INSTALLATION, OPERATION AND MAINTENANCE
GROTH MODELS 8490
ELECTRICALLY OPERATED DRIP TRAPS

INSTALLATION

The drip trap should be installed with the axis of the bowl in a horizontal position and the inlet/drain ports along a vertical axis with the drain at the bottom. If the condensate is to be piped away, use appropriate fittings, pipe, and/or tubing to pipe away at both the drain and vent ports. Provide sufficient clearances for easy access to operate and perform maintenance.

The discharge port and vent port must be piped to a drain and/or vent location. The drip trap will release condensate, under system pressure, at unknown times, so it should not discharge into an open area where personnel may be working. The vent port may release a small volume of gas when opening.

WARNING
Align and install inlet and outlet piping so that no undue stress is imposed on the drip trap. Do not over-tighten threaded connections; damage or breakage may result. The maximum working pressure must not exceed 60 PSIG.

Remove the position indicator [requires 3/32" Allen wrench] and the housing cover from the actuator. Remove and retain the instruction sheets for the actuator and timer [if applicable]. If the drip trap is equipped with an internal cycle timer, connect 115 VAC to terminals 6 & 1 [#1 is the neutral line] inside the actuator housing. If the drip trap is controlled externally, connect the controlled 115 VAC to terminals 1 [neutral], 2 [to open] and 3 [to close]. Maximum current required is 1 amp. See the actuator manufacturer's manual for utilization of valve status limit switches.

Before replacing the cover and position indicator, check the internal timer settings [if applicable]. If the desired cycle was specified on the purchase order, it will be set at the factory. Otherwise, set open [draining] and close [filling] intervals with the range and dial adjustments on the face of the timer. Refer to enclosed timer instructions and the operation section of this manual.

Note: Follow applicable codes for the location and environment when running power to the actuator. The actuator housing is NEMA 7.

OPERATION

During the closed [filling] interval of the cycle, the bowl is open to the inlet port, so condensate fills the bowl, and the discharge port is blocked, so neither liquid nor gas can escape. When the valve shifts to the open [draining] position, the inlet port is blocked so gas cannot enter, and the bowl is open to the discharge port, so condensate is drained from the bowl. In the open position, a vent port is also opened to allow air to enter the bowl to replace the condensate.

The open [draining] interval should be just long enough to completely drain the bowl. Excess draining time will allow condensate to back up into the system. The closed [filling] interval should be long enough to nearly fill the bowl. A small volume of gas will be released from the bowl during draining, so frequency of cycling should be minimized.

The amount of system condensate and therefore the required draining frequency will depend on various environmental and operating conditions. When required to adjust the cycle, refer to the installation section of this manual.

Note: Do not set either time interval to less than 30 seconds.

The drip trap may be operated manually if desired. Lift the position indicator as far as possible and insert a 11/16" open-end or adjustable wrench onto the actuator shaft and release the indicator. The wrench must be 3/8" thick to maintain the required lift of the indicator. This lift disengages the electric drive from the output shaft. Now you can turn the shaft freely, using the indicator to determine the open/closed position. When the wrench is removed in either the open or closed position, the electric drive will be engaged.

MAINTENANCE

It is important to regularly inspect and clean drip traps, especially their seating surfaces. Frequency of this inspection and maintenance will depend upon the severity of the service.

Before any maintenance is attempted, be certain that all pressure to the inlet is blocked and all internal pressure in the drip trap has been safely vented.

Remove (6) hex bolts and nuts and remove the bowl and actuator [with bracket]. Inspect the bowl, gasket and actuator and clean inside the bowl.

Refer to Fig. 1. Remove the cap screw and the coupling and remove the shaft/disc assembly from the cover. Clean and inspect the disc and shaft. The disc surface that contacts the O-Rings must be clean and smooth. Clean and lubricate or replace all O-Rings and the bearing diaphragm. Install the disc/shaft assembly with all keys and washers as in fig. 1. Replace the coupling and cap screw and torque to 16-20 ft lb.

Note: The Belleville washers must be stacked back-to back and not nested.

Replace the bowl and actuator and torque hex bolts to 16-20 ft lb.

NOTICE: Please specify model, size and serial number when ordering replacement parts

Fig. 1