General Information regarding the calibration of test stations

General Information:

All testers are being calibrated and adjusted on site by the use of traceable measuring instruments. The test certificate, included in the delivery, provides information regarding the determined measurement accuracies. In the area of industrial and scientific measurement engineering there is no need for official calibrations by the bureau of standards. Industrial and scientific measurement parameters will be calibrated and adjusted. In Germany, only inspections are affected, which, determined by law, are subject to official calibrations. The calibration gives indication on the extent to which the measured value and the correct value correspond to each other. Hereby, it is assumed that the measuring equipment does not exceed the pre-determined limits during the process. This is assumed until the next calibration takes place. This is based on the prerequisite that the measuring equipment is treated and handled in a proper way in the meantime. We recommend inspections on a regular basis to check the proper functioning and accuracy of the testers. The intervals of those inspections depend on the tester model, the frequency of use, the operating conditions and the customer's individual requirements of measurement control. Thus, a general statement regarding the calibration cycle is not possible. The control and calibration process may take place in our works or on site, carried out by the customer.

Should the customer decide to inspect the test station on his or her own, there is the possibility of calibrating with a digital force measuring system and a corresponding load cell, serving as a force transducer. Moreover, we recommend a periodically performed inspection of the tester in our works. As part of this kind of inspection, the functionality of the device is checked, faulty or worn out parts are being replaced and the tester will be adjusted. If requested, a factory default calibration can be carried out, too.

Display Control with the KMG Force Gauge:

Load Cell 50 to 1000 N with fork heads M6	Load Cell 2000 to 10000 N with ball screws M12

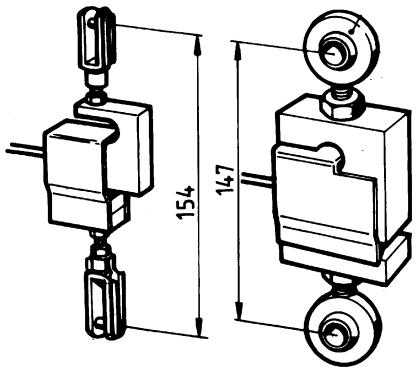
For the adjustment and calibration of MAV PRÜFTECHNIK test machines, the KMG force gauge can be equipped with load cells of the required force range from 50 to 10,000 N. In order to do this, a set of support racks is needed for the fixture of the respective load cell on the tester. Moreover for manually operated devices, the KB 1000 load adaptor is required for the application of a defined static testing load.

All basic information and technical data regarding the KMG force measuring device can be taken out of the descriptions for the KMG and SM load cell. Any desired amount of load cells with whatever range you just need can be connected to a single KMG force gauge and be operated alternately. When re-ordering a single load cell, the customer can just connect it to the KMG. The KMG will automatically detect the connected load cell, display it on the intro screen and load all related parameters. Consequently, the appropriate load cell connected to the KMG can always be selected for the required range of the tester to be calibrated.

When using the KMG as a control device, the load cell will be equipped with M6 fork heads or M12 ball screws, depending on the force range. For the fitting on the tester, appropriate HLT support racks are required. During the calibration, the displayed values of the tester and the values of the KMG force gauge are being compared.

When calibrating a motorized test station, the load is applied through the motor drive, whereas for manually operated testers, a KB 1000 load adaptor is needed to apply the static test load.

KMG Force Gauge



Load Cell 50 to 1000 N with fork heads M6	Load Cell 2000 to 10000 N with ball screws M12

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mav Prüftechnik® Testing Technics

General Information regarding the calibration of test stations

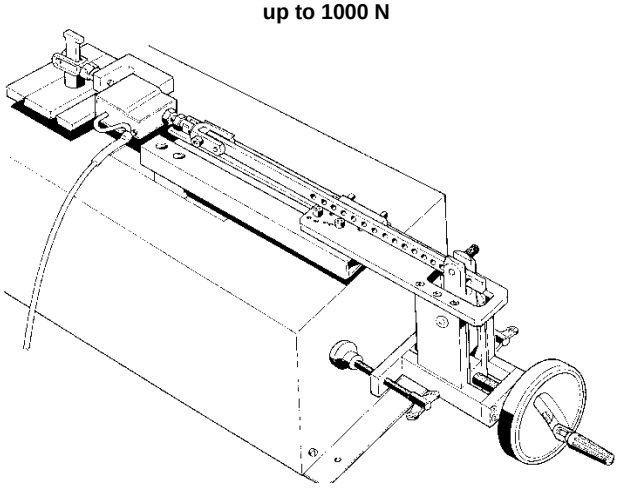
Adjustment and Calibration of Test Stations with the KMG force gauge:

For carrying out adjustments with an optimum accuracy the testers have to be loaded with their respective nominal load. Therefore it is a prerequisite that the testers can be loaded with a defined static load during the adjustment procedure. This also applies for the calibration of testers, however for a calibration not only should the nominal load be generated, but also should the accuracy be verified at predefined force steps, e.g. a verification series over the range of 10% of the nominal load.

In case of the adjustment or calibration with the KMG force measuring device, the corresponding load cell of the KMG is set up between the measuring point and the load bar of the tester respectively between the measuring point and a suitable load adaptor (e.g. KB 1000). For this, applicable support racks are used, which enables an assembly at the necessary fixing height. The measuring point of the tester is loaded via the reference load cell either by means of the tester's drive or by means of a load adaptor. During the calibration process, the operating mode of the tester must always be set to roll mode. During the calibration, the displayed values of the tester and the KMG force gauge are being compared. If deviations are determined which are outside the permissible tolerances, the tester must be readjusted. Depending on the model, for digital testers there is a model specific adjustment menu with automatic adjustment, which can be used. All information needed for this can be found in the instruction manual.

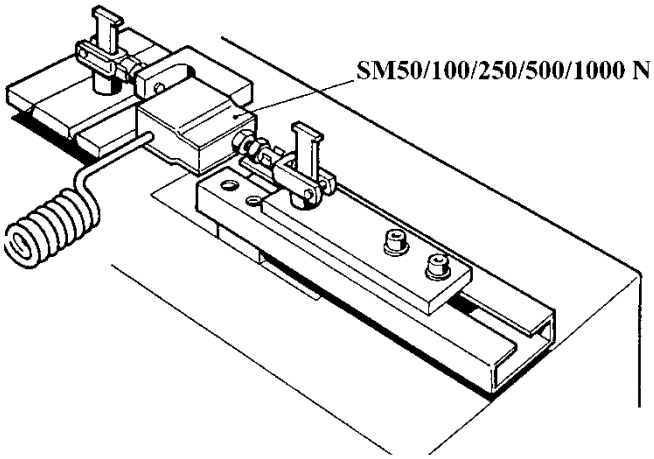
Examples for Controls with the KMG force gauge

for testers CT 50, FT,FT-Touch, ET(S), EP, EP/LV, DIP up to 1000 N



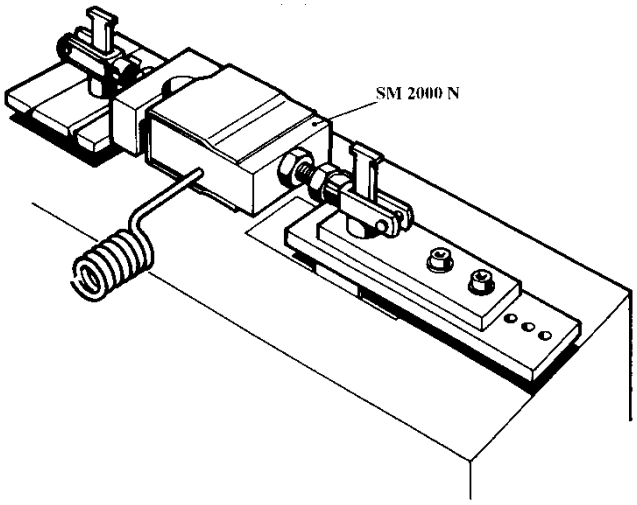
load cell with load adaptor KB 1000

for testers FTS, ETM, FTM, ATM, EPM, DIP/S, DIPM up to 1000 N



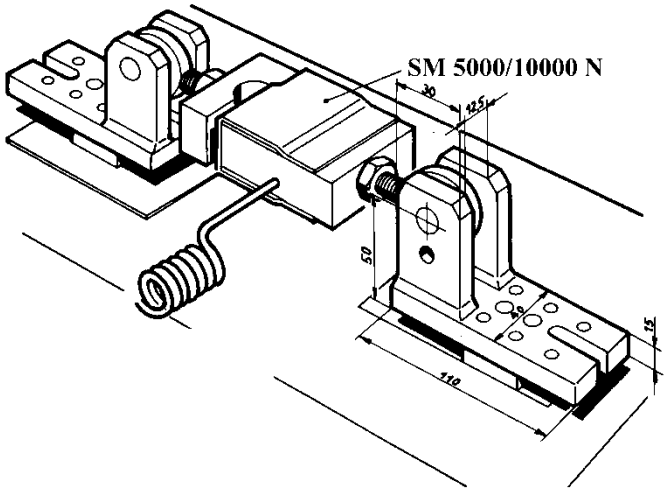
load cell with support racks HLT 100

for all motorized testers with a nominal load of 2000 / 3000 N



load cell with support racks LB 300

for motorized testers with a nominal load of 5 kN/ 6 kN / 10 kN



load cell with support racks LB 1000

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