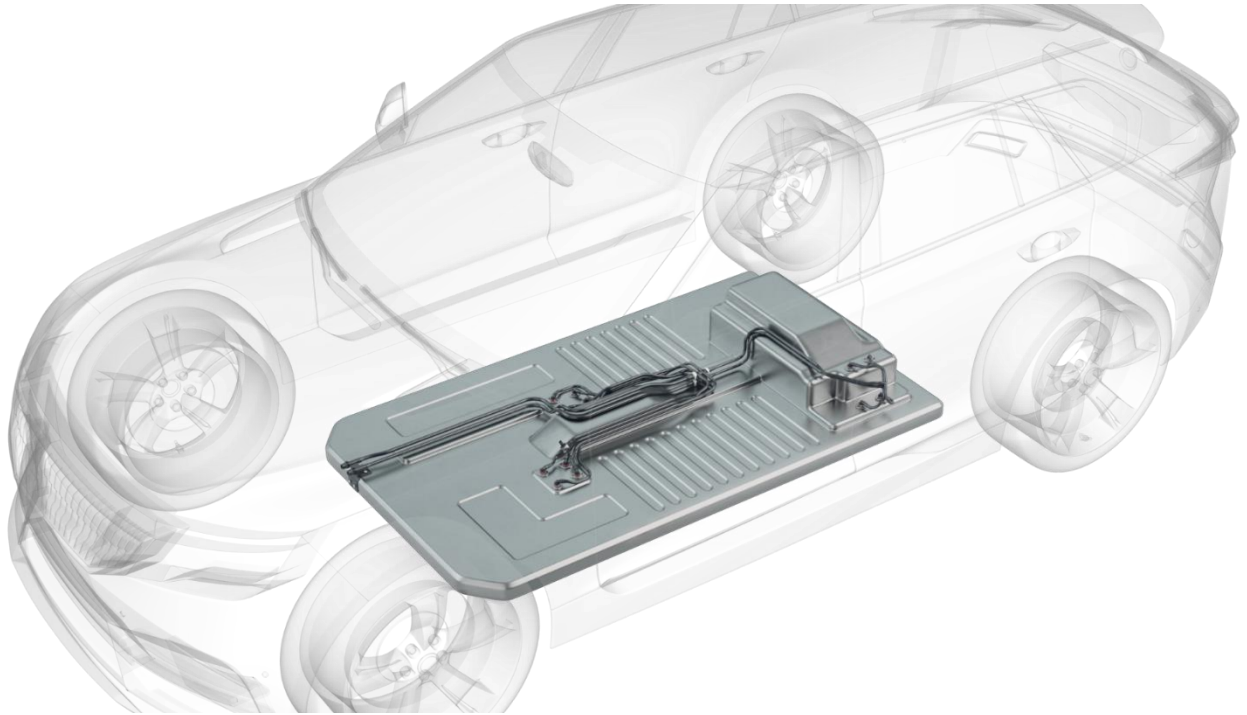


VOSS Valves for Thermal Management



2/2-Way Switching Valve

Technical specifications

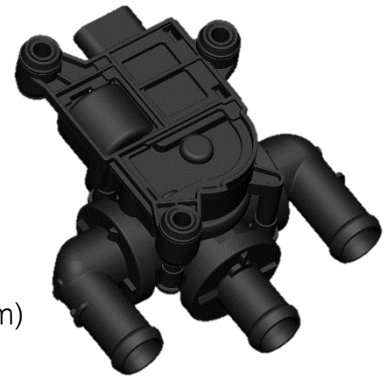
- Valve functionality: 2/2-Way Switching
 - Nominal volume flow: 25 l/min
 - Nominal operating pressure: 2.5 bar
 - Pressure drop (@25 l/min): < 0.1 bar
 - Maximum operating pressure: 3.5 bar
 - Internal leakage (@dp: 2.5 bar): < 0.050 l/min
 - Pressure during vacuum filling: -0.98 bar (0.02 bar abs.)
 - Medium temperature: -40 °C to +140 °C
 - Medium type: Automotive Coolant
-
- Nominal supply voltage: 12 V
 - Operational voltage range: 9 V – 16 V
 - Operational current: < 0.5 A (only during valve motion)
 - Nominal speed: 10 rpm (60°/s)
-
- In-built absolute angle sensor: Yes (Data via LIN-Bus)
 - Actuator control: LIN 2.1
 - Electrical connector: 5-pin Connector (MLK/MCON 1.2 mm)
 - Actuator certified for standard automotive applications
-
- Environment temperature: -40 °C to +140 °C
 - IP-Protection class: IP6K9K
 - Mounting location: Engine mounted // Chassis mounted
 - Lifetime / Endurance: 3 Million cycles (end-stop to end-stop)
-
- Fluid port type: Hose Interface (Port outer- \varnothing : 20 mm // inner- \varnothing : 15 mm)
(Other port types and orientations on request)



3/2-Way Proportional Valve

Technical specifications

- Valve functionality: 3/2-Way Proportional
 - Nominal volume flow: 25 l/min
 - Nominal operating pressure: 2.5 bar
 - Pressure drop (@25 l/min): < 0.1 bar
 - Maximum operating pressure: 3.5 bar
 - Internal leakage (@dp: 2.5 bar): < 0.050 l/min
 - Pressure during vacuum filling: -0.98 bar (0.02 bar abs.)
 - Medium temperature: -40 °C to +140 °C
 - Medium type: Automotive Coolant
-
- Nominal supply voltage: 12 V
 - Operational voltage range: 9 V – 16 V
 - Operational current: < 0.5 A (only during valve motion)
 - Nominal speed: 10 rpm (60°/s)
-
- In-built absolute angle sensor: Yes (Data via LIN-Bus)
 - Actuator control: LIN 2.1
 - Electrical connector: 5-pin Connector (MLK/MCON 1.2 mm)
 - Actuator certified for standard automotive applications
-
- Environment temperature: -40 °C to +140 °C
 - IP-Protection class: IP6K9K
 - Mounting location: Engine mounted // Chassis mounted
 - Lifetime / Endurance: 3 Million cycles (end-stop to end-stop)
-
- Fluid port type: Hose Interface (Port outer- \varnothing : 20mm // inner- \varnothing : 15mm)
(Other port types and orientations on request)



4/2-Way Switching / Proportional Valve

Technical specifications

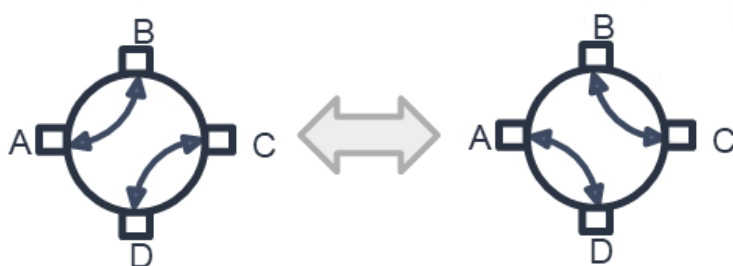
- Valve functionality: 4/2-Way Switching / Proportional
- Nominal volume flow: 25 l/min
- Nominal operating pressure: 2.5 bar
- Pressure drop (@25 l/min): < 0.1 bar
- Maximum operating pressure: 3.5 bar
- Internal leakage (@dp: 2.5 bar): < 0.050 l/min
- Pressure during vacuum filling: -0.98 bar (0.02 bar abs.)
- Medium temperature: -40 °C to +140 °C
- Medium type: Automotive Coolant

- Nominal supply voltage: 12 V
- Operational voltage range: 9 V – 16 V
- Operational current: < 0.5 A (only during valve motion)
- Nominal speed: 10 rpm (60°/s)

- In-built absolute angle sensor: Yes (Data via LIN-Bus)
- Actuator control: LIN 2.1
- Electrical connector: 5-pin Connector (MLK/MCON 1.2 mm)
- Actuator certified for standard automotive applications

- Environment temperature: -40 °C to +140 °C
- IP-Protection class: IP6K9K
- Mounting location: Engine mounted // Chassis mounted
- Lifetime / Endurance: 3 Million cycles (end-stop to end-stop)

- Fluid port type: Hose Interface (Port outer- \varnothing : 20 mm // inner- \varnothing : 15 mm)
(Other port types and orientations on request)



4/2-Way Stacked Switching Valve (Currently in Development)

Technical specifications

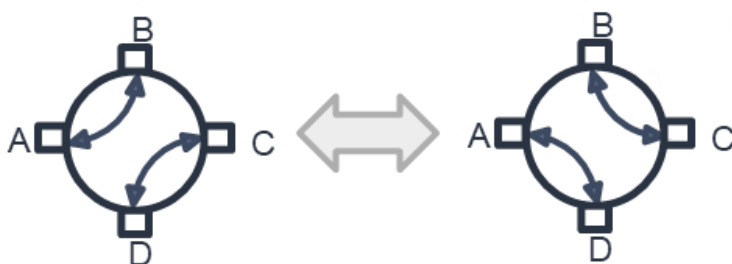
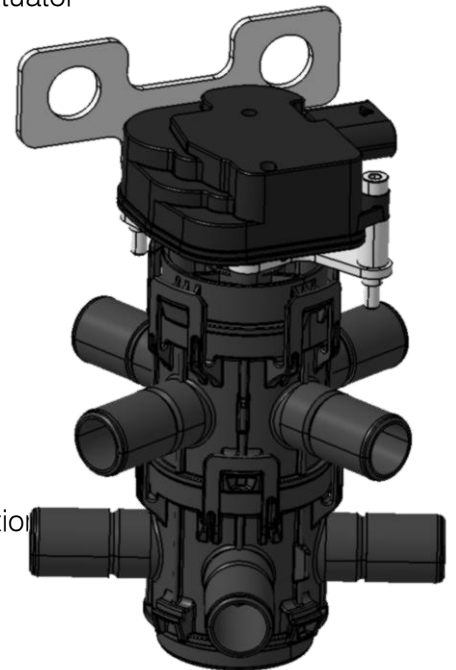
- Valve functionality: 4/2-Way Stacked Switching
Dual valve control with one actuator
- Connection between valves: Synchronous or with free-play
- Nominal volume flow: 25 l/min
- Nominal operating pressure: 2.5 bar
- Pressure drop (@25 l/min): < 0.1 bar
- Maximum operating pressure: 3.5 bar
- Internal leakage (@dp: 2.5 bar): < 0.20 l/min
- Pressure during vacuum filling: -0.98 bar (0.02 bar abs.)
- Medium temperature: -40 °C to +140 °C
- Medium type: Automotive Coolant

- Nominal supply voltage: 12 V
- Operational voltage range: 9 V – 16 V
- Operational current: < 0.5 A (only during valve motion)
- Nominal speed: 10 rpm (60°/s)

- In-built absolute angle sensor: Yes (Data via LIN-Bus)
- Actuator control: LIN 2.1
- Electrical connector: 5-pin Connector (MLK/MCON 1.2 mm)
- Actuator certified for standard automotive applications

- Environment temperature: -40 °C to +140 °C
- IP-Protection class: IP6K9K
- Mounting location: Chassis mounted
- Lifetime / Endurance: 3 Million cycles (end-stop to end-stop)

- Fluid port type: VOSS QC system 270 S14 (Inner-ø : 14 mm)
(Other port types and orientations on request)



High Flow 3/2-Way Valve (Currently in Development)

Technical specifications

- Valve functionality: 3/2-Way Switching/Proportional
 - Nominal volume flow: 300 – 400 l/min
 - Nominal operating pressure: 4.0 bar
 - Pressure drop (@350 l/min): < 0.1 bar
 - Maximum operating pressure: 2.5 bar
 - Internal leakage (@dp: tbd): < 1% of max. flow
 - Pressure during vacuum filling: Tbd.
 - Medium temperature: -40 °C to +85 °C
 - Medium type: Automotive Coolant (for Fuel Cell Applications)
-
- Nominal supply voltage: 24 V
 - Operational voltage range: 21 V – 30 V
 - Operational current: < 2.0 A
 - Nominal speed: Tbd.
 - Fail-Safe: Tbd.
-
- Position feedback: Yes (Data via Bus)
 - Actuator control: CAN-Bus
 - Electrical connector: 6-pin Connector (MLK/MCON 1.2 mm)
 - Actuator certified for standard automotive applications
-
- Environment temperature: -40 °C to +100 °C
 - IP-Protection class: IP6K9K
 - Mounting location: Chassis mounted
 - Lifetime / Endurance: Tbd.
-
- Fluid port type: Hose Interface (Port outer- \varnothing : 54mm // inner- \varnothing : 50mm)
(Other port types and orientations on request)



High Flow 2/2-Way Valve (Currently in Development)

Technical specifications

- Valve functionality: 2/2-Way Switching/Proportional
- Nominal volume flow: 300 – 400 l/min
- Nominal operating pressure: 4.0 bar
- Pressure drop (@350 l/min): < 0.1 bar
- Maximum operating pressure: 2.5 bar
- Internal leakage (@dp: tbd): < 1% of max. flow
- Pressure during vacuum filling: Tbd.
- Medium temperature: -40 °C to +85 °C
- Medium type: Automotive Coolant (for Fuel Cell Applications)

- Nominal supply voltage: 24 V
- Operational voltage range: 21 V – 30 V
- Operational current: < 2.0 A
- Nominal speed: Tbd.
- Fail-Safe: Tbd.

- Position feedback: Yes (Data via Bus)
- Actuator control: CAN-Bus
- Electrical connector: 6-pin Connector (MLK/MCON 1.2 mm)
- Actuator certified for standard automotive applications

- Environment temperature: -40 °C to +100 °C
- IP-Protection class: IP6K9K
- Mounting location: Chassis mounted
- Lifetime / Endurance: Tbd.

- Fluid port type: Hose Interface (Port outer- \varnothing : 54mm // inner- \varnothing : 50mm)
(Other port types and orientations on request)

