



# Consolidated™ Condensed Catalog

## Pressure Relief Solutions

- Safety Relief Valves
- Safety Valves

**Consolidated**

a Baker Hughes business

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# Baker Hughes is looking to the future

The world is rapidly changing. In the dynamic environment of Energy Transition, it's more important than ever to innovate and provide solutions that help our customers face new challenges with confidence in their process applications.



**Optimize Service**



**Improve Reliability**



**Increase Efficiency**



**Reduce Emissions**











## 19000 Series Safety Relief Valve

Inlet Sizes: 0.5" to 2"

Inlet Ratings: Threaded and ASME Class 150 through 2500"

Outlet Ratings: Threaded and ASME Class 150 to 300

Orifice Sizes: 0.096 sq. in. through 0.567 sq. in.

Set Pressure Range: 5 to 8000 psig (0,34 to 551 barg)

Temperature Range: -425°F to 1100°F (-254°C to 593°C)

Certifications: ASME B&PVC Section III and XIII (UV)  
PED  
China Manufacturing License (CML)  
API 520 and 521  
NACE  
Others available upon request

The 19000 Series safety relief valve is ASME and PED certified. It meets and exceeds API seat tightness performance. The 19000 offers enhanced capacity and blowdown performance on many media types. In most cases, it does not require parts changes to accommodate different media.

## Options for 19000 Series Safety Relief Valve

### 19000-MS Standard Design

Metal-to-metal seat construction. Seat tightness compliant with API 527.

### 19000-DA Series O-Ring Seat Option

Soft seat design offers bubble tight seats at up to 97 percent of valve set pressure for valves set at 101 psig (6.96 barg) and above. This option promotes higher, more efficient system operating pressures without significant seat leakage concerns.









# Consolidated Safety Valves

## In compliance with:

- ASME Section I Code for Boiler Applications

Since 1879, Consolidated safety valves have been known for exceptional quality, performance and dependability. Because safety valves play an important role in keeping people and equipment safe, it is important that they be reliable in even the most demanding real-world applications. That's why Baker Hughes works closely with our customers and regulatory organizations to configure, engineer, and manufacture safety valves that can help maintain safer operating conditions in a full range of environments.

### Key valve features

Our comprehensive portfolio of safety valves offer cost effective solutions for maintaining smooth steam operations safely. Consolidated safety valves feature a unique pop-action opening that can relieve over-pressurized steam quickly, when pressures upstream from the valve reach set point.

What is more, Consolidated safety valves comply with the ASME Section I code for boiler applications. They are built with many features that meet ASME requirements for steam-compressible fluids. For example, all models feature a lifting lever, required by the code for testing, instead of deadweight or weighted levers. Consolidated safety valves can also withstand set pressures up to 103 percent with a blowdown value of 4 percent, or 96 percent of set pressure drop before the valve re-seats.

### A full range of valves

With a range of styles, models, options and configurations, Consolidated safety valves work in many different boiler applications.

### Applications:

- Economizer (steam/water)
- Drum
- Superheater main steam line
- Supercritical
- Power actuated relief valve
- Cold re-heater line
- Hot re-heater line
- Soot blowers in forced flow steam generators
- Organic fluid vapor generators
- High temp hot water generators
- Electric boilers
- Waste heat recovery boilers





## 1700 Series Maxiflow™ Safety Valve

Inlet Sizes:	1.5" through 8"
Inlet Ratings:	ASME Class 600 through 4500 Flanged and BWE
Outlet Sizes:	3" through 10" flanged
Outlet Ratings:	ASME Class 150 and 300
Orifice Sizes:	Eleven sizes – 1 through T
Set Pressure Range:	100 to 5800 psig (6,90 to 400 barg)
Temperature Range:	Up to 1200°F (649°C)
Materials:	Alloy and carbon steel cast body with stainless steel trim
Certifications:	ASME B&PVC Section I (V) and Section XIII (UV) PED China Manufacturing License (CML) Others available upon request

The 1700 Series Maxiflow high-pressure safety valve is a premium product that is installed on a majority of power generating stations worldwide to help protect boilers from overpressure conditions.



## 2700 Series Safety Valve

Inlet Sizes:	1.5" through 6"
Inlet Ratings:	ASME Class 600, 900 and 1500
Outlet Sizes:	3" through 8"
Outlet Ratings:	ASME Class 150 and 300
Orifice Sizes:	Seven sizes – 1 through Q
Set Pressure Range:	100 to 1600 psig (6,90 to 110 barg)
Temperature Range:	Up to 1050°F (565°C)
Materials:	Alloy and carbon steel cast body with stainless steel trim
Certifications:	ASME B&PVC Section I (V) and Section XIII (UV) PED China Manufacturing License (CML) Others available upon request

The 2700 Series safety valve is configured to meet the specific requirements of the cogeneration and waste-to-energy markets.

# Consolidated Safety Valves



## 1811 Series Safety Valve

Inlet Sizes:	1.25" through 6"
Inlet Ratings:	ASME Class 300 and 600
Outlet Sizes:	1.5" through 8"
Outlet Ratings:	ASME Class 150
Orifice Sizes:	Ten sizes – F through Q
Set Pressure Range:	15 to 725 psig (1 to 50 barg)
Temperature Range:	Up to 1000°F (538°C)
Materials:	Alloy and carbon steel cast body with stainless steel trim
Certifications:	ASME B&PVC Section I (V) and Section XIII (UV) PED China Manufacturing License (CML) Others available upon request

The 1811 Series safety valve is a cost-effective, high-capacity, flanged-steel safety valve for steam service.

## 1511 Series Safety Valve

Inlet Sizes:	1.5" through 6"
Inlet Ratings:	ASME Class 250
Outlet Sizes:	2.5" through 4"
Outlet Ratings:	ASME Class 125
Orifice Sizes:	Eight sizes – H through Q
Set Pressure Range:	15 to 250 psig (1 to 17,24 barg)
Temperature Range:	-20°F to 420°F (-29°C to 215°C)
Materials:	Cast iron body with brass trim
Certifications:	ASME B&PVC Section I (V) and Section XIII (UV) PED China Manufacturing License (CML) Others available upon request

The 1511 Series safety valve is configured for low pressure, steam heating boilers and steam generators as well as air service applications.



### 1541-3, 1543-3 Series Safety Valve

Inlet Sizes:	0.5" through 2.5"
Outlet Sizes:	0.75" through 2.5"
Inlet Rating:	Threaded
Outlet Rating:	Threaded
Orifice Sizes:	D, E, F, G, H and J
Set Pressure Range:	15 to 350 psig (1 to 24,13 barg)
Temperature Range:	-20°F to 420°F (-29°C to 215°C)
Materials:	Cast iron bonnet with brass base and trim
Certifications:	ASME B&PVC Section I (V) and Section XIII (UV)

The 1541 and 1543 Series safety valves are configured for steam and other compressible fluids. Compression media is limited to non-toxic, non-flammable, non-corrosive service. These valves are most commonly used in pharmaceutical and process plants.



### 1900/P Series Safety Valve

Inlet Sizes:	1" through 8"
Inlet Ratings:	ASME Class 150 through 2500
Outlet Sizes:	2" through 10"
Outlet Ratings:	ASME Class 150 and 300
Orifice Sizes:	D through T
Set Pressure Range:	5 to 6000 psig (0,34 to 414 barg)
Temperature Range:	-20°F to 850°F (-29°C to 454°C)
Certifications:	ASME B&PVC, Section I (V) (Steam Service) API 520 and 527 Others available upon request

The 1900/P Series safety valve is designed to meet Economizer and Organic fluid applications.





## Providing Full-Service Support Locally Around the Globe

Baker Hughes's Aftermarket Centers (AMCs) are designed for advanced distribution systems for Consolidated products around the world. Together with our trained network of over 200 GTCs (Green Tag Centers), we can dispatch a qualified valve expert to nearly any location within hours.

Innovations to stock local modules and kits in region give the sites the ability to assemble and test a wide range of final valve configurations from our state-of-the-art ValvFAST program. Local technicians and advance valve testing, including safety valve steam testing, allows our teams great flexibility to solve the urgent needs of our customers.

- Quality Aftermarket Products and Support
- Quick Access to OEM Parts, Kits and Complete Valves
- Advanced Machining, Testing and Technology to Quickly Fulfill Special Orders



