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TKM-359CE

LEEB HARDNESS TESTER

High precision hardness tester TKM-359CE is intended for quick measuring of metal items in laboratorial, manufacturing and field conditions.

Device is intended for non-destructive testing of production quality in metallurgy, mechanical engineering, aircraft, shipbuilding, atomic industry, oil and gas industry.

Hardness tester functions by Leeb method.

Impact proof, ergonomic housing (IP 65)

TKM-359CE CONTROLS HARDNESS OF FOLLOWING:

- All basic types of metals and alloys without additional calibrations (structural, tool, corrosion-proof, heat-proof, non-corrosive steels and alloys as well as alloys of nonferrous metals, cast iron, aluminium, bronze, brass);
- Items with surface hardening and high frequency current hardening;
- Items of complicated configuration;
- Heavy and big items with rough surface.

EXPLOITATION ADVANTAGES

- Wide range of controlled metals and alloys.
- Low sensitivity to the curvative and roughness of surface.
- Monitoring of hardness change along the surface.
- Stable measurements independent from force and time of pressing the probe to the surface.
- Possibility of material identification in blank production.
- Control of "volumetric" hardness.

FEATURES OF TKM-359CE

1. Impact-, dust- and water- proof housing.
2. Intuitive "plug and play" graphic interface.
3. Bright color graphic display allows working at below zero temperature and stays bright at any lighting.
4. Signalization of exceeding of prescribed readings threshold.
5. Unique system of statistic data processing.
6. Fast adjustment of device readings by one or 2 standard test blocks.
7. Intellectual averaging of readings.
8. Flexible device memory for recording of readings and their analysis.
9. Programming of additional scales calibrations of hardness tester by 2 or less standard test blocks.
10. Fast programming of additional scales by 2 to 10 standard test blocks.

HARDNESS TESTER MODES:

Measurement mode	Readings	Using
By basic scales	Basic hardness units (HRC, HB, HV)	Hardness testing of the bulk of products
By additional calibrations to basic scales	By HRA, HRB, HSD scales and ultimate tensile strength	Hardness testing of high-alloy steels, special cast iron and nonferrous metals
By additional scales	Scales are programmed by the user	Special problems solving

REQUIREMENTS TO CONTROLLED ITEM:

- Items heavier than 5 kg and thicker than 6 mm need no additional preparation;
- Hard items (eg tubes) with awaited hardness from 90 to 250 HB and thicker than 4 mm need no additional preparation;
- Other items should be fixed on a support plate by fixing paste;
- Roughness of controlled surface providing best measurement accuracy depends on a probe.

BASIC DELIVERY SET

Elements	Quantity
Electronic unit	1
Accumulator (pre-installed)	1
D-type probe	1
Connecting cable	1
Charger	1
PC cable	1
Soft case	1
Cuff to fix device on arm	1
Bag for carrying and storing	1

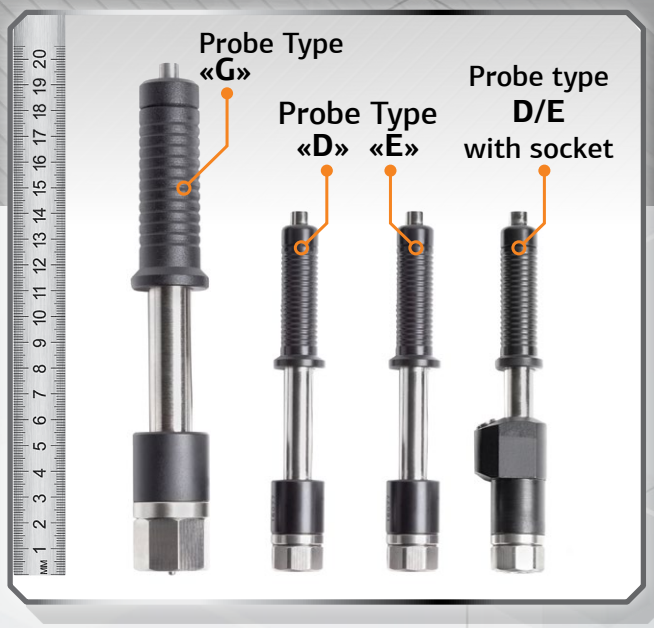
ACCESSORIES

1. Replaceable probes of different construction and impact force.
2. Special head “Z-359” for easier probe positioning on complex surfaces.
3. Connection cables.

Special head «Z-359»

PROBES CHARACTERISTICS

Probe Type	Length, mm	Diameter, mm	Application
D	138	21	Solving the bulk of control problems
G	200	29	Control of items with high structural heterogeneity and roughness Ra from 7.2
E	138	21	Probe with indenter made of polycrystalline of boron nitride intended for control of materials with high hardness



MAIN TECHNICAL PARAMETERS:

Accuracy	3%
Calibration error with the first rate test blocks:	
Rockwell	1.5 HRC
Brinell	10 HB
Vickers	12 HV
Spot diameter on the item surface for probe positioning	From 7 mm
Quantity of possible additional calibrations of scales	5 for every scale
Quantity of additional scales	3
Duration of one measurement	2 seconds
Quantity of measurements for average reading calculation	1-99
Memory capacity, readings	12 400
Maximum quantity of name units of readings generated in memory	100
Quantity of algorithms for known to be false readings during average value calculation	3
PC Connection	USB
Power Supply	LI-ion accumulator
Dimensions of hardness tester electronic unit	121*69*41mm
Weight of electronic unit	0.3 kg
Weight of D-probe	0.15 kg
Operating temperature range	-15…+50 °C
Guarantee period	1 year

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