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# 12AT/50AT Series

## Spin-On Filters



ENGINEERING YOUR SUCCESS.

# 12AT/50AT Series

## Spin-On Filters

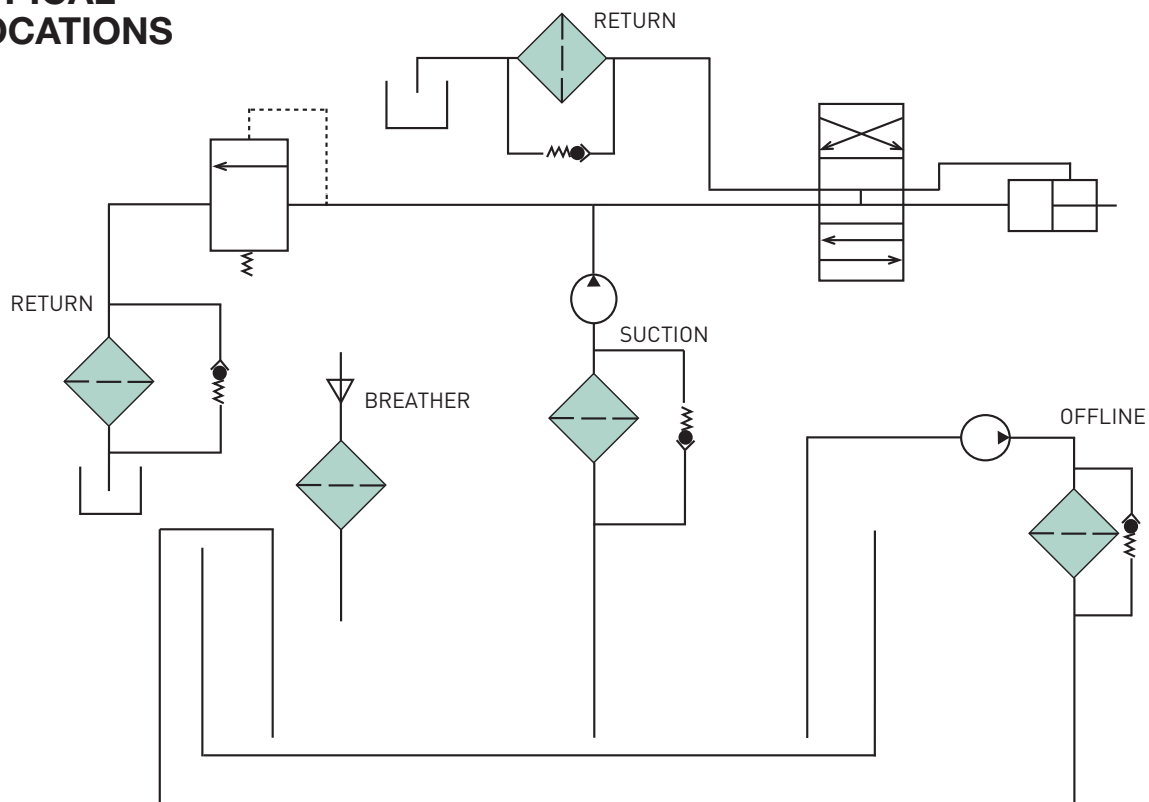
### Applications for Spin-On Filters

- Mobile Equipment
- Hydrostatic Drives
- Industrial Power Units
- Reservoir Breathers

Often, economic conditions dictate what type of filter is used on a piece of equipment. When costs are tight, you need a filter that is inexpensive, yet uncompromising in performance and quality. Parker's spin-on filters fit that need. They are built to fit demanding design parameters in today's mobile and industrial equipment. No compromising.



## TYPICAL LOCATIONS



# 12AT/50AT Series

## Spin-On Filters

### Typical Element Performance: 12AT

| Media Code | Filter Media | Beta Ratios | Particle Size/Efficiency |
|------------|--------------|-------------|--------------------------|
| 25C        | Cellulose    | $B_{25}=2$  | 25 / 50%                 |
| 10C        | Cellulose    | $B_{10}=2$  | 10 / 50%                 |
| 03C        | Cellulose    | $B_3=2$     | 3 / 50%                  |
| 20B        | Microglass   | $B_{20}=75$ | 20 / 98.7%               |
| 10B        | Microglass   | $B_{10}=75$ | 10 / 98.7%               |

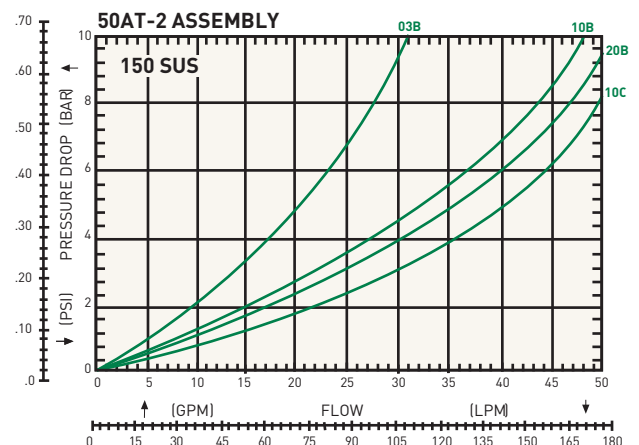
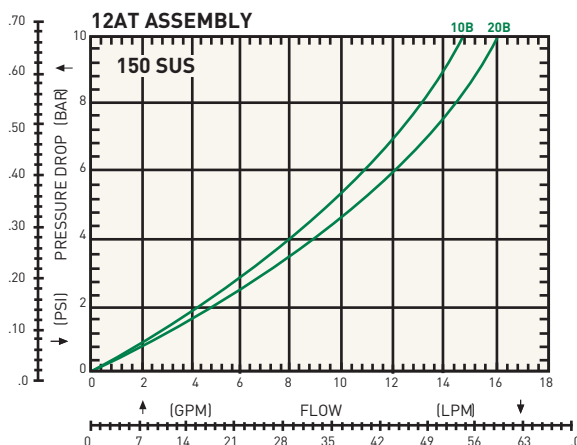
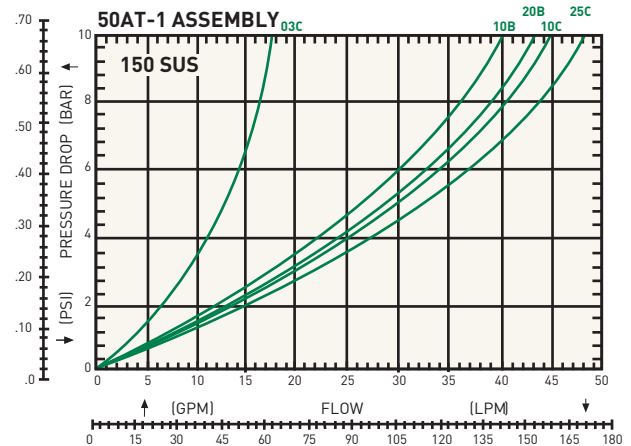
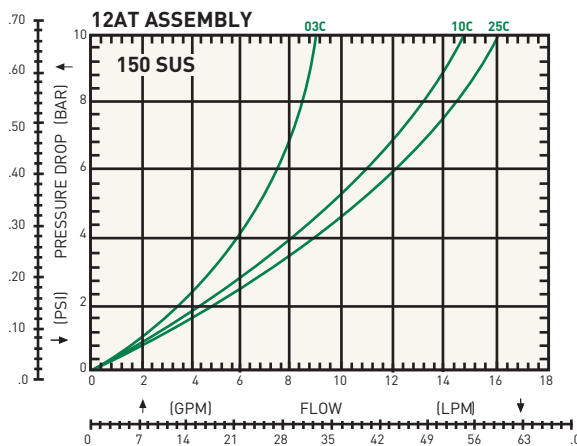
Actual results are dependent on system flow rates, fluid viscosities, and other parameters.

### Typical Element Performance: 50AT

| Media Code | Filter Media | Beta Ratios | Particle Size/Efficiency |
|------------|--------------|-------------|--------------------------|
| 25C        | Cellulose    | $B_{25}=2$  | 25 / 50%                 |
| 10C        | Cellulose    | $B_{10}=2$  | 10 / 50%                 |
| 03C        | Cellulose    | $B_3=2$     | 3 / 50%                  |
| 20B        | Microglass   | $B_{20}=75$ | 20 / 98.7%               |
| 10B        | Microglass   | $B_{10}=75$ | 10 / 98.7%               |
| 10C-2      | Cellulose    | $B_{10}=2$  | 10 / 50%                 |
| 20B-2      | Microglass   | $B_{20}=75$ | 20 / 98.7%               |
| 10B-2      | Microglass   | $B_{10}=75$ | 10 / 98.7%               |
| 03B-2      | Microglass   | $B_3=75$    | 3 / 98.7%                |

Actual results are dependent on system flow rates, fluid viscosities, and other parameters.

| Beta Rating  | Efficiency at (X) Particle Size |
|--------------|---------------------------------|
| $B_x = 2$    | 50.0%                           |
| $B_x = 20$   | 95.0%                           |
| $B_x = 75$   | 98.7%                           |
| $B_x = 200$  | 99.5%                           |
| $B_x = 1000$ | 99.99%                          |



# 12AT/50AT Series

## Spin-On Filters

### Installation and Specification Data Model 12AT

#### Pressure Ratings:

Maximum Allowable Operating Pressure (MAOP): 150 psi (10.3 bar)

Design Safety Factor: 2.5:1

#### Operating Temperatures:

-40°F to 225°F (-40°C to 107°C)

#### Element Collapse Rating:

100 psid minimum

#### Element Condition Indicators:

Gauge: Color coded 15/25 psi

Gauge: Color coded vacuum

Pressure Switch: Normally open

20 +/- 2 psi

5 Amps @ 24 VDC

Vacuum Switch: Normally open

5" +/- 1" Hg

1.0 Amp @ 120 VAC

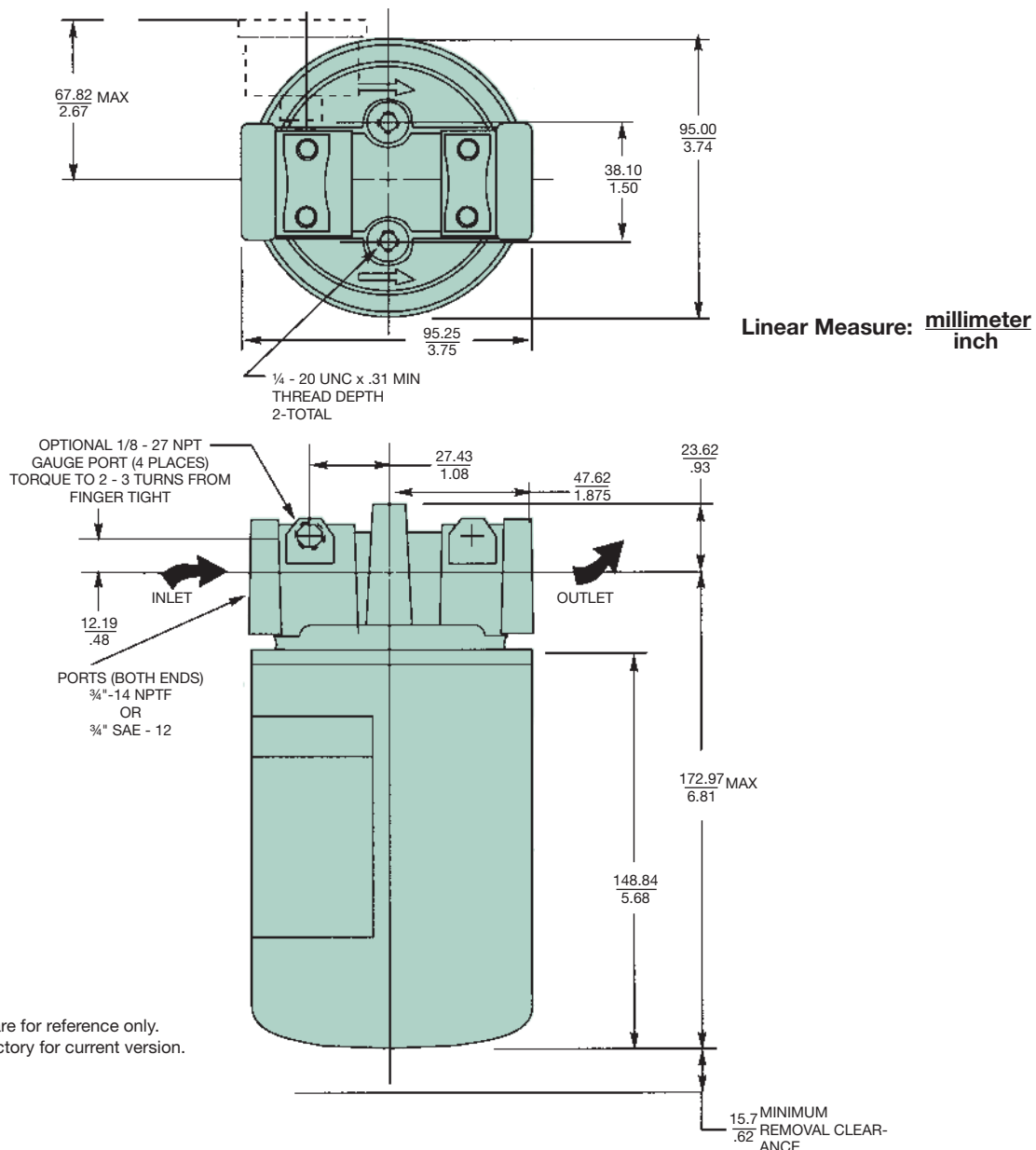
#### Filter Material:

Head: Aluminum

Cannister: Low Carbon Steel

#### Shipping Weights (approximate):

1.6 lbs.



# 12AT/50AT Series

## Spin-On Filters

### Installation and Specification Data Model 50AT

#### Pressure Ratings:

Maximum Allowable Operating Pressure (MAOP): 150 psi (10.3 bar)

Design Safety Factor: 2.5:1

#### Operating Temperatures:

-40°F to 225°F (-40°C to 107°C)

#### Element Collapse Rating:

100 psid minimum

#### Element Condition Indicators:

Gauge: Color coded 15/25 psi

Gauge: Color coded vacuum

Pressure Switch: Normally open

20 +/- 2 psi

5 Amps @ 24 VDC

Vacuum Switch: Normally open

5" +/- 1" Hg

1.0 Amp @ 120 VAC

#### Filter Material:

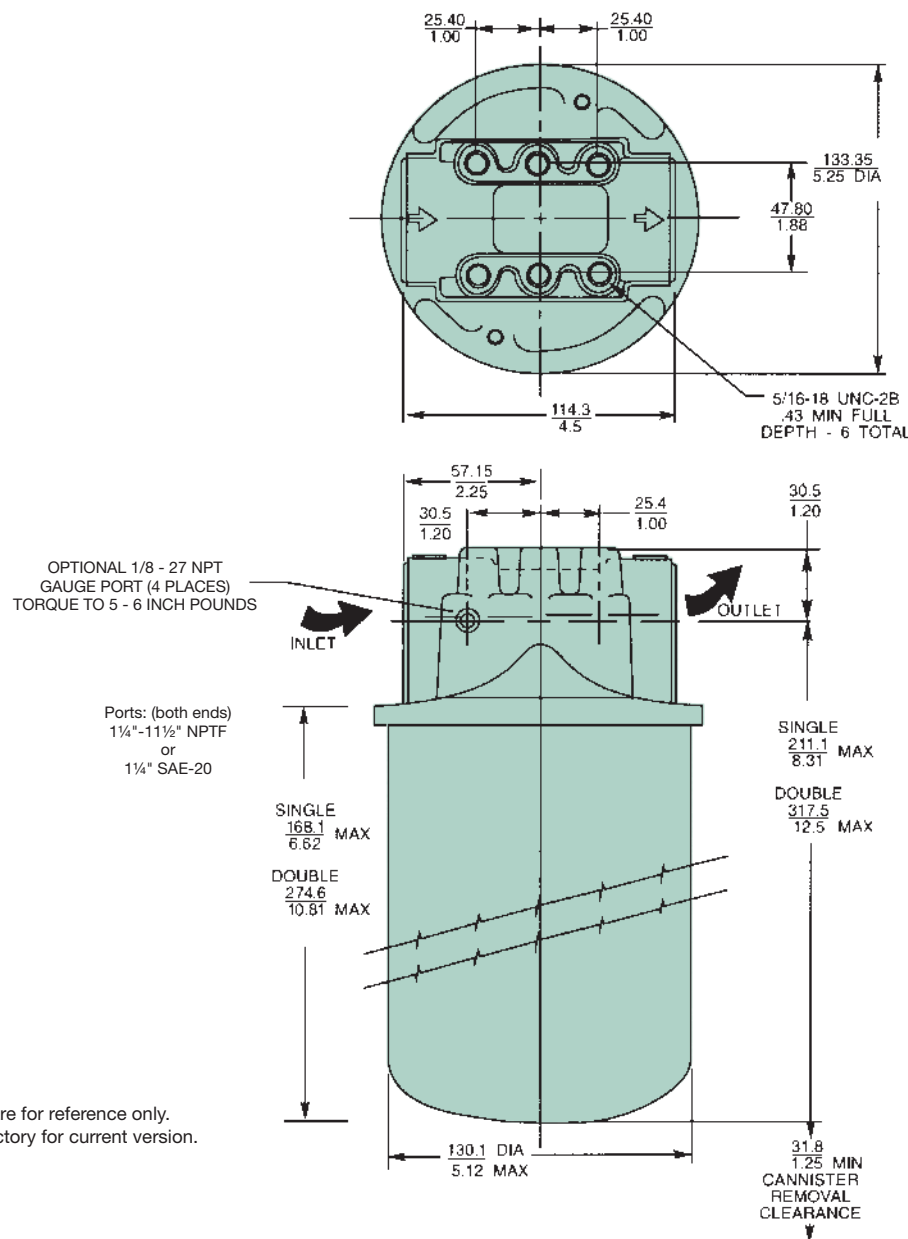
Head: Aluminum

Cannister: Low Carbon Steel

#### Shipping Weights (approximate):

Single length: 3.7 lbs.

Double length: 5.3 lbs.



Linear Measure: millimeter  
inch

Drawings are for reference only.  
Contact factory for current version.

# 12AT/50AT Series

## Spin-On Filters

### Reservoir Breather Assemblies 12AT and 50AT

#### Sizing

Select the proper size cannister for the maximum rate of reservoir draw down or air exchange rate. As a rule of thumb, clean pressure drop should be limited to 0.18 psid (5" H<sub>2</sub>O).

A pipe flange, weld collar, etc. may be used to connect the cannister adapter kit to the reservoir. Make sure that air is not able to leak around the adapter. When mounting on the side of the reservoir, make sure the installation is above the surface of the fluid.

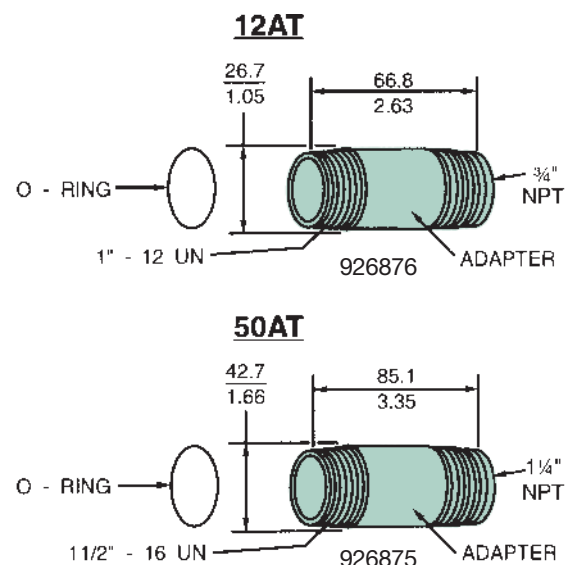
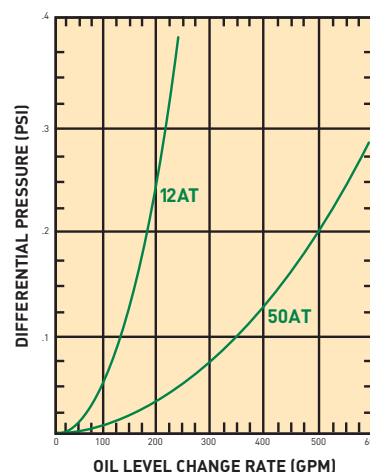
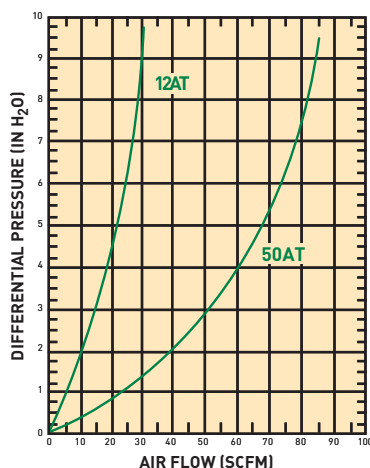
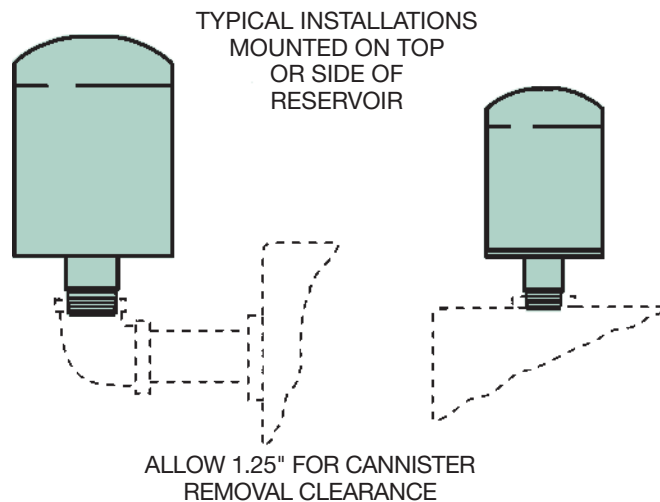
Recommended cannister change out is after 500 hours of operation. More frequent replacement may be required when operated in heavily contaminated areas such as grinding operations, primary metal mills, and on mobile equipment. Under such conditions, increase replacement frequency to every 250 hours.

| Model    | Air Rating* | Element | Adapter Kit |
|----------|-------------|---------|-------------|
| 12AT-03C | 1 micron    | 926543  | 926876      |
| 12AT-10C | 2 micron    | 921999  | 926876      |
| 12AT-25C | 5 micron    | 925023  | 926876      |
| 50AT-03C | 1 micron    | 926541  | 926875      |
| 50AT-10C | 2 micron    | 926169  | 926875      |
| 50AT-25C | 5 micron    | 926170  | 926875      |

\* 99% Removal efficiency for particles larger than the stated size in air.

Graphs are for 03C cannisters only. Total pressure drop across cannister, adapter, and pipe may be found by adding pressure drops below:

- + 1.5% for each inch of 12AT adapter or 3/4" pipe used.
- + 3.0% for each 3/4" elbow used.
- + 1.0% for each inch of 50AT adapter or 1-1/4" pipe used.
- + 2.0% for each 1-1/4" elbow used.



# 12AT/50AT Series

## Spin-On Filters

### Filter Service

Filter cannisters need to be replaced when the pressure gauge reads the filter bypass setting. For example, if a 12AT filter has a 25 psi bypass valve, it needs to be replaced when the pressure gauge reads 25 psi. If no indicator of any kind is used, replace the cannister after the first 50 hours of operation, and every 250 hours thereafter. More frequent replacement could be required depending on operating conditions.

When servicing a 12AT or 50AT filter, use the following procedure:

- Shut down the main system and release pressure in the filter line.
- Unthread the cannister and discard it along with the accompanying seal. A strap wrench may be required.
- Apply a small amount of lubricant to the new cannister seal.
- Install the new cannister and hand tighten 3/8 to 1/2 turn after gasket makes contact with head.

### Accessory Parts List

| Description            | 12AT   | 50AT   |
|------------------------|--------|--------|
| Gauge - 15 psi         | 936911 | 936911 |
| Gauge - 25 psi         | 936912 | 936912 |
| Pressure switch-25 psi | 926923 | 926923 |
| Vacuum switch          | 926949 | 926949 |
| Breather adapter kit   | 926876 | 926875 |
| Vacuum gauge           | 936909 | 936909 |

### Replacement Cannisters

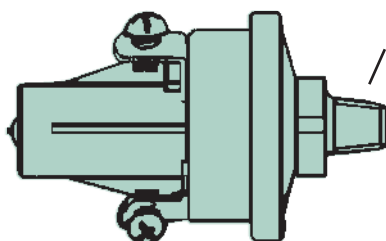
| Media | 12AT   | 50AT   | 50AT-2 |
|-------|--------|--------|--------|
| 25C   | 925023 | 926170 | N/A    |
| 10C   | 921999 | 926169 | 927736 |
| 03C   | 926543 | 926541 | N/A    |
| 20B   | 928764 | 928767 | 929446 |
| 10B   | 928763 | 928766 | 929445 |
| 03B   | N/A    | 934200 | 932073 |



Indicator Gauge (15 PSI)

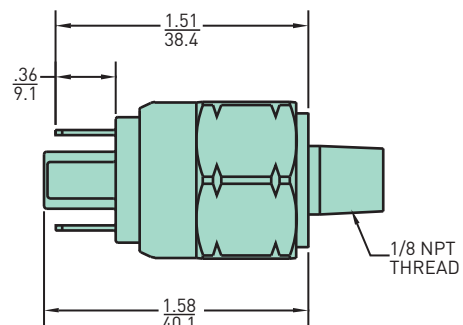


Indicator Gauge (25 PSI)



Vacuum Switch

1/8-27 NPTF



Pressure Switch

Linear Measure =  $\frac{\text{inches}}{\text{mm}}$

# 12AT/50AT Series

## Spin-On Filters

### How To Order

Select the desired symbol (in the correct position) to construct a model code.

Example:

| BOX 1 | BOX 2       | BOX 3    | BOX 4      | BOX 5    | BOX 6     | BOX 7     | BOX 8    |
|-------|-------------|----------|------------|----------|-----------|-----------|----------|
|       | <b>50AT</b> | <b>2</b> | <b>10C</b> | <b>N</b> | <b>25</b> | <b>DD</b> | <b>N</b> |

| BOX 1: Seals |             |
|--------------|-------------|
| Symbol       | Description |
| <b>None</b>  | <b>Buna</b> |

| BOX 2: Basic Assembly |                           |
|-----------------------|---------------------------|
| Symbol                | Description               |
| <b>12AT</b>           | <b>Spin-on (¾" nom.)</b>  |
| <b>50AT</b>           | <b>Spin-on (1¼" nom.)</b> |

| BOX 3: Length |                                            |
|---------------|--------------------------------------------|
| Symbol        | Description                                |
| <b>None</b>   | <b>Single length cannister</b>             |
| <b>2</b>      | <b>Double length cannister (50AT only)</b> |

| BOX 4: Cannister Media    |                  |
|---------------------------|------------------|
| Symbol                    | Description      |
| <b>25C*</b>               | <b>Cellulose</b> |
| <b>10C</b>                | <b>Cellulose</b> |
| 03C*                      | Cellulose        |
| 20B                       | Microglass       |
| 10B                       | Microglass       |
| 03B **                    | Microglass       |
| * Not available in 50AT-2 |                  |
| ** Not available in 12AT  |                  |

| BOX 5: Indicator Symbol |             |
|-------------------------|-------------|
| Symbol                  | Description |
| <b>N</b>                | <b>None</b> |

| BOX 6: Bypass Setting |                |
|-----------------------|----------------|
| Symbol                | Description    |
| <b>25</b>             | <b>25 psid</b> |
| 15                    | 15 psid        |
| 3                     | 3 psid         |
| X                     | No bypass      |

| BOX 7: Ports |                    |
|--------------|--------------------|
| Symbol       | Description        |
| 12AT         |                    |
| <b>BB</b>    | <b>3/4" NPTF</b>   |
| <b>MM</b>    | <b>SAE-12</b>      |
| 50AT         |                    |
| <b>DD</b>    | <b>1-1/4" NPTF</b> |
| <b>OO</b>    | <b>SAE-20</b>      |

| BOX 8: Gauge Port Location |                                                                    |
|----------------------------|--------------------------------------------------------------------|
| Symbol                     | Description                                                        |
| <b>N</b>                   | <b>None</b>                                                        |
| <b>H</b>                   | <b>Inlet and outlet, both sides (all ports drilled and tapped)</b> |

NOTE: Gauges must be ordered separately.

Please note the bolded options reflect standard options with a reduced lead-time. Consult factory on all other lead-time options.