula templates for maximum ease of use
- Management of measuring tasks
- Measuring task linked to images or drawings
- Static and dynamic measurements
- Supported by graphical operating elements
- Live visualization of measured values
- Simultaneous digital and analog displays of up to 128 features
- Connection of inductive probes and Mahr measuring instruments via USB interface
- Connection of Mahr instruments via Integrated Wireless
- Data export in Microsoft® Excel or in qs-Stat format (dfq, dfx or dfd-format)
- Password protected user levels (3 levels)
- Online help integrated in Cockpit Software
- **Includes:** Millimar Cockpit Software including 10,1 in Touch PC, Preinstalled Windows® 10 IoT Enterprise, Mahr License Key, Installation Disk, Recovery Stick 16 GB, Operating Instructions, Power Supply, VESA 100 Standard Stand



Application:

- Practical measuring computer with a smart and universally applicable software for complex measuring tasks in the production area

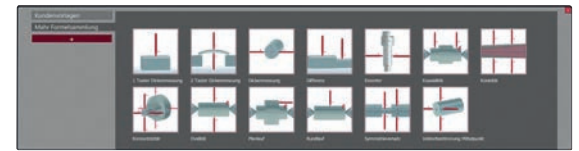
Technical Data

Order No.	5312801
Model	C 1700 PC
Display	Vertical bar graph Horizontal bar graph Analog display or round scale Digital display Any combination of display types can be chosen for each feature
Range of Digital Display	± 1000 mm / 50 in
Range of Analog Display	± 10000 µm, ± 5000 µm, ± 2000 µm, ± 1000 µm, ± 500 µm, ± 200 µm, ± 100 µm, ± 50 µm, ± 20 µm, ± 10 µm / ± 0.5 in, ± 0.2 in, ± 0.1 in, ± 0.05 in, ± 0.02 in, ± 0.01 in, ± 0.005 in, ± 0.002 in, ± 0.001 in, ± 0.0005 in
Resolution	0,01 µm / 0.5 µin
Length Units	mm, µm, in
Angle Units	Degrees, radians
Tolerance Display	Upper and lower tolerance limit (per feature) Upper and lower warning limit (per feature)
Compatibility	USB, Integrated Wireless, Millimar N 1700
Measuring Combination	Predefined formula templates for standard features Links entered via comprehensive formula editor
Features	128
Feature Types	Length, angle, dimensionless
Dynamic Functions	MAX, MIN, MAX-MIN, MAX+MIN
Classification	Max. 20 classes
Measuring Range	Dependent on measuring instrument (mm)
Number of Connectable Wireless Receivers for i-Stick	1
Number of Connectable Measuring Instruments with Integrated Wireless	8
Number of Connectable Measuring Instruments with USB Interface	64
Data Export	qs-Stat, Microsoft Excel
Hardware Interfaces	1x USB 3.0, 3x USB 2.0, 2x COM port Full-PIN (RS232/485; 5V/12V), 2x COM 2x COM port 3-PIN (RX, TX, GND; RS232/485 switchable), 2x 10/100/1000Mbit RJ45 Ports; 2x W-LAN connector, VGA, Display port
Energy Supply	100–240V ACDC active switching; 12V DC-Out
Power Consumption	18
IP Protection Category	IP 65 (Front Panel)
Languages	German, English, Chinese, French, Russian, Czech
System Requirements	2 free USB 2.0 interfaces
Product Weight	2,00 kg

Millimar Cockpit | Measuring Software

Functions

- Interactive, touchscreen software
- Simple and intuitive user interface
- User-friendly setup of measuring tasks
- Access to predefined formula templates for maximum ease of use
- Management of measuring tasks
- Measuring task linked to images or drawings
- Static and dynamic measurements
- Supported by graphical operating elements
- Live visualization of measured values
- Simultaneous digital and analog displays of up to 128 features
- Connection of inductive probes and Mahr measuring instruments via USB interface
- Connection of Mahr measuring instruments via Integrated Wireless
- Data export in Microsoft Excel or qs-Stat format (dfq or dfx/dfd format)
- Password protected user levels (3 levels)
- Online help can be accessed directly from the software
- **Includes:** Mahr License Key, Installation Disk, Operating Instructions



Application:

- Smart and universal software for complex measuring tasks in the manufacturing industry

Technical Data

Order No.	5312800
Model	Cockpit
Display	Vertical bar graph Horizontal bar graph Analog display or round scale Digital display Any combination of display types can be chosen for each feature
Range of Digital Display	± 1000 mm / 50 in
Range of Analog Display	± 10000 µm, ± 5000 µm, ± 2000 µm, ± 1000 µm, ± 500 µm, ± 200 µm, ± 100 µm, ± 50 µm, ± 20 µm, ± 10 µm / ± 0.5 in, ± 0.2 in, ± 0.1 in, ± 0.05 in, ± 0.02 in, ± 0.01 in, ± 0.005 in, ± 0.002 in, ± 0.001 in, ± 0.0005 in
Resolution	0,01 µm / 0.5 µin
Length Units	mm, µm, in
Angle Units	Degrees, radians
Tolerance Display	Upper and lower tolerance limit (per feature) Upper and lower warning limit (per feature)
Compatibility	USB, Integrated Wireless, Millimar N 1700
Measuring Combination	Predefined formula templates for standard features Links entered via comprehensive formula editor
Features	128
Feature Types	Length, angle, dimensionless
Dynamic Functions	MAX, MIN, MAX-MIN, MAX+MIN
Classification	Max. 20 classes
Measuring Range	Dependent on measuring instrument (mm)
Number of Connectable Wireless Receivers for i-Stick	1
Number of Connectable Measuring Instruments with Integrated Wireless	8
Number of Connectable Measuring Instruments with USB Interface	64
Data Export	qs-Stat, Microsoft Excel
Languages	German, English, Chinese, French, Russian, Czech
System Requirements	MS Windows 10, MS Windows 8, MS Windows 7, 2 free USB 2.0 interfaces

Millimar Gaging Modules

Functions

- Flexible combination of RS485 bus modules
- Synchronous data of multiple connected sensors
- Connects to the Millimar Cockpit Software
- Connection of all types of measuring sensors within the same compatibility
- Modular and customizable selection of product combinations
- Theoretical bus data rate of max. 4189 values per second (depending on the number of connected channels)
- **Includes:** Instruction Manual

Millimar N 1702 M | Module for Inductive Probes



Technical Data

Order No.	5331120
Model	N 1702 M
Resolution	0,1 µm / 5 µin
Measuring Range, Inductive Probe	± 2000 µm, ± 5000 µm / ± 0.079 in, ± 0.197 in
Probe Inputs	2
Compatibility	Mahr, Mahr 1340, Mahr Half Bridge, Mahr LVDT, Mahr VLDT
Data Transmission Rate	4189 (Values per second)
Error Limit	0,3 % (min. 0,2 m)

Millimar N 1701 PS | Power Supply Module



Technical Data

Order No.	5331133
Model	N 1701 PS
Data Interface	RS485
Energy Supply	230 V/115 V; 50/60 Hz
Current Supply	2000 mA

Millimar N 1701 USB | USB Connecting Module



Technical Data

Order No.	5331130
Model	N 1701 USB
Data Interface	RS485
Current Supply	430 mA

Accessories

Order No.	Product Name	Model
4102058	Foot switch to trigger data transmission	16 ESf

Millimar N 1704 I/O | I/O Module



Technical Data

Order No.	5331134
Model	N 1704 I/O
Data Interface	RS485
Control Inputs	4 inputs, 10 V - 30 V
Control Outputs	4 outputs, 10 V - 30 V ESD protected, short circuit proof
Current Consumption	70 mA

Millimar N 1701 P | Modules for Air Gaging

Functions

- Flexible combination of RS485 bus modules
- Synchronous data of multiple connected sensors
- Connects to the Millimar Cockpit Software
- Connection of all types of measuring sensors within the same compatibility
- Modular and customizable selection of product combinations
- Theoretical bus data rate of max. 4189 values per second (depending on the number of connected channels)
- **Includes:** Instruction Manual



Technical Data

Order No.	5331155	5331156	5331157
Model	N 1701 PF-2500/5000	N 1701 PF-2500/5000-4	N 1701 PF-10000
Description 1	Millimar N 1701 PF-2500/5000	Millimar N 1701 PF-2500/5000-4	Millimar N 1701 PF-10000
Description 2	Single Channel Pneumatic Module	Single Channel Pneumatic Module	Single Channel Pneumatic Module
Air System Compatibility	Mahr Federal	Mahr Federal	Mahr Federal
Measuring Principle	Differential Pressure	Differential Pressure	Differential Pressure
Measuring Value Acquisition	Piezo	Piezo	Piezo
Magnification	2500/5000:1	2500/5000:1	10,000:1
Number of Jets	1,2 or 3	4	1,2 or 3
Resolution (Software Dependent)	0,1 µm (5 µin)	0,1 µm (5 µin)	0,1 µm (5 µin)
Measuring Range	±40 µm (±0.0015 µin) / ±20 µm (±0.00075 µin) tooling dependent	±40 µm (±0.0015 µin) / ±20 µm (±0.00075 µin) tooling dependent	±8 µm (±0.0003 µin)
Measuring Error in µm (in)	<1% of measuring range, better 0,5%	<1% of measuring range, better 0,5%	<1% of measuring range, better 0,5%
Signal noise in	≤0,4 µm (15.7 µin)	≤0,4 µm (15.7 µin)	≤0,1 µm (3.9 µin)
Setting Time in Sec (1m/3.3 ft Hose)	≤0.3	≤0.3	≤0.5
Setting Time in Sec (2m/6.6 ft Hose)	≤0.5	≤0.5	≤0.7
Operating Temperature	0 - 40°C (32°F - 104°F)	0 - 40°C (32°F - 104°F)	0 - 40°C (32°F - 104°F)
Supply Pressure (>4bar Before Regulator)	30.4 psi ±5%	30.4 psi ±5%	30.4 psi ±5%
Air Supply Connection	PU Hose diameter 8 x1	PU Hose diameter 8 x1	PU Hose diameter 8 x1
Measuring Air Connection	3/8-32 Male	3/8-32 Male	9/32-40 Male
Zero Setting (OFFSET)	Electrical	Electrical	Electrical
Amplification (GAIN)	Electrical	Electrical	Electrical
Air Consumption	Approximately 1-2m ³	Approximately 1-2m ³	Approximately 1-2m ³
Housing Dimensions (HxWxD)	50 mm x 90 mm x 66 mm / (2 in x 3.5 in x 2.6 in)	50 mm x 90 mm x 66 mm / (2 in x 3.5 in x 2.6 in)	50 mm x 90 mm x 66 mm / (2 in x 3.5 in x 2.6 in)
Power Supply	+ 5V From N 1700 Bus	+ 5V From N 1700 Bus	+ 5V From N 1700 Bus

Accessories

Order No.	2258471
Description 1	Filter/Regulator kit for N 1701 PtoE Module
Air System Compatibility	Mahr Federal
Housing Dimensions (HxWxD)mm/in	PU Hose Diameter 10 x1
Air Supply Connection	PU Hose Diameter 10 x1
Regulated Air Connection	PU Hose Diameter 8 x1
Max Number of N 1701 P to E Modules Supplied	3
Regulated Pressure (>4bar Before Regulator)	30.4 psi ±5%