



N/NH

Truck-mounted fire pump series

Normal pressure pump type N

Combined normal- and high-pressure fire pump
type NH

Certified according to EN 1028 and UL classified

 **rosenbauer**

Truck-mounted fire pump series N/NH.

The next-generation fire pump.



Fire-fighters all over the globe rely on the ruggedness, operating safety and user friendly operation of Rosenbauer N/NH-series centrifugal fire pumps.

No matter whether you need an airport, industrial or municipal fire-fighting vehicle – Rosenbauer N/NH series pumps convince people worldwide with their technical details:

- Minimum pressure change during operation due to flat pump output characteristic
- Integration of a wide variety of foam proportioning systems
- Pump pressure governor
- Mechanical overheating protection
- Maximum priming performance
- Automatic priming

As well as with the following conveniences for the operator: Noise reduction, due to low speeds and a direct drive via the power take-off (PTO). Maximum of user-friendliness and ergonomics.

The series incorporates the requirements and conditions of modern chassis. Due to the aluminium or gunmetal material, the special modular design of this pump and the availability of both rotational directions, the N/NH series is suitable for installation in vehicles all over the world. The pump is mounted either in the rear or as a midship version.

The pump can also be driven by a separate engine. N/NH-pumps are suitable for tough, continuous operations with any kind of water and foam concentrate quality, and in a wide range of climatic conditions.

■ Innovative. Ergonomic. Quiet.

The “N” normal-pressure pump and the “NH” combined normal- and high-pressure pump prove themselves with innovative technology, ergonomic operation and low noise operation.

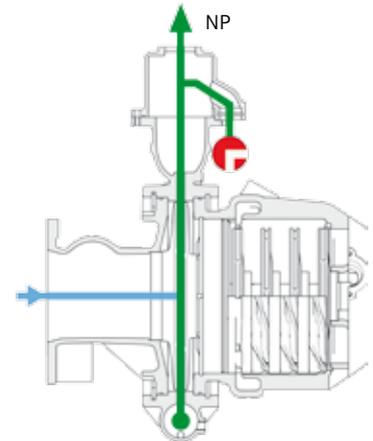
Normal pressure fire pump type “N”

The single-stage centrifugal pump provides maximum efficiency, due to the spiral housing and water stripper edges in the volute. It proves itself with its flat pump output characteristic. This minimizes pressure peaks, due to nozzles being opened and closed. The pump speed is designed for common vehicle power take-offs (PTOs); a gear box does not have to be used. This results in reductions of the maintenance effort, weight, space, as well as in reduction of additional noise.

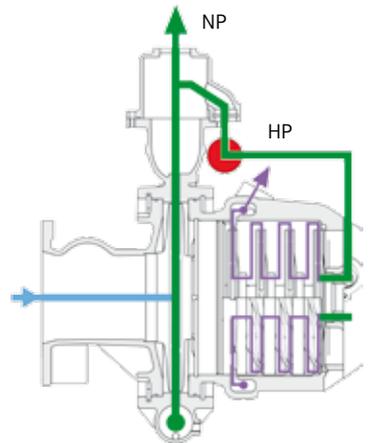
Combined normal- and high-pressure fire pump type “NH”

The NH series pumps combine all the benefits of the N series pump with those of a four-stage high-pressure centrifugal pump on a single pump shaft. The counter-rotating arrangement of the normal- and high-pressure impellers provides optimum thrust load compensation. A separate drive for the high-pressure pump is not required. With the help of a switchover valve, the water supply of the high-pressure pump can be activated and deactivated. The use of centrifugal impellers makes the high-pressure pump resistant against contaminated water. A separate filter system is not required.

The Rosenbauer high-pressure pump also has a flat characteristic. Pressure peaks, due to HP nozzles being opened and closed, are minimized.



Switchover valve “CLOSED” Normal-pressure operation no flow of water through the high-pressure pump



Switchover valve “OPEN” Normal- and/or high-pressure operation



Benefits of the N/NH series pumps

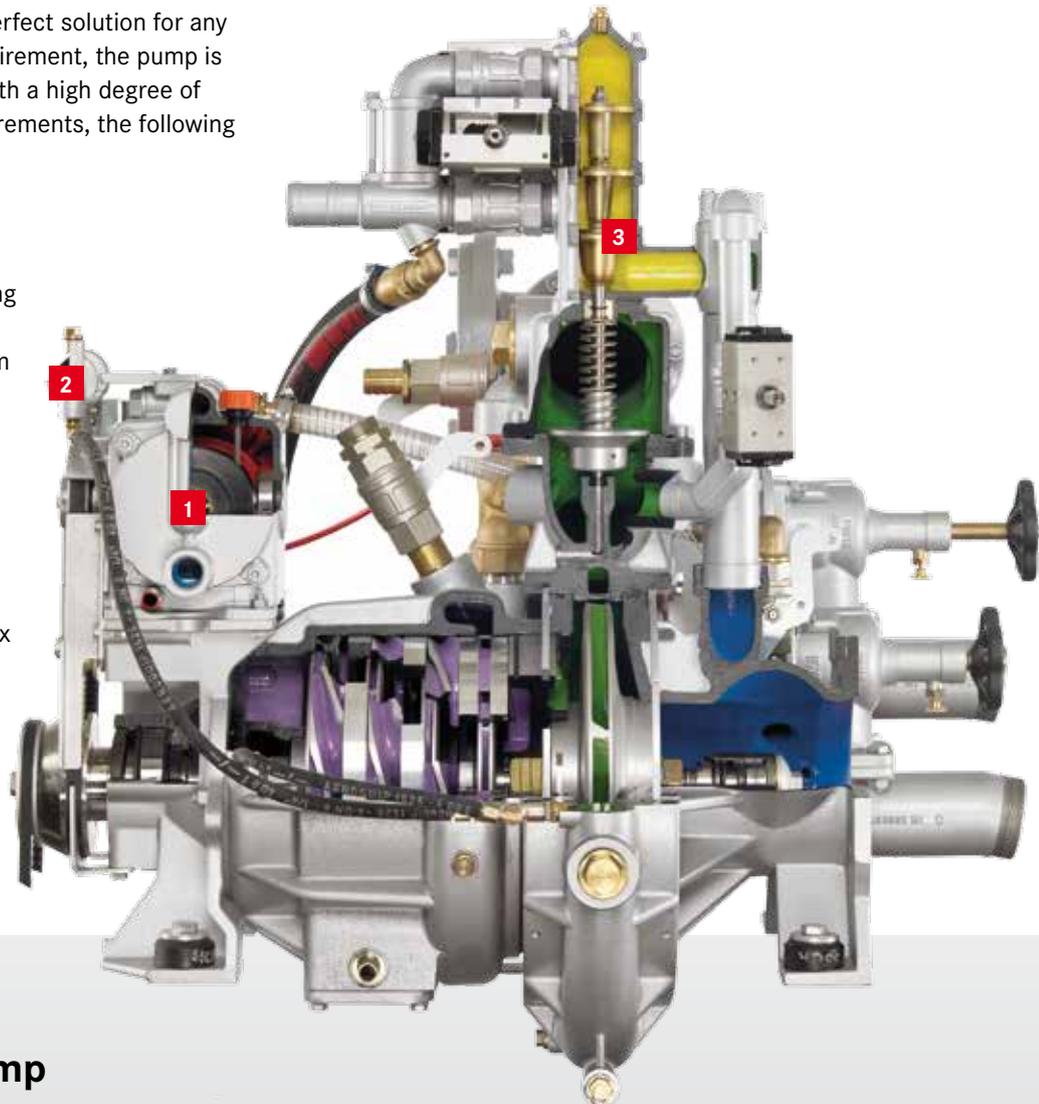
User-friendly due to

- Noise reduction due to low pump speed
- Easy operation due to LCS (logic control system)
- Low positioning of the screw down valves
- Excellent operating reliability and low maintenance due to mechanical shaft seals
- Resistant against contamination, thanks to wide impeller cross-section
- High corrosion-resistance of the pump materials
- Normal pressure and high pressure part on one shaft (no separate drive necessary)

The perfect solution for any requirement.

The N/NH pump series offers the perfect solution for any requirement. Depending on the requirement, the pump is equipped with manual controls or with a high degree of automation. Depending on the requirements, the following equipment variants are available.

- Piston priming pump
 - > manual
 - > pneumatic with automatic priming
- Foam proportioning system
 - > automatic around-the-pump foam proportioning system FIXMIX, HP-FIXMIX
 - > direct injection foam proportioning system DIGIDOS, DIGIMATIC, AQUAMATIC
 - > compressed air foam system (CAFS) applications
- Direct drive via pedestal or gearbox for adaptation to power take-off speeds



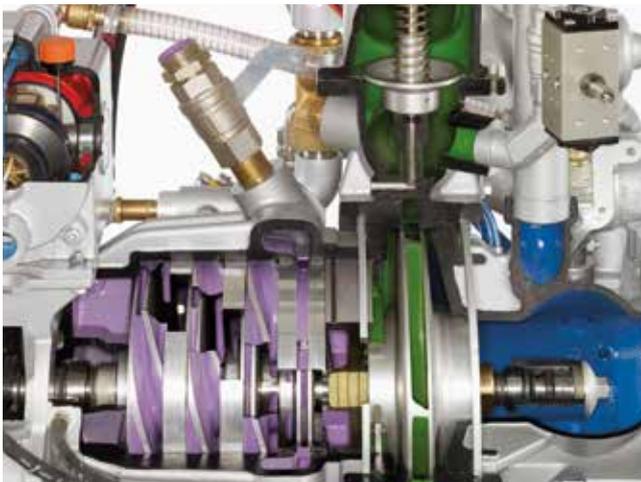
■ Piston priming pump

1 Piston priming pump

The KAP Professional piston priming pump gives fire-fighters a very effective and extremely rugged priming pump. The drive operates via a drive belt. The KAP can be switched on or off manually or automatically. Due to the oil-bath lubrication and to the double acting piston pump, it has an especially high operational safety.

2 Automatic priming

The control of the priming pump depends on the pump pressure. When reaching the priming pressure, a cylinder disengages the priming pump – the priming process is disabled. For free-discharge or hydrant operation, the priming pump can be disabled.



4-stage high pressure part and 1-stage normal pressure on one common shaft



Piston priming pump with automatic priming - mounted above the centrifugal pump



3-stage FIXMIX for 3 proportioning rates



High pressure FIXMIX - foam proportioning for the high pressure part

■ Around-the-pump foam proportioning system

3 FIXMIX around-the-pump foam proportioning system

A mechanical, automatic around-the-pump foam proportioning system is available for the N/NH series pumps. The system is fully embedded in the pump. The system works automatically and does not depend on pump capacity or pressure. The system is totally maintenance free. Up to 3 different proportioning rates (free combination of 0.5 %; 1 %; 3 % and 6 %) can be selected on the normal-pressure side. The system is available both with mechanical and pneumatic operation.

High-pressure FIXMIX

With this system, one proportioning rate can also be admixed on the high-pressure pump. This system works mechanically too. With the HP FIXMIX it is possible to provide water on the normal pressure side and foam on the high pressure side at the same time.

Ergonomics and ease of operation.

During the development of the N/NH pump series, particular emphasis was placed on operation ease and ergonomics. One of the points of emphasis was noise reduction. Noise is not only dampened – it is not even created!

The control panel of the N/NH pump is divided into mechanical and electrical operation, as well as into gauges. Highest economical requests can be fulfilled, due to this arrangement of the operation elements in working height and the gauges at eye level. In order to improve accessibility, the screw down valves are positioned at the height of the suction inlet.

The operating elements are ergonomic. They are made, that they can be used with gloves. The corresponding function of the operation is inscribed and indicated by using colors. The mechanical and electrical operation are configured together with the customer.



Rosenbauer LCS Logic Control System

The LCS is integrated in the operation of the N/NH pump. As a result, a wide variety of pump functions can be operated, as well as foam proportioning systems, CAF systems and generators. The condition of the medium and aggregate are color coded (normal pressure: green, high pressure: purple, foam: yellow, electric: white). This makes it possible for the user to immediately find his way on the control panel. Every function is lit-up to provide error-free operation, when visibility is low or at night.

Installation and drive of the N/NH pump

In order to optimally dampen noise, the N/NH pump is always installed on rubber bearings. It allows the users a better communication in the surroundings of the pump. Depending on the vehicle and the requirements, this pump series can be built either without or with a gear box for adaptation to a wide variety of power take-offs.

The pump can also be flanged directly on a diesel engine in order to run independent of the vehicle drive. This makes it possible to operate a engine-pump trailer or a stationary application. A hydraulic drive is also possible.





Manual operation



Mechanical overheating protection



Electrical operation



Pump heating

Options

Using a special modular system, the N/NH series can be adapted to customer demands. This makes it possible to accommodate the pump especially to various chassis, environments and operators.

- **Pump pressure governor with cavitation display**
Controls the motor speed to maintain a certain pressure – regardless of the required water volume
- **Gear box for adaptation to PTO speeds**
- **Model with SAE3 connection**
To drive the pump with a separate pump engine
- **Cardan shaft brake**
Especially for automatic gearboxes so that the drive shaft does not continue to run when the PTO is switched off
- **Gunmetal type** for best-possible corrosion protection
- **FIXMIX around-the-pump foam proportioning system** for normal and high pressure
- **Coupling systems by Storz, BSS, NH, etc.**
the right coupling system for regional conditions
- **Pump heating**
Prevents freezing of the pump during long travel times
- **Pressure outlets either at the rear or on the sides**
- **Automatic priming** for secure water supply
- **Mechanical overheating protection** safe protection against overheating for normal- and/or high-pressure pumps
- **Operation controls** mechanical or electrical

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Truck-mounted fire pump series



Certified according to EN 1028

p	Q	N25	NH25	N35	NH35	N45	NH45	N55	NH55
FPN 10 –	750	x	x						
FPN 10 –	1000	x	x						
FPN 10 –	1500	x	x						
FPN 10 –	2000	x	x						
FPN 10 –	3000			x	x				
FPN 10 –	4000					x	x	x	x
10 –	5000*							x	x
FPH 40 –	250		x		x		x		x

EN1028: p = nominal pressure (bar), Q = rated output (lpm)

*) Pump performance of N55 / NH55 not included in EN1028 - correlates with 10-5000

UL classified according to NFPA 1901

p	Q	N25	NH25	N35	NH35	N45	NH45	N55	NH55
UL 150 –	500	x	x						
UL 150 –	750			x	x				
UL 150 –	1250					x	x		
UL 150 –	1500							x	x

UL: p = nominal pressure (psi), Q = rated output (USgpm)

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