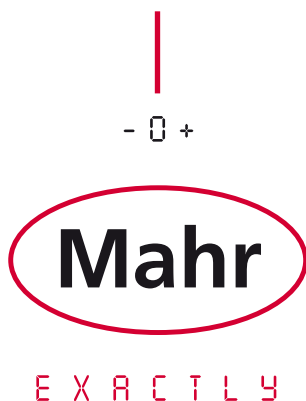# MarForm

MarForm MMQ 100 with EasyForm
Form measurement made easy!

Mahr

EXACTLY

▶ | **Test the quality of your products in the production environment.** Despite the fact that the benefits of monitoring quality in the manufacturing environment have been recognized by manycompanies, a large number of businesses have until now beenreluctant to implement form testing at the production machine. The instruments required for this are too expensive, too sensitive and too complicated to operate. Simpler devices do not offer the required evaluation and documentation options. Therefore, either the slow process of sending products to the precision inspection room must be accepted or, to be on the safe side, production is made more accurate and thus more expensive. The high-precision, robust and easy-to-use MMQ 100 represents the solution to this problem.

MarForm MMQ 100

The Formtest with the simplest operation

Features

The MarForm MMQ 100 offers outstanding accuracy in a robust package designed for use in production environments. Used in combination with the EasyForm software, it represents the perfect solution for performing measurement tasks simply, yet effectively.

• Precise and fast measurement results
• Reliable thanks to mechanical bearings
• Large measuring volume
• Fast computer-assisted workpiece alignment
• Centering and tilting screws for rough and fine adjustment
• Universal and reliable
• Suitable for use on the shop floor as no compressed air connection is required
• No keyboard or mouse required
• Optional digital transmitters in Z and X transmit the measuring position directly to the software

The **MMQ 100** can also be operated from a laptop, thus enabling mobile use. All you need is a power outlet!

Optimized for frequent form measuring tasks

• Roundness (also in a section)
• Flatness (from a circle)
• Concentricity
• Coaxiality
• Radial run-out
• Axial run-out
• Plane parallelism from opposite circles
• Fourier/waviness analysis.

(1) from a polar trace

EasyForm Touchscreen Software

If you want to use a form measuring instrument in a production environment, you don't want to have the hassle of a keyboard and a mouse.

The **touchscreen operation** makes measurement child's play. All the necessary functions are available at the touch of your fingertip. The number of steps required to produce a record are minimized, enabling you to reduce your personnel and operating costs. You can perform a roundness measurement in two simple steps. What is more, the software guides you through each setting you want to make.

The **Easy Form software** records each step of your measurements. No matter whether you want to repeat the most recent measurements or decide to combine various measurements and evaluations of a workpiece in a feature sequence, programs can be created interactively in the **Easy Form teach-in mode**.

You can save your measurement tasks under one of the programmable function keys.

EasyForm is based on highly optimized **MarWin** measurement and evaluation routines and can be combined with other MarWin modules. **EasyForm** operates under the Windows® operating system and features functions for user administration, network support and for electronic storage of records, and can be expanded for future options.

The easiest way of operating a measuring instrument.

• Intuitive user interface for immediate measurements
• Interactive, automatic program creation
• 3D representation of flatness in color with grid lines and interactive graphic preview
• Immediate display of measuring results on the screen
• Concise measuring records on the screen, as a file (also in the network) or on paper (any Windows printer)
• Operating system: Windows® 7
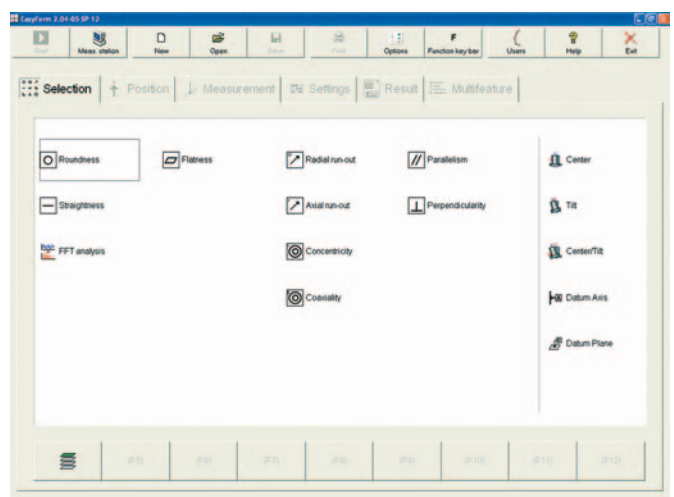
EasyForm Touchscreen Software

In order to be able to identify production errors immediately and eliminate them as quickly as possible, metrology is more important than ever for testing form and positional deviations. It helps you to minimize time-consuming and costly reworking and rejection rates. But these measurements must not put undue stress on your workforce. It must be possible to perform them quickly, easily and without the possibility of operator error. Clear icons and logical defaults minimize the need for data entry.
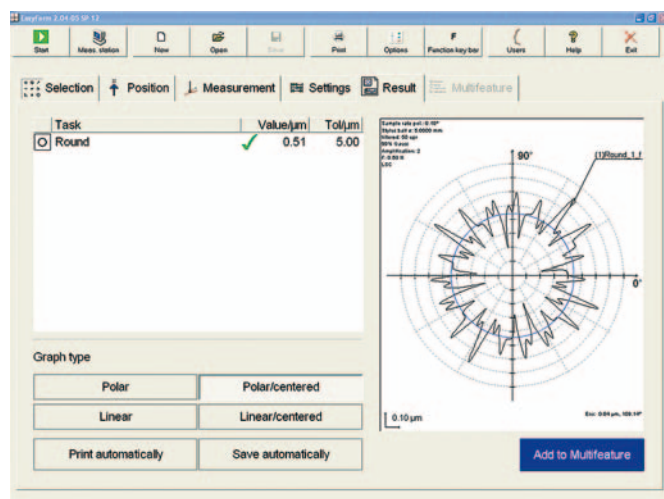

Workpiece alignment is supported by the computer. The measuring position is automatically recorded by the software. Detailed 3D graphics increase the informativeness of your measurement results. Moreover, you can also interactively rotate the graphic as desired for optimum presentation of the measurement result.
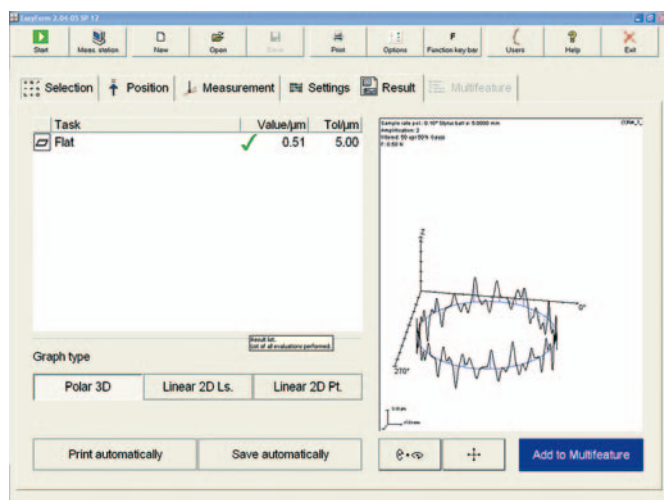

The 32 function keys of the touchscreen can be identified with images or drawings of your workpieces and assigned to the relevant measuring programs. This means that only one touch is required to carry out the relevant measurement. It is also possible to create a measuring run without any programming knowledge. Furthermore, the closed system is protected by user administration from unintentional changes.

EasyForm Touchscreen Software
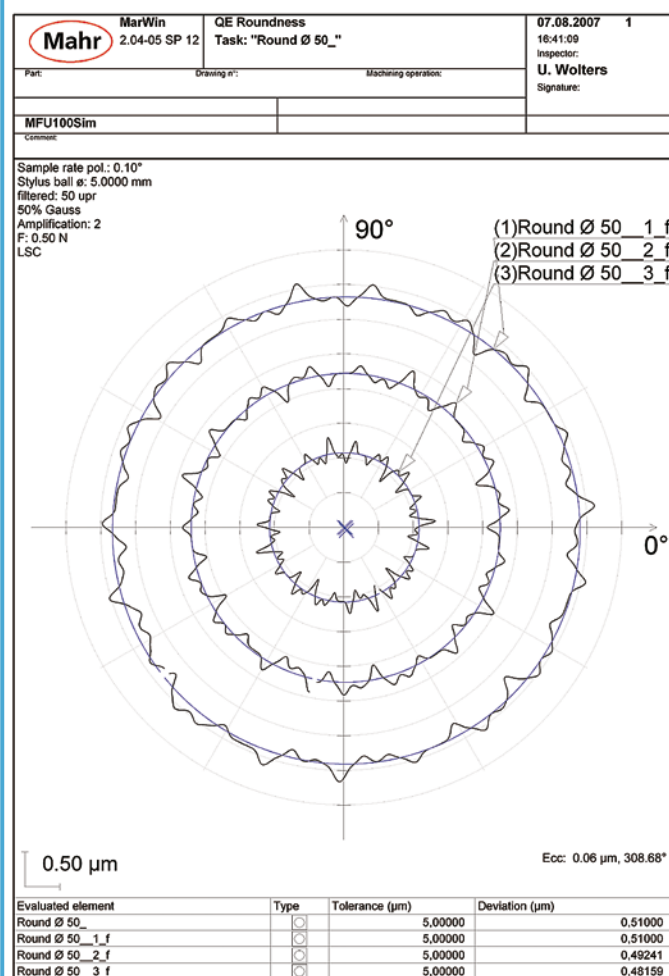
This means that you can not only measure the quality of your products in compliance with standards, but also depict it in a clear and informative manner. Naturally, the measuring records can be stored electronically, documented in paperless form and sent electronically, e.g. by e-mail. The versatile Windows® PC peripherals with their high-resolution printers also enable perfect documentation of your measurement results in color or black and white.
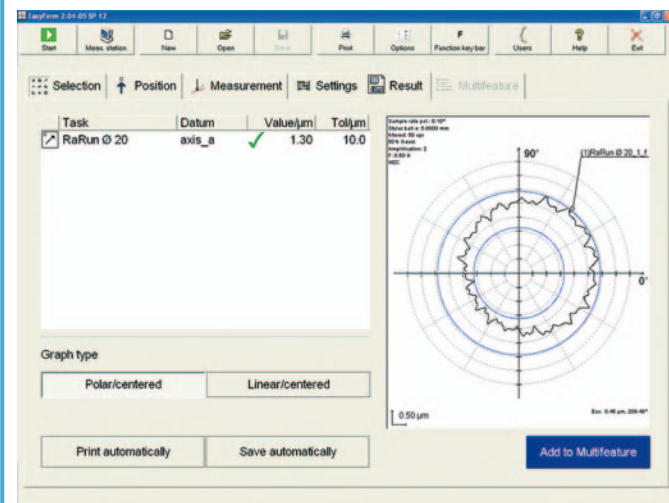
T20W Probe

The inductive **T20W** probe is a universal device. The fact that the probe arm can be moved in a range of 180° and that there are a variety of clamping options for the probe means that measurements can also be performed in areas that are difficult to access. You can combine easily exchangeable probe arms with a variety of styluses in order to adapt the probe to the relevant measurement tasks or workpieces.

T20W probe with probe arm range of 180°
- Measuring range ± 1,000 µm (.040 in)
- Measuring force adjustable from 0.01 N to 0.12 N (0.002 to 0.027 lbf)
- Switchable measuring direction
- Exchangeable probe arm
- Mechanical overload protection
- Free travel limitation adjustable in contacting direction
- Clamping shaft dia. 8 mm (0.31 in)

MarForm MMQ 100. Technical Data

MMQ 100 measuring station	**Order no. 9999116**
Roundness measuring device, C-axis	
Roundness deviation (µm+µm/mm measuring height)**	0.05 + 0.0006
Roundness deviation (µm+µm/mm measuring height)*	0.025 + 0.0003
Axial run-out deviation (µm+µm/mm measuring radius)**	0.04 + 0.0006
Axial run-out deviation (µm+µm/mm measuring radius)*	0.020 + 0.0003
Centering and tilting table	Manual rough and fine adjustment
Table diameter	160 mm (6.3 in)
Table load capacity, centric	200 N (44 lbf)
Rotational speed (rpm) 50 Hz / 60 Hz	5 / 6
Vertical unit, Z-axis	
Positioning path	300 mm (11.8 in)
Positioning	manual
Horizontal unit, X-axis	
Positioning path	180 mm (7 in)
Positioning	manual
Measuring volume	
Test diameter up to	210 mm (8.27 in)
Measuring height up to	400 mm (15.75 in)
Distance C-/Z-axis	190 mm (7.48 in)
Dimensions, weight	
Length	470 mm (18.50 in)
Width	300 mm (11.81 in)
Height	545 mm (21.46 in)
Weight approx.	28 kg (61.73 lbs)
Connection data	
Mains voltage (V/Hz-VA)	230 (115) / 50 (60)-20

* Values as max. deviation from reference circle LSC at 20 °C ±1 °C (68 °F ± 1 K) in vibration-free environment, filter 15 upr, 5 rpm and standard probe arm with ball dia. 3 mm.

**All values in accordance with DIN ISO 1101 at 20 °C ±1 °C (68 °F ±1 K) in vibration-free environment, filter 15 upr LSC, 5 rpm and standard probe arm with ball dia. 3 mm.
Tested on standard, taking into account compensation algorithms.