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RST Instruments Ltd. 11545 Kingston St., Maple Ridge, BC V2X 0Z5 Canada





PRODUCT CATEGORY:
BOREHOLE PACKERS + ACCESSORIES



Borehole Packers

RST Instruments Borehole Packers are pneumatically or hydraulically inflatable packers that incorporate one fixed and one sliding head attached to a center shaft. This sliding head allows the packer gland to retract about the center shaft as it inflates. The packer heads are constructed of either plated steel or aluminum while the shaft is polished stainless steel or aluminum. The packer gland consists of a rubber membrane reinforced with either polyester fabric or steel. Packers made from steel heads, stainless steel shaft and a steel reinforced gland are suitable for medium pressure applications.

> WHY IT IS IMPORTANT

Single packers in an open borehole or well screen:

Isolates a zone from the packer Allows samples to be taken and pressure to to the bottom of the well.

Allows samples to be taken and pressure to be monitored in the zone below the packer.

Allows water to be pumped under pressure to below the packer for permeability testing or hydrofracturing.

Two packers separated by a specified length of perforated spacer pipe:

Can be used to test a zone or formation at a specific depth.

Only the zone between the packers is affected.

Can also be used with a wireline system - water can be pumped down the drill rods for zone testing below the second packer, eliminating the need to pull the rods for each test, therefore minimizing in-hole disturbance and costly redrilling.

> APPLICATIONS

| Monitor well sampling. | Zone testing and monitoring. |
|------------------------|----------------------------------------------------|
| Permeability testing. | Pressure grouting. |
| Packer piezometers. | Sealing off artesian flows in open or cased holes. |

> FEATURES

Packer heads can include sealed pass throughs for instrumentation leads, pump leads, etc.

Steel reinforced, abrasion resistant glands are easily replaced in the field.

Hollow center shaft for placement of sampling and monitoring equipment, or for passing water through the packer during permeability testing.

Suitable for a wide variety of applications in open or cased holes.

MEDIUM PRESSURE PACKER SPECIFICATIONS

Steel reinforced gland, plated steel heads, stainless steel shaft

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|-------------------------------------------------------------------|------------------|----------------------|----------|---------------------------|----------|-----------------------------------|---------|-------------------------------------|-------------------|-----------|-------------------|
| MODEL | PART # | DEFLATED DIAMETER | | MAX. INFLATED DIAMETER | | MAX. UNCONFINED WORKING PRESSURE* | | STANDARD GLAND LENGTHS | CENTRE SHAFT I.D. | | SHAFT THREAD SIZE |
| N | BP0053 BP0054 | 4.3 cm | 1.69 in. | 8.25 cm | 3.25 in. | 2482 kPa | 360 psi | 635 mm (25 in.) 1000 mm (40 in.) | 1.25 cm | 0.493 in. | 3/8 NPT |
| Н | BP0103 BP0104 | 5.7 cm | 2.25 in. | 11.05 cm | 4.35 in. | 1930 kPa | 280 psi | 635 mm (25 in.) 1000 mm (40 in.) | 2.09 cm | 0.824 in. | 3/4 NPT |
| Р | BP0153 BP0154 | 7.2 cm | 2.83 in. | 14.78 cm | 5.82 in. | 1172 kPa | 170 psi | 635 mm (25 in.) 1000 mm (40 in.) | 3.51 cm | 1.38 in. | 1 1/4 NPT |
| P5-9 | BP0224 | 11.9 cm | 4.7 in. | 25.65 cm | 10.1 in. | 965 kPa | 140 psi | 1250 mm (49 in.) | 5.26 cm | 2.07 in. | 2 NPT |

*The working pressures are specified in free air.

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SPECIFICATIONS + ORDERING

| BOREHOLE PACKER PARTS | | | | | |
|-----------------------------------|------------|------------|------------|---------|--|
| | MODELS | | | | |
| ITEM | N | Н | P | P5-9 | |
| Spare Gland - 635mm (25 in.) | BP0051 | BP0101 | BP0151 | N/A | |
| Spare Gland - 1000mm (40 in.) | BP0052 | BP0102 | BP0152 | N/A | |
| Spare Gland - 1250mm (49 in.) | N/A | | | BP0226 | |
| 0-Ring Kit | BPONH | вроно | BPOPQ | BP059 | |
| Seating Cone | BP0501 | BP0502 | BP0503 | N/A | |
| Swivel Wireline Adapter | BP0531 | BP0530 | BP0529 | N/A | |
| Nipple | BPFN038 | BPFN075 | BPFN125 | BPFN200 | |
| Coupling | BPFC038 | BPFC075 | BPFC125 | BPFC200 | |
| End Cap | BPFE038 | BPFE075 | BPFE125 | BPFE200 | |
| Perforated Spacer - 5 ft. | BPP5038 | BPP5075 | BPP5125 | BPP5200 | |
| Solid Spacer - 5 ft. | BPP6038 | BPP6075 | BPP6125 | BPP6200 | |
| 3/16 in. Coiled Inflation Line | BP0557-C-N | BP0557-C-H | BP0557-C-P | N/A | |
| 1/4 in. Coiled Inflation Line | N/A | BP0558-C-H | BP0558-C-P | N/A | |
| Lifting Bail | BP0521 | BP0522 | BP0523 | BP0527 | |

| BOREHOLE PACKER ACCESSORIES | | | | |
|-----------------------------|-------------------------------------------------------|--|--|--|
| PART # | DESCRIPTION | | | |
| BP0557 | 3/16 in. dia. Nylon Inflation Tubing (3200 psi burst) | | | |
| BP0558 | 1/4 in. dia. Nylon Inflation Tubing (3200 psi burst) | | | |
| BP0511 | NQ Stuffing Box - 3/16 in. Inflation Line | | | |
| BP0511-1/4 | NQ Stuffing Box for 1/4 in. Inflation Line | | | |
| BP0511SK | Stuffing Box Seal Kit 3/16 in. Inflation Line | | | |
| BP0511SK-1/4 | Stuffing Box Seal Kit 1/4 in. Inflation Line | | | |
| BP0512 | HQ Pin Sub | | | |
| BP0513 | PQ Pin Sub | | | |
| BP0560 | Inflation Regulator 0-359 psi | | | |
| BP0560HP | Inflation Regulator 0-1500 psi | | | |
| BPFLW100 | 1 in. Flow System - 150 psi | | | |
| C-700-1 | Replacement Flow Meter for 1 in. Flow System | | | |
| FIAB1H11 | B1H-11 1/8 in. Female Quick Connect | | | |
| FIAB1K11 | B1-K11 1/8 in. Female Quick Connect | | | |
| FIA68CA32 | 68CA-3-2 3/16 in. Tube x 1/8 MNPT Fitting | | | |
| FIA61CA3 | 61CA-3 3/16 in. Nut and Sleeve | | | |
| FIA62CA3 | 62CA-3 3/16 in. Tube Union | | | |
| FIA68CA42 | 1/4 in. Tube x 1/8 in. MNPT Fitting | | | |
| FIA61CA4 | 61CA-4 1/4 in. Nut and Sleeve | | | |
| FIA62CA4 | 62CA-4 1/4 in. Tube Union | | | |



Inflation Regulators are used to control inflation of the borehole packers. Two models are available: 0-350 psi and 0-1500 psi. Each regulator includes a quick connect (to attach the packer inflation line) and a standard nitrogen bottle connector.



Seating Cones are used to set the packer assembly in place at the drill bit.



Lifting Bails are used to raise and lower the packer assembly by utilizing the wireline. If a swivel wireline connection is already in place, a modified lifting bale with threads matching to the swivel connector is available.

Feed-through
Adapters allow
instrument leads
to be passed
through the
packers to the
pumps and other
equipment in
the zone below
the packer.





Stuffing Boxes provide a seal on the drill rods and against the wireline and inflation line. This allows water to be pumped down the drill rods under pressure.



A Flow System is used to monitor and control water during downhole testing. Each flow system includes a flow meter, pressure gauge, shut-off valve, by-pass valve, connection hose, and aluminum frame.