

Swing Style Check Valves

API 6D Steel Flanged End Swing Check Valves

P800 Series P900 Series

Oilpatch Threaded End Swing Check Valves

P300 Series

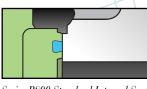


# **Positive Backflow Prevention With All The Extras**

## The PBV<sup>®</sup> Series P800 and P900 Flanged Swing Check Valves

## Standard Features

- 316 SS Trim
- 316 SS overlay on Integral and Removable Seat designs
- 316 SS overlay on Body Disc contact
- API 6D Monogrammed
- Material meets NACE MR0175
- Graphite secondary Body Gasket for Fire-Safe operation
- Dove tail Seat Seal groove
- Full port piggable
- Blind bolt holes and metal-to-metal Body Cover Weather Seal for offshore service
- WCC / WCB dual rated Body material
- Viton® GF Seals
- Hydrostatic tested 100% to API 6D and API 598
- In-line repairable
- Bleed Plug on Cover
- Cast feet to prevent roll over (10" and larger)
- Suitable for horizontal and vertical up-flow installation



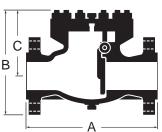


Series P800 Standard Integral Seat Design seals with a Clapper O-ring.

Series P900 Removable Seat Design extends the service life of the valve.

Data		P800/P9	00, Carbon	Steel						
		Valve Size (In)	ANSI Class	Working Pressure	A (In) RF	A (In) RTJ	B (In)	C (In)	Weight (Lbs)	Order Figure Numbers
			150	275	8	8 1/2	9	6	40	P-810-11-2236-YY
		300	720	10 <sup>1</sup> /2	111/8	9	6 <sup>1</sup> /2	42	P-830-11-2236-YY	
	2	600	1440	11 <sup>1</sup> /2	115/8	9 1/4	6 <sup>1</sup> /2	57	P-860-11-2236-YY	
			900	2160	14 <sup>1</sup> /2	14 5/8	10 <sup>1</sup> /2	8 <sup>1</sup> /2	150	P-890-11-2236-YY
			1500	3600	14 <sup>1</sup> /2	14 5/8	10 <sup>1</sup> /2	81/2	150	P-815-11-2236-YY
		150	275	9 1/2	10	10 5/8	7 <sup>1</sup> /2	69	P-810-11-2236-YY	
			300	720	12 <sup>1</sup> /2	13 <sup>1</sup> /8	10 5/8	9	70	P-830-11-2236-YY
$\frown$	$\sim$	3	600	1440	14	14 <sup>1</sup> /8	113/8	8 1/4	100	P-860-11-2236-YY
			900	2160	15	15 <sup>1</sup> /8	113/4	91/2	180	P-890-11-2236-YY
			1500	3600	18 <sup>1</sup> /2	18 5/8	15 <sup>5</sup> /8	10 <sup>1</sup> /2	280	P-815-11-2236-YY
			150	275	11 <sup>1</sup> /2	12	12 5/8	9	94	P-810-11-2236-YY
			300	720	14	14 5/8	13 <sup>1</sup> /2	10	120	P-830-11-2236-YY
		4	600	1440	17	17 <sup>1</sup> /8	13 <sup>3</sup> /4	10 3/4	181	P-860-11-2236-YY
ents			900	2160	18	18 <sup>1</sup> /8	14	11 <sup>1</sup> /2	250	P-890-11-2236-YY
.1165			1500	3600	21 <sup>1</sup> /2	21 5/8	17	12 <sup>1</sup> /4	370	P-815-11-2236-YY
			150	275	14	14 <sup>1</sup> /2	16 <sup>1</sup> /2	11	161	P-810-11-2236-YY
. 2		6	300	720	17 <sup>1</sup> /2	18 <sup>1</sup> /8	18	12 <sup>1</sup> /2	250	P-830-11-2236-YY
			600	1440	22	22 <sup>1</sup> /8	19 <sup>5</sup> /8	14	440	P-860-11-2236-YY
ı 2			900	2160	24	24 <sup>1</sup> /8	20	15	890	P-890-11-2236-YY
ı 3			1500	3600	27 <sup>3</sup> /4	28	22	15 <sup>1</sup> /2	1040	P-815-11-2236-YY
3			150	275	19 <sup>1</sup> /2	20	20 1/8	13 3/4	263	P-810-11-2236-YY
5		8	300	720	21	21 5/8	20 1/8	15	380	P-830-11-2236-YY
		0	600	1440	26	26 <sup>1</sup> /8	23	16 <sup>1</sup> /2	567	P-860-11-2236-YY
			900	2160	29	29 <sup>1</sup> /8	24	18 <sup>1</sup> /2	1010	P-890-11-2236-YY
3 4			150	275	24 1/4	25	23 5/8	16 <sup>3/4</sup>	480	P-810-11-2236-YY
-		10	300	720	24 <sup>1</sup> /2	25 <sup>1</sup> /8	25	17 <sup>1</sup> /2	600	P-830-11-2236-YY
4,5		10	600	1440	31	31 <sup>1</sup> /8	<b>29</b> 1/2	20	1210	P-860-11-2236-YY
ı 5			900	2160	33	33 <sup>1</sup> /8	31	21 <sup>1</sup> /2	1785	P-890-11-2236-YY
6			150	275	27 <sup>1</sup> /2	28	26 <sup>3</sup> /8	19	619	P-810-11-2236-YY
		12	300	720	28	28 <sup>5</sup> /8	29	20 <sup>1</sup> /2	850	P-830-11-2236-YY
6		12	600	1440	33	33 <sup>1</sup> /8	33 <sup>7</sup> /8	22	1430	P-860-11-2236-YY
. 7			900	2160	38	38 <sup>1</sup> /8	36	24	2370	P-890-11-2236-YY

# **Dimensional Data**



# Contents

### Series P800/P900

- Features
- Dimensional Data
- Parts & Engineering Data
  - Figure Order Numbers

### Series P300

- Features
- Dimensional Data
- Parts & Engineering Data
- Figure Order Numbers
  - Standards & Warranty (
    - Terms of Sale

# 3 4 8 1 12 2 SS Overlay For Extended Service 6 10 10

# Parts & Materials

Item No.	Description	Standard Sour (NACE) Trim				
1	Body	ASTM A216 Gr. WCC				
2	Cover	ASTM A516 Gr. 70/A216 Gr. WCC				
3	Stud	ASTM A193 Gr. B7M				
4	Nut	ASTM A194 Gr. 2HM				
5	Clapper	ASTM A351 Gr. CF8M				
6	Clapper Pin	ASTM A479 Gr. 316 SS				
7	Stop Pin	ASTM A105				
8	Vent Plug	ASTM A105				
9*	Clapper O-ring (Std.)	Viton <sup>®</sup> GF				
10**	Rem. Seat (Opt.)	316 SS				
11	Cover O-ring	Viton <sup>®</sup> GF				
12	Cover Gasket	Graphite				

\*Not shown above, see detail on page two. \*\*Removable seat option illustrated. See detail on page two. NOTE: We reserve the right to change materials and specifications.

# Specifying Series P800 and P900 Valve Figure Numbers

Follow the example and use the figure number chart below to specify the valve you need.

## Example valve specified: 4" P-960-11-2236-YY

This number represents a 4" P Series, Removable Seat Design, Class 600, Fire-Safe to API 6FD, Raised Face End Connections, Carbon Steel Body & Cover, Stainless Steel Disc, Viton<sup>®</sup> GF Seals, NACE, no modifications.

Р	- 9	60	- 1	1	- 22	36 -	- <b>Y</b>	Y
Series	Design	Pressure Class	Fire Tested	End Connection	Body/Cover Material	Disc Material	Seat Seals	Cover Seals
Р	<b>8</b> 6D Integral Seat	<b>10</b> 150	<b>1</b> API 6FD	1 RF	<b>22</b> Carbon Steel-WCC	<b>00</b> Same As Body	<b>B</b> Buna N	<b>B</b> Buna N/Graphite
	<b>9</b> 6D Removable Seat	<b>30</b> 300		<b>2</b> Non Standard	<b>28</b> LT Carbon Steel-LCC	<b>36</b> Stainless Steel	<b>R</b> LT Buna N	<b>R</b> LT Buna N
		<b>60</b> 600		<b>3</b> RTJ			<b>Y</b> Viton <sup>®</sup> GF	<b>Y</b> Viton <sup>®</sup> GF/Graphite
		<b>90</b> 900		<b>4</b> RF x WE			<b>Z</b> Metal-to-Metal	<b>z</b> Rtj
		<b>15</b> 1500		5 WE				
		<b>25</b> 2500		<b>6</b> RTJ x WE				

Other materials available upon request.

# **Engineering Data**

# Stretch Your Oilfield Maintenance Dollars

# With The Durable PBV<sup>®</sup> Oilpatch Series P300 Threaded Swing Check Valves

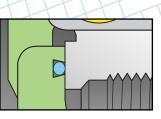
## Standard Features

## **Ductile Iron and Steel**

- 316 SS trim
- Material meets NACE MR0175
- Dove tail Seat Seal Groove
- Full port piggable
- Top entry Disc in-line serviceable
- WCC/WCB dual rated Body material
- 90 DU Peroxide Cured Seals
- Hydrostatic tested 100% to API 598
- Bleed Plug on Cover
- Suitable for horizontal and vertical up-flow installation

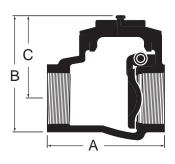
## Bronze

- 300 psi MOP rated
- ASTM B62 Body and Trim
- Full port piggable
- Dove tail Seat Seal Groove
- Top entry Disc in-line serviceable
- 90 DU Peroxide Cured Buna Seals
- Hydrostatic tested 100% to API 598
- Suitable for horizontal and vertical up-flow installation



Series P300 Integral Seat Design utilizes a Disc Seal O-ring.

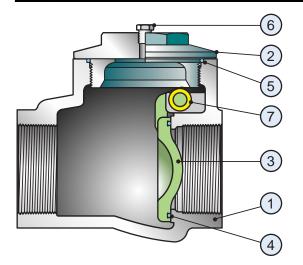
# **Dimensional Data**



P300, Carbo	on Steel					
Valve Size (In)	MOP (PSI)	A (In)	B (in)	C (In)	Weight (Lbs)	Order Figure Numbers
	275	41/4	4 <sup>1</sup> /8	1 <sup>1</sup> /2	8	P-310-00-2236-PP
	720	4 <sup>1</sup> /4	4 <sup>1</sup> /8	1 <sup>1</sup> /2	8	P-330-00-2236-PP
1	1440	4 <sup>1</sup> /4	4 <sup>1</sup> /8	1 <sup>1</sup> /2	8	P-360-00-2236-PP
'	2160	4 <sup>1</sup> /4	4 <sup>1</sup> /8	1 <sup>1</sup> /2	8	P-390-00-2236-PP
	3600	4 <sup>1</sup> /4	4 <sup>1</sup> /8	1 <sup>1</sup> /2	8	P-315-00-2236-PP
	5000	4 1/4	4 <sup>1</sup> /8	1 <sup>1</sup> /2	8	P-35S-00-2236-PP
	275	7 <sup>1</sup> /4	4 <sup>3</sup> /8	2	13	P-310-00-2236-PP
	720	7 <sup>1</sup> /4	4 <sup>3</sup> /8	2	13	P-330-00-2236-PP
2	1440	7 <sup>1</sup> /4	4 <sup>3</sup> /8	2	13	P-360-00-2236-PP
	2160	7 <sup>1</sup> /4	4 <sup>3</sup> /8	2	13	P-390-00-2236-PP
	3600	7 <sup>1</sup> /4	4 <sup>3</sup> /8	2	13	P-315-00-2236-PP
	275	8 <sup>3</sup> /4	5 <sup>3</sup> /4	2 <sup>7</sup> /8	35	P-310-00-2236-PP
3	720	8 <sup>3</sup> /4	5 <sup>3</sup> /4	2 <sup>7</sup> /8	35	P-330-00-2236-PP
5	1440	8 <sup>3</sup> /4	5 <sup>3</sup> /4	2 <sup>7</sup> /8	35	P-360-00-2236-PP
	2160	8 <sup>3</sup> /4	5 <sup>3</sup> /4	2 <sup>7</sup> /8	35	P-390-00-2236-PP
	275	10	7 <sup>5</sup> /8	4	70	P-310-00-2236-PP
4	720	10	7 <sup>5</sup> /8	4	70	P-330-00-2236-PP
т	1440	10	7 <sup>5</sup> /8	4	70	P-360-00-2236-PP
	2160	10	7 <sup>5</sup> /8	4	70	P-390-00-2236-PP

P300, Bronze				
Valve Size (In)	MOP (PSI)	End To End (In)	Weight (Lbs)	Order Figure Numbers
1	300	3 <sup>9</sup> /16	2	P-33M-00-2400-PP
2	300	5 <sup>3</sup> /16	5	P-33M-00-2400-PP
3	300	7 <sup>1</sup> /4	12	P-33M-00-2400-PP
4	300	9 <sup>1</sup> /4	26	P-33M-00-2400-PP

# **Engineering Data**



# Parts & Materials

Item No.	Description	Carbon Steel	Ductile Iron	Bronze	
1	Body	ASTM A216 WCC	ASTM A395	Bronze B62	
2	Bonnet	ASTM A216 WCC	ASTM A395	Bronze B62	
3	Disc	ASTM A351 CF8M	ASTM A351 CF8M	Bronze B62	
4	Disc Seal	90 Durometer Peroxide Cured Buna	90 Durometer Peroxide Cured Buna	90 Durometer Peroxide Cured Buna	
5	Bonnet Seal	90 Durometer Peroxide Cured Buna	90 Durometer Peroxide Cured Buna	90 Durometer Peroxide Cured Buna	
6	Plug	ASTM A105	ASTM A105	NA	
7	Bushing	304 SS (1" only)	304 SS (1" only)	Bronze	

P300, Ducti	ile Iron					
Valve Size (In)	MOP (PSI)	A (In)	B (In)	C (In)	Weight (Lbs)	Order Figure Numbers
	300	4 1/4	4 1/8	11/2	8	P-33M-00-2136-PP
	600	4 1/4	4 1/8	11/2	8	P-36M-00-2136-PP
1	750	4 1/4	4 1/8	11/2	8	P-37M-00-2136-PP
1	1000	4 1/4	4 1/8	11/2	8	P-31K-00-2136-PP
	1500	4 1/4	4 1/8	11/2	8	P-360-00-2136-PP
	2000	4 1/4	4 1/8	11/2	8	P-32K-00-2136-PP
	300	6	4 <sup>3</sup> /8	2	12	P-33M-00-2136-PP
	600	6	4 <sup>3</sup> /8	2	12	P-36M-00-2136-PP
2	750	6	4 <sup>3</sup> /8	2	12	P-37M-00-2136-PP
Z	1000	6	4 <sup>3</sup> /8	2	12	P-31K-00-2136-PP
	1500	6	4 <sup>3</sup> /8	2	12	P-360-00-2136-PP
	2000	6	4 <sup>3</sup> /8	2	12	P-32K-00-2136-PP
	300	8	5 <sup>3</sup> /4	2 7/8	31	P-33M-00-2136-PP
	600	8	5 <sup>3</sup> /4	2 7/8	31	P-36M-00-2136-PP
3	750	8	5 <sup>3</sup> /4	2 7/8	31	P-37M-00-2136-PP
5	1000	8	5 <sup>3</sup> /4	2 7/8	31	P-31K-00-2136-PP
	1500	8	5 <sup>3</sup> /4	2 7/8	31	P-360-00-2136-PP
	2000	8	5 <sup>3</sup> /4	2 7/8	31	P-32K-00-2136-PP
	300	10	7 5/8	4	63	P-33M-00-2136-PP
	600	10	7 5/8	4	63	P-36M-00-2136-PP
А	750	10	7 5/8	4	63	P-37M-00-2136-PP
4	1000	10	7 5/8	4	63	P-31K-00-2136-PP
	1500	10	7 5/8	4	63	P-360-00-2136-PP
	2000	10	7 5/8	4	63	P-32K-00-2136-PP

PBV® Oilpatch Valves are designed, engineered, and manufactured to be Oilpatch tough.

By specifying PBV° Oilpatch Valves you can be assured of high performance results even under the extreme service conditions the oilpatch presents.

"Always specify genuine PBV" replacement parts".

# Specifying Series P300 Oilpatch Valve Figure Numbers

Follow the example and use the figure number chart below to specify the valve you need.

## Example valve specified: 3" P-330-00-2236-PP

This number represents a 3" P Series Oilpatch Design, ANSI Class 300 (720 WOG), Non Fire-Safe, Threaded End Connections, Carbon Steel Body & Cover, Stainless Steel Disc, with Peroxide Cured Buna N Seals and No Modifications.

P	- 3	6 M	_	0	0 -	2 2	36	– P	Р
Series	Design	Pressure C Carbon Steel	lass Ductile Iron /Bronze	Fire Tested	End Connection	Body/Cover Material	Disc Material	Seat Seals	Cover Seals
Р	<b>3</b> Oilpatch	10 Cl. 150 (275 WOG) 30	<b>3M</b> 300 WOG <b>6M</b>	<b>0</b> Non Fire-Safe	<b>0</b> Threaded	21 Ductile Iron 22	00 Same As Body 36	<b>B</b> Buna <b>P</b>	B Buna P
		Cl. 300 (720 WOG) <b>60</b> Cl. 600 (1440 WOG)	600 WOG <b>7M</b> 750 WOG			Carbon Steel <b>24</b> Bronze	Stainless Steel	Peroxide Cured Buna Y Viton <sup>®</sup> GF	Peroxide Cured Buna Y Viton <sup>®</sup> GF
		<b>90</b> Cl. 900 (2160 WOG) <b>15</b>	1K 1000 WOG <b>60</b>						
		CI. 1500 (3600 WOG) 5S 5000 WOG*	1500 WOG 2K 2000 WOG						

\* 1" Carbon Steel Only.

## Manufactured in Strict Conformance with the following Qualifying Authorities

- ISO 9000 Quality System
- API 6D Specification for Pipeline Valves
- ASME B16.34 Valves-Flanged, Threaded and Welding End
- ASME B16.5 Pipe Flanges and Flanged Fittings
- NACE MR0175 Sulfide Stress Cracking Resistant Metallic Materials for Oilfield Equipment
- CSA #Z245.15 Steel Valves
- ASME Section VIII Division 1 Boiler and Pressure Vessel Code
- Canadian Registration Number (CRN) Products Registered in all Provinces and Territories

## Warranty

The warranty described below applies only to new or unused goods, or goods reconditioned by ZY-TECH GLOBAL INDUS-TRIES (Seller). The Seller specifically disclaims any warranty for used goods or goods sold "as is". For a period of one (1) year after date of purchase of any of the goods described herein, Seller warrants such goods shall remain free from failure due to defects in workmanship and materials incorporated therein by or for Seller provided such failure shall not have been caused or contributed to, by improper usage, service or application, improper installation or maintenance, repairs, alterations, or modifications effected by or for the user, misuse, negligence or accident.

In the event of failure for which Seller has assumed warranty obligations hereunder, and provided written notification of such failure shall be immediately given to Seller, it agrees to repair, or at its option, to replace the goods sold at its sold expense.

Apart from the warranty and undertaking above set forth, Seller assumes no obligation or liability for losses, expense or damages, direct or consequential, suffered or incurred as a result of any failure of, or defect in, the goods described herein, including but not limited to, such costs, expenses or damages as may result from the necessity to remove, replace, restore or transport the goods from any location or service in which they may be used, regardless of the cause of such failure or defect.

This warranty extends only to the original Purchaser of the goods and is the only warranty made by Seller in connection therewith. There are not other warranties, express or implied, of any kind given with respect to the goods, their merchantability, fitness for any particular purpose or usage, or otherwise, nor is any person authorized to extend on behalf of Seller any form of warranty other than that above set forth.

The goods described herein are not sold or distributed by Seller for personal, family or household purposes, nor are they normally suited for use as such.

## **Prices**

Prices and other terms of sale where set forth in current price sheets are subject to change without notice. Stenographic or clerical errors are subject to corrections. Prices are subject to stabilization controls, if any, on or after May 1, 1974.

## Acceptance of Orders And Special Orders

All orders are subject to acceptance by Seller at its home office, Stafford, Texas, only. No assignment of the Purchaser's rights may be made without the written consent of the Seller. Orders for special material are subject to cancellation only upon agreement to make payment for the work performed, material used and reasonable profit.

## Terms, Payment And Partial Shipment

Net-10th prox. One percent (1%) per month interest charged on accounts after 30 days, or twelve percent (12%) annually. All accounts are payable in United States funds, free of exchange, collection, or any other charges. If, in the sole discretion of Seller, the financial condition of the Purchaser at any time so requires, Seller retains the right to require full or partial payment in advance or to require other adequate advances of financial responsibility. Seller reserves the right to make partial shipments from time to time and render invoices therefor, which shall be due and payable as provided in said invoices.

## Taxes

Unless otherwise specifically noted, the amount of any sales, use, occupancy, excise tax, or other tax, of any nature, federal, state, or local, for which Seller is legally liable, either initially or through failure of payment by Purchaser, shall be added or be in addition to the price quoted and Purchaser agrees to pay the same to Seller.

## **Unavoidable Conditions**

Seller shall not be liable for failure to deliver or delays in delivery occasioned by causes beyond its control, including, without limitation, strikes, lockouts, fires, embargoes, war or other outbreaks of hostilities, acts of God, inability to obtain shipping space, machinery, breakdowns, delays of carriers or suppliers, and governmental acts or regulations.

## **Returns And Cancellations**

No product may be returned without Seller's prior written consent. All goods returned are subject to a handling charge plus freight in both directions and charges for any required reconditioning, unless otherwise specified in writing by Seller. Overages, shortages and incorrect material claims must be made in writing within ten (10) days of receipt of goods. Cancellation of orders once placed with and accepted by Seller may be made only with its written consent.

## **No Waiver**

Seller's failure to insist upon any of the terms, covenants, or conditions listed herein or to exercise any right hereunder shall not be construed as a waiver or relinquishment of the future performances of any such term, covenant or condition, or the future exercise of such right or a waiver or relinquishment or waiver of any other term, covenant or condition or the exercise of any other rights hereunder.

## **Governing Law**

This contract shall be governed by, construed and enforced in accordance with the laws of the State of Texas.

## Totality of Agreement: Special Provisions, Modifications

This instrument constitutes the entire agreement of the parties with respect to all matters and things herein mentioned. Purchaser warrants, represents and agrees that it has inspected the goods and has otherwise made inquiry and review on its own behalf, concerning the nature, characteristics and quality of the materials and workmanship incorporated therein at or prior to delivery, that it is fully contented and satisfied therewith and has independently determined that the goods are in all respects fit and usable for all purposes for which they are intended to be employed by Purchaser. It is expressly acknowledged and agreed by and between the parties that neither party has, nor is now, relying upon any collateral, prior or contemporaneous agreement, written or oral, assurance or assurances, representation or warranty, of any kind or nature as to or respecting the condition or capabilities of the goods and the other matters and things, rights and responsibilities herein fixed and described. No modification, waiver or discharge of any term or provision of this instrument shall be implied by law, nor shall any alteration, modification or acquittance of any such term or provision be effective for any purpose unless in writing signed by or upon behalf of the party charged therewith.



# P.B.V.



Contact your local PBV® representative for more information about other PBV® Brand flow control products, or learn more about other fine PBV® products by visiting www.zy-tech.com.

Your Local Representative

