

Pressure Control, Relief Cartridges

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RPGT	Anti-Shock, pilot-operated, balanced poppet relief valve	
RPIT	Anti-Shock, pilot-operated, balanced poppet relief valve	
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RVEA	Ventable, pilot-operated, balanced piston relief
RVGA	Ventable, pilot-operated, balanced piston relief
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RVCS	Ventable, pilot-operated, balanced poppet relief
RVES	Ventable, pilot-operated, balanced poppet relief
RVGS	Ventable, pilot-operated, balanced poppet relief
RVIS	Ventable, pilot-operated, balanced poppet relief
RVET	Anti-Shock, ventable, pilot-operated, balanced poppet relief
RVGT	Anti-Shock, ventable, pilot-operated, balanced poppet relief
RVIT	Anti-Shock, ventable, pilot-operated, balanced poppet relief
RBAD	Dual, direct-acting relief valve - pilot
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RVCD	Ventable, pilot-operated, balanced piston relief valve with drain to port
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Cavity Information

Series	Ports	Cavities
Series Z Cartridges 3/8-24 UNF Cartridge Thread 5 mm Valve Hex Size 11 - 14 Nm Valve Installation Torque	3-Port	T-382A
Series P Cartridges M16 Cartridge Thread 22,2 mm Valve Hex Size 27 - 33 Nm Valve Installation Torque	2-Port 2-Port (Deep) 3-Port	T-8A T-8DP T-9A
Series 0 Cartridges M16 Cartridge Thread 19,1 mm Valve Hex Size 25,4 mm Valve Hex Size 27 - 33 Nm Valve Installation Torque	2-Port 2-Port (Deep) 3-Port 3-Port 4-Port	T-162A T-162DP T-150A T-163A T-30A
Series 1 Cartridges M20 Cartridge Thread 22,2 mm Valve Hex Size 41 - 47 Nm Valve Installation Torque	2-Port 2-Port 3-Port 4-Port 4-Port 6-Port	T-10A T-13A T-11A T-21A T-31A T-61A
Series 2 Cartridges 1"-14 UNS Cartridge Thread 28,6 mm Valve Hex Size 61 - 68 Nm Valve Installation Torque	2-Port 2-Port 3-Port 4-Port 4-Port 4-Port (Dual path) 6-Port 6-Port	T-3A T-5A T-2A T-22A T-32A T-52AD T-52A T-62A
Series 3 Cartridges M36 Cartridge Thread 31,8 mm Valve Hex Size 203 - 217 Nm Valve Installation Torque	2-Port 3-Port 4-Port 4-Port 4-Port (Dual path) 6-Port 6-Port	T-16A T-17A T-23A T-33A T-53AD T-53A T-63A
Series 4 Cartridges M48 Cartridge Thread 41,3 mm Valve Hex Size 474 - 508 Nm Valve Installation Torque	2-Port 2-Port (Undercut) 3-Port 3-Port (Undercut) 4-Port 4-Port (Undercut) 4-Port 4-Port (Dual path) 6-Port 6-Port	T-18A T-18AU T-19A T-19AU T-24A T-24AU T-34A T-54AD T-54A T-54A



The valve is normally vented. When vented (de-energized), the pressure drop from the inlet (port 1) to tank (port 2) is typically 100 psi (see performance curves).

Energizing the solenoid activates the relief function. In relief mode, the valve opens to tank (port 2), throttling flow to regulate the pressure when the pressure at the inlet (port 1) reaches the valve setting. The setting is adjustable with an adjust screw.

TECHNICAL DATA

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

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	80 cc/min.@140 bar
Response Time - Typical	50 ms
Adjustment - No. of CW Turns from Min. to Max. setting	3.0
Locknut Hex Size	11,1 mm
Locknut Torque	5 - 6 Nm
U.S. Patent #	10,533,584
Seal kit - Cartridge	Buna: 990010007
Seal kit - Cartridge	Polyurethane: 990010002
Seal kit - Cartridge	Viton: 990010006

CONFIGURATION OPTIONS

Model Code Example: RVCKLJN

CONTROL	(L)	ADJUSTMENT RANGE (J	J) (SEAL MATERIAL	(N)	COIL *	
L Standard Screw Adjustment		J 300 - 5000 psi (20 - 350 bar), 1000 psi	i	N Buna-N		No coil	
		(70 bar) Standard Setting		E EPDM		* Additional coil options are available	
				V Viton		· · · · · · · · · · · · · · · · · · ·	



This FLeX Series solenoid-operated, 2-stage, balanced relief cartridge is a pressure regulating valve.

The valve is normally in relief mode. In relief mode, the valve is open to tank (port 2), throttling flow to regulate the pressure when the pressure at the inlet (port 1) reaches the valve setting. The setting is adjustable with an adjust screw.

Energizing the solenoid opens the main chamber to tank and the valve becomes vented. The pressure drop from the inlet (port 1) to tank (port 2) is typically 100 psi (see performance curves).

TECHNICAL DATA

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

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	80 cc/min.@140 bar
Response Time - Typical	50 ms
Adjustment - No. of CW Turns from Min. to Max. setting	3.0
Locknut Hex Size	11,1 mm
Locknut Torque	5 - 6 Nm
Seal kit - Cartridge	Buna: 990010007
Seal kit - Cartridge	Polyurethane: 990010002
Seal kit - Cartridge	Viton: 990010006

CONFIGURATION OPTIONS

Model Code Example: RVCLLJN

CONTROL	(L)	ADJUSTMENT RANGE (J)	SEAL MATERIAL	(N)	COIL *
L Standard Screw Adjustment		J 300 - 5000 psi (20 - 350 bar), 1000 psi	N Buna-N		No coil
		(70 bar) Standard Setting	E EPDM		* Additional coil options are available
			V Viton		



screw.

a spool-type directional valve.

TECHNICAL DATA

Factory Pressure Settings Established at 15 L/min. Maximum Operating Pressure 350 bar Maximum Valve Leakage at 110 SUS (24 cSt) 80 cc/min.@210 bar Response Time - Typical 50 ms Adjustment - No. of CW Turns from Min. to Max. setting 3.0 Locknut Hex Size 11,1 mm 5 - 6 Nm Locknut Torque Seal kit - Cartridge Buna: 990010007 Seal kit - Cartridge Polvurethane: 990010002 Viton: 990010006 Seal kit - Cartridge

This FLeX Series solenoid-operated, 2-stage, balanced relief cartridge is a pressure regulating valve.

The valve is normally in relief mode. In relief mode, the valve is open to tank (port 2), throttling flow to regulate the pressure when the pressure at the inlet (port 1) reaches the valve setting. The setting is adjustable with an adjust

Energizing the solenoid blocks pilot flow. The valve blocks the flow path from inlet (port 1) to tank (port 2) similar to

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

CONFIGURATION OPTIONS

CONTROL L Standar

Model Code Example: RVCMLJN

	(L) ADJUSTMENT RANGE	(J) SEAL MATERIAL	(N) COIL *	
d Screw Adjustment	J 300 - 5000 psi (20 - 350 bar), 2) psi N Buna-N	No coil	
	(70 bar) Standard Setting	E EPDM	* Additional coil options are available	
		V Viton	·····	



The valve is normally blocked. De-energized, the valve blocks the flow path from inlet (port 1) to tank (port 2) similar to a spool-type directional valve.

Energizing the solenoid activates the relief function. In relief mode, the valve opens to tank (port 2), throttling flow to regulate the pressure when the pressure at the inlet (port 1) reaches the valve setting. The setting is adjustable with an adjust screw.

TECHNICAL DATA

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

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	80 cc/min.@210 bar
Response Time - Typical	50 ms
Adjustment - No. of CW Turns from Min. to Max. setting	3.0
Locknut Hex Size	11,1 mm
Locknut Torque	5 - 6 Nm
Seal kit - Cartridge	Buna: 990010007
Seal kit - Cartridge	Polyurethane: 990010002
Seal kit - Cartridge	Viton: 990010006

CONFIGURATION OPTIONS

CONTROL L Standard

Model Code Example: RVCNLJN

	(L)	ADJUSTMENT RANGE	(J)	SEAL MATERIAL	(N)	COIL *	
Screw Adjustment		J 300 - 5000 psi (20 - 350 bar), 1000	osi	N Buna-N		No coil	
		(70 bar) Standard Setting	etting	E EPDM		* Additional coil options are available	
				V Viton			









Pilot-operated, balanced-piston 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, have low pressure rise vs. flow, they are smooth and quiet, and are . moderately fast.

TECHNICAL DATA

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

15 L/min.
350 bar
30 cc/min.@70 bar
10 ms
5
12,7 mm
9 - 10 Nm
Buna: 990162007
EPDM: 990162014
Polyurethane: 990162002
Viton: 990162006

CONFIGURATION OPTIONS

CONTROL L Standard Sc

Model Code Example: RPCCLAN

CONTROL	(L)	ADJUSTMENT RANGE (A	<u>A) (</u>	SEAL MATERIAL	(N)	MATERIAL/COATING
 L Standard Screw Adjustment C Tamper Resistant - Factory Set K Handknob 		 A 75 - 3000 psi (5 - 210 bar), 1000 psi (7 bar) Standard Setting W 75 - 4500 psi (5 - 315 bar), 1000 psi (7 bar) Standard Setting 	70 70	N Buna-N E EPDM V Viton		Standard Material/Coating /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

- **B** 75 1500 psi (5 105 bar), 1000 psi (70 bar) Standard Setting
- C 75 6000 psi (5 420 bar), 1000 psi (70 bar) Standard Setting
- N 75 800 psi (5 55 bar), 400 psi (28 bar) Standard Setting
- Q 75 400 psi (5 28 bar), 200 psi (14 bar) Standard Setting









Pilot-operated, balanced-piston 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, have low pressure rise vs. flow, they are smooth and quiet, and are moderately fast.

TECHNICAL DATA

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

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Response Time - Typical	10 ms
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: 990010007
Seal kit - Cartridge	EPDM: 990010014
Seal kit - Cartridge	Polyurethane: 990010002
Seal kit - Cartridge	Viton: 990010006

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: RPECLAN

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

- 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











Pilot-operated, balanced-piston 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, have low pressure rise vs. flow, they are smooth and quiet, and are moderately fast.

TECHNICAL DATA

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

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	50 cc/min.@70 bar
Response Time - Typical	10 ms
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: 990203007
Seal kit - Cartridge	EPDM: 990203014
Seal kit - Cartridge	Polyurethane: 990003002
Seal kit - Cartridge	Viton: 990203006

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: RPGCLAN

CONTROL	(L)	ADJUSTMENT RANGE (A)	SEAL MATERIAL	(N)	MATERIAL/COATING
 L Standard Screw Adjustment C Tamper Resistant - Factory Set J Capped Screw Adjustment K Handknob O Handknob with Panel Mount W Hex Wrench Adjustment Y Tri-Grip Handknob 		 A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting W 150 - 4500 psi (10,5 - 315 bar), 1000 psi (70 bar) Standard Setting B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting C 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting D 25 - 800 psi (1,7 - 55 bar), 400 psi (28 bar) Standard Setting E 25 - 400 psi (1,7 - 28 bar), 200 psi (14 bar) Standard Setting N 60 - 800 psi (4 - 55 bar), 400 psi (28 bar) Standard Setting 	N Buna-N E EPDM V Viton		Standard Material/Coating /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel
		Q 60 - 400 psi (4 - 28 bar), 200 psi (14			

bar) Standard Setting

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MODEL

RPIC





Pilot-operated, balanced-piston 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, have low pressure rise vs. flow, they are smooth and quiet, and are moderately fast.

TECHNICAL DATA

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

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	65 cc/min.@70 bar
Response Time - Typical	10 ms
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: 990016007
Seal kit - Cartridge	EPDM: 990016014
Seal kit - Cartridge	Polyurethane: 990016002
Seal kit - Cartridge	Viton: 990016006

CONFIGURATION OPTIONS

Model Code Example: RPICLAN

CONTROL	(L)	ADJUSTMENT RANGE	(A)	SEAL MATERIAL	(N)	MATERIAL/COATING	
 L Standard Screw Adjustment C Tamper Resistant - Factory Set W Hex Wrench Adjustment Y Tri-Grip Handknob 		 A 100 - 3000 psi (7 - 210 bar), 1000 (70 bar) Standard Setting W 150 - 4500 psi (10,5 - 315 bar), 10 psi (70 bar) Standard Setting B 50 - 1500 psi (3,5 - 105 bar), 1000 (70 bar) Standard Setting C 150 - 6000 psi (10,5 - 420 bar), 100 psi (70 bar) Standard Setting D 25 - 800 psi (1,7 - 55 bar), 400 psi bar) Standard Setting E 25 - 400 psi (1,7 - 28 bar), 200 psi bar) Standard Setting 	psi 000 0 psi 000 i (28 i (14	N Buna-N E EPDM V Viton		Standard Material/Coating /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel	

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

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Pilot-operated, balanced piston relief valve SERIES 4 / CAPACITY: 760 L/min. / CAVITY: T-18A



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MODEL

RPKC







Pilot-operated, balanced-piston 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, have low pressure rise vs. flow, they are smooth and quiet, and are moderately fast.

TECHNICAL DATA

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

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	80 cc/min.@70 bar
Response Time - Typical	10 ms
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: 990018007
Seal kit - Cartridge	EPDM: 990018014
Seal kit - Cartridge	Polyurethane: 990018002
Seal kit - Cartridge	Viton: 990018006

CONFIGURATION OPTIONS

Model Code Example: RPKCLAN

CONTROL	(L)	ADJUSTMENT RANGE (A)	SEAL MATERIAL	(N)	MATERIAL/COATING
L Standard Screw Adjustment C Tamper Resistant - Factory Set K Handknob W Hex Wrench Adjustment Y Tri-Grip Handknob		 A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting W 150 - 4500 psi (10,5 - 315 bar), 1000 psi (70 bar) Standard Setting B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting C 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting D 25 - 800 psi (1,7 - 55 bar), 400 psi (28 bar) Standard Setting E 25 - 400 psi (1,7 - 28 bar), 200 psi (14 bar) Standard Setting N 60 - 800 psi (4 - 55 bar), 400 psi (28 	N Buna-N E EPDM V Viton	<u>(N)</u>	Standard Material/Coating /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel
		bar) Standard Setting			

Q 60 - 400 psi (4 - 28 bar), 200 psi (14 bar) Standard Setting











Direct-acting relief cartridges are normally closed, pressure-limiting valves used to protect hydraulic components from pressure transients. When the pressure at the inlet (port 1) reaches the valve setting, the valve starts to open to tank (port 2), throttling flow to limit the pressure rise. These valves are smooth and quiet, essentially zero leak, dirt tolerant, immune to silting and are very fast.

TECHNICAL DATA

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

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at Reseat	0,7 cc/min.
Response Time - Typical	2 ms
Reseat	>85% of crack setting
Adjustment - No. of CW Turns from Min. to Max. setting	6
Locknut Hex Size	12,7 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990162007
Seal kit - Cartridge	EPDM: 990162014
Seal kit - Cartridge	Polyurethane: 990162002
Seal kit - Cartridge	Viton: 990162006

NOTES U.S. Patent #4,742,846; European Patent Pending

CONFIGURATION OPTIONS

Model Code Example: RDBALAN

CONTROL	(L)	ADJUSTMENT RANGE	(A)	SEAL MATERIAL	(N)	MATERIAL/COATING	
L Standard Screw Adjustment		A 500 - 3000 psi (35 - 210 bar)	, 1000 psi	N Buna-N		Standard Material/Coating	
C Tamper Resistant - Factory Set		(70 bar) Standard Setting		E EPDM		/AP Stainless Steel, Passivated	
K Handknob		W 800 - 4500 psi (55 - 315 bar) (70 bar) Standard Setting	, 1000 psi	V Viton		/LH Mild Steel, Zinc-Nickel	
		B 300 - 1500 psi (20 - 105 bar) (70 bar) Standard Setting	, 1000 psi				
		C 1000 - 6000 psi (70 - 420 ba (70 bar) Standard Setting	r), 1000 psi				
		D 200 - 800 psi (14 - 55 bar), 4 bar) Standard Setting	00 psi (28				
		E 100 - 400 psi (7 - 28 bar), 20 bar) Standard Setting	0 psi (14				

- **S** 50 200 psi (3,5 14 bar), 100 psi (7 bar) Standard Setting









Direct-acting relief cartridges are normally closed, pressure-limiting valves used to protect hydraulic components from pressure transients. When the pressure at the inlet (port 1) reaches the valve setting, the valve starts to open to tank (port 2), throttling flow to limit the pressure rise. These valves are smooth and quiet, essentially zero leak, dirt tolerant, immune to silting and are very fast.

TECHNICAL DATA

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

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at Reseat	0,7 cc/min.
Response Time - Typical	2 ms
Reseat	>90% of setting
Adjustment - No. of CW Turns from Min. to Max. setting	6
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990310007
Seal kit - Cartridge	EPDM: 990310014
Seal kit - Cartridge	Viton: 990310006

CONFIGURATION OPTIONS

Model Code Example: RDDALAN

CONTROL	(L)	ADJUSTMENT RANGE (A)	SEAL MATERIAL (N)	MATERIAL/COATING
 L Standard Screw Adjustment C Tamper Resistant - Factory Set Y Tri-Grip Handknob 		 A 500 - 3000 psi (35 - 210 bar), 1000 psi (70 bar) Standard Setting W 800 - 4500 psi (55 - 315 bar), 1000 psi (70 bar) Standard Setting B 300 - 1500 psi (20 - 105 bar), 1000 psi (70 bar) Standard Setting C 1000 - 6000 psi (70 - 420 bar), 1000 psi (70 bar) Standard Setting 	N Buna-N E EPDM V Viton	Standard Material/Coating /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel
		 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 C 200 - 100 psi (25 - 44 bar) 400 psi (7 - 28 bar) 		

S 50 - 200 psi (3,5 - 14 bar), 100 psi (7 bar) Standard Setting









Direct-acting relief cartridges are normally closed, pressure-limiting valves used to protect hydraulic components from pressure transients. When the pressure at the inlet (port 1) reaches the valve setting, the valve starts to open to tank (port 2), throttling flow to limit the pressure rise. These valves are smooth and quiet, essentially zero leak, dirt tolerant, immune to silting and are very fast.

TECHNICAL DATA

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

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at Reseat	0,7 cc/min.
Response Time - Typical	2 ms
Reseat	>90% of setting
Adjustment - No. of CW Turns from Min. to Max. setting	6
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990316007
Seal kit - Cartridge	Viton: 990316006

U.S. Patent #4,742,846; European Patent Pending NOTES

CONFIGURATION OPTIONS

Model Code Example: RDHALAN

CONTROL (L)	ADJUSTMENT RANGE (A)	SEAL MATERIAL (N)	MATERIAL/COATING
L Standard Screw Adjustment C Tamper Resistant - Factory Set	 A 500 - 3000 psi (35 - 210 bar), 1000 psi (70 bar) Standard Setting W 800 - 4500 psi (55 - 315 bar), 1000 psi (70 bar) Standard Setting B 300 - 1500 psi (20 - 105 bar), 1000 psi (70 bar) Standard Setting C 1000 - 6000 psi (70 - 420 bar), 1000 psi (70 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 	N Buna-N E EPDM V Viton	Standard Material/Coating /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel









Direct-acting relief cartridges are normally closed, pressure-limiting valves used to protect hydraulic components from pressure transients. When the pressure at the inlet (port 1) reaches the valve setting, the valve starts to open to tank (port 2), throttling flow to limit the pressure rise. These valves are smooth and quiet, essentially zero leak, dirt tolerant, immune to silting and are very fast.

TECHNICAL DATA

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

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at Reseat	0,7 cc/min.
Response Time - Typical	2 ms
Reseat	>90% of setting
Adjustment - No. of CW Turns from Min. to Max. setting	6
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990318007
Seal kit - Cartridge	EPDM: 990318014
Seal kit - Cartridge	Viton: 990318006

NOTES U.S. Patent #4,742,846; European Patent Pending

CONFIGURATION OPTIONS

Model Code Example: RDJALAN

CONTROL	(L)	ADJUSTMENT RANGE (A)	SEAL MATERIAL	(N)	MATERIAL/COATING
L Standard Screw Adjustment C Tamper Resistant - Factory Set Q Capped and Lockwired		 A 500 - 3000 psi (35 - 210 bar), 1000 psi (70 bar) Standard Setting W 800 - 4500 psi (55 - 315 bar), 1000 psi (70 bar) Standard Setting B 300 - 1500 psi (20 - 105 bar), 1000 psi (70 bar) Standard Setting C 1000 - 6000 psi (70 - 420 bar), 1000 psi (70 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 200 psi (25 - 44 bar) 100 psi (7 	N Buna-N E EPDM V Viton		Standard Material/Coating /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel
		S 50 - 200 psi (3.5 - 14 bar) 100 psi (7			



sunhydraulics.com/model/RGFA







Direct-acting relief cartridges are normally closed, pressure-limiting valves used to protect hydraulic components from pressure transients. When the pressure at the inlet (port 1) reaches the valve setting, the valve starts to open to tank (port 2), throttling flow to limit the pressure rise.

TECHNICAL DATA

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

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	50 cc/min.@70 bar
Response Time - Typical	10 ms
Adjustment - No. of CW Turns from Min. to Max. setting	6
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990203007
Seal kit - Cartridge	EPDM: 990203014
Seal kit - Cartridge	Polyurethane: 990003002
Seal kit - Cartridge	Viton: 990203006

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: RGFALCN

CONTROL	(L)	ADJUSTMENT RANGE (C)	SEAL MATERIAL	(N)	MATERIAL/COATING	
L Standard Screw Adjustment		C 18 - 50 psi (1,2 - 3,5 bar), 50 psi (3,5	N Buna-N		Standard Material/Coating	
C Tamper Resistant - Factory Set		bar) Standard Setting	E EPDM		/AP Stainless Steel, Passivated	
K Handknob		E 20 - 75 psi (1,4 - 5 bar), 75 psi (5 bar)	V Viton			
O Handknob with Panel Mount		Standard Setting				
		F 35 - 80 psi (2,4 -5,5 bar), 80 psi (5,5				
		bar) Standard Setting				

G 30 - 150 psi (2 - 10,5 bar), 150 psi (10,5 bar) Standard Setting







Non-adjustable direct-acting relief cartridges are normally closed, pressure-limiting valves used to protect hydraulic components from pressure transients. When the pressure at the inlet (port 1) reaches the valve setting, the valve starts to open to tank (port 2), throttling flow to limit the pressure rise. These valves are smooth and quiet, essentially zero leak, dirt tolerant, immune to silting and are very fast.

TECHNICAL DATA

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

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at Reseat	0,7 cc/min.
Response Time - Typical	2 ms
Reseat	>90% of setting
Seal kit - Cartridge	Buna: 990310007
Seal kit - Cartridge	Viton: 990310006

CONFIGURATION OPTIONS

Model Code Example: RDDA3AN

ADJUSTMENT RANGE (A) SEAL MATERIAL A 500 - 3000 psi (35 - 210 bar)

N Buna-N

V Viton

Standard Material/Coating /LH Mild Steel, Zinc-Nickel

(N) MATERIAL/COATING

C 1000 - 6000 psi (70 - 420 bar) D 200 - 800 psi (14 - 55 bar)



Δ3





Non-adjustable direct-acting relief cartridges are normally closed, pressure-limiting valves used to protect hydraulic components from pressure transients. When the pressure at the inlet (port 1) reaches the valve setting, the valve starts to open to tank (port 2), throttling flow to limit the pressure rise. These valves are smooth and quiet, essentially zero leak, dirt tolerant, immune to silting and are very fast.

TECHNICAL DATA

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

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at Reseat	0,7 cc/min.
Response Time - Typical	2 ms
Reseat	>90% of setting
Seal kit - Cartridge	Buna: 990303007
Seal kit - Cartridge	EPDM: 990303014
Seal kit - Cartridge	Polyurethane: 990303002
Seal kit - Cartridge	Viton: 990303006

CONFIGURATION OPTIONS

Model Code Example: RDFA3AN

(N)

AD	JUSTMENT RANGE	(A)	SEAL MATERIAL
А	500 - 3000 psi (35 - 210 bar)		N Buna-N
С	1000 - 6000 psi (70 - 420 bar)		V Viton

D 200 - 800 psi (14 - 55 bar)



MODEL RDDT





Direct-acting relief cartridges are normally closed, pressure-limiting valves used to protect hydraulic components from pressure transients. When the pressure at the inlet (port 1) reaches the valve setting, the valve starts to open to tank (port 2), throttling flow to limit the pressure rise. These valves are smooth and quiet, essentially zero leak, dirt tolerant, immune to silting and are very fast.

The CE marked valve is a safety valve that meets the requirements of the European Directive for Pressurized Devices (PED) 2014/68/EU. The valve setting represents the excess operating pressure at which the valve opens. Valve capacity can be determined from the performance curve. It shows an approved flow which depends on the excess operating pressure. As a requirement of the PED, the system pressure at the maximum approved flow is a maximum of 10% above the excess operating pressure.

TECHNICAL DATA

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

Maximum Valve Leakage at Reseat	0,7 cc/min.
Response Time - Typical	2 ms
Reseat	>90% of setting
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: 990310007
Seal kit - Cartridge	Viton: 990310006

CONFIGURATION OPTIONS

Model Code Example: RDDTQAN

CONTROL	(Q)	ADJUSTMENT RANGE	(A)	SEAL MATERIAL	(N)
Q Capped and Lockwired		A 100 - 210 bar (100 - 210 bar)		N Buna-N	
		B 90 - 99 bar (90 - 99 bar)		V Viton	
		C 315 - 422 bar (315 - 422 bar)			
		W 211 - 314 bar (211 - 314 bar)			





Direct-acting relief cartridges are normally closed, pressure-limiting valves used to protect hydraulic components from pressure transients. When the pressure at the inlet (port 1) reaches the valve setting, the valve starts to open to tank (port 2), throttling flow to limit the pressure rise. These valves are smooth and quiet, essentially zero leak, dirt tolerant, immune to silting and are very fast.

The CE marked valve is a safety valve that meets the requirements of the European Directive for Pressurized Devices (PED) 2014/68/EU. The valve setting represents the excess operating pressure at which the valve opens. Valve capacity can be determined from the performance curve. It shows an approved flow which depends on the excess operating pressure. As a requirement of the PED, the system pressure at the maximum approved flow is a maximum of 10% above the excess operating pressure.

TECHNICAL DATA

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

Maximum Valve Leakage at Reseat	0,7 cc/min.
Response Time - Typical	2 ms
Reseat	>90% of setting
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: 990303007
Seal kit - Cartridge	Polyurethane: 990303002
Seal kit - Cartridge	Viton: 990303006

CONFIGURATION OPTIONS

Model Code Example: RDFTQBN

CONTROL	(Q)	ADJUSTMENT RANGE	(B)	SEAL MATERIAL	(N)
Q Capped and Lockwired		B 60 - 105 bar (60 - 105 bar)		N Buna-N	
		A 106 - 209 bar (106 - 209 bar)		V Viton	
		C 210 - 420 bar (210 - 420 bar)			









Fast-acting, pilot-operated, balanced piston relief cartridges are normally closed, pressure-limiting valves used to protect hydraulics components from pressure transients. Fast opening and closing is gained at the expense of smoothness. When the pressure at the inlet (port 1) reaches the valve setting, the valve starts to open to tank (port 2), throttling flow to limit the pressure rise. These valves have low pressure rise vs. flow and are very fast.

TECHNICAL DATA

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

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Response Time - Typical	2 ms
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: 990010007
Seal kit - Cartridge	Polyurethane: 990010002
Seal kit - Cartridge	Viton: 990010006

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: RPEELAN

CONTROL	(L)	ADJUSTMENT RANGE (A)	SEAL MATERIAL	(N)	MATERIAL/COATING	
 L Standard Screw Adjustment C Tamper Resistant - Factory Set K Handknob O Handknob with Panel Mount Y Tri-Grip Handknob 		 A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting C 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting D 25 - 800 psi (1,7 - 55 bar), 400 psi (28 bar) Standard Setting 	N Buna-N V Viton		Standard Material/Coating /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel	

E 25 - 400 psi (1,7 - 28 bar), 200 psi (14

W 150 - 4500 psi (10,5 - 315 bar), 1000 psi (70 bar) Standard Setting

bar) Standard Setting









Fast-acting, pilot-operated, balanced piston relief cartridges are normally closed, pressure-limiting valves used to protect hydraulics components from pressure transients. Fast opening and closing is gained at the expense of smoothness. When the pressure at the inlet (port 1) reaches the valve setting, the valve starts to open to tank (port 2), throttling flow to limit the pressure rise. These valves have low pressure rise vs. flow and are very fast.

TECHNICAL DATA

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

Factory Pressure Settings Established at	15 L/min.		
Maximum Operating Pressure	350 bar		
Maximum Valve Leakage at 110 SUS (24 cSt)	50 cc/min.@70 bar		
Response Time - Typical	2 ms		
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: 990203007		
Seal kit - Cartridge	EPDM: 990203014		
Seal kit - Cartridge	Polyurethane: 990003002		
Seal kit - Cartridge	Viton: 990203006		

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: RPGELAN

CONTROL	(L) ADJUSTMENT RANGE (A)	SEAL MATERIAL (N)	MATERIAL/COATING
 L Standard Screw Adjustment C Tamper Resistant - Factory Set K Handknob O Handknob with Panel Mount 	 A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting C 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting D 25 - 800 psi (1,7 - 55 bar), 400 psi (28 	N Buna-N E EPDM V Viton	Standard Material/Coating /AP Stainless Steel, Passivated
	E 25 - 400 psi (1,7 - 28 bar), 200 psi (14		

bar) Standard Setting

W 150 - 4500 psi (10,5 - 315 bar), 1000 psi (70 bar) Standard Setting





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MODEL

RPIE





Fast-acting, pilot-operated, balanced piston relief cartridges are normally closed, pressure-limiting valves used to protect hydraulics components from pressure transients. Fast opening and closing is gained at the expense of smoothness. When the pressure at the inlet (port 1) reaches the valve setting, the valve starts to open to tank (port 2), throttling flow to limit the pressure rise. These valves have low pressure rise vs. flow and are very fast.

TECHNICAL DATA

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

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	65 cc/min.@70 bar
Response Time - Typical	2 ms
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: 990016007
Seal kit - Cartridge	Polyurethane: 990016002
Seal kit - Cartridge	Viton: 990016006

CONFIGURATION OPTIONS

Model Code Example: RPIELAN

CONTROL	(L)	ADJUSTMENT RANGE (A)	SEAL MATERIAL	(N)	MATERIAL/COATING
L Standard Screw Adjustment C Tamper Resistant - Factory Set K Handknob		 A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting C 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting D 25 - 800 psi (1,7 - 55 bar), 400 psi (28 bar) Standard Setting E 25 - 400 psi (1,7 - 28 bar), 200 psi (14 bar) Standard Setting W 150 - 4500 psi (10,5 - 315 bar), 1000 psi (70 bar) Standard Setting 	N Buna-N V Viton		Standard Material/Coating /AP Stainless Steel, Passivated

Fast-acting, pilot-operated, balanced piston relief valve SERIES 4 / CAPACITY: 760 L/min. / CAVITY: T-18A



MODEL RPKE



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Fast-acting, pilot-operated, balanced piston relief cartridges are normally closed, pressure-limiting valves used to protect hydraulics components from pressure transients. Fast opening and closing is gained at the expense of smoothness. When the pressure at the inlet (port 1) reaches the valve setting, the valve starts to open to tank (port 2), throttling flow to limit the pressure rise. These valves have low pressure rise vs. flow and are very fast.

TECHNICAL DATA

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

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	80 cc/min.@70 bar
Response Time - Typical	2 ms
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: 990018007
Seal kit - Cartridge	Polyurethane: 990018002
Seal kit - Cartridge	Viton: 990018006

CONFIGURATION OPTIONS

Model Code Example: RPKELAN

CONTROL	(L)	ADJUSTMENT RANGE (A)	SEAL MATERIAL	(N)	MATERIAL/COATING
 L Standard Screw Adjustment C Tamper Resistant - Factory Set K Handknob 		 A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting C 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting D 25 - 800 psi (1,7 - 55 bar), 400 psi (28 bar) Standard Setting E 25 - 400 psi (1,7 - 28 bar), 200 psi (14 bar) Standard Setting W 150 - 4500 psi (10,5 - 315 bar), 1000 psi (70 bar) Standard Setting 	N Buna-N V Viton		Standard Material/Coating /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

MODEL RPES









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.

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.
Response Time - Typical	7 ms
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: 990310007
Seal kit - Cartridge	Viton: 990310006

CONFIGURATION OPTIONS

Model Code Example: RPESLAN

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



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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.

Factory Pressure Settings Established at	15 L/min.		
Maximum Operating Pressure	350 bar		
Maximum Valve Leakage at Reseat	0,7 cc/min.		
Response Time - Typical	7 ms		
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: 990303007		
Seal kit - Cartridge	EPDM: 990303014		
Seal kit - Cartridge	Polyurethane: 990303002		
Seal kit - Cartridge	Viton: 990303006		

CONFIGURATION OPTIONS

Model Code Example: RPGSLAN

CONTROL	(L)	ADJUSTMENT RANGE (A)	SEAL MATERIAL (N)	MATERIAL/COATING
 L Standard Screw Adjustment C Tamper Resistant - Factory Set K Handknob Y Tri-Grip Handknob 		 A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting C 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting N 60 - 800 psi (4 - 55 bar), 400 psi (28 bar) Standard Setting N 60 - 800 psi (4 - 29 bar), 200 psi (44 bar) 	N Buna-N E EPDM V Viton	Standard Material/Coating /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel
		Q 00 - 400 psi (4 - 20 bai), 200 psi (14		

bar) Standard Setting

W 100 - 4500 psi (7 - 315 bar), 1000 psi (70 bar) Standard Setting



sunhydraulics.com/model/RPIS







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

Q 60 - 400 psi (4 - 28 bar), 200 psi (14 bar) Standard Setting

W 150 - 4500 psi (10,5 - 315 bar), 1000 psi (70 bar) Standard Setting

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

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at Reseat	0,7 cc/min.
Response Time - Typical	7 ms
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: 990316007
Seal kit - Cartridge	EPDM: 990316014
Seal kit - Cartridge	Viton: 990316006

CONFIGURATION OPTIONS

Model Code Example: RPISLAN

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



sunhydraulics.com/model/RPKS







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.

Factory Pressure Settings Established at	15 L/min.		
Maximum Operating Pressure	350 bar		
Maximum Valve Leakage at Reseat	0,7 cc/min.		
Response Time - Typical	7 ms		
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: 990318007		
Seal kit - Cartridge	EPDM: 990318014		
Seal kit - Cartridge	Polyurethane: 990018002		
Seal kit - Cartridge	Viton: 990318006		

CONFIGURATION OPTIONS

Model Code Example: RPKSLAN

(L) ADJUSTMENT RANGE (A) SEAL MATERIAL (N) MATERIAL/COATING CONTROL N Buna-N 100 - 3000 psi (7 - 210 bar), 1000 psi L Standard Screw Adjustment Standard Material/C (70 bar) Standard Setting E EPDM C Tamper Resistant - Factory Set **/AP** Stainless Steel, Passivated **B** 50 - 1500 psi (3,5 - 105 bar), 1000 psi K Handknob V Viton /LH Mild Steel, Zinc-Nickel (70 bar) Standard Setting W Hex Wrench Adjustment С 150 - 6000 psi (10,5 - 420 bar), 1000 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 150 - 4500 psi (10,5 - 315 bar), 1000
- vv 150 4500 psi (10,5 315 bar), 100 psi (70 bar) Standard Setting



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in (mm)

Pilot-operated, anti shock relief cartridges limit maximum system pressure and also limit the rate of pressure rise. The valve opens and then ramps closed at a constant speed, independent of settings and flows. The adjust screw determines the maximum (relief) setting and the minimum (threshold) setting.

TECHNICAL DATA

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

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,41 L/min.
Pressure Ramp Up Time	100 - 300 ms
Response Time - Typical	2 ms
Adjustment - No. of CW Turns from Min. to Max. setting	4.5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
U.S. Patent #	6,039,070
Seal kit - Cartridge	Buna: 990310007
Seal kit - Cartridge	Viton: 990310006

CONFIGURATION OPTIONS

Model Code Example: RPETLWN

CONTROL	(L)	ADJUSTMENT RANGE (W)	SEAL MATERIAL	(N)	MATERIAL/COATING
L Standard Screw Adjustment		W 3000 - 4500 psi (210 - 315 bar), 3000	N Buna-N		Standard Material/Coating
C Tamper Resistant - Factory Set		psi (210 bar) Standard Setting	V Viton		/AP Stainless Steel, Passivated
		A 2000 - 3000 psi (140 - 210 bar), 2000			/LH Mild Steel, Zinc-Nickel
		psi (140 bar) Standard Setting			
		C 4500 - 6000 psi (315 - 420 bar), 4500			

psi (315 bar) Standard Setting

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MODEL RPGT



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Pilot-operated, anti shock relief cartridges limit maximum system pressure and also limit the rate of pressure rise. The valve opens and then ramps closed at a constant speed, independent of settings and flows. The adjust screw determines the maximum (relief) setting and the minimum (threshold) setting.

TECHNICAL DATA

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

Factory Pressure Settings Established at	15 L/min.		
Maximum Operating Pressure	350 bar		
Control Pilot Flow	0,16 - 0,41 L/min.		
Pressure Ramp Up Time	200 - 400 ms		
Response Time - Typical	2 ms		
Adjustment - No. of CW Turns from Min. to Max. setting	4.5		
Locknut Hex Size	15 mm		
Locknut Torque	9 - 10 Nm		
U.S. Patent #	6,039,070		
Seal kit - Cartridge	Buna: 990303007		
Seal kit - Cartridge	Polyurethane: 990303002		
Seal kit - Cartridge	Viton: 990303006		

NOTES Patents: US#6,039,070; Germany EP 1 001 197; Japan #3,119,230

CONFIGURATION OPTIONS

Model Code Example: RPGTLAN

CONTROL	(L)	ADJUSTMENT RANGE	(A)	SEAL MATERIAL	(N)	MATERIAL/COATING
L Standard Screw Adjustment		A 2000 - 3000 psi (140 - 210 bar), 200	00	N Buna-N		Standard Material/Coating
C Tamper Resistant - Factory Set		psi (140 bar) Standard Setting		V Viton		/AP Stainless Steel, Passivated
		C 4500 - 6000 psi (315 - 420 bar), 450)0			/LH Mild Steel, Zinc-Nickel
		psi (315 bar) Standard Setting				· · · · · · · · · · · · · · · · · · ·
		W 3000 - 4500 psi (210 - 315 bar), 300)0			

psi (210 bar) Standard Setting











Pilot-operated, anti shock relief cartridges limit maximum system pressure and also limit the rate of pressure rise. The valve opens and then ramps closed at a constant speed, independent of settings and flows. The adjust screw determines the maximum (relief) setting and the minimum (threshold) setting.

TECHNICAL DATA

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

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,41 L/min.
Pressure Ramp Up Time	300 - 500 ms
Response Time - Typical	2 ms
Adjustment - No. of CW Turns from Min. to Max. setting	4.5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
U.S. Patent #	6,039,070
Seal kit - Cartridge	Buna: 990316007
Seal kit - Cartridge	Viton: 990316006

NOTES • Patents: US#6,039,070; Germany EP 1 001 197; Japan #3,119,230

• Patents: US#6,039,070; Germany EP 1 001 197; Japan #3,119,230

CONFIGURATION OPTIONS

Model Code Example: RPITLAN

CONTROL	(L)	ADJUSTMENT RANGE (A	٩)	SEAL MATERIAL	(N)	MATERIAL/COATING
L Standard Screw Adjustment		A 2000 - 3000 psi (140 - 210 bar), 2000		N Buna-N		Standard Material/Coating
C Tamper Resistant - Factory Set		 psi (140 bar) Standard Setting C 4500 - 6000 psi (315 - 420 bar), 4500 psi (315 bar) Standard Setting W 3000 - 4500 psi (210 - 315 bar), 3000 psi (210 bar) Standard Setting 		V Viton		/AP Stainless Steel, Passivated


sunhydraulics.com/model/RPKT







Pilot-operated, anti shock relief cartridges limit maximum system pressure and also limit the rate of pressure rise. The valve opens and then ramps closed at a constant speed, independent of settings and flows. The adjust screw determines the maximum (relief) setting and the minimum (threshold) setting.

TECHNICAL DATA

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

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,41 L/min.
Pressure Ramp Up Time	400 - 600 ms
Response Time - Typical	2 ms
Adjustment - No. of CW Turns from Min. to Max. setting	4.5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
U.S. Patent #	6,039,070
Seal kit - Cartridge	Buna: 990318007
Seal kit - Cartridge	Viton: 990318006

CONFIGURATION OPTIONS

Model Code Example: RPKTLAN

(L) ADJUSTMENT RANGE (A) SEAL MATERIAL (N) MATERIAL/COATING CONTROL 2000 - 3000 psi (140 - 210 bar), 2000 N Buna-N Standard Screw Adjustmen A dard Material/Coating psi (140 bar) Standard Setting C Tamper Resistant - Factory Set V Viton /AP Stainless Steel, Passivated С 4500 - 6000 psi (315 - 420 bar), 4500 psi (315 bar) Standard Setting W 3000 - 4500 psi (210 - 315 bar), 3000

psi (210 bar) Standard Setting





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Direct-acting, pilot relief cartridges are used to remotely control the pressure setting of other pilot-operated valves. Because capacity is limited to pilot flow, these valves should be used with other higher flow valves.

TECHNICAL DATA

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

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,3 cc/min.
Response Time - Typical	2 ms
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: 990203007
Seal kit - Cartridge	EPDM: 990203014
Seal kit - Cartridge	Polyurethane: 990003002
Seal kit - Cartridge	Viton: 990203006

For Series 2 cartridges configured with an O control (panel mount handknob), a 1.00 in. (25,4 mm) diameter hole is required in the panel. NOTES

CONFIGURATION OPTIONS

Model Code Example: RBAALAN

(L) ADJUSTMENT RANGE (A) SEAL MATERIAL (N) MATERIAL/COATING L Standard Screw Adjustment A 25 - 3000 psi (1,7 - 210 bar), 1000 psi N Buna-N Standard Material/Coating (70 bar) Standard Setting C Tamper Resistant - Factory Set E EPDM /AP Stainless Steel, Passivated B 25 - 1500 psi (1,7 - 105 bar), 1000 psi V Viton /LH Mild Steel, Zinc-Nickel J Capped Screw Adjustment K Handknob

- O Handknob with Panel Mount
- Y Tri-Grip Handknob

CONTROL

- (70 bar) Standard Setting C 25 - 6000 psi (1,7 - 420 bar), 1000 psi
- (70 bar) Standard Setting
- D 25 800 psi (1,7 55 bar), 400 psi (28 bar) Standard Setting
- E 25 400 psi (1,7 28 bar), 200 psi (14 bar) Standard Setting
- W 25 4500 psi (1,7 315 bar), 1000 psi (70 bar) Standard Setting





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Direct-acting, pilot relief cartridges are used to remotely control the pressure setting of other pilot-operated valves. Because capacity is limited to pilot flow, these valves should be used with other higher flow valves.

TECHNICAL DATA

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

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,3 cc/min.
Response Time - Typical	2 ms
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: 990010007
Seal kit - Cartridge	EPDM: 990010014
Seal kit - Cartridge	Polyurethane: 990010002
Seal kit - Cartridge	Viton: 990010006

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: RBACLAN

CONTROL	(L)	ADJUSTMENT RANGE (A)	SEAL MATERIAL	(N)	MATERIAL/COATING
 L Standard Screw Adjustment C Tamper Resistant - Factory Set J Capped Screw Adjustment K Handknob O Handknob with Panel Mount 		 A 25 - 3000 psi (1,7 - 210 bar), 1000 psi (70 bar) Standard Setting W 25 - 4500 psi (1,7 - 315 bar), 1000 psi (70 bar) Standard Setting B 25 - 1500 psi (1,7 - 105 bar), 1000 psi (70 bar) Standard Setting C 25 - 6000 psi (1,7 - 420 bar), 1000 psi (70 bar) Standard Setting 	N Buna-N E EPDM V Viton		Standard Material/Coating /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

D 25 - 800 psi (1,7 - 55 bar), 400 psi (28

bar) Standard Setting

bar) Standard Setting

E 25 - 400 psi (1,7 - 28 bar), 200 psi (14

MODEL **RBAC**

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Two-port, pilot-stage, direct-acting relief cartridges are fully adjustable, normally closed pressure regulating valves. When the pressure at port 1 (inlet) is sufficient to overcome the spring force (valve setting), a flow path is opened from port 1 to port 2 (tank).

TECHNICAL DATA

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

Factory Pressure Settings Established at	30 cc/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	1 cc/min.
Response Time - Typical	2 ms
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990608007
Seal kit - Cartridge	EPDM: 990608014
Seal kit - Cartridge	Polyurethane: 990008002
Seal kit - Cartridge	Viton: 990608006

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: RBAELAN

 L Standard Screw Adjustment C Tamper Resistant - Factory Set K Handknob O Handknob with Panel Mount Y Tri-Grip Handknob 	 A 25 - 3000 psi (1,7 - 210 bar), 1000 psi (70 bar) Standard Setting B 25 - 1500 psi (1,7 - 105 bar), 1000 psi (70 bar) Standard Setting C 25 - 6000 psi (1,7 - 420 bar), 1000 psi (70 bar) Standard Setting D 25 - 800 psi (1,7 - 55 bar), 400 psi (28 bar) Standard Setting E 25 - 400 psi (1,7 - 28 bar), 200 psi (14 bar) Standard Setting W 25 - 4500 psi (1,7 - 315 bar), 1000 psi 	N Buna-N E EPDM V Viton	Standard Material/Coating /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

(70 bar) Standard Setting



sunhydraulics.com/model/RQCB







Kick-down relief cartridges act similar to a circuit breaker in an electrical system. The valves will kick completely open and remain open once the pressure at the inlet (port 1) exceeds the valve settting, creating an unrestricted flow path from port 1 to tank (port 2). The valve remains open as long as the pressure at port 1 exceeds the pressure at port 2. To reset the valve, flow from port 1 to port 2 must cease and pressure at port 2 must be equal to or greater than the pressure at port 1.

TECHNICAL DATA

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

Factory Pressure Settings Established at	Kick down point
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Response Time - Typical	25 ms
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: 990162007
Seal kit - Cartridge	Polyurethane: 990162002
Seal kit - Cartridge	Viton: 990162006

NOTES Do not use in load holding applications.

CONFIGURATION OPTIONS

Model Code Example: RQCBLAN

CONTROL	(L)	ADJUSTMENT RANGE	(A)	SEAL MATERIAL	(N)
 L Standard Screw Adjustment C Tamper Resistant - Factory Set K Handknob 		 A 75 - 3000 psi (5 - 210 bar), 100 bar) Standard Setting B 75 - 1500 psi (5 - 105 bar), 100 bar) Standard Setting C 75 - 6000 psi (5 - 420 bar), 100 bar) Standard Setting N 75 - 800 psi (5 - 55 bar), 400 p bar) Standard Setting Q 75 - 400 psi (5 - 28 bar), 200 p bar) Standard Setting W 75 - 4500 psi (5 - 315 bar), 100 bar) Standard Setting 	00 psi (70 00 psi (70 00 psi (70 00 psi (70 05i (28 05i (14 00 psi (70	N Buna-N V Viton	







Kick-down relief cartridges act similar to a circuit breaker in an electrical system. The valves will kick completely open and remain open once the pressure at the inlet (port 1) exceeds the valve settting, creating an unrestricted flow path from port 1 to tank (port 2). The valve remains open as long as the pressure at port 1 exceeds the pressure at port 2. To reset the valve, flow from port 1 to port 2 must cease and pressure at port 2 must be equal to or greater than the pressure at port 1.

TECHNICAL DATA

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

Factory Pressure Settings Established at	Kick down point
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Response Time - Typical	25 ms
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: 990010007
Seal kit - Cartridge	Polyurethane: 990010002
Seal kit - Cartridge	Viton: 990010006

NOTES • Do not use in load holding applications.

• 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: RQEBLAN

CONTROL	(L)	ADJUSTMENT RANGE (A	A)	SEAL MATERIAL	(N)	MATERIAL/COATING
 L Standard Screw Adjustment C Tamper Resistant - Factory Set K Handknob O Handknob with Panel Mount 		 A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting C 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting D 25 - 800 psi (1,7 - 55 bar), 400 psi (28 bar) Standard Setting E 25 - 400 psi (1,7 - 28 bar), 200 psi (14 bar) Standard Setting W 150 - 4500 psi (10,5 - 315 bar), 1000 psi (70 bar) Standard Setting 		N Buna-N V Viton		Standard Material/Coating /AP Stainless Steel, Passivated









Kick-down relief cartridges act similar to a circuit breaker in an electrical system. The valves will kick completely open and remain open once the pressure at the inlet (port 1) exceeds the valve settting, creating an unrestricted flow path from port 1 to tank (port 2). The valve remains open as long as the pressure at port 1 exceeds the pressure at port 2. To reset the valve, flow from port 1 to port 2 must cease and pressure at port 2 must be equal to or greater than the pressure at port 1.

TECHNICAL DATA

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

Factory Pressure Settings Established at	Kick down point
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	50 cc/min.@70 bar
Response Time - Typical	25 ms
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: 990203007
Seal kit - Cartridge	Polyurethane: 990003002
Seal kit - Cartridge	Viton: 990203006

• Do not use in load holding applications.

• 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: RQGBLAN

CONTROL	(L)	ADJUSTMENT RANGE	(A)	SEAL MATERIAL	(N)	MATERIAL/COATING	
 L Standard Screw Adjustment C Tamper Resistant - Factory Set K Handknob O Handknob with Panel Mount W Hex Wrench Adjustment 		 A 100 - 3000 psi (7 - 210 bar), 1 (70 bar) Standard Setting B 50 - 1500 psi (3,5 - 105 bar), 7 (70 bar) Standard Setting C 150 - 6000 psi (10,5 - 420 bar psi (70 bar) Standard Setting D 25 - 800 psi (1,7 - 55 bar), 400 bar) Standard Setting E 25 - 400 psi (1,7 - 28 bar), 200 bar) Standard Setting W 150 - 4500 psi (10,5 - 315 bar psi (70 bar) Standard Setting 	000 psi 1000 psi), 1000 D psi (28 D psi (14), 1000	N Buna-N V Viton		Standard Material/Coating /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel	





MODEL







Kick-down relief cartridges act similar to a circuit breaker in an electrical system. The valves will kick completely open and remain open once the pressure at the inlet (port 1) exceeds the valve settting, creating an unrestricted flow path from port 1 to tank (port 2). The valve remains open as long as the pressure at port 1 exceeds the pressure at port 2. To reset the valve, flow from port 1 to port 2 must cease and pressure at port 2 must be equal to or greater than the pressure at port 1.

TECHNICAL DATA

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

Factory Pressure Settings Established at	Kick down point
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	65 cc/min.@70 bar
Response Time - Typical	25 ms
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: 990016007
Seal kit - Cartridge	Polyurethane: 990016002
Seal kit - Cartridge	Viton: 990016006

Do not use in load holding applications. NOTES

CONFIGURATION OPTIONS

Model Code Example: RQIBLAN

CONTROL	(L)	ADJUSTMENT RANGE (A)	SEAL MATERIAL	(N)	MATERIAL/COATING
 L Standard Screw Adjustment C Tamper Resistant - Factory Set K Handknob 		 A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting C 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting D 25 - 800 psi (1,7 - 55 bar), 400 psi (28 bar) Standard Setting E 25 - 400 psi (1,7 - 28 bar), 200 psi (14 bar) Standard Setting W 150 - 4500 psi (10,5 - 315 bar), 1000 psi (70 bar) 	N Buna-N V Viton		Standard Material/Coating /AP Stainless Steel, Passivated

Kick-down, pilot-operated, balanced piston relief valve SERIES 4 / CAPACITY: 760 L/min. / CAVITY: T-18A





Model RQKB







Kick-down relief cartridges act similar to a circuit breaker in an electrical system. The valves will kick completely open and remain open once the pressure at the inlet (port 1) exceeds the valve settting, creating an unrestricted flow path from port 1 to tank (port 2). The valve remains open as long as the pressure at port 1 exceeds the pressure at port 2. To reset the valve, flow from port 1 to port 2 must cease and pressure at port 2 must be equal to or greater than the pressure at port 1.

TECHNICAL DATA

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

Factory Pressure Settings Established at	Kick down point
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	80 cc/min.@70 bar
Response Time - Typical	25 ms
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: 990018007
Seal kit - Cartridge	Polyurethane: 990018002
Seal kit - Cartridge	Viton: 990018006

NOTES Do not use in load holding applications.

CONFIGURATION OPTIONS

Model Code Example: RQKBLAN

CONTROL	(L)	ADJUSTMENT RANGE (A)	SEAL MATERIAL (N	MATERIAL/COATING
 L Standard Screw Adjustment C Tamper Resistant - Factory Set K Handknob 		 A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting C 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting D 25 - 800 psi (1,7 - 55 bar), 400 psi (28 bar) Standard Setting E 25 - 400 psi (1,7 - 28 bar), 200 psi (14 bar) Standard Setting 	N Buna-N V Viton	Standard Material/Coating /AP Stainless Steel, Passivated

W 150 - 4500 psi (10,5 - 315 bar), 1000 psi (70 bar) Standard Setting

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MODEL RPGD







Air-controlled, pilot-operated, balanced piston relief cartridges use compressed air over a diaphragm instead of an adjustable spring to control pressure setting. The air signal is supplied through a port in the hex-end of the cartridge. They 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, have low pressure rise vs. flow, they are smooth and quiet, and are moderately fast.

TECHNICAL DATA

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

Pilot Ratio20:1Maximum Operating Pressure140 barMaximum Valve Leakage at 110 SUS (24 cSt)50 cc/min.@70 barMaximum Air Pressure10,5 barResponse Time - Typical10 msSeal kit - CartridgeBuna: 990203007Seal kit - CartridgePolyurethane: 99003002		
Maximum Operating Pressure140 barMaximum Valve Leakage at 110 SUS (24 cSt)50 cc/min.@70 barMaximum Air Pressure10,5 barResponse Time - Typical10 msSeal kit - CartridgeBuna: 990203007Seal kit - CartridgePolyurethane: 99003002	Pilot Ratio	20:1
Maximum Valve Leakage at 110 SUS (24 cSt)50 cc/min.@70 barMaximum Air Pressure10,5 barResponse Time - Typical10 msSeal kit - CartridgeBuna: 990203007Seal kit - CartridgePolyurethane: 990003002	Maximum Operating Pressure	140 bar
Maximum Air Pressure 10,5 bar Response Time - Typical 10 ms Seal kit - Cartridge Buna: 990203007 Seal kit - Cartridge Polyurethane: 99003002	Maximum Valve Leakage at 110 SUS (24 cSt)	50 cc/min.@70 bar
Response Time - Typical 10 ms Seal kit - Cartridge Buna: 990203007 Seal kit - Cartridge Polyurethane: 990003002	Maximum Air Pressure	10,5 bar
Seal kit - Cartridge Buna: 990203007 Seal kit - Cartridge Polyurethane: 990003002	Response Time - Typical	10 ms
Seal kit - Cartridge Polyurethane: 990003002	Seal kit - Cartridge	Buna: 990203007
	Seal kit - Cartridge	Polyurethane: 990003002
Seal kit - Cartridge Viton: 990203006	Seal kit - Cartridge	Viton: 990203006

CONFIGURATION OPTIONS

Model Code Example: RPGDABN

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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MODEL RPID







Air-controlled, pilot-operated, balanced piston relief cartridges use compressed air over a diaphragm instead of an adjustable spring to control pressure setting. The air signal is supplied through a port in the hex-end of the cartridge. They 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, have low pressure rise vs. flow, they are smooth and quiet, and are moderately fast.

TECHNICAL DATA

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

Pilot Ratio	20:1
Hysteresis (with dither)	<4%
Maximum Operating Pressure	140 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	65 cc/min.@70 bar
Maximum Air Pressure	10,5 bar
Response Time - Typical	10 ms
Seal kit - Cartridge	Buna: 990016007
Seal kit - Cartridge	Polyurethane: 990016002
Seal kit - Cartridge	Viton: 990016006

CONFIGURATION OPTIONS

Model Code Example: RPIDBBN

CONTROL (B)	OPERATING RANGE (B	<u>3) s</u>	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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Model RPKD







Air-controlled, pilot-operated, balanced piston relief cartridges use compressed air over a diaphragm instead of an adjustable spring to control pressure setting. The air signal is supplied through a port in the hex-end of the cartridge. They 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, have low pressure rise vs. flow, they are smooth and quiet, and are moderately fast.

TECHNICAL DATA

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

Pilot Ratio	20:1
Maximum Operating Pressure	140 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	80 cc/min.@70 bar
Maximum Air Pressure	10,5 bar
Response Time - Typical	10 ms
Seal kit - Cartridge	Buna: 990018007
Seal kit - Cartridge	Polyurethane: 990018002
Seal kit - Cartridge	Viton: 990018006

CONFIGURATION OPTIONS

Model Code Example: RPKDBBN

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



Air Pilot



Air-controlled, pilot relief cartridges are used to remotely control the pressure setting of other pilot operated valves. Because capacity is limited to pilot flow, these valves should be used with valves with compatable pilot flows. They use compressed air over a diaphragm instead of an adjustable spring to control pressure setting, the air signal is supplied through a port in the hex-end of the cartridge.

TECHNICAL DATA

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

Pilot Ratio	20:1
Maximum Operating Pressure	140 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,3 cc/min.
Response Time - Typical	2 ms
Seal kit - Cartridge	Buna: 990203007
Seal kit - Cartridge	Viton: 990203006
5	

CONFIGURATION OPTIONS

Model Code Example: RBABABN

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



MODEL RBAR



sunhydraulics.com/model/RBAR





Two-port, pilot-stage, air-controlled, direct-acting relief cartridges are normally closed pressure regulating valves. When the pressure at port 1 (inlet) is sufficient to overcome the force due to the air signal, a flow path is opened from port 1 to port 2 (tank). These cartridges are designed for pilot flow applications and utilize Sun's T-8A cavity so they can be used in conjunction with Sun's pilot-operated, main-stage valves.

TECHNICAL DATA

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

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	1 cc/min.
Maximum Pilot Pressure	10,5 bar
Pilot Control Port	See Control Options
Seal kit - Cartridge	Buna: 990608007
Seal kit - Cartridge	EPDM: 990608014
Seal kit - Cartridge	Polyurethane: 990008002
Seal kit - Cartridge	Viton: 990608006

CONFIGURATION OPTIONS

Model Code Example: RBARBWN

CONTROL	(B) AIR PILOT RATIO	(W) SEAL MATERIAL	(N)
B External 4-SAE Port	W 50:1	N Buna-N	
A External 1/8 NPTF Port	Y 75:1	E EPDM	
D External 1/8 BSPP Port		V Viton	









Ventable, pilot-operated, balanced piston 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. They provide a vent port (port 3) that connects between the main piston and pilot stage to provide for remote control by other pilot or 2-way valves. These valves are accurate, have low pressure rise vs. flow, they are smooth and quiet, and are moderately fast.

TECHNICAL DATA

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

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,11 - 0,16 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Response Time - Typical	10 ms
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: 990163007
Seal kit - Cartridge	EPDM: 990163014
Seal kit - Cartridge	Polyurethane: 990163002
Seal kit - Cartridge	Viton: 990163006

CONFIGURATION OPTIONS

Model Code Example: RVBALAN

CONTROL	(L)	ADJUSTMENT RANGE	(A)	SEAL MATERIAL	(N)	MATERIAL/COATING
L Standard Screw Adjustment C Tamper Resistant - Factory Set K Handknob		 A 75 - 3000 psi (5 - 210 bar), 1000 psi bar) Standard Setting W 75 - 4500 psi (5 - 315 bar), 1000 psi bar) Standard Setting B 75 - 1500 psi (5 - 105 bar), 1000 psi bar) Standard Setting C 75 - 6000 psi (5 - 420 bar), 1000 psi bar) Standard Setting N 75 - 800 psi (5 - 55 bar), 400 psi (28 bar) Standard Setting 	i (70 i (70 i (70 i (70 3	N Buna-N E EPDM V Viton		Standard Material/Coating /AP Stainless Steel, Passivated
		Q 75 - 400 psi (5 - 28 bar), 200 psi (14 bar) Standard Setting	1			









Ventable, pilot-operated, balanced piston 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. They provide a vent port (port 3) that connects between the main piston and pilot stage to provide for remote control by other pilot or 2-way valves. These valves are accurate, have low pressure rise vs. flow, they are smooth and quiet, and are moderately fast.

TECHNICAL DATA

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

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,11 - 0,16 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Response Time - Typical	10 ms
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: RVCALAN

CONTROL	(L)	ADJUSTMENT RANGE (A)	SEAL MATERIAL	(N)	MATERIAL/COATING	
 L Standard Screw Adjustment C Tamper Resistant - Factory Set K Handknob O Handknob with Panel Mount 		 A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting W 150 - 4500 psi (10,5 - 315 bar), 1000 psi (70 bar) Standard Setting B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting C 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting D 25 - 800 psi (17 - 55 bar) 400 psi (28 	N Buna-N E EPDM V Viton		Standard Material/Coating /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel	

bar) Standard Setting E 25 - 400 psi (1,7 - 28 bar), 200 psi (14 bar) Standard Setting un hydraulics MODEL



sunhydraulics.com/model/RVEA







Ventable, pilot-operated, balanced piston 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. They provide a vent port (port 3) that connects between the main piston and pilot stage to provide for remote control by other pilot or 2-way valves. These valves are accurate, have low pressure rise vs. flow, they are smooth and quiet, and are moderately fast.

TECHNICAL DATA

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

Factory Pressure Settings Established at	15 L/min.		
Maximum Operating Pressure	350 bar		
Control Pilot Flow	0,16 - 0,25 L/min.		
Maximum Valve Leakage at 110 SUS (24 cSt)	50 cc/min.@70 bar		
Response Time - Typical	10 ms		
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: RVEALAN

N Buna-N

E EPDM

V Viton

CONTROL	
---------	--

L Standard Screw Adjustment

- C Tamper Resistant Factory Set
- K Handknob
- 0 Handknob with Panel Mount
- W Hex Wrench Adjustment
- Y Tri-Grip Handknob
- (70 bar) Standard Setting **W** 150 - 4500 psi (10,5 - 315 bar), 1000 psi (70 bar) Standard Setting

100 - 3000 psi (7 - 210 bar), 1000 psi

(L) ADJUSTMENT RANGE

- B 50 1500 psi (3,5 105 bar), 1000 psi (70 bar) Standard Setting
- C 150 6000 psi (10,5 420 bar), 1000 psi (70 bar) Standard Setting
- D 25 800 psi (1,7 55 bar), 400 psi (28 bar) Standard Setting
- E 25 400 psi (1,7 28 bar), 200 psi (14 bar) Standard Setting

(A) SEAL MATERIAL

(N) MATERIAL/COATING Standard Material/Coating /AP Stainless Steel, Passivated

/LH Mild Steel, Zinc-Nickel





MODEL

RVGA



Ventable, pilot-operated, balanced piston 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. They provide a vent port (port 3) that connects between the main piston and pilot stage to provide for remote control by other pilot or 2-way valves. These valves are accurate, have low pressure rise vs. flow, they are smooth and quiet, and are moderately fast.

TECHNICAL DATA

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

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,25 - 0,33 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	65 cc/min.@70 bar
Response Time - Typical	10 ms
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

CONFIGURATION OPTIONS

Model Code Example: RVGALAN

CONTROL	(L)	ADJUSTMENT RANGE (A)	SEAL MATERIAL	(N)	MATERIAL/COATING
 L Standard Screw Adjustment C Tamper Resistant - Factory Set K Handknob 		 A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting W 150 - 4500 psi (10,5 - 315 bar), 1000 psi (70 bar) Standard Setting B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting C 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting D 25 - 800 psi (1,7 - 55 bar), 400 psi (28 bar) Standard Setting E 25 - 400 psi (1,7 - 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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Ventable, pilot-operated, balanced piston 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. They provide a vent port (port 3) that connects between the main piston and pilot stage to provide for remote control by other pilot or 2-way valves. These valves are accurate, have low pressure rise vs. flow, they are smooth and quiet, and are moderately fast.

TECHNICAL DATA

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

15 L/min.
350 bar
0,25 - 0,33 L/min.
80 cc/min.@70 bar
10 ms
5
15 mm
9 - 10 Nm
Buna: 990019007
EPDM: 990019014
Polyurethane: 990019002
Viton: 990019006

CONFIGURATION OPTIONS

CONTROL

Model Code Example: RVIALAN

E EPDM

V Viton

(L)	ADJUSTMENT RANGE	(A)	SEAL MATERIAL
Adjustment	A 100 - 3000 psi (7 - 210 bar), 10	000 psi	N Buna-N

(N) MATERIAL/COATING

L Standard Screw Adjustment C Tamper Resistant - Factory Set K Handknob

١	100 - 3000 psi (7 - 210 bar), 1000 psi
	(70 bar) Standard Setting
V	150 - 4500 psi (10,5 - 315 bar), 1000
	psi (70 bar) Standard Setting

- **B** 50 1500 psi (3,5 105 bar), 1000 psi (70 bar) Standard Setting
- **C** 150 6000 psi (10,5 420 bar), 1000 psi (70 bar) Standard Setting
- D 25 800 psi (1,7 55 bar), 400 psi (28 bar) Standard Setting
- E 25 400 psi (1,7 28 bar), 200 psi (14
- N bor) Stransfar (4 Settingar), 400 psi (28
 - bar) Standard Setting

Standard Mater

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

sun hydraulics MODEL RVCS



sunhydraulics.com/model/RVCS







Ventable, 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. They provide a vent port (port 3) that connects between the main piston and pilot stage to provide for remote control by other pilot or 2-way valves. These valves are accurate, have low pressure rise vs. flow, they are smooth and quiet, and are moderately fast.

TECHNICAL DATA

Q 60 - 400 psi (4 - 28 bar), 200 psi (14 bar) Standard Setting

W 150 - 4500 psi (10,5 - 315 bar), 1000 psi (70 bar) Standard Setting

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

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,11 - 0,16 L/min.
Maximum Valve Leakage at Reseat	0,7 cc/min.
Response Time - Typical	2 ms
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: 990611007
Seal kit - Cartridge	Viton: 990611006

CONFIGURATION OPTIONS

Model Code Example: RVCSLAN

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









Ventable, 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. They provide a vent port (port 3) that connects between the main piston and pilot stage to provide for remote control by other pilot or 2-way valves. These valves are accurate, have low pressure rise vs. flow, they are smooth and quiet, and are moderately fast.

TECHNICAL DATA

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

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,25 - 0,33 L/min.
Maximum Valve Leakage at Reseat	0,7 cc/min.
Response Time - Typical	2 ms
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: 990402007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990402006

CONFIGURATION OPTIONS

CONTROL L Standard Scre

Model Code Example: RVESLAN

CONTROL (ADJUSTMENT RANGE (A)	SEAL MATERIAL (N) MATERIAL/COATING
L Standard Screw Adjustment		A 100 - 3000 psi (7 - 210 bar), 1000 psi	N Buna-N	Standard Material/Coating
C Tamper Resistant - Factory Set		(70 bar) Standard Setting	E EPDM	/AP Stainless Steel, Passivated
K Handknob		B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting	V Viton	/LH Mild Steel, Zinc-Nickel
		C 150 6000 mai (10 5 400 har) 1000		

- 150 6000 psi (10,5 420 bar), 1000 С
- psi (70 bar) Standard Setting 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** 150 4500 psi (10,5 315 bar), 1000 psi (70 bar) Standard Setting

sunhydraulics.com/model/RVES





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Ventable, 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. They provide a vent port (port 3) that connects between the main piston and pilot stage to provide for remote control by other pilot or 2-way valves. These valves are accurate, have low pressure rise vs. flow, they are smooth and quiet, and are moderately fast.

TECHNICAL DATA

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

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,25 - 0,33 L/min.
Maximum Valve Leakage at Reseat	0,7 cc/min.
Response Time - Typical	2 ms
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: 990217007
Seal kit - Cartridge	Polyurethane: 990217002
Seal kit - Cartridge	Viton: 990217006

CONFIGURATION OPTIONS

Model Code Example: RVGSLAN

CONTROL		ADJUSTMENT RANGE	A) SEAL MATERIAL	(N)	MATERIAL/COATING	
L Standard Screw Adjustment C Tamper Resistant - Factory Set K Handknob		 A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting C 150 - 6000 psi (10,5 - 420 bar), 1000 psi (10,5 - 420 bar), 1	N Buna-N E EPDM V Viton		Standard Material/Coating /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel	

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 150 - 4500 psi (10,5 - 315 bar), 1000 psi (70 bar) Standard Setting

sun hydraulics MODEL RVIS









Ventable, 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. They provide a vent port (port 3) that connects between the main piston and pilot stage to provide for remote control by other pilot or 2-way valves. These valves are accurate, have low pressure rise vs. flow, they are smooth and quiet, and are moderately fast.

TECHNICAL DATA

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

15 L/min.
350 bar
0,25 - 0,33 L/min.
0,7 cc/min.
2 ms
5
15 mm
9 - 10 Nm
Buna: 990219007
Viton: 990219006

CONFIGURATION OPTIONS

Model Code Example: RVISLAN

(L)	ADJUSTMENT RANGE (A)	SEAL MATERIAL (N)	MATERIAL/COATING
tment	A 100 - 3000 psi (7 - 210 bar), 1000 psi	N Buna-N	Standard Material/Coating
ctory Set	(70 bar) Standard Setting	V Viton	/AP Stainless Steel, Passivated
	B 50 - 1500 psi (3,5 - 105 bar), 1000 psi		

- L Standard Screw Adjus C Tamper Resistant - Fa
- K Handknob

CONTROL

- (70 bar) Standard Setting
 C 150 6000 psi (10,5 420 bar), 1000 psi (70 bar) Standard Setting
 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
 - ₩ 150 4500 psi (10,5 315 bar), 1000 psi (70 bar) Standard Setting











Ventable, pilot-operated, anti shock relief cartridges limit maximum system pressure and also limit the rate of pressure rise. The valve opens and then ramps closed at a constant speed, independent of settings and flows. These 3 port valves include a vent port (port 3) that connects between the main piston and the pilot stage to provide for remote control by other pilot or 2-way valves. The adjust screw determines the maximum (relief) setting and the minimum (threshold) setting.

TECHNICAL DATA

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

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,41 L/min.
Pressure Ramp Up Time	200 - 400 ms
Response Time - Typical	2 ms
Adjustment - No. of CW Turns from Min. to Max. setting	4.5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
U.S. Patent #	6,039,070
Seal kit - Cartridge	Buna: 990402007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990402006

(N)

NOTES Patents are pending for this product.

CONFIGURATION OPTIONS

Standard Screw Adjustment

C Tamper Resistant - Factory Set

Model Code Example: RVETLAN

(A) SEAL MATERIAL

N Buna-N

V Viton

С	0	N	T	R	0	L	

- (L) ADJUSTMENT RANGE
 - A 500 3000 psi (35 210 bar), 1000 ps (70 bar) Standard Setting
 - **B** 500 1500 psi (35 105 bar), 1000 psi
 - (70 bar) Standard Setting C 1000 - 6000 psi (70 - 420 bar), 1000 psi
 - (70 bar) Standard Setting
 - W 1000 4500 psi (70 315 bar), 1000 psi (70 bar) Standard Setting









Ventable, pilot-operated, anti shock relief cartridges limit maximum system pressure and also limit the rate of pressure rise. The valve opens and then ramps closed at a constant speed, independent of settings and flows. These 3 port valves include a vent port (port 3) that connects between the main piston and the pilot stage to provide for remote control by other pilot or 2-way valves. The adjust screw determines the maximum (relief) setting and the minimum (threshold) setting.

TECHNICAL DATA

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

15 L/min.
350 bar
0,25 - 0,33 L/min.
300 - 500 ms
2 ms
4.5
15 mm
9 - 10 Nm
6,039,070
Buna: 990217007
Polyurethane: 990217002
Viton: 990217006

NOTES Patents are pending for this product.

CONFIGURATION OPTIONS

Model Code Example: RVGTLAN

CONTROL	(L)	ADJUSTMENT RANGE (A)	SEAL MATERIAL (N)	MATERIAL/COATING
 L Standard Screw Adjustment C Tamper Resistant - Factory Set 		 A 500 - 3000 psi (35 - 210 bar), 1000 psi (70 bar) Standard Setting B 500 - 1500 psi (35 - 105 bar), 1000 psi 	N Buna-N V Viton	Standard Material/Coating /AP Stainless Steel, Passivated
		 (70 bar) Standard Setting C 1000 - 6000 psi (70 - 420 bar), 1000 psi (70 bar) Standard Setting 		

W 1000 - 4500 psi (70 - 315 bar), 1000 psi (70 bar) Standard Setting

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MODEL **RVIT**



sunhydraulics.com/model/RVIT







Ventable, pilot-operated, anti shock relief cartridges limit maximum system pressure and also limit the rate of pressure rise. The valve opens and then ramps closed at a constant speed, independent of settings and flows. These 3 port valves include a vent port (port 3) that connects between the main piston and the pilot stage to provide for remote control by other pilot or 2-way valves. The adjust screw determines the maximum (relief) setting and the minimum (threshold) setting.

TECHNICAL DATA

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

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,25 - 0,33 L/min.
Pressure Ramp Up Time	400 - 850 ms
Response Time - Typical	2 ms
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: 990219007
Seal kit - Cartridge	Viton: 990219006

CONFIGURATION OPTIONS

Model Code Example: RVITLAN

(A) SEAL MATERIAL

N Buna-N

Viton ۷

CONTROL

L Standard Screw Adjustment

C Tamper Resistant - Factory Set

K Handknob

500 - 3000 psi (35 - 210 bar), 1000 psi (70 bar) Standard Setting 1000 - 6000 psi (70 - 420 bar), 1000 psi С

(70 bar) Standard Setting W 1000 - 4500 psi (70 - 315 bar), 1000 psi

(70 bar) Standard Setting

(L) ADJUSTMENT RANGE

А

(N) MATERIAL/COATING

Standard Material/Coating /AP Stainless Steel, Passivated



sunhydraulics.com/model/RBAD







This direct-acting, pilot relief cartridge incorporates back-to-back check valves. This allows it to remotely control 2 other pilot-operated valves or act as a thermal relief for both ends of an actuator. Because capacity is limited to pilot flow, this valve should be used with other valves with comparable pilot flows.

TECHNICAL DATA

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

Maximum Valve Leakage at 110 SUS (24 cSt)	0,3 cc/min.
Response Time - Typical	2 ms
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: RBADLAN

CONTROL	(L)	ADJUSTMENT RANGE	(A)	SEAL MATERIAL	(N)	MATERIAL/COATING	
L Standard Screw Adjustment		A 25 - 3000 psi (1,7 - 210 bar), 1000 p	si	N Buna-N		Standard Material/Coating	
C Tamper Resistant - Factory Set		(70 bar) Standard Setting		V Viton		/AP Stainless Steel, Passivated	
K Handknob		B 25 - 1500 psi (1,7 - 105 bar), 1000 p	si			/LH Mild Steel, Zinc-Nickel	
O Handknob with Panel Mount		(70 bar) Standard Setting					
		• 05 000 mai (4 7 400 hav) 4000 m	- :				

- C 25 6000 psi (1,7 420 bar), 1000 psi
- (70 bar) Standard Setting D 25 - 800 psi (1,7 - 55 bar), 400 psi (28
- bar) Standard Setting E 25 - 400 psi (1,7 - 28 bar), 200 psi (14 bar) Standard Setting
- W 25 4500 psi (1,7 315 bar), 1000 psi (70 bar) Standard Setting







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The relief-before-check cartridge is a CavitySaver[™] (multi-function) valve incorporating a direct-acting relief tee'd in before a check function. When the pressure at the inlet (port 2) reaches the relief valve setting, the valve starts to open to tank (port 3), throttling flow to limit the pressure rise. The check valve flow is from the inlet (port 2) to the system port (port1). These valves are smooth and quiet, essentially zero leak, dirt tolerant, immune to silting and are very fast.

TECHNICAL DATA

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

(N) MATERIAL/COATING

Standard Material/Coating

/AP Stainless Steel, Passivated

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Response Time - Typical	10 ms
Adjustment - No. of CW Turns from Min. to Max. setting	6
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

CONFIGURATION OPTIONS

Model Code Example: HRDALAN

(A) SEAL MATERIAL

N Buna-N

V Viton

CONTROL

- L Standard Screw Adjustment
- **C** Tamper Resistant Factory Set
- K Handknob
- (L)
 ADJUSTMENT RANGE
 (A

 A
 500 3000 psi (35 210 bar), 1000 psi
 - (70 bar) Standard Setting D 200 - 700 psi (14 - 50 bar), 400 psi (28
 - bar) Standard Setting

W 800 - 4500 psi (55 - 315 bar), 1000 psi (70 bar) Standard Setting

MODEL <mark>sun</mark> hydraulics **HRDB**











The relief-after-check cartridge is a CavitySaver™ (multi-function) valve incorporating a direct-acting relief tee'd in after a check function. The check valve flow is from the inlet (port 2) to the system port (port1). When the pressure in the system (port 1) reaches the relief valve setting, the valve starts to open to tank (port 3), throttling flow to limit the pressure rise. These valves are smooth and quiet, essentially zero-leak, dirt-tolerant, immune to silting and are very fast.

TECHNICAL DATA

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

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Response Time - Typical	10 ms
Adjustment - No. of CW Turns from Min. to Max. setting	6
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

CONFIGURATION OPTIONS

CONTROL L Standard C Tamper

Model Code Example: HRDBLAN

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), 1000 psi (70 bar) Standard Setting W 800 - 4500 psi (55 - 315 bar), 1000 psi (70 bar) Standard Setting 	N Buna-N V Viton	Standard Material/Coating /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel











The ventable relief-before-check cartridge is a CavitySaver[™] (multi-function) valve incorporating a ventable, pilotoperated, balanced piston relief tee'd in before a check function. When the pressure at the inlet (port 2) reaches the relief valve setting, the valve starts to open to tank (port 3), throttling flow to regulate the pressure. The check valve flow is from the inlet (port 2) to the system port (port1). The valve includes a vent port (port 4) that connects between the main piston and pilot stage to provide for remote control by other pilot or 2-way valves.

These valves are accurate, have low pressure rise vs. flow, are smooth, quiet, and are moderately fast.

TECHNICAL DATA

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

Maximum Operating Pressure 350 bar
Maximum Valve Leakage at 110 SUS (24 cSt) 30 cc/min.@70 bar
Check Cracking Pressure 1,7 bar
Response Time - Typical 10 ms
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: 990021007
Seal kit - Cartridge Polyurethane: 990021002
Seal kit - Cartridge Viton: 990021006

CONFIGURATION OPTIONS

Model Code Example: HVCALAN

CONTROL	(L)	ADJUSTMENT RANGE (A)	SEAL MATERIAL	(N)
L Standard Screw Adjustment C Tamper Resistant - Factory Set		A 75 - 3000 psi (5 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N V Viton	
K Handknob		B 75 - 1500 psi (5 - 105 bar), 1000 psi (70 bar) Standard Setting		
		D 75 - 800 psi (5 - 55 bar), 400 psi (28 bar) Standard Setting		
		W 75 - 4500 nsi (5 - 315 har) 1000 nsi (70		

bar) Standard Setting

sun hydraulics

 MODEL
 Ventable, pilot-operated, balanced piston relief main stage with integral T-8A

 HVCA8
 control cavity - before check

 SERIES 1 / CAPACITY: 40 L/min. / CAVITY: T-21A







<mark>sun</mark> hydraulics°



The relief-before-check cartridge is a CavitySaver[™] (multi-function) valve incorporating a normally closed, balanced piston modulating element tee'd in before a check function. The valve incorporates an integral pilot control cavity. The pilot control cavity will accept any T-8A pressure control cartridge. When the pressure at the inlet (port 2) reaches the pilot control valve setting, the modulating element starts to open to tank (port 3), throttling flow to regulate the pressure. The T-8A pilot section is drained to port 4. The check valve flow is from the inlet (port 2) to the system port (port1).

TECHNICAL DATA

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

15 L/min.
350 bar
30 cc/min.@70 bar
1,7 bar
T-8A
27 - 33 Nm
10 ms
Buna: 990021007
EPDM: 990021014
Polyurethane: 990021002
Viton: 990021006

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: HVCA8DN

BIAS PRESSURE	(D) SEAL MATERIAL	(N)
D 75 psi (5 bar)	N Buna-N	
	E EPDM	
	V Viton	









Ventable, pilot-operated, balanced piston relief cartridges with external drain 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. They provide a vent port (port 3) that connects between the main piston and pilot stage to provide for remote control by other pilot or 2-way valves and a drain (port 4) that makes them insensitive to back pressure. These valves are accurate, have low pressure rise vs. flow, they are smooth and quiet, and are moderately fast.

TECHNICAL DATA

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

Factory Pressure Settings Established at15 L/min.Maximum Operating Pressure350 barControl Pilot Flow0,11 - 0,16 L/min.Maximum Valve Leakage at 110 SUS (24 cSt)30 cc/min.@70 barResponse Time - Typical10 msAdjustment - No. of CW Turns from Min. to Max. setting5Locknut Hex Size15 mmLocknut Torque9 - 10 NmSeal kit - CartridgeEPDM: 990021007Seal kit - CartridgePolyurethane: 990021002Seal kit - CartridgeViton: 990021006		
Maximum Operating Pressure350 barControl Pilot Flow0,11 - 0,16 L/min.Maximum Valve Leakage at 110 SUS (24 cSt)30 cc/min.@70 barResponse Time - Typical10 msAdjustment - No. of CW Turns from Min. to Max. setting5Locknut Hex Size15 mmLocknut Torque9 - 10 NmSeal kit - CartridgeBuna: 990021007Seal kit - CartridgePolyurethane: 990021002Seal kit - CartridgeViton: 990021002	Factory Pressure Settings Established at	15 L/min.
Control Pilot Flow0,11 - 0,16 L/min.Maximum Valve Leakage at 110 SUS (24 cSt)30 cc/min.@70 barResponse Time - Typical10 msAdjustment - No. of CW Turns from Min. to Max. setting5Locknut Hex Size15 mmLocknut Torque9 - 10 NmSeal kit - CartridgeBuna: 990021007Seal kit - CartridgeEPDM: 990021014Seal kit - CartridgePolyurethane: 990021002Seal kit - CartridgeViton: 990021006	Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)30 cc/min.@70 barResponse Time - Typical10 msAdjustment - No. of CW Turns from Min. to Max. setting5Locknut Hex Size15 mmLocknut Torque9 - 10 NmSeal kit - CartridgeBuna: 990021007Seal kit - CartridgeEPDM: 990021014Seal kit - CartridgePolyurethane: 990021002Seal kit - CartridgeViton: 990021006	Control Pilot Flow	0,11 - 0,16 L/min.
Response Time - Typical10 msAdjustment - No. of CW Turns from Min. to Max. setting5Locknut Hex Size15 mmLocknut Torque9 - 10 NmSeal kit - CartridgeBuna: 990021007Seal kit - CartridgeEPDM: 990021014Seal kit - CartridgePolyurethane: 990021002Seal kit - CartridgeViton: 990021006	Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Adjustment - No. of CW Turns from Min. to Max. setting5Locknut Hex Size15 mmLocknut Torque9 - 10 NmSeal kit - CartridgeBuna: 990021007Seal kit - CartridgeEPDM: 990021014Seal kit - CartridgePolyurethane: 990021002Seal kit - CartridgeViton: 990021006	Response Time - Typical	10 ms
Locknut Hex Size15 mmLocknut Torque9 - 10 NmSeal kit - CartridgeBuna: 990021007Seal kit - CartridgeEPDM: 990021014Seal kit - CartridgePolyurethane: 990021002Seal kit - CartridgeViton: 990021006	Adjustment - No. of CW Turns from Min. to Max. setting	5
Locknut Torque9 - 10 NmSeal kit - CartridgeBuna: 990021007Seal kit - CartridgeEPDM: 990021014Seal kit - CartridgePolyurethane: 990021002Seal kit - CartridgeViton: 990021006	Locknut Hex Size	15 mm
Seal kit - CartridgeBuna: 990021007Seal kit - CartridgeEPDM: 990021014Seal kit - CartridgePolyurethane: 990021002Seal kit - CartridgeViton: 990021006	Locknut Torque	9 - 10 Nm
Seal kit - CartridgeEPDM: 990021014Seal kit - CartridgePolyurethane: 990021002Seal kit - CartridgeViton: 990021006	Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge Polyurethane: 990021002 Seal kit - Cartridge Viton: 990021006	Seal kit - Cartridge	EPDM: 990021014
Seal kit - Cartridge Viton: 990021006	Seal kit - Cartridge	Polyurethane: 990021002
	Seal kit - Cartridge	Viton: 990021006

CONFIGURATION OPTIONS

Model Code Example: RVCDLAN

CONTROL	(L) ADJUSTMENT RANGE (A)	SEAL MATERIAL (N)	MATERIAL/COATING
 L Standard Screw Adjustment C Tamper Resistant - Factory Set 	A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N E EPDM	Standard Material/Coating /AP Stainless Steel, Passivated
K Handknob Y Tri-Grip Handknob	B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting	V Viton	/LH Mild Steel, Zinc-Nickel
	C 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting		
	D 25 - 800 psi (1,7 - 55 bar), 400 psi (28		

bar) Standard Setting

bar) Standard Setting **W** 150 - 4500 psi (10,5 - 315 bar), 1000 psi (70 bar) Standard Setting

E 25 - 400 psi (1,7 - 28 bar), 200 psi (14









Ventable, pilot-operated, balanced piston relief cartridges with external drain 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. They provide a vent port (port 3) that connects between the main piston and pilot stage to provide for remote control by other pilot or 2-way valves and a drain (port 4) that makes them insensitive to back pressure. These valves are accurate, have low pressure rise vs. flow, they are smooth and quiet, and are moderately fast.

TECHNICAL DATA

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

Factory Procesure Settings Established at	15 L/min
Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,25 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	50 cc/min.@70 bar
Response Time - Typical	10 ms
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: 990022007
Seal kit - Cartridge	Polyurethane: 990022002
Seal kit - Cartridge	Viton: 990022006

CONFIGURATION OPTIONS

Model Code Example: RVEDLAN

CONTROL (L) ADJUSTMENT RANGE	(A) SEAL MATERIAL	(N)
 L Standard Screw Adjustment C Tamper Resistant - Factory Set K Handknob W Hex Wrench Adjustment Y Tri-Grip Handknob 	 A 100 - 3000 psi (7 - 210 bar), 1 (70 bar) Standard Setting B 50 - 1500 psi (3,5 - 105 bar), (70 bar) Standard Setting C 150 - 6000 psi (10,5 - 420 bar psi (70 bar) Standard Setting D 25 - 800 psi (1,7 - 55 bar), 40 bar) Standard Setting E 25 - 400 psi (1,7 - 28 bar), 20 bar) Standard Setting W 150 - 4500 psi (10,5 - 315 bar psi (70 bar) Standard Setting W 150 - 4500 psi (10,5 - 315 bar psi (70 bar) Standard Setting 	N Buna-N E EPDM 1000 psi V Viton r), 1000 0 psi (28 0 psi (14 r), 1000	

sun hydraulics MODEL

Ventable, pilot-operated, balanced piston relief valve with drain to port 4 SERIES 3 / CAPACITY: 240 L/min. / CAVITY: T-23A









Ventable, pilot-operated, balanced piston relief cartridges with external drain 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. They provide a vent port (port 3) that connects between the main piston and pilot stage to provide for remote control by other pilot or 2-way valves and a drain (port 4) that makes them insensitive to back pressure. These valves are accurate, have low pressure rise vs. flow, they are smooth and quiet, and are moderately fast.

TECHNICAL DATA

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

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,25 - 0,33 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	65 cc/min.@70 bar
Response Time - Typical	10 ms
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: 990023007
Seal kit - Cartridge	Polyurethane: 990023002
Seal kit - Cartridge	Viton: 990023006

CONFIGURATION OPTIONS

Model Code Example: RVGDLAN

CONTROL	(L)	ADJUSTMENT RANGE	(A)	SEAL MATERIAL	(N)	MATERIAL/COATING
 L Standard Screw Adjustment C Tamper Resistant - Factory Set K Handknob 		 A 100 - 3000 psi (7 - 210 bar), 1000 (70 bar) Standard Setting B 50 - 1500 psi (3,5 - 105 bar), 1000 (70 bar) Standard Setting C 150 - 6000 psi (10,5 - 420 bar), 11 psi (70 bar) Standard Setting D 25 - 800 psi (1,7 - 55 bar), 400 psi bar) Standard Setting E 25 - 400 psi (1,7 - 28 bar), 200 psi bar) Standard Setting W 150 - 4500 psi (10,5 - 315 bar), 11 psi (70 bar) Standard Setting) psi 0 psi 000 ii (28 ii (14 000	N Buna-N V Viton		Standard Material/Coating /AP Stainless Steel, Passivated





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Ventable, pilot-operated, balanced piston relief cartridges with external drain 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. They provide a vent port (port 3) that connects between the main piston and pilot stage to provide for remote control by other pilot or 2-way valves and a drain (port 4) that makes them insensitive to back pressure. These valves are accurate, have low pressure rise vs. flow, they are smooth and quiet, and are moderately fast.

TECHNICAL DATA

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

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,25 - 0,33 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	80 cc/min.@70 bar
Response Time - Typical	10 ms
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: 990024007
Seal kit - Cartridge	EPDM: 990024014
Seal kit - Cartridge	Polyurethane: 990024002
Seal kit - Cartridge	Viton: 990024006

CONFIGURATION OPTIONS

Model Code Example: RVIDLAN

ADJUSTMENT RANGE (A)	SEAL MATERIAL (N)	MATERIAL/COATING
 A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting C 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting D 25 - 800 psi (1,7 - 55 bar), 400 psi (28 bar) Standard Setting E 25 - 400 psi (1,7 - 28 bar), 200 psi (14 bar) Standard Setting W 150 - 4500 psi (10,5 - 315 bar), 1000 	N Buna-N E EPDM V Viton	Standard Material/Coating /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel
	 ADJUSTMENT RANGE (A) A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting C 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting D 25 - 800 psi (1,7 - 55 bar), 400 psi (28 bar) Standard Setting E 25 - 400 psi (1,7 - 28 bar), 200 psi (14 bar) Standard Setting W 150 - 4500 psi (10,5 - 315 bar), 1000 psi (70 bar) Standard Setting 	ADJUSTMENT RANGE (A) A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting N Buna-N B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting E EPDM C 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting V Viton D 25 - 800 psi (1,7 - 55 bar), 400 psi (28 bar) Standard Setting V E 25 - 400 psi (1,7 - 28 bar), 200 psi (14 bar) Standard Setting Pathod Setting W 150 - 4500 psi (10,5 - 315 bar), 1000 psi (70 bar) Standard Setting Pathod Setting

MODEL <mark>sun</mark> hydraulics" **RPEC8**

Pilot-operated, balanced piston relief main stage with integral T-8A control cavity SERIES 1 / CAPACITY: 95 L/min. / CAVITY: T-10A





This valve is a normally closed modulating element that incorporates an integral pilot control cavity. It is a balanced piston design. The pilot control cavity will accept any T-8A pressure control cartridge. When the pressure at the inlet (port 1) reaches the pilot control cartridge's setting, the modulating element starts to open to tank (port 2), throttling flow to regulate the pressure. The pilot cartridge's setting determines the difference in pressure between port 1 and port 2.

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	Т-8А
Pilot Control Valve Installation Torque	27 - 33 Nm
Pilot Control Valve Hex Size	22,2 mm
Main stage leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Seal kit - Cartridge	Buna: 990010007
Seal kit - Cartridge	EPDM: 990010014
Seal kit - Cartridge	Polyurethane: 990010002
Seal kit - Cartridge	Viton: 990010006

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

CONFIGURATION OPTIONS

Model Code Example: RPEC8WN

ADJUSTMENT RANGE (W)) SEAL MATERIAL	
W 100 - 5000 psi (7 - 350 bar)		N Buna-N	
D 25 - 3000 psi (1,7 - 210 bar)		E EPDM	
		V Viton	
MODEL RPGC8

Pilot-operated, balanced piston relief main stage with integral T-8A control cavity SERIES 2 / CAPACITY: 200 L/min. / CAVITY: T-3A



<mark>sun</mark> hydraulics"



This valve is a normally closed modulating element that incorporates an integral pilot control cavity. It is a balanced piston design. The pilot control cavity will accept any T-8A pressure control cartridge. When the pressure at the inlet (port 1) reaches the pilot control cartridge's setting, the modulating element starts to open to tank (port 2), throttling flow to regulate the pressure. The pilot cartridge's setting determines the difference in pressure between port 1 and port 2.

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
Main stage leakage at 110 SUS (24 cSt)	50 cc/min.@70 bar
Seal kit - Cartridge	Buna: 990203007
Seal kit - Cartridge	EPDM: 990203014
Seal kit - Cartridge	Polyurethane: 990003002
Seal kit - Cartridge	Viton: 990203006

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: RPGC8WN

ADJUSTMENT RANGE	(W) SEAL MATERIAL	(N)
W 100 - 5000 psi (7 - 350 bar)	N Buna-N	
D 25 - 3000 psi (1,7 - 210 bar)	E EPDM	
	V Viton	

MODEL RPIC8

<mark>sun</mark> hydraulics"

Pilot-operated, balanced piston relief main stage with integral T-8A control cavity SERIES 3 / CAPACITY: 380 L/min. / CAVITY: T-16A



This valve is a normally closed modulating element that incorporates an integral pilot control cavity. It is a balanced piston design. The pilot control cavity will accept any T-8A pressure control cartridge. When the pressure at the inlet (port 1) reaches the pilot control cartridge's setting, the modulating element starts to open to tank (port 2), throttling flow to regulate the pressure. The pilot cartridge's setting determines the difference in pressure between port 1 and port 2.

TECHNICAL DATA

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

Maximum Operating Pressure	350 bar
Control Pilot Flow	0,25 - 0,33 L/min.
Pilot Control Cavity	T-8A
Main stage leakage at 110 SUS (24 cSt)	65 cc/min.@70 bar
Seal kit - Cartridge	Buna: 990016007
Seal kit - Cartridge	EPDM: 990016014
Seal kit - Cartridge	Polyurethane: 990016002
Seal kit - Cartridge	Viton: 990016006

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: RPIC8WN

ADJUSTMENT RANGE	(W) SEAL MATERIAL	(N)
W 100 - 5000 psi (7 - 350 bar)	N Buna-N	
D 25 - 3000 psi (1,7 - 210 bar)	E EPDM	
	V Viton	

MODEL RPKC8

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Pilot-operated, balanced piston relief main stage with integral T-8A control cavity SERIES 4 / CAPACITY: 760 L/min. / CAVITY: T-18A



INLET

(1)

in. (mm)

sunhydraulics.com/model/RPKC8



This valve is a normally closed modulating element that incorporates an integral pilot control cavity. It is a balanced piston design. The pilot control cavity will accept any T-8A pressure control cartridge. When the pressure at the inlet (port 1) reaches the pilot control cartridge's setting, the modulating element starts to open to tank (port 2), throttling flow to regulate the pressure. The pilot cartridge's setting determines the difference in pressure between port 1 and port 2.

TECHNICAL DATA

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

Maximum Operating Pressure	350 bar
Control Pilot Flow	0,25 - 0,33 L/min.
Pilot Control Cavity	T-8A
Main stage leakage at 110 SUS (24 cSt)	80 cc/min.@70 bar
Seal kit - Cartridge	Buna: 990018007
Seal kit - Cartridge	EPDM: 990018014
Seal kit - Cartridge	Polyurethane: 990018002
Seal kit - Cartridge	Viton: 990018006

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: RPKC8WN

ADJUSTMENT RANGE	(W) SEAL MATERIAL	(N)
W 100 - 5000 psi (7 - 350 bar)	N Buna-N	
D 25 - 3000 psi (1,7 - 210 bar)	E EPDM	
	V Viton	

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

SERIES 1 / CAPACITY: 95 L/min. / CAVITY: T-10A





MODEL

RPES8



This valve is a normally closed modulating element that incorporates an integral pilot control cavity. It is a balanced poppet design. The pilot control cavity will accept any T-8A pressure control cartridge. When the pressure at the inlet (port 1) reaches the pilot control cartridge's setting, the poppet element starts to open to tank (port 2), throttling flow to regulate the pressure. The pilot cartridge's setting determines the difference in pressure between port 1 and port 2.

TECHNICAL DATA

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

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,41 L/min.
Pilot Control Cavity	T-8A
Pilot Control Valve Installation Torque	27 - 33 Nm
Pilot Control Valve Hex Size	22,2 mm
Main stage leakage at reseat	0,7 cc/min.
Response Time - Typical	7 ms
Seal kit - Cartridge	Buna: 990310007
Seal kit - Cartridge	EPDM: 990310014
Seal kit - Cartridge	Viton: 990310006

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

CONFIGURATION OPTIONS

Model Code Example: RPES8WN

ADJUSTMENT RANGE	(W)	SEAL MATERIAL	(N)	MATERIAL/COATING	
W 1000 - 5000 psi (70 - 350 bar)		N Buna-N		Standard Material/Coating	
D 50 - 1500 psi (3,5 - 105 bar)		E EPDM		/LH Mild Steel, Zinc-Nickel	
		V Viton			

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sun hydraulics RPGS8

Pilot-operated, balanced poppet relief main stage with integral T-8A control cavity SERIES 2 / CAPACITY: 200 L/min. / CAVITY: T-3A





This valve is a normally closed modulating element that incorporates an integral pilot control cavity. It is a balanced poppet design. The pilot control cavity will accept any T-8A pressure control cartridge. When the pressure at the inlet (port 1) reaches the pilot control cartridge's setting, the poppet element starts to open to tank (port 2), throttling flow to regulate the pressure. The pilot cartridge's setting determines the difference in pressure between port 1 and port 2.

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
Main stage leakage at reseat	0,7 cc/min.
Response Time - Typical	2 ms
Seal kit - Cartridge	Buna: 990303007
Seal kit - Cartridge	EPDM: 990303014
Seal kit - Cartridge	Polyurethane: 990303002
Seal kit - Cartridge	Viton: 990303006
	· · · · · · · · · · · · · · · · · · ·

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: RPGS8N

ADJUSTMENT RANGE	SEAL MATERIAL
B 50 - 1500 psi (3,5 - 105 bar)	E EPDM
W 100 - 5000 psi (7 - 350 bar)	N Buna-N
	V Viton

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

SERIES 3 / CAPACITY: 380 L/min. / CAVITY: T-16A



sunhydraulics.com/model/RPIS8



This valve is a normally closed modulating element that incorporates an integral pilot control cavity. It is a balanced poppet design. The pilot control cavity will accept any T-8A pressure control cartridge. When the pressure at the inlet (port 1) reaches the pilot control cartridge's setting, the poppet element starts to open to tank (port 2), throttling flow to regulate the pressure. The pilot cartridge's setting determines the difference in pressure between port 1 and port 2.

TECHNICAL DATA

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

Maximum Operating Pressure	350 bar
Control Pilot Flow	0,25 - 0,33 L/min.
Pilot Control Cavity	T-8A
Main stage leakage at reseat	0,7 cc/min.
Response Time - Typical	2 ms
Seal kit - Cartridge	Buna: 990316007
Seal kit - Cartridge	EPDM: 990316014
Seal kit - Cartridge	Polyurethane: 990016002
Seal kit - Cartridge	Viton: 990316006

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: RPIS8N

ADJUSTMENT RANGE	SEAL MATERIAL
B 50 - 1500 psi (3,5 - 105 bar)	E EPDM
W 100 - 5000 psi (7 - 350 bar)	N Buna-N
	V Viton

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

SERIES 4 / CAPACITY: 760 L/min. / CAVITY: T-18A





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This valve is a normally closed modulating element that incorporates an integral pilot control cavity. It is a balanced poppet design. The pilot control cavity will accept any T-8A pressure control cartridge. When the pressure at the inlet (port 1) reaches the pilot control cartridge's setting, the poppet element starts to open to tank (port 2), throttling flow to regulate the pressure. The pilot cartridge's setting determines the difference in pressure between port 1 and port 2.

TECHNICAL DATA

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

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,25 - 0,33 L/min.
Pilot Control Cavity	T-8A
Pilot Control Valve Installation Torque	27 - 33 Nm
Pilot Control Valve Hex Size	22,2 mm
Main stage leakage at reseat	0,7 cc/min.
Response Time - Typical	2 ms
Seal kit - Cartridge	Buna: 990318007
Seal kit - Cartridge	Polyurethane: 990018002
Seal kit - Cartridge	Viton: 990318006

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: RPKS8N

ADJUSTMENT RANGE	SEAL MATERIAL
B 50 - 1500 psi (3,5 - 105 bar)	N Buna-N
W 100 - 5000 psi (7 - 350 bar)	V Viton







This valve is a normally closed modulating element that incorporates an integral pilot control cavity. It is ventable, externally drained, and is a balanced piston design. The pilot control cavity will accept any T-8A pressure control cartridge. When the pressure at the inlet (port 1) reaches the pilot control cartridge setting, the modulating element starts to open to tank (port 2), throttling flow to regulate the pressure. The pilot cartridge's setting determines the difference in pressure between the inlet (port 1) and the drain (port 4). The vent port (port 3) that tees in between the main piston and pilot control cartridge, allows the modulating element to also be controlled by remote pilot or 2-way valves.

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	Т-8А
Main stage leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Response Time - Typical	10 ms
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	EPDM: 990021014
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

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

<mark>sun</mark> hydraulics"

Model Code Example: RVCD8WN

MINIMUM CONTROL PRESSURE (W)	SEAL MATERIAL (I	N)
W 100 psi (7 bar)	N Buna-N	
D 25 psi (1,7 bar)	E EPDM	
	V Viton	

MODEL **RVED8**

Ventable, pilot-operated, balanced piston relief main stage with integral T-8A control cavity and drain to port 4 SERIES 2 / CAPACITY: 120 L/min. / CAVITY: T-22A





This valve is a normally closed modulating element that incorporates an integral pilot control cavity. It is ventable, externally drained, and is a balanced piston design. The pilot control cavity will accept any T-8A pressure control cartridge. When the pressure at the inlet (port 1) reaches the pilot control cartridge setting, the modulating element starts to open to tank (port 2), throttling flow to regulate the pressure. The pilot cartridge's setting determines the difference in pressure between the inlet (port 1) and the drain (port 4). The vent port (port 3) that tees in between the main piston and pilot control cartridge, allows the modulating element to also be controlled by remote pilot or 2way valves.

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	Т-8А
Pilot Control Valve Installation Torque	27 - 33 Nm
Pilot Control Valve Hex Size	22,2 mm
Main stage leakage at 110 SUS (24 cSt)	50 cc/min.@70 bar
Response Time - Typical	10 ms
Seal kit - Cartridge	Buna: 990022007
Seal kit - Cartridge	EPDM: 990022014
Seal kit - Cartridge	Polyurethane: 990022002
Seal kit - Cartridge	Viton: 990022006

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

CONFIGURATION OPTIONS

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Model Code Example: RVED8WN

(N)

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

D 25 psi (1,7 bar)

E EPDM V Viton

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Ventable, pilot-operated, balanced piston relief main stage with integral T-8A control cavity and drain to port 4 SERIES 3 / CAPACITY: 240 L/min. / CAVITY: T-23A



sunhydraulics.com/model/RVGD8



2.59 (65,8) LOCATING SHOULDER τΩΓ СI πΩr INLET ð 1. The 1 (4)3 (2)DRAIN VENT OUTLET in. (mm)

This valve is a normally closed modulating element that incorporates an integral pilot control cavity. It is ventable, externally drained, and is a balanced piston design. The pilot control cavity will accept any T-8A pressure control cartridge. When the pressure at the inlet (port 1) reaches the pilot control cartridge setting, the modulating element starts to open to tank (port 2), throttling flow to regulate the pressure. The pilot cartridge's setting determines the difference in pressure between the inlet (port 1) and the drain (port 4). The vent port (port 3) that tees in between the main piston and pilot control cartridge, allows the modulating element to also be controlled by remote pilot or 2-way valves.

TECHNICAL DATA

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

Maximum Operating Pressure	350 bar
Control Pilot Flow	0,25 - 0,33 L/min.
Pilot Control Cavity	Т-8А
Main stage leakage at 110 SUS (24 cSt)	65 cc/min.@70 bar
Response Time - Typical	10 ms
Seal kit - Cartridge	Buna: 990023007
Seal kit - Cartridge	EPDM: 990023014
Seal kit - Cartridge	Polyurethane: 990023002
Seal kit - Cartridge	Viton: 990023006

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: RVGD8WN

MINIMUM CONTROL PRESSURE (W) SEAL MATERIAL	(N)
W 100 psi (7 bar)	N Buna-N	
D 25 psi (1,7 bar)	E EPDM	
	V Viton	

Ventable, pilot-operated, balanced piston relief main stage with integral T-8A control cavity and drain to port 4 SERIES 4 / CAPACITY: 480 L/min. / CAVITY: T-24A





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This valve is a normally closed modulating element that incorporates an integral pilot control cavity. It is ventable, externally drained, and is a balanced piston design. The pilot control cavity will accept any T-8A pressure control cartridge. When the pressure at the inlet (port 1) reaches the pilot control cartridge setting, the modulating element starts to open to tank (port 2), throttling flow to regulate the pressure. The pilot cartridge's setting determines the difference in pressure between the inlet (port 1) and the drain (port 4). The vent port (port 3) that tees in between the main piston and pilot control cartridge, allows the modulating element to also be controlled by remote pilot or 2-way valves.

TECHNICAL DATA

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

Maximum Operating Pressure	350 bar
Pilot Control Cavity	Т-8А
Pilot Control Valve Installation Torque	27 - 33 Nm
Pilot Control Valve Hex Size	22,2 mm
Main stage leakage at 110 SUS (24 cSt)	80 cc/min.@70 bar
Response Time - Typical	10 ms
Seal kit - Cartridge	Buna: 990024007
Seal kit - Cartridge	Polyurethane: 990024002
Seal kit - Cartridge	Viton: 990024006

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: RVID8WN

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

D 25 psi (1,7 bar)

V Viton

Electro-proportional relief valve - pilot capacity SERIES P / CAPACITY: 1 L/min. / CAVITY: T-8A





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MODEL

RBAP



This 2-port, pilot-stage, direct-acting relief cartridge is an electro-proportionally controlled, pressure regulating valve. The proportional control allows for infinite, step-less adjustability within the selected pressure range. When the pressure at port 1 (inlet) is sufficient to overcome the solenoid forces, as determined by the analog input signal, the poppet lifts and allows flow from port 1 to port 2 (outlet). This pilot control cartridge utilizes the T-8A cavity so it can be used in conjunction with Sun's main stage, pressure control elements.

TECHNICAL DATA

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

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at Reseat	25 cc/min.
Manual Override Force Requirement	66 N/100 bar @ Port 1
Reseat	>85% of setting
Seal kit - Cartridge	Buna: 990208007
Seal kit - Cartridge	EPDM: 990008014
Seal kit - Cartridge	Viton: 990208006

NOTES Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.

CONFIGURATION OPTIONS

Model Code Example: RBAPXAN

CONTROL	(X)	ADJUSTMENT RANGE	(A)	SEAL MATERIAL	(N)	COIL *	
X No Manual Override		A 300 - 3000 psi (20 - 210 bar)		N Buna-N			No coil
E Twist (Extended) Manual Override		B 150 - 1500 psi (10,5 - 105 bar)		E EPDM		212	DIN 43650-Form A, 12 VDC
L Manual Override - Adjustable		D 50 - 750 psi (3,5 - 50 bar)		V Viton		224	DIN 43650-Form A, 24 VDC
T Tuning Adjustment		W 500 - 5000 psi (35 - 350 bar)				224NX0	1 DIN 43650-Form A, 24 VDC, no transient voltage suppression (TVS) diodes, with XMD-01 driver
						224NX0	2 DIN 43650-Form A, 24 VDC, no transient voltage suppression (TVS) diodes, with XMD-02 driver
						912	Deutsch DT04-2P, 12 VDC
						912NX0	11 Deutsch DT04-2P, 12 VDC, no transient voltage suppression (TVS) diodes, with XMD-01 driver
						912NX0	2 Deutsch DT04-2P, 12 VDC, no transient voltage suppression (TVS) diodes, with XMD-02 driver
						924	Deutsch DT04-2P, 24 VDC
					924NX0	1 Deutsch DT04-2P, 24 VDC, no transient voltage suppression (TVS) diodes, with XMD-01	

driver 924NX02 Deutsch DT04-2P, 24 VDC, no transient voltage suppression (TVS) diodes, with XMD-02 driver

* Additional coil options are available



This 2-port, pilot-stage, direct-acting relief cartridge is an electro-proportionally controlled, normally-closed pressure regulating valve. The valve is spring biased closed to its highest setting (customer specified). Increasing current to the coil will proportionally decrease the pressure setting. When the pressure at port 1 (inlet) is sufficient to overcome the spring force minus the solenoid force, as determined by the analog input signal, the poppet lifts and allows flow from port 1 to port 2 (outlet). This pilot control cartridge utilizes the T-8A cavity so it can be used in conjunction with Sun's main stage, pressure control elements.

TECHNICAL DATA

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

Maximum Operating Pressure	350 bar			
Maximum Valve Leakage at Reseat	25 cc/min.			
Reseat	>85% of setting			
Seal kit - Cartridge	Buna: 990208007			
Seal kit - Cartridge	Viton: 990208006			

CONFIGURATION OPTIONS

Model Code Example: RBANXAN

CONTROL	(X)	ADJUSTMENT RANGE	(A)	SEAL MATERIAL	(N)	COIL *
X No Manual Override		A 3000 - 1500 psi (105 - 210 bar)		N Buna-N		No coil
		B 1500 - 800 psi (55 - 105 bar)		V Viton		212 DIN 43650-Form A, 12 VDC
		D 800 - 300 psi (20 - 55 bar)				224 DIN 43650-Form A, 24 VDC
		W 5000 - 3000 psi (210 - 350 bar)				912 Deutsch DT04-2P, 12 VDC
						924 Deutsch DT04-2P. 24 VDC

* Additional coil options are available

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