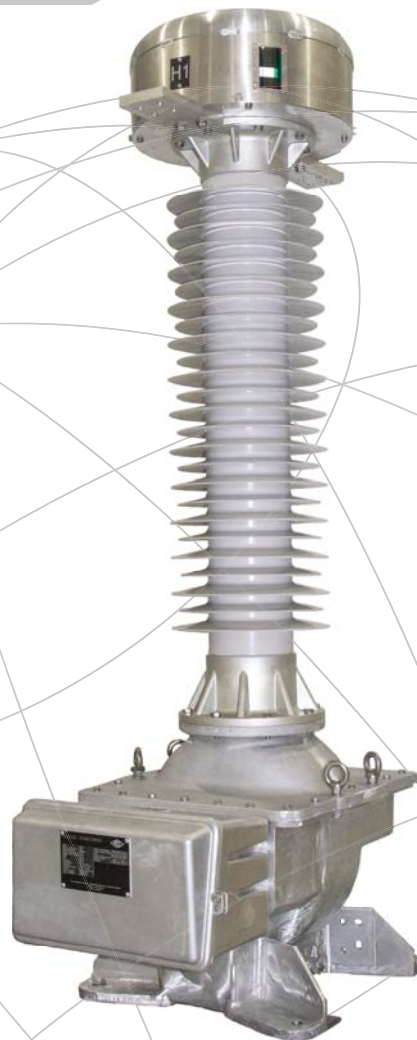




Type IV0  
Outdoor Oil-Filled Voltage Transformer  
72.5kV - 245kV



GERMANY HAMBURG • WIRGES • KIRCHAICH • DRESDEN  
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Intelligence



### **Ritz USA - Lavonia, GA**

The Ritz Instrument Transformer Group has a long and proud tradition of building quality products. The company was founded in Hamburg, Germany, over 70 years ago and since that time has expanded through acquisition and organic growth to its current size of 8 locations across the globe. Throughout its history, Ritz has remained privately owned; the shares currently with a Trust, thus giving it flexibility and purpose not enjoyed by publicly traded companies.

Ritz has remained focused on its core competencies. The Ritz Group has achieved additional diversification and financial strength by expanding beyond being just a manufacturer of instrument transformers into other product fields, all the while adhering to our knowledge base in winding, insulation systems, and molding. Each manufacturing location is certified to the exacting ISO 9001 Quality Standard. Our geographic dispersion and global focus have allowed us to become experts in all the world's major standards. This knowledge not only allows us to meet the expectations of customers using the various standards but also to develop a synthesis of these standards as our own internal measures.

To be more responsive to the North American customer base and to gain global cost efficiencies, the Ritz Group established a manufacturing plant (Ritz USA) in Lavonia, Georgia. The mission of this company is to maintain profitability and growth through customer satisfaction, industry-leading quality, and efficient product development and manufacture. The factory is designed to manufacture and test low, medium, and high voltage instrument transformers for both the utility and OEM markets.

## High Voltage Applications

CVO  
Capacitive Voltage Transformer  
72kV - 550kV

ICO  
Current Transformer  
72kV - 245kV

IVO  
Voltage Transformer  
72kV - 245kV

CMO  
Combined Current and  
Voltage Transformer  
72kV - 245kV

Line Traps

Revenue Metering  
and Protection Relay  
Applications

ISO9001-2015



[www.ritzusa.com](http://www.ritzusa.com)



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## **General**

Type IVO is an Inductive Voltage Transformer (VT) used in high voltage systems to provide voltage outputs to revenue-based meters, protective relays, and other system voltage monitoring instruments.

This brochure details the features and ratings of the Ritz Type IVO for voltage class ratings from 72kV thru 245kV.

## **Construction**

The external insulation is provided by a polymer hollow-core insulator consisting of a fiberglass reinforced resin tube with molded-on silicone rubber sheds and marine-grade aluminum flanges. Polymer insulators provide a strong resistance to pollution and maintain long lasting high levels of hydrophobicity. In addition, polymer insulators reduce weight, increase seismic withstand performance, and offer a higher level of safety. As an option, porcelain insulators can be provided.

High voltage windings done with double enamel coated magnetic wire providing insulation between turns.

Standard 2-tapped secondary windings. Other configurations available upon request.

Insulator flange bolts and hardware at top and bottom of unit are stainless steel and are torqued to specifications at the factory.

Base tank of the unit includes four (4) lifting eyes to facilitate proper handling during installation.

Marine grade aluminum base tank includes one (1) oil drain plug located at the bottom side of the tank.

Bellow position indicator at top of VT primary housing is positioned for viewing angle when operator is in position at front of secondary terminal box. Oil level viewing window is glass.

2H ground pad provision is positioned at base of unit.

Four (4) mounting holes are spaced per Industry Standards to facilitate new and retrofit mounting patterns of support structures. Adapter plates to fit non-standard hole mounting patterns can be designed.

## **Seismic Performance**

Seismic performance is considered in all aspects of the VT design. Designs can be supplied to comply with seismic standards.

## **Primary Terminal Connection**

Aluminum NEMA 4H pad provisions are provided.

## **Secondary Terminal Box**

Customer secondary connections are housed in a cast marine-grade aluminum terminal box on the front of the unit with a large swing-out lockable door. An aluminum removable or field-drillable gland plate is provided for customer conduit hubs. Terminal box has provisions for optional condensation heater element.

## **Nameplate**

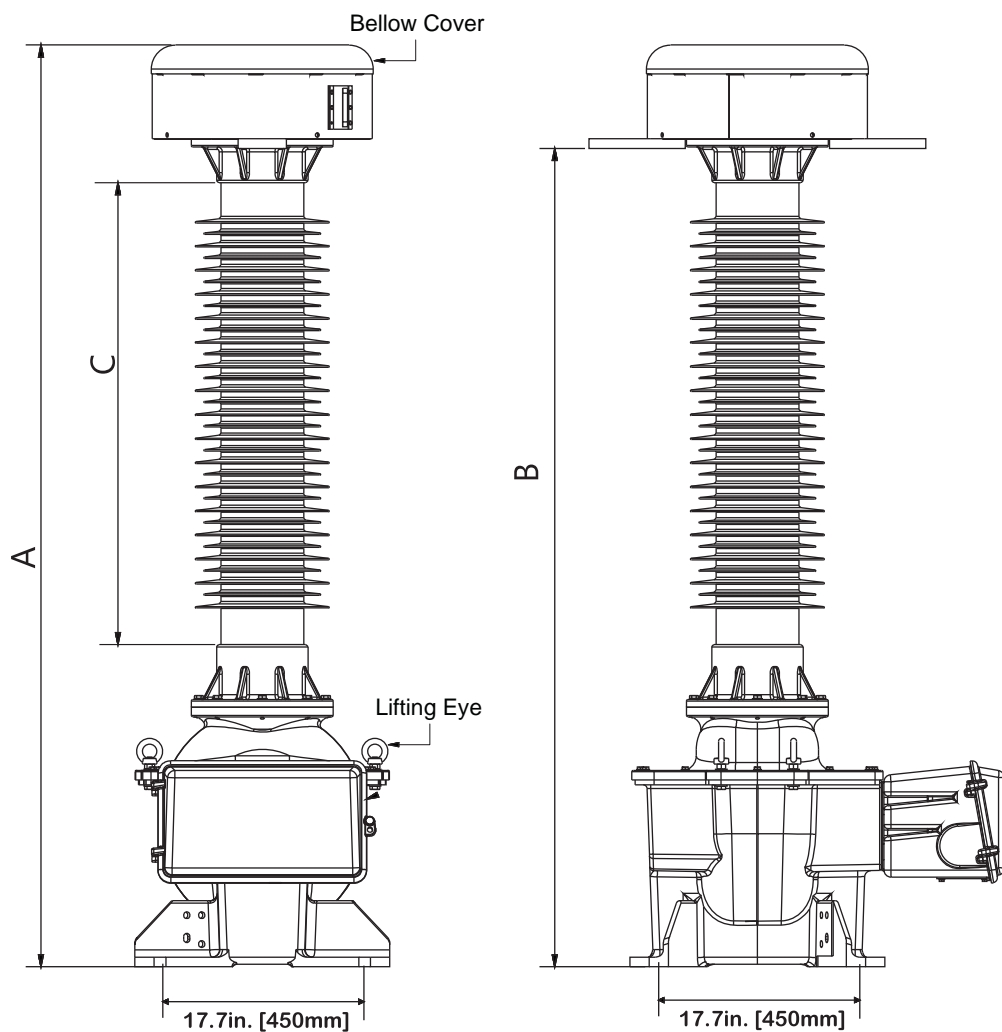
Laser engraved nameplate is mounted on the front face of the secondary terminal box.

## **Standards**

Ritz can design Type IVO to meet all national and international standards including IEEE/ANSI, CSA, IEC and to any customer requirements.

	NOM. SYSTEM VOLTAGE (kV)	MAX. SYSTEM VOLTAGE (kV)	BIL (kV)	Ratio	ACCURACY CLASS / BURDEN RATING	THERMAL BURDEN (VA)	TOTAL HEIGHT Dim A (in[mm])	PRIMARY TERMINAL HEIGHT Dim B (in[mm])	CREEPAGE DISTANCE (in[mm])	STRIKE DISTANCE Dim C (in[mm])	TOTAL WEIGHT (lbs[kg])	OIL WEIGHT (lbs[kg])
IVO72	69	72	350	350/600	0.3WXYZ, ZZ 0.15WXYZ	5000	75.4 [1915]	66.9 [1700]	150.4 [3820]	37.8 [960]	659 [299.5]	104 [47.3]
IVO123	115	123	550	600/1000	0.3WXYZ, ZZ 0.15WXYZ	5000	75.4 [1915]	66.9 [1700]	150.4 [3820]	37.8 [960]	659 [299.5]	104 [47.3]
IVO145	138	145	650	700/1200	0.3WXYZ, ZZ 0.15WXYZ	5000	81.5 [2070]	73.0 [1855]	177.2 [4500]	43.9 [1115]	750 [340.9]	132 [60.0]
IVO170	161	170	750	800/1400	0.3WXYZ, ZZ 0.15WXYZ	5000						
IVO245	230	245	1050	1200/2000	0.3WXYZ, ZZ 0.15WXYZ	5000						

Consult factory for other rating and dimensional information for special designs.



Represented By



*\*Information within subject to change without notice*

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