



HYDRA-SENTINEL

"R" SERIES AUTOMATIC SHUTDOWN SYSTEM

The HYDRA-SENTINEL is an automatic isolation device for chlorine cylinders and drums for use in all applications including water and wastewater treatment plants. It is intended to shut the primary isolation valves on these containers in the event of detecting a significant gaseous chlorine leak.

The system's principal benefit is to enhance protection for operating personnel against exposure to chlorine gas by isolating chlorine containers at the source prior to a significant leak occurring. It is also intended for protection of plant and equipment from accelerated corrosion caused by chlorine gas escape while the installation is unmanned.



Electrical Control Panel

The New HYDRA-SENTINEL R Series is C Tick compliant. Improvements include a rotary actuator (replacing the reciprocating ratchet system), enhanced electronics and simplified pneumatics allowing the system to isolate multiple chlorine gas cylinders or drums in less than 3 seconds, further improving the HYDRA-SENTINEL's protection of equipment, personnel and the public.

The HYDRA-SENTINEL is not intended to prevent leaks from occurring in the first place.

GENERAL OVERVIEW

The design incorporates intent that the system will remain operable under adverse conditions, which may be a result of influences within the plant.

As such the primary considerations include:

- Pneumatic operation – air is supplied from a compressed air cylinder, allocated specifically for this function.
- System operates from an integral battery supply, which is continually on charge when power (240V) is available.
- One year warranty



Pneumatic Control Panel



Yoke Mount Actuator Arm Assembly



Valve Mount Actuator Arm Assembly

KEY COMPONENTS

The system includes the following key components:

- Wall-mount electrical control panel – including PLC, relays, battery, charge circuit and flashing light.
- Wall-mount pneumatic control panel – including an integral air receiver vessel (for multiple actuator arms) single acting solenoid & low pressure sensor.
- Quantity of actuator arms (up to 6) as required by the installation, arranged for direct clamping to a container valve or chlorine vacuum regulator.

C tick compliant to AS/NZS C1SPR11:2004

File No: HYD100706A-3



N27131



HYDRA-SENTINEL "R" SERIES

DISPLAY

The system is designed to shutdown gas containers under the following input conditions:

- Gas Leak
- Remote Stop

Additionally the system can facilitate a shutdown under the following condition, if required:

- Low Air Pressure (less than 700kPa)
- Low Battery Voltage (11Vdc)

The control panel includes indication for the following conditions:

- Power On
- Power Loss
- Low Air Pressure
- Low Battery Voltage
- Leak Detected
- Test
- Remote Shutdown Activated

Operator functions include

- Manual Test
- System Reset

TECHNICAL DATA

Enclosure Rating: IP56

Operating Temperature: -15°C to +50°C continuous

Humidity: 0 to 99%, Non condensing

Power: 240 VAC, 50Hz, 15 Watts

Distance Operating Arm to Controller: 20 metres max (Option available)

Contact Rating: 5 Amp at 250 VAC, Resistive

Battery Backup: 12 V, 4 Amp, 4 hours minimum

Compressed Air Supply

Flowrate: 250 NL/min /arm

Pressure: 700 kPa

AIR SUPPLY OPTIONS

1. Air Receiver Package – suitable for sites with existing plant air supply (maximum 6 arms)
2. Full Air Service Package – includes a reciprocating air compressor & receiver (maximum 6 arms)
3. Air Conversion Package – converts existing G size air cylinder and reciprocating actuators to rotary actuators (maximum 2 arms)

Conditioning: 0.3 micron filter with auto drain and oil mist separator as standard with air supply options 1 & 2

ASSOCIATED EQUIPMENT

Hydramet On-line Chlorine Gas Leak Monitoring System for the detection of Gaseous Chlorine in ambient air.

Features Include:

- Selectable Range
- Multiple Alarms
- Battery Backup
- Analogue Outputs
- Sensor Auto-Test
- Auto-Test Verification
- Remote Sensor Monitoring



For Sales and Service please contact an office nearest to you:

WESTERN AUSTRALIA

9 Chifley Brace
Jandakot WA 6164

Telephone: (08) 9412 6100

Fax: (08) 9412 6199

Email: hydramet@hydramet.com.au

CENTRAL REGION

29 Deloraine Road
Edwardstown SA 5039

Telephone: (08) 8374 7800

Fax: (08) 8374 7899

Email: hydrasa@hydramet.com.au

EASTERN REGION

Unit 4, 47-51 Little Boundary Road
Laverton North VIC 3026

Telephone: (03) 9325 3900

Fax: (03) 9318 9653

Email: hydravic@hydramet.com.au

Web Site: www.hydramet.com.au