8” FRP Membrane Housing Contents

1. Explanation Model

2. End Entry Specification

3. End Entry Components

4. Side Entry Specification

5. Side Entry Components

6. Quality Assurance

7. Certificates

8. Projects

9. Addendum Drawings

9—1 W80E150 FRP membrane housing drawing..................06
9—2 W80E300 FRP membrane housing drawing..................06
9—3 W80E450 FRP membrane housing drawing..................07
9—4 W80E600 FRP membrane housing drawing..................07
9—5 W80E1000 FRP membrane housing drawing..................08
9—6 W80E1200 FRP membrane housing drawing..................08
9—7 W80S150 FRP membrane housing drawing..................09
9—8 W80S300 FRP membrane housing drawing..................09
9—9 W80S450 FRP membrane housing drawing..................10
9—10 W80S600 FRP membrane housing drawing...............10
9—11 W80S1000 FRP membrane housing drawing...............11
9—12 W80S1200 FRP membrane housing drawing...............11
8” FRP membrane housing

☆ Composite Construction for Best Chemical Compatibility & Corrosion Resistance.
☆ Smooth Inner Wall, Unique Mirror Finish ID.
☆ Beautiful & Attractive Appearance.
☆ Length From 1 Element to 8 Elements.
☆ Adapters, Interconnectors & Mounting Clamps Available.
☆ Inlet & Outlet, Size & Quantity Can be Selected.
☆ Certified by ASME, ISO9001, ISO14001 and GB/T2800.

Technical Specification

Material: Fiberglass and epoxy.
Working Pressure: 150–1800 PSI.
Operating Temperature: -7 °C–49 °C.
Connection: End port, side port optional.
Operating pH Range: 3–11.
Cleaning pH Range: 2–12 (≤ 30 min).

Test

Burst Test: 6 times of its design pressure.
Cycle Test: 100000 times.
Hydraulic Test: 100% quality assurance test with 1.2 times stage elevation.
Barcol Hardness Test: Repeated once every 1.5 meters.
Test every membrane housing, not sampling.
## Explanation of Codes of Winder Membrane Pressure Vessels

- **W**: Brand Name
- **80**: Membrane Housing Diameter: 8"
- **E**: Feed/Concentrate Port Type: End Port E (Side Port S)
- **300**: Membrane Housing Max Operating Pressure: 300 PSI
- **-1**: Membrane of Element Inside

### End Entry Specification

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Design Pressure (PSI)</th>
<th>Operating Temperature</th>
<th>Feed Port (inch)</th>
<th>Permeate Port (inch)</th>
<th>Connection</th>
<th>Element Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>W80E150</td>
<td>150</td>
<td>-10 °C–49 °C</td>
<td>DN40 1.5&quot;</td>
<td>1&quot; NPTF</td>
<td>End port</td>
<td>40&quot; × (1–8)</td>
</tr>
<tr>
<td>W80E300</td>
<td>300</td>
<td>-10 °C–49 °C</td>
<td>DN40 1.5&quot;</td>
<td>1&quot; NPTF</td>
<td>End port</td>
<td>40&quot; × (1–8)</td>
</tr>
<tr>
<td>W80E450</td>
<td>450</td>
<td>-10 °C–49 °C</td>
<td>DN40 1.5&quot;</td>
<td>1&quot; NPTF</td>
<td>End port</td>
<td>40&quot; × (1–8)</td>
</tr>
<tr>
<td>W80E600</td>
<td>600</td>
<td>-10 °C–49 °C</td>
<td>DN40 1.5&quot;</td>
<td>1&quot; NPTF</td>
<td>End port</td>
<td>40&quot; × (1–8)</td>
</tr>
<tr>
<td>W80E1000</td>
<td>1000</td>
<td>-10 °C–49 °C</td>
<td>DN40 1.5&quot;</td>
<td>1&quot; NPTF</td>
<td>End port</td>
<td>40&quot; × (1–8)</td>
</tr>
<tr>
<td>W80E1200</td>
<td>1200</td>
<td>-10 °C–49 °C</td>
<td>DN40 1.5&quot;</td>
<td>1&quot; NPTF</td>
<td>End port</td>
<td>40&quot; × (1–8)</td>
</tr>
<tr>
<td>W80E1500</td>
<td>1500</td>
<td>-10 °C–49 °C</td>
<td>DN40 1.5&quot;</td>
<td>1&quot; NPTF</td>
<td>End port</td>
<td>40&quot; × (1–8)</td>
</tr>
<tr>
<td>W80E1800</td>
<td>1800</td>
<td>-10 °C–49 °C</td>
<td>DN40 1.5&quot;</td>
<td>1&quot; NPTF</td>
<td>End port</td>
<td>40&quot; × (1–8)</td>
</tr>
</tbody>
</table>

### End Entry Components

- **Component assembly diagram of 8" end entry membrane housing**
- **Components detail of 8" end entry membrane housing**
Serial-Number | Description          | Material      |
---|----------------------|--------------|
① | Permeate port        | ABS          |
② | Three turns locking ring | SA-479M F316L |
③ | Permeate retaining ring | EPDM 512    |
④ | F/C Port             | SS304        |
⑤ | Bearing Plate        | SB-209, 6061-T651 |
⑥ | Head Seal            | PF062-3      |
⑦ | Head Seal O Ring     | EPDM 512     |
⑧ | Adaptor              | ABS CHIMEI 757K |
⑨ | Adaptor O Ring       | EPDM 512     |
10 | Head Seal Ring       | EPDM 512     |
11 | Thrust Cone          | PF062-3      |

※ Note: Do not install thrust cone at feed port.

### Side Entry Specification

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Design Pressure (PSI)</th>
<th>Operating Temperature</th>
<th>Feed Port (inch)</th>
<th>Permeate Port (inch)</th>
<th>Connection</th>
<th>Element Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>W80S150</td>
<td>150</td>
<td>-10 °C–49 °C</td>
<td>DN40 1.5&quot;/DN50 2&quot; /DN65 2.5&quot;</td>
<td>DN80 3&quot;</td>
<td>DN100 4&quot;</td>
<td>1&quot; NPTF</td>
</tr>
<tr>
<td>W80S300</td>
<td>300</td>
<td>-10 °C–49 °C</td>
<td>DN40 1.5&quot;/DN50 2&quot; /DN65 2.5&quot;</td>
<td>DN80 3&quot;</td>
<td>DN100 4&quot;</td>
<td>1&quot; NPTF</td>
</tr>
<tr>
<td>W80S450</td>
<td>450</td>
<td>-10 °C–49 °C</td>
<td>DN40 1.5&quot;/DN50 2&quot; /DN65 2.5&quot;</td>
<td>DN80 3&quot;</td>
<td>DN100 4&quot;</td>
<td>1&quot; NPTF</td>
</tr>
<tr>
<td>W80S600</td>
<td>600</td>
<td>-10 °C–49 °C</td>
<td>DN40 1.5&quot;/DN50 2&quot; /DN65 2.5&quot;</td>
<td>DN80 3&quot;</td>
<td>-</td>
<td>1&quot; NPTF</td>
</tr>
<tr>
<td>W80S1000</td>
<td>1000</td>
<td>-10 °C–49 °C</td>
<td>DN40 1.5&quot;/DN50 2&quot; /DN65 2.5&quot;</td>
<td>DN80 3&quot;</td>
<td>-</td>
<td>1&quot; NPTF</td>
</tr>
<tr>
<td>W80S1200</td>
<td>1200</td>
<td>-10 °C–49 °C</td>
<td>DN40 1.5&quot;/DN50 2&quot; /DN65 2.5&quot;</td>
<td>DN80 3&quot;</td>
<td>-</td>
<td>1&quot; NPTF</td>
</tr>
<tr>
<td>W80S1500</td>
<td>1500</td>
<td>-10 °C–49 °C</td>
<td>DN40 1.5&quot;/DN50 2&quot; /DN65 2.5&quot;</td>
<td>DN80 3&quot;</td>
<td>-</td>
<td>1&quot; NPTF</td>
</tr>
<tr>
<td>W80S1800</td>
<td>1800</td>
<td>-10 °C–49 °C</td>
<td>DN40 1.5&quot;/DN50 2&quot; /DN65 2.5&quot;</td>
<td>DN80 3&quot;</td>
<td>-</td>
<td>1&quot; NPTF</td>
</tr>
</tbody>
</table>

---

Component assembly diagram of 8" side entry membrane housing

Component detail of 8" side entry membrane housing

Higher Technology, Cleaner Water!
<table>
<thead>
<tr>
<th>Serial-Number</th>
<th>Description</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Three Turns Retainer Ring</td>
<td>SA-479M F316L</td>
</tr>
<tr>
<td>2</td>
<td>Permeate port</td>
<td>EPDM 512</td>
</tr>
<tr>
<td>3</td>
<td>Permeate retaining ring</td>
<td>ABS</td>
</tr>
<tr>
<td>4</td>
<td>Bearing Plate</td>
<td>SB-209, 6061-T651</td>
</tr>
<tr>
<td>5</td>
<td>Head Seal</td>
<td>PF062-3</td>
</tr>
<tr>
<td>6</td>
<td>Head Seal Ring</td>
<td>EPDM 512</td>
</tr>
<tr>
<td>7</td>
<td>Head Seal O Ring</td>
<td>EPDM 512</td>
</tr>
<tr>
<td>8</td>
<td>Adaptor</td>
<td>ABS CHIMEI 757K</td>
</tr>
<tr>
<td>9</td>
<td>Adaptor O Ring</td>
<td>EPDM 512</td>
</tr>
<tr>
<td>10</td>
<td>Thrust Cone</td>
<td>PF062-3</td>
</tr>
</tbody>
</table>

※ **Note:** Do not install thrust cone at feed port.

**Quality Assurance**

**Barcol hardness test:** repeated once every 1.5 meters.

**Hydraulic test:**
100% quality assurance test with 1.2 times stage elevation. Keep pressure for 2 minutes to ensure no leakage.

**Burst test:**
6 times of its design pressure.

**Cycle test:**
1000000 times.
Higher Technology, Cleaner Water!

Projects

- Gansu chemical plant water process engineering. May 2014
- Biel Crystal water treatment engineering. May 2015
- Daya Bay Cnooc’s refinery project. July 2016
- Qingdao wastewater reclamation project. Aug 2016
- Dalian Hengli petrochemical water treatment project. Nov 2017

Certificates

- ASME
- CNAS28001
- ISO9001
- ISO14001
Addendum Drawings

1. W80E150 FRP membrane housing drawing

2. W80E300 FRP membrane housing drawing
3. W80E450 FRP membrane housing drawing

4. W80E600 FRP membrane housing drawing
5. W80E1000 FRP membrane housing drawing

6. W80E1200 FRP membrane housing drawing
7. W80S150 FRP membrane housing drawing

8. W80S300 FRP membrane housing drawing
9. W80S450 FRP membrane housing drawing

10. W80S600 FRP membrane housing drawing
11. W80S1000 FRP membrane housing drawing

12. W80S1200 FRP membrane housing drawing