

PVB Divider Valve

Series Progressive Systems

General

The PVB Divider Valve is designed for small-size series progressive lubrication systems. It is a cost efficient solution for supplying multiple lubrication points with relatively small volumes of oil and grease. For use with machine tools, processing machinery, presses, textile, printing and packaging machinery.

Features

- + Progressive distributor block designed for use with oil or grease applications
- + Manifolds available in sizes ranging from 6 to 20 outlets
- + Positive volume of 0.17cc (0.01 cu. in.) per outlet per cycle
- + Easy-to-use control and monitoring features



For mobile applications see Datasheet #35635: PVB Mobile Divider Valve.

Technical Data

Material	Steel	
Minimum Pressure	145 psi (10 bar)	
Maximum Pressure	Without indicator pin	4350 psi (300 bar)
	With indicator pin	2300 psi (160 bar)
Maximum Differential Pressure (between two outlets)	1015 psi (70 bar)	
Temperature Range	-5°F to 176°F (-20°C to 80°C)	
Metered Volume Per Outlet	0.17cc (0.01 cu. in.) per cycle	
Lubricant	Grease	Up to NLGI grade 2
	Oil	ISO VG 68 to 1,500 at working temp.
	Synthetics	Contact factory prior to use

Operation

The series progressive technology allows just one piston to move at any given time. The movement of that piston causes another piston to move, and so on. With all pistons at their far left positions (Figure 1), lubricant is introduced into the block and routed to piston A. The lubricant causes piston A to move to the right, discharging a metered amount of lubricant from outlet 1 (Figure 2).

Numbers and letters are for reference only.

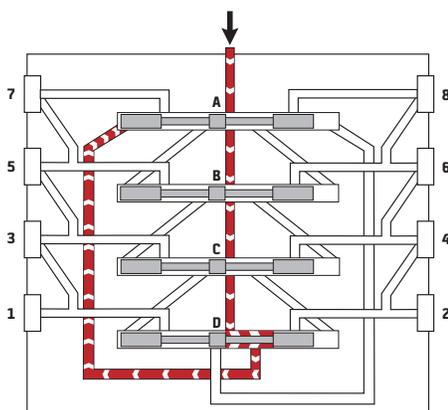


Figure 1

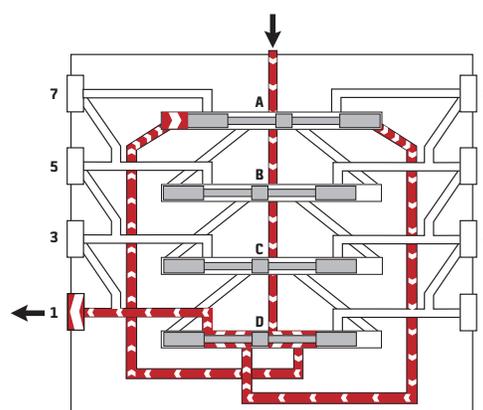


Figure 2

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The movement of **piston A** also opens a port that is connected to **piston B**. Lubricant makes its way to **piston B**, and causes **piston B** to move to the right, discharging a metered amount of lubricant from **outlet 8** (Figure 3). The movement of **piston B** has now opened a port that is connected to **piston C**. Lubricant makes its way to **piston C**, and causes **piston C** to move to the right, discharging a metered amount of lubricant from **outlet 6**. The same process discharges lubricant from **outlet 4** (Figure 4).

Numbers and letters are for reference only.

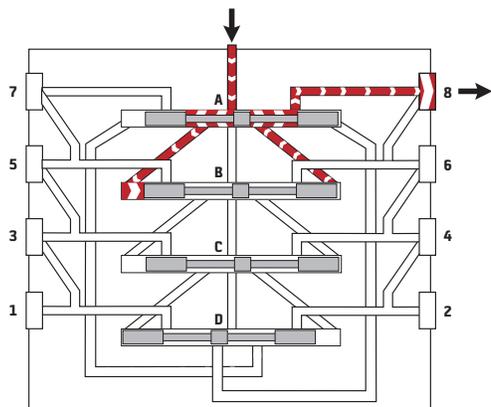


Figure 3

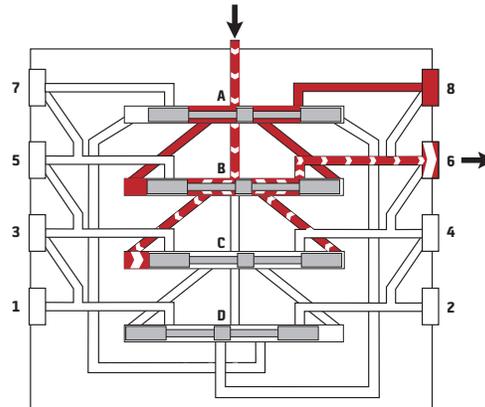


Figure 4

Now that **piston D** has moved to the right, all pistons are now sitting in the far right positions. Lubricant now follows the port back to **piston A**, moving it to the left. This discharges lubricant from **outlet 2** (Figure 5).

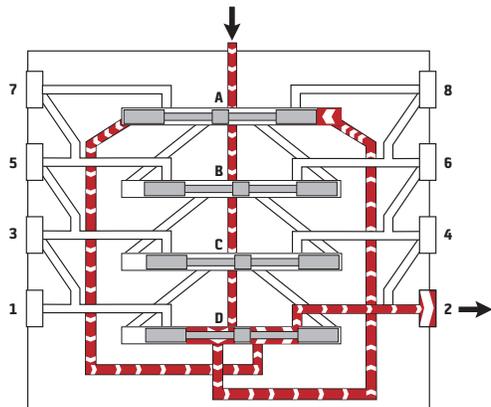
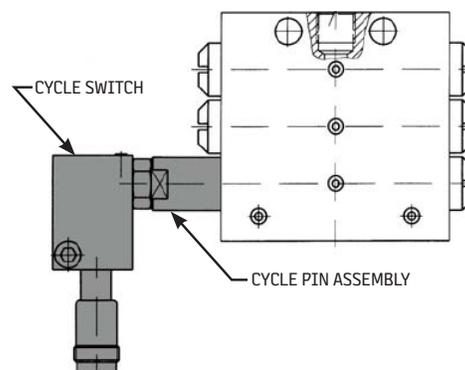


Figure 5

Monitoring

Several monitoring options are available for the PVB Divider Valve. Choose from no cycle pin, with cycle pin or with cycle pin and cycle switch – all which are depicted in the graphic to the right.



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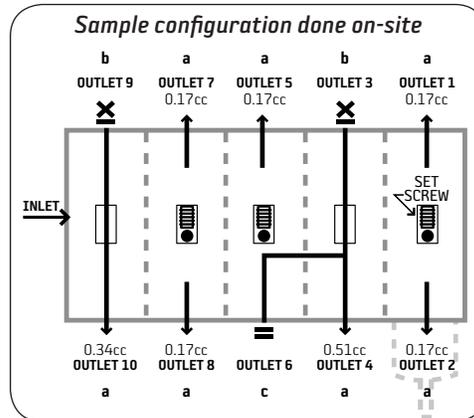
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Outlet Code Descriptions & Example

The PVB requires the use of special connectors and/or closure plugs to configure a specific outlet arrangement. All divider valves are supplied with open/working outlets on each side and can be configured using connectors or plugs, as shown on page 4. Using the appropriate connector or plug allows you to combine multiple outlets to meet higher output requirements. Closure plugs can also be used to reduce the number of working outlets. See chart below for outlet code descriptions.

Code	Outlet Type	Description
a	Open or working	Outlet is fitted with special tube connector
b	Closed	Lubricant ported to opposite outlet, same segment. (Internal set screw and ball ¹ removed, unused outlet fitted with special closure plug and clamping ring; see accessories on page 4)
c	Closed	Lubricant ported to adjacent segment, away from the inlet segment, same side (unused outlet fitted with closure plug and copper seal; see accessories on page 4) ²



ATTENTION

Standard or conventional tubing adapters are not appropriate.

¹ Set screw (Part #74107-2644)
Ball (Part #71961-4114)

² Code "c" porting is not possible for the end segment.

How to Order

Name	Outlets	Part #		
		Without Pin	With Pin	With Pin & Switch
PVB Divider Valve	6	PVB06A01AAA03	PVB06A02AAA03	PVB06A03AAA03
	8	PVB08A01AAA03	PVB08A02AAA03	PVB08A03AAA03
	10	PVB10A01AAAA03	PVB10A02AAAA03	PVB10A03AAAA03
	12	PVB12-002	PVB12-001	PVB12-003
	14	PVB14-001	PVB14-002	PVB14-003
	16	PVB16-001	PVB16-002	PVB16-003
	18	PVB18-001	PVB18-002	PVB18-003
	20	PVB20-001	PVB20-002	PVB20-003

When ordering, specify by name, description and part number, e.g. PVB Divider Valve, 12 Outlets with Pin & Switch, Part #PVB12-003.

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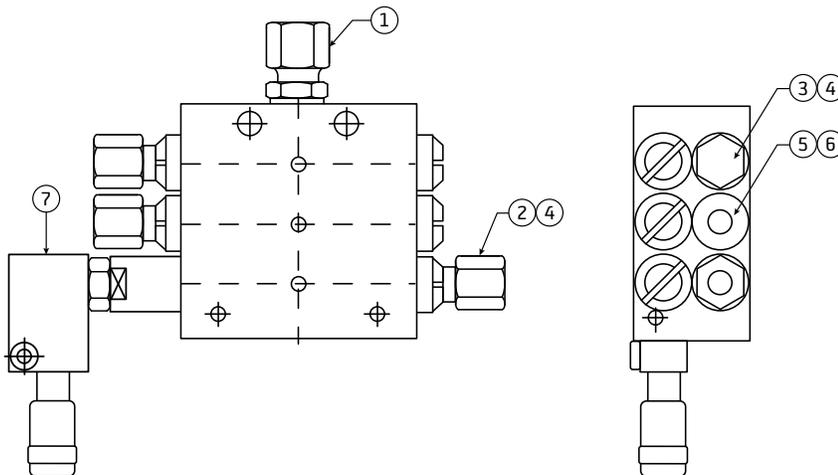
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Accessories

PVB accessories for use when divider valves are ordered without connectors or closure plugs.

Item	Description	Part #		
1	Inlet tubing connector - 1/4" tubing	810176-3		
	Inlet tubing connector - 6mm tubing	73442-1214		
	Inlet tubing connector - 10mm tubing	73442-1633		
2	Outlet tubing connector	Compression	3/16" tubing with check valve	35360
		3/16" tubing without check valve	35361	
		1/4" tubing with check valve	35166	
		1/4" tubing without check valve	35362	
		6mm tubing with check valve	23301	
		Push-to-connect	4mm with check valve	23405
		6mm with check valve	23407	
		1/4" with check valve	29080	
		1/4" without check valve	29082	
		3/16" with check valve	29084	
		3/16" without check valve	29086	
		1/8" NPT (female) with check valve	29076	
		1/8" NPT (female) without check valve	29078	
		3	Closure plug - "b" porting (singling)	74161-1851
4	Clamping ring - required for "b" porting (singling)	73511-3223		
5	Closure plug - "c" porting	74161-5741		
6	Copper seal - required for "c" porting	72712-1094		
7	Proximity cycle switch with LED (PNP)	66925-1311*		
	Proximity cycle switch with LED (NPN)	66925S003*		
Not Shown	Inlet adapter - 1/8" NPT Female	810279-3		
Not Shown	Copper seal - inlet	20913-1		
Not Shown	Right angle plug w/30' cable for switch	76928-2833		
Not Shown	Straight plug w/30' cable for switch	76928-2863		

* Use with cable part #76928-2863 or #76928-2833



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