



# Consolidated\* 1511 Series

## Safety Valve

### Overview

Consolidated\* 1511 series safety valves from GE offer a proven, high-performance design for low-pressure steam heating boilers and steam generators, as well as air service applications. The valves' cast-iron, exposed-spring design is built to meet exacting ASME Section I and VIII specifications.

### Features and Benefits

- Handles a broad range of operating conditions. Pressures up to 250 psig (17.24 barg) and operating temperatures as high as 406 F (207.8 C).
- Available in a variety of sizes. From 1.5 inches (38.1 mm) to 6 inches (152.4 mm) in a complete range of ASME-certified orifice sizes.
- Meets industry specifications. ASME Section I and VIII certified and offered with ASME/ANSI Class 125 and 250 flat face flanges.
- Offers easy assembly and maintenance. Exposed-spring design provides quick, simple assembly and maintenance

### Applications

#### Steam or Air Service

Consolidated 1511 safety valves are designed for use in all steam and air service applications within specified pressure and temperature limits. These valves are not suitable for incompressible fluid service, such as water or oil.

#### Noncorrosive Air or Gas Service

- Please contact your GE sales representative with questions about noncorrosive compressible fluid service (other than air or steam) for your specific application. Consolidated 1511 valves are not suitable for relieving toxic, flammable, or corrosive media.

#### Approved for Marine Use

- With ASME Section I certification, Consolidated 1500 series safety valves are approved for use by the U.S. Coast Guard, as well as for a variety of other marine applications.

### Bolting to Steel Flanges

Special considerations are required when bolting valves to carbon steel flanges:

- ANSI Class 150 Steel Flanges. When the valve is bolted to Class 150 steel flanges, the flange must be flat-faced.
- ANSI Class 300 Steel Flanges. When the valve is bolted to Class 300 steel flanges, the raised face of the flange may be supplied with a flat face.



#### Note:

Because the Consolidated 1511 valve is not fully enclosed, system media will escape from the following locations during operation:

1. Valve outlet: Most of the steam will escape from this main discharge area.
2. Open yoke: A small amount of steam will exhaust vertically from the valve.
3. Drain hole: Additional steam will escape from the hole at the base of the valve.

**Scope of Design**

Inlet Size		Valve Type	Orifice Discharge Area		Connections	
in.	mm		in <sup>2</sup>	cm <sup>2</sup>	Inlet <sup>1</sup> ANSI STD RF	Outlet ANSI STD
1.50	38.1	1511H	.785	5.065	1.50" (38.1 mm) 250 class	2.50" (63.5 mm) NPT(internal)
1.50	38.1	1511J	1.287	8.303	1.50" (38.1 mm) 250 class	2.50" (63.5 mm) NPT(internal)
2.00	50.8	1511K	1.840	11.871	2.00" (50.8 mm) 250 class	3.00" (76.2 mm) NPT(internal)
2.50	63.5	1511L	2.853	18.406	2.50" (63.5 mm) 250 class	4.00" (101.6 mm) NPT (internal)
3.00	76.2	1511M	3.600	23.226	3.00" (76.2 mm) 250 class	4.00" (101.6 mm) NPT(internal)
4.00	101.6	1511N	4.340	28.000	4.00" (101.6 mm) 250 class	6.00" (152.4 mm) 125 class F.F.
4.00	101.6	1511P	6.380	41.161	4.00" (101.6 mm) 250 class	6.00" (152.4 mm) 125 class F.F.
6.00	152.4	1511Q	11.050	71.290	6.00" (152.4 mm) 250 class	8.00" (203.2 mm) 125 class F.F.

Note:

1. Inlet connection available with ANSI class 125 FF on application.

**Enlarge Inlet Flange Option  
ANSI Class 250 Replacement  
Valves**

Orifice	Enlarge Inlet Flange	
	in.	mm
H	2.00	50.8
	2.50	63.5
	3.00	76.2
J	2.00	50.8
	2.50	63.5
	3.00	76.2
K	2.50	63.5
	3.00	76.2
	3.50	88.9
	4.00	101.6
L	3.00	76.2
	3.50	88.9
	4.00	101.6
M	3.50	88.9
	4.00	101.6
	4.50	114.3

**Pressure/Temperature Limits**

Valve Type	Set Pressure Limit		Temperature Limit	
	psig	barg	°F	°C
	1511	250	17.23	406
1511_S	250	17.23	406	207.7

**Specifications**

INLET SIZES	1.5" (38.1 mm) through 6" (152.4 mm) in either flanged or threaded design.
INLET RATINGS	ANSI Class 250, Optional ANSI Class 125 or Female Screwed.
OUTLET SIZES	2.5" (63.5 mm) through 4" (101.6 mm) threaded, 6" (152.4 mm) and 8" (203.2 mm) flanged.
OUTLET RATINGS	ANSI Class 125, Optional ANSI Class 125 or Female Screwed.
ORIFICE SIZES	Eight sizes: H through Q
TEMPERATURE RANGE	-20°F (-28.9°C) to 406°F (207.8°C)
MATERIALS	Cast iron body with brass trim is standard. Stainless steel trim is optional.
CERTIFICATION	ASME B & PVC Section I and VIII
BLOWDOWN	4 percent
BACK PRESSURE LIMIT	20 percent of Set Pressure

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