



**IKM Intelligent Calibration Module for Deadweight Tester
(Pressure Balances)**

- Used in combination with a deadweight tester (pressure balance) to determine the required mass loads
- Conversion into all common pressure units
- Consideration of the local gravity on-site
- Considers all critical ambient parameters to improve the measuring accuracy
- Easy calibration of pressure transmitters through integrated voltage supply and multimeter function (optional)
- Self-sustaining system, PC-independent
- Retro-fitting possible, for all deadweight tester (pressure balances) available on the market



IKM - Basic

Deadweight Tester (pressure balances) are well-proven precision measuring products. Their mechanical measuring principle guarantees high accuracies. However, in order to achieve these accuracies, corresponding corrections have to be made. Besides the temperature of the piston-/cylinder-system, the main influencing factors are the local gravity and the ambient parameters. The basic IKM package converts masses into the corresponding pressure value, or vice versa it calculates the mass-loads required for a specific pressure value. The conversion can be carried out in all common pressure units. The ambient parameters (temperature, relative humidity, barometric pressure) can be entered into the IKM manually to get the corrections.

IKM - Metrology Extension

This package (option) includes sensors to make an automatic registration of all critical parameters and a continual updating of the calculations possible. Thus no additional laboratory measuring instruments such as barometers, hygrometers and thermometers are required.

IKM - Transmitter Extension

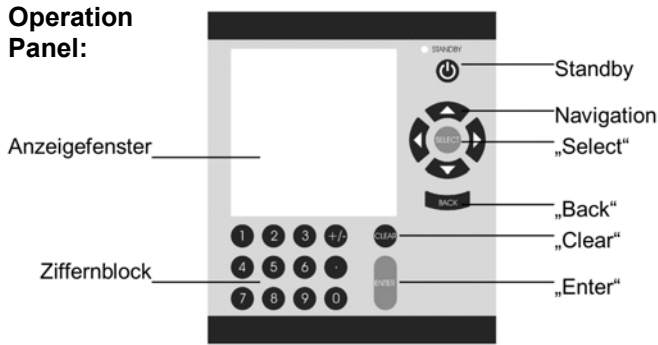
Deadweight Tester are frequently used for (on-site) calibration of pressure transmitters. Using this extension no additional devices are required. The power supply for the pressure transmitter (12 VDC regulated) as well as the signal measurement is realised via this optional module. Besides the signal (mA or V) the automatic converted pressure value is also shown on the IKM display.

IKM- Visualisation Extension

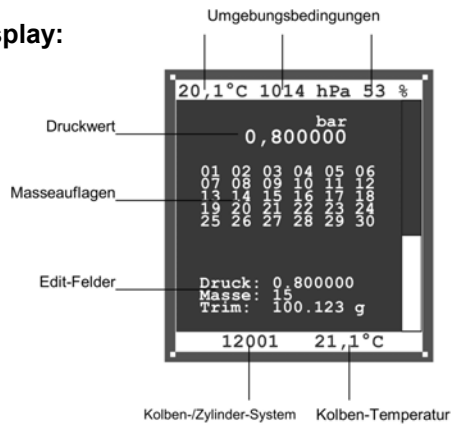
With this package, the IKM shows the position of the piston as a bargraph on its display. The piston position is measured contact-free. This helps the user to find and keep the right piston position.



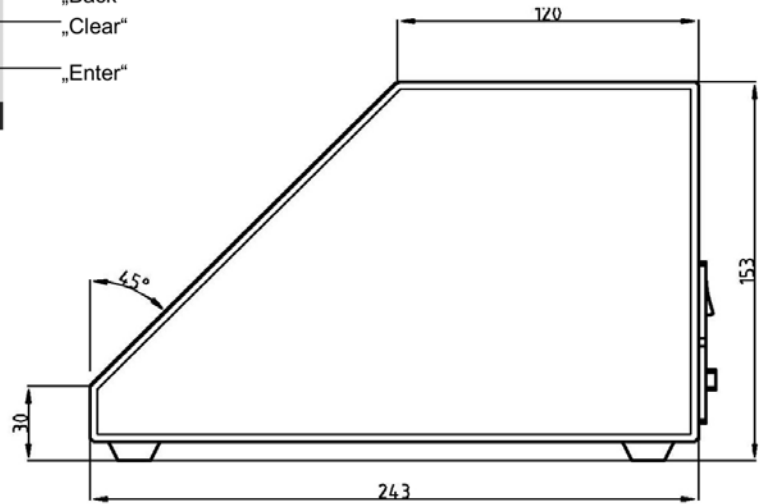
**Operation
Panel:**



Display:



Dimension:



Techn. Data:

	IKM - basic	Metrology Extension	Transmitter Extension	Visualisation Extension
Dimension	155 x 243 x 145 mm			
Weight	appr. 3.3 kg			
PC-Communication	RS 232			
Barometric Pressure Range Accuracy		900...1100 mbar abs. 0.05%		
Piston temperature Range Accuracy		10...30°C 0.1°C		
Ambient temperature Range Accuracy		10...30°C 0.5°C		
Air humidity Range Accuracy		20...80% r.h. 5%		
Voltage / Current Range Accuracy			0...10 V, 0/4...20 mA 0.01%	
Measurement of piston position Accuracy				0.5 mm