

# WILKERSON®

Richland, MI 49083

Tel: (269) 629-5000

Installation & Service Instructions  
83-718-000

Filter Models M35, M36 and M37  
with Variations and Accessories

ISSUED: February, 2007

Supersedes: October, 1996

Doc. #83718000, EN# 061219, Rev. 3

## ⚠ WARNING

To avoid unpredictable system behavior that can cause personal injury and property damage:

- Disconnect electrical supply (when necessary) before installation, servicing, or conversion.
- Disconnect air supply and depressurize all air lines connected to this product before installation, servicing, or conversion.
- Operate within the manufacturer's specified pressure, temperature, and other conditions listed in these instructions.
- Medium must be moisture-free if ambient temperature is below freezing.
- Service according to procedures listed in these instructions.
- Installation, service, and conversion of these products must be performed by knowledgeable personnel who understand how pneumatic products are to be applied.
- After installation, servicing, or conversion, air and electrical supplies (when necessary) should be connected and the product tested for proper function and leakage. If audible leakage is present, or the product does not operate properly, do not put into use.
- Warnings and specifications on the product should not be covered by paint, etc. If masking is not possible, contact your local representative for replacement labels.

## ⚠ CAUTION

Polycarbonate bowls and sight domes, being transparent and tough, are ideal for use with Filters and Lubricators. They are suitable for use in normal industrial environments, but should not be located in areas where they could be subjected to direct sunlight, an impact blow, nor temperatures outside of the rated range. As with most plastics, some chemicals can cause damage. Polycarbonate bowls and sight domes should not be exposed to chlorinated hydrocarbons, ketones, esters and certain alcohols. They should not be used in air systems where compressors are lubricated with fire-resistant fluids such as phosphate ester and diester types.

Metal bowls are recommended where ambient and/or media conditions are not compatible with polycarbonate bowls. Metal bowls resist the action of most such solvents, but should not be used where strong acids or bases are present or in salt laden atmospheres. Consult the factory for specific recommendations where these conditions exist.

**TO CLEAN POLYCARBONATE BOWLS USE MILD SOAP AND WATER ONLY! DO NOT** use cleansing agents such as acetone, benzene, carbon tetrachloride, gasoline, toluene, etc., which are damaging to this plastic.

Bowl guards are recommended for added protection of polycarbonate bowls where chemical attack may occasionally occur.

## ⚠ WARNING

To avoid polycarbonate bowl rupture that can cause personal injury or property damage, do not exceed bowl pressure or temperature ratings. Polycarbonate bowls have a 150 PSIG pressure rating and a maximum temperature rating of 125°F.

## Safety Guide

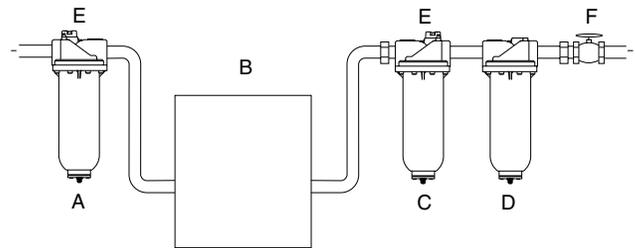
For more complete information on recommended application guidelines, see the Safety Guide section of Pneumatic Division catalogs or you can download the **Pneumatic Division Safety Guide** at: [www.wilkersoncorp.com](http://www.wilkersoncorp.com)

## INSTALLATION

1. Refer to WARNINGS and CAUTIONS.
2. Purge downstream air line of oil.
3. Install the unit with the air flowing in the direction indicated by the arrow on the body and / or the Differential Pressure Indicator.

4. The drain line connection is dependent on the type of drain that is selected.
5. Maximum inlet pressure and operating temperature ratings are: units with Differential Pressure Indicator, 150 psig (10.3 bar) and 150°F (66°C); units without DP2 Differential Pressure Indicator: 300 psig (20.7 bar) 150°F (66°C).

## TYPICAL INSTALLATION (not to scale)



- A. PREFILTER** - It is recommended that a Wilkerson "B1" Element coalescing prefilter (particle removal down to 1.0 micron; maximum downstream remaining oil content is 0.5 ppm/wt.) is installed to protect the dryer from contaminants and extend the element life in the high efficiency coalescing filter (filter "C").
- B. AIR DRYER** - (Refrigerated or Desiccant). An air dryer is recommended if water vapor condensation is a problem.
- C. HIGH EFFICIENCY COALESCER FILTER** - It is recommended that a Wilkerson "C" element coalescer (particle removal down to 0.01 micron; maximum downstream remaining oil content 0.01 ppm/wt) be installed to protect the compressed air system from oil and particulate contamination.
- D. OIL VAPOR FILTER** - The Type D element filter (maximum downstream remaining oil content 0.003 ppm/wt) is an adsorption type for removing oil vapors, oil-associated odors, whether petroleum base or synthetic base and nearly 100% of any remaining solid contaminants.
- E. DIFFERENTIAL PRESSURE INDICATOR / GAUGE** - Maximum recommended pressure drop across coalescer filters is 7 psi (0.5 bar). This can be monitored by installing a Wilkerson DP2 differential pressure indicator.
- F. VALVE** - Do not use a valve or shutoff device in conjunction with a coalescer filter that will allow a momentary or surge pressure drop

## ⚠ WARNING

**FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.**

This document and other information from The Company, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application, including consequences of any failure and review the information concerning the product or systems in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met.

The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by The Company and its subsidiaries at any time without notice.

**EXTRA COPIES OF THESE INSTRUCTIONS ARE AVAILABLE FOR INCLUSION IN EQUIPMENT / MAINTENANCE MANUALS THAT UTILIZE THESE PRODUCTS. CONTACT YOUR LOCAL REPRESENTATIVE.**

greater than 50 psid (3,4 bar). To avoid high surges which can either ruin the element or momentarily allow downstream contamination, use a slow-opening type valve.

### MAINTENANCE

1. The element operates effectively when it is saturated. The element's useful life will end only when the DP2 Differential Pressure Indicator is completely red. The element cannot be cleaned or reused and must be replaced at the end of its useful life.
2. IF THE UNIT HAS A MANUAL DRAIN, DRAIN THE UNIT ONCE EVERY 8 HOURS MINIMUM. If the unit is equipped with an automatic drain clean the screen around the drain. Clean screen by blowing off with air gun.
3. When bowl becomes dirty, clean with a clean, dry cloth.
4. Before placing the unit in service, make sure that the bowl is properly reinstalled, and securely bolted in place per noted torque specification.

### REPAIR KITS AND REPLACEMENT PARTS

Filter Element Kit (kit includes filter element, element o-ring, and retainer o-ring).

Element Types			
	Type B1 (1 micron)	Type C (0.01 micron)	Type D (oil vapor, adsorption)
M35	MSP-95-502	MTP-95-502	MXP-95-502
M36	MSP-95-503	MTP-95-503	MXP-95-503
M37	MSP-95-504	MTP-95-504	MXP-95-504

#### Drain Plate Kit:

##### Drain Plate:

- (Use with internal automatic mechanical float drain no. GRP-95-981 ..... GRP-95-391
- Drain Plate (1/2 NPT) ..... GRP-95-393
- Drain Plate (RC1/2) ..... GRP-95-395

Bowl O-ring Kit..... GRP-95-291

Differential Pressure Indicator (Standard) ..... DP2-01-001

Differential Pressure Indicator Removal Cap Kit:  
(for 300 psig appl.)..... GRP-95-022

#### Internal Drains:

- Automatic Mechanical Drain:  
(Fluorocarbon seals w/ 1/8 NPTstem)..... GRP-95-981
- Automatic Mechanical Drain:  
(Fluorocarbon seals w/ R1/8 stem)..... GRP-96-300
- Manual Override for Auto Drain:  
(GRP-95-981) NPT Body Threads..... GRP-96-001  
(GRP-96-981) BSPP-G Body Threads..... GRP-96-101

#### External Drains:

- External Automatic Mechanical Drain..... X01-04-000
- External Automatic Mechanical Drain..... X02-04-F00
- External Automatic Mechanical Drain..... XB3-04-000

### AUTOMATIC ELECTRIC DRAIN VALVE

Model Number Kit	Port Size	Orifice Size	Electrical	Operating Pressure	
				Min.	Max.
X20-02-EE00	1/4" NPT	7/16"	115 VAC/1Ph/50-60Hz	2 psig	300 psig
X20-02-ED00	1/4" NPT	7/16"	230 VAC/1PH/50-60Hz	2 psig	300 psig
X20-02-EC00	1/4" NPT	7/16"	24 VDC	5 psig	300 psig
X20-04-EE00	1/2" NPT	7/16"	115 VAC/1Ph/50-60Hz	2 psig	300 psig
X20-04-ED00	1/2" NPT	7/16"	230 VAC/1PH/50-60Hz	2 psig	300 psig
X20-04-EC00	1/2" NPT	7/16"	24 VDC	5 psig	300 psig

