

## Pressure Control, Reducing Cartridges

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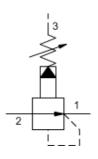
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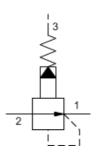


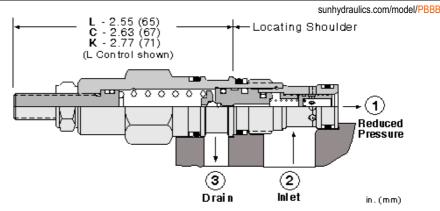
## Cavity Information

Series	Ports	Cavities
Series Z Cartridges	3-Port	T-382A
3/8-24 UNF Cartridge Thread		
5 mm Valve Hex Size		
1 - 14 Nm Valve Installation Torque		
Series P Cartridges	2-Port	T-8A
M16 Cartridge Thread	2-Port (Deep)	T-8DP
22.2 mm Valve Hex Size	3-Port	T-9A
27 - 33 Nm Valve Installation Torque		
Series 0 Cartridges	2-Port	T-162A
	2-Port (Deep)	T-162DP
M16 Cartridge Thread 19,1 mm Valve Hex Size	3-Port	T-150A
25,4 mm Valve Hex Size	3-Port	T-163A
27 - 33 Nm Valve Installation Torque	4-Port	T-30A
Series 1 Cartridges	2-Port	T-10A
M20 Cartridge Thread	2-Port	T-13A
vi20 Carmage Thread 22.2 mm Valve Hex Size	3-Port	T-11A
11 - 47 Nm Valve Installation Torque	4-Port	T-21A
The state of the s	4-Port	T-31A
	6-Port	T-61A
Series 2 Cartridges	2-Port	T-3A
I"-14 UNS Cartridge Thread	2-Port	T-5A
28,6 mm Valve Hex Size	3-Port	T-2A
1 - 68 Nm Valve Installation Torque	4-Port 4-Port	T-22A
	4-Port (Dual path)	T-32A T-52AD
	6-Port	T-52AD T-52A
	6-Port	T-62A
Series 3 Cartridges	2-Port	T-16A
•	3-Port	T-17A
M36 Cartridge Thread 31,8 mm Valve Hex Size	4-Port	T-23A
203 - 217 Nm Valve Installation Torque	4-Port	T-33A
2	4-Port (Dual path)	T-53AD
	6-Port	T-53A
	6-Port	T-63A
Series 4 Cartridges	2-Port	T-18A
M48 Cartridge Thread	2-Port (Undercut)	T-18AU
11,3 mm Valve Hex Size	3-Port	T-19A T-19AU
174 - 508 Nm Valve Installation Torque	3-Port (Undercut) 4-Port	T-19AU T-24A
	4-Port (Undercut)	T-24A T-24AU
	4-Port	T-34A
	4-Port (Dual path)	T-54AD
	6-Port	T-54A
	6-Port	T-64A









Pilot-operated, pressure reducing valves reduce a high primary pressure at the inlet (port 2) to a constant reduced pressure at port 1, allowing circuits with multiple pressure requirements to be operated using a single pump.

#### **TECHNICAL DATA**

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	blocked control port (dead headed)	
Maximum Operating Pressure	350 bar	
Control Pilot Flow	0,11 - 0,16 L/min.	
Adjustment - No. of CW Turns from Min. to Max. setting	5	
Locknut Hex Size	12,7 mm	
Locknut Torque	9 - 10 Nm	
Seal kit - Cartridge	Buna: 990163007	
Seal kit - Cartridge	Polyurethane: 990163002	
Seal kit - Cartridge	Viton: 990163006	

#### **CONFIGURATION OPTIONS**

L Standard Screw Adjustment

W Hex Wrench Adjustment

K Handknob

C Tamper Resistant - Factory Set

#### Model Code Example: PBBBLAN

#### CONTROL (L) ADJUSTMENT RANGE

## **A** 75 - 3000 psi (5 - 210 bar), 200 psi (14 bar) Standard Setting

- **W** 75 4500 psi (5 315 bar), 200 psi (14 bar) Standard Setting
- **B** 75 1500 psi (5 105 bar), 200 psi (14 bar) Standard Setting
- **N** 75 800 psi (5 55 bar), 200 psi (14 bar) Standard Setting
- **Q** 75 400 psi (5 28 bar), 200 psi (14 bar) Standard Setting

## (A) SEAL MATERIAL N Buna-N

E EPDM V Viton

## (N) MATERIAL/COATING Standard Material/Coating

/AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

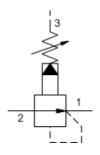
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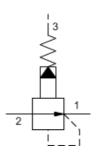


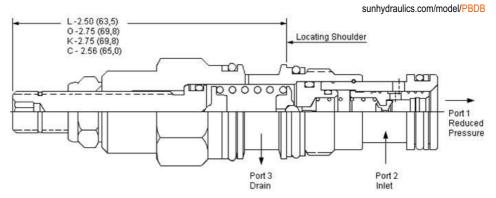
#### Pilot-operated, pressure reducing valve

#### SERIES 1 / CAPACITY: 40 L/min. / CAVITY: T-11A









Pilot-operated, pressure reducing valves reduce a high primary pressure at the inlet (port 2) to a constant reduced pressure at port 1, allowing circuits with multiple pressure requirements to be operated using a single pump.

#### **TECHNICAL DATA**

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	blocked control port (dead headed)
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,11 - 0,16 L/min.
Adjustment - No. of CW Turns from Min. to Max. setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	EPDM: 990011014
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

#### **NOTES**

- Maximum pressure differentials for spring ranges: A and B are 3000 psi (210 bar) N and Q are 2000 psi (140 bar) W is 5000 psi (350 bar)inlet pressure
- For Series 1 cartridges configured with an O control (panel mount handknob), a .75 in. (19 mm) diameter hole is required in the panel.

#### **CONFIGURATION OPTIONS**

#### **Model Code Example: PBDBLAN**

#### L Standard Screw Adjustment

- C Tamper Resistant Factory Set
- K Handknob

CONTROL

- W Hex Wrench Adjustment
- Y Tri-Grip Handknob
- 100 3000 psi (7 210 bar), 200 psi (14 bar) Standard Setting

(L) ADJUSTMENT RANGE

- W 150 4500 psi (10,5 315 bar), 200 psi (14 bar) Standard Setting
- **B** 50 1500 psi (3,5 105 bar), 200 psi (14 bar) Standard Setting
- N 60 800 psi (4 55 bar), 200 psi (14 bar) Standard Setting
- Q 60 400 psi (4 28 bar), 200 psi (14

(A) SEAL MATERIAL N Buna-N V Viton

/AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

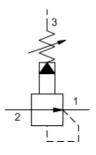
(N) MATERIAL/COATING

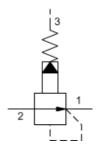
bar) Standard Setting

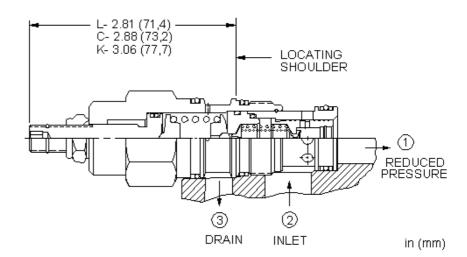
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Pilot-operated, pressure reducing valves reduce a high primary pressure at the inlet (port 2) to a constant reduced pressure at port 1, allowing circuits with multiple pressure requirements to be operated using a single pump.

#### **TECHNICAL DATA**

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	blocked control port (dead headed)
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,25 L/min.
Adjustment - No. of CW Turns from Min. to Max. setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	EPDM: 990202014
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

#### **NOTES**

- Maximum pressure differentials for spring ranges: A and B are 3000 psi (210 bar) N and Q are 2000 psi (140 bar) W is 5000 psi (350 bar)inlet pressure
- For Series 1 cartridges configured with an O control (panel mount handknob), a .75 in. (19 mm) diameter hole is required in the panel.

#### **CONFIGURATION OPTIONS**

#### Model Code Example: PBFBLAN

#### L Standard Screw Adjustment

- C Tamper Resistant Factory Set
- K Handknob

CONTROL

- W Hex Wrench Adjustment
- Y Tri-Grip Handknob

#### (L) ADJUSTMENT RANGE

bar) Standard Setting

#### (A) SEAL MATERIAL N Buna-N

**E** EPDM V Viton

#### (N) MATERIAL/COATING

/AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

#### (14 bar) Standard Setting **B** 50 - 1500 psi (3,5 - 105 bar), 200 psi

(14 bar) Standard Setting

A 100 - 3000 psi (7 - 210 bar), 200 psi (14

W 150 - 4500 psi (10,5 - 315 bar), 200 psi

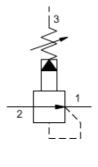
- **N** 60 800 psi (4 55 bar), 200 psi (14 bar) Standard Setting
- Q 60 400 psi (4 28 bar), 200 psi (14 bar) Standard Setting

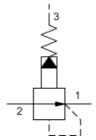
© 2020 Sun Hydraulics 3 of 25 Pilot-operated, pressure reducing valve

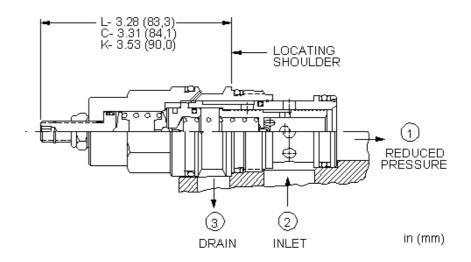
SERIES 3 / CAPACITY: 160 L/min. / CAVITY: T-17A



sunhydraulics.com/model/PBHB







Pilot-operated, pressure reducing valves reduce a high primary pressure at the inlet (port 2) to a constant reduced pressure at port 1, allowing circuits with multiple pressure requirements to be operated using a single pump.

#### **TECHNICAL DATA**

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	blocked control port (dead headed)
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,25 - 0,33 L/min.
Adjustment - No. of CW Turns from Min. to Max. setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	EPDM: 990017014
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

**NOTES** 

CONTROL

Maximum pressure differentials for spring ranges: A and B are 3000 psi (210 bar) N and Q are 2000 psi (140 bar) W is 5000 psi (350 bar)inlet pressure

#### **CONFIGURATION OPTIONS**

#### Model Code Example: PBHBLAN

#### L Standard Screw Adjustment

- C Tamper Resistant Factory Set
- K Handknob
- W Hex Wrench Adjustment
- Y Tri-Grip Handknob

#### (L) ADJUSTMENT RANGE

(A) SEAL MATERIAL

(N) MATERIAL/COATING

#### A 100 - 3000 psi (7 - 210 bar), 200 psi (14

- bar) Standard Setting
   150 4500 psi (10,5 315 bar), 200 psi (14 bar) Standard Setting
- **B** 50 1500 psi (3,5 105 bar), 200 psi (14 bar) Standard Setting
- **N** 60 800 psi (4 55 bar), 200 psi (14 bar) Standard Setting
- **Q** 60 400 psi (4 28 bar), 200 psi (14 bar) Standard Setting

## N Buna-N E EPDM

V Viton

#### Standard Material/Coating

/AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

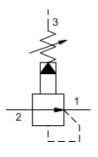
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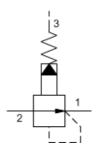
Pilot-operated, pressure reducing valve

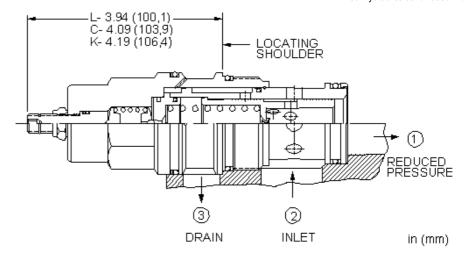
SERIES 4 / CAPACITY: 320 L/min. / CAVITY: T-19A



sunhydraulics.com/model/PBJB







Pilot-operated, pressure reducing valves reduce a high primary pressure at the inlet (port 2) to a constant reduced pressure at port 1, allowing circuits with multiple pressure requirements to be operated using a single pump.

#### **TECHNICAL DATA**

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	blocked control port (dead headed)
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,25 - 0,33 L/min.
Adjustment - No. of CW Turns from Min. to Max. setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	EPDM: 990019014
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

**NOTES** 

CONTROL

Maximum pressure differentials for spring ranges: A and B are 3000 psi (210 bar) N and Q are 2000 psi (140 bar) W is 5000 psi (350 bar)inlet pressure

#### **CONFIGURATION OPTIONS**

#### Model Code Example: PBJBLAN

#### L Standard Screw Adjustment

- C Tamper Resistant Factory Set
- K Handknob
- Q Capped and Lockwired
- W Hex Wrench Adjustment
- Y Tri-Grip Handknob

#### A 100 - 3000 psi (7 - 210 bar), 200 psi (14 bar) Standard Setting

(L) ADJUSTMENT RANGE

- W 150 4500 psi (10,5 315 bar), 200 psi (14 bar) Standard Setting
- 50 1500 psi (3,5 105 bar), 200 psi (14 bar) Standard Setting
- 25 1500 psi (1,7 105 bar), 200 psi (14 bar) Standard Setting
- N 60 800 psi (4 55 bar), 200 psi (14 bar) Standard Setting
- Q 60 400 psi (4 28 bar), 200 psi (14 bar) Standard Setting

#### (A) SEAL MATERIAL (N) MATERIAL/COATING

N Buna-N **E** EPDM /AP Stainless Steel, Passivated

V Viton /LH Mild Steel. Zinc-Nickel

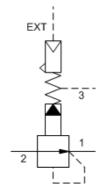
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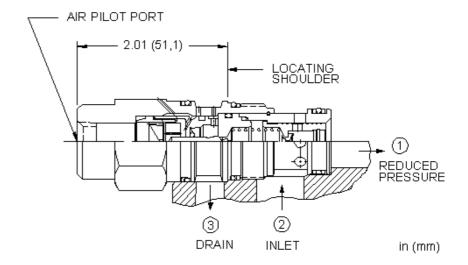






sunhydraulics.com/model/PBFC





Air-controlled, pilot-operated pressure reducing cartridges use compressed air over a diaphragm instead of an adjustable spring as the setting to reduce a high primary pressure at the inlet (port 2) to a constant reduced pressure at port 1. The air signal is supplied through a port in the hex-end of the cartridge and the hydraulic setting is directly proportional to the air setting at a ratio of 20:1 (hydraulic:air).

#### **TECHNICAL DATA**

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Γ	T
Pilot Ratio	20:1
Maximum Operating Pressure	140 bar
Control Pilot Flow	0,16 - 0,25 L/min.
Maximum Air Pressure	10,5 bar
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

#### **CONFIGURATION OPTIONS**

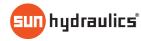
#### **Model Code Example: PBFCABN**

 CONTROL
 (A)
 OPERATING RANGE
 (B)
 SEAL MATERIAL
 (N)

 A External 1/4 NPTF Port
 B 50 - 1500 psi (3,5 - 105 bar)
 N Buna-N

 V Viton

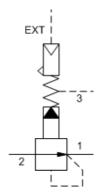
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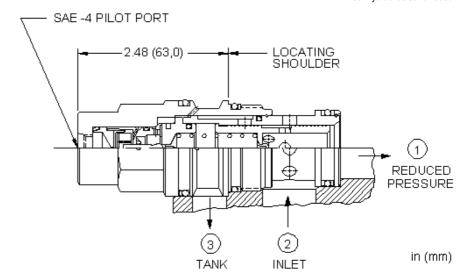






sunhydraulics.com/model/PBHC





Air-controlled, pilot-operated pressure reducing cartridges use compressed air over a diaphragm instead of an adjustable spring as the setting to reduce a high primary pressure at the inlet (port 2) to a constant reduced pressure at port 1. The air signal is supplied through a port in the hex-end of the cartridge and the hydraulic setting is directly proportional to the air setting at a ratio of 20:1 (hydraulic:air).

#### **TECHNICAL DATA**

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Pilot Ratio	20:1
Maximum Operating Pressure	140 bar
Control Pilot Flow	0,25 - 0,33 L/min.
Maximum Air Pressure	10,5 bar
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

#### **CONFIGURATION OPTIONS**

#### Model Code Example: PBHCBBN

CONTROL	(B)	OPERATING RANGE	(B)	SEAL MATERIAL	(N)
B External 4-SAE Port		<b>B</b> 50 - 1500 psi (3,5 - 105 bar)		N Buna-N	
_				V Viton	

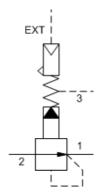
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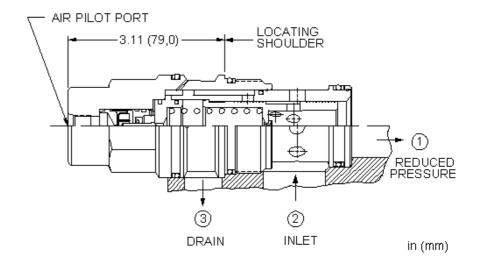


MODEL PBJC



sunhydraulics.com/model/PBJC





Air-controlled, pilot-operated pressure reducing cartridges use compressed air over a diaphragm instead of an adjustable spring as the setting to reduce a high primary pressure at the inlet (port 2) to a constant reduced pressure at port 1. The air signal is supplied through a port in the hex-end of the cartridge and the hydraulic setting is directly proportional to the air setting at a ratio of 20:1 (hydraulic:air).

#### **TECHNICAL DATA**

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Pilot Ratio	20:1	
Maximum Operating Pressure	140 bar	
Control Pilot Flow	0,25 - 0,33 L/min.	
Maximum Air Pressure	10,5 bar	
Locknut Hex Size	15 mm	
Locknut Torque	9 - 10 Nm	
Seal kit - Cartridge	Buna: 990019007	
Seal kit - Cartridge	Polyurethane: 990019002	
Seal kit - Cartridge	Viton: 990019006	

#### **CONFIGURATION OPTIONS**

#### Model Code Example: PBJCBBN

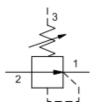
 CONTROL
 (B)
 OPERATING RANGE
 (B)
 SEAL MATERIAL
 (N)

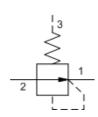
 B External 4-SAE Port
 B 50 - 1500 psi (3,5 - 105 bar)
 N Buna-N
 V Viton

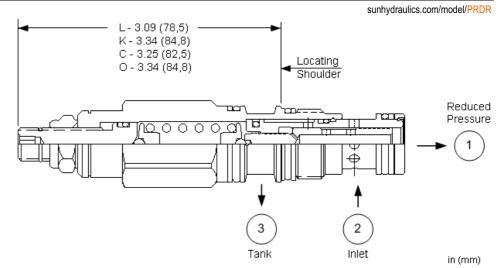
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#### SERIES 1 / CAPACITY: 40 L/min. / CAVITY: T-11A









Direct-acting, pressure reducing valves reduce a high primary pressure at the inlet (port 2) to a constant reduced pressure at port 1. These valves incorporate a damped construction for stable operation allowing the use of high reduced pressure.

#### **TECHNICAL DATA**

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	0.25 gpm
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.
Adjustment - No. of CW Turns from Min. to Max. setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	EPDM: 990011014
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

**NOTES** 

For Series 1 cartridges configured with an O control (panel mount handknob), a .75 in. (19 mm) diameter hole is required in the panel.

#### **CONFIGURATION OPTIONS**

#### Model Code Example: PRDRLAN

- C Tamper Resistant Factory Set
- K Handknob

CONTROL

O Handknob with Panel Mount

## (L) ADJUSTMENT RANGE

- 500 3000 psi (35 210 bar), 700 psi
- (50 bar) Standard Setting **B** 50 - 1500 psi (3,5 - 105 bar), 200 psi
- (14 bar) Standard Setting **D** 25 - 800 psi (1,7 - 55 bar), 200 psi (14
- bar) Standard Setting E 25 - 400 psi (1,7 - 28 bar), 200 psi (14
- bar) Standard Setting **S** 25 - 200 psi (1,7 - 14 bar), 100 psi (7
- (70 bar) Standard Setting

## (A) SEAL MATERIAL **E** EPDM

V Viton

(N) MATERIAL/COATING

/AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

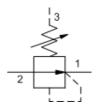
	bar) Standard Setting	
W	750 - 4500 psi (50 - 315 bar),	1000 psi

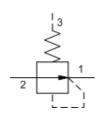
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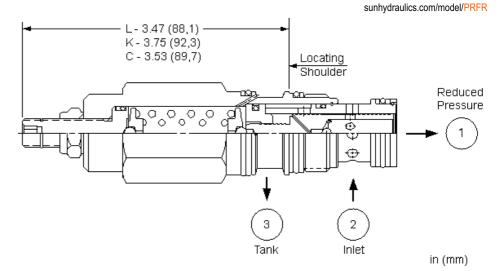


#### SERIES 2 / CAPACITY: 80 L/min. / CAVITY: T-2A









Direct-acting, pressure reducing valves reduce a high primary pressure at the inlet (port 2) to a constant reduced pressure at port 1. These valves incorporate a damped construction for stable operation allowing the use of high reduced pressure.

#### **TECHNICAL DATA**

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	0.25 gpm
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	50 cc/min.
Adjustment - No. of CW Turns from Min. to Max. setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	EPDM: 990202014
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

#### **CONFIGURATION OPTIONS**

#### Model Code Example: PRFRLAN

CONTROL (L) ADJUSTMENT RANGE (A) SEAL MATERIAL (N) MATERIAL/COATING

#### Standard Screw Adjustment

- C Tamper Resistant Factory Set
- K Handknob

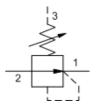
- **A** 750 3000 psi (50 210 bar), 1000 psi (70 bar) Standard Setting
- **B** 300 1500 psi (20 105 bar), 500 psi (35 bar) Standard Setting
- **D** 200 800 psi (14 55 bar), 400 psi (28 bar) Standard Setting
- E 100 400 psi (7 28 bar), 200 psi (14 bar) Standard Setting
- **S** 50 200 psi (3,5 14 bar), 100 psi (7 bar) Standard Setting
- **W** 1000 4500 psi (70 315 bar), 1000 psi (70 bar) Standard Setting
- N Buna-NStandard Material/CoatingE EPDM/AP Stainless Steel, PassivatedV Viton/LH Mild Steel, Zinc-Nickel

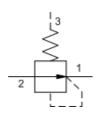
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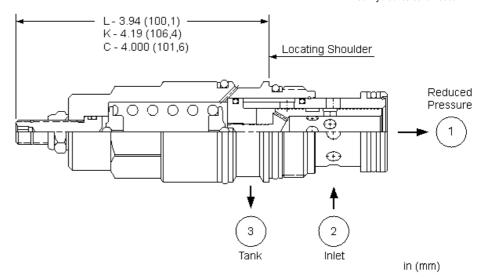
SERIES 3 / CAPACITY: 160 L/min. / CAVITY: T-17A



sunhydraulics.com/model/PRHR







Direct-acting, pressure reducing valves reduce a high primary pressure at the inlet (port 2) to a constant reduced pressure at port 1. These valves incorporate a damped construction for stable operation allowing the use of high reduced pressure.

#### **TECHNICAL DATA**

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	0.25 gpm
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	65 cc/min.
Adjustment - No. of CW Turns from Min. to Max. setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

#### **CONFIGURATION OPTIONS**

#### Model Code Example: PRHRLAN

#### CONTROL (L) ADJUSTMENT RANGE (A) SEAL MATERIAL (N) MATERIAL/COATING

#### Standard Screw Adjustment

- C Tamper Resistant Factory Set
- **K** Handknob

- **A** 750 3000 psi (50 210 bar), 1000 psi (70 bar) Standard Setting
- **B** 300 1500 psi (20 105 bar), 500 psi (35 bar) Standard Setting
- **D** 200 800 psi (14 55 bar), 400 psi (28 bar) Standard Setting
- E 100 400 psi (7 28 bar), 200 psi (14 bar) Standard Setting
- **S** 50 200 psi (3,5 14 bar), 100 psi (7 bar) Standard Setting
- **W** 1100 4500 psi (76 315 bar), 1100 psi (76 bar) Standard Setting

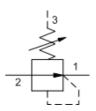
N Buna-N Standard Material/Coating
E EPDM /AP Stainless Steel, Passivated
V Viton /LH Mild Steel, Zinc-Nickel

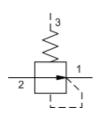
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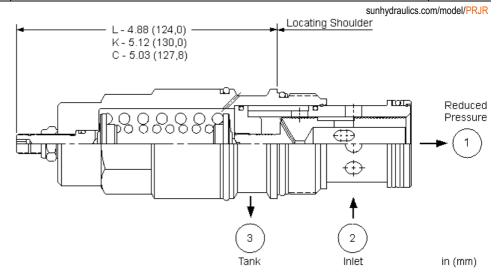


#### SERIES 4 / CAPACITY: 320 L/min. / CAVITY: T-19A









Direct-acting, pressure reducing valves reduce a high primary pressure at the inlet (port 2) to a constant reduced pressure at port 1. These valves incorporate a damped construction for stable operation allowing the use of high reduced pressure.

#### **TECHNICAL DATA**

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	0.25 gpm
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	80 cc/min.
Adjustment - No. of CW Turns from Min. to Max. setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	EPDM: 990019014
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

#### **CONFIGURATION OPTIONS**

#### Model Code Example: PRJRLAN

V Viton

CONTROL (L) ADJUSTMENT RANGE (A) SEAL MATERIAL (N) MATERIAL/COATING

- C Tamper Resistant Factory Set
- K Handknob

- 750 3000 psi (50 210 bar), 1000 ps (70 bar) Standard Setting
- **B** 300 1500 psi (20 105 bar), 500 psi (35 bar) Standard Setting
- **D** 200 800 psi (14 55 bar), 400 psi (28 bar) Standard Setting
- E 100 400 psi (7 28 bar), 200 psi (14 bar) Standard Setting
- **S** 50 200 psi (3,5 14 bar), 100 psi (7
- W 1100 4500 psi (76 315 bar), 1100 psi (76 bar) Standard Setting
- **E** EPDM /AP Stainless Steel, Passivated

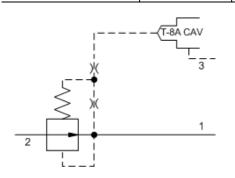
bar) Standard Setting

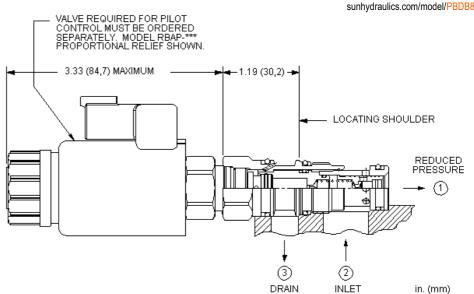
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## Pilot-operated, pressure reducing main stage with integral T-8A control cavity SERIES 1 / CAPACITY: 40 L/min. / CAVITY: T-11A







This valve is a normally open modulating element that incorporates an integral pilot control cavity. The pilot control cavity will accept any T-8A pressure control cartridge. The valve reduces a high primary pressure at the inlet (port 2) to a constant reduced pressure at port 1. The pilot cartridge's setting determines the difference in pressure between reduced pressure (port 1) and the drain (port 3).

#### **TECHNICAL DATA**

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Control Pilot Flow	0,11 - 0,16 L/min.
Pilot Control Cavity	T-8A
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	EPDM: 990011014
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

**NOTES** 

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

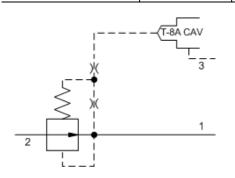
#### **CONFIGURATION OPTIONS**

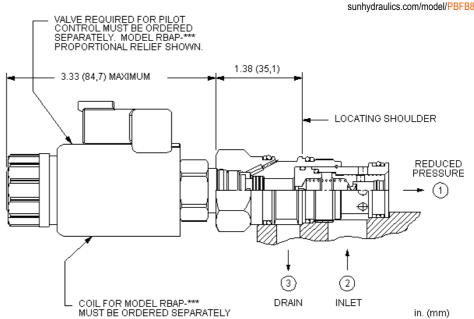
Model Code Example: PBDB8WN

BIAS PRESSURE	(W) SEAL MATERIAL	(N)
<b>W</b> 100 psi (7 bar)	N Buna-N	
D 25 pci (1.7 bor)	V Viton	

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This valve is a normally open modulating element that incorporates an integral pilot control cavity. The pilot control cavity will accept any T-8A pressure control cartridge. The valve reduces a high primary pressure at the inlet (port 2) to a constant reduced pressure at port 1. The pilot cartridge's setting determines the difference in pressure between reduced pressure (port 1) and the drain (port 3).

#### **TECHNICAL DATA**

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,25 L/min.
Pilot Control Cavity	T-8A
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	EPDM: 990202014
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

**NOTES** 

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

#### **CONFIGURATION OPTIONS**

Model Code Example: PBFB8WN

MINIMUM CONTROL PRESSURE (W) SEAL MATERIAL

(N)

W 100 psi (7 bar)
D 25 psi (1,7 bar)

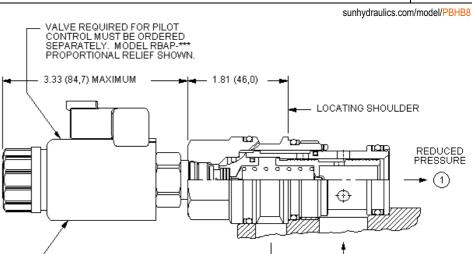
N Buna-N

**E** EPDM

**V** Viton

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This valve is a normally open modulating element that incorporates an integral pilot control cavity. The pilot control cavity will accept any T-8A pressure control cartridge. The valve reduces a high primary pressure at the inlet (port 2) to a constant reduced pressure at port 1. The pilot cartridge's setting determines the difference in pressure between reduced pressure (port 1) and the drain (port 3).

(3)

DRAIN

#### **TECHNICAL DATA**

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

(2)

INLET

in. (mm)

Factory Pressure Settings Established at	blocked control port (dead headed)
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,25 - 0,33 L/min.
Pilot Control Cavity	T-8A
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	EPDM: 990017014
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

**NOTES** 

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

COIL FOR MODEL RBAP-\*\*\* MUST BE ORDERED SEPARATELY

#### **CONFIGURATION OPTIONS**

Model Code Example: PBHB8WN

MINIMUM CONTROL PRESSURE (W) SEAL MATERIAL

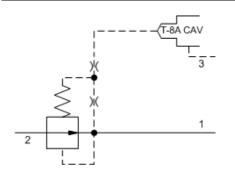
(N)

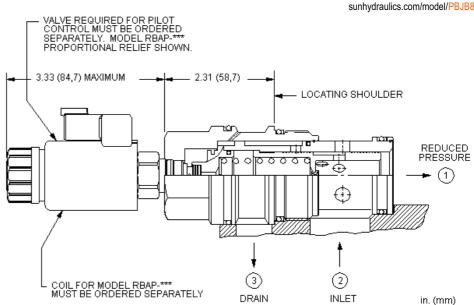
W 100 psi (7 bar)
D 25 psi (1,7 bar)

N Buna-N
E EPDM
V Viton

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This valve is a normally open modulating element that incorporates an integral pilot control cavity. The pilot control cavity will accept any T-8A pressure control cartridge. The valve reduces a high primary pressure at the inlet (port 2) to a constant reduced pressure at port 1. The pilot cartridge's setting determines the difference in pressure between reduced pressure (port 1) and the drain (port 3).

#### **TECHNICAL DATA**

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	blocked control port (dead headed)
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,25 - 0,33 L/min.
Pilot Control Cavity	T-8A
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	EPDM: 990019014
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

**NOTES** 

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

#### **CONFIGURATION OPTIONS**

Model Code Example: PBJB8WN

MINIMUM CONTROL PRESSURE (W) SEAL MATERIAL

(N)

W 100 psi (7 bar)
D 25 psi (1,7 bar)

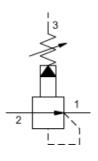
N Buna-N E EPDM

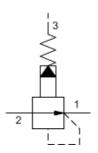
**V** Viton

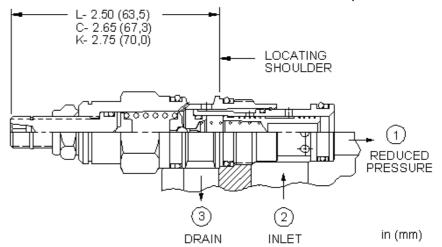
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Pilot-operated, pressure reducing valves reduce a high primary pressure at the inlet (port 2) to a constant reduced pressure at port 1, allowing circuits with multiple pressure requirements to be operated using a single pump.

#### **TECHNICAL DATA**

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	blocked control port (dead headed)
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,11 - 0,16 L/min.
Adjustment - No. of CW Turns from Min. to Max. setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

For Series 1 cartridges configured with an O control (panel mount handknob), a .75 in. (19 mm) diameter hole is required in the panel. **NOTES** 

#### **CONFIGURATION OPTIONS**

#### Model Code Example: PBDFLAN

CONTROL	(L)	ADJUSTMENT RANGE	(A)	SEAL MATERIAL	(N)
I Standard Screw Adjustment		▲ 100 - 3000 psi (7 - 210 bar) 2	00 nei (14	N Runa-N	

- Tamper Resistant Factory Set
- K Handknob

- bar) Standard Setting 50 - 1500 psi (3,5 - 105 bar), 200 psi
- (14 bar) Standard Setting
- **D** 25 800 psi (1,7 55 bar), 200 psi (14 bar) Standard Setting
- E 25 400 psi (1,7 28 bar), 200 psi (14 bar) Standard Setting
- **G** 60 3000 psi (4 210 bar), 200 psi (14 bar) Standard Setting
- **K** 75 1500 psi (5 105 bar), 200 psi (14 bar) Standard Setting
- N 60 800 psi (4 55 bar), 200 psi (14 bar) Standard Setting
- P 40 400 psi (2,8 28 bar), 200 psi (14 bar) Standard Setting
- **Q** 60 400 psi (4 28 bar), 200 psi (14 bar) Standard Setting
- W 150 4500 psi (10,5 315 bar), 200 psi (14 bar) Standard Setting

V Viton

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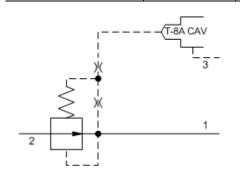


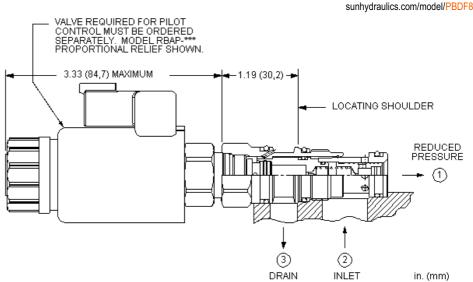
MODEL PBDF8

Pilot-operated, pressure reducing main stage with drilled piston orifice and integral T-8A control cavity

SERIES 1 / CAPACITY: 40 L/min. / CAVITY: T-11A







This valve is a normally open modulating element that incorporates an integral pilot control cavity. The pilot control cavity will accept any T-8A pressure control cartridge. The valve reduces a high primary pressure at the inlet (port 2) to a constant reduced pressure at port 1. The pilot cartridge's setting determines the difference in pressure between reduced pressure (port 1) and the drain (port 3).

#### **TECHNICAL DATA**

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar	
Control Pilot Flow	0,11 - 0,16 L/min.	
Pilot Control Cavity	T-8A	
Seal kit - Cartridge	Buna: 990011007	
Seal kit - Cartridge	Polyurethane: 990011002	
Seal kit - Cartridge	Viton: 990011006	

#### **CONFIGURATION OPTIONS**

Model Code Example: PBDF8WN

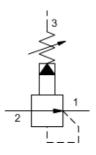
BIAS PRESSURE	(W) SEAL MATERIAL	(N)
<b>W</b> 100 psi (7 bar)	<b>N</b> Buna-N	
<b>D</b> 25 psi (1,7 bar)	<b>V</b> Viton	

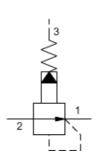
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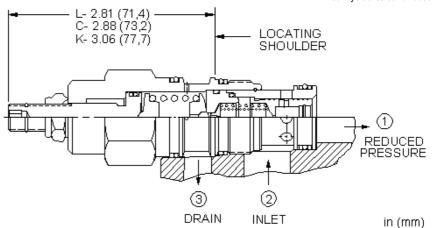
SERIES 2 / CAPACITY: 80 L/min. / CAVITY: T-2A



sunhydraulics.com/model/PBFF







Pilot-operated, pressure reducing valves reduce a high primary pressure at the inlet (port 2) to a constant reduced pressure at port 1, allowing circuits with multiple pressure requirements to be operated using a single pump.

#### **TECHNICAL DATA**

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	blocked control port (dead headed)	
Control Pilot Flow	0,16 - 0,25 L/min.	
Adjustment - No. of CW Turns from Min. to Max. setting	5	
Locknut Hex Size	15 mm	
Locknut Torque	9 - 10 Nm	
Seal kit - Cartridge	Buna: 990202007	
Seal kit - Cartridge	EPDM: 990202014	
Seal kit - Cartridge	Polyurethane: 990002002	
Seal kit - Cartridge	Viton: 990202006	

**NOTES** 

For Series 1 cartridges configured with an O control (panel mount handknob), a .75 in. (19 mm) diameter hole is required in the panel.

#### **CONFIGURATION OPTIONS**

#### Model Code Example: PBFFLAN

L Standard Screw Adjustment

- C Tamper Resistant Factory Set
- K Handknob

CONTROL

- 100 3000 psi (7 210 bar), 200 psi (14 bar) Standard Setting

  B 50 - 1500 psi (3,5 - 105 bar), 200 psi
- (14 bar) Standard Setting

(L) ADJUSTMENT RANGE

- N 60 800 psi (4 55 bar), 200 psi (14 bar) Standard Setting
- Q 60 400 psi (4 28 bar), 200 psi (14 bar) Standard Setting
- W 150 4500 psi (10,5 315 bar), 200 psi (14 bar) Standard Setting

N Buna-N E FPDM V Viton

(A) SEAL MATERIAL

Standard Material/Coating

/LH Mild Steel, Zinc-Nickel

(N) MATERIAL/COATING

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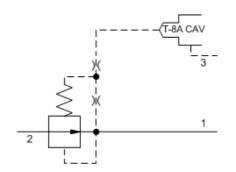


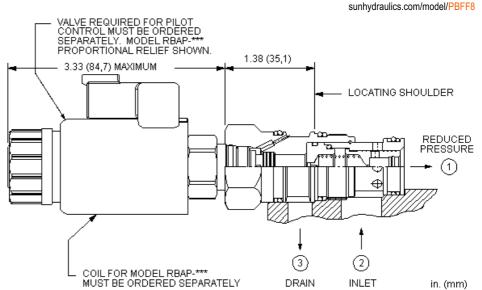


Pilot-operated, pressure reducing main stage with drilled piston orifice and integral T-8A control cavity

SERIES 2 / CAPACITY: 80 L/min. / CAVITY: T-2A







This valve is a normally open modulating element that incorporates an integral pilot control cavity. The pilot control cavity will accept any T-8A pressure control cartridge. The valve reduces a high primary pressure at the inlet (port 2) to a constant reduced pressure at port 1. The pilot cartridge's setting determines the difference in pressure between reduced pressure (port 1) and the drain (port 3).

#### **TECHNICAL DATA**

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,25 L/min.
Pilot Control Cavity	T-8A
Pilot Control Valve Installation Torque	27 - 33 Nm
Pilot Control Valve Hex Size	22,2 mm
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	EPDM: 990202014
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

#### **CONFIGURATION OPTIONS**

#### Model Code Example: PBFF8WN

(N)

MINIMUM CONTROL PRESSURE (W) SEAL MATERIAL W 100 psi (7 bar) N Buna-N

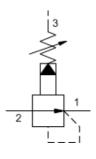
**E** EPDM

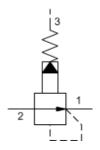
**D** 25 psi (1,7 bar) V Viton

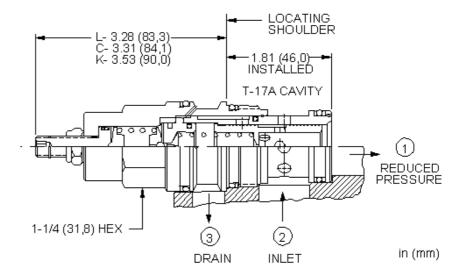
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sunhydraulics.com/model/PBHF







Pilot-operated, pressure reducing valves reduce a high primary pressure at the inlet (port 2) to a constant reduced pressure at port 1, allowing circuits with multiple pressure requirements to be operated using a single pump.

#### **TECHNICAL DATA**

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	blocked control port (dead headed)	
Maximum Operating Pressure	350 bar	
Control Pilot Flow	0,25 - 0,33 L/min.	
Adjustment - No. of CW Turns from Min. to Max. setting	5	
Locknut Hex Size	15 mm	
Locknut Torque	9 - 10 Nm	
Seal kit - Cartridge	Buna: 990017007	
Seal kit - Cartridge	Polyurethane: 990017002	
Seal kit - Cartridge	Viton: 990017006	

(N)

#### **CONFIGURATION OPTIONS**

#### Model Code Example: PBHFLAN

#### L Standard Screw Adjustment

- C Tamper Resistant Factory Set
- K Handknob

CONTROL

- M Capped Screw Adjustment with Lockwire Holes
- Q Capped and Lockwired
- W Hex Wrench Adjustment
- Y Tri-Grip Handknob

## A 100 - 3000 psi (7 - 210 bar), 200 psi (14 bar) Standard Setting

(L) ADJUSTMENT RANGE

- B 50 1500 psi (3,5 105 bar), 200 psi
- (14 bar) Standard Setting C 150 - 6000 psi (10,5 - 420 bar), 200 psi
- (14 bar) Standard Setting **D** 25 800 psi (1,7 55 bar), 200 psi (14
- bar) Standard Setting
- **E** 25 400 psi (1,7 28 bar), 200 psi (14 bar) Standard Setting
- N 60 800 psi (4 55 bar), 200 psi (14 bar) Standard Setting
- **Q** 60 400 psi (4 28 bar), 200 psi (14 bar) Standard Setting
- **W** 150 4500 psi (10,5 315 bar), 200 psi (14 bar) Standard Setting

## (A) SEAL MATERIAL

#### IATENIAL

N Buna-N V Viton

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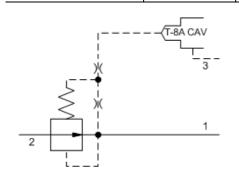


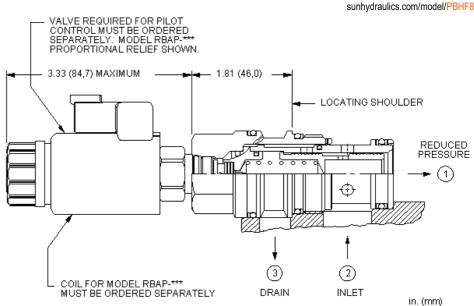


Pilot-operated, pressure reducing main stage with drilled piston orifice and integral T-8A control cavity

SERIES 3 / CAPACITY: 160 L/min. / CAVITY: T-17A







This valve is a normally open modulating element that incorporates an integral pilot control cavity. The pilot control cavity will accept any T-8A pressure control cartridge. The valve reduces a high primary pressure at the inlet (port 2) to a constant reduced pressure at port 1. The pilot cartridge's setting determines the difference in pressure between reduced pressure (port 1) and the drain (port 3).

#### **TECHNICAL DATA**

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	blocked control port (dead headed)	
Maximum Operating Pressure	350 bar	
Control Pilot Flow	0,25 - 0,33 L/min.	
Pilot Control Cavity	T-8A	
Seal kit - Cartridge	Buna: 990017007	
Seal kit - Cartridge	EPDM: 990017014	
Seal kit - Cartridge	Polyurethane: 990017002	
Seal kit - Cartridge	Viton: 990017006	

**NOTES** 

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

#### **CONFIGURATION OPTIONS**

Model Code Example: PBHF8WN

MINIMUM CONTROL PRESSURE (W) SEAL MATERIAL (I

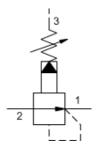
W 100 psi (7 bar)
D 25 psi (1,7 bar)

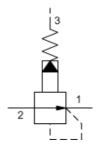
N Buna-NE EPDMV Viton

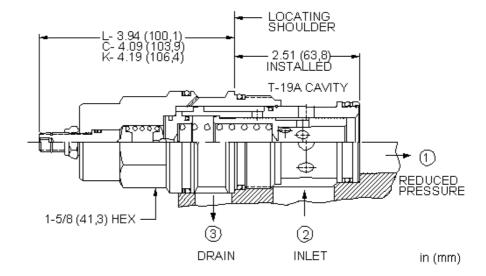
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Pilot-operated, pressure reducing valves reduce a high primary pressure at the inlet (port 2) to a constant reduced pressure at port 1, allowing circuits with multiple pressure requirements to be operated using a single pump.

#### **TECHNICAL DATA**

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	blocked control port (dead headed)	
Maximum Operating Pressure	350 bar	
Control Pilot Flow	0,25 - 0,33 L/min.	
Adjustment - No. of CW Turns from Min. to Max. setting	5	
Locknut Hex Size	15 mm	
Locknut Torque	9 - 10 Nm	
Seal kit - Cartridge	Buna: 990019007	
Seal kit - Cartridge	EPDM: 990019014	
Seal kit - Cartridge	Polyurethane: 990019002	
Seal kit - Cartridge	Viton: 990019006	

#### **CONFIGURATION OPTIONS**

#### Model Code Example: PBJFLAN

#### L Standard Screw Adjustment

- C Tamper Resistant Factory Set
- K Handknob

CONTROL

N Capped Screw Adjustment with Lockwire Holes

#### (L) ADJUSTMENT RANGE **A** 100 - 3000 psi (7 - 210 bar), 200 psi (14

## (A) SEAL MATERIAL

#### bar) Standard Setting

- **B** 50 1500 psi (3,5 105 bar), 200 psi (14 bar) Standard Setting
- C 150 6000 psi (10,5 420 bar), 200 psi (14 bar) Standard Setting
- **D** 25 800 psi (1,7 55 bar), 200 psi (14 bar) Standard Setting
- E 25 400 psi (1,7 28 bar), 200 psi (14 bar) Standard Setting
- N 60 800 psi (4 55 bar), 200 psi (14 bar) Standard Setting
- Q 60 400 psi (4 28 bar), 200 psi (14 bar) Standard Setting
- W 100 4500 psi (7 315 bar), 200 psi (14

bar) Standard Setting

#### N Buna-N

**E** EPDM V Viton

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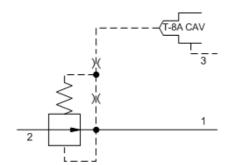


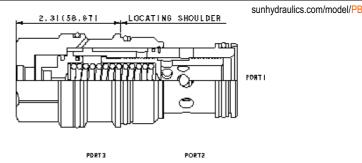


Pilot-operated, pressure reducing main stage with drilled piston orifice and integral T-8A control cavity

SERIES 4 / CAPACITY: 320 L/min. / CAVITY: T-19A







This valve is a normally open modulating element that incorporates an integral pilot control cavity. The pilot control cavity will accept any T-8A pressure control cartridge. The valve reduces a high primary pressure at the inlet (port 2) to a constant reduced pressure at port 1. The pilot cartridge's setting determines the difference in pressure between reduced pressure (port 1) and the drain (port 3).

#### **TECHNICAL DATA**

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	blocked control port (dead headed)	
Maximum Operating Pressure	350 bar	
Control Pilot Flow	0,25 - 0,33 L/min.	
Pilot Control Cavity	T-8A	
Seal kit - Cartridge	Buna: 990019007	
Seal kit - Cartridge	Polyurethane: 990019002	
Seal kit - Cartridge	Viton: 990019006	

#### **CONFIGURATION OPTIONS**

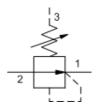
#### Model Code Example: PBJF8WN

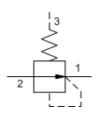
MINIMUM CONTROL PRESSURE	(W)	SEAL MATERIAL	(N)
<b>W</b> 100 psi (7 bar)		N Buna-N	
<b>D</b> 25 psi (1,7 bar)		<b>V</b> Viton	

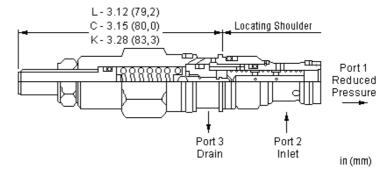
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Direct-acting, pressure reducing valves reduce a high primary pressure at the inlet (port 2) to a constant reduced pressure at port 1. These valves incorporate a damped construction for stable operation allowing the use of high reduced pressure.

#### **TECHNICAL DATA**

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	0.25 gpm
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.
Adjustment - No. of CW Turns from Min. to Max. setting	5
Locknut Hex Size	12,7 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990163007
Seal kit - Cartridge	EPDM: 990163014
Seal kit - Cartridge	Viton: 990163006

#### **CONFIGURATION OPTIONS**

#### Model Code Example: PRBRLAN

V Viton

CONTROL (L) ADJUSTMENT RANGE (A) SEAL MATERIAL (N) MATERIAL/COATING

#### L Standard Screw Adjustment

- C Tamper Resistant Factory Set
- **K** Handknob

- A 500 3000 psi (35 210 bar), 700 psi (50 bar) Standard Setting
- **B** 50 1500 psi (3,5 105 bar), 200 psi (14 bar) Standard Setting
- **D** 25 800 psi (1,7 55 bar), 200 psi (14 bar) Standard Setting
- **E** 25 400 psi (1,7 28 bar), 200 psi (14 bar) Standard Setting
- **S** 25 200 psi (1,7 14 bar), 100 psi (7 bar) Standard Setting
- **W** 750 4500 psi (50 315 bar), 1000 psi (70 bar) Standard Setting

N Buna-N Standard Material/Coating
E EPDM /AP Stainless Steel, Passivated

/AP Stainless Steel, Passivated
/LH Mild Steel, Zinc-Nickel

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## www.sunhydraulics.com

Sun Hydraulics Headquarters Sarasota, Florida USA +1 941 362 1200 Sun Hydraulics Limited Coventry England +44 2476 217 400 sales@sunuk.com

Sun Hydraulics Korea Corp. Incheon Korea +82 3281 31350 sales@sunhydraulics.co.kr Sun Hydraulik GmbH Erkelenz Germany +49 2431 80910 sales@sunhydraulik.de

Sun Hydraulics China Co. Ltd. Shanghai P.R. China +86 2162 375885 sunchinainfo@sunhydraulics.com Sun Hydraulics Corp. (India) Bangalore India +91 8028 456325 sunindiainfo@sunhydraulics.com

Sun Hydraulics Corp. (S.America) Rosario, Argentina +54 9 341 584 3075 ventas@sunhydraulics.com