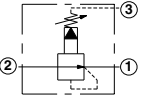
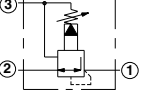
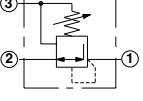
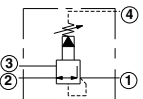
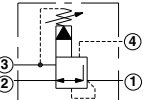
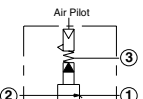
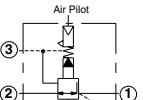
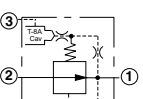
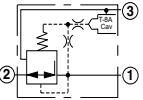
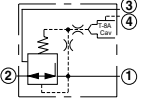
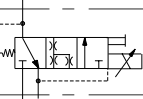
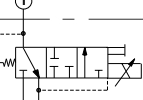
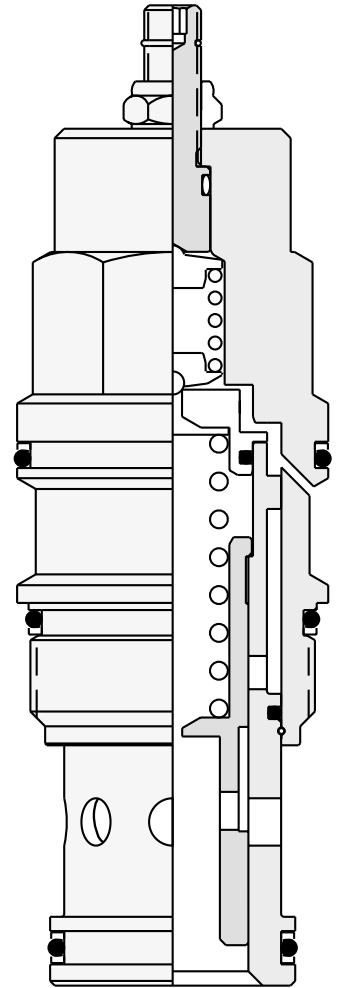
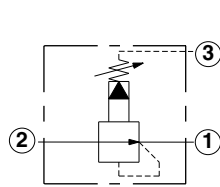
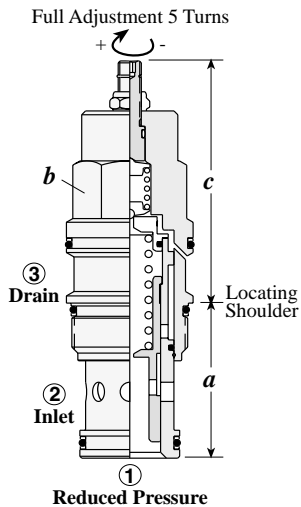


Reducing and Reducing/Relieving Cartridge Valves

| <i>Cartridge Type</i> | <i>Page</i> |
|---|---|
|  | Pilot Operated Reducing 30 |
|  | Pilot Operated Reducing/Relieving 31 |
|  | Direct Acting Reducing/Relieving 32 |
|  | Pilot Operated Reducing/Relieving, Externally Drained 33 |
|  | Pilot Operated Reducing/Relieving, Ventable 34 |
|  | Air Controlled, Pilot Operated Reducing 35 |
|  | Air Controlled, Pilot Operated Reducing/Relieving 36 |
|  | Modulating Element with Integral Pilot Control Cavity 37 |
|  | 3-Way, Modulating Element with Integral Pilot Control Cavity 38 |
|  | 3-Way, Externally Drained, Modulating Element with Integral Pilot Control Cavity 39 |
|  | Electro-proportional, Direct Acting Reducing/Relieving 40 |
|  | Electro-proportional, Direct Acting with Low Leakage 41 |

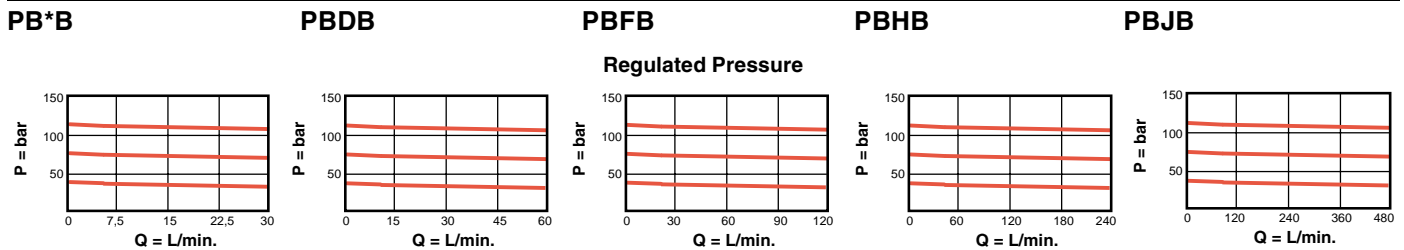


PILOT OPERATED REDUCING



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

Performance Curves



- Maximum operating pressure = 350 bar
- Factory pressure setting established at blocked control port (deadhead)
- Control pilot flow = PBBB, PBDB: 0,11 to 0,16 L/min., PBFB: 0,16 to 0,25 L/min., PBHB, PBJB: 0,25 to 0,33 L/min.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 210 bar.

PB * B - * * *

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

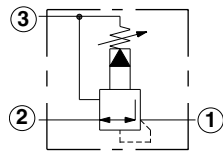
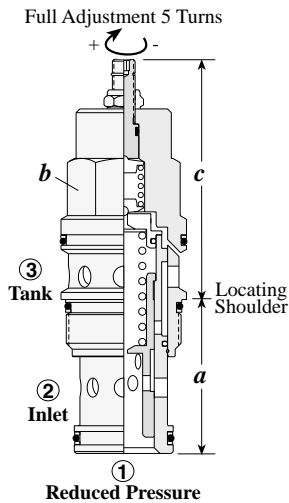
Adjustment Range Options:
 All are standard set at 14 bar.
 Maximum pressure differentials for spring ranges:
 A and B are 210 bar.
 N and Q are 140 bar.
 W is 350 bar inlet pressure.

** See page 162 for information on Control Options

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

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PILOT OPERATED REDUCING/RELIEVING



| Capacity | Typical Cartridge Model Code | Cavity | Cartridge Dimensions | | | | | Installation Torque (Nm) |
|------------|------------------------------|---------|----------------------|------|-----|-----|-----|--------------------------|
| | | | a | b | c | | | |
| | | | | | L | C | K | |
| 40 L/min. | PPDB - LAN | T - 11A | 34,9 | 22,2 | 64 | 66 | 70 | 40/50 |
| 80 L/min. | PPFB - LAN | T - 2A | 34,9 | 28,6 | 72 | 74 | 78 | 60/70 |
| 160 L/min. | PPHB - LAN | T - 17A | 46 | 31,8 | 84 | 86 | 90 | 200/215 |
| 320 L/min. | PPJB - LAN | T - 19A | 63,5 | 41,3 | 100 | 104 | 107 | 465/500 |

Performance Curves

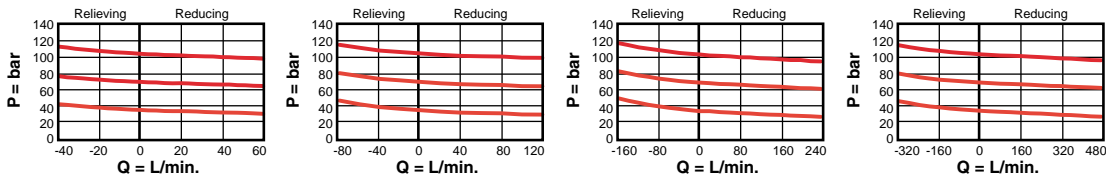
PPDB

PPFB

PPHB

PPJB

Regulated Pressure



- Maximum operating pressure = 350 bar
- Factory pressure setting established at blocked control port (deadhead)
- Control pilot flow = PPDB: 0,11 to 0,16 L/min., PPFB: 0,16 to 0,25 L/min., PPHB, PPJB: 0,25 to 0,33 L/min.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 210 bar.

PP * B - * * *

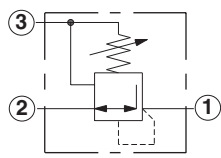
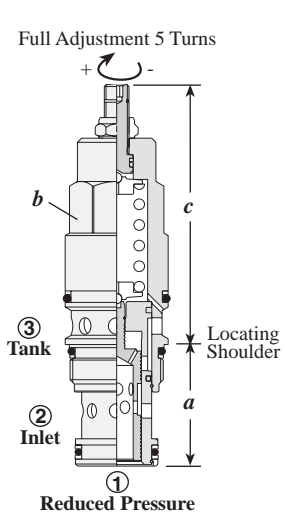
| Nominal Capacity | Control** | Adjustment Range | Seal |
|---------------------|---------------------------|------------------------|-----------------|
| D 40 L/min. | L Standard Screw | A 7 - 210 bar | N Buna-N |
| F 80 L/min. | C Tamper Resistant | B 3,5 - 105 bar | V Viton |
| H 160 L/min. | K Handknob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

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

** See page 162 for information on Control Options

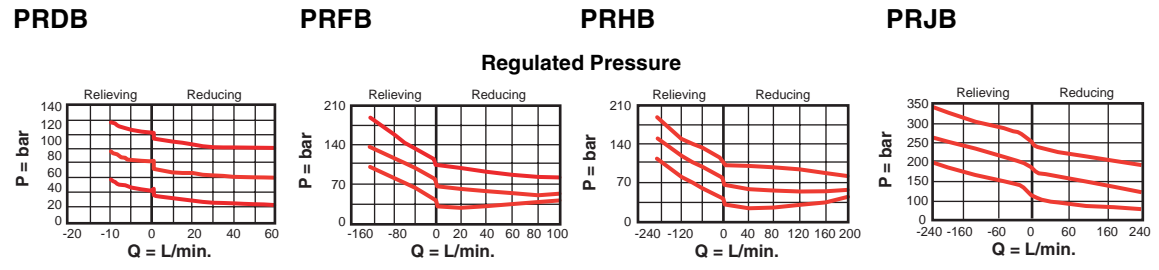
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DIRECT ACTING REDUCING/RELIEVING



| Capacity | Typical Cartridge Model Code | Cavity | Cartridge Dimensions | | | | | Installation Torque (Nm) |
|------------|------------------------------|---------|----------------------|------|-----|-------|-----|--------------------------|
| | | | a | b | c | | | |
| | | | | | L | C | K | |
| 40 L/min. | PRDB - LAN | T - 11A | 34,9 | 22,2 | 79 | 81 | 85 | 40/50 |
| 80 L/min. | PRFB - LAN | T - 2A | 34,9 | 28,6 | 89 | 91 | 96 | 60/70 |
| 160 L/min. | PRHB - LAN | T - 17A | 46 | 31,8 | 100 | 102 | 107 | 200/215 |
| 320 L/min. | PRJB - LAN | T - 19A | 63,5 | 41,3 | 124 | 127,8 | 130 | 350/375 |

Performance Curves



- Maximum operating pressure = 350 bar
- Factory pressure setting established at blocked control port (deadhead)
- Maximum leakage = PRDB: 32,8 cc/min./70 bar; PRFB: 49,2 cc/min./70; PRHB: 65,5 cc/min./70 bar; PRJB: 81,9 cc/min./70 bar.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 210 bar.
- All spring ranges are capable of operating with 350 bar inlet pressure.

PR ★ B - ★ ★ ★

| Nominal Capacity | Control** | Adjustment Range | Seal |
|---------------------|---------------------------|------------------------|-----------------|
| D 40 L/min. | L Standard Screw | A 35 - 210 bar | N Buna-N |
| F 80 L/min. | C Tamper Resistant | B 3,5 - 105 bar | V Viton |
| H 160 L/min. | K Handknob | D 1,5 - 55 bar | |
| J 320 L/min. | | E 1,5 - 25 bar | |
| | | S 1,5 - 14 bar | |
| | | W*50 - 315 bar | |

Available for PRFB and PRHB

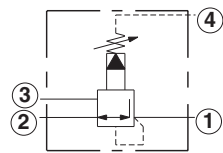
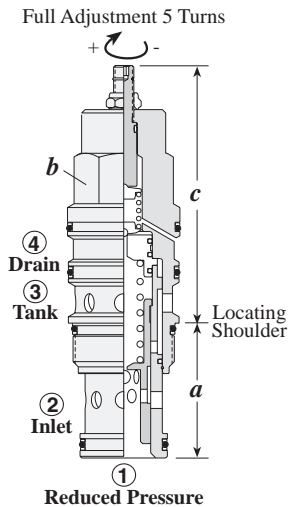
| | |
|---------------------|--|
| A 50-210 bar | <i>Adjustment Range Options:</i> PRDB Only: A is standard set at 70 bar. B, D, E, S are standard set at 14 bar. PRFB, PRHB: A, W are standard set at 70 bar. D is standard set at 25 bar. E is standard set at 14 bar. S is standard set at 7 bar. |
| B 20-105 bar | |
| D 14-55 bar | |
| E 7-25 bar | |
| S 3,5-14 bar | |

** See page 162 for information on Control Options

* Not available for PRFB, PRHB
Customer may specify pressure setting.

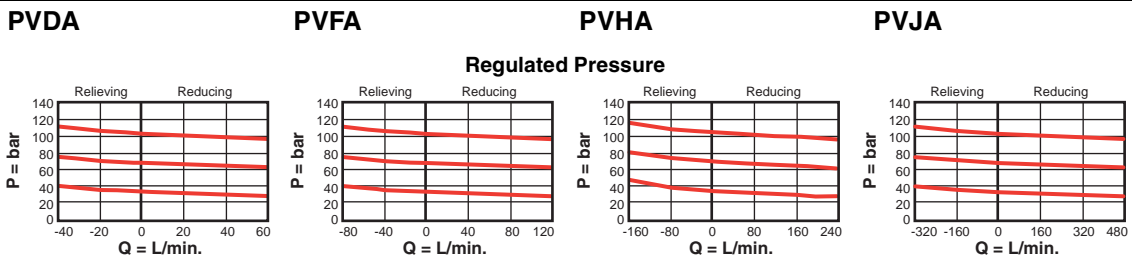
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PILOT OPERATED REDUCING/RELIEVING, EXTERNALLY DRAINED



| Capacity | Typical Cartridge Model Code | Cavity | Cartridge Dimensions | | | | | Installation Torque (Nm) |
|------------|------------------------------|---------|----------------------|------|-----|-----|-----|--------------------------|
| | | | a | b | c | | | |
| 40 L/min. | PVDA – LAN | T - 21A | 34,9 | 22,2 | L | C | K | 40/50 |
| 80 L/min. | PVFA – LAN | T - 22A | 34,9 | 28,6 | 88 | 90 | 94 | 60/70 |
| 160 L/min. | PVHA – LAN | T - 23A | 46 | 31,8 | 100 | 102 | 107 | 200/215 |
| 320 L/min. | PVJA – LAN | T - 24A | 63,5 | 41,3 | 122 | 126 | 129 | 465/500 |

Performance Curves



- Maximum operating pressure = 350 bar
- Factory pressure setting established at blocked control port (deadhead)
- Control pilot flow = PVDA: 0,11 to 0,16 L/min., PVFA: 0,16 to 0,25 L/min., PVHA, PVJA: 0,25 to 0,33 L/min.
- Maximum pressure at port 3 should be limited to 210 bar.
- Pressure on the drain (port 4) is directly additive to the valve setting at a 1:1 ratio and should not exceed 350 bar.

PV ★ A – ★ ★ ★

| Nominal Capacity | Control** | Adjustment Range | Seal |
|------------------|--------------------|------------------|----------|
| D 40 L/min. | L Standard Screw | A 7 - 210 bar | N Buna-N |
| F 80 L/min. | C Tamper Resistant | B 3,5 - 105 bar | V Viton |
| H 160 L/min. | K Handknob | D 2 - 55 bar | |
| J 320 L/min. | | E 2 - 25 bar | |
| | | W 10 - 315 bar | |

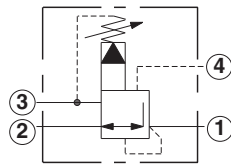
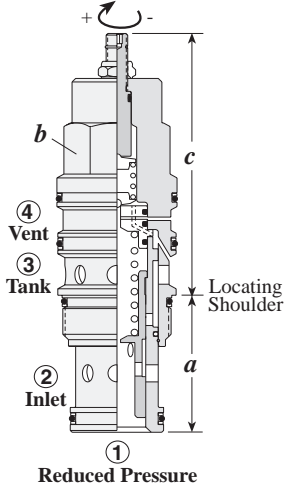
Adjustment Range Options:
 All are standard set at 14 bar.
 Maximum pressure differentials for spring ranges:
 A and B are 210 bar.
 D and E are 140 bar.
 W is 350 bar inlet pressure.
 Customer may specify pressure setting.

**See page 162 for information on Control Options

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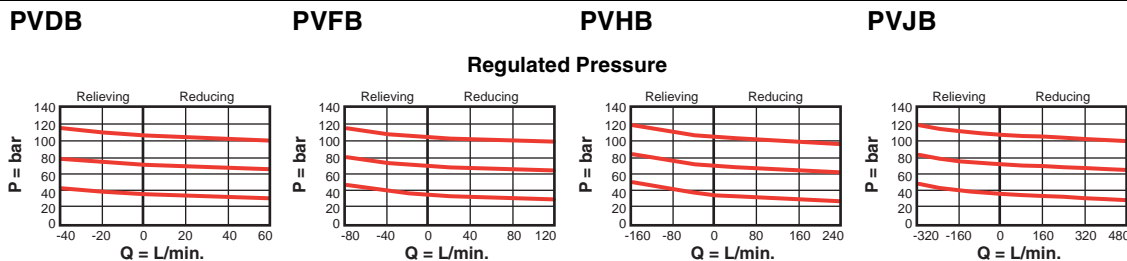
PILOT OPERATED REDUCING/RELIEVING, VENTABLE

Full Adjustment 5 Turns



| Capacity | Typical Cartridge Model Code | Cavity | Cartridge Dimensions | | | | | Installation Torque (Nm) |
|------------|------------------------------|---------|----------------------|------|-----|-----|-----|--------------------------|
| | | | a | b | c | | | |
| | | | | | L | C | K | |
| 40 L/min. | PVDB - LAN | T - 21A | 34,9 | 22,2 | 79 | 81 | 85 | 40/50 |
| 80 L/min. | PVFB - LAN | T - 22A | 34,9 | 28,6 | 88 | 90 | 94 | 60/70 |
| 160 L/min. | PVHB - LAN | T - 23A | 46 | 31,8 | 100 | 102 | 107 | 200/215 |
| 320 L/min. | PVJB - LAN | T - 24A | 63,5 | 41,3 | 122 | 126 | 129 | 465/500 |

Performance Curves



- Maximum operating pressure = 350 bar
- Factory pressure setting established at blocked control port (deadhead)
- Control pilot flow = PVDB: 0,11 to 0,16 L/min., PVFB: 0,16 to 0,25 L/min., PVHB, PVJB: 0,25 to 0,33 L/min.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 210 bar.
- By controlling the pressure at the vent (port 4), the effective setting of the valve can be controlled below the nominal valve setting.

PV ★ B - ★ ★ ★

| Nominal Capacity | Control** | Adjustment Range | Seal |
|------------------|--------------------|------------------|----------|
| D 40 L/min. | L Standard Screw | A 7 - 210 bar | N Buna-N |
| F 80 L/min. | C Tamper Resistant | B 3,5 - 105 bar | V Viton |
| H 160 L/min. | K Handknob | D 2 - 55 bar | |
| J 320 L/min. | | E 2 - 25 bar | |
| | | W 10 - 315 bar | |

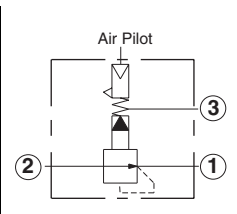
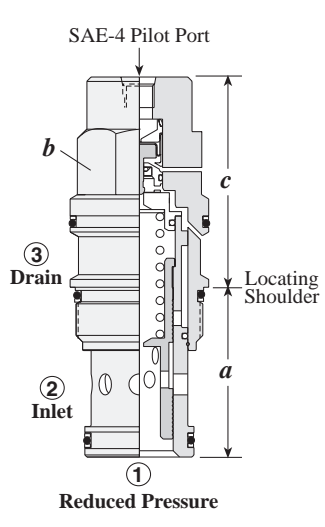
Adjustment Range Options:
 All are standard set at 14 bar.
 Maximum pressure differentials for spring ranges:
 A and B are 210 bar.
 D and E are 140 bar.
 W is 350 bar inlet pressure.
Customer may specify pressure setting.

** See page 162 for information on Control Options

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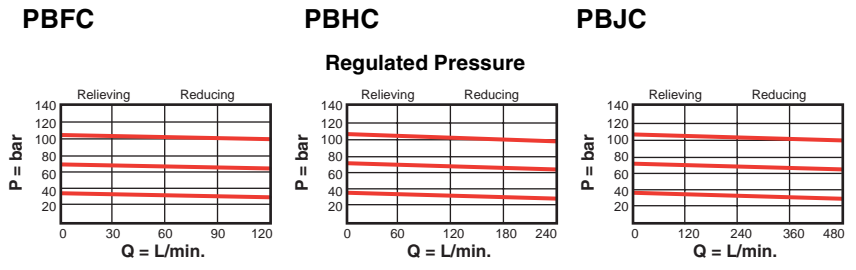
Reducing and Reducing/Relieving Valves

AIR CONTROLLED, PILOT OPERATED REDUCING

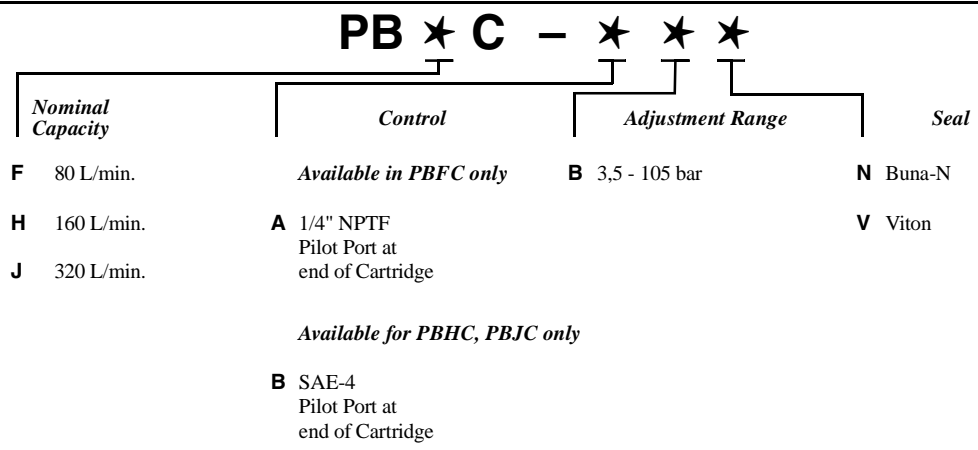


| Capacity | Typical Cartridge Model Code | Cavity | Cartridge Dimensions | | | | Installation Torque (Nm) |
|------------|------------------------------|---------|----------------------|------|----|----|--------------------------|
| | | | a | b | c | | |
| 80 L/min. | PBFC – ABN | T - 2A | 34,9 | 28,6 | 51 | - | 60/70 |
| 160 L/min. | PBHC – BBN | T - 17A | 46 | 31,8 | - | 63 | 200/215 |
| 320 L/min. | PBJC – BBN | T - 19A | 63,5 | 41,3 | - | 80 | 465/500 |

Performance Curves



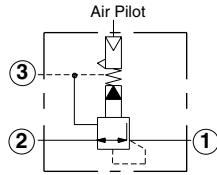
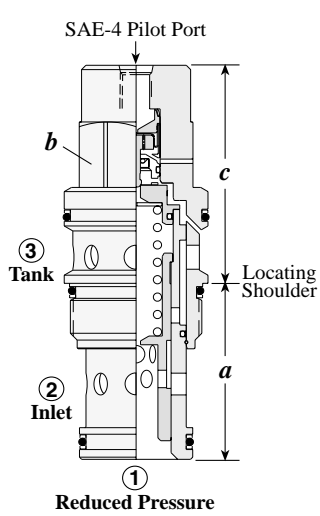
- Pilot ratio, air to hydraulic 1:20
- Maximum operating pressure = 140 bar
- Maximum air pressure should not exceed 10 bar.
- Control pilot flow = PBFC: 0,16 to 0,25 L/min., PBHC, PBJC: 0,25 to 0,33 L/min.
- Maximum pressure differential, inlet to outlet = 210 bar.
- The pressure at port 3 determines the minimum valve setting and should not exceed 70 bar.



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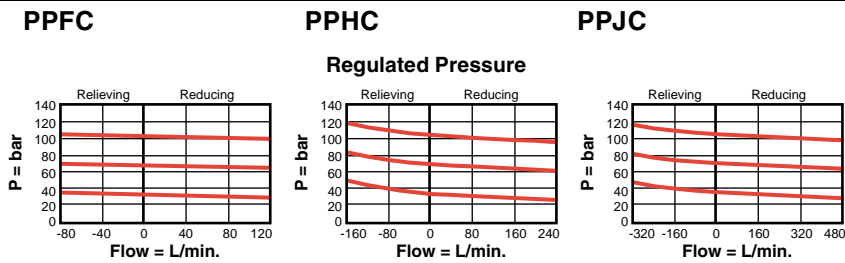
Reducing and Reducing/Relieving Valves

AIR CONTROLLED, PILOT OPERATED REDUCING/RELIEVING



| Capacity | Typical Cartridge Model Code | Cavity | Cartridge Dimensions | | | | Installation Torque (Nm) |
|------------|------------------------------|---------|----------------------|------|---|----|--------------------------|
| | | | a | b | c | | |
| 80 L/min. | PPFC – ABN | T - 2A | 34,9 | 28,6 | A | B | 60/70 |
| 160 L/min. | PPHC – BBN | T - 17A | 46 | 31,8 | - | 63 | 200/215 |
| 320 L/min. | PPJC – BBN | T - 19A | 63,5 | 41,3 | - | 80 | 465/500 |

Performance Curves



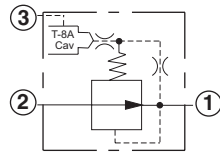
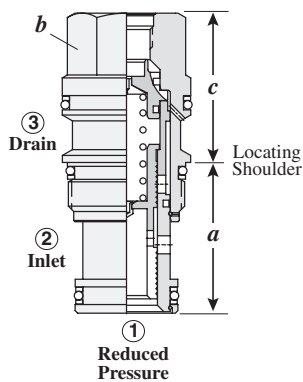
- Pilot ratio, air to hydraulic 1:20 Maximum operating pressure = 140 bar
- Maximum air pressure should not exceed 10 bar.
- Control pilot flow = PPFC: 0,16 to 0,25 L/min., PPHC, PPJC: 0,25 to 0,33 L/min.
- Maximum pressure differential, inlet to outlet = 210 bar.
- The pressure at port 3 determines the minimum valve setting and should not exceed 70 bar.

PP ★ C – ★ ★ ★

| Nominal Capacity | Control | Adjustment Range | Seal |
|---------------------|--|------------------------|-----------------|
| F 80 L/min. | Available in PPFC only | B 3,5 - 105 bar | N Buna-N |
| H 160 L/min. | A 1/4" NPTF Pilot Port at end of Cartridge | | V Viton |
| J 320 L/min. | Available for PPHC, PPJC only | | |
| | B SAE-4 Pilot Port at end of Cartridge | | |

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MODULATING ELEMENT WITH INTEGRAL PILOT CONTROL CAVITY

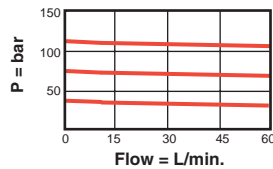


The -8 control option allows a pilot control valve to be incorporated directly into the end of the modulating element via the T-8A cavity. These pilot control cartridges are sold separately and include electro-proportional, solenoid, air pilot, and hydraulic pilot operation. See Pilot Control Cartridges on page 121.

| Capacity | Typical Cartridge Model Code | Cavity | Cartridge Dimensions | | | Installation Torque (Nm) |
|------------|------------------------------|---------|----------------------|------|------|--------------------------|
| | | | a | b | c | |
| 40 L/min. | PBDB – 8WN | T - 11A | 34,9 | 22,2 | 30,2 | 40/50 |
| 80 L/min. | PBFB – 8WN | T - 2A | 34,9 | 28,6 | 35,1 | 60/70 |
| 160 L/min. | PBHB – 8WN | T - 17A | 46,0 | 31,8 | 46,0 | 200/215 |
| 320 L/min. | PBJB – 8WN | T - 19A | 63,5 | 41,3 | 58,7 | 465/500 |

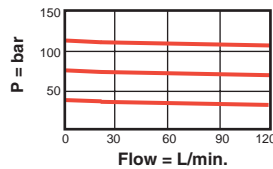
Performance Curves

PBDB-8

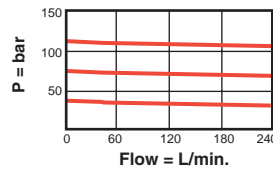


PBFB-8

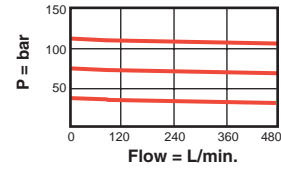
Regulated Pressure with T-8A Pilot Stage Installed



PBHB-8



PBJB-8



- Maximum operating pressure = 350 bar
- Control pilot flow = PBDB-8: 0,11 to 0,16 L/min., PBFB-8: 0,16 to 0,25 L/min., PBHB-8, PBJB-8: 0,25 to 0,33 L/min.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 210 bar.
- Maximum inlet pressure is determined by the bias spring. The D spring is limited to 140 bar maximum differential pressure and the W spring is limited to 350 bar maximum inlet pressure.
- With the -8 control option, the main stage valve should first be installed to the correct torque value. The T-8A pilot control valve should then be installed into the main stage valve to its required torque value.

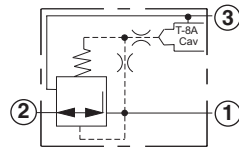
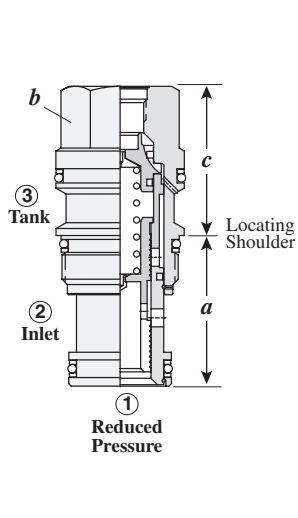
PB * B - 8 * *

| Nominal Capacity | Control | Minimum Control Pressure | Seal |
|---------------------|---|--------------------------|-----------------|
| D 40 L/min. | 8 T-8A Cavity in hex body for pilot operation (Pilot valve to be ordered separately) | D 1,7 bar | N Buna-N |
| F 80 L/min. | | W 7 bar | V Viton |
| H 160 L/min. | | | |
| J 320 L/min. | | | |

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Reducing and Reducing/Relieving Valves

3-WAY, MODULATING ELEMENT WITH INTEGRAL PILOT CONTROL CAVITY

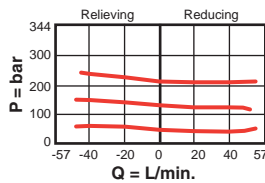


The -8 control option allows a pilot control valve to be incorporated directly into the end of the modulating element via the T-8A cavity. These pilot control cartridges are sold separately and include electro-proportional, solenoid, air pilot, and hydraulic pilot operation. See Pilot Control Cartridges on page 121.

| Capacity | Typical Cartridge Model Code | Cavity | Cartridge Dimensions | | | Installation Torque (Nm) |
|------------|------------------------------|---------|----------------------|------|------|--------------------------|
| | | | a | b | c | |
| 40 L/min. | PPDB - 8WN | T - 11A | 34,9 | 22,2 | 30,2 | 40/50 |
| 80 L/min. | PPFB - 8WN | T - 2A | 34,9 | 28,6 | 35,1 | 60/70 |
| 160 L/min. | PPHB - 8WN | T - 17A | 46,0 | 31,8 | 46,0 | 200/215 |
| 320 L/min. | PPJB - 8WN | T - 19A | 63,5 | 41,3 | 58,7 | 465/500 |

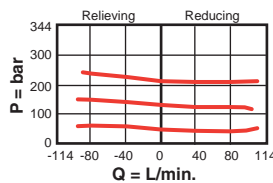
Performance Curves

PPDB-8

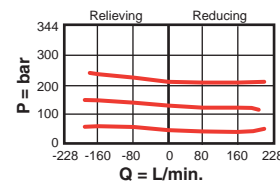


PPFB-8

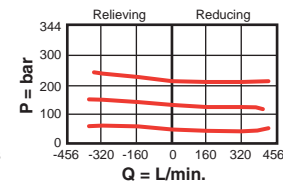
Regulated Pressure with T-8A Pilot Stage Installed



PPHB-8



PPJB-8



- Maximum operating pressure = 350 bar
- Control pilot flow = PPDB-8: 0,11 to 0,16 L/min., PPFB-8: 0,16 to 0,25 L/min., PPHB-8, PPJB-8: 0,25 to 0,33 L/min.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 210 bar.
- Maximum inlet pressure is determined by the bias spring. The D spring is limited to 140 bar maximum differential pressure and the W spring is limited to 350 bar maximum inlet pressure.
- With the -8 control option, the main stage valve should first be installed to the correct torque value. The T-8A pilot control valve should then be installed into the main stage valve to its required torque value.

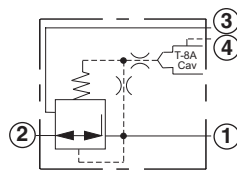
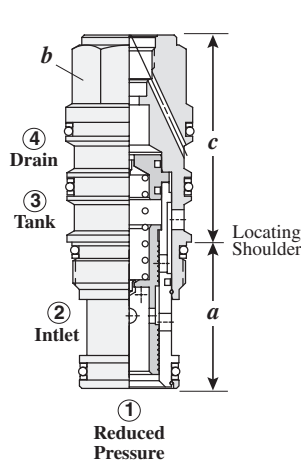
PP ★ B - 8 ★ ★

| Nominal Capacity | Control | Minimum Control Pressure | Seal |
|---------------------|---|--------------------------|-----------------|
| D 40 L/min. | 8 T-8A Cavity in hex body for pilot operation (Pilot valve to be ordered separately) | D 1,7 bar | N Buna-N |
| F 80 L/min. | | W 7 bar | V Viton |
| H 160 L/min. | | | |
| J 320 L/min. | | | |

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Reducing and Reducing/Relieving Valves

3-WAY, EXTERNALLY DRAINED, MODULATING ELEMENT WITH INTEGRAL PILOT CONTROL CAVITY



The -8 control option allows a pilot control valve to be incorporated directly into the end of the modulating element via the T-8A cavity. These pilot control cartridges are sold separately and include electro-proportional, solenoid, air pilot, and hydraulic pilot operation. See Pilot Control Cartridges on page 121.

| Capacity | Typical Cartridge Model Code | Cavity | Cartridge Dimensions | | | Installation Torque (Nm) |
|------------|------------------------------|---------|----------------------|------|------|--------------------------|
| | | | a | b | c | |
| 40 L/min. | PVDA - 8WN | T - 21A | 34,9 | 22,2 | 45,2 | 40/50 |
| 80 L/min. | PVFA - 8WN | T - 22A | 34,9 | 28,6 | 50,8 | 60/70 |
| 160 L/min. | PVHA - 8WN | T - 23A | 46,0 | 31,8 | 65,8 | 200/215 |
| 320 L/min. | PVJA - 8WN | T - 24A | 63,5 | 41,3 | 80,3 | 465/500 |

Performance Curves

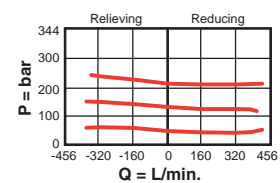
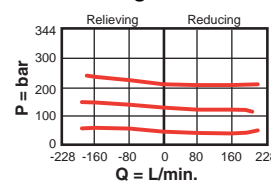
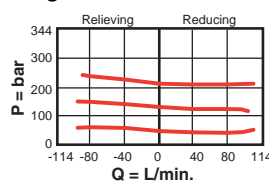
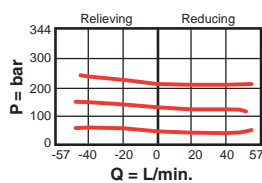
PVDA-8

PVFA-8

PVHA-8

PVJA-8

Regulated Pressure with T-8A Pilot Stage Installed



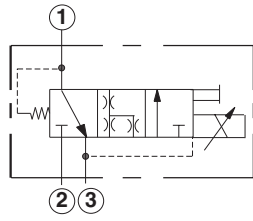
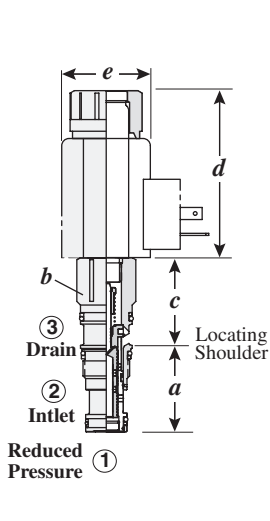
- Maximum operating pressure = 350 bar
- Control pilot flow = PVDA-8: 0,11 to 0,16 L/min., PVFA-8: 0,16 to 0,25 L/min., PVHA-8, PVJA-8: 0,25 to 0,33 L/min.
- Maximum pressure at port 3 should be limited to 210 bar.
- Pressure on the drain (port 4) is directly additive to the valve setting at a 1:1 ratio and should not exceed 350 bar.
- Maximum inlet pressure is determined by the bias spring. The D spring is limited to 140 bar maximum differential pressure and the W spring is limited to 350 bar maximum inlet pressure.
- With the -8 control option, the main stage valve should first be installed to the correct torque value. The T-8A pilot control valve should then be installed into the main stage valve to its required torque value.

PV ★ A - 8 ★ ★

| Nominal Capacity | Control | Minimum Control Pressure | Seal |
|------------------|--|--------------------------|----------|
| D 40 L/min. | 8 T-8A Cavity in hex body for pilot operation (Pilot valve to be ordered separately) | D 1,7 bar | N Buna-N |
| F 80 L/min. | | W 7 bar | V Viton |
| H 160 L/min. | | | |
| J 320 L/min. | | | |

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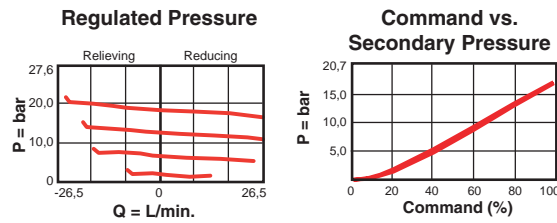
ELECTRO-PROPORTIONAL, DIRECT ACTING REDUCING/RELIEVING



| Capacity | Typical Cartridge Model Code | Cavity | Cartridge Dimensions | | | | | Installation Torque (Nm) |
|-----------|------------------------------|--------|----------------------|------|------|------|----------|--------------------------|
| | | | a | b | c | d | e (dia.) | |
| 20 L/min. | PRDL - MDN | T-11A | 35,1 | 22,2 | 38,1 | 70,1 | 37,3 | 45/50 |

Performance Curves

PRDL



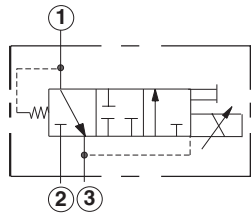
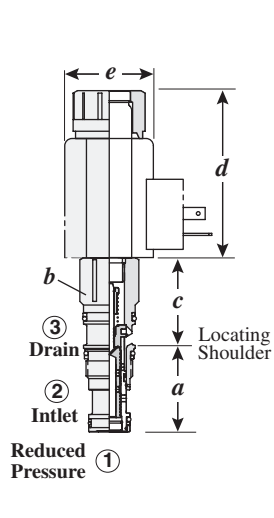
- Maximum operating pressure = 350 bar
- Maximum valve leakage = 328 cc/min. at deadhead
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 210 bar.
- For optimum performance, an amplifier with current sensing and adjustable dither should be used. Dither should be adjustable between 100 - 250 Hz.

PRDL - MDN

| Nominal Capacity | Control | Operating Range | Seal |
|--------------------|--|-----------------------|-----------------|
| L 20 L/min. | M Manual Override (Standard) | D 3,5 - 35 bar | N Buna-N |
| | NOTE: Coil must be ordered separately. Use 12V DC or 24V DC (Series 770-***) coils only. See page 167. | E 1,7 - 18 bar | V Viton |
| | | S 0,7 - 7 bar | |

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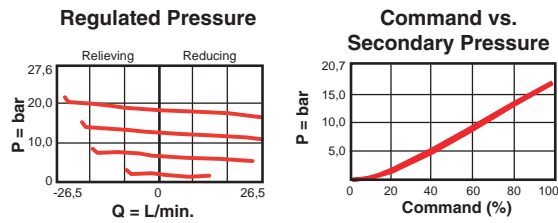
ELECTRO-PROPORTIONAL, DIRECT ACTING WITH LOW LEAKAGE



| Capacity | Typical Cartridge Model Code | Cavity | Cartridge Dimensions | | | | | Installation Torque (Nm) |
|-----------|------------------------------|--------|----------------------|------|------|------|----------|--------------------------|
| | | | a | b | c | d | e (dia.) | |
| 20 L/min. | PRDP - MDN | T-11A | 35,1 | 22,2 | 38,1 | 70,1 | 37,3 | 45/50 |

Performance Curves

PRDP



- Maximum operating pressure = 350 bar
- Maximum valve leakage = 32.8 cc/min. at deadhead
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 210 bar.
- For optimum performance, an amplifier with current sensing and adjustable dither should be used. Dither should be adjustable between 100 - 250 Hz.

PRDP - MDN

| | | | |
|--|---|---|---|
| <p>Nominal Capacity</p> <p>P 20 L/min.</p> | <p>Control</p> <p>M Manual Override (Standard)</p> <p>NOTE: Coil must be ordered separately. Use 12V DC or 24V DC (Series 770-***) coils only. See page 167.</p> | <p>Operating Range</p> <p>D 3,5 - 35 bar</p> <p>E 1,7 - 18 bar</p> | <p>Seal</p> <p>N Buna-N</p> <p>V Viton</p> |
|--|---|---|---|

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