NEVER GET STUCK
PIONEERING AWD SOLUTION

POCLAIN
Hydraulics

ADDIDRIVE
TECHNOLOGY
Customers have no other choice, but to opt for mechanical all-wheel drive to improve the mobility of their trucks. This generates constraints and impacts their total cost of ownership, which results in:

- increased fuel consumption;
- reduction in payload capacity;
- lower levels of comfort for the driver.

Poclain Hydraulics offers an alternative solution - Addidrive, which has already been adopted by various manufacturers for over a decade:

- MAN (Hydrodrive)
- RENAULT TRUCKS (Optitrack)
- DAIMLER BENZ (HAD)
- VOLVO TRUCKS - TERBERG (X-Track)
- TDS (EZ Trac)
- IVECO (Hi-Traction)

Addidrive enables customers to seize new market opportunities. OEM’s are provided with a proven technology which meets their strategic needs.

A genuine alternative to mechanical all-wheel drive, Addidrive ensures optimum mobility for trucks which need to work in harsh weather conditions and irregular terrain - such as fields, forests and construction sites.
A TECHNOLOGY WHICH SUITS ALL TYPES OF TRUCKS

Transform a 4x2 tractor into 4x4 by transferring torque to the driving axle without impacting the height of the cabin or the turning radius.

Transform a 6x2 tractor into 6x4 by transferring torque to the front axle. The truck will benefit from additional traction when needed without impacting fuel consumption in 6x2 mode.
Whatever the chassis type, Addidrive transfers torque to one of the axles in order to enhance the traction of the truck in difficult driving conditions.

Transform a 6x4 into a 6x6 by transferring torque to the front axle without impacting the height of the vehicle, for an additional weight of under 450kg.

Transfer torque to one or two additional axles to transform the vehicle into 8x6 or 8x8 and ensure optimum traction distribution.
SIMPLE DESIGN
THAT IS EASY TO INSTALL

- Compatible with the original braking system (drum or disk)
- Does not affect kinematic steering or suspension
- No need to re-certify the axle
- Watertight design
- Hydraulic maintenance in sync with axle maintenance
- Compatible with different types of tires

MF hydraulic motors
Driven hydraulic axle

Fitted on the front wheels, the MF motors provide traction or retaining torque whenever needed.

- Up to 82 kW [110 HP] and 12 000 N.m [8,850 lb.ft] per axle
- Up to 30 kph [18.6 mph] when the system is activated

PW variable displacement pump

Powered by the internal combustion engine PTO, the PW pump generates and provides hydraulic power to the MF motors

- 96 cm³ / rev. [5.86 in³ / rev.]
- Up to 233 kW [312 HP]
- Up to 3 650 rpm
- Up to 450 bar [6,527 PSI]
FEATURES

- Compatible with the truck manufacturer's output
- Integral solution which limits the validation time
- Compatible with the design of the existing chassis
- Software compatible with the J1939 protocol
- Compatible with most existing options provided by the manufacturer
- Does not affect the use of specific equipment (aerial work platform, concrete pump, etc.)
- For more demanding conditions, Addidrive can be installed on two axles

AddiFlow control valve
The AddiFlow control valve ensures the safety and management of the activation, release and free-wheeling of MF motors

SD-CT200 ECU and embedded software
The ECU manages communication and additional functions
- Automotive standards / IP67 Protection
- Compatible with the CAN truck network

Tank / Cooler / Filter
These components, which are not supplied by Poclain Hydraulics, are used to control the temperature and maintain the oil quality. The size is specified according to the application requirements.
A CHOICE OF FUNCTIONS
FOR ALL TYPES OF SITUATIONS

**TRACTION**
Standard function
Torque is transferred on front axle instantaneously, as soon as the truck loses adherence, from 0 to ~30 kph [18.6 mph]

- Activation on demand, only when necessary
- Smooth automatic torque transfer
- Higher truck gradeability, both loaded and empty, in forward and reverse drive
- Limited skidding, better adherence in bad conditions
- Better truck steerability and control
- Continuous traction, even during gearbox shifting

**VEHICLE START BOOST**
Standard function
When AddiDrive is activated, torque is systematically transferred at start, regardless of rear wheel adherence

- Avoid loss of adherence during starting phases (traction at 0 kph)
- Improve truck gradeability and performance
- Limit clutch wear
**FREEWHEELING**

**Standard function**

Whenever the traction mode is not required, freewheeling mode ensures minimum drag torque and power consumption. Addidrive is automatically disengaged above 30 kph [18.6 mph]

- Fuel saving (vs AWD)
- Standard on-road performance: steering angle, suspensions...
- No component wear
- No impact on standard truck noise level

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**CREEP WORKING**

**Optional function**

The truck is powered forward and reverse by the hydrostatic transmission only, at low speed, for working applications

- Precise maneuverability at constant low speed
- Driver can focus on dedicated task
- Optimal driver comfort with cruise control feature
- Preserves clutch and brakes

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**JOCKEY**

**Optional function**

The truck is powered forward and reverse by the hydrostatic transmission only, at low speed

- Accurate positioning at low speed
- Optimal driver comfort at very low speed
- Preserves clutch and brakes

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**RETAINING**

**Optional function**

When going downhill with bad adherence conditions, the hydraulic axle contributes to maintaining adherence

- Higher adherence and steering control when going downhill
- Especially useful when the truck is not loaded
- Enhances driver and truck safety
PEACE OF MIND
THANKS TO HIGHER EFFICIENCY
PERFORMANCE

Increased payload capacity compared to a mechanical all-wheel drive truck

Easier to drive over obstacles with or without load

Enables to come up close to the working area on a construction site

The Boost at Start function helps the truck to start in difficult conditions, in forward and reverse directions, without forcing the clutch

Limited impact on fuel consumption compared to a standard truck

- Productivity
- Time saving
- Costs control

SAFETY / RELIABILITY

No risk of getting stuck due to lack of adherence thanks to the transfer of the rear torque to the front

Automatic disengagement at 30 km per h

Better maneuverability owing to traction on the main axle when driving around corners and in the event of poor adherence when driving in a straight line

Adapted to extreme temperatures from -40°C to +40°C

- No unexpected extra costs
- No additional maintenance

COMFORT

Easy access to the driver’s cabin, with all the comfort of a standard truck

Lower center of gravity to improve driver comfort

Enhanced turning radius compared to a standard truck or mechanical all-wheel drive

Stable truck and trailer coupling

- Less driver fatigue
- Peace of mind
- Better maneuverability
OPTIMIZATION OF YOUR TRUCK FLEET
VERSATILE

Compatible with all truck brands and models
Compatible with the existing trailer fleet
Enables one truck to be used for various tasks

- Optimized fleet
- No constraints with regard to truck choice
- Optimise truck usage

**Increase the payload**

- 32 t
- 4x4 Mechanical
- 44 t*
- 4x4 Hydraulic

*According to the regulation in force

- Optimal cost ownership
- Identical on-road performance
- Improved mobility without load

**Disengage a mechanic axle**

- 6x4 Mechanical
- 6x4 Hydraulic

- Fuel efficiency
- Increased maneuverability on low-adherence terrain

**Replace two trucks with one**

- 6x6 Mechanical
- 6x4 Mechanical
- 6x6 Hydraulic

- The same truck can be used for two tasks
- Versatile and optimized fleet

**Mechanical axle**

**Hydraulic axle**
ASSISTANCE AT EACH STAGE OF THE PROJECT

DESIGN
Our engineering teams develop products which take into account all the needs of your applications.

RESEARCH & DEVELOPMENT
Our calculation and simulation tools optimize performance, weight, fuel consumption and life time of your trucks.
TRAINING
Our certified training center can train your teams to sell, use and repair our hydraulic systems.

AFTER-SALES SUPPORT
Our global network ensures that spare parts are delivered in time, wherever you are located.

MANUFACTURING
Our manufacturing plants located throughout the world are able to build products which comply with the strictest quality standards.

VALIDATION
Our local teams assist you from the design stage. They support you in the field with our experts, to commission and test your prototypes and their applications.