Molecular Sieve Filter

The 580-1700 Series Filters are designed for use in high pressure, high purity laser gas systems to prevent the possible introduction of moisture into lasing and purge gas streams.

580-1701 Shown

Ordering Information

Part Number	Catalyst	Removal Capacity
580-1701	Housing	N/A
580-1723	13X Mole Sieve (removes CO_2 and water)	5.4 grams H2O
580-1733	4A Mole Sieve (removes water)	6.0 grams H2O
580-1753	Activated Carbon (removes C_3 and up)	4.8 grams C3
580-1743	Sintered Bronze (removes 5µm particle)	99.5% efficiency

Materials and Specifications

- **Housing**
  Brass barstock
- **Seals**
  Buna-N®
- **Inlet and Outlet Fittings**
  Brass ¼" FPT
- **Pressure Drop**
  2.4 PSIG at 3 scfm air
- **Efficiency**
  99% original
- **Maximum Operating Pressure**
  2,000 PSIG (138 BAR)
  500 PSIG Oxygen (33.3 BAR)
- **Weight**
  2.6 lbs. (1.2 kg)

Purge Valves

The 502 Series Purges are designed for use with Laser purity gases to ensure system integrity during the breakdown of components or during gas source changes. By preventing the release of gases into the workplace and by preventing air from infiltrating high purity systems, purges ensure safety and gas quality.

The Tee Purge, installed at a regulator inlet connection, is an effective method for purging a regulator and the downstream system.

The Straight Purge, best suited for pressure cycling or dilution purging, connects to a regulator body through an auxiliary high pressure port. The purged gas is vented through the regulator body to a safe location downstream.

502-1002
Straight Purge

502-2003-CGA
Tee Purge

Materials and Specifications

- **Seat**
  PCTFE
- **Diaphragms (Purge and Center Valves)**
  Elgiloy®
- **Spring and Stem**
  304 stainless steel
- **Cv**
  0.27
- **Maximum Pressure**
  3,000 PSIG (210 BAR)

Ordering Information

Part Number	Material	Purge Type	Weight
502-1002	Brass Barstock	Straight Purge	1.2 lbs. (0.54 kg)
502-2003-CGA	Brass Barstock	Tee Purge	2.5 lbs. (1.12 kg)
502-2010	Brass Barstock	Right Manifold Tee Purge	2.5 lbs. (1.12 kg)
502-2011	Brass Barstock	Left Manifold Tee Purge	2.5 lbs. (1.12 kg)

Diaphragm Valves

The 533 Series Diaphragm Valves are ideal for use as the primary flow switch in high purity or corrosive gas systems. Springless design and low wetted surface area combine to minimize particle generation, and the completely swept path minimizes entrapment.

533-3029 Shown

Ordering Information

533-3	B	C	D
	Flow Control	**Material**	**Connection**
	0: Multi-Turn	2: Brass	0: ¼" FPT x ¼" FPT
	1: ¼ Turn		2: ¼" Tube x ¼" Tube
			3: ¼" MPT (Extended Leg) x ¼" Tube
			4: ¼" MPT x ¼" MPT
			7: ¼" MPT x 6mm Tube
			8: ¼" MPT (Extended Leg) x ⅛" Tube
			9: ¼" MPT (Extended Leg) x ¼" FPT

For example, a 533-3120 is a bare body, brass diaphragm valve controlled by a ¼ turn handle.

Materials and Specifications

- **Maximum Inlet Pressure**
  3,500 PSIG (240 BAR)
- **Temperature Range**
  -40°F to 140°F (-40°C to 60°C)
- **Helium Leak Integrity**
  1 x 10^{-9} scc/sec
- **Bodies and Fittings**
  Brass barstock
- **Diaphragms**
  Elgiloy®
- **Seats**
  PCTFE
- **Seals**
  Metal to metal
- **Cv**
  0.17
- **Weight**
  0.66 lbs. (0.3 kg)

Relief Valves

The 9400 Series Gas Phase Relief Valves offer excellent discharge capacity and field adjustability. The captive seat design minimizes the whetted surface area reducing possible contamination. The unique design also provides an accurate cracking pressure with zero leakage up to 98% of the nominal set pressure. Models 2039 and 2040 are designed for cryogenic on-line application and offer a gooseneck design that enables a safe discharge.


830-9413 Shown

Specifications

- **580-2039 and 580-2040 Temperature Range**
  -450˚F to 1500˚F
- **830-9412, 830-9413, and 830-9414 Temperature Range**
  Viton® Seat - 20˚F to 400˚F
  Neoprene - 40˚F to 300˚F
  Maximum Pressure - 3700 PSI

Ordering Information

Part Number	Description	Connections	Materials
830-9412	Preset at 220 PSIG: (range 130 - 310 PSIG)	½" MPT x ½" FPT	Brass Body, Viton® Seat
830-9413	Preset at 420 PSIG: (range 260 - 600 PSIG)	½" MPT x ½" FPT	Brass Body, Viton® Seat
830-9414	Preset at 100 PSIG: (range 80 - 120 PSIG)	¼" MPT x ½" FPT	Brass Body, Neoprene Seat
830-9415	Preset at 20 PSIG: (range 8 - 34 PSIG)	½" MPT x ½" FPT	Brass Body, Neoprene Seat
580-2039	750 PSIG Cryogenic Relief	Male x Female CGA 440 (⅝" Flare)	Stainless Steel
580-2040	750 PSIG Cryogenic Relief	Male x Female CGA 295 (½" Flare)	Stainless Steel