



BT600AC

**STAINLESS STEEL AUTOMATIC BRINE MAKING PLANT
COMPLETE WITH AUTOMATIC SALINITY CONTROL, OVERFLOW
PREVENTION, AUTOMATIC PUMP OUT TO STORAGE, PUMP PROTECTION
AND OPTIONAL PRESSURE SPRAY ASSISTED CLEAN-OUT**

SAMPLE SPECIFICATION SHEET

Brine Making Plant shall meet the following minimum specifications:

1. The brine making process will be automatically controlled by an Electronic Controller (EC). The EC will control the salinity content of the finished brine to within $\pm 0.2\%$ and pump the finished brine to a customer supplied storage tank. The operator will be able to pre-select the desired salinity level of the finished brine. In auto mode the EC will shut down the machine in the event that the brine is either too rich or too lean. The brine maker will also include full manual override controls which enable brine production in a fully manual mode.

Comply: _____yes _____no

2. The dissolution tank, brine containment tank and spillway shall be welded 304 stainless steel, one-piece construction. The stainless steel baffle wall between the dissolution side of the tank and the brine containment side of the tank shall be welded on both sides of the baffle.

Comply: _____yes _____no

3. The entire Brine Making Plant shall be constructed into a single frame to allow for easy loading, un-loading, and positioning using standard fork lift trucks.

Comply: _____yes _____no

4. The dissolution tank, brine containment tank and spillway shall be constructed of 304 grade stainless steel. Plastic or fiberglass construction is not permitted.

Comply: _____yes _____no

5. The Brine Making Plant shall be delivered as a complete, one piece, and turnkey system with all plumbing, pump, etc. factory installed and affixed to the plant. No field assembly, other than to connect the municipality's water supply and plug in the electrical control panel shall be necessary. The municipality will be responsible for connecting the discharge pump to its own storage facilities if required.

Comply: _____yes _____no

6. Overall dimensions shall not exceed:

Width: 150 inches

Comply: _____yes _____no

Depth: 62 inches

Comply: _____yes _____no

Height: 60 inches

Comply: _____yes _____no

7. System being supplied shall be designed and constructed so as to assure the dissolution tank can be filled using a standard 2 yd³ loader bucket.

Comply: _____yes _____no

8. System shall be an upward water flow type system. Water will move through the salt from the bottom to the top. The brine will exit the dissolution tank through a fixed, stainless steel spillway into the brine containment tank.

Comply: _____yes _____no

9. Dissolution Tank Opening:

Width: 116 inches minimum

State Width: _____

Depth: 36 inches

State Depth: _____

Capacity: 3.5 yd³

State Capacity: _____

10. Brine Containment Tank:

Capacity: approximately 2950 litres (780 USG)

State Capacity: _____

11. Pump/Motor shall be:

Close coupled only:

Comply: _____yes _____no

Rated for 120 USGPM flow rate

Comply: _____yes _____no

2 HP – 115/220 VAC Single Phase	Comply: ____yes ____no
Housing shall be glass reinforced polypropylene	Comply: ____yes ____no
Pump shaft shall be stainless steel	Comply: ____yes ____no
All other pump parts shall be corrosion resistant	Comply: ____yes ____no

12. All valves and fittings that are exposed to salt or brine shall be corrosion resistant Banjo flange style polypropylene or approved equal.

Comply: ____yes ____no

13. All fresh water supply lines and dilution water supply lines that are affixed to the Brine Making Plant shall be Sch. 80 PVC pipe. Flexible hose is not permitted.

Comply: ____yes ____no

14. Flexible hose affixed to the Brine Making Plant used for recirculation purposes shall be wire reinforced and rated for up to 100 PSI and have a service temperature rating of -40°C to 120°C.

Comply: ____yes ____no

15. Main water supply line shall be controlled using an electric solenoid valve that is activated/de-activated by the electrical panel.

Comply: ____yes ____no

16. The Brine Making Plant shall include water/brine high-level float switches on both the dissolution tank and the brine containment tank. The dissolution tank level switch will close the main water supply valve automatically in order to prevent overfilling. The brine containment tank switch will control the pump out to storage function. The switches shall be c/w slosh guards as required.

Comply: ____yes ____no

17. The Brine Making Plant will include a low level safety switch that will automatically prevent the pump from running when there is no liquid in the brine containment tank. The switch shall be c/w slosh guard.

Comply: _____yes _____no

18. Electrical Panel:

Nema 4X

Comply: _____yes _____no

10' electrical cord c/w "twist lock" plug

Comply: _____yes _____no

Motor contactor c/w overload relay

Comply: _____yes _____no

Emergency Stop button

Comply: _____yes _____no

Float switch relays equipped with manual overrides

Comply: _____yes _____no

Electronic Salinity Control – User Adjustable

Comply: _____yes _____no

Manual Override Control Switch

Comply: _____yes _____no

Pump Start/Stop Switch

Comply: _____yes _____no

Auto/Manual Switch

Comply: _____yes _____no

Remote High Level Float Switch (for storage tank)

Comply: _____yes _____no

19. Spillway:

The spillway shall have a flow capacity of not less than 18,900 litres (5000 USG) per hour.

Comply: _____yes _____no

20. Clean-Out Valves:

The dissolution tank shall include at least one 6" NPT stainless steel clean-out pipe c/w Poly Butterfly Valve located at the back of the tank. No elbows or other flow diversions are permitted on the clean-out pipe. The clean-out pipe shall be located approximately 1/4" to 1/2" from the floor of the dissolution tank.

The brine containment tank shall include at least one 6" NPT stainless steel clean-out pipe c/w Poly Butterfly Valve also located at the back of the dissolution tank. The pipe shall be completely sealed from the dissolution tank so that no liquid from the dissolution tank can contaminate the finished brine in the brine containment tank.

Comply: _____yes _____no

21. Clean-Out Spray System:

The clean-out system shall include a fresh water spray system with electric ball valve control to assist with the clean-out of both the dissolution tank and the brine containment tank. The pressure spray system shall be integrally plumbed into the

fresh water supply system and shall be activated by a single dedicated electric ball valve.

Comply: _____yes _____no