



aerospace  
climate control  
electromechanical  
**filtration**  
fluid & gas handling  
hydraulics  
pneumatics  
process control  
sealing & shielding



# 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.



**Mounting**

- 2 or 6 hole pattern for flexibility

**Ports**

- Both NPT and SAE straight thread available

**Indicator Gauge**

- Shows at a glance when the cannister needs changing

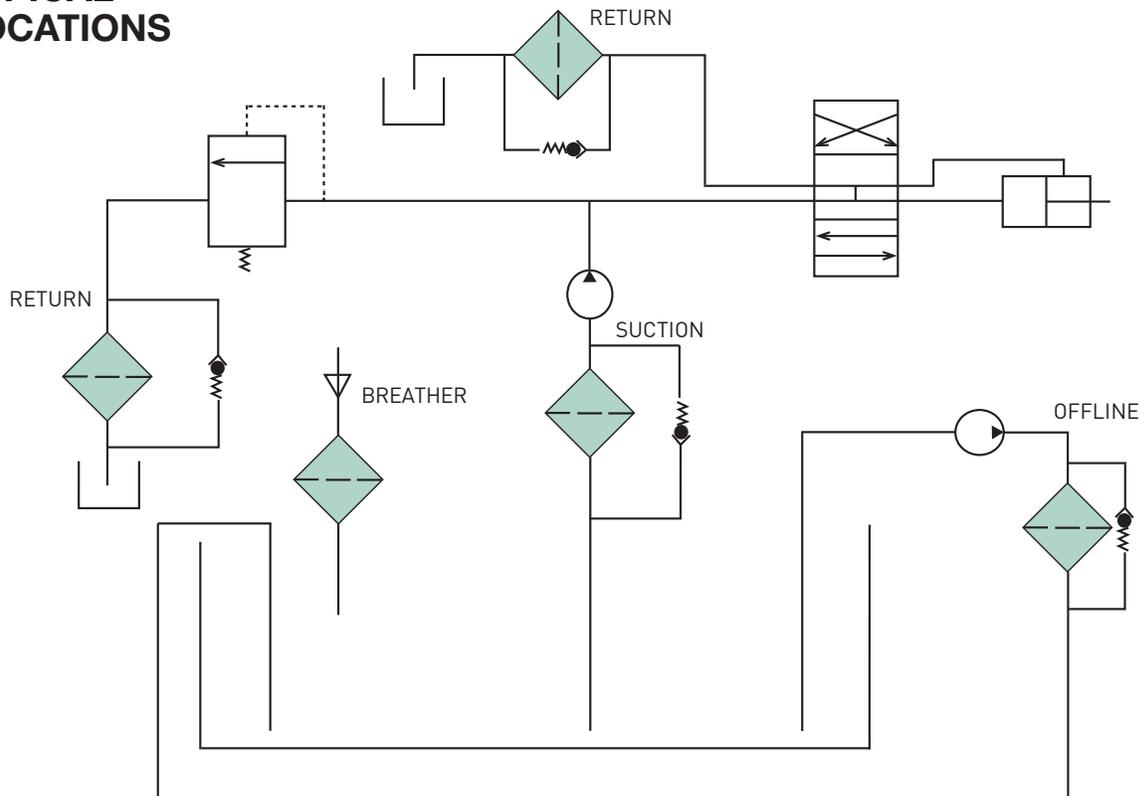
**Disposable Cannister**

- No mess, oil is contained inside
- Easy to handle
- Single and double lengths for longer life

**Interchangeability**

- Parker cannisters fit many competitors' heads. Contact Hydraulic Filter Division for part numbers

### TYPICAL LOCATIONS



# 12AT/50AT Series

## Spin-On Filters

### Typical Element Performance: 12AT

Media Code	Filter Media	Beta Ratios	Particle Size/Efficiency
25C	Cellulose	B <sub>25</sub> =2	25 / 50%
10C	Cellulose	B <sub>10</sub> =2	10 / 50%
03C	Cellulose	B <sub>3</sub> =2	3 / 50%
20B	Microglass	B <sub>20</sub> =75	20 / 98.7%
10B	Microglass	B <sub>10</sub> =75	10 / 98.7%

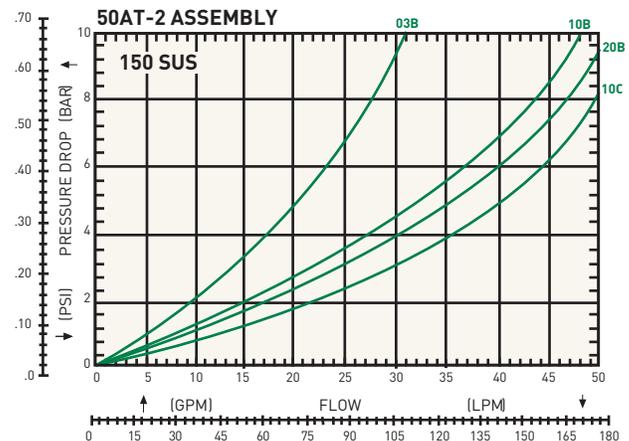
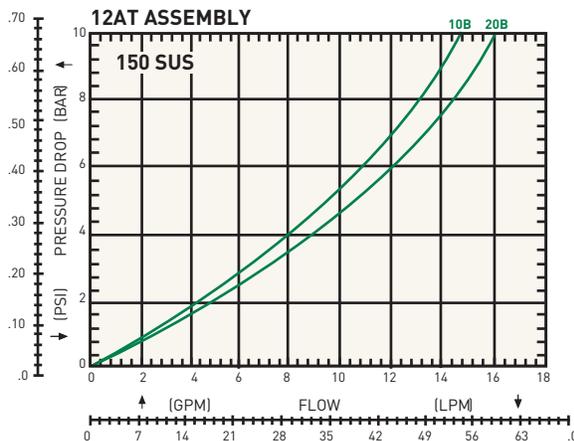
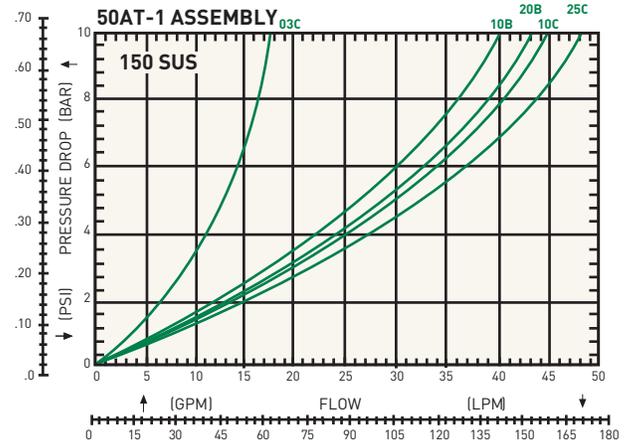
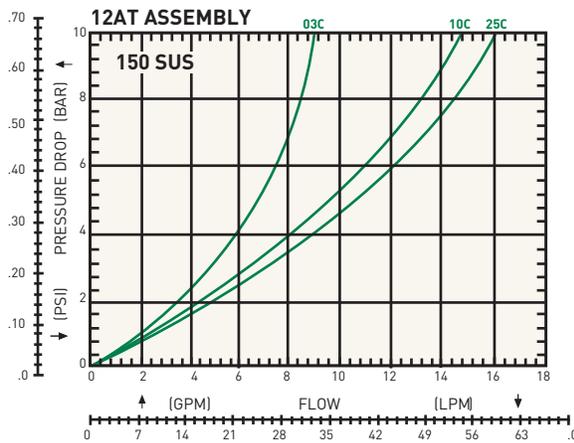
Actual results are dependent on system flow rates, fluid viscosities, and other parameters.

### Typical Element Performance: 50AT

Media Code	Filter Media	Beta Ratios	Particle Size/Efficiency
25C	Cellulose	B <sub>25</sub> =2	25 / 50%
10C	Cellulose	B <sub>10</sub> =2	10 / 50%
03C	Cellulose	B <sub>3</sub> =2	3 / 50%
20B	Microglass	B <sub>20</sub> =75	20 / 98.7%
10B	Microglass	B <sub>10</sub> =75	10 / 98.7%
10C-2	Cellulose	B <sub>10</sub> =2	10 / 50%
20B-2	Microglass	B <sub>20</sub> =75	20 / 98.7%
10B-2	Microglass	B <sub>10</sub> =75	10 / 98.7%
03B-2	Microglass	B <sub>3</sub> =75	3 / 98.7%

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

Beta Rating	Efficiency at (X) Particle Size
Bx = 2	50.0%
Bx = 20	95.0%
Bx = 75	98.7%
Bx = 200	99.5%
Bx = 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

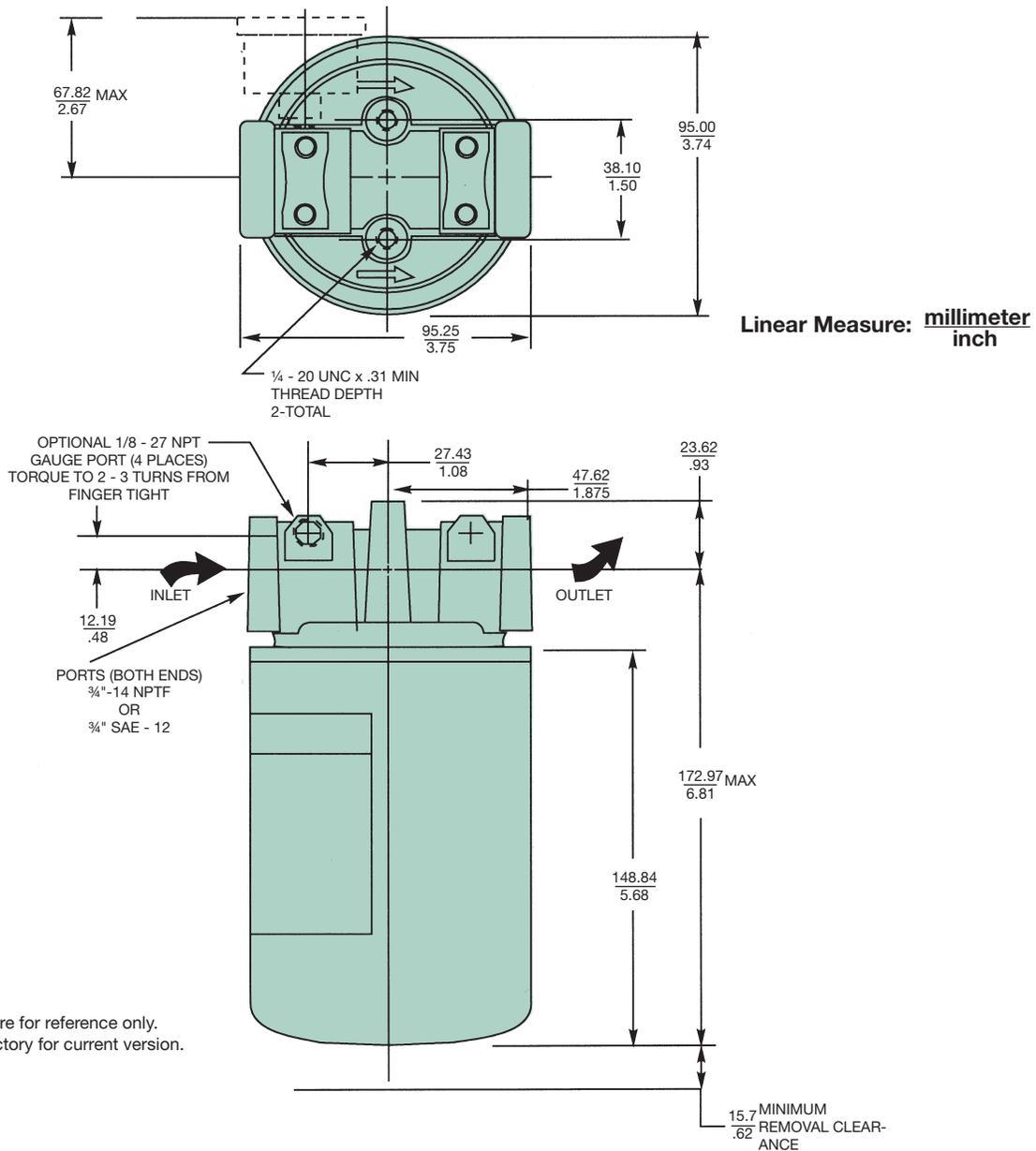
#### Filter Material:

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

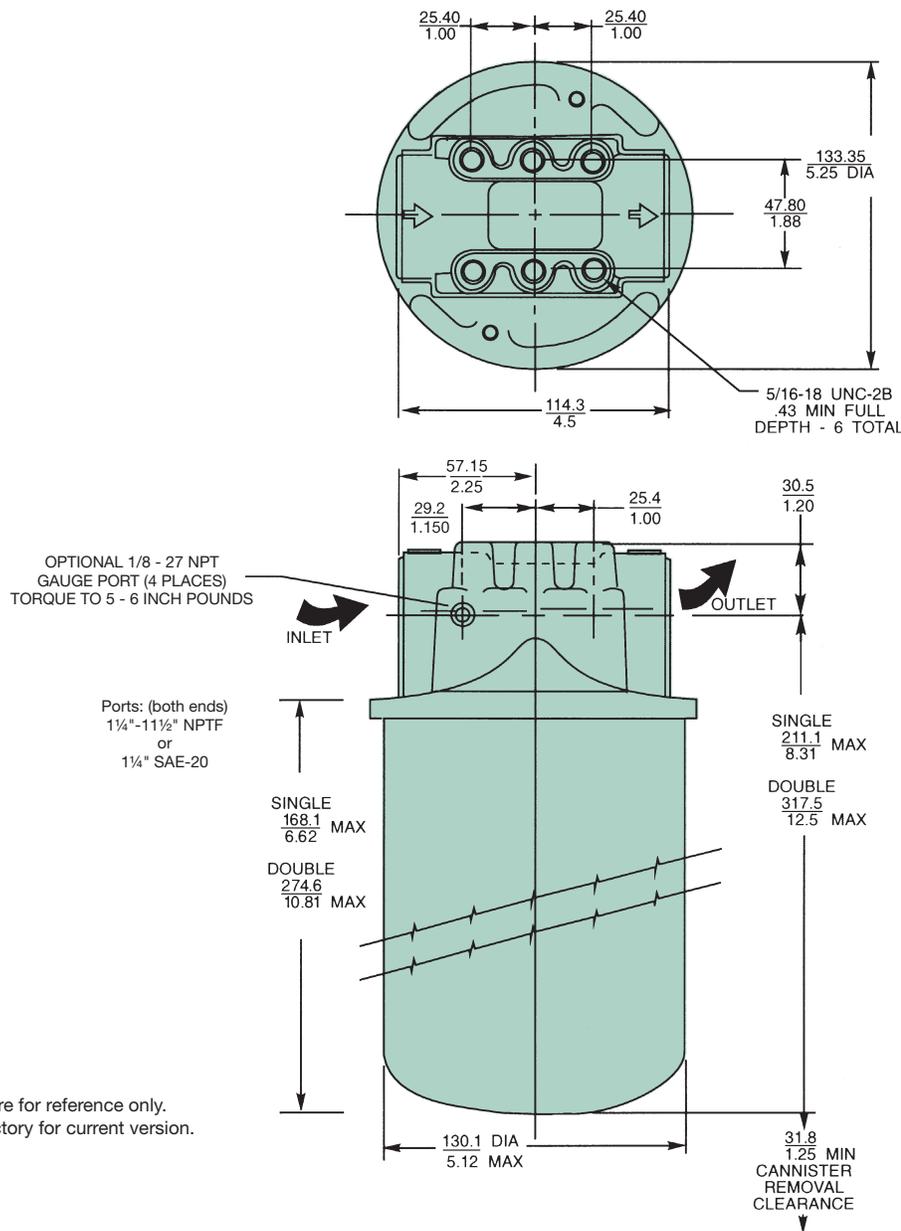
Gauge: Color coded vacuum

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.



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.

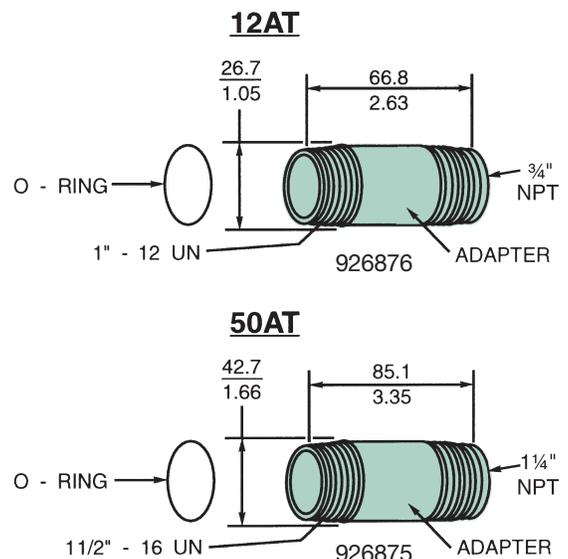
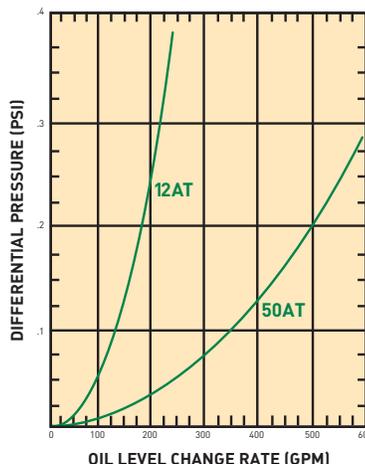
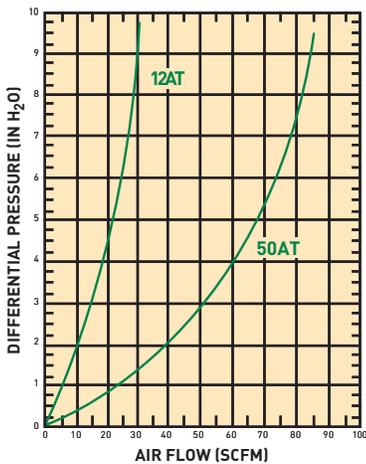
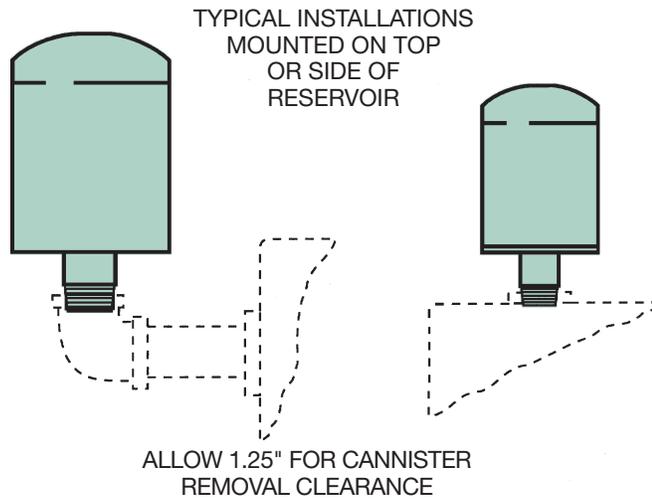
Recommended cannister change out is after 500 hours of operation. More frequent replacement may be required when operated in heavily contaminated areas such as grinding operations, primary metal mills, and on mobile equipment. Under such conditions, increase replacement frequency to every 250 hours.

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:

- A. Shut down the main system and release pressure in the filter line.
- B. Unthread the cannister and discard it along with the accompanying seal. A strap wrench may be required.
- C. Apply a small amount of lubricant to the new cannister seal.
- D. 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

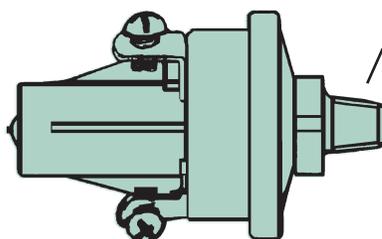
Media	12AT	50AT	50AT-2
25C	925023	926170	N/A
10C	921999	926169	927736
03C	926543	926541	N/A
20B	928764	928767	929446
10B	928763	928766	929445
03B	N/A	934200	932073



Indicator Gauge (15 PSI)

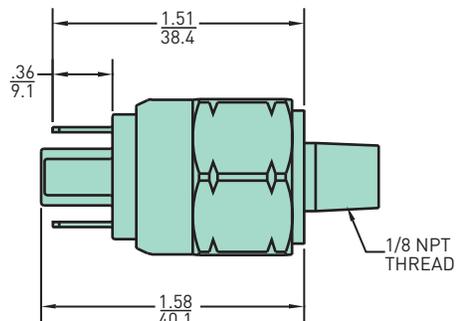


Indicator Gauge (25 PSI)



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 (3/4" nom.)</b>
<b>50AT</b>	<b>Spin-on (1 1/4" nom.)</b>

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

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.