

# CTS-10889-02

Seal, Black

Equivalent to: Gilson 5463125095

Rainin R007101636



## Technical Data Sheet

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### 1.0 Description

This Seal is designed to be compatible with 10SC and 10WSC HPLC systems. It is equivalent to Gilson part number 5463125095 and Rainin part number R007101636.

### 2.0 Specifications

#### 2.1 Wetted Materials

Carbon Filled Teflon®

Hastelloy®

### 3.0 Replacement Frequency

Beyond routine maintenance it may be necessary to replace the seals more frequently if they are operating in a high salt buffer concentration environment or if the plunger themselves are scratched and worn. Seals may also need replacing if the system fails its leak test.

### 4.0 Installation Information

CTS's parts are designed to be compatible and interchangeable with the OEM parts.

1. Remove Front Cover.
2. Disconnect all of the capillary tubing from the pump head.
3. Disconnect the active inlet valve cable.
4. Loosen the 2 pump head screws using a 4mm Allen wrench. Use caution when loosening. Back out each screw a little bit at a time moving back and forth until both screws are free.



5. Loosen the lock screw and carefully remove the pump head from the plunger housing. (The best way to do this is to lay the entire assembly on a flat surface and pull the pump head straight up and away from the housing. This will minimize the possibility of snapping the sapphire plunger when trying to remove the pump head).
6. Using one of the plungers, or small pick carefully remove the old pump seal (if using a metal pick care must be taken not to scratch or nick the metal housing).
7. Clean the pump head chambers.
8. Push the new seals into the chamber.
9. Reassemble the pump head to the plunger housing and the plunger housing to the pump.
10. Re-attach all capillary tubing and the active inlet valve cable.

## 5.0 Operating Recommendations

### 5.1 General

Teflon® is a chemically inert material, making this an excellent general purpose seal suitable for use with nearly all HPLC solvents. The addition of the graphite fill adds stiffness to the Teflon material and helps extend the lifetime of the seal.

### 5.2 Seal Wear-in

1. Place one of the mobile phase transfer lines into a bottle of isopropanol (~100mL).
2. Set the pump gradient to pump 100% of whichever mobile phase transfer line is in the isopropanol.
3. Disconnect the outlet check valve capillary tubing from the HPLC column or column chamber and connect a flow restrictor capable of producing ~350bar of backpressure.
4. Place the capillary/flow restrictor outlet into a waste beaker.
5. Open up the purge valve.
6. Turn on the pump and allow the isopropanol to drain to waste.
7. Close the purge valve and set the flow rate so that the system pressure is approximately 350bar. Allow the system to pump for at least 15minutes.
8. Close the purge valve and set the flow rate so that the system pressure Turn off the pump.
9. Remove the mobile phase transfer line from the isopropanol and place back in the mobile phase.
10. Allow the pump to pump mobile phase through the system for a few minutes to flush the isopropanol.
11. Remove the flow restrictor and reconnect the outlet check valve capillary tubing to the HPLC column or column chamber.

## 6.0 Warranty

We view your business with us as a partnership based on mutual trust.

We extend a Lifetime Warranty against any manufacturing defects on all CTS parts. On the rare occasion that you experience a problem, we invite you to contact your Account Manager directly.

Returns can only be accepted if a Return Material Authorization Number (RMA) is obtained prior to shipment. Please call (1) 952-895-8292 or email: [ctssales@ctshplc.com](mailto:ctssales@ctshplc.com) to get an RMA.