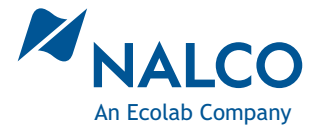


3D TRASAR™ Water Saver™ Technology



Specification SPEC-623

3D TRASAR Water Saver Technology is a hybrid cooling water treatment technology, combining Nalco 3D TRASAR Technology and electrochemical precipitation (EP) equipment. Nalco's 3D TRASAR Water Saver Technology has been used in open recirculating cooling water applications to remove hardness, increase tower cycles and save water.

- Safe environmentally friendly scale control
- Save substantial amounts of water by raising cycles of concentration
- Reduce chemical consumption and discharge

Description

The principle of 3D TRASAR Water Saver equipment is to electrochemically create a local alkaline environment on cathode surface to precipitate hardness inside the equipment in the form of calcium carbonate (CaCO_3) and magnesium hydroxide ($\text{Mg}(\text{OH})_2$), which will be periodically removed and disposed of. This electrochemical process reduces calcium and magnesium hardness in tower water and allows the cooling tower to be operated at higher cycles of concentration.

The direct benefit of incorporation of this technology with Nalco's cooling water program is to provide a hybrid cooling water treatment program for customers that demand sustainable cooling water offerings that can save water, reduce chemical usage and increase tower cycles while maximizing cooling system performance.

The key parameters are monitored and logged in the 3D TRASAR Controller. The information is automatically updated every hour to enVision™ web and is accessible to designated people. The carefully designed alarm system will send alarms to designated people via email, text messages, or mobile devices 24/7/365.

Potential applications are open recirculating cooling water applications in Manufacturing, Institutional, and Food and Beverage markets.



Figure 1 — 3D TRASAR Water Saver Technology, Standard Skid, Single

Support

If you have any questions, please contact your Nalco representative. In North America, you can contact the Nalco Global Equipment Solutions Help Desk at 1-800-323-8483.

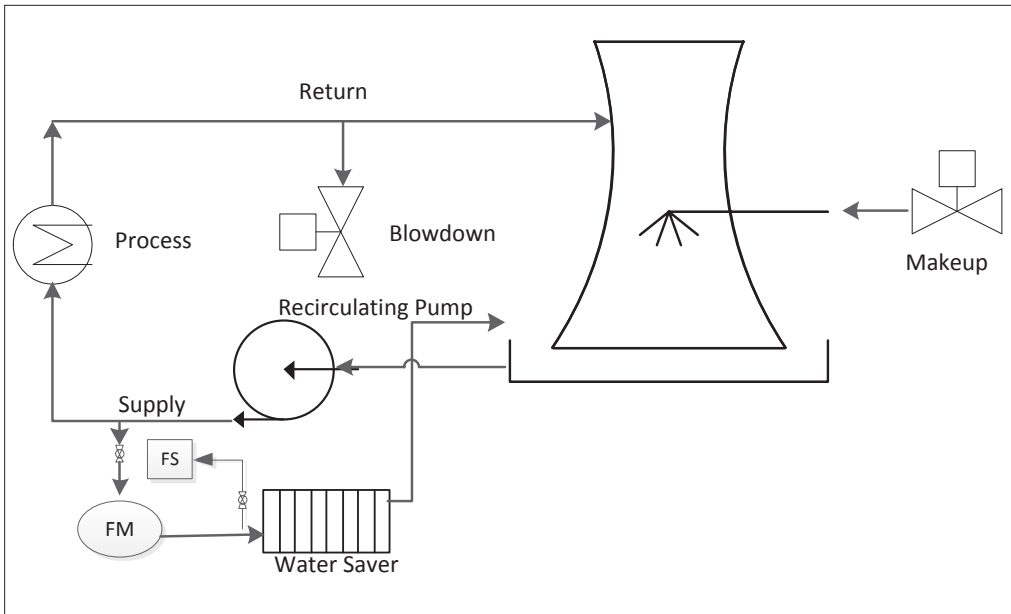


Figure 2 — An Example of 3D TRASAR Water Saver Technology Installation Locations

Specifications

The 3D TRASAR Water Saver systems consist of a number of modules.

- Dual skids (8 reactor)
 - Standard skids, without pump
 - Standard skids, with pump
 - Secondary skids, without pump
 - Secondary skids, with pump
- Single skids (4 reactor)
 - Standard skids, without pump
 - Standard skids, with pump
 - Secondary skids, without pump
 - Secondary skids, with pump

Systems Dimensions:

85" (Wide) x 34" (Deep) x 62" (High), Dual
 42.5" (Wide) x 34" (Deep) x 62" (High), Single

Operating Pressure: 45 psi Max

Operating temperature: 40 to 120°F

Power:

With Pump, 480 VAC, 3-phase, 60 Hz: one 20A protected 4-wire (incl. neutral) branch circuit per skid

Without Pump, 120VAC, 1-Phase, 60 Hz: one 20A protected branch circuit per skid

240 VAC, 1-Phase, 60 Hz: one 10A protected branch circuit per skid

480 VAC, 3-Phase, 60 Hz: one 10A protected 4-wire (incl. neutral) branch circuit per skid

Weight:

Shipment Weight:

– 1,580 lbs (Dual)

– 690 lbs (Single)

Operating Weight:

– 3,060 lbs (Dual)

– 1,430 lbs (Single)

Inlet and outlet: 2"

Drain: 1.5"

Standard Systems and Part Numbers

Water Saver Skids

060-WStdS1.88	Standard, Single
060-WStdS2.88	Standard, Single with Pump
060-WSSecS1.88	Secondary, Single
060-WSSecS2.88	Secondary, Single with Pump
060-WStdD1.88	Standard, Dual
060-WStdD2.88	Standard, Dual with Pump
060-WSSecD1.88	Secondary, Dual
060-WSSecD2.88	Secondary, Dual with Pump

Replacement Parts and Accessories

Water Saver

060-Cleanset.88	Clean set
060-WSAnode.88	Anode
060-WS6CAT.88	Cathode
060-Toolset.88	Tool set (clean set and a set of wrenches)
060-WSSEAL0.88	Bottom seal, Old model (Flow direction: top to bottom)
060-WSSEAL1.88	Top seal, old model, and top and bottom seals, new model (Flow direction: bottom to top)
060-BT5211.88	3D BLR Controller with Modem

Flow Switch

6000668	Flow Switch
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Flow Meter

301-FS81000.88	Flow Sensor for 2" or 3" Pipe
301-FS81008.88	Flow Sensor for 4" or 6" Pipe
301-FS81004.88	Tee, 2" PVC
301-FS81006.88	Saddle, 3" PVC
301-FS81010.88	Saddle, 4" PVC
301-FS81021.88	Saddle, 6" PVC
301-FS81022.88	Tee, 2" Steel
301-FS81023.88	Saddle, 3" Iron
301-FS81024.88	Saddle, 4" Iron
301-FS81025.88	Saddle, 6" Iron
6008876	Transmitter with Display

Pump

6051452	2 HP, Centrifugal Pump, 208/230/460 Volt, 3 PH., 60 HZ
6051453	5HP, Centrifugal Pump, 208/230/460 Volt, 3 PH., 60 HZ
6053027	Water Saver Pump Repair Kit

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