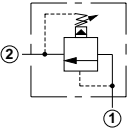
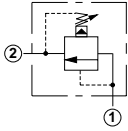
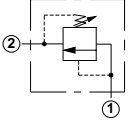
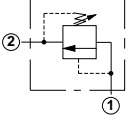
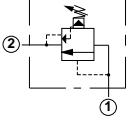
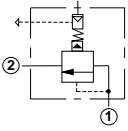
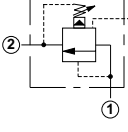
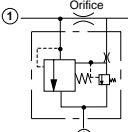
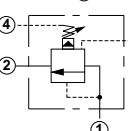
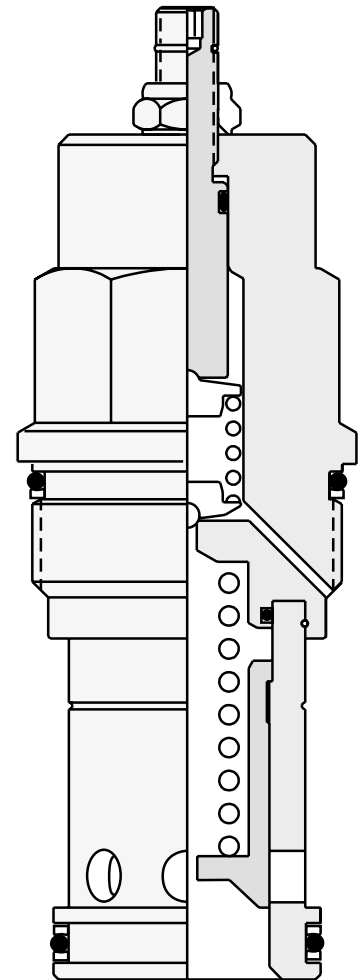


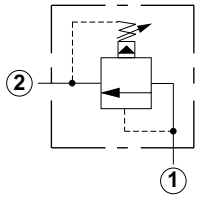
Relief Cartridge Valves

	<i>Cartridge Type</i>	<i>Page</i>
	Pilot Operated	4
	Pilot Operated, Rapid Response	4
	Direct Acting	5
	Direct Acting, Pilot Stage	5
	Pilot Operated, Kick-down	6
	Air Controlled, Pilot Operated, 20:1 Ratio	6
	Pilot Operated with Vent	7
	Bypass Compensator, with Relief	7
	Pilot Operated, with Vent and External Drain	8



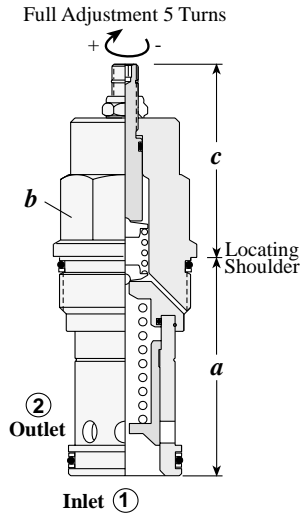
Relief Valves

PILOT OPERATED



Capacity	Typical Cartridge Model Code	Cavity	Cartridge Dimensions					Installation Torque (lb. ft.)
			a	b	c			
					L	C	K	
12 GPM	RPCC – LAN	T - 162A	1.22	3/4"	2.11	2.17	2.31	25/30
25 GPM	RPEC – LAN	T - 10A	1.56	7/8"	2.00	2.06	2.25	30/35
50 GPM	RPGC – LAN	T - 3A	1.88	1 1/8"	2.12	2.18	2.38	45/50
100 GPM	RPIC – LAN	T - 16A	2.44	1 1/4"	2.44	2.47	2.69	150/160
200 GPM	RPKC – LAN	T - 18A	3.13	1 5/8"	2.81	2.94	3.06	350/375

OPTION ORDERING INFORMATION



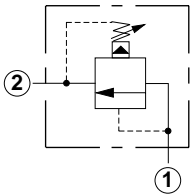
RP * C - * * *

Nominal Capacity	Control**	Adjustment Range	Seal
C 12 GPM*	L Standard Screw	A 100 - 3000 psi	N Buna-N
E 25 GPM	C Tamper Resistant	B 50 - 1500 psi	V Viton
G 50 GPM	K Handknob	C 150 - 6000 psi	
I 100 GPM		N 60 - 800 psi	
K 200 GPM		Q 60 - 400 psi	
		W 150 - 4500 psi	

Adjustment Range Options:
 A, B, C, and W are standard set at 1000 psi.
 N Option is standard set at 400 psi.
 Q Option is standard set at 200 psi.
 * Minimum setting 75 psi on all ranges.
Customer may specify pressure setting.

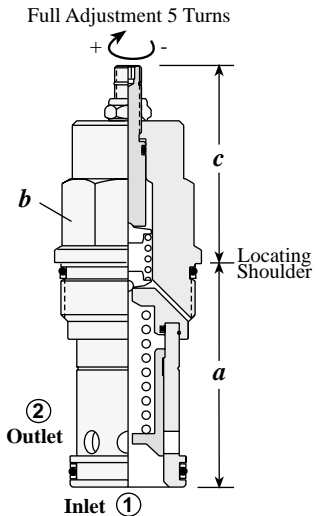
** See page 92 for information on Control Options

PILOT OPERATED, RAPID RESPONSE



Capacity	Typical Cartridge Model Code	Cavity	Cartridge Dimensions					Installation Torque (lb. ft.)
			a	b	c			
					L	C	K	
25 GPM	RPEE – LAN	T - 10A	1.56	7/8"	2.00	2.06	2.25	30/35
50 GPM	RPGE – LAN	T - 3A	1.88	1 1/8"	2.12	2.18	2.25	45/50
100 GPM	RPIE – LAN	T - 16A	2.44	1 1/4"	2.44	2.47	2.69	150/160
200 GPM	RPKE – LAN	T - 18A	3.13	1 5/8"	2.81	2.94	3.06	350/375

OPTION ORDERING INFORMATION



RP * E - * * *

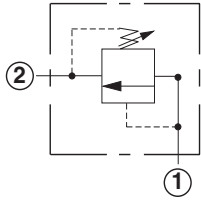
Nominal Capacity	Control**	Adjustment Range	Seal
E 25 GPM	L Standard Screw	A 100 - 3000 psi	N Buna-N
G 50 GPM	C Tamper Resistant	B 50 - 1500 psi	V Viton
I 100 GPM	K Handknob	C 150 - 6000 psi	
K 200 GPM		D 25 - 800 psi	
		E 25 - 400 psi	
		W 150 - 4500 psi	

Adjustment Range Options:
 A, B, C, and W are standard set at 1000 psi.
 D Option is standard set at 400 psi.
 E Option is standard set at 200 psi.
Customer may specify pressure setting.

** See page 92 for information on Control Options

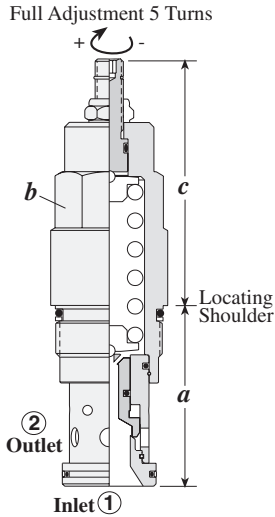
Relief Valves

DIRECT ACTING



Capacity	Typical Cartridge Model Code	Cavity	Cartridge Dimensions				Installation Torque (lb. ft.)
			a	b	L	C	
12 GPM	RDBA – LAN	T - 162A	1.22	3/4"	2.11	2.17	25/30
25 GPM	RDDA – LAN	T - 10A	1.56	7/8"	2.38	2.44	30/35
50 GPM	RDFA – LAN	T - 3A	1.88	1 1/8"	2.50	2.56	45/50
100 GPM	RDHA – LAN	T - 16A	2.44	1 1/4"	3.25	3.31	150/160
200 GPM	RDJA – LAN	T - 18A	3.13	1 5/8"	3.94	4.07	350/375

OPTION ORDERING INFORMATION



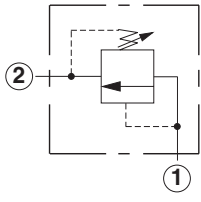
RD * A - * * *

Nominal Capacity	Control**	Adjustment Range	Seal
B 12 GPM	L Standard Screw	A 500 - 3000 psi	N Buna-N
D 25 GPM	C Tamper Resistant	B 300 - 1500 psi	V Viton
F 50 GPM		C 1000 - 6000 psi	
H 100 GPM		D 200 - 800 psi	
J 200 GPM		E 100 - 400 psi	
		S 50-200 psi	
		W 1000 - 4500 psi	

U.S. Patent #4,742,846 ** See page 92 for information on Control Options
 European Patent Pending

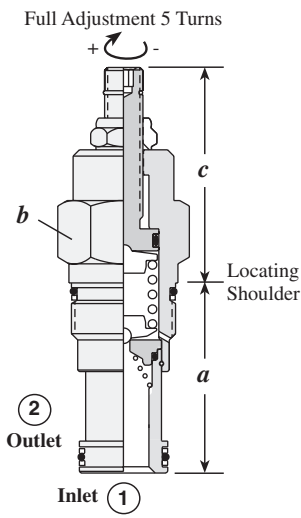
Adjustment Range Options:
 A, B, C, and W are standard set at 1000 psi.
 D Option is standard set at 400 psi.
 E Option is standard set at 200 psi.
 S Option is standard set at 100 psi.
Customer may specify pressure setting.

DIRECT ACTING, PILOT STAGE



Capacity	Typical Cartridge Model Code	Cavity	Cartridge Dimensions				Installation Torque (lb. ft.)	
			a	b	L	C		K
60 in. ³ /min.	RBAC – LAN	T - 10A	1.56	7/8"	2.00	2.06	2.25	30/35
120 in. ³ /min.	RBAA – LAN	T - 3A	1.88	1 1/8"	2.12	2.18	2.38	45/50

OPTION ORDERING INFORMATION



RB A * - * * *

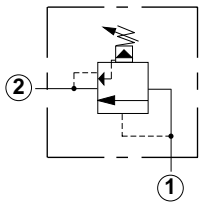
Nominal Capacity	Control**	Adjustment Range	Seal
C 60 in. ³ /min.	L Standard Screw	A 25 - 3000 psi	N Buna-N
A 120 in. ³ /min.	C Tamper Resistant	B 25 - 1500 psi	V Viton
	K Handknob	C 25 - 6000 psi	
		D 25 - 800 psi	
		E 25 - 400 psi	
		W 25 - 4500 psi	

U.S. Patent #4,742,846 ** See page 92 for information on Control Options
 European Patent Pending

Adjustment Range Options:
 A, B, C, and W are standard set at 1000 psi.
 D Option is standard set at 400 psi.
 E Option is standard set at 200 psi.
Customer may specify pressure setting.

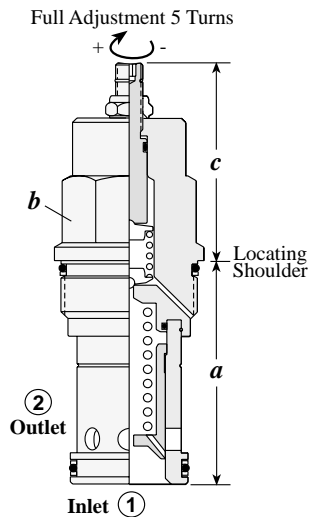
Relief Valves

PILOT OPERATED, KICK-DOWN



Capacity	Typical Cartridge Model Code	Cavity	Cartridge Dimensions					Installation Torque (lb. ft.)
			a	b	c			
					L	C	K	
25 GPM	RQEB - LAN	T - 10A	1.56	7/8"	2.00	2.06	2.25	30/35
50 GPM	RQGB - LAN	T - 3A	1.88	1 1/8"	2.12	2.18	2.38	45/50
100 GPM	RQIB - LAN	T - 16A	2.44	1 1/4"	2.44	2.47	2.69	150/160
200 GPM	RQKB - LAN	T - 18A	3.13	1 5/8"	2.81	2.94	3.06	350/375

OPTION ORDERING INFORMATION



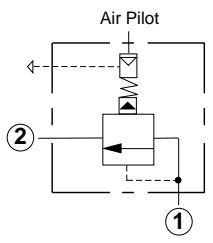
RQ * B - * * *

Nominal Capacity	Control**	Adjustment Range	Seal
E 25 GPM	L Standard Screw	A 100 - 3000 psi	N Buna-N
G 50 GPM	C Tamper Resistant	B 50 - 1500 psi	V Viton
I 100 GPM	K Handknob	C 150 - 6000 psi	
K 200 GPM		D 25 - 800 psi	
		E 25 - 400 psi	
		W 150 - 4500 psi	

Adjustment Range Options:
 A, B, C, and W are standard set at 1000 psi.
 D Option is standard set at 400 psi.
 E Option is standard set at 200 psi.
Customer may specify pressure setting.

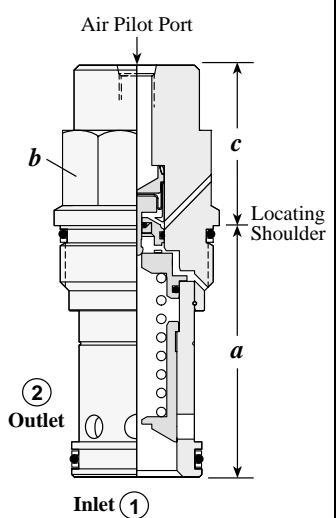
** See page 92 for information on Control Options

AIR CONTROLLED, PILOT OPERATED, 20:1 RATIO



Capacity	Typical Cartridge Model Code	Cavity	Cartridge Dimensions				Installation Torque (lb. ft.)
			a	b	c		
					A	B	
50 GPM	RPGD - ABN	T - 3A	1.88	1 1/8"	1.31	-	45/50
100 GPM	RPID - BBN	T - 16A	2.44	1 1/4"	-	1.62	150/160
200 GPM	RPKD - BBN	T - 18A	3.13	1 5/8"	-	2.00	350/375

OPTION ORDERING INFORMATION



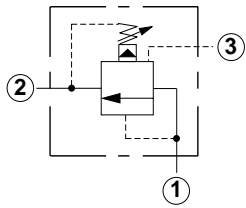
RP * D - * * *

Nominal Capacity	Control**	Adjustment Range	Seal
G 50 GPM	<i>Available for RPGD only</i>	B 50 - 1500 psi	N Buna-N
I 100 GPM	A 1/4" NPTF Pilot Port at end of Cartridge*		V Viton
K 200 GPM	<i>Available for RPID, RPKD only</i>		
	B SAE-4 Pilot Port at end of Cartridge*		

* Maximum air pilot pressure should not exceed 150 psi.

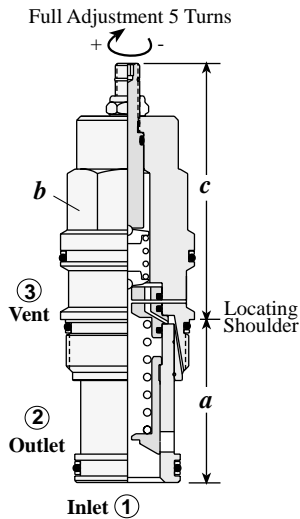
Relief Valves

PILOT OPERATED WITH VENT



Capacity	Typical Cartridge Model Code	Cavity	Cartridge Dimensions						Installation Torque (lb. ft.)
			a	b	c				
					L	C	K		
7.5 GPM	RVBA – LAN	T - 163A	1.22	3/4"	2.55	2.63	2.77	25/30	
15 GPM	RVCA – LAN	T - 11A	1.38	7/8"	2.50	2.56	2.75	30/35	
30 GPM	RVEA – LAN	T - 2A	1.38	1 1/8"	2.81	2.88	3.06	45/50	
60 GPM	RVGA – LAN	T - 17A	1.81	1 1/4"	3.28	3.31	3.53	150/160	
120 GPM	RVIA – LAN	T - 19A	2.50	1 5/8"	3.94	4.09	4.19	350/375	

OPTION ORDERING INFORMATION



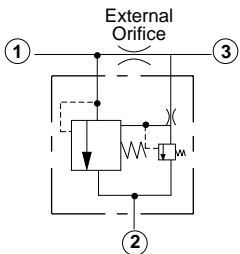
RV ★ A – ★ ★ ★

Nominal Capacity	Control**	Adjustment Range	Seal
B 7.5 GPM*	L Standard Screw	A 100 - 3000 psi	N Buna-N
C 15 GPM	C Tamper Resistant	B 50 - 1500 psi	V Viton
E 30 GPM	K Handknob	C 150 - 6000 psi	
G 60 GPM		N 60 - 800 psi	
I 120 GPM		Q 60 - 400 psi	
		W 150 - 4500 psi	

Adjustment Range Options:
 A, B, C, and W are standard set at 1000 psi.
 N Option is standard set at 400 psi.
 Q Option is standard set at 200 psi.
 * Minimum setting 75 psi on all ranges.
Customer may specify pressure setting.

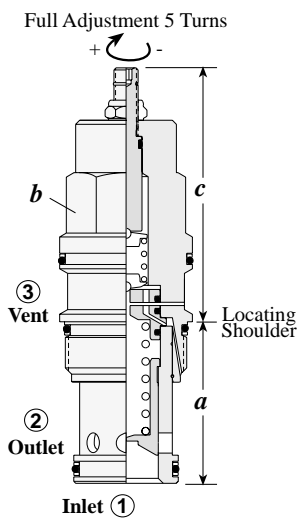
** See page 92 for information on Control Options

BYPASS COMPENSATOR, WITH RELIEF



Capacity	Typical Cartridge Model Code	Cavity	Cartridge Dimensions						Installation Torque (lb. ft.)
			a	b	c				
					L	C	K		
2.5 GPM	RVBB – LAN	T - 163A	1.22	3/4"	2.55	2.63	2.77	25/30	
5 GPM	RVCB – LAN	T - 11A	1.38	7/8"	2.50	2.56	2.75	30/35	
10 GPM	RVEB – LAN	T - 2A	1.38	1 1/8"	2.81	2.88	3.06	45/50	
20 GPM	RVGB – LAN	T - 17A	1.81	1 1/4"	3.28	3.31	3.53	150/160	
40 GPM	RVIB – LAN	T - 19A	2.50	1 5/8"	3.94	4.09	4.19	350/375	

OPTION ORDERING INFORMATION



RV ★ B – ★ ★ ★

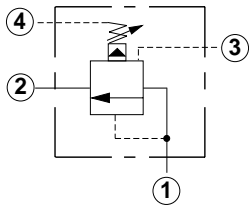
Nominal Capacity	Control**	Adjustment Range	Seal
B 2.5 GPM*	L Standard Screw	A 100 - 3000 psi	N Buna-N
C 5 GPM	C Tamper Resistant	B 100 - 1500 psi	V Viton
E 10 GPM	K Handknob	C 100 - 6000 psi	
G 20 GPM			
I 40 GPM			

Adjustment Range Options:
 A, B, and C are standard set at 1000 psi.
 * Minimum setting 100 psi on all ranges.
Customer may specify pressure setting.

** See page 92 for information on Control Options

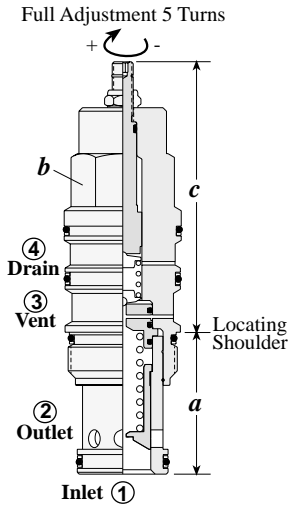
Relief Valves

PILOT OPERATED, WITH VENT AND EXTERNAL DRAIN



Capacity	Typical Cartridge Model Code	Cavity	Cartridge Dimensions					Installation Torque (lb. ft.)
			a	b	c			
					L	C	K	
15 GPM	RVCD - LAN	T - 21A	1.38	7/8"	3.09	3.15	3.34	30/35
30 GPM	RVED - LAN	T - 22A	1.38	1 1/8"	3.44	3.50	3.69	45/50
60 GPM	RVGD - LAN	T - 23A	1.81	1 1/4"	3.93	3.99	4.19	150/160
120 GPM	RVID - LAN	T - 24A	2.50	1 5/8"	4.78	4.90	5.03	350/375

OPTION ORDERING INFORMATION



RV * D - * * *

Nominal Capacity	Control**	Adjustment Range	Seal
C 15 GPM	L Standard Screw	A 100 - 3000 psi	N Buna-N
E 30 GPM	C Tamper Resistant	B 50 - 1500 psi	V Viton
G 60 GPM	K Handknob	C 150 - 6000 psi	
I 120 GPM		D 25 - 800 psi	
		E 25 - 400 psi	
		W 150 - 4500 psi	

Adjustment Range Options:
 A, B, C, and W are standard set at 1000 psi.
 D Option is standard set at 400 psi.
 E Option is standard set at 200 psi.
Customer may specify pressure setting.

** See page 92 for information on Control Options