PRODUCTS & ACCESSORIES FOR DISTRIBUTION TRANSFORMERS.

WWW.REINHAUSEN.COM
ONLY THE BEST FOR YOUR DISTRIBUTION TRANSFORMER (DT).

Switching, insulating, measuring and protecting. Offering multiple solutions, the REINHAUSEN Group works to ensure that your transformer can operate in the best conditions in regard to all of its functions.

Switching
Changing voltage has never been so easy. Either with MR ECOTAP® VPD® for on-load applications, or with CAPT® de-energized tap changers, the best performance of your transformer is guaranteed.

Insulating
CEDASPE® bushings are the perfect solution for insulating your transformer, thanks to the porcelain body and the high level of customization.

Measuring & protecting
MESSKO® and CEDASPE® instruments for measuring and protecting include oil-level indicators, Bucholz relays, thermometers, pressure relief devices, dehydrating breathers and gas relays. These devices ensure that both power and distribution transformers can work in safe conditions.
OUR CHOICES.
YOUR ADVANTAGES.

We want our products to be recognized for their quality, reliability and safety and have designed – and continue to work on – our accessories accordingly while always keeping future requirements in mind. Our best solutions provide multiple advantages for your distribution transformer.

**Flexibility**
Adaptable design in accordance with various standards (IEC/IEEE). Multiple solutions available on demand. High level of customization.

**Quality, best value for price**
Products designed to achieve and exceed the minimum standard requirements. Reduction of total transformer cost thanks to optimized designs.

**Maximum operating reliability**
Enhanced operating reliability and safety of your transformer. Fully tried and tested in accordance with IEC 60214 standards with unmatched experience in the field.

**Long lasting**
Designed by our experts with future requirements in mind. We want our products to work not only today, but also for years to come!
MESSKO® AND CEDASPE® – ACCESSORIES FOR DISTRIBUTION TRANSFORMERS.

The challenge of every operator of distribution transformers is to protect the equipment from unscheduled threats. Unforeseen occurrences can shorten a transformer’s service life by a few years within a matter of seconds. To reduce the risk of failure and minimize the effects of an outage, transformers are equipped with various products such as temperature and oil-level indicators, flow indicators, pressure relief devices and bushings. MESSKO® and CEDASPE® offer comprehensive transformer-related solutions.

Porcelain bushings

CEDASPE® bushings are liquid filled, hollow core, oil communicating electrical bushings designed in accordance with EN 50180, EN 50243, EN 50386 and DIN 42537 standards. Characteristics and tests for this type of insulated bushing are based on IEC 60137.

Standardized design and production expertise, developed over many years, ensures that the various series for distribution transformers represent the best value-for-price guarantee in the market.

Thermometers

The CEDASPE® BM series is a bimetallic oil-temperature indicator without contacts mainly used for applications in distribution transformers.

The CEDASPE® BM series can feature a radial, rigid-stem design for top cover mounting or a back-entry stem design for lateral wall mounting.

MESSKO® COMPACT thermometers are used for taking temperature measurements in transformers. The thermometers are based on the Bourdon tube measuring system with no additional mechanical parts.

For further information about CEDASPE® bushings and measurement devices, please visit www.cedaspe.com
For further information about MESSKO® accessories for transformers, please visit www.reinhausen.com/messko
Buchholz relay

Designed to detect faults and minimize the propagation of any damage in oil-filled transformers, the CEDASPE® Buchholz relay is particularly effective in the event of short-circuited core laminations, degraded core-bolt insulation, overheated windings, short circuits, ground faults and poor contacts. The relay operates via an alarm switch in the event of gas accumulation or via a trip switch in the event of an abrupt increase in the oil-flow rate or loss of oil.

Pressure relief devices

MESSKO® MPreC® pressure relief devices protect medium and large-sized distribution transformers, power transformers and tap changers during periods of increased oil-system pressure.

Breathers

CEDASPE® breathers are available in two main versions: the CEDASPE® VE series and the CEDASPE® VC series. Both types are suitable for replacing the earlier DIN series and are available as a traditional single body as well as a modular assembly.

The CEDASPE® VE series breathers have an air-inlet oil cup protected by an aluminum housing, while the CEDASPE® VC series breathers have an air inlet that works via a spring-loaded and bi-directional bottom valve.

Oil-level gauges

The CEDASPE® NFG (normal face gauge) series is a magnetic oil-level indicator designed for both power transformers and large distribution transformers. It is used for checking and measuring the oil level inside the conservator. The outcome is an analog indication given by an arrow spacing on a graduated dial and by one or more electric contacts (up to 4 switches) which switch when the oil level reaches the minimum/maximum allowed.
CAPT® – DE-ENERGIZED TAP-CHANGER.

Six different product categories and more than a thousand available configurations. Specifically designed for oil-immersed transformers, CAPT® de-energized tap-changers can fulfill almost any requirements in DT applications with rated currents up to 200 A and voltages up to 36 kV. The products are manufactured in accordance to with IEC 60214.

Linear type:
CAPT® 090-095-096 series

- Compact size, high performance. With a modular design that combines high quality standards and a great level of customization, it is possible to obtain the perfect switch for your transformer
- Easy installation, low weight. A limited number of components is provided to the customer for a simplified assembly procedure on site. The weight of the components is reduced to the minimum, so that the maximum efficiency is guaranteed

Cable type:
CAPT® 099 series

- Installation has never been so flexible. Thanks to the cable application, you can choose where to place the drive and adjust it to your needs
- Space savings in the transformer tank are made possible by the limited thickness and the possibility to install the tap changer either horizontally or vertically

Rotary type:
CAPT® 085-086 series

- Designed in accordance with the British standard assembly, CAPT® 085 and CAPT® 086 series are manufactured with a rotary setting of the drive equipment
- Adjustable shaft length, specifically designed contacts and a modular design are combined to obtain a switch of maximum efficiency

For further information about CAPT® de-energized tap-changers, please visit www.capt.it
ECOTAP® VPD® – ON-LOAD TAP-CHANGER.

Compact, reliable and maintenance free. Distribution transformers can now be regulated with the superior vacuum technology for on-load tap-changers from Maschinenfabrik Reinhausen (MR). They maintain a constant voltage in public, industrial, and private distribution grids by compensating for fluctuations in the medium and, if necessary, high-voltage levels and responding dynamically to changes in the feed-in and demand at the low-voltage level.

ECOTAP® VPD® combines the know-how that MR has accumulated over decades in high-speed resistor-type on-load tap-changers using vacuum technology with the experience in voltage regulation distribution transformers gained around the globe since 2012 by working with transformer manufacturers and operators.

ECOTAP® VPD® allows all manufacturers of distribution transformers to add voltage regulation transformers to their product range, with superior MR vacuum technology and at a price which makes the transformer/on-load tap-changer system very attractive to a number of operators.

Main advantages

- The compact dimensions permit installation in virtually any power rating class of distribution transformers without any major changes to the footprint
- The proven electro-mechanical operating principle of MR’s vacuum technology ensures stable and reliable operation for decades without the need to service the primary equipment
- Use of the high-speed resistor-type tap-changer principle, with which manufacturers and operators have been familiar for decades, ensures that design, production, testing, and operation can be carried out on the basis of previous experience and that comprehensive training is not needed

For further information about ECOTAP® VPD®, please visit www.reinhausen.com/oltc
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the data of the devices delivered. We reserve
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