

New Liebherr all-round wheel loaders of the mid-size range developed for demanding recycling-applications

- At IFAT, Liebherr exhibits the L 546, the largest member of the new mid-size wheel loader range
- Developed for regions in which emission stage IV / Tier 4f applies
- Larger axles, strong steel structure: investments in robustness expand utilisation applications of the mid-size wheel loader range

Munich (Germany), 30 May 2016 – At IFAT 2016, Liebherr presents the L 546, the largest member of the new mid-size wheel loader range. The new generation of mid-size wheel loaders that fulfil the emissions guidelines of emission stage IV/ Tier 4f had its world premiere at Bauma 2016. With the L 526, L 538 and L 546 wheel loaders, the new range comprises three models that remain true to the reputation of this machine class as powerful and reliable all-rounders. In order to further increase the robustness and durability of these wheel loaders, Liebherr has installed larger axles and reinforced the steel structures. As a result, the new all-round wheel loaders are well-prepared for demanding applications in the recycling industry.

Liebherr has developed the new L 526, L 538 and L 546 models in view of the current requirements of the market. The proven and efficient hydrostatic driveline also impresses with fuel savings of up to 25 per cent in comparison with wheel loaders of the same size class. Liebherr offers numerous application-specific solutions to increase versatility. With these models, customers can choose between Z-bar linkage for standard applications and parallel lift arms for industrial applications. The new all-round wheel loaders are thus particularly versatile.

From the new range, Liebherr will show the L 546 at IFAT 2016. An efficient, 123 kW / 167 HP diesel engine powers the wheel loader. The exhibit is equipped with parallel lift arm, the LIKUFIX hydraulic quick hitch system and a high-dump bucket with a capacity of 4.0 m³. The operating weight and tipping load of the L 546 are perfectly balanced: With an operating weight of 15,360 kg the IFAT-exhibit achieves a tipping load of 8,200 kg.

Larger axles and robust steel structures increase reliability

The new all-round wheel loaders fulfil the requirements of companies from the widest variety of sectors. For example, an important field of application is the recycling industry, where operators place particularly high demands on the machines. Multiple-shift operation with up to 6,000 operating hours per year and working with solid rubber tyres or foam filled tyres are typical of wheel loader operations in this sector. Reliability is of the utmost importance as wheel loaders in recycling operations frequently play key roles in the production process.

Liebherr has prepared the new all-round wheel loaders for these stringent requirements with targeted investment in robustness. In order to increase the stability of the machines, Liebherr has installed larger axles than in the previous generation in all three models. These have automatic self-locking differentials that provide the greatest degree of traction even on rough terrain.

The new generation of all-round wheel loaders embodies the decades-long experience of Liebherr in the development, design and production of steel components. Comprehensive optimisation of the entire steel structure improves the durability of the machines, for example in demanding industrial applications. In particular, the developers have reinforced the structure of the steel frame and the two lift arm variants. High-quality hydraulic components round off the package for increasing durability.

Independent of the utilisation profile: more efficient driveline ensures productivity

Efficient diesel engines of emission stage IV/ Tier 4f power the new wheel loaders in the mid-size range. Engine output is tuned to the requirements of the powerful hydrostatic drive. Here, the proven Liebherr-Power-Efficiency plays a decisive role. The system controls the engine in such a way that it delivers the greatest possible amount of power even at low engine speeds. The result is a higher degree of effectiveness and fuel savings of up to 25 per cent in comparison with wheel loaders of the same size class.

The hydrostatic driveline allows rapid and continuous acceleration in all speed ranges, without discernible gear-changing processes and without interruption in tractive force. In addition, it autonomously applies the brakes so that the service brake only has to provide supportive assistance and thus remains almost free of wear. Continuous traction control, combined with automatic self-locking differentials, prevents wheelspin. This means that tyre wear is reduced by up to 25 per cent and operating costs are decreased.

The proven exhaust gas after-treatment system comprises a diesel oxidation catalyst (DOC), diesel particle filter (DPF) and selective catalytic reduction (SCR). The system is state of the art in this machine class. It effectively reduces the emission of pollutants.

The fact that companies can work productively with Liebherr wheel loaders in the mid-size range is also due to the unique component installation location. Liebherr installs heavy components such as the diesel engine in the rear. The centre of gravity shifts to the rear of the machines. The wheel loaders thus require less additional counterweight and attain higher tipping loads with low operating weight. This means that operators can use larger buckets in everyday operations and hence optimise handling capacity and productivity.

No compromises with safety and comfort

The designers have holistically reworked the interior of the cab to provide higher standards of comfort. A wide ladder leads to a roomy, modern comfort cab that is ergonomically adjusted to suit the machine operator. As desired the comfort safety door is available. It can be opened comfortably by 180 degrees.

The interior of the cab is logically structured and provides a spacious feeling. Storage and stowage facilities appear tidy and are well-conceived down to the smallest detail. Displays, control elements and operator's seat form an ergonomic unit. The control instruments are laid out in a clear manner so the machine operator can view all operation-related machine data at a glance. In addition they can adjust the height of the touch-screen display to each individual's preference on the A pillar.

The new electrohydraulic system allows the operator to programme the lift arm and bucket positions from the cab as desired. An optionally-available, powerful air conditioning system always ensures a pleasant working temperature.

The design of the cab offers the machine operator good visibility to all sides. The large glass and window surfaces are extended a long way downwards, improving all-round visibility. Together with the standard reversing camera, these measures ensure the safety of both man and machine.

With respect to maintenance, the focus is also on safety and comfort. The service personnel only have to open a cover to gain access to the engine bay. Maintenance work can be conducted safely from the ground. The well-considered installation location of the components guarantees that all maintenance points are safely, easily and rapidly accessible. Operators thus save time with maintenance.

Focus on versatility: specific solutions for standard and industrial applications

The Liebherr wheel loaders in the mid-size range offer a wide range of equipment options for customer-specific applications.

Customers can choose between Z-bar linkage for standard applications and parallel lift arms for industrial applications. Both lift arm variants offer rapid response characteristics and allow efficient working. The Z-bar linkage impresses with its high torque in lower lift arm positions. It is the right choice when the wheel loader has to break-out material from a pile. The challenges are different in the case of industrial applications. For example, recycling companies often work with heavy equipment such as high-dump buckets to move bulky and demanding material such as scrap metal, building rubble or glass. The parallel lift arm system is the best choice for such duties. It has high power in the upper lift arm range and offers parallel guidance that is advantageous for such applications.

If desired, the LIKUFIX hydraulic quick hitch system is available for the wheel loaders in the mid-size range. With LIKUFIX, the machine operator can safely change between several mechanical and hydraulic tool attachments within a short period of time simply

by pressing a button in the cab. Here, the hydraulic lines are connected automatically. In this way, the widest variety of applications can be conducted efficiently with the right tool attachment without the machine operator losing valuable time in changing the equipment.

Independent of the field of application, the cooling system of the new all-round wheel loader reliably performs its task. It is installed directly behind the operator's cab in the rear chassis. This is the cleanest part of the wheel loader, where the radiator can draw in low-dust air. In the case of particularly dust-intensive applications, such as in sawmills or paper mills, equipment options such as a fluff screen, reversible fan drive and a coarse-meshed radiator grille protect the cooling system. These protective measures ensure uniform cooling performance. They also reduce cleaning and maintenance requirements, increasing machine availability. Non-slip foot plates and stable hand rails provide a high degree of safety when cleaning the cooling system.

Performance data (standard version)

| | Tipping load (kg) | Bucket content (m ³) | Operating weight (kg) | Engine output (kW / PS) |
|-------|----------------------|-------------------------------------|-----------------------------|----------------------------|
| L 526 | 7,700 | 2.1 | 11,250 | 103 / 140 |
| L 538 | 9,500 | 2.6 | 13,500 | 114 / 155 |
| L 546 | 10,500 | 2.8 | 14,200 | 123 / 167 |

Emissions are below the emission threshold values in accordance with Stage IV / Tier 4f.

Captions

liebherr-all-round-wheel-loader-recycling.jpg

The new Liebherr all-round wheel loaders impress with its high productivity in recycling applications.

liebherr-l546-all-round-wheel-loader.jpg

The robust L 546 is the largest member of Liebherr's new mid-size wheel loader range.

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