



INSTALLATION, OPERATION & MAINTENANCE INSTRUCTIONS

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Model 9201EF Mixing Valve

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.

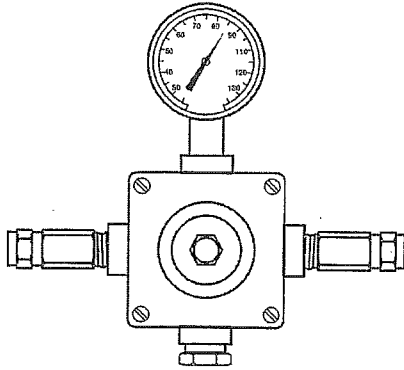
SHOULD YOU EXPERIENCE DIFFICULTY WITH THE INSTALLATION OF THIS MODEL, PLEASE CALL:

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**



Operating Principle

This model 9201EF Emergency Eye Wash/Face Wash mixing valve is made of a thermostatic element with a stainless steel sliding piston and liner housed in a bronze casting. The thermostatic cartridge responds to temperature changes in the hot and cold water supplies. In the event the thermostatic element fails or the hot water supply fails, the valve will provide full cold water bypass flow.

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.

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.

CAPACITIES

Pressure Drop PSI	5	10	20	30	45
Tempered Flow	2	3	5	7	10
Cold Water Bypass	1	2	4	5	7

Setting the Mixing Valve

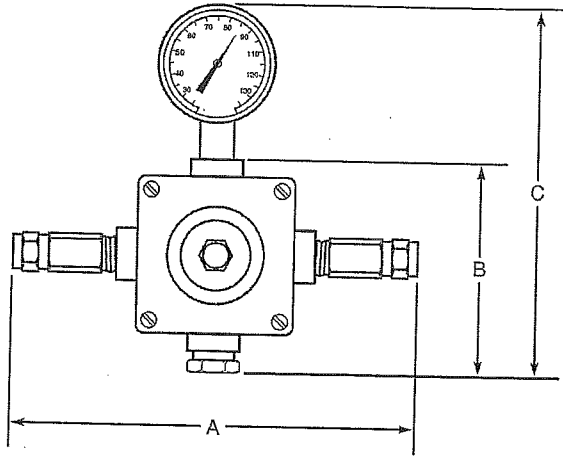
Caution: When maintaining and adjusting the mixing valve, all fixtures should be isolated from use. Haws recommends that you work safely at all times and in a manner consistent with the OSHA Lock/Tagout standard, 29 CFR 1910.147 and other applicable standards.

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 (ie. chemicals).
2. Remove the rounded cover nut on front of the valve body.
3. Create a draw on the mixing valve by opening a downstream eye wash fixture.
4. Insert a $\frac{5}{32}$ " allen key into the stem opening of the valve 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 to measure the outlet temperature.
5. Replace rounded cover nut.

DIMENSIONS: 1/2" inlets & outlet

Valve Number	A	B	C
9201EF	9"	4"	8"



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. 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.

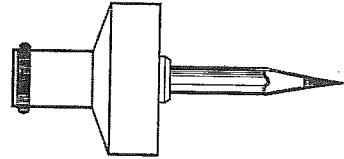
5. Open the cold water supply. The thermometer should return to the set temperature.

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

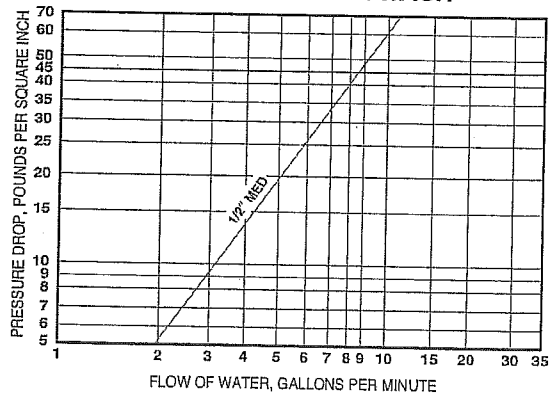
Replacing the Thermostat Element

The thermostat replacement procedure is as follows:

1. Shut off the hot water supply and cold water supply to the mixing valve.
2. Remove the four cover screws (#9) and remove the front cover (#26) of the valve.
3. Remove thermostat (#11) from the valve body. No special tools are necessary.
4. Insert a dowel rod, pencil (eraser-end), or narrow pen into the open end of the thermostat. Push on the dowel rod with your hand. If the thermostat feels spongy or springy, the thermostat has lost its charge. If the thermostat feels solid or hard, the thermostat is good and operable.
5. Be sure that the stainless steel piston (#15) moves freely up and down within the liner (#21). Lime or calcium buildup should be cleaned with vinegar, green scotch pad, or fine emery cloth.



CAPACITY OF TYPE 9201EF THERMOSTATIC MIXING VALVE FOR EMERGENCY EYE FACE WASH



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

Provisions shall be made to thermally isolate the valve.

Installation

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

Typical Installation *Figure 1*

When installed 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 with a recirculating pump on the hot water supply line only:

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.

Note: The mixing valve must be installed with inlet check valves and the Eyewash/Facewash fixture should be installed 4 to 10 feet from the mixing valve.

Note: The valve body must be maintained at an ambient room temperature of above 50°F to prevent premature closure of the safety back-seat mechanism.

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.

Figure 1
Typical installation. Valve must be installed with check valves.

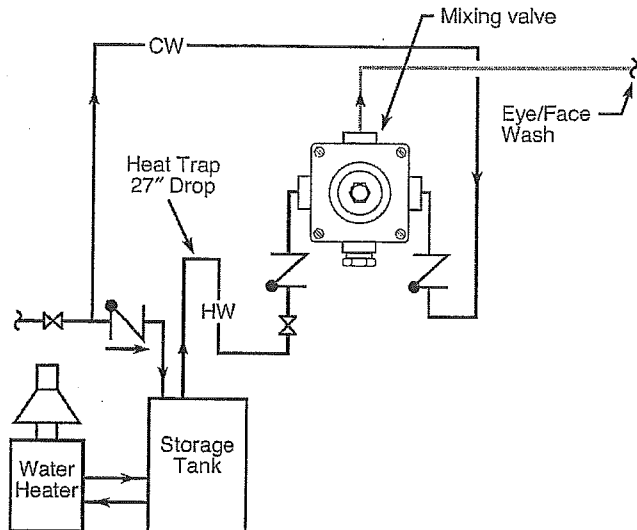
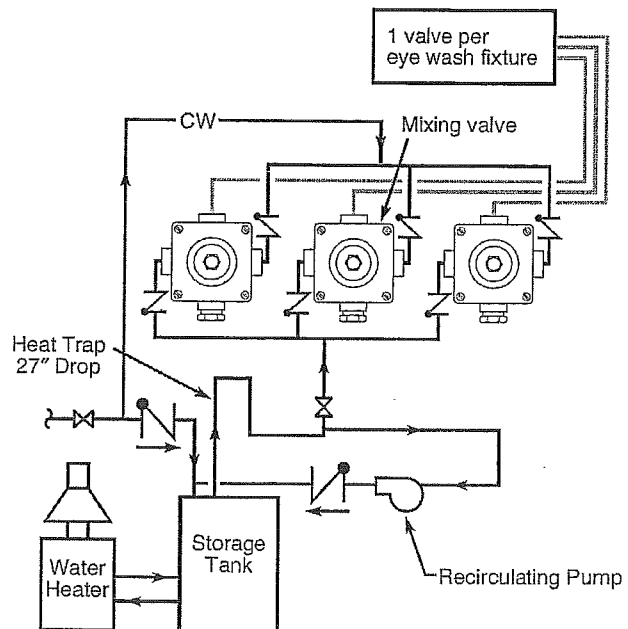


Figure 2
Typical installation. Valve must be installed with check valves.

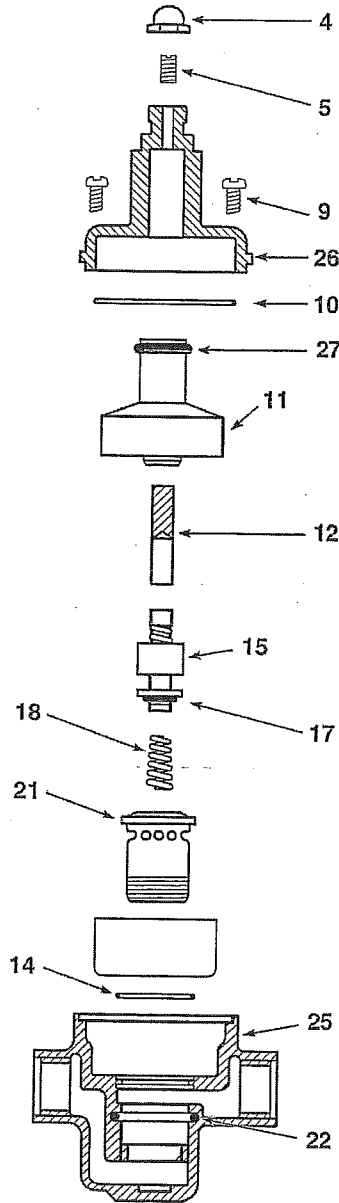


Model 9201EF Test Record

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Parts Break Down

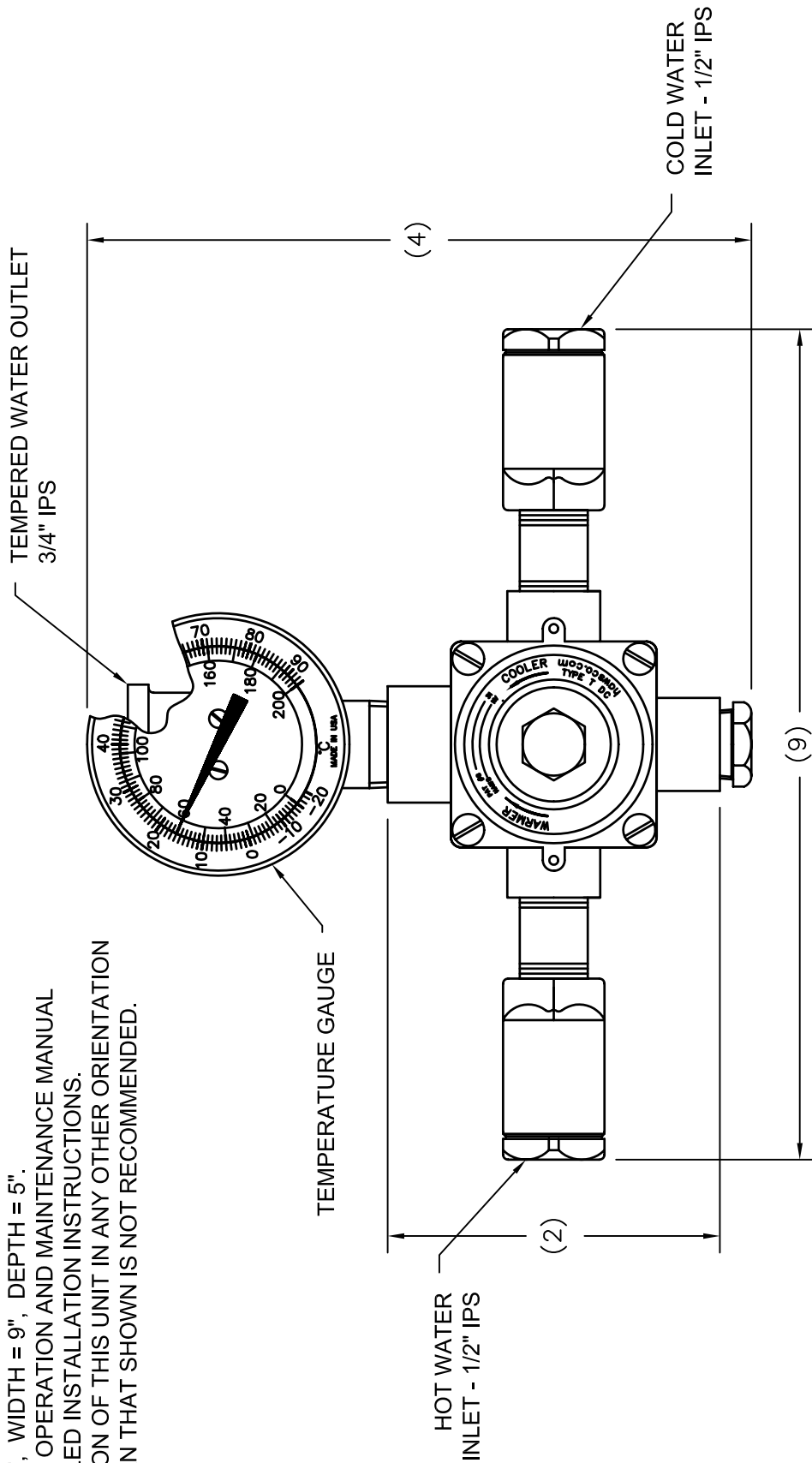


Repair Kits and Assemblies

Item	Description	Contains	Part No.
A	Repair Kit	11-12-15-18-21+B	0006274554
B	O-Ring & Gasket Kit	10-14-17-22-27	0006274561

NOTES:

1. THERMOSTATIC MIXING VALVE TO SUPPLY TEMPERED WATER FROM 2 TO 7 GPM @ 30 PSI.
2. FACTORY OUTLET FLOW SET AT 85° F.
3. INLETS 1/2" IPS, OUTLET 3/4" IPS.
4. OVERALL VALVE BODY REF. DIMENSIONS: HEIGHT = 4", WIDTH = 9", DEPTH = 5".
5. SEE 9201EF OPERATION AND MAINTENANCE MANUAL FOR DETAILED INSTALLATION INSTRUCTIONS.
6. INSTALLATION OF THIS UNIT IN ANY OTHER ORIENTATION OTHER THAN THAT SHOWN IS NOT RECOMMENDED.



Haws Corporation

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DRAWING NUMBER:	15304A00	DRAWING NUMBER:	0002076177.D
SCALE:	NA	SCALE:	A
DATE:	3/5/08	DATE:	3/5/08
APPROVED:	CARBONE	APPROVED:	CARBONE
ISSUED BY:	LEW 4/73	ISSUED BY:	LEW 4/73
DESIGNED BY:	LEW 4/73	DESIGNED BY:	LEW 4/73
MODEL(S):	9201EF	MODEL(S):	9201EF
INFO FAX DOC #:	2920133	INFO FAX DOC #:	2920133
DRAWING TYPE:	INSTALLATION/FABRACK	DRAWING TYPE:	INSTALLATION/FABRACK
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OF:	1	OF:	1