



## MEDIUM VOLTAGE POWER TRANSFORMERS



### MAXIMUM POWER. MAXIMUM PERFORMANCE

Substation-type transformers are designed for industrial and power infrastructure applications that demand high reliability, construction flexibility, and adaptation to project-specific requirements. These units are manufactured with ratings up to 10 MVA and can be configured for both new installations and the modernization or replacement of existing equipment. Their customized designs ensure safe integration with switchgear, control panels, and special substation layouts.

Each transformer is developed through a tailored engineering process, ensuring full compliance with international standards, seamless integration with existing systems, and the option to include special accessories for operation, monitoring, and preventive maintenance.

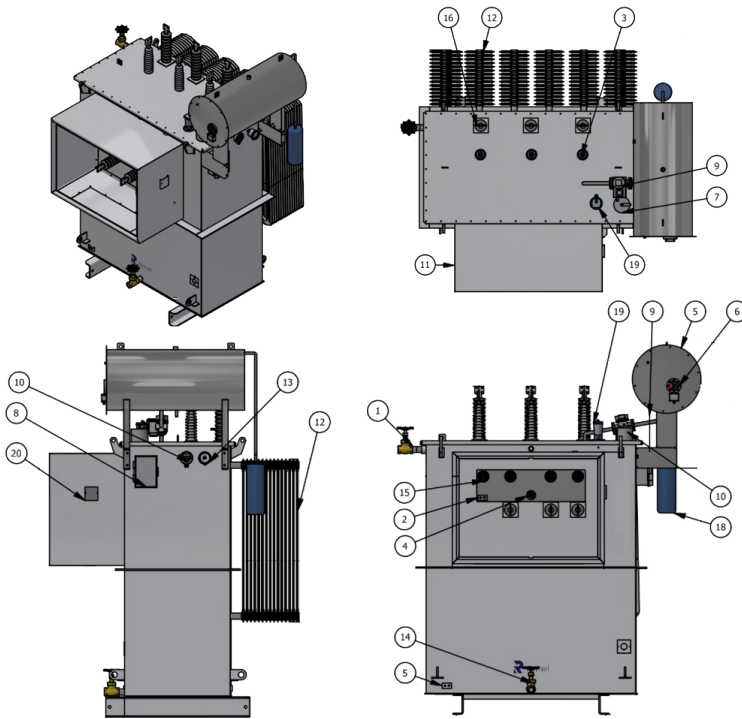
The transformers can be supplied with natural ester insulation, ideal for applications requiring enhanced fire safety, reduced environmental impact, and extended insulation life, or with conventional mineral oil, suitable for standard applications where special safety or sustainability requirements do not apply.

### Advantages of RYMEL Power Transformers

- **High operational reliability** for industrial environments and critical infrastructure.
- **Flexible construction design**, adaptable to each project—whether for new installations or replacements.
- **Designed and tested** in accordance with major international standards: IEEE, IEC, DOE, NTC, and RETIE.
- **Fully customizable up to 10 MVA**, configurable in dimensions, connections, and voltages according to project requirements.
- **Bushings mounted** on the top cover or side wall through throat-type openings, adaptable to facilitate interconnection in primary substations.
- **Reinforced tanks** with anti-corrosive coatings for long service life in harsh environments. Available with an expansion tank or air cushion.
- **Guaranteed energy efficiency.**
- **Mechanical flexibility:** core-coil assembly and tank construction adaptable to site dimensional constraints.
- **Optional forced-air cooling system** to increase power rating by +15%, +25%, or +33% above the base kVA.
- **Optional natural ester fluid**, providing increased fire safety, reduced environmental impact, and extended insulation life.



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1. Oil filling valve
2. Tank Grounding Terminal
3. High-voltage bushings
4. Tap changer
5. Oil conservator
6. Oil level gauge
7. Pressure relief device
8. Control cabinet
9. Buchholz relay with contacts
10. Thermal image window
11. Low-voltage cabinet
12. Radiators
13. Thermometer
14. Oil drain valve
15. Low-voltage bushings
16. High-voltage surge arrester
17. Lifting lugs
18. Silica gel breather
19. Sudden pressure relay
20. Nameplate

TECHNICAL INFORMATION	
Power Ratings [kVA]	Up to 10 MVA
Configuration	Indoor Substation - Outdoor Substation
Maximum Voltage [HV]	Up to 36 kV
Maximum Voltage LV	Up to 15 kV
Connection Group	DD, YY, DY, Three-winding option
Operating Frequency Range [Hz]:	50 - 60
Tap Changer	5 positions
Standard	IEEE, IEC
Temperature Rise	65°C or 55°C
BIL	Up to 200 kV
K-Factor	1 to 20
Cooling	ONAN, ONAF - KNAN, KNAF
Insulation liquid	Mineral or Natural Ester
Thermal Class	120 °C

### Special Accessories:

The integration of special accessories with electrical contacts is offered for monitoring, protection, and control, such as:

- Thermometer
- Thermal Image Window
- Buchholz Relay
- Vacuum-Pressure Gauge
- Oil Level Gauge
- Sudden Pressure Relay
- Pressure Relief Device
- Built-in Current Transformers (CTs)
- Bushings Mounted on the Top Cover or Side Wall
- Surge Protection Device (SPD)
- Power Increase with Forced-Air Cooling: +15%, +25%, or +33% above the base kVA rating