



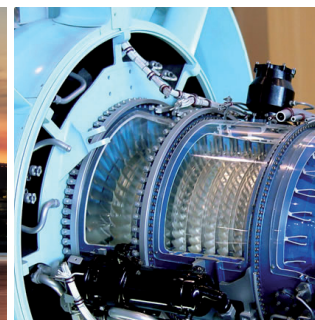
### Measured quantities

- High voltage

### Applications

Coating tests on:

- Pipes
- Tanks
- Containers
- Structures



# Isolation Tester UIP



Pore testing device for corrosion protection

## UIP overview

The devices of the UIP series (Union Isolation Tester) are used to test for pore-free condition of corrosion protection coatings of pipes, containers, and plant components. The battery-powered device generates test voltages between 5 kV and 30 kV, which are applied to the grounded test object via corresponding test electrodes. In case of a defect, a spark-over with additional audible warning indicates the location of the defect.

### Device variants

Three device variants are available:

**Type V:** With Type V an infinitely variable test voltage within the range of 5 kV to 30 kV can be set using a potentiometer. This type is suitable for tests of pipelines to DN 500.

Description	Item No.
Isolation Tester Type "V" Voltage 5-30 kV, adjustable	04102199998

**Type NR:** A fixed test voltage setting is used here. The electronics correct any voltage drops as a result of damp weather or large test capacitances. As a result, this type is ideally suited for nominal diameters greater than DN 500. A variety of high-voltage coils with fixed test voltage settings in the range of 5 kV to 30 kV are available here. The test voltage must be specified when ordering.

Description	Item No.
Isolation Tester Type "NR" with corrected fixed voltage	04102199999

**Typ VNR:** The test voltage is corrected here as for Type NR. In addition, 6 different test voltages can be set by the operator (5 kV, 10 kV, 15 kV, 20 kV, 25 kV, 30 kV). This type is therefore suitable for tests with frequently changing test voltages on pipes greater than DN 500.

Description	Item No.
Isolation Tester Type "VNR" with 5-fold adjustable corrected voltage	04100199999

## Technical data

Weight of electronics	3.2 kg
Dimensions of electronics	W x H x D [mm] 240 x 200 x 145
Weight of high-voltage coil	0.7 kg
Dimensions High-voltage coil	700 mm (L) x 60 mm
Cable length High-voltage coil	1.6 m
Line voltage for charging	220 V, 50/60 Hz
Line current / Line power	8 – 11 mA / approx. 2 W
Battery voltage	12 – 13.5 V
Battery charging current	Approx. 110 – 180 mA
Charging voltage with overload protection	14.5 V
Battery rated capacity	3 Ah
Discharge current	50 – 300 mA
Operating time without reloading	8 – 30 hours
Test high voltage	5 – 30 kV
Test current	1.5 – 2 mA (peak value) 2 µA rms
Test sound	2800 Hz / 90 dB

Technical data Isolation Tester UIP

### Scope of delivery:

- Charging cable 230 Volt (Item No.: 04302199994)
- Ground cable 10 m (Item No.: 04302199993)
- Ground spike without cable (Item No.: 04301199958)
- Ground spike with cable 2 m (Item No.: 04301199877)
- Shoulder strap (Item No.: 04401199996)
- Test piece extension (Item No. 04301199960)  
incl. sensor bracket holder (Item No.: 04301199961)
- Spark test section (Item No.: 04301199959)
- Dust protection cap (Item No.: 04401099998)
- Operating instructions (Item No.: 04601099903)

### Optional accessories:

- Carrying case (Item No.: 04302199994)  
Dimensions approx. 65 x 26 x 28 cm
- Trailing ground (Item No.: 04302199990) for mobile grounding and thus a larger operating range without grounding modification
- Wide variety of test electrodes

One of the following mounts is required for mounting the test electrodes, depending on the test electrode type:

- Test brush holder (Item No.: 04301199961)
- Wire spiral holder, fork-type (Item No.: 04301199983)
- Wire spiral holder, shell-type (Item No.: 04301199982)

## Test electrodes

A large variety of test electrodes enables reliable testing of any surface type. The test brushes consist of a 25 mm long, dense bristle edging made of phosphor bronze and are thus very long lasting.

### Straight test brushes:

For testing of plane surfaces, e.g., on tanks and structures.



Test brushes, straight	Item No.
Length: 200 mm	04301199937
Length: 300 mm	04301199971
Length: 400 mm	04300199995
Length: 500 mm	04301199970
Length: 600 mm	04301199930

### Semicircular test brushes:

For testing of pipelines. Each half circumference of the pipeline is tested in one pass.



Test brushes, semicircular	Item No.
Nominal diameter: DN 50	04301199943
Nominal diameter: DN 60	04301199952
Nominal diameter: DN 70	04301199942
Nominal diameter: DN 80	04301199941
Nominal diameter: DN 100	04301199951
Nominal diameter: DN 125	04301199940
Nominal diameter: DN 150	04301199950
Nominal diameter: DN 200	04301199939
Nominal diameter: DN 250	04301199949
Nominal diameter: DN 300	04301199938

### Segment test brushes:

For testing of pipelines with greater nominal diameters. The pipe circumference is tested in segments. The arc length of the test brushes is 500 mm.



Test brushes, segment	Item No.
Nominal diameter: DN 350	04301199918
Nominal diameter: DN 400	04301199917
Nominal diameter: DN 500	04301199916
Nominal diameter: DN 550	04301199906
Nominal diameter: DN 600	04301199915
Nominal diameter: DN 700	04301199909
Nominal diameter: DN 800	04301199914
Nominal diameter: DN 900	04301199908
Nominal diameter: DN 1000	04301199913
Nominal diameter: DN 1200	04301199912
Nominal diameter: DN 1400	04301199911

### Wire spirals:

For testing of pipelines with greater nominal diameter in one pass. The wire spirals cover the complete pipe circumference.



Wire spirals	Item No.
Wire spiral DN 80	04301199993
Wire spiral DN 100	04301199992
Wire spiral DN 125	04301199991
Wire spiral DN 150	04301199990
Wire spiral DN 200	04301199989
Wire spiral DN 250	04301199981
Wire spiral DN 300	04301199988
Wire spiral DN 350	04301199987
Wire spiral DN 400	04301199986
Wire spiral DN 450	04301199884
Wire spiral DN 500	04301199985
Wire spiral DN 600	04301199962
Wire spiral DN 700	04301199994
Wire spiral DN 750, two-part	04301199929
Wire spiral DN 800, two-part	04301199995
Wire spiral DN 900, two-part	04301199996
Wire spiral DN 1000, two-part	04301199984
Wire spiral DN 1100, two-part	04301199878
Wire spiral DN 1200, two-part	04301199947
Wire spiral DN 1300, two-part	04301199879
Wire spiral DN 1400, two-part	04301199948
Wire spiral DN 1500, two-part	04301199875
Wire spiral DN 1600, two-part	04301199863
Wire spiral DN 1800, two-part	04301199860

### Broom test brush:

For testing of fittings, connections, and all non-homogeneous surfaces.



Test brush, broom	Item No.
Broom electrode with adapter	04301199969

Additional test electrode types are available on request.



## About UNION Instruments

UNION Instruments, founded in 1919, is a specialized supplier of measuring instruments in the areas of calorimetry, gas composition and leak testing. Its user and customer base includes biogas producers, the chemical industry, and energy and water suppliers. The company has its headquarters in Karlsruhe and subsidiaries in Lübeck as well as in Berlin. With approximately 30 international distributors, UNION Instruments operates worldwide. The company's core businesses include development and production as well as maintenance, service, and support.

## Our service performance



### Support

The **UNION-hotline** helps to solve all inquiries and urgent issues fast and easy. Device specific concerns can be solved worldwide within minutes by direct communication via **TEAMVIEWER**.



### Original spare parts

Original spare parts for the majority of UNION's products are on stock directly at site and ready for dispatch within a few hours.



### Software

For read-out of measurement and calibration data a device-specific software is available for our clients. In addition to the graphic display of measurement data its export in several database formats is possible.



### Training

UNION offers individual in-house training or on-site seminars for installation, use and maintenance of our devices even at the customer's premises. Training is individually adapted to the client's requirements.



### Repair service

A global service for inspection, maintenance and repair of our devices and systems is provided directly by UNION and via its distributors.



### Certification

Since 20 years we have implemented the ISO9001 system. UNION's products are certified to ATEX and UL/CSA directives accordingly. Industrial safety "**Safety with System**" is part of UNION's company policy.



### Engineering

In the last decades UNION compiled a very high level to the state of the art that covers many market segments. So a wide range of possible solution approaches is on hand.



### Calibration

As part of maintenance and service UNION provides the validation and re-calibration of measuring devices in conformity with certified custody transfer instruments and / or traceable perpendicular.

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