

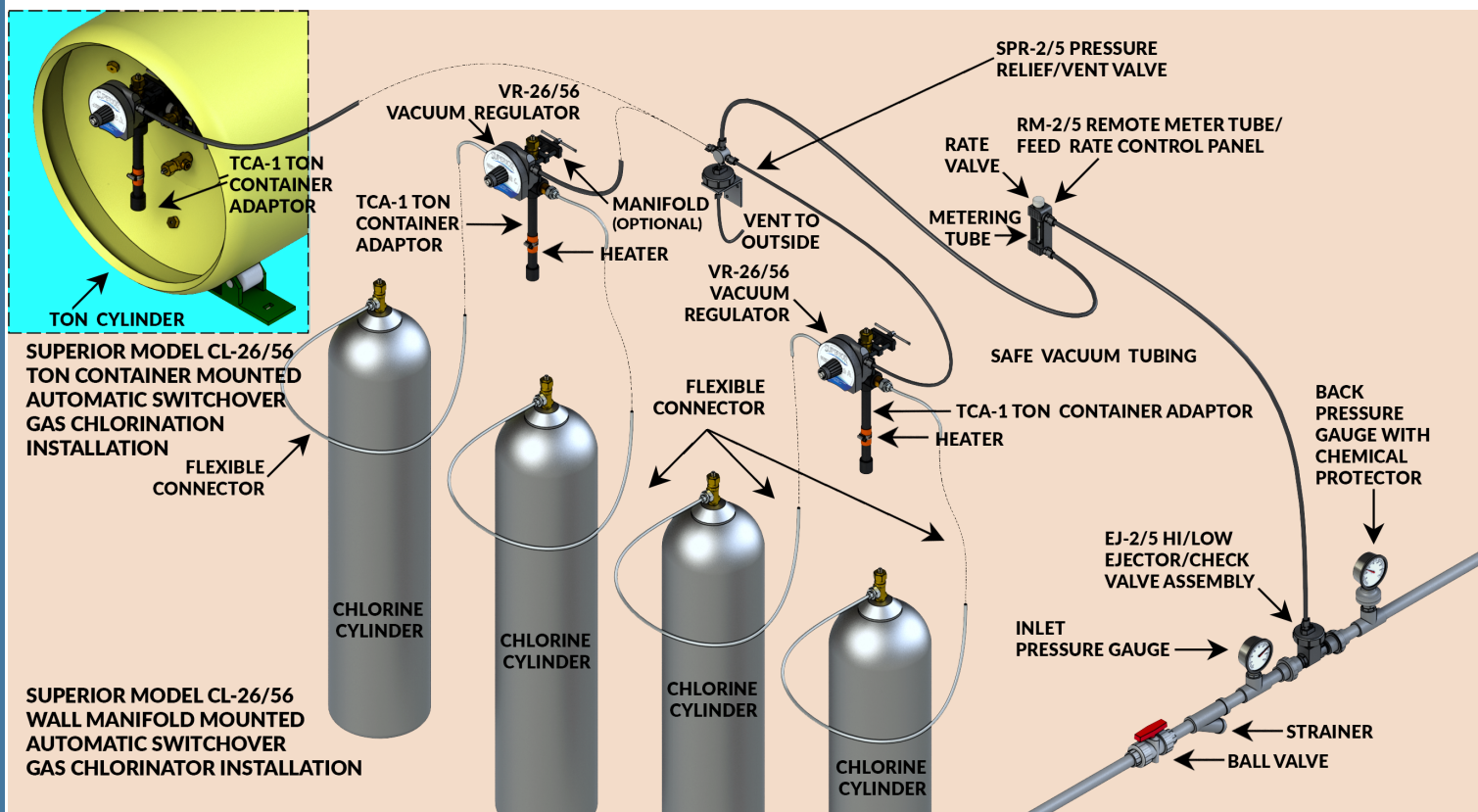


CL-26/56 PRODUCT DATA

### GENERAL DESCRIPTION

The SUPERIOR™ Series CL-26/56 Automatic Switchover Gas Chlorinator with CL-26 Maximum Capacity 250PPD (5kg/hr) and CL-56 Maximum Capacity 500PPD (10kg/hr), is a state-of-the-art, totally vacuum-operated system designed to automatically switch chlorine feed from an empty cylinder to a full cylinder. The Series CL-26/56 allows round-the-clock chlorination without being concerned about running out of chlorine when the system is unattended. Series CL-26/56 chlorinators are of the vacuum-operated solution feed type, designed to mount directly on chlorine valves of cylinders, wall manifolds, or ton container adaptors. Two vacuum regulators, each containing an integral and independent latching mechanism, are mounted directly onto two chlorine valves. A chlorine gas flow meter panel indicates the amount of chlorine being fed and may be located wherever it is safest and most convenient. Chlorine flow rate is manually adjusted, and the design permits easy addition of a number of automatic flow rate control devices. A high efficiency, water operated ejector produces the vacuum necessary to operate the system. The ejector assembly contains a backflow check valve system to prevent pressurized water from entering the chlorinator. A spring opposed diaphragm vacuum regulator controls the chlorine gas flow rate and also acts as the safety shutoff valve.

## CL-26/56 TYPICAL INSTALLATION

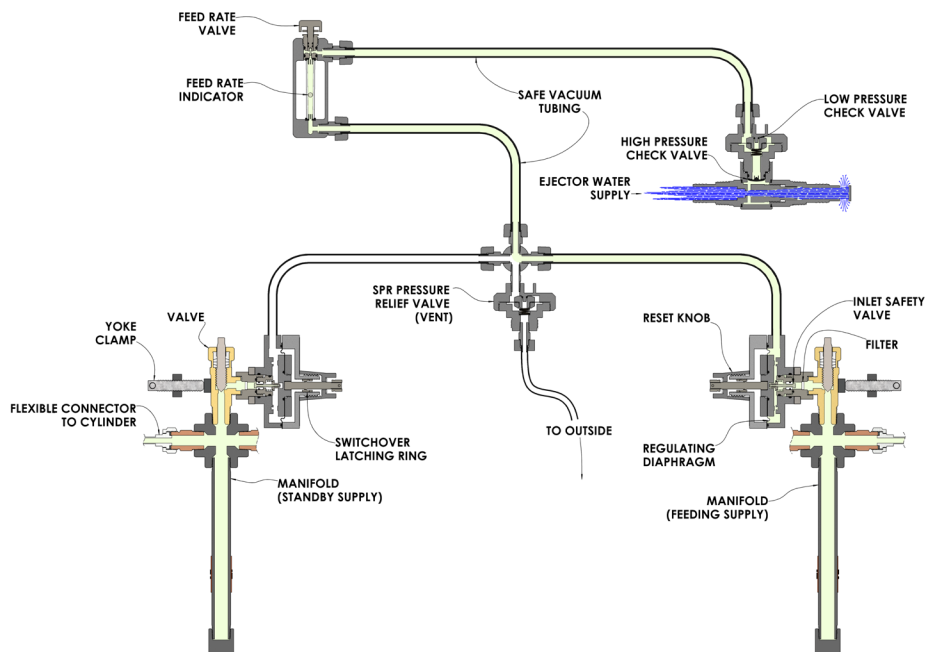


## FEATURES

The SUPERIOR™ Series CL-26/56 represents the most modern design technology coupled with the very best materials available to create an outstanding, user friendly piece of equipment. It is designed with user safety as a primary concern.

1. A new ultra-thick, fluoroplastic yoke coating gives superior corrosion resistance, won't crack, peel, or chip.
2. All molded parts are fiberglass reinforced ABS plastic, designed for superior strength, warp-resistance and chlorine resistance.
3. The rate valve seat is pure fluoroplastic and will not swell, stick, or become brittle with age or exposure to liquid chlorine.
4. All external bolts and nuts are Titanium for complete corrosion resistance. A SUPERIOR™ exclusive.
5. Extra heavy duty outlet threads on the ejector diffuser prevent breakage from overtightening or "bumping" of the ejector assembly.
6. Easier to service and perform routine maintenance, with standard size wrench lugs provided on all screwed together ejector parts.
7. All vacuum fitting holes are heavily reinforced to prevent the possibility of cracking from overtightening fittings.
8. Dual pressure check valve is standard on all SUPERIOR™ Gas Chlorinators. Proven high back pressure unitized check valve design protects against sudden surges up to 300 PSIG while a spring loaded diaphragm check valve provides positive shutoff even when there is no backpressure to force the seat closed.
9. Built in latching switchover mechanism in each regulator requires no field adjustment, and allows the operator to easily designate the standby and operating cylinders.
10. All SUPERIOR™ Gas Chlorinators carry a 3-year limited warranty, in addition to a lifetime warranty on 4 vital parts: main diaphragm, springs, inlet adaptor, and body bolts.
11. Fewer parts, combined with superior materials and a superior design gives you the industry's superior gas chlorinator: SUPERIOR™.

## CL-26/56 FLOW DIAGRAM



## SYSTEM OPERATION

The automatic switchover vacuum regulators are securely clamped onto the chlorine valves of cylinders, wall manifolds, or ton container adaptors. Vacuum tubing connects each regulator to the wall mounted pressure relief/vent valve which also serves as an interconnecting point for the vacuum tubing. A single piece of vacuum tubing connects the pressure relief valve to the wall mounted remote meter tube/rate valve panel. The ejector is connected to the remote meter panel with a single piece of vacuum tubing.

Water under pressure flows through the ejector at high velocity causing a strong vacuum to be created. This opens the check valves in the ejector assembly and transmits a vacuum signal through the remote meter tube/rate valve panel, back to the vacuum regulators. When the vacuum reaches a pre-set level, the diaphragm in the regulator moves, opening the chlorine inlet safety valve, and permits gas to flow from the chlorine cylinder. The spring-opposed diaphragm and inlet valve regulate the vacuum at this point.

Chlorine gas passes through the regulator, pressure relief valve connector, remote flow meter panel and rate control valve to the ejector. The gas mixes with the ejector water and is discharged through the diffuser into the water being treated.

When the chlorine supply is depleted in one source, vacuum starts to increase in the system. This causes the diaphragm in the "stand-by" regulator to be pulled back, overcoming the detent mechanism and opening the inlet/safety valve. Chlorine gas is then withdrawn from the "stand-by" cylinder to satisfy the increased system vacuum, and the vacuum returns to the operating level. The empty chlorine cylinder(s) or ton container(s) is(are) replaced at the operator's convenience, and the regulator then placed on "stand-by".

## MODULAR DESIGN

SUPERIOR™ Gas Chlorinators have been designed to give the maximum flexibility in system installation. Each component of the chlorinator: the vacuum regulator, the metering tube panel, and the ejector, can be placed wherever it is safest and most convenient for operating personnel. The regulator may be mounted on the chlorine cylinder in a safe storage area while the remote meter tube panel is placed in an easily accessible place, since it operates completely under vacuum. The ejector can be located wherever plumbing and/or hydraulic conditions make it most desirable. Modular design also makes it easy and inexpensive to expand or upgrade the system.

## MATERIALS OF CONSTRUCTION

One of SUPERIOR's™ major competitive advantages is the use of the finest, strongest, and most durable materials available. Extensive use of Fluoroplastics and fiberglass reinforced thermoplastics allow SUPERIOR™ Gas Chlorinators to withstand attack by chlorine in any form and to give the longest operational life. Many parts are guaranteed for the life of the equipment against chlorine damage.

## FLOW METER CAPACITIES

SUPERIOR's modular design concept allows the chlorine gas indicating meter and flow rate control valve to be located wherever it is most convenient for the operator, and also in the safest location. A dual English/Metric scale variable area flow metering tube is provided with a maximum capacity of 250 pounds per 24 hours - 5 kg/hr (Model CL-26) or 500 pounds per 24 hours - 10 kg/hr (Model CL-56). All metering tubes are interchangeable and may be changed in the field without special tools.

# SPECIFICATIONS

The chlorinator shall be SUPERIOR™ MODEL CL-\_\_\_(26/56) manufactured by Chemical Injection Technologies, Inc., Ft. Pierce, Florida, and shall have a maximum capacity of \_\_\_\_\_ pounds per day (kg/hr) of chlorine feed and shall be equipped with a chlorine flow meter of \_\_\_\_\_ pounds per day (kg/hr).

The chlorinator shall be of modular design consisting of two (2) automatic switchover vacuum regulators, one (1) pressure relief/vent valve, one (1) flow meter/rate valve panel, and one (1) ejector/check valve. Each of these assemblies shall be capable of being individually located wherever safety and/or operator convenience dictates.

The vacuum regulators shall mount directly on the chlorine valves of cylinders, wall manifolds, or ton container adaptors by means of a positive yoke type clamp having an integral tightening screw with slide bar handle. No wrenches or other tools shall be required to mount or dismount the vacuum regulator from the chlorine valve. The chlorine valve/chlorinator inlet adaptor shall be constructed of corrosion-proof fluoroplastic material which shall be inert to the effects of wet, dry, or liquid chlorine. The inlet safety shutoff/vacuum regulating valve shall be of capsulated design, easily removable as a unit from the outlet side of the yoke. A fluoroplastic filter shall be installed in the vacuum regulator inlet and shall be capable of removing impurities greater than 25 microns. All external screws and nuts shall be made of Titanium to prevent corrosion.

Each automatic switchover vacuum regulator shall contain its own built-in diaphragm detent mechanism, which shall be made entirely of non-metallic corrosion resistant materials. The detent mechanism shall be factory preset and shall not require any field adjustment.

The flow meter/rate control valve panel shall be capable of mounting wherever it is safest and most convenient for operating personnel. The panel shall be constructed of fiberglass reinforced thermoplastic material and shall incorporate a flow rate control valve made of fluoroplastic material which is inert to the corrosive effects of chlorine. The rate valve metering tip shall be constructed of metal which is completely impervious to the effects of wet, dry, or liquid chlorine attack. Design shall provide for full closing of the rate valve without engaging the control surfaces, to prevent damage. Accuracy shall be ±2% of maximum. Minimum calibrated feed rate shall be 1/20th of maximum flow meter scale (20:1 turndown ratio).

Vacuum shall be created by a fixed-throat venturi/ejector system connected directly to the chlorine solution diffuser. A dual high pressure/low pressure check valve system shall prevent water from entering the gas system. The ejector assembly shall be capable of withstanding water pressure up to 300 PSIG (20.7 Bars). A universal type chlorine solution diffuser shall be provided which shall allow close-coupling of the ejector to a water main, use of flexible solution hose, or rigid solution pipe, without the use of special adaptors.

## SPECIFICATIONS STANDARD ACCESSORIES

- 25 ft. - 3/8" Vent vacuum tubing
- 25 ft. - 1/2" or 5/8" Vacuum tubing
- 10 - Lead cylinder connection gaskets
- 1 - Cylinder Wrench
- 1 - Vent insect screen

## OPTIONAL ACCESSORIES AVAILABLE

Inlet Water Assembly	Gas Masks
Wall Manifold Kits	Gas Detectors
Booster Pumps	Scales
Residual Analyzers	Gauges
Automatic Controls	Chlorine Comparators
Ton Container Adaptors	Ball Check Valve
Dual High Pressure Check Valve Assembly	

## OTHER SUPERIOR™ SOLUTIONS AVAILABLE

- VACUFEED LIQUID CHEMICAL FEED SYSTEMS
- VACUUM ALARM SAFETY DEVICE
- INSTRUMENTATION, ANALYZERS, & CONTROLS
- CHLOR-CLEAR EDUCTOR TUBE CLEARING SYSTEM
- UP TO 10,000 POUNDS PER DAY (200 KG/HR)
- GAS SULFONATORS (DECHLORINATORS)
- AMMONIATORS
- AUTOMATIC FLOW PROPORTIONING
- COMPOUND LOOP CONTROL
- AUTOMATIC RESIDUAL CONTROL
- AMPEROMETRIC & COLORIMETRIC ANALYZERS



SUPERIOR™ Gas Chlorinators are proudly made by Chemical Injection Technologies, Inc.  
835 Edwards Road, Fort Pierce, Florida 34982 USA. Tel. 772-461-0666.