

8393IV(2.0) “STINGRAY” MONITOR INSTRUCTIONS

Installation:

- 1) Install monitor on riser pipe terminated with a companion flange or male pipe thread that matches the monitor inlet base. If the monitor has a 3” pipe thread base (NPT female), the minimum thread engagement should be 3/4”, or six (6) threads and should be sealed with a good grade of pipe joint sealant..
- 2) The riser **MUST** be strong enough to withstand the nozzle reaction force with the nozzle flowing a straight stream parallel to the ground. The maximum allowed reaction force for this monitor is 632 lbs. Use the friction loss for the monitor (and stream shaper if used) together with the available pressure and flow from your water supply to determine the pressure at the nozzle that you intend to use. Use one of the reaction force formulae below to determine that the reaction force of nozzle does not exceed 632 lbs. This monitor is designed for a maximum pressure at the inlet of 200 psi and a maximum flow rate of 1250 GPM (US).

STRAIGHT BORE NOZZLES

$$NR = 1.5 d^2 NP$$

NR = Nozzle Reaction (Pounds)

d = Nozzle Diameter (Inches)

NP = Nozzle (Pitot) Pressure (PSI)

COMBINATION FOG NOZZLES

$$NR = 0.0505 Q \sqrt{P}$$

NR = Nozzle Reaction (Pounds)

Q = Flow (US GPM)

P = Nozzle Pressure (PSI at base of nozzle)

- 3) **NOZZLE REACTION FORCE NOT TO EXCEED 632 LBS.** If Monitor inlet pressure causes reaction force to exceed 632 lbs. an orifice plate must be used at the monitor inlet to bring the reaction force in line with the parameters described above.

Operation:

- 1) The monitor discharge can be raised to 90 degrees (70 degrees w/optional pressure gauge) above horizontal by turning the hand wheel in a counter-clockwise direction. It can be lowered to 60 degrees below horizontal by turning the hand wheel in a clockwise direction.
- 2) The monitor can be rotated horizontally by releasing the horizontal twist-lock at the lower right and rotating the monitor by pushing or pulling on the monitors return bend. Turn the horizontal lock knob counter-clockwise to release the lock or clockwise to engage it.
- 3) When monitor is left unattended, **ALWAYS** lock the horizontal movement.

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- 4) Because of the worm gearing on the vertical movement, no lock is needed. The vertical discharge will stay in the position in which it was last set.
- 5) Open and close the water control isolation valve by means of the handle shaft. When the shaft is in the “up” position, the valve is open and when in the “down” position, the valve is closed. There are positive handle stops at the full open and full closed positions.
- 6) The water control valve is not intended to be used for “throttling” the water flow. It should be fully open or fully closed. **ALWAYS** open and close the valve slowly under flow conditions to avoid creating a water hammer.
- 7) The monitor should be drained after use in freezing temperatures. 1) Shut off the water supply valve. 2) Open the monitor’s water control valve. 3) Turn the hand wheel until the monitor’s discharge is at its lowest vertical position. 4) Drain the monitor and piping by means of an automatic ball drip or other drain valve. 5) After the system has been drained, close the monitor’s water control valve and place the monitor discharge back in the desired position.

Maintenance:

- 1) Move the monitor and valve through its entire range of motion monthly. At this time, inspect the monitor for proper lubrication, especially in corrosive environments or in climates where ice could form in the valve. Keeping the gearing and rotation joints well lubricated is important.
- 2) Grease fittings are provided for the up-down and left-right rotation joints, routine greasing should be performed to expel water & other contaminants that can get into the rotation joints. If the monitor is exposed to a high level of radiant heat for a prolonged period, it may be possible for the factory grease to thin and run out of the rotation joints. In such an event, fresh grease should be applied. Use Mobilux EP2 or equivalent. Start at one end of travel range and apply grease through the fitting of each joint until fresh grease comes out the joint. Repeat every 30 degrees throughout the full range of travel on each rotation joint. Wipe off any expelled grease when done.
- 3) If the monitor is subjected to vibration, check all fasteners and set screws for signs of loosening. If necessary, secure them with a “Loctite #242” or similar type of adhesive product.
- 4) For repair parts, please consult the assembly drawing and contact your Elkhart Brass dealer, or contact Elkhart Brass Mfg.
- 5) Maintain the monitor paint as dictated by use and by the environment. The factory applied paint is a red (RAL 3003) urethane enamel.