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## **Original Operating Instructions 1255729**

F-Senso Entry Force Measuring Device  
Type: 10-80 kN;

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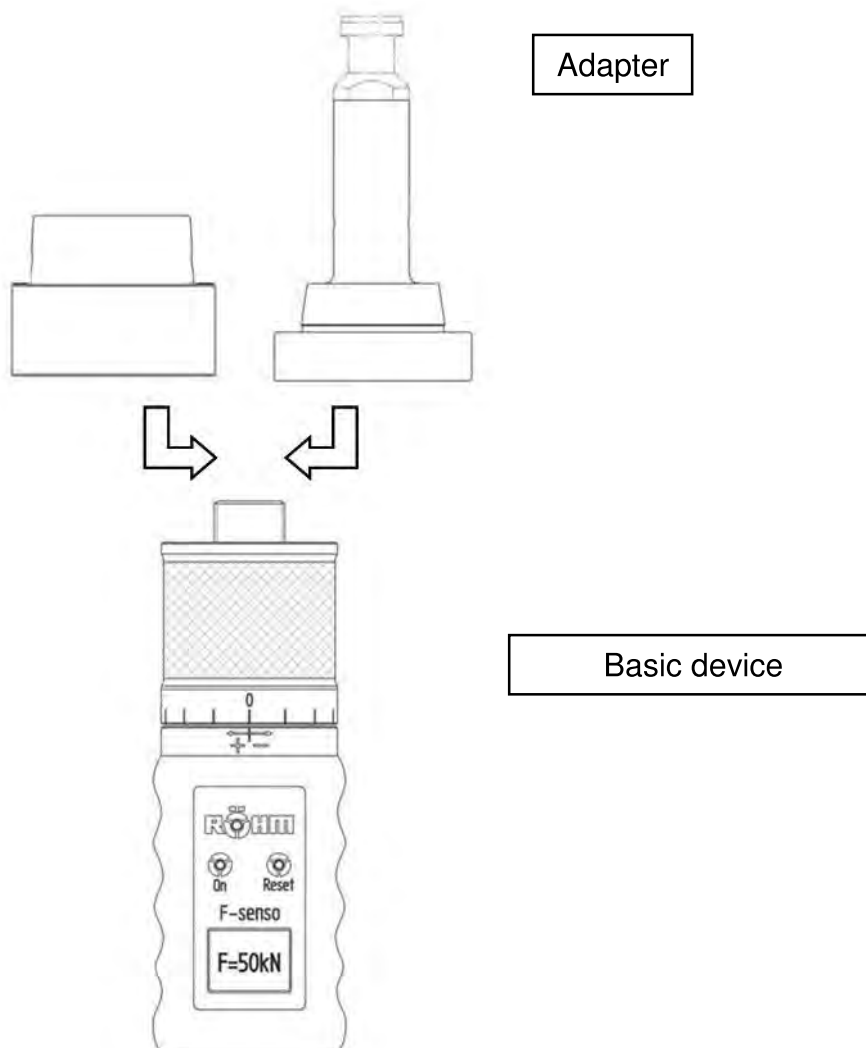


## Description

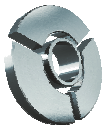
Many thanks for deciding on the F-Senso entry force measuring device from the company ROEHM. Please read through the operating instructions carefully before putting the device into operation.

### 1. Description

The F-Senso entry force measuring device is employed for measuring the axial entry force of tool receptacles in the machine spindle. Forces on various different tool receptacles can be measured, such as e.g. quick-release taper (SK), hollow shaft cone (HSK) and also Capto (PSC). This is realized through the utilization of different adapters.



2.



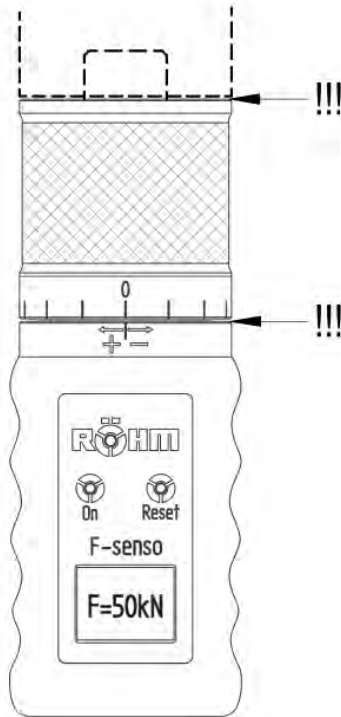
### General information

- Adhere to the specified installation or operating steps.
- The operation / installation of this product may be implemented by qualified specialists only.
- Except for the activities described in the operation and installation directions relating to the product, no changes, attachments, conversions or maintenance work may be carried out on the product.
- The measuring device can be damaged by overload of more than 10% of the maximum value.
- Transport and store the device carefully in the case supplied.
- If faults occur in the product, please contact the manufacturer.



### 3. Danger warnings

!!! Danger of crushing!!!



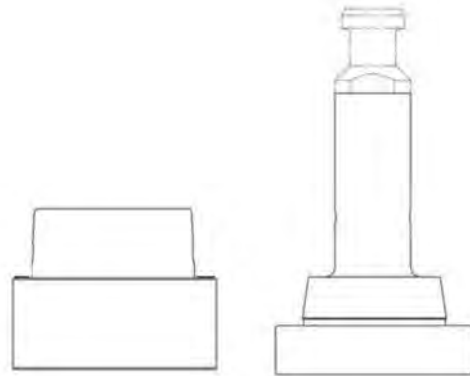
Danger of crushing exists in the upper area of the adapter, on the limit stop surface.

Therefore increased care should be taken during the measurement procedure.

Likewise, danger of crushing exists when adjusting the setting sleeve.



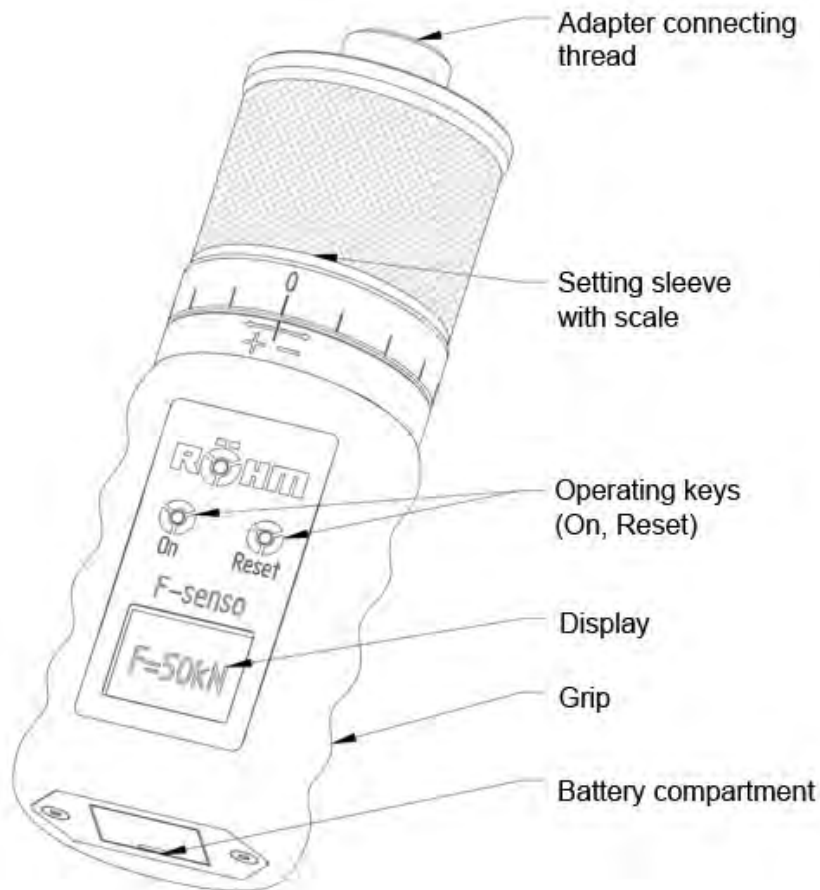
Exercise care when handling the adapter, since the individual adapter parts are not fixed-connected with each other, rather simply latched together.





### 4. Operation

#### 4.1. Overview of the basic device



#### 4.2. Operational startup

Please first place the supplied 9 V block battery into the identified battery compartment.

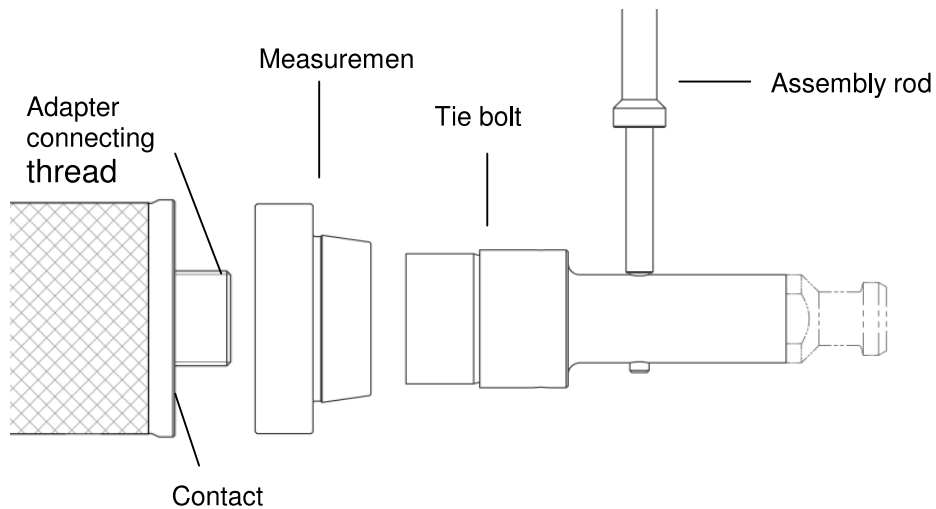
#### 4.3. Adapter mounting

Prerequisites

- Only matching adapters of the company ROEHM may be mounted.
- The adapter connecting thread M24 x 1.5 and the flat surface must be in a clean and undamaged condition.

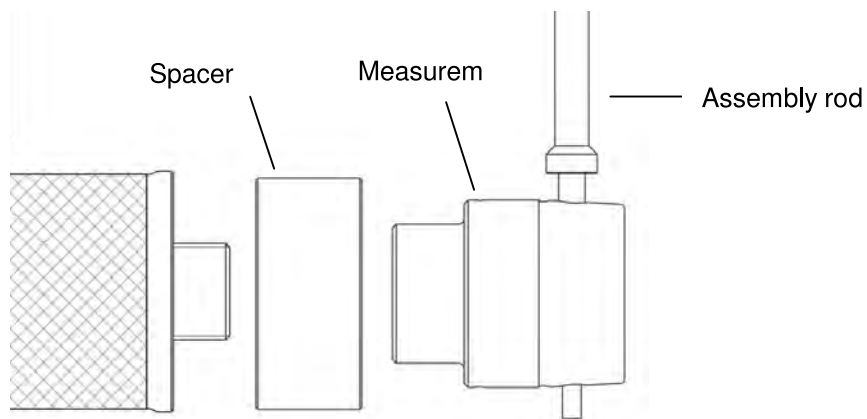


### SK Adapter mounting



1. Place measurement cone onto the basic device.
2. Screw tie bolts onto basic device.
3. Tighten tie bolts with assembly rod hand-tight on basic device.

### HSK adapter mounting



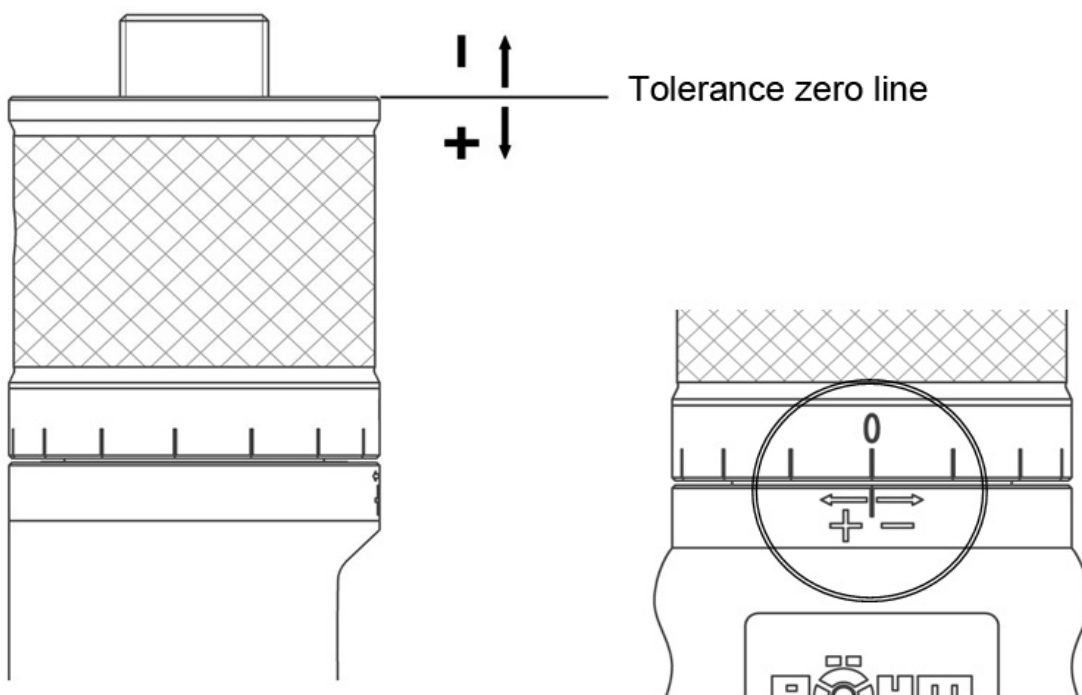
1. Place spacer onto the basic device.
2. Screw measurement cone onto basic device.
3. Tighten measurement cone with assembly rod hand-tight on basic device.



### 4.4. Positioning the setting sleeve

With the F-Senso entry force measuring device, it is possible to consider tolerances between spindle and tool.

Measuring is to be implemented in the represented position of the setting sleeve (see circled area in right-hand display), if no wear is present on tool receptacle, spindle shaft and clamping set. By adjusting the setting sleeve, wear can be considered in case of the measurement.



- First adjust the setting sleeve to required position.
- One latching of the setting sleeve corresponds to an axial displacement of 0,1 mm.
- The setting sleeve must have engaged exactly after every adjustment.
- Rotating the setting sleeve in "+" direction means an extension of the tension element on the adapter; rotating in "-" direction means a shortening.  
(Expressed differently, a displacement of the flat surface with respect to the clamping slant of the adapter).



### 4.5. Carrying out a measurement

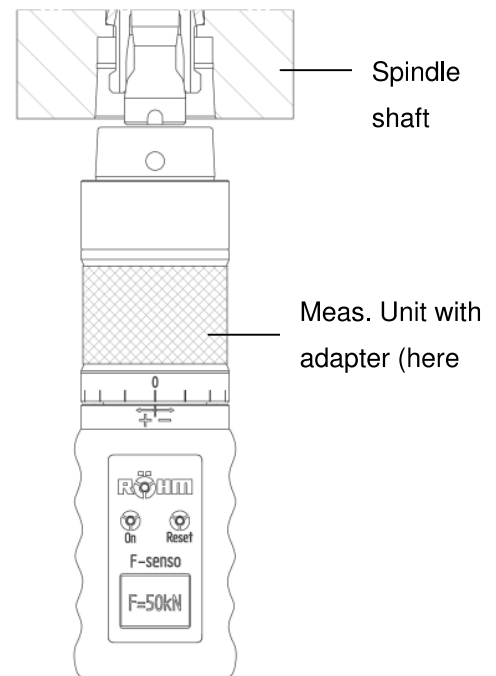
Please mount corresponding adapter (see Chap. 4.3) before you switch on the device. Check the position of the setting sleeve (see Chap. 4.4). This must have engaged before every measurement.

Switch on the device by pressing the On key. After that, an information screen with the serial number appears briefly. Now the device changes into measuring mode. You can begin the measurement.

Insert the device with adapter into the spindle shaft centrally and straight.

Activate the workpiece clamping, where you introduce the entry force.

The currently acting entry force is displayed, as well as the maximum entry force indicated below that.



By repeated pressing of the On key, the device switches off again. The same result occurs with the AUTO-OFF function if the device is not used for 3 min.





## 5. Technical data

<b>Measuring range</b>	10-80 kN
<b>Resolution</b>	0.1 N
<b>Measurement principle</b>	Force sensor with strain gauges
<b>Operating modes</b>	Display of the current value
	Display of the maximum value
<b>Precision</b>	0.25% (f.s.)
<b>Overload</b>	max. 10%
<b>Display</b>	LCD display
<b>Power supply</b>	9 block battery
<b>Temperature range</b>	5 - 40° C
<b>Weight</b>	approx. 2 kg
<b>Dimensions</b> (Basic device)	approx. Ø 66 mm; L = 189 mm

## 6. Guarantee exclusion

If damage occurs, caused by

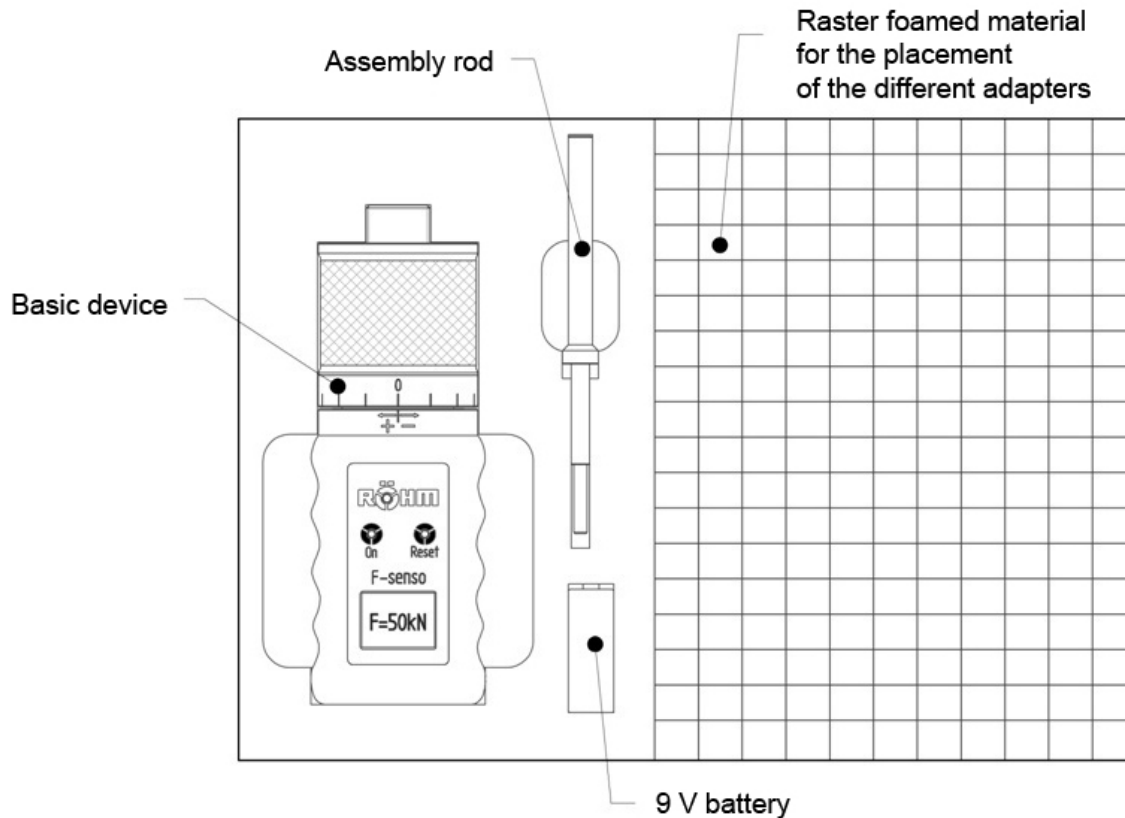
- non-observation of the written instructions (operating instructions) of the vendor,
- natural wear,
- influence of force majeure,
- operating errors of any type or caused through improper employment or operation or
- changed environmental conditions,

the guarantee claim is invalidated. ROEHM therefore does not assume any further liability.



## 7. Scope of delivery and accessories

The following illustration shows the supplied case content.



You can find the ID No. of the different adapters below, which match the basic 10-80 kN device.

Adapter	ID No.
HSK-A 50	1255738
HSK-A 63	1255739
HSK-A 80	1255740
HSK-A 100	1255741
HSK-A 125	1255742
SK 30	1255743

Adapter	ID No.
SK 50	1255745
SK 60	1255746
Capto PSC 40	1255748
Capto PSC 50	1255749
Capto PSC 63	1255750
Capto PSC 80	1255751