Eaton SLV20 load sensing proportional directional valve

A flexible, priority flow sharing solution for mini and micro machinery

Eaton's SLV20 valve is a compact, lightweight solution for low-flow applications that require load sensing and flow sharing

Eaton's SLV20 valve brings load sensing and priority flow sharing to low-flow applications where a traditional cast iron sectional mobile valve is too large and heavy. Designed in sections to facilitate stacking of multiple functions, the SLV20 utilizes the new Eaton ESV9 four-way three-position proportional solenoid cartridge valve in a hydraulic integrated circuit concept.

Flows of up to 60 L/min at the inlet and 30 L/min at the work port can be achieved when using a load sense compensated system in the valve bank. Meter-out (post-compensation) or meter-in (pre-compensation) control is achieved through the use of logic elements, which enable flow sharing and flow prioritization in the same valve bank.

The maximum rated pressure is 250 bar within the working parameters of aluminum manifolds. This significantly reduces the weight of a typical section, which can lead to efficiency gains and, in some cases, increased load carrying capability and battery life.

A new multifunction meter-out compensator reduces the size of the section by 40% and provides flow sharing, even at low flows. Sections with meter-in compensators can also provide priority control to functions such as steering or transmission. Meter-in and meter-out sections can be included in the same bank and assembled in any order.

The main advantage of this system is flexibility. SLV20 valve sections are manufactured from aluminum drawn bar, which makes it possible to produce small batches of individual sections with added functions, such as pilot-operated check valves or counterbalance valves. This reduces the need for remotely mounted ancillary valves to perform other functions. Sequencing and regeneration can also be achieved using this method.

The SLV20 valve is ideal for OEMs upgrading from manual to electrohydraulic (EH) actuation, and for those looking to consolidate and reduce the size of main system circuits on mini and micro platforms.

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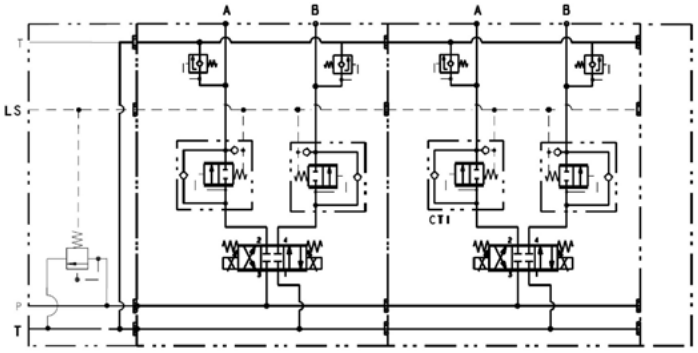
SLV20 valve features and benefits

- Brings load sensing and priority flow sharing to low-flow machinery (up to 30 L/min) with the flexibility and serviceability of screw-in cartridge valves
- Pre- and post-compensation options offer flow sharing and flow prioritization
- Patent-pending multifunction compensator reduces section size by 40%, making overall system simple and compact
- Aluminum sections reduce weight, which can increase efficiency, load carrying capability and battery life
- Can be used in open-center and closed-center systems
- Load control stack offers stable load control
- Configurable functionality
- Flexible mounting
- Low system cost
- Eaton ESV9 four-way three-position proportional solenoid cartridge valve features best-in-class hysteresis and flow performance
- Pro-FX Ready™ for easy integration with other Eaton Pro-FX Ready products
- Multiple inlet section options accommodate range of pump options

Applications

The SLV20 valve offers the ideal flow rate for mini and micro machinery platforms in the following industries:

- Construction: excavators, wheel loaders, skid steer loaders, trenchers
- Agriculture: tractors and attachments
- Material handling: spider cranes, truck-mounted cranes, aerial work platforms, lift trucks, telehandlers
- Vocational vehicles: snow and ice management, road sweepers, lawnmowers
- Auxiliary/accessory control on larger machines



SLV20 assembly with two post-compensated work sections featuring patent-pending MDPS2-10 valve.

Specifications

Rated work port & inlet pressure	250 bar
Rated work port flow @ 10 bar dP	22 L/min
Work port flow @ 14 bar dP	30 L/min
Work section thickness	50 mm
Sections per assembly	6
Electrical: Tough coils	IP69K
Manual override	Optional
Average work section weight	3 kg
Inlet/end plate weight	3 kg

For more information about the SLV20 load sensing proportional directional valve, please contact your Eaton sales manager.

Learn more about Eaton's full range of screw-in cartridge valves at **Eaton.com/SiCV**

Discover the latest additions to the SiCV portfolio at **Eaton.com/New-SiCV**

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Document No. E-VLSE-BB003-E
July 2020

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