Twin dual-line lubrication system

For the most demanding applications

World class equipment deserves world class lubrication

Automatic lubrication is more effective than manual lubrication. Because the machine or vehicle is lubricated while it is in motion, the grease spreads better over the surface that has to be lubricated. In addition, the grease is applied in small doses with short intervals, providing optimal lubrication. Moreover, this results in a collar of grease on the outer edge of the pins and bushings, keeping out dirt, dust and water. Thus automatic lubrication offers many advantages:

- Longer service life of slewing bearings, pins and bushings
- Lower repair and maintenance costs
- Improved machine and vehicle uptime
- Higher productivity
- Higher residual value
- Up to 50% less grease consumption
- No possibility of accidents while greasing hard to reach lubrication points

The Groeneveld dual-line automatic lubrication system is developed specifically for the most demanding applications. For installations with many lubrication points or large line lengths. For extremely low or high ambient temperatures. For applications where the reliability of the system is crucial. Thanks to the unique product properties, Twin offers great benefits and an excellent return on investment.

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When only the very best will do

Unique product features make Twin the best solution for larger machines that are often used under extreme conditions. The system works under relatively low pressure, which means that the structure – and therefore the quality – of the grease is preserved. Furthermore, the dual-line system with its patented metering units ensures that all lubrication points are always optimally lubricated. This is made possible due to precise metering and lubrication intervals, also in case of extremely low or high ambient temperatures and large distances between pump and lubrication points. In addition, it is easy to expand the system to detachable equipment pieces. This makes the system extremely suitable for larger machines such as large wheel loaders and dump trucks, but also for spreaders and heavy haulage trailers.

Unique characteristics

- Grease output and grease delivery independently of ambient temperature and grease viscosity
- Thanks to the relatively low work pressure, the quality of the grease is preserved
- Modern pump with real-time clock, memory, CAN-Bus connection and follower plate
- Suitable for biodegradable grease
- High quality metering units and distribution blocks
- Standard with in-cab display
- Available with reservoir volumes ranging from 2 to 200 liters
- Easy to program, install and extend
- The filling coupling with filter prevents contamination during filling
- Easily extended to grippers, excavation buckets and other equipment pieces through quick couplers

Follower plate
Equipped with a follower plate ensuring all the grease in the reservoir is used. This means that the reservoir wall remains clean, allowing you to check the grease level visually. Ageing of the grease as a result of oxidation is also prevented.

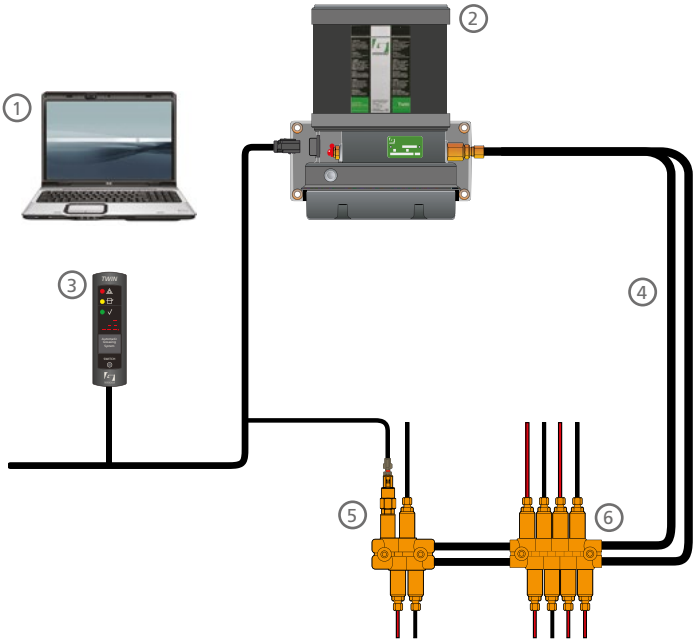
Metering units and distribution blocks
Groeneveld has a wide range of metering units available. These metering units can be mounted in any required combination on brass distribution blocks. The distribution blocks are available in versions with between 2 and 21 outputs.

Twin system overview

1. Change settings and diagnose the system with Twin GINA software.

3. In-cab display with:
   - Selection key lubrication interval
   - Information about:
     - Minimum level
     - Empty reservoir and failures
     - Selected lubrication interval

5. Twin pressure sensor:
   - Guaranteed and temperature independent grease delivery
   - Control over the entire lubrication process



2. Pump with:
   - Control unit and memory
   - Reservoir with follower plate, filler coupling and minimum level indicator
   - Test switch

4. Immediate indication of possible obstructions and leaks in the main line.

6. Thanks to the wide range of metering units (13 types with an output between 0.025 and 2.0 cc), each lubrication point will get exactly the pre-set correct amount of grease.

Secondary lines
The lines create the connection between the metering units and the lubrication points. From flexible hoses to very strong steel pipes. Groeneveld has the correct line for any application.

In-cab display
In order to check the status of the system, the driver or operator does not have to leave the cabin. The in-cab display will show failure messages in the cabin. This will allow an easy and fast diagnosis of the system, as well as remote assistance.

Major time saving

Automatic lubrication of all bearings, pins and bushes will save you many hours of manual lubrication. Moreover, the equipment is lubricated while moving, a significant difference with manual lubrication. Together with the extended life span of crucial components, this will ensure that the Groeneveld Twin has a quick return on investment. Moreover, maintenance personnel do not constantly have to be present on site. And maintenance personnel do not have to crawl under and climb over the machine in order to lubricate hard to reach points. This makes the Twin automatic lubrication system a smart investment in machine availability, efficiency, productivity and safety.

Working principle

A Twin system consists of a pump with grease reservoir, a main line network to the distribution blocks with metering units and a secondary line network to the lubrication points. The grease is pumped to the distribution blocks via a double main line network. The metering units supply the exact right amount of grease to each of the lubrication points. The pump switches off once the pressure in all metering units is at least 100 bar. As a result, always the right amount of grease is provided at each lubrication point, independent of counter-pressure, temperature or viscosity of the grease.

Groeneveld and quality

Experienced, expert and well-trained technicians, employed by Groeneveld or one of our partners, install the Twin in a professional manner. A guarantee for years of trouble-free operation.

Groeneveld has its own production and assembly facilities and development centers. Product- and process quality are paramount.

The right solution for any system

For medium-sized machines, a Twin system with a reservoir of two to eight liters will do the trick. For the larger machine, however, Groeneveld has an XL version with a 20 liter capacity and barrel pumps of up to 200 liters.

Kits

For the most common applications, Groeneveld supplies ready-made kits. These kits contain all necessary components for installation. This allows Groeneveld to offer an expert and quick solution for each machine.

Twin XL

Twin XL: additional capacity

Specifically for larger earthmoving machines, the Groeneveld range includes the Twin XL. An automatic lubrication system with a higher grease delivery and an extra large reservoir on the basis of the Twin. The Twin XL is made of sturdy and coated material and has a capacity of 20 liters of NLGI-2 grease. For machines and vehicles with an extremely high grease demand, such as mining equipment, Groeneveld supplies reservoir volumes from 40 to 200 liters.

With these alternatives, Groeneveld is able to meet the demand of companies of not having to refill grease between maintenance stops.

Applications

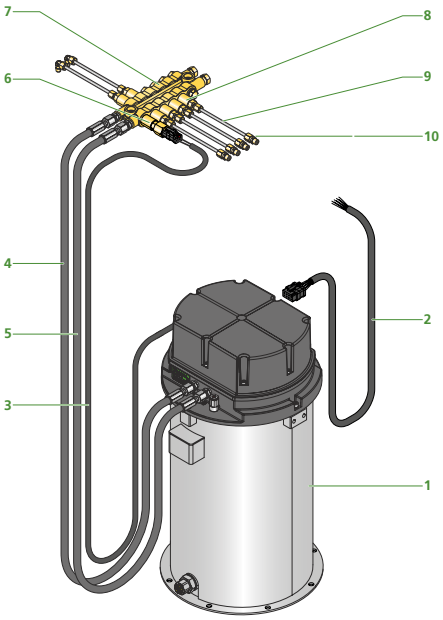
Contrary to progressive systems, the Groeneveld Twin XL works perfectly at extremely low temperatures and in case of large distances between pump and lubrication points. This makes the Twin XL highly suitable for large wheel loaders, articulated and rigid dump trucks of more than 50 tons and excavators of more than 60 tons.

Certainly, the Twin XL can also be used on smaller equipment. In that case the major benefit will be that the user rarely needs to refill the reservoir.

Twin Barrel pump

Twin system overview

1. Grease reservoir and pump unit
2. Electrical connection
3. Cable harness pressure switch
4. Primary grease line A
5. Primary grease line B
6. Pressure switch
7. Divider block
8. Metering unit
9. Secondary grease lines to the individual lubrication points
10. Connection to the lubrication point



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Groeneveld: a global player

Since its foundation in 1971 in Gorinchem, Groeneveld Lubrication Solutions has developed into a global company with approximately 600 employees. Groeneveld has over 30 branches in more than 20 countries. In many countries, the company is also represented by independent distributors and dealers – all just as driven as our own organization to offer added value to the customer's company.
Groeneveld is looking forward being of service to you by installing and maintaining your systems. That is why it is good to know that Groeneveld has a global presence. Visit the Groeneveld website for the telephone numbers of the Groeneveld branches, distributors and service dealers.

SingleLine
Parallel lubrication system

For trucks, trailers and machines with many lubrication points. It will simultaneously grease all lubrication points, at the right time and with the correct amount of grease. Due to the regular lubrication with short intervals, vital parts are properly lubricated at all times, so that moist and dirt are unable to enter these parts. It applied more than 500,000 times all over the world.

Oilmaster HD
Always the correct level of oil

Groeneveld's Heavy Duty oil management system ensures that the oil level in the engine is always at an optimal level. Checking the oil level manually is a thing of the past. This doesn't only save time, but also ensures that there is never too little or too much oil in the engine, with all the costly and time-consuming consequences. The system is applied in numerous sectors throughout the world.

Greensight
Safety support system

Greensight is available as an obstacle detection system, as a camera system and as a combination. The implementation of ultrasound allows the system to detect obstacles in the pre-set zones very accurately. It can be expanded with sensors either on the sides or on the top of the vehicle or machine. The camera system offers an optimal view under all conditions.

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