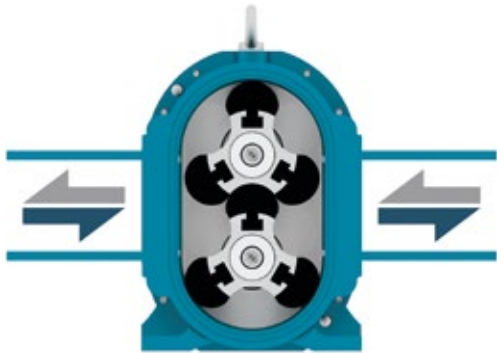


**ROTARY LOBE
PUMPS
FOR USE
IN POTENTIALLY
EXPLOSIVE AREAS**



BÖRGER ROTARY LOBE PUMPS

THE VERSATILE PUMPS



For use in potentially explosive atmospheres, pump units have to be manufactured according to the European ATEX guidelines (2014/34/EU). Böhler manufactures “customized”, ready-to-connect, ATEX-compliant, stationary or mobile pump units exactly in line with your wishes and requirements.

Each Böhler rotary lobe pump is configured for its specific application using a modular principle. This also applies to the mobile pumps. In this respect, we deliver everything “from a single source”. The entire unit is designed and manufactured for the corresponding application, including the mobile unit, the pump technology and the control unit.

OPERATING PRINCIPLE

Rotary lobe pumps are self-priming, valveless, positive displacement pumps. The synchronized rotation of the rotor pair creates a vacuum on the priming side of the pump. This vacuum draws the liquid into the pump chamber. The medium is pumped into the pressure area due to the rotation of the rotors. If the direction of rotation is changed, the flow is reversed.

CONSTRUCTION

1 The quick-release cover

Access to all wetted parts by simply loosening four nuts.

2 The rotors

Large selection of high-quality rotors for almost pulsation-free pumping of the medium.

3 The casing protection

Depending on its size, the BLUEline pump is available with and completely without protection plates and liners. When pumping abrasive media containing solids, the protection plates and liners protect the pump casing from wear and can be replaced in a matter of minutes.

4 The intermediate chamber and shaft seal

The large-volume quench chamber ensures the highest degree of safety. The ideal mechanical seal is selected depending on the medium.

5 The carrier and timing gear

The high-quality and maintenance-free carrier and timing gear guarantees a smooth and even operation of the rotors. The result is a long service life of the pump.



BLUEline Nova



AT A GLANCE

+ Customized

+ Compliance with ATEX and TA Luft (Technical Instructions on Air Quality Control)

+ 25 pump sizes with flow rates of 1 to 1,440 m³/h

+ With and without casing protection plates and liners

+ Ready-to-connect complete units

+ "Everything from a single source"
– designed and built by Börger

+ Ease of maintenance with MIP®
(Maintenance in Place)

Series	Flow rate		Pressure Max (bar)
	Min. (m³/h)	Max. (m³/h)	
BLUEline Nova AN	0,03	35	10
ONIXline BJ	0,05	65	16
BLUEline Nova PN	0,06	75	12
BLUEline Nova QN	0,14	110	8
BLUEline Legend PL	0,11	115	8
ONIXline BL	0,11	135	16
BLUEline Legend CL	0,23	185	8
BLUEline Legend FL	0,34	410	12
BLUEline Legend EL	0,62	1.110	10
BLUEline Legend XL	1,10	1.440	10

POSSIBLE EQUIPMENT CATEGORIES

Explosion protection gas:

EX marking
II 2G Ex h IIB T3 Gb
II 2G Ex h IIB T4 Gb
II -/2G Ex h IIC T3 -/Gb
II -/2G Ex h IIC T4 -/Gb
II 2/-G Ex h IIB T4 Gb/-
II 2/3G Ex h IIB T3 Gb/Gc

Explosion protection dust:

EX marking
II -/2D Ex h IIIB T135°C -/Db

BÖRGER CONTROL TECHNOLOGY

Our engineers develop, program and build the ATEX-compliant control technology tailored to your specific purpose in our electrical engineering department. All monitoring devices, e.g. temperature monitoring, electronic seal monitoring or overpressure protection, are controlled and monitored by the control technology which is easy to operate.

TECHNICAL DOCUMENTATION

We prepare all necessary technical documentation for you. Our technical editors work closely with the sales engineers and our design department. Certified staff guarantees compliance with all guidelines. We prepare individual inspection records for the pump handover at our own pump testing facility.

DURABLE AND RELIABLE THE STATIONARY PUMP

CONSTRUCTION AND FUNCTION

(of this example pump)

1 The rotary lobe pump

The powerful rotary lobe pump is designed and manufactured individually to suit your application.

2 Sealing and thermosiphon systems

The large-volume seal chamber provides space for different sealing systems. In ATEX applications, very often pressurized, double-acting mechanical seals are used. The pressure is usually applied by thermosiphon systems, upon request, also according to API682 plan 53B.

3 The coupling guard

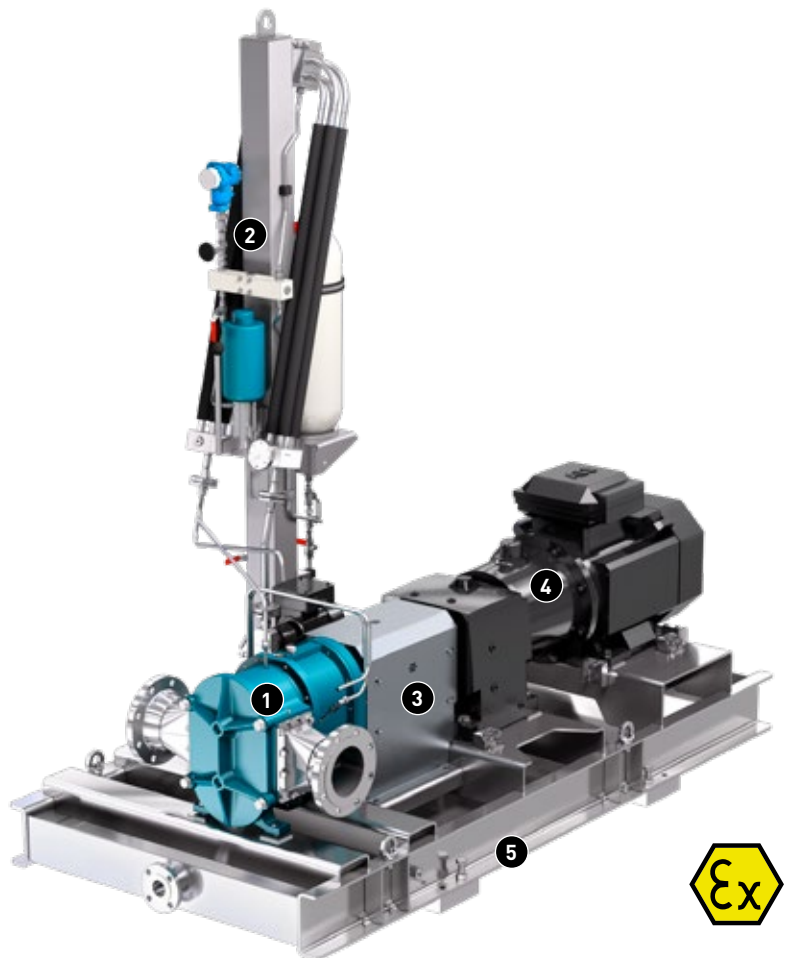
The ATEX-compliant coupling guard installed here withstands a static load of up to 90 kg.

4 The motor

Very often, the pump is driven by an ATEX-compliant electric motor. Other motor types are possible as well.

5 The base frame

Just like the entire pump unit, the base frame is manufactured exactly in line with the customer's requirements. Upon request, it can be also equipped with an oil drip pan underneath the pump and the motor, with crane lugs or forklift pockets.



TAILORED SOLUTIONS



Various sealing systems possible



Compliant with TA Luft (Technical Instructions on Air Quality Control)



Overpressure protection by bypass with safety valve



With heatable pump casing



Electronic pressure measurement at suction and pressure side



Dry run protection by temperature measurement in the pump chamber

COMPACT AND VERSATILE THE HAND CART PUMP



TAILORED SOLUTIONS



Control technology programmed for the specific application



Can be carried by two persons



With integrated bag filter



Completely heated pump unit



TS container with fill level monitoring, pressure protection, circulation pump and temperature monitoring of the barrier fluid

CONSTRUCTION AND FUNCTION (of this example pump)



1 The rotary lobe pump

The powerful rotary lobe pump is designed and manufactured individually to suit your application. The use of stainless steel rotors is possible for all pump sizes.

2 The motor

In order to adjust the speed of the pump and, as a result, the flow rate to the individual application, an ATEX-compliant variable speed motor or a frequency converter can be used.

3 The filter technology

Depending on the pumped medium, it may be useful to install a filter upstream of the pump.

4 The control technology

The pump is operated by the control unit. The control unit programmed in line with the customer's wishes and requirements, controls various measuring systems (e.g. fill level measurement for dry run protection or pressure measurement for overpressure protection) and ensures the highest level of safety.

5 The chassis

We manufacture a perfectly suited chassis for each specific application of the pump. Thanks to the forklift pockets, loading and unloading of the hand cart pump is very easy.

FOR TERRAIN WHICH IS DIFFICULT TO ACCESS

MOBILE PUMP FOR TRANSPORT BY FORKLIFT TRUCK

CONSTRUCTION AND FUNCTION (of this example pump)

1 The rotary lobe pump

A thermometer monitors the temperature in the pump chamber of the rotary lobe pump. An electronic pressure monitoring device in the intermediate chamber immediately indicates any leaks of the mechanical seal. The pump is classified as permanently technically tight (TA Luft-compliant).

2 Mechanical overpressure protection

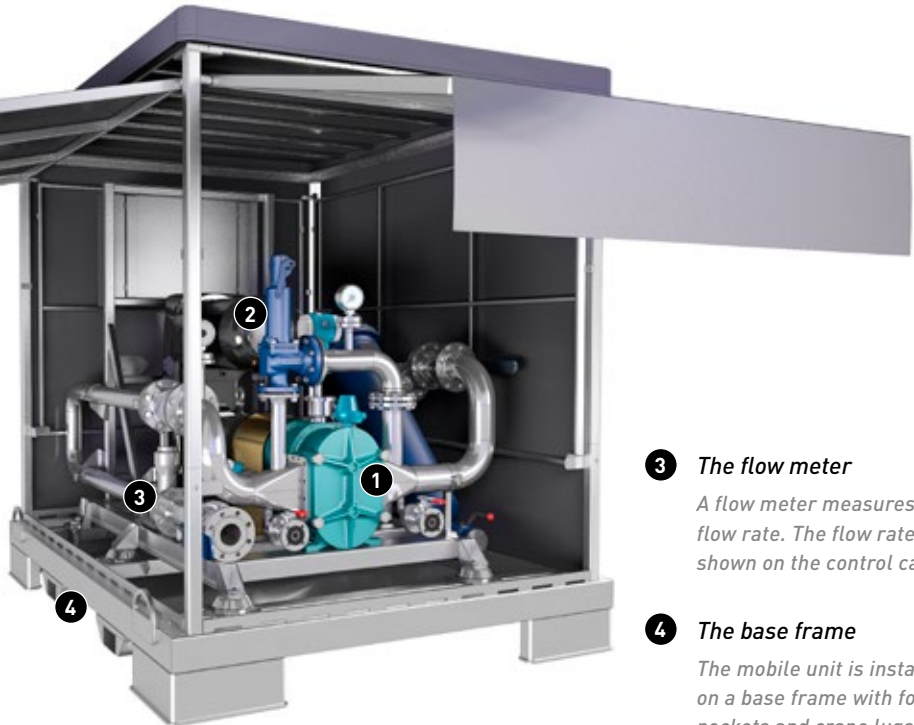
A bypass with safety valve protects the pump from overpressure.

3 The flow meter

A flow meter measures the flow rate. The flow rate is shown on the control cabinet.

4 The base frame

The mobile unit is installed on a base frame with forklift pockets and crane lugs. An oil drip pan is installed underneath the pump and the motor. A level measuring device checks the fill quantity of the oil drip pan.



TAILORED SOLUTIONS



With flow meter



Tarpaulin-roof bow-construction as weather protection with conductive tarpaulin



Overpressure protection by bypass with rupture disks



Can be transported by forklift truck



Electronic leak monitor



Pressure measurement by means of pressure transmitter

POWERFUL WITH LOTS OF SPACE ON A CAR TRAILER



CONSTRUCTION AND FUNCTION

(of this example pump)

- 1 The rotary lobe pump**
The powerful rotary lobe pump is equipped with a Variocap as mechanical overpressure protection.
- 2 The filter technology**
In order to separate solids during transfer operations, the mobile unit is equipped with a filter system. Coarse solid particles are filtered out.
- 3 The control technology**
The control technology is adapted to your individual requirements by Börger's electrical engineering department. Naturally, easy operation of the unit is ensured. Upon request, the control unit can also be operated by a handheld transmitter.
- 4 The chassis**
The chassis for mobile pumps is manufactured by our metal construction department exactly in line with your wishes and requirements. Installation on a roll-off container or a lowering frame is also possible. Of course, all trailers are approved by the TÜV before delivery.
- 5 The roof construction**
Our mobile units are equipped with different roof constructions. Whether a tarp / roof bow-construction, aluminum roof or noise enclosure of the entire unit – we make everything possible.

TAILORED SOLUTIONS



Variocap as mechanical overpressure protection



Special accessories and storage compartments



ATEX-compliant drive technology



Number and type of suction and pressure connections freely selectable



Filter system with differential pressure measurement



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