

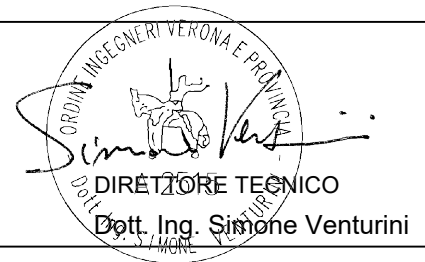


**PROGETTO DEFINITIVO DI UN IMPIANTO AGRO-FOTOVOLTAICO DELLA POTENZA COMPLESSIVA DI 104,4 MWp, E RELATIVE OPERE DI CONNESSIONE ALLA RETE, DOTATO DI SISTEMA DI ACCUMULO CON POTENZA DI 17,6 MW DA REALIZZARSI NEL COMUNE DI TORREMAGGIORE (FG)**

## PROGETTO DEFINITIVO

COMMITTENTE: EPSILON SOLAR s.r.l.

PROGETTISTA:



TITOLO ELABORATO:

**BROCHURE TRASFORMATORI  
DI TENSIONE AT**

ELABORATO n° :

BI035F-D-TM00-IMP-SH-10-00

NOME FILE :

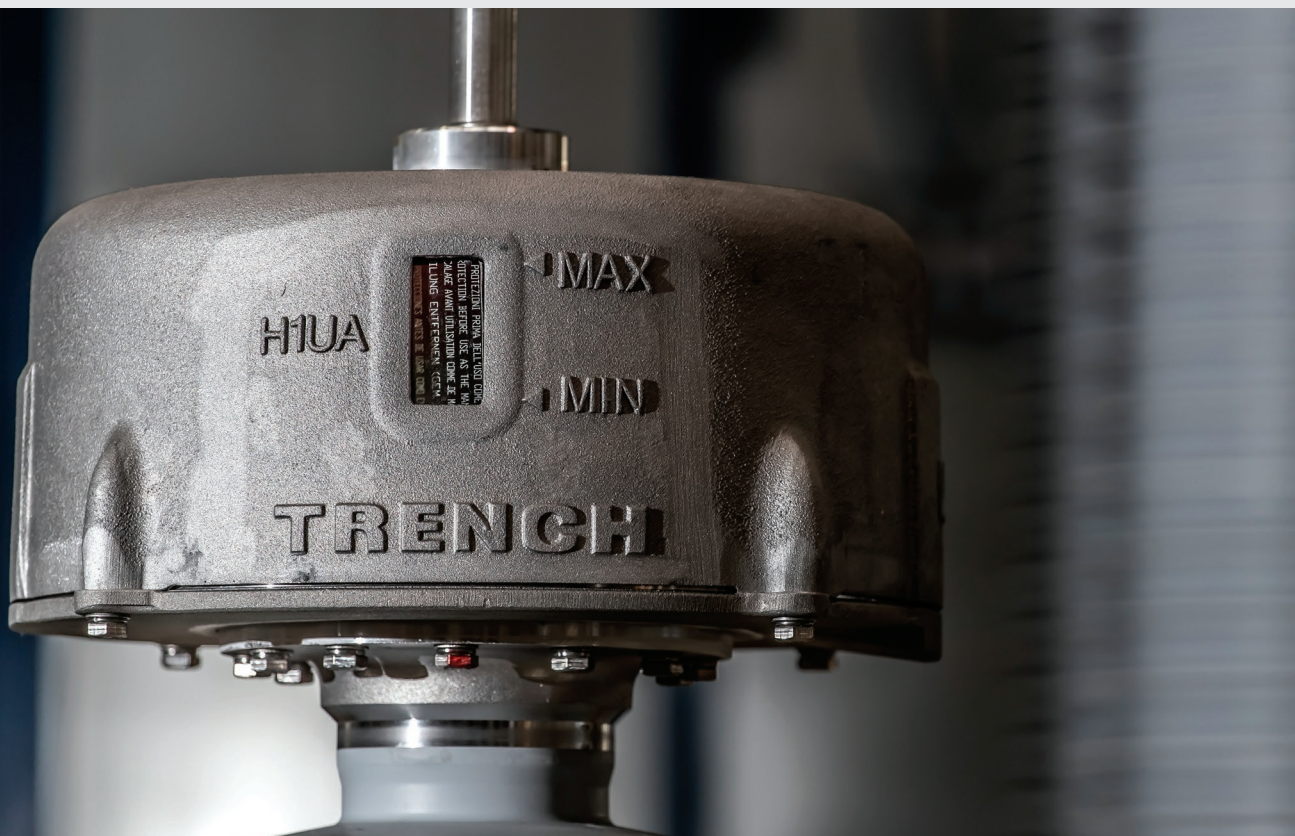
SCALA : -

DATA : Marzo 2024

	N.	DATA	DESCRIZIONE	ELABORATO	CONTROLLATO	APPROVATO
REVISIONE	00	Marzo 2024	Emissione	N.Ostoich	M.Palvarini	S. Venturini
	01					
	02					
	03					
	04					

# OIL INSULATED VOLTAGE

TRANSFORMERS



**TRENCH**



Trench is a recognized world leader in the design and manufacture of high voltage equipment for application on electric utility and high energy industrial systems.

Oil insulated Voltage Transformers are used to convert high transmission line voltages (up to 550KV) to standardized low and easily measurable values, which will be used for metering, protection and control of the high voltage system. As such, the need for accurate and reliable voltage transformation is essential.

The reliability and security of Trench oil-insulated instrument transformers is based on over 50 years of innovation with oil-insulated units operating under a wide range of environmental conditions.

Oil insulated Voltage Transformers also ensure suitable electrical insulation between high voltage and low voltage measuring equipment.

# MAIN FEATURES

## General

Complete portfolio available from 72 to 550 kV

Meet all IEC and ANSI metering and protection classes

Rated primary Voltage up to 550 kV

Rated Secondary Voltages 100 V, 100: $\sqrt{3}$  V, 100:3 V, 110 V, 110: $\sqrt{3}$  V, 110:3 V, ...

Suitable also for Line Discharge use

Fully type tested according to international standards

Special tests are also available to meet specific customer requirements

## Product design

Oil/paper internal insulation

External insulation with porcelain or composite insulator

External part made of aluminum or stainless materials

Sealed & Robust Construction

Easy Customization to match all specific Customer requirements

Easy Installation without special tools required .

Available to withstand :

- Effects of internal arc (according to IEC 61869 Standard)
- Multichopped Test (according to IEC 61869 Standard)
- Heavy seismic solicitations, according to IEC 62271, IEEE 693 and specific customers' requests (i.e. Chile ETG A.0.20)

Hermetically sealed. A suitable Nitrogen cushion or Inox steel bellows allows the oil volume variation in every service conditions.

## Product process

Optimized design to manufacturing

Lean manufacturing concept applied to the whole supply chain

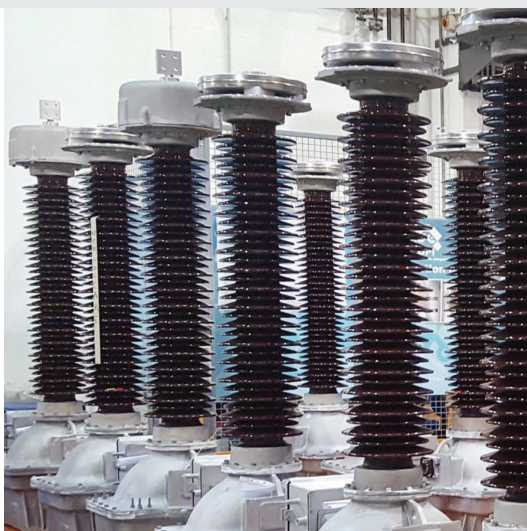
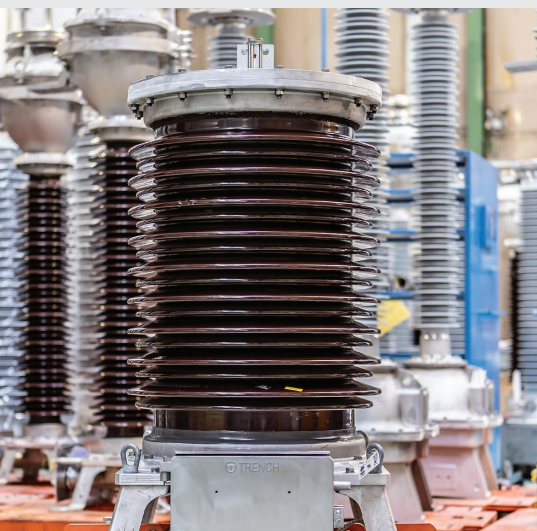
Optimized design allows the use of reduced numbers of components and quick Customization to all Customer specific requirements

Partial discharge free design and process

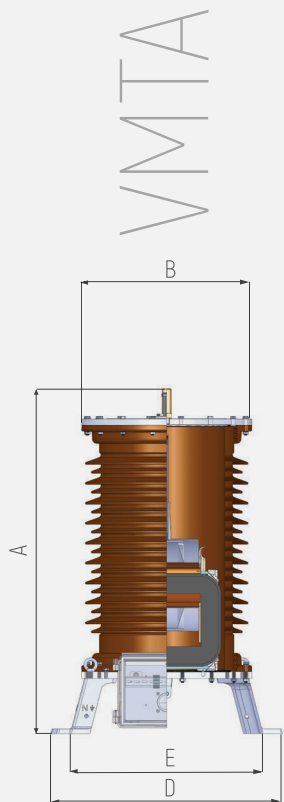
Maintenance free during a long lifetime of more than 30 years

Trench Management System has been certified to ISO 9001, ISO 14001 and OHSAS 18001 standards

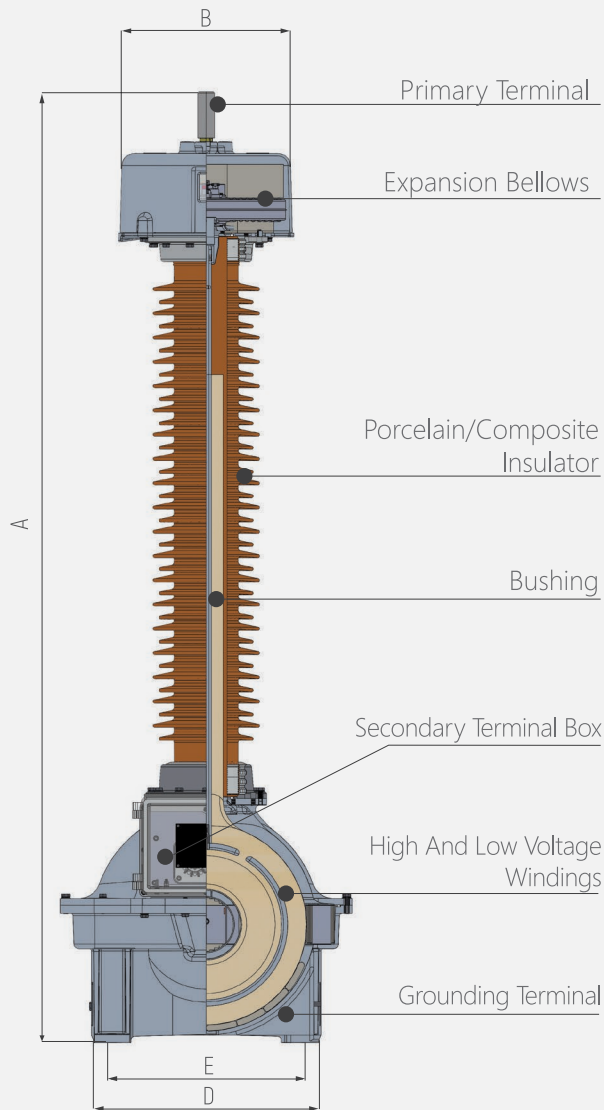
Thousands of transformers installed and in service for more than 50 years all over the world and in all environmental conditions are the best guarantee of the quality and reliability of our products.



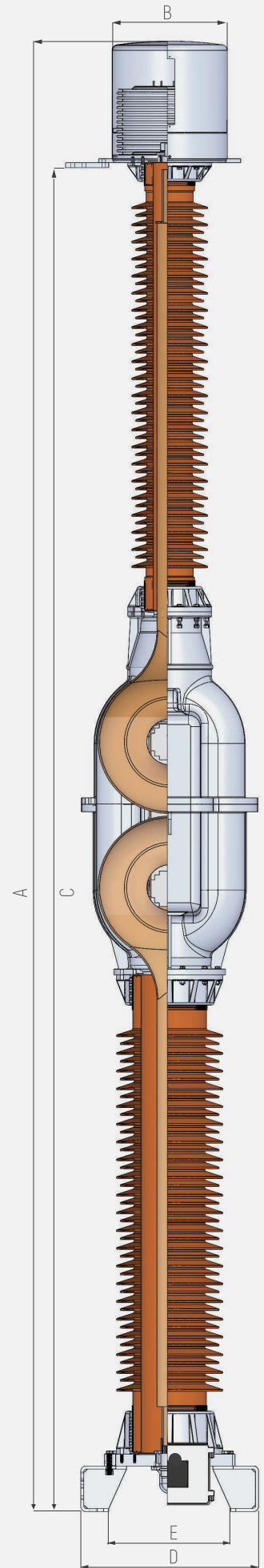
# PRODUCT STRUCTURE



V E O T



V E O S



# ELECTRICAL and MECHANICAL DATA



Type	Highest Voltage for Equipment Um	Rated Power-Frequency withstand Voltage	Rated Lightning Impulse withstand Voltage	Rated Switching withstand voltage	Arc Distance	Minimum nominal specific creepage distance (Pollution Level III)	Minimum nominal specific creepage distance (Pollution Level IV)	A	B	C	D	E - Base Fixing (N°4 holes Ø 20 for VMTA, n°4 holes Ø 24 for VEOT, n°4 holes Ø 30 for VEOS)	Total weight	Oil Weight
	kV (rms)	kV (rms)	kV (peak)	kV (peak)	mm	mm	mm	mm	mm	mm	mm	mm	KG	KG
VMTA 72,5	72,5	140	325	-	700	1815	2250	1125	560	-	756 X 756	690 X 690	340	55
VEOT 123	123	230	550	-	1200	3075	3813	2265	698	-	535 X 528	450 X 450	380	60
VEOT 145	145	275	650	-	1200	3625	4495	2340	698	-	535 X 528	450 X 450	380	60
VEOT 170	170	325	750	-	1400	4250	5270	2465	415	-	535 X 528	450 X 450	400	130
VEOT 245	245	395	950	-	220	6125	7595	3585	455	-	700 X 680	600 X 600	750	130
VEOT 300	300	460	1050	850	220	7500	9300	3740	465	-	700 X 680	600 X 600	800	130
VEOS 362	362	510	1300	950	2650	9050	11222	4955	690	4750	700 X 680	600 X 600	1020	220
VEOS 420	420	630	1425	1050	3200	10500	13020	5795	690	5280	700 X 680	600 X 600	1200	240
VEOS 550	550	680	1550	1175	3800	13750	17050	6445	690	5945	700 X 680	600 X 600	1450	265

Data are indicative and are not binding. Dimensions are referred to typical VTs equipped with porcelain insulator & according to IEC 61869 Standards – Other options are available. The regular improving on design may cause discrepancies between this document and updated product. On request our sales team will be glad to submit You a firm updated technical & commercial offer fully customized to your specific requests.

**Trench Canada**

1865 Clements Road  
L1W 3R8 Pickering,  
Ontario CANADA  
t. +1 416 298 8108  
f. +1 416 298 2209

**Trench Germany**

Nürnbergger Straße 199  
96050 Bamberg  
Germany  
t. +49 951 1803 0  
f. +49 951 1803 224

**Trench Italia**

Strada Curagnata, 37  
17014 Cairo Montenotte  
Italy  
t. +39 019 5161 111  
f. + 39 019 5161 401

**Trench High Voltage Shenyang**

No. 2 Jingshenxian Street  
Daiyi Economic  
Development Zone  
Shenbei New District, Shenyang 110136  
People's Republic of China  
t. 86-24-8 89 23 99  
f. 86-24-89 73 72 00

**Siemens India**

Registered & Corporate Office  
Birla Aurora, Level 21,  
Plot No. 1080,  
Dr. Annie Besant Road, Worli,  
Mumbai - 400030



**TRENCH**