INSTALLATION, OPERATION & MAINTENANCE INSTRUCTIONS

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Model 9201-Tempered Water Blending System

NOTE TO INSTALLER: Please leave this information with the Maintenance Department.

LIMITED WARRANTY

HAWS® warrants that all of its products are guaranteed against defective material or poor workmanship for a period of **one year from date of shipment.** HAWS liability under this warranty shall be discharged by furnishing without charge F.O.B. HAWS Factory any goods, or part thereof, which shall appear to the Company upon inspection to be of defective material or not of first class workmanship, provided that claim is made in writing to company within a reasonable period after receipt of the product. Where claims for defects are made, the defective part or parts shall be delivered to the Company, prepaid, for inspection. HAWS will not be liable for the cost of repairs, alterations or replacements, or for any expense connected therewith made by the owner or his agents, except upon written authority from HAWS, Sparks, Nevada. HAWS will not be liable for any damages caused by defective materials or poor workmanship, except for replacements, as provided above. Buyer agrees that Haws has made no other warranties either expressed or implied in addition to those above stated, except that of title with respect to any of the products or equipment sold hereunder and that HAWS shall not be liable for general, special, or consequential damages claimed to arise under the contract of sale.

The emergency equipment manufactured by HAWS is warranted to function if installation and maintenance instructions provided are adhered to. The units also must be used for the purpose, which they were intended. This product is intended to supplement first-aid treatment. Due to widely varying conditions HAWS cannot guarantee that the use of this emergency equipment will prevent serious injury or the aggravation of existing or prior injuries.

NO OTHER WARRANTIES EXPRESSED OR IMPLIED ARE AUTHORIZED, PROVIDED OR GIVEN BY HAWS.

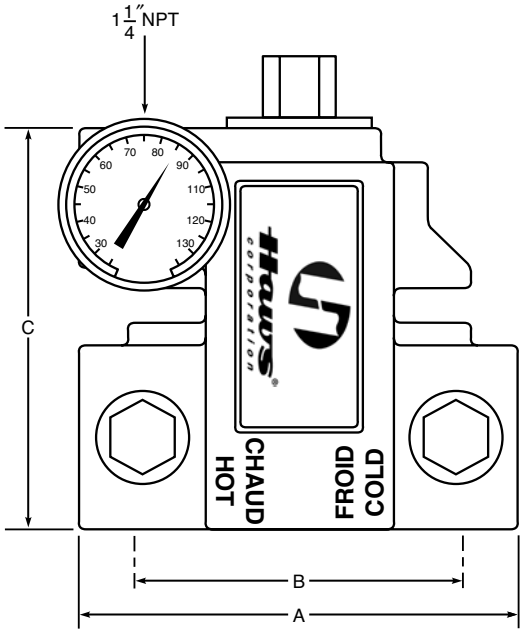
SHOULD YOU EXPERIENCE DIFFICULTY WITH THE INSTALLATION OF THIS MODEL, PLEASE CALL:

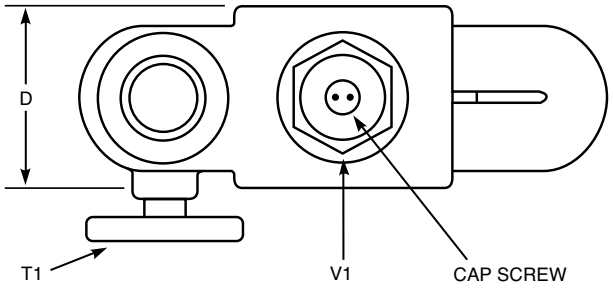
1-800-766-5612

FOR PARTS CALL:

1-800-758-9378

(U.S.A. AND CANADA ONLY) MONDAY-THURSDAY: 6:00 A.M. – 4:00 P.M. PST
FRIDAY: 6:00 A.M – 1:00 P.M. PST





DIMENSIONS:

A	B	C	D
7″	5″	6 1/2″	3″

CAPACITIES

Pressure Drop PSI	5	10	20	30	45
Tempered Flow	9	13	17	25	27
Cold Water Bypass	7	10	14	21	22

Caution: When maintaining and adjusting the mixing valve, the delivered flushing fluid temperature shall be 60°F (15°C) to 95°F (35°C). In circumstances where chemical reaction is accelerated by flushing fluid temperature, a medical advisor should be consulted for the optimum temperature for each application.

Setting the Mixing Valve

Caution: When maintaining and adjusting the mixing valve, all fixtures should be isolated from use. It is recommended that you work safely at all times and in a manner consistent with the OSHA Lock/Tagout standard, 29 CFR 1910.147 and other applicable standards.

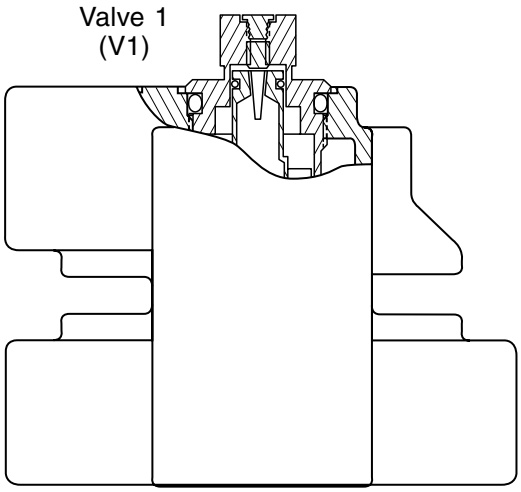
This mixing valve has been set at the factory to deliver 85°F outlet flow. Should the valve require adjustment, or an application require a different set temperature, proceed as follows:

1. Contact the proper medical and safety authorities to determine the correct water temperature for the specific application.
2. Use a spanner wrench to remove the tamper-resistant cap screw.
3. Create a draw on the mixing valve by opening a downstream eye wash fixture.
4. Insert a 5/32″ allen key into the cap opening of the valve (V1) and seat in the adjustment screw (not shown). Set the outlet temperature by turning the adjustment screw-clockwise to reduce temperature, counterclockwise to increase temperature. Use the dial thermometer (T1) to measure the outlet temperature.
5. Replace cap screw.

Note: Valve must be installed with check valves. If shut off valves are installed in the shower line for maintenance purposes, provisions shall be made to prevent unauthorized shut off.

Testing the Mixing Valve

The mixing valve and the emergency fixtures it serves should be tested weekly for proper operation.



Valve temperature test procedure is as follows:

1. Activate eye wash fixture to observe and record the temperature of the dial thermometer (T1). If the temperature of the thermometer is not correct, readjust the mixing valve according to the section “Setting the Mixing Valve”.
2. Observe the flow from the emergency fixtures to ensure an adequate flow of water.

In addition to testing for proper temperature, the cold water by-pass and hot water shut down features of the mixing valve should be tested weekly.

The test procedure is as follows:

1. Test valve temperature as described in Step 1 and Step 2 above.
2. Shut off the hot water supply to the mixing valve. Observe the outlet flow from the emergency fixtures to ensure an adequate flow of cold water. A slight drop in flow may occur after shutting down the hot water supply to the mixing valve, however, the drop should be minimal and for a short duration.
3. Open the hot water supply to the mixing valve. The thermometer should return to the set temperature.
4. Shut off the cold water supply to the mixing valve. The flow of water should shut down rapidly.
5. Open the cold water supply. The thermometer should return to the set temperature.

Note: The thermometer (T1) should be checked at least every six months.

Replacing the Thermostat Cartridge

The thermostat replacement procedure is as follows:

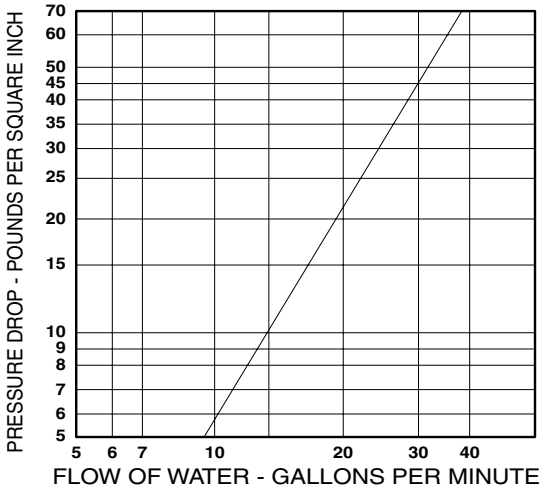
Note: It is recommended that you work safely at all times and in a manner consistent with the OSHA Lock/Tagout standard, 29 CFR 1910.147 and other applicable standards.

1. Shut off the hot water supply and cold water supply to the mixing valve.
2. Unscrew valve (V1) and install a new cartridge assembly.
3. Open the hot water supply and the cold water supply to mixing valve. Check the temperature to see if the replacement cartridge is operating correctly. If the temperature requires adjustment refer to the section “Setting the Mixing Valve.”

Operating Principle

This Emergency Shower and Eye Wash mixing valve is made of a thermostat housed in a brass casting. The thermostatic cartridge responds to temperature changes in the hot and cold water supplies. The valve requires testing and maintenance on a regular basis. In the event the element fails the valve should provide full cold water flow.

CAPACITY OF THERMOSTATIC MIXING VALVE FOR EMERGENCY SHOWERS



Note: Gallon per minute ratings may vary dependent upon incoming water temperatures and pressures. Hot and cold water inlet pressures must be equal.

Maximum Inlet Pressure: 125 PSI.

Recommended Supply Pressure: 65 PSI.

Recommended Inlet Temperature: 120°F.*

*When supplying 140°F or greater, additional outlet controls should be used.

Installation

After installing the mixing valve, be sure to flush the system thoroughly. We recommend isolation and check valves for proper maintenance.

Typical Installation *Figure 1*

When installed at or near the water heater and without a recirculation system:

Install the valve as shown in *Figure 1* with the mixing valve positioned below the hot water tank or heater. If this is not possible, pipe in heat trap as shown.

Typical Installation *Figure 2*

When installed away from the water heater with a recirculating pump on the hot water supply line:

Note: If the valve is installed 20 feet or more from the water heater, it is important to recirculate the hot water supply to the mixing valve.

Install the mixing valve as shown in *Figure 2*. The non-circulated loop should be limited to 10 feet and must be flushed periodically.

Caution: The cold water line must be installed so that it is not affected by excessively hot ambient temperatures. An example of hot ambient temperature is a long run of pipe exposed to direct sunlight. Cold water pipe installed in the ceilings of boiler rooms or rooms that increase ambient temperature require a recirculating pump.

Caution: When maintaining and adjusting the mixing valve, the delivered flushing fluid temperature shall be 60°F (15°C) to 95°F (35°C). In circumstances where chemical reaction is accelerated by flushing fluid temperature, a medical advisor should be consulted for the optimum temperature for each application.

Note: The Eyewash/Facewash fixture should be installed 4 to 10 feet from the mixing valve.

Figure 1

Typical installation. Valve must be installed with check valves.

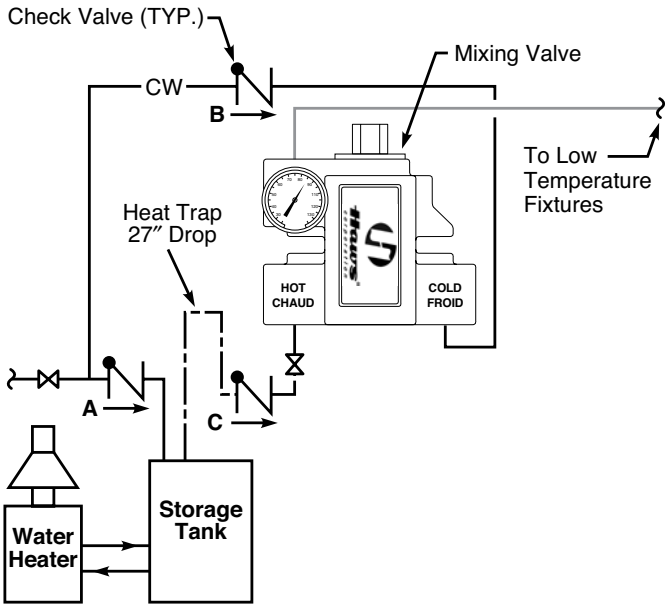
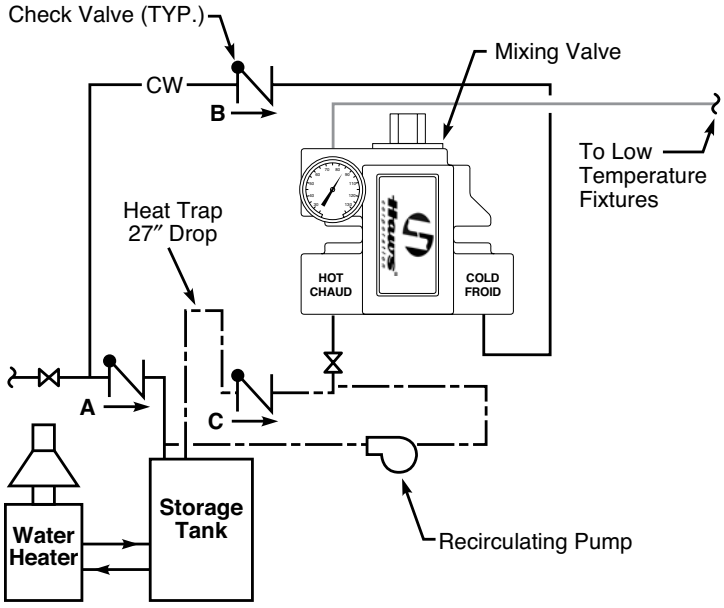


Figure 2

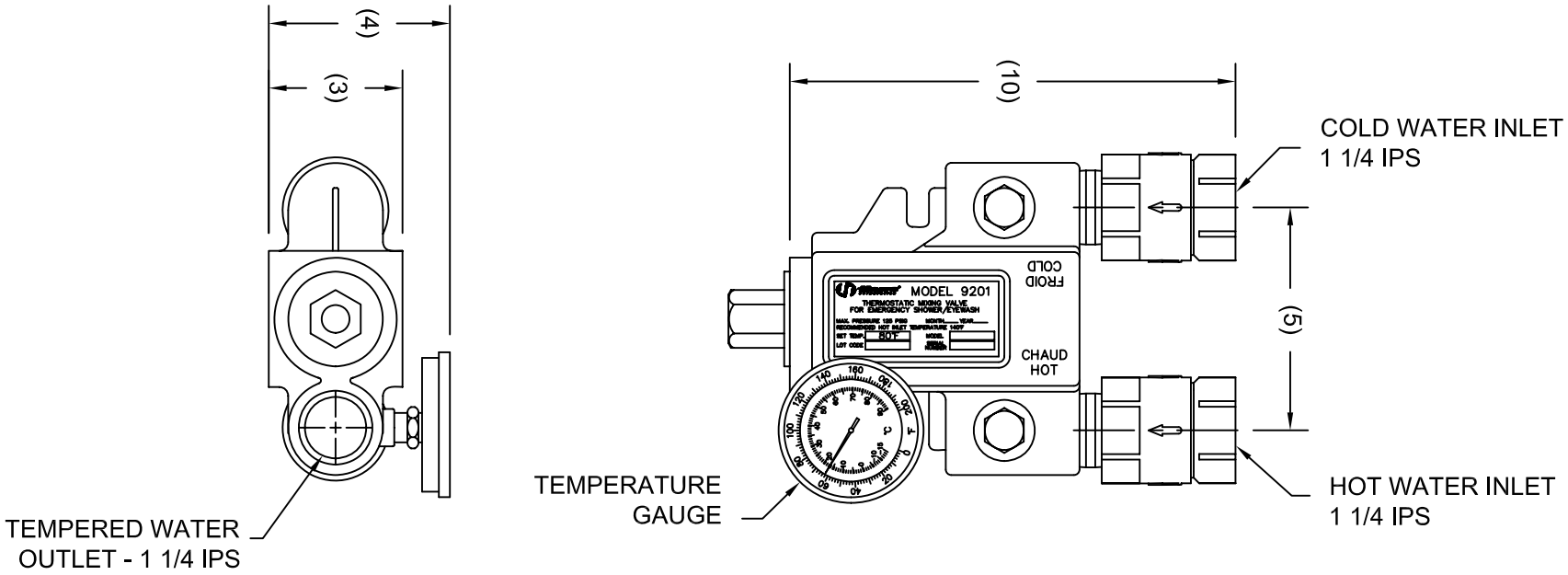
Typical recirculating installation. Valve must be installed with check valves.



Test Record
Location _____

YEAR	Date	T1	YEAR	Date	T1	YEAR	Date	T1
	Jan			July			Jan	
	Feb			Aug			Feb	
	March			Sept			March	
	April			Oct			April	
	May			Nov			May	
	June			Dec			June	
	July			Jan			July	
	Aug			Feb			Aug	
	Sept			March			Sept	
	Oct			April			Oct	
	Nov			May			Nov	
	Dec			June			Dec	
	Jan			July			Jan	
	Feb			Aug			Feb	
	March			Sept			March	
	April			Oct			April	
	May			Nov			May	
	June			Dec			June	
	July			Jan			July	
	Aug			Feb			Aug	
	Sept			March			Sept	
	Oct			April			Oct	
	Nov			May			Nov	
	Dec			June			Dec	
	Jan			July			Jan	
	Feb			Aug			Feb	
	March			Sept			March	
	April			Oct			April	
	May			Nov			May	
	June			Dec			June	

Before you use this chart please make a copy for future testing records.



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ECR NO.	REVISED PER	BY:
	ECN: 3994	VWC
DRAWN: P. M.	DATE: 04/99	CHK'D.:
APPROVED:	DATE:	

MODEL(S):
9201 MIXING VALVE
INFO FAX DOC #: 29201
SCALE: NA DRAWING TYPE: INSTALLATION/FAXBACK

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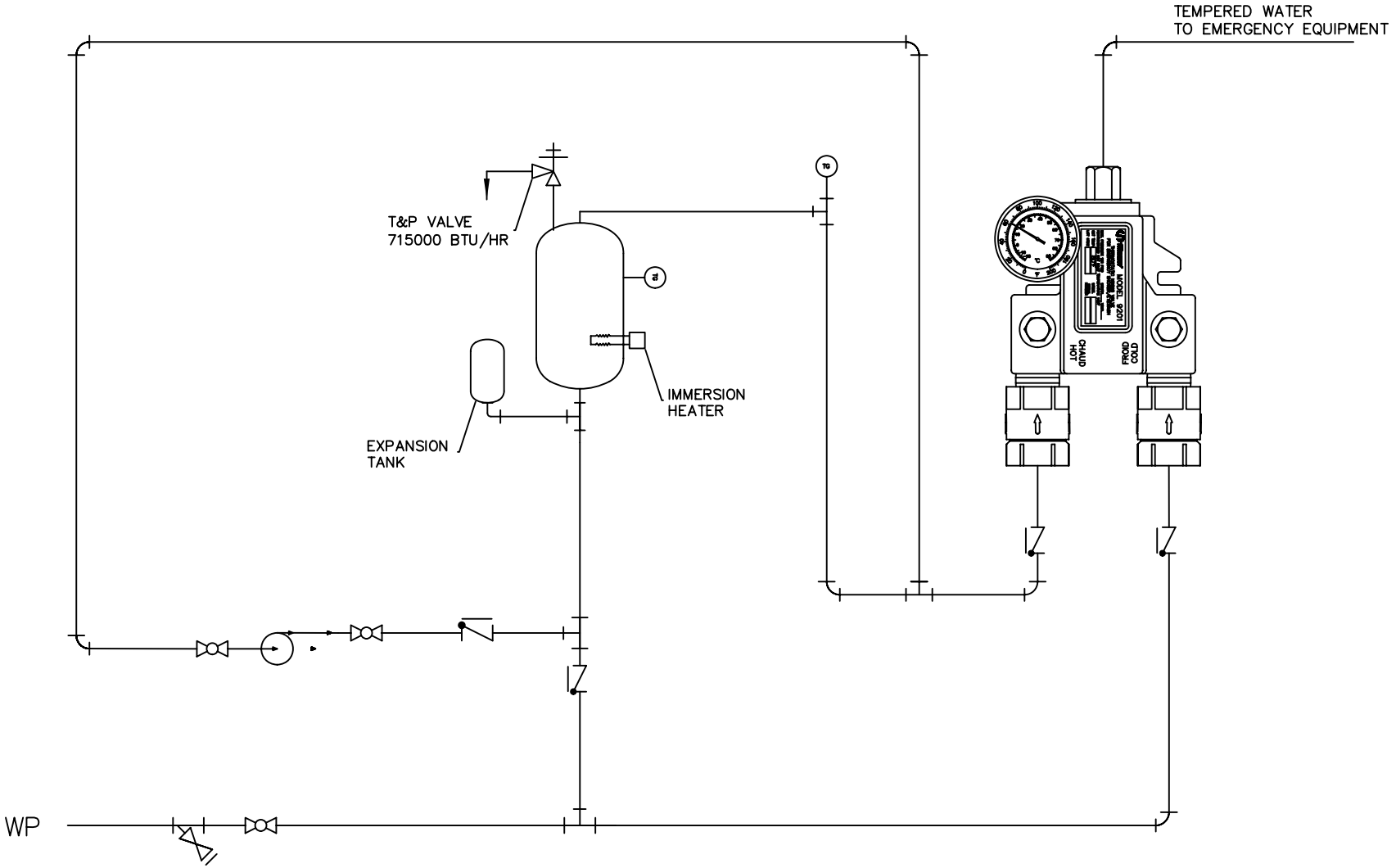
DRAWING NUMBER: 14098A00 REV. 5
SIZE: A SHT. 1 OF 2



DWG. NO. 14098A00

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ECR NO.	REVISED PER ECN: 3994	BY:	MODEL(S):	PART NUMBER: 0002080228.D
DRAWN: P.M.	DATE: 04/99	CHK'D.:	9201 MIXING VALVE	DRAWING NUMBER: 14098A00 REV. 5
APPROVED:	DATE:		INFO FAX DOC #: 29201	
			SCALE: NA DRAWING TYPE: INSTALLATION/FAXBACK	SIZE: A SHT. 2 OF 2