

CAPITAL CONTROLS® VEGA™

Gas Chlorinator Vent Exhaust Gas Arrestor

The Capital Controls® VEGA™ is a disposable chlorinator vacuum regulator vent gas arrestor designed to treat occasional chlorine gas vent releases that may accompany chlorine container changeovers and fouled vacuum regulator inlet valves. The field tested VEGA prevents nuisance tripping of chlorine room air sensor alarms; helps compliance with local, state and federal code restrictions against exhausting chlorine fumes outside of a building; keeps the building free from chlorine related acid corrosion.

The VEGA is a 5 gallon (18.9 liters) HDPE disposable container of chemically impregnated alumina oxide 4 mm spherical beads designed to react on contact to convert the chlorine to harmless landfill disposable salt. The solid reaction products are locked in the ceramic bead. This is the same media as used in the EST™ Type DES 3000 large one-ton and EST Type DSH 400 150-pound (68 kg) chlorine container scrubbers. Unlike carbon based media used for the same purpose, the Type "STS" ceramic based media carries no fear of combustion and has no need of neutralization prior to disposal.

De Nora Water Technologies recommends at least one VEGA per vacuum regulator vent. The manifolding of two or more regulator vents to a single VEGA is discouraged due to back pressure concerns. As designed, the VEGA has less pressure loss than an equal length of vent tubing.

The VEGA is equipped with inlet and outlet chlorine colorimetric indicator strips. The white strips turn yellow upon exposure to chlorine gas.

For more information on Capital Controls® VEGA™ visit www.denora.com



The VEGA is also available with "PHD" media for use with Sulfur Dioxide (SO₂). Colorimetric indicator strip not available with SO₂.



We Understand Chlorination

Features and Benefits:

- Passive dependable operation – no moving parts
- No liquid chemicals
- Pressure loss less than an equal tubing length
- Media is non-hazardous in fresh or spent forms
- No heaters required above -40°F (-40°C)
- Carbon free non-flammable alumina oxide media substrate
- Inlet and outlet colorimetric chlorine indicators
- Light weight with easy carrying handle – less than 35 pounds (15.9 kg)
- Effortless floor mounting
- Complete with 3/8", 1/2" and 5/8" tube connector adaptors
- Compact 10" sq x 17" high (25.4 cm sq x 43.2 cm high)
- Piggy-Back stackable rugged HDPE construction
- Safe and Low cost
- Tested

Performance Characteristics

The Capital Controls® VEGA™, Vent Exhaust Gas Arrestor, is designed to neutralize the chlorine from intermittent vacuum regulator vent releases normally experienced while changing chlorine containers. The chlorine gas will gravity flow from the vacuum regulator vent to the floor mounted VEGA bottom inlet. The exothermic reaction between the chlorine and the "STS" scrubbing media will cause a draft as the clean hot air rises and exits the VEGA top outlet. The pressure loss through the VEGA will be less than an equivalent length of tubing. The chlorine discharge concentration will be less than the NFPA 1/Uniform Fire Code required 1/2 IDLH.

Validation tests have shown discharge concentrations less than 100 ppbv while the allowable OSHA workplace limit is 500 ppbv. The media is capable of neutralizing up to 3 pounds (1.4 kg) of chlorine based on complete exhaustion. Exhaustion will be evident by a change in color from white to yellow by the colorimetric indicator strip on the VEGA exhaust line.

Scope Specification

Arrestor Container and Assembly

- One (1) 10" square x 17" high (25.4 cm square x 43.2 cm high), 5 gallon (19.0 liters) high density polyethylene containers, white opaque, UV inhibited with lockable lid.
- Side mounted bottom inlet and top outlet PVC bulkhead fittings with internal screens
- Side mounted external inlet and outlet clear PVC observation elbows implanted with colorimetric chlorine indicator strips
- One set of three tubing connectors for 3/8", 1/2", 5/8" tubing
- Bulkhead shipping plugs
- 30 pounds (13.6 kg) of Type "STS" dry media, chemically impregnated activated alumina for chlorine treatment
- Built-in hand grips
- Carrying handle
- Total filled weight is 35 pounds (15.9 kg)

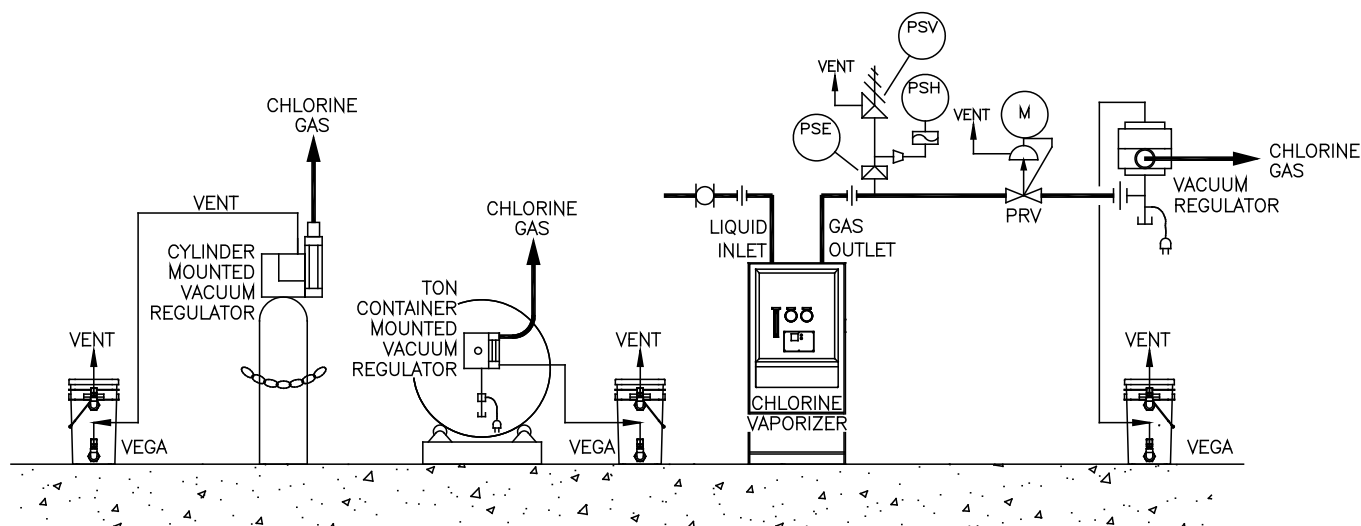
Available Upon Request:

- CAD drawings
- Sample specifications
- "STS" media MSDS
- Test certifications
- On-Site room audits
- Custom designs for other gases

De Nora Water Technologies recommends two VEGA™ arrangements.

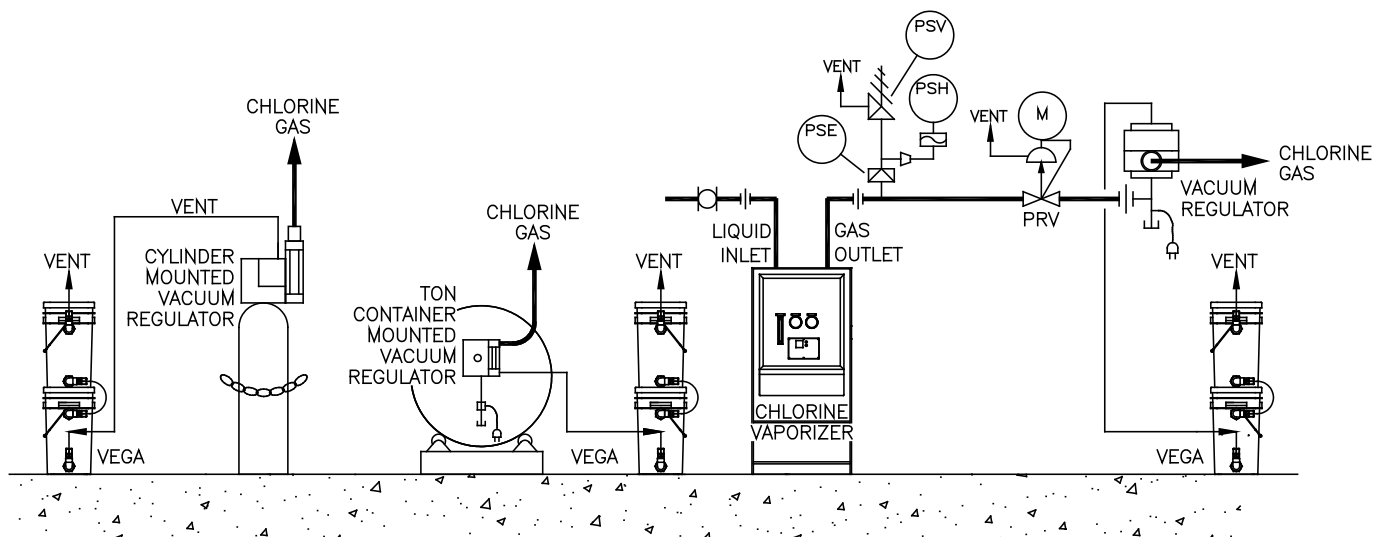
Single System Arrangement

The most common is a single system arrangement. The outlet port tubing is run outside of the room to an area which can accept a small dose of chlorine or to the room air chlorine sensor. The VEGA system should be replaced once a year to best ensure no escape of chlorine when using a single unit arrangement.



Stacked System Arrangement

The second configuration is a stacked arrangement. This design further ensures that no chlorine will escape into the room or outside the room. The first of two VEGA containers is connected in series to a second top-mounted container with an intermediate chlorine indicator strip. When this strip turns yellow it is time to replace the first container. The second container guards against area contamination until the exhausted VEGA system can be replaced. Tests have shown that under sporadic venting conditions a VEGA system should last at least one year before replacement is required.



Brief Specification

The Vent Exhaust Gas Arrestor (VEGA™) shall meet or exceed the requirements of the "NFPA 1/Uniform Fire Code" (UFC) including the requirement of Article 80 section 8003.3 relating to treatment systems for toxic and highly toxic compressed gases.

The VEGA manufacturer shall provide calculations and a written guarantee documenting that the VEGA meets the requirements, as specified herein, when operated in accordance with the manufacturer's system operating instructions.

The VEGA shall be passive, utilizing a carbon-free dry chemical process, and include De Nora Water Technologies Capital Controls® Type "STS" chlorine neutralizing media set within a high density polyethylene vessel, complete with inlet and outlet colorimetric chlorine indicators, and tubing connectors. Media types that have carbon as part of the substrate are not acceptable.

The VEGA system shall be fully passive and shall be designed to neutralize up to 3 pounds (1.4 kgs) of cumulative chlorine vent exhaust from a chlorinator vacuum regulator. The pressure loss through the VEGA unit shall be less than an equivalent length of tubing. Exhaustion shall be evident by a change in color from white to yellow by the colorimetric strip on the VEGA exhaust line.

The VEGA system shall be furnished by a single ISO 9001 approved manufacturer with a minimum of 5 years experience in the design and supply of dry carbon-free chlorine gas neutralizing systems. The system shall be De Nora Water Technologies Capital Controls® VEGA™.

For more information on Capital Controls® VEGA™ visit www.denora.com

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Warranty and Capability

De Nora Water Technologies offers a limited one (1) year warranty (Reference 005.9001 for full warranty) on the Capital Controls VEGA Vent Exhaust Gas Arrestor.

De Nora Water Technologies is ISO 9001 certified to provide quality and precision materials. Disinfection technologies, water quality monitors and instrumentation for water and wastewater are areas of specialization. Over 35 years of industrial and municipal application experience in the water and wastewater industries is incorporated into the equipment design to provide high quality comprehensive solutions for the global market.

