

Instruction manual FK50

Congratulations on your purchase of a Spring Force Gauge of FEINMETALL.

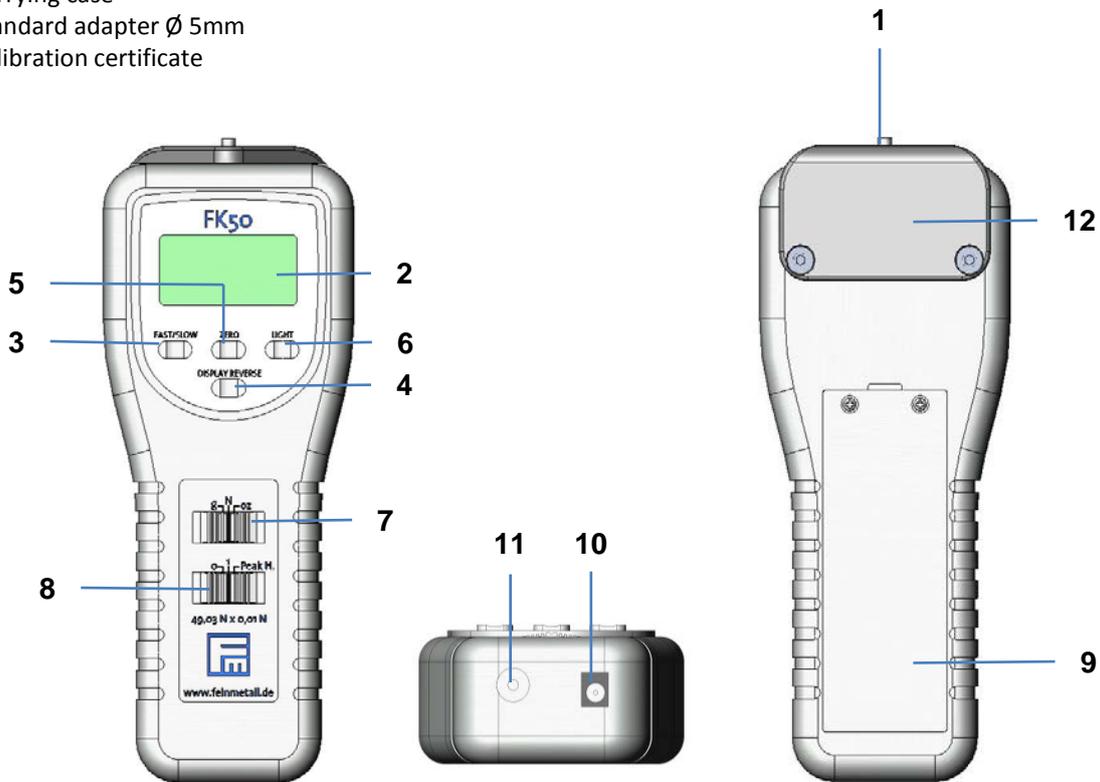
For questions, requests or suggestions, do not hesitate to contact us.

Read this manual carefully before commissioning, even if you already have experience with FEINMETALL measuring instruments.

The instrument may only be operated and maintained by trained staff.

1. Scope of delivery

- Spring Force Gauge FK50
- Carrying case
- Standard adapter \varnothing 5mm
- Calibration certificate



1. Load cell
2. LC Display
3. FAST/SLOW (Button for fast or slow measuring frequency)
4. DISPLAY REVERSE (reversal by 180°)
5. ZERO (zero setting)
6. LIGHT (Backlight, must be pressed at least 2 sec. Automatic shutdown after about 15 sec.)
7. Unit selection (N, g, oz)
8. Power / Peak Hold – sliding switch
9. battery case
10. DC 9V connector
11. RS 232 output terminal
12. Retainer (angle)

2. Warning notices

The instrument is only suitable for use by the human hand.

It is not suitable for use with technical hooks or cranes.

Wrong executed measurements may cause serious personal injury and damage of property.

In particular forces that overload the maximum load of the instrument or any lateral forces on the load cell have to be avoided.

Otherwise the instrument can be damaged.

If the maximum load is exceeded „-----“, is displayed.

All kind of torsions of the instrument may lead to breakage of the instrument or decline of accuracy.

Please note:

Any technical modification of the instrument is prohibited and may cause incorrect results, safety defects and the destruction of the instrument.

The instrument may only be used in accordance to the described guidelines.

The warranty expires by:

- Failure to comply with our guidelines
- Use other than the described applications
- Modification or opening the device, mechanical damage by media, liquids
- Wear and tear
- Inappropriate mechanical or electrical installation
- Overload

Within the quality assurance the measurement technology properties of the instrument must be reviewed at regular intervals.

The responsible user has to define a suitable interval as well as the type and quantity of the maintenance Interval.

3. Operating conditions

- 0°C to 50°C
- 15% to 80% humidity
- Measure capacity and accuracy 50 N +/- 0,5 % at 25°C

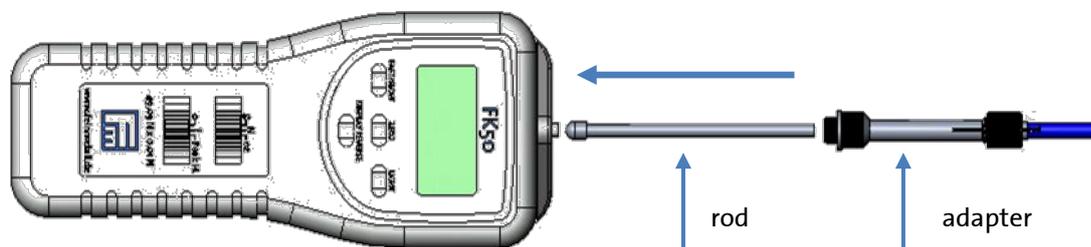
4. Power supply

- 6 x 1,5 V AA, UM-3 size battery
- Built in low battery indicator (LCD shows “Lo”)
- or DC 9V adapter (not included)
- The power consumption is approximately DC 28 mA.



5. Measuring procedure

Install the adapter with the rod to the retainer angle (12.).

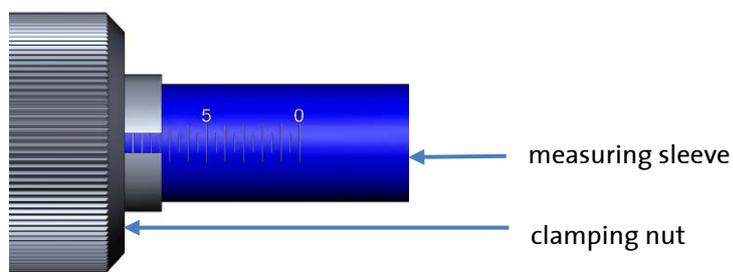


Set the measurement range according to the following formula via the clamping nut and the measuring sleeve: Projection height (PH) minus working travel (WT) equals the value to set at the scale.

E.g.: PH = 10,9mm, WT = 4,0mm, value = 6,9mm (PH – WT).

Please note: The scale on the measuring sleeve is for orientation.

The adjusted value has to be checked with a calibrated measurement equipment.



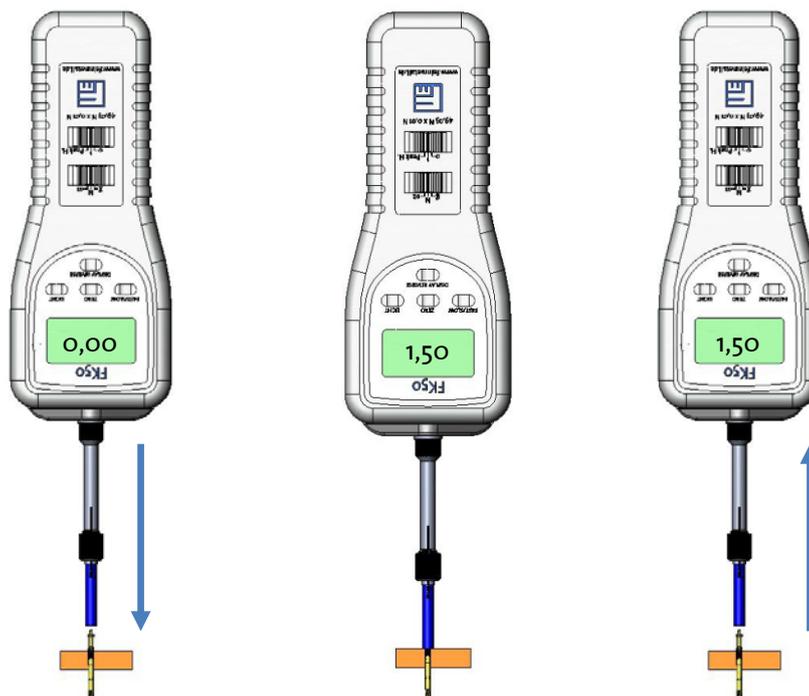
Set the Power sliding switch (8.) to Peak Hold and the Unit selection sliding switch (7.) to N.

Turn the advice upside down that the adapter faces downwards.

Now push the DISPLAY REVERSE (4.) button.

Next push the ZERO (5.) button.

Start the measuring procedure by guiding the measuring sleeve over the spring contact probe.



The result is now displayed.

After pushing the ZERO (5.) button, the next measuring procedure can be started.

6. Configuration of the RS 232 and the computer interface cable

The computer interface cable, one side with a ear phone plug that connects to the meter's RS 232 output and the other side with the D9 plug that connects the computer's COM terminal, is optional available.
16-digit-signal output:

D15	D14	D13	D12	D11	D10	D9	D8	D7	D6	D5	D4	D3	D2	D1	Do
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Do	End Word		
D1 & D8	Display reading, D1 = LSD, D8 = MSD		
D9	Decimal Point (DP), position from right to left 0 = No DP, 1 = 1 DP, 2 = 2 DP, 3 = 3 DP		
D10	Polarity, 0 = Positive, 1 = Negative		
D11 & D12	Annunciator for Display		
	g = 57	Newton = 59	oz = 58
	Kg = 55	LB = 56	
D13	1		
D14	4		
D15	Start Word		

Configuration of the D9 plug:

Pin	Signal	Pin	Signal
1	Data Carrier Detect	6	Data Set Ready
2	Received Data	7	Request to Send
3	Transmitted Data	8	Clear to Send
4	Data Terminal Ready	9	Ring Indicator
5	Signal Ground		

Configuration of the ear phone plug:

Signal (Tip) = Pin 2, Ground (Sleeve) = Pin 5

RS 232 setting

Baud rate	9600
Parity	No parity
Data bit no.	8 Data bits
Stop bit	1 Stop bit



7. Optional accessories

- RS232 Computer interface cable
- Miscellaneous adjustable and rigid adapters
(the range is shown in the latest catalog or on www.feinmetall.de)

ATTENTION!

The screw thread of the clamping nut and the adapter needs to be cleaned and greased in periodical time segments to keep an ideal clamping force and movability.

