

# **Professionals In High Voltage Technology**

# Maschinenfabrik Reinhausen (MR) Products





















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## On Load Tap Changers (OLTC):



#### The VACUTAP® VR®

The world's first on-load tapchanger which is maintenancefree up to 300,000 switching operations. Since its maintenance is no timedependent, your transformer has much less downtime.



#### **VACUTAP® VM®**

Fully retrofittable and 100% connection-compatible with the OILTAP® M, of which there are over 70,000 in existence. All you have to do is dismantle the old diverter switch and fit the new VM® model.



### **VACUTAP® VV®**

Already operates throughout the world. It's maintenance-free up to 300,000 operations and suitable for most network applications. Thus your transformer lifecycle costs are reduced significantly.



#### **OILTAP®** R

The on-load tap-changer for the highest voltages and transformer output rates.



#### **OILTAP® M**

The on-load tap-changer allowing the widest and most comprehensive scope of applications: From transformers with medium output rates to large power transformers, process transformers subject to the highest levels of stress, special transformers.



#### **OILTAP® V**

An exceptionally compact onload tapchanger for tapped transformers with small to medium output rates.

#### **Voltage Regulators:**







# **ISM® TECHNOLOGY**

- Latest communication technology
- \New intuitive operation, cuttingedge graphical display - ISM® Intuitive Control Interface (IICI)
- Prepared for new applications and the challenges of the future
- Maximum operational reliability and data security

#### **TAPCON® 240-LV**

The "Limit Volt" System for monitoring the regulated distance in a HV transformer. The main functions of the TAPCON® 240-LV are:

- Monitoring the regulated mains voltage (under- and overvoltage)
- Monitoring of voltage changes initiated by tap-change operations
- Monitoring the Electronic motor drive ED (under/overvoltage)

#### **TAPCON® 230**

Measurement, control and regulation — the TAPCON® 230 voltage regulator provides all these functions in one device. Regardless of whether simple regulation tasks or complex requirements for a modern transformer control device, the TAPCON® 230 can be used flexibly and completes all tasks reliably. It is a real all-around worker that offers the highest level of operating convenience.

#### **Motor Drive Units & OLTC Accessories:**







#### **OIL FILTER UNIT OF 100**

- paper filter design to clean the switching oil
- 2 pump unit designs available
- combination filter design to clean and dry the switching oil
- 2 designs for controlling the pump
  unit
- control integrated into separate control cabinet
- control integrated into the ED motor drive

#### **PROTECTIVE RELAY RS2001**

The protective relay is designed to protect the on-load tap-changer and the transformer during a malfunction within the on-load tap-changer or the selector switch oil compartment.

#### **TAPMOTION® ED**

TAPMOTION® ED is used exclusively for operating on-load tap-changers and off-circuit tap-changers in regulating transformers as well as for operating plunger-core earth-fault neutralizers.

#### **Transformer Accessories:**







#### **BeTech**

- Thermometer with bellow-type technology
- Extremely durable and reliable
- No readjustment or recalibration ever needed
- Contacts individually adjustable
- Compensation of ambient temperature
- Laminated safety glass viewing glass with built-in UV filter

#### Trasy2 - Series

- Bourdon tube measuring system with no additional mechanical parts
- Extremely durable and reliable; No readjustment or recalibration ever needed
- Quick and easy configuration of gradients via DIP switches in the ZT-F2.1 (thermal image of winding temperature)
- Automatic compensation of ambient temperature
- Laminated safety glass viewing glass with built-in UV filter

# Compact - Series

- Bourdon tube measuring system with no additional mechanical parts
- Extremely durable and reliable; no readjustment or recalibration ever needed
- Quick and easy configuration of gradients via potentiometer (thermal image of winding temperature)
- Laminated safety glass viewing glass with built-in UV filter

# **Dehydrating Breather:**





#### MTRAB® DB100

- Maintenance-free
- Use of glass cylinders for optimizing the regeneration process and for excellent weather resistance
- DIN flange for optimal mounting
- Test button for performing selftests
- Optional: Offshore model, filter heater for use in temperatures as low as -50 °C and a data logger, Protection of the electrical lines from damage (such as gnawing by animals)

#### MTRAB® DB200

- Maintenance-free
- Use of glass cylinders for optimizing the regeneration process and for excellent weather resistance
- DIN flange for optimal mounting
- Test button for performing self-tests
- Optional: Offshore model, filter heater for use in temperatures as low as -50 °C and a data logger, Protection of the electrical lines from damage (such as gnawing by animals)

#### MTRAB® DB200D

- Maintenance-free
- Use of glass cylinders for optimizing the regeneration process and for excellent weather resistance
- DIN flange for optimal mounting
- Test button for performing selftests
- Optional: Offshore version, filter heater for use in temperatures as low as -50 °C and a data logger, Protection of the electrical lines from damage (such as gnawing by animals)