TRANSFORMER FEATURES

Range – 2 to 100 MVA, 15KV to 230KV voltage class
Loading – Designed to deliver rated current and MVA in all tap positions
Service – Outdoor
Basic Impulse Level (BIL) – Per ANSI standard
Impedance – ANSI standard
Coils – Aluminum or copper conductor, circular construction, continuous or helical disc, or barrel wound
Cooling Fluid – Type II mineral oil, R-Temp or Silicone oil available up to 15 MVA
Fluid Preservation System – Sealed tank or conservator
Cooling Radiators – Plate type
Gauges and Accessories –
  • Liquid temperature indicator
  • Liquid level gauge
  • Vacuum pressure gauge
  • Drain valves
  • Filter press connections (top and bottom)
  • Automatic pressure relief device
  • Control wiring in flexible conduit
  • Other accessories available
Paint – ANSI 61 enamel on sandblasted surface, other colors available
Nameplate – Stainless steel, engraved
Bushings – Cover or side mounted
Other – Welded top cover, 19-in manhole covers, provisions on base for skidding, transformer lifting lugs, stainless steel ground pads

OPTIONAL FEATURES

- Reconnectable windings
- Non-standard impedance
- Epoxy paint in your choice of color
- Demountable radiators with isolation valves
- Galvanized radiators
- Terminal throats and chambers
- Sloping roof
- Multi-stage fan cooling for increased MVA
- Other gauges and accessories
- Shock indicator
- Customer-specific controls and relays

LIQUID FILLED BENEFITS

- High overload capacities
- Economical operation
- High level of dielectric reliability
- Low corona levels
- Sealed unit requiring low maintenance
- Versatility of terminating options using throats, flanges or air terminal chambers

ADDITIONAL FEATURES AVAILABLE

- Rigid galvanized conduit wiring
- Provisions for parallel operation
- Potential transformer for voltage signal
- Loss evaluated designs
### Liquid Filled Transformers

#### TYPICAL DIMENSIONS, WEIGHTS AND DATA FOR LIQUID FILLED TRANSFORMERS

<table>
<thead>
<tr>
<th>KV Voltage</th>
<th>KVA</th>
<th>Tank Height (inches)</th>
<th>Tank Width (inches)</th>
<th>Total Depth (inches)</th>
<th>Total Weight (pounds)</th>
<th>Oil Quantity (gallons)</th>
<th>NL</th>
<th>LL</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>2,500</td>
<td>94</td>
<td>78</td>
<td>98</td>
<td>15,000</td>
<td>400</td>
<td>5</td>
<td>29</td>
</tr>
<tr>
<td>15</td>
<td>3,750</td>
<td>120</td>
<td>110</td>
<td>110</td>
<td>20,000</td>
<td>510</td>
<td>7</td>
<td>42</td>
</tr>
<tr>
<td>15</td>
<td>5,000</td>
<td>120</td>
<td>110</td>
<td>110</td>
<td>28,000</td>
<td>850</td>
<td>9</td>
<td>46</td>
</tr>
<tr>
<td>15</td>
<td>10,000</td>
<td>140</td>
<td>120</td>
<td>110</td>
<td>44,000</td>
<td>1,500</td>
<td>14</td>
<td>81</td>
</tr>
<tr>
<td>15</td>
<td>15,000</td>
<td>140</td>
<td>140</td>
<td>168</td>
<td>60,000</td>
<td>2,000</td>
<td>20</td>
<td>115</td>
</tr>
<tr>
<td>69</td>
<td>5,000</td>
<td>164</td>
<td>108</td>
<td>115</td>
<td>45,000</td>
<td>2,000</td>
<td>12</td>
<td>47</td>
</tr>
<tr>
<td>69</td>
<td>10,000</td>
<td>173</td>
<td>115</td>
<td>123</td>
<td>60,000</td>
<td>2,400</td>
<td>18</td>
<td>86</td>
</tr>
<tr>
<td>69</td>
<td>15,000</td>
<td>173</td>
<td>127</td>
<td>128</td>
<td>73,000</td>
<td>2,700</td>
<td>22</td>
<td>115</td>
</tr>
</tbody>
</table>

Data is for estimating purposes only and should never be used for construction. Contact factory for actual dimensions, weights and oil volume.

#### SAMPLE OUTLINE FOR 12-24 MVA LIQUID FILLED TRANSFORMER

![Diagram of Transformer Outline]

**LIQUID FILLED TRANSFORMER DATA**

- **MOD/SN:** 47012MA033
- **MVA:** 12/13.4/16/17.9/20/22.4
- **PH:** 3, 60 Hz, 55/65˚C Rise
- **Load Tap:** ± 2 x 2.5%
- **Class:** OA/OA/FFA/FFA/FFA
- **Impedance:** 8.0% Nominal
- **Winding:** Copper
- **Winding Volts BIL AMPS. @ 22.4 MVA**
  - HV 69000 x 34500 Delta
  - LV 12470 GRD Y/7200
- **Nominal Weight:** 82,500 LBS
- **Voltage:**
  - HV 69000 x 34500 Delta
  - LV 12470 GRD Y/7200
- **BIL:** 350 KV
- **AMPS. @ 22.4 MVA**
  - HV 375 NOM @ 34.5 KV
  - LV 1037