

# High Pressure Packers for Hydrogeological Investigations & Civil Engineering

## Applications

Sava-Solexperts Inflatable Packers are designed for any number of applications in boreholes and water wells. They are used whenever a borehole or well has to be sealed while at the same time guaranteeing access to the isolated borehole section.

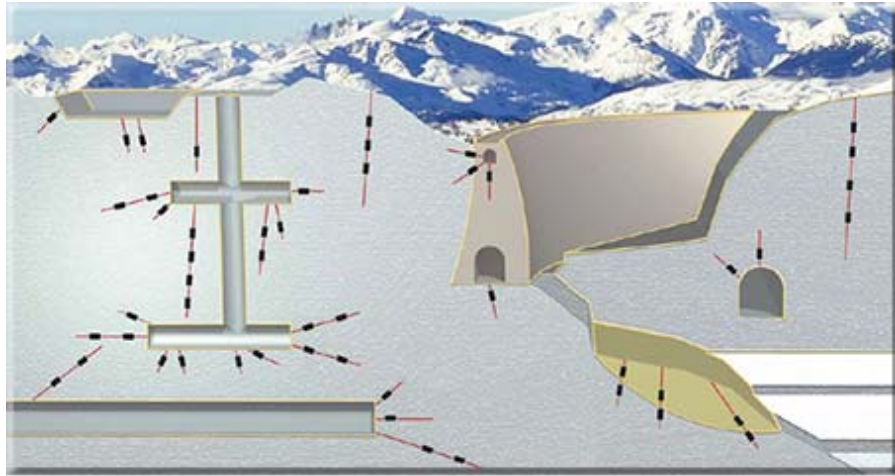
The main areas of application for Sava-Solexperts Inflatable Packers are:

**Hydrogeological Investigations:** Hydraulic testing & monitoring of defined borehole sections to estimate the hydraulic parameters (steady-state hydraulic head, transmissivity, permeability, storativity, etc) of geological formations or engineered barriers.

- Hydrological assessments for the planning and construction of dams and tunnels
- Hydrological characterization of waste disposal sites, hazardous waste sites & hydraulic barriers
- Optimization of groundwater monitoring and water wells

**Civil & Underground Engineering:** Borehole or borehole section sealing to enable pressure and depth-oriented grouting or injecting for consolidation and waterproofing.

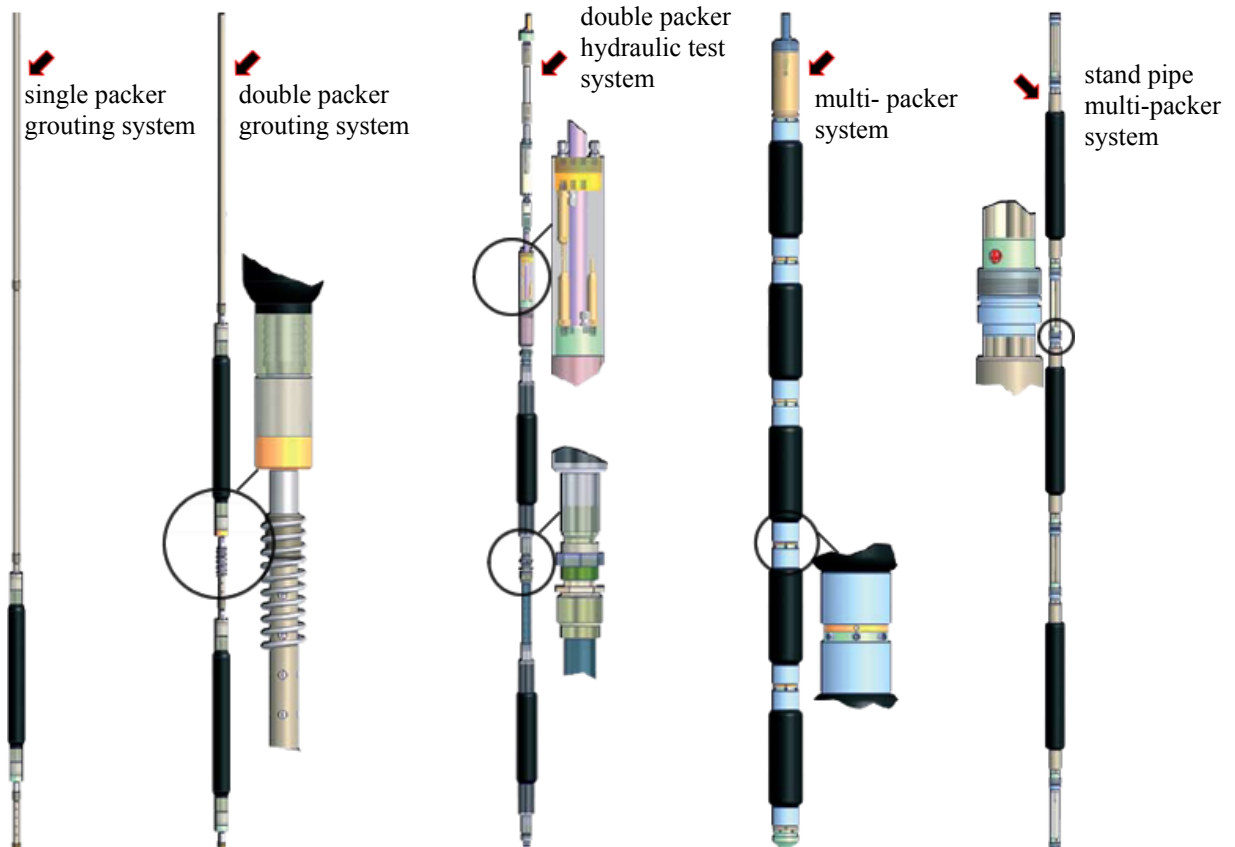
- Grouting for foundations, tunnels and galleries
- Injections for slope & underground stabilization
- Sealing of water producing boreholes



Performances	Material	Abilities
<ul style="list-style-type: none"> <li>• high inflation pressures</li> <li>• large inflation diameters</li> <li>• big mandrel diameters</li> <li>• long durability</li> </ul>	<ul style="list-style-type: none"> <li>• stainless steel</li> <li>• aramid reinforcement</li> <li>• steel reinforcement</li> <li>• high quality rubber</li> </ul>	<ul style="list-style-type: none"> <li>• single/double/multi-packer systems</li> <li>• each packer individually made</li> <li>• custom made packers</li> <li>• borehole testing, test analysis, test design &amp; instrumentation</li> </ul>

## Packer Systems:

Solexperts offers complete packer systems and an extensive array of accessories. Our products and services include everything from single to multi-packer systems to downhole acquisitions and acquisitions surface equipment and data acquisitions. We will be glad to assemble a custom packer system to perfectly meet your specific needs. Beyond that, our experienced test engineers, hydrogeologists and technicians are available to perform and analyze various borehole tests on a contract basis.



## Accessories and Services:

### Down-Hole Equipment

#### Lines

- pressure and flow lines in different materials and sizes up to 600 bar
- triple or quadruple flat packs (lines & data cable in one flat pack coated)

#### Rods

- in different sizes, wall thicknesses and lengths
- made of steel, stainless steel or PVC
- various couplings with double o-ring Sealing

#### Valves

- hydraulic, pneumatic and mechanical solutions
- for up to 200 bar and flowrates up to 100L / min, made of steel/stainless stl.

#### Filters

- steel or stainless steel filters
- sintered ceramic or sintered stainless steel filters
- UHMW / LD-PE filters

#### Probes

- different sensor types to measure pressure, temperature, humidity, electric conductivity, etc.
- in pressure tight housings up to 200 bar, made of steel or stainless steel

### Down-Hole Equipment (cont'd)

#### Submersible Pumps

- 2 inch to 4 inch submersible pumps, double valve pumps
- Moineau pumps driven by sucker rods

#### Samplers/Bailers

- water sampling, if needed under formation pressure

#### Centralizers

- several systems, various materials
- custom made for any application

### Surface Equipment

#### Cable Reels

- clutch-driven hydraulic or electric
- for all types of cables

#### Flowboards

- all types of flowmeters and flow controllers
- from ml / day up to 400L/min & 200 bar

#### Wellheads

- for injecting, withdrawal, sealing and Monitoring

#### Sensors

- pressure, temperature & hydrochemical

### Surface Equipment (cont'd)

#### Injection Pumps

- from 1 ml / day to 200L / min
- for constant pressure or flow up to 200 bar

#### Data Acquisitions

- data acquisition & visualization for various applications
- online, via logger or remote inquiry

### Services

#### Borehole Testing

- performance of hydraulic, geotechnical and geophysical in-situ tests

#### Test Analysis

- test analysis and interpretation with Solexperts' own software packages

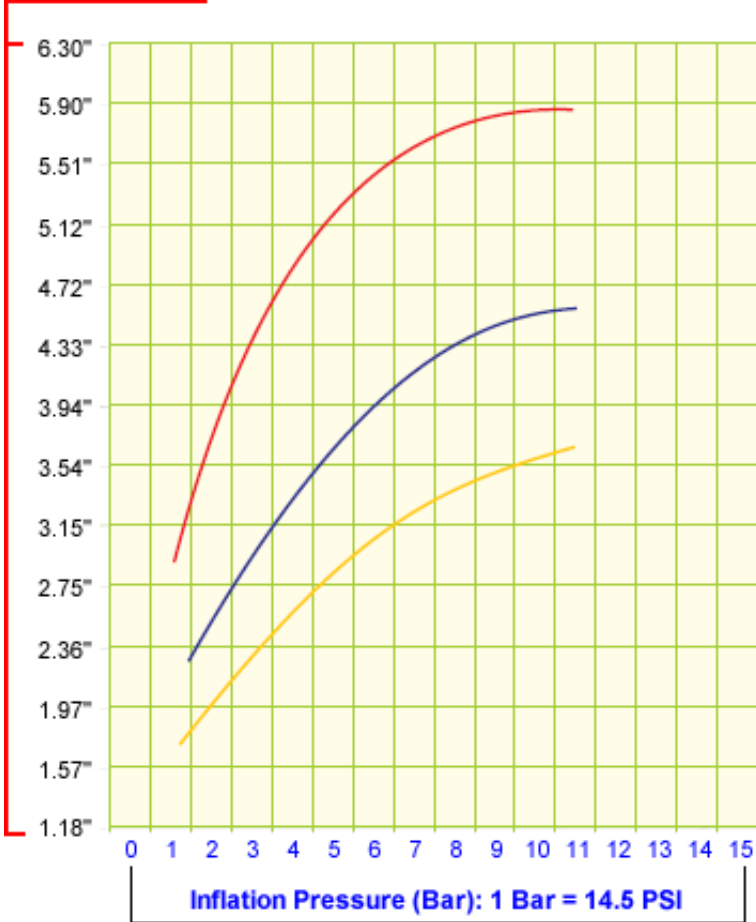
#### Test Design & Instrumentation

- for short and long term testing and monitoring

Specifications	Packer 43	Packer 54	Packer 73	Packer 88	Packer 122
boreholes diameter; min - max (inch)	1.77" - 3.74"	2.2" - 4.52"	2.99" - 5.9"	3.5" - 6.69"	4.96" - 10.23"
packer outer diameter (inch)	1.69"	2.12"	2.87"	3.46"	4.80"
mandrel inner diameter (inch)	0.63"	1.07"	1.65"	2.09"	3.18"
rubber length (inch)	19.68" ; 39.37"	19.68" ; 39.37"	19.68" ; 39.37"	19.68" ; 39.37"	19.68" ; 39.37"
threads (inch)	G 0.5"	G 1"	G 1.5"	G 2"	G 3"

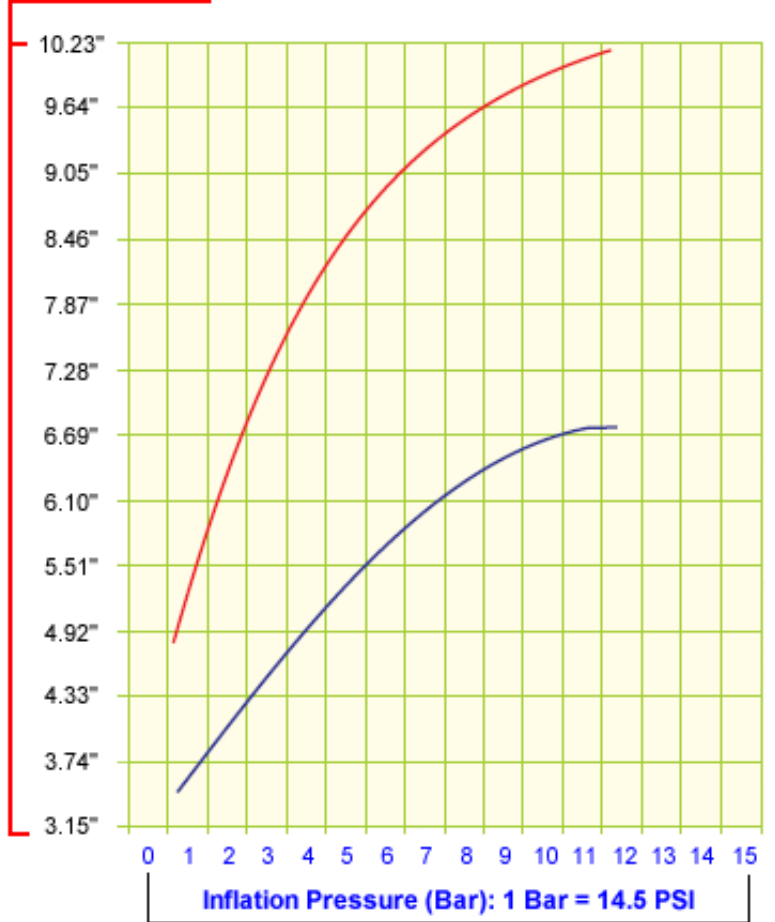
# Packer Performances Under Atmospheric Conditions

Diameter (inches)



- Packer 43** —————
- Packer 54** —————
- Packer 73** —————

Diameter (inches)



- Packer 88** —————
- Packer 122** —————