



Wheel loaders 9-30 tons



Standard and optional specifications can vary according to the regulations in force in each country. Photographs and other graphic descriptions shown in this brochure may include standard and/or optional specifications. Ljungby Maskin reserves the right to modify machine specifications from time to time. No obligation shall be incurred relating to such changes.

Small manufacturer among Giants

How it started

Ljungby Maskin is the making of Rune Andersson. This fearless innovator and company owner started importing and selling loading machines in the early years of the 1970s. Before that, Rune had manufactured fork-lift trucks with great success. In 1983, he built his first self-designed wheel loader and since then, the aim has been clear:

“To produce customized machines of superior quality, for optimum productivity, providing the highest levels of safety and comfort for the operator”

A Niche Company

Ljungby Wheel Loaders are characterized by the high torsional strength of the frames and loader arms, powerful engines, transmissions and axles, high hydraulic flow, very low noise levels, an extremely tight turning radius, excellent all-around visibility and an impressive bucket angle, much appreciated by operators who get stuck.

Many machines operate 3 to 5 shifts on very tough jobs and it is not uncommon to run a Ljungby for over 60.000 hours with little or no repairs. Over the years, Ljungby has produced more than 3.000

wheel loaders and today, fewer than 50 have been decommissioned! Superior design and manufacturing quality, a close relationship with customers and a passion for excellence are the ingredients of this success.

The Ljungby range

The Ljungby Wheel Loader range consists of 8 models weighing from 9 to 30 tonnes. Two Landfill Compactors (22 and 35 tonnes) complete Ljungby’s product catalogue. With superior performance in areas such as engine output, cycle times, turning radius, tipping loads, bucket angling and breakout force, the buyer has the assurance that he can tackle the most demanding jobs with a Wheel Loader selected from the Ljungby range.

Product development

At Ljungby, wheel loaders are under constant development, often in close cooperation with the customer. In this way, many practical solutions are incorporated and become part of the standard machine build. Being a relatively small company, Ljungby Maskin features huge flexibility and short decision lines that mean, among other benefits, that new design solutions can be rapidly integrated into production.

Everything under one roof

All of Ljungby Maskin production is built to order. Most machines include many optional extras. In-house production in the 20.000 m² factory is maximized to ensure the highest levels of quality. The company manufactures front and rear frames, loading arms, cabs, various tools, hydraulic cylinders and other associated components. The drive-line components, i.e. engine, transmission and axles are supplied by leading manufacturers. Cutting, bending, rolling, welding, machining, sand-blasting, washing and painting all take place in the plant before the machines are assembled and tested. This manufacturing philosophy reduces vulnerability to sub-standard quality by giving Ljungby full control over the production processes. The environment is also spared unnecessary pollution caused by numerous journeys between production units.

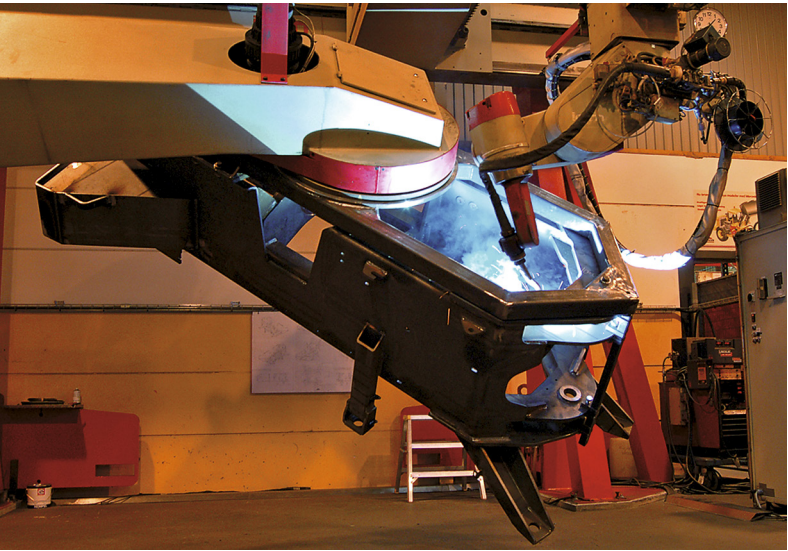
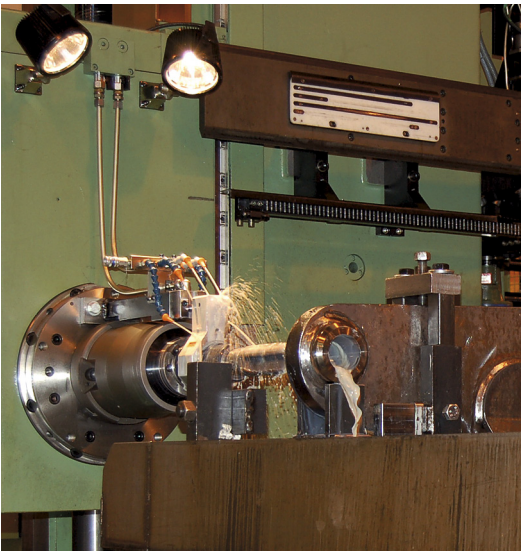
The Market

Sweden is Ljungby Maskin’s largest market, but an increasing share of production is exported. The company has its own subsidiaries in Denmark and the Netherlands and retailers in several other European countries. Development of new export sales territories is ongoing.

Model summary Wheel Loaders

Specifications	L9	L11	L13	L15	L18	L20	L25	L30
Operating weight tonnes	9.5-10.5	10.9-11.5	12.8-13.6	14.5-16.0	17.2-19.0	19.8-22.0	25.5-28.5	30.0-32.0
Tipping load 0° kg	6,500	8,100	9,300	10,900	13,900	16,100	21,500	24,000
Breakout force kN	95	95	110	120	170	180	230	250
Engine output kW (hp)	151 (205)	151 (205)	170 (231)	170 (231)	220 (300)	220 (300)	294 (400)	294 (400)
Lifting height mm	3,985	4,070	4,180	4,180	4,265	4,320	4,630	4,700
Tyre dimensions	17.5R25	20.5R25	20.5R25	20.5R25	23.5R25	23.5R25	26.5R25	29.5R25

For complete technical data, see the product sheet for each model.



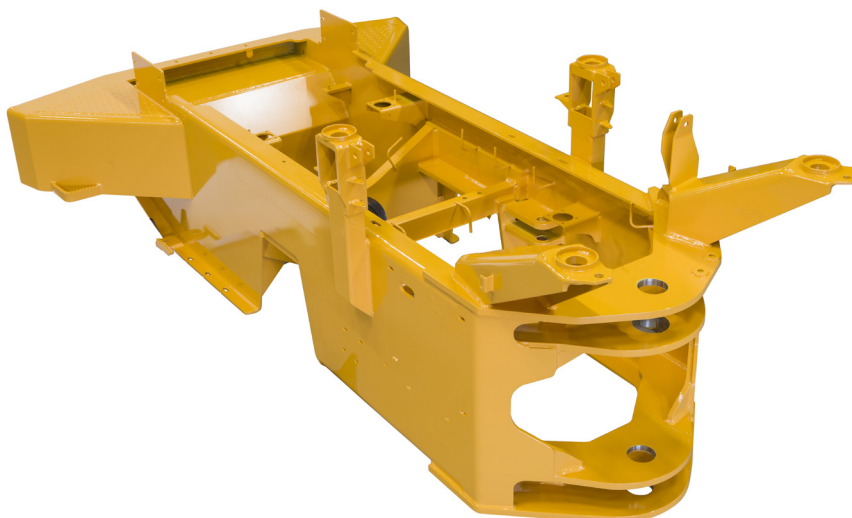
Over-dimensioning - a philosophy

A Ljungby is designed for demanding customers who require the best quality available. It will provide long service life under the toughest job conditions.



Weight distribution

The tipping load is the decisive aspect when deciding on a machine size. To achieve a high tipping load counterbalance mounted equipment, the Ljungby machines are light at the front and heavy at the back. This design allows a smaller Ljungby loader to lift the same load that a heavier competing unit would normally lift, but with fuel consumption reduced.

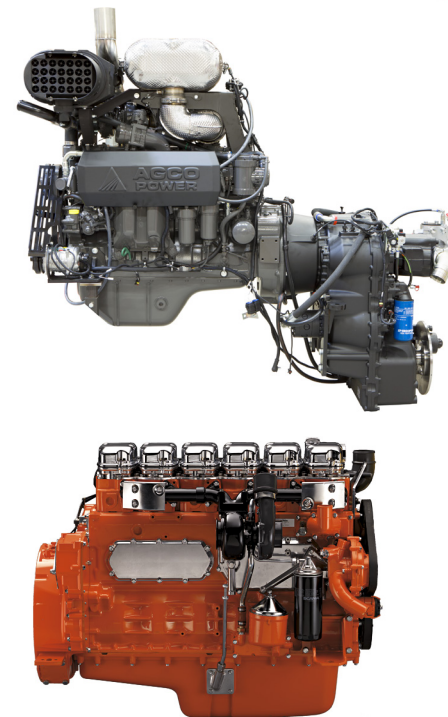


Frame

The Ljungby chassis features long distances between the bearing positions on the frame joints. The box design of the front frame protects the lift cylinders, providing it with incredible torsional strength. The rear frame is designed similar to that of a truck. Just like the front frame, it is also manufactured in heavy-duty Weldox structural steel. This makes it strong with high torsional strength, while maintaining a high degree of flexibility to prevent cracking. The suspension bearings of the axles rely on annealed steel, while during assembly expansion-shell bolts are used both in the articulated steering bearings and to hold the steering cylinders.

Loading arm

The Ljungby loading arm is truly unique with lots of advantages. It provides an unparalleled view from the cab and offers a breaking force strong enough for the rear wheels to clear the ground. The bucket can be angled forwards to a full 105° for grading work, and to break or pull the machine free in case it gets stuck. The tilt has impressive strength even at full forward tilting, making



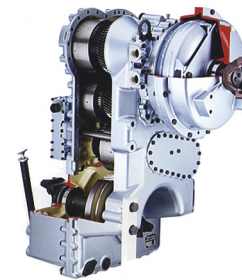
Ljungby the ideal choice for handling lumber using a grapple. All bolts and pins are made from annealed steel. As an option, 100% side-shifting is available when working with pallet forks.

Engine

Engine options include the latest eco-friendly engines from well-known brands like Sisu and Scania. All loaders feature extremely powerful engines with performance well beyond that of other machines in their respective weight ranges. To enable fuel-efficient driving, the torque is high already at low revs, while power is maintained even at high rpms.

Gearbox

All models come equipped with world-leading ZF gearboxes. They offer proportional gear shifting control and automatic kick-down with smooth, quick up- and down-shifting. The gearbox offers 5 forward gears and 3 reverse plus three drive modes (low, medium, high). The rigid converter makes the loader



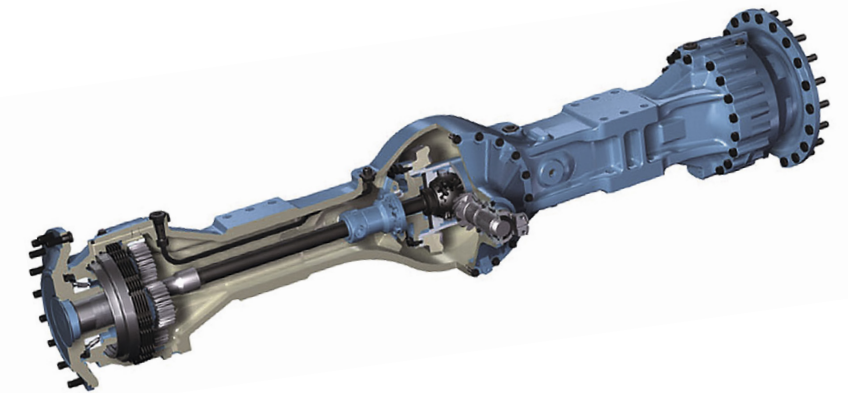
incredibly fast both when working in intensive, short cycles and for transport over long distances. The high penetration force translates into extraordinary bucket filling capacity, contributing to the high machine capacity and an increase in loaded weight per time unit. All along, the rigid converter contributes to reduced loss of power, this way improving fuel economy even further.

Lock-up

Ljungby was first in the world to offer optional lock-up on all its models. Lock-up is an interesting option on loaders that travel over longer distances. The lock-up feature reduces fuel consumption by up to 25% and enables higher travel speeds.

Axles

The Ljungby axle range includes five types of ZF axles. The drive axles are fully floating and fitted with hub reduction at the wheels for extra power. Both the front and rear axles have automatic differential braking that quickly distributes braking power to the wheels with the best grip. This equipment level increases traction on soft ground and contributes

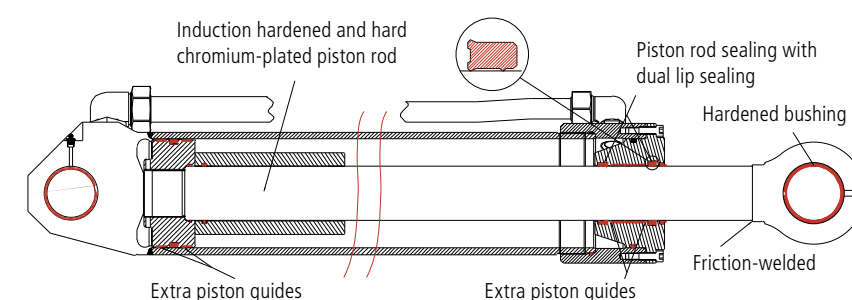


to the excellent penetrating ability in gravel. The brake discs are completely oil-sealed and hydraulically applied. As standard, our biggest loader features external axle cooling in which oil is pumped through special filters and a radiator. This is a popular option on the smaller models.

Hydraulic system

Another option is a 100% load-sensing hydraulic system with pumps and valve assemblies from Parker and Sauer-Danfoss. This makes the hydraulics faster and more sensitive, while reducing heat build-up and thereby lowering fuel consumption. The fan has been replaced with a hydraulic solution with thermostat control. The high-capacity pumps improve loading and unloading speeds and make the Ljungby loaders ideal for implements driven by hydraulic power.

To achieve uncompromising quality, all hydraulic cylinders are manufactured in-house. They feature induction hardened and hard chrome plated piston rods, twin piston rod guides and double sealing lips.



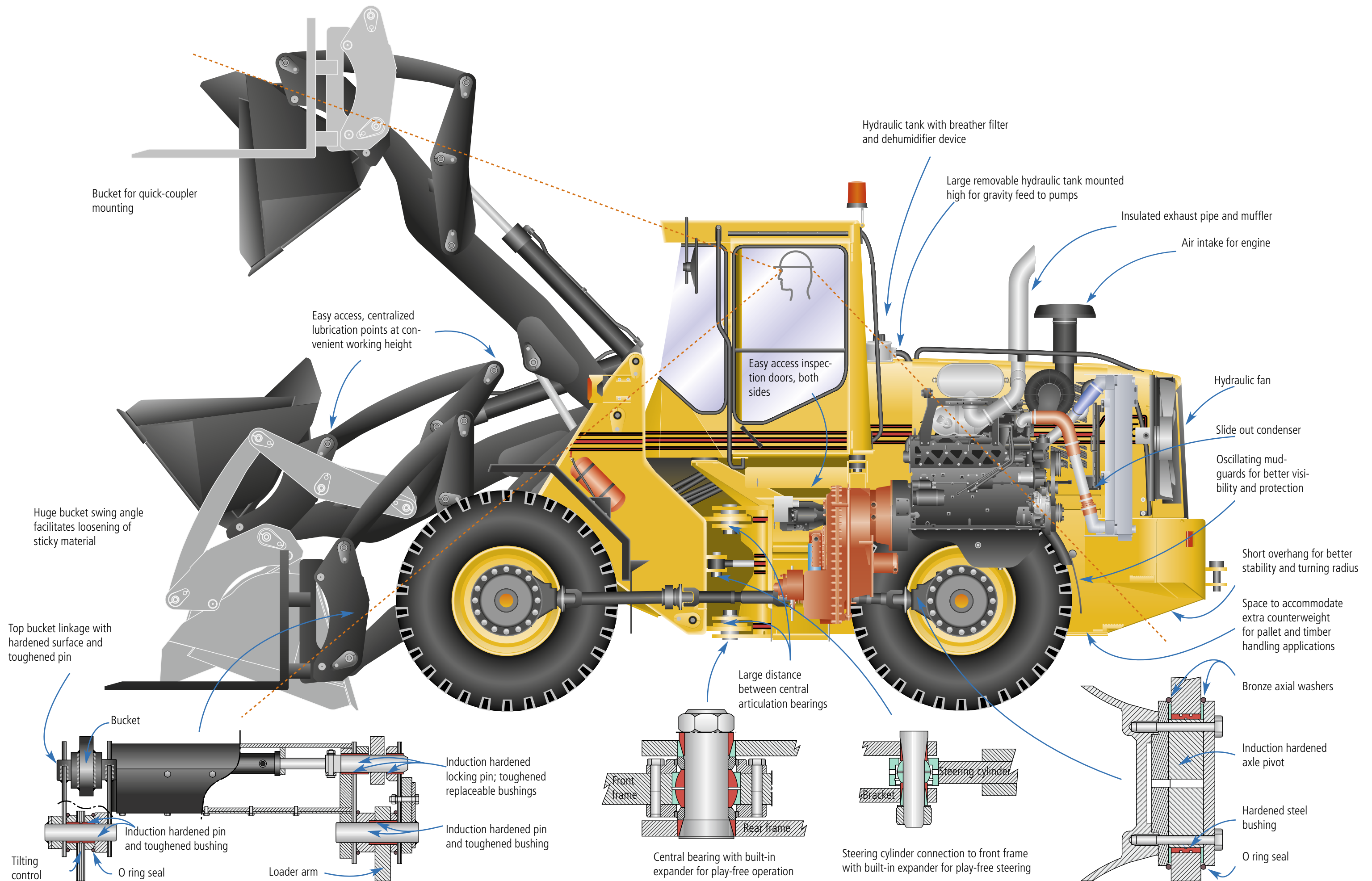
Steering

Ljungby machines have a steering angle of 45° to offer superb manoeuvrability and the tightest turning radius in the market. This is of course a big advantage when driving in narrow confines between industrial buildings, but also important when e.g. loading gravel since the loading cycles can be reduced. The machines are equipped with a gear-box-driven emergency steering pump to allow steering when the machine is moving, but the engine is shut off or the battery has insufficient charge.

Electric system

All electronics are integrated in a central distribution box, conveniently mounted in the cab. All electric cables are Class SBF 127 rated. The main switch is located next to the battery and features electric operation via the ignition switch.

The controller on the Ljungby machines is the well-known Ljungby Machine Control System, LMC. The system controller has three main functions: Operator information, Settings and Troubleshooting. The operator is able to continuously monitor the temperature in the engine, axles and gearbox together with the fuel consumption. The monitor can be connected to a rear-vision camera for added safety when reversing. The operator can also perform hydraulics and steering settings according to driver's preferences. To facilitate troubleshooting, a service technician can obtain a full service report complete with error codes when making field visits.



Ljungby - Your second home...

Visibility means safety

Comfort and safety are top priorities for Ljungby. As far as safety is concerned, it applies not only to the operators, but also to other colleagues working close to the machine. All Ljungby cabs have panoramic windows with no corner posts obstructing the operators' view over parts of the work area. In addition, the machines have oscillating mud-guards at the rear, loader arms that do not obscure the pallet forks and a visible flag for locking tools.

Doors are mounted on the outside of the cab so that the frames do not reduce visibility. The width of the cab allows the operator to keep an eye over the sides of the machine and mirrors have been mounted to view areas that otherwise would have remained obscured. The rear overhang is very short. In addition to contributing to the exceptional all-terrain capability of the Ljungby wheel loader, this design also maximizes the ground area seen from the cab.

A Ljungby can be fitted with many optional extras, including visual and audio reversing alarms, front grilles to protect the wind-screen, hose-bursting safety-valves, lifting cylinder stroke limiters and automatic fire extinguishing systems for units operating in fire-risk areas.

The cab, your all-day work place

Operators spend 8 hours per day in their cab, sometimes more if they own their machines. Consequently, the cab must be comfortable and a pleasant place to work in. A Ljungby cab is very roomy. There's plenty of space for the operator. Cab step design allows the operator to climb out and down in a forward position. The operator compartment is mounted on rubber pads that insula-



te it from external vibration. Several seat models are available, including a floating suspension option for operation on rough ground. The steering wheel, pedals, servo-control levers, seat and steering joystick are all ergonomically designed and fully adjustable.

A popular option is the Ljungby Maskin Comfort System, a hydraulic cab suspension system, which provides a significant reduction of vibration and shocks in the daily use of the machine.

The automatic door closer is another option providing better driver comfort. With a simple push of a button, the driver can close the door without having to extend out of the machine to reach the door.

An Ideal work climate

Ljungby cabs have the lowest noise levels on the market. In spite of this, company engineers are actively working on bettering current achievements. The engine compartment and rear frame are also partially insulated and the cab floor is fitted with a noise-reduction liner. The high insulation level of the cab also

means better hot and cold temperature regulation. The heater is very powerful and upper and lower ducts spread heat evenly throughout the cab. Climate control is standard. The cab is pressurized and air is cleaned through coarse and fine filters. Micro and charcoal filters can be fitted for dusty environments. Re-circulated cab air is also filtered.

Environmental considerations

Ljungby Maskin abides by the laws and regulations applicable to environmental concerns. With almost all its production under the same roof, Ljungby Maskin is also saving the environment from pollution caused by transportation of sub-assemblies and components between various plants. The environment is taken into consideration not only in the production process, but also in the design of the product itself. Our machines are fitted with the most fuel-efficient engines on the market and we offer transmissions with lock-up, which reduces the fuel consumption by up to 25% when driving on roads.

Service friendliness

Service friendliness is an important consideration in the design of a Ljungby. Fully opening gas-sprung side panels provide excellent access to the engine and filter and facilitate cleaning of the cooler and condenser. The radiator grilles are removable and allow easy cleaning of the radiator and hydraulic cooler fan.

Batteries are easily accessible in their convenient, tightly-sealed box and the cable running to the engine is very short. The hydraulic system is equipped with a number of monitoring points that can be reached through large opening service panels located at the front of the machine and beneath the cab.



More than just wheel loaders

Compactors

The Ljungby Maskin product range also includes 22 and 35 tonnes landfill compactors. After 30 years of constant improvement, in close cooperation with customers, these machines are undoubtedly the best compactors on the market.

The Ljungby compactors are characterized by high clearance, excellent protection around the entire machine, high ground pressure and an unequalled level of comfort for the operator. The pressurized cab is equipped with standard micro and charcoal filters.

Tools

Ljungby Maskin manufactures a wide selection of wheel loader tools: traditional buckets in many profiles and sizes for a wide range of applications; high-tipping buckets; levelling buckets; tilting quick-couplers and wood grabs up to 4 m² – with or without hydraulic ejectors. Buckets designed and built to specific customer requirements are also available. All in-house production is made from Hardox plate for extra durability.

Ljungby can also supply out-sourced attachments such as pallet forks, bucket equipment and crane arms as well as a number of other accessories.

Customisation

Most customers have a number of very specific requirements for their machines. Such demands present complex challenges for Ljungby engineers, in areas such as design, mechanics, hydraulics and electronics.

Customers who handle sensitive products such as salt, fertilizer, pellets, battery acid of similar dangerous mate-

rials need a machine that is customized for these purposes. Through many years of cooperation with their customers, Ljungby Maskin has accumulated a very large number of practical solutions that increase operational reliability and extend the working life of the machine.

Standard Equipment

For a complete list of the standard equipment on each model, please check the model Data Sheet. Below is a general summary:

- Onboard computer (settings, failure codes, service information, electronic monitoring, etc.)
- Soundproofed, air-conditioned, pressurized cab with heating and air re-circulation through a fine filter.
- Instructor/Trainee seat
- Adjustable pedals
- Adjustable arm-rest and right-side servo-lever control-panel
- Air-suspension operator seat designed for wheel loaders
- Hydraulic locking quick coupler with 3rd hydraulic function
- Loader-arm suspension (L9 – L20)
- Electronically-controlled latest generation engine with intercooler, automatic shut-down and electric engine heater
- Proportional automatic transmission with 5 forward and 3 reverse gears
- Automatic kick-down
- “Front size” axles in front and rear, with automatic diff-lock and wet brakes
- External engine and gearbox cooling
- External filtering and cooling of front and rear axle oil (L25 and L30)
- Electrically heated mirrors

Optional equipment

Ljungby can provide many extras. The following list is only a sample of the most common accessories and adaptations:

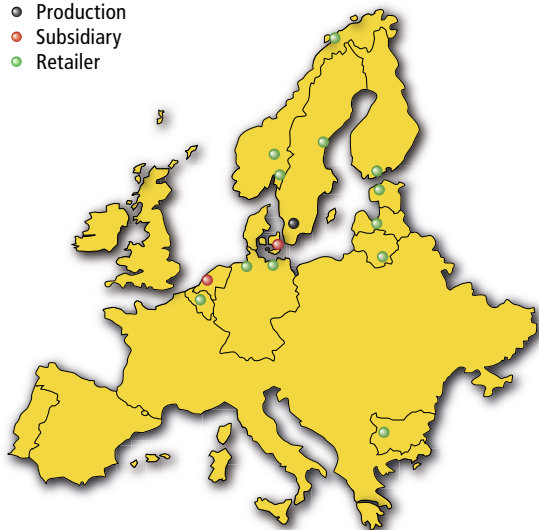
- Joystick steering
- Automatic centralized lubrication
- Extra hydraulic functions
- Tilting quick-coupler
- Reversible fan
- Transmission with lock-up
- Bucket-load weighing system
- Automatic fire-extinguishing system
- Air compressor
- Reversing camera
- In-house painting to customers’ colours
- Special protection packages e.g. rust proofing, electrical protection, dust protection, etc.
- Loader-arm suspension (standard on models L9 – L20)
- Special seats
- Extra lighting
- Particle filters
- Three-point hitch
- Hitch hook
- LM Comfort (cab suspension)
- Automatic door closer





www.ljungbymaskin.se

- Production
- Subsidiary
- Retailer



Ljungby Maskin AB designs, manufactures and sells wheel loaders and landfill compactors. Production facilities are located in Ljungby, Sweden. The company has its own subsidiaries in Denmark and the Netherlands and sells through a network of independent retailers in various other European countries.

For further information, please visit our Internet website at www.ljungbymaskin.se



Ljungby Maskin AB, Box 314, SE-341 26 Ljungby
Tel: +46 372 252 00, Fax: +46 372 831 25, E-mail: info@ljungbymaskin.se