



## "R" PILOT "PNEUMATIC or HYDRAULIC"

### OPERATION

The BWB "R-PILOT" is a 3 way, normally closed or normally open, automatic, pressure sensing device. By choosing the appropriate inlet, the sensor can detect pressure above (**PSH**) or below (**PSL**) any desired pressure setting. By selecting the correct piston assembly & spring combination (See Pressure Chart), and either loosening or tightening the adjustment bolt, the sensor may be set between **0.5** and **10,000 PSI**. It is normally installed on a process vessel, process flow line, or in a control panel. The sensor receives sensing pressure (Port **D**) from the component which it is monitoring and supply pressure (Port **A** or **B**) from the safety system which it will shutdown.

### FEATURES

- 316 STAINLESS STEEL MATERIALS
- 150 PSI (10.34 BAR) MAWP
- 1/4" FNPT CONTROL PORTS
- DEAD BAND +/- 5% OF SET PRESSURE
- SET POINT REPEATABILITY +/- 1% OF SET PRESSURE

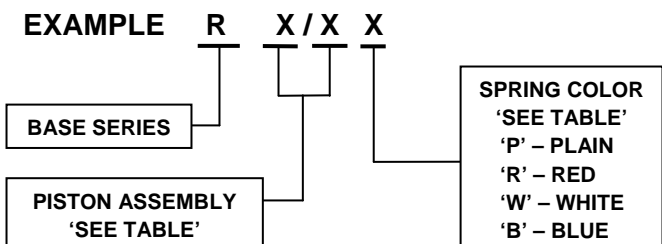
### SERVICE CLASSIFICATION

- Standard service: Viton O-rings
- Temperature Range: -20 to 250 o F (-29 to 121 o C)
- Special service: O Ring compounds and materials to Customer Requirements



BWB Controls 'R' Pilots can be configured to meet the needs of the customer by changing the Sensing Sleeves, Sensing Pistons and Springs. Please review the charts below to determine your configuration.

### ORDERING INFORMATION



PISTON ASSEMBLY TABLE		
SENSING PISTON RANGE CAPABILITY		
DIAPHRAGM ASSEMBLY	0.5 - 3 PSI	.03 - .21 bar
LOW PRESSURE ASSEMBLY	3 - 10 PSI	.21 - .69 bar
#1/2 PISTON ASSEMBLY	5 - 800 PSI	.34 - 55 bar
#2/3 PISTON ASSEMBLY	250 - 2000 PSI	17 - 138 bar
#4/5 PISTON ASSEMBLY	2000 - 10000 PSI	138 - 689 bar

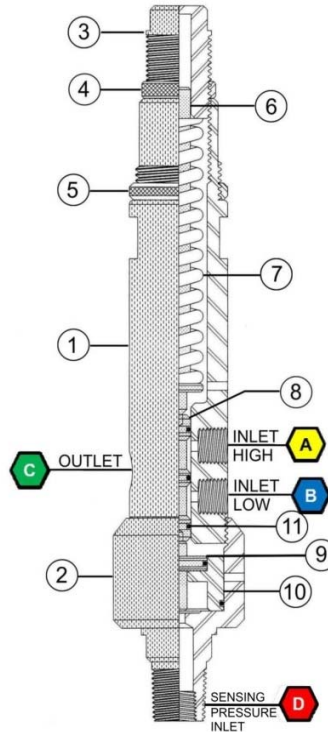
PART #	PISTON - SPRING	ADJUSTABLE RANGE	
RDIA	DIA PLAIN	0.5 - 3 PSI	.03 - .21 bar
RLP	LP PLAIN	3 - 10 PSI	.21 - .69 bar
R1/2P	#1/2 - PLAIN	5 - 15 PSI	.34 - 1.02 bar
R1/2R	#1/2 RED	15 - 50 PSI	1.02 - 3.45 bar
R1/2W	#1/2 - WHITE	50 - 150 PSI	3.45 - 10 bar
R1/2B	#1/2 - BLUE	150 - 250 PSI	10 - 17 bar
R2/1W	#2/1 - WHITE	150 - 250 PSI	10 - 17 bar
R2/1B	#2/1 - BLUE	250 - 800 PSI	17 - 55 bar
R2/3B	#2/3 - BLUE	250 - 800 PSI	17 - 55 bar
R3/2B	#3/2 - BLUE	800 - 2000 PSI	55 - 138 bar
R4/5B	#4/5 - BLUE	2000 - 4000 PSI	138 - 276 bar
R5/4B	#5/4 - BLUE	4000 - 10000 PSI	276 - 689 bar

WEIGHTS			
R	4.25 POUNDS	R (PSHL)	11.00 POUNDS
RDIA	9.00 POUNDS	RDIF	7.00 POUNDS
RIC	4.50 POUNDS	RLP	4.25 POUNDS
PANEL MOUNT			
1 - 3/8" Diameter Hole (35 mm)			
Maximum Panel Thickness, 0.25 Inches (6 mm)			
Panel Nut Thickness; 0.25 inches (6 mm)			



**INSTALLATION**

- PORT 'A'**
  - A** PSH – Supply Inlet (N.O.)
  - PSL – Exhaust (N.C.)
  - 30 to 150 PSI (2.06 to 10.3 bar)
  - 1/4" FNPT - Orifice - .125" (3.17 mm)
- PORT 'B'**
  - B** PSL – Supply Inlet (N.C.)
  - PSH – Exhaust (N.O.)
  - 30 to 150 PSI (2.06 to 10.3 bar)
  - 1/4" FNPT - Orifice - .125" (3.17 mm)
- PORT 'C'**
  - C** Supply Pressure Outlet
  - 1/4" FNPT
  - Orifice Size - .062" (1.57 mm)
- PORT 'D'**
  - D** Sensing Pressure Inlet
  - 0.5 to 10000 PSI (0.03 to 689.48 bar)
  - 1/4" FNPT and 1/2" MNPT
  - Orifice Size - .187 (4.75 mm)



ITEM	DESCRIPTION
1	BODY
2	BASE
3	ADJUSTMENT BOLT
4	LOCK RING
5	PANEL LOCK RING
6	SPRING GUIDE
7	SPRING
8	INNER PISTON
9	SENSING PISTON ***
10	SENSING SLEEVE ***
11	O RING

\*\*\* SENSING PISTON AND SLEEVE DATA IS FOUND ON THE ABOVE PAGE

**REPAIR KIT(S):**  
CONTAINS ALL SEALS

Please see the diagrams below of the Sleeve and Piston configurations.

1/2 PISTON ASSEMBLY	
1/2 PISTON & SLEEVE	2/1 PISTON & SLEEVE
2/3 PISTON ASSEMBLY	
2/3 PISTON & SLEEVE	3/2 PISTON & SLEEVE
4/5 PISTON ASSEMBLY	
4/5 PISTON & SLEEVE	5/4 PISTON & SLEEVE

**DIMENSIONS**

2.625 in. / 6.667 cm ADJUSTABLE

10.312 - 10.687 in. (26.192 - 27.145 cm)

1.500 in. / 3.810 cm

2.000 in. / 5.080 cm