



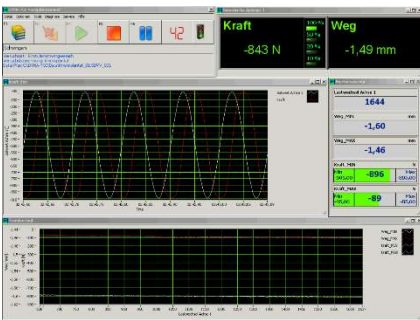
## Ideal for test lab

The universal DYNA-EndoWear are electrically powered and do not require compressed air or hydraulic oil.

Thanks to our compact design, our DYNA-EndoWear requires comparatively little space in the laboratory. Especially when several joint types are to be tested, for which only one test system would be required at DYNA-MESS.

They are compact, require only small footprint and are driven by electric power only.

## Software DYNA-TCC



DYNA-MESS develops the test software "DYNA-TCC" in-house and is constantly adapting to the growing requirements with regard to interfaces, design, operating systems, user tools and the state of the art.

Simple integration into a higher-level "Laboratory Information and Management System" (LIMS) by standardized and adaptable interfaces.

It is our uniform standard software for all test systems from DYNA-MESS and is therefore tried and tested worldwide.

The DYNA-TCC software is also used in our fatigue and static testing machines and thus forms an ideal platform for a universal laboratory solution. Therefore it is not a "one application development" but an additional software module extension of DYNA-TCC.

It is a real-time software for the configuration of all curves as a real-time setpoint for servo drives via freely definable and expandable software (closed-loop control) and not, as with some providers, through changes to the fixed hardware configuration consisting of "motor, drives and gearboxes" with the associated changeover effort, the new validation and of course a considerable amount of time.

## Flexibel and Efficient

Quick and easy sample change thanks to modular test cells for the type of joint to be tested.

Only one machine required to test hip and knee joint types. The machines other providers can often only display one type of joint, which means that two or more test systems are often required.

As a result, significantly better utilization, especially when there are not so many tests to be carried out and thereby significantly better ROI (Return of Invest).



## The technology in detail

The universal implant wear simulator DYNA-EndoWear is currently available in three different configurations:

- DYNA-EndoWear 3 **H** for **H**ip only
- DYNA-EndoWear 3 **K** for **K**nee only
- DYNA-EndoWear 3 **HK** for **H**ip and **K**nee

The basic machine DYNA-EndoWear always contains a reference station (green circle) and three test stations (blue circle).



Several coordinated electrical high-end servo drives are also used as such in their function so each axis may operate in force or position control (depending on the application) in the advanced feed-forward control mode. This means that all axes are actually controlled in closed-loop synchronously and dependent on each other and not just only regulated in simple speed or position control.

In combination with our new high-performance multi-channel-controller "**DYNA-CLC**" and our flexible test software "**DYNA-TCC**" - that has proven itself over many years - provides the ideal basis for multi-axis and very complex tests like this.

Each test station has the required sensors and a protective hose for tests in the medium, e.g. saline (in vitro).

For tests in medium (e.g. saline), each test station is equipped with a leak detection and can be temperature controlled.

The CE-compliant protective housing can be opened completely to the rear, which means that a lot of space and free ergonomic access to the test stations is possible.

A six axis load cell serves as a reference in one of the test stations. Optionally, the other two test stations can also be equipped with a six axis load cell.

DYNA-MESS as a system supplier for static and dynamic test systems - advantages:

- price advantage through package prices
- common maintenance & calibration
- one contact person for all machines
- uniform software and therefore less training effort





## About DYNA-MESS



*Commissioning hall of DYNA-MESS Prüfsysteme*

DYNA-MESS Prüfsysteme GmbH was founded in 1985 in Aachen. The company designs and produces machines (tension, compression, bending and torsion) as single or multi axis machines for static and dynamic testing of materials and components.

The roots of DYNA-MESS lie in the rope and lifting technology. The company received its first orders for the inspection of wire and synthetic fiber ropes as well as slings and chains. This has resulted in the development of a wide range of machines for material and component testing.

As a manufacturer of testing equipment for mechanical testing, DYNA-MESS focuses on the development, conception and realization of customized testing machines.

The focus is on dynamic component testing, which is carried out in the form of continuous vibration tests or continuous function tests, as well as on special machines for special applications.

For conventional testing tasks, DYNA-MESS has standard series of testing machines.

