

# On-Load Tap Changers OLTC's

Dynamic Voltage Regulation for Modern Power Networks



## What is an OLTC?

On-Load Tap Changers (OLTCs) enable voltage regulation under load without interrupting power supply.

By adjusting the transformer turns ratio in real time, OLTCs maintain stable secondary voltage under varying network conditions, ensuring consistent power quality and reliable operation.

## Key Figures



**±5% to ±10%**  
voltage regulation range



Incremental tap adjustment



**500,000+**  
operations without maintenance



Compatible with natural ester fluids



Manual or AVR controlled operation



### Precise Voltage Control

Maintains stable output voltage under fluctuating load conditions



### High Switching Reliability

Vacuum switching technology minimises arcing and contact wear



### Reduced Maintenance Requirements

Designed for long operational intervals without intervention



### Network Efficiency

Optimises voltage levels to reduce losses and improve power quality

## Key Technical Features

- ✓ Vacuum switching technology for low wear and high reliability
- ✓ Compatible with mineral oil and natural ester fluids
- ✓ Typically installed on high-voltage winding
- ✓ Manual or automatic voltage regulator (AVR) operation
- ✓ Built to IEC, ANSI, BS, UL and ENATS standards
- ✓ Proven in distribution, industrial and renewable applications



# Where OLTC's are required

OLTC's provide real-time voltage regulation to maintain network stability without interrupting supply.



Load fluctuation across distribution networks



Intermittant renewable generation (wind/solar)



Long feeder distances and voltage drop



Industrial processes with variable demand

## Operational Performance



500,000+ switching operations without maintenance



Minimal contact wear due to vacuum switching



Stable operation under frequent load operation



No requirement for on-line oil filtration systems

## Application Areas



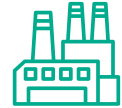
### Urban Electrical Distribution Areas

Voltage regulation in space-constrained substations and long feeders



### Renewable Energy Integration

Voltage control and power flow management in wind and solar networks

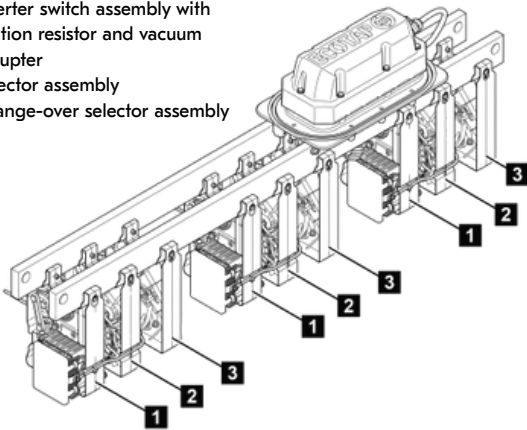


### Industrial & Utility Networks

Regulation for rectifier, furnace, and high-variability load applications

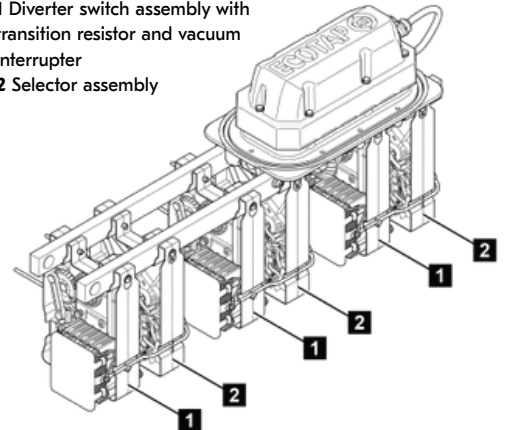
## OLTC Configuration

- 1 Diverter switch assembly with transition resistor and vacuum interrupter
- 2 Selector assembly
- 3 Change-over selector assembly



Rear view of the ECOTAP® VPD® with change-over selector

- 1 Diverter switch assembly with transition resistor and vacuum interrupter
- 2 Selector assembly



Rear view of the ECOTAP® VPD® without change-over selector

## Maintain Voltage Stability Across Your Network

Discover how our OLTC solutions can improve voltage stability, reduce maintenance requirements and support modern grid performance

Dublin Rd, Cavan, H12 KV20, Ireland  
 +353 494331588  
 [www.kytechpowertech.com](http://www.kytechpowertech.com)



A company of R&S