

## OPERATING INSTRUCTIONS

### HIGH PRESSURE COLUMN PRE-FILTER

#### DESIGN

The Column Pre-filter is used between the sample injecting device and the column. By preventing particles from accumulating on the column inlet frit, the useful life of the column may be extended significantly.

The design employs a geometry which minimizes sample mixing, has minimal internal volume (4.8  $\mu$ l), zero dead volume and excellent capture surface (7.1 mm<sup>2</sup>).

Filter elements can be easily replaced in a minute or two. The assembly can be used at pressures to 15,000 PSI.

#### INSTALLATION

Install the filter with flow arrow aligned consistent with flow to the column.

The assembly is provided with nuts and ferrules for 1/16" O.D. tubing. The tubing ends should be clean, square, and burr-free with minimum chamfer.

Slip the tubing through the large ends of the nut and ferrule, respectively. Insert and **maintain** the tube **fully seated** into the fitting socket and (using 3/8" and 5/16" wrenches) tighten the nut 3/4 of a turn from the finger-tight position. Connect the other end in the same manner. Once the ferrule is swaged to the tubing during the first assembly, 1/6 turn past finger-tight is sufficient to reconnect.

#### MAINTENANCE

Periodically the filter element will require replacement. The frequency will depend on the cleanness of the system and fluids and the appropriate use of reservoir, high pressure (post-pump) and, possibly, sample filters.

To remove the filter element:

1. Disconnect one or both 1/16" tubing connections.
2. Using 3/8" and 1/2" wrenches, remove **both** closures from the filter housing.

3. Using a wood, plastic, or soft metal rod, lightly push the filter element out of the housing.
4. Remove any debris adhering to housing bore or conical surfaces of closures. **DO NOT SCRATCH SURFACES.**
5. Assemble one closure to housing, tightening gently.
6. Drop a new filter element into the housing bore, flat against the closure face.
7. Assemble the remaining closure, tightening only until metal-to-metal contact is felt.
8. Reinstall the assembly in the pressure line, observing the proper flow direction.

NOTE: The ends of the filter assembly are identical. The arrow provides a consistent reference to avoid the possibility of flushing collected particles from the filter to the column.

#### SPARE PARTS

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|---------|---|
| 05-0154 | Replacement filter elements, 2 $\mu$ m, pack of 10  |
| 05-0155 | Replacement filter elements, .5 $\mu$ m, pack of 10 |

