

ROMER ABSOLUTE ARM Compact

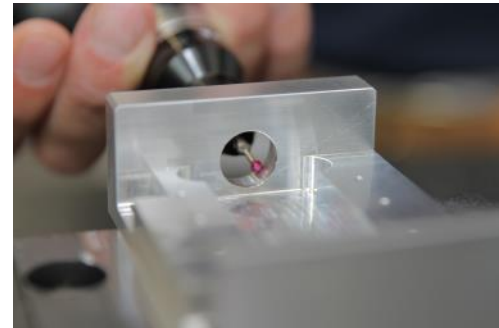
APPLICATIONS

September 2014

The new ROMER Absolute Arm Compact

WHAT ARE THE APPLICATIONS ?

The new **ROMER Absolute Arm Compact** is a 3D portable measuring arm for the shop floor to inspect small parts. It replaces standard hand tools like calipers, micrometers, bore gages, etc.



The new ROMER Absolute Arm Compact

PORTABLE

- Smaller and lighter
- You won't forget any accessory – everything fits in one case.
- Get ready to measure in less than a minute



The new ROMER Absolute Arm Compact

IT'S SO EASY !

- Just place it on the table and measure
 - ✓ No clamping, no additional base required*
- Easy to move
 - ✓ Just slide the arm across the table next to the part
- No cables
 - ✓ With FP2 (Mobility Pack) you can work with battery power and wireless communication

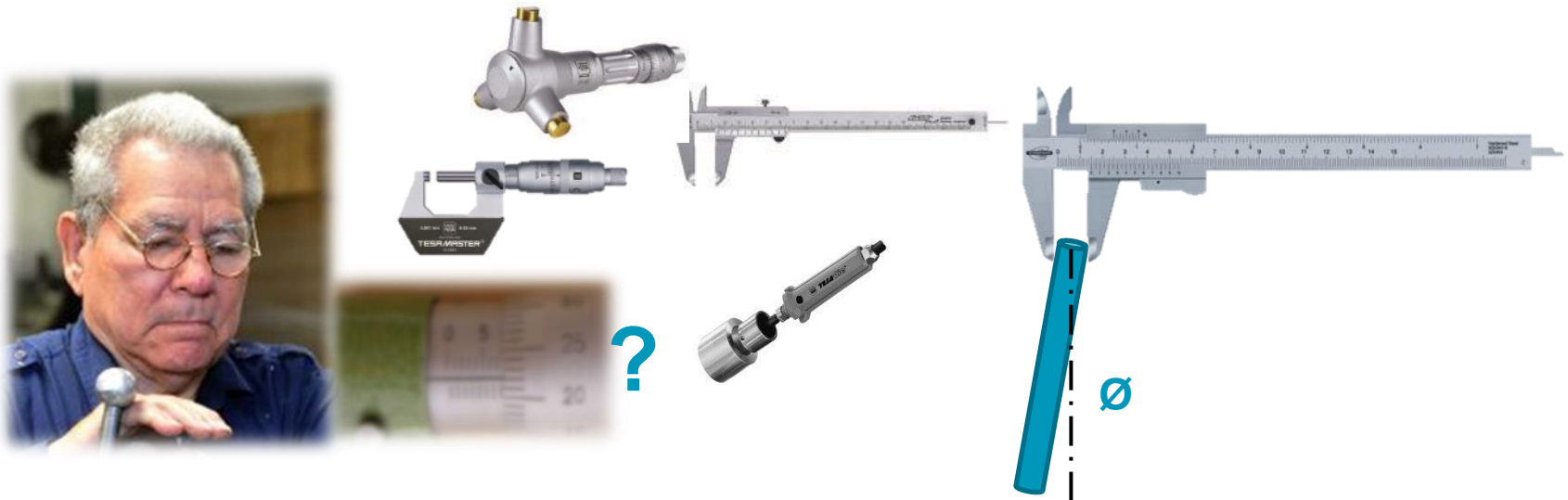


*because this arm has counter weight instead of counter balance, it doesn't create torque, as the back and front sides are balanced. That means the arm will not move when you start your measurement.

The new ROMER Absolute Arm Compact

TRUST YOUR MEASUREMENT

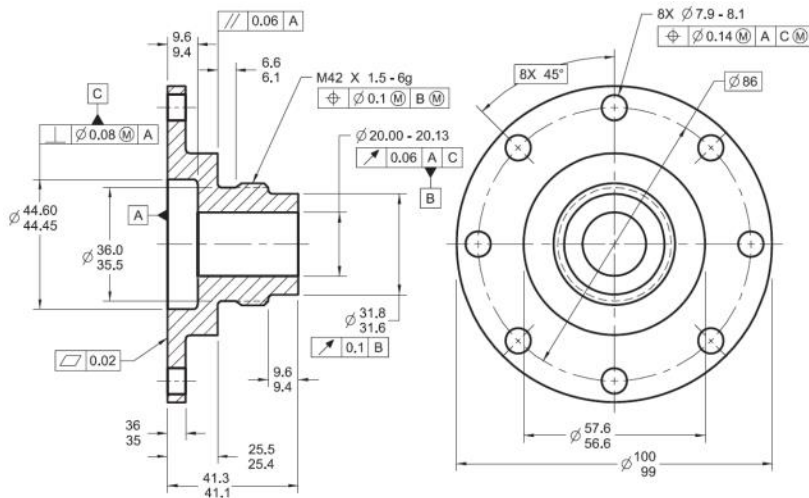
- Hand tools can easily give you wrong measurement results, because they are very user dependent.
- With metrology software you standardize the measurement process (e.g. 4 points for a circle, 5 for a plane, etc) and eliminate outliers if necessary.



The new ROMER Absolute Arm Compact

GD&T MEASUREMENTS

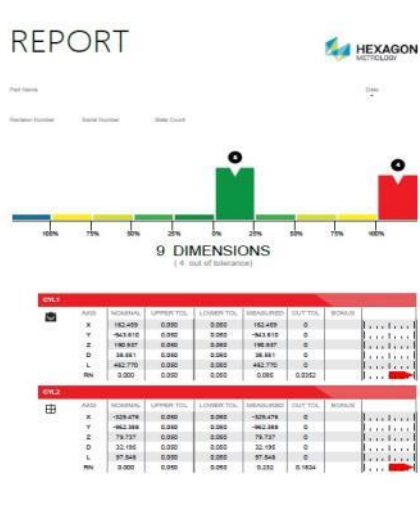
- GD&T is a reality in most of the industries and you need the right measurement equipment with an intelligent software algorithm behind.
- Use PCDMIS Touch to inspect any type of part, even under very tight tolerances such as H7 grade.



The new ROMER Absolute Arm Compact

REPORTING

- Independent of the measurement method, the goal in most of the cases is to have a report.
- With PCDMIS Touch the report is done in real time, no problems to understand hand writing.
- Due to its simplicity, a minimum training is required.



The new ROMER Absolute Arm Compact

ADJUST THE PART ON THE MACHINE

- No need for reset : the true benefit of absolute encoders in confined spaces
- Magnetic blocks allows versatile mounting options on different machines
- No cables : work fully wireless with Mobility Pack (FP2)



The new ROMER Absolute Arm Compact

REPEATABLE & AUTOMATIC PROBE RECOGNITION

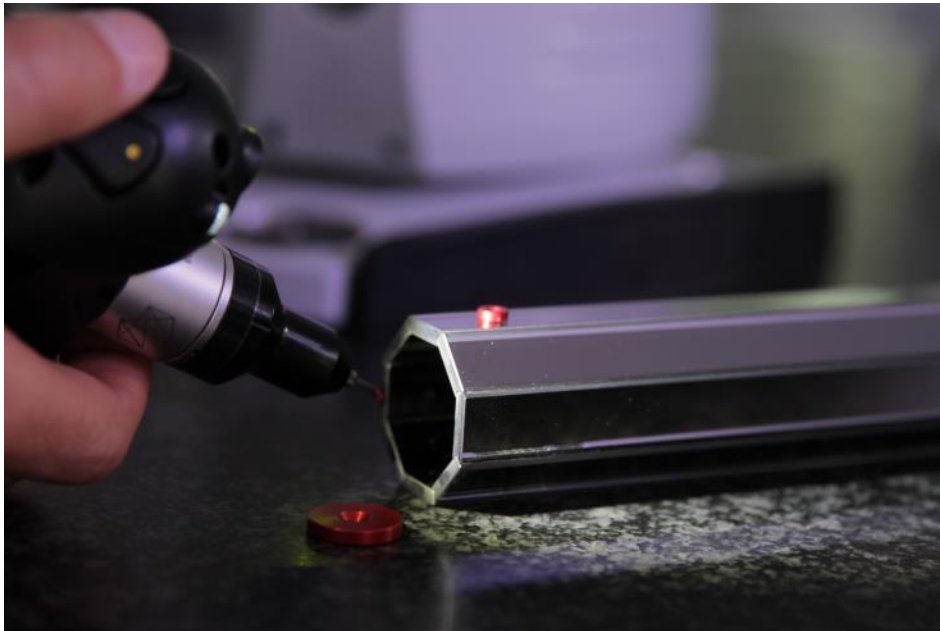
- Swap probes without any tools and the TKJ connector ensures the repeatability of the connection. You don't need to recalibrate it. The repeatability is less than 1 μm !



The new ROMER Absolute Arm Compact

WORK LIGHT AND CAMERA

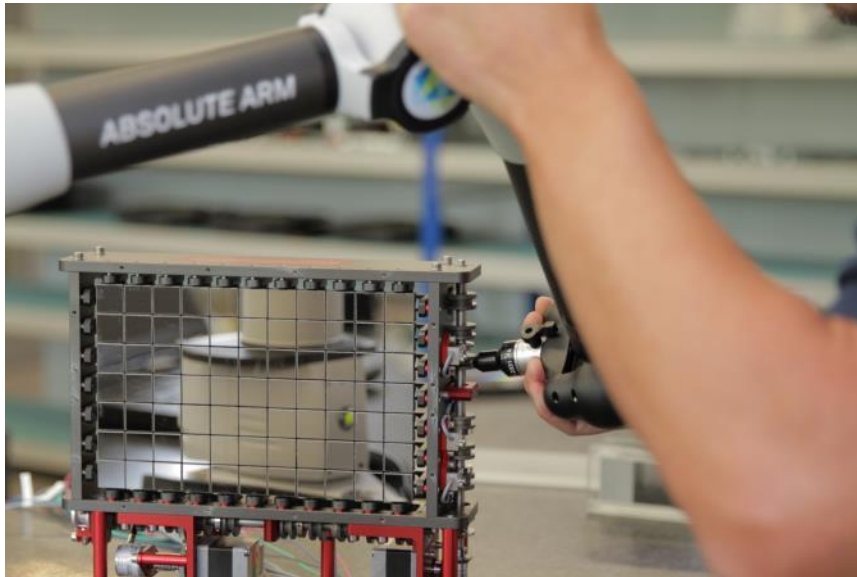
- You can add pictures of a critical dimension to the report, even when you don't have good lighting conditions



The new ROMER Absolute Arm Compact

SUITABLE FOR THE MOST DEMANDING TOLERANCES

- With accuracy starting from 5 μ m (ISO 10360-2), the ROMER Absolute Arm Compact can measure parts which could only be measured by stationary CMMs. A new world of applications is open for this portable CMM, without the complexity of part programming.



SOME APPLICATIONS - RA7512

On Machine Verification (OMV)

- The part can be measured when it is still under the CNC, so you can apply milling corrections with the part aligned.
- **Why is the 7512 perfect for this application?**
 - ✓ Very accurate
 - ✓ You don't need to reference the arm, so no problems in colliding with the part or machine
 - ✓ No warm-up means less down-time = money saved.



SOME APPLICATIONS - RA7512

Inspection of Small Molds and Dies

- Parts are compared to the CAD model.
- Historically this is a very difficult application for arms because the tolerances are so low.
- Scanning systems are not accurate enough for these inspection tasks. The 7512 allows you to work within the required accuracy and even replace some stationary CMMs. Because these parts have such small features, the 3mm probe is often used.
- **Why is the 7512 perfect for this application?**
 - Accuracy
 - The ISO 10360-2 certification means that it is easy for the customer to incorporate their measurements into the total quality control process.



SOME APPLICATIONS - RA7512

Inspection of Medical Components

- Correct fitting of components to allow smooth movements (joints).
- To avoid excessive wear of components, causing premature need of replacement.
- Profile measurement and sphericity are extremely important (GD&T) on all ball-joints.
- **Why is the 7512 perfect for this application?**
 - Accuracy



SOME APPLICATIONS - RA7312

Inspection of Automotive Interior Components

- Parts also include switch-gear (switches for headlights, windows, wipers etc), door handles, fuse-boxes.
- Often, they are checked for the position of their connectors.
- **Why is the 7312 perfect for this application?**
 - ✓ Easy to use
 - ✓ Fast measurement



SOME APPLICATIONS - RA7512

Inspection of Brake Components

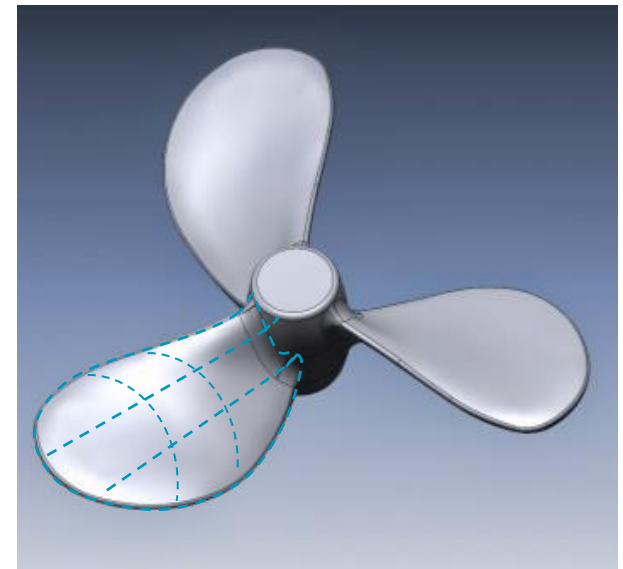
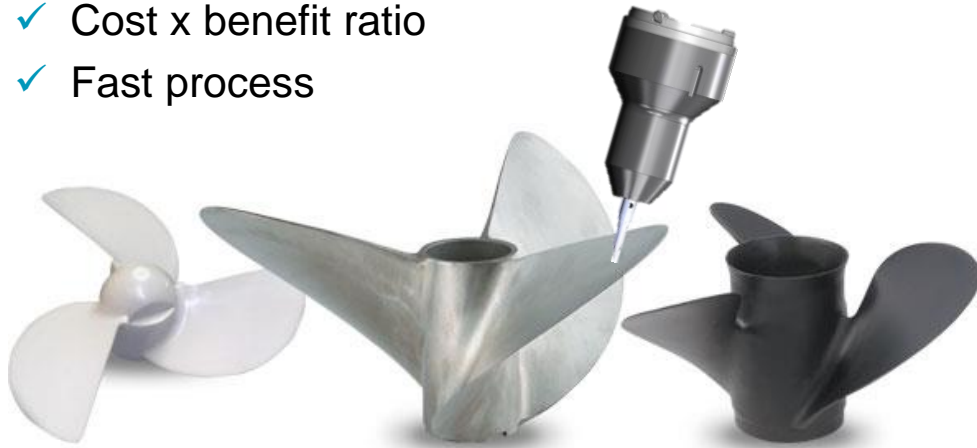
- Brake calipers and discs can be inspected to their CAD models, or measured for GD&T:
 - ✓ Disk flatness
 - ✓ Disk circularity
 - ✓ Caliper alignment
- **Why is the 7512 perfect for this application?**
 - ✓ Accuracy



SOME APPLICATIONS - RA7312

Reverse Engineering a Free-form Shape

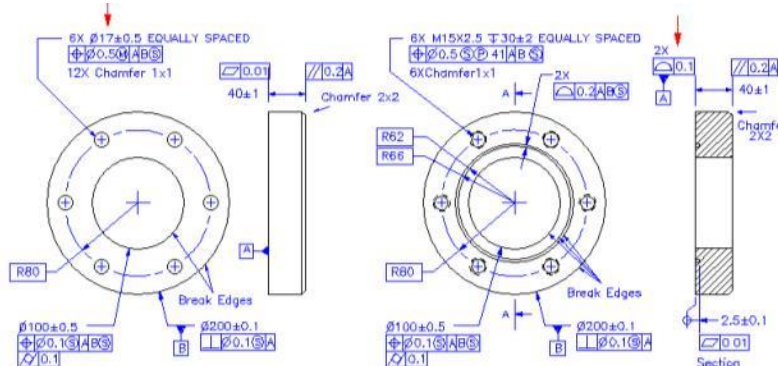
- Because hand tools measures only 1D, it's impossible to get dimensions of a free form shape.
- With ROMER Absolute Arm COMPACT you can reverse engineer free form shapes by creating splines using a point probe and exporting them to a CAD software as IGES.
- **Why is the 7312 perfect for this application?**
 - ✓ Cost x benefit ratio
 - ✓ Fast process



SOME APPLICATIONS - RA7312

Inspection of Ball Valves

- Like for the brake components, pumps and valves can be measured for many GD&T values, often according to a simple drawing:
 - ✓ Inspection of the holes of the flanges.
 - ✓ Alignment/ perpendicularity of vital pump axes.
 - ✓ Concentricity of the valve seat.
 - ✓ Checking of roundness of the steel ball to ensure the correct sealing.
 - ✓ Flatness of all flange planes.
- **Why is the 7312 perfect for this application?**
 - ✓ Portability: often the arm can be placed directly on the pump.



SOME APPLICATIONS - RA7312

Inspection of Household Components

- Light switches , plugs, alarms, thermostats have small features that require measurement, so that they may fit together correctly.
- **Why is the 7312 perfect for this application?**
 - ✓ Fast
 - ✓ Good cost x benefit ratio
 - ✓ It easily replaces hand tools



SOME APPLICATIONS - RA7312

Inspection of Household Appliance Components

- Components such as plastic covers, impellers and motors should all be checked for position and alignment.
- **Why is the 7312 perfect for this application?**
 - ✓ Companies like Electrolux use ROMER MultiGage 1.2m arms for years to inspect such parts.

