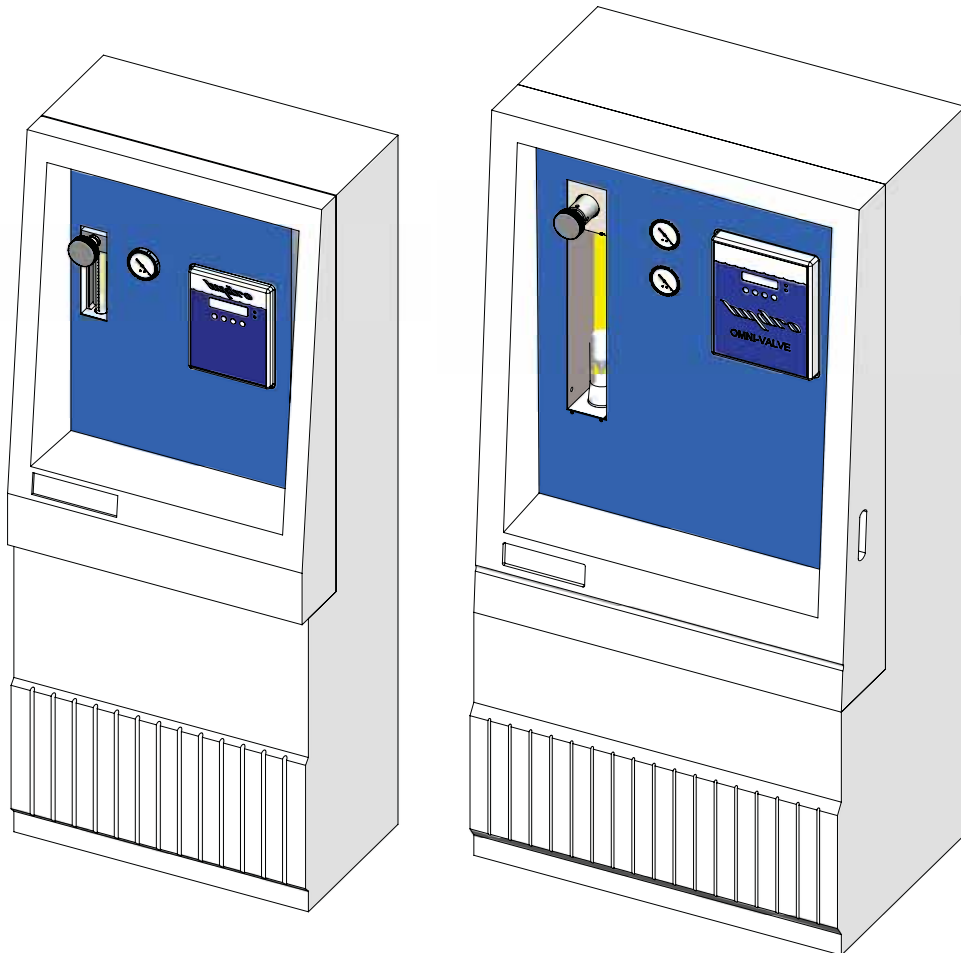




# Series FH Floor Cabinets

## Operation and Maintenance Manual



# Series FH Floor Cabinets Operation Manual

## Table of Contents

<b>I. Introduction.....</b>	<b>3</b>
<b>II. Specifications .....</b>	<b>3</b>
<b>III. Installation.....</b>	<b>3</b>
A. Mounting.....	3
B. Chlorine Connections.....	3
C. Operation.....	3
D. Wiring .....	3
<b>IV. Maintenance .....</b>	<b>4</b>
A. Vacuum Gauge Maintenance .....	6
B. Automatic Control Valve Maintenance .....	6
C. Flow Meter Maintenance .....	6
D. Differential Pressure Regulator Maintenance .....	6
<b>Figures</b>	
1. Front, Rear, and Side Views .....	4
2. Representative Exploded View Drawings .....	5

# I. INTRODUCTION

The Hydro Instruments FH Series Floor Cabinets are multi-functional enclosures designed to mount the chlorine gas monitoring and control equipment. Various configurations and capacities can be ordered for chlorine, sulfur dioxide, ammonia and carbon dioxide gases. Figures shown in this manual are representative examples only and are not meant to be a complete list of all options. A typical set of equipment includes flow meter, manual control valve, inlet and outlet vacuum gauges, automatic control valve, differential pressure regulator, and bypass piping valves.

The cabinets have a removable front cover shell and front panel (See Figure 2) for easy access to internal components.

# II. SPECIFICATIONS

Detailed specifications depend on the configuration being ordered and many configurations are available. Consult the factory or your local sales representative for detailed specifications.

# III. INSTALLATION

## A. Mounting

The floor cabinet should be mounted to allow easy access for inspection, maintenance, ventilation, and general operation. The cabinet is not suitable for outdoor installation. Each floor cabinet must be anchored using four bolts with washers.

## B. Gas Chemical Connections

For inlet and outlet gas connections, refer to Figure 1. The connections are at the lower back opening of the floor cabinet assembly.

## C. Operation

Refer to Figure 1 for this discussion.

**Manual Control Operation:** Close bypass valves 1 and 2 and open bypass valve 3. Use the manual rate control valve above the flow meter tube to adjust chlorine gas feed rate.

**Automatic Control Operation:** Close bypass valve 3 and open bypass valves 1 and 2. Be sure that the manual rate control valve is fully open. Use the automatic control valve to adjust chlorine gas feed rate. Refer to automatic control valve operation and maintenance manual for details.

## D. Wiring

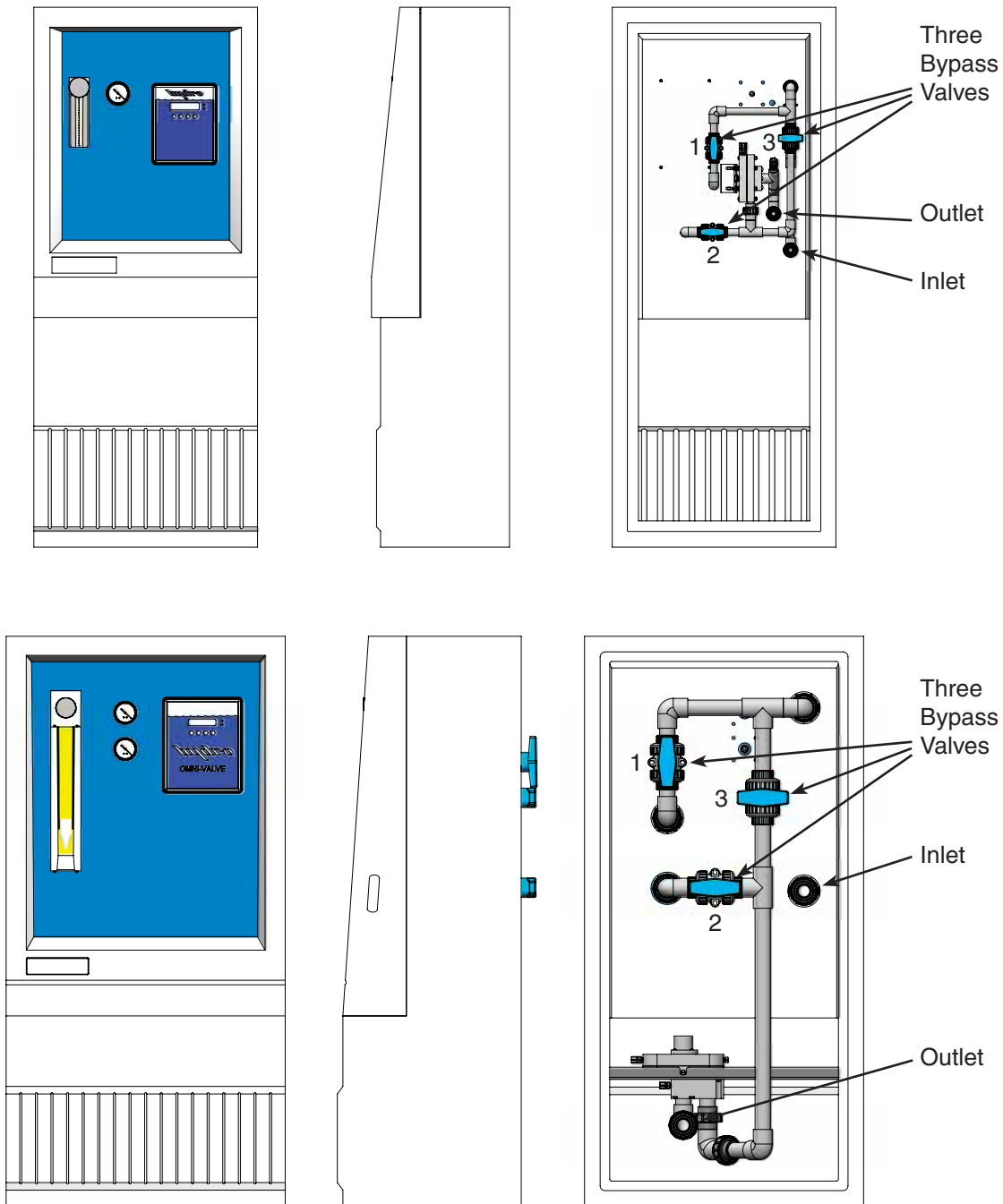
The A/C power and signal wires should be connected directly to the automatic control valve. Refer to automatic control valve operation and maintenance manual for details.

## IV. MAINTENANCE

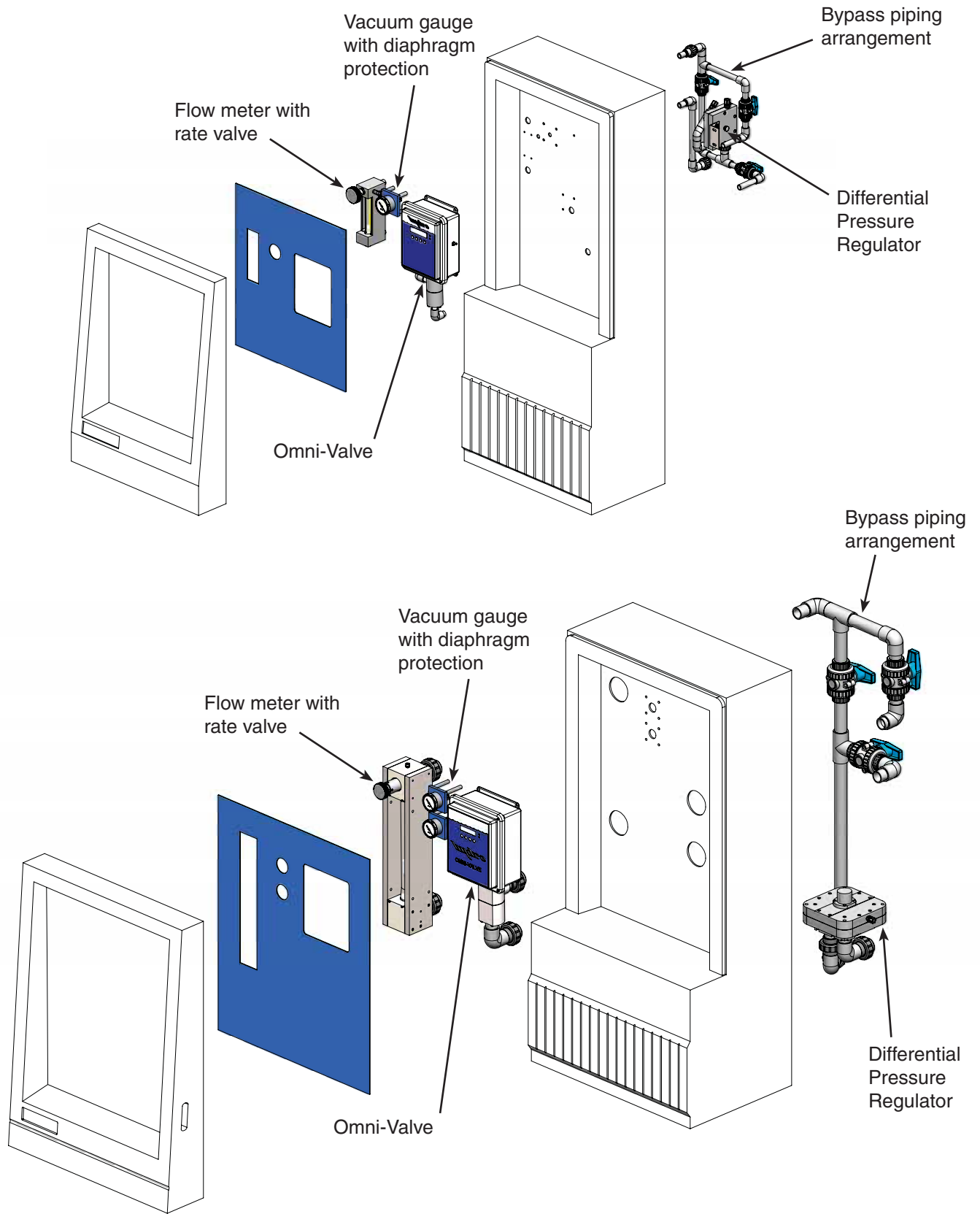
Maintenance of the internal equipment is done by removing the front cover shell and front panel. See Figure 2. Refer to individual instruction manuals for detailed maintenance instructions. It is recommended to perform preventative maintenance and cleaning every 12 months or sooner as needed based on experience at each side.

Use mild soap and water solution to clean the outside of the cabinet. Do not use solvents or abrasives because this could result in damaging the cabinet. Do not allow liquids to come into contact with the electronics or wiring since this could cause damage to the equipment.

**FIGURE 1: Front, Rear, and Side Views**



**FIGURE 2: Exploded Drawing**



**ENGINEERING REFINEMENTS:** These instructions generally describe the installation, operation, and maintenance of this equipment. Hydro Instruments reserves the right to make engineering refinements that have not been described herein. Questions that cannot be answered specifically by these instructions should be directed to your local sales representatives or Hydro Instruments.

- A. **Vacuum Gauge Maintenance:** All vacuum gauges will be equipped with liquid filled diaphragm protectors. If the gauges are not working then either the mechanism of the gauge is damaged or the liquid filled diaphragm protector has been damaged. Damaged gauges typically will require replacement and cannot be serviced.
- B. **Automatic Control Valve Maintenance:** The automatic control valve is accessed by removing the front cover shell and front panel. For details of maintenance, please refer to the appropriate automatic control valve instruction manual.
- C. **Flow Meter Maintenance:** The flow meter is accessed by removing the front cover shell and front panel. Refer to the appropriate parts diagram and consider the following instructions.

*NOTE: Carefully follow shutdown procedures before performing this repair.*

- 1. Rate Valve
  - a. Fully unscrew and remove the rate valve from the meter assembly.
  - b. Inspect and clean the two Rate Valve O-Rings and replace them if necessary.
  - c. Clean out any visible debris or corrosion found in the meter or on the rate valve.
- 2. Meter Tube Assembly
  - a. Carefully remove the protective covers.
  - b. While carefully preventing the flow tube from falling, unscrew the meter inlet plug to allow the meter tube to be removed.
  - c. Inspect and clean the top and bottom o-rings or gaskets. Replace them if necessary.
  - d. Clean the tube, float and stops carefully before reassembly.
- D. **Differential Pressure Regulator Maintenance:** The differential pressure regulator is mounted in the rear of the floor cabinet assembly. Refer to the appropriate parts diagram and consider the following instructions.
  - 1. Disassemble the bodies of the differential pressure regulator.
  - 2. Inspect and clean the O-Rings, and diaphragm. Replace them if necessary.
  - 3. Clean out any visible debris or corrosion found.
  - 4. Replace any items found to be damaged or corroded.