2 WAY FLOW DIVIDER - Spool size 28

- Up to 450 bar [6527 psi]
- Up to 200 l/min [52,8 gpm]
- Direct in-line mounting, depending on system configuration
- Threaded connections :
  - ISO 1179 (BSPP/Gas)
  - ISO 11926 (UNF)
- Open or closed loop circuits
- Can work by dividing or combining the flow

Specifications are subject to change without notice.

▷ DESCRIPTION

FLUID-SYSTEM is a leader in the design of anti-slipping system (registered patent) for hydrostatic transmissions and will put its experience to work for you.

The flow divider is a slip preventing system for all types of hydrostatic transmissions. It provides 100%, on demand traction for any field configuration.

FLUID-SYSTEM's flow divider is designed to suit the highest of performance and safety standards for all of our clients.

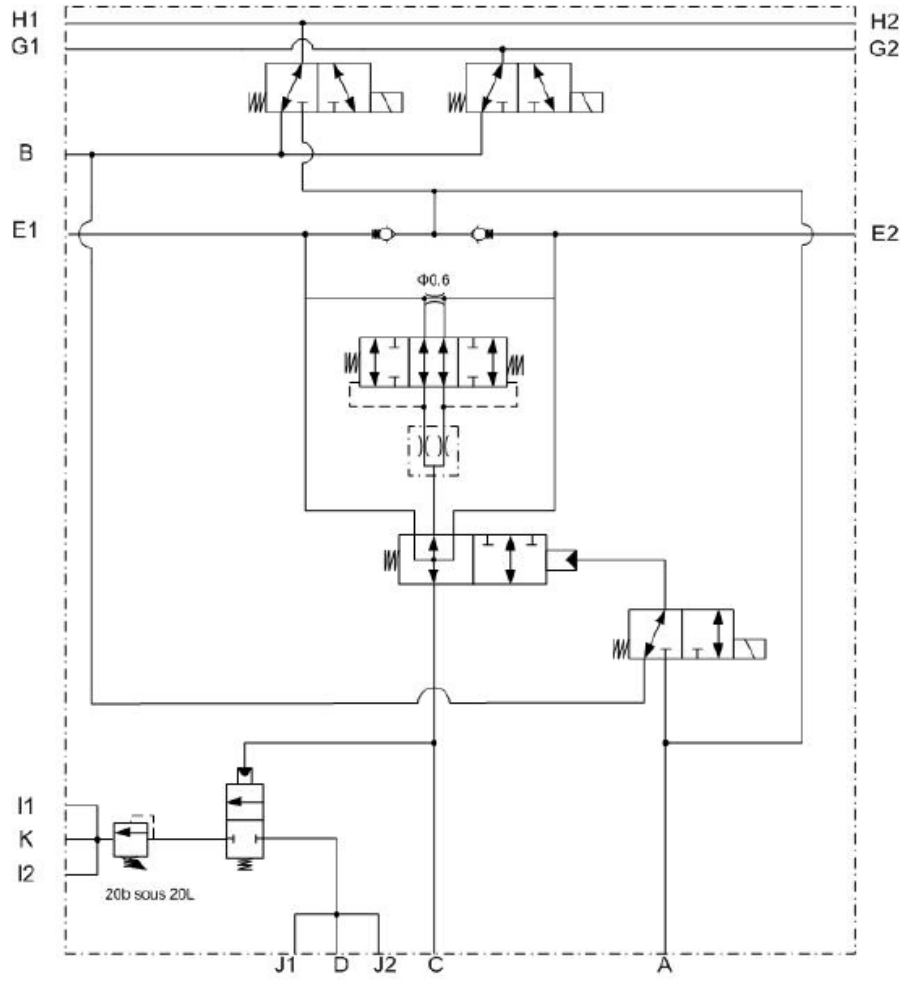
The bidirectional flow divider controls the speed between wheels of the same axle, or between different axles by dividing or combining the flow. It is equipped with an electric or hydraulic controlled bypass that enables a higher operating speed on the road. It can be equally used on open or closed loop circuits.

FLUID-SYSTEM flow divider versatility allows for different installation options on many types of hydrostatic transmissions.

▷ BENEFITS

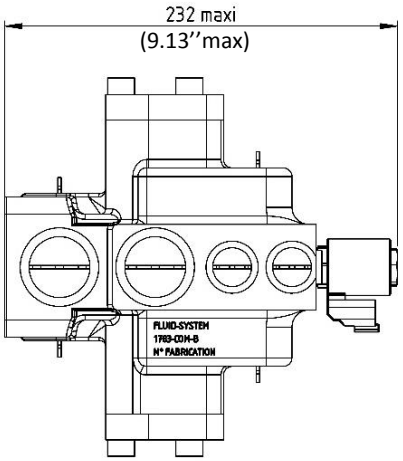
- → Designed to reduce the installation and operation costs
- → Robust and reliable
- → No need for maintenance: cost savings and reduced risk of equipment failure
- → Cost-effective solution
- → Flows can be added or divided with precision
- → Flow ratio can be adjusted to customer need
- → Large range of options
- → Long life span
- → Rigorously designed; bench and field tested

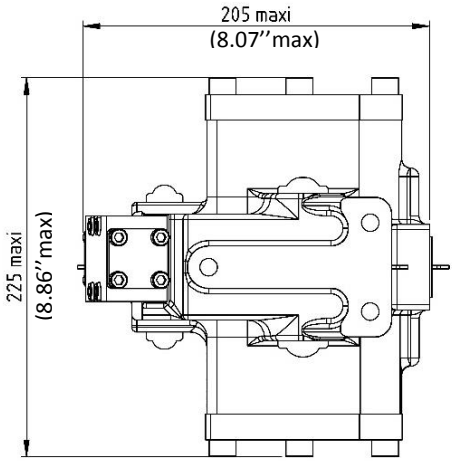
▷ HYDRAULIC SCHEMATIC

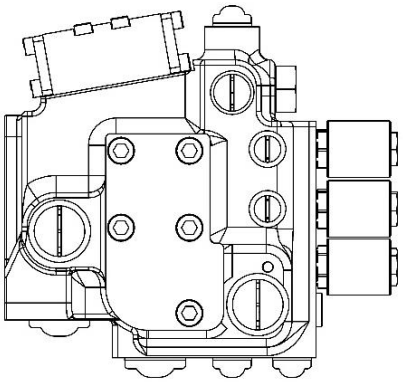


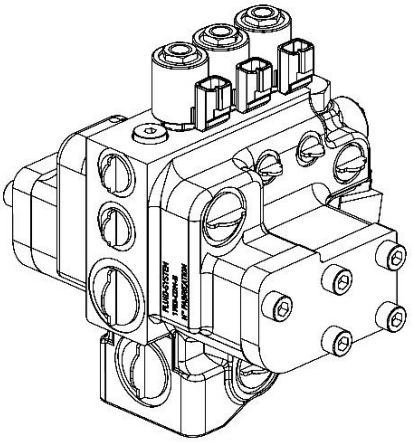
▷ OVERALL DIMENSIONS

Millimeter (Inches)









▷ INSTALLATION WARNING

If you need to install a flushing valve in a closed loop circuit equipped with a flow divider, the flushing valve must be installed between the pump and the flow divider.

▷ TECNICAL SPECIFICATIONS

Maximum Flow	200 l/min (52,8 gpm)
Operating Pressure	450 bar (6527 psi)
Piloting Pressure	Min 8 bar (116 psi) - Max 50 bar (725 psi) *
Maximum Pressure	500 bar (7255 psi)
Operating Temperature	-20°C to 80°C (32°F to 176°F)
Seals	NBR **
Threaded Connections	ISO 1179 (BSP/Gas) - ISO 11926 (UNF)
Weight	21 kg (46,3 lbs)
Material	Cast iron and Steel
Viscosity	Between 10 and 100 cst
Pollution Level	20/18/15 as per ISO 4406
Surface Treatment	Phosphatation

* Values can be changed upon request to our engineering department.
** Other seals available on demand.

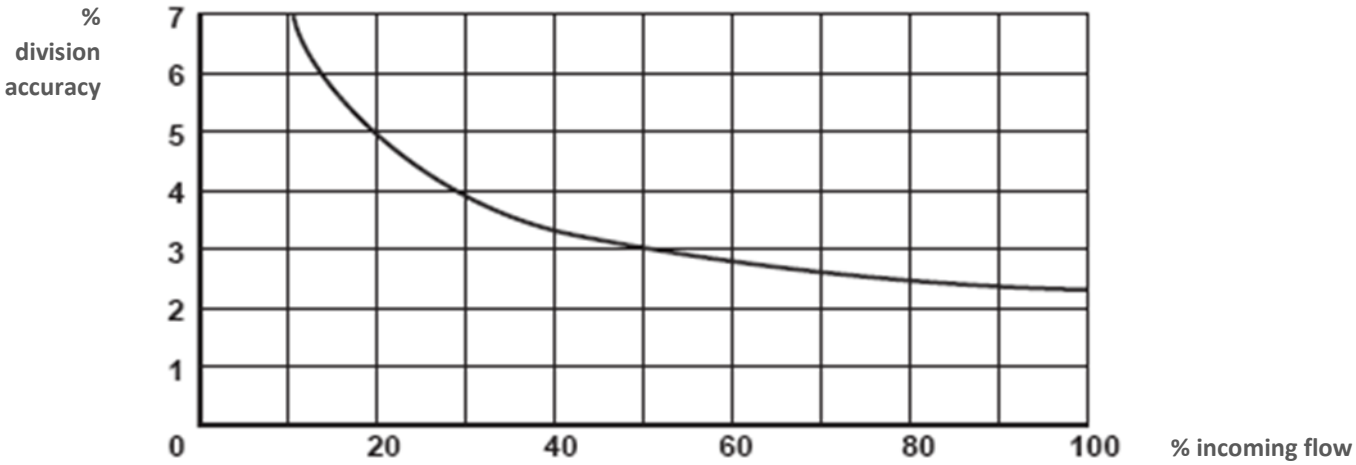
▷ PORT TABLE

Size	Max Flow	Ports	European Threades Connections ISO 1179-1	US Threaded Connections ISO 11926-1	Protective Cap
20	200 l/min	C, D	1'' BSP	1'' 5/16 – 12 UNF – 2B	Plastic
		E1, E2, J1, J2	3/4 '' BSP	1'' 1/16 – 12 UNF – 2B	Plastic
		A, B, K	1/2 '' BSP	7/8'' - 14 UNF – 2B	Plastic
		I1, I2	3/8 '' BSP	5/8'' – 18 UNF – 2B	Plastic
		G1, G2, H1, H2	1/4 '' BSP	1/2'' – 20 UNF – 2B	Plastic

▷ SPECIFICATION CURVES

a. DIVISION SPECIFICATIONS

Division ratio can be : 50/50 – 70/30 – 80/20

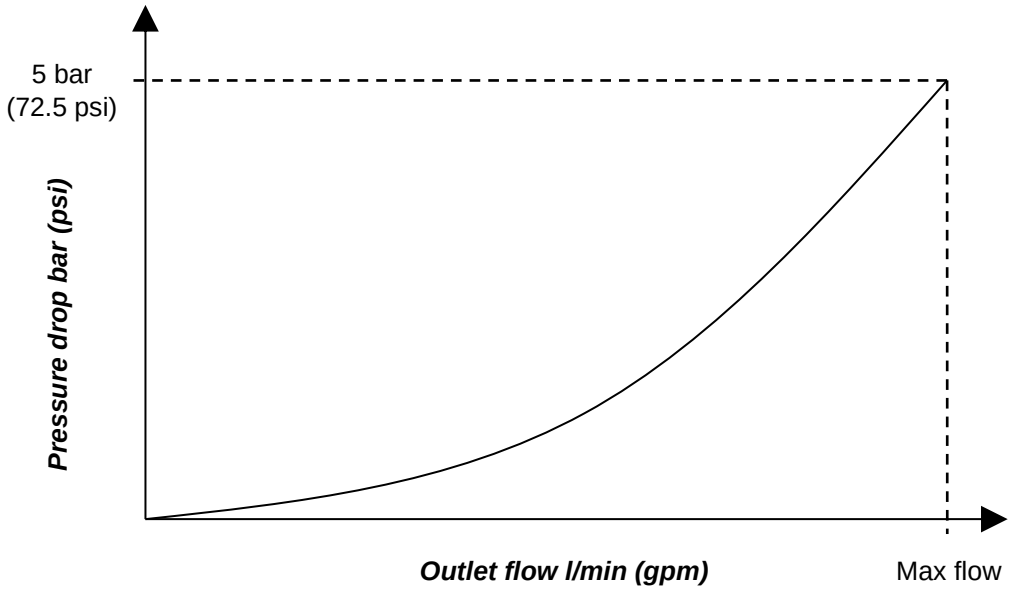


The precision is determined by the pressure difference of 150 bar (2176 psi) between A and B, without orifice and with a ratio of 50/50; it is equal to:

$$\frac{Q_A}{Q_P} \quad \text{ou} \quad \frac{Q_B}{Q_P}$$

b. PRESSURE DROP

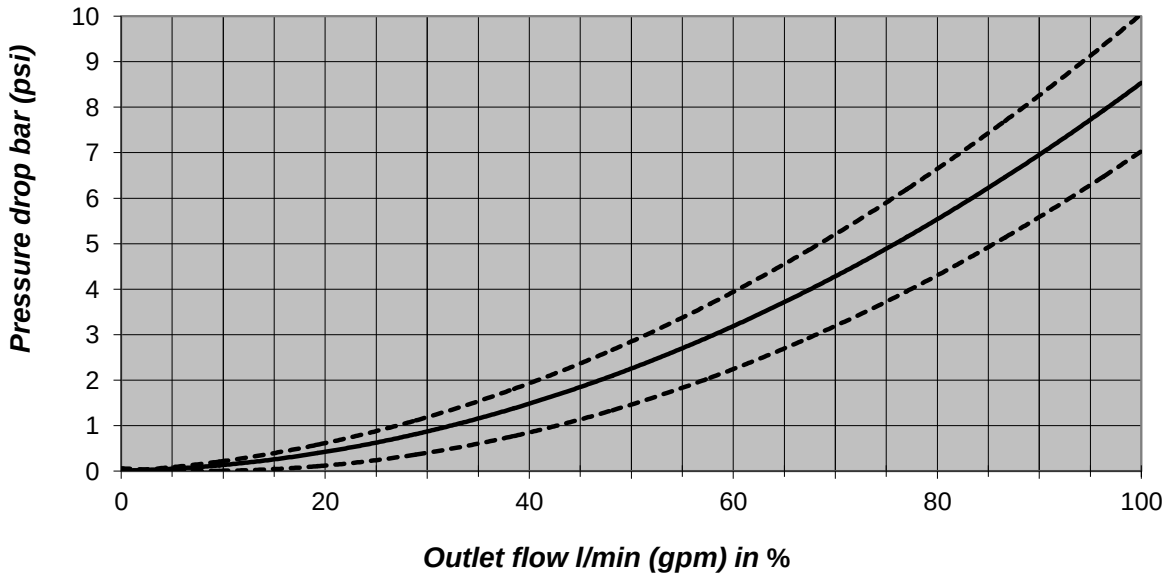
Bypass mode



Division mode

The total pressure drop corresponds to the loss at the transfer restrictor boundaries increased by the loss of the block itself.

Test conditions: HV 46 hydraulic fluid at 40°C [104°F]



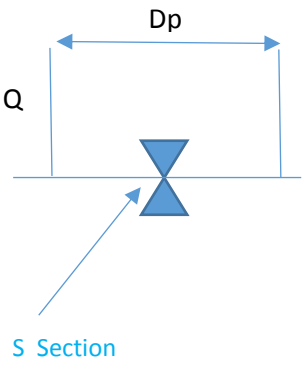
c. TRANSFER RESTRICTOR (with orifice size)

It is located between the two outlets.

Transfer restrictor calculation:

$$Q = 90 \times C \times S \times \sqrt{Dp}$$

l /min — Restrictor shape (0.65 – 1.5) — cm^2 — bar



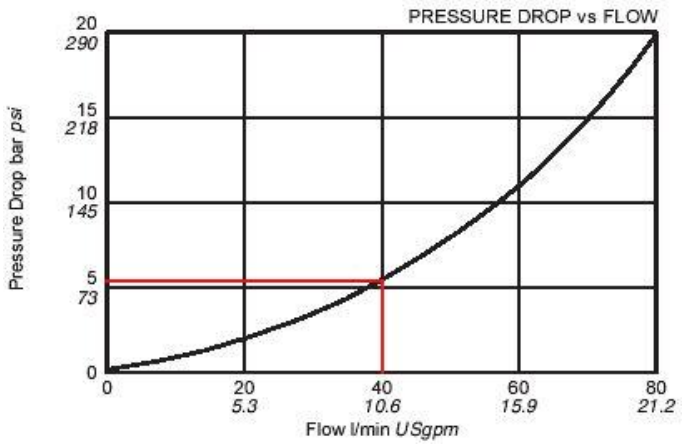
d. CHECK VALVES ON FEEDING SYSTEM

In some applications, a receiver located in front of the flow divider can use a higher flow than the one supplied. In this case, the oil is brought back in the line in order to protect the components from cavitation.

When a vehicle equipped with a hydrostatic transmission takes a turn, the external wheel must turn faster than the interior one. If the divider is installed between the right and the left wheels and is activated (without the bypass mode) while taking the turn, the check valves on the feeding system can be useful.

Note: Trials will confirm the required sizing for the application.

Nominal flow is aroud 40 l/min (10.6 US gpm) with a loss not exceeding 6 bar (87 psi).



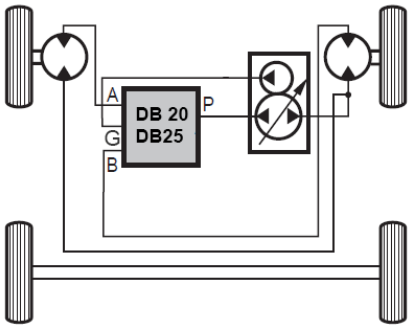
▷ REFERENCE

1783 - CAT - A

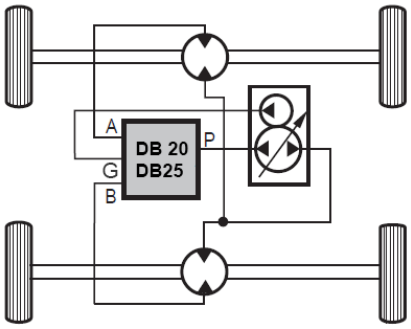
▷ APPLICATIONS

WITH HYDRAULIC CONTROL	WITH ELECTROHYDRAULIC CONTROL
→ Excavation machinery → Paved road sweepers → Forestry equipment → Harvesting machinery	→ Agricultural machinery → Self-propelled mowers → Lifting cranes

Transmission circuit examples (Flow divider with integrated pressure supply valves)



Flow divider operating as a wheel separator (Pst) with integrated pressure supply valves and supply port (S).



Flow divider operating as an axis separator with integrated pressure supply valves and supply port (S).

Note: If you need to install a flushing valve in a closed loop circuit equipped with a flow divider, the flushing valve must be installed between the pump and the flow divider. If necessary please consult us.

▷ ACCESSORIES

With electric controls, direct-acting, with spool valve, hydraulic screw distributor…