When loading and compacting

Hydraulics is the solution.

When it comes to high power density, hydraulics is the only way to get the job done efficiently. This technology enables refuse collection vehicle manufacturers achieve short cycle times and low fuel consumption while ensuring components remain lightweight. We are delighted to work with you to create innovative concepts that increase flexibility and simplify service maintenance.

Solutions for a World under Pressure
Every type of refuse collection vehicle is designed to be deployed in a specific area of operation. As such, these vehicles are constantly optimized in terms of the way that they function and how they are constructed. The rear loader has been a reliable model used in residential areas for decades. Operators require short cycle times and low noise levels, since frequent stops need to be made without disturbing residents. Front loaders are the preferred option for collecting commercial waste, where a high level of compacting is deployed to make the best use of the loading space. Side loaders mean that operations can be executed from the driver’s cab, which is particularly useful in less densely populated residential areas. In particular, the picker arm and claw need to be operated with extreme precision.

Although the collection mechanism can be arranged in various different ways, the basic functions of the different types of refuse collection vehicles mentioned are similar. These include:

- Operating the picker arm and claw
- Lifting, tipping and lowering containers
- Compacting the waste
- Opening the rear hopper
- Moving the expulsion plate

The installation space available for the control blocks of these functions and the hydraulic pumps is limited and weight must be kept to an absolute minimum. This provides users with the maximum loading volume possible. HAWE Hydraulik can provide very compact control blocks and can integrate additional, secondary functions such as load-bearing valves, lowering brake valves and priority valves directly into the control block to save space. Modern technology with integrated CAN bus control means safe and smooth operations can be executed from the driver’s cab with even greater ease and less maintenance. A tool for monitoring performance and hence controlling errors in the individual functions can be directly integrated into the control system.

The hydraulically controlled functions can be used efficiently using variable displacement pumps, since they adapt their displacement capacity to the respective step in the overall process. By simultaneously working with large flow rates and low pressure, even the noise made by the hydraulic pump can be considerably reduced without impacting performance. In addition, fuel consumption and harmful emissions can be further reduced with other energy recovery concepts. Get in touch!
Optimized space requirements and weight – making your work easier.

An open partnership between supplier and vehicle manufacturer from the outset ensures that outstanding savings can be made, both in terms of cost-effectiveness and resources. HAWE Hydraulik takes its environmental commitments seriously and plays its part by using the latest manufacturing technology and efficient hydraulic solutions. Some of the items in our product range include:

### One directional valve type for all functions:

It is a state-of-the-art and economical hydraulic control for all movements – the proportional directional spool valve type PSL according the Load-Sensing-Principle. For all functions with a volume flow up to 50 l/min combined with the PSL in one valve bank. Requiring little space and various additional options directly integrated – these are additional advantages.

- Operating pressure \( p_{\text{max}} \): 420 bar
- Flow rate \( Q_{\text{max}} \): 240 lpm

### Smart communications between components:

The PSL’s on-board CAN technology minimizes the amount of wiring required and makes it easier to design smart systems. As you would expect, it supports all common communication protocols.

- Operating pressure \( p_{\text{max}} \): 420 bar
- Flow rate \( Q_{\text{max}} \): 200 lpm

### Efficient hydraulic fluid supply:

The energy-efficient axial piston pump type V60N generates the necessary pressure and flow rate, continually adapting these to the current requirements. A capacity regulator reliably prevents the system from becoming overloaded. Various nominal sizes, controls and drive options offer maximum flexibility while minimizing space requirements.

- Operating pressure \( p_{\text{max}} \): 400 bar
- Geometric displacement \( V_g \): 130 cm\(^3\)/rev.

### Safety and precision:

Load-holding valves type LHT and releasable check valves prevent uncontrolled movements of the functions, and because they are leak-free, there is no need of re-adjusting. The availability of different versions (pipe connection, manifold mounting, screw-in cartridge) ensures the valve can be installed close to the actuator, maximizing speed of response and safety.

- Operating pressure \( p_{\text{max}} \): 450 bar
- Flow rate \( Q_{\text{max}} \): 250 lpm

### Decentralized electronic control unit:

The flexible CAN node type CAN-IO 14 is a very compact and competitive controller for hydraulic applications. It can be used as CAN-Bus-Slave in combination with a PLVC or CAN-PSL or stand-alone with a user programmed C-program. Since the unit has protection class IP 67 and is designed for a temperature range from -40°C to 85°C, users of mobile machines rely on it functioning perfectly even in harsh outdoor environments.
With three sales offices in the U.S., subsidiaries and expert partner companies throughout North America, HAWE Hydraulik is bound to have a presence in your area.

HAWE Hydraulik offers the following benefits:
■ Comprehensive individual advice and assistance
■ Customized solutions
■ Products designed and manufactured using state-of-the-art technology
■ Many years of experience and expertise in hydraulic products and their uses
■ Tailored service and maintenance contracts
■ Layout, set-up, and maintenance/service on-site
If you have any questions, please get in touch. Our experts are always happy to help.

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