

AUTOL



Automatic Lubrication Systems for
Commercial Vehicles

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About Autol

-  **1** No.1 brand of centralized lubrication in China. Annual production capacity 200,000 sets.
-  **10** 10 CNAS certified laboratories. Provide comprehensive and professional laboratory testing services.
-  **70+** AUTOL products are exported to more than 70 countries and regions.
-  **100+** More than 100 R&D personnel.
-  **300+** Acquired more than 300 technical patents at home and abroad. Widely used in construction machinery, wind power, commercial vehicles, mining, port equipments and many other fields.
-  **800K+** Up to now more than 800,000 sets of installed lubrication equipments with various models are in operation.

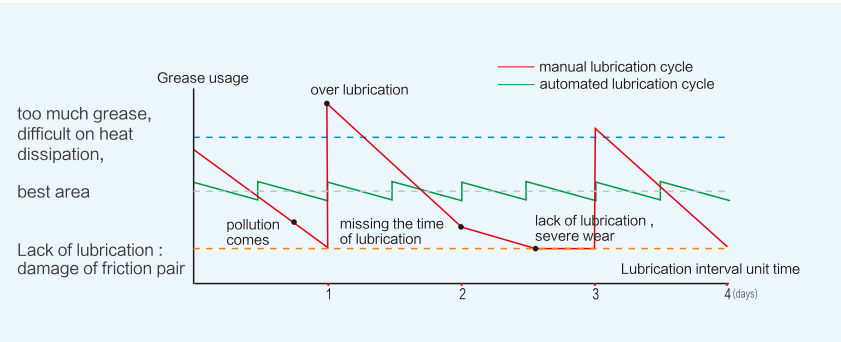


Value of Autol Centralized Lubrication Solution

It features long time interval of maintenance and repair, reduced costs of spare parts, increased operating hours and high operating efficiency.

Goodlubricationmay prolongequipmentmaintenance interval, reduce frequency of maintenance and repair, and therefore save maintenance materials, reduce downtime and increase operating efficiency.

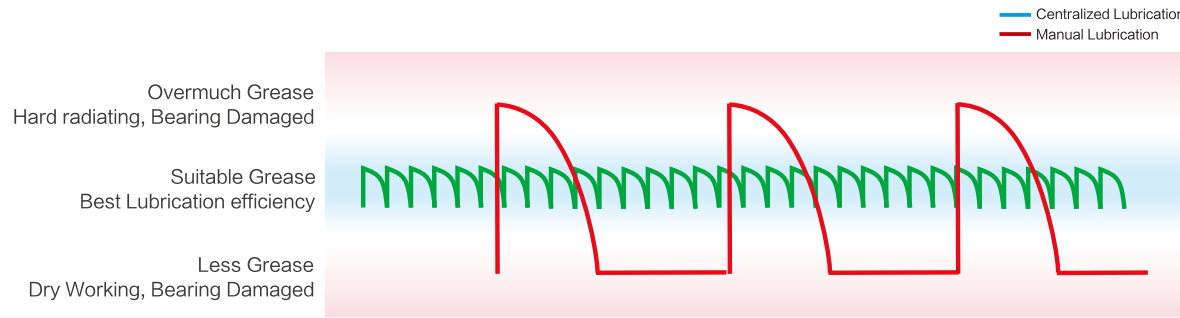
Comparison between manual lubrication and automated lubrication on same lubrication cycle



comparisons on project	manual lubrication	Automated lubrication	Benefits of Automated lubrication
grease cost	20 days/1kg/time 18times/year	0.625 days/0.08kg/time	save grease cost about USD 37.00 per equivalent cycle
lubrication labor cost	standard project 18 times/year 20 days/2 hours/usd 4.50/time	manpower free	save labor cost about USD 160 per equivalent cycle
save fuel costs	long-term friction ,strenuous operation,increased fuel consumption	Convenient operation	saving 1-3% fuel per 100,000 kilometers,about USD 573
maintenance cost	Frequent maintenance, decrease bus operating rate	No need for frequent maintenance	save 6 times basic maintenance check, 2 times deep maintenance check per year, estimated benefits about USD 420

The service life of the lubrication parts could increased by 60% and above.

For the conventional manually operated lubrication, the grease filled is uneasily controlled and leakage from grease nipple, dust, etc. will be entrapped into the friction pair causing worse wear. For the centralized lubrication system, the grease lines are fully enclosed to ensure clean lubrication. The service life of the lubrication parts could increased by 60% and above due to grease supply at fixed time, fixed amount and high frequency.



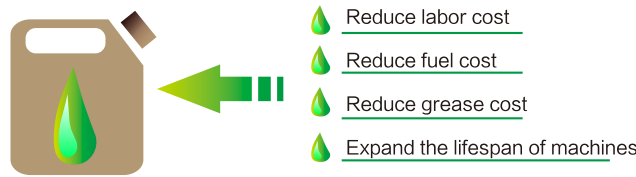
Mechanic automation could save labor by 95% for realization of safety production.

During equipment operation, lubrication at fixed time, point and amount could save labor by 95%, reducing work on equipment under complicated operating conditions and ensuring safety of work.

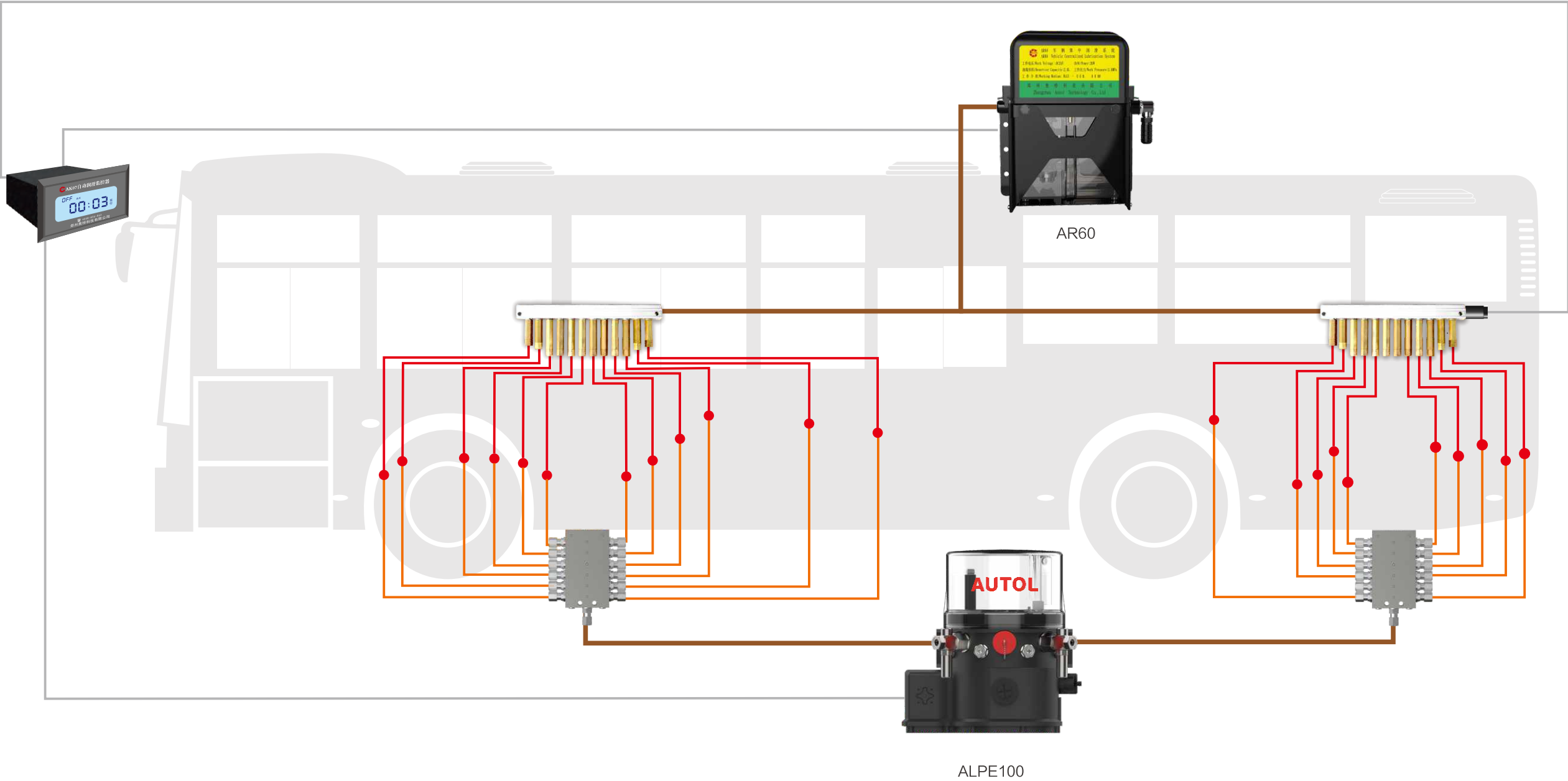


Energy saving and environmentally friendly: Grease reduced by over 70%.

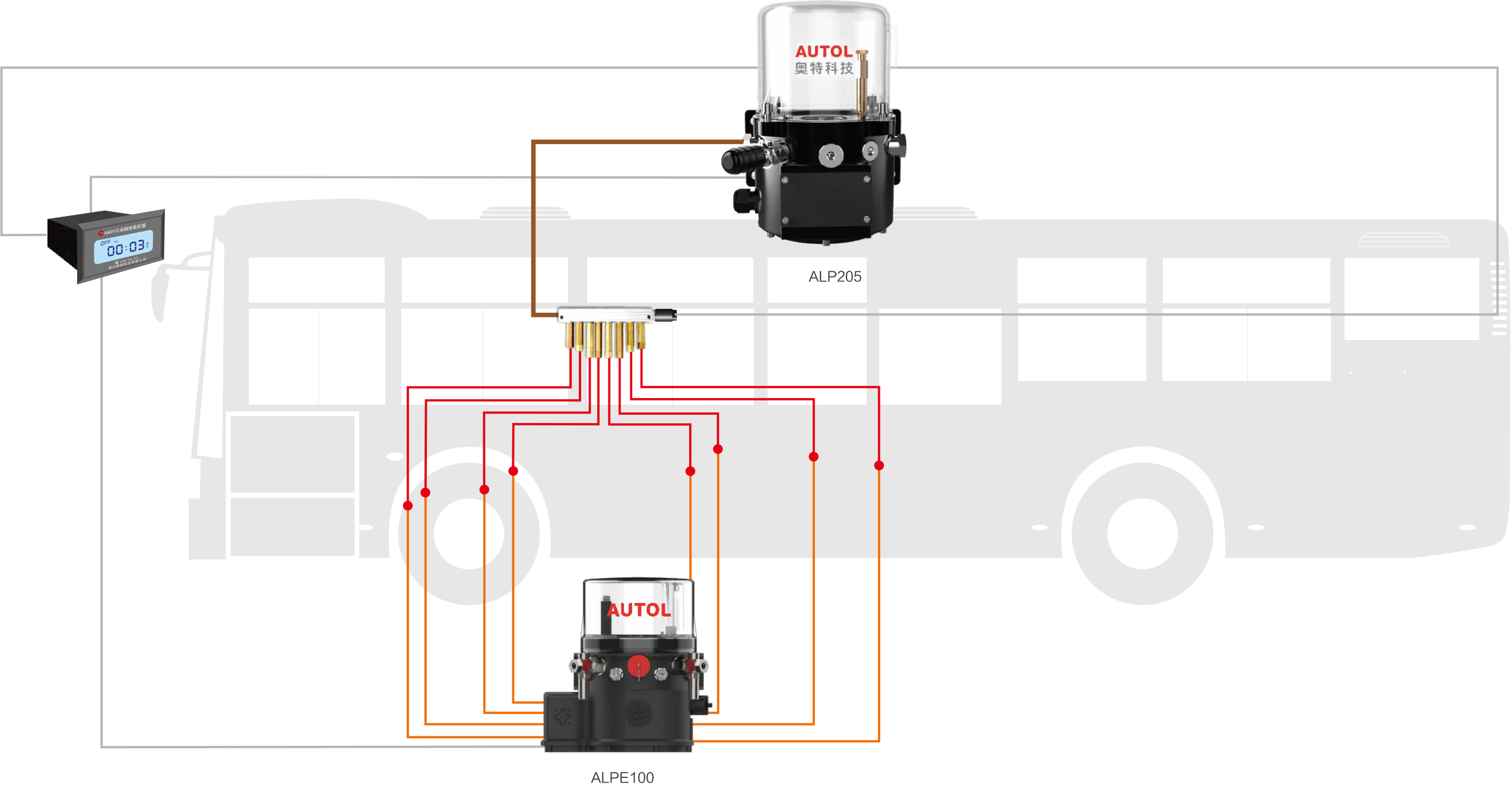
Conventional manually operated lubrication causes large amount of grease waste.The centralized lubrication system can supply clean pressurized grease to the designated lube points with fixed amount at fixed time during operation for optimal lubrication, causing reduction in grease consumption over 70%.



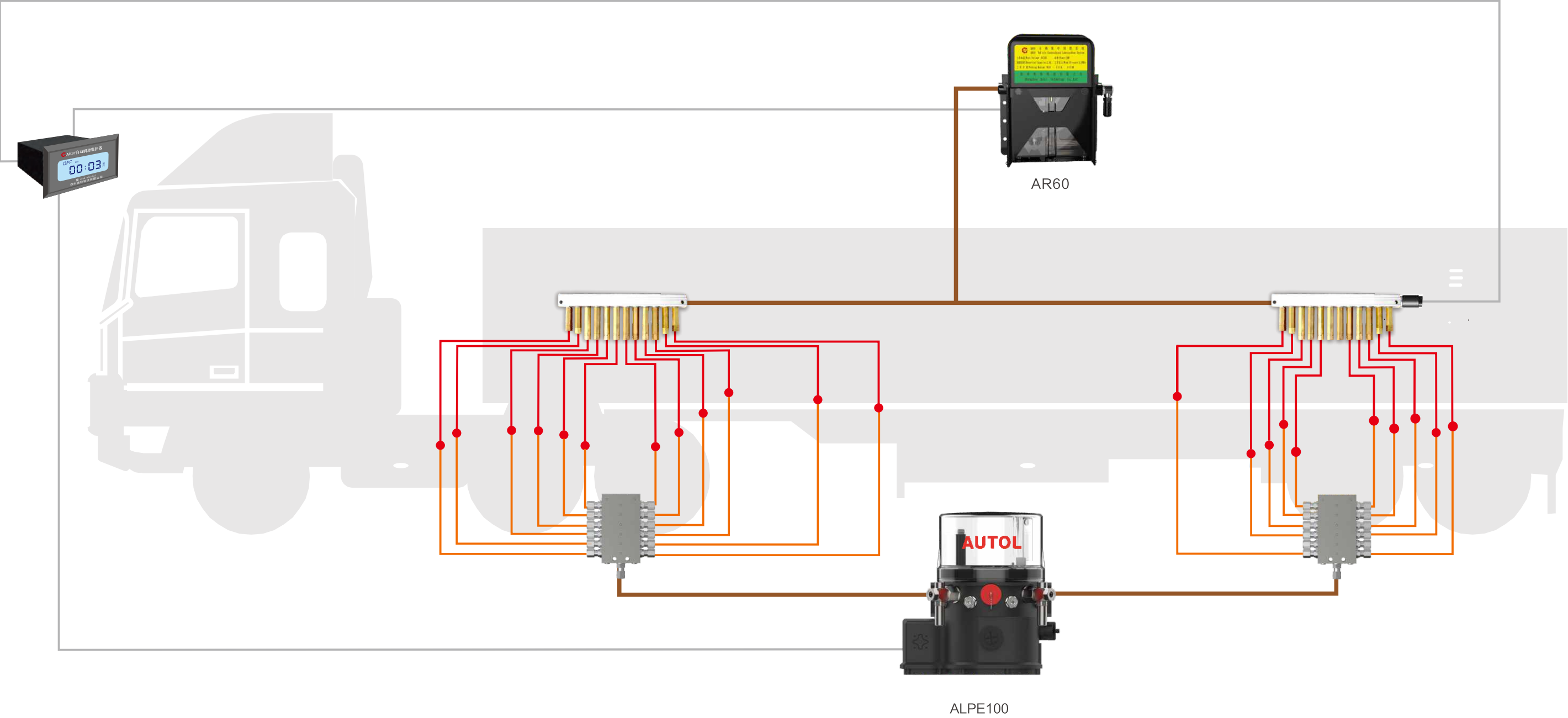
Optional Solution for Bus (Fuel) Vehicle



Optional Solution for Bus (Electric) Vehicle



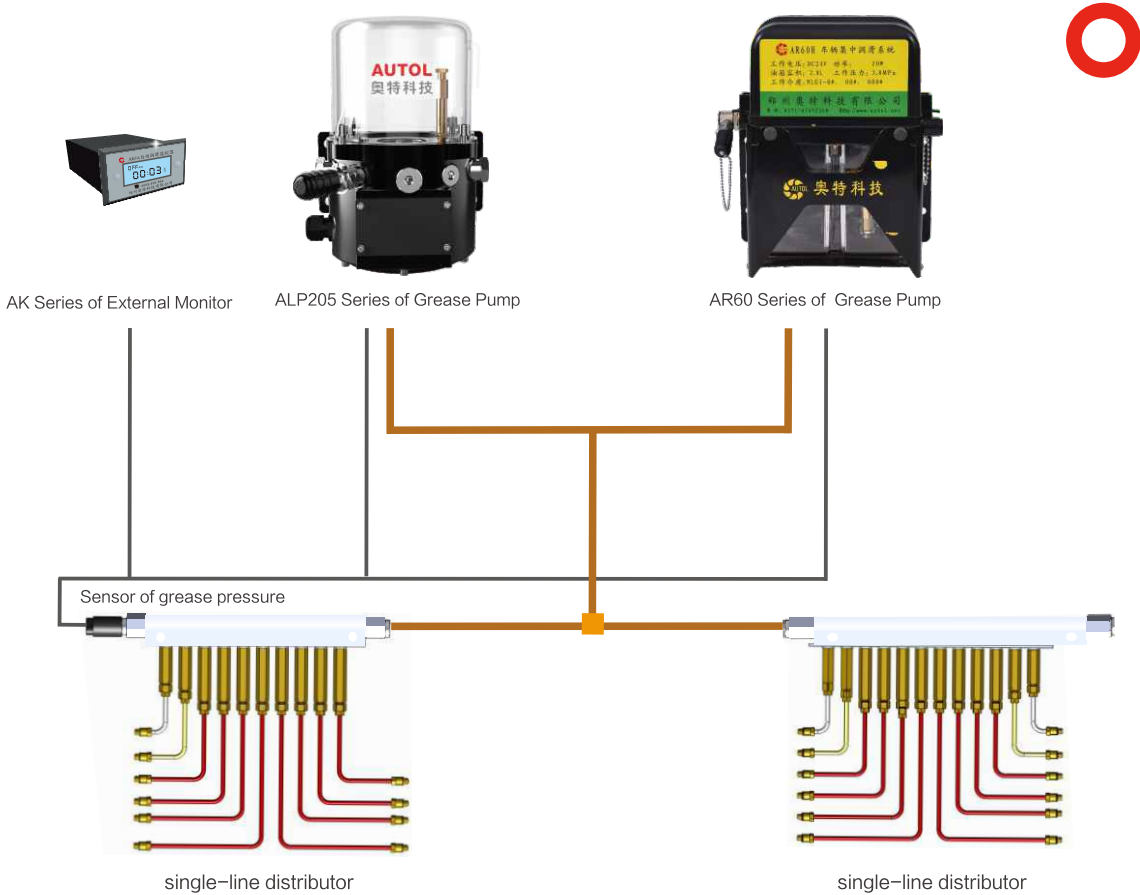
Optional Solution for Truck



Single-line CLS

Single line lubrication system is integrated with LED monitor, grease pressure sensor and temperature sensor. The monitor keeps monitoring the whole system working status. If a place where temperature is below -15℃, temperature sensor will give protective signal to monitor.

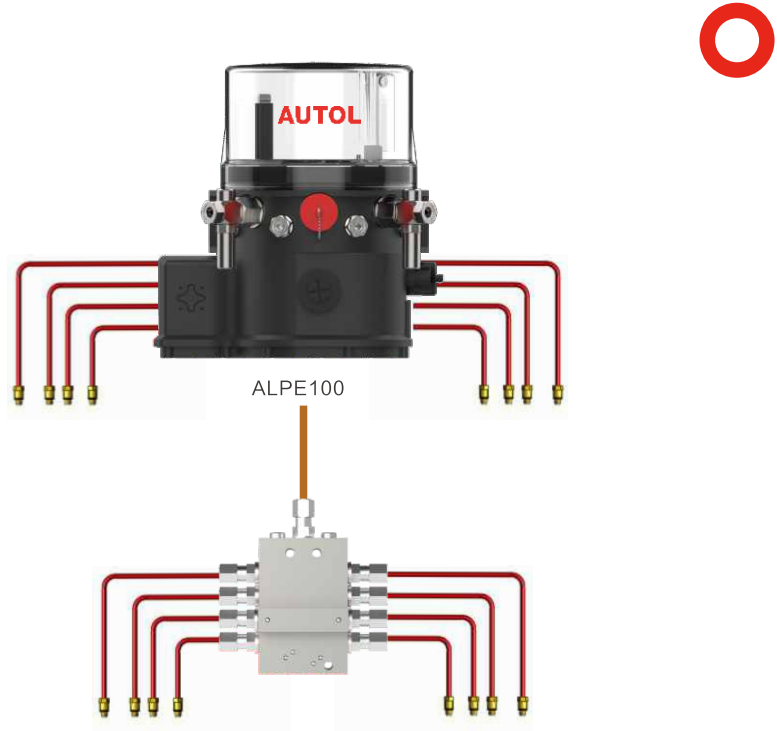
This system is suitable to use grease NLGI-000,00,0.



Multi-function CLS

The centralized lubrication system with multi-function pump is a simple and efficient centralized lubrication system, featuring advantages as simple structure, easy installation, no grease distributor, and high operating reliability, etc. The grease lines in the system are relatively independent each other. Failure to a single grease line will have no influence on the system.

It applies to mechanical equipment for construction machinery, commercial vehicles, bus, truck, semi-truck, coach, etc.



ALP205 Series Pump

ALP205 series lubrication pump is specifically developed for new energy vehicles, which has small volume, light weight and compact structure features. ALP205 series pump is mainly used for commercial vehicles(bus&truck) with the lubrication points of less than 10.



Technical Data of ALP205 Series of Lubrication Pump

Model	Control mode	Nominal flow	Maximum operating pressure	Parameters of motor	Grease available	Operating temperature
ALP205	External/Internal monitor	90mL/min	Room temperature 3.8MPa	40W DC24V/2.5A	NLGI-0#、00#、000#	-40℃~70℃

ALPE100 Series Pump

ALPE100 lubrication pump is a multi functional piston pump, which has 2 outlets that could be connected with progressive dividers. There are another 8 outlets, which is used for connecting with the lube points directly.

ALPE100 has been widely used in industries like wind turbines, commercial vehicles, small construction machinery, etc



Technical Data of ALPE100 Series of Lubrication Pump

Model	Operating voltage	Pump element	Maximum pressure	Max number of outlets/ pumping elements	Applicable grease	Operating temperature	Protection grade
ALPE100	DC12V/DC24	0.2mL/min, 0.3mL/min, 0.4mL/min, 1.0mL/min, 2.5mL/min	35MPa	8 single utilities-2 progressive outlets	Grease up to NLGI-2	-40℃~70℃	IP67

AR60 Series of Grease Pump

Ar60 series grease pump is designed for commercial vehicle with the lubrication points max 60. According to different installation space, here are two optional types, AR60H and AR60HL.

Autol patented paddle inside the pump could prevent grease deterioration at the bottom of reverior.



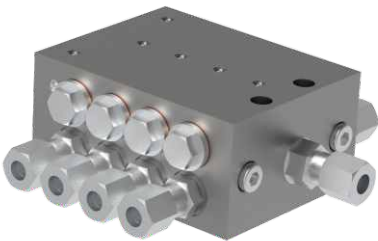
Technical Data of AR60 Series of Lubrication Pump

Model	Control mode	Nominal flow	Maximum operating pressure	Capacity	Parameters of motor	Grease available	Operating temperature
AR60H	External monitor	120mL/min	3.8MPa	2.8L	20W 12V/24V	NLGI-0#, 000#, 00#	-40℃~70℃
AR60HL							

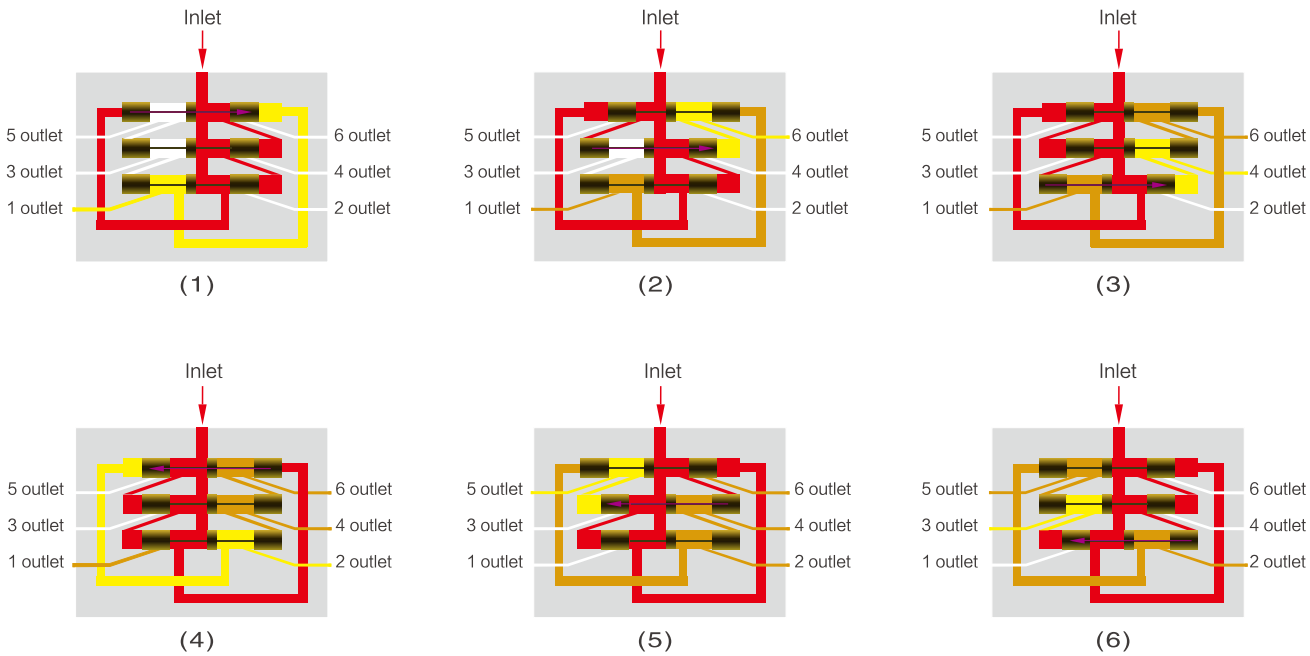
SSVA Progressive Distributor

The SSVA monoblock progressive divider works on the principle that the internal pistons are moving in sequence by hydraulic pressure , then each grease outlet discharges the grease to the different lubricating points follow this sequence.

Maximum pressure: 350bar
Number of outlets: 6~22 pcs
Start-up pressure: ≤20bar
Grease output: 0.2ml/cy
Operation temperature: -30℃~70℃
Applicable grease: NLGI-0#,1#,2#



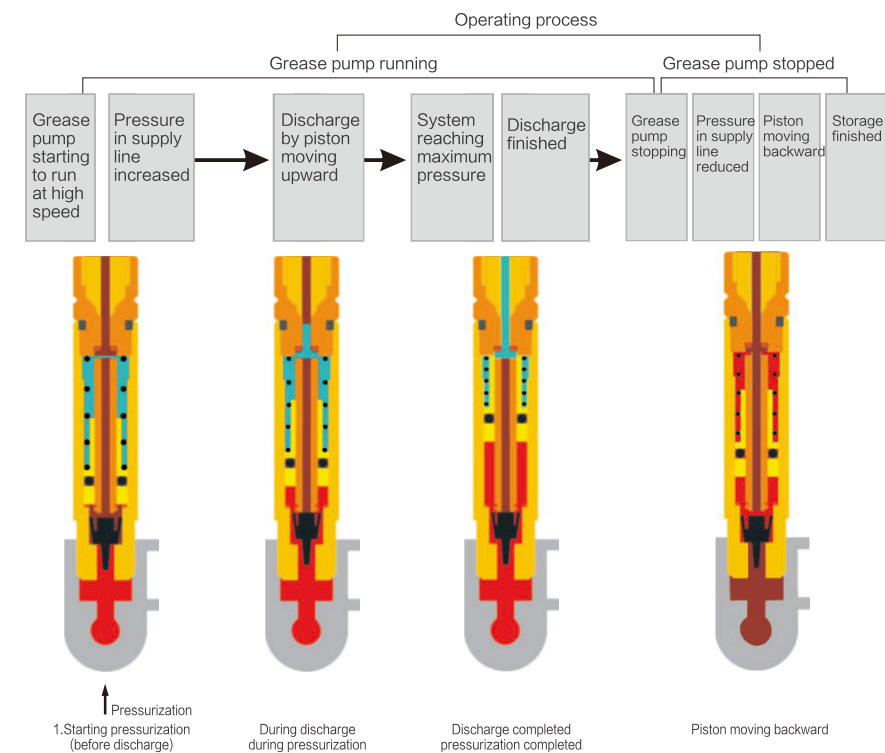
Operating Principle



Single Line Divider

The single line distributor adopts full parallel structure. Its structure is compact, reliability is high, maintenance is easy and maintenance cost is low. So that, it can satisfy the lubrication requirements of equipment under various conditions.

Maximum operating pressure: 6.3 Mpa
Grease available: NLGI-000#、00#、0#
Displacement: 0.13、0.2、0.4ml/cy



1.The umbrella valve inside the distributor moves upward under the pushing force of the pressure grease in the supply line.

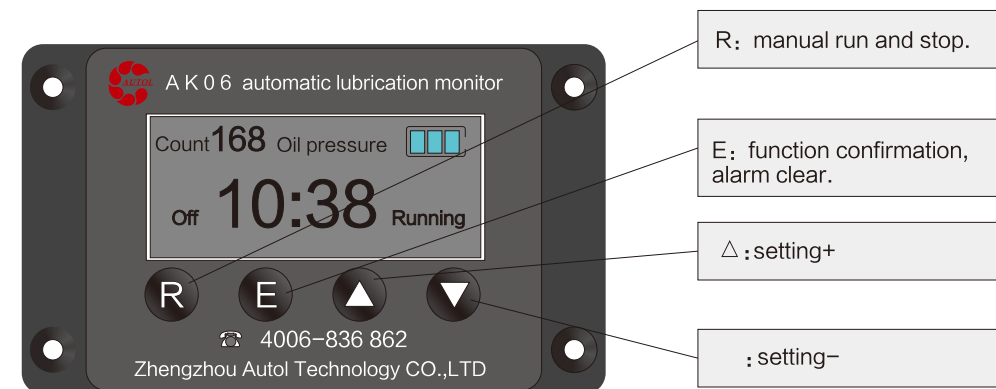
2.The umbrella valve seals up the center hole in core rod. And, the high-pressure grease in the supply line pushes the piston to move upward against the spring resistance to discharge the grease remained in the upper chamber of the previous cycle.

3.The grease discharge is finished when the piston moves to the top of the upper chamber.

4.The unloading valve will automatically be opened when the grease pump is stopped. Now, the high-pressure grease inside the supply line flows back via the unloading valve, allowing that the system pressure drops rapidly. Then, the piston of the distributor returns under the action of the spring. And, the umbrella valve is reset to seal up the grease inlet. Next, the piston delivers grease from the lower chamber to the upper chamber through the center hole in core rod. Thus, the grease supply is also ready for the next cycle.

Monitor

Internal Monitor



Important information:

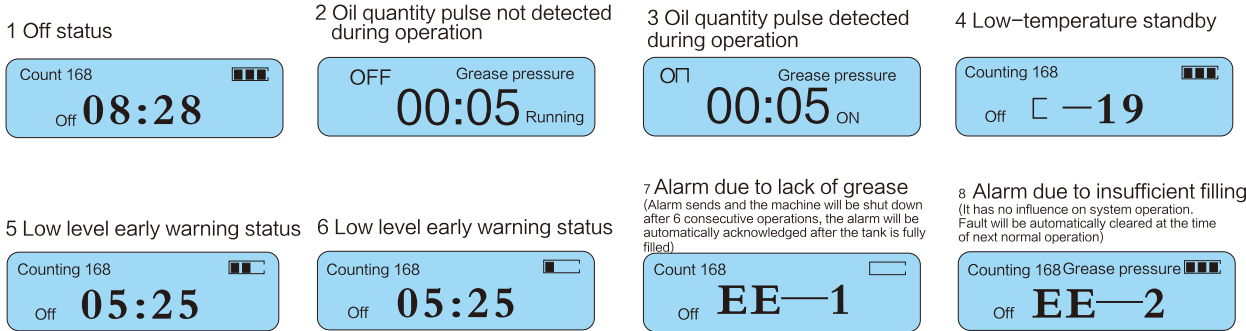
Press and hold both "▲" and "▼" for 4s and above and press the "E" to enter into the mode of setting. It is automatically locked after exiting the mode of setting. Press briefly the "E" to enter into the setting interface and press briefly in turn the "E" to select the setting items "1P, 2P, 3P and 4P". Confirmed.

- 1P: Press briefly the "▲" or "▼" to set the off time (1 to 30 h, customizable);
 - 2P: Set the number of pulses to be detected (0 to 99 min, customizable);
 - 3P: Press briefly the "▲" or "▼" to set the operation time (1 to 60 min, customizable);
 - 4P: Press briefly the "▲" or "▼" to set the low-temperature standby temperature ($-50^{\circ}\text{C} \sim 0^{\circ}\text{C}$);
- Briefly press the "E" to confirm entering into the "OFF" state.

Special Attention!

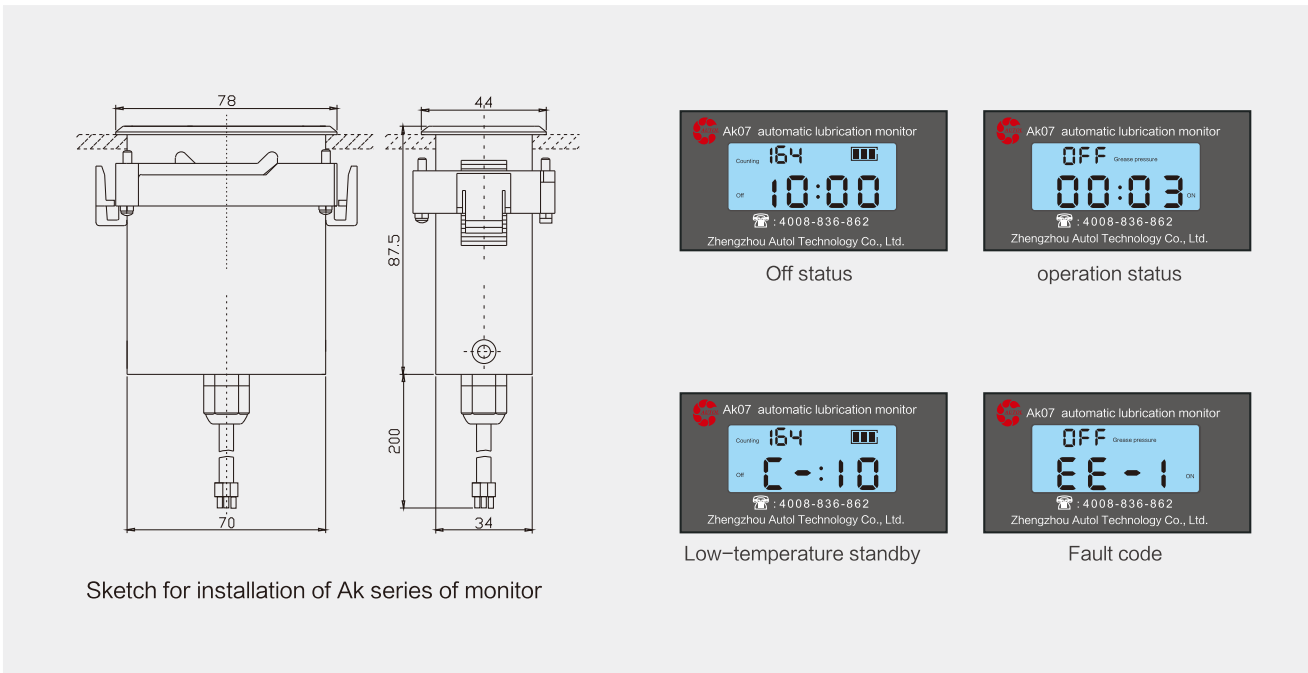
This monitor is designed with function against misoperation:

Setting Interface



External Monitor

As a control center of the lubrication system, the monitor is used to dynamically display the grease pressure signal in the grease line, time countdown to the OFF state, operating hours, total number of operations and fault code, etc. It features protection for standby at low temperature and fault alarm. The monitor may be built-in or externally mounted. A built-in monitor is integrated with grease pump. An externally mounted monitor is installed for easy operation. The monitor is provided with a remote control, allowing for adjusting the system off time (1 to 30 h, non-standard, customizable) according to equipment operating conditions.



Points of innovation:

It is designed with initiative intelligent temperature control technology to challenge the high altitude and extremely cold climate. The operating parameters may be dynamically displayed by an automatic ECU LCD-based system and microcomputer based automatic control. A CAN interface is reserved for remote wireless management via CAN platform.

Grease Gun



AJ-500 Hand-push grease gun
Output: 500ml/cy
Grease available: NLGI-1#&2#



AJ70 Manual grease gun
Oil tank capacity: 15Kg/18L
Output: 70ml/cy
Grease: NLGI-0#、1#



Excellent After-sales Service System

Providing customers with excellent products and perfect services is the driving force of our unremitting pursuit. We provide users with "first-time" technical services and arrange regular inspection mechanism.

- Professional training service before use;
- Installation and trial run guidance;
- Training services of basic operation and daily maintenance;
- One year quality guarantee,life time repair service.
- We have well organized after-sales network,and our professional engineers and partner distributors will response to your questions timely.



Our Customers



NOTE