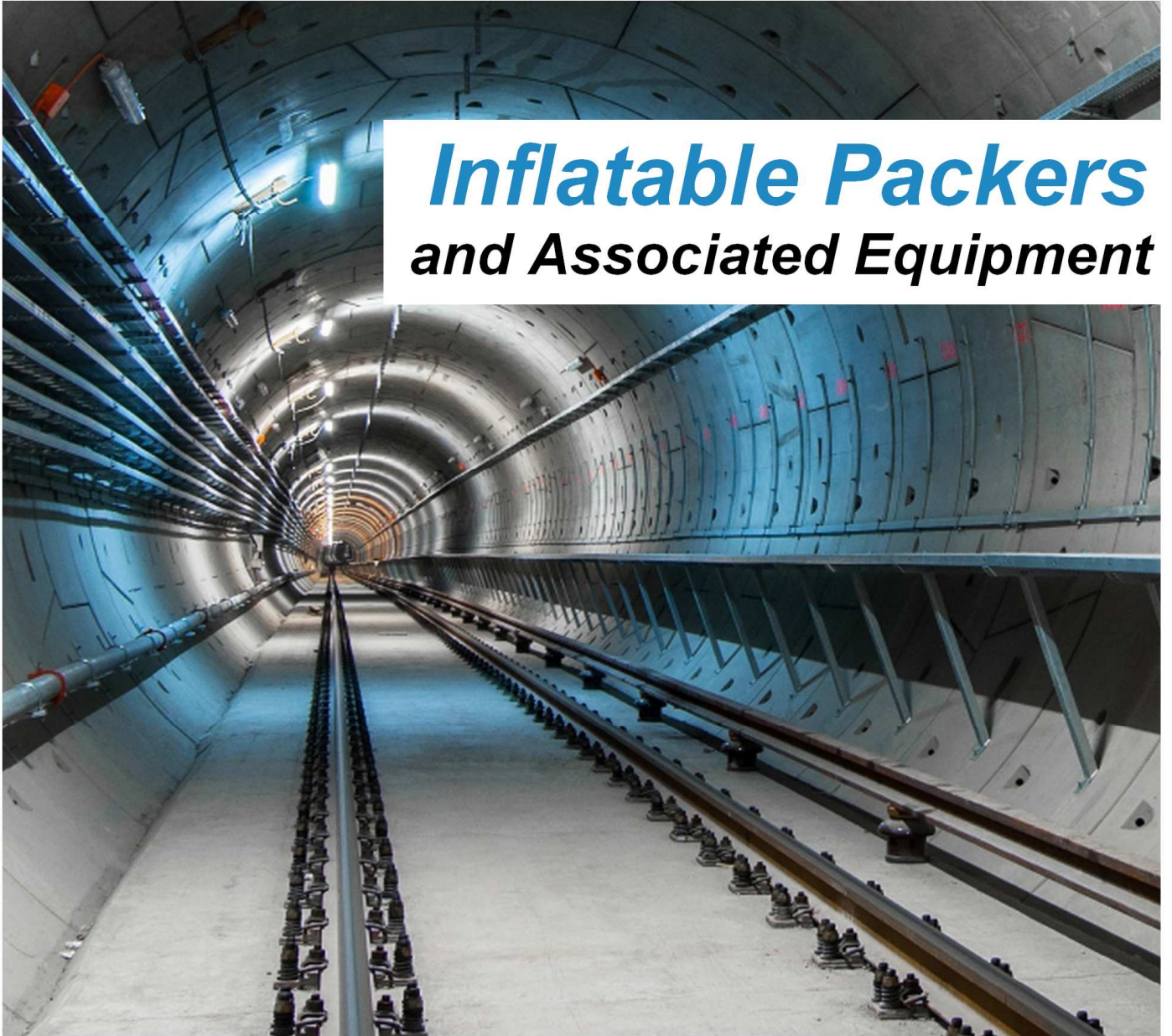


## ***Inflatable Packers and Associated Equipment***



## INFLATABLE PACKERS

**Geopro** offers a complete range of inflatable packers in nine different diameters from 28 up to 170mm.

All of our packers are reinforced with two layers of steel cables embedded into natural rubber.

The Geopro packers are frequently used for grout injection and other geotechnical applications for structural reinforcement and/or water sealing of deep foundations, tunnels, dams and mines. Thanks to their modular design, all packers offer reliable and easy operation.

## FEATURES

- ⇒ Available as either single or double packer assembly
- ⇒ Single packers are easily converted to double packers
- ⇒ Suitable for tube à manchettes grouting
- ⇒ Double packer test zone lengths easily adjustable
- ⇒ In the field replaceable packer element

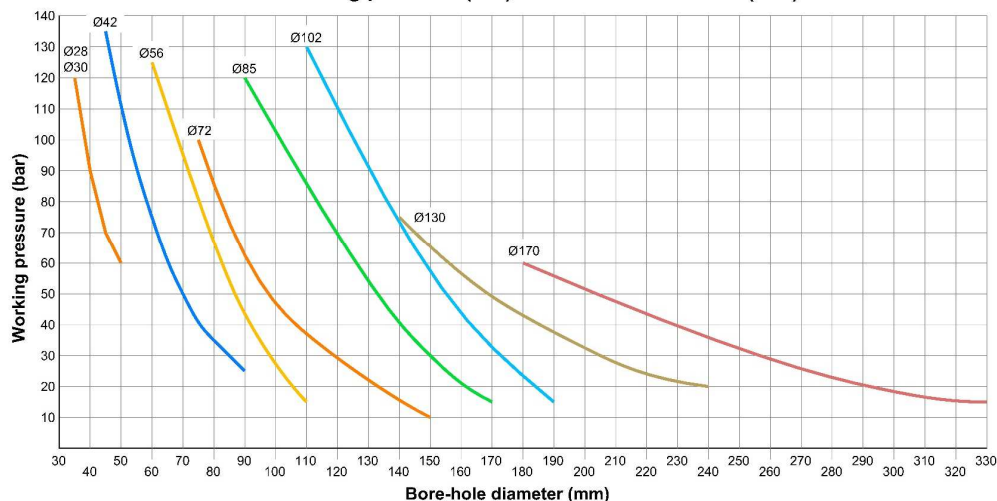
The length of the rubber sealing element depends on the application requirements with the standard lengths being:

- ⇒ 300mm for Ø28, 30 and 42mm packers
- ⇒ 500mm and 1000mm for Ø28, 30, 42, 56, 72, 85, 102, 130 & 170mm packers

## STANDARD SIZES AND WORKING PRESSURES

Nominal diameter (mm)	Connection upper	Central tube inner diameter	Expansion Max. diameter (mm)	Inflation inlet(s)
28	3/8" BSP	8	50	1 x 1/8" BSP
30	3/8" BSP	8	50	1 x 1/8" BSP
42	1/2" BSP	17	98	2 x 1/8" BSP
56	3/4" BSP	20	125	2 x 1/8" BSP
72	1"1/4 BSP	35	160	2 x 1/8" BSP
85	1"1/4 BSP	35	185	2 x 1/8" BSP
102	2" BSP	50	200	2 x 1/8" BSP
130	3" BSP	80	270	2 x 1/4" BSP
170	3" BSP	80	330	2 x 1/4" BSP

Maximum working pressure (bar) vs bore-hole diameter (mm)



## WIRELINE PACKER SYSTEM FOR PERMEABILITY TESTING

The wireline Packer System is a time-saving method for conducting permeability testing during core drilling.

Available for all makes of wireline core barrels N, H, P and S.

### SPECIFICATION

Wireline core barrel diameter	N	H	P	S
Bore-hole diameter (mm)	76	96	122	146
Packer nominal diameter (mm)	42	56	72	85
Packer inner diameter (mm)	17	20	35	35
Working pressure (bar)	40	35	30	35

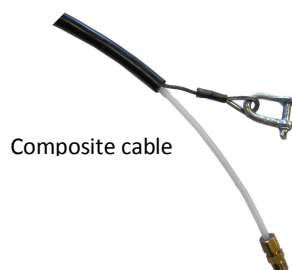
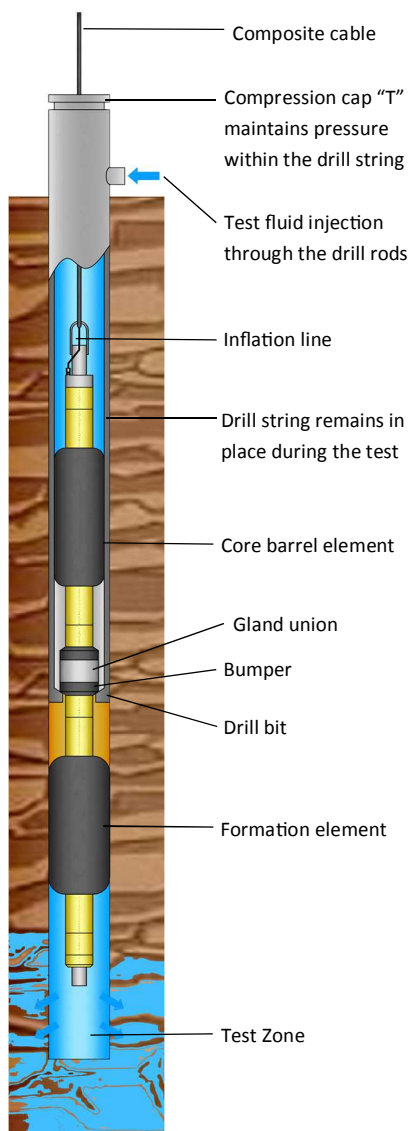
The wireline packers incorporate a gland union that rest inside the drill bit, the bumper guarantees the positioning of the packer and protects the drill bite.

These wireline packers are available in:

- Single version A
- Straddle version B
- Straddle version with extension rods C

A compression cap "T" on the Seal Tee Assembly prevents pressure loss around the composite cable during testing.

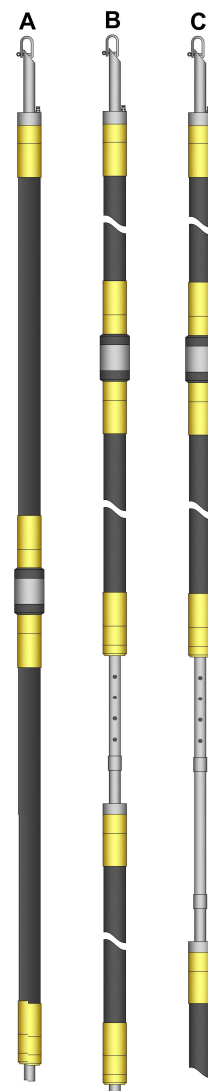
The composite cable is composed of a nylon tube 3x6mm for inflation and a cable to lower and retrieve the wireline packer.



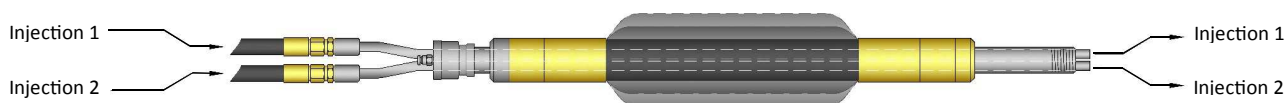
Composite cable



Seal "T"



## TWIN TUBE PACKER for two components injection



The twin tubes single packers are used for injection of two components products (resins...).

The design of these packers makes possible the mixing of the two components below the packer to avoid mixing and hardening of the resin inside the packer and make it re-usable.

These twin tube packers are available for our 42 mm up to 102 mm packers.

Other diameters can be made upon request.



A thread in the lower part of the packer allows the mounting of a static mixer (Optional)

## LARGE DIAMETER PACKER

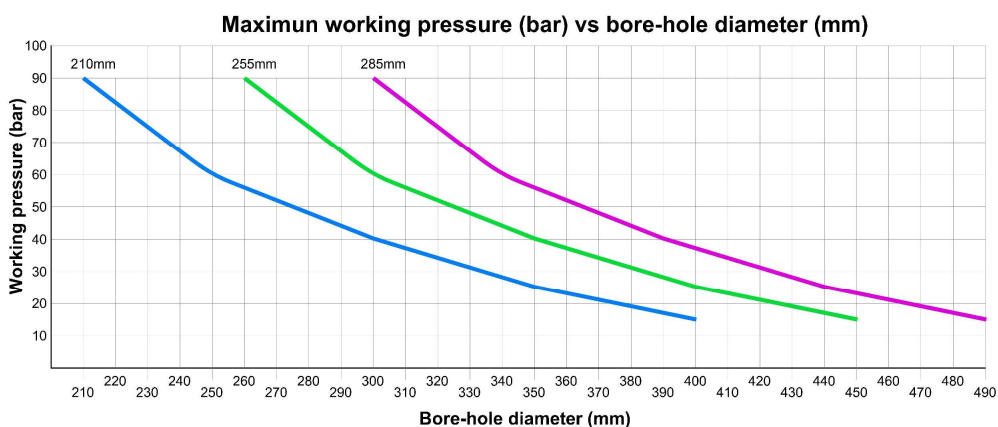


**Geopro** offers three large diameter inflatable packers, Ø210, Ø255 and 285mm

These packers are designed for applications such as pumping tests, the production of water wells, injection, permeability tests in boreholes from Ø220 to Ø500mm.

They are fitted as standard with a 6" tube for the Ø210 and 8" for the Ø255 and 285mm.

They are then adapted to the application by adding 3" to 6" through tubes.



## PUMPING SYSTEM WITH INFLATABLE PACKER

Without packer in the borehole, the water can be influenced by the external atmosphere through contact with the surface. The absence of a packer also allows the mixing of water of different levels (leaks, corrosion, etc.)

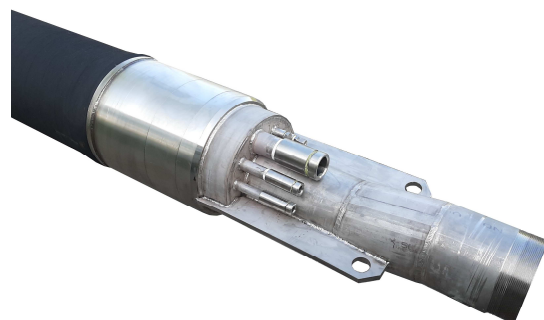
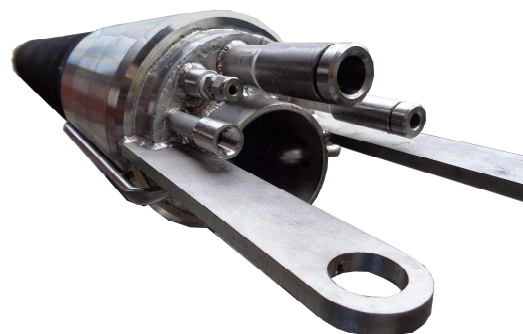
### WITH THE PACKER

- Pumping takes place in the aquifer chosen for its quality
- The pumping chamber is isolated and therefore protected from surface contamination
- The absence of marling reduces bacterial activity
- The pumping chamber remains pressurized.

### THE DIFFERENT POSSIBILITIES OF USING THE INFLATABLE PACKER

The simple packer is a system equipped with a single INFLATABLE element, the pump is then installed under the packer. This system can be used with or without a rising column.

The double packer is a system equipped with two inflatable elements, the pump is then installed for pumping between the inflatable elements or under the two inflatable elements in the case of a bridge packer.



## INFLATION HAND PUMP VHP100



The VHP100 pump is particularly well suitable for inflation of our packers or to any other application requiring water pressurization. (Max. outlet pressure 100 bar)

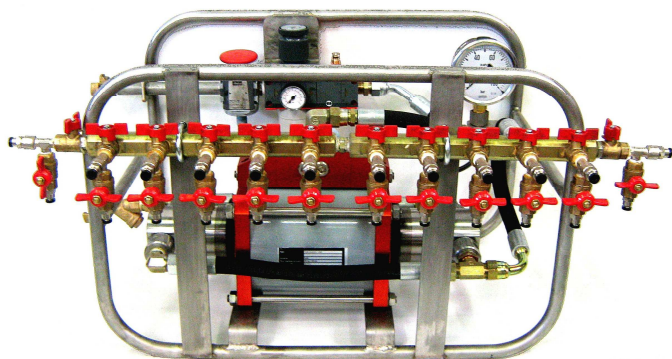
The design of the VHP100 pump allows the assembly of the feeding option which facilitates the filling of large volumes without actuating the pump and a fast pressurization.

Entirely made of plastic materials and aluminium, the VHP100 pump does not require any maintenance in particular and is not sensitive to the problem of corrosion often encountered on the job sites.

### TECHNICAL DATA

Plunger diameter:	10 mm
Plunger stroke:	325 mm
Volume / stroke:	25 cm <sup>3</sup>
Maximum pressure:	100 bar
Weight:	9.5 Kg
Tank volume:	6 liters
Pressurized fluid:	Water
Pressure gauge:	0-100 bar
Outlet thread:	1/4" BSP

## AIR DRIVEN INFLATION UNIT



**Geopro** offers a large range of air driven pumps. Two ratios are available: ratio 10 for output pressure of 70 bar / 1025 psi and ratio 20 for a maximum output pressure of 140 bar / 2000 psi. (Other ratios upon request)

The output pressure is related to the pump ratio multiplied by the air pressure.

Our pump ratio 10 is especially well adapted to the inflation of our inflatable packers.

They are also available in single or double acting configuration.

## INFLATION HOSES AND ADAPTERS

### Low pressure inflation hose IH36



Material : Polyamide 12  
 Inner diameter : 3mm  
 Outer diameter : 6mm  
 Max. working pressure : 45 bar

### Quick coupling inflation adapters

1/8" or 1/4" Thread

Double union 6x6



### High pressure inflation hose RIH48



Material : Polyamide 12  
 Inner diameter : 4mm  
 Outer diameter : 8mm  
 Max. working pressure : 215 bar

### Cutting ring inflation adapters

1/8" or 1/4" Thread

Double union 6x6



## PRESSURE WATER TEST MEASUREMENT LINE



This Line is used for “Lugeon” pressure water test for measuring the water conductivity through geological formations.

Mounted and unified on a foldable stainless steel frame, it allows an easy measuring of the pressures when injecting different water flows into the borehole.

The volumetric type flow meter is equipped with an electronic and easy-view flow resetting device.

The pressure gauge is glycerine-bath type.

The capacities and specifications of both are in accordance with “Lugeon” test norm.

## PRESSURE GAUGE PROTECTOR SM70



The pressure gauge **SM70** is designed to read a reliable grouting pressure. The pressure is sensed by a flexible rubber sleeve which prevents gauge corrosion or contamination by cement or slurries. They can be easily repaired in the field. A plug facilitates the filling with glycol.

These gauge protectors are available with or without pressure gauge and are equipped with a threaded connection for possible assembly of a pressure sensor.

These gauge protectors are rated at a maximum working pressure of 70 bar / 1000 psi.

Two sizes are available 3/4" (DN 20) and 1" (DN 25)



**SMC70**

The pressure gauge protectors SM70 can be supplied ready for use. This assembly **SMC70** is composed of steel frame, a pressure gauge protector, a pressure gauge 0-100 bar and a discharge valve.

## INFLATION MANIFOLD



This system allows to inflate several packers with a single pump.

### Main features

Number of outputs : 5

Individual purge

Length : 300 mm

Height : 355 mm

Quick coupling for Ø6 mm hose

Working pressure : 45 bar – 650 psi