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.

Capacitive Voltage Transformers are used to convert high transmission line Voltage (up to 1200 kV) 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 Capacitive Voltage Transformers is based on over 50 years of innovation with units operating under a wide range of environmental conditions. Capacitive Voltage Transformers also ensure suitable electrical insulation between high voltage and low voltage measuring equipment.
## MAIN FEATURES

### General
- Complete portfolio available from 72 to 1200 kV
- Meet all IEC and ANSI metering and protection classes
- Rated primary Voltage up to 1200 kV
- Rated Secondary Voltages: 100 V, 100:V3 V, 110 V, 110:V3 V, 110.3 V, ...
- Suitable for HF coupling; possibility to fix the line trap directly on the top of CVT
- Fully type tested according to international standards. KEMA Certificates available
- Special tests are also available to meet specific customer requirements.
- Available also with options for power quality measurements.
- High fidelity of transient response and rapid damping of ferroresonance oscillations.
- Constant accuracy in all service conditions.

### Product design
- Oil/pt and/or paper internal insulation
- External insulation with porcelain or composite insulator
- External parts made of aluminum or stainless materials
- Sealed & Robust Construction
- Easy Customization to match all specific Customer requirements
- Easy Installation without special tools required
- High performance about seismic solicitations. Design available to match EC, IEEE and specific Standards
- Hermetically sealed. A suitable Inox steel bellows located in the Capacitor Divider allows the oil volume variation and keep the internal pressure equal to ambient one in every service conditions
- Bellows puncture pin available on request designed to provide for the release of internal pressure in the event of abnormal 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.
- Automated process guarantees reproducible quality in manufacturing of condensers
- Modular capacitor dividers and EMUs with optimized design allows an easy customization of the product ensuring short delivery times.
- 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.
# ELECTRICAL and MECHANICAL DATA

<table>
<thead>
<tr>
<th>Type</th>
<th>Highest Voltage for Equipment (kV)</th>
<th>Rated capacitance (pF)</th>
<th>Number of Units for Stack</th>
<th>Rated power-frequency withstand voltage (kV)</th>
<th>Rated lightning impulse withstand voltage (kV)</th>
<th>Rated switching withstand voltage (kV)</th>
<th>Arc distance (mm)</th>
<th>Minimum nominal specific creepage distance (Pollution Level III) (mm)</th>
<th>Minimum nominal specific creepage distance (Pollution Level IV) (mm)</th>
<th>A</th>
<th>B-Base Fitting (Ø 4 holes Ø 12)</th>
<th>C</th>
<th>Total weight (KG)</th>
<th>Oil Weight (KG)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCVT 72,5</td>
<td>72,5</td>
<td>8000-12000</td>
<td>1</td>
<td>140</td>
<td>325</td>
<td>-</td>
<td>750</td>
<td>1815</td>
<td>2250</td>
<td>1470</td>
<td>32 X 4/70</td>
<td>394 X 508</td>
<td>195</td>
<td>34</td>
</tr>
<tr>
<td>TCVT 123</td>
<td>123</td>
<td>5000-6000</td>
<td>1</td>
<td>730</td>
<td>550</td>
<td>-</td>
<td>1005</td>
<td>3075</td>
<td>3813</td>
<td>1770</td>
<td>32 X 4/70</td>
<td>394 X 508</td>
<td>275</td>
<td>36</td>
</tr>
<tr>
<td>TCVT 145</td>
<td>145</td>
<td>4000-5000</td>
<td>1</td>
<td>275</td>
<td>650</td>
<td>-</td>
<td>1205</td>
<td>3625</td>
<td>4495</td>
<td>1970</td>
<td>32 X 4/70</td>
<td>394 X 508</td>
<td>245</td>
<td>37</td>
</tr>
<tr>
<td>TCVT 170</td>
<td>170</td>
<td>4000-4500</td>
<td>1</td>
<td>325</td>
<td>750</td>
<td>-</td>
<td>1405</td>
<td>4250</td>
<td>5270</td>
<td>2170</td>
<td>32 X 4/70</td>
<td>394 X 508</td>
<td>265</td>
<td>38</td>
</tr>
<tr>
<td>TCVT 245</td>
<td>245</td>
<td>4000-6000</td>
<td>1</td>
<td>460</td>
<td>1050</td>
<td>-</td>
<td>2005</td>
<td>6125</td>
<td>7595</td>
<td>2800</td>
<td>32 X 4/70</td>
<td>394 X 508</td>
<td>350</td>
<td>50</td>
</tr>
<tr>
<td>TCVT 300</td>
<td>300</td>
<td>4000-6500</td>
<td>1</td>
<td>460</td>
<td>1050</td>
<td>850</td>
<td>2305</td>
<td>7500</td>
<td>9300</td>
<td>3100</td>
<td>32 X 4/70</td>
<td>394 X 508</td>
<td>385</td>
<td>52</td>
</tr>
<tr>
<td>TCVT 362</td>
<td>362</td>
<td>3000-6000</td>
<td>2</td>
<td>510</td>
<td>1175</td>
<td>950</td>
<td>2810</td>
<td>9050</td>
<td>1122</td>
<td>3480</td>
<td>32 X 4/70</td>
<td>394 X 508</td>
<td>460</td>
<td>54</td>
</tr>
<tr>
<td>TCVT 420</td>
<td>420</td>
<td>4000-5000</td>
<td>2</td>
<td>630</td>
<td>1425</td>
<td>1050</td>
<td>2810</td>
<td>10500</td>
<td>1322</td>
<td>3900</td>
<td>32 X 4/70</td>
<td>394 X 508</td>
<td>475</td>
<td>58</td>
</tr>
<tr>
<td>TCVT 550</td>
<td>550</td>
<td>4000-8000</td>
<td>2</td>
<td>680</td>
<td>1550</td>
<td>1175</td>
<td>4010</td>
<td>13750</td>
<td>17050</td>
<td>5250</td>
<td>32 X 4/70</td>
<td>394 X 508</td>
<td>750</td>
<td>106</td>
</tr>
<tr>
<td>TCVT 800</td>
<td>800</td>
<td>3000-5000</td>
<td>3</td>
<td>975</td>
<td>2100</td>
<td>1550</td>
<td>4915</td>
<td>20000</td>
<td>24800</td>
<td>6480</td>
<td>32 X 4/70</td>
<td>394 X 508</td>
<td>860</td>
<td>144</td>
</tr>
</tbody>
</table>

Data are indicative and are not binding. Dimensions are referred to typical TCVTs equipped with porcelain insulator and a medium size RMU & 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 updated technical & commercial offer fully customized to your specific requests.