

# ePTO



# WORLD PREMIERE FOR ENVIRONMENTALLY SMART LOADING SOLUTION

A new vehicle solution has seen the light of day. It's a loading vehicle uses an electro-hydraulic system, or ePTO, installed alongside the traditional engine-driven system. This enables the crane operator to work with the engine switched off – quietly and free from exhaust fumes.

The ePTO allows the loader crane to be powered electrically by a plug-in system, instead of the vehicle's engine. Using electric power instead of conventional diesel power offers considerable benefits, including improved energy efficiency, lower noise levels and less environmental impact, while also making it possible to work indoors. For example, the energy required to operate the crane is 60–70 per cent less than for a conventional crane. It also provides a much healthier working environment for the person operating the crane, since the operator does not have to work amid the noise and exhaust fumes of an idling engine.

The fact that work can be carried out quietly and without fossil emissions makes this solution ideal for urban environments that are used by large numbers of people, for instance.

## Facts about the loading solution

- The crane is powered electrically by a plug-in-system (ePTO), which means that it can be operated when the engine is switched off.
- Ideally suited to sensitive environments and for indoor use.

## Crane operation with ePTO

- No exhaust fumes (carbon dioxide, nitrogen oxides or particulates).
- 60–70 per cent lower energy consumption.
- 70 per cent lower operating costs.
- 30 per cent lower noise level.
- Equal lifting capacity to a conventional crane.

# HOW ePTO WORKS

The electric power take off (ePTO) system comprises a battery, an electric motor, a hydraulic pump and a smart electronic control system. This is all packaged in a stainless steel box that is mounted on the truck chassis. A display mounted inside the truck cabin provides information about the current status of the ePTO, which can also be started and stopped by using the display.

## Automatic starting and stopping

Operation of the ePTO in combination with a HIAB X-HiPro loader crane is very straightforward. When the crane is not in use the electric pump is automatically switched off to save energy and battery capacity. As soon as you move a control lever the ePTO starts up again.

## Powerful battery with ample capacity

The system's battery has a capacity of 40 kWh, which is sufficient for an average day of crane work. The battery is recharged at night and can also be support charged at the work place if an electricity supply is available.

## Standard hydraulic pump for back-up

The truck is also equipped with a conventional hydraulic pump on the transmission power take off (PTO), so when the PTO is engaged hydraulic oil is supplied by the conventional hydraulic pump. The ePTO will not start in this mode.

## Loader crane

The HIAB X-HiPro loader crane uses an advanced load stabilisation system, LSS, to enable quick and easy crane operation, as well as an optimised hydraulic system that cuts energy losses to a minimum. This means that loading and unloading can be completed with minimal energy requirements and at the maximum possible speed.

*"It's fully in line with our efforts to make our business as sustainable and environmentally efficient as possible. For instance, we have a job in the Port of Stockholm that involves a great deal of gravel moving. Being able to do this without having the engine running means that the people around us will hardly notice the work being carried out."*  
Daniel Bergholtz, Turebergs Åkeri, Sweden.

*"I really believe in this concept. It minimises emissions and can replace conventional systems in vehicles such as refuse trucks and loading vehicles."*

Hans Winscher, Country Manager at Hiab Sweden.



# BUILT TO PERFORM

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