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Flow divider valve FDV-1N

Automatic volume flow division 1:1

1 Product Description

1.1 Application

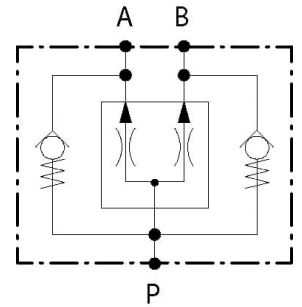
The flow divider valve is used in hydrostatic drives with parallel hydro-motors. A distribution ratio of 1:1 prevents the hydro-motor from rotating when ground are unfavorable.

1.2 Mounting location (Recommendation)

The flow divider valve is installed close to the pump.

2 Function

The flow divider valve splits an input volume into two equal output volumes. The output volumes can be combined again through check-valves. A compensation valve situated between the outputs enables partial compensation and prevents e.g. drive wheels blocking.



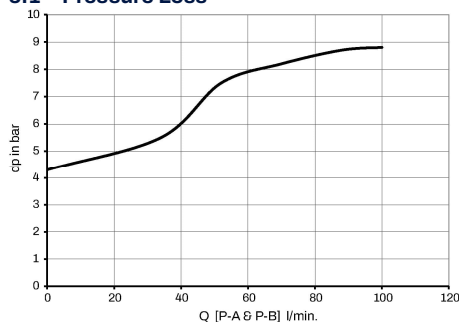
2.1 Characteristics

- Automatic distribution of flow volume
- High distribution precision
- Easy installation

3 Technical Data

Criterion	Units	Value
Max. operating pressure	bar	420
Max. volume flow	l/min	220
Weight	kg	10,7
Connection		
Connection size		
A, B	SAE 3/4" 6000psi ISO6162	
P	SAE 1" 6000psi ISO6162	
Installation position		Beliebig
Hydraulic fluid		Mineral oil (HL, HLP) conforming with DIN 51524, other fluids upon request
Hydraulic fluid temperature range	°C	-20 – +80
Ambient temperature:	°C	< +50
Viscosity range	mm ² /s	2,8 – 500
Contamination grade		Filtering conforming with NAS 1638, class 9, with minimum retention rate $\beta_{10} \geq 75$

3.1 Pressure Loss



4 Installation

4.1 General remarks

- Observe all installation and safety information of the construction machine manufacturer.
- Only technically permitted changes are to be made on the construction machine.
- The user has to ensure that the device is suitable for the respective application.
- Application exclusively for the range of application specified by the manufacturer.
- Before installation or deinstallation, the hydraulic system is to be depressurized.
- Settings are to be made by qualified personnel only.
- Opening is only to be performed with the approval of the manufacturer, otherwise the warranty is invalidated.
- No responsibility is taken for the correctness of these installation recommendations, the functionality and the technical details of the construction machine must be checked.

4.2 Application example

Final drive with hydraulic differential

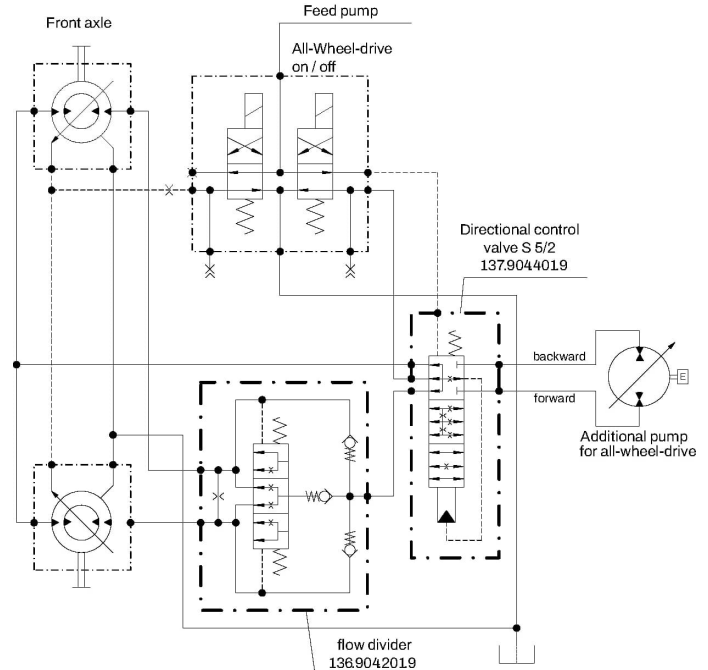
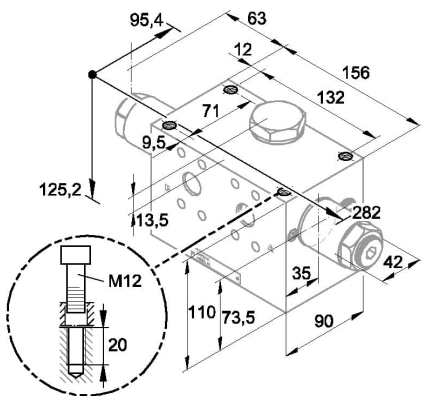
The directional control valve S5/2 137.904.401.9 and the flow divider 136.904.201.9 are intended for use in the drive train of a grader or a comparable mobile work machine with a closed circuit. They are used to control an axle that is operated either in tow mode or in drive mode and feed motors with two lifting volumes (e.g. Poclain wheel hub motors). The directional control valve is used to connect the machine's hydraulic drive motors from a freewheeling position to the drive (pump). When unswitched, the axle is not driven, so it is in towing mode. The connection to the pump is established. Since the pilot pressure is routed via the control spool, this results in a smooth shift. It also ensures that the engine pistons are held by the pressure on the control disk. By using the flow divider, the volume flow can be distributed evenly across both drive motors (hydraulic differential). The valve is very suitable for up to 250 l/min

4.3 Applications

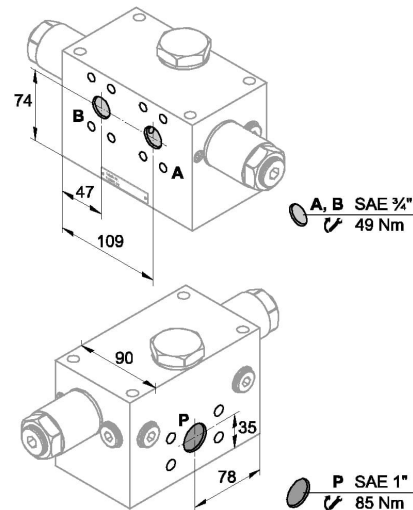
- hydrostatic drives
- Agricultural machines
- ...

4.4 Installation space

- With 4 × M12 fastening bolts on level mounting element.



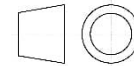
4.5 Dimensions



5 Notes, Standards and Safety Requirements

5.1 General remarks

- The views in drawings are shown in accordance with the European normal projection variant
- A comma (,) is used as a decimal point in drawings
- All dimensions are given in mm



5.2 Standards

The following standards are to be observed because of the surface temperatures on the flow divider valve:

- EN 563, Temperatures on surfaces that can be touched.
- EN 982, Safety-technical requirements for fluid-technical systems and their components.

6 Accessories