

FLEXIBILITY IMPACT TESTER



The test enables the detection of cracks, spalling and loss of adhesion.

NORMAS

ISO 6272-1 · ISO 6272-2 · ASTM D2794 · UNE EN 10209 · UNE 135331

NK Impact Testers by NEURTEK are precision instruments designed to assess the resistance of organic and inorganic coatings to free-fall impacts. The test detects the occurrence of cracks, spalling and loss of adhesion, providing information on the flexibility, curing and toughness of the coating under impact conditions.

Designed and manufactured by NK, the equipment is supplied complete with a support base, graduated guide tube, mass clamping and release ring, and an impact mass with a lower support ring, in accordance with the relevant standard. They are available in two ranges — the IT2700 series with a mass diameter of 27 mm and the IT5000 series with a mass diameter of 50 mm — to cover the wide range of current international standard.

APPLICATION

- **Industrial and architectural coatings:** testing the ductility and adhesion of coatings on steel and aluminium.
- **Galvanising and lacquering:** mandatory tests in Qualicoat-accredited processes (ISO 6272-2).
- **Powder coatings:** assessment of the flexibility and curing of thermosetting powder coatings.
- **Automotive industry:** testing of primers, topcoats and anti-corrosion coatings.
- **Coatings R&D:** development and validation of new formulations and application processes.

GENERAL CHARACTERISTICS

- 1,000 mm graduated guide bar.
- Interchangeable impact weights and additional threaded weights to adjust the impact energy.
- Static ball impact tester available in models IT2700-2 and IT2700-4 for reverse impact testing.
- Robust, low-maintenance design; manufactured entirely by NK in Spain.
- Compatible with multiple international standards via conversion kits (see relevant section).
- Also available in a portable version — please check availability with the sales team.

TEST PRINCIPLE

An impact mass falls freely from a specified height along a graduated guide rail, striking the coated test specimen via a steel ball. The test can be carried out in two ways:

- **Specification verification:** the impact mass is fixed at the height specified in the standard or specification, released, and the coating is visually inspected for cracks or spalling.
- **Determination of the resistance limit:** the test is repeated, progressively increasing the height until the first crack appears, thereby obtaining the impact resistance limit value in N·m (or kg·cm).

APPLICABLE STANDARDS

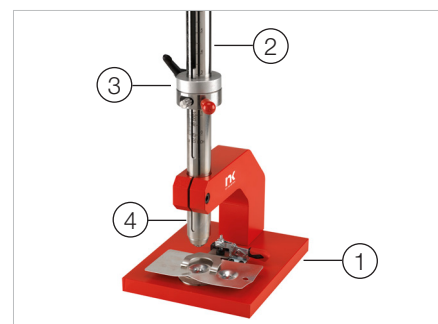
- **UNE EN ISO 6272-1:** Paints and varnishes — Rapid deformation tests (impact resistance) — Part 1: Falling-weight test, large-area indenter.
- **UNE EN ISO 6272-2:** Part 2: Falling-weight test, small-area indenter. Required by Qualicoat for the accreditation of coating laboratories.
- **ASTM D2794:** Standard Test Method for Resistance of Organic Coatings to the Effects of fast Deformation (Impact).

MODELS AND ACCESSORIES

Code	Standards	Impact mass	Additional masses	Static mass with ball	Ball diameter	Ring diameter	Max. height
NK-IT2700-1	UNE EN ISO 6272-1 DIN 55669	1,000 g	1,000 g with thread	-	20 mm	27 mm	1,000 mm
NK-IT2700-2	UNE EN ISO 6272-2 Qualicoat	1,000 g	1,000 g with thread	150 g	15,9 / 12.7 mm	16.3 mm	1,000 mm
NK-IT2700-3	ASTM D2794	900 g	1,000 g with thread	-	15.9 mm	-	1,000 mm
NK-IT2700-4	UNE EN 10209 (Anexo C)	1,500 g	-	360 g	22 mm	20.6 mm	1,000 mm
NK-IT5000-1	-	510 g	-	-	50 mm	-	350 mm
NK-IT5000-2	UNE 135331	450 g	-	-	50 mm	-	350 mm

The supply includes:

1. Support base.
2. Graduated guide tube.
3. Mass clamping and release ring.
4. Impact mass with lower support ring in accordance with the specified standard.



CONVERSION KITS

Conversion kits allow an existing impactometer to be adapted to comply with different standards without the need to purchase a complete set of equipment, significantly reducing costs and simplifying laboratory management.

Reference	Conversion	Components included
NK-IT2700-1-ISO2	The base unit IT2700-1 , which complies with ISO 6272-1, is converted into the IT2700-2 unit, which complies with ISO 6272-2 / thanks to NK-IT2700-1-ISO2	Static mass 150 g with 15.9 mm ball · Impact ring ø16.3 mm
NK-IT2700-1-ASTM	The base unit IT2700-1 , which complies with ISO 6272-1, is converted into the IT2700-3 unit, which complies with ASTM D2794..	Impact mass 900 g, 15.9 mm ball · Additional mass 120 g with threaded shank, without ball · Ring ø16.3 mm
NK-IT2700-2-ISO1	The base unit IT2700-2 , which complies with ISO 6272-2, is converted into the IT2700-1 unit, which complies with ISO 6272-1 / DIN 55669.	Impact ring ø27 mm
NK-IT2700-2-ASTM	The base unit IT2700-2 , which complies with ISO 6272-2, is converted into the IT2700-3 unit, which complies with ASTM D2794.	Impact mass 900 g, 15.9 mm ball · Additional mass 120 g, threaded, without ball
NK-IT2700-3-ISO1	The base unit IT2700-3 , which complies with ASTM D2794, is converted into the IT2700-1 unit, which complies with ISO 6272-1 / DIN 55669.	Impact ring ø27 mm
NK-IT2700-3-ISO2	The base unit IT2700-3 , which complies with ASTM D2794, is converted into the IT2700-2 unit, which complies with ISO 6272-2 / Qualicoat.	Impact mass 1,000 g, 20 mm ball · Additional mass 1,000 g, threaded, without ball · Static mass 150 g, 15.9 mm ball

