



THE NEW KALMAR 5-9 TONNE
CHALLENGING YOUR EXPECTATIONS



Power and precision

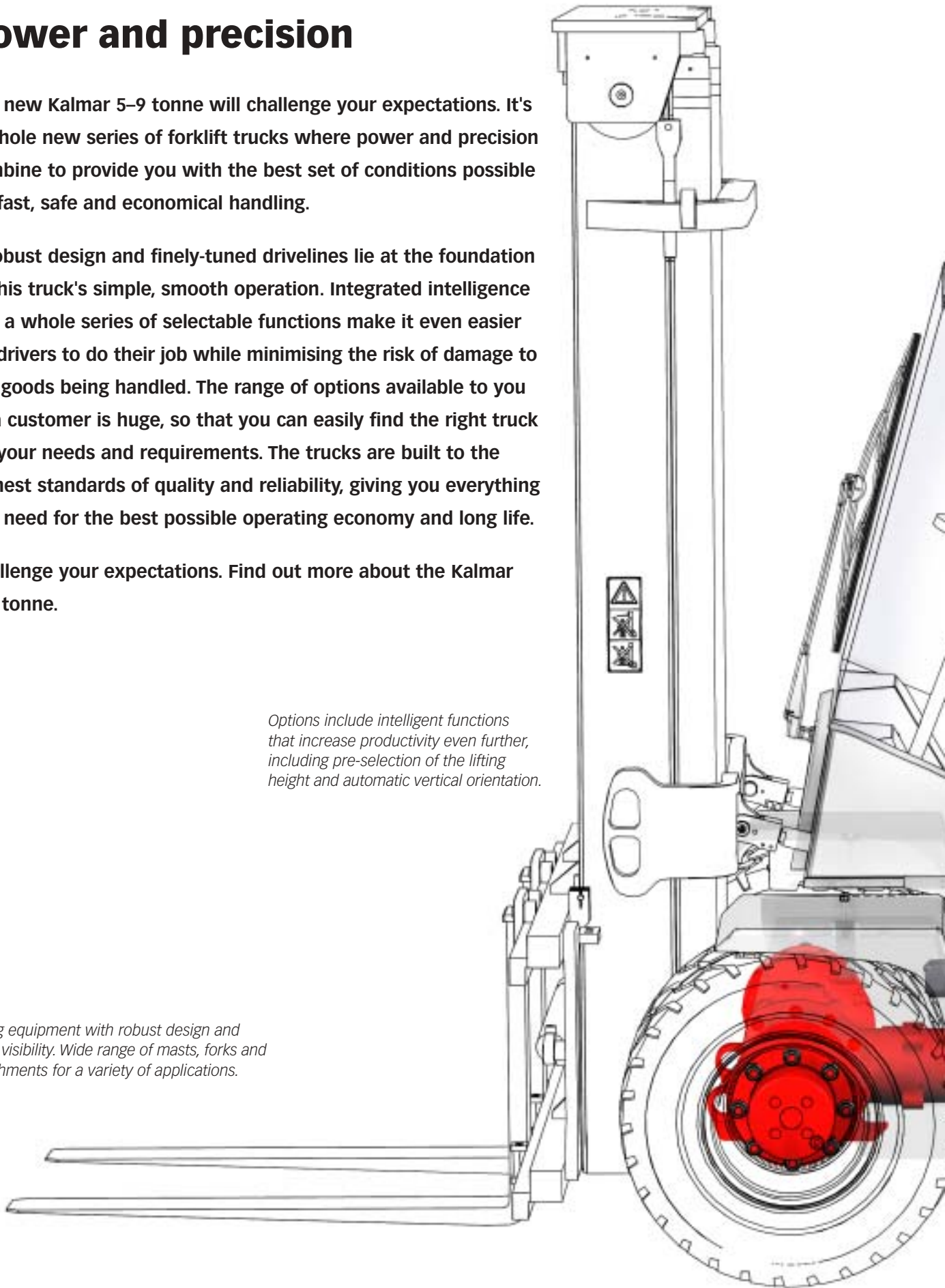
The new Kalmar 5–9 tonne will challenge your expectations. It's a whole new series of forklift trucks where power and precision combine to provide you with the best set of conditions possible for fast, safe and economical handling.

A robust design and finely-tuned drivelines lie at the foundation of this truck's simple, smooth operation. Integrated intelligence and a whole series of selectable functions make it even easier for drivers to do their job while minimising the risk of damage to the goods being handled. The range of options available to you as a customer is huge, so that you can easily find the right truck for your needs and requirements. The trucks are built to the highest standards of quality and reliability, giving you everything you need for the best possible operating economy and long life.

Challenge your expectations. Find out more about the Kalmar 5–9 tonne.

Options include intelligent functions that increase productivity even further, including pre-selection of the lifting height and automatic vertical orientation.

Lifting equipment with robust design and good visibility. Wide range of masts, forks and attachments for a variety of applications.



The best driver environment on the market is now even better, and is fully adapted to today's requirements. Three different concepts mean that you can choose the one that best meets your needs.

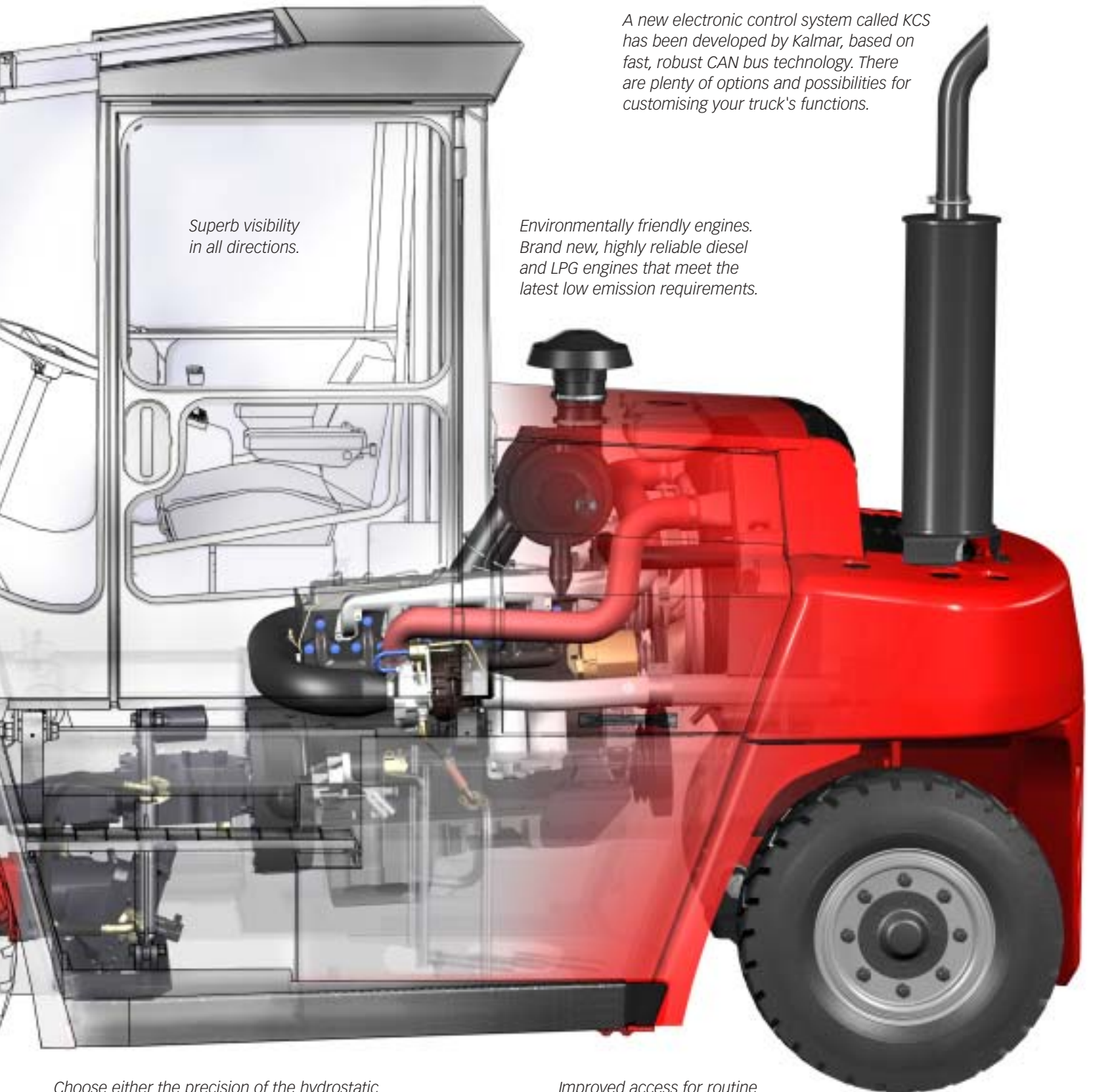
Superb visibility in all directions.

A new electronic control system called KCS has been developed by Kalmar, based on fast, robust CAN bus technology. There are plenty of options and possibilities for customising your truck's functions.

Environmentally friendly engines. Brand new, highly reliable diesel and LPG engines that meet the latest low emission requirements.

Choose either the precision of the hydrostatic drive or a robust and reliable gearbox, or electric power for whisper-quiet operation and no exhaust emissions.

Improved access for routine maintenance and servicing.



Three concepts for your unique driver environment

The best driver environment on the market just got even better. The new Kalmar 5–9 tonne is available in no less than three different concepts, all with Kalmar's unique visibility, ergonomics and efficiency.

Spirit Delta

This driver environment, based on extensive research, has become the norm for the highest standards of comfort and ergonomics. A huge range of setting options, full control of all the truck's functions within easy view and reach, and optimum visibility in all directions mean the driver environment is made for efficiency. The new Spirit Delta is now also wider, allowing more space for mounting computers and communication equipment, for example.

Spirit Delta Space

We worked closely with our customers to develop the new Spirit Delta Space to provide the best possible space, safety and comfort. The concept

is a more spacious version of Spirit Delta, and includes a fully variable rotating operator's seat with the pedals, steering column, instruments, levers, controls and any additional equipment all following the rotation. The available space and the wide range of additional equipment mean that it's easy for you to customise the driver environment to your application.

FlexCab/FlexGuard

New FlexCab and FlexGuard comprise a new, exceptionally robust option. FlexCab is a complete cabin that can be adapted to an open safety cage, FlexGuard, with or without windscreens, doors and heating system depending on the climate and operating environment. FlexCab and FlexGuard provide excellent driver ergonomics and superb visibility in all directions. The strong frame of profiled beams is designed to allow optimum visibility in all directions. The interior is light, airy and robust, with generous headroom.



The space inside the new Spirit Delta Space can only be described as huge. Here, the driver sits like a king, able to survey the load and handling, with plenty of space for extra equipment, and with unimpeded visibility in all directions.



There's a full range of options available for Spirit Delta and Spirit Delta Space for improved ergonomics and handling, such as a joystick for controlling all the hydraulics.



Spirit Delta has undergone further development to provide extra width for more space for installing additional equipment.



The ergonomics of Spirit Delta are first class, with all controls and instruments easy to survey.



FlexCab is a robust and efficient driver environment that can easily be adapted to a FlexGuard safety cage.



The rotating driver's seat in the new Spirit Delta Space provides optimum ergonomics and improved handling safety. The steering wheel, instruments and controls all rotate with the seat, allowing the driver to easily and safely operate the truck forwards or backwards.

Integrated, fast and user-friendly – we call it KCS

Every Kalmar truck is built from the ground up for efficient handling, with components that work seamlessly together to ensure optimum driveability and safe lifting. KCS, Kalmar's own proprietary electronic control system for improved safety and efficiency, is fitted as standard in trucks with Spirit Delta Space cabins or as an option in trucks with Spirit Delta cabins.

The KCS system uses fast processors and modern CAN bus technology to give top performance and extremely high operational reliability. Information is presented on a clear display on the steering wheel panel, using a simple, language-independent interface. Function buttons make it easy to navigate between menus to get information fast, or make settings for the truck's functions.

KCS has many options, and all of them are fully integrated with the other functions of the truck. Examples include:

- Joystick control and mini steering wheel mounted in the arm rest for easy and safe manoeuvring of the truck with great ergonomics for the driver.
- Automatic vertical orientation, allowing the user to ensure that the load is being held vertical simply by pressing a button.
- Lifting height pre-selection with 15 height presets, making it simple to rapidly arrive at the correct lifting height.
- Chain slack protection, which prevents unwanted travel of the forks or attachments.



KCS is Kalmar's own electronic control system, developed in-house. CAN bus technology and fast processors give high performance and safety.



Joystick control or a mini steering wheel in the arm rest mean great ergonomics for the driver.



All options are integrated with the other functions of the truck, and are easily controlled by the driver.



Gearboxes for heavy-duty handling and low emissions

The gearbox models have a capacity of 6 to 9 tonnes and are extremely powerful and robust – built for very demanding industrial applications. The new diesel and LPG engines all run softly with low noise levels, low fuel consumption and low emissions that meet the latest requirements.

Turbo-charged and environmentally friendly engines

Two new turbo-charged Perkins engines – one with four cylinders and one with six cylinders – deliver impressive direct torque at low engine speeds. The result is smooth operation with fast acceleration and efficient handling. In addition, they are highly fuel-efficient and require very little maintenance, resulting in excellent operation economy. Emissions are low, and exceed the Stage 2 requirements.

Purpose-built LPG engine

The new LPG engine from GM was designed from scratch for LPG fuel, resulting in high reliability and low fuel consumption. The engine is a V8, delivering excellent performance and great feel for smooth handling. It is also very quiet, with low exhaust emissions.



Hydraulic inching is available as an option, controlled by the KCS. Inching allows precision operation even while maintaining high engine speeds for efficient lifting.



The new turbo-charged diesel engines deliver excellent performance with low exhaust emissions that meet the Stage 2 requirements.



An effective particle filter is available as an option, reducing emissions to an absolute minimum.





Efficient electric trucks right up to 9 tonnes

Kalmar is the undisputed market leader in electric trucks with capacities between 5 and 9 tonnes. The perfect choice when environmental considerations and low noise levels are important, for example, for indoor use. With their highly efficient motors controlled by intelligent electronics, the new electric trucks are extremely easy to operate, offering high precision and superior performance. Their high battery capacity and very robust basic design make them very reliable and ensure that they have a long service life.

Twin electric motors

Kalmar's electric trucks have twin electric motors: one for driving and one for the lifting hydraulics. This, combined with a fully electronic control system, provides improved driving characteristics with smooth transitions when starting and stopping, and rapid responses to the driver's actions.

The battery is located behind the cabin to be easily accessible for servicing, and so that the driver does not have to sit right next to the power source. Battery capacity is high and the truck can operate for long periods, even when lifting heavy loads.



Reliable electronics with heavy duty cooling for high operational reliability even in very demanding applications.



Battery replacement system where the battery either slides out along tracks, or has slots for forklift, increases the truck's operational availability.



The electric motors are highly efficient, and are controlled by advanced electronics for the longest possible operating times and best driving characteristics.

Hydrostatic drive for maximum precision

Our trucks with hydrostatic drive have a capacity of 5 to 9 tonnes, with superb driving characteristics and maximum precision. Hydrostatic drive delivers fast, safe and efficient handling because the speed and lifting functions of the truck are entirely independent of each other, making it possible to inch the truck forward while lifting at full power. The new turbo-charged diesel engines have low noise levels and low exhaust emissions that meet the latest requirements. Very good overall economy is guaranteed by low fuel consumption, long intervals between servicing and high reliability.

Integrated electronics...

The newly-developed hydrostatic drive is electronically controlled by Kalmar's proprietary control system, KCS. The engine, the hydrostatic transmission and the hydraulics are integrated in the one system, delivering high performance and excellent operational reliability. Newly developed software and fast computers return instant responses to the operator. The engine brake can be adjusted to one of nine different settings,

from soft braking (similar to a gearbox truck) to braking at full force. The options are many, making it possible for you to customise the truck's functions to improve productivity, safety and operator ergonomics.

...or mechanical control

Our trucks that use a conventional mechanically-controlled hydrostatic drive offer superior driving characteristics, high precision and excellent reliability. They are exceptionally reliable, with a long service life and require only minimal servicing.

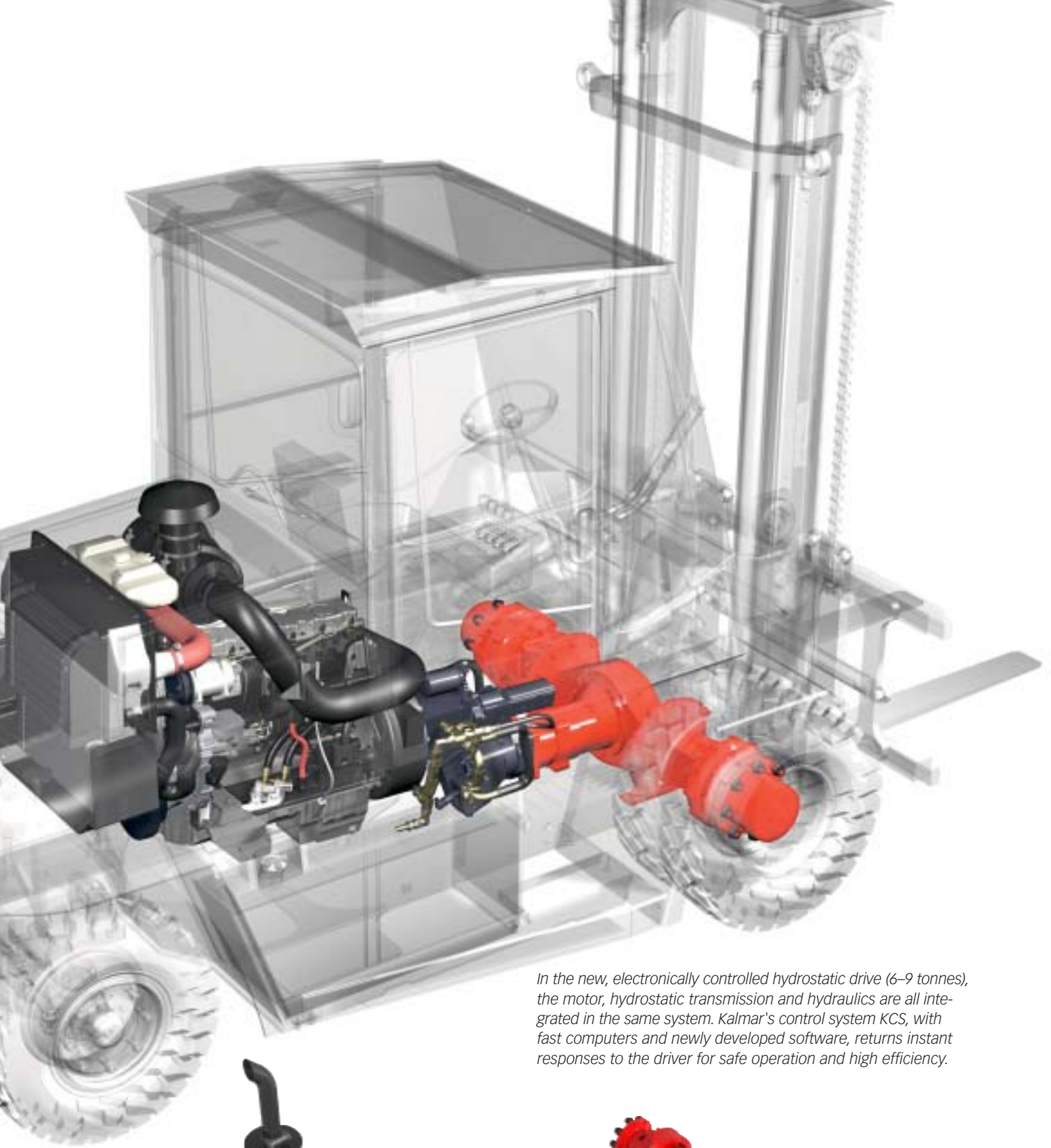


The engine brake can be adjusted to one of nine settings, from insignificant to full force.

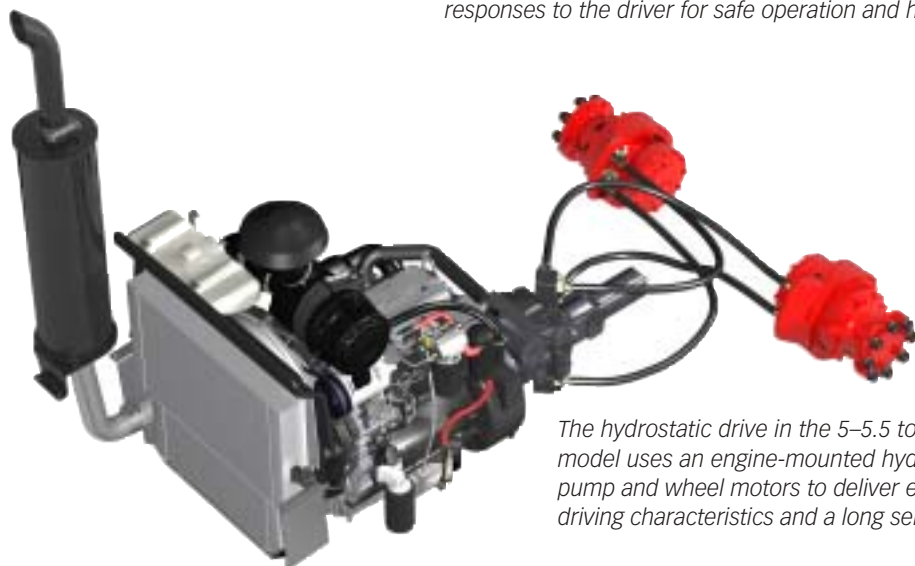


Dual pedals for forwards and backwards let the driver manoeuvre the truck quickly and safely, and ergonomically.

Robust design with long intervals between servicing means high reliability and great overall economy.



In the new, electronically controlled hydrostatic drive (6–9 tonnes), the motor, hydrostatic transmission and hydraulics are all integrated in the same system. Kalmar's control system KCS, with fast computers and newly developed software, returns instant responses to the driver for safe operation and high efficiency.



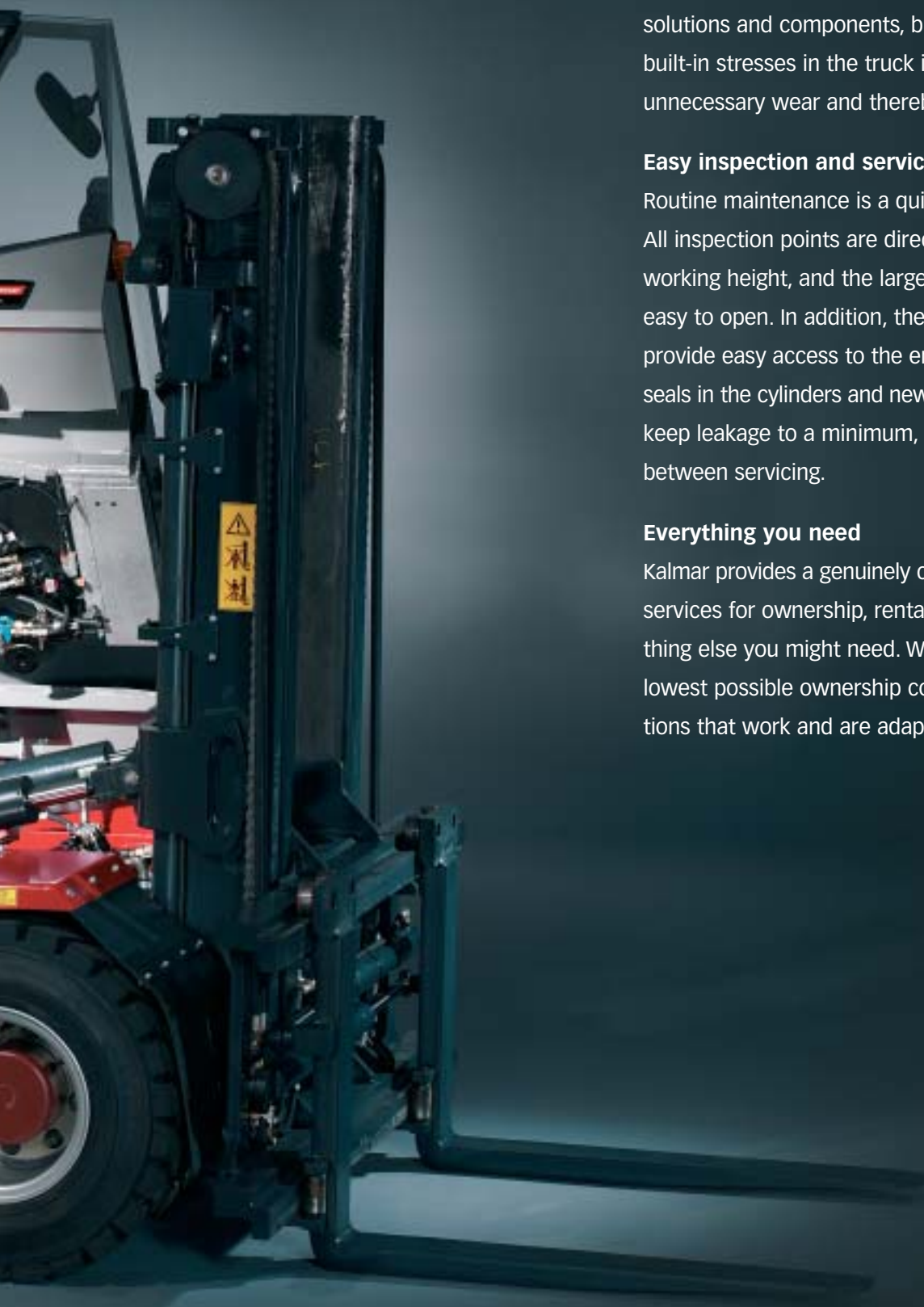
The hydrostatic drive in the 5–5.5 tonne model uses an engine-mounted hydraulic pump and wheel motors to deliver excellent driving characteristics and a long service life.



Double seals in the hydraulic cylinders and new ORFS fittings minimise the risk of leakage.

New, bigger inspection hatches are easily accessible at working height, making routine maintenance quick and easy.





Clearly cost-effective

The new Kalmar 5–9 tonne series was developed from the start to provide reliable operation and a long service life with a minimum of downtime. This has been achieved partly through technical solutions and components, but also by eliminating built-in stresses in the truck itself that generate unnecessary wear and thereby increase costs.

Easy inspection and servicing

Routine maintenance is a quick and easy process. All inspection points are directly accessible at working height, and the large inspection hatches are easy to open. In addition, the cabin can be tilted to provide easy access to the entire drive line. Double seals in the cylinders and new ORFS hydraulic fittings keep leakage to a minimum, extending intervals between servicing.

Everything you need

Kalmar provides a genuinely comprehensive range of services for ownership, rental, servicing and everything else you might need. We focus on offering the lowest possible ownership costs by providing solutions that work and are adapted to your needs.

Contact information:

Make things easy. These three little words symbolise the Kalmar philosophy.

Making heavy things easier to handle is nothing new for Kalmar. The company has over 100 years of experience in lifting and moving heavy objects with our machines in over 140 countries around the world.

But the three little words "make things easy" also encompass another dimension. Kalmar is more than just a machine supplier. Kalmar offers solutions that make life easier for its customers, everything from driver assistance to contract maintenance and fleet management.

Kalmar Industries AB
SE-341 81 Ljungby, Sweden
tel. +46 372 260 00, fax +46 372 263 90
email: info@kalmarind.com
www.kalmarind.com



Make things easy