

**CVTO 150-200  
OIL-FILLED  
DISTRIBUTION**



**METERING UNITS**

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OIL-FILLED  
DISTRIBUTION**

| <b>CVTO 150-200</b> |                 |             | Last three digits indicate options |                 |             | <b>Oil-filled Current / Voltage</b> |                 |             |           |
|---------------------|-----------------|-------------|------------------------------------|-----------------|-------------|-------------------------------------|-----------------|-------------|-----------|
| Voltage             | 25 Kv           |             |                                    | 34. Kv          |             |                                     | 34.5 Kv         |             |           |
|                     | BIL kV          | Turns Ratio | VT Ratio                           | BIL kV          | Turns Ratio | VT Ratio                            | BIL kV          | Turns Ratio | VT Ratio  |
|                     | 150             | 120:1       | 14400:120                          | 150             | 175:1       | 20125:115                           | 200             | 175:1       | 20125:115 |
| Current             | Catalog ID      |             |                                    | Catalog ID      |             |                                     | Catalog ID      |             |           |
| 10/20:5             | MB201500020C000 |             |                                    | MA201500020C000 |             |                                     | MA202000020C000 |             |           |
| 25/50:5             | MB201500050C000 |             |                                    | MA201500050C000 |             |                                     | MA202000050C000 |             |           |
| 50/100:5            | MB201500100C000 |             |                                    | MA201500100C000 |             |                                     | MA202000100C000 |             |           |
| 75/150:5            | MB201500150C000 |             |                                    | MA201500150C000 |             |                                     | MA202000150C000 |             |           |
| 100/200:5           | MB201500200C000 |             |                                    | MA201500200C000 |             |                                     | MA202000200C000 |             |           |
| 150/300:5           | MB201500300C000 |             |                                    | MA201500300C000 |             |                                     | MA202000300C000 |             |           |
| 200/400:5           | MB201500400C000 |             |                                    | MA201500400C000 |             |                                     | MA202000400C000 |             |           |
| * 300/600:5         | MB201500600C000 |             |                                    | MA201500600C000 |             |                                     | MA202000600C000 |             |           |

Note: All VT characteristic accuracy: 0.3 @W,X, Y, Z, ZZ  
All Rating Factors are for 30°C ambient & VT VA 4000.

All CT characteristic accuracy: 0.3 @B0.1..B1.8 on both ratios.  
\* CT rating factors 1.5 below 300/600:5, at 300/600:5 is 1.0.

**Application**

Type CVTO transformers are single phase combined CT/VT metering class units designed to provide metering accuracy at 0.3% when loaded with IEEE burdens through ZZ for VT sections and B0.1..B1.8 for CT sections. They are oil filled and hermetically sealed with a dry Nitrogen cushion.

**Fabrication**

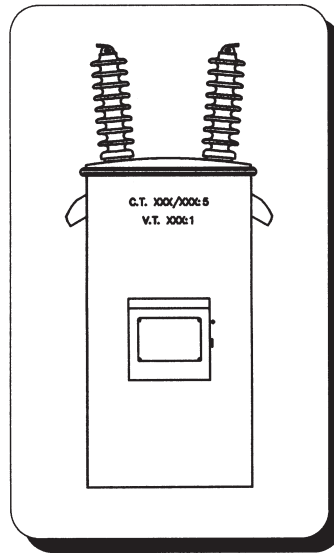
Standard transformer tanks are manufactured from mild steel, protected with a latest technology powder coated exterior finish suitable for withstanding the most rigorous environmental conditions. Stainless steel components are available for special order needs. Porcelain clad bushings are one-piece wet process type designed to exceed IEEE standard creep and strike distances.

**Magnetic circuits**

All ITEC metering transformers use high grade highly permeable silicon steel cores. Repeatability of accuracy performance from one transformer to another is dependent on consistent performance of quality core steel.

**Ground connections**

Each transformer is supplied with a 1/2" - 13 ground boss.



**Drying and impregnation**

In order to achieve the highest possible insulation integrity, CVTOs are dried out and impregnated with oil under vacuum to minimize moisture content. Each unit's final test dissipation factor readings insure that proper drying has been achieved.

**Primary terminals**

The standard terminal for ITEC metering CVTO unit is a cable clamp type. Higher current ratings are supplied with a 2-hole or 4-hole NEMA spade to satisfy the current requirements.

**Secondary terminals**

Secondary terminations are brought into a dry weatherproof low voltage compartment and secured to low voltage block terminations for convenient connections.

**Testing**

Every transformer is tested in accordance with IEEE STD C57.13 (Latest revision) In addition, ITEC tests each unit in accordance with NEMA 107. Extinction levels are required to be a minimum of 35% above operating voltage for all transformers.

**Nameplate information**

In addition to the nameplate, ratio information is stenciled onto the tank wall in 2" high numerals for remote reading.

**HV Lightning arresters**

CVTO's come provided with two sets of mounting bosses for HV lightning arresters, which are an optional extra.

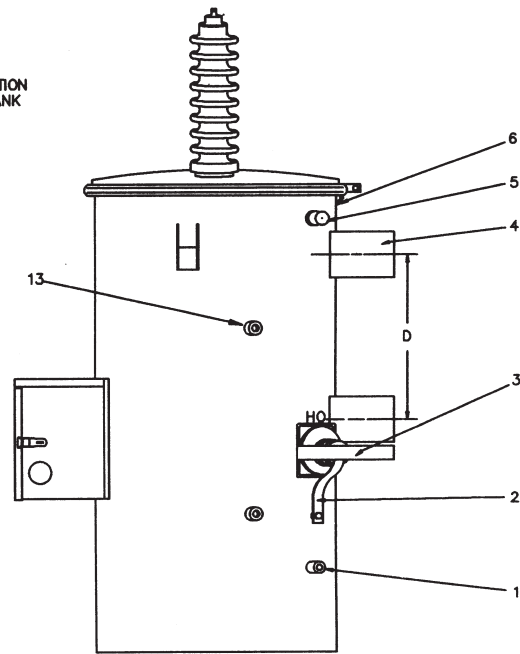
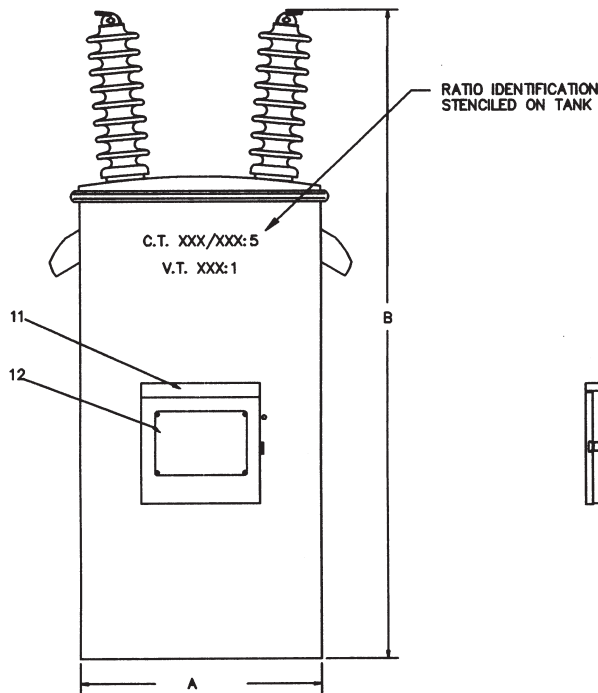
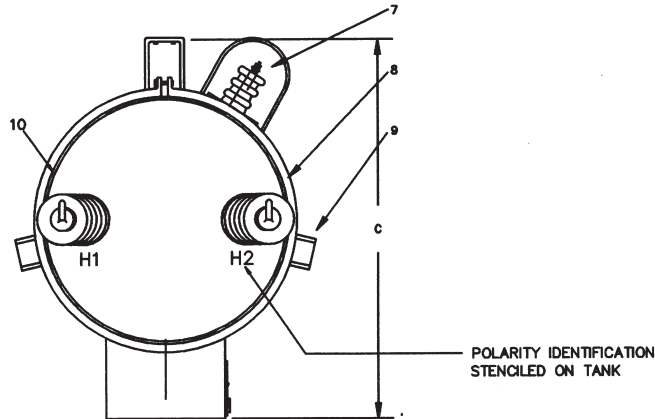
**OIL-15**

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This information is subject to change without notice. Not responsible for typographical errors.

**Specifications**

**Description**

|              |       |       |
|--------------|-------|-------|
| BIL kV       | 150   | 200   |
| A            | 16"   | 18.8" |
| B            | 51"   | 53.5" |
| C            | 26.8" | 30.5" |
| D            | 11.3" | 11.3" |
| Weight (lbs) | 400   | 715   |
| Min. Creep   | 29.8" | 30.8" |
| Min. Strike  | 14.4" | 11.6" |

1. Tank ground boss 1/2"-13.
2. Removable ground strap.
3. Neutral bushing guard.
4. Hanger bracket type 'A'.
5. Pressure relief valve.
6. Cover/tank ground connection.
7. Neutral bushing.

8. Cover/cover clamping ring.
9. Lifting ears.
10. HV bushing, glaze ANSI 70 light gray.
11. Secondary terminal box w/1.5" conduit opening.
12. Nameplate.
13. 1/2"-13 mounting bosses for optional lightning arresters.

**OIL-16** CVTO offers an excellent way to reduce mounting cost when compared to multiple units.  
**Instrument Transformer Equipment Corporation, PO Box 23088, Charlotte NC 28227-0272**  
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