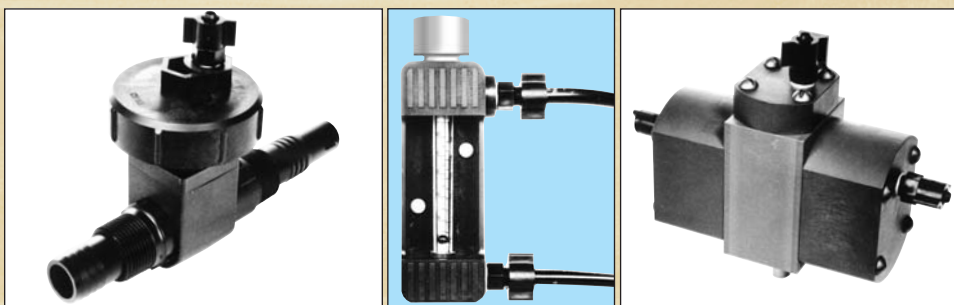


SUPERIOR DESIGN • SUPERIOR MATERIALS • SUPERIOR SAFETY

SUPERIOR

Gas Chlorinators



DIRECT CYLINDER MOUNTING
GAS CHLORINATORS & SULFONATORS
MODULAR DESIGN • SAFE, ALL-VACUUM OPERATION
HIGHEST QUALITY • LOWER COST

THE SOLUTION TO WATER AND WASTEWATER TREATMENT

SUPERIOR

Gas Chlorinators

Solutions to water and wastewater problems in:
Drinking Water • Sewage • Industrial Processes
Food Processing • Cooling Water • Swimming Pools

Superior Gas Chlorinators are designed for the water & wastewater treatment needs of the 1990's... and beyond. They are made of the most modern materials available that offer the ultimate in both chemical resistance and strength.

These rugged and versatile units were designed by one of the chlorination industry's most experienced, creative minds. Only the most proven elements of existing technology were incorporated, and innovative new solutions were designed to solve the problems which have plagued other brands, most of which date back to the 1960's and 1970's.

Fanatical attention to very small details has resulted in a SUPERIOR gas chlorinator that is a quantum leap ahead of its contemporaries. All of this has been wrapped up in a gas chlorinator that is much safer, as well as more economical to install and to operate than anything else on the market. Fewer parts and a "user

friendly" design make Superior Gas Chlorinators extremely easy to maintain.

FLOW METER CAPACITIES

Maximum Chlorine and Sulfur Dioxide flow meters are available in English/Metric "Dual" ranges with the following maximum feed rates:

English	Metric	English	Metric
1.5 Lbs./24 Hour	30 Gr./Hr.	4 Lbs./24 Hrs.	75 Gr./Hr.
10 Lbs./24 Hrs.	200 Gr./Hr.	25 Lbs./24 Hrs.	500 Gr./Hr.
50 Lbs./24 Hrs.	1000 Gr./Hr.	100 Lbs./24 Hrs.	2000 Gr./Hr.
200 Lbs./24 Hrs.	5 KG./Hr.	500 Lbs./24 Hrs.	10 KG./Hr.
		1000 Lbs./24 Hrs.	20 KG./Hr.
		2000 Lbs./24 Hrs.	40 KG./Hr.

THE STRONGEST, MOST DURABLE MATERIALS AVAILABLE

are used exclusively in SUPERIOR Gas Chlorinators...a key reason why SUPERIOR will greatly outlast and outperform other gas chlorinators. Superior materials provide a stable, warp-free design platform which allows for very close tolerance manufacturing. This means precision and reliability are built into Superior at an unprecedented level.

All external bolts and nuts are Titanium for complete corrosion resistance...a SUPERIOR exclusive. There are no stainless steel or monel nuts and bolts to corrode and freeze up in the presence of moist chlorine gas.

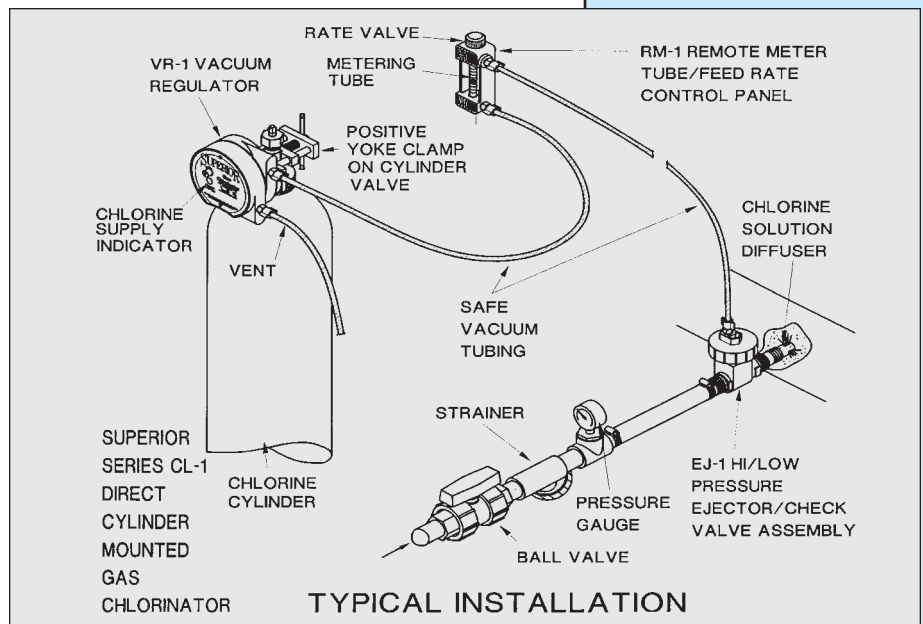
Deeply recessed PVDF cylinder-to-chlorinator inlet adaptor assures easy, self-centering mounting during cylinder changes and prevents leaks caused by misalignment.

SUPERIOR vacuum regulators are more rugged and durable. They are the heart of the All-Vacuum safety system. Easily upgraded to higher capacities with a change of vacuum tube fittings. Add another regulator and an automatic switchover module for uninterrupted 24 hour a day chlorination.

SUPERIOR remote rate valve / metering tube panels use only state-of-the-art materials to insure dependable, repeatable gas flow rates. Additional panels may be combined with ejectors to feed several applications from one chlorine source.

SUPERIOR vacuum producing ejectors are extremely efficient and extra-strong. A unique dual pressure check valve system eliminates the water "flooding" nuisance common in most designs.

SUPERIOR modular design allows all components to be located separately or all in one area, as safety and operator convenience considerations dictate.



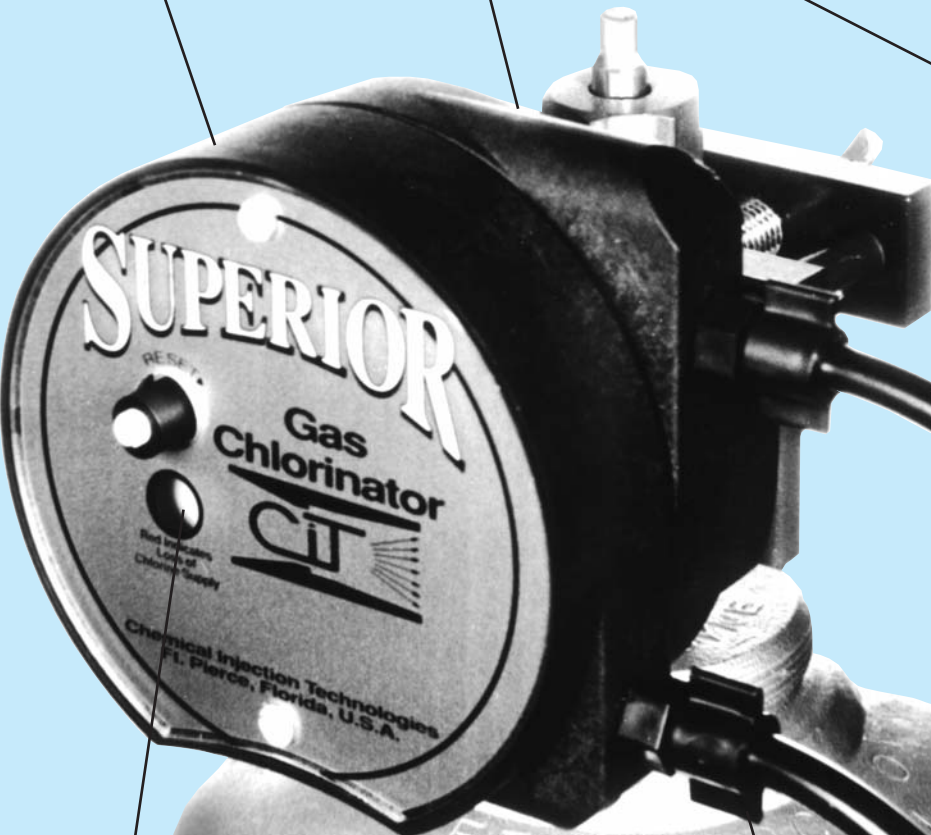
& MATERIALS FOR SAFER OPERATION...LONGER LIFE...LESS MAINTENANCE...LOWER COST

All molded parts are fiberglass reinforced plastic, designed for superior strength, warp-resistance and chlorine resistance. Excellent UV resistance.

A new ultra-thick, fluoroplastic yoke coating gives superior corrosion resistance, won't crack, peel or chip. Chlorine will not diffuse through it to cause bubbling and peeling.

Special "Lip" type metering tube gaskets automatically center tubes, making removal and re-assembly a snap. No chance of misalignment.

The rate valve "Seat" is pure PVDF fluoroplastic and will not swell, stick or become brittle with age or exposure to liquid chlorine.



Rugged, fiberglass-reinforced, high-impact plastic remote meter panel can be located wherever it is safest and most convenient for the operator.

Positive, gravity operated, loss of gas supply indicator gives an easy-to-see bright red color when the chlorine supply is exhausted. A bright green color indicates adequate chlorine supply.

Extra-heavy duty yoke with an integral vise-type tightening handle, prevents over-tightening. No need to find a wrench to change cylinders.

PVDF vacuum tubing fittings are standard... another SUPERIOR exclusive. "User friendly" design makes it easy to attach tubing, and to tighten or loosen ferrule nuts without tools.

All vacuum fitting holes are heavily reinforced to prevent the possibility of cracking from over-tightening fittings.

Dual check valves provide positive sealing at all backpressures from 0 to 300 psig (0 to 21.1 Kg/cm²) without mechanical wear of seats.

Easier to service and perform routine maintenance, with standard size wrench lugs provided on all screwed-together ejector parts. No more pipe wrenches to accidentally tear and scrape plastic surfaces.

The "Universal" ejector diffuser allows use of high pressure solution hose, direct ejector mounting in mains, or in-line piping with rigid solution pipe.

Extra heavy-duty outlet threads on the ejector diffuser prevent accidental breakage from over-tightening or "bumping" of the ejector assembly.

Rugged, high strength fiberglass reinforced ejector body has a standard pressure rating of 300 psig (21.1 Kg/cm²).

THE SUPERIOR EJECTOR

The Superior Gas Chlorinator ejector is an extremely rugged, highly efficient vacuum producer. The Superior ejector is designed to operate with minimum water flows and water pressure differentials. It is also designed to withstand very harsh environments and is capable of handling excessive physical force.

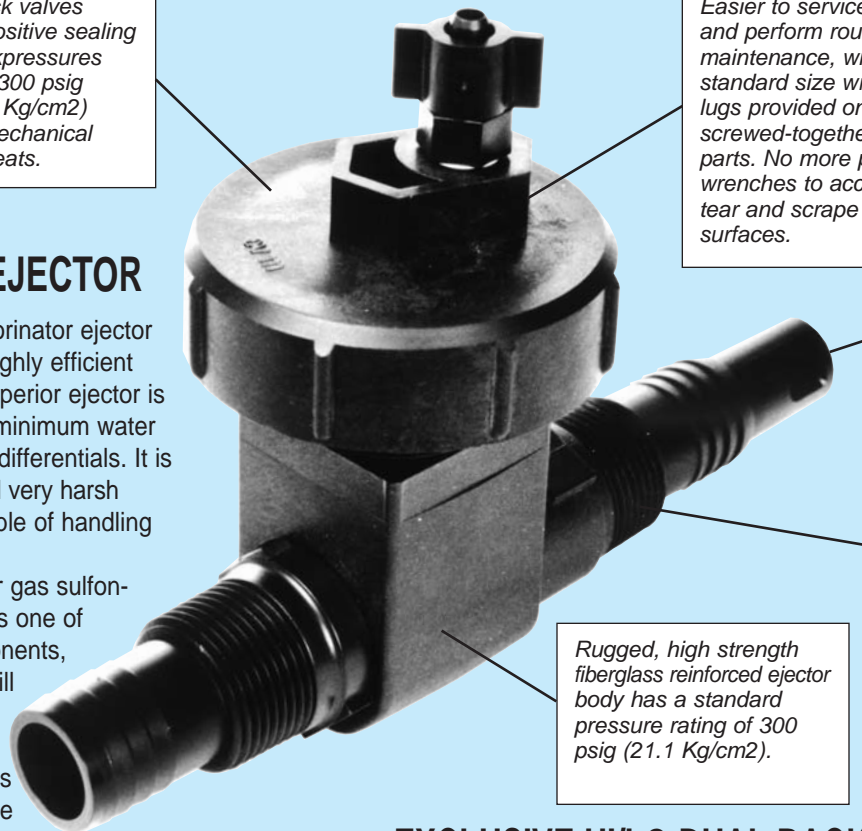
In a gas chlorination or gas sulfonation system, the ejector is one of the most important components, because its malfunction will cause the entire system to fail. The most common problem with other ejectors is failure of the check valve system to prevent water from backing up into the dry gas areas when the chlorine system is not in operation. Water in these areas will cause serious operational problems and will usually require disassembly and service of the chlorinator parts.

Superior solves these problems by using a unique dual check valve system, incorporated into a single, easily removable assembly. A proven design, single-piece unitized "umbrella" type check valve capable of withstanding static pressures of 300 PSIG (21.1 KG/CM²) without being damaged, handles high back pressures as well as water "hammer." A positive sealing, spring opposed diaphragm type check valve provides tight sealing even when there is very little or no pressure differential to force the valve closed.

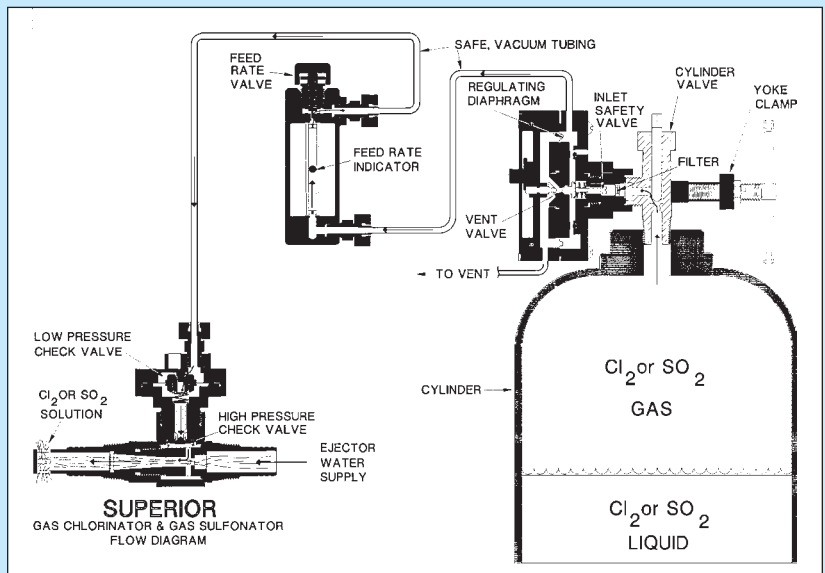
The diffuser outlet of the Superior ejector offers the strongest threaded area available. This has been a constant problem in other designs due to over-tightening or other force applied to the ejector, causing the diffuser to break at the threaded area. Every part of the Superior ejector was designed with this extra strength concept in mind.

The Superior ejector is the most "user friendly" ejector to maintain and service. All parts that screw together are provided with standard size wrench "lugs" to make disassembly a very simple procedure. There is no need for any special tools, and no reason to accidentally tear and scrape plastic surfaces with pipe wrenches.

Superior ejectors may also be used as replacement assemblies in all brands of gas chlorinators and gas sulfonators.



EXCLUSIVE HI/LO DUAL BACKPRESSURE EJECTOR

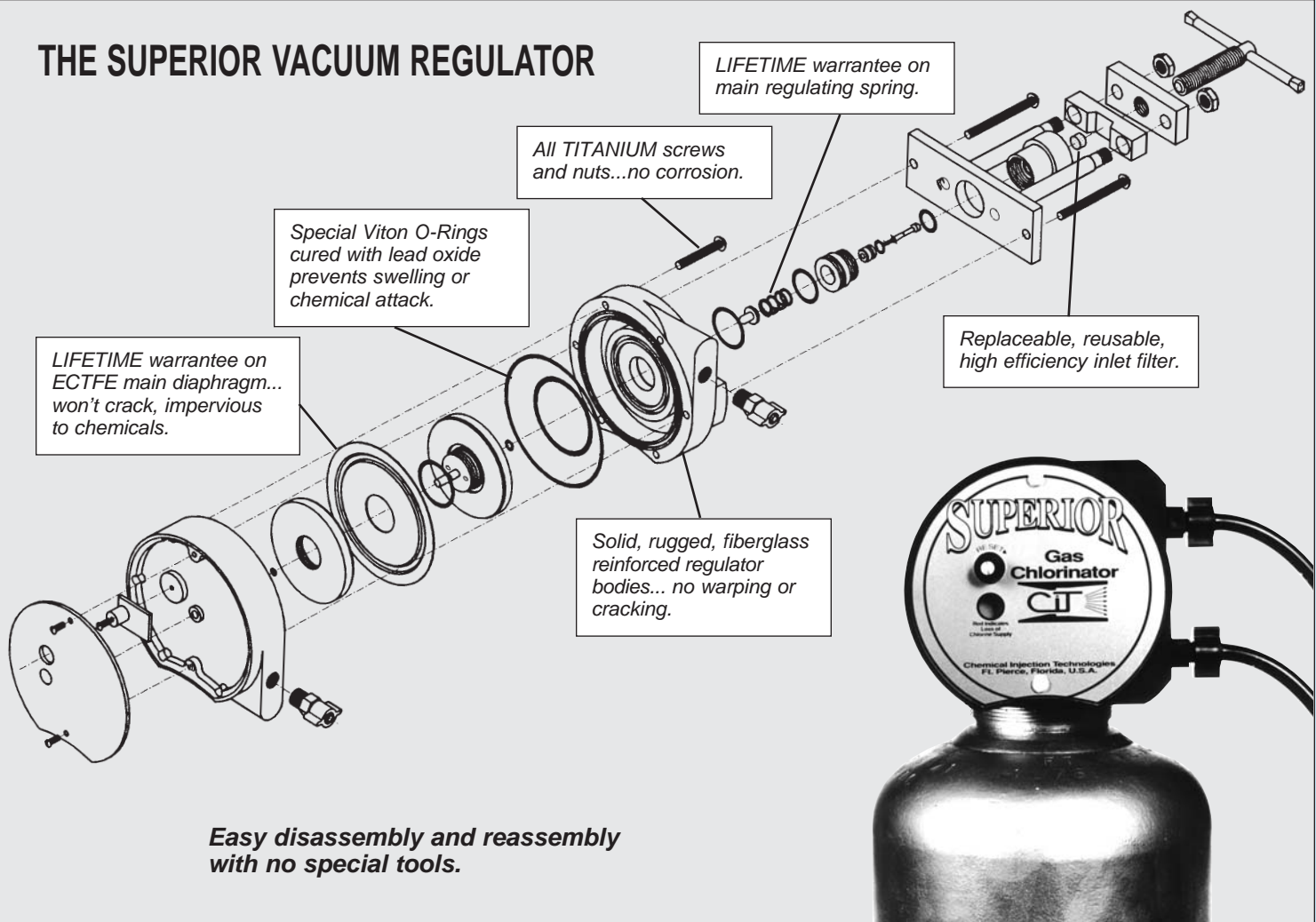


MODULAR DESIGN FOR SAFETY AND CONVENIENCE

The SUPERIOR modular approach to chlorinator system design allows the maximum flexibility in placement of the system components for safety and convenience. The cylinder mounted vacuum regulator can be located in the most secure area, while the all-vacuum remote metering tube/feed rate control panel may be placed wherever it is most convenient for the operator. In this manner the pressurized chlorine gas can be isolated where it is safe and secure, allowing only gas under vacuum in the operations areas. Any break in a vacuum line results in immediate, positive tight shut-off of chlorine gas at the vacuum regulator inlet valve.

The Superior ejector may be located directly at the point of chlorine solution injection for greatest safety and optimum mixing of chlorine gas and water.

THE SUPERIOR VACUUM REGULATOR

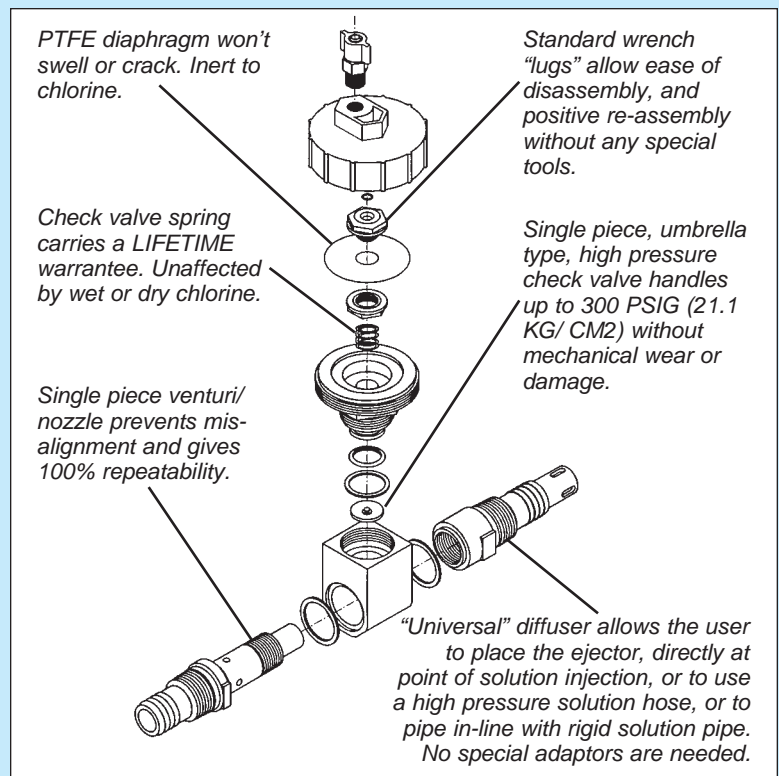


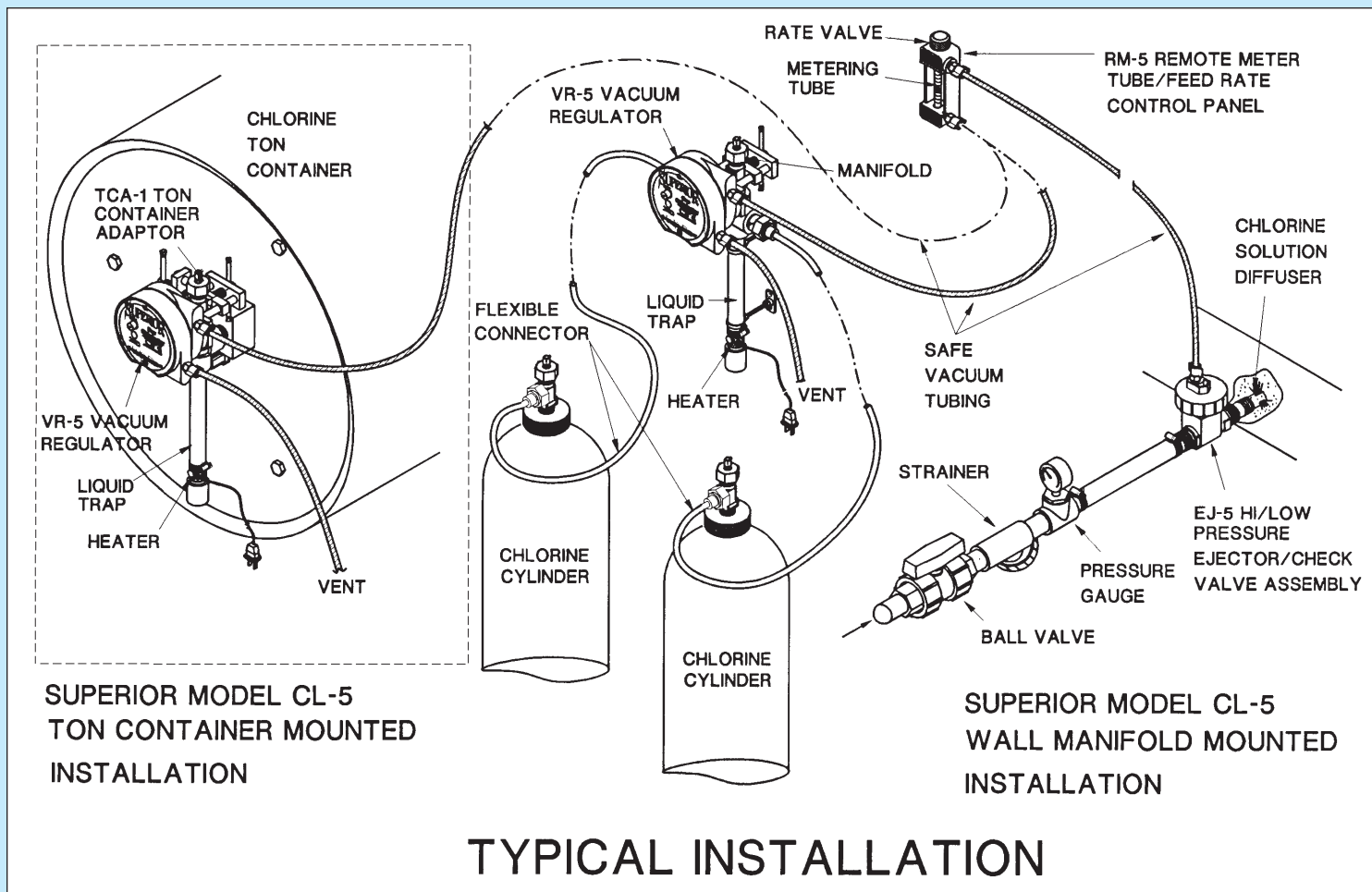
EASY MAINTENANCE & FEWER PARTS MEANS LOWER OPERATING COSTS

The SUPERIOR "user friendly" design was based on the guiding principle that time spent on maintenance as well as service "downtime" is not only a pain in the neck, but also very expensive. These are two things no one needs in any quantity.

By starting out with fewer parts SUPERIOR gets a quick advantage by virtue of the fact that there is less to go wrong. With up to 60% fewer parts than some other brands, Superior makes life much easier. And when there is a need for some preventive maintenance, or even to perform service, SUPERIOR's design lets you do it much easier and without any special tools.

A quick look at the exploded parts drawings on this page will show you how few parts are involved and how easily everything fits together. And the fact that all of these parts are made of the very highest quality materials available, ensures that you will not have to replace very many of them...if any. Most routine maintenance and service consists of cleaning out deposits of impurities carried by the chlorine gas. This can be done either by the user or a local Superior dealer, at minimum cost.



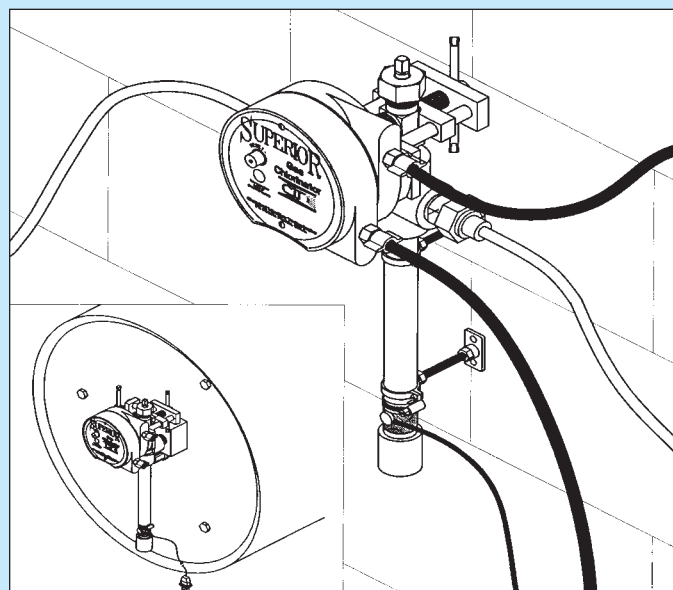


CHLORINE FEED RATES UP TO 500 PPD (10 KG/HR) FOR CYLINDER, WALL MANIFOLD OR TON CONTAINER MOUNTING

When sustained chlorine feed rates over 100 PPD (2000 GR/HR) are required, SUPERIOR Gas Chlorinators can easily be mounted on optional multi-cylinder wall manifolds. Wall manifolds are available for any number of chlorine cylinders which can be joined together to increase the total chlorine withdrawal rate. For short periods of time, depending on the ambient temperature, chlorine gas can be withdrawn at very high rates from a single chlorine cylinder. But, when continuous feed rates over 100 PPD are needed, it is not possible to use a single cylinder source of supply.

Another alternative for higher feed rates is the SUPERIOR Ton Container Adaptor. It is specially designed to allow a SUPERIOR cylinder mounted gas chlorinator to be mounted directly onto the top gas outlet valve of a standard one (1) ton chlorine container. The SUPERIOR Ton Container Adaptor may also be used with any other brand of direct cylinder mounted gas chlorinator.

The SUPERIOR Ton Container Adaptor employs a unique liquid chlorine trap and heater system that virtually eliminates the possibility of liquid chlorine entering the chlorinator. It enables the user to take advantage of lower gas chlorine costs of ton containers, while eliminating the use of pressurized flexible connectors and wall manifolds. The SUPERIOR adaptor has an ultra-thick plastic coating that prevents corrosion.



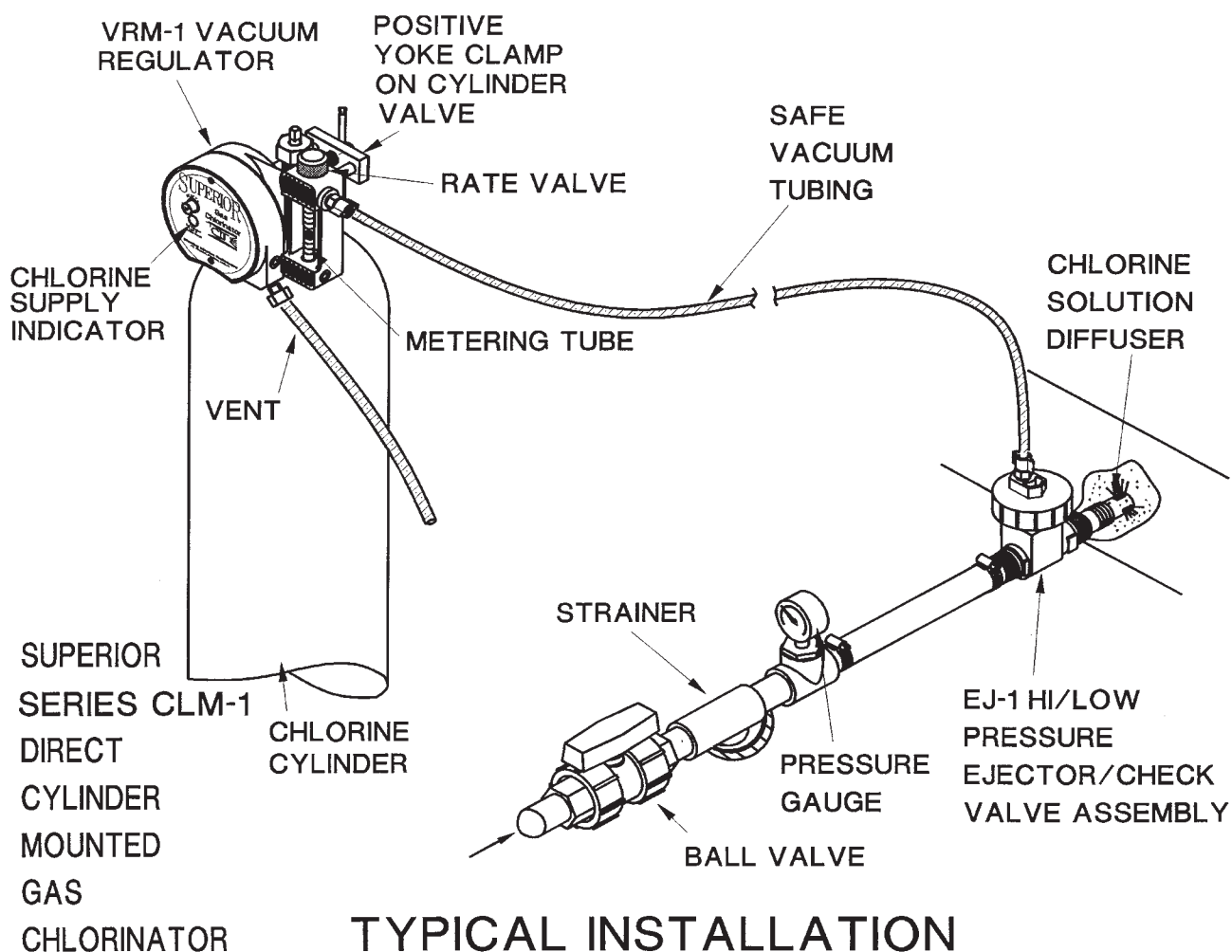
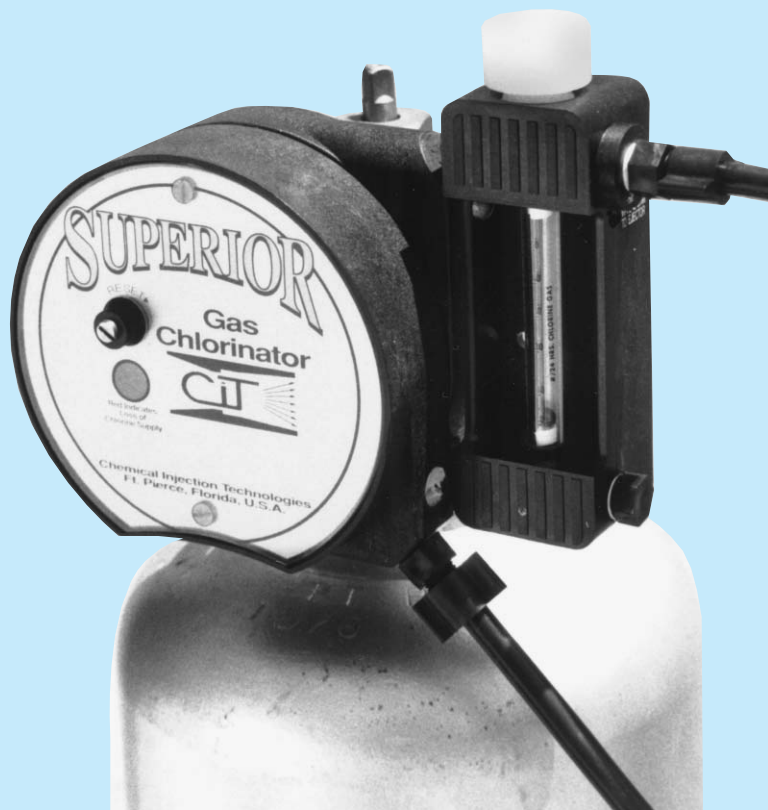
FEED RATES. All SUPERIOR Gas Chlorinators and Gas Sulphonators are available with variable area flow meters and flow rate adjusting valves that have a usable range of 20 to 1. SUPERIOR dealers, as well as Chemical Injection Technologies will be happy to provide assistance in determining your gas flow requirements. Feed rates from just a fraction of a pound per 24 Hours (GR/HR) up to 500 pounds per 24 hours (10 KG/HR) are available as standard units.

SUPERIOR SERIES "CLM" GAS CHLORINATORS with integrated chlorine feed rate adjustment and vacuum regulation in one compact unit.

The SUPERIOR Series "CLM" gas chlorinators give you all of the unique SUPERIOR design and materials advantages, as well as our 3 year warranty. They only differ from our standard "CL" Series because the remote metering/feed rate panel is close-coupled to the vacuum regulator to form an integral unit.

The "CLM" vacuum regulator is extremely versatile. If at some future date requirements should change, the meter panel can be dismantled to create a remote meter application. This can be accomplished very easily.

When space is at a premium or operator convenience dictates having everything in one compact area, the SUPERIOR Series "CLM" will meet your needs. Series "CLM" is available with chlorine feed rates to 500 pounds per 24 hours (10 Kg/Hr).



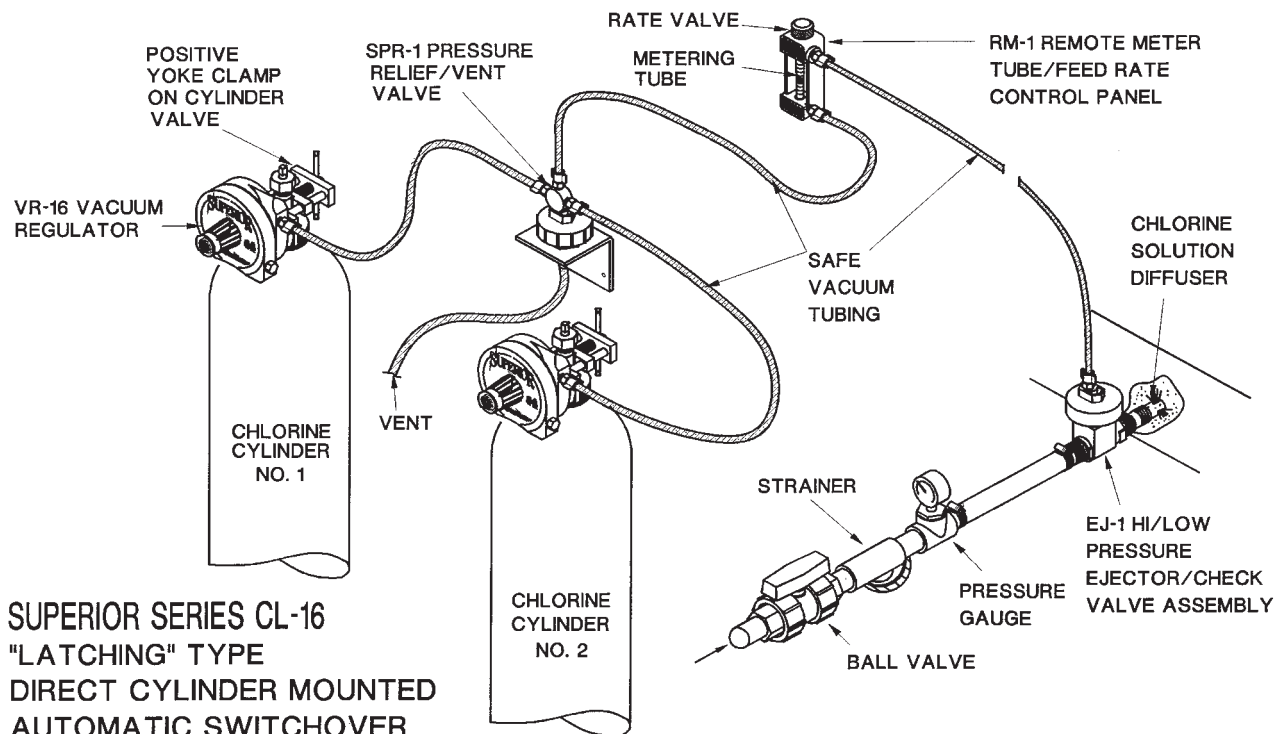
SUPERIOR OFFERS YOU A CHOICE OF AUTOMATIC SWITCHOVER SYSTEMS

SUPERIOR "LATCHING" TYPE AUTOMATIC SWITCHOVER GAS CHLORINATORS

Using economical, self-actuating vacuum regulators, the SUPERIOR "latching" type automatic switchover system offers a lower cost alternative for around the clock chlorination, without interruption. Each chlorine vacuum regulator contains it's own built-in switchover mechanism. One vacuum regulator diaphragm is "latched" into standby mode while one regulator is in the operating mode feeding chlorine gas.

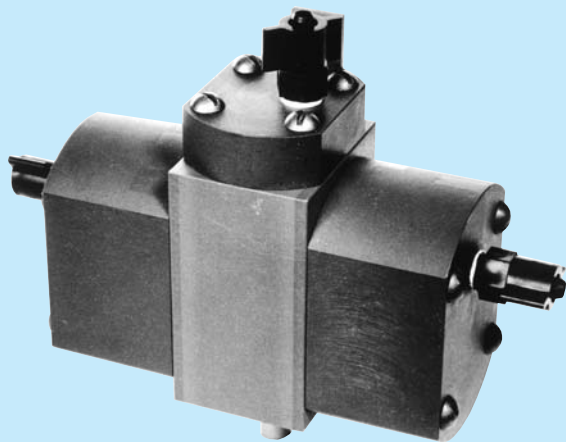
When the chlorine supply is depleted in the operating source, vacuum starts to build up in the system. This causes the diaphragm in the "stand by" regulator to be pulled back, overcoming the latching mechanism and opening the inlet valve. Chlorine is then withdrawn from the "stand by" cylinder to satisfy the increased system vacuum, and the vacuum returns to the operating level. The empty cylinder can be replaced at the operator's convenience, and that regulator is then placed in "stand by" mode.

The SUPERIOR "latching" type switchover systems carry the same 3-year warranty and Superior materials as all of our other models, in addition to the unique SUPERIOR lifetime warranty on five (5) major components.



**SUPERIOR SERIES CL-16
"LATCHING" TYPE
DIRECT CYLINDER MOUNTED
AUTOMATIC SWITCHOVER
GAS CHLORINATOR**

TYPICAL INSTALLATION



THE SUPERIOR MODULAR AUTOMATIC SWITCHOVER SYSTEM

Automatic reset...the SUPERIOR Automatic Switchover system requires no manual resetting once the empty source is replaced with a new source.

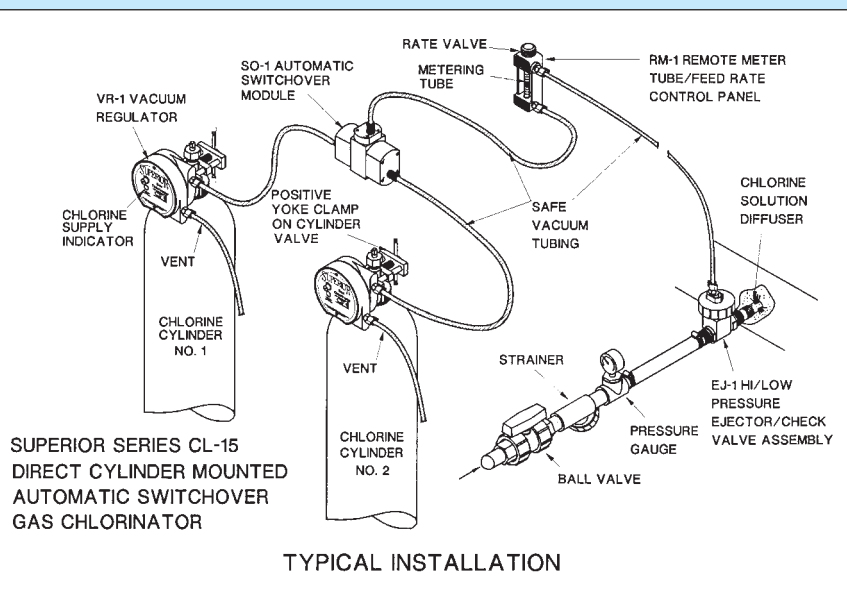
SUPERIOR switchover module is designed to prevent sticking, misalignment or wear on internal parts. Up to 20% fewer parts than some other brands.

All TITANIUM screws insure maximum corrosion protection. The only other metal used is a special Tantalum alloy spring, which is inert to chlorine.

All internal parts are made from non-corrosive, non-sticking materials providing friction-free operation. SUPERIOR switchover modules do not hang up or stick, even in very low feed rate situations where the module does not change over very frequently.

The SUPERIOR Modular Automatic Switchover Gas Chlorination system is state-of-the-art, totally vacuum operated, designed to automatically switch chlorine feed from an empty cylinder to a full cylinder. It allows around the clock protection without concern for running out of chlorine when the system is unattended. Potable water systems are never without necessary disinfection, and wastewater won't be discharged without being chlorinated.

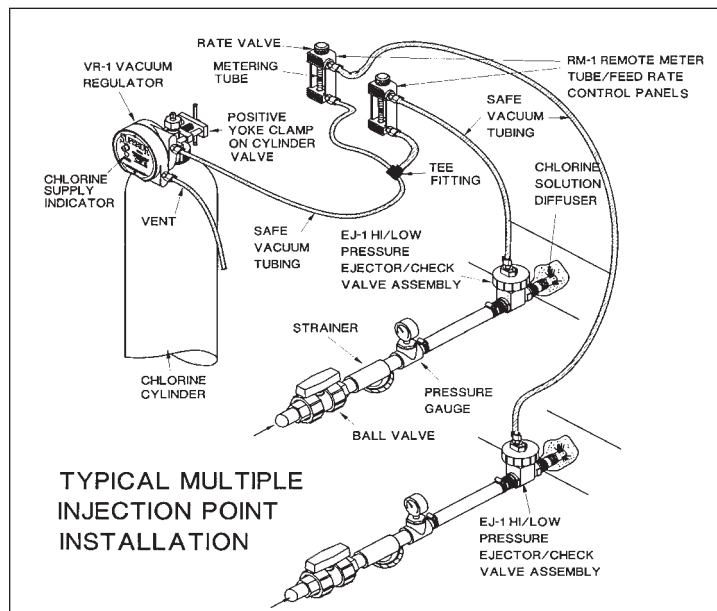
A vacuum operated switchover module is wall mounted and connected to two vacuum regulators which may be directly mounted on two chlorine cylinders, two wall manifolds or two ton container adaptors. The regulators and chlorine supplies may be located in an area separate from the switchover module and other system components for safety and operator convenience. One or more chlorine gas flow meter panels and ejectors may be used with the switchover module and located wherever desired.



MULTIPLE POINT GAS CHLORINATION

SUPERIOR's modular system versatility is most apparent when used in a multiple feed point application. Every SUPERIOR Gas Chlorinator is easily adaptable to precise, and independent, control of chlorine feed to more than one point. By using separate ejectors and separate remote metering panels, chlorine solution can be added to two, three or even ten independent systems... all using just a single chlorine source.

Each remote meter panel/ejector combination acts as an independent gas chlorinator, and each may feed at different rates, start and stop individually, with no change in the feed rates of any other application point. It is the same as having several completely separate and independent gas chlorinators, but at a fraction of the cost. Food processing plants, pre and post-chlorination in water and waste treatment plants, as well as step-feed control for multi-well systems are some applications that lend themselves to multiple point chlorination.



SUPERIOR High Capacity Gas Chlorinators Chlorine Gas Feed Rates to 2000 PPD (40 KG/HR)

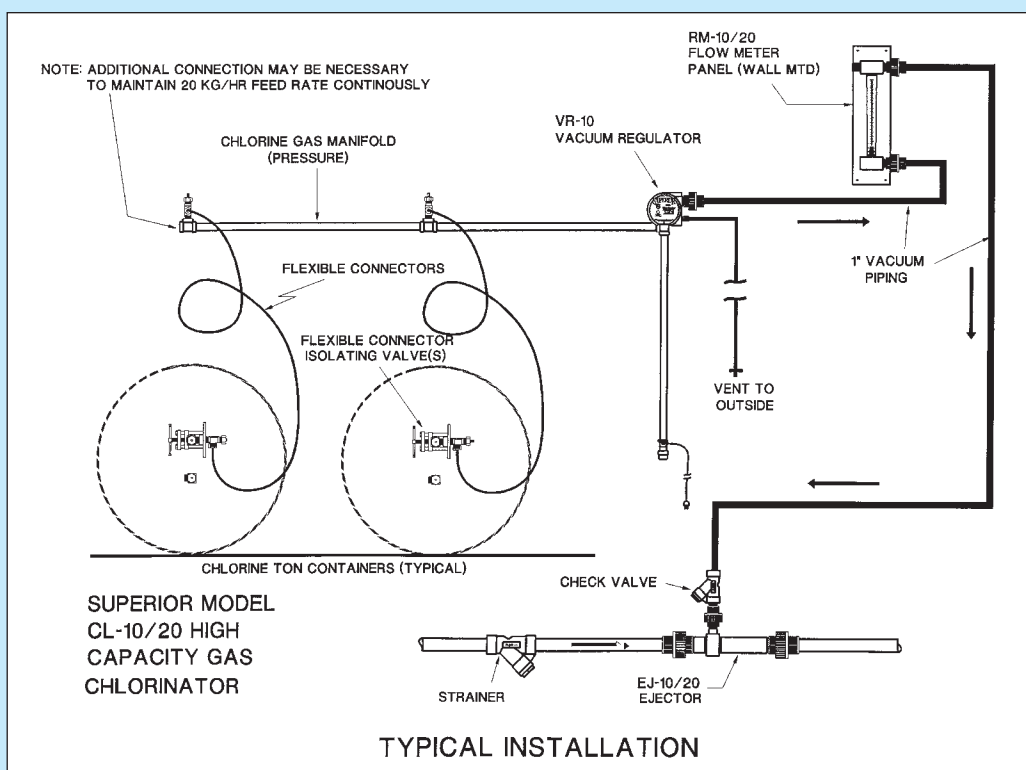


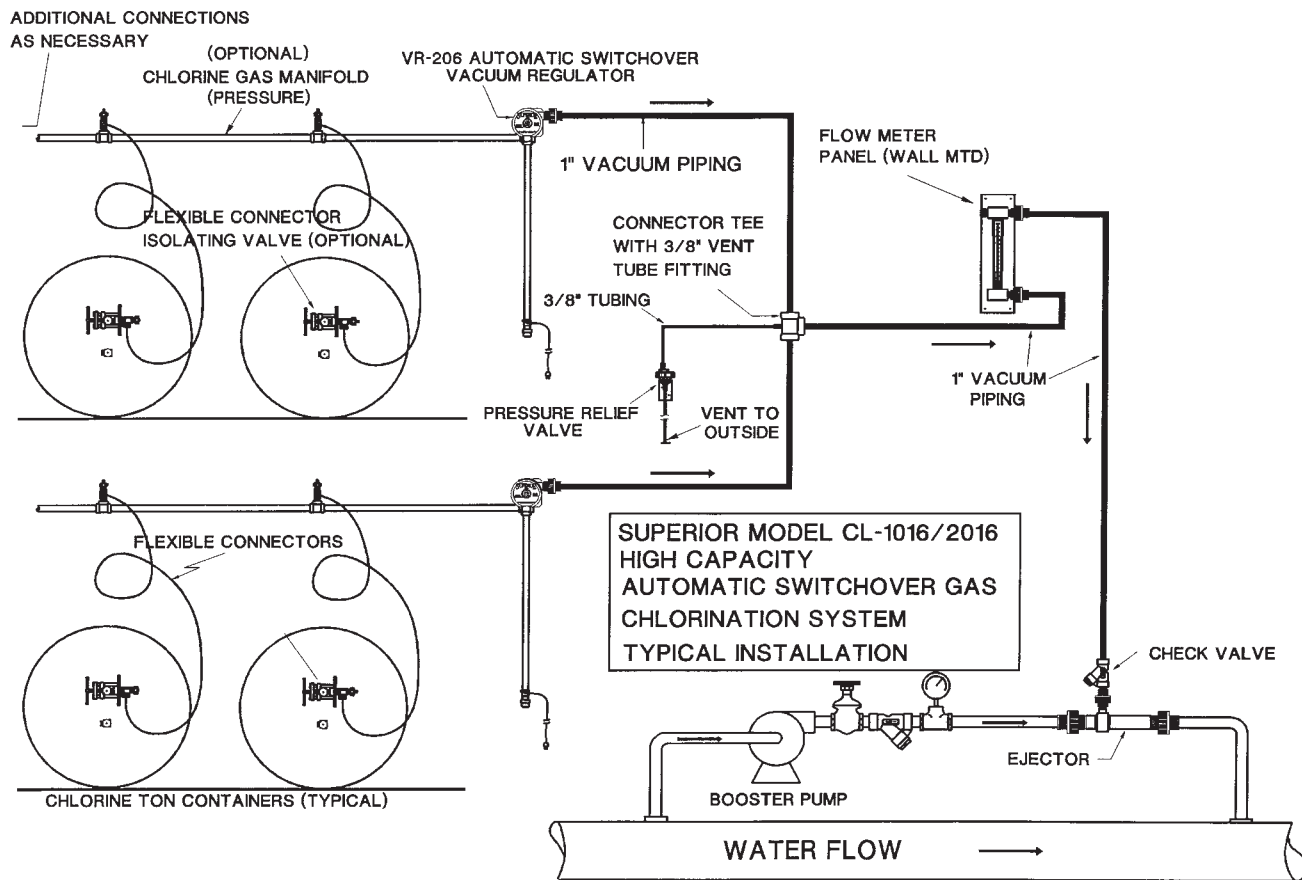
The SUPERIOR High Capacity series gas chlorinators are based on the same modular type design as our lower capacity systems. This means that you get all of the benefits of SUPERIOR safety, simplicity and versatility, even when your requirements call for chlorine feed rates up to 2000 pounds per 24 hours (40 kg/hr).

These high capacity units are very cost effective. The chlorine vacuum regulators use standard parts from our lower capacity units where possible, to make them very affordable. Modular design allows the pressurized chlorine gas supply to be isolated away from the working area, while the feed rate adjustment flow metering panel can be located wherever it is most convenient for the operator, all under a safe vacuum condition.

SUPERIOR design utilizes a proven "sonic" flow regulating principle which eliminates the need for large, expensive, service prone differential pressure regulators, while allowing peak ejector performance.

The multiple point and automatic switchover application ranges shown in this bulletin, for the lower capacity gas chlorinators, are also available with the SUPERIOR High Capacity Series.





TYPICAL INSTALLATION

The superior SUPERIOR Warranty

Three (3) Year Standard Warranty on:

- Complete Systems and
- Component Assemblies

In addition, all of the SUPERIOR tested assemblies still carry the full three (3) year warranty even if they are used in conjunction with other manufacturer's components. For example, a SUPERIOR vacuum regulator used to replace another brand in an existing system, will still carry the full three (3) year warranty on the vacuum regulator.

Other brands either do not offer their extended warranty on assembled components that are not sold as part of a complete system, or will void the warranty if it is used with any other brand, or both. SUPERIOR is unique in the gas chlorinator industry by offering customers this comprehensive protection. We can do this because of our confidence in our SUPERIOR design and our SUPERIOR materials

Lifetime Warranty on Five (5) Major Parts:

- Vacuum regulator inlet/safety valve spring
- Ejector check valve spring
- Non-metallic inlet adaptor
- Main vacuum regulator diaphragm
- Vacuum regulator body screws

These parts have been specially engineered to provide extra long life in normal service. Only SUPERIOR offers a warranty on so many parts for the useful life of the chlorinator system.

At Chemical Injection Technologies, Inc., we are proud of our SUPERIOR design and we are not afraid to back up that pride with action. Compare, and you will see for yourself why SUPERIOR is setting the new standard for excellence.