



Hydrostatic transmissions

Hydrostatic transmissions were introduced on mobile machinery because of their versatility and adaptability to a wide variety of applications. The advantages they provide compared to the traditional mechanical and hydrokinetic transmission are the following:

- Free positioning of the engine on the machinery, since the hydrostatic units can be fitted without any kinematics-related constraints
- High weight/power ratio
- Easy regulation of the traction speed, thanks to the high-sensing controls of both the pumps and hydraulic motors
- Two-direction operation with smooth motion control during reversing
- Optimal use of the power installed
- Maximum traction force at low RPM both for diesel engines and traction motors (high performance)

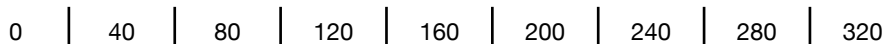


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The introduction of pumps and motors designed for use in closed circuits have highlighted these features. This allowed us to incorporate flow rate, pressure and power regulators into the pumps and motors, thus avoiding unnecessary energy waste and heat dissipation. As a result, this solution has improved the performance of the overall hydrostatic transmission.

OUR RANGE – cm³/REV DISPLACEMENT

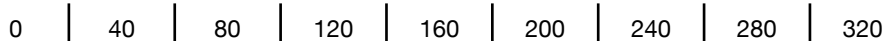
Pumps



High pressure (480 bar)

Medium pressure (350 bar)

Motors



High pressure (480 bar)

Medium pressure (350 bar)



Warehouse



Design



Support



Service



Consulting

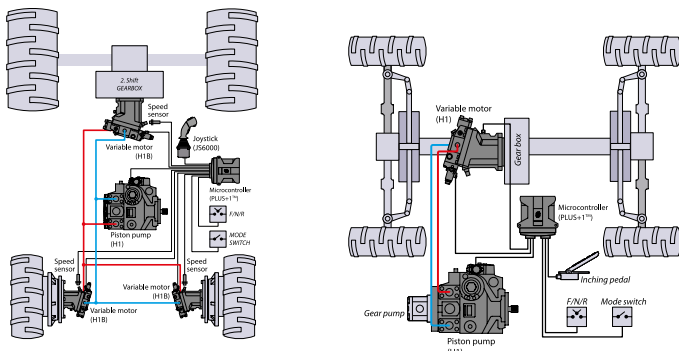
Turnkey solutions

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THE HYDRAULIC SYSTEM

Traction can be obtained through different solutions depending on the type of machine to be managed. The most common ones are the following:

1. The hydraulic motor is fitted directly to the differential axle. Therefore, there will be one or two motors, depending on whether the machine is equipped with two or four-wheel drive.
2. The hydraulic motor is fitted to the mechanical gearbox. Motion is then transmitted to the wheels by means of drive shafts and differential axles.
3. There is one hydraulic motor per wheel. Depending on the type of motor (slow or fast), coupling can be made directly to the hub or using a reduction gear.

The number of motors depend on the number of drive wheels.

Should a wide speed range be required in combination with high traction forces on picking up, variable displacement motors are normally used, as they allow us to obtain a high transmission ratio.

The machine movement is controlled by an axial piston pump with variable displacement for closed circuits mounted on the engine.

A mechanical lever control, a hydraulic control, or an electro-hydraulic proportional control can be used to control the pump displacement and the speed of the machine.

Today, an increasing number of machines uses pumps with electric control managed by an electronic system, which controls and optimises operating speed, the engine operation, the activation of the parking brake, the gearbox and variable displacement hydraulic motor.

SACE s.r.l. can develop the software based on the client's specifications and on the machine to be manufactured.

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