

# Model STS

## Emergency Water Tempering Skid System

### APPLICATION:

Acorn Controls' water tempering system provides usable tempered water immediately in an emergency, where time delays in receiving proper irrigation of hazardous material exposure can increase the severity of trauma and/or injury. Acorn Controls offers tank and valve size options that are able to supply multiple showers, eye/face washes and eyewashes simultaneously. All of Acorn Controls' water tempering systems, when located in a reasonable proximity to possible work place exposure, provide an environment conducive to quick and proper length of treatment, in accordance with ANSI Z358.1, Appendix B6.

### SPECIFICATIONS:

#### Valve Specifications:

Maximum Operating Pressure: ..... 125 PSI (861 kPa)  
 Maximum Hot Water Supply Temp: ..... 180°F (82°C)  
 Outlet Temp. Range: ..... 60°F-95°F (15°C-35°C)  
 Minimum Hot Water Supply ..... 5°F (3°C)  
 Above Set Point

#### NOTE:

**SEE ACORN CONTROLS ET71 SERIES VALVE SUBMITTAL SHEET FOR ADDITIONAL VALVE SPECIFICATIONS**

#### Expansion Tank:

Volume ..... 32 Gal (121 L)  
 Maximum Pressure ..... 40 PSI (276 kPa)

#### Water Heater Tank:

Capacity ..... 120 Gal (454 L)  
 Maximum Working Pressure ..... 125 PSI (861 kPa)

#### Heating Element:

Thermostat ..... 60°F-250°F (16°C-121°C)  
 Power Requirements ..... 240 VAC  
 Power ..... 5.477 kW



### FEATURES:

- 5' x 5' All stainless steel constructed skid for corrosive environments.
- 120 gallon **NON** ASME tank with ET71-2 tempering valve standard. 120 and 300 gallon ASME tanks optional available. 300 gallon tank will include ET71-3 tempering valve.
- Utilizes Acorn Controls ET71 Series tempering valves which are IAPMO certified per ASSE 1071 and CSAB125.3.
- Electrical components in NEMA 4 standard, or optional NEMA 7 classifications.
- Heating element with integral high temperature shut-off.
- 15' (4.5 m), 10 gage, 4 wire power cord with 3", 4 blade twist-lock connector.

### GUIDE SPECIFICATION:

Emergency water tempering system shall be mounted to a 5' x 5' stainless steel skid. Tempering system shall include a tempering valve that shall be independent lab certified to ASSE 1071 and CSA standards. Valve shall have an on demand internal cold water bypass of at least 60% of the normal flow rate with a temperature range of 60°F to 95°F (16°C or 35°C) factory set to 85°F (29°C) and adjustable by the safety officer. Hot water tank shall be constructed to ASME standards with an electrical heating element with an integral high temperature limit shut-off. All electrical components shall be single phase NEMA 4 (standard) or NEMA 7 (optional) classifications. Every tempering system shall be factory assembled and tested.

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Submittal # **STS**  
 Revised: 08/06/18

#### Product carries the following certifications:



Est. 1954  
**ACORN ENGINEERING COMPANY**  
 Manufacturer of Engineered Products

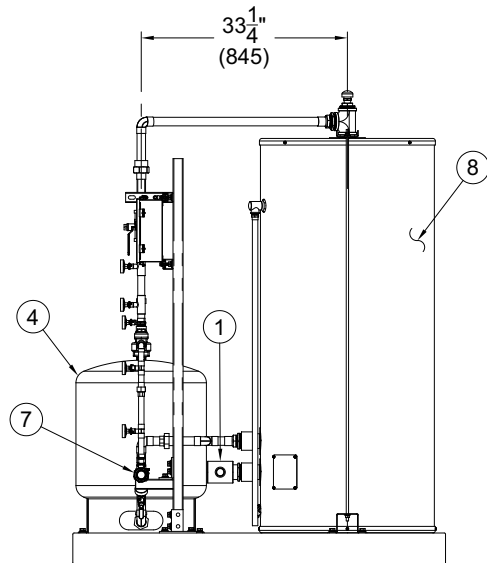
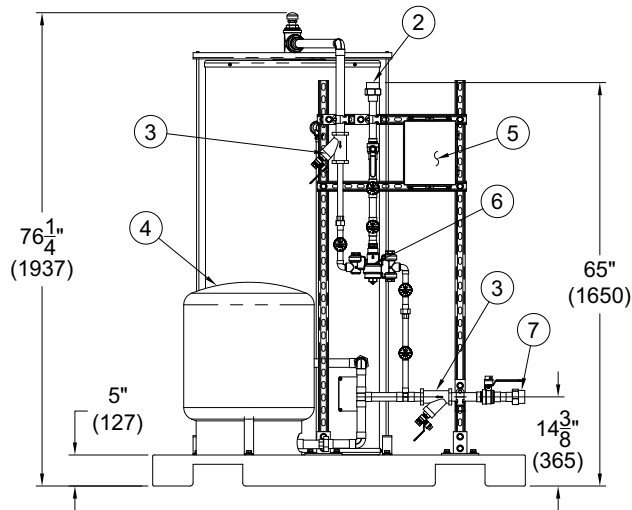
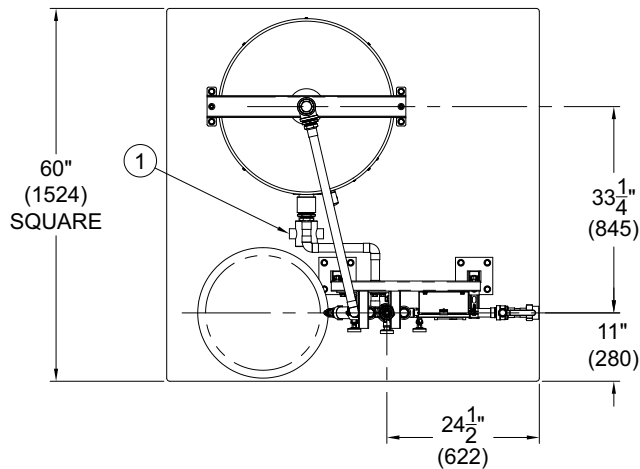
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## OPTIONS:

- STS-1 120 Gallon **NON** ASME Tank (Standard) With ET71-2 Tempering Valve
- STS-1A 120 Gallon ASME Tank With ET71-2 Tempering Valve
- STS-3 300 Gallon ASME Tank With ET71-3 Tempering Valve
- NEMA 7 Class Components
  - Division 1
  - Division 2
- Booster Pump  
Manufacturer and Model Number: \_\_\_\_\_
- Recirculation Pump

## TECHNICAL DIMENSIONS:



### NOTES:

- ① ELECTRIC HEATING ELEMENT
- ② 1" NPT OUTLET CONNETION
- ③ "Y" STRAINERS
- ④ EXPANSION TANK
- ⑤ ELECTRICAL CONTROL BOX
- ⑥ ET71 SERIES TEMPERING VALVE
- ⑦ 1" NPT SUPPLY INLET
- ⑧ WATER HEATER TANK



## PUMP INFORMATION:

Manufacturer: \_\_\_\_\_

Manufacturer Part Number: \_\_\_\_\_

**IF PUMP NOT SPECIFIED ABOVE, MUST PROVIDE THE FOLLOWING**

System Head Loss: \_\_\_\_\_

Required Flow: \_\_\_\_\_

**STS** Revised: 08/06/18

**WARNING:** Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

Acorn Controls warrants that its products are free from defects in material or workmanship under normal use and service for a period of one year from date of shipment. Acorn's liability under this warranty shall be discharged solely by replacement or repair of defective material, provided Acorn is notified in writing within one year from date of shipment, F.O.B. Industry, California.

SELECTION SUMMARY & APPROVAL FOR MANUFACTURING

Model Number & Options \_\_\_\_\_ Quantity \_\_\_\_\_

Company \_\_\_\_\_

Contact \_\_\_\_\_ Title \_\_\_\_\_

Signature (Approval for Manufacturing) \_\_\_\_\_ Date \_\_\_\_\_

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