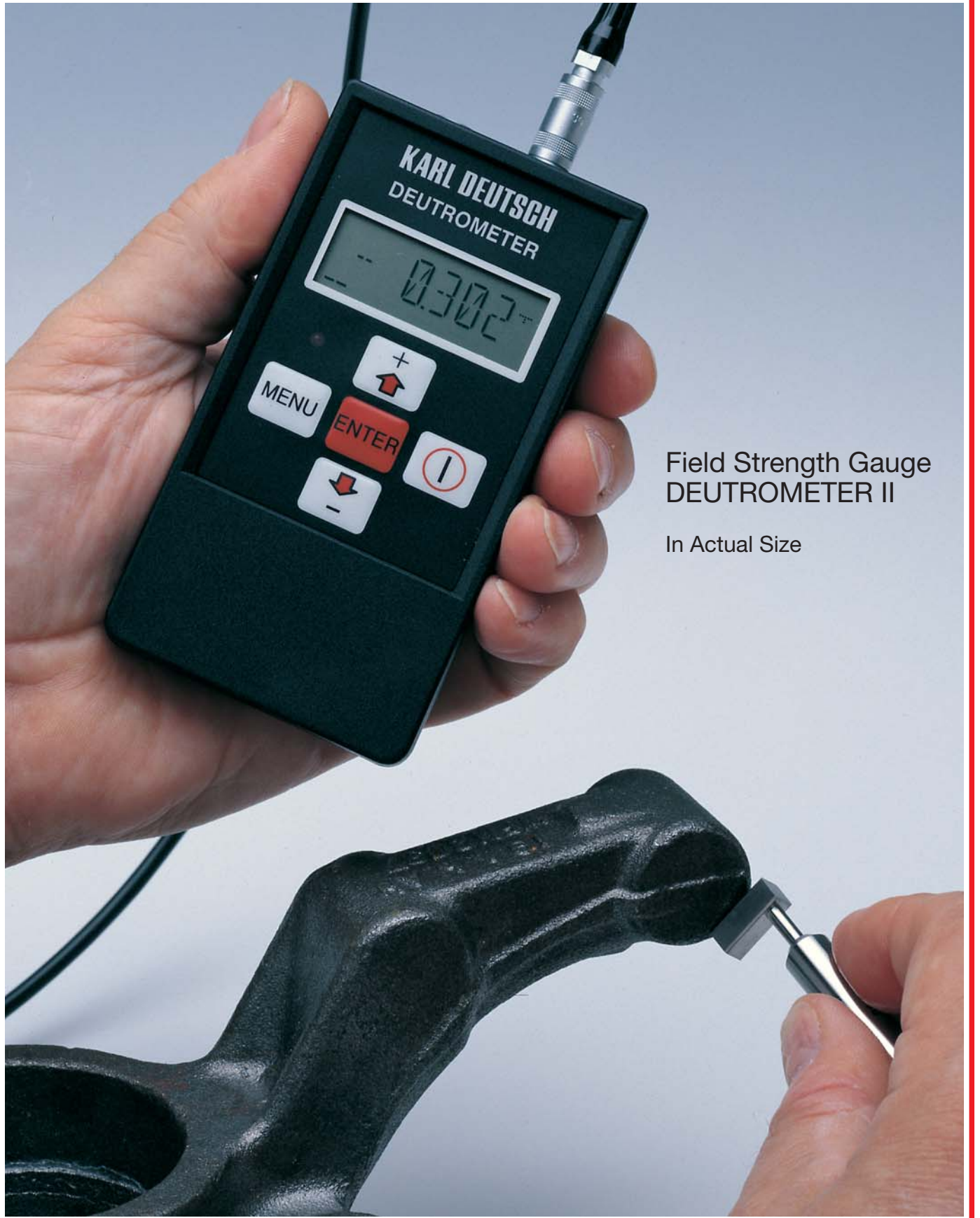


DEUTROFLUX

Accessories for Magnetic Particle Inspection



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Field Strength Gauge
DEUTROMETER II

In Actual Size

KARL DEUTSCH



DEUTROMETER

Field Strength Meter DEUTROMETER II



DEUTROMETER II
with probe, angled for 90°

alternatively:



with probe, straight



Zero field chamber



Reference magnet

There are two main applications for field strength meters:

1. Measuring of tangential field strength during magnetisation to ensure the values required by specification or by the customers.
2. Measuring of residual field strength resp. induction (normal component) after demagnetisation to ensure that no chips adhere to the workpiece which disturb a successive machining.

For both tasks, the new DEUTROMETER II offers many features:

- Measurement of DC or AC fields, RMS or peak values
- Automatic zeroing when switched on, without calibration
- Three measuring ranges, one automatic range:
 - 0-1,999 kA/m resp. mT
 - 0-19,99 kA/m resp. mT
 - 0-199,9 kA/m resp. mT
- Indication selectable either in kA/m (field strength) or mT (induction)
- Optical and acoustical signals in chase of exceeding limit value
- Peak value storage
- Storage capacity for 1000 measured values
- Statistics
- PC or printer connection via serial interface
- Easy maximum value determination by additional bar indicator
- Hall element principle for high accuracy of $\pm 2\%$ of final value ± 1 digit
- Automatic switch off
- Small dimensions (65 x 120 x 22 mm³) and low weight (150 g incl. batteries)
- Long-life battery operation:
 - 30 hrs for rechargeable NiMH batteries
 - 50 hrs for Alkaline-Manganese dry cells
- Automatic low-battery warning
- Quality Certificate including declaration on retraceability

Article No's:

DEUTROMETER II (incl. carrying case, if not delivered with test set)	3872.001
Probe for DEUTROMETER II, angled for 90°	3872.101
Probe for DEUTROMETER II, straight	3872.201

Accessories:

NiMH rechargeable batteries (set of 2)	6016.001
Battery charger 230 VAC for NiCd / NiMH rechargeable batteries	6015.001
Strip printer (incl. 230 VAC power supply, paper roll, ribbon)	6010.001
Printer cable DEUTROMETER II (Lemo) ↔ strip printer	1657.305
PC connection cable DEUTROMETER II (Lemo) ↔ PC (RS232C-interface), incl. adapter 9-pin D-sub (m) – 25-pin D-sub (f)	1657.307
Protective bag	3872.401
Adapter cable USB → RS232 including driver CD	2691.001

Consumer material:

Spare paper roll for printer 6010	6011.001
Spare ribbon (black) for printer 6010	6012.001

Zero Field Chamber and Reference Magnet

The zero chamber protects from external magnetic fields. This enables an optimum zero adjustment of the DEUTROMETER II. By means of the reference magnet, the indication accuracy of the DEUTROMETER II can be tested.

Article No's:

Zero field chamber	3872.701
Reference magnet	3872.601

Both zero field chamber and also the reference magnet can be stored within the practical carrying case of the DEUTROMETER II.





Large-Area UV-Lamp 3848

The UV Lamp of the Fourth Generation - the Best Alternative for Stationary Use

- Extremely high intensity with very large and homogeneous field of irradiation
- Hinges and quick-seal coupling for easy exchange of bulbs without tools
- Totally enclosed reflector for protection from external pollution
- Optimum cooling for low housing temperature and long bulb lifetime
- Quick start-up of UV-bulb at any temperature
- Edge filter: In addition to the serially built-in blue filter glass, another clear filter glass is built-in. The intensity of the lamp is slightly reduced, but all short wave UV irradiance components are almost blocked. The edge filter can also be dismantled.



Technical Data:

Irradiation intensity:

more than 6 000 $\mu\text{W}/\text{cm}^2$ in 400 mm,
more than 7 000 $\mu\text{W}/\text{cm}^2$ in 300 mm distance
from edge filter

Without edge filter:

more than 10 000 $\mu\text{W}/\text{cm}^2$ in 400 mm or
more than 11 500 $\mu\text{W}/\text{cm}^2$ in 300 mm distance
from filter glass

Life time of bulb:

After approx. 1000 hours, the intensity is half
of the initial value

Illuminated area:

approx. 800 by 300 mm^2
(half-value dimensions, depending on
focusing, distance approx. 400 mm)

Housing temperature:

(at the operator's side): approx. 28° C

Weight:

approx. 18 kgs

Dimensions:

435 x 295 x 271 mm^3 (L/W/H)

Mains voltage:

230 V/50 Hz (Option: 60 Hz)

Power consumption:

approx. 800 VA

Article No's:

Large-Area UV-lamp (incl. UV bulb, blue filter glass, edge filter and 2.5 m mains cable)	3848.002
UV-Spare bulb	6302.001
UV-Spare filter glass (blue)	6302.101
UV-Spare edge filter (clear)	6302.201

Hand Lamps: For All Applications



Technical Data:

Electronic ballast with fixed connection cable 2.0 m and mains cable 2.0 m

UV Intensity: more than 3500 $\mu\text{W}/\text{cm}^2$ in 400 mm distance

Irradiated area: approx. 85 mm dia. (half value dimension)

Dimensions: Lamp 160/105 mm dia., 250 mm long
electronic ballast 175 x 115 x 220 mm³

Weight: Lamp 1.5 kgs
electronic ballast 3.3 kgs

UV-Compact Lamp 3814

- Very few components of visible light
- Fulfills the strict aerospace specifications
- With impact- and shockproof polymer plastic housing; filter glass rubber pivoted
- Simple and easy exchange of bulb and filter glass without tools
- **Optimum choice when strict aerospace specifications must be fulfilled**

Article No's:

UV compact lamp (for 230 VAC, other voltages on request)	3814.003
Spare UV bulb	3814.101
Spare UV filter	3814.203



UV-Spotlight PH 3819
with built-in electronic ballast

UV-Spotlights

- Unreached beam intensity
($>30000 \mu\text{W}/\text{cm}^2$)
- Ready for use in short time (15 s)
- Beam focussing even at longer distances
(several meters)
- **Optimum choice for long-distance inspection with high intensity**

Technical Data:

Intensity of irradiation:
more than 30000 $\mu\text{W}/\text{cm}^2$ in 500 mm

Beam divergence angle:
approx. 3.5°

Dimensions (l/w/h):
PH 3819: Lamp: 300 x 155 x 290 mm³
PS 3818: Lamp: 240 x 155 x 250 mm³
Electronic ballast: 270 x 130 x 170 mm³

Weight:
PH 3819: 2.25 kgs
PS 3818: Lamp 1.2 kgs
Electronic ballast 1.5 kgs



UV-Spotlight PS 3818
with separate electronic ballast

Article No's:

(230 VAC, other voltages on request)	
UV-Spotlight PH 3819 with 2 m cable	3819.001
with 5 m cable	3819.011
UV-Spotlight PS 3818	3818.001
UV spare bulb	3816.101
UV spare filter	3816.201
Spare joint gasket	3816.301
Conversion reflector midlight for beam aperture 20°	3816.601



Further Accessories

Reusable DEUTROFLUX - Spray Bottle



By a few pumping movements before use, the entire contents can be sprayed. Therefore, spraying becomes much easier and protects the environment.

Sizes: Bottle: 310 x 120 mm dia.
Handle to jet: 210 mm
Weight (unfilled): 460 g
Max. volume: approx. 1 l
Max. pressure: 3 bar

Article No.: Bottle 6303.001

KARL DEUTSCH magnetic particle agents for crack detection: See FLUXA brochure P 90
KARL DEUTSCH penetrant agents: See KD-Check brochure P 99

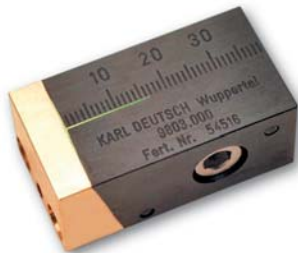
ASTM-Centrifuge Tube



To check a fresh batch of inspection agent for correct concentration.

Article No.: Glass 6901.001
Stand 9804.001

FLUXA Test Block



The FLUXA test block is used to check the indicating sensitivity of fluorescent magnetic particle inspection agent. It contains a permanent magnet and an artificial crack whose indicated length can be read from the engraved scale. Thus, a quantitative statement of the indication sensitivity is possible.

Article No.: 9803.001

Reference Block 1

acc. to EN ISO 9934-2 (former MTU Test Block)



The same task as the FLUXA test block is fulfilled by the Reference Block 1. It is residually magnetised and contains a network of coarse and fine cracks. Their indication is evaluated.

Article No.: 6904.001

Reference Block 2

acc. to EN ISO 9934-2



It is used like the FLUXA Test Block for checking the indicating sensitivity of the magnetic particle inspection agent.

Article No.: 6904.002

BERTHOLD-Testing Device



This reference device is a simple testing device to check for sufficient field strength. It is placed onto the workpiece, magnetised and sprayed together with it. Proper magnetisation produces an indication of the artificial cross-shaped crack.

Article No.: 3823.001

Residual Field Indicator

By using the residual field indicator, the amount of residual magnetism in a workpiece can be checked and the position of the magnetic poles be recognised. For this purpose, the indicator is held with its lower side against the surface to be tested. By moving and swivelling the indicator, the maximum indication is found.

Measuring range: ± 5 Gauß



Article No.: 3821.002

Lux-Illumination Meter



The Lux-illumination meter is a hand-held instrument to measure the intensity of visible light. UV components are suppressed, thus enabling a measurement (as requested in ISO 3059) also with switched-on UV lamp. For optimum handling, the sensor is separated from the gauge.

As done with all our measuring instruments, this gauge is also delivered with a certificate and can be recertified.

Measuring ranges: 0.1 ... 199 900 Lux (lx)

Resolution: 0.1 (within range 0.1 – 199.9 lx)

Article No.: 6905.001

UV-Intensity Meter



The DEUTROLFLUX-intensity meter is a hand-held instrument to measure the intensity of longwave UV radiation (365 nm) and to ensure sufficient irradiation. The UV photo sensor is detachable. Direct reading in $\mu\text{W}/\text{cm}^2$, unaffected by visible and shortwave UV-light.

Measuring ranges:

A: 0-1200 $\mu\text{W}/\text{cm}^2$

B: 1000-6000 $\mu\text{W}/\text{cm}^2$
(extended range by using attenuator)

Article No.: 6903.001



Magnetic Particle Test Set

All test instruments described in this brochure can also be delivered together in a plastic carrying case. It contains one each of the following units:

- DEUTROMETER II
- DEUTROMETER Probe (straight) incl. cable
- UV Intensity Meter
- ASTM Centrifuge Tube
- BERTHOLD Testing Device
- Reference Block Type 1 acc. to EN ISO 9934-2
- FLUXA Test Block
- Residual Field Indicator
- Sample Bottle of FLUXA Testing Agent
- Set of Operating Manuals

Article No.: 3865.003