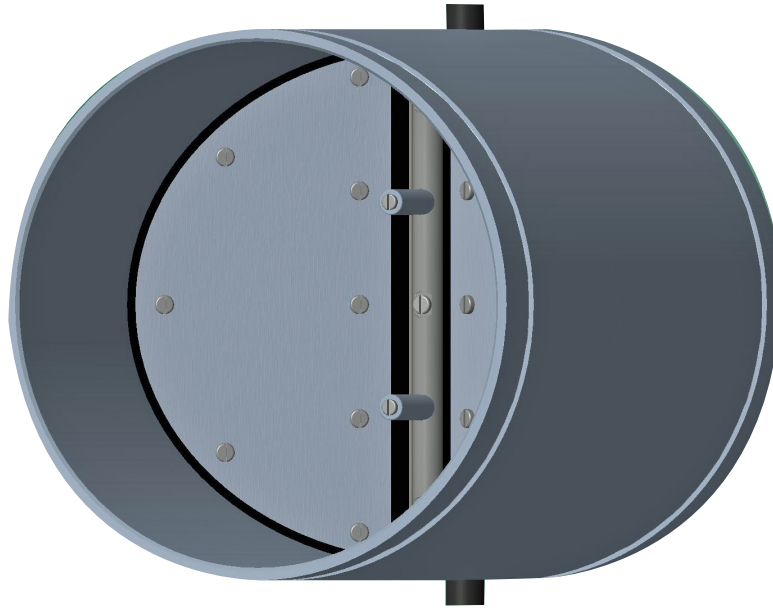




## SERIES 831

### ElastoTITE™ GROOVED END ELASTOMER HINGED CHECK VALVE



#### General Description

**Process Development & Control's ElastoTITE™ Full Port Elastomer-Hinged Check Valves** have low pressure loss, lightweight design and a compact construction. Our Patented Flexible Anti-Fatigue Reinforcement Layer design *increases* the life of the valve and reduces the need for replacement of the elastomer sealing member during routine maintenance. The elastomer hinge check valve design eliminates a restrictive valve seat and increases the valve's open area and flow coefficient significantly. The ElastoTITE™ Plain End Check Valve is perfect for compressed air and gas systems, water systems and vacuum pumps.

**PDC's Grooved End Elastomer-Hinged Check Valve** features a choice of body materials of Carbon Steel or 316 Stainless Steel. The available internal materials are Aluminum and 316 Stainless Steel. Buna-N is the standard seal with available optional seal materials of EPDM, Silicone or Viton.

Materials can be configured to a Maximum Working Pressure of 150 PSI. Operating temperatures range from -40° F to 500° F with available sizes 1" thru 12". If your application requires unique size and material configurations, please contact the factory for assistance with your special requirements.

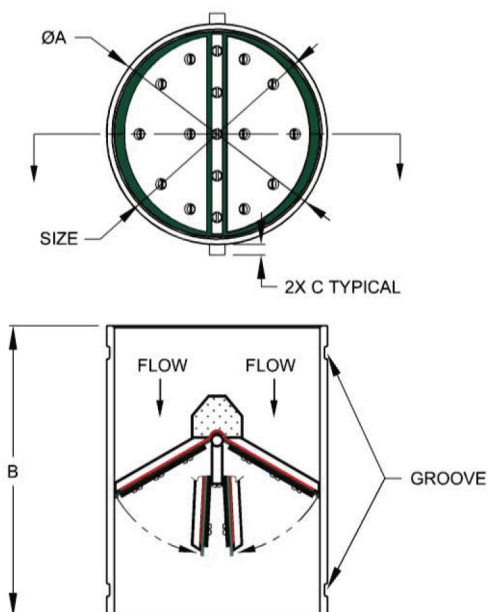


#### AIS COMPLIANCE

PDC is pleased to supply products that are in compliance with "American Iron and Steel (AIS)" provided that the AIS compliance requirement is made known to PDC during the quoting and ordering processes.



# SERIES 831 ElastoTITE™ GROOVED END ELASTOMER HINGED CHECK VALVE



Valve Size	XXX=	A	B	C
1	001	1.32	5.75	0.16
1-1/4	125	1.66	5.75	0.16
1-1/2	150	1.90	5.75	0.16
2	002	2.38	5.75	0.16
2-1/2	250	2.88	5.75	0.25
3	003	3.50	5.75	0.25
4	004	4.50	6.75	0.25
5	005	5.56	7.75	0.35
6	006	6.63	8.75	0.34
8	008	8.63	10.75	0.41
10	010	10.75	12.75	0.56
12	012	12.75	14.75	0.56

If your application requires different size and material configurations, please contact the factory for assistance with your special requirements.

Body Materials
Carbon Steel
316 Stainless Steel
Internal Materials
Aluminum
316 Stainless Steel
Stainless Steel Spring Option

Sealing Member Materials	
Material	Temperature
Buna-N	-60 ° F to 225 ° F
EPDM	-40 ° F to 300 ° F
Silicone	-100 ° F to 500 ° F
Viton	-20 ° F to 400 ° F

Temperature ranges are for general guidance.  
Range may vary with application.

GENERAL DIMENSIONS
(in inches)
A = Outside Diameter
B = Face-to-Face
C = Clearance

Standard Models & Materials				
Model	Body	Internals	Seal	Max. Working Pressure (PSI)*
831-XXX-CSAL-BN	Carbon Steel	Aluminum	Buna-N	150
831-XXX-CS6S-BN	Carbon Steel	316 Stainless Steel	Buna-N	150
831-XXX-6SAL-BN	316 Stainless Steel	Aluminum	Buna-N	150
831-XXX-6S6S-BN	316 Stainless Steel	316 Stainless Steel	Buna-N	150

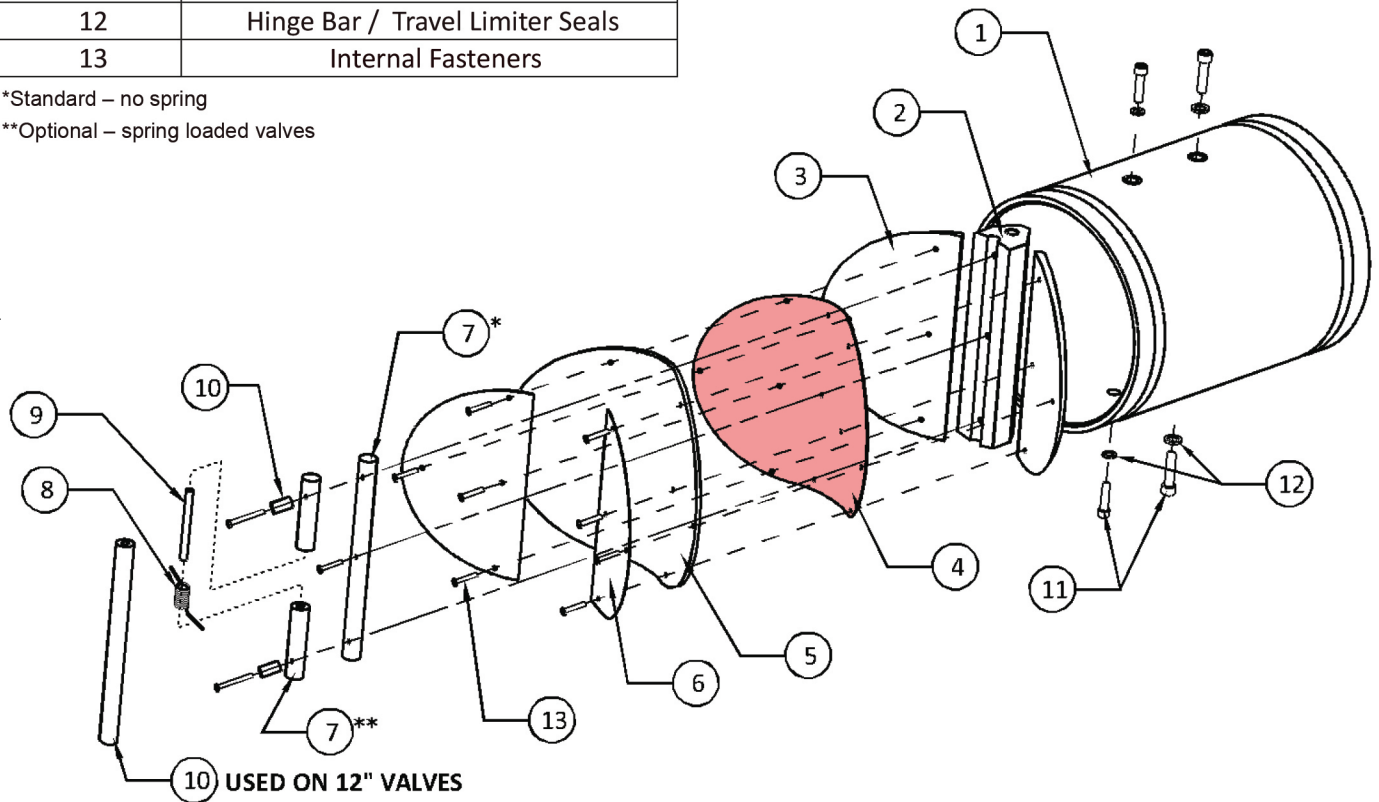
Note: Process Development & Control's ElastoTITE Check Valves are designed to work without the assistance of a spring.  
A spring option is available.  
XXX = SIZE (to be for all sizes)  
\*Cold Working Pressure (CWP) from -20 ° F to 100 ° F for 1" thru 12" valve sizes can be up to 200 PSI.

## SERIES 831 – VALVE COMPONENTS

Item No.:	Description:
1	Grooved End Body
2	Hinge Bar
3	Valve Plate
4	Anti-Fatigue Layer
5	Valve Seal
6	Seal Retainer Plate
7*	Seal Clamp
7**	Seal Clamp End
8	Spring (optional)
9	Spring Shaft
10	Travel Limiter
11	Hinge Bar / Travel Limiter Fasteners
12	Hinge Bar / Travel Limiter Seals
13	Internal Fasteners

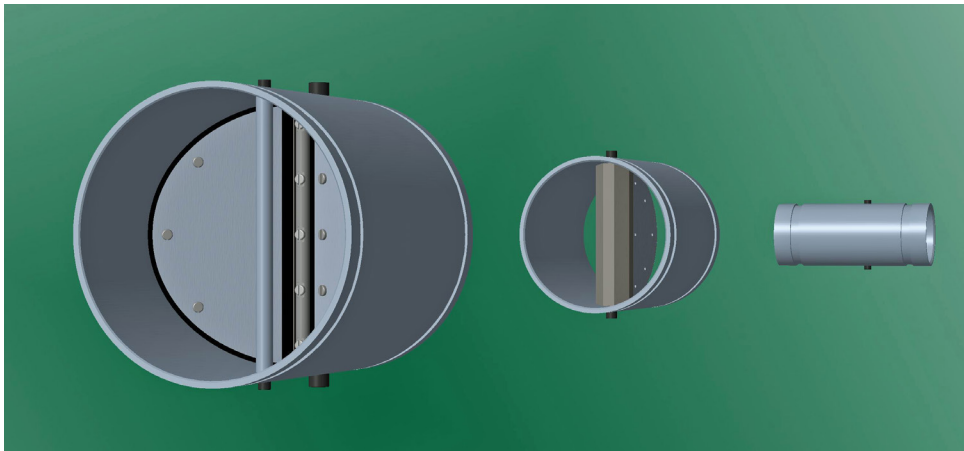
\*Standard – no spring

\*\*Optional – spring loaded valves



## Series 831 - Design Features

- **PDC's Patented Anti-Fatigue Reinforcement Layer** – Our **ElastoTITE™** Check Valve's New Patented Anti-Fatigue Reinforcement Layer is substantially unstretchable and capable of resisting abrasion forces that are encountered while the valve is in operation, increasing the life of the valve significantly.
- **Smooth Valve Bore** – The smooth machined bore allows the compliant valve seal to maintain a consistent check against backflow.
- **Grooved End Body** – PDC's Grooved End Series 831 conforms to ANSI/AWWA C-606 specifications for Grooved Ends on both ends of the valve.
- **NO Metal-to-Metal Rotating Parts** – The motionless Hinge Bar and Seal Clamp design decreases wear of Hinges, Shafts, Valve Plates, and Springs slashing maintenance requirements and costs.
- **Full Port Seatless Design** – Provides the largest flow area possible with the smallest pressure loss.
- **Fast Closure Feature** – The closing time is reduced by the valve plate's minimum travel from an open to a fully closed position.
- **Springless Design** – Our valves operate without the assistance of a spring in the majority of all applications. With the assistance of a spring, the "slamming" action of the plates is all but eliminated. A spring is recommended when the valve is placed in a vertical downward flow pipeline position.
- **Reinforced Valve Seal** – Tolerant to liquids, gases, steam, chemical, oil, and fuel. The strength and durability of these elastomers ensure the prolonged life of the valves. The seals provide a tight shutoff.
- **Valves can be installed in a pipeline in any position.**
- **Competitive Pricing** – PDC offers competitive pricing, excellent customer service and quick turnaround to meet your needs.



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