

SPENCE

SAFETY & RELIEF VALVES



- Steam
- Air
- Liquids
- Gases
- Cryogenic



Safety Relief Valves

Figure 31, 41 & 41A Flanged

CAST IRON SAFETY VALVES FOR STEAM, AIR & NON-HAZARDOUS GAS SERVICE

Sizes: 1-1/2 x 2-1/2 to 6 x 8 inches

Orifices: J (1.391) to R (16.475) square inches

Set Pressure Range: 5 to 250 PSIG

Temperature Range: -20 to 406°F

Applicable Codes: ASME Section I & VIII Steam, Air & Gas
C.S.A. B-51 Canadian Registration #0G0591.9C

Applications: Steam Boilers, Unfired Steam Pressure Vessels & Steam Lines, Pressure Reducing Stations, Accumulators, Sterilizers, Steam Cleaners & Cookers, Compressors, Receivers, Intercoolers & Aftercoolers, Pneumatic Conveyers & other Pneumatic Systems

Materials & Options: Standard materials are cast iron body, bronze trim & carbon steel-zinc plated spring. Features include a semi-nozzle, dual ring control & open lever.



Figure 31, 41 & 41A Threaded

BRONZE SAFETY VALVES FOR STEAM, AIR & NON-HAZARDOUS GAS SERVICE

Sizes: 1/2 x 3/4 to 2-1/2 x 2-1/2 inches

Orifices: D (.1188) to J (1.391) square inches

Set Pressure Range: 5 to 300 PSIG

Temperature Range: -20 to 422°F

Applicable Codes: ASME Section I & VIII Steam, Air & Gas
C.S.A. B-51 Canadian Registration #0G0591.9C
PED 97/23/EC

Applications: Steam Boilers, Unfired Steam Pressure Vessels & Steam Lines, Pressure Reducing Stations, Accumulators, sterilizers, Steam Cleaners & Cookers, Compressors, Receivers, Intercoolers & Aftercoolers, Pneumatic Conveyers & other Pneumatic Systems

Materials & Options: Standard materials are bronze body, brass/bronze trim & carbon steel-zinc plated spring. Features include a full nozzle, dual ring control & open lever. Top outlet available 1/2 to 2 (Figure 41A-T, 42A-T & 43A-T). Closed bonnet for hazardous service available 1/2 x 3/4 (Figure 41A-A). Available with stainless steel trim: base & disc (Figure 32, 42, 42A & 42A-A).



Figure 10

CAST IRON SAFETY VALVES FOR STEAM HEATING BOILERS

Sizes: 3/4 x 1 to 3 x 3 inches

Orifice: .276 to 4.430 square inches

Set Pressure Range: 5 to 15 PSIG

Temperature Range: -20 to 250°F

Applicable Codes: ASME Section IV Steam (at 15 PSIG only)
C.S.A. B-51 Canadian Registration #0G0591.9C

Applications: Commercial, Residential & Industrial Low Pressure, Steam Heating Boilers.

Materials & Options: Standard materials are cast iron body, brass/bronze trim & carbon steel-zinc plated spring.



Safety Relief Valves

Figure 15V

CAST IRON SAFETY VALVES FOR VACUUM SERVICE

- Sizes:** 1 x 3/4 to 3 x 3 inches
- Orifices:** .276 to 4.430 square inches
- Set Pressure Range:** 5 to 30 inches HG
- Temperature Range:** -20 to 400°F
- Applications:** Bulk Hauling Trailers, Vacuum Pumps & Pneumatic Conveying Equipment, Light Gauge Tanks
- Materials & Options:** Standard materials are cast iron body, brass/bronze trim & carbon steel-zinc plated spring. (Same as 15A, installation reversed).



Figure 50

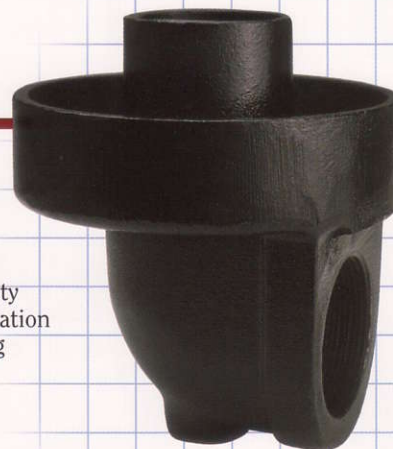
BRONZE OR ALUMINUM SAFETY VALVES FOR AIR, GAS, VAPORS & POWDERED SOLIDS SERVICE

- Sizes:** 2 inch FPT Inlet
- Orifices:** 2.011 square inches
- Set Pressure Range:** 10 to 30 PSIG
- Temperature Range:** 0 to 225°F
- Applicable Codes:** ASME VIII Air, Gas & Vapors, C.S.A. B-51
Canadian Registration #0G0591.9C
- Applications:** Bulk Hauling Trailers & Storage Vessels, Railroad Tank Cars, Pneumatic Conveyor Systems & Related Equipment
- Materials & Options:** Standard materials are bronze body, bronze trim, viton o-ring seat seal & a carbon steel-zinc plated spring. Bronze with pull ring (Figure 51), Aluminum body (Figure 52), Aluminum body with pull ring (Figure 53).



Drip Pan Elbow

- Sizes:** 3/4 to 8 inches
- Pressure Range:** To 250 PSIG
- Temperature Range:** To 406°F
- Applications:** Installed on the outlet/discharge pipes of steam safety valves. Drip Pan elbows collect & drain the condensation to safe areas, eliminating piping stains & preventing injury/damage to people/equipment.
- Materials & Options:** Standard materials are cast iron.
Sizes 3/4 to 4 inches have an FPT inlet.
Sizes 6 & 8 inches have integral 125# ANSI flange inlets.



Cryogenic Safety Relief Valves

Figure 790/780 Cryotree™/Diverter Valve

BRONZE 3 WAY BALL VALVE (CRYOTREE™ ADDS SAFETY RELIEF VALVE & RUPTURE DISC) FOR AIR, LIQUID & GAS SERVICE

- Sizes:** 3/4 to 1-1/2 inches
- Orifices:** Full
- Set Pressure Range:** 0 to 600 PSIG
- Temperature Range:** -423 to 400°F
- Applicable Codes:** ANSI B31.3, ASME Section VIII Liquid, Air & Gas, CGA S-1.2 & S-1.3, V-4301 & V-4401
- Applications:** Dual Safety Relief Systems, Stationary Cryogenic Tanks, Manifolding, Distribution Systems, Process Systems, Liquid & Gaseous Cryogenic Applications
- Materials & Options:** Standard materials are bronze body, stainless steel stem, oxygen cleaned, v ring stem packing, teflon® seals, bronze safety valves (Figure 710), bronze rupture disc and brass bleed valves

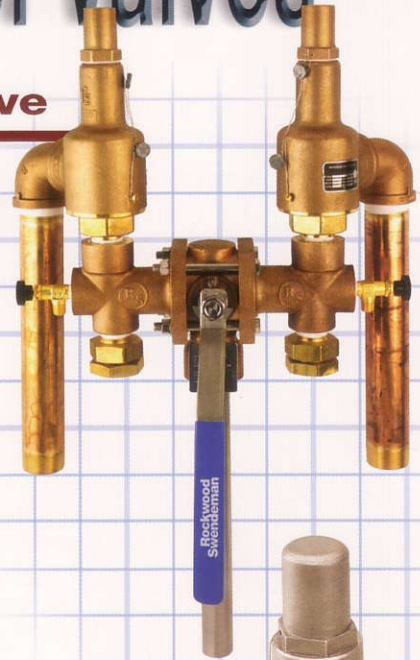


Figure 710/760 RXSO/RXSO-S

BRONZE OR STAINLESS STEEL SAFETY RELIEF VALVES FOR AIR, LIQUID & GAS SERVICE

- Sizes:** 1/2 to 2 inches
- Orifices:** A (.118) to E (.628) square inches
- Set Pressure Range:** 10 to 400 PSIG
- Temperature Range:** -423 to 400°F
- Applicable Codes:** ASME Section VIII Liquid, Air & Gas, CGA S-1.2 & S-1.3, V-4301 & V-4401, API 527, Canadian Registration #QG0591.9, PED 97/23/EC
- Applications:** Stationary Cryogenic Storage Tanks, Dual Safety Relief Systems, Tanks, Pipelines, Vessels & Pumps, Air & Gas Compressors, Corrosive Industrial Applications, Noxious or Expensive Liquid or Gases
- Materials & Options:** Standard material are bronze body, bronze trim, plain cap, teflon soft seat, oxygen cleaned and packaged & stainless steel spring. Also available in all stainless steel. Features include an open lever, large & extra large capacity.



Figure 770/775 RSL/RSL-S

BRONZE OR STAINLESS STEEL RELIEF VALVE FOR LIQUID SERVICE

- Sizes:** 1/2 to 2 inches
- Orifices:** A (.118) to E (.628) square inches
- Set Pressure Range:** 10 to 300 PSIG
- Temperature Range:** 0 to 300°F
- Applications:** Tanks, Pumps, Pipeline & Vessels
- Materials & Options:** Standard material are bronze body, bronze trim, plain cap, teflon® soft seat, oxygen cleaned and packaged & stainless steel spring. Also available in all stainless steel. Features include an open lever, large & extra large capacity.



Safety Relief Valves

Figure 810/820 Multi-Purpose

BRONZE SAFETY RELIEF VALVES FOR STEAM, LIQUID, AIR & GAS SERVICE

- Sizes:** 1/2 to 1-1/2 inches
- Orifices:** D (.1188) to H (.8479) square inches
- Set Pressure Range:** 5 to 900 PSIG
- Temperature Range:** -400 to 422°F
- Applicable Codes:** ASME Section VIII Steam, Liquid, Air & Gas, API 527
C.S.A. B-51 Canadian Registration #0G0591.9C
PED 97/23/EC
- Applications:** Steam/Liquid/Air/Gas Pressure Vessels & Systems, Pumps, Tanks & Hydraulic Systems, Pressure Reducing Stations, Vacuum Systems, OEM Equipment
- Materials & Options:** Standard materials are bronze body, brass/bronze trim & stainless steel spring. Also available in stainless steel trim. Features include Packed Cap, Open Lever, Plain Cap, EPDM/Viton/Teflon Soft Seats.

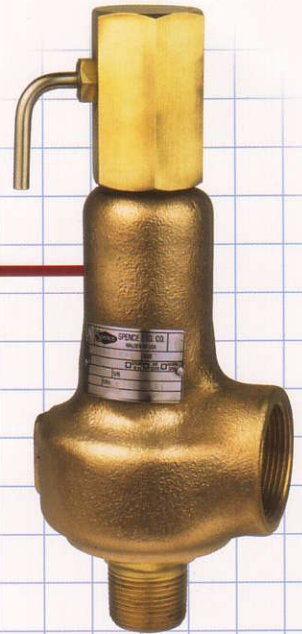


Figure 860 Multi-Purpose

STAINLESS STEEL SAFETY RELIEF VALVES FOR STEAM, LIQUID, AIR & GAS SERVICE

- Sizes:** 1/2 to 1-1/2 inches
- Orifices:** D (.1188) to H (.8479) square inches
- Set Pressure Range:** 5 to 900 PSIG
- Temperature Range:** -320 to 800°F
- Applicable Codes:** ASME Section VIII Steam, Liquid, Air & Gas, API 527
C.S.A. B-51 Canadian Registration #0G0591.9C
- Applications:** Steam/Liquid/Air/Gas Pressure Vessels & Systems, Pumps, Tanks & Hydraulic Systems, Pressure Reducing Stations, Vacuum Systems, OEM Equipment
- Materials & Options:** Standard materials are 316 stainless steel body, trim & spring. Features include Packed Cap, Open Lever, Plain Cap, EPDM/Viton/Teflon Soft Seats.



Figure 15C/15A

CAST IRON & ALUMINUM SAFETY VALVES FOR AIR & NON-HAZARDOUS GAS SERVICE

- Sizes:** 3/4 x 1 to 3 x 3 inches
- Orifices:** .276 to 4.430 square inches
- Set Pressure Range:** 5 to 15 PSIG (Above 15 PSIG, consult factory)
- Temperature Range:** -20 to 400°F
- Applicable Codes:** ASME Section VIII Air & Gas (2 x 2-1/2 inch only)
C.S.A. B-51 Canadian Registration
#0G0591.9C (15C, 15LC) #OH0591.9C (15A, 15LA)
- Applications:** High Volume Blowers & Compressors, Dryers & Pneumatic Equipment, Bulk Hauling Trailers, Air Pollution Control Equipment
- Materials & Options:** Standard materials are cast iron body, brass/bronze trim & carbon steel-zinc plated spring. Without lifting lever (Figure 15A). Aluminum body (Figure 15LC/15LA).





A division of CIRCOR International, Inc.

150 Coldenham Road
Walden NY 12586-2035
845-778-5566
Fax 845-778-1072
sales@spenceengineering.com

SPENCE ENGINEERING COMPANY, INC.

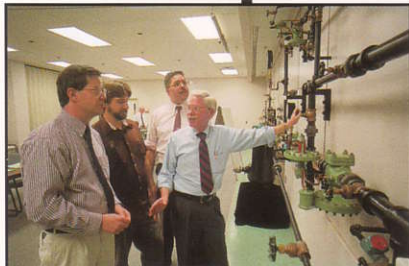
Paulsen Spence patented the normally closed external pilot operated packless Pressure Regulator in 1926 and founded Spence Engineering Company. Today, Spence is the only producer of Regulators up to 12 inches in cast iron and cast steel. Spence Regulators are recognized as the most durable and reliable built today.

Nicholson Steam Traps, renowned for their high quality since 1883, have been manufactured at Spence's ISO 9001 certified facility since 1994. Spence is also an ASME certified manufacturer of bronze, iron and stainless steel Safety Relief Valves, including Rockwood Swendeman Cryogenic Safety Relief Valves. SSI Equipment Inc. Strainers and Valves have further broadened the Spence product offering, including Custom Fabricated Strainers in a wide variety of materials and Automated, Self Cleaning Strainers/Systems.

Spence Engineering has grown to be a single source provider of Thermal Fluid Control products for commercial, institutional and industrial facilities.

Local Technical Support

Spence Engineering has a network of highly trained Representatives around the world who can direct you to local inventory of our products for fast delivery. They have the expertise to assist you in system design and product specification, assuring the best, most cost effective solution for your needs.



Technical Training

We offer a regular schedule of workshops covering various technical issues in our state of the art Valve Technology Training Center. We can also schedule customized on-site training sessions to suit your particular needs.

Find out more about the companies of Circor International at www.circor.com

Spence Safety Relief Valves are Available from Stock!

To find the nearest Spence Safety Valve Center, contact your local Spence Representative or contact us at 1-845-778-1072 or visit our Website at www.spenceengineering.com