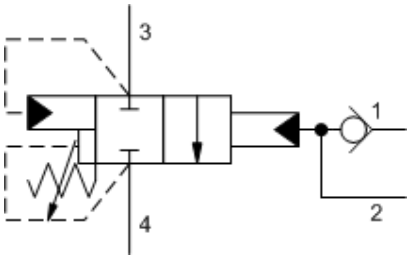
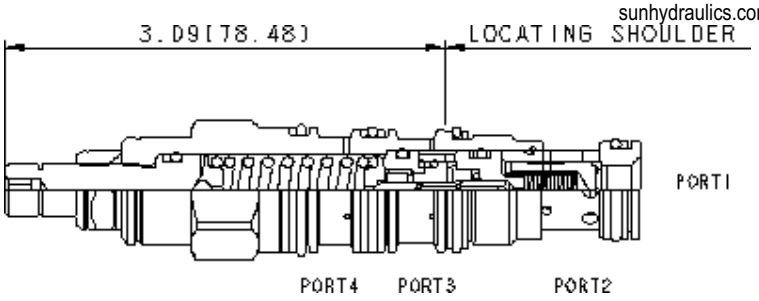
MODEL
QCDB

20%, accumulator sense, pump unload valve with check - pilot capacity
SERIES 1 / CAPACITY: 60 L/min. / CAVITY: T-21A

sunhydraulics.com/model/QCDB





CONFIGURATION

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

The accumulator sense, pump unload pilot valve is used to sense pressure in an accumulator at port 2 of the valve and when the pressure at port 2 reaches the valve setting, port 3 connects to port 4 to vent a relief valve and unload the pump. This valve has a 20% ratio between unload setting and reset; when pressure at port 2 falls below 80% of the valve setting, port 3 is blocked from port 4 and the pump will come back online to recharge the accumulator.

The integral free-flow check valve is suitable for pump flows up to 15 gpm (60 L/min). For higher capacity pumps, another version of accumulator sense, pump unload cartridge, QPAB, which requires a separate check cartridge is available.

TECHNICAL DATA

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

Cavity	T-21A
Series	1
Capacity	60 L/min.
Maximum Operating Pressure	350 bar
Check Cracking Pressure	0,3 bar
Pressure Drop, Port 1 to Port 2	7 bar@60 L/min.
Pilot Flow Capacity	0,75 L/min.
Adjustment - No. of CW Turns from Min. to Max. setting	5
Valve Hex Size	22,2 mm
Valve Installation Torque	41 - 47 Nm
Adjustment Screw Internal Hex Size	4 mm
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
Model Weight	0.19 kg.

CONFIGURATION OPTIONS

Model Code Example: QCDBLAN

CONTROL (L)

- **L** Standard Screw Adjustment
- **C** Tamper Resistant - Factory Set

ADJUSTMENT RANGE (A)

- **A** 1000 - 3000 psi (70 - 210 bar), 1000 psi (70 bar) Standard Setting
- **B** 500 - 1500 psi (35 - 105 bar), 500 psi (35 bar) Standard Setting
- **C** 2000 - 5000 psi (140 - 350 bar), 2000 psi (140 bar) Standard Setting
- **D** 250 - 800 psi (18 - 55 bar), 250 psi (18 bar) Standard Setting

SEAL MATERIAL (N)

- **N** Buna-N
- **V** Viton

MATERIAL/COATING

- Standard Material/Coating
- **/AP** Stainless Steel, Passivated
- **/LH** Mild Steel, Zinc-Nickel

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TECHNICAL FEATURES

- The pressure differential between unload and reset will be within +3/-2% of the stated ratio of the valve.
- The accumulator sensing area is positively sealed.
- The spool design of this valve allows it to maintain a fixed differential ratio because the areas are created by diameters on the spool that will not wear or change with use.
- Minimum clearances between the spool and sleeve and a seal on the pilot piston diameter significantly reduce the potential for silting.
- When applying this cartridge, a separate drain line is required to prevent erratic operation caused by tank line pressure fluctuations.
- NOTE: Careful consideration should be given when selecting an adjustment range. System pressure drops and flows tend to affect the operation of unloading valves. Low operating pressures combined with low differentials result in a very narrow band between unload and reset, requiring precise system design. High flow rates typically mean high pressure drops, which subtract from the differential the valve has to work with.
- Sun has designed a variety of standard accumulator/pump unload assemblies with a variety of features. These assemblies can be found on our website under SOLUTIONS: ACCUMLATOR SENSE, PUMP UNLOAD.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

PERFORMANCE CURVES

