



FILTRINE QCP – QUICK CONNECT PANEL

INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS

Please read these instructions completely before installation.

INSTALLATION INSTRUCTIONS

The QCP Quick Connect Panel provides all the diagnostics that medical equipment manufacturers require.

- **Mount the QCP panel in a location where meters can be read by the medical equipment operators.** Consideration should be given to the routing of chilled liquid line.
- Excessive pipe lengths cause heat gain as well as pressure reduction. Locate the panel between the chiller and medical equipment, preferably close to the medical equipment. The closer the panel is to the medical heat exchanger, the more useful the temperature readings will be.
- All coolant lines must be insulated to reduce heat gain and to prevent condensation from forming during high humidity conditions.
- The piping procedure simply consists of matching QCP connections to the appropriate points and setting the ball valves to the desired operation mode. (See **Operation Modes** table on page 2.)
- If plumbing line size reduction is being considered, it must be verified that proper flow and pressure can be maintained. As a general rule, reducing the pipe size is not recommended.
- When installation has been completed, put the unit in Full Bypass Mode. Close the ball valve that feeds the city water drain while filling the system. If this valve is left open while the chiller is inoperative and being filled, the fluid being added to the system will run down the drain. Once the chiller has been started, open this valve.

A list of plumbing/electrical connections to the QCP panel and where they should be routed:

| | |
|---------------------------------|---|
| CITY WATER DRAIN* | This connection is piped to a floor drain or any other suitable water disposal drain. |
| TO CHILLER | Piped to the RETURN connection at the chiller. |
| FROM CHILLER | Piped to the chiller DISCHARGE connection. |
| CITY WATER SUPPLY* | Connect to the municipal water supply for backup cooling. |
| FROM EQUIPMENT | Piped to the discharge line of the medical equipment. |
| SOLENOID COILS* | Connect the wires in parallel and refer to the chiller electrical diagram. |
| * Optional equipment for QCP-AS | |

OPERATION

Your QCP will give you years of trouble-free service. Like any other piece of fine equipment, occasional maintenance may be required. You will soon discover the flexibility designed into the QCP. In most circumstances, service can be performed on the unit or chiller without interrupting medical requirements.

There are five operation modes of the QCP panel summarized below:

| | |
|---------------------------------|---|
| 1. NORMAL OPERATION | The standard operating configuration. See Mode 1 on next page and note location/settings of valves and flow paths. |
| 2. FULL BYPASS | This configuration isolates the chiller from the medical equipment. It can be used when starting the chiller if the medical equipment is not yet operational. The chilled water is simply routed from the chiller discharge back to the return line. See Mode 2 in chart on next page and note location/settings of valves and flow paths. |
| 3. SERVICE FLOW METER | In the event the flow meter or other instruments in this path need service, flow can be routed as shown. See Mode 3 in chart on next page and note location/settings of valves and flow paths. |
| 4. SERVICE FILTER | Filter changes will be required when the system is initially started and periodically thereafter. This mode allows uninterrupted service to the medical equipment while a filter change takes place. See Mode 4 in chart on next page and note location/settings of valves and flow paths. |
| 5. CITY WATER BACKUP* | This condition will occur if the chiller fails and actuates solenoids 1 and 2. Notice that the flow of water is from the city water connection through the medical equipment and down the drain. IMPORTANT: The city water pressure must not exceed 80 p.s.i. The automatic backup will only work if the system was previously operating in Mode 1 (Normal Mode). See Mode 5 in chart on next page and note location/settings of valves and flow paths. |
| * Optional equipment for QCP-AS | |

Charts on reverse





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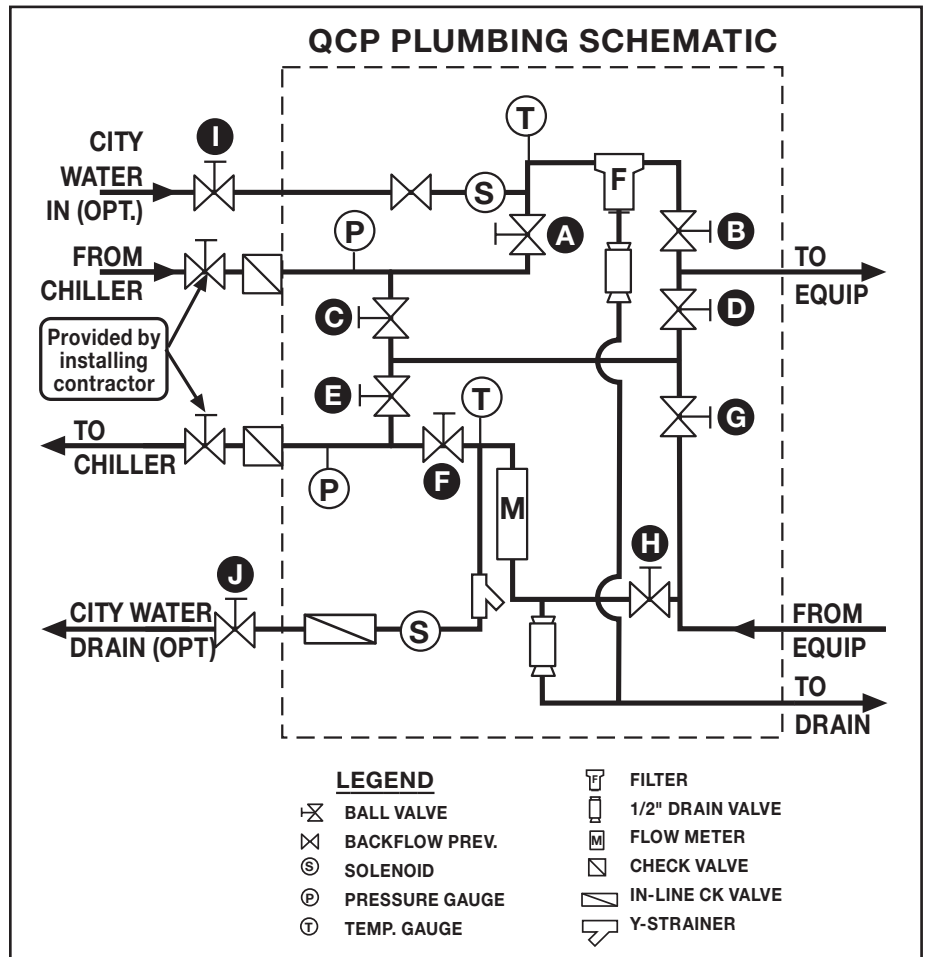
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FILTER MAINTENANCE

The filter is a bag type. Using a 50 micron bag, the pressure drop is less than 5 p.s.i. when new. The filter should be changed if the pressure drop across the unit exceeds 12 p.s.i. A spare filter should be kept on hand at all times.

Study the flow path of Mode 4 operation in the chart to the right. This configuration allows the replacement of the filter element while delivering uninterrupted flow to the medical equipment. This will probably be the first routine maintenance performed on the QCP. Since the system is a closed loop, the coolant will eventually be cleaned of all contamination and filter changes will become rare.

If repeated city water operation is actuated, filter contamination is likely. The filter element should be changed when the pressure drop across the unit is greater than 12 p.s.i.g.



QCP OPERATION MODES: O=OPEN / C=CLOSED

| VALVE | NORMAL | FULL BY-PASS | SERVICE FLOW METER | SERVICE FILTER | CITY WATER BACK-UP* |
|----------|--------|--------------|--------------------|----------------|---------------------|
| A | O | O | O | C | O |
| B | O | O | O | C | O |
| C | C | C | C | O | C |
| D | C | O | C | O | C |
| E | C | C | O | C | C |
| F | O | O | C | O | O |
| G | C | O | O | C | C |
| H | O | O | C | O | O |
| I | O | C | O | C | O |
| J | O | C | O | O | O |

*Optional equipment for QCP-AS

