

7725(i)

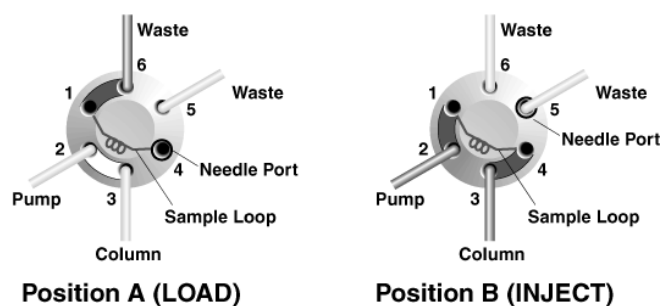
Front Loading Sample Iniector

Description

The 7725 is a stainless steel 2-position front-loading sample injection valve. The (i) version is identical except for the additional built-in position sensing switch. The unique design of this injector includes Rheodyne's® unique Make-Before-Break (MBB®) architecture. This feature allows continuous flow between LOAD and INJECT positions. A 20 µL sample loop is connected between Ports 1 and 4.

Flow Diagram

A schematic of the flow switching pattern is shown below. The numbered circles represent the ports in the valve stator, and the white and dark grooves represent the connecting passages in the rotor seal.



Specifications

Liquid Contacts: Stainless steel, Vespel and ceramic

Port Size: Accepts 10-32 male threaded fittings

Port Depth: 3.4 mm ± 1 mm (0.137" ± 0.005") from the end of the swaged ferrule to the port bottom

Fittings: Five packs- Nut: P/N 6000-109, Long Nut: P/N 6000-111, Extra Long Nut: P/N 6000-162

Flow Passage Diameters: 0.4 mm (0.018") and 0.6 mm (0.024")

Volume in Flow Passages: *Stator (includes stator face assembly)*- 1.4 µL/hole,

Rotor Seal- 0.6 µL/groove

Maximum Operating Pressure: 48 MPa (483 bar, 7000 psi)

Operating Temperature Range: 4-80°C

pH Range: 1-10 for wetted surfaces

Weight: 286 grams (reference point only, no tolerance specified)

Position Sensing Switch ("i" version only): Rated for 10V, 10 mA DC/AC

Storage Temperature: -30-80°C, <95% humidity, non-condensing

Warranty: One year from date of shipment from Rheodyne on defects in materials and workmanship

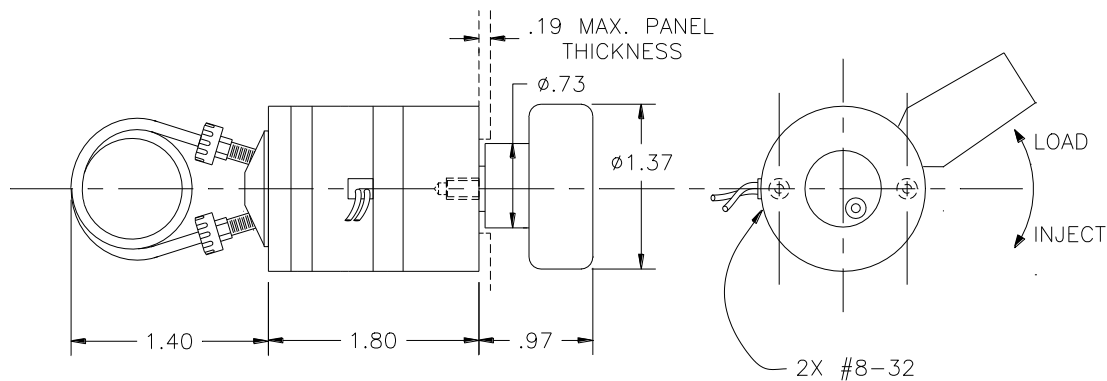
Warranty Repair Rate: 0.02%

Supplied With

(2) Hex Keys, (2) Mounting Screws, (2) Vent Lines, (1) Needle Port Cleaner
(3) Long Nuts, (1) Extra Long Nut, (4) Ferrules

Dimensional Drawing

Dimensions are in inches.



7725(i) General Information

Lifetime

Rheodyne does not specify lifetime on our products, specifically the wear surfaces, due to the wide variation in conditions to which the products are exposed.

As a point of reference, the lifetime tests we do at our factory show the typical 7725(i) holding 34 MPa (5,000 psi) after 30,000 cycles.

The test conditions are:

- 50/50 methanol/water
- ambient pressure
- cycle the valve every six seconds (two movements per cycle)
- 10,000 cycles per 24 hours

NOTE: Shipping, storing or operating this valve below 0°C with water in the fluid passages may cause failure of the sealing surfaces.

Storage Period

We have no data on long time storage of the 7725(i).



Recycle Capacity

The valve can be taken apart to individual components and each part recycled for its material at a recycling facility.

Chemical Compatibility

The wetted surfaces of the valve, 316 stainless steel, ceramic and Vespel, will tolerate a wide range of solvents and chemicals. The standard rotor seal, Vespel, will breakdown at pH 10 and greater. Chlorinated compounds will attack the 316 stainless steel.

Sample Loop

The sample loop attaches at Ports 1 and 4. With the use of the colored ChromTRAC™ fittings and the color-coded label for the stator the loops can be attached in the correct ports by simply matching the colors.

Rheodyne® Inspection System

All incoming fabricated parts are inspected using a sampling plan to conformance standards. All incoming lots are quarantined until they have passed this inspection.

During the manufacturing process there are established in-process inspection points. The product cannot advance in the manufacturing process if it fails at one of these inspection points. All valve products are subject to final adjustment and performance testing. This testing is done on one hundred percent of the units produced.

Technical Information

The Rheodyne Technical Notes, Product Notes and Solutions Book contain technical information on all Rheodyne products.