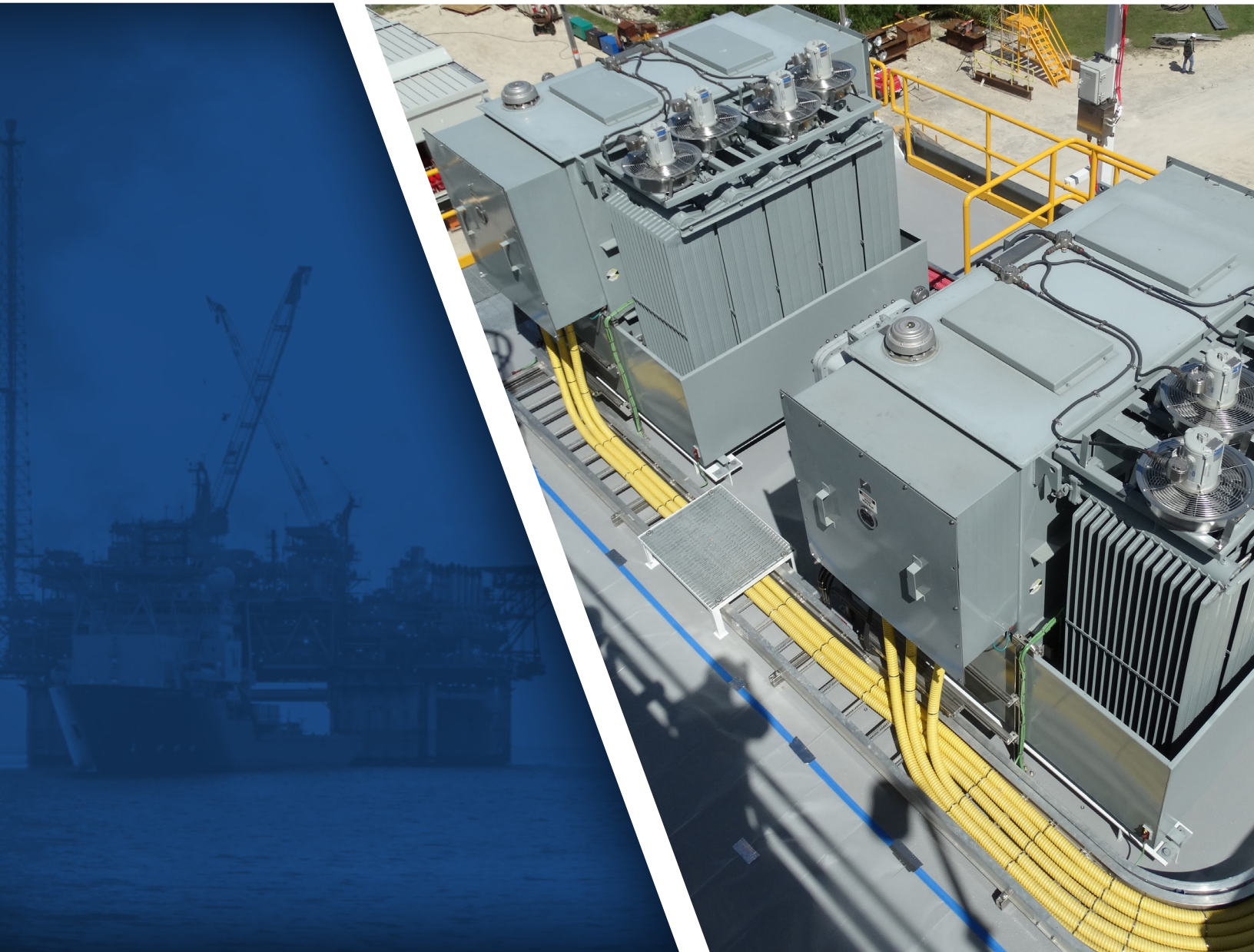


# Vantran

## TRANSFORMERS



H I G H E S T  
Q U A L I T Y

| S H O R T E S T  
L E A D T I M E S

| D E P E N D A B L E  
D E L I V E R Y



## VanTran Introduction

VanTran Transformers is a manufacturer of liquid-filled transformers for the industrial, commercial, renewable, and utility markets. We are known for engineering excellence and robust designs with a reputation as a manufacturer of transformers well-suited for harsh environments, demanding applications, and rough treatment.

With more than 50 years of experience in the Transformer Industry, VanTran is a true American success story. Regardless of the size or scope of your order, we'll get the job done right—on time and cost effectively, ensuring your satisfaction at every stage of the process. With a history of success, and a vision for the future, no one can serve you better than VanTran.

## VanTran Offers

- Substation, Padmount, Submersible, Multi-Tap, Auto, & Grounding
- Base ratings up to 10 MVA
- Voltages up to 46 kV
- Dual primary and secondary voltages
- Retrofit designing to match existing installations
- Step-down and step-up applications
- UL/CUL certification
- Seismic qualification
- Harmonic duty K-Factor
- Hazardous duty for classified areas
- Corrosive and coastal environments



## Quality Engineering & Craftsmanship

VanTran stands second-to-none in terms of design, manufacturing, and customer service. Whether you need a hazardous duty transformer for offshore oil and gas platform installations, or a custom-built unit to isolate excessive harmonics produced by drive-systems, VanTran has a highly skilled team of engineers, technicians, and customer service personnel ready to help. No challenge is too great.

## Core and Coil

VanTran utilizes a rectangular coil and five-legged wound core design for three-phase units, and three-legged wound core design for single phase units.

Low-voltage is wound from copper or aluminum foil with thermally upgraded kraft paper as layer insulation. High short-circuit capability and longer life are inherent in transformers with foil windings where axial forces are eliminated by the balance of magnetic centers. Our lead and tap insulation is made from thermally upgraded kraft paper, and the start/finish coil leads are either MIG welded aluminum or brazed copper bus bar.

High-voltage windings use round or rectangular magnet wire. Copper wire is film insulated with heavy formvar. Aluminum wire is insulated with double spiral-wrapped thermally upgraded kraft paper.

Cores are made with non-aging grain-oriented silicon steel and shaped/sized to fit the required specification. As a result, core losses in VanTran transformers are the lowest obtainable.

Cooling ducts are liberally spaced to minimize winding temperature gradient and reduce hottest spot temperatures.



## Letter From our CEO

For over half a century, VanTran has been serving the electrical industry by providing liquid filled transformers of the highest quality. From our beginning, we have focused on serving our customers' unique needs with custom solutions rather than forcing them to adapt to a standard product line. That philosophy, coupled with what is consistently the fastest delivery in the industry has earned VanTran a special place with our customers.

From its inception, VanTran has been at the forefront of engineering and manufacturing excellence for the most challenging transformer applications and conditions. Whether installed on an oil & gas platform in the Gulf of Mexico, buried under snow off the coast of Sakhalin Island in Russia, or powering a gas plant in Equatorial Guinea, VanTran transformers are built to withstand the rigors of the toughest environments.

When my father, Al Bolin, started VanTran with a handful of transformer veterans in 1963, they were determined to succeed in an environment dominated by much larger competitors. They found success by offering an extremely well-designed and well-manufactured transformer and treating customers with respect and fairness.

Having been raised in that kind of manufacturing philosophy, I am committed to continuing our legacy. It has carried VanTran for fifty plus years and it is what makes our company unique.

If you are an existing customer, I thank you for your patronage and look forward to continuing to satisfy your transformer needs. If you have yet to use our product, I ask that you give us an opportunity to earn your business. You will notice a difference with VanTran; from the quote request, to drawing submittal, to production of your transformer, and on time delivery. Give us a try and you will see why so many people think of VanTran for their liquid-filled transformers.

Sincerely,

A handwritten signature in black ink, reading "Donald A. Bolin".

Donald A. Bolin  
CEO





# Substation

VanTran Substation transformers are in service around the globe with many satisfied customers. Base ratings up to 10 MVA and 46 kV primary voltages. Our units can be found in a variety of industries including offshore oil production, industrial and steel plants, military installations, and manufacturing facilities. Special application designs are our specialty for temporary power needs, hazardous environment locations, and countless other demanding applications.

All VanTran transformers feature sealed tank construction with welded on covers and conform to IEEE/ANSI C57.12 standards, where applicable. Skid mounting is also available as an option.

Numerous bushing options are available including cover-mounted, sidewall-mounted, and full air terminal chambers or throats for switchgear interconnection.

**Standard Features:**

- Liquid Level Gauge
- Top Oil Temperature Gauge
- Fill Plug
- Drain Valve with Sampler
- Schrader Valve for Nitrogen Blanket
- Automatic Pressure Relief Valve
- Externally Operated De-Energized Tap Changer
- Tank Grounding Pads
- Jacking provision
- Base designed for rolling
- Undercoating of tank bottom to prevent corrosion
- Diagrammatic corrosion resistant nameplate

**Available Options:**

- Hazardous duty for classified areas
- Primary & Secondary Dual Voltage & Special Taps
- Primary Molded Vacuum Interrupters
- Secondary Breakers
- 304L & 316L Stainless Steel tank, cabinets, & hardware
- Mineral Oil or Natural Ester Fluid
- Nitrogen Pressurization Systems
- K-Factor for drive applications
- Neutral Grounding Resistors
- Seismic Withstand
- Fork Lift Pockets
- Special Paint Colors



# Padmount

VanTran was at the forefront of development of Padmount Transformers over 50 years ago. They are available in the same size range and voltages of our Substation designs – up to 10 MVA and 46 kV primary voltages. Designs feature high security, three-point latching, pad-lockable double door compartments with full length steel center partitions and penta-head (REA) security bolts. This ensures secure access to the electrical compartment.

All VanTran transformers feature sealed tank construction with welded on covers and conform to IEEE/ANSI C57.12 standards, where applicable.

Bushings can be externally clamped porcelain or epoxy, depending on the application. VanTran offers a full range of both dead front and live front components to fit your needs.

**Standard Features:**

- Liquid Level Gauge
- Top Oil Temperature Gauge
- Fill Plug
- Drain Valve with Sampler
- Schrader Valve for Nitrogen Blanket
- Automatic Pressure Relief Valve
- Externally Operated De-Energized Tap Changer
- Tank Grounding Pads
- Jacking provision
- Base designed for rolling
- Undercoating of tank bottom to prevent corrosion
- Diagrammatic corrosion resistant nameplate

**Available Options:**

- Dead Front or Live Front Primary
- Radial or Loop Feed Primary
- Primary Fusing
- Primary Molded Vacuum Interrupters
- Secondary Breakers
- Loadbreak Switches
- 304L & 316L Stainless Steel tank, cabinets, & hardware
- Mineral Oil or Natural Ester Fluids
- Externally mounted devices in pad-lockable box
- Seismic Withstand
- Special Paint Colors





# Submersible

VanTran Submersible transformers feature a sealed tank construction and conform to IEEE/ANSI C57.12 standards, where applicable. Our Submersible units are designed and built to your specific application. As a result, VanTran can manufacture custom units with an endless array of voltages, frequencies, and configurations.

Units feature 304L or 316L stainless steel tanks with welded on covers, and are painted with a heavy tar-like coating to prevent corrosion.

High voltage bushings are top mounted-dead front epoxy wells with inserts. Low voltage bushings are also top-mounted and come standard with spade terminals. Under oil fusing with non-load break canister fuses interlocked to an on-off safety switch and other fusing alternatives.

VanTran Submersible transformer radiators are made from 3/16" steel ensuring reliable performance under the most challenging - high moisture environments inherent in vault installations.

## Single Phase:

- 25, 37½, 50, 75, & 167 kVA
- Up to 25kV Systems & 150 kV BIL
- Mineral Oil or Natural Ester Fluids

## Three Phase:

- 300, 500, 750, 1000, 1500, or 2500 kVA
- Up to 25 kV Systems & 150 kV BIL
- Mineral Oil or Natural Ester Fluids

## Standard Accessories:

- Welded-on cover
- Cover mounted bushings & switches
- Lifting Lugs or Hooks
- Automatic Pressure Relief Device
- De-Energized Tap Changer
- Drain Plug or Valve
- Tank Ground Pad

# Multi-Tap Substation

VanTran Multi-Tap Substation transformers offer multiple primary and secondary voltages for temporary power services. These transformers are in use by leading rental power dealers, and as universal spares for industrial plants with various distribution voltages and legacy systems.

Multi-Tap units are available up to 7000 kVA and are designed for step-up or step-down applications with 480Y and 600Y secondaries, medium voltage primaries of 2400V to 35 kV, and selectable Delta or Wye connections. They are especially rugged construction well-suited for frequent movement and shipping. VanTran Multi-Taps come equipped as standard with a protective cage, fork lift pockets for ease of transportation, and truck tied down lugs.

Multi-Tap voltages are selectable through a series of dual voltage, delta-wye, and de-energized tap changer switches.

## Primary Voltage:

- 2400 Delta
- 6928 Delta
- 7200 Delta
- 7620 Delta
- 7970 Delta
- 8320 Delta
- 4160GrdY/2400
- 12000GrdY/6928
- 12470GrdY/7200
- 13200GrdY/7620
- 13800GrdY/7970
- 14400GrdY/8320
- Others available to 35kV

## Low Voltage:

- 480Y/277
- 480 Delta
- Dual Selectable 480Y/277 X 600Y/346
- Dual Selectable 480Y/277 X 380Y/220

## Numerous Options Available Including:

- 50/60 Hz
- 55/65°C
- Forced Air Cooling Fans
- Special Voltages
- Special Paint Colors
- Gauge and Switch Guards







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