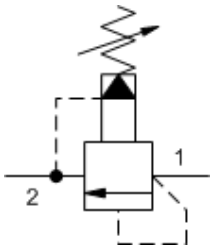
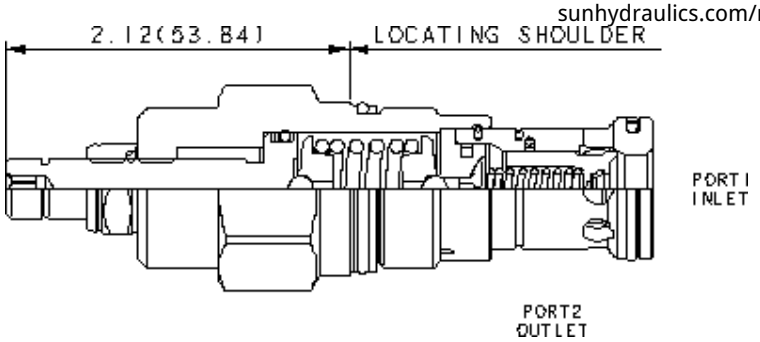
MODEL
RPGS

Pilot-operated, balanced poppet relief valve
SERIES 2 / CAPACITY: 50 gpm / CAVITY: T-3A

sunhydraulics.com/model/RPGS





CONFIGURATION

L	Control	Standard Screw Adjustment
A	Adjustment Range	100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting
N	Seal Material	Buna-N
(none)	Material/Coating	

Pilot-operated, balanced-poppet relief cartridges are normally closed pressure regulating valves. When the pressure at the inlet (port 1) reaches the valve setting, the valve starts to open to tank (port 2), throttling flow to regulate the pressure. These valves are accurate, smooth, quiet, fast, and have low pressure rise vs. flow.

TECHNICAL DATA

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

Cavity	T-3A
Series	2
Capacity	50 gpm
Maximum Operating Pressure	5000 psi
Factory Pressure Settings Established at	4 gpm
Maximum Valve Leakage at Reseat	10 drops/min.
Response Time - Typical	7 ms
Adjustment - No. of CW Turns from Min. to Max. setting	5
Valve Hex Size	1 1/8 in.
Valve Installation Torque	45 - 50 lbf ft
Adjustment Screw Internal Hex Size	5/32 in.
Locknut Hex Size	9/16 in.
Locknut Torque	80 - 90 lbf in.
Seal kit - Cartridge	Buna: 990303007
Seal kit - Cartridge	EPDM: 990303014
Seal kit - Cartridge	Polyurethane: 990303002
Seal kit - Cartridge	Viton: 990303006
Model Weight	0.58 lb.

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CONFIGURATION OPTIONS

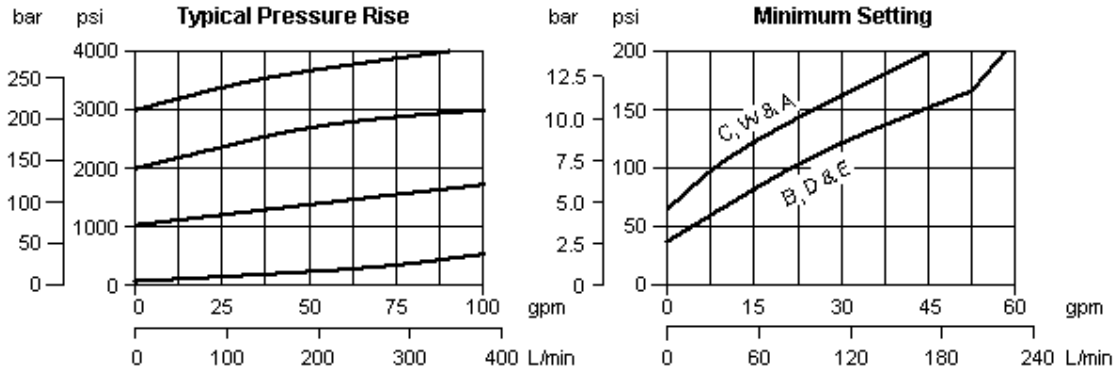
Model Code Example: RPGSLAN

CONTROL (L)	ADJUSTMENT RANGE (A)	SEAL MATERIAL (N)	MATERIAL/COATING
L Standard Screw Adjustment	**A** 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting	**N** Buna-N	Standard Material/Coating
C Tamper Resistant - Factory Set	**B** 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting	**E** EPDM	**/AP** Stainless Steel, Passivated
K Handknob	**C** 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting	**V** Viton	**/LH** Mild Steel, Zinc-Nickel
Y Tri-Grip Handknob	**N** 60 - 800 psi (4 - 55 bar), 400 psi (28 bar) Standard Setting		
	Q 60 - 400 psi (4 - 28 bar), 200 psi (14 bar) Standard Setting		
	W 100 - 4500 psi (7 - 315 bar), 1000 psi (70 bar) Standard Setting		

TECHNICAL FEATURES

- Because the modulating occurs inside the cartridge, these valves are immune to most of the problems associated with cavitation, namely noise and manifold erosion.
- Cartridges configured with EPDM seals are for use in systems with phosphate ester fluids. Exposure to petroleum based fluids, greases and lubricants will damage the seals.
- Will accept maximum pressure at port 2; suitable for use in cross port relief circuits.
- Valve is relatively insensitive to varying oil temperatures and oil borne contamination.
- Main stage orifice is protected by a 150-micron stainless steel screen.
- Suitable for use in load holding applications.
- Back pressure on the tank port (port 2) is directly additive to the valve setting at a 1:1 ratio.
- W and Y controls (where applicable) can be specified with or without a special setting. When no special setting is specified, the valve is adjustable throughout its full range using the W or Y control. When a special setting is specified, this setting represents the maximum setting of the valve.
- Corrosion resistant cartridge valves are intended for use in corrosive environments and are identified by the model code suffix /AP for external stainless steel components, or /LH for external zinc-nickel plated components. See the CONFIGURATION section for all options. For further details, please see the Materials of Construction page located under TECH RESOURCES.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

PERFORMANCE CURVES



RELATED MODELS

- RPGS8 Pilot-operated, balanced poppet relief main stage with integral T-8A control cavity

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