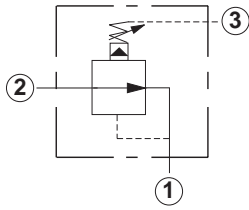


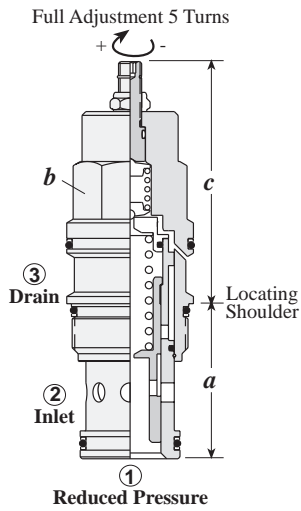
Pressure Reducing Valves

PILOT OPERATED REDUCING



Capacity	Typical Cartridge Model Code	Cavity	Cartridge Dimensions					Installation Torque (Nm)
			a	b	c			
					L	C	K	
20 L/min.	PBBB – LAN	T - 163A	31	19,1	65	67	71	35/40
40 L/min.	PBDB – LAN	T - 11A	34,9	22,2	64	66	70	40/50
80 L/min.	PBFB – LAN	T - 2A	34,9	28,6	72	74	78	60/70
160 L/min.	PBHB – LAN	T - 17A	46	31,8	84	86	90	200/215
320 L/min.	PBJB – LAN	T - 19A	63,5	41,3	100	104	107	465/500

OPTION ORDERING INFORMATION



PB * B - * * *

Nominal Capacity	Control**	Adjustment Range	Seal
B 20 L/min.*	L Standard Screw	A 7 - 210 bar	N Buna-N
D 40 L/min.	C Tamper Resistant	W 10 - 315 bar	V Viton
F 80 L/min.	K Handknob	B 3,5 - 105 bar	
H 160 L/min.		N 4 - 55 bar	
J 320 L/min.		Q 4 - 25 bar	

Adjustment Range Options:
 All are standard set at 14 bar.
 Maximum pressure differentials for spring ranges:
 A and B are 210 bar.
 N and Q are 140 bar.
 W is 350 bar inlet pressure.

** See page 244 for information on Control Options

* Minimum setting 5 bar on all ranges.
 Customer may specify pressure setting.

TECHNICAL TIPS / PERFORMANCE CURVES

Pressure Reducing Valves, Pilot Operated

Applications

Pilot operated reducing cartridges reduce high primary pressure at port 2 (inlet) to a controlled lower pressure at port 1. Port 3 is the pilot drain connection and pressure in this port is directly additive to the reduced pressure setting.

- Provide a controlled lower pressure to a secondary circuit function.
- Provide accurate reduced pressure control for clamp and hold down circuits.

Design Concepts and Features

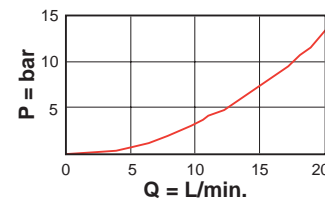
- Low hysteresis for accurate pressure regulation.
- High flow capacity relative to physical size.
- Low pilot flow (from .15 to .35 L/min.) dependent on frame size.
- Incorporates a 150 micron screen to protect main stage control orifice from contamination.
- Multiple spring ranges for optimum adjustment control.
- See page 34 for maximum operating pressure differentials for individual spring ranges.

Note: Sun also offers reducing/relieving cartridges (PP*B) that are functionally interchangeable with reducing cartridges. However, with the reducing/relieving valves it is necessary to have a full flow capacity return passage from port 3. See page 42 for further details.

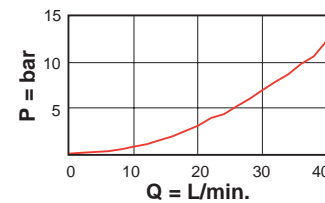
Performance Curves

No Load Pressure Drop with Valve Full Open

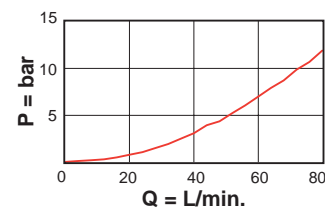
PBBB-L*N



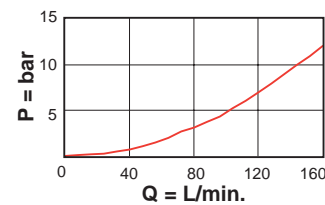
PBDB-L*N



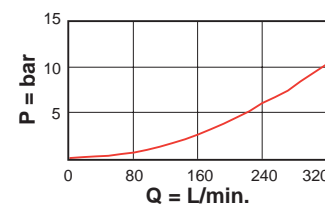
PBFB-L*N



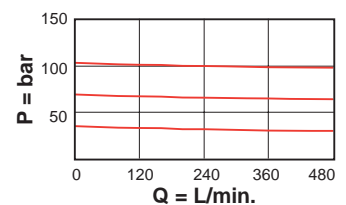
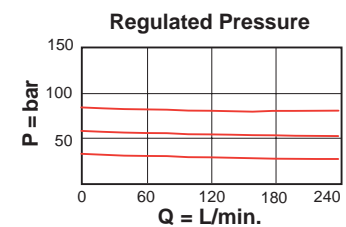
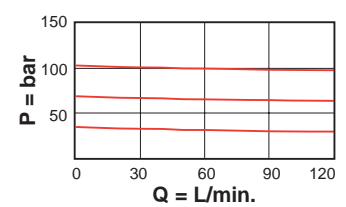
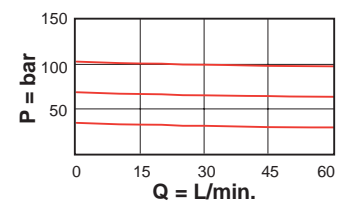
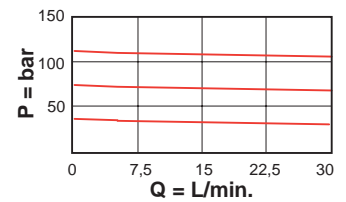
PBHB-L*N



PBJB-L*N



Regulated Pressure



General Application Requirements

- Operating Temperature Range: Buna-N seals -45° C to 90° C, Viton seals -15° C to 120° C.
- Viscosity Range: 10-600 centistokes.
- Fluid Contamination Level: ISO 4406 18/15 or better; Recommend $\beta_{10} \geq 75$ to achieve ISO 18/15 or better in most systems.
- Factory Pressure Setting for cartridge is established at zero flow rate.