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Industrial Refrigeration Corrosion Resistant Controls

June 2009



ENGINEERING YOUR SUCCESS.

Corrosion Resistant Controls

Corrosion resistance, reduced weight, and operation at high pressures, and low loads – that's what our new generation of controls offers to simplify system design and maintenance.

The controls are engineered from corrosion resistant alloys, utilizing new technologies that reduce the component weight by up to 70%, while maintaining the working pressures to 32 bar (464 psig). Additionally, the design of these valves allows them to operate and control at low load conditions, with an improved turndown ratio of 10:1. The unique pilot arrangement greatly reduces the potential for valve malfunction due to foreign matter.

For sustainability, reduced installed cost, and reduced shipping cost, Refrigerating Specialties corrosion resistant component line provides the simplified solution.

Inlet Pressure Regulators

A4W
20-50mm
(3/4" to 2")
32 bar
(464 psig)



Purpose:

The A4W inlet pressure regulators modulate the flow of refrigerant gas or liquid to maintain a constant upstream pressure. This improved design has a higher working pressure, greater working temperature range than competitive products, and minimizes the effects of system impurities for a more durable operation. The A4Ws most beneficial features are its stainless steel and aluminum construction, which allows it to withstand corrosive environments and its overall light weight minimizes installation costs.

Product Features:

- Suitable for Ammonia, CO₂, R-22, R-404A, and other common refrigerants
- Designed entirely with corrosion resistant material – 304 stainless steel and aluminum
- No body wearing surfaces
- Stainless steel components are resistant to wire drawing
- Improved performance at low loads with a turn down ratio of 10% of capacity
- Design drastically reduces foreign material to flow from inlet to diaphragm/seat and piston cavity
- Light weight
- Can be mounted in a horizontal and vertical position
- Several control options available
- Fluid temperature rating: -60°C to 116°C (-76°F to 240°F)
- Ambient temperature rating: -40°C to 60°C (-40°F to 140°F)
- Complies with Pressure Equipment Directive 97/23/EC

For complete information on the A4W, request Product Bulletin 22-00.

Outlet Pressure Regulators

A4WO
20-50mm
(3/4" to 2")
32 bar
(464 psig)



Purpose:

The A4WO outlet pressure regulators modulate the flow of refrigerant gas or liquid to maintain a constant downstream pressure. This improved design has a higher working pressure, greater working temperature range than competitive products, and minimizes the effects of system impurities for a more durable operation. The A4WOs most beneficial features are its stainless steel and aluminum construction, which allows it to withstand corrosive environments and its overall light weight minimizes installation costs.

Product Features:

- Suitable for Ammonia, CO₂, R-22, R-404A, and other common refrigerants
- Designed entirely with corrosion resistant material – 304 stainless steel and aluminum
- No body wearing surfaces
- Stainless steel components are resistant to wiredrawing
- Improved performance at low loads with a turn down ratio of 10% of capacity
- Design drastically reduces foreign material to flow from inlet to diaphragm/seat and piston cavity
- Light weight
- Can be mounted in a horizontal and vertical position
- Several control options available
- Fluid temperature rating: -60°C to 116°C (-76°F to 240°F)
- Ambient temperature rating: -40°C to 60°C (-40°F to 140°F)
- Complies with Pressure Equipment Directive 97/23/EC

For complete information on the A4WO, request Product Bulletin 22-05.

Solenoid Valves

S4W
20-50mm
(3/4" to 2")
32 bar
(464 psig)



Purpose:

The S4W is a spring closing valve suitable for use in refrigerant liquid, hot gas, or suction lines, whose primary purpose is to stop flow of refrigerant. The S4Ws most beneficial features are its stainless steel and aluminum construction, which allows it to withstand corrosive environments and its overall light weight minimizes installation costs.

Product Features:

- Suitable for Ammonia, CO₂, R-22, R-404A, and other common refrigerants
- Designed entirely with corrosion resistant material – 304 stainless steel and aluminum
- No body wearing surfaces
- Stainless steel components are resistant to wiredrawing
- Design drastically reduces foreign material to the solenoid and piston cavity
- Light weight
- Can be mounted in a horizontal and vertical position
- Fluid temperature rating: -60°C to 116°C (-76°F to 240°F)
- Ambient temperature rating: -40°C to 60°C (-40°F to 140°F)
- Complies with Pressure Equipment Directive 97/23/EC

For complete information on the A4W, request Product Bulletin 30-01.

Refrigerant Strainers

RSW
20-50mm
(3/4" to 2")
32 bar
(464 psig)



Purpose:

The RSW refrigerant strainer collects foreign materials and dirt in a refrigerant system at minimal pressure drop in order to minimize or prevent damage of control valves. The RSWs most beneficial features are its stainless steel and aluminum construction, which allows it to withstand corrosive environments and its overall light weight minimizes installation costs.

Product Features:

- Suitable for Ammonia, CO₂, R-22, R-404A, and other common refrigerants
- Designed entirely with corrosion resistant material – 304 stainless steel and aluminum
- Light weight
- Stainless steel (60 mesh) screen
- Fluid temperature rating: -60°C to 116°C (-76°F to 240°F)
- Ambient temperature rating: -40°C to 60°C (-40°F to 140°F)
- Complies with Pressure Equipment Directive 97/23/EC

For complete information on the RSW, request Product Bulletin 00-20.





CLIMATE CONTROL

- Accumulators
- CO₂ controls
- Electronic controllers
- Filter-driers
- Hand shut-off valves
- Heat exchangers
- Hose & fittings
- Pressure regulating valves
- Refrigerant distributors
- Safety relief valves
- Solenoid valves
- Thermostatic expansion valves



AEROSPACE

- Flight control systems & components
- Fluid conveyance systems
- Fluid metering delivery & atomization devices
- Fuel systems & components
- Hydraulic systems & components
- Inert nitrogen generating systems
- Pneumatic systems & components
- Wheels & brakes



ELECTROMECHANICAL

- AC/DC drives & systems
- Electric actuators, gantry robots & slides
- Electrohydrostatic actuation systems
- Electromechanical actuation systems
- Human machine interfaces
- Linear motors
- Stepper motors, servo motors, drives & controls
- Structural extrusions



FILTRATION

- Analytical gas generators
- Compressed air & gas filters
- Condition monitoring
- Engine air, fuel & oil filtration & systems
- Hydraulic, lubrication & coolant filters
- Process, chemical, water & microfiltration filters
- Nitrogen, hydrogen & zero air generators



FLUID & GAS HANDLING

- Brass fittings & valves
- Diagnostic equipment
- Fluid conveyance systems
- Industrial hose
- PTFE & PFA hose, tubing & plastic fittings
- Quick disconnects
- Rubber & thermoplastic hose & couplings
- Tube fittings & adapters



HYDRAULICS

- Diagnostic equipment
- Hydraulic cylinders & accumulators
- Hydraulic motors & pumps
- Hydraulic systems
- Hydraulic valves & controls
- Power take-offs
- Quick disconnects
- Rubber & thermoplastic hose & couplings
- Tube fittings & adapters



PNEUMATICS

- Air preparation
- Brass fittings & valves
- Manifolds
- Pneumatic actuators, grippers, valves, controls & accessories
- Quick disconnects
- Rotary actuators
- Rubber & thermoplastic hose & couplings
- Structural extrusions
- Thermoplastic tubing & fittings
- Vacuum generators, cups & sensors



PROCESS CONTROL

- Analytical sample conditioning products & systems
- Fluoropolymer chemical delivery fittings, valves & pumps
- High purity gas delivery fittings, valves & regulators
- Instrumentation fittings, valves & regulators
- Medium pressure fittings & valves
- Process control manifolds



SEALING & SHIELDING

- Dynamic seals
- Elastomeric o-rings
- EMI shielding
- Extruded & precision-cut, fabricated elastomeric seals
- Homogeneous & inserted elastomeric shapes
- High temperature metal seals
- Metal & plastic retained composite seals
- Thermal management

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