



Movement by Perfection



The Royal League in ventilation, control and drive technology



# New generation of ventilation technology

for dry transformer cooling



# Ventilation technology for dry transformer cooling



*Dry transformer without forced ventilation*

Dry transformers – which require solely air for cooling – must dissipate the heat loss build-up in the windings through the coil surface to the cooling air without exceeding the permissible insulation class excess temperatures inside the coil. Optimised cooling facilitates temperature reduction for the high-voltage winding and uniform temperature distribution for the entire transformer.

Higher peak loads can be absorbed by using dedicated cooling accomplished with ZIEHL-ABEGG fans. This option provides freedom for development when designing the systems for new plants. In existing plants, corresponding retrofitting measures can achieve considerably higher performance.

## Benefits of the forced ventilation of dry transformers

- Higher material utilisation factor
- Higher peak loads
- Higher performance in existing plants becomes feasible
- Constant temperature of the dry transformer and consequentially longer service life



# ZIEHL-ABEGG solutions

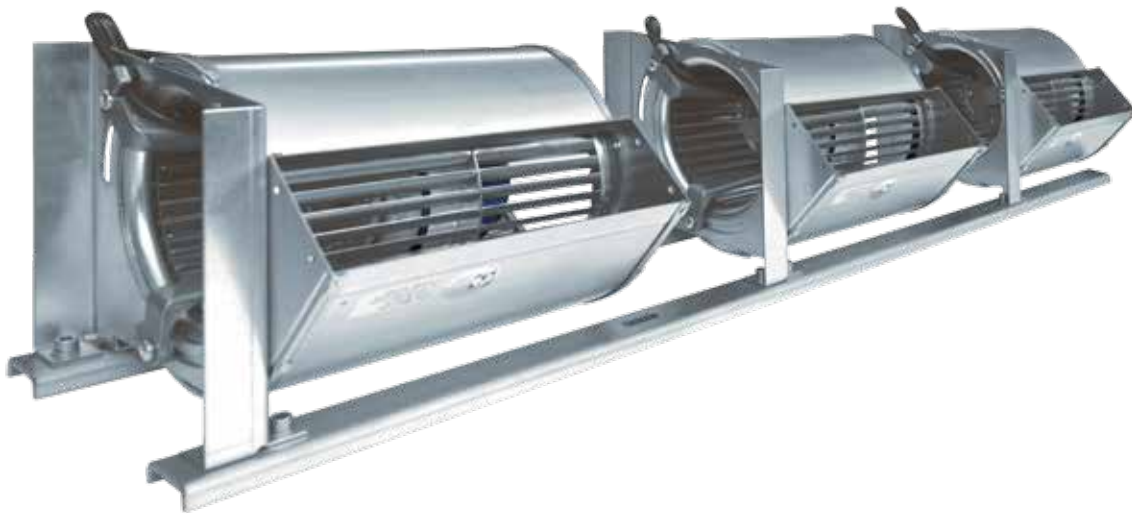
Regardless of the system or solution you decide on, ZIEHL-ABEGG is always the right choice

Successfully established solutions with cross-flow fans



The alternative

**The new, clever solution for optimised cooling through flexible ventilation technology with scroll fans**



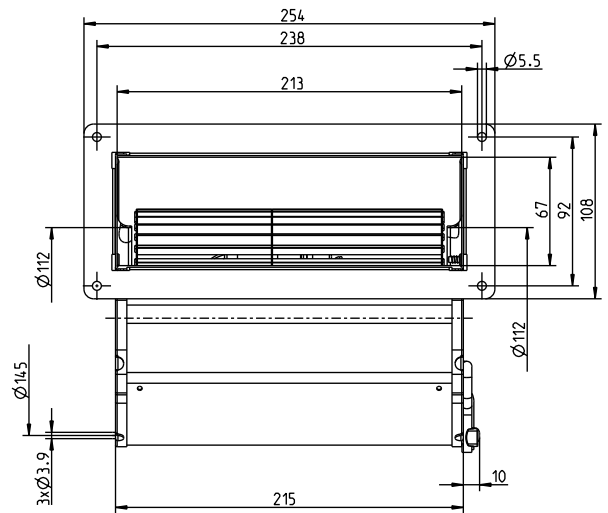
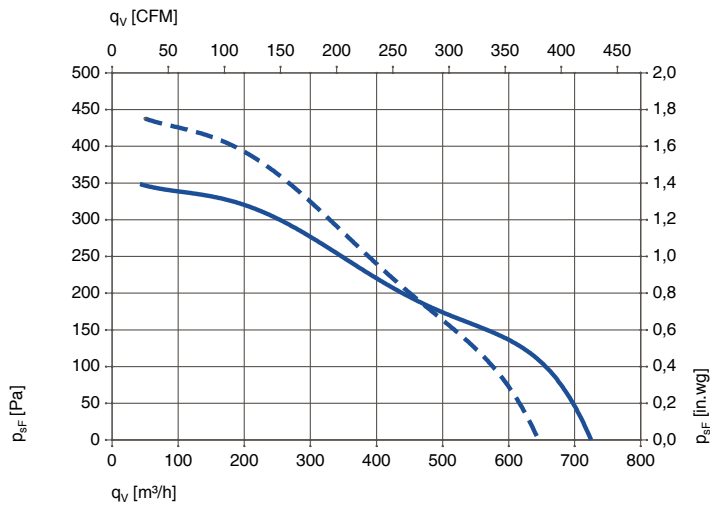
The new system comprises double inlet centrifugal fans which are mounted hinged on profile rails. The fans can be variably positioned on these.

## Advantages

- Flexible air volumes through various numbers of fans
- Dedicated cooling of the hot spots through directional airflow on the coil core
- Exact positioning of the fan using variable rail lengths
- Flexible attachment system through variable interface on the existing transformer construction
- Reduced installation effort and easy accessibility during maintenance
- Reduced fan type variety
- Simple installation
- ErP compliant



## Technical Data



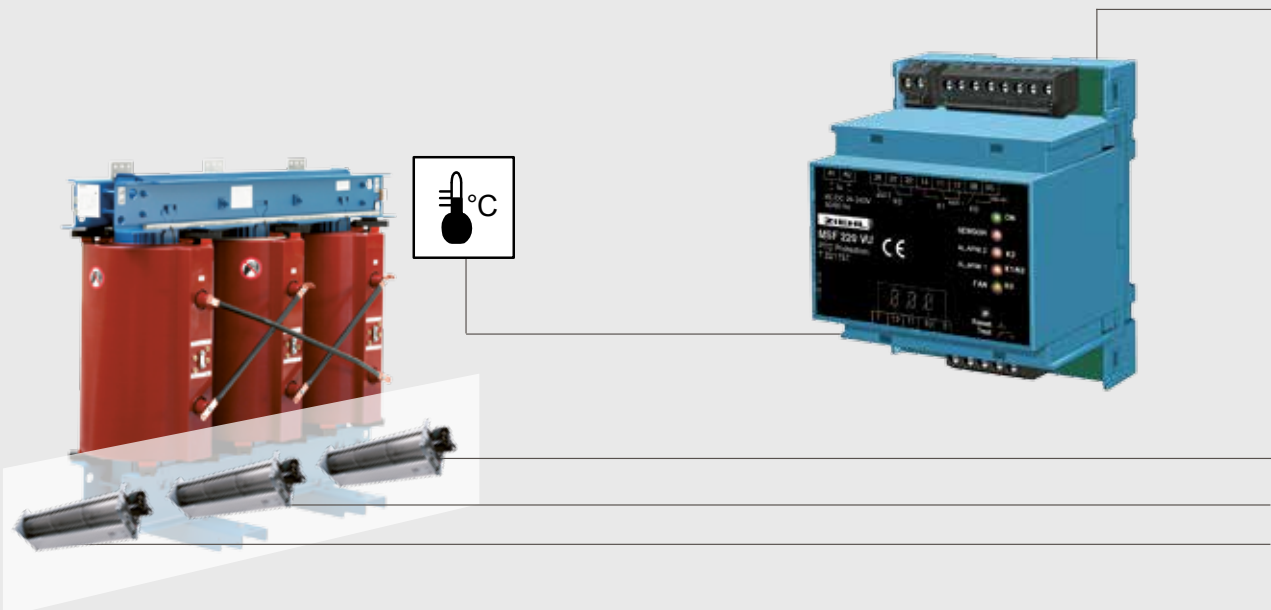
Characteristic curve data, series RD13S  
higher air-handling capacity on request

## A perfect match for optimal performance Transformer protection with PTC's

- Special monitoring and protection devices
- PTC relay with 2 or 3 PTC temperature sensor circuits
- Specially developed to protect dry transformers
- Integrated fan controller and monitor
- All products from one, single source

### Application areas

- Control of fans on dry transformers
- Retrofitting of fans on dry transformers for higher performance



# The Royal League



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