

# GUIDE SPECIFICATION

## VERTICAL ABOVE GROUND POLY BRINERS

### PART 1: GENERAL

#### 1.1 SCOPE OF WORK

This **BrineMaker** specification covers flat bottom, upright, domed top, crosslinked polyethylene (XLPE) briner vessels fabricated according to the requirements of ASTM D1998 and the basic components and optional features outlined below. The BrineMaker is designed to receive pneumatically loaded salt and to produce and supply saturated brine. The stated design capacity is based on the shell capacity of dry salt with a density of 70#/cubic foot.

#### 1.2 MANUFACTURER QUALIFICATIONS

##### 1.2.1 MANUFACTURER'S EXPERIENCE:

Briner supplier shall have been regularly engaged in the design and manufacture of brine make-up and storage systems tanks such as specified herein for at least five years. The manufacturer's experience shall include at least fifteen installations of equal or larger capacity than specified herein, that have been in operation for at least five years.

##### 1.2.2 MANUFACTURER'S WARRANTY:

The BrineMaker and accessories shall be warranted as follows:

Poly Vessel	: three years
Accessories	: one year
Electronics	: by manufacturer

#### 1.3 SUBMITTALS

##### 1.3.1 SHOP DRAWINGS:

Briner supplier shall furnish BrineMaker shop drawings for approval. Drawings shall indicate type, size and location of all specified fittings and other appurtenances.

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### 1.3.2 SEISMIC CALCULATIONS:

Where required, briner supplier shall furnish seismic design calculations in accordance with the current IBC which have been verified and stamped by an independent registered professional engineer.

### 1.3.3 CHEMICAL RESISTANCE DATA:

All materials used in the construction of the vessel and appurtenances shall be compatible with sodium chloride brine.

## PART 2: PRODUCTS

### 2.1 ACCEPTABLE PRODUCTS

**BrineMaker, Inc.** 800-998-7345 or

Approved equal

### 2.2 BrineMaker MATERIALS OF CONSTRUCTION

#### 2.2.1 Standard Components:

Tank:	Crosslinked Polyethylene
Salt Fill Line:	4" fully radiused 304SS w/camlok, cap and supports
Brine Outlet:	2" flange with PVC collection plenum
Top Manway:	Fume Tight Lid with SS Hinged Pressure Relief/Inspection Port
FRP Side Manway:	24" flanged with EPDM gasket and SS hardware
Drain:	2" flange with diptube & screen
Vent/Dust Collection:	8" flange with dust bag, hose clamps and supports
Water Inlet:	2" flange with 1" Spiral Distribution Head
Lifting Lugs:	Molded-In (on most vessels)

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### 2.2.2 Optional Accessories:

Salt Level Indication:	3" flange w/bob device, LED readout and 4-20ma output
Freeze Protection System:	Heating pads with control panel and insulation
Brine Level Control System:	Pressure transducer, controller, NEMA 4X enc., solenoid valve
Brine Concentration Monitor:	Conductivity sensor and Controller
FRP Access Ladder:	With Operator Safety Deck
Fall Protection:	OSHA compliant SS fall protection system with harness
Gravel Bed:	Quartz gravel bed (as specified by Morton Salt)
Seismic & Wind Restraint:	per current IBC applicable design requirements (galvanized components / SS as an option)
NSF 61 Labeled (XLPE):	NSF 61 Certification specific to sodium chloride brine
Dust Bag Housing:	4' x 8' HDPE Housing with 2' x 3' SS Hinged Door
Expansion Joint Assemblies:	2" EPDM/PVC Butterfly Valve / Galvanized Hardware / SS Support (for outlet and drain connections) <b>NOTE:</b> Required to maintain vessel warranty

### 2.3 BrineMaker SEISMIC & WIND DESIGN

Briner supplier shall provide seismic and wind design in conformance with plans and instruction certified by a registered professional engineer. Provide wet stamped calculations.

### 2.4 BrineMaker Temperature Maintenance System

2.4.1 The heating system shall be designed to maintain briner contents at 50°F, at a minimum ambient temperature of [redacted]°F.

2.4.2 The insulation will have an outer protective layer of mastic coating.

### 2.5 BrineMaker Specification – [redacted] Ton Unit

Diameter:	[redacted]
Height:	[redacted] (shell)
Volume:	[redacted] cubic feet
Standard Tank Color:	Natural/Translucent
Configuration:	Flat bottom, domed top
Design Specific Gravity:	≥1.35

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Design Temperature:	100° f
Design Pressure:	atmospheric
Design Standard:	ASTM D1998
Fabrication Method:	Rotational Molding
Resin:	HDXLPE or HDLPE