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CTI-4, CTI-5 and CTI-6

Tracking Index Test Apparatus – CTI/PTI



Test with precision. Decide with confidence.

Everything for Precise Measurements – All from One Source!

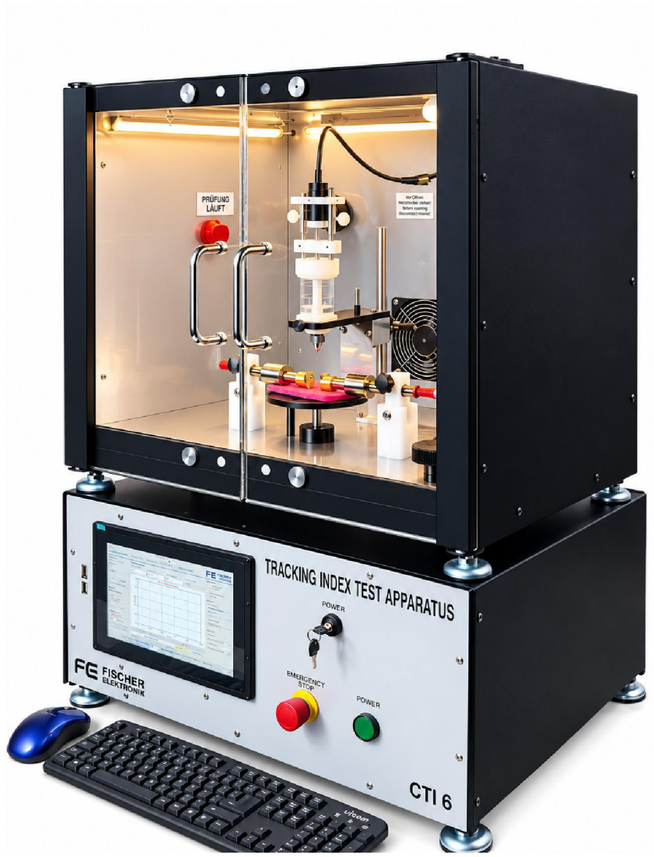


CTI-6

PC-Controlled Tracking Index Apparatus up to 1000 V – IEC 60112 / UL 2597 / ASTM D 3638

DIN EN 60112 (IEC 60112) | **UL 2597** | **ASTM D 3638***

- Standards-compliant testing
- Automated test procedure
- High-precision measurement technology
- User-friendly operation
- Future-proof platform
- Automatic test report generation
- CSV file for further processing
- 2 years warranty



Your Advantages

- Over 40 years of experience in the market
- Numerous reputable references
- Proven and reliable testing technology
- On-site and online training
- Customized solutions to meet your requirements
- Expert consultation & service

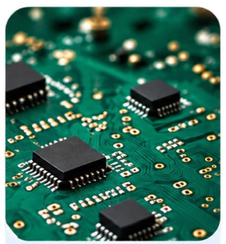
Application Areas



Electrical and electronics industry



Plastics industry



Insulating materials and raw materials

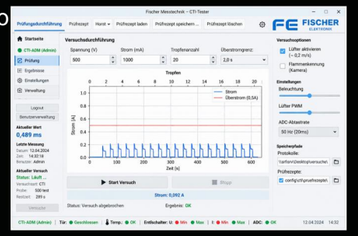


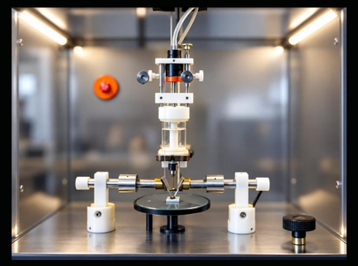
Material development

Made in Germany

Product Overview

The Tracking Index Apparatus is designed to determine and evaluate the resistance to tracking of solid electrical insulating materials. Testing is performed in accordance with DIN EN 60112 (IEC 60112) and UL 2597, ensuring reliable determination of the Comparative Tracking Index (CTI) and Proof Tracking Index (PTI).
Thanks to precise measurement technology and automated test procedures, the system delivers reproducible and reliable test results. It is ideally suited for quality assurance, research & development, and industrial testing laboratories.
***Testing procedures and equipment configurations in accordance with relevant ASTM standards are also available upon customer request. Individual requirements can be taken into account during the design process and implemented through customized solutions**.*





Operating Principle

During the test, the specimen is positioned between two platinum electrodes arranged in a defined configuration and subjected to a specified test voltage.
At defined time intervals, drops of a standardized electrolyte solution are applied to the specimen surface between the electrodes. Under these controlled conditions, the behavior of the insulating material is examined and its resistance to surface tracking is evaluated.

Technical Data

Control unit dimensions (W x H x D)	610 x 305 x 600 mm	**Test unit dimensions (W x H x D)**	610 x 550 x 450 mm
Control unit weight	approx. 45 kg	**Test unit weight**	approx. 30 kg
Operating voltage	230 VAC (±5 %), 50 Hz, max. 8 A	**Electrode voltage**	100 to 1000 VAC
Test range	CTI / PTI	**Current limitation**	adjustable
Test medium	Electrolyte solution	**Switch-off time**	adjustable
Drop size	adjustable	**Number of drops**	adjustable
Drop interval	adjustable	**Touchscreen display**	10.9" LED touchscreen (PC-controlled)
Testing according to	DIN EN 60112 (IEC 60112), UL 2597 and ASTM D 3638*	**USB interface**	available

Software

User-friendly operation	Intuitive control and easy handling
Storage of all test results	Automatic storage of measurement data
Creation of test plans	Individual test programs and test sequences
Multi-language software	German, English
Data export	CSV and PDF files

Accessories

- Platinum Electrodes
- Seal Kit for Dropping Device
- Glass Plate for Test Table
- Precision Balance
- Spacing Gauge for Adjusting the Electrode and Dropping Device Distances

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CTI-5

Tracking Index Tester up to 1000 V – IEC 60112 / UL 2597 / ASTM D 3638

DIN EN 60112 (IEC 60112) | **UL 2597** | **ASTM D 3638***

- Standards-compliant testing
- High-precision measurement technology
- Upgradeable to CTI-6
- 2-year warranty

Your Benefits

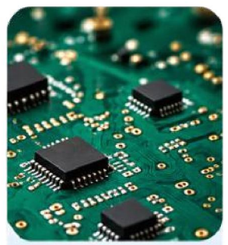
- Over 40 years of experience in the market
- Numerous reputable references
- Proven and reliable testing technology
- On-site and online training
- Customized solutions to meet your requirements
- Expert consultation & service



Application Areas


Electrical and electronics industry


Plastics industry


Insulating materials and raw materials


Material development

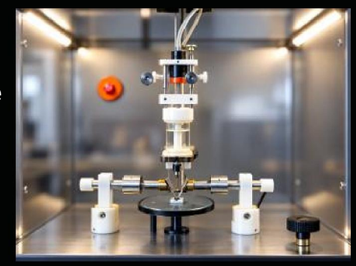
Made in Germany

Product Overview

The Tracking Index Tester is designed to determine and evaluate the tracking resistance of solid electrical insulating materials. Testing is performed in accordance with DIN EN 60112 (IEC 60112) and UL 2597 for reliable determination of CTI and PTI.
Thanks to precise measurement technology and accurate adjustment of the relevant test parameters, the system ensures reliable and reproducible test results. It is ideally suited for quality assurance, research & development, and industrial testing laboratories.
Testing in accordance with relevant ASTM standards is also available upon request. The equipment can be customized to meet specific customer requirements.

Operating Principle

During testing, the specimen is positioned between two precisely arranged platinum electrodes and subjected to a specified test voltage.
At defined intervals, drops of a standardized electrolyte solution are applied to the specimen surface between the electrodes. Under these controlled conditions, the insulating material's behavior and resistance to surface tracking are evaluated.



Precise Adjustment of Test Parameters

The test apparatus allows precise and reproducible adjustment of the relevant test parameters, including test voltage, short-circuit current, drop size, and number of drops.
The test voltage is adjustable up to 1,000 V, enabling different materials and material systems to be tested under defined and reproducible conditions.

Technical Data

Control unit dimensions (W x H x D)	610 x 305 x 600 mm	**Test unit dimensions (W x H x D)**	610 x 550 x 450 mm
Control unit weight	approx. 45 kg	**Test unit weight**	approx. 30 kg
Operating voltage	230 VAC (±5%), 50 Hz, max. 8 A	**Electrode voltage**	100 to 1000 VAC
Test range	CTI / PTI	**Current limiting**	adjustable
Test medium	Electrolyte solution	**Drop size**	adjustable
Number of drops	adjustable	**Testing according to**	DIN EN 60112 (IEC 60112), UL 2597 and ASTM D 3638*

Accessories

- Platinum Electrodes
- Seal Kit for Dropping Device
- Glass Plate for Test Table
- Precision Balance
- Spacing Gauge for Adjusting the Electrode and Dropping Device Distances

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CTI-4

Tracking Index Apparatus up to 600 V – IEC 60112

DIN EN 60112 (IEC 60112)

- Standards-compliant testing
- High-precision measurement technology
- Upgradable to PC-controlled device
- 2-year warranty



Your Benefits

- Over 40 years of experience in the market
- Numerous reputable references
- Proven and reliable testing technology
- On-site and online training
- Customized solutions to meet your requirements
- Expert consultation & service

Application Areas



Electrical and electronics industry



Plastics industry



Insulating materials and raw materials



Material development

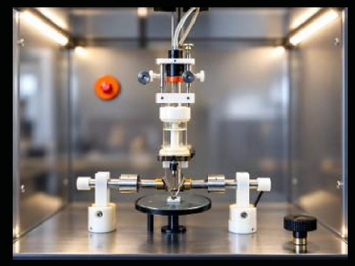
Made in Germany

Product Overview

The Tracking Index Apparatus is designed to determine and evaluate the tracking resistance of solid electrical insulating materials. Testing is performed in accordance with DIN EN 60112 (IEC 60112) for reliable determination of the Comparative Tracking Index (CTI) and Proof Tracking Index (PTI).
Thanks to precise measurement technology and accurate adjustment of the relevant test parameters, the system ensures reliable and reproducible test results. It is ideally suited for quality assurance, research & development, and industrial testing laboratories.
The equipment can be tailored to meet specific customer requirements through customized design and configuration.

Operating Principle

During testing, the specimen is positioned between two precisely arranged platinum electrodes and subjected to a specified test voltage.
At defined intervals, drops of a standardized electrolyte solution are applied to the specimen surface between the electrodes. Under these controlled conditions, the behavior of the insulating material is examined and its resistance to surface tracking is evaluated.



Precise Adjustment of Test Parameters

The test apparatus allows precise and reproducible adjustment of the relevant test parameters, including test voltage, short-circuit current, drop size, and number of drops.
The test voltage is adjustable up to 600 V, enabling different materials and material systems to be tested under defined and reproducible conditions.

Technical Data

Control unit dimensions (W x H x D)	610 x 305 x 600 mm	**Test unit dimensions (W x H x D)**	610 x 550 x 450 mm
Control unit weight	approx. 45 kg	**Test unit weight**	approx. 30 kg
Operating voltage	230 VAC (±5%), 50 Hz, max. 8 A	**Electrode voltage**	100 to 1000 VAC
Test range	CTI / PTI	**Current limiting**	adjustable
Test medium	Electrolyte solution	**Drop size**	adjustable
Number of drops	adjustable	**Testing according to**	DIN EN 60112 (IEC 60112), UL 2597 and ASTM D 3638*

Accessories

- Platinum Electrodes
- Seal Kit for Dropping Device
- Glass Plate for Test Table
- Precision Balance
- Spacing Gauge for Adjusting the Electrode and Dropping Device Distances

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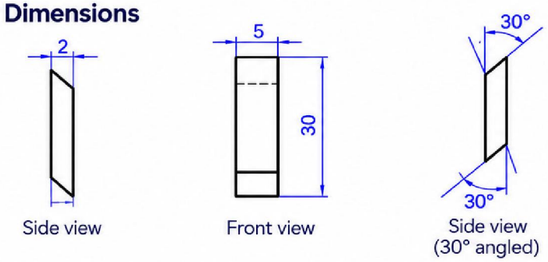
Platinum Electrodes

For Tracking Index Test Apparatus in Accordance with IEC 60112 / UL 2597 / ASTM D 3638



Front view

Dimensions



Side view | Front view | Side view (30° angled)

- Chisel-shaped electrodes with a 30° angled tip on both sides (5 mm side).
- Sharp, burr-free edges for reproducible test results.
- Smooth, clean surface, free from oxide, residues, scratches, and deformation.

Note: Dimensions in mm. Other variants available on request.

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Product Overview

Precision electrodes made of high-quality platinum for Tracking Index Test Apparatus. The precisely defined electrode geometry, featuring chisel-shaped tips beveled on both sides, ensures accurate and reproducible positioning in the test apparatus.
The electrodes are designed for determining the Proof Tracking Index (PTI) and Comparative Tracking Index (CTI) of solid electrical insulating materials.

Technical Data

Electrode material	Platinum (Pt), purity at least 99.95 %	**Pressing force**	1.00 ± 0.05 N per electrode; ensured by precision mechanical design
Number of electrodes	2 electrodes per set	**Total length**	30 mm
Cross-section	Rectangular: 5.0 ± 0.1 mm × 2.0 ± 0.1 mm	**Surface**	Smooth, clean, free of oxide, residues, grooves and deformations
Electrode tip	Chisel-shaped; 2 × 30° ± 2° bevelled on the 5-mm side	**Application**	CTI and PTI testing on solid electrical insulating materials
Tip edge	Sharp and burr-free; edge radius approx. 0.01 mm to 0.10 mm	**Standard**	IEC 60112:2025; applicable national adoption and device specifications
Working distance	4.0 ± 0.1 mm between the electrodes; adjustable in the test device		

Application Example

Use of precision electrodes in a tracking index test setup according to IEC 60112



Reproducible test results | Defined electrode geometry | Reliable quality testing | According to IEC 60112

Test Electrolyte

Electrolyte Solution for CTI and PTI Testing – IEC 60112 / UL 2597 / ASTM D 3638



- Ready-to-use 0.1 % ammonium chloride solution according to IEC 60112
- For reproducible and comparable test results
- Directly usable in tracking index test setups

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Product Overview

Ready-to-use 0.1% ammonium chloride solution (NH_4Cl) for CTI and PTI testing of solid electrical insulating materials. The test solution is designed for use in Tracking Index Test Apparatus in accordance with IEC 60112, ensuring defined and reproducible test conditions.

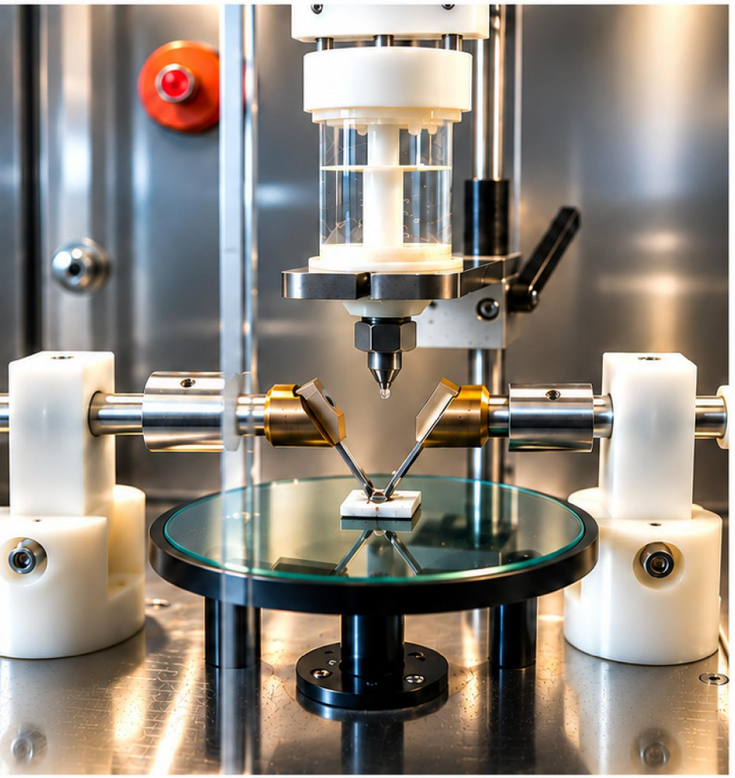
Technical Data

Electrolyte	Ammonium chloride solution (NH_4Cl)	**Reference temperature**	25 °C
Concentration	0.1 %	**Volume**	1 L
Test method	CTI / PTI	**Execution**	According to relevant standard
Test object	Finished electrical insulation	**Packaging**	HDPE bottle, 0.45
Application	Tracking index testing	**Shelf life**	365 days
Material specification	Solid electrical insulating material	**Testing according to**	IEC 60112:2025

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CTI Measurements

Determination of the Comparative Tracking Index (CTI) and Proof Tracking Index (PTI) in accordance with IEC 60112, UL 2597 and ASTM D 3638.



Standards-compliant testing
CTI and PTI testing according to IEC 60112 / UL 2597 / ASTM D 3638.

Reliable and comparable results
Tests under norm defined conditions in our laboratory.

Detailed test reports
Including CTI/PTI value, test conditions, photos and evaluation.

Individual consultation
Support in selecting suitable test methods and interpreting the results.

We are also happy to test your materials.
Contact us for a customized offer.

Our Service

We determine the Comparative Tracking Index (CTI) and Proof Tracking Index (PTI) of solid electrical insulating materials in accordance with IEC 60112, UL 2597, and ASTM D 3638.
Testing is performed under defined conditions in our testing laboratory, providing reliable and comparable results for evaluating the tracking resistance of your materials.

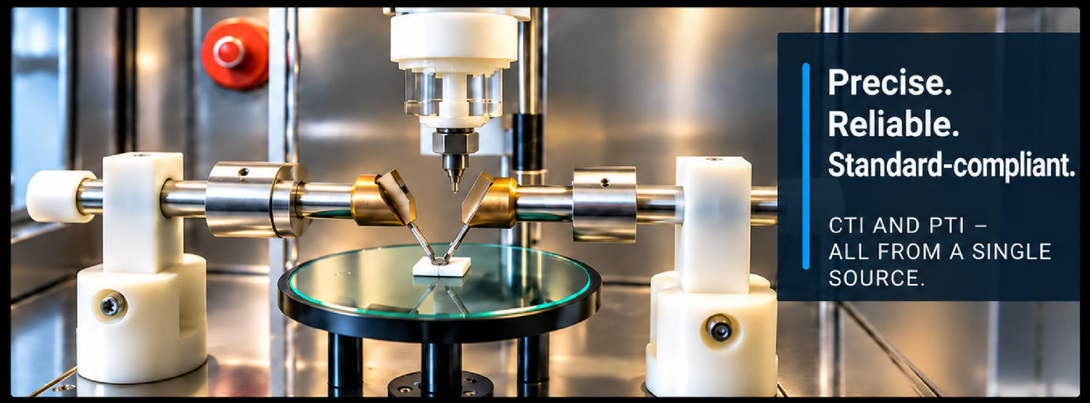
Our Process – Simple and Transparent

1 Inquiry
You send us your inquiry and, if applicable, material information.

2 Sample Shipment
We provide you with the test samples.

3 Testing
We conduct CTI and PTI measurements according to IEC 60112 / UL 2597 / ASTM D 3638 in our testing laboratory.

4 Results
You will receive a detailed test report including CTI and PTI values as well as the test conditions and evaluation.



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Rental Test Devices

CTI-4, CTI-5 and CTI-6 – Flexible Rental of Test Apparatus for Testing in Accordance with IEC 60112 / UL 2597 / ASTM D 3638

Flexible Availability
For temporary testing requirements, projects and peak workloads.

Ready-to-Use Test Equipment
Technically inspected CTI-4, CTI-5 and CTI-6 test equipment for reliable results.

No Long-Term Investment
Ideal for time-limited or occasional testing requirements.

Personal Support
Advice on equipment selection, operation and return of the rental unit.



Our Service

We offer our CTI/PTI testing apparatus CTI-4, CTI-5, and CTI-6 for rental over a specified period. The rental equipment enables testing of solid electrical insulating materials in accordance with IEC 60112 / UL 2597 / ASTM D 3638 – flexibly and directly in your own testing environment.

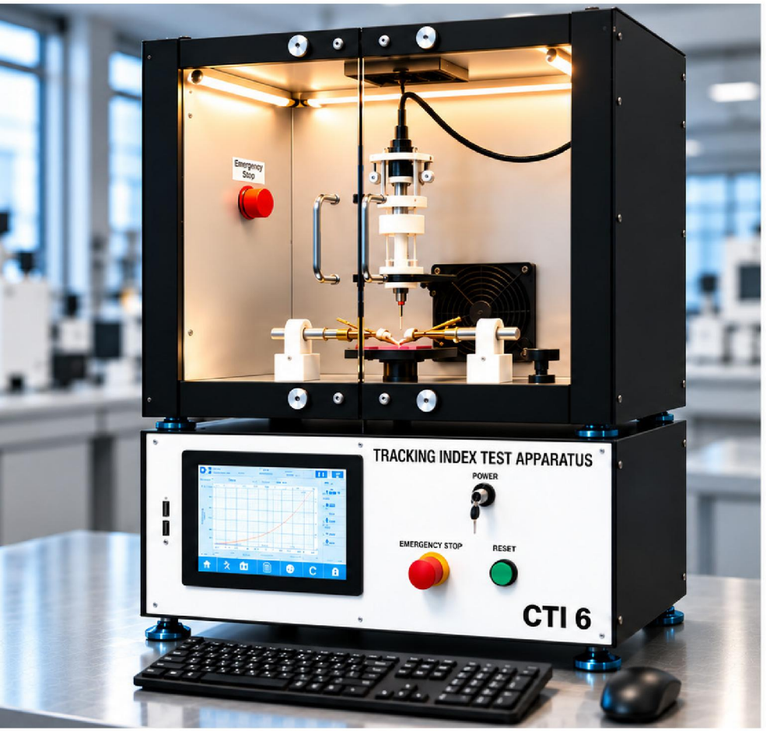
1. **Inquiry**
   You send us your inquiry and, if applicable, your requirements.
2. **Select Device**
   We will provide you with the suitable testing device (CTI-4., CTI-5 or CTI-6).
3. **Delivery**
   Fast and secure delivery to your location.
4. **Testing**
   We perform CTI/PTI testing in our laboratory.
5. **Return**
   Simple and uncomplicated return shipment.

Flexible. Ready for Use. Tailored to Your Needs.
CTI/PTI TESTING TECHNOLOGY FOR RENT.

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Calibration and Maintenance

CTI-4, CTI-5 and CTI-6 – For Reliable Test Results



Professionel Calibration

Calibration of CTI/PTI tracking testers (Tracking Index apparatus) to ensure accurate and reliable test results.

Compliance with Standards

Calibration according to IEC 60112 / UL 2597 / ASTM D 3638 and manufacturer specifications.

Detailed Calibration Reports

Including measured values, calibration conditions and evaluation.

Service & Support

Expert support for calibration, maintenance and troubleshooting to keep your Tracking Index apparatus in optimal condition.

Our Service

We provide professional calibration and maintenance services for your CTI-4, CTI-5, and CTI-6 Tracking Index Test Apparatus. To ensure long-term reliability and high testing accuracy, we recommend sending your equipment to us for calibration and inspection every two years.
During this process, we inspect and calibrate essential test parameters, including voltage, current, drop size, and timing. The electrodes are checked for wear and, if their dimensions permit, professionally reconditioned. In addition, we inspect the internal electronics and verify all relevant equipment functions.
The test chamber and dropping device are thoroughly cleaned and checked for proper operation. These measures help ensure reliable and reproducible test results.
In the future, we also plan to offer on-site maintenance and calibration services at our customers' facilities. This will provide greater flexibility while reducing equipment downtime and transportation times.

Calibration Certificates and Documentation

Depending on customer requirements, we offer different calibration documentation options, including **Factory Calibration Certificate** or **DAkkS Calibration Certificate**.

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Training and Consulting

CTI-4, CTI-5 and CTI-6 – Expert Training and Professional Consulting



Our Service

We provide professional training and technical consulting for the CTI-4, CTI-5, and CTI-6 Tracking Index Test Apparatus. Our training programs are designed to help users operate the equipment correctly, perform tests in accordance with IEC 60112 / UL 2597 / ASTM D 3638, and achieve reliable and reproducible test results.

During the training, we explain the operating principles of the equipment, the correct preparation of test specimens, and the precise adjustment of essential test parameters, including voltage, current, drop size, and timing. Special attention is given to the proper positioning of electrodes, handling of test electrolytes, and correct execution of CTI and PTI tests.

In addition, we provide practical guidance on evaluating and interpreting test results, identifying potential sources of error, and ensuring consistent testing conditions. Our technical consulting services also support customers with specific testing requirements, material evaluations, and questions related to applicable testing standards.

Training sessions can be tailored to individual customer needs and the experience level of the participants. Our goal is to provide users with the knowledge and practical skills required to operate their Tracking Index Test Apparatus safely, efficiently, and confidently.

Training Certificate

Upon completion of the training, each participant receives a personalized Training Certificate confirming their participation and the practical knowledge acquired. The certificate documents the employee's training in the operation and handling of the CTI-4, CTI-5, and CTI-6 Tracking Index Test Apparatus, including relevant testing procedures and applicable standards.

This provides companies with documented evidence of employee training and supports internal quality assurance and personnel qualification processes.

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MORE INFORMATION

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Web: https://www.fischer-messtechnik.de/contact

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