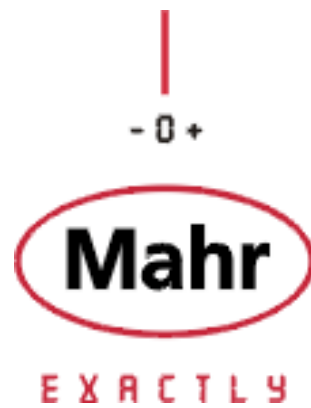


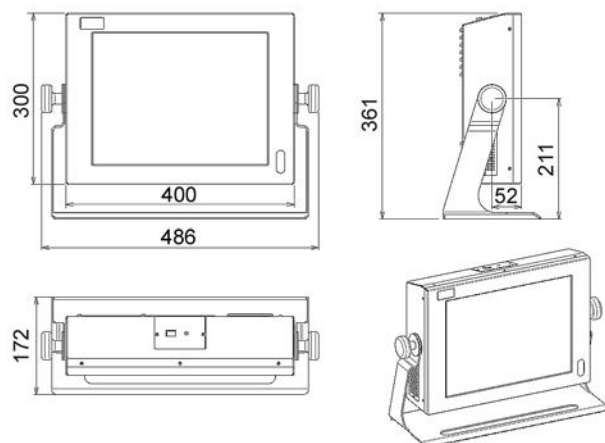
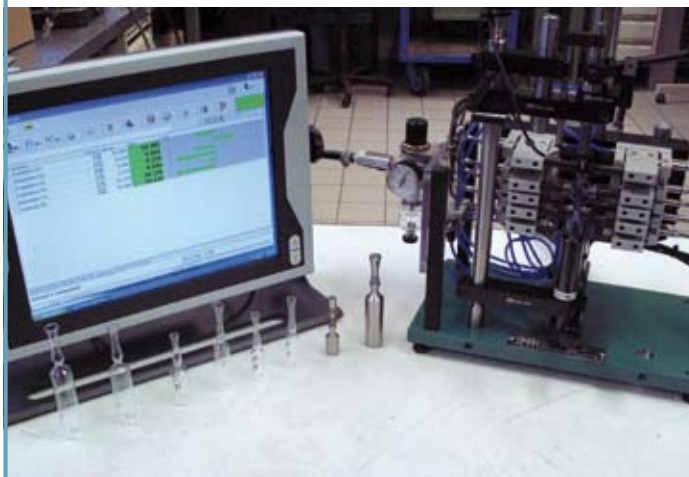
# Millimar



**Multi-gage Measuring System**



## Millimar G1275



### Description

The Millimar G1275 measuring computer provides the simplest possible means of acquiring and statistically analyzing measurement results from multi-gage measuring devices. Thanks to the industrial housing, the measuring computer is ideally suited for use even in harsh manufacturing environments. The compact dimensions of the housing mean that the measuring computer can even be installed in areas with very limited space. The 15" TFT monitor provides a clear, easy-to-read display of measurement results, thereby helping to avoid reading errors and false interpretation of results. The operator's keyboard allows the measuring computer to be operated reliably in a manufacturing scenario. Measured signals can be acquired by the Millimar G1275 measuring computer using a huge variety of sensors, connected to a wide range of measurement interfaces via the RS232 and/or USB ports.

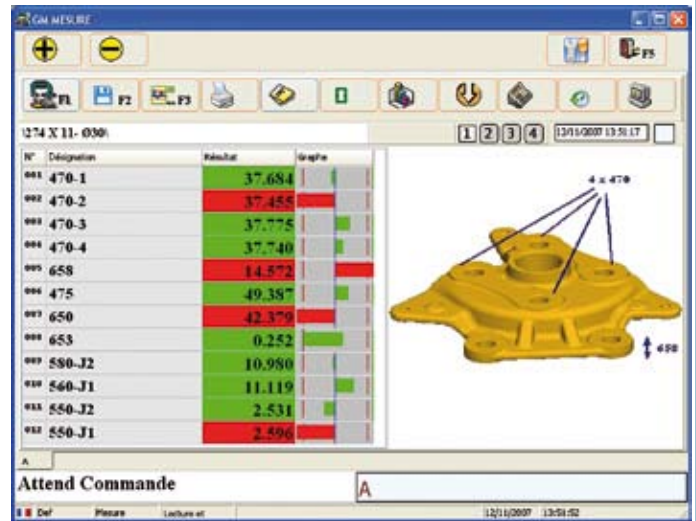
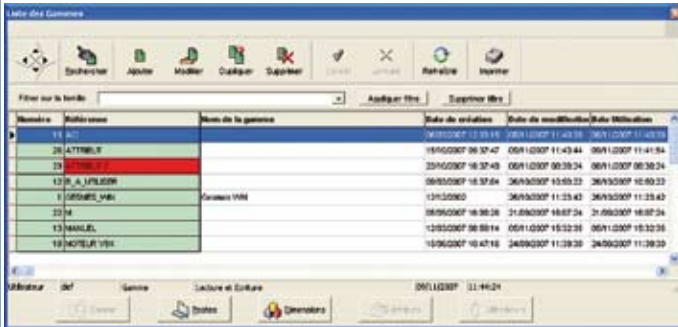
### Technical Data

External dimensions (LxWxH)	400 mm x 112 mm x 300 mm (15.75 in x 4.41 in x 11.81 in)
With pedestal	486 mm x 172 mm x 361 mm (19.13 in x 6.77 in x 14.21 in)
Mass	9 kg (19.84 lbs)
Material	Painted galvanized steel
Operating temperature	0 °C to 45 °C (32 °F to 113 °F)
Storage temperature	-20 °C to 60 °C (-4 °F to 140 °F)
Relative humidity (in use)	8% to 90%, with no condensation
Relative humidity (not in use)	5% to 95%
Protection rating	IP53 (IP65 on front panel)
TFT color monitor	15" active matrix XGA
Supply voltage	230 V ± 10%
Frequency	47 Hz to 63 Hz
Power consumption	90 W

### Interfaces

PCI slot:	1 (max. 180 mm x 100 mm / 7.09 in x 3.94 in)
Inputs/outputs:	4 RS-232 (COM1 to COM4) 1 LPT1 port 1 keyboard port 1 mouse port 1 Ethernet port (RJ45) 1 USB at rear 1 USB at top

## Millimar D1200X Software

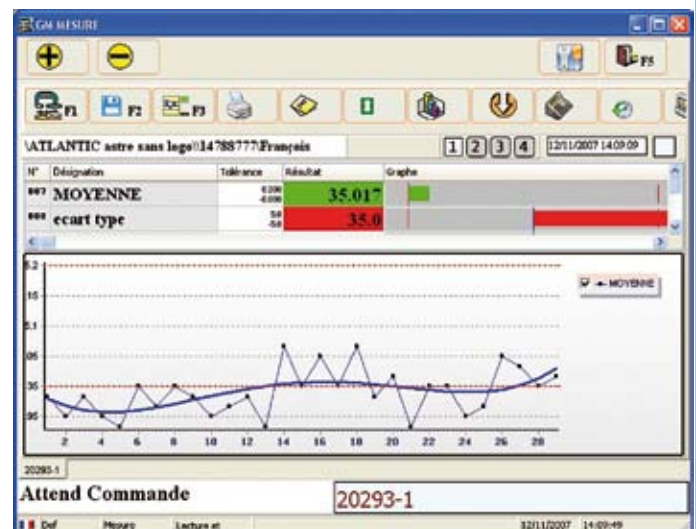
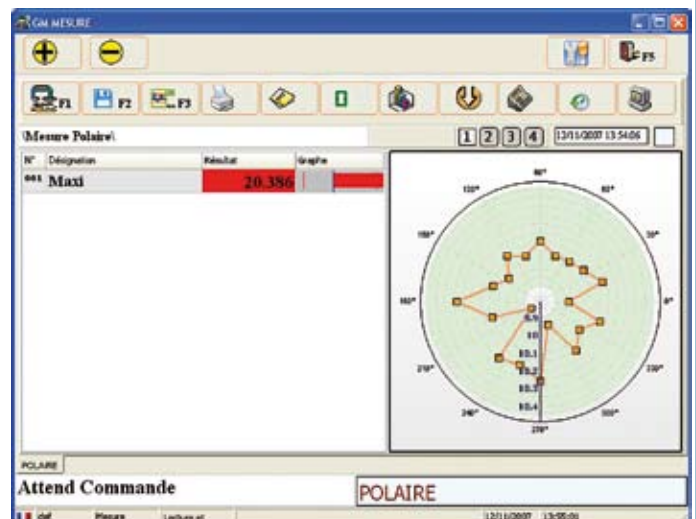


### Description

- Windows-based software
- ACCESS database
- Password protected menus and access privileges
- Non-restrictive formula editor
- Easy-to-program test plans - simply fill in the on-screen forms
- User-programmable calculation formula
- Quick-select options for display of measurements already performed
- Simple sensor adjustment using an on-screen assistant
- Storage of calibration history
- Measurement value display (numeric and bar graph views)
- Storage of measurements (manual or automatic)
- Sensor workspace monitoring with alarm output
- Statistical analysis of measurement results, with visualization using histograms and SPC control charts
- Automatic calibration requests defined by hours and number of measurements
- Faulty measurement values can be commented to indicate the cause
- Statistical analyses
- Normality tests
- Integrated measuring system analysis (R&R) and gage capability
- Data export module supporting numerous formats
- QDAS, SUMEQ, SESAME, QUASAR and other interfaces supported
- Option to use I/O port for automatic control
- Can be used in automatic production lines with dialog control

### Minimum System Requirements

- 1.5 GHz Pentium IV or similar processor
- Windows 2000 or Windows XP
- 20 GB free hard-disk space
- 512 MB RAM
- Screen resolution: 1024 x 768
- A spare USB port
- CD drive
- 1 to 4 RS-232 interfaces, depending on the number of peripheral devices





## Millimar Standard Elements



### Modular

The use of Millimar standard elements allows multi-gage measuring devices to be designed and implemented for the widest possible range of workpieces, e.g. rotationally symmetrical and non-rotationally symmetrical parts.

Rotationally symmetrical workpieces can be mounted between centers or on prismatic supports, whereas non-rotationally symmetrical workpieces often require a special holder.

### Versatile

The versatility of the Millimar standard elements means that the right solution can be provided, whatever the measurement task at hand.

Whether it's a question of external, internal or length measurements, the Millimar standard elements will be able to meet your requirements, even in the case of complex workpiece geometries.

Thanks to the space-saving design of the styli, a high number of measuring points can be inspected within a small area of the testpiece.

The pneumatic lifting mechanisms integrated into the measuring elements simplify the job of moving the testpiece into the measuring position and reduce the amount of wear on the styli.

### Flexible

The modular concept using Millimar standard elements is continued throughout the construction of the whole system. A generous amount of travel in the styli (up to 20 mm / 0.79 in) allows a high degree of flexibility in terms of the variety of testpieces that can be accommodated.

### Precise

The Millimar standard elements are specially designed for use in the workshop and are manufactured using a rigorous process. This guarantees that the measuring devices give stable and reliable measurements.

For example, using styli fitted with two ball-bearing guides for supporting the moving part, it is possible to achieve measurement accuracy at the  $\mu\text{m}$  scale, if this is required due to the tolerances of the feature being measured.

### Reliable

All components are long-lasting and low-maintenance thanks to the use of rust-proof materials, the selection of appropriate heat treatments, and the use of a lifting mechanism to minimize the effects of friction acting on the styli when the workpiece is inserted.

### Economical

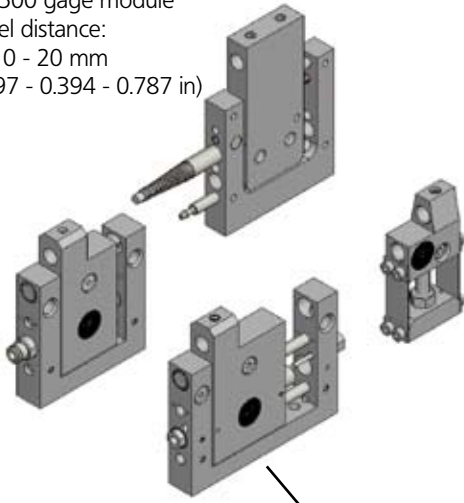
Our systems can either be constructed by the customer from standard elements obtained from the catalogue, or alternatively we can provide ready-built devices as turn-key solutions. Whichever option you choose, you can be sure that you are purchasing a system that is tailored to your specific requirements on the most favorable of terms.

Below are just a few examples of the many factors that contribute to the cost effectiveness of the Millimar standard elements:

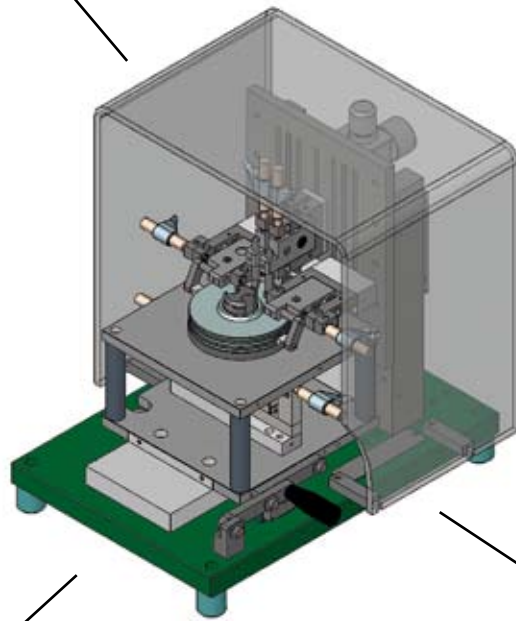
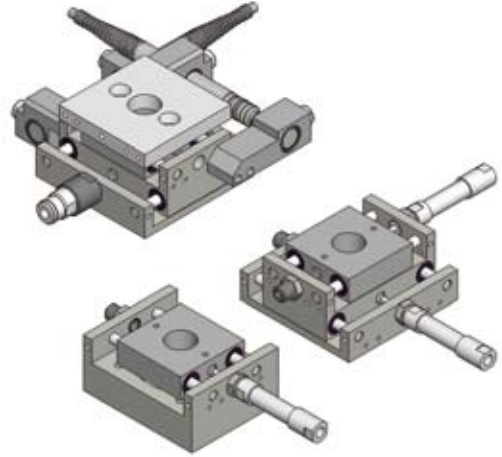
- Reusability of standard elements: Once manufacture of a particular type of workpiece has ceased, all standard elements used in the test equipment can be reused for a different type of workpiece.
- A choice of different mechanisms for guiding the moving part of the stylus, according to the accuracy requirements of the measuring task (optimal price-performance ratio).
- Reduction in development and implementation time.
- Availability of the equipment: Our standard elements are manufactured under standard production conditions and are always available off the shelf and ready to use.

## Millimar Standard Elements

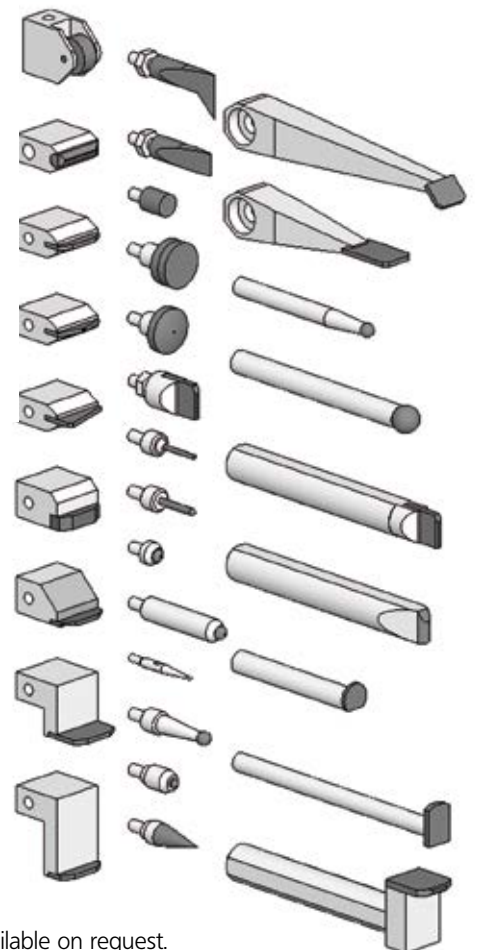
FP 1500 gage module  
 Travel distance:  
 5 - 10 - 20 mm  
 (0.197 - 0.394 - 0.787 in)



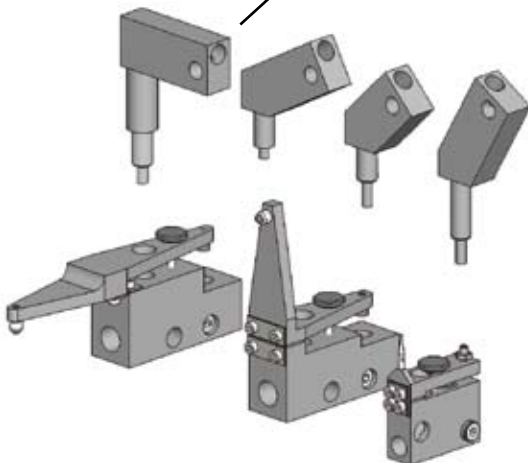
XY tables  
 Travel distance: 2.5 - 5 - 7 mm  
 (0.098 - 0.197 - 0.275 in)



Styli



Angular adjustment  
 0 - 30 - 45 - 60 - 90°



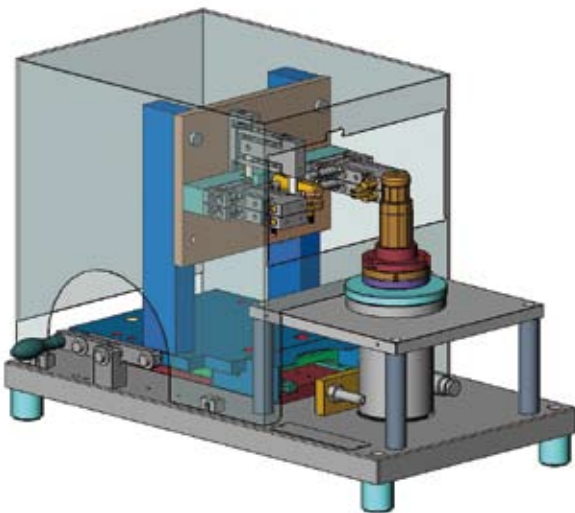
Full catalogue available on request.

## Standardized Measuring Devices



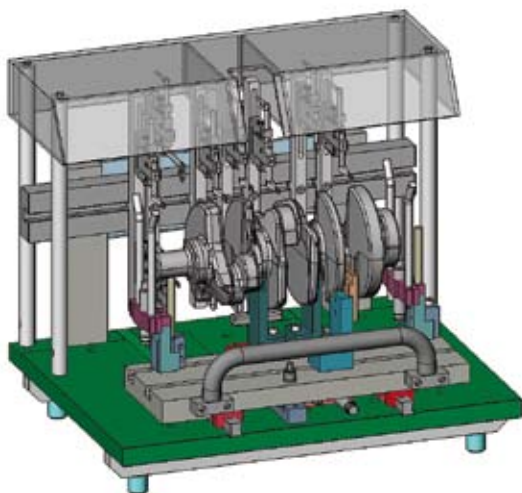
### Vertical measuring device with pivoting clamping of workpiece between centers

These measuring devices allow inspection of diameter, length, and radial and axial run-out for rotationally symmetrical parts.



### Measuring device with rotary table

Measuring devices with rotary table allow combined external and internal measurements and automatic radial and axial run-out testing.



### Horizontal measuring device with clamping of workpiece on prisms or between centers, including workpiece loading table

The horizontal measuring device allows workpieces to be held on prismatic supports or between centers. This system is particularly suitable for heavy workpieces.

**The workpiece can be loaded into the workpiece holder away from the actual measuring station.**

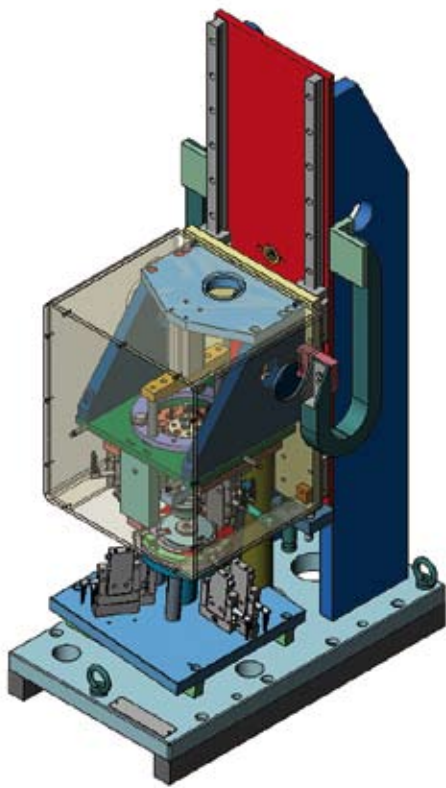


## Customer-specific Measuring Devices

### Customer-specific Measuring Machines

Complete design and build service for automatic machines for integration into production lines.

Measurement results can be evaluated online to allow tool adjustments, statistical analysis, etc.



### Automated measuring machines

Workpieces can be placed by robots, for example.

Loading and lifting is then carried out automatically.

The various gage modules are connected to our industrial measuring computer.

The Millimar D1200X software provides display and analysis of static and dynamic measurements and form deviations.

