



ARTRANS
TRANSFORMERS



www.artrans.com.ar



BACKGROUND AND HISTORY

ARTRANS SA, was founded by Mr Mario Godoy, Mr Rubén Caparotta and Mr Pablo Zambruno. It started its operations as a small factory in April 2, 1982. Since then, ARTRANS S.A. has become one of the main supplier companies of power, distribution and oilfield transformers in Argentina.

Those original entrepreneurs passed on the responsibility of carrying out their vision to a second generation of owners. Now, Mr Rodrigo Godoy, Mr Marcelo Caparotta and Mr David Zambruno, sons of those visionaries, have taken the responsibility to continue doing business and improving the company's performance.



With main facilities located in a 6000 m² property, at Acceso Sur 8407, Carrodilla, Mendoza, Argentina, ARTRANS S.A. manufactures transformers up to 80000 KVA, supplying the international oilfield market since 1993. At present, a new plant has added to ARTRANS' properties; a brand new facility of 3000 m².

Our international experience includes more than 7000 units operating in several countries such as the US, Canada, Venezuela, Colombia, Ecuador, Perú, Bolivia, Thailand, Australia, United Arab Emirates, Saudi Arabia, Libya, Syria, Sudan, Angola and Egypt.

Our services also include predictive, preventative and corrective maintenance plans, and technical assistance for the proper mounting, installation and set-up, as well as the supplying of replacement and spare parts.

PRODUCTS AND SERVICES

- Distribution Transformers
- Rural Areas Transformers
- Power Transformers and Autotransformers up to 80 MVA, at 138kV.
- Neutral Artificial Transformers and Reactors
- Oilfield and Mining Applications:
- Electric Submersible pumps applications,
- Variable Speed Drive input (fixed frequency) 6,12,18,24 pulses
- Variable Speed Drive output (variable frequency)
- Substation-ground level
- Substation mobile type
- Assembly and start up supervision up to 500 KV
- Technical Assistance.
- After-sales Services.
- Replacement and spare parts.
- Repair and maintenance of transformers



MANUFACTURING AND TESTING CAPABILITY

Our facilities have all of the necessary fabrication and testing equipment required to produce the highest quality products. Our high voltage test laboratory is one of only five in Argentina that allows testing not only our products, but also our competitors'. In addition we have signed agreements with two main Universities in Argentina in order to develop research activities.

ARTRANS SA main goal is to supply the Transformers market with the highest available technology and workmanship, in order to produce high quality products that fulfill our customer requirements. For that reason, ARTRANS SA has a group highly trained and experienced Engineers and Technicians of recognized international reputation, capable of producing high quality products. These capabilities have allowed ARTRANS SA to produce more than 2.5 Million KVA with our own brand that complies with International Quality Standards.



Distribution transformers used for electrical distribution at low or medium voltages.

Main features

- . 25 to 2500 kVA
- . Primary voltages: 11, 13.8, 20 or 34.5 kV
- . Fixed frequency 50 or 60 Hz
- . Indoor or Outdoor service for rural, urban or industrial zones, or any other activity that requires intensive use of energy.
- . Conservator or Sealed type.



Power transformers used for electrical distribution at substations at medium or high voltages.

Main features

- . 1.25 MVA to 80 MVA
- . Primary voltages: 13.8, 34.5, 69 or 138 kV.
- . Fixed frequency 50 or 60 Hz.
- . Indoor or Outdoor service
- . With On load or Off load Tap Changer.



Oilfield applications

Transformers for oilfield applications manufactured under customer requirements and specifications. Constructive type designed to cope with the more severe shipping, handling and environmental conditions.

Main Features:

- VSD Input
 - Up to 3000 kVA
 - Primary voltages: 6.6, 11, 13.8, 20 or 33 kV
 - 3, 6, 9 or 12-phase suitable for 6, 12, 18 or 24 pulse VSD application.
 - Fixed frequency 50 or 60 Hz
- VSD Output
 - Multiple service voltages.
 - Variable frequency: 10 to 90 Hertz range.
- On Shore / Off Shore use
- ANSI, IEC or CSA standards.
- With conservator or pad mounted type.
- Bushings in enclosures or on the cover
- Submersible Pump applications.



Sealed Flood Proof Applications

Sealed Transformers to operate in Underground location.

Able to operate where flooding risk is present.

Units can operate submerged up to 1 meter under water.

ONAN cooling

Nitrogen pressurized.

Including HV fuses.

Capacity: 200 to 1000 KVA

Maximum Voltage: 15 KV

MAIN EQUIPMENT AND FACILITIES

BUENOS AIRES OFFICES:

·Location: Av. Belgrano 535, 5° Floor, Room "A", Buenos Aires,.

MENDOZA HEADQUARTERS:

·Location: Av. Acceso Sur 8407, Carrodilla, Lujan de Cuyo, Mendoza. Total surface 8800 m².

DEPARTMENTS

·Managment, Sales & Marketing, Engineering, Accounting, Finance, Quality Assurance, Testing and HV laboratories, Production, Logistics and Warehouses, totaling 500 m².

MANUFACTURING

FABRICATION

- 5 ea welding units type MAG-MIG.
- 2 ea welding units manual type.
- Metal Saw
- Abrasive disk cutter.
- Drill Press.
- Hand tooling.
- 360 degree crane, 8 m radius 5 tons loading capacity
- 2 ea monorail type cranes FORVIS 5 tons Plasma and flame cutting equipment, SAF mod. Multitome CT 1503, Plasma ZIP MATIC 1503.
- Pneumatic-Mechanical steel sheet bender, CENA, 50 tons capacity.
- 1 ea punching hydraulic press, 30 tons capacity, H.B.
- 1 ea elipsoidal cutter for radiant tubes

COATING

- 1 ea electrostatic painting equipment, DEVELVIS LX 80.
- 1 ea steam washer.
- Rail type crane FORVIS 5 Tons.
- 360° crane, electrical winch FORVIS 5 Tons.
- Hand tooling.

CORE MANUFACTURING

- 2 ea motoryzed punchers.
- 2 ea motoryzed shears w/ 1.25 m of free shear capacity.
- 2 ea motorized deburrers.
- 2 ea motorized spoolers.
- 1 ea stripper.
- 1 ea automatic puncher.
- 1 ea monorail crane, Forvis 5 Tons.
- Hand tooling

WOOD PROCESSING.

- 7 function wood working machine
- Endless saw.
- Milling machine
- Hand tooling.

WINDING

Controlled room

- 8 ea winding machines with clutch and gear irreversible reducer, gradual starting. Maximum capacity length capacity 3 m
- 1 ea winding machine, variable speed CD 2.5mts and 10 Tons maximum pulling capacity.
- Hand tooling.

ASSEMBLY

- Hand Tooling for assembly processes
- Crane bridge, 8 m span, Forvis max lift 9 m 10 tons load capacity.
- Crane bridge, 8 m span, Agil max lift 9 m 5 tons load capacity.
- 2 ea drying ovens

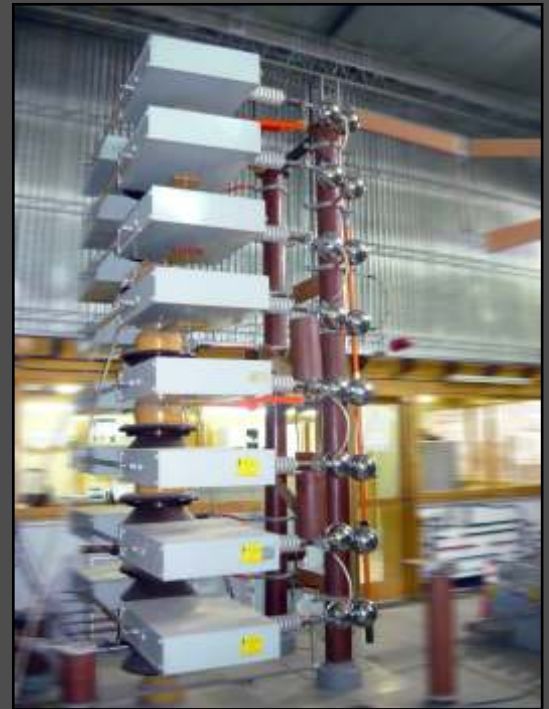
POWER UNITS ASSEMBLY AREA

- Hand Tooling for assembly processes
- Hydraulic jacks for tighteneing of cores and winding assemblies
- Crane bridge, Calvino 10 m span max lift 11.5m and 20/50 Tons load capacity
- 1 ea drying ovens. Autoclave.
- 1 ea vacuum drying oven

ASSEMBLY ROOM OF CONTROLLED ATMOSPHERE FOR ASSEMBLY OF UNITS UP TO 80 MVA AND ABOVE, AND 132 KV.

TESTING LABORATORY

- Ratio electronic testing unit.
- Analogic Ratio electronic testing unit..
- 2 ea applied voltage units, 450 kV.
- 2 ea Gen-sets AC, for induced voltage testing.
- 1 ea Spinterómetro for oil testing.
- Resistance measurement bridge.
- Wattmeters
- Voltmeters.
- Ampmeters.
- Frequencymeters.
- Voltage Transformers.
- Current transformers.
- Applied voltaje transformer.
- Electronic Megger.
- Digital Power Analyzer.
- 4000 kVA of capacitive power factor correction
- Auxiliary equipment and instruments



HV LABORATORY

Atmosphere Controlled Room

Pulse Generator, N.R. 1000 KV. 34 KJ with:

- 8 stages pulse generator, capacitor divisor for measurement.
- DIGITAL Oscilloscope
- Spinterometer balls for voltage verification.
- Overhead crane max lift 11.5m and 15 Tons load capacity and a second one of 5 Tons.

WAREHOUSES

- Capacity for storing raw materials and finished products.
- Computaryzed stck control.
- Forklift Nissan 3500 kg load capacity.

OIL TREATMENT EQUIPMENT

Oil treatment unit, ETEA.Max flow	2500 l/h.
Vacuum pump (vacuum)	180 m3/h < 1mm Hg.
Power	75 KW.
2 ea Oil treatment unit, ETEA.Max flow	5000 l/h.
Vacuum pump (vacuum)	360 m3/h. 1mmHg.
Power	135 KW.

Centrifugal pump.

Flow	10000 L/h
Max. head	5 m.

Vacuum pump.

Flow 1st stage	300 m3/h
Flow 2nd stage	1800 m3/h
Maximum vacuum	500Um/tg

Epoxy coated oil tanks

Qty 3 ea	22.000 liters ea
Qty 2 ea	5.000 liters ea

QUALITY ASSURANCE

Our search for a continuous improvement in quality is land marked by the ISO 9002 certification, achieved in 1997 and maintained since then. The certification process was granted by Det Norske Veritas Quality System Certificate. In 2007, we recertified to meet ISO 9001 quality assurance requirements.

Standards for design and testing

- IEC 60076-1 Part 1: General
- IEC 60076-2 Part 2: Temperature rise
- IEC 60076-3 Part 3: Insulation levels and dielectric tests
- IEC 60076-4 Part 4: Tappings and connections
- IEC 60076-5 Part 5: Ability to withstand short circuit
- ANSI C57.12.00 General Requirements for Distribution, Power and Regulating Transformers.
- ANSI C 57.12.90 Test Code for Distribution, Power and regulating transformers.
- ANSI C 57.12.00 a and b Thermal and Short-Circuit Requirements (supplement to C 57.12.90)
- ANSI C 57.98 Guide for Transformer Impulse Test (appendix to ANSI C57.12.90)
- ANSI C 57.100 Thermal Evaluation of Oil Immersed Distribution Transformers.
- ANSI C 57.106 Guide for acceptance and Maintenance of Insulating Oil in equipment.
- ANSI C 57.109 Guide for Liquid-Immersed Transformer Through-Fault Current Duration
- ANSI C 57.110 Recommended Practice for Establishing Transformer Capabilty When Supplying Non sinusoidal Load Current.
- ASME-Standards Chapter IX: Welding procedures

TYPES OF UNITS AVAILABLE.

- Power Transformer Manufacturing up to 80 MVA at either 132, 69, 24.9 or 13,86 Kv, with On load or Off Load Tap Changer.
- Neutral Reactors, 19 MVA or as per customer request.
- Step Down transformers for Oilfield applications from 63 to 2500 kVA at either 33, 20, 13.8, 11, 6.6 or 2.3 kV; suitable for 6, 12 or 24 Puse VSD.
- Step Up transformers for VSD output in a wide variatey of ranges.
- Special transformers and Testing equipement for electric submersible pumps
- Testing Transformers for 200 KV
- Supply and start-up of gen-sets
- On site maintenance up to 150 MVA, 132 kV, with On Load Tap Changer





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TRANSFORMADORES

