

Hydra Drive System (HDS)

HydraSpecma's intelligent assisted drive axle

HydraSpecma's intelligent and hydraulic assisted drive axle is called **Hydra Drive System (HDS)**. You can install it on tractors and construction vehicles for different purposes.

HDS uses the tractor's own hydraulic system and ISOBUS electrical system. It is a *Plug & Play* solution with 30% less power requirement!

Hydra Drive System consists of an axle with integral differential lock, drum brakes, hydraulic motor, together with control valves and an operating unit for the tractor. The software is based on *Danfoss Plus+1* and is designed to work in harsh environment with a high degree of user-friendliness. When driven at speeds above the optional working range (0-30 km/h), the system automatically disengages. Maximum speed is 50 km/h.

What does HydraDrive System offer?

Hydra Drive System (HDS) is a complete 10-12 tonne trailer axle with integral differential lock, drum brakes, hydraulic motor, together with control valves and an operating unit for the tractor.

Compared to other assisted pull systems, there is only one hydraulic motor in this system. It is placed in the spot where we normally see the drive shaft. The hydraulic motor is 800 cm³ continuously variable across 14 levels. This allows a high efficiency and a constant pull. The tractor's hydraulic system can be used with a maximum flow from 50-200 LPM and the tractor's maximum pressure (typical 200 bars). Maximum effect approximately 66 kW.

HydraSpecma has developed a system that is 30% more energy efficient than traditional assisted drives.

This ensures:

- More power to other functions
- Reduced oil consumption for assisted drive
- Reduced fuel consumption

When acquiring **Hydra Drive System** you receive an operating system developed by **HydraSpecma** based on *Danfoss Plus+1 platform*. The system is controlled using a small joystick that is installed in the tractor.



Hydra Drive System is developed in cooperation with Hvamø A/S.

The system can run in either *manual* or *auto* mode. In *auto* mode the system is active from 0,5 km/hr up to maximum speed and the hydraulic motor is continuously variable across 14 levels. The system also functions in reverse.

When driven at speeds above the optional working range (0-30 km/h), the system automatically disengages. Maximum speed is 50 km/h.

HydraSpecma has taken functional safety into account in regard to software development. This means that the software from *Danfoss* is safety assessed, and furthermore **HydraSpecma** makes a risk assessment of the entire system. The accompanying documentation ensures the option of integration with the machine's CE marking.

Want to know more?

If you would like further information on **Hydra Drive System (HDS)** you are welcome to contact **HydraSpecma** on +45 9735 0599.