OIL INSULATED CURRENT

TRANSFORMERS
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 Current Transformers are used to convert high transmission line currents (up to 5000 A) 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 current 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 Current Transformers also ensure suitable electrical insulation between high voltage and low voltage measuring equipment.
# MAIN FEATURES

<table>
<thead>
<tr>
<th>General</th>
<th>Product design</th>
<th>Product process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fully covering the range from 72 to 550 kV</td>
<td>Oil/paper internal insulation</td>
<td>Optimized Design to Manufacturing</td>
</tr>
<tr>
<td>Fully meeting all IEC and ANSI metering and protection classes comprising TPS, TPX, TPY and TPZ ones</td>
<td>External insulation with porcelain or composite insulator</td>
<td>Lean manufacturing concept applied to the whole supply chain</td>
</tr>
<tr>
<td>Rated primary current up to 5000 A</td>
<td>External part made by aluminum or stainless materials</td>
<td>Modular design allows the use of reduced number of components</td>
</tr>
<tr>
<td>Rated secondary current of 1A, 2A or 5A</td>
<td>Cores/windings located on the top of CT (head type)</td>
<td>Partial discharge free design and process</td>
</tr>
<tr>
<td>Primary and/or secondary reconnection available. Rated short circuit withstand up to 200 kA peak</td>
<td>Bar-type primary conductor allows higher short circuit current and avoids large voltage drop across the primary winding</td>
<td>Optimized Drying and Soaking Oil Process easily allow the use of special Oils in case of specific Customer’s needs. (Low ambient temperature applications or special Oil requirement for various reasons)</td>
</tr>
<tr>
<td>Fully type tested according to International Standards</td>
<td>Available to withstand: - Internal arc effects (according to IEC 61869 Standards) - Multichopped test (according to IEC 61869 Standards) - Heavy seismic stress according to IEC 62271, IEEE 693 and specific Customer request (i.e. Chile ETG A-020)</td>
<td>Maintenance free during a long lifetime of more than 30 years</td>
</tr>
<tr>
<td>Key oil impregnated paper insulation has been optimized after long experience based on famous Haefely-Trench original design</td>
<td>Hermetically sealed. A suitable Inox steel bellows allows the oil volume variation and keep the internal pressure equal to ambient one in every service conditions</td>
<td>Trench Management System has been certified according to ISO ISO 9001, ISO 14001 and OHSAS 18001 Standards</td>
</tr>
</tbody>
</table>

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

- Aluminium top cover
- Oil Level Indicator
- Inox Steel Bellows
- Lifting Lugs
- High Voltage Terminals
- Secondary Cores/Windings
- Porcelain/Composite Insulator
- High Voltage Insulation
- Terminal Box
- Oil Sampling Plug
- Earth Terminal
- Fixing Holes
<table>
<thead>
<tr>
<th>Type</th>
<th>Highest Voltage for Equipment (Um)</th>
<th>Rated Power-Frequency withstand Voltage</th>
<th>Rated Lightning Impulse withstand voltage</th>
<th>Arc Distance</th>
<th>Minimum normal specific corona distance (Pollution Level III)</th>
<th>Minimum normal specific corona distance (Pollution Level IV)</th>
<th>E - Base Fitting (N4 holes Ø 20 up to 420 kV and N4 holes Ø 24 for 550 kV)</th>
<th>Total weight</th>
<th>Oil Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>IOSK 72,5</td>
<td>72.5</td>
<td>140</td>
<td>325</td>
<td>-</td>
<td>700</td>
<td>1815</td>
<td>785</td>
<td>1260</td>
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<tr>
<td>IOSK 123</td>
<td>123</td>
<td>230</td>
<td>550</td>
<td>-</td>
<td>1200</td>
<td>3075</td>
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<td>275</td>
<td>650</td>
<td>-</td>
<td>1200</td>
<td>3625</td>
<td>785</td>
<td>1965</td>
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<tr>
<td>IOSK 170</td>
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<td>750</td>
<td>-</td>
<td>1400</td>
<td>4250</td>
<td>785</td>
<td>1920</td>
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<tr>
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<td>460</td>
<td>1050</td>
<td>-</td>
<td>2200</td>
<td>6125</td>
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<td>2830</td>
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<tr>
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<td>460</td>
<td>1050</td>
<td>850</td>
<td>2200</td>
<td>7500</td>
<td>880</td>
<td>2930</td>
<td>490 X 490</td>
</tr>
<tr>
<td>IOSK 362</td>
<td>362</td>
<td>510</td>
<td>1175</td>
<td>950</td>
<td>2650</td>
<td>9050</td>
<td>880</td>
<td>3830</td>
<td>490 X 490</td>
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<td>IOSK 420</td>
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<td>630</td>
<td>1425</td>
<td>1050</td>
<td>3200</td>
<td>10500</td>
<td>880</td>
<td>3935</td>
<td>490 X 500</td>
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<td>IOSK 550</td>
<td>550</td>
<td>680</td>
<td>1550</td>
<td>1175</td>
<td>3800</td>
<td>13750</td>
<td>995</td>
<td>4740</td>
<td>660 X 700</td>
</tr>
</tbody>
</table>

Data are indicative and are not binding. Dimensions are referred to typical CTs 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
Nürnberger Straße 199
96050 Bamberg
Germany
t. +49 951 1803 0
f. +49 951 1805 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 Jingzhouxian Street
Daiji Economic Development Zone
Shenbei New District, Shenyang 110036
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 – 400050