

ADHESION

KN-10 ELECTRONIC ADHESION TESTER



The device measures tensile adhesion force.

STANDARDS

ISO 4624 · ISO 16276-1 · ASTM D4541 · EN 13144 · EN 24624

APPLICATION

Equipment developed for measuring the adhesion of paint layers, coatings or building materials to different types of substrates.

The equipment measures the tensile force required to cause the coating to peel off, enabling the strength of the bond between layers, or between a layer and the substrate, to be assessed in accordance with the main international standards.

The instrument incorporates an electronic system with a digital display, ensuring accurate and repeatable results. Its versatility allows for the testing of both industrial coatings and building materials, using test dollies of different diameters.

GENERAL CHARACTERISTICS

Type II electronic instrument with digital display, for testing the adhesion of paint coatings, galvanic layers and building materials, using test discs with diameters of 20 mm and 50 mm respectively.

The test is carried out as follows: A test disc is adhered to the surface under investigation, with or without making an incision in the layer around it to isolate it, should the standard (EN 13144 and ISO 4624) or the application require it. The instrument is placed on top of the test specimen and, by turning a wheel, an increasing peel force is progressively applied. When detachment occurs, the electronic display shows the force exerted at the moment of detachment. Following this, the physical condition of the test specimen and the substrate must be analysed to determine the failure mode and draw conclusions.

Range: 5-1000 Kgf (0.05 to 10.00 KN)

Resolution: 1 Kgf

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INSTRUCTIONS FOR USE

The tensile adhesion test involves fixing a test specimen or metal disc to the surface of the coating using an adhesive. Once the adhesive has cured, the tensile bolt is screwed into the test specimen and the equipment is set up. We begin to turn the handle at a constant speed; the equipment applies a tensile force perpendicular to the surface until the test specimen is torn away.

The adhesion value is obtained by recording the force required to detach the coating from the substrate, expressed as force per unit area (MPa or mm/cm²). The surface of the test piece is then inspected to identify the mode of failure (cohesive, adhesive or mixed).

MODELS

Code	Description
NK-AT2000	KN-10 Electronic Adhesion Tester Industrial paint testing

The supply includes:

- KN-10 adhesion tester
- 10 aluminium test discs, 20 mm in diameter.
- Cutting tool for 20 mm.
- Tension bolt, length 34 mm.
- Generic two-component adhesive
- Magnetic clamp for holding test discs
- Reinforcement disc for testing on soft or uneven surfaces
- 2.5 mm Allen key.
- Carry case
- Manual



Optional calibration	Code	Description
✓	SER-CT013	Calibration Certification for Adhesion Tester (1 scale)

Code	Description
NK-AT2000-50	Conversion kit for construction testing

The supply includes:

- 5 aluminium dollies, 50 mm in diameter.
- Diamond cutting tool, 54 mm diameter, with spindle
- Tension bolt, length 75 mm
- 3 feet high
- Support washer



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Code	Description
NK-AT5000	KN-10 electronic adhesion tester for construction testing. Model for construction, mortars and coatings.

The supply includes:

- KN-10 adhesion tester
- Aluminium dollies, 50 mm diameter (5 pcs)
- Diamond cutting tool, diameter 54 mm.
- Tension bolt, length 75 mm.
- Generic two-component adhesive
- Set of 3 height-adjustable feet.
- Support washer
- 2.5 mm Allen key.
- Carry case.
- Manual



Optional calibration	Code	Description
✓	SER-CT013	Calibration Certification for Adhesion Tester (1 scale)

Code	Description
NK-AT5000-20	Conversion kit for industrial paint testing

The supply includes:

- 10 aluminium dollies, 20 mm in diameter.
- Ball joint / Tension bolt, length 34 mm.
- Cutting tool, 20 mm in diameter.
- Magnetic holding bracket for test specimens /dollies.



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ACCESSORIES

Dollies

Code	Description
NK-ATDOLLY20-100	Dollies Ø20 mm, pack of 100
NK-ATDOLLY20-50	Ø20 mm dollies, pack of 50
NK-ATDOLLY20-25	Dollies Ø20 mm, pack of 25
NK-ATDOLLY50-10	Dollies Ø50 mm, pack of 10
NK-ATDOLLY50-30	Dollies Ø50 mm, pack of 30



Drill bit

Code	Description
NK-ATCUT20	Drill bit Ø20 mm
NK-ATCUT54-1	Diamond drill bit Ø54 with quick-change spindle for 32–152 mm core bits



Tension bolt

Code	Description
NEU-1836001	Tension bolt, length 34 mm.
NEU-1836002	Tension bolt, length 75 mm.



Adhesive

Code	Description
NK-AT-ADH-1	Araldite two-component adhesive, 2 x 15 ml
NK-AT-ADH-2	Araldite 2011 adhesive, 50 ml.

