

DIGITAL DENSITOMETER MD 20

Introduction

Digital densitometer MD 20 is a portable battery-powered densitometer designed for measuring radiograph blackening using an external light source - incandescent or LED radiographic illuminator (viewer).

The densitometer is equipped with a semiautomatic zero adjustment and automatic switch-off when not used. For each recalibration we highly recommend using of a densitometric etalon FOMASTEP E-09.

Technical Description

Densitometer MD 20 consists of its own measuring instrument, the measuring probe and shielded connecting cable. The USB connector for connecting the probe using the shielded cable is located on the top of the device above the display. The measuring probe embodiment is a pencil with a black plastic housing. The construction of the measuring probe ensures spot measurement of radiographic blackening.

Operating instructions

Device control:

Switching the device on/off - briefly press the button with the switch symbol Ⓞ

Meter reset - connect the probe. Place the probe on the viewer screen and press and hold the button with symbol „0" until the display shows blinking „0" as well, which will also be stored in the instrument.

Measurement itself - place the probe on the tested densitometric transparent film which is placed on the viewer screen.

Instrument Recalibration

Densitometer MD 20 enables recalibration according to ASME SE-1079 or ASTM E 1079-85 ("Standard practice for calibration of Transmission densitometers") using the button CAL according to the USER MANUAL (delivered with the device). For the device recalibration we recommend using FOMASTEP E-09 densitometric etalon.

Supply Subject

- Densitometer MD 20
- Measuring probe
- Connecting cable with a USB connector
- Battery 9V (type 6F22)
- Calibration sheet
- Operating manual (user manual)
- Suitcase

Instrument Advantages

- Very high accuracy thanks to the use of an integrated circuit with a capability to logarithm in decades
- Zeroing with any light
- One of the smallest densitometers in the market
- Affordable price



Technical parameters

Measuring range	0 - 4,0 D
Resolution	0,01 D
Precision	+/- 0,05 D (within 0 - 4,0 D)
Display	Blackening, +/-, LOBAT
Zero setting range	In any illumination
Zero holding time	About 5 min (+/- 0,01 D)
Zero stabilization time	Max. 1 sec
Data stabilization time	Max. 2 sec
Probe opening diam.	2 mm
Power - battery	9 V typ, IEC 6F22, 6LR61
Consumption on / off	11 mA
Operating time (measurement)	About. 45 hrs (alkaline battery)
Control	4 buttons:
	Ⓞ on / off
	0 zero adjustment
	CAL switch to calibration mode
	↑↓ setting the required value of blackening during calibration
Automatic turning off	About 5 min after turning on
Ambient temperature	5 - 35°C
Dimensions	79 x 118 x 25mm
Cable length	70 cm
Weight	126g (170g including battery)