FLOWSERVE

Seal Gard 32 and 54

Standardized External Seal Flush Water Controllers

Experience In Motion

The Seal Gard water flush controller protects your seal by improving the seal environment with external flush water and increases the mean time between planned maintenance (MTBPM).

Conserve water, save seals

The Seal Gard provides a unitized, cost-effective means of delivering cool, clean flush water to packing and single or dual mechanical seals. Key benefits include:

- Regulating flush water flow rates saves water and energy and reduces expenses.
- Assuring adequate flow for seal cooling extends seal life and equipment uptime.
- Eliminating excessive flush rates removes a common cause of seal face erosion.

The Seal Gard's standard instrumentation includes flow and pressure gauges to visually check the seal's operating environment. An optional alarm is available to alert operators of a loss of flush water or excessive flush water consumption, allowing immediate action to be taken for preventative health of the seal.

Standardized feature packages simplify Seal Gard selection process and reduce delivery time.

Two main body types satisfy the essential requirements of single and dual seal piping plans with features designed to provide the right amount of visualization and control. The Seal Gard is stocked in common configurations to decrease the time from order to installation.

Seal Gard 32

Single seals appreciate the cooling and assured lubrication provided by a Seal Gard 32, which follows API 682 guidelines for a Plan 32. The Seal Gard 32 flushes externally supplied clean water through the seal to remove heat, process fluids and solids from the seal chamber, and increase the seal chamber pressure and fluid vapor margin.

Seal Gard 54

The Seal Gard 54 is specially designed for use on dual seals operating with a Plan 54 and an external water supply. The Seal Gard 54 allows operators to monitor the dual seals' barrier chamber, adjust flow, and set the barrier fluid operating pressure.

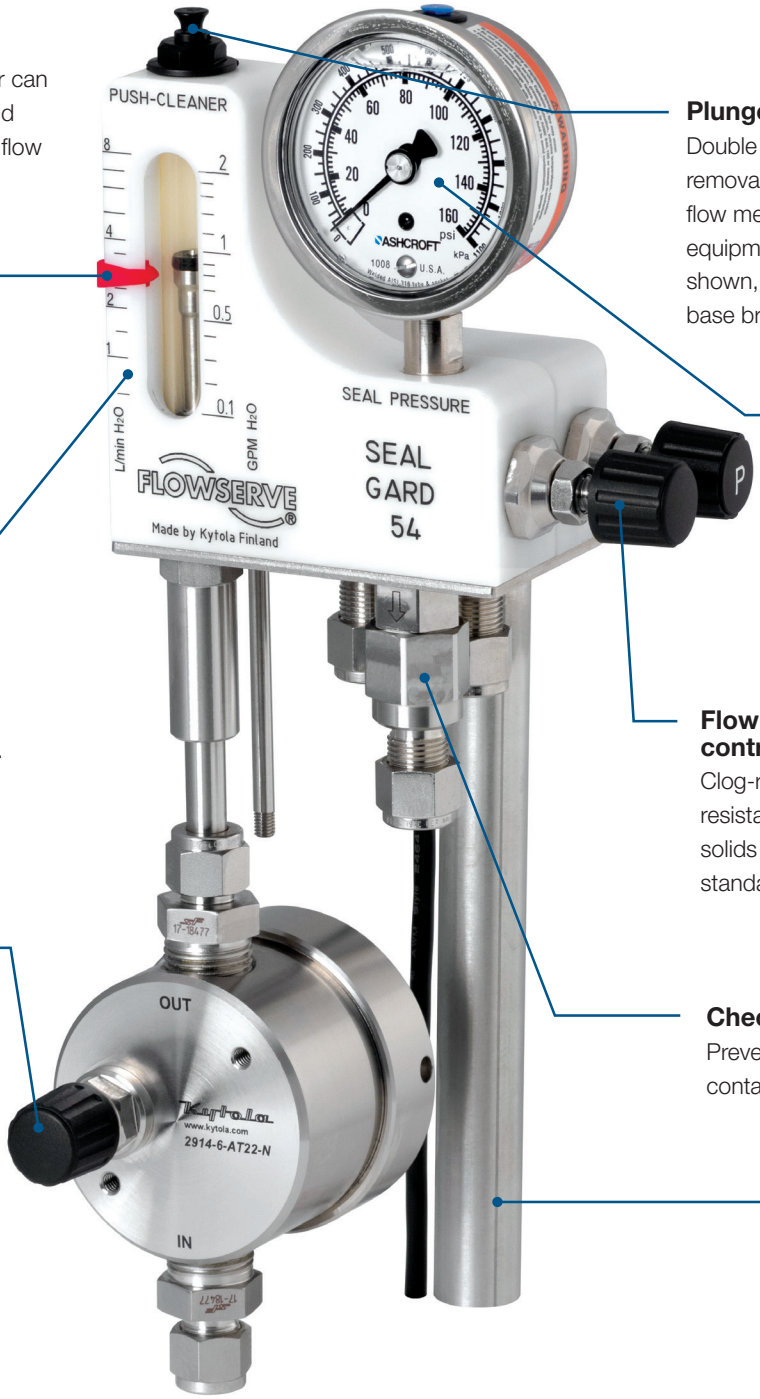
The Seal Gard 54 is available with a single or dual flow meter to enable multiple flow alarm setpoints and monitor flush rates to and from the seal's barrier cavity.

Detect upset conditions
Available proximity flow sensor can be added to any Seal Gard and configured to alarm on a high-flow or low-flow reading.

Desired setpoint indicating arrows on flow meter and pressure gauge let operators know with a glance whether the seal is operating in the right flush water conditions.

Flow meter
Freeze-resistant dual unit, hang-up resistant, with repeatable measurements to ±1%. Dual flow meter Seal Gard 54 available to show flow to and from seal (page 5).

Optional adjustable constant flow regulator
Reduces false flow alarm triggers by stabilizing flow to the seal, despite changes in supply or seal chamber pressure.



Plunger wiper rod
Double wiper plunger with removable rod can clean flow meter sight glass while equipment is running. As shown, rod is safely stored on base bracket.

Dual unit, stainless steel pressure gauge

Flow and back pressure control valves
Clog-resistant with tamper-resistant locknuts. Passes solids five times larger than a standard needle valve.

Check valve
Prevents process fluid from contaminating supply header.

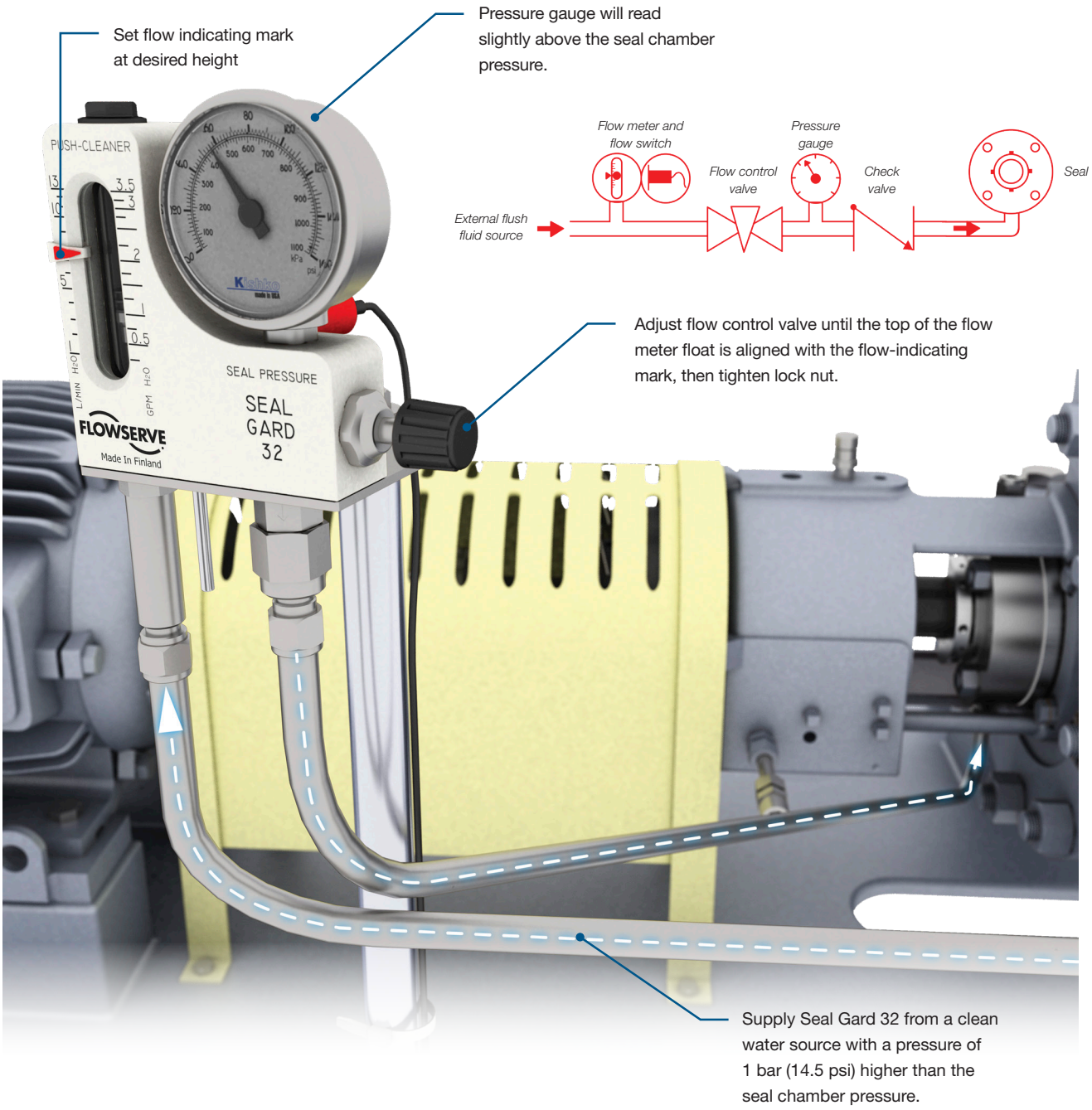
Optional 316SS floor-mount stand

Materials of construction	
Body	Polyoxymethylene (POM)
Metering tube	Polysulfone plastic (PSU)
Metallic parts	316 stainless steel
Float	329 stainless steel
O-ring seals	Fluoroelastomer (FKM)
Connectors	⅜ in compression fitting

Operating parameters	
Design MAWP	20 bar @ 100°C (362 psi @ 212°F)
Flow	0.5 to 13 lpm (0.1 to 3.5 gpm)
Flow alarm range	1 to 9 lpm (0.25 to 2.5 gpm)
Flow measurement repeatability	±1%
External flush fluid	Water
Temperature range	-16°C to 100°C (4°F to 212°F)

Seal Gard 32

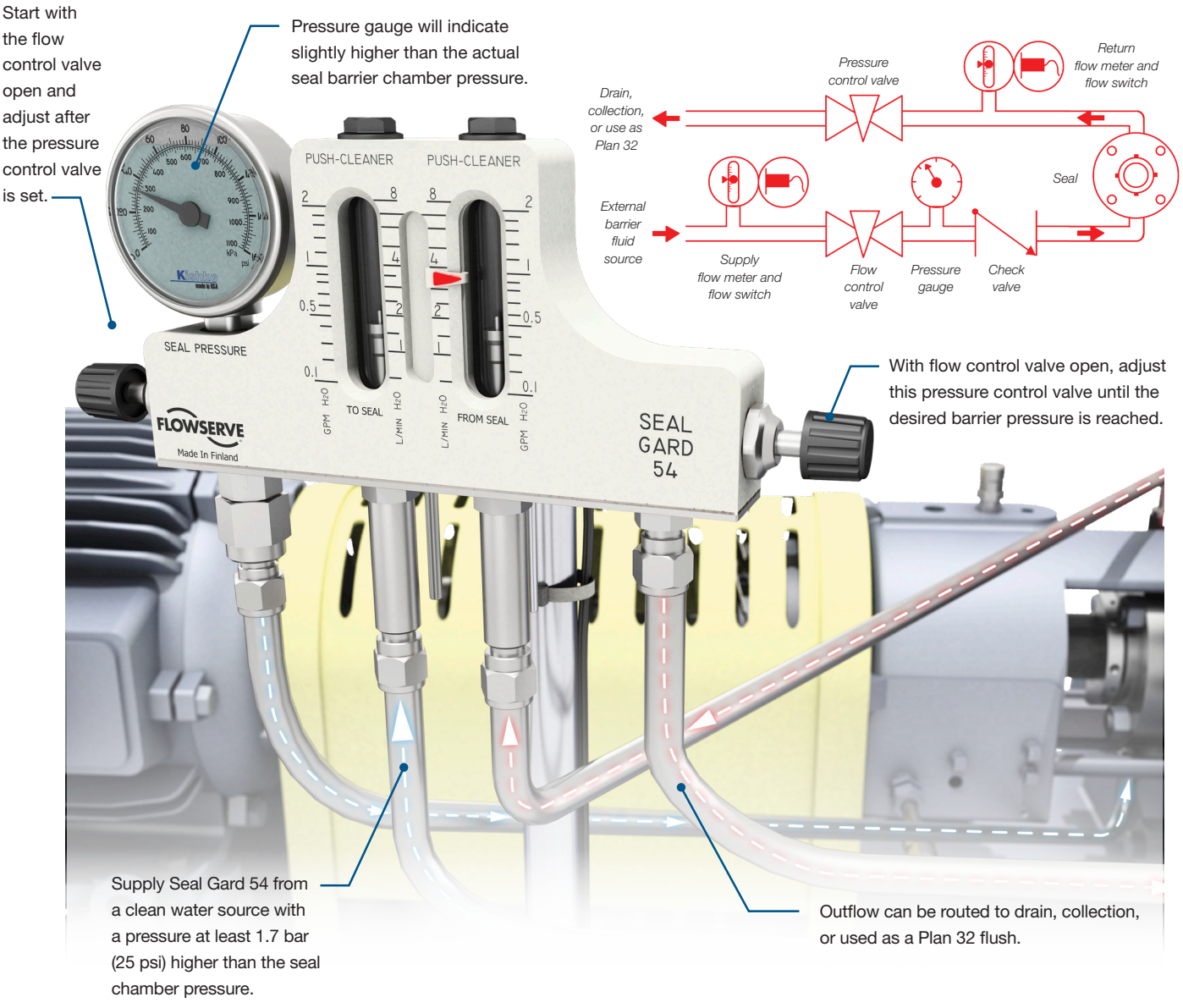
The Seal Gard 32's compact size enables users to install it conveniently near the seal on the optional 75 cm (30 in) tall floor stand. Complete the installation by connecting a water source to the Seal Gard 32's inlet port and the outlet port to the seal using ⅜ in tubing. The Seal Gard 32 can be configured with either a low- or high-flow sensor. The low-flow sensor alerts users that clean flush fluid is no longer flowing to the seal, which can create an undesirable operating environment for the seal. Alternatively, the user can choose to configure the flow sensor to alarm on a high-flow reading in order to send an alert when excessive flush water is being consumed.



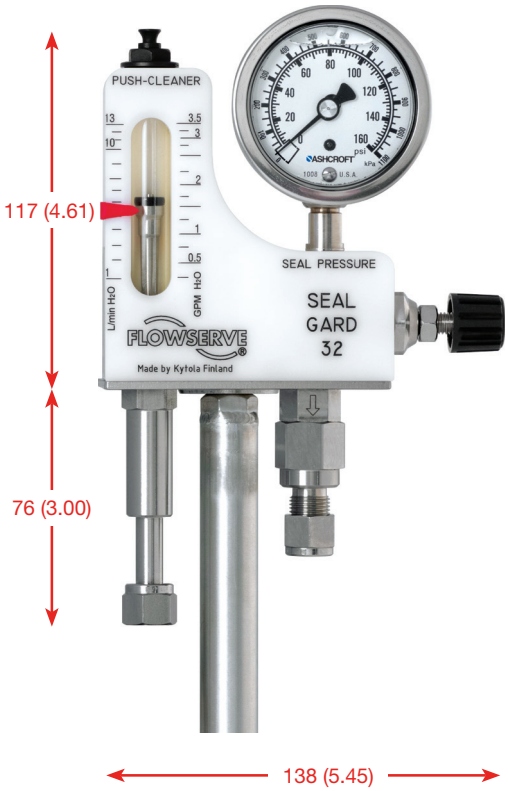
Seal Gard 54 dual flow meter

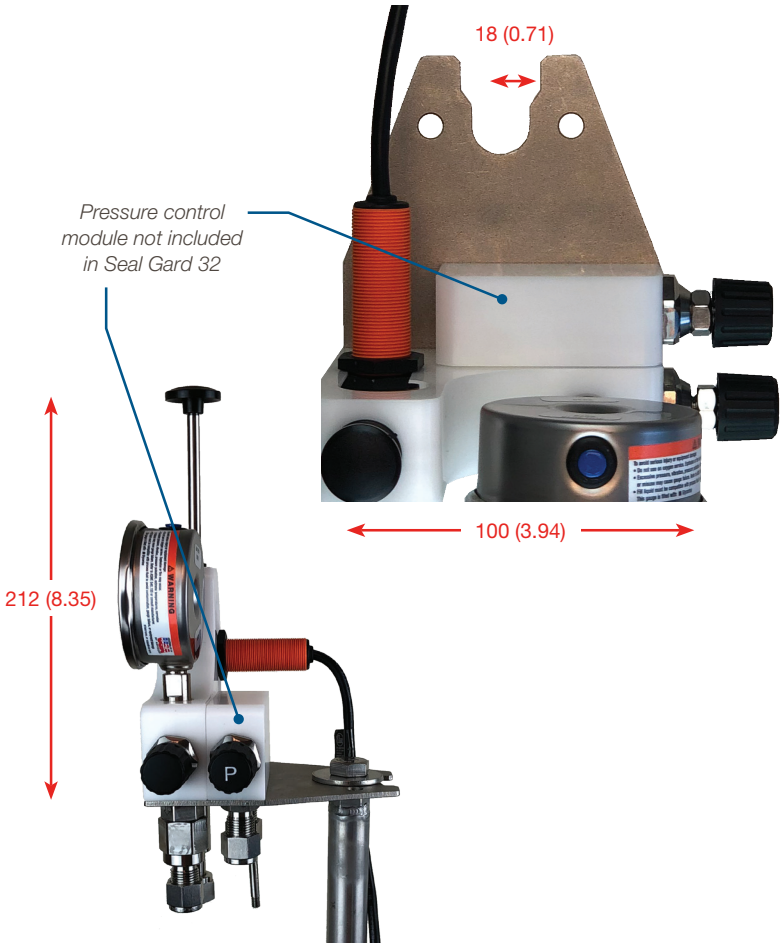
The Seal Gard 54 dual flow meter provides additional monitoring capability for dual seals. Dual flow meters enable the installation of two flow sensors so alarms can be set for both high and low flows. One flow meter and optional flow sensor are on the supply side of the Seal Gard 54 going to the seal, and the other flow meter and optional flow sensor are on the return side monitoring the flow coming out of the seal. This enables the detection of several off-design conditions, including:

- Reverse pressurization of the inner seal
  - Detected by low or no flow on the supply side flow meter and a drop in indicated barrier pressure
- Excessive inner seal barrier fluid consumption
  - Detected by an increase in barrier fluid flow and confirmed by flow continuing when the flow control valve is temporarily closed
- Excessive outer seal barrier fluid consumption
  - Detected by an increase in barrier fluid flow, a drop in barrier pressure, and visible leakage around the seal's drive collar
- Excessive barrier fluid flow
  - Detected by high flow on supply side flow meter
- Insufficient barrier fluid flow
  - Detected by low flow on return side flow meter



Seal Gard 32 and 54 single flow meter dimensions and part numbers



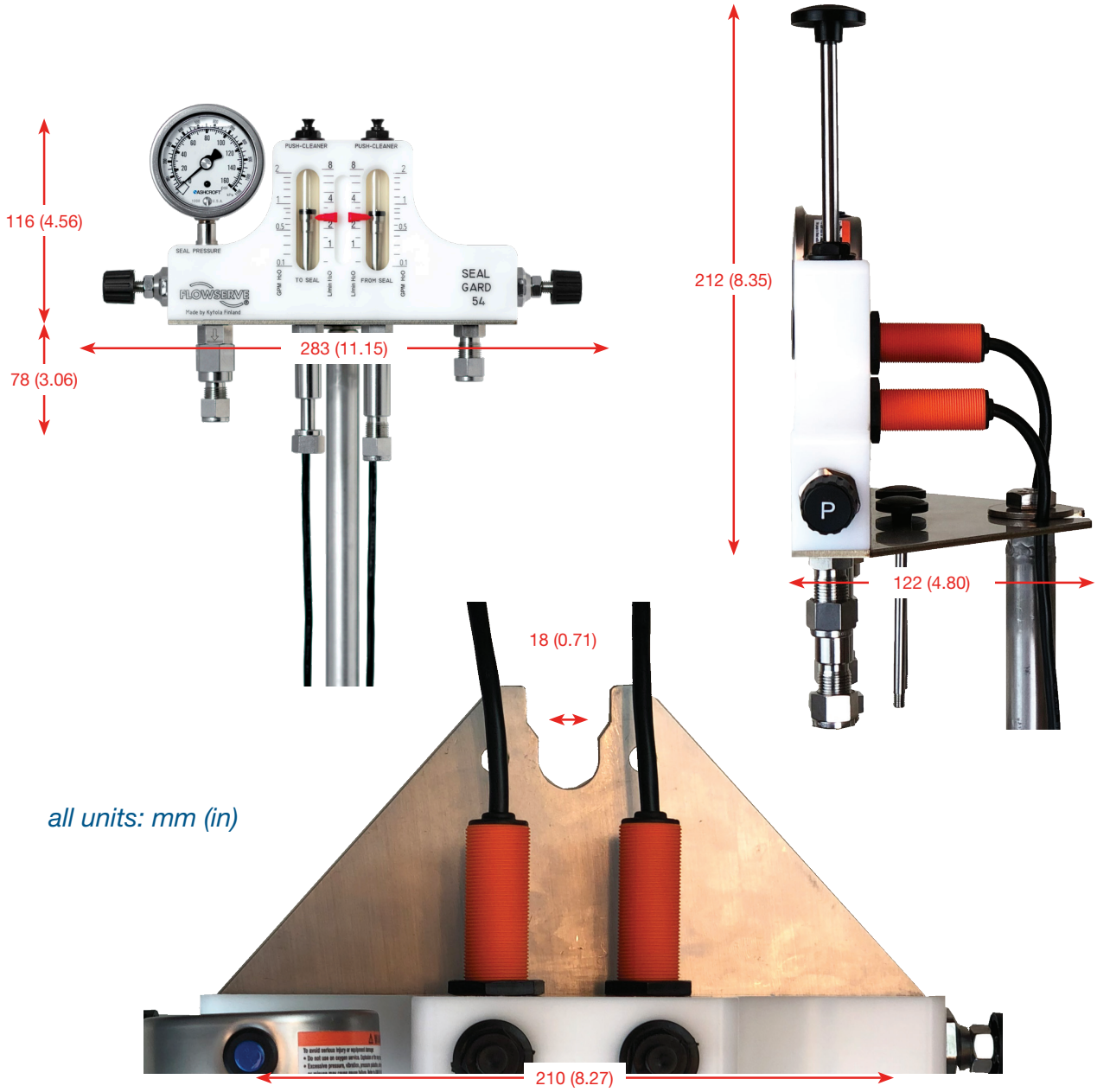


all units: mm (in)

Seal Gard 32 Part Number	Flow Rate	Pressure Gauge
SGRD321L1PVT1	0.5 to 8 lpm (0.1 to 2 gpm)	1,100 kPa (160 psi)
SGRD321L2PVT1	0.5 to 8 lpm (0.1 to 2 gpm)	2,500 kPa (360 psi)
SGRD321H1PVT1	1 to 13 lpm (0.25 to 3.5 gpm)	1,100 kPa (160 psi)
SGRD321H2PVT1	1 to 13 lpm (0.25 to 3.5 gpm)	2,500 kPa (360 psi)

Seal Gard 54 Single Meter Part Number	Flow Rate	Pressure Gauge
SGRD541L1PVT1	0.5 to 8 lpm (0.1 to 2 gpm)	1,100 kPa (160 psi)
SGRD541L2PVT1	0.5 to 8 lpm (0.1 to 2 gpm)	2,500 kPa (360 psi)
SGRD541H1PVT1	1 to 13 lpm (0.25 to 3.5 gpm)	1,100 kPa (160 psi)
SGRD541H2PVT1	1 to 13 lpm (0.25 to 3.5 gpm)	2,500 kPa (360 psi)

Seal Gard 54 dual flow meter dimensions and part numbers



all units: mm (in)

Seal Gard 54 Dual Meter Part Number	Flow Rate	Pressure Gauge
SGRD542L1PVT1	0.5 to 8 lpm (0.1 to 2 gpm)	1,100 kPa (160 psi)
SGRD542L2PVT1	0.5 to 8 lpm (0.1 to 2 gpm)	2,500 kPa (360 psi)

Seal Gard 32 and 54 options

Seal Gard 32 and 54 Standard Options	Part Number
Flow alarm sensor, 10 to 55 VDC proximity switch	SGRD-ALARM10V
Flow alarm sensor, 20 to 250 VAC/DC proximity switch	SGRD-ALARM20V
316SS floor stand for Seal Gard 32 and 54	SGRD-STAND
Constant flow regulator up to 10 lpm (2.6 gpm)	SGRD-CONFLOW26
Constant flow regulator up to 13 lpm (3.5 gpm)	SGRD-CONFLOW35
Repair kit: Includes all O-rings, replacement flow meter tube and replacement cleaning rod	SGRD-REPAIRKIT
Flow alarm sensor kit, ATEX certified, intrinsically safe	SGRD-ALARMATEX
Hose barb adapter fitting (2) required SGRD 32, (4) required SGRD 54	SGRD-HOSEBARB

Seal Gard 32 and 54 Non-standard Options	
Connections	10 mm (⅜ in) hose barbs
Elastomers	EPDM
High chemical compatibility, higher-temperature body material	PVDF (polyvinylidene flouride) thermoplastic

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