

Pressure Control, Relief Cartridges

*Powered by Sun **QuickPrint**,
your on-demand, customized catalogue solution.*

This information is subject to change without notice. Visit www.sunhydraulics.com for complete and up to date information.

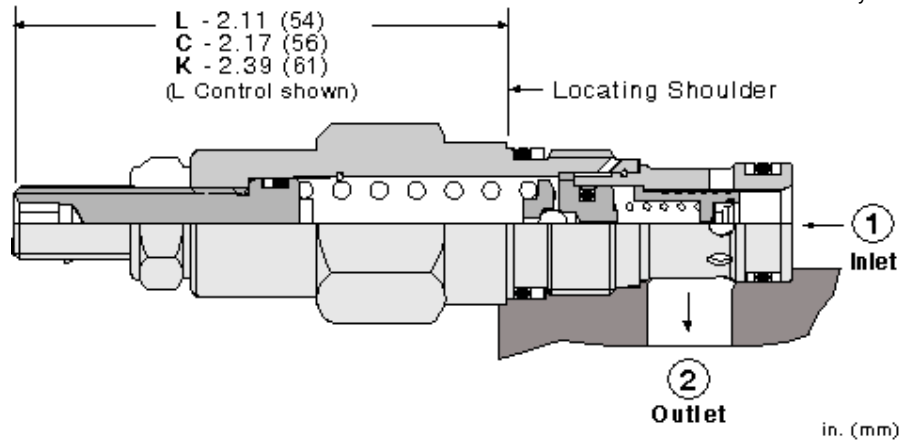
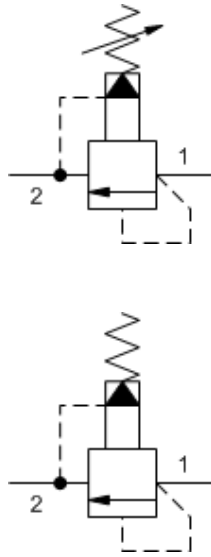
RPCC	Pilot operated, balanced piston relief valve	.....1
RPEC	Pilot operated, balanced piston relief valve	.....2
RPGC	Pilot operated, balanced piston relief valve	.....3
RPIC	Pilot operated, balanced piston relief valve	.....4
RPKC	Pilot operated, balanced piston relief valve	.....5
RDBA	Direct-acting relief valve	.....7
RDDA	Direct-acting relief valve	.....9
RDFA	Direct-acting relief valve	.....10
RDHA	Direct-acting relief valve	.....11
RDJA	Direct-acting relief valve	.....12
RDDA3	Non-adjustable direct-acting relief valve	.....13
RDFA3	Non-adjustable direct-acting relief valve	.....14
RDDT	Direct-acting relief valve, CE marked	.....15
RDFT	Direct-acting relief valve, CE marked	.....16
RPEE	Fast-acting, pilot operated, balanced piston relief valve	.....17
RPGE	Fast-acting, pilot operated, balanced piston relief valve	.....18
RPIE	Fast-acting, pilot operated, balanced piston relief valve	.....19
RPKE	Fast-acting, pilot operated, balanced piston relief valve	.....20

RPES	Pilot operated, balanced poppet relief valve	.....21
RPGS	Pilot operated, balanced poppet relief valve	.....22
RPIS	Pilot operated, balanced poppet relief valve	.....23
RPKS	Pilot operated, balanced poppet relief valve	.....24
RPET	Anti Shock, pilot operated, balanced poppet relief valve	.....25
RPGT	Anti Shock, pilot operated, balanced poppet relief valve	.....26
RPIT	Anti Shock, pilot operated, balanced poppet relief valve	.....27
RPKT	Anti Shock, pilot operated, balanced poppet relief valve	.....28
RBAA	Direct-acting relief valve - pilot capacity	.....29
RBAC	Direct-acting relief valve - pilot capacity	.....30
RBAE	Direct-acting relief valve - pilot capacity	.....31
RQCB	Kick-down, pilot operated, balanced piston relief valve	.....32
RQEB	Kick-down, pilot operated, balanced piston relief valve	.....33
RQGB	Kick-down, pilot operated, balanced piston relief valve	.....34
RQIB	Kick-down, pilot operated, balanced piston relief valve	.....35
RQKB	Kick-down, pilot operated, balanced piston relief valve	.....36
RPGD	Air-controlled, pilot operated, balanced piston relief valve	.....37
RPID	Air-controlled, pilot operated, balanced piston relief valve	.....38
RPKD	Air-controlled, pilot operated, balanced piston relief valve	.....39
RBAB	Air-controlled, direct-acting relief valve - pilot capacity	.....40

RBAR	Air-controlled, direct-acting relief valve - pilot capacity	.....41
RVBA	Ventable, pilot operated, balanced piston relief valve	.....42
RVCA	Ventable, pilot operated, balanced piston relief valve	.....43
RVEA	Ventable, pilot operated, balanced piston relief valve	.....44
RVGA	Ventable, pilot operated, balanced piston relief valve	.....45
RVIA	Ventable, pilot operated, balanced piston relief valve	.....46
RVCS	Ventable, pilot operated, balanced poppet relief valve	.....48
RVES	Ventable, pilot operated, balanced poppet relief valve	.....49
RVGS	Ventable, pilot operated, balanced poppet relief valve	.....50
RVIS	Ventable, pilot operated, balanced poppet relief valve	.....51
RVET	Anti Shock, ventable, pilot operated, balanced poppet relief valve	.....52
RVGT	Anti Shock, ventable, pilot operated, balanced poppet relief valve	.....53
RVIT	Anti Shock, ventable, pilot operated, balanced poppet relief valve	.....54
RBAD	Dual, direct-acting relief valve - pilot capacity	.....55
HRDA	Direct-acting relief valve - before check	.....56
HRDB	Direct-acting relief valve - after check	.....57
HVCA	Ventable, pilot operated, balanced piston relief valve - before check	.....58
HVCA8	Ventable, pilot operated, balanced piston relief main stage with integral T-8A control cavity - before check	.....59
RVCD	Ventable, pilot operated, balanced piston relief valve with drain to port	.....60

RVED	Ventable, pilot operated, balanced piston relief valve with drain to port 4	.....61
RVGD	Ventable, pilot operated, balanced piston relief valve with drain to port 4	.....62
RVID	Ventable, pilot operated, balanced piston relief valve with drain to port 4	.....63
RPEC8	Pilot operated, balanced piston relief main stage with integral T-8A control cavity	.....64
RPGC8	Pilot operated, balanced piston relief main stage with integral T-8A control cavity	.....65
RPIC8	Pilot operated, balanced piston relief main stage with integral T-8A control cavity	.....66
RPKC8	Pilot operated, balanced piston relief main stage with integral T-8A control cavity	.....67
RPES8	Pilot operated, balanced poppet relief main stage with integral T-8A control cavity	.....68
RPGS8	Pilot operated, balanced poppet relief main stage with integral T-8A control cavity	.....69
RPIS8	Pilot operated, balanced poppet relief main stage with integral T-8A control cavity	.....70
RPKS8	Pilot operated, balanced poppet relief main stage with integral T-8A control cavity	.....71
RVCD8	Ventable, pilot operated, balanced piston relief main stage with integral T-8A control cavity and drain to port 4	.....72
RVED8	Ventable, pilot operated, balanced piston relief main stage with integral T-8A control cavity and drain to port 4	.....73
RVGD8	Ventable, pilot operated, balanced piston relief main stage with integral T-8A control cavity and drain to port 4	.....74
RVID8	Ventable, pilot operated, balanced piston relief main stage with integral T-8A control cavity and drain to port 4	.....75
RBAP	Electro-proportional relief valve - pilot capacity	.....76
RBAN	Electro-proportional relief valve - pilot capacity, high pressure setting with no command	.....77

Series	Ports	Cavities
Series Z Cartridges 3/8-24 UNF Cartridge Thread 5 mm Valve Hex Size 11 - 14 Nm Valve Installation Torque	2-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	T-162A T-162DP T-163A
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-64A



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.

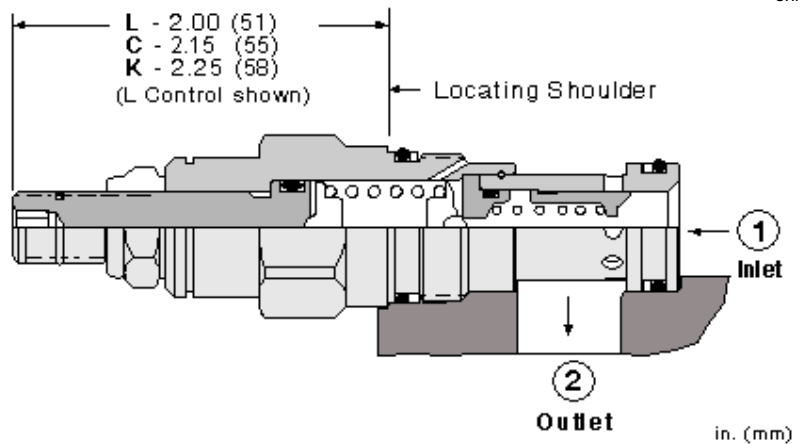
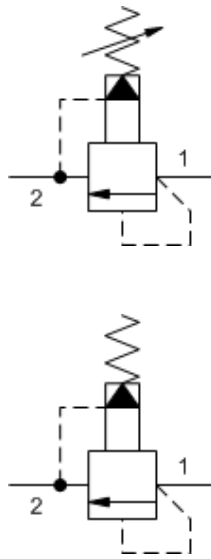
TECHNICAL DATA

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Response Time - Typical	10 ms
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Adjustment - Number of Clockwise Turns to Increase Setting	5
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

CONFIGURATION OPTIONS

Model Code Example: RPCCLAN

CONTROL	(L) ADJUSTMENT RANGE	(A) SEAL MATERIAL	(N) MATERIAL/COATING
L Standard Screw Adjustment	A 75 - 3000 psi (5 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N	Standard Material/Coating
C Tamper Resistant - Factory Set	W 75 - 4500 psi (5 - 315 bar), 1000 psi (70 bar) Standard Setting	E EPDM	/AP Stainless Steel, Passivated
K Handknob	B 75 - 1500 psi (5 - 105 bar), 1000 psi (70 bar) Standard Setting	V Viton	/LH Mild Steel, Zinc-Nickel
	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

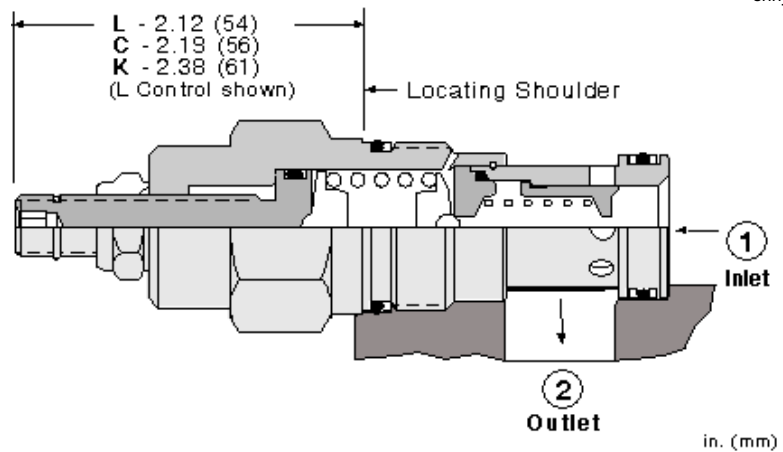
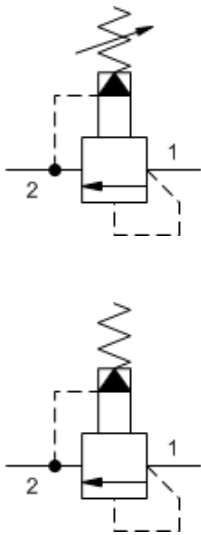
Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Response Time - Typical	10 ms
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	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	A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N	Standard Material/Coating
C Tamper Resistant - Factory Set	W 150 - 4500 psi (10,5 - 315 bar), 1000 psi (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
O Handknob with Panel Mount	C 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting		
W Hex Wrench Adjustment	N 60 - 800 psi (4 - 55 bar), 400 psi (28 bar) Standard Setting		
Y Tri-Grip Handknob	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

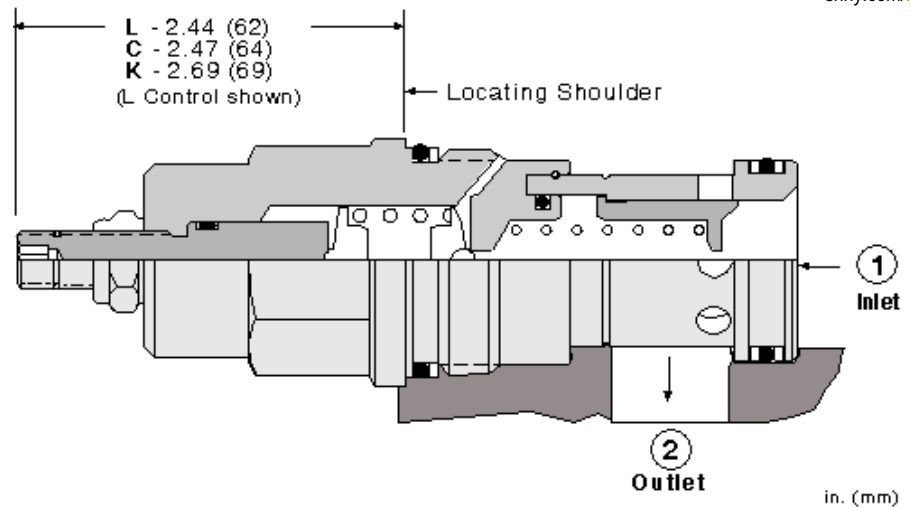
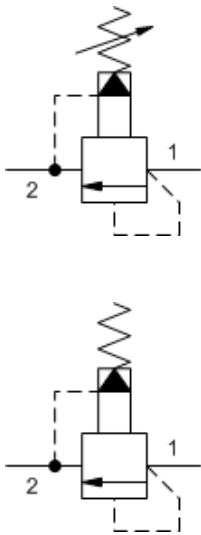
Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Response Time - Typical	10 ms
Maximum Valve Leakage at 110 SUS (24 cSt)	50 cc/min.@70 bar
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	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	A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N	Standard Material/Coating
C Tamper Resistant - Factory Set		E EPDM	/AP Stainless Steel, Passivated
J Capped Screw Adjustment	W 150 - 4500 psi (10.5 - 315 bar), 1000 psi (70 bar) Standard Setting	V Viton	/LH Mild Steel, Zinc-Nickel
K Handknob	B 50 - 1500 psi (3.5 - 105 bar), 1000 psi (70 bar) Standard Setting		
O Handknob with Panel Mount	C 150 - 6000 psi (10.5 - 420 bar), 1000 psi (70 bar) Standard Setting		
W Hex Wrench Adjustment	D 25 - 800 psi (1.7 - 55 bar), 400 psi (28 bar) Standard Setting		
Y Tri-Grip Handknob	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		
	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.

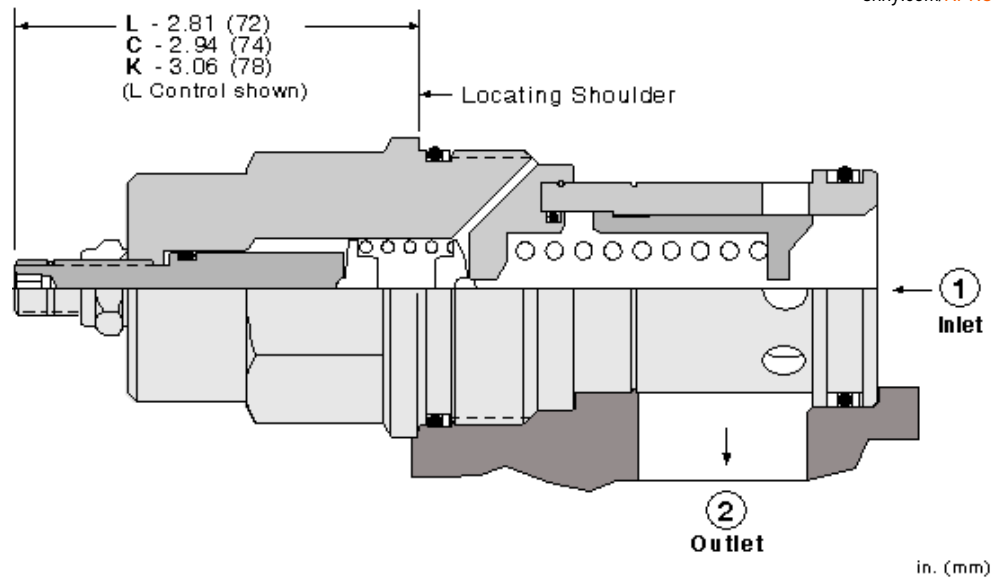
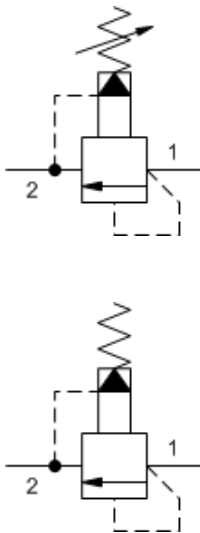
TECHNICAL DATA

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Response Time - Typical	10 ms
Maximum Valve Leakage at 110 SUS (24 cSt)	65 cc/min.@70 bar
Adjustment - Number of Clockwise Turns to Increase 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	A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N	Standard Material/Coating
C Tamper Resistant - Factory Set	W 150 - 4500 psi (10,5 - 315 bar), 1000 psi (70 bar) Standard Setting	E EPDM	/AP Stainless Steel, Passivated
W Hex Wrench Adjustment	B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting	V Viton	/LH Mild Steel, Zinc-Nickel
Y Tri-Grip Handknob	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		
	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

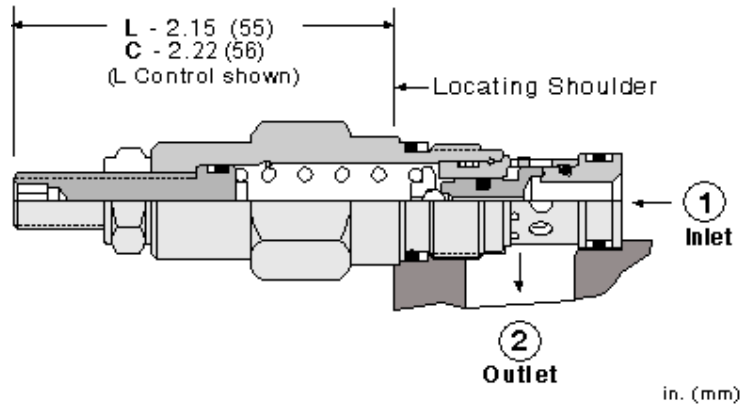
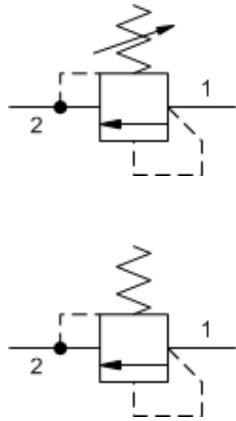
Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Response Time - Typical	10 ms
Maximum Valve Leakage at 110 SUS (24 cSt)	80 cc/min.@70 bar
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	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	A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N	Standard Material/Coating
C Tamper Resistant - Factory Set	W 150 - 4500 psi (10,5 - 315 bar), 1000 psi (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
W Hex Wrench Adjustment	C 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting		
Y Tri-Grip Handknob	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		

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

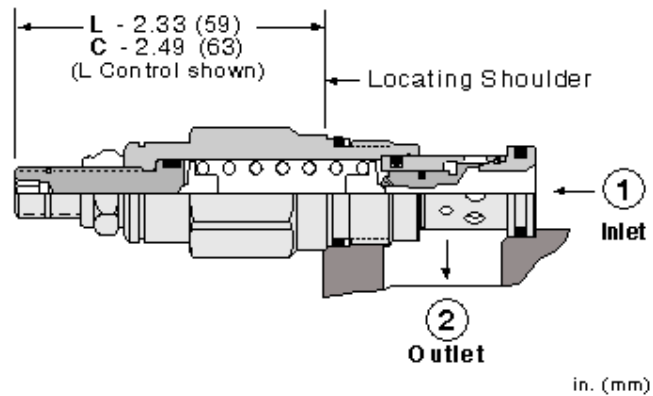
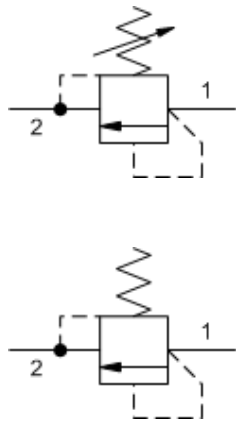
Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Response Time - Typical	2 ms
Maximum Valve Leakage at Reseat	0,7 cc/min.
Reseat	>85% of setting
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	12,7 mm
Locknut Torque	9 - 10 Nm
Seal kit - 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 (70 bar) Standard Setting	N Buna-N	Standard Material/Coating
C Tamper Resistant - Factory Set	W 800 - 4500 psi (55 - 315 bar), 1000 psi (70 bar) Standard Setting	E EPDM	/AP Stainless Steel, Passivated
K Handknob	B 300 - 1500 psi (20 - 105 bar), 1000 psi (70 bar) Standard Setting	V Viton	/LH Mild Steel, Zinc-Nickel
	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 150 - 400 psi (10 - 28 bar), 200 psi (14 bar) Standard Setting		
	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.

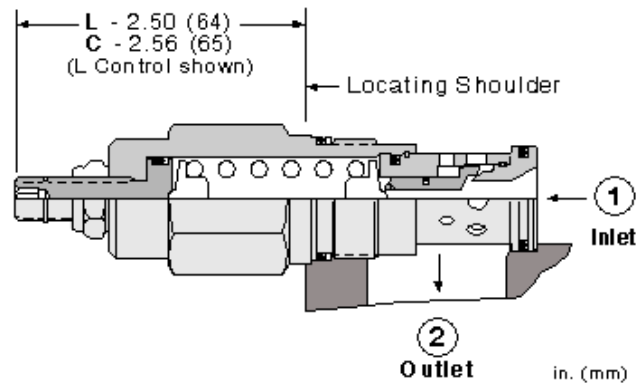
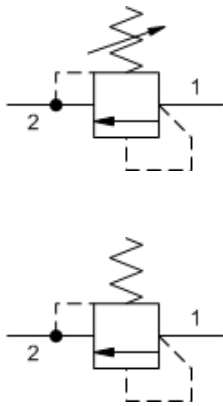
TECHNICAL DATA

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Response Time - Typical	2 ms
Maximum Valve Leakage at Reseat	0,7 cc/min.
Reseat	>90% of setting
Adjustment - Number of Clockwise Turns to Increase 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	A 500 - 3000 psi (35 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N	Standard Material/Coating
C Tamper Resistant - Factory Set	W 800 - 4500 psi (55 - 315 bar), 1000 psi (70 bar) Standard Setting	E EPDM	/AP Stainless Steel, Passivated
Y Tri-Grip Handknob	B 300 - 1500 psi (20 - 105 bar), 1000 psi (70 bar) Standard Setting	V Viton	/LH Mild Steel, Zinc-Nickel
	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		



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

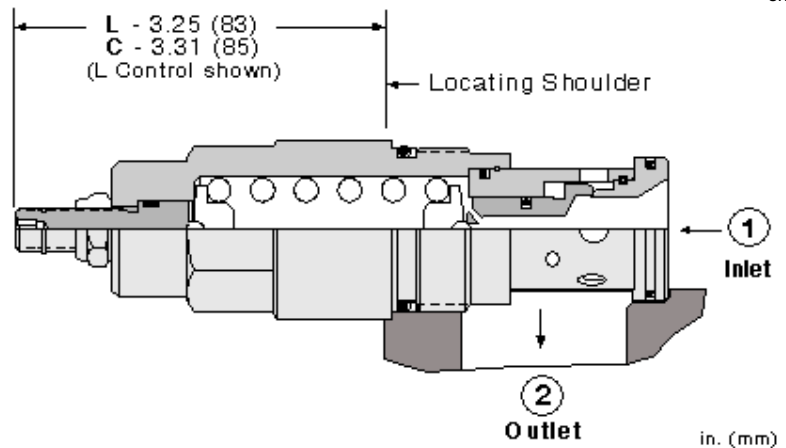
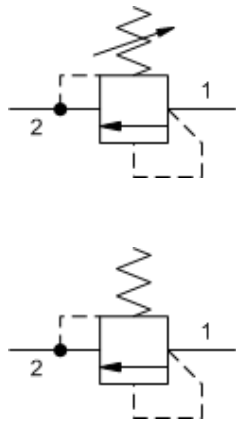
Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Response Time - Typical	2 ms
Maximum Valve Leakage at Reseat	0,7 cc/min.
Reseat	>90% of setting
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990303007
Seal kit - Cartridge	EPDM: 990303014
Seal kit - Cartridge	Polyurethane: 990303002
Seal kit - Cartridge	Viton: 990303006

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

CONFIGURATION OPTIONS

Model Code Example: RDFALAN

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



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

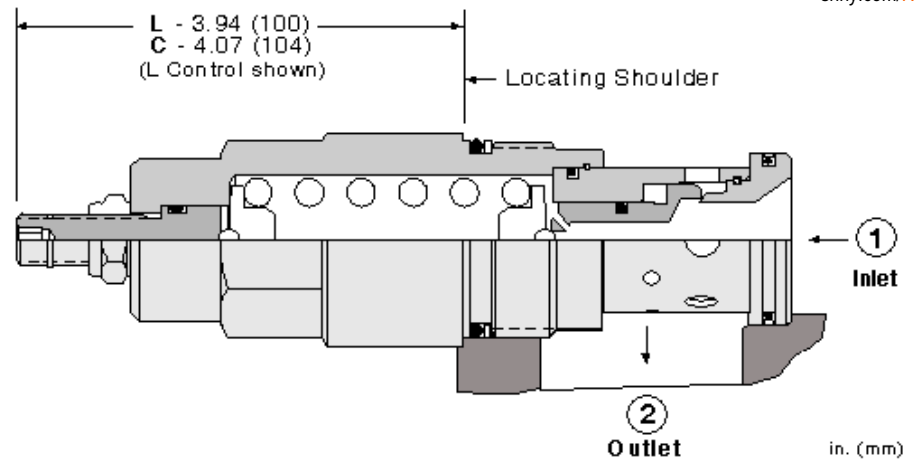
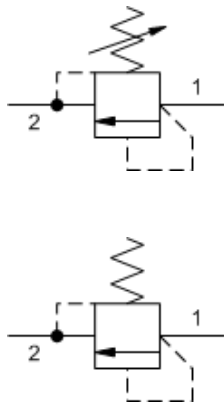
Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Response Time - Typical	2 ms
Maximum Valve Leakage at Reseat	0,7 cc/min.
Reseat	>90% of setting
Adjustment - Number of Clockwise Turns to Increase Setting	6
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990316007
Seal kit - Cartridge	Viton: 990316006

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

CONFIGURATION OPTIONS

Model Code Example: RDHALAN

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



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

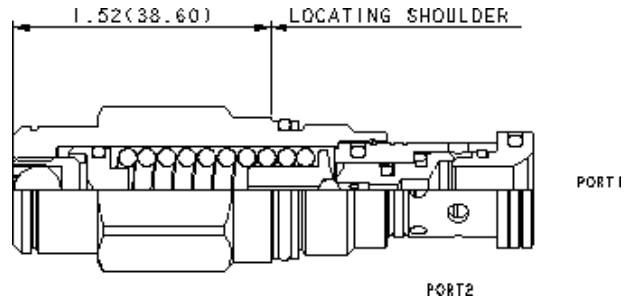
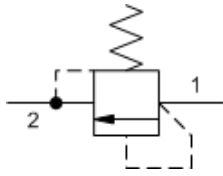
Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Response Time - Typical	2 ms
Maximum Valve Leakage at Reseat	0,7 cc/min.
Reseat	>90% of setting
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990318007
Seal kit - Cartridge	EPDM: 990318014
Seal kit - Cartridge	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	A 500 - 3000 psi (35 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N	Standard Material/Coating
C Tamper Resistant - Factory Set	W 800 - 4500 psi (55 - 315 bar), 1000 psi (70 bar) Standard Setting	E EPDM	/AP Stainless Steel, Passivated
Q Capped and Lockwired	B 300 - 1500 psi (20 - 105 bar), 1000 psi (70 bar) Standard Setting	V Viton	/LH Mild Steel, Zinc-Nickel
	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		



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.

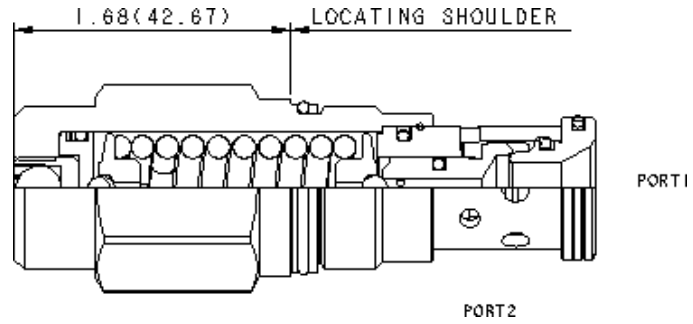
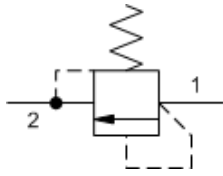
TECHNICAL DATA

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Response Time - Typical	2 ms
Maximum Valve Leakage at Reseat	0,7 cc/min.
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	(N)
A 500 - 3000 psi (35 - 210 bar)		N Buna-N	
C 1000 - 6000 psi (70 - 420 bar)		V Viton	
D 200 - 800 psi (14 - 55 bar)			



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.

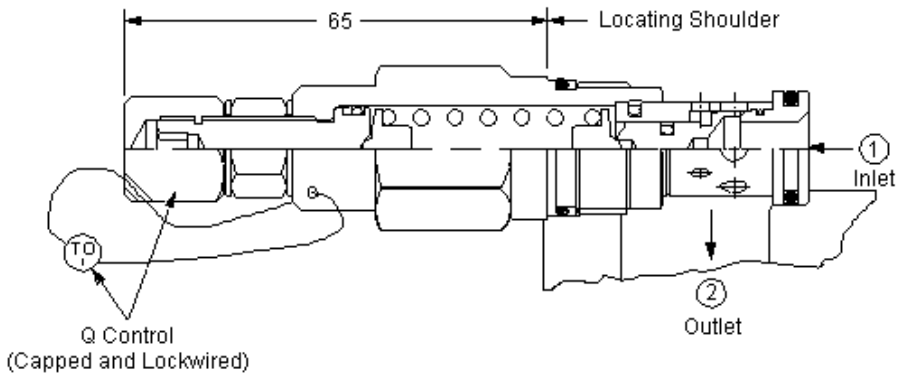
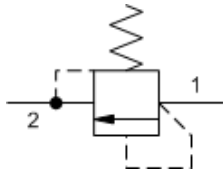
TECHNICAL DATA

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Response Time - Typical	2 ms
Maximum Valve Leakage at Reseat	0,7 cc/min.
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

ADJUSTMENT RANGE	(A)	SEAL MATERIAL	(N)
A 500 - 3000 psi (35 - 210 bar)		N Buna-N	
C 1000 - 6000 psi (70 - 420 bar)		V Viton	
D 200 - 800 psi (14 - 55 bar)			



Dimensions in mm

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) 97/23/EC. 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.

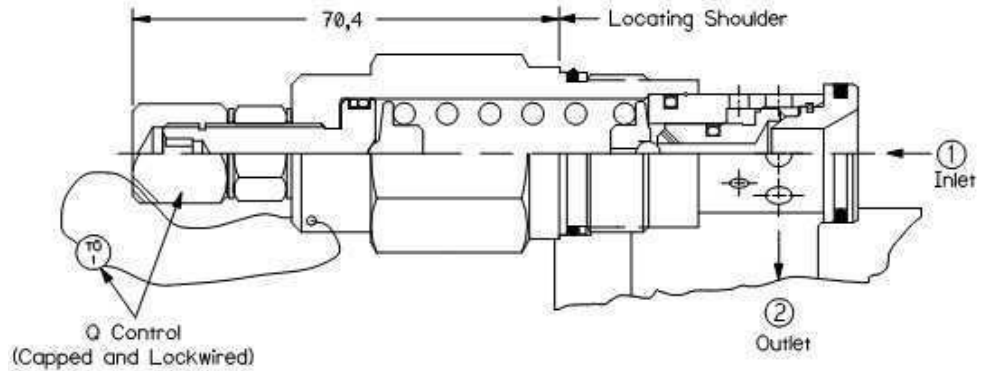
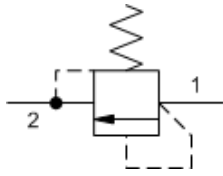
TECHNICAL DATA

Response Time - Typical	2 ms
Maximum Valve Leakage at Reseat	0,7 cc/min.
Reseat	>90% of setting
Adjustment - Number of Clockwise Turns to Increase 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) B 90 - 99 bar (90 - 99 bar) C 315 - 422 bar (315 - 422 bar) W 211 - 314 bar (211 - 314 bar)	N Buna-N V Viton	



Dimensions in mm

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) 97/23/EC. 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.

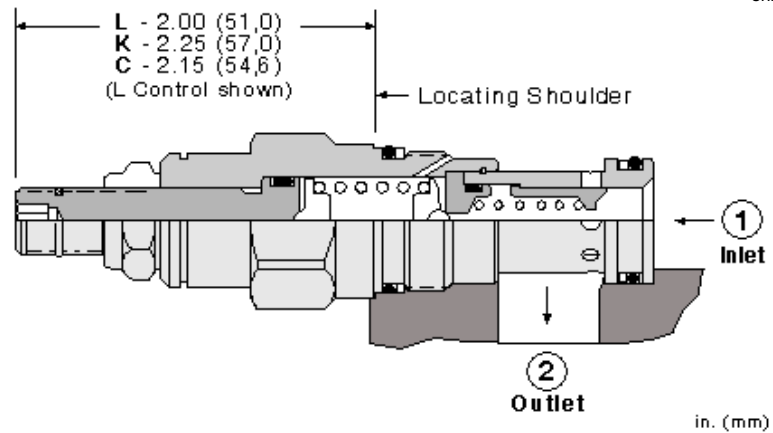
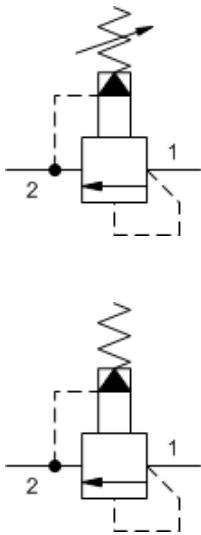
TECHNICAL DATA

Response Time - Typical	2 ms
Maximum Valve Leakage at Reseat	0,7 cc/min.
Reseat	>90% of setting
Adjustment - Number of Clockwise Turns to Increase 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) A 106 - 209 bar (106 - 209 bar) C 210 - 420 bar (210 - 420 bar)	N Buna-N V Viton	



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

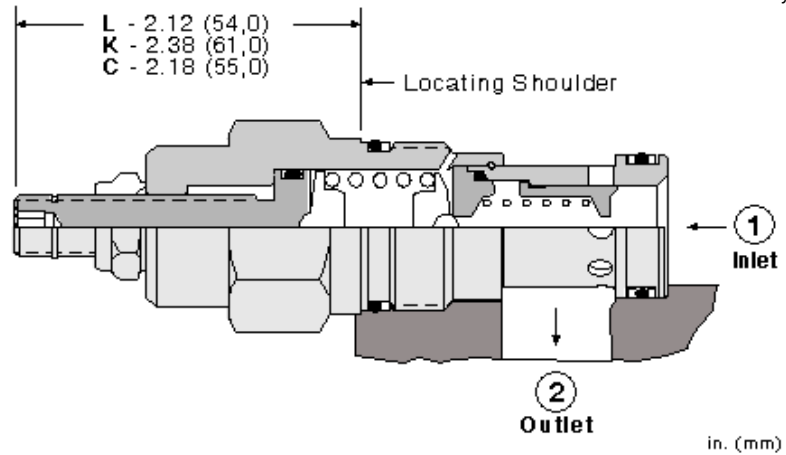
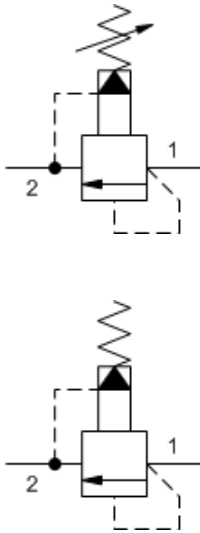
Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Response Time - Typical	2 ms
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990010007
Seal kit - Cartridge	Polyurethane: 990010002
Seal kit - Cartridge	Viton: 990010006

NOTES 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: RPEELAN

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



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

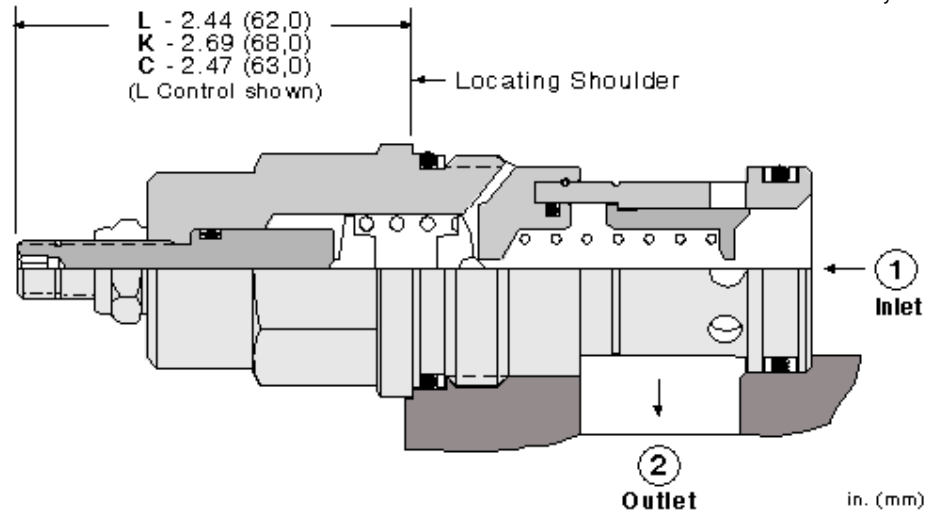
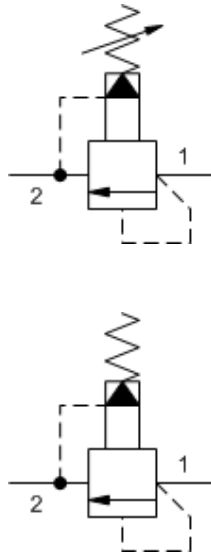
Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Response Time - Typical	2 ms
Maximum Valve Leakage at 110 SUS (24 cSt)	50 cc/min.@70 bar
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	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: RPGE LAN

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



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.

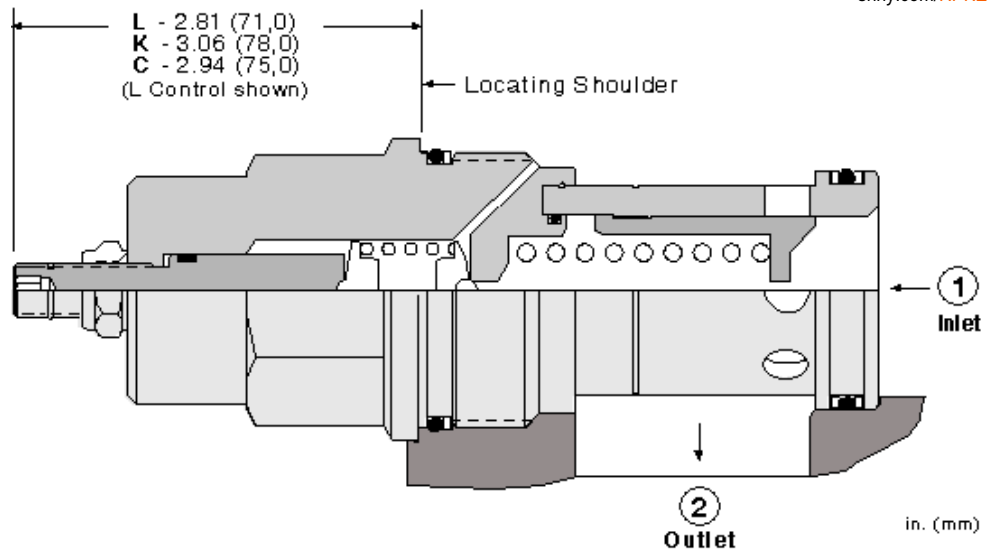
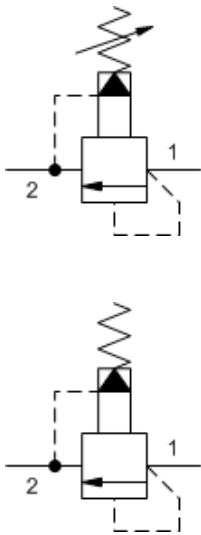
TECHNICAL DATA

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Response Time - Typical	2 ms
Maximum Valve Leakage at 110 SUS (24 cSt)	65 cc/min.@70 bar
Adjustment - Number of Clockwise Turns to Increase 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	A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N	Standard Material/Coating
C Tamper Resistant - Factory Set	B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting	V Viton	/AP Stainless Steel, Passivated
K Handknob	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		



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.

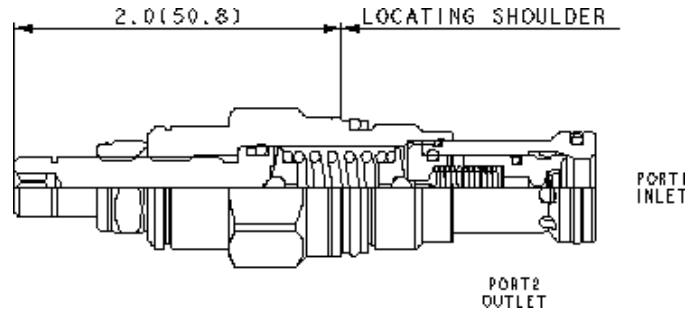
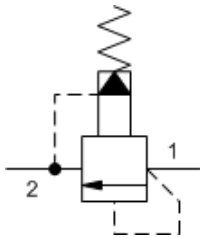
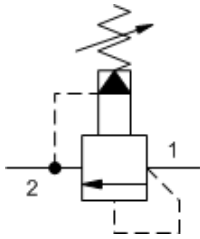
TECHNICAL DATA

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Response Time - Typical	2 ms
Maximum Valve Leakage at 110 SUS (24 cSt)	80 cc/min.@70 bar
Adjustment - Number of Clockwise Turns to Increase 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	A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N	Standard Material/Coating
C Tamper Resistant - Factory Set	B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting	V Viton	/AP Stainless Steel, Passivated
K Handknob	C 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting		/LH Mild Steel, Zinc-Nickel
	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		



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.

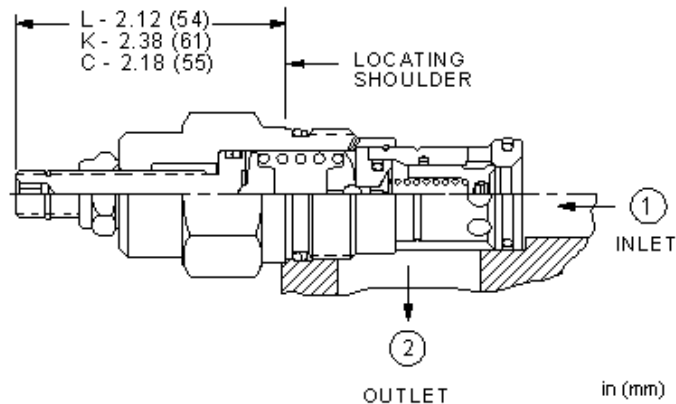
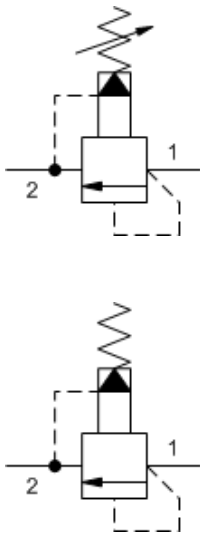
TECHNICAL DATA

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Response Time - Typical	7 ms
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.
Adjustment - Number of Clockwise Turns to Increase 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	A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N	Standard Material/Coating
C Tamper Resistant - Factory Set	B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting	E EPDM	/AP Stainless Steel, Passivated
K Handknob	C 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting	V Viton	/LH Mild Steel, Zinc-Nickel
Y Tri-Grip Handknob	N 60 - 800 psi (4 - 55 bar), 400 psi (28 bar) Standard Setting		
	Q 60 - 400 psi (4 - 28 bar), 200 psi (14 bar) Standard Setting		
	W 100 - 4500 psi (7 - 315 bar), 1000 psi (70 bar) Standard Setting		



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.

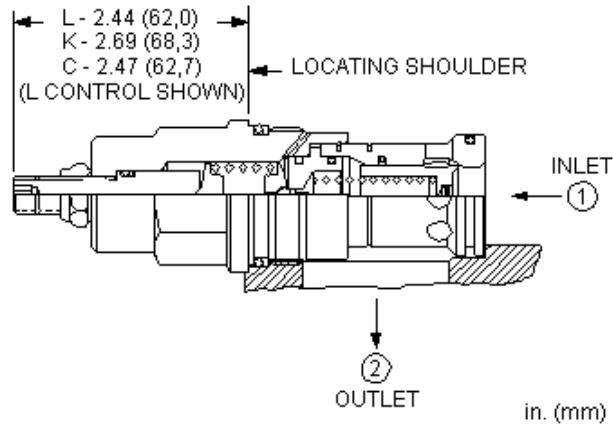
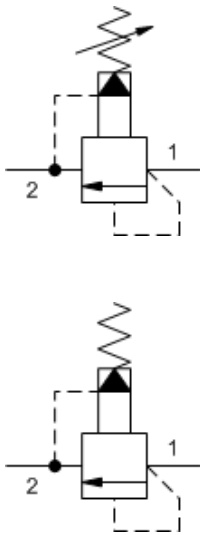
TECHNICAL DATA

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Response Time - Typical	7 ms
Maximum Valve Leakage at Reseat	0,7 cc/min.
Adjustment - Number of Clockwise Turns to Increase 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	A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N	Standard Material/Coating
C Tamper Resistant - Factory Set	B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting	E EPDM	IAP Stainless Steel, Passivated
K Handknob	C 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting	V Viton	
Y Tri-Grip Handknob	N 60 - 800 psi (4 - 55 bar), 400 psi (28 bar) Standard Setting		
	Q 60 - 400 psi (4 - 28 bar), 200 psi (14 bar) Standard Setting		
	W 100 - 4500 psi (7 - 315 bar), 1000 psi (70 bar) Standard Setting		



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.

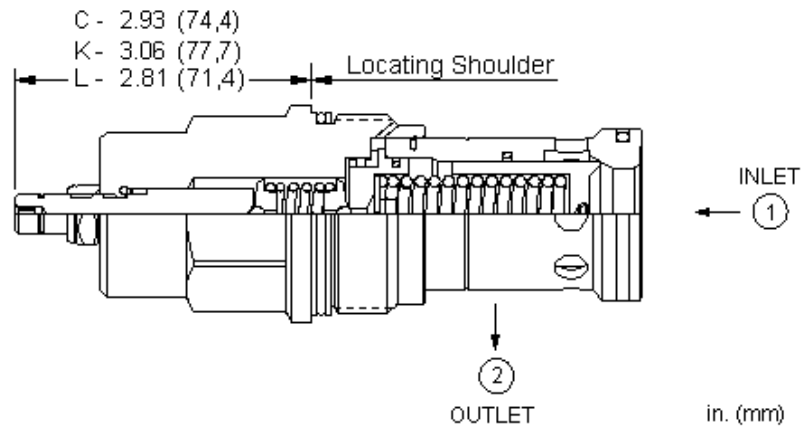
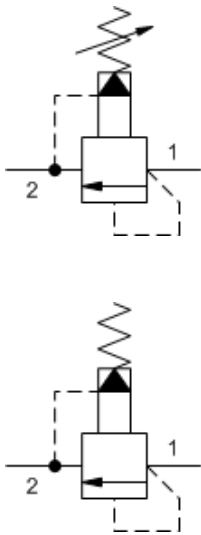
TECHNICAL DATA

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Response Time - Typical	7 ms
Maximum Valve Leakage at Reseat	0,7 cc/min.
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990316007
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	A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N	Standard Material/Coating
C Tamper Resistant - Factory Set	B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting	V Viton	/AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel
K Handknob	C 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting		
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 psi (70 bar) Standard Setting		



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.

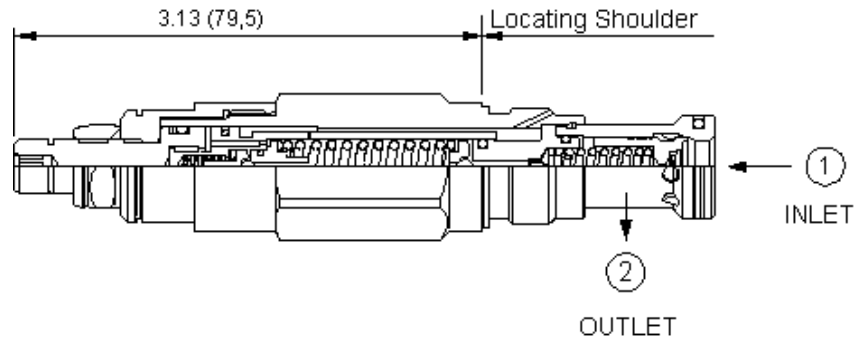
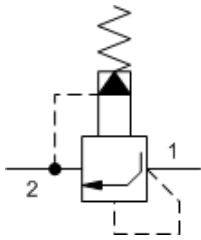
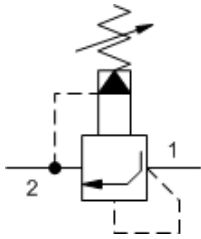
TECHNICAL DATA

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Response Time - Typical	7 ms
Maximum Valve Leakage at Reseat	0,7 cc/min.
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990318007
Seal kit - Cartridge	Polyurethane: 990018002
Seal kit - Cartridge	Viton: 990318006

CONFIGURATION OPTIONS

Model Code Example: RPKSLAN

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



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.

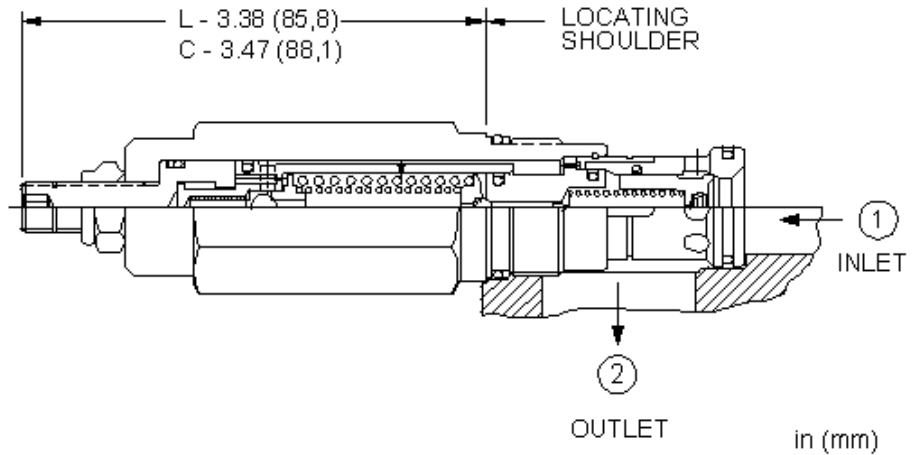
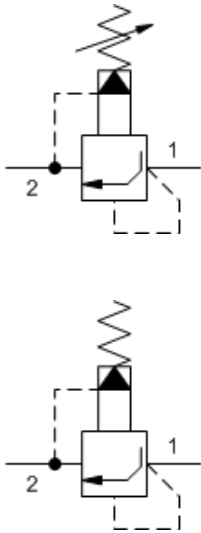
TECHNICAL DATA

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,41 L/min.
Response Time - Typical	2 ms
U.S. Patent #	6,039,070
Pressure Ramp Up Time	100 - 300 ms
Adjustment - Number of Clockwise Turns to Increase Setting	4.5
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: **RPETLWN**

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



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

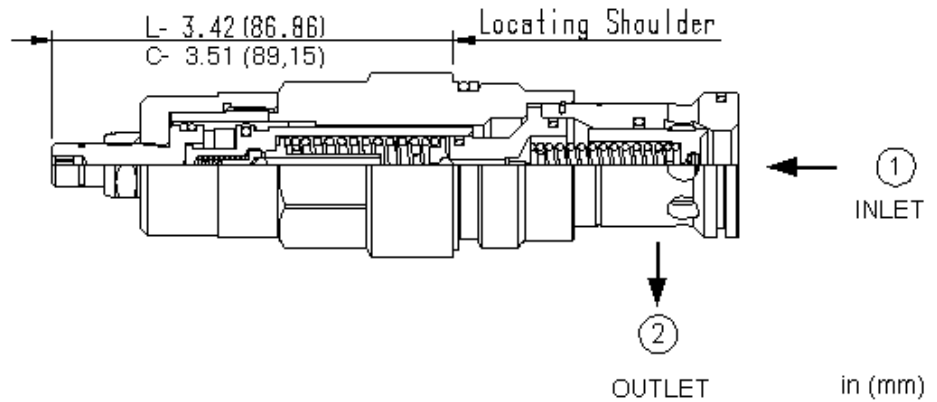
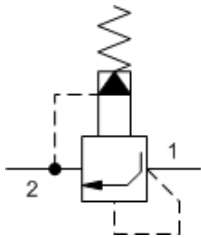
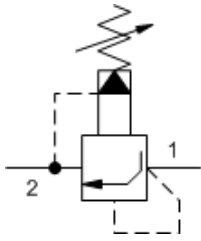
Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,41 L/min.
Response Time - Typical	2 ms
U.S. Patent #	6,039,070
Pressure Ramp Up Time	200 - 400 ms
Adjustment - Number of Clockwise Turns to Increase Setting	4.5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990303007
Seal kit - Cartridge	Polyurethane: 990303002
Seal kit - Cartridge	Viton: 990303006

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

CONFIGURATION OPTIONS

Model Code Example: RPGLAN

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

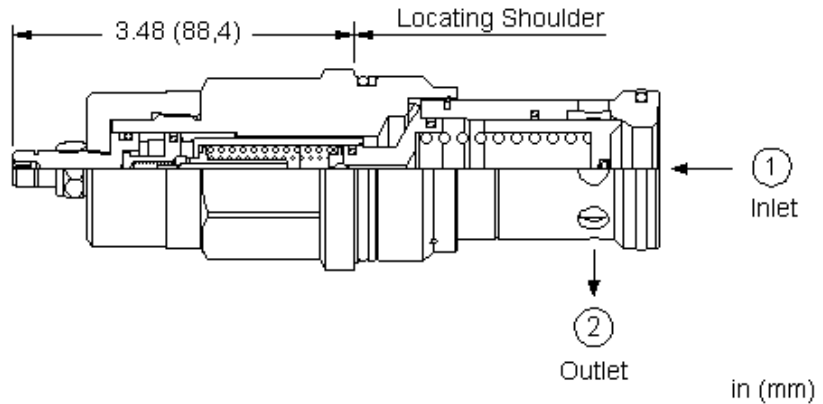
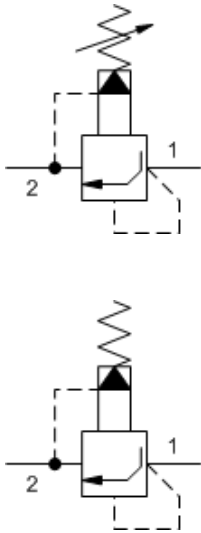
Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,41 L/min.
Response Time - Typical	2 ms
U.S. Patent #	6,039,070
Pressure Ramp Up Time	300 - 500 ms
Adjustment - Number of Clockwise Turns to Increase Setting	4.5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
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) SEAL MATERIAL	(N) MATERIAL/COATING
L Standard Screw Adjustment	A 2000 - 3000 psi (140 - 210 bar), 2000 psi (140 bar) Standard Setting	N Buna-N	Standard Material/Coating
C Tamper Resistant - Factory Set	C 4500 - 6000 psi (315 - 420 bar), 4500 psi (315 bar) Standard Setting	V Viton	/AP Stainless Steel, Passivated
	W 3000 - 4500 psi (210 - 315 bar), 3000 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.

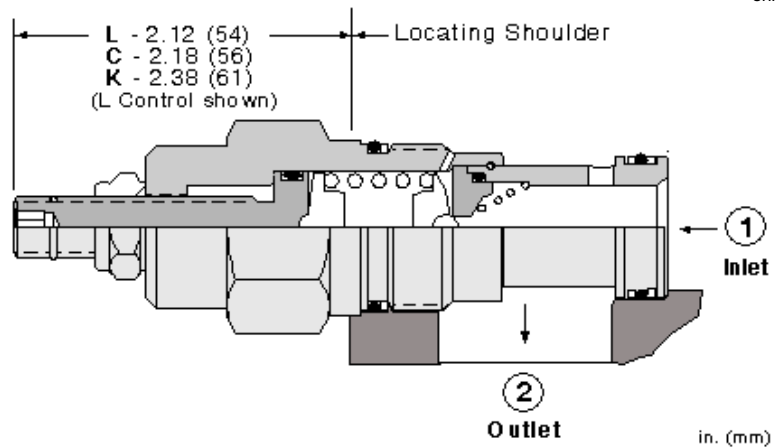
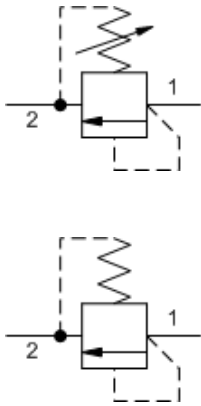
TECHNICAL DATA

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,41 L/min.
Response Time - Typical	2 ms
U.S. Patent #	6,039,070
Pressure Ramp Up Time	400 - 600 ms
Adjustment - Number of Clockwise Turns to Increase Setting	4.5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990318007
Seal kit - Cartridge	Viton: 990318006

CONFIGURATION OPTIONS

Model Code Example: RPKTLAN

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



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

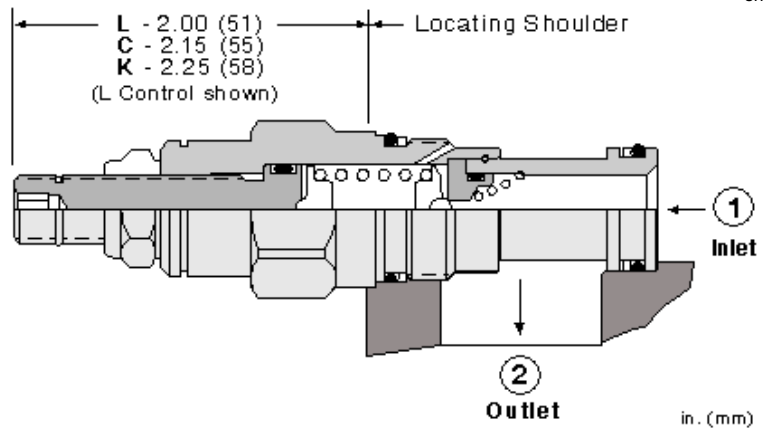
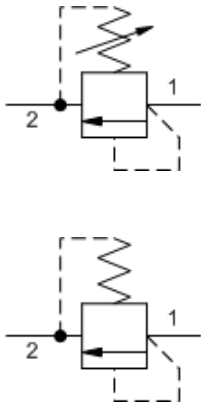
Maximum Operating Pressure	350 bar
Response Time - Typical	2 ms
Maximum Valve Leakage at 110 SUS (24 cSt)	0,3 cc/min.
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990203007
Seal kit - Cartridge	EPDM: 990203014
Seal kit - Cartridge	Polyurethane: 990003002
Seal kit - Cartridge	Viton: 990203006

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

CONFIGURATION OPTIONS

Model Code Example: RBAALAN

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



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

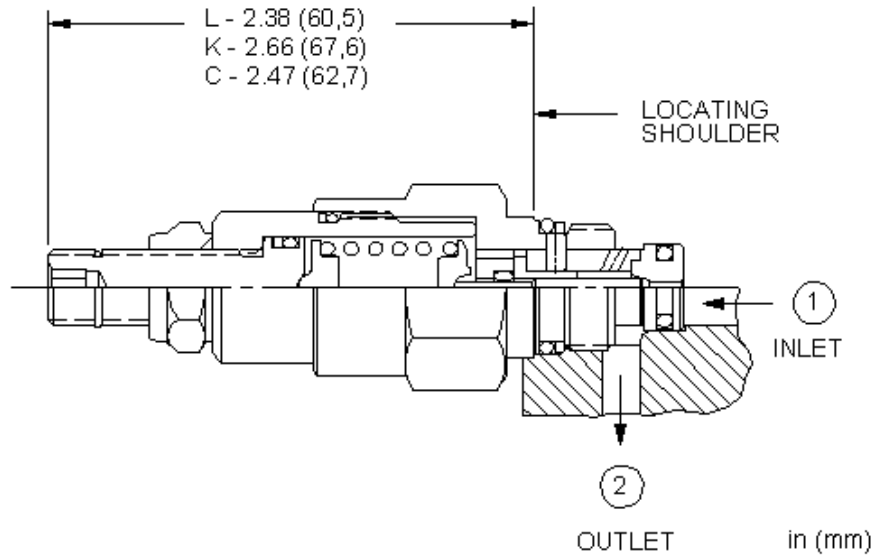
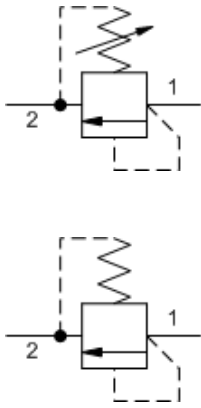
Maximum Operating Pressure	350 bar
Response Time - Typical	2 ms
Maximum Valve Leakage at 110 SUS (24 cSt)	0,3 cc/min.
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990010007
Seal kit - Cartridge	EPDM: 990010014
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: RBACLAN

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



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

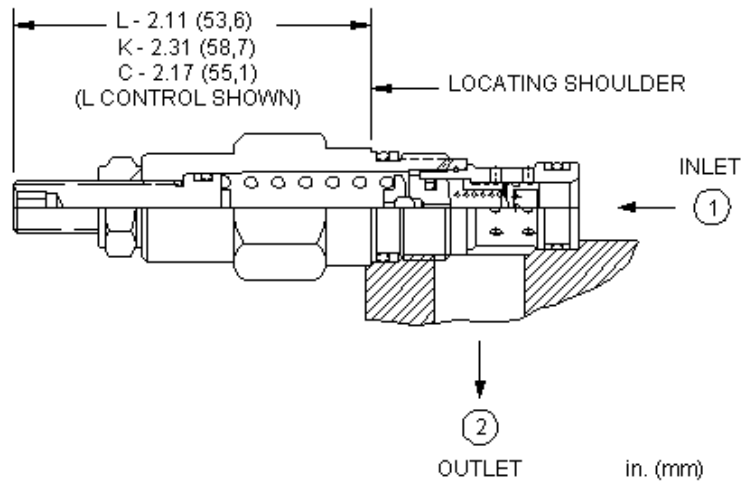
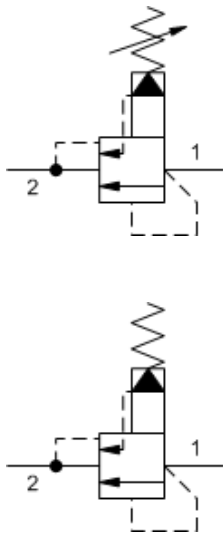
Factory Pressure Settings Established at	30 cc/min.
Maximum Operating Pressure	350 bar
Response Time - Typical	2 ms
Maximum Valve Leakage at 110 SUS (24 cSt)	1 cc/min.
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990608007
Seal kit - Cartridge	EPDM: 990608014
Seal kit -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

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



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 setting, 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

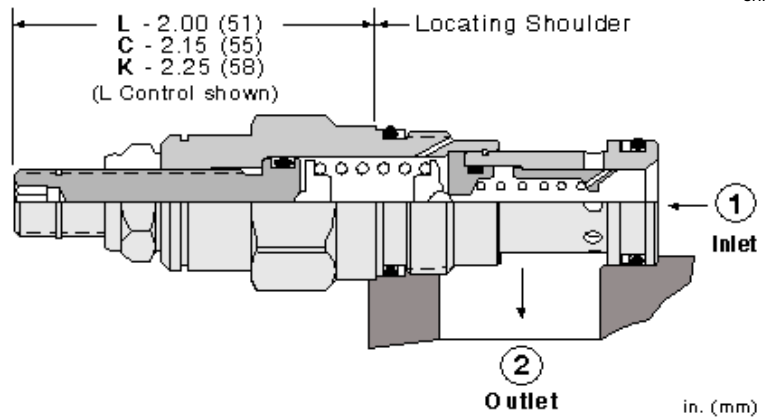
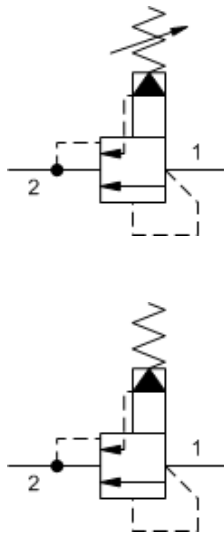
Factory Pressure Settings Established at	Kick down point
Maximum Operating Pressure	350 bar
Response Time - Typical	25 ms
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - 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	A 75 - 3000 psi (5 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N	
C Tamper Resistant - Factory Set	B 75 - 1500 psi (5 - 105 bar), 1000 psi (70 bar) Standard Setting	V Viton	
K Handknob	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		
	W 75 - 4500 psi (5 - 315 bar), 1000 psi (70 bar) Standard Setting		



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 setting, 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

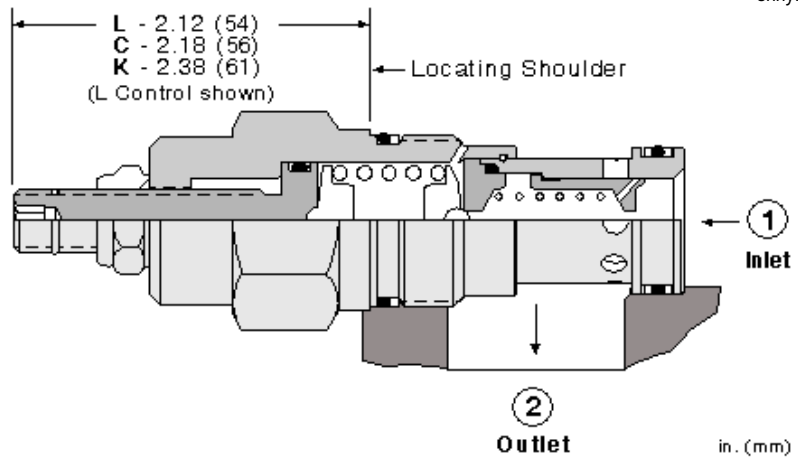
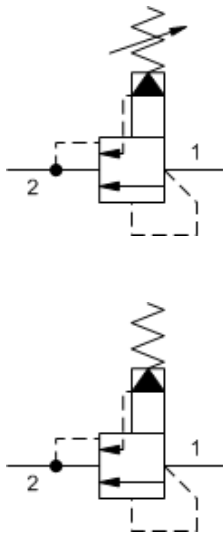
Factory Pressure Settings Established at	Kick down point
Maximum Operating Pressure	350 bar
Response Time - Typical	25 ms
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - 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) SEAL MATERIAL	(N) MATERIAL/COATING
L Standard Screw Adjustment	A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N	Standard Material/Coating
C Tamper Resistant - Factory Set	B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting	V Viton	/AP Stainless Steel, Passivated
K Handknob	C 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting		
O Handknob with Panel Mount	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		



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 setting, 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

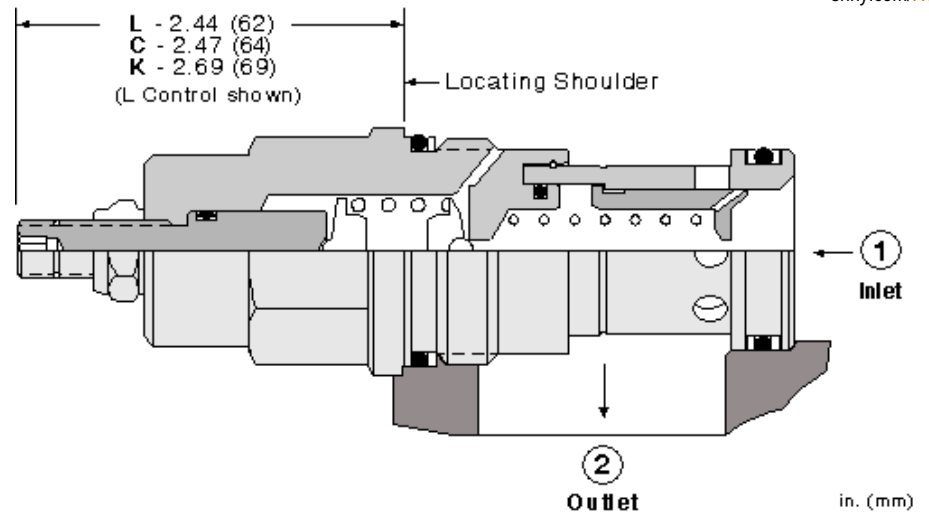
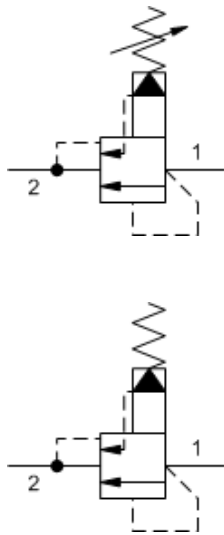
Factory Pressure Settings Established at	Kick down point
Maximum Operating Pressure	350 bar
Response Time - Typical	25 ms
Maximum Valve Leakage at 110 SUS (24 cSt)	50 cc/min.@70 bar
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990203007
Seal kit - Cartridge	Polyurethane: 990003002
Seal kit - Cartridge	Viton: 990203006

- 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: RQGBLAN

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



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 setting, 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

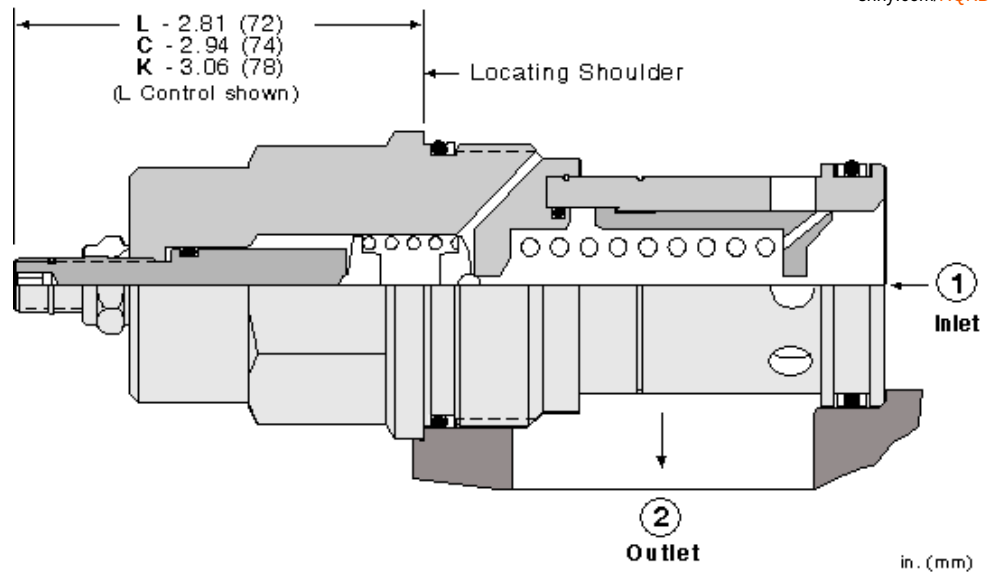
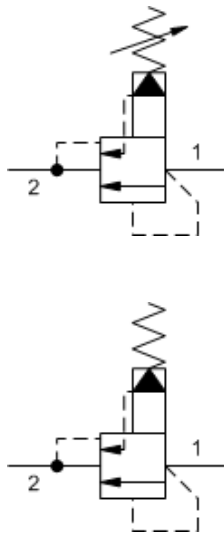
Factory Pressure Settings Established at	Kick down point
Maximum Operating Pressure	350 bar
Response Time - Typical	25 ms
Maximum Valve Leakage at 110 SUS (24 cSt)	65 cc/min.@70 bar
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990016007
Seal kit - Cartridge	Polyurethane: 990016002
Seal kit - Cartridge	Viton: 990016006

NOTES Do not use in load holding applications.

CONFIGURATION OPTIONS

Model Code Example: RQIBLAN

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



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 setting, 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

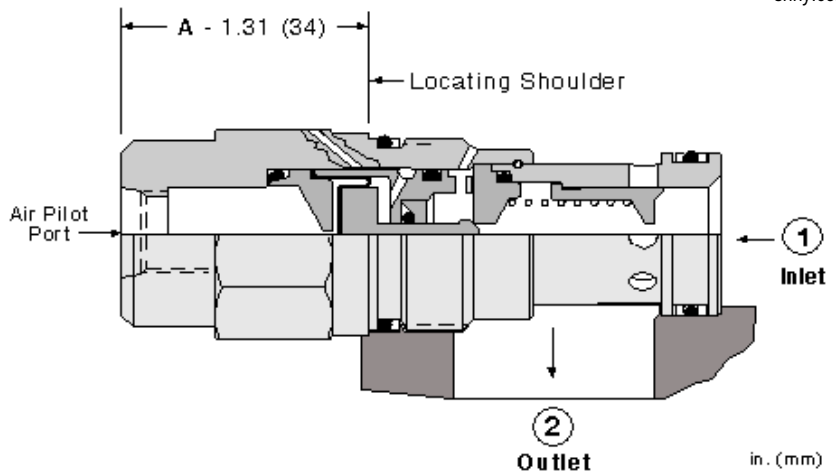
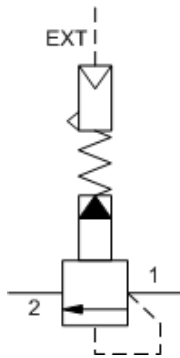
Factory Pressure Settings Established at	Kick down point
Maximum Operating Pressure	350 bar
Response Time - Typical	25 ms
Maximum Valve Leakage at 110 SUS (24 cSt)	80 cc/min.@70 bar
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - 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	A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N	Standard Material/Coating
C Tamper Resistant - Factory Set	B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting	V Viton	IAP Stainless Steel, Passivated
K Handknob	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		



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.

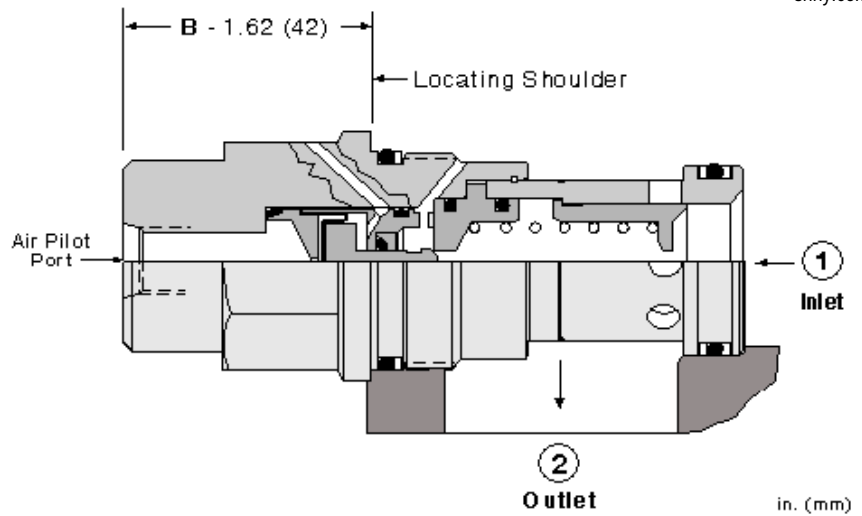
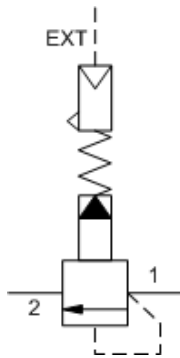
TECHNICAL DATA

Pilot Ratio	20:1
Maximum Operating Pressure	140 bar
Response Time - Typical	10 ms
Maximum Valve Leakage at 110 SUS (24 cSt)	50 cc/min.@70 bar
Maximum Air Pressure	10,5 bar
Seal kit - Cartridge	Buna: 990203007
Seal kit - Cartridge	Polyurethane: 990003002
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	



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.

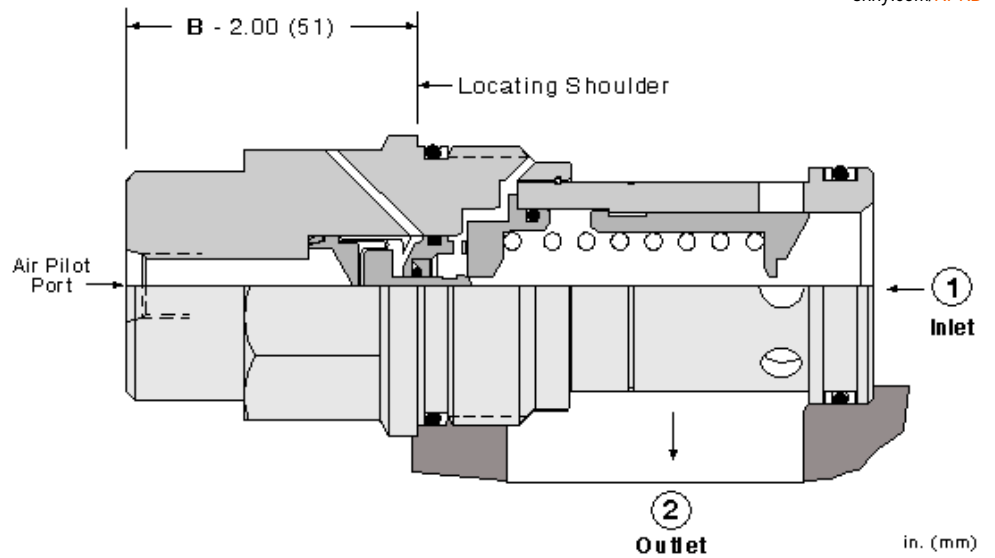
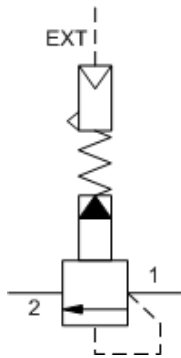
TECHNICAL DATA

Pilot Ratio	20:1
Hysteresis (with dither)	<4%
Maximum Operating Pressure	140 bar
Response Time - Typical	10 ms
Maximum Valve Leakage at 110 SUS (24 cSt)	65 cc/min.@70 bar
Maximum Air Pressure	10,5 bar
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) SEAL MATERIAL	(N)
B External 4- SAE Port	B 50 - 1500 psi (3,5 - 105 bar)	N Buna-N V Viton	



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.

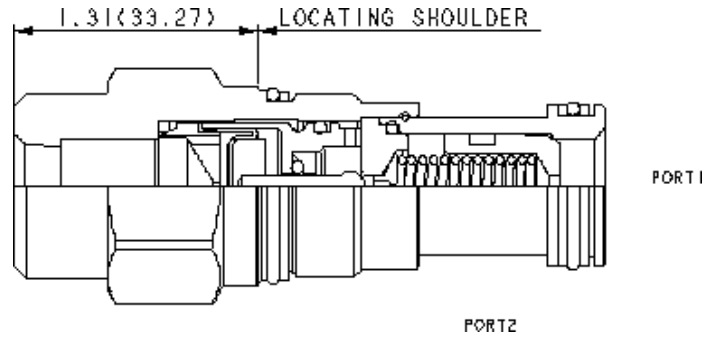
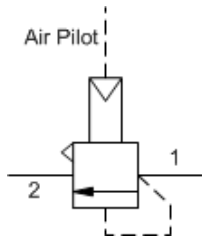
TECHNICAL DATA

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

CONFIGURATION OPTIONS

Model Code Example: RPKDBBN

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



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 compatible 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.

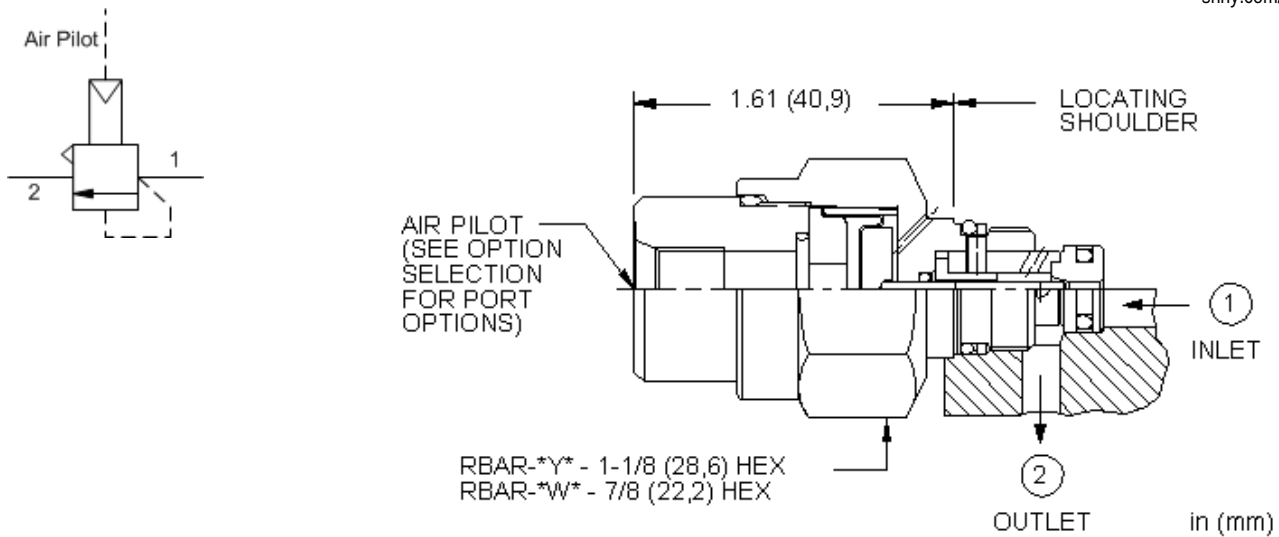
TECHNICAL DATA

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

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	



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.

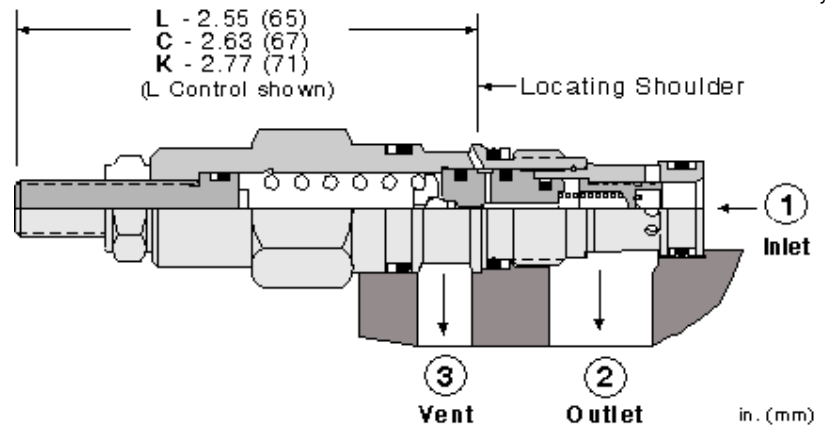
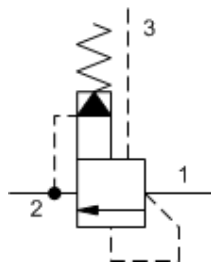
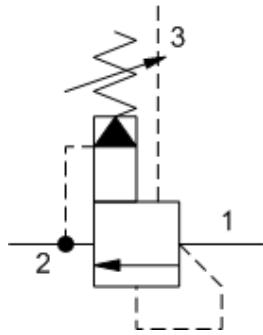
TECHNICAL DATA

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.

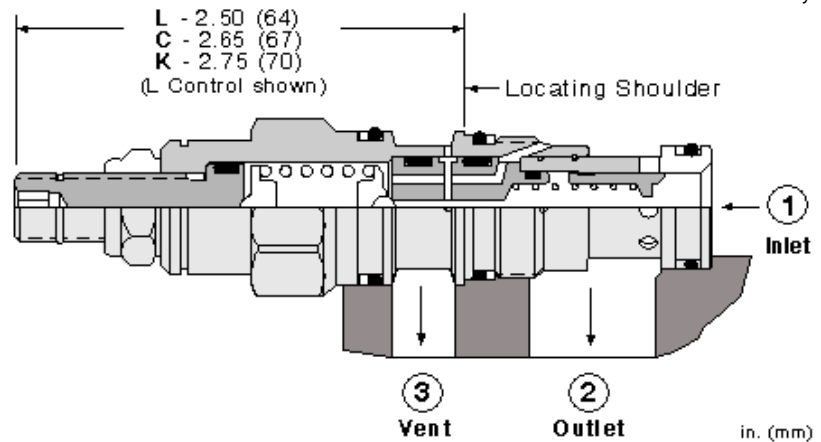
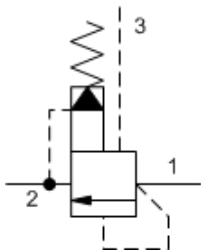
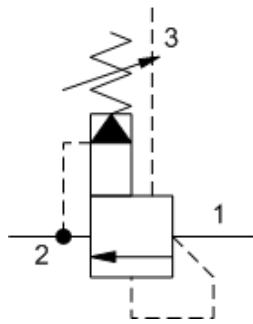
TECHNICAL DATA

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,11 - 0,16 L/min.
Response Time - Typical	10 ms
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990163007
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	A 75 - 3000 psi (5 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N	Standard Material/Coating
C Tamper Resistant - Factory Set	W 75 - 4500 psi (5 - 315 bar), 1000 psi (70 bar) Standard Setting	V Viton	IAP Stainless Steel, Passivated
K Handknob	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		



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

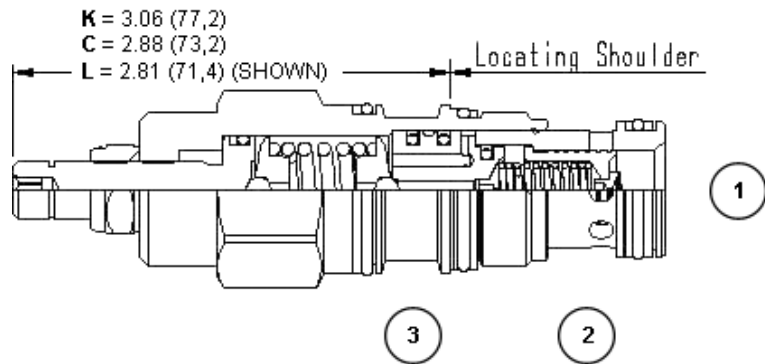
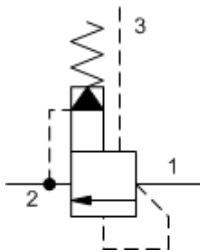
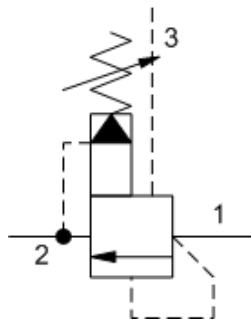
Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,11 - 0,16 L/min.
Response Time - Typical	10 ms
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	15 mm
Locknut 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	A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N	Standard Material/Coating
C Tamper Resistant - Factory Set	W 150 - 4500 psi (10,5 - 315 bar), 1000 psi (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
O Handknob with Panel Mount	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		



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

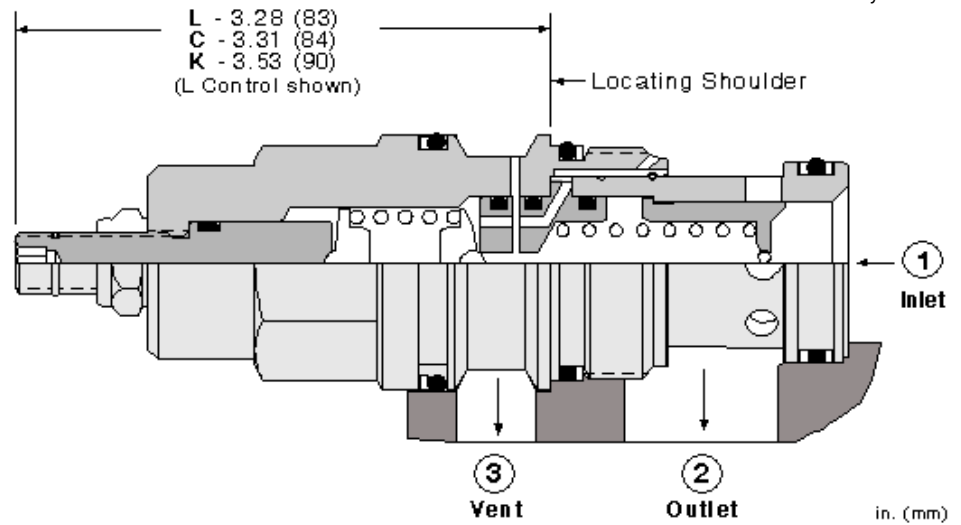
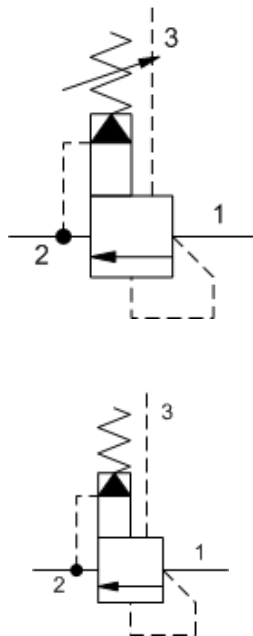
Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,25 L/min.
Response Time - Typical	10 ms
Maximum Valve Leakage at 110 SUS (24 cSt)	50 cc/min.@70 bar
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	15 mm
Locknut 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

CONTROL	(L) ADJUSTMENT RANGE	(A) SEAL MATERIAL	(N) MATERIAL/COATING
L Standard Screw Adjustment	A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N	Standard Material/Coating
C Tamper Resistant - Factory Set	W 150 - 4500 psi (10,5 - 315 bar), 1000 psi (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	
O Handknob with Panel Mount	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		



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.

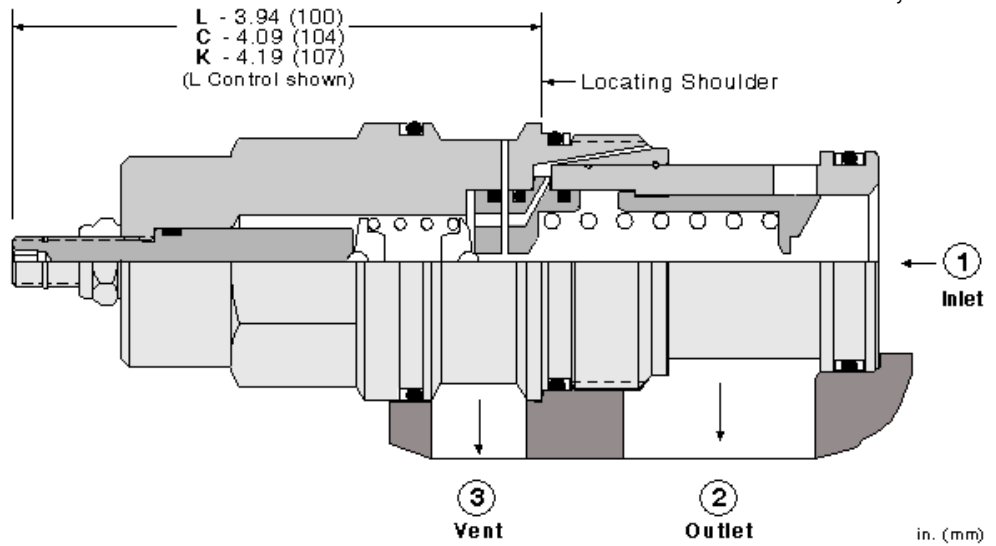
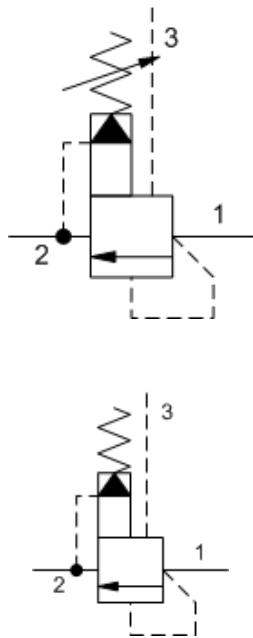
TECHNICAL DATA

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,25 - 0,33 L/min.
Response Time - Typical	10 ms
Maximum Valve Leakage at 110 SUS (24 cSt)	65 cc/min.@70 bar
Adjustment - Number of Clockwise Turns to Increase 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	A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N	Standard Material/Coating
C Tamper Resistant - Factory Set	W 150 - 4500 psi (10,5 - 315 bar), 1000 psi (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 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		



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

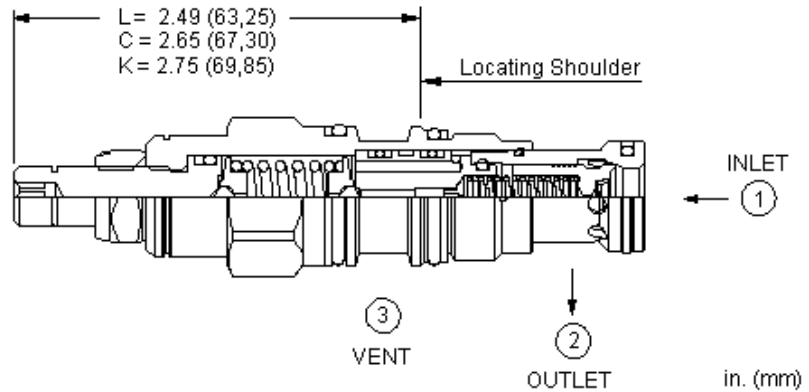
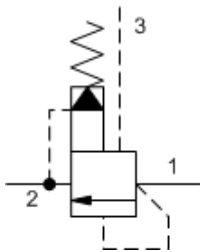
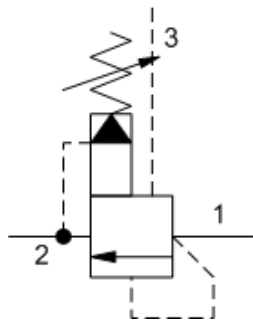
Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,25 - 0,33 L/min.
Response Time - Typical	10 ms
Maximum Valve Leakage at 110 SUS (24 cSt)	80 cc/min.@70 bar
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	EPDM: 990019014
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

Model Code Example: RVIALAN

CONTROL	(L) ADJUSTMENT RANGE	(A) SEAL MATERIAL	(N) MATERIAL/COATING
L Standard Screw Adjustment	A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N	Standard Material/Coating
C Tamper Resistant - Factory Set	W 150 - 4500 psi (10,5 - 315 bar), 1000 psi (70 bar) Standard Setting	E EPDM	IAP Stainless Steel, Passivated
K Handknob	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	V Viton	

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.

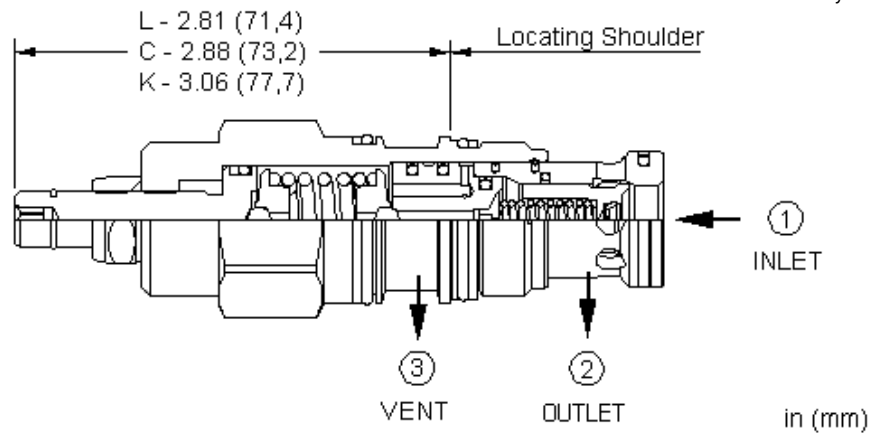
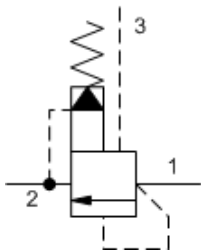
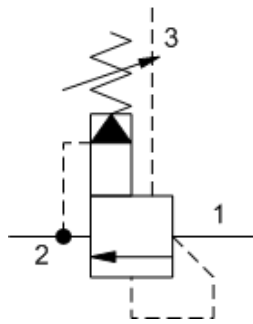
TECHNICAL DATA

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,11 - 0,16 L/min.
Response Time - Typical	2 ms
Maximum Valve Leakage at Reseat	0,7 cc/min.
Adjustment - Number of Clockwise Turns to Increase 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) ADJUSTMENT RANGE	(A) SEAL MATERIAL	(N) MATERIAL/COATING
L Standard Screw Adjustment	A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N	Standard Material/Coating
C Tamper Resistant - Factory Set	B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting	E EPDM	/LH Mild Steel, Zinc-Nickel
K Handknob	C 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting	V Viton	
	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		



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.

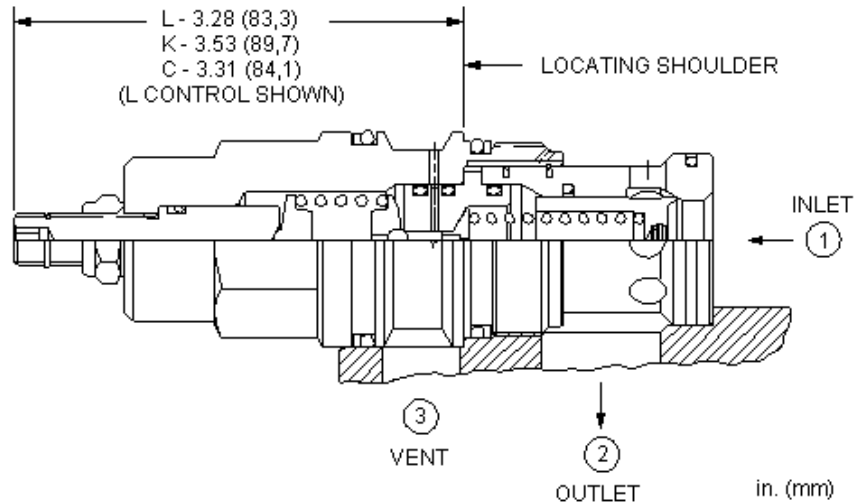
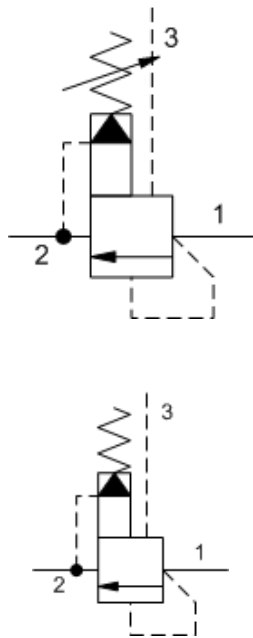
TECHNICAL DATA

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,25 - 0,33 L/min.
Response Time - Typical	2 ms
Maximum Valve Leakage at Reseat	0,7 cc/min.
Adjustment - Number of Clockwise Turns to Increase 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

Model Code Example: RVESLAN

CONTROL	(L) ADJUSTMENT RANGE	(A) SEAL MATERIAL	(N) MATERIAL/COATING
L Standard Screw Adjustment	A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N	Standard Material/Coating
C Tamper Resistant - Factory Set	B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting	V Viton	IAP Stainless Steel, Passivated
K Handknob	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		
	W 150 - 4500 psi (10,5 - 315 bar), 1000 psi (70 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.

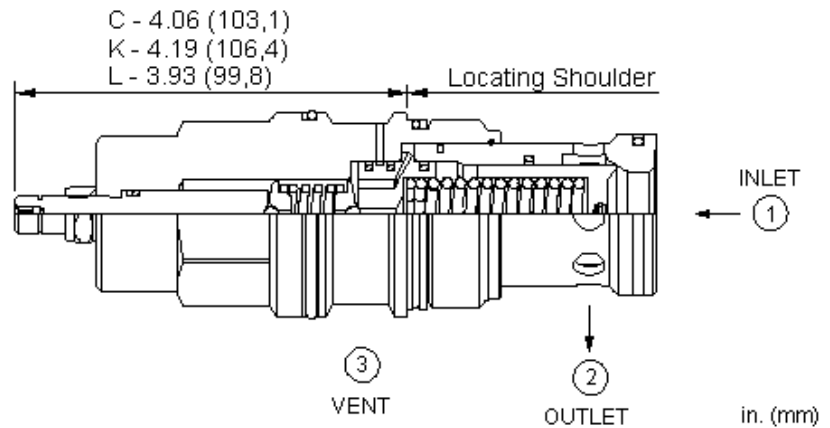
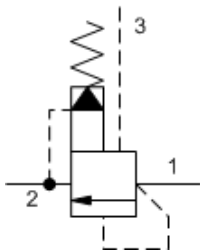
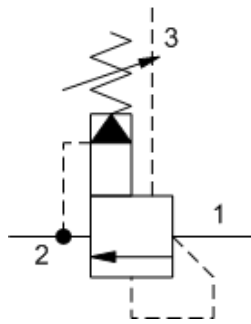
TECHNICAL DATA

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,25 - 0,33 L/min.
Response Time - Typical	2 ms
Maximum Valve Leakage at Reseat	0,7 cc/min.
Adjustment - Number of Clockwise Turns to Increase 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	(L) ADJUSTMENT RANGE	(A) SEAL MATERIAL	(N) MATERIAL/COATING
L Standard Screw Adjustment	A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N	Standard Material/Coating
C Tamper Resistant - Factory Set	B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting	E EPDM	/AP Stainless Steel, Passivated
K Handknob	C 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting	V Viton	
	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		



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.

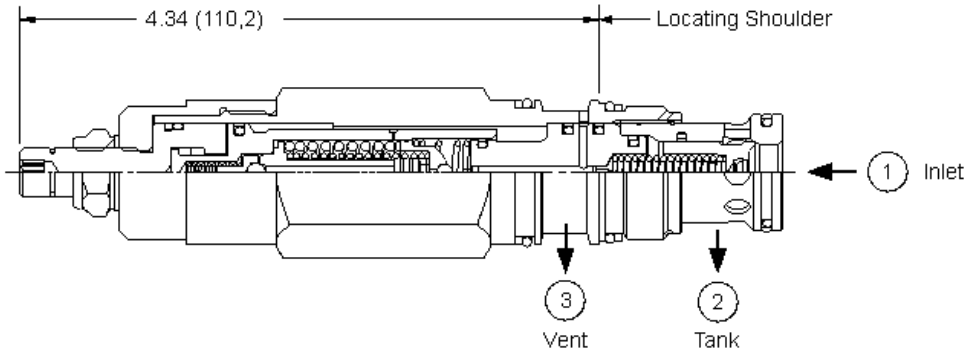
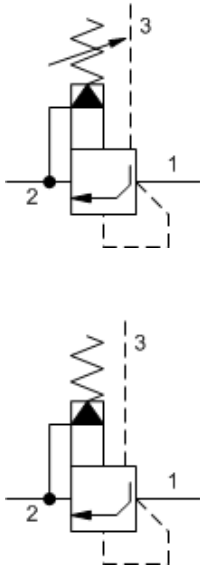
TECHNICAL DATA

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,25 - 0,33 L/min.
Response Time - Typical	2 ms
Maximum Valve Leakage at Reseat	0,7 cc/min.
Adjustment - Number of Clockwise Turns to Increase 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: RVISLAN

CONTROL	(L) ADJUSTMENT RANGE	(A) SEAL MATERIAL	(N) MATERIAL/COATING
L Standard Screw Adjustment	A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N	Standard Material/Coating
C Tamper Resistant - Factory Set	B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting	V Viton	IAP Stainless Steel, Passivated
K Handknob	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		
	W 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

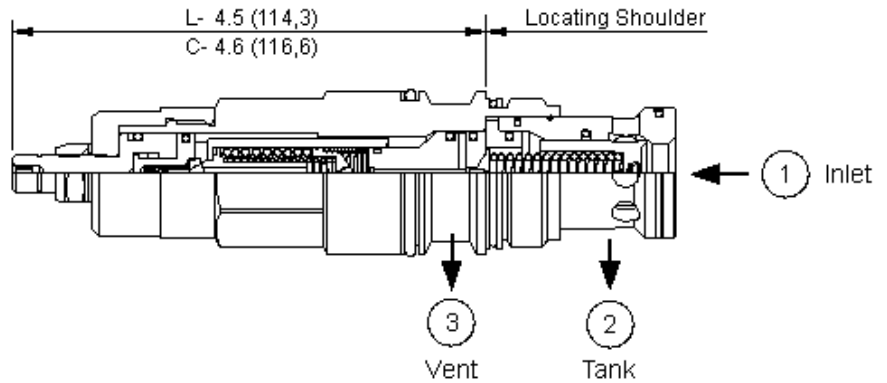
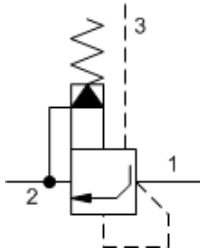
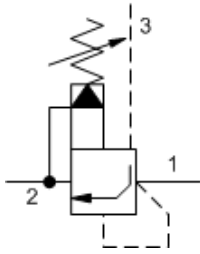
Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,41 L/min.
Response Time - Typical	2 ms
U.S. Patent #	6,039,070
Pressure Ramp Up Time	200 - 400 ms
Adjustment - Number of Clockwise Turns to Increase Setting	4.5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990402007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990402006

NOTES Patents are pending for this product.

CONFIGURATION OPTIONS

Model Code Example: RVETLAN

CONTROL	(L) ADJUSTMENT RANGE	(A) SEAL MATERIAL	(N)
L Standard Screw Adjustment	A 500 - 3000 psi (35 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N	
C Tamper Resistant - Factory Set	B 500 - 1500 psi (35 - 105 bar), 1000 psi (70 bar) Standard Setting	V Viton	
	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

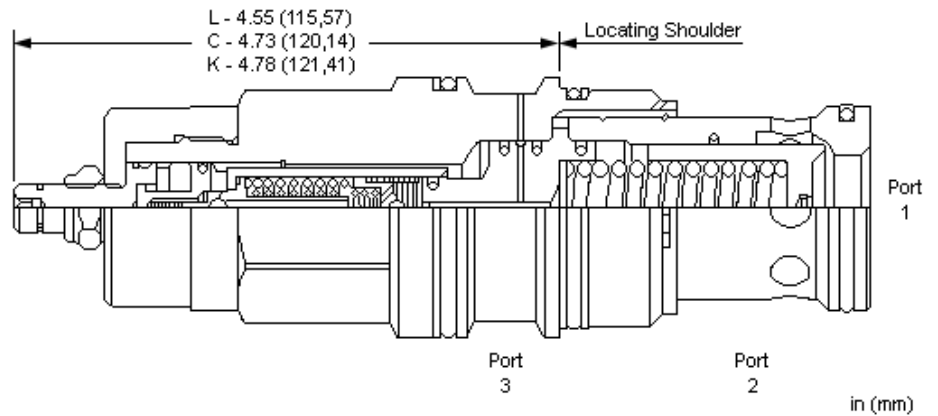
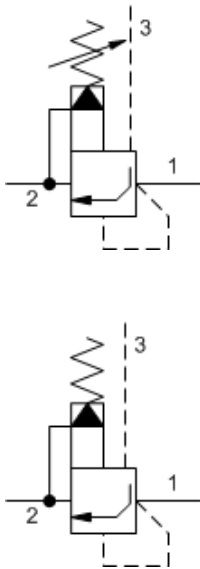
Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,25 - 0,33 L/min.
Response Time - Typical	2 ms
U.S. Patent #	6,039,070
Pressure Ramp Up Time	300 - 500 ms
Adjustment - Number of Clockwise Turns to Increase Setting	4.5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990217007
Seal kit - Cartridge	Polyurethane: 990217002
Seal kit - Cartridge	Viton: 990217006

NOTES Patents are pending for this product.

CONFIGURATION OPTIONS

Model Code Example: RVGTLAN

CONTROL	(L) ADJUSTMENT RANGE	(A) SEAL MATERIAL	(N)
L Standard Screw Adjustment	A 500 - 3000 psi (35 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N	
C Tamper Resistant - Factory Set	B 500 - 1500 psi (35 - 105 bar), 1000 psi (70 bar) Standard Setting	V Viton	
	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.

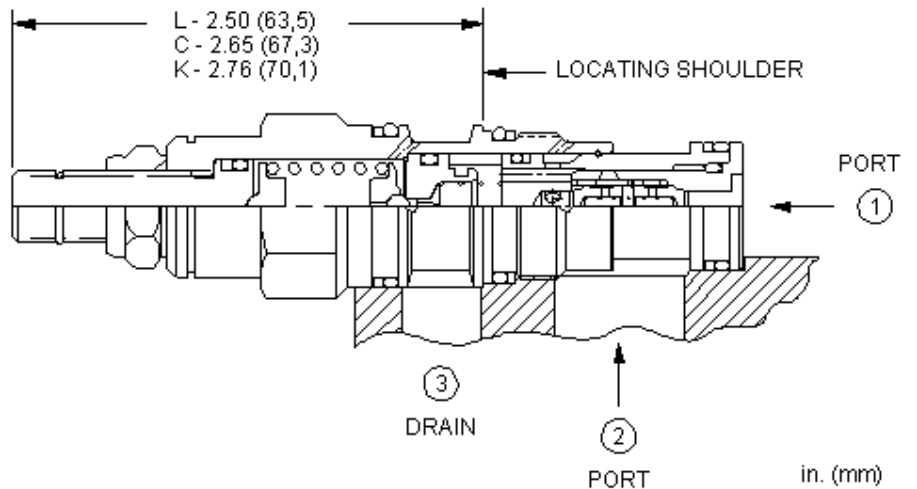
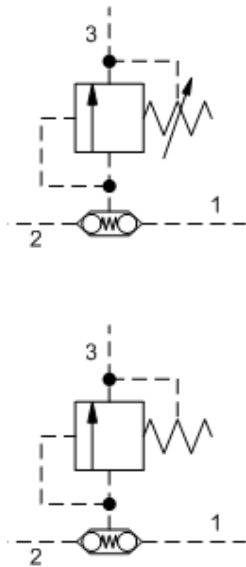
TECHNICAL DATA

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,25 - 0,33 L/min.
Response Time - Typical	2 ms
Pressure Ramp Up Time	400 - 850 ms
Adjustment - Number of Clockwise Turns to Increase 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

CONTROL	(L) ADJUSTMENT RANGE	(A) SEAL MATERIAL	(N)
L Standard Screw Adjustment	A 500 - 3000 psi (35 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N	
C Tamper Resistant - Factory Set	C 1000 - 6000 psi (70 - 420 bar), 1000 psi (70 bar) Standard Setting	V Viton	
K Handknob	W 1000 - 4500 psi (70 - 315 bar), 1000 psi (70 bar) Standard Setting		



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

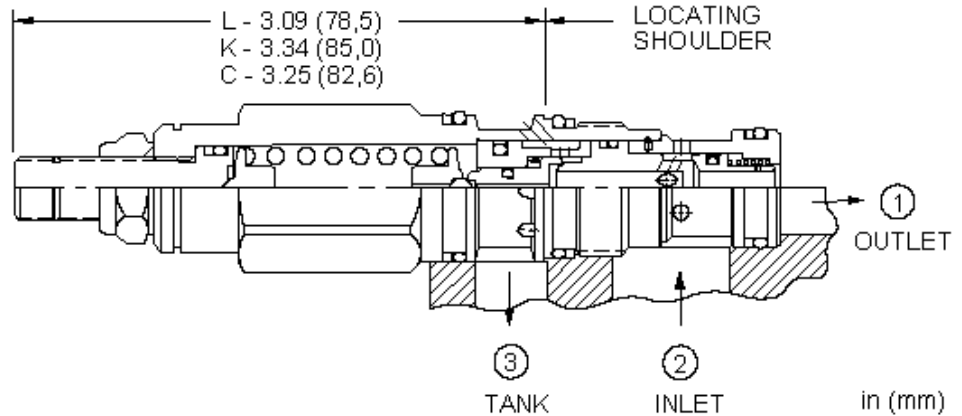
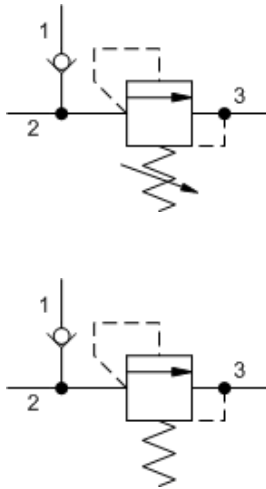
Response Time - Typical	2 ms
Maximum Valve Leakage at 110 SUS (24 cSt)	0,3 cc/min.
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

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: RBADLAN

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



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.

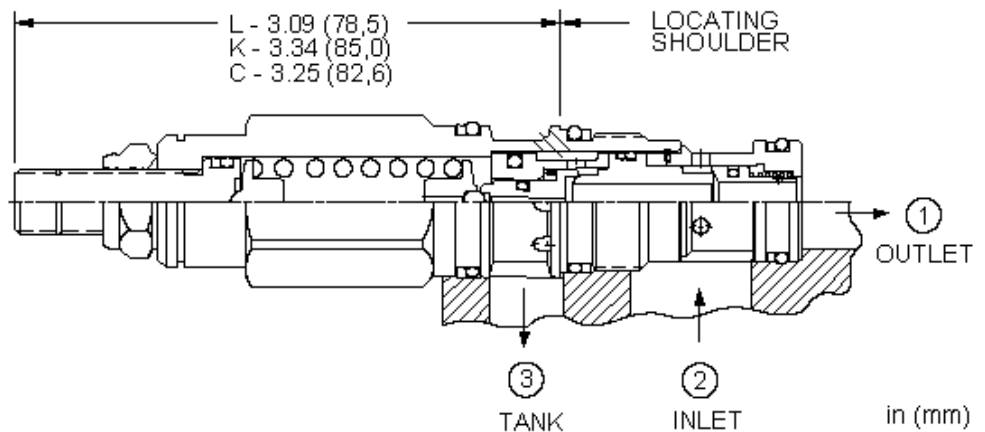
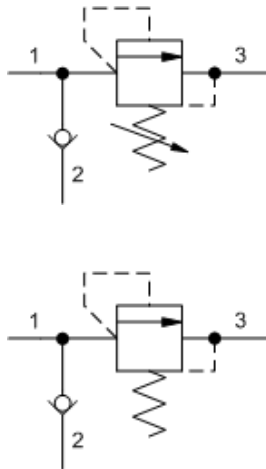
TECHNICAL DATA

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Response Time - Typical	10 ms
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Adjustment - Number of Clockwise Turns to Increase 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

CONTROL	(L) ADJUSTMENT RANGE	(A) SEAL MATERIAL	(N)
L Standard Screw Adjustment	A 500 - 3000 psi (35 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N	
C Tamper Resistant - Factory Set	D 200 - 700 psi (14 - 50 bar), 400 psi (28 bar) Standard Setting	V Viton	
K Handknob	W 800 - 4500 psi (55 - 315 bar), 1000 psi (70 bar) Standard Setting		



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 (port 1). 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.

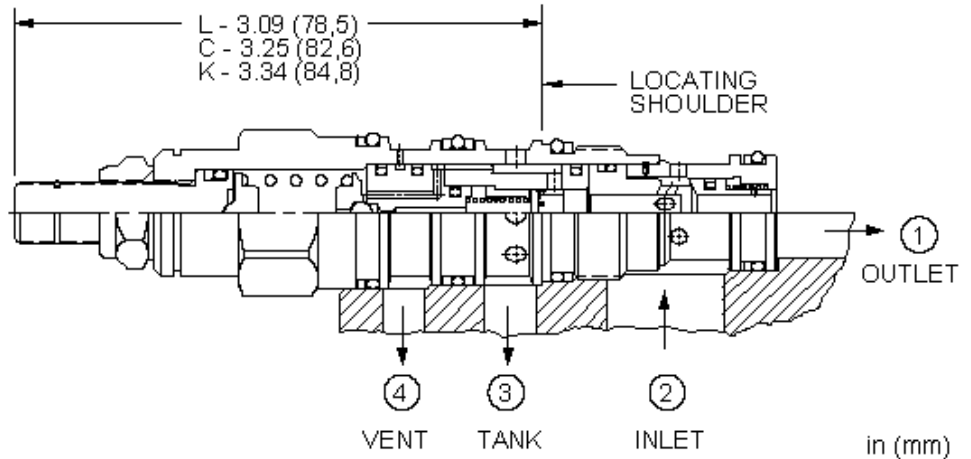
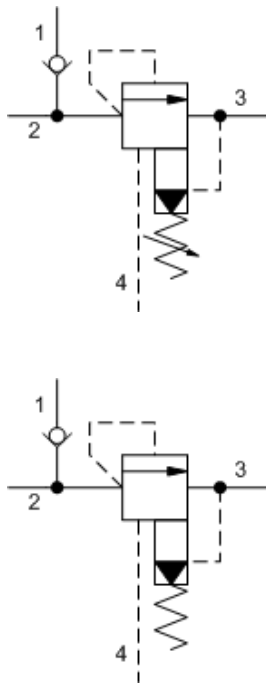
TECHNICAL DATA

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Response Time - Typical	10 ms
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Adjustment - Number of Clockwise Turns to Increase 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: HRDBLAN

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



The ventable relief-before-check cartridge is a CavitySaver™ (multi-function) valve incorporating a ventable, pilot-operated, 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.

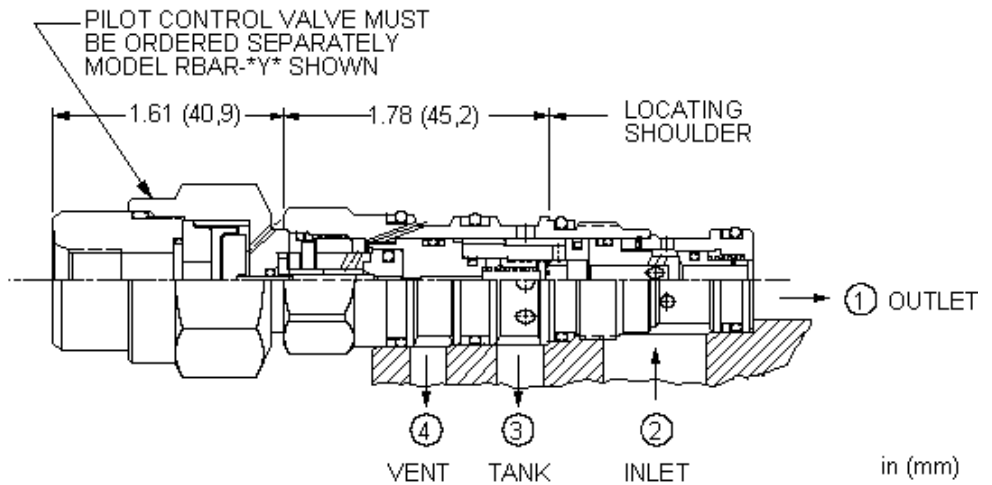
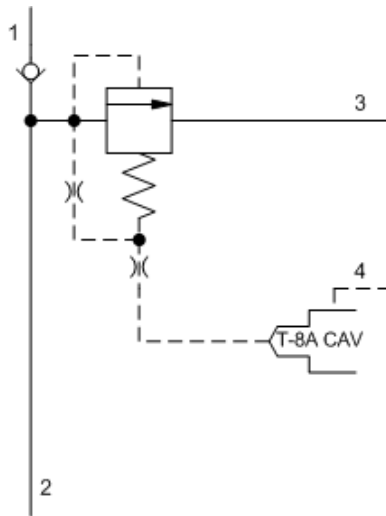
TECHNICAL DATA

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Response Time - Typical	10 ms
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Check Cracking Pressure	1,7 bar
Adjustment - Number of Clockwise Turns to Increase 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	A 75 - 3000 psi (5 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N	
C Tamper Resistant - Factory Set	B 75 - 1500 psi (5 - 105 bar), 1000 psi (70 bar) Standard Setting	V Viton	
K Handknob	D 75 - 800 psi (5 - 55 bar), 400 psi (28 bar) Standard Setting		
	W 75 - 4500 psi (5 - 315 bar), 1000 psi (70 bar) Standard Setting		



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

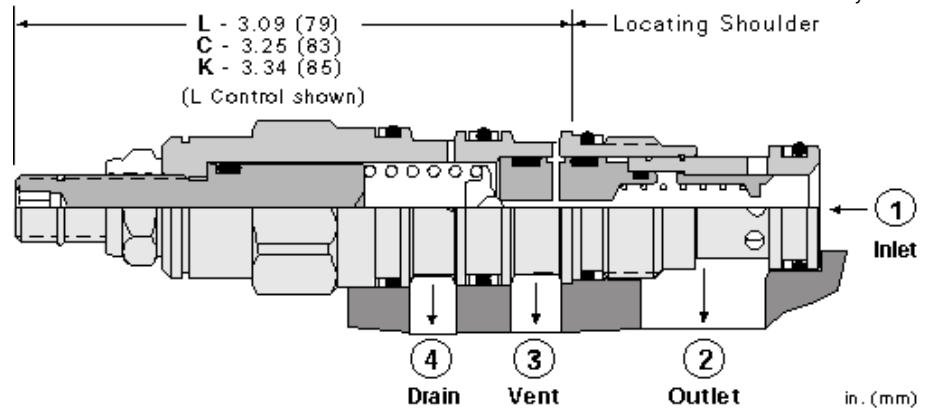
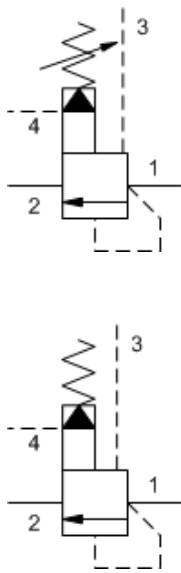
Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Response Time - Typical	10 ms
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Check Cracking Pressure	1,7 bar
Pilot Control Cavity	T-8A
Pilot Control Valve Installation Torque	27 - 33 Nm
Seal kit - Cartridge	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

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.

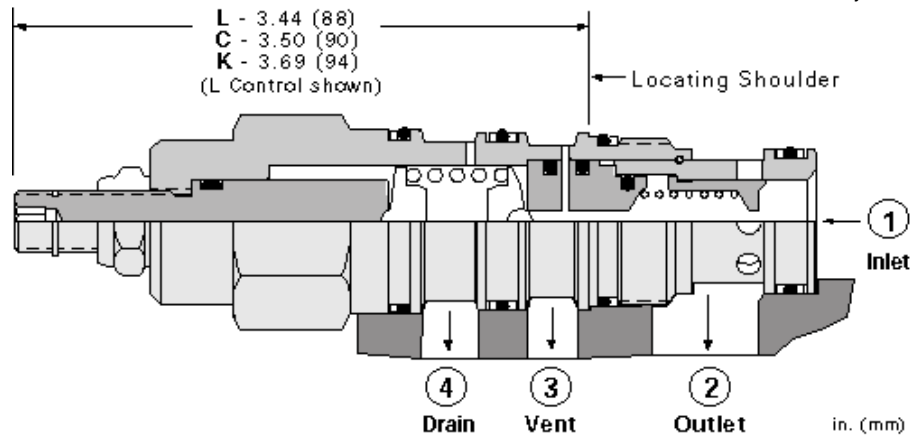
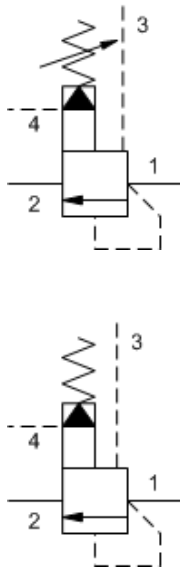
TECHNICAL DATA

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,11 - 0,16 L/min.
Response Time - Typical	10 ms
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min. @70 bar
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	EPDM: 990021014
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	A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N	Standard Material/Coating
C Tamper Resistant - Factory Set	B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting	E EPDM	/AP Stainless Steel, Passivated
K Handknob	C 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting	V Viton	
Y Tri-Grip Handknob	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		



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.

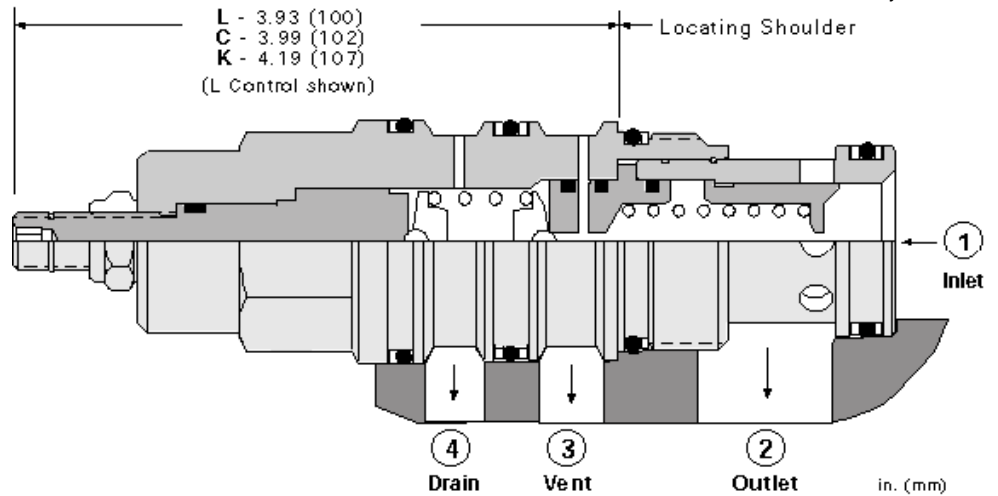
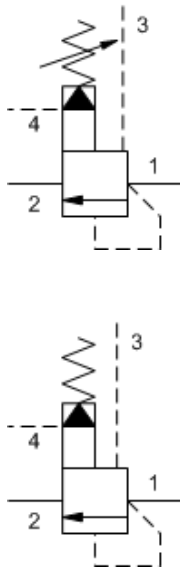
TECHNICAL DATA

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,25 L/min.
Response Time - Typical	10 ms
Maximum Valve Leakage at 110 SUS (24 cSt)	50 cc/min.@70 bar
Adjustment - Number of Clockwise Turns to Increase 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	A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N	
C Tamper Resistant - Factory Set	B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting	E EPDM	
K Handknob	C 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting	V Viton	
W Hex Wrench Adjustment	D 25 - 800 psi (1,7 - 55 bar), 400 psi (28 bar) Standard Setting		
Y Tri-Grip Handknob	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		



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.

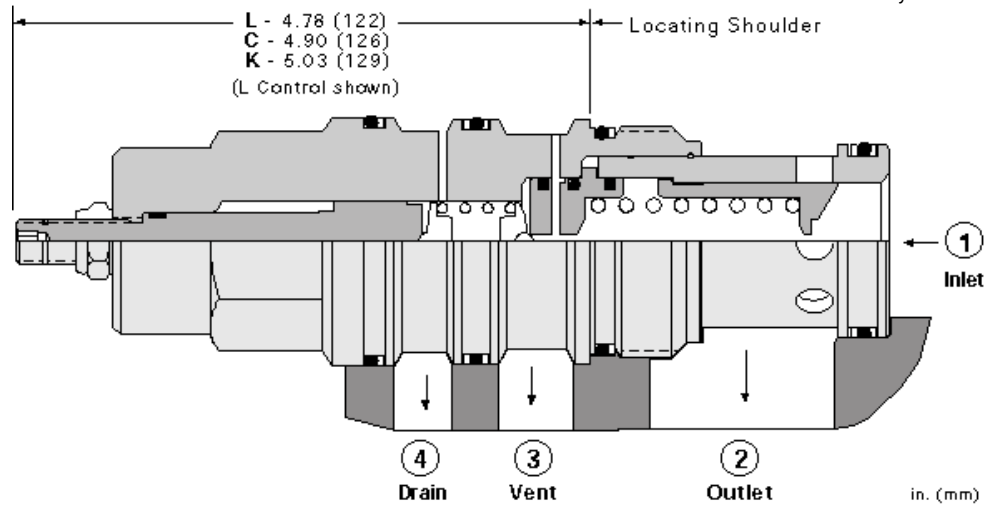
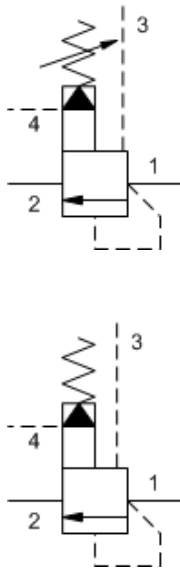
TECHNICAL DATA

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,25 - 0,33 L/min.
Response Time - Typical	10 ms
Maximum Valve Leakage at 110 SUS (24 cSt)	65 cc/min.@70 bar
Adjustment - Number of Clockwise Turns to Increase 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	A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N	Standard Material/Coating
C Tamper Resistant - Factory Set	B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting	V Viton	IAP Stainless Steel, Passivated
K Handknob	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		



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.

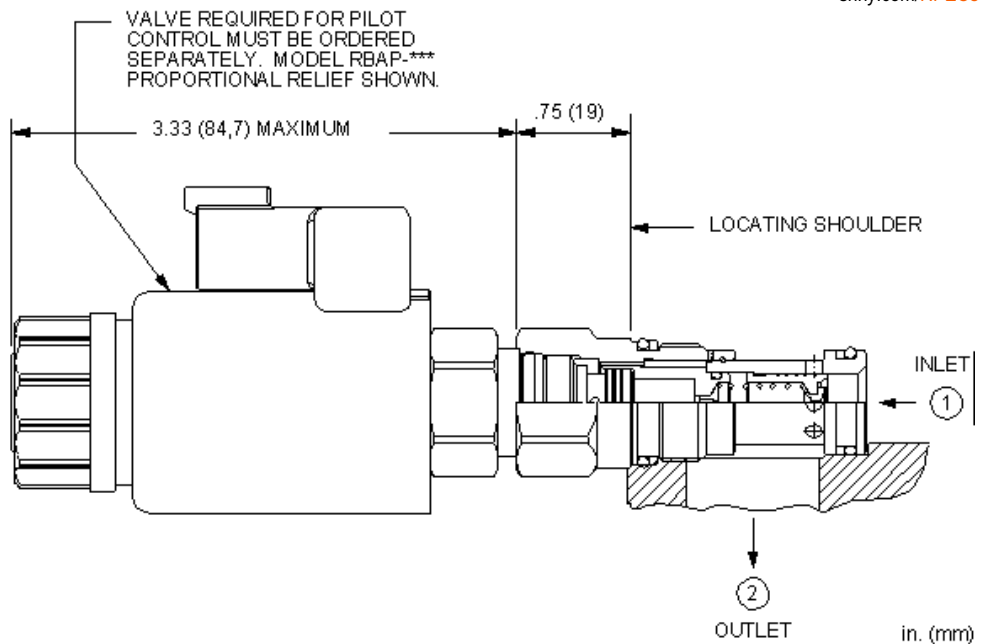
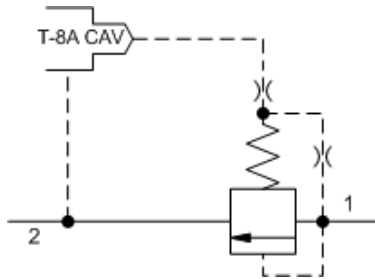
TECHNICAL DATA

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,25 - 0,33 L/min.
Response Time - Typical	10 ms
Maximum Valve Leakage at 110 SUS (24 cSt)	80 cc/min.@70 bar
Adjustment - Number of Clockwise Turns to Increase 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

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



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

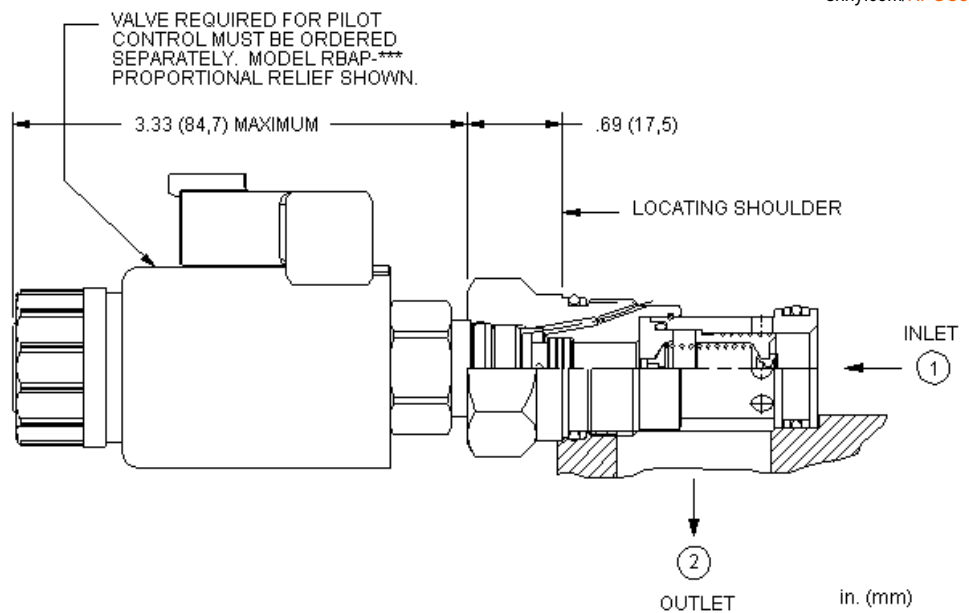
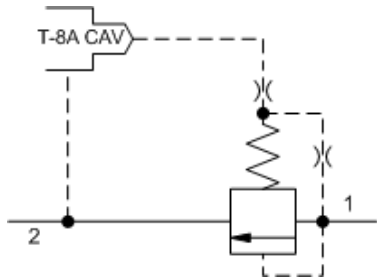
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,11 - 0,16 L/min.
Pilot Control Cavity	T-8A
Pilot Control Valve Installation Torque	27 - 33 Nm
Pilot Control Valve Hex Size	22,2 mm
Main stage leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Seal kit - Cartridge	Buna: 990010007
Seal kit - Cartridge	EPDM: 990010014
Seal kit - Cartridge	Polyurethane: 990010002
Seal kit - Cartridge	Viton: 990010006

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: RPEC8WN

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



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

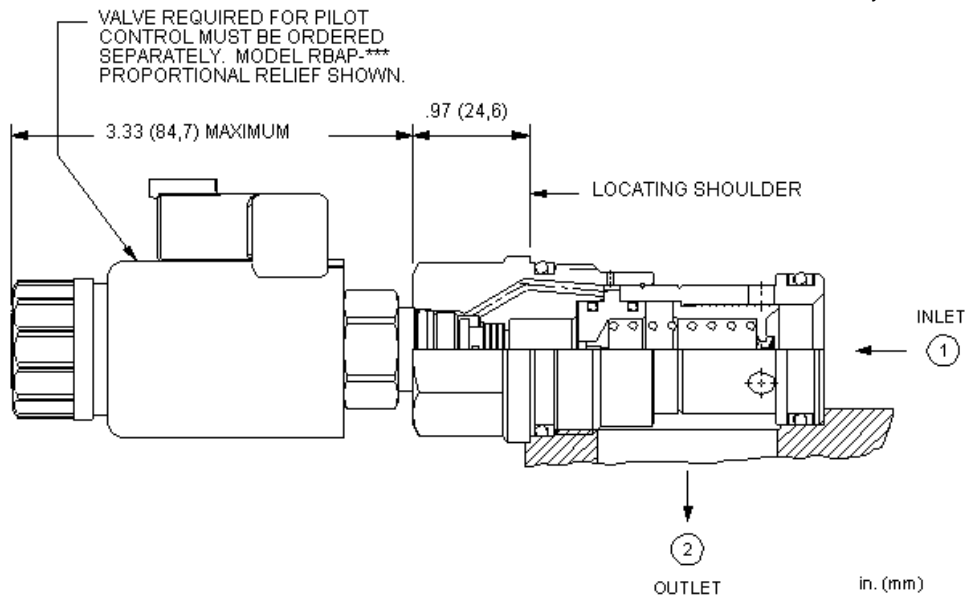
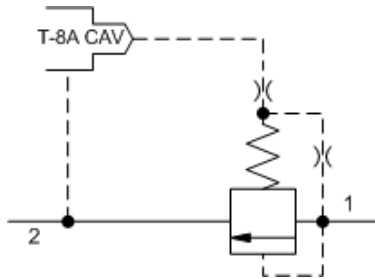
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,25 L/min.
Pilot Control Cavity	T-8A
Main stage leakage at 110 SUS (24 cSt)	50 cc/min. @70 bar
Seal kit - Cartridge	Buna: 990203007
Seal kit - Cartridge	EPDM: 990203014
Seal kit - Cartridge	Polyurethane: 990003002
Seal kit - Cartridge	Viton: 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

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



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

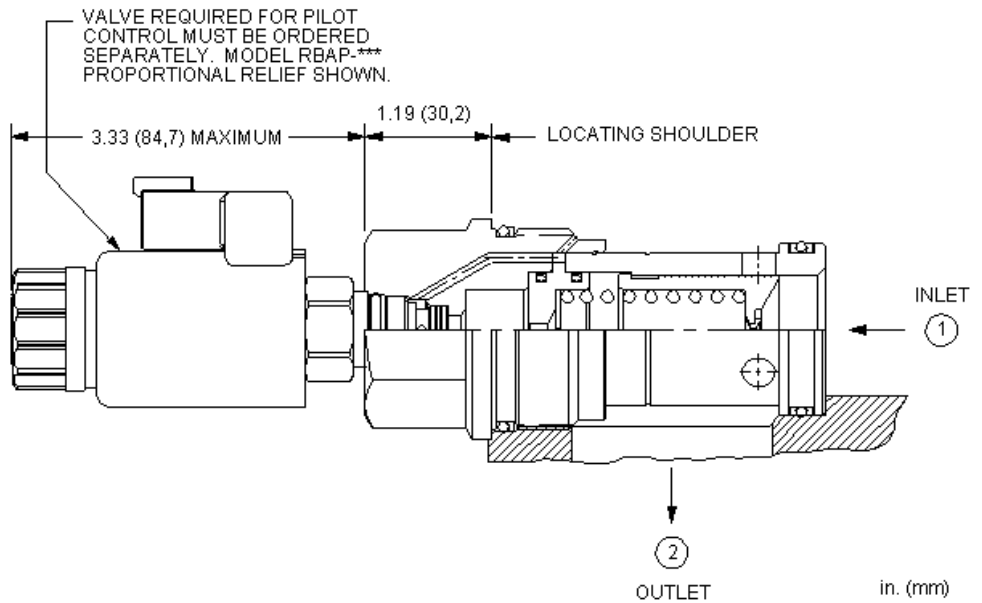
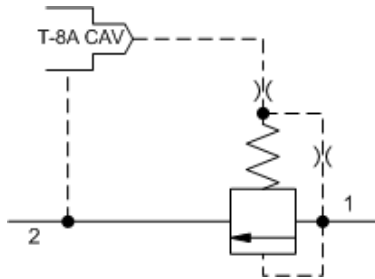
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,25 - 0,33 L/min.
Pilot Control Cavity	T-8A
Main stage leakage at 110 SUS (24 cSt)	65 cc/min.@70 bar
Seal kit - Cartridge	Buna: 990016007
Seal kit - Cartridge	EPDM: 990016014
Seal kit - Cartridge	Polyurethane: 990016002
Seal kit - Cartridge	Viton: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

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



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

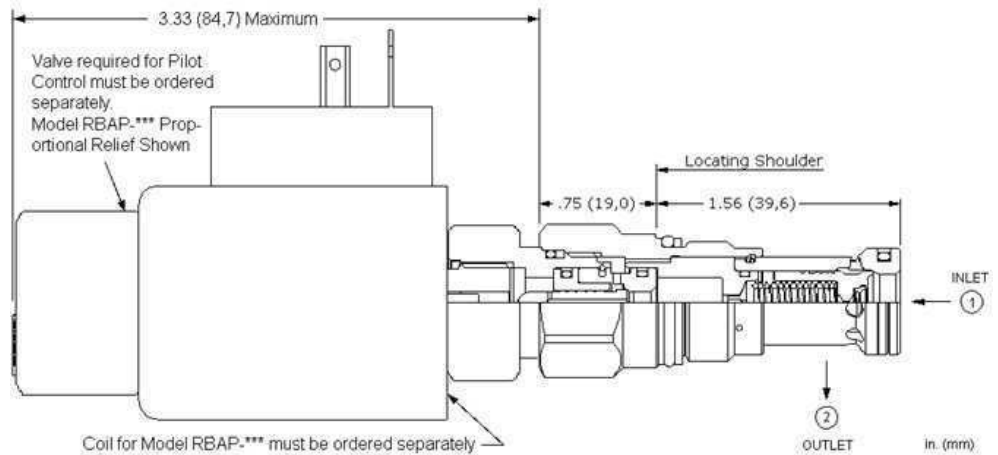
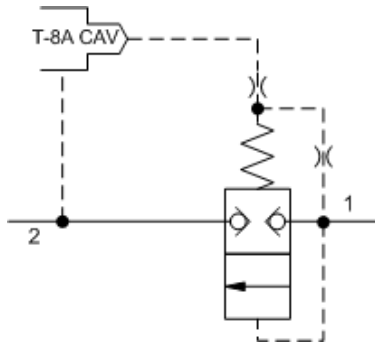
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,25 - 0,33 L/min.
Pilot Control Cavity	T-8A
Main stage leakage at 110 SUS (24 cSt)	80 cc/min. @70 bar
Seal kit - Cartridge	Buna: 990018007
Seal kit - Cartridge	EPDM: 990018014
Seal kit - Cartridge	Polyurethane: 990018002
Seal kit - Cartridge	Viton: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

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



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

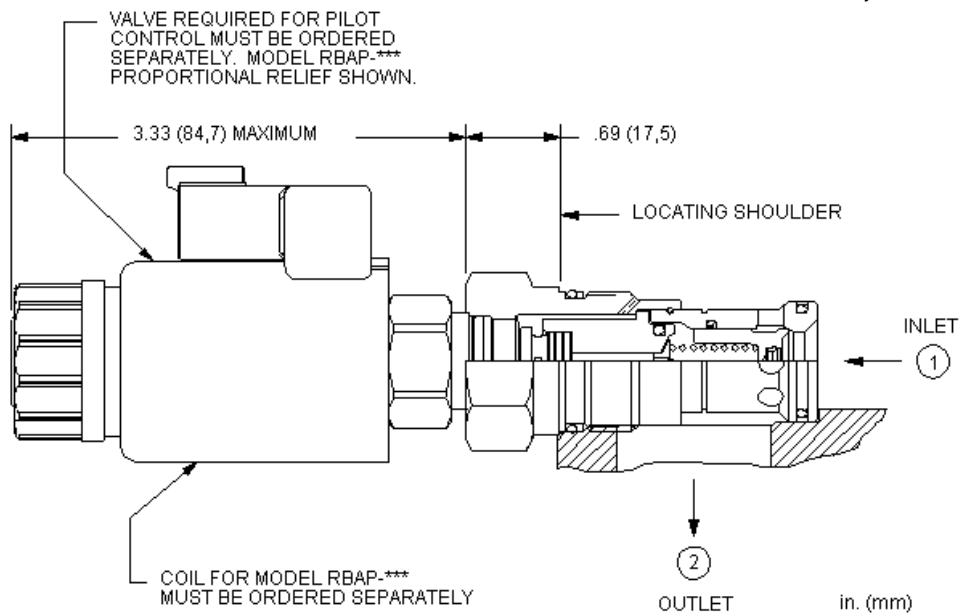
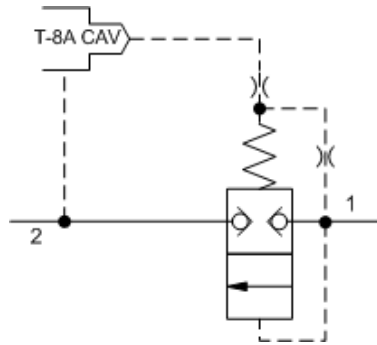
Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,41 L/min.
Response Time - Typical	7 ms
Pilot Control Cavity	T-8A
Pilot Control Valve Installation Torque	27 - 33 Nm
Pilot Control Valve Hex Size	22,2 mm
Main stage leakage at reset	0,7 cc/min.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

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: RPES8WN

MINIMUM CONTROL PRESSURE (W)	SEAL MATERIAL (N)
W 100 psi (7 bar)	N Buna-N
D 50 psi (3,5 bar)	E EPDM
	V Viton



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

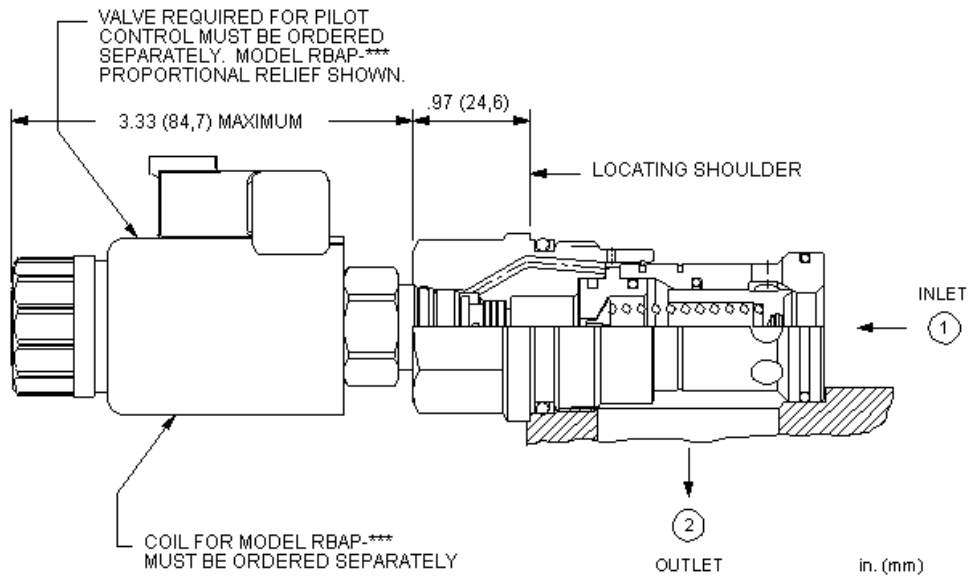
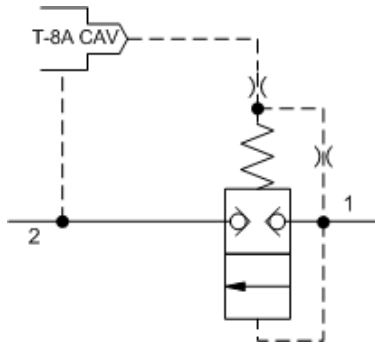
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,25 L/min.
Response Time - Typical	2 ms
Pilot Control Cavity	T-8A
Pilot Control Valve Installation Torque	27 - 33 Nm
Pilot Control Valve Hex Size	22,2 mm
Main stage leakage at reset	0,7 cc/min.
Seal kit - Cartridge	Buna: 990303007
Seal kit - 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: RPGS8WN

MINIMUM CONTROL PRESSURE (W)	SEAL MATERIAL (N)
W 100 psi (7 bar)	N Buna-N
B 50 psi (3,5 bar)	E EPDM
	V Viton



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

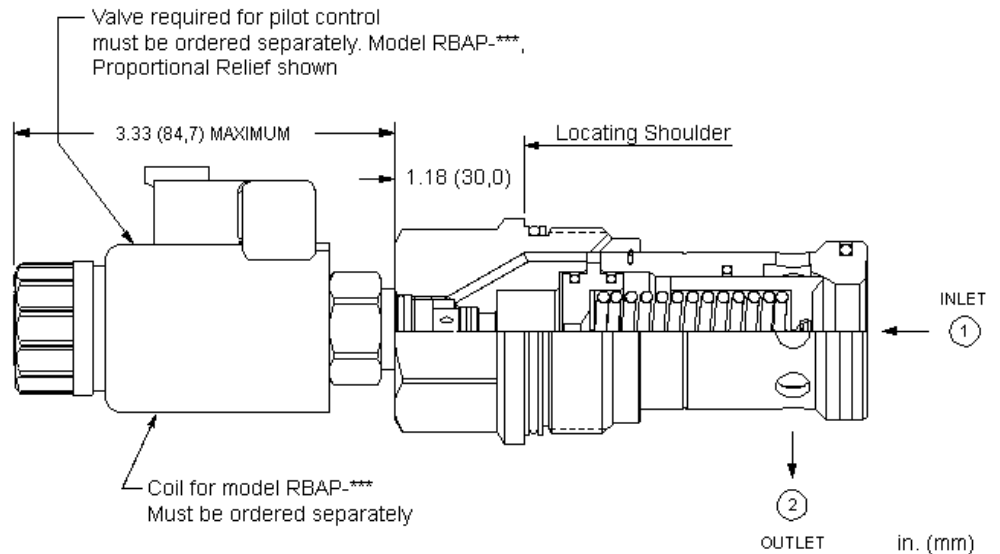
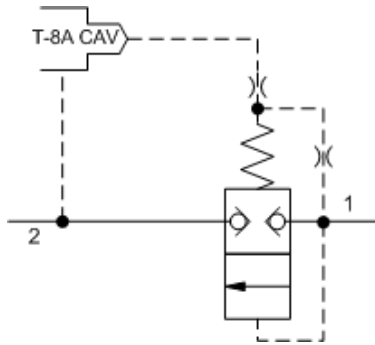
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,25 - 0,33 L/min.
Response Time - Typical	2 ms
Pilot Control Cavity	T-8A
Main stage leakage at reseal	0,7 cc/min.
Seal kit - Cartridge	Buna: 990316007
Seal kit - Cartridge	EPDM: 990316014
Seal kit - Cartridge	Polyurethane: 990016002
Seal kit - Cartridge	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: RPIS8WN

MINIMUM CONTROL PRESSURE (W)	SEAL MATERIAL (N)
W 100 psi (7 bar)	N Buna-N
B 50 psi (3,5 bar)	E EPDM
	V Viton



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

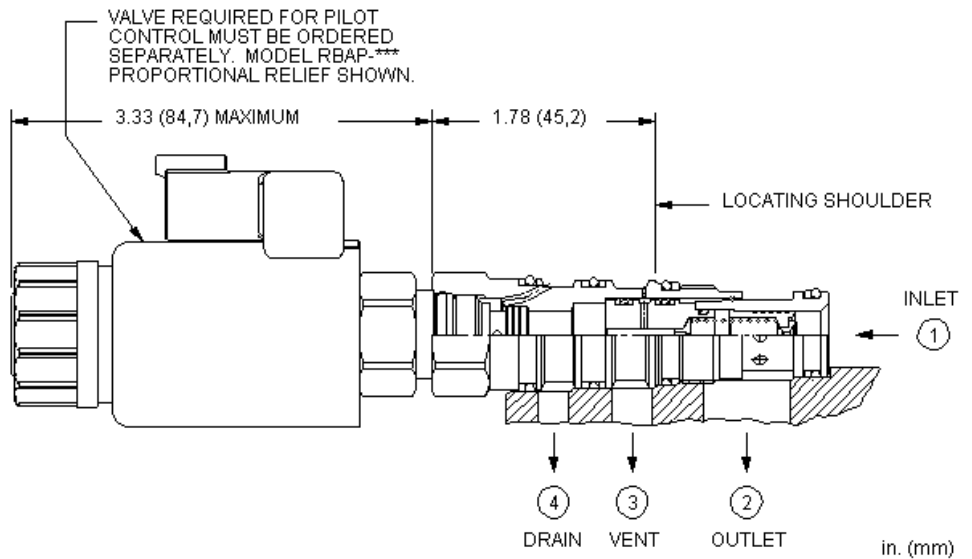
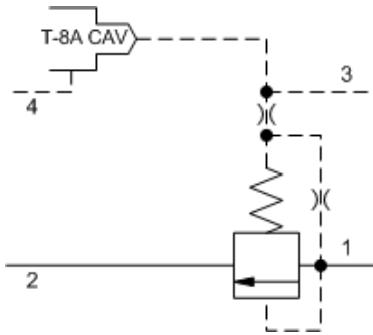
Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,25 - 0,33 L/min.
Response Time - Typical	2 ms
Pilot Control Cavity	T-8A
Pilot Control Valve Installation Torque	27 - 33 Nm
Pilot Control Valve Hex Size	22,2 mm
Main stage leakage at reseal	0,7 cc/min.
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: RPKS8WN

MINIMUM CONTROL PRESSURE (W)	SEAL MATERIAL (N)
W 100 psi (7 bar)	N Buna-N
B 50 psi (3,5 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

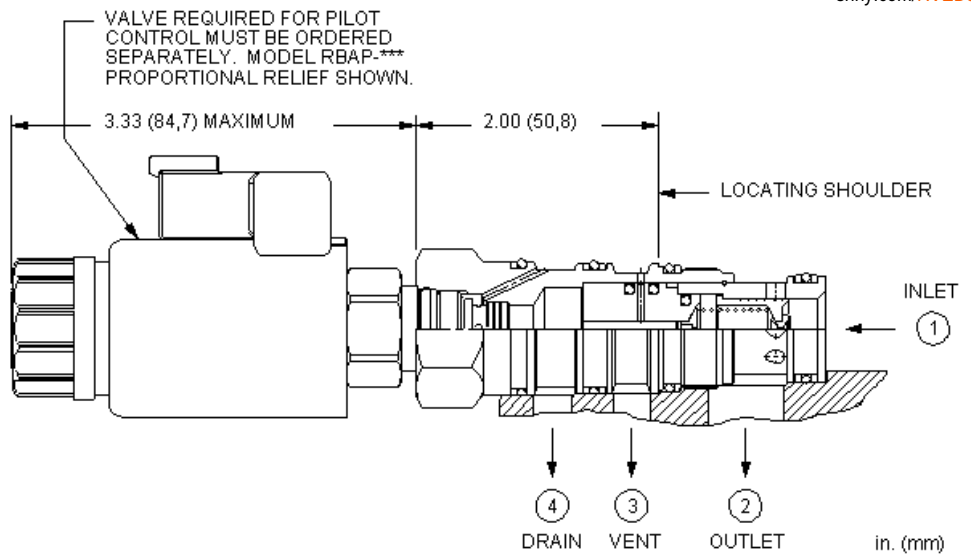
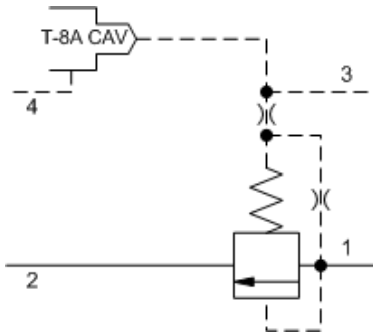
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,11 - 0,16 L/min.
Response Time - Typical	10 ms
Pilot Control Cavity	T-8A
Main stage leakage at 110 SUS (24 cSt)	30 cc/min. @70 bar
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	EPDM: 990021014
Seal kit - Cartridge	Polyurethane: 990021002
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

Model Code Example: RVCD8WN

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



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

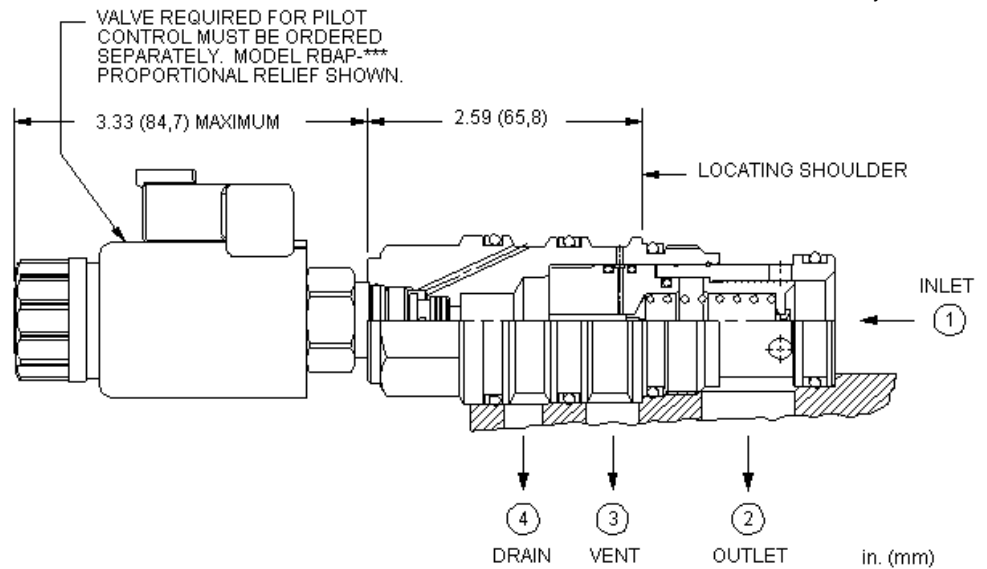
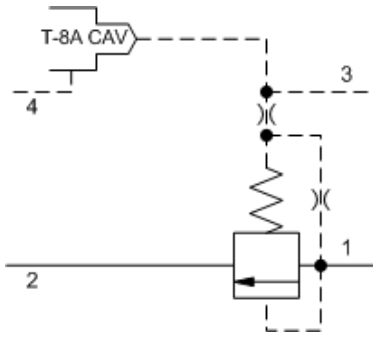
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,25 L/min.
Response Time - Typical	10 ms
Pilot Control Cavity	T-8A
Pilot Control Valve Installation Torque	27 - 33 Nm
Pilot Control Valve Hex Size	22,2 mm
Main stage leakage at 110 SUS (24 cSt)	50 cc/min. @70 bar
Seal kit - Cartridge	Buna: 990022007
Seal kit - Cartridge	EPDM: 990022014
Seal kit - Cartridge	Polyurethane: 990022002
Seal kit - Cartridge	Viton: 990022006

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: RVED8WN

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



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

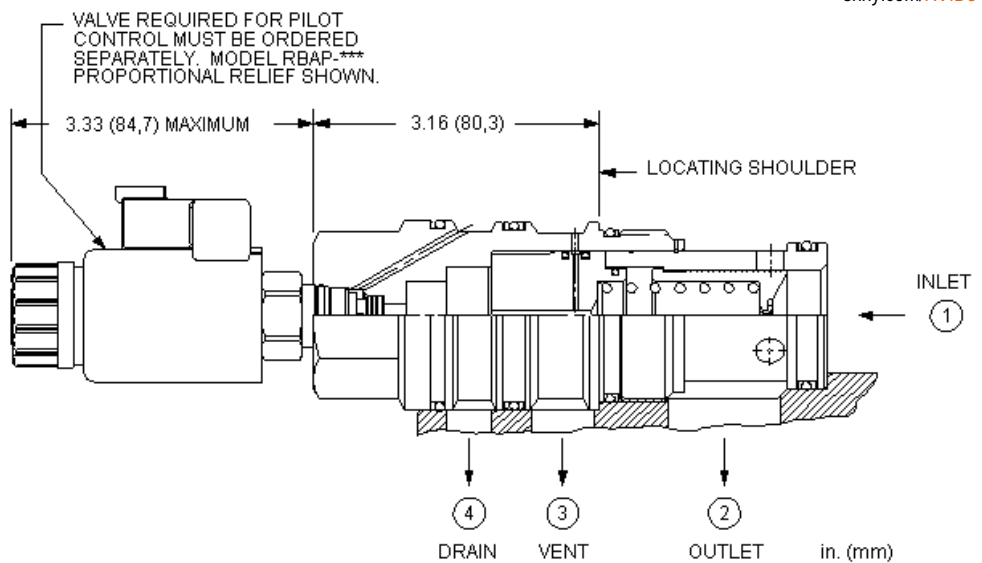
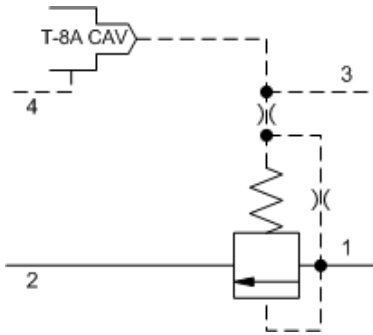
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,25 - 0,33 L/min.
Response Time - Typical	10 ms
Pilot Control Cavity	T-8A
Main stage leakage at 110 SUS (24 cSt)	65 cc/min.@70 bar
Seal kit - Cartridge	Buna: 990023007
Seal kit - Cartridge	EPDM: 990023014
Seal kit - Cartridge	Polyurethane: 990023002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



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

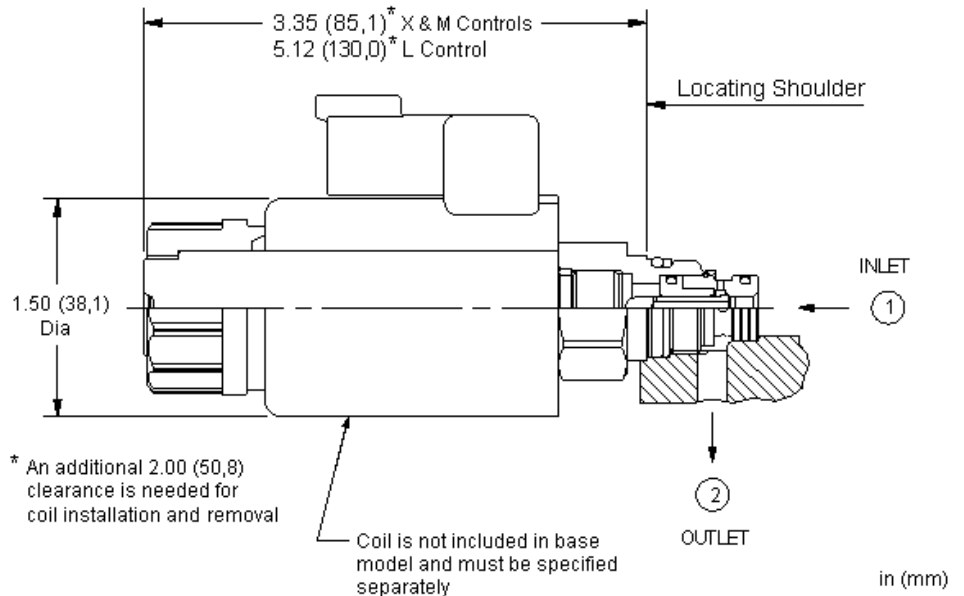
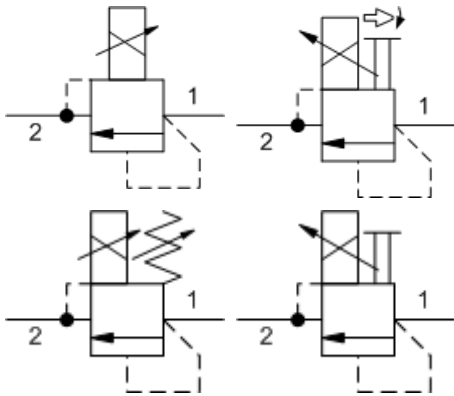
Maximum Operating Pressure	350 bar
Response Time - Typical	10 ms
Pilot Control Cavity	T-8A
Pilot Control Valve Installation Torque	27 - 33 Nm
Pilot Control Valve Hex Size	22,2 mm
Main stage leakage at 110 SUS (24 cSt)	80 cc/min.@70 bar
Seal kit - Cartridge	Buna: 990024007
Seal kit - Cartridge	Polyurethane: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



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

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	Viton: 990208006

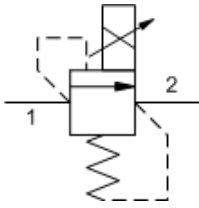
NOTES Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.

CONFIGURATION OPTIONS

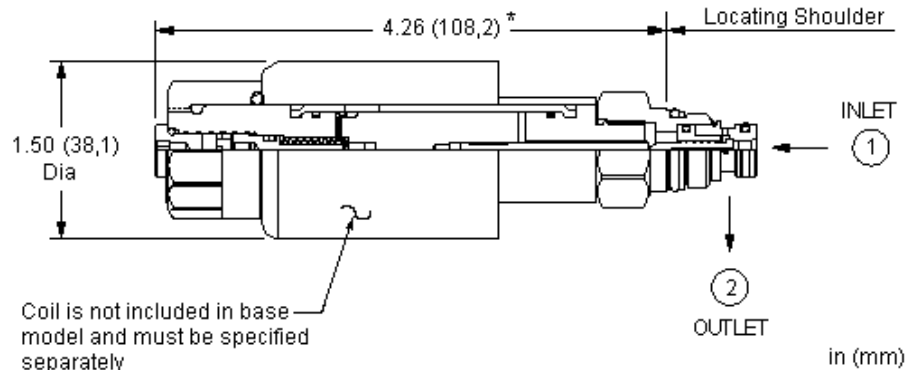
Model Code Example: RBAPXAN

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)		712 Twin Lead, 12 VDC
			724 Twin Lead, 24 VDC
			912 Deutsch DT04-2P, 12 VDC
			924 Deutsch DT04-2P, 24 VDC

* Additional coil options are available



* An additional 2.00 (50,8) clearance is needed for coil installation and removal



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

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) B 1500 - 800 psi (55 - 105 bar) D 800 - 300 psi (20 - 55 bar) W 5000 - 3000 psi (210 - 350 bar)	N Buna-N V Viton	No coil 212 DIN 43650-Form A, 12 VDC 224 DIN 43650-Form A, 24 VDC 712 Twin Lead, 12 VDC 724 Twin Lead, 24 VDC 912 Deutsch DT04-2P, 12 VDC 924 Deutsch DT04-2P, 24 VDC

* Additional coil options are available



Corporate Headquarters
1500 West University Parkway
Sarasota, FL 34243 U.S.A.
Phone: 941.362.1200
suninfo@sunhydraulics.com

ONE RELIABLE SOURCE ENDLESS SOLUTIONS



Sun Hydraulics Limited
Wheler Road
Coventry CV3 4LA
England
Ph: +44-2476-217-400
sales@sunuk.com

Sun Hydraulik GmbH
Brüsseler Allee 2
D-41812 Erkelenz
Germany
Ph: +49-2431-8091-0
sales@sunhydraulik.de

Sun Hydraulics Corporation
55 rue Fragonard
Résidence Rambouillet - Appt A-42
33520 Bruges
France
Ph: +33-673063371
info@sunfr.com

Sun Hydraulics Korea Corp.
92 Hogupo-ro
Namdong-gu
Incheon 405-818
Korea
Ph: +82-32-813-1350
sales@sunhydraulics.co.kr

Sun Hydraulics China Co. Ltd
Hong Kong New World Tower
47th Floor
300, Huaihai Zhong Road
Shanghai 200021
P.R.China
Ph: +86-21-5116-2862
sunchinainfo@sunhydraulics.com

Sun Hydraulics (India)
No. 48 'Regent Prime'
Unit No. 306, Level 3
Whitefield Main Road,
Whitefield, Bangalore - 560 066
India
Ph: +0091-80-28456325
sunindiainfo@sunhydraulics.com