**C&D TRUE FRONT ACCESS**

**TEL Series**

**Float Service**

**BENEFITS:**
- Long Life Float Service Design
- Confirmed via 3rd party Certification
- Premium alloy and material components
- True Front Access Design
- True direct connect terminal for reliability
- C&D Ohmic Ring® for accurate testing
- Optional True Front Access gas collection system
- Connection versatility
- Maximum Performance
- Superior output due to direct terminal connection
- Low internal resistance
- Compliant to major global specifications
  - IEC 60896-21/22
  - Telcordia SR-4228
  - Eurobat Guide Classification: Long Life
  - Bellcore GR-63-CORE & GR-1089-CORE
  - UL94 V-0FR (V2 Optional)
- Non-Hazardous, not restricted for any transportation mode (air, water or land)

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Battery</th>
<th>Voltage Per Unit</th>
<th>Ampere Hour Capacity 8 Hour Rate @ 77°F (25°C) to 1.75 v/c</th>
<th>Ampere Hour Capacity 10 Hour Rate @ 68°F (20°C) to 1.80 v/c</th>
<th>Maximum Discharge Current</th>
<th>Short Circuit Current</th>
<th>Ohms Impedance 60 Hz (Ω)</th>
<th>Battery Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEL12-190F/FG</td>
<td>12 V</td>
<td>190 Ah</td>
<td>188 Ah</td>
<td>800 Amperes</td>
<td>4500 Amperes</td>
<td>0.0035 Ohms</td>
<td>126 lbs/57 kg</td>
</tr>
</tbody>
</table>

**Typical Wireline Application**

**Typical Wireless Application**

[Image of battery with TFA gas collection system]
SPECIFICATIONS

Ampere Hour Capacity to 1.75 Volts per Cell @77°F (25°C)
Discharge in Hrs.

<table>
<thead>
<tr>
<th>Model</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>10</th>
<th>12</th>
<th>20</th>
<th>24</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEL12-190F/FG</td>
<td>130</td>
<td>151</td>
<td>162</td>
<td>170</td>
<td>178</td>
<td>182</td>
<td>187</td>
<td>190</td>
<td>196</td>
<td>198</td>
<td>208</td>
<td>211</td>
</tr>
</tbody>
</table>

You may also access the product ratings by logging onto the C&D Battery Sizing program at www.cdstandbypower.net

Ampere Hour Capacity to 1.80 Volts per Cell @68°F (20°C)
Discharge in Hrs.

<table>
<thead>
<tr>
<th>Model</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>10</th>
<th>12</th>
<th>20</th>
<th>24</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEL12-190F/FG</td>
<td>121</td>
<td>142</td>
<td>153</td>
<td>162</td>
<td>168</td>
<td>173</td>
<td>177</td>
<td>180</td>
<td>188</td>
<td>191</td>
<td>204</td>
<td>204</td>
</tr>
</tbody>
</table>

You may also access the product ratings by logging onto the C&D Battery Sizing program at www.cdstandbypower.net

DIMENSIONS

<table>
<thead>
<tr>
<th>MODEL</th>
<th>A in mm</th>
<th>B in mm</th>
<th>C in mm</th>
<th>D in mm</th>
<th>E in mm</th>
<th>F in mm</th>
<th>G in mm</th>
<th>H in mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEL12-190F</td>
<td>20.3</td>
<td>516</td>
<td>21.5</td>
<td>546</td>
<td>22.0</td>
<td>559</td>
<td>20.1</td>
<td>512</td>
</tr>
<tr>
<td>TEL12-190FG</td>
<td>20.3</td>
<td>516</td>
<td>21.5</td>
<td>546</td>
<td>22.0</td>
<td>559</td>
<td>20.1</td>
<td>512</td>
</tr>
</tbody>
</table>

*All dimensions in inches and (millimeters). All dimensions are for reference only. Contact a C&D Representative for complete dimensional information.

Operating Temperature Range with temperature compensation
Discharge: -40°F (-40°C) to 160°F (71°C)
Charge: -10°F (-23°C) to 140°F (60°C)

Nominal Operating Temperature Range
+68°F (20°C) to +80°F (27°C)

Recommended Maximum Charging Current Limit
C20/5 Amperes (41.6A)

Float Charging Voltage
13.5 to 13.8 VDC average per 12V unit

Maximum AC Ripple (Charger)
0.5% RMS or 1.5% P-P of float charge voltage recommended for best results. Max voltage allowed = 1.4% RMS (4% P-P) Max current allowed = C20/20

Self Discharge
Battery can be stored up to 6 months at 77°F (25°C) before a freshening charge is required. Batteries stored at temperatures greater than 77°F (25°C) will require recharge sooner than batteries stored at lower temperatures. See C&D bulletin 41-7272, Self-Discharge and Inventory Control for details.

Equalize charge and cycle service voltage
14.40 to 14.80 VDC average per 12V unit @ 77°F (25°C)

Terminal: Inserted - Inter-unit connector provided
Threaded copper alloy insert terminal to accept M8 bolt

Terminal Hardware Torque
160 in.-lbes. (18 N-m)

Telcordia Part Numbers

<table>
<thead>
<tr>
<th>Battery Part Number</th>
<th>CLEI Code</th>
<th>CPR</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEL12-190F/FG</td>
<td>Pending</td>
<td>Pending</td>
</tr>
</tbody>
</table>

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