



High Pressure Pumps for Construction Works and Drilling Techniques

*Lease
Sales
Maintenance
Repair works
Services*

Jet Grouting / Ground Stabilization

Tunnel-driving

Exploitation of natural gas and oil

Horizontal directional drilling

Building of wells

Well-stimulation

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Scope of Activities

lease of high-pressure pump containers

general overhaul and modification of used pump units

manufacture of new complete pump containers and mobile units



The Enterprise

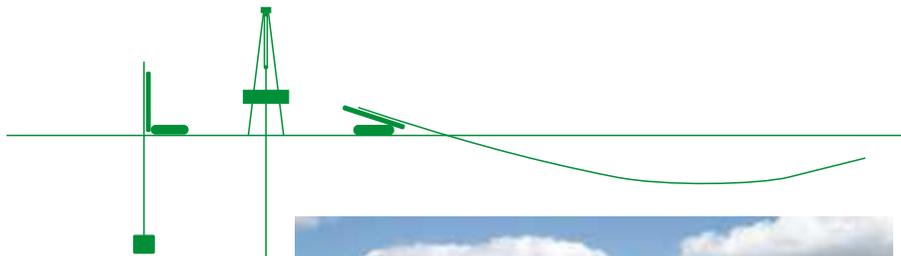
Our company manufactures and operates high-pressure pump units for the construction and drilling industry.

One of our main fields of operation is the special ground engineering where our pump containers are mainly used for the application of the jet grouting technique.

Tunnel driving and large-scale refilling works are also part of our activities.

Drilling operations are another main field for the application of our high-pressure pump units. Here our pumps are predominantly used for large-size horizontal directional drillings.

In special cases our pumps are also used to sink vertical wells, as for example for potable water and thermal springs.



Our activities cover the whole of Europe and parts of the former Soviet Union.

Reputable ground engineering companies all over the world have purchased our pump units often specially designed and manufactured for their own individual purposes.

Our qualified staff always takes care of the operation and maintenance of our pumps at customers' construction sites.

This means, that any change or modification which has to be carried out on our equipment to meet the varying requirements of ground engineering is recognized and followed up at an early state.

Consequently, we are able to steadily optimize and improve our equipment.



HPS High-pressure Pump Containers

Our high-pressure pumps which are Halliburton plunger pumps, type HT 400, have continuously been improved since 1957 and have become a highly reliable component part.

The easily exchangeable fluid end is available in different sizes. Hence, it can be used for a variety of different pressures and volumes. The robust fluid end is able to move a variety of fluids and fluids with solid contents such as cement suspensions.

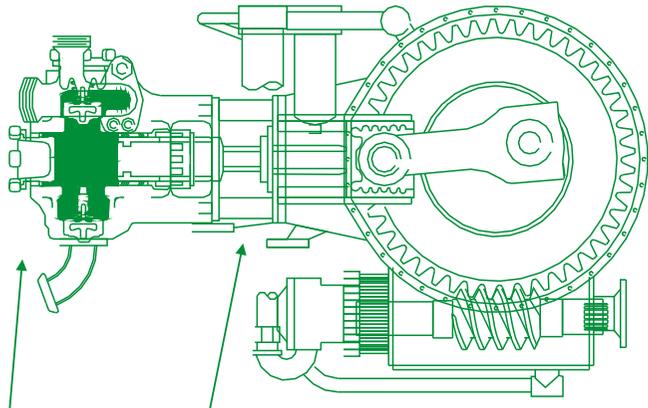
As prime mover, diesel engines with a capacity of up to 600 kW are used.

Power is transmitted by an electrically controlled Allison power shift gear.



Technical Data of the Standard HPS High-pressure Pump Container

Type:	Halliburton - plunger pump with three pistons
Drive:	Diesel engine such as CAT 15
Engine capacity:	420 kw
Length:	6300 (with multi-lift frame 6500)
Width:	2450
Height:	2650 (with multi-lift frame 2700)
Transport Weight	12.5 tons
Max. capacity:	2700 l/min. at 77 bar (6" fluid end)
Max. pump pressure:	1350 bar at 140 l/min (3 3/8" fluid end)



Fluid End

Spacer

Power End

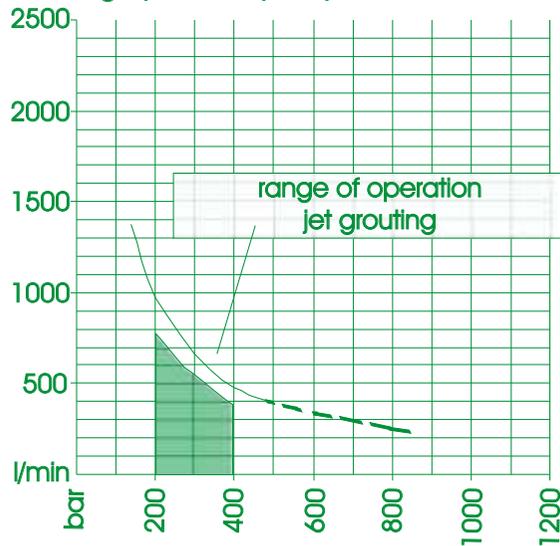
The fluid end is the water-carrying part of the pump in which the energy arriving from the power end is transformed into motion for the medium to be pumped such as water, water with solids content and cement suspension.

Spacers are installed between the power end and the fluid end to prevent the transporting medium from penetrating from the fluid end into the power end.

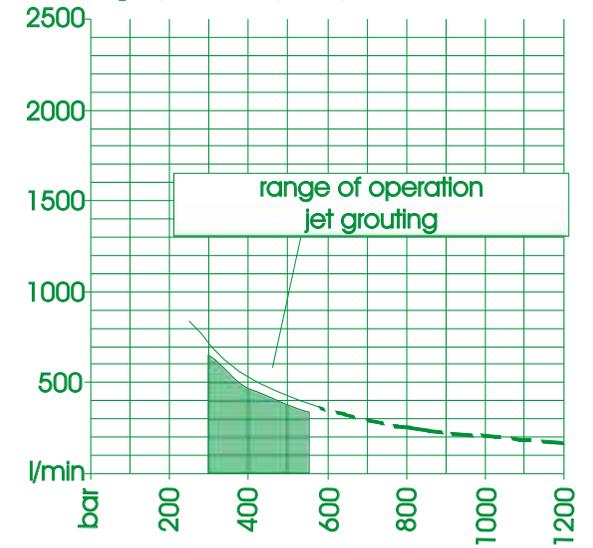
This subassembly reduces the initial speed and herewith increases the torque and changes the sense of rotation. By this the power end builds up the necessary energy for the fluid end through a worm gear with steel worm.

Different fluid end sizes ensure a wide range of pressure / quantity varieties.

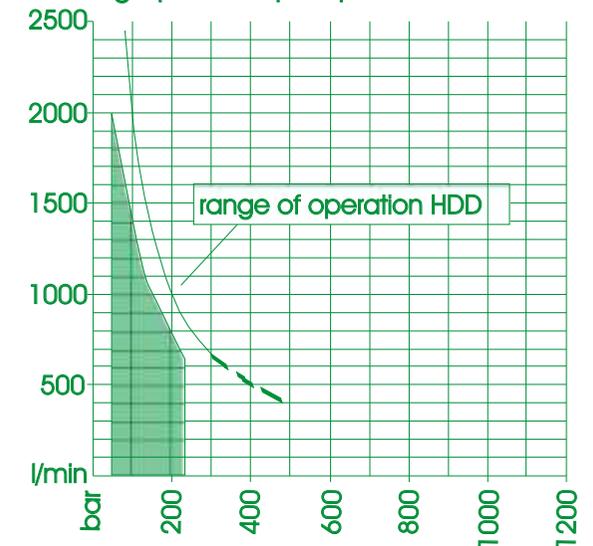
Characteristic curve
High-pressure pump container 4-1/2"

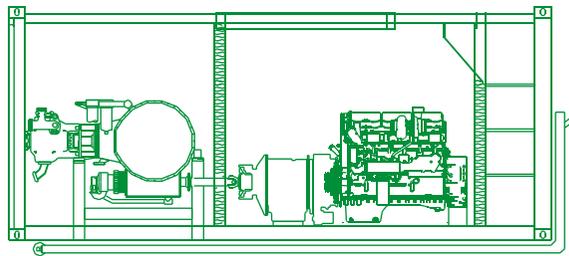
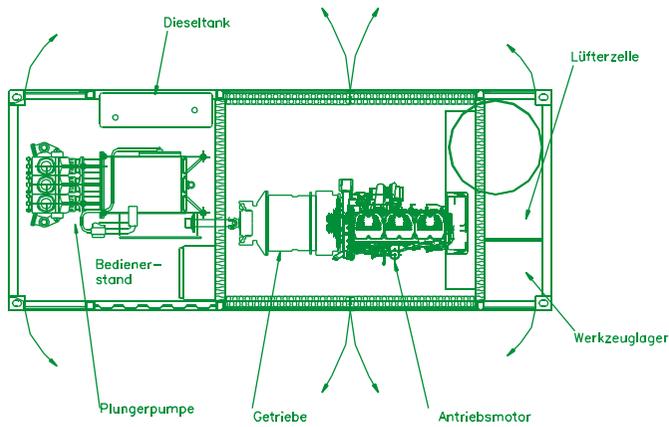


Characteristic curve
High-pressure pump container 3-3/8"



Characteristic curve
High-pressure pump container 6"





The operator's seat is in the front area of the high-pressure pump. A well-arranged service cabinet gives details of all vital functions and operating status and an electro-hydraulic shut-off safety switch for shifting the gear into the neutral position is integrated in this cabinet.

This electro-hydraulic safety-switch has been installed in addition to the mechanical bursting safety device to largely avoid its loss since it is progressively adjustable from 0 -600 bar and therefore reacts correspondingly.

Performance data are monitored by the operator on two digital displays. One display informs about the momentarily pumped quantity, the other shows the respective pressure.

An analog adder which may be reset is additionally installed.

A diesel tank with a capacity of 700 l guarantees even long-lasting operations.



All component parts are well arranged in a 20-ft-container (6300 x 2450 x 2650), in the middle of which the engine/gear unit is installed.

A 120-mm-insulation provides sufficient sound insulation.

An easy access for maintenance and repair works is possible through large doors on the left and right hand side.



In the right front part there is the cooling chamber containing a large-sized cooler.

A hydraulically driven and thermostatically controlled ventilator guarantees sufficient cooling. Exhaust air as well as exhaust gas is abstracted from above.



In the left front part is the tool compartment for special tools leaving even enough space to store spare and wearing parts.



Optionally, the high-pressure pump container can be equipped with a remote control which permits an operation performed from the drill rig.



The container is equipped either with an original container hooking for the handling by crane or with a multi-lift frame for hook unwinding.



Service

Workshop

We dispose of some 6,000 square meters of premises. Our production hall has four manufacturing areas and a coarse cleaning place, all up to the latest standard.

High-pressure Testing Stand

Our high-pressure pumps undergo acceptance tests and diagnoses including steady and peak load tests under simulation of real working conditions. These tests are carried out in our own workshop.

Warehouse

In our warehouse we hold a stock of all wearing and spare parts for our pumps.

Hence, immediate repairs or dispatch of parts within 24 hours is guaranteed.

Accessories

In addition to our high-pressure pumps we supply accessories such as high-pressure hoses and lines, stirring devices, charging pumps etc.

Special Designs

For special requirements we design and build high-pressure pump units as well as the matching fittings, for example units which are firmly mounted on portable devices.

The construction of these units is carried out in close compliance with our customers' requirements.



24-hour-Service

In cases of emergency or repair works: We are available for our customers day and night and at week-ends.

Lease Personnel

To make sure that our high-pressure pumps run without fail our qualified staff is available on a rent-by-the-hour basis

Workshop Van

For maintenance and repair works we provide an assembly van which is equipped with all standard wearing and spare parts and all necessary special tools.

Transportation

Our high-pressure pumps are mounted on standard trans-container frames; optionally, they dispose of a multi-lift hooking device.

Upon request we deliver our pump units with our own vehicles directly to the customers' site.

