



LDP, LTC

TORQUE TESTING BENCH TECHNOLOGY

LDP

- › MACHINE
- › SOFTWARE
- › OPERATING MANUAL
- › FACTORY CALIBRATION
CERTIFICATE
FOR TORQUE SENSOR

LTC

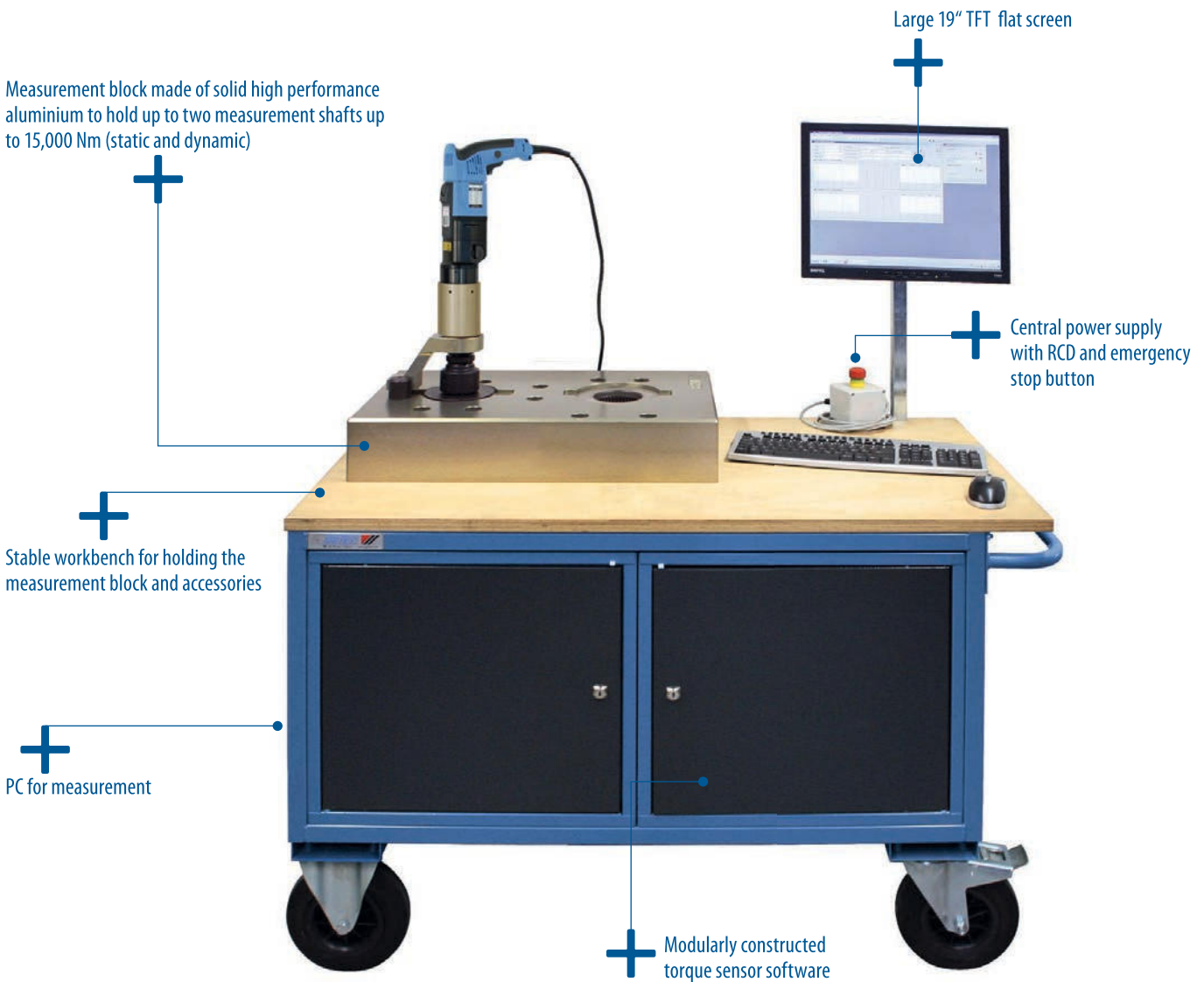
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THE TORQUE TESTING BENCH TECHNOLOGY

LDP SERIES, 100 - 15.000 Nm

LDP series



Measure dynamic torques, but how?

If one looks at the influencing factors that arise during the production of a correct bolted connection, it is clear that the greatest influence is due to the bolt itself: Type and condition of the thread, quality class, diameter, length, bolting in speed, the list could be continued almost endlessly.

For this reason, there are still no recommended measurement regulations from any of the official bodies for the traceable determination of dynamic torques. Torque measurements where the resistance of the bolted connection is simulated via mechanical braking systems or similar systems ignore significant influencing factors.

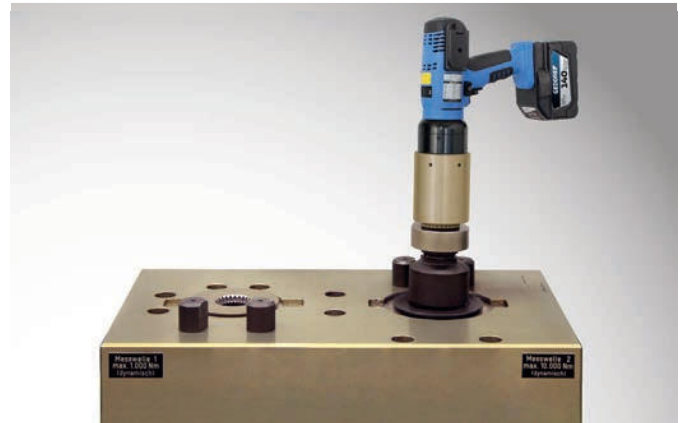
Static and dynamic torque measurements up to 15,000 Nm

Torque measurement with system

The torque testing bench system takes the actual aspects of your bolting applications in practice into account as much as is feasible. Original bolts with all the influencing factors that act on them are measured to determine the dynamic torques.

Correction factors are not necessary

The value determined during measurement is actually equivalent to the dynamic torque applied to the bolted connection. Subsequent addition of correction factors for hard or soft bolting operations, etc. is not necessary. This allows you to implement rational and error-free measurement in all application cases.



The modular kit

The interface between bolt and test bench is the so called bolt adapter. Attachment of the bolt to the bolt adapter is simple and means that the bolted connection can be changed at any time, even during measurements. Special adaptations are just as easy with this system as the direct use of standard female hexagon inserts for static torque measurement of hydraulic wrenches, torque multipliers and torque wrenches.

Module for graphical evaluation

The mean values of all measurement series are recorded graphically and shown on the factory calibration certificate. The torque curve is recorded up to the maximum value for hydraulic torque wrenches and manual torque multipliers.

Module for different languages

Certificates in various languages are increasingly required due to the international use of bolting systems. This is no longer a problem with the language module. The languages of all previously created factory calibration certificates can be changed both during measurement and afterwards. Over 15 European and Asiatic languages are currently available.

Module for measurement unit selection

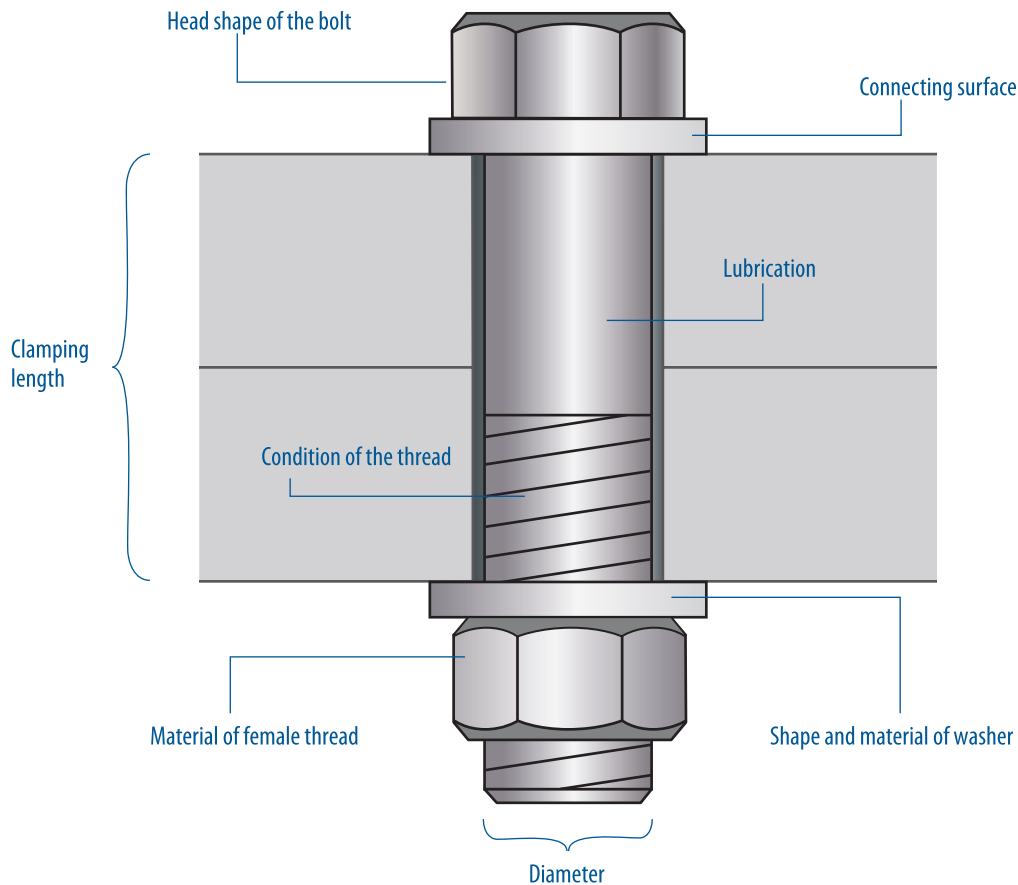
Torque data is frequently given with the imperial units system. This software module allows you to switch the units in all previously created certificates before or after measurement between the metric and imperial units systems.

Database module

You can administrate all your torque wrenches as well as static and dynamic bolting systems with this module. Over 500 test specimens can be recorded for 20 years with the basic module alone. Identification is implemented with a bar code scanner.



THE INFLUENCING FACTORS OF A BOLT



Influencing factors of the bolt connection

The aim of every bolt tightening operation is to achieve the required clamp force that is generated between two components being connected. The clamp force is influenced by numerous factors in the torque process. This means that the expected clamp force may not be reached in the end because other influencing factors have reduced the force. Influencing factors can be the condition of the thread, lubrication, etc. It is therefore very important to know the bolted connection and relevant influencing factors before any bolt tightening using torque. But how can the required clamp force be achieved with reproducible accuracy? The answer is: system setting using original bolts.

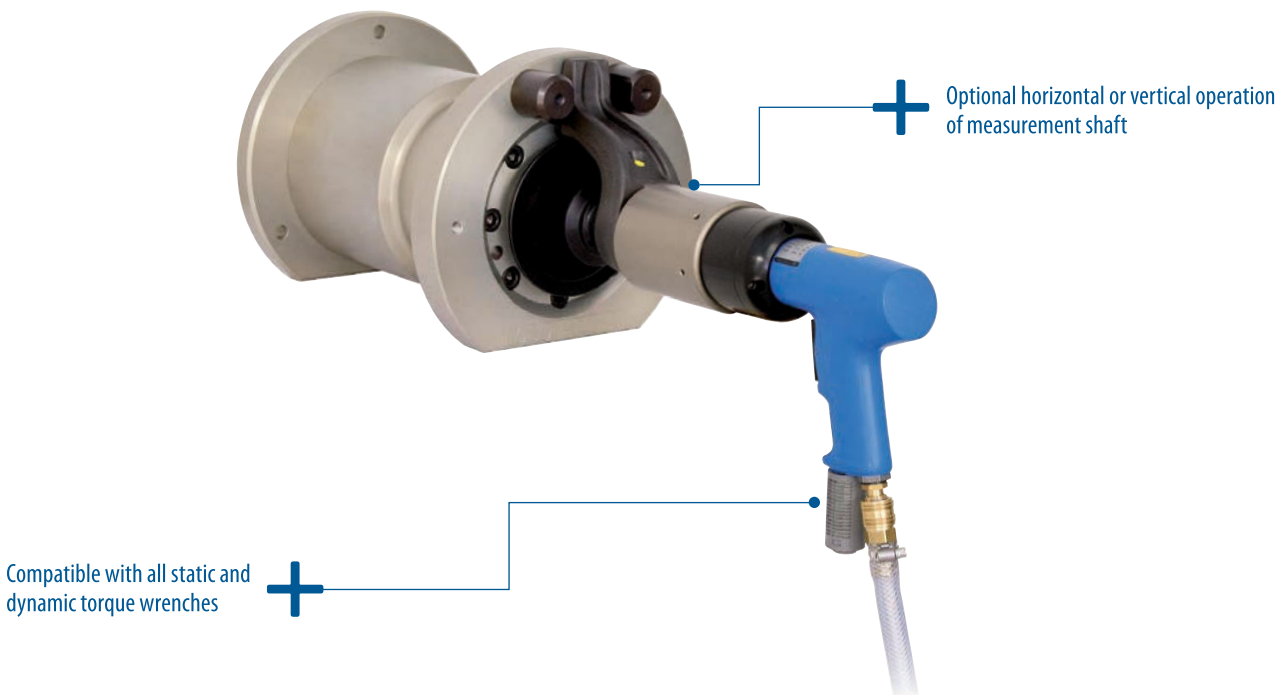
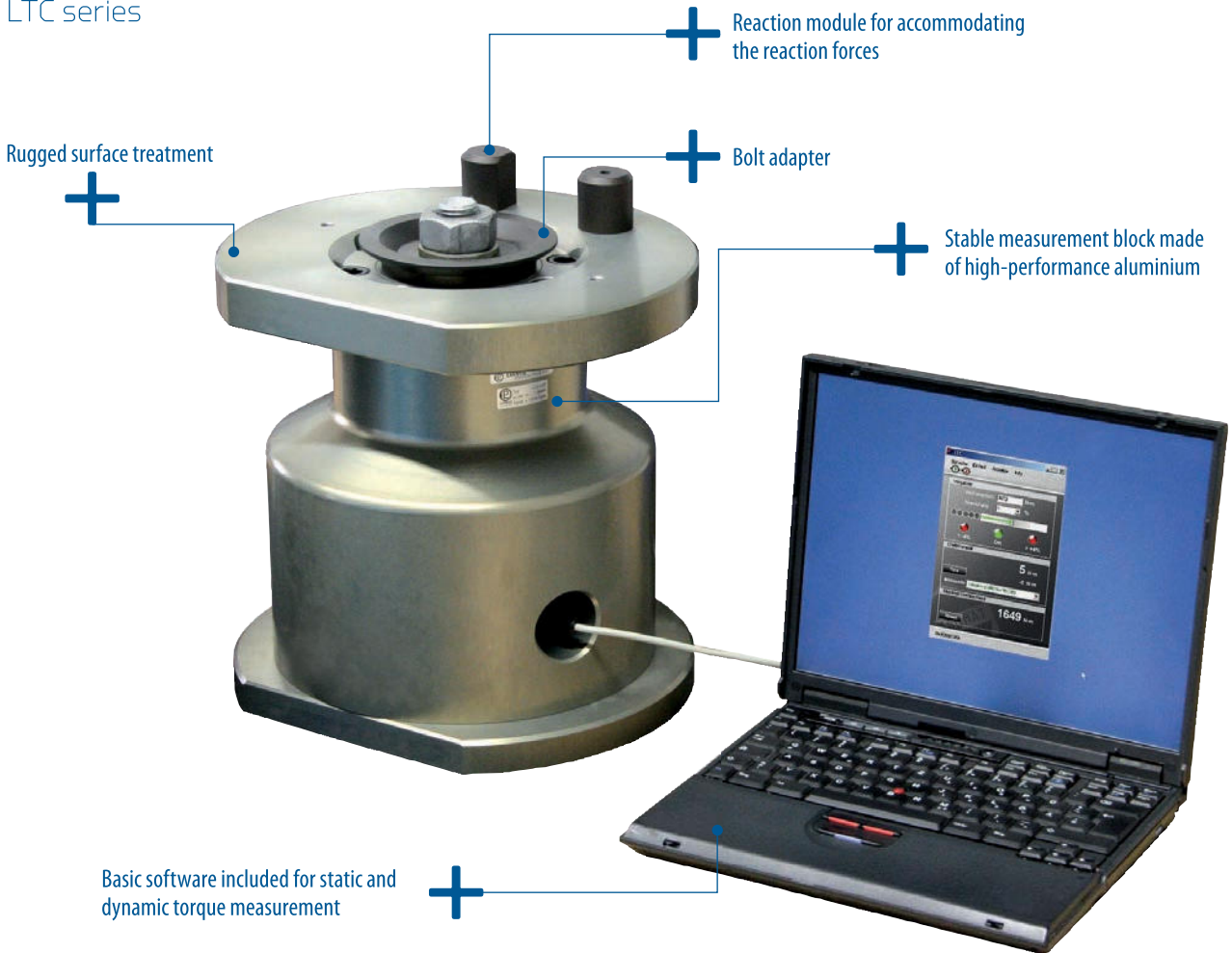
Teach-in with original bolts

We know the influencing factors for bolt connections and take them into consideration during the test procedure. Our philosophy is very close to practice. The bolt adapters in the torque testing benches are realised 1:1 with the real application case. All influencing factors are taken into account with this process. Even exotic bolting operations can be individually simulated with our torque testing benches. The entire system reacts flexibly to hard and soft, static and dynamic bolting operations. At the end of measurement, each device receives the individual factory calibration certificate.

THE TORQUE TESTING BENCH TECHNOLOGY

LTC SERIES, 100 - 5.000 Nm

LTC series



Static and dynamic torque measurements up to 5.000 Nm

Static and dynamic bolting systems must be regularly checked for their torque accuracy. The Torque Check (LTC) system was developed for simple, mobile and professional dynamic torque measurement.

Torque measurement with our system

You do not need to omit proven, close to practice measurement of your bolting operation with this model. As in the larger LDP series the dynamic torque is determined using an original bolt. The supplied bolt adapter can be exchanged and replaced.

Basic software with comprehensive utility

The basic software included with the system has comprehensive utilities for rapid static and dynamic torque measurement in metric and imperial units. Both German and English are available as the operating languages. At the end of each measurement, the system signals the operator immediately as to whether the determined value lies within the specified tolerances or not. The operator is constantly informed visually and numerically about the torque progress. This is particularly helpful when testing torque wrenches.

The basic software can be upgraded modularly to a complete test bench environment. So that the test bench grows from the entry model to a fully professional system together with your requirements.



The LTC is available for the following measuring ranges:

LTC-10	100 – 1.000 Nm
LTC-30	300 – 3.000 Nm
LTC-50	500 – 5.000 Nm

