

# Conditioned Gas for Controlled Performance

**RELIABLE. TRUSTWORTHY.  
AMERICAN MADE.**

## INSTRUMENT **FILTER DRYERS**

### APPLICATIONS

Cost-effective instrument filtration for pneumatic controllers and other high pressure instruments. Filtration down to 3-Microns. Removes particles, moisture, H<sub>2</sub>S, odorant, and other impurities that can effect instrument performance.



**AND CARTRIDGE REFILLS**



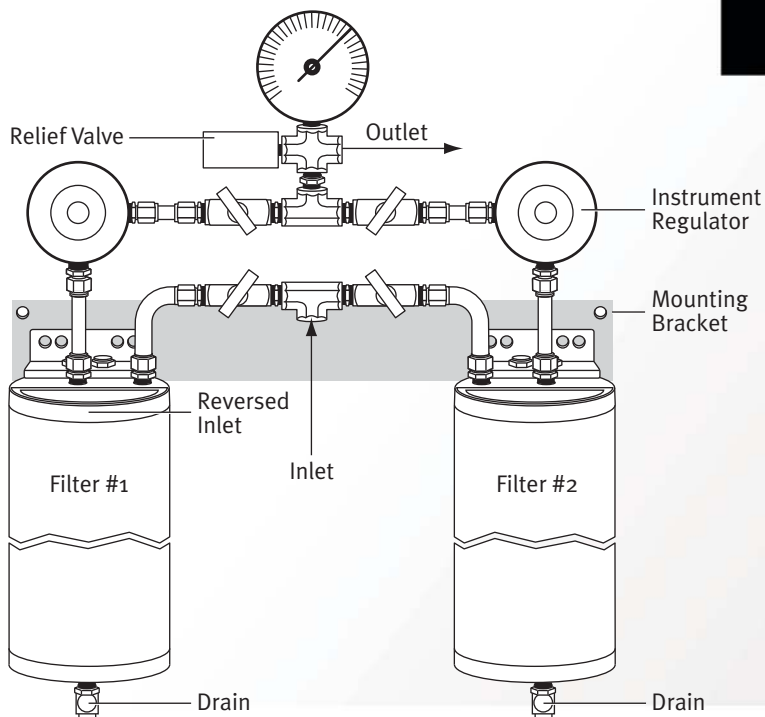
**Systems, Inc.**

International Measurement and Control Systems

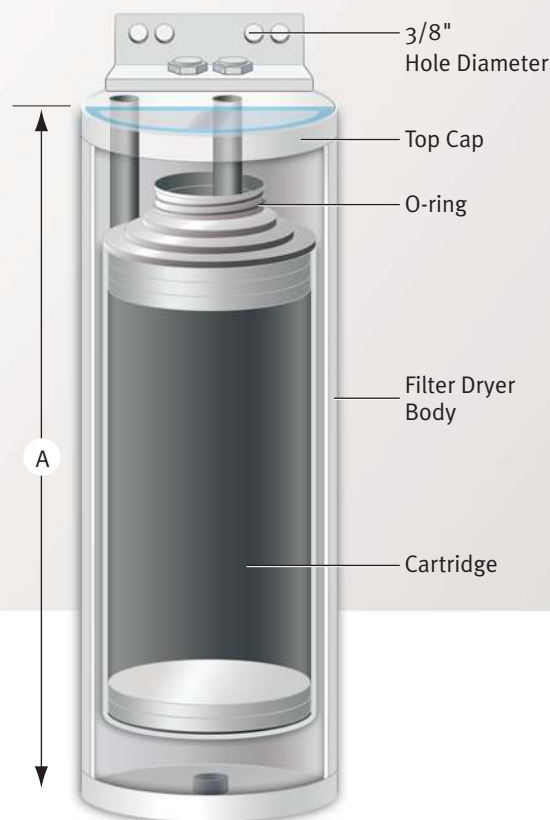
90 Main Street, PO Box 1605 • Tullytown, PA 19007

**1-800-955-4GAS** • Phone: (215) 946-2200 • Fax: (215) 943-2984

Email: [sales@imacsystems.com](mailto:sales@imacsystems.com) [www.imacsystems.com](http://www.imacsystems.com)



## DIMENSIONS



## IMAC FILTER DRYER SWITCHING ASSEMBLY

The IMAC Filter Dryer Switching System filters, dehydrates, and regulates gas. Optional accessories include Brass, Electroless Nickel or Stainless Steel Regulators, Brass or Plated Steel Relief Valve, Moisture Indicator, and Pressure Gauges.

The IMAC Filter Dryer Switching Assembly mounts two FD-5 filter dryers in parallel with instrument pressure regulators on each of the outlets. By setting one regulator 20 PSI higher than the other regulator, only one filter dryer will be in service at a time. When the in-service filter dryer becomes saturated, hydrates will pass through and cause the regulator to freeze off. The second filter dryer will begin operation. This allows for longer service between filter changes and redundancy of filtration and regulation. Valves in the system allow for changing cartridges without interruption of service.

### STANDARD MATERIALS

**BODY:** Carbon Steel

**VALVES:** Carbon Steel

**REGULATORS:** Brass (Nitrile Seals)

**RELIEF VALVE:** Brass

### OPTIONAL ELEMENT MEDIA

Silica Gel

Activated Charcoal

Sulfa-Gon

Molecular Sieve

Activated Alumina

DRYER TYPE	HEIGHT (A)	DIAMETER (B)	HOLE SPAN (INSIDE)	HOLE SPAN (OUTSIDE)
FD-19	5 1/2"	3 1/2"	1.543"	3.145"
FD-4	12"	4 1/2"	2"	3"
FD-5	19"	4 1/2"	2"	3"

ITEM	DESCRIPTION	FD-19 PART NO.	FD-4 PART NO.	FD-5 PART NO.
1	Top Cap	719-19-8B	719-4-3	719-4-3
2	O-ring	719-233	719-241	719-241
3	Filter Dryer Body	719-19-3AA	719-4-1AA	719-5-1AA
4	Cartridge	719-19-19_	719-4-4_	719-5-5_
5	Mounting Bracket	n/a	719-4-5	719-4-5



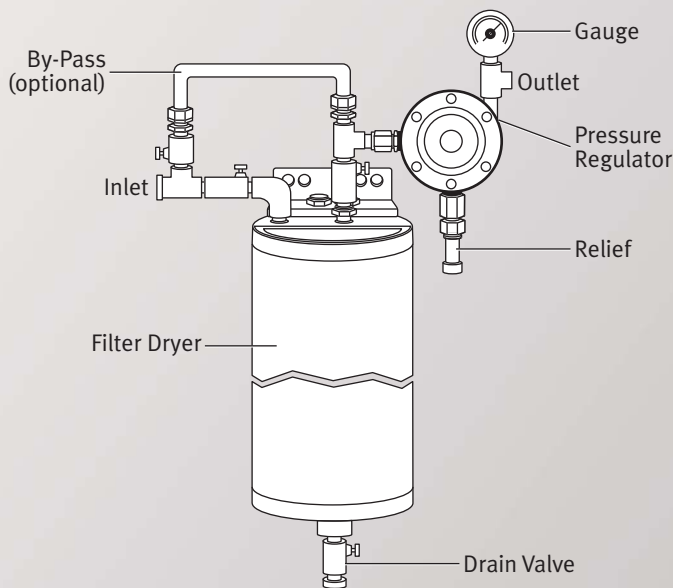
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## REGULATED SUPPLY GAS SYSTEM

**Supply Gas System** filters, dehydrates, and regulates gas. Optional accessories include Brass or Stainless Steel Relief Valve, By-Pass, Moisture Indicator, and Pressure Gauges.

### STANDARD MATERIALS

**BODY:** Carbon Steel

**FITTINGS:** Stainless Steel

# OTHER OPTIONS

*Custom assemblies and options available upon customer request.*



*Inline Moisture Indicator*



*External By-Pass Manifold*



*Needle Valve Drain*

## FEATURES

- Quick “spin-off” canister for fast element change in the field.
- All units tested to maximum pressure.
- All units supplied with certificate of test and serial number.
- Standard mounting bracket. (removable for different installation applications on FD-4 and FD-5)
- More desiccant standard than other manufacturers.
- Redundant 3-micron filtration to ensure maximum protection from particulates.
- Epoxy-coated, corrosion-resistant housing.
- Interchangeable elements with other manufacturers. (low cost, maximum volume, high performance elements)
- Variety of filter sizes. (custom sizes available upon request)
- Many options, alternative configurations, and assemblies to meet specific needs.

## SPECIFICATIONS

- **MAOP:** 1500 PSIG
- **FLOW CAPACITY:** 50 SCFM (3000 SCFH)
- **TEMPERATURE RANGE:** -40° F to 140° F (standard)
- **BODY:** Carbon Steel (standard)
- **PORTS:** 1/4" NPT (standard) (Other sizes available upon request)
- **FILTRATION:** 3-Micron Filtration
- **SEALS:** Viton (Standard) Buna-N (Optional)

## DESCRIPTION

**The IMAC Instrument Filter Dryers** are a perfect example of high-technology, American-made products and are expertly designed to condition gas for more effective and reliable use. The Instrument Filter Dryer provides maximum filtration and maximum drying for supply gas to control instrumentation, catalytic heaters and other applications requiring clean, dry gas. Instrument Filter Dryers help mitigate the Joule-Thomson effect, preventing costly freeze-ups in cold environments. Instrument filter dryers are available in different medias for a variety of applications. These medias can remove solids, moisture, aerosols, odorants and H<sub>2</sub>S. The desiccant-based IMAC Instrument Filter Dryer is designed for easy installation, trouble-free maintenance, and maximum scrubbing. The removal of unwanted contaminants helps eliminate costly down-time and increase performance and longevity for equipment downstream.



# RELATED PRODUCTS



## High Pressure Instrument Regulator

- First cut on high pressure natural gas to control valve supply. (other applications include catalytic heaters, valve actuators, pressure controllers, and chemical injection pumps)
- Ideal in instrumentation columns.

**INLET & OUTLET (3 PORTS):** 1/4" NPT  
**MAX INLET PRESSURE:** 5500 PSIG  
**OUTLET RANGES:** 0-30 PSIG, 0-60 PSIG, 0-120 PSIG, 0-150 PSIG, 0-225 PSIG, 0-500 PSIG  
**TEMP RANGE:** -40° F to 225° F

### OPTIONS

- **Adjustment Method:** T-Bar or Adjustment Screw w/ Tamper Resistant Cover
- **Casing Materials:** Brass, Electroless Nickel, or Stainless Steel

## Pilot Gas Pre-Heater

When power is available, the Pilot Gas Pre-Heater is designed to heat a pilot tube gas stream. The high efficiency aluminum casting with digital temperature controller maintains gas stream temperature regardless of gas flow.

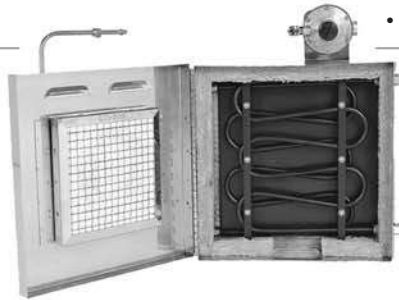


- Precise temperature control to prevent damage to valve seals.
- Digital temperature display and setpoint.
- 3/8" inlet and outlet connections.
- Compact
- No maintenance
- CSA C/US Certified for hazardous locations.
- 1500 PSIG Max Operating Pressure.

## Instrument Gas Pre-Heater

Pre-piped in a compact, highly durable stainless steel casing that includes an explosion-proof heater, stainless steel preheating tube and low pressure fuel gas regulator.

- Provides freeze protection for instrument supply gas, pilot actuated regulators and other related products.
- Freeze prevention at compressor and metering sites or gas chromatographs, valves, pilots and other low flow instruments.
- Operates for extended periods of time without maintenance.
- Single or dual coil.
- CSA, FM or non-certified heater available.



*Related products available in assemblies upon customer request.*

## Catalytic Heaters

Explosion-proof Infrared Heaters for spot heating applications.

- 1,250 BTU/hr – 60,000 BTU/hr
- Stainless steel construction
- Low maintenance
- CSA, FM and CE/ATEX approved for use in hazardous locations.
- Different sizes and mounting orientations available.



**Most items kept in stock and ready for immediate delivery.**



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## ABOUT IMAC SYSTEMS, INC.

IMAC Systems, Inc. was established in 1978 in Yardley, PA. Five expansions and 30+ years later, IMAC Systems, Inc. owns and occupies a state-of-the-art manufacturing facility on the Delaware River in Tullytown, PA. The facilities include a complete gas meter repair and calibration shop and a high-precision CNC machine shop that specializes in close tolerance, sophisticated machining.

IMAC Systems, Inc. is a 3rd generation, family-owned private business that continues to pride itself on a sound history of dependable quality, quick turnaround, and American-made craftsmanship. By remaining steadfast in our dedication to providing the very best service and skill, we are able to stay competitively priced and find viable solutions to our customers' most complex challenges.

When the highest quality, best standard of care, and greatest degree of innovation are required, IMAC Systems, Inc. will deliver on a promise of exceeding expectations.