



**POWER THE FUTURE**



[www.ares-trafo.com](http://www.ares-trafo.com)

**BUSHINGS AND ACCESSORIES**

FOR DISTRIBUTION AND POWER TRANSFORMERS

# Company Profile

ARES TRAF0 has been manufacturing many accessories used for power and distribution transformers almost 20 years and so far it's one of the most well known companies in this market for energy sector.

ARES TRAF0 is exporting more than 74% of its products to worldwide. This success has been built up through long-term relationships with customers and ARES TRAF0 becoming a reliable manufacturer of consistently high-quality products.

Production and logistics are focused on the continuous improvement of efficiency. ARES TRAF0 is able to customize almost every product in order to satisfy customer requirements and sharing expertise and experiences to improve customer service.

Today, ARES TRAF0 has operation facilities in two locations in Turkey - Kartepe, employs more than 120 people, serving for transformer accessories production and transformer coil windings for transformer manufacturers.

Our sales department and engineering department always able to give a positive answer to the demands of the customers, more and more frequently dealing with the various requirements; the efficiency of this service is shown by delivery terms on line with customer needs, good packing, clear documentation.

Ares Accessories Production Facility : 6000 m<sup>2</sup>  
Ares Coil Winding Facility : 5000 m<sup>2</sup>





### PORCELAIN BUSHINGS FOR DISTRIBUTION TRANSFORMERS

Porcelain bushings for Distribution Transformers with a rated voltage range from 1 kV to 3 kV and a rated current range of 250A to 6300A.

These bushings are manufactured in accordance with EN 50386 , DIN 42530 and DIN42539 norms.

Primarily used for indoor and outdoor applications in the field of distribution transformers, these bushings are available in several designs and can be customized to fit almost any kind of customer requirement upon request (i.e. tin plating, special drillings, special connectors, etc.).

The LV series features a porcelain and plastic insulating body on the oil side; in addition, rods are available both in copper or brass. We can provide excellent performance even under very extreme applications for -60C or silicone oils.

### PORCELAIN BUSHINGS FOR POWER TRANSFORMERS

Porcelain bushings for power transformers with a rated voltage range from 12 kV to 52 kV and a rated current range of 250A to 3150A These bushings are manufactured in accordance with EN 50180 , DIN 42531 , DIN 42532 , DIN42533 norms.

Featuring an extensive range of available customizations, the HV bushing can be manufactured according to almost any kind of customer requirement (i.e. rod extension, special connectors, special finish surface, etc.)

Designed for both indoor and outdoor applications, the HV bushing series can even operate under extreme environmental conditions (i.e. very polluted areas, very cold/hot ambient temperatures, very corrosive/aggressive environments, etc.).



### PLUG-IN BUSHINGS FOR DISTRIBUTION TRANSFORMERS

Plug-in bushings for oil immersed distribution transformers manufactured from epoxy resin are used at the HV Side of the Indoor and with special material for outdoor transformers . Plug in Bushings in compliance with EN 50180 and EN 50181 / IEC60137 Interfaces of A-B-C-D-E-F types Plug in Bushings up to 12-24-36 kV, and 250A-630A-1250A levels.

Insulation material is Epoxy Resin from Huntsman which has 90°C to 115°C Tg. We deliver with accessories of Plastic Cover for protection , Aluminium Clamp, Fixing Ring, Earthing Cable, Gasket, Brass Nuts & Washers

### Bushing Flag Connectors

We produce acc. to DIN 43675 and we have bushing flag connectors are available in several designs and can be customized to fit almost any kind of customer requirement upon request (i.e. tin or silver plating, special drillings, special connection threads, etc.)



### BUCHHOLZ RELAYS FOR TRANSFORMER PROTECTION

ARES Buchholz Relay in accordance with EN 50216-2 protects liquid immersed transformers and reactors with conservator. It will be mounted in the pipeline between transformer and conservator tank.

ARES Buchholz Relay operates as a protection device that can be provided with two or three contacts for alarm and tripping.

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.



**Magnetic Oil Level Gauges With Contacts**

ARES Magnetic Oil level gauges acc. to DIN42569 for liquid immersed transformers for conservator tanks. It operates as a protection device that can be provided with two contacts for alarm and tripping.



**Magnetic Oil Level Gauges**

ARES Magnetic Oil level gauges acc. to DIN42569 for liquid immersed transformers for conservator tanks. It operates as a protection device that can be provided with two contacts for alarm and tripping with it is moving float.

**Vertical Oil Level Gauges**

ARES Vertical Oil level gauges operates with vertical float movement is used for hermetically sealed transformers. The float movement is transmitted to the display by means of a magnetic clutch.



**Axial Cooling Fans for Power Transformers**

ARES Axial cooling fans are a type of device that increases airflow pressure as it passes through. The fan blades work by forcing air to move parallel to the shaft, which the blades rotate around. The axial fan characteristics such as air-flow, power, voltage, frequency, noise level, dimensions, corrosion class, protection class and materials of components can be adjusted. Acc. to ErP2015 and we design your fans according to your requirements with minimum power consumption.

Sizes : from ø450 to ø1250 mm  
Air volume ( free blowing ) from 3750 - 50000 m3/h ( 50 hz - design ) & 60 Hz - design  
Protection : IP55 to IP66 levels.

ACCORDING TO ErP DIRECTIVE 2015/125/EG

**Cross Flow fans for Dry Type Transformers**

ARES Cross Flow fans for Dry Type Transformers have optimal solutions for air forced cooling of transformers. High performance induction motor cross flow fans are designed to dissipate heat generated by dry type transformer losses while complying with the market requirements and assure fail-safe operations in all industrial zones.



**Bimetal Thermometers**

ARES Bimetal thermometers in accordance with DIN 16160 is used for indicating and monitoring the oil temperature of distribution transformers. The thermometer will be mounted on the transformer cover and is available with three different connection threads: G1" ,G1/2" , G1/4"

The Bimetal Thermometer operates with either one limit switch (alarm) or two switches (alarm and tripping) for monitoring settable limit values.

Also we have models without contact thermometers.



### Pressure Relief Device With Contacts

ARES pressure safety devices are designed to prevent excessive mechanical stress caused by increases in pressure that can occur in the event of a short circuit inside an oil-filled transformer.

T50 and T80 pressure safety devices are designed to operate quickly in response to sudden increases in pressure inside the transformer. If the pressure in the transformer rises above a pre-set pressure between 30 - 70 kPa, the valve opens and the overpressure releases. After decline, the cover of the device closes again leaktight. It is equipped upon request with one or two NO or NC contacts.

### Pressure Relief Valve

ARES pressure safety devices are designed to operate quickly in response to sudden increases in pressure inside the Transformer, If the pressure in the transformer rises above a pre-set pressure between 30 - 70 kPa, the valve opens and the overpressure releases in addition to the operating limits of EN 50216-1, 1" - 1 1/2" - 2" sizes



### Flanged and Screwed Ball Valves

ARES ball valves is a shut off valve that controls the flow of a oil liquid by means of a rotary ball having a bore. By rotating the ball a quarter turn (90 degrees) around its axis, the medium can flow through or is blocked.

These ball valves are designed to prevent oil leakage with special sealing system for oil-filled transformers with SS304 or SS316 body materials.

### Transformer Gate Valves

ARES Gate valve functions by lifting a circular gate out of the path of the oil. When the valve is fully open, gate valves are full bore, meaning there is nothing to obstruct the flow because the gate and pipeline diameter have the same opening.

These gate valves are designed to prevent oil leakage for oil-filled transformers with Brass, Bronze or Stainless Steel materials with sizes of DN25-50-80-100mm and some of gate valves with drain and single flanges.



### Brass and Bronze Drain Valves

ARES drain valve functions by lifting a circular globe part out of the path of the oil. When the valve is fully open there is nothing to obstruct the flow because of that easily drain the Transformer oil.

These drain valves are designed to prevent oil leakage for oil-filled transformers with Brass or Bronze Materials with sizes of DN15-25-32mm and some of gate valves with drain and single flanges.

### Stainless Drain Valves

ARES stainless drain valve functions by lifting a circular globe part out of the path of the oil. When the valve is fully open there is nothing to obstruct the flow because of that easily drain the Transformer oil.

These drain valves are designed to prevent oil leakage for oil-filled transformers with transformers with SS304 or SS316 stainless steel materials with sizes of DN15-32mm and some of gate valves with drain and single flanges.





**Butterfly valves for Radiators**

Available in sizes of DN100-125-150-200-250-300mm

The round valves are available in range from DN100mm to DN300mm nominal diameter. The radiator valves are available with metal to metal sealing, and sealing with O-ring (zero leakage). Furthermore, all butterfly valves are available in an offshore version. With an AISI 316 body, they work perfectly even in very extreme

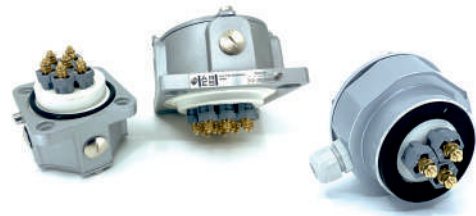


**Butterfly valves for Radiators DN80**

ARES Butterfly valves for radiator valves have a nominal bore diameter of DN80 mm and available in with metal to metal sealing, and sealing with O-ring (zero leakage). Furthermore, all butterfly valves are available in aluminium, steel and SS316 body. Our valves are designed in accordance with EN 50216-8 (DIN 42560).

**Butterfly valves for Buchholz Relays**

ARES Butterfly valves for Buchholz Relays are the perfect devices for enabling isolation of the Buchholz relay for replacement purposes as well as for enabling the disconnection of buchholz relay on pipeline. These butterfly valves have sealing with O-ring (zero leakage), Furthermore, all butterfly valves are available in aluminium, steel and SS316 body. Available in Sizes of DN25-50-80mm. Our valves are designed in accordance with EN 50216-8 (DIN 42560).



**Terminal Connection Boxes**

ARES terminal boxes help to wiring connections with terminals, insulation feed throughs of cast aluminum and IP65 protection.

Terminal boxes are available in a wide variety terminals/entries for use in several applications with different cable glands.

**Copper Flexible Braided Connectors**

ARES connectors are manufactured from highly flexible wires, which are braided from annealed Cu-ETP wires, and solderless contact areas pressed from seamless Cu-ETP tubes, we also manufacture these parts from tinned wires and tin coated contact areas.



**Copper Flexible Press Welded Foil Connectors**

ARES connectors are constructed from Cu-HCP foils with a thickness of 0,10 to 0,30 mm by overlapping the needed amount together and welding their ends as required contact areas without using any welding additive. This special welding process takes places under high pressure and intensive heat. These connectors have a uniform cross-section over their entire lenght and due to their homogeneous molecular structure; they are perfect electrical conductors.

**Moisture Holders**

ARES moisture holders used to dry the intake air of transformers. If the operating temperature of the transformer drops, air will be sucked in and dried by the silica gel inside. If the temperature rises, air is expelled from the conservator and flows through the transformer dehydrating breather in the opposite direction. The size of the dehydrating breather which has to be used depends on the oil volume.





**Distribution Transformer Wheels**

Design according to DIN 42561 and customer specification  
Diameter : Ø125 to Ø200mm



**Power Transformer Wheels**

Design according to DIN42561 and customer specifications up to 70 tonnes.

Diameter : Ø100 to Ø400 mm with and without rail

Single wheel or double wheel with cone bearings

Special request as regards the fixing at the transformer tank are always taken into account, special diameters flat wheel design, blocking device



**Gas Sampling Device for Buchholz Relay**

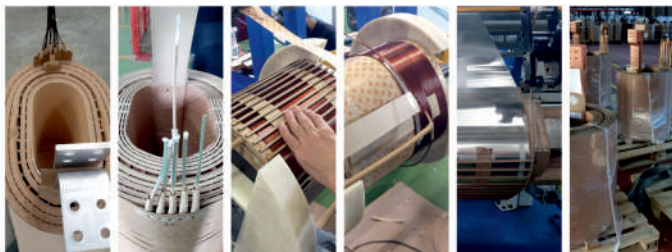
The gas sampling device as follows has been designed to overcome this problem by siting the unit remote from the Buchholz and in a readily accessible position typically on the side of the transformer.

The presence of gas inside an oil filled transformer is always a sign of malfunction and to analysis of the evolved gas can often give good indication of the type of malfunction but accessing the Buchholz relay



**Nitrogen Pressure Regulator**

Used as Air pressure Regulator for transportation of transformers without oil with Dry-Air or Nitrogen.



**Coil winding for Distribution Transformers**

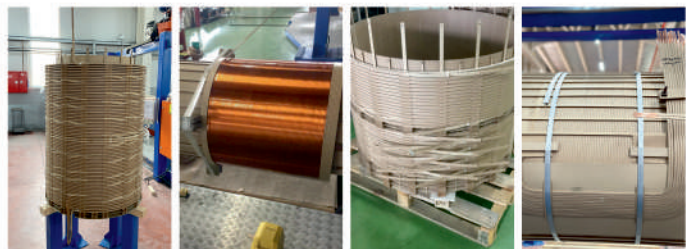
Production of 180-240 pieces (60-80 transformer) coils per week up to 50 KVA-2 MVA.

Production of 60 coils (20 transformers) per week at powers between 2-5 MVA.

**Coil winding for Power Transformers**

Production of 60 coils (20 transformers) per month for powers between 5-30 MVA.

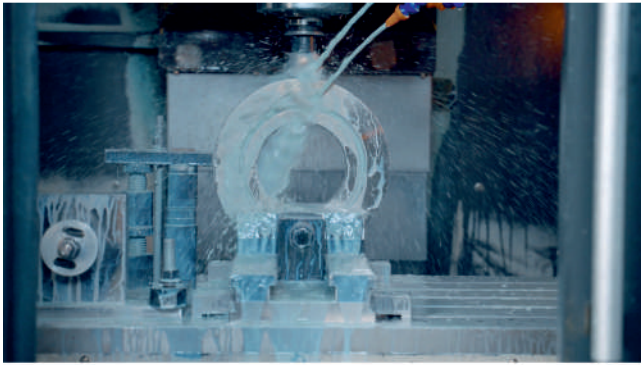
Production of 60 pieces (20 transformers) coils per month at powers between 30-90 MVA.



## MANUFACTURING FACILITIES

ARES TRAF0 has several CNC machines which provides us to manufacture thousands of high quality products with the latest technology. We have in house machinery capacity .

ARES TRAF0 aims the improving reliability day by day and designing new products to satisfy the latest market requirements , we do changes and improvements by customer advises.



## QUALITY AND MANAGEMENT SYSTEM CERTIFICATION

ARES TRAF0 quality management system has been ISO 9001:2015, ISO45000:2018 and ISO14000:2015 certified. ARES TRAF0 bushings and accessories are designed and manufactured to satisfy and exceed the requirements of international IEC and EN standards and regulations. Each product is routine tested and controlled individually. All products are tested in accordance with the latest EN 50216 (accessories for power transformers) standards with routine and type tests.



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