THREE PHASE TEST SEPARATOR

EASTLINE Energy Resources three phase Test Separator is a mechanical device used to separate and measure Oil, Water and Gas rates. Portable test separators accurately gauge fluid production levels, providing our customers with valuable information regarding the wells performance and potential.

The main elements of the test separator include:
1. The Vessel – including the internal components, pressure and level controllers and safety devices.
2. The Piping necessary for the different phases and metering (fitted with corresponding metering devices).
3. The Skid and its protective frame.

Separators are also equipped with in-built shrinkage tester, barton recorder and sampling points.

The principal internal components of the separator are used to help in separator. The coalescing plates prevent droplet larger than 15 mm from being carried into the outlet gas stream. The mist extractor, which is the last obstacle the gas stream must pass before leaving the separator vessel, blocks fine liquid droplets still in the gas.

The blocked liquid droplets coalesce back into the oil phase.

VESEL CAPACITY

The vessel capacity for each phase depends on the conditions of pressure and temperature and the following as well:
1. Viscosity and density of the liquid,
2. Vessel operating liquid level,
3. Vessel internals like mist extractors and coalescing plates
4. Required liquid gas separator efficiency in terms of size of liquid droplets to be separated from gas phase,
5. Size of vessel itself as shown in the table below.

<table>
<thead>
<tr>
<th>SIZE</th>
<th>WORKING PRESSURE (PSI)</th>
<th>LIQUID CAPACITY (BBLs/DAY)</th>
<th>GAS CAPACITY MMscf/d LIQUID @ 1/3 of the VESSEL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>400 (psig) 600 (psig) 800 (psig) 1000 (psig) 1200 (psig) 1400 (psig) 2000 (psig)</td>
</tr>
<tr>
<td>42” x 10’</td>
<td>1440</td>
<td>10,000</td>
<td>28 35 40 45 50 59 0</td>
</tr>
<tr>
<td>42” x 15’</td>
<td>1440</td>
<td>12,000</td>
<td>41 48 53 57 63 72 0</td>
</tr>
<tr>
<td>48” x 10’</td>
<td>1440</td>
<td>13,000</td>
<td>42 49 55 60 70 83 0</td>
</tr>
<tr>
<td>48” x 15’</td>
<td>1440</td>
<td>19,000</td>
<td>50 58 67 75 82 93 0</td>
</tr>
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<td>2000</td>
<td>19,000</td>
<td>50 58 67 75 82 93 110</td>
</tr>
</tbody>
</table>

**TECHNICAL SPECIFICATION**

**48” x 15’ THREE PHASE TEST SEPARATOR**

- **WORKING PRESSURE:** 1440-psi
- **WORKING TEMPERATURE:** 150-degF
- **CAPACITIES:**
  - **GAS:** 93 MMscf/day Operating Pressure with Liquid at 1/3 full
  - **LIQUID:** 19,000 B/D with 2 Minuted Retention Time Operating Fluid
- **METERING EQUIPMENT:**
  - **GAS:** 6-inch Senior ANSI 600 Daniel Orifice Fitting
  - **OIL:** (1EA) 3-inch Turbine Meter Analyzers and (1EA) 2-inch Turbine Meter Analyzers
  - **WATER:** (1EA) 2-inch Turbine Meter Analyzers
- **SAFETY EQUIPMENT:**
  - **OVER PRESSURE SAFETY DEVICES:** 3 x 3-inch 1440-psi Pilot Relief Valve and 3 x 2-inch Rupture Disc
- **VALVE CONTROLS:**
  - **GAS BACK PRESSURE:** 1EA x 3-inch
  - **OIL LEVEL CONTROL:** 2EA x 3-inch
  - **WATER LEVEL CONTROL:** 1EA x 3-inch
- **SERVICE:** Standard
- **STANDARD:** NACE MR0175
- **CODE:** ASME Section VIII, DIVISION 1
- **CONNECTIONS:**
  - **INLET (FEMALE):** 3-inch 602 TH
  - **GAS OUTLET (MALE):** 3-inch 602 WH
  - **OIL LINE OUTLET (MALE):** 3-inch 602 WH
  - **WATER LINE OUTLET (MALE):** 3-INCH 602 WH
- **DIMENSIONS (L x W x H):** 29 x 7 x 9 Feet
- **WEIGHT:** 22,000 KILOGRAMS
- **SPECIAL FEATURES:** Separator Bypass Inlet to Gas and Oil Outlet
  Recombining Line Oil or Total Liquid to Gas Outlet

![Eastline Logo](image)