Your Source For Safety Valves Replacement Parts And Repair Needs

PEC
Process Equipment & Controls

Dear Customer,

Our latest product line addition is safety valves.

We can supply you with new ones, remanufactured ones, or repair your old ones. We can supply you in most cases with the same valve that you might be replacing. We can do it fast and at a competitive price.

The company that we represent sells to wholesalers only. They have the largest inventory in the country ready for immediate shipment. They have been in business for 30 years and their 70,000 sq. ft. warehouse not only houses a lot of room for their inventory, but the latest in test equipment and a complete machine shop. All of the valves are built and set according to code requirements.

One of their many services is an exchange program. If you find that you have a hectic life during turnarounds, this program allows you relief. We can make a list of your needs before the shut down and have the valves ready for installation when you take your old valves down. You can send them in for repair or exchange them for the valves that you just received.

We can tailor any program to your needs. If you wish to have one of our experts give a seminar or visit your plant, arrangements are only a phone call away.

Sincerely,

Your Safety Valve Supplier

VALVE SERVICE CENTER
repairs carry a one-year warranty.

Our service center repair capabilities are designed to keep your safety and relief valves at peak operating efficiency.

The factory-trained service personnel spot potential problems and recommend the most economical ways to solve them. Over the years, our service center has proven popular with maintenance managers. It allows their plants to have valves repaired, serviced and set quickly, which minimizes downtime. They also like the service because it saves them money.

The service center updates the valve to the latest design standard when necessary. These upgrades use only genuine factory standard parts to assure maximum reliability and long life. All valves serviced in our repair facility carry a one-year standard warranty. The service center holds ASME's V & UV stamps and National Board's NB & VR stamps

Exchange and Rental Programs

It is no longer necessary to purchase large stocks of back-up valves or risk excessive downtime costs due to non-availability of needed valves. Our service center's Valve Exchange Program lets you eliminate both the capital commitment and the risk. Instead, you get significant savings in logistics costs during your turnaround maintenance outages. This valve program is individually structured to meet the needs of each customer.

If you have safety valves in need of repair but don't have the numbers that justify an on-site service unit or can't afford a shut down, a valve rental program offers a solution.

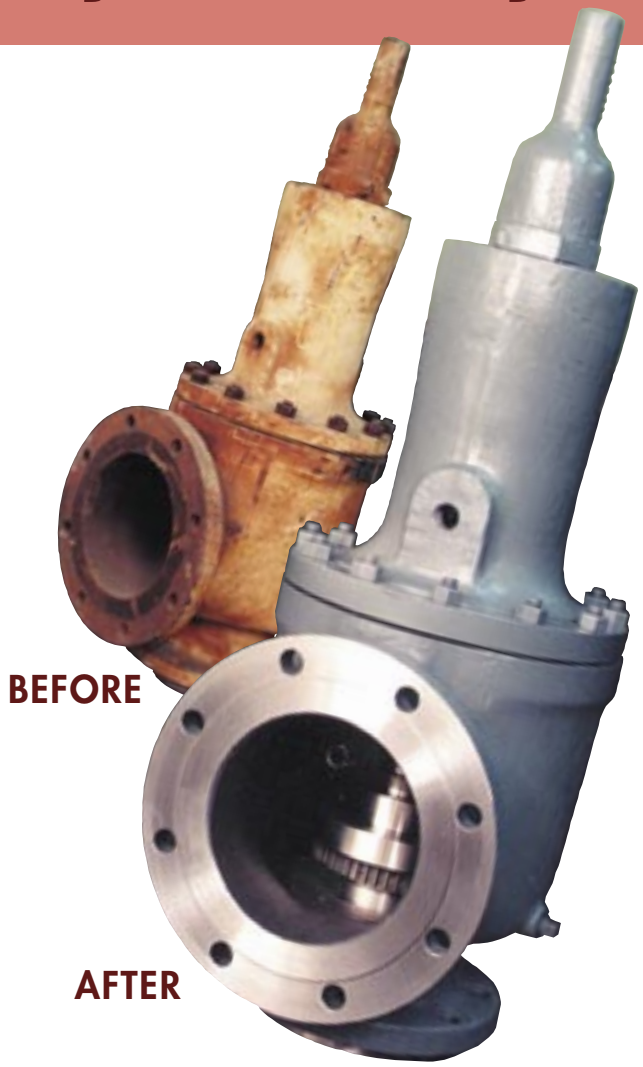
Before a maintenance shutdown, the service center ships the safety valves you need in advance. The old valves are then shipped to the service center for repair, testing and reset. After service, your valves are shipped back to you for replacement of the rental valves.

Either of these programs can maximize uptime while saving both time and money. Your supplier will work directly with a service center application engineer to customize a program to meet your plant's needs.

New Repair Capabilities Added

Our service center now offers in-house repair and testing services on regulator valves, control valves, pressure-sealed gate valves and globe valves.

One call to your valve supplier will provide quick solutions to all your safety and control valve service needs.



Repair Case Study:

■ *Quick Turnaround*

This severe duty safety valve was sent to the service center for repair.

Castings were sandblasted, flanges were refaced, worn critical metal surfaces were resurfaced and machined to original tolerances, and all gaskets, bolts and nuts were replaced.

The valve was then tested under the same rigorous quality guidelines as a new valve and returned to the customer.

The turnaround ... only one week.
The savings ... significant!

A RELIABLE ALTERNATIVE
is the quality in a remanufactured valve.

The difference between remanufactured valves and new OEM valves is:

- Half the price!
- Twice the warranty!

Lower prices, reliable products and quick availability make remanufactured valves a profitable option.

In the past few years, many companies have found that it makes sense to rely on remanufactured safety valves. For most industrial uses, remanufactured valves offer excellent availability and are extremely cost effective without compromising quality or safety.

Now you can be part of this growing trend. We not only have the facilities but also extensive experience in all areas of valve remanufacturing.

Here are just some of the ways we can put that experience to work for you:

Valve Exchange Program

If you have several safety valves in need of repair but can't afford to shut down for lengthy repairs.

Solution: A valve exchange program.

Before a maintenance shutdown, we ship the safety valves to you in advance. The old valves are then shipped to us for repair. After repair, the valves are set and shipped back to you for replacement valves on your next maintenance cycle.

Two-year Warranty Guarantees Workmanship

During the remanufacturing process, all valves receive the utmost attention to ensure they meet original specifications. Our quality control program allows our personnel to carefully monitor all steps of the remanufacturing process to assure the highest quality. And we provide guarantees on all remanufactured valves for two years on parts and workmanship.

As with our new valves, computer-aided ordering and parts inventory ensure a fast, reliable turnaround for remanufactured valves.

Check with your local valve supplier for details on how remanufactured valves can work for you.

FIELD SERVICE UNIT
delivers on-site valve testing and repair.

Fully-equipped repair shop on wheels.

Sometimes even the fastest off-site service isn't good enough … the work must be performed at the site and within a very tight window of opportunity. And that's where our Field Service Unit delivers.

The self-contained repair shop and mobile testing stand unit offers on-site repair and resetting of safety valves during scheduled maintenance shutdowns.

Step into the mobile repair unit and you'll find all the equipment necessary to perform the highest-caliber repairs. Included is a sand blaster, compressor, lathe, mill/drill press, lapping stones—it's all inside. There's also a Consolidated® seat-resurfacing machine with all the adapters for every orifice in the Maxi-Flow® boiler line. Completed safety valve work will carry the VR stamp.

State-of-the-art computerized testing

The Field Service Unit also includes a state-of-the-art computerized lift-assist testing unit that allows for testing set pressures and resetting high-pressure safety valves in the field. The testing unit makes testing valves that are welded in-line or stationary possible without removing the valves. You won't be required to pressure down or increase pressure to test for set pressure. The lift-assist testing unit also allows for resetting valves after repairs have been made while the valves are on-line.

If removing from service and shipping valves isn't practical or possible at your plant, then the on-site Field Service Unit is perfect for you. From the equipment on the truck to the people on the repair team, a nationally respected valve repair company with 30 years of experience backs everything. Whether you need the Field Service Unit for three days or three weeks, you're going to save a lot of downtime.

On-site testing, repair and resetting of:

- Safety valves

Plus, on-site repair of:

- Regulator valves
- Control valves
- Pressure-sealed gate valves
- Globe valves

For more informaton on scheduling and costs, give your local valve supplier a call.

Process/Safety-Relief Valve — Flanged

Consolidated 1900

Features

ASME-NB
- Sizes 1″ - 12″
- Plain cap, open test lever and packed test lever
- Stainless steel or special alloy trim
- For process and general service industries
- C.S. or special alloy bodies
- All stainless
- O Ring Seat
- Balance Seal

Manufacturers and their figure numbers

Consolidated	▪ 1900 Series ▪ 1900-30 Series
Lonergan	▪ D Series ▪ DB Series ▪ DO ▪ DH ▪ DS ▪ WH ▪ R ▪ W
Crosby	▪ JOS/JO Series ▪ JBS/JB Series ▪ JL ▪ JW ▪ JJC ▪ JO112C ▪ Sage 600 Series
Farris	▪ 26EA10 ▪ 26RB11 ▪ 26PA12
Kunkle	▪ 5000 Series ▪ 5100 Series

Process/Safety-Relief Valve — Screwed

Kunkle 264/266

Features

ASME-NB
- Sizes 1/4″ - 2″
- Plain cap, open test lever and packed test lever
- Stainless steel or special alloy trim
- For process and general service industries
- All stainless
- O Ring Seat
- Special Connections
  - Flanged
  - Butt Weld
  - Socket Weld

Manufacturers and their figure numbers

Kunkle	▪ 264 ▪ 265 ▪ 266 ▪ 267 ▪ 910 ▪ 911
Consolidated	▪ 1970 ▪ 1975 ▪ 1980 ▪ 1982 ▪ 1990-98 ▪ 2990-98 ▪ 3990-98 ▪ 19000
Crosby	▪ JR ▪ JRU ▪ JMB ▪ 900
Farris	▪ 1850 ▪ 1870 ▪ 1890 ▪ 2740 ▪ 2741 ▪ 2745 ▪ 2700 Series
TXT/Texsteam	▪ 77100 ▪ 77200 ▪ 77300 ▪ 77400 ▪ 87165 ▪ 87166 ▪ 87265 ▪ 87266 ▪ 7100 ▪ 7200
Anderson-Greenwood	▪ 81 ▪ 83 Series
Republic	▪ 641 ▪ 646 ▪ 647
Hydro-Seal Series	▪ 1 ▪ 2 ▪ 3 ▪ 4 ▪ 5 ▪ 6 ▪ 7 ▪ 8 ▪ LS ▪ 14 ▪ 38 ▪ FT ▪ HC
Lonergan	▪ LCT-11 ▪ LCT-13 ▪ LCT-14 ▪ LCT-20 ▪ LCT-30 ▪ LCT-40 ▪ L40

Portable Bronze Safety Valve

Kunkle 6010

Features

ASME-NB

- Sizes 1/4 - 3"
- Steam or air service
- Plain cap or test lever
- Side outlet
- Bronze or stainless steel trim
- Soft seal
- Cryogenic

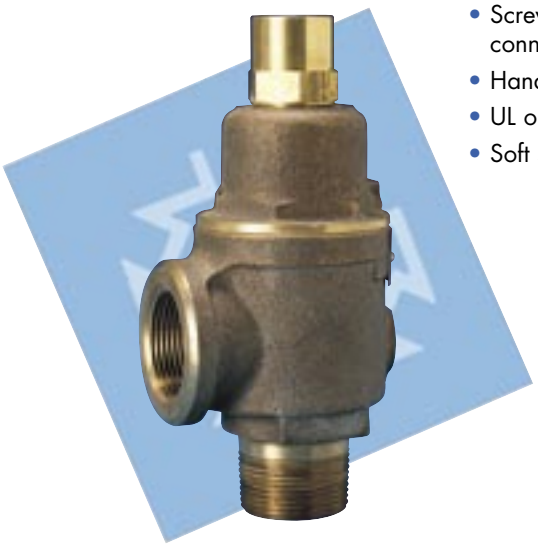
Kunkle	▪ 2 ▪ 2-A ▪ 21 ▪ 22-M ▪ 23-S ▪ 23-MS ▪ 80-4 ▪ 83-4 ▪ 84-4 ▪ 87 ▪ 189 ▪ 337 ▪ 363 ▪ 6000 ▪ 6010 ▪ 6021 ▪ 6030 ▪ 6230 ▪ 6283
Rockwood/ Swendeman	▪ M ▪ XM ▪ RSO ▪ RSO-L ▪ RXSO ▪ SO ▪ XSO
Republic	▪ 631 ▪ 635
Keckley	▪ 40 ▪ 44 ▪ 6010
Texsteam	▪ 550-ROW ▪ 550-SO

Manufacturers and their figure numbers

Conbraco	▪ 19 Series ▪ 29 Series
Taylor	▪ 80 Series
Farris	▪ 1808 ▪ 1855 ▪ 1856MC ▪ 1875 ▪ 1876
Lonergan	▪ 11W200 ▪ 12W200 ▪ 13W200 ▪ KVT ▪ OVS ▪ FBF ▪ ODP ▪ EIF ▪ BBJ ▪ BIA
Consolidated	▪ 1451 ▪ 1471 ▪ 1541 ▪ 1543 ▪ 1543-3 ▪ 1551
Crosby-ORR	▪ 15 ▪ 30 ▪ 40 ▪ 40-A
Aquatrol	▪ 17 ▪ 18 ▪ 25 ▪ 26 ▪ 78 ▪ 88 ▪ 89 ▪ 125 ▪ 126 ▪ 133 ▪ 135
Crane	▪ 1118 ▪ 2500 ▪ 2501 ▪ 2551 ▪ 2601 ▪ 2602 ▪ 2604 ▪ 2606 ▪ 2651 ▪ 2668
Jayco/Scott	▪ T ▪ 150 ▪ 155 ▪ 252
Lunkenheimer	▪ 300 ▪ 304 ▪ 629 ▪ 1045 ▪ 1213 ▪ 1227 ▪ 1483 ▪ 1705 ▪ 1765 ▪ 1766
Spence	▪ 31 ▪ 41

Bronze Liquid Relief Valve

Kunkle 20



Features

- Size 1/4" - 3"
- Plain cap or test lever
- Bronze or stainless steel trim
- Screwed or flanged connections
- Hand wheel adjustment
- UL or FM approval
- Soft seat

Manufacturers and their figure numbers

Kunkle	▪ 10 ▪ 11 ▪ 19 ▪ 19-M-1 ▪ 20 ▪ 20-M-1 ▪ 50 ▪ 50-P ▪ 200-H ▪ 200-A
Consolidated	▪ 1478/2478 ▪ 1479/2479 ▪ 1485 ▪ 1488 ▪ 1502
Crosby	▪ GC ▪ 25
Aquatrol	▪ 51 ▪ 55 ▪ 68 ▪ 69
Texsteam	▪ 35-R ▪ 550-ROV
Keckley	▪ 42 ▪ 43
Kingston	▪ 103 ▪ 103D ▪ 104 ▪ 120
Lunkenheimer	▪ 202 ▪ 286 ▪ 658 ▪ 996
Rockwood/ Swendeman	▪ SL ▪ RSL ▪ HL
Jayco	▪ 312 ▪ 313 ▪ 325 ▪ 326
Crane	▪ 1128 ▪ 1130 ▪ 2611 ▪ 2614 ▪ 2674
Farris	▪ 1410 ▪ 1420
Republic	▪ 631 ▪ 636
Lonergan	▪ T ▪ TBB ▪ 11H200 ▪ 12H200

Cast Steel Boiler Safety Valve

Kunkle 300/600

Features

ASME-NB

- Sizes 1" - 8"
- Steel or alloy body
- Steel or alloy spring
- Test lever
- Exposed spring
- Flanged or Butt Weld

Manufacturers and their figure numbers

Kunkle	▪ 300	▪ 600	▪ 300A	▪ 600A
Consolidated	▪ 1415 ▪ 1557 ▪ 1811	▪ 1553 ▪ 1558 ▪ 2700	▪ 1555 ▪ 1700 ▪ Series	▪ 1556 ▪ 1810
Crosby	▪ HS ▪ HCA	▪ HSA ▪ HN	▪ HC ▪ HNA	▪ HSJ ▪ HE
Farris	▪ 2575	▪ 2585	▪ 4500	
Keckley	▪ 401	▪ 402	▪ 403	
Lonergan	▪ V	▪ S	▪ W	▪ R

Cast Iron & Cast Steel Liquid Relief Valve

Kunkle 91

Features

- Sizes 1/2" - 8"
- FM approval for fire system service
- Bronze or stainless steel trim
- Screwed and flanged connections
- Stainless steel throughout

Manufacturers and their figure numbers

Kunkle	▪ 71 ▪ 140 ▪ 218	▪ 71-S ▪ 171 ▪ 291	▪ 91 ▪ 171-S	▪ 91-S ▪ 191
Consolidated	▪ 1491	▪ 1496	▪ 1685	
Lunkenheimer	▪ 1407	▪ 1408		
Keckley	▪ 46	▪ 46-S	▪ 47	▪ 47-S
Lonergan	▪ H ▪ HU-D ▪ HTC ▪ HRN ▪ HSS	▪ HU ▪ HDF ▪ 23H ▪ FSS ▪ HIB	▪ 41HH200 ▪ 11H200 ▪ 34H ▪ HCA ▪ HU3	▪ HU4

Cast Iron Safety Valve

Kunkle 252/6252

Features

ASME-NB

- Sizes 1-1/2″ - 6″
- Steam or air service
- Test lever
- Bronze or stainless steel trim
- Screwed or flanged connections

Manufacturers and their figure numbers

Kunkle	▪ 250 ▪ 255	▪ 252 ▪ 6252	▪ 253	
Consolidated	▪ 1511	▪ 1511-S		
Crosby	▪ HO	▪ HOB	▪ HR	
Farris	▪ 1960 ▪ 2250	▪ 1961 ▪ 2251	▪ 1962 ▪ 19	▪ 46 ▪ Series
Lunkenheimer	▪ 630			
Conbraco	▪ 119			
Crane	▪ 1102	▪ 1113	▪ 1114	
Keckley	▪ 300	▪ 301		
Spence	▪ 31	▪ 41	▪ 41A	
Lonergan	▪ GIF	▪ YIA	▪ YIJ	

Low Pressure Steam Boiler Safety Valve

Kunkle 930

Features

ASME-NB

- Screwed or flanged connections
- Medium or high capacity
- Sizes 3/4″ - 4″

Manufacturers and their figure numbers

Kunkle	▪ 930-1 ▪ 254	▪ 215T ▪ 933	▪ 216R ▪ 183-T	▪ 6254
Consolidated	▪ 1865	▪ 1510		
Conbraco	▪ 13-200	▪ 12-200	▪ 14-200	
Crane	▪ 2568	▪ 1165	▪ 1166	▪ 1168
Crosby-ORR	▪ 10	▪ 15	▪ 15A	
Spence/Watts	▪ 10	▪ 15		
Lonergan	▪ 15-W			

Air Compressor Safety Valve

Kunkle 30

Features

ASME-NB

- Sizes 1/8″ - 3″
- Soft seat
- Atmospheric Relief

Manufacturers and their figure numbers

Kunkle	▪ 1 ▪ 1A ▪ 28A ▪ 29A ▪ 30 ▪ 39A ▪ 48A ▪ 82-4 ▪ 86 ▪ 230 ▪ 330 ▪ 540 ▪ 542 ▪ 548 ▪ 6130 ▪ 6182 ▪ 6186
Consolidated	▪ 1445 ▪ 1542 ▪ 1544 ▪ 1545 ▪ 1664
Conbraco	▪ 15-102
Kingston	▪ 100 ▪ 110C ▪ 112C ▪ 112CT ▪ 114 ▪ 115 ▪ 118 ▪ 119C ▪ 125 ▪ 128
Jayco/Scott	▪ 149
Keckley	▪ 41
Aquatrol	▪ 120 ▪ 121 ▪ 130 ▪ 132
Lunkenheimer	▪ 433 ▪ 1226 ▪ 1704

Hot Water Boiler Relief Valve

Kunkle 537

Features

ASME-NB

- Sizes 3/4″ - 2″

Manufacturers and their figure numbers

Kunkle	▪ 137 ▪ 537 ▪ 927
McDonnel-Miller	▪ 230 ▪ 240
Watts	▪ 174A ▪ 740
Conbraco	▪ 10-213 ▪ 10-321 ▪ 10-604 — 10-618
Bell & Gossett	▪ 175 ▪ 480 ▪ 750

Vacuum Relief Valve

Kunkle 215V

Features

- Iron, steel, stainless steel, bronze or aluminum
- Sizes 1/2" - 14"
- Flanged or screwed connections

Manufacturers and their figure numbers

Kunkle	▪ 215V	▪ 11V	▪ 80-V
Crane	▪ 1155V		
Conbraco	▪ 14-290	▪ 37-100	
Union Flonetics/ Foster	▪ V-1		
Protectoseal	▪ 6240	▪ 16240	▪ 17800
Aquatrol	▪ 27		
Lonergan	▪ VAK-14C		

Drip Pan Elbows

DPE/299

Features

- Cast iron and cast steel
- Flanged and screwed connections
- Sizes 3/4" - 10"

Manufacturers and their figure numbers

Kunkle	▪ 299		
Consolidated	▪ 1665	▪ 1666	▪ 1667
Crane	▪ 1100		
Crosby	▪ EFS		
Keckley	▪ DPE		
Lonergan	▪ DPE		

HOW TO ORDER SAFETY VALVES

Please Supply The Following Information:	Example:
1. Quantity of Valves	**4**
2. Size of Valve Inlet and Outlet	**1½" x 2"**
3. Type, Model or Figure Number	**1905FC**
4. Manufacturer	**Consolidated**
5. Inlet and Outlet Flange Rating and Facing	**150 x 150, RF, ANSI**
6. Body Material	**Steel**
7. Trim Material	**Stainless Steel**
8. O Ring Seat Seal Material, if required	**Teflon**
9. Set Pressure	**125 psig**
10. Required Capacity	**300 lbs./hr.**
11. Type of Service (Flow Medium)	**Steam**
12. Operating and Relieving Temperature	**274-298 Degrees F**
13. Back Pressure-Constant or Variable Amount	**0**
14. Allowable Overpressure	**10%**
15. Accessories (Cap, Lever, Gag, etc.)	**Plain Cap**

GENERAL INFORMATION AND DEFINITIONS

SAFETY VALVE: Safety valves or pop safety valves are automatic, direct-pressure actuated, pressure-relieving devices for use in vapor or gas services.

SAFETY RELIEF VALVE: Safety relief valves are basically like pop safety valves and are primarily for liquid service where the thermal expansion in a liquid laden vessel actuates the valve. When vapor is generated in these vessels, due to uncontrolled heat input, this valve with the huddling chamber, will give a high disc lift and discharge the expanded vapors. This valve is also suitable for gas or vapor service.

SELECTION OF VALVE: Valves should be selected for the particular installation on which they are to be used and also on the basis of the rated discharge capacity. This should be equal to or greater than the maximum output of the system.

INSTALLATION: The valve is to be installed in a vertical position, into a clean fitting, using the proper size and type of wrench so as not to damage the valve. The discharge piping, without stop valves, shall be independently supported and sloped downward slightly to drain condensate.

OPERATING PRESSURE: The actual pressure at which a vessel is maintained in normal operation.

ALLOWABLE WORKING PRESSURE: Maximum design pressure of a new vessel in accordance with applicable codes.

SET PRESSURE: The pressure at which the valve opens.

BLOW DOWN: The difference between the pressures at which a pop type safety valve opens and closes.

POP ACTION: The sharp opening action of a safety valve when operating with steam, air or other compressible fluids.

WARN: This is the sound in the valve immediately preceding the pop. This is also called a "simmer."

DISC: The moving member of the valve which is held down by the spring and is lifted by the water, vapor or gas pressure.

For More Information Contact Your Safety Valve Supplier.

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