



# PARTICULATE FILTERS

# F3

Arrow F3 series particulate filters remove harmful oil/water condensate, pipe scale, dirt and rust from your compressed air system. This prevents corrosive damage to compressed air equipment and finished products. Typically, particulate filters are installed upstream of regulators to prevent valve failure. They are also used as pre-filters to oil removing and coalescing filters to insure high efficiency and long element life in applications such as paint spraying, instrumentation and pharmaceuticals.

Each filter is equipped with a highly efficient baffling system for maximum bulk liquid and dirt particle removal. The Arrow heavy-duty, cleanable porous bronze element removes fine particles. Particle removal can be tailored to specific needs with either the 40 or 5 micron bronze element. An optional 3 micron absolute pleated fiber element is also offered for extra-fine particle removal.

The Arrow 3 micron absolute element is a high efficiency filter element with solid particulate removal in the 90% efficiency range down to .28 microns. The Beta efficiency rating is 99.5%. The element is constructed of pleated cloth fibers and rib supports for strength. Both ends have urethane 50 durometer elastomer seals to insure particulate entrapment. The pleated fiber design gives this element 10 times the surface area of similar nominal rated elements. This increased surface area provides a long element life and the same pressure drop characteristics as our current 40 micron element. When used as a pre-filter to a coalescing filter, it will increase the life of the coalescing element by 4 to 6 times.



## LEGEND

- ▼ – Air Containing Liquid and Particulate
- ▽ – Clean Air
- ▼ – Liquid and Particulate

**IMPORTANT:** Particulate filters only remove water in its liquid state. Water vapors will pass through a particulate filter and condense into liquid as the temperature in the air line drops. Liquid condensation may have a harmful effect on certain applications. We recommend installing an ARROW dryer for complete removal of liquid condensation from the system.

## Miniature Particulate Filters



### FEATURES

- 20 micron sintered bronze element
- High strength, recleanable
- 1 oz. polycarbonate bowl
- Manual twist drain

### OPTIONS

add suffix to part number in alpha and numeric order

#### Overnight Drains

An overnight drain operates when a compressed air system is shut down. It clears accumulated condensate from a filter bowl when pressure falls to 3 psig or less. It then closes when pressure rises to 6 psig.

- J** Overnight drain for polycarbonate bowl . . . . . F300-01J  
*Push to manually drain.*
- K** Overnight drain for metal bowl . . . . . F300-01KM  
*Twist to manually drain.*
- M** Metal bowl . . . . . F300-01M
- Z** Piston drain . . . . . F300-01Z
- 5** 5 micron element . . . . . F300-01-5

### SPECIFICATIONS

**WARNING!** Polycarbonate plastic bowls could rupture if exposed to incompatible chemicals whether inside or outside the bowl. If such chemicals are present, use a metal bowl.

#### Polycarbonate Bowl

- Max. pressure 150 psig
- Operating temperature range 40°F to 125°F

#### Metal Bowl

- Black coated aluminum
- Max. pressure 250 psig
- Operating temperature range 40°F to 175°F

#### Piston Drain

Note: Z option is differential drain which opens & ejects water only when a differential pressure is created at the start of air flow. The piston drain lifts up (approx. 1 second) & closes, it will not operate again until the flow stops, then starts back up again.

- Max. pressure 175 psig
- Operating temperature range 40°F to 175°F

**Body** black coated zinc

**Baffle** plastic

**Seals** Buna N

#### Elements

- 20 micron sintered bronze
- 5 micron sintered bronze

### KITS

#### Bowl Kits

- Polycarbonate . . . . . BKF300
- Polycarbonate with overnight drain . . . . . BKF300J
- Metal . . . . . BKF300M

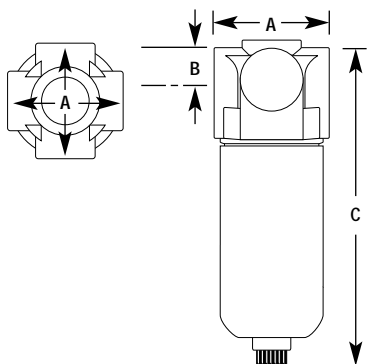
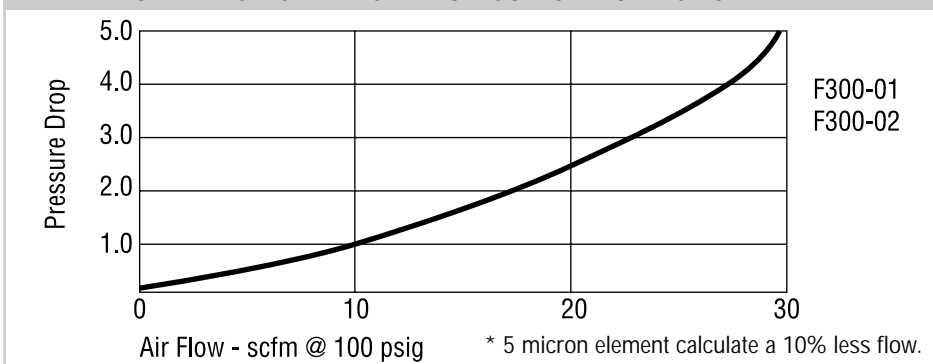
#### Element Kits

- 20 micron 2-pack . . . . . EKF300
- 5 micron 2-pack . . . . . EKF300-5

#### Drain Kit

- Piston drain kit . . . . . PKF300
- Mounting Bracket . . . . . FBK3

### PERFORMANCE CHARACTERISTICS FOR 20 MICRON ELEMENT



### DIMENSIONS

PIPE SIZE	MODEL NO.	MAX. FLOW SCFM*	BOWL CAPACITY	DIMENSIONS (INCHES)			WEIGHT (LBS.)
				A	B	C	
1/8"	F300-01	27	1 oz.	1 1/2	1/2	4 5/8	.5
1/4"	F300-02	27	1 oz.	1 1/2	1/2	4 5/8	.5

\* Flow scfm based on 5.0 psi Δ p @ 100 psig inlet.

# Tri•Star Particulate Filters



## OPTIONS

add suffix to part number in alpha and numeric order

### Float Drain

An internal float rises as condensate accumulates in a filter bowl to activate the drain.

F Internal float drain . . . . . F352F

### Overnight Drains

An overnight drain operates when a compressed air system is shut down. It clears accumulated condensate from a filter bowl when pressure falls to 3 psig or less.

J Overnight drain for polycarbonate bowl . . . . . F352J  
*Push to manually drain.*

K Overnight drain for metal bowl . . . . . F352KM  
*Twist to manually drain.*

M Black coated metal bowl . . . . . F352M

W Black coated metal bowl with sight . . . . . F352W

-5 5 micron element . . . . . F352-5

-3 3 micron absolute element . . . . . F352-3

## SPECIFICATIONS

**WARNING!** Polycarbonate plastic bowls could rupture if exposed to incompatible chemicals whether inside or outside the bowl. If such chemicals are present, use a metal bowl.

### Polycarbonate Bowl

- Max. supply pressure 150 psig
- Operating temperature range 40°F to 125°F

### Metal Bowl

- Zinc, black coated
- Max. supply pressure 250 psig
- Operating temperature range 40°F to 200°F

### Metal Bowl with Sight

- Zinc, black coated
- Max. supply pressure 250 psig
- Operating temperature range 40°F to 160°F

### Internal Float Drain

- Buna N float
- Note: limits bowl temperature and pressure rating
- Operating pressure range 30 to 175 psig
  - Operating temperature range 40°F to 120°F

**Body** black coated aluminum

**Bowl Guard** nickel plated steel

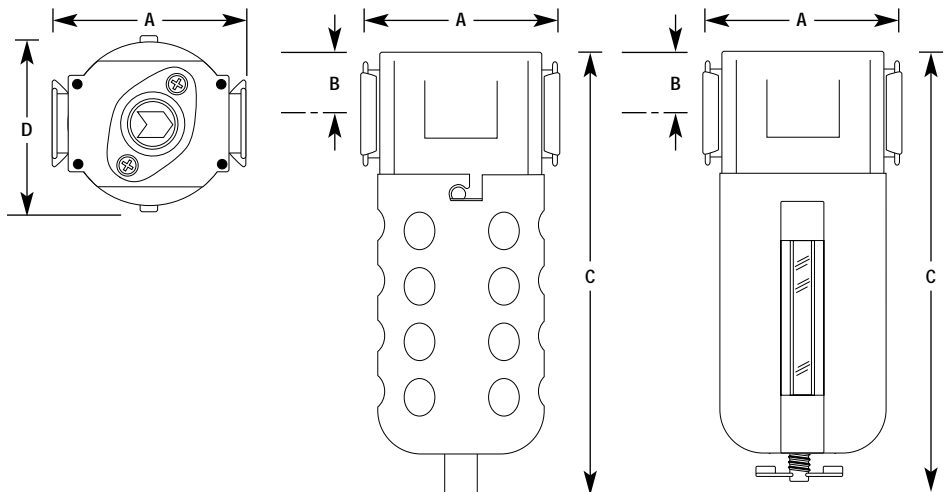
**Baffle** plastic

**Vane** plastic

**Seals** Buna N

## FEATURES

- 40 micron sintered bronze element offers depth filtration. High strength, recleanable
- 5 oz. polycarbonate bowl with nickel plated steel bowl guard
- Manual push drain on polycarbonate bowl
- In-line or modular installation



# F3

## Elements

- 40 micron sintered bronze standard
- 5 micron sintered bronze
- 3 micron absolute pleated fiber

## KITS

- Internal float drain kit . . . . . 5200

## Bowl Kits

- Polycarbonate with guard . . . BKF35
- Black coated metal . . . . . BKF45M
- Black coated metal with sight . . . . . BKF45W

## Element Kits

- 40 micron 2-pack . . . . . EK35
- 5 micron 2-pack . . . . . EK35-5
- 3 micron absolute 2-pack . . . EK35-3

## Repair Kits

- Repair kit . . . . . RKF35
- Replacement sight kit . . . . . WK45

## Mounting Kit see page 65

- Mounting kit . . . . . FBK5

## 3 Micron Absolute

The new Arrow 3 micron absolute element is a high efficiency particulate removal element. Unlike nominal rated particulate elements, the 3 micron absolute is qualified to an efficiency rating of 99.5% **solid particulate removal** at 3 microns, and maintains 95% efficiency ratings to .3 microns.

PARTICLE SIZE	REMOVAL EFFICIENCY RATING*	
	5 MICRON NOMINAL	ARROW 3 MICRON ABSOLUTE
.3 μ	19.2%	95.0%
.5 μ	28.8%	97.6%
1.0 μ	35.1%	97.6%
3.0 μ	89.7%	99.5%

\* Beta Filtration Rating β<sub>3</sub> = 200

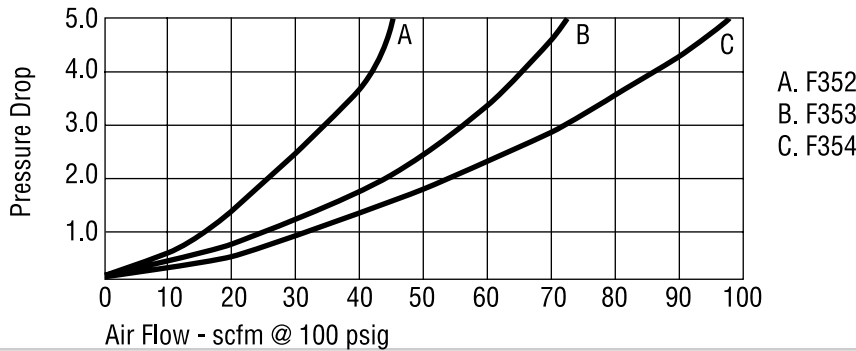
## Features:

- Element media is cellulosic and synthetic fibers with a resin binder. The pleated design has 10 times the surface area of sintered nominal rated elements and increases particle collection.
- End seals consist of 50 durometer Urethane to prevent solid particulate leakage past the element.
- Solid rib supports add extra strength and prevent element collapse under high differential pressure loads.
- Flow and pressure drop identical to 40 micron element.

## Applications:

- Air gauging equipment
- Instrument air
- After filter for desiccant dryer

## PERFORMANCE CHARACTERISTICS FOR 40 MICRON ELEMENT



\* 5 micron element reduces flow by 10%

## DIMENSIONS

PIPE SIZE	MODEL NO.	MAX. FLOW SCFM*	BOWL CAPACITY	DIMENSIONS (INCHES)				WEIGHT (LBS.)
				A	B	C	D	
1/4"	F352	48	5 oz.	2 <sup>3</sup> / <sub>4</sub>	<sup>3</sup> / <sub>4</sub>	6 <sup>1</sup> / <sub>4</sub>	2 <sup>1</sup> / <sub>2</sub>	1.2
<sup>3</sup> / <sub>8</sub> "	F353	75	5 oz.	2 <sup>3</sup> / <sub>4</sub>	<sup>3</sup> / <sub>4</sub>	6 <sup>1</sup> / <sub>4</sub>	2 <sup>1</sup> / <sub>2</sub>	1.2
1/2"	F354	100	5 oz.	2 <sup>3</sup> / <sub>4</sub>	<sup>3</sup> / <sub>4</sub>	6 <sup>1</sup> / <sub>4</sub>	2 <sup>1</sup> / <sub>2</sub>	1.2
1/4"	F352W	48	6 oz.	2 <sup>3</sup> / <sub>4</sub>	<sup>3</sup> / <sub>4</sub>	6 <sup>7</sup> / <sub>8</sub>	2 <sup>1</sup> / <sub>2</sub>	1.7
<sup>3</sup> / <sub>8</sub> "	F353W	75	6 oz.	2 <sup>3</sup> / <sub>4</sub>	<sup>3</sup> / <sub>4</sub>	6 <sup>7</sup> / <sub>8</sub>	2 <sup>1</sup> / <sub>2</sub>	1.7
1/2"	F354W	100	6 oz.	2 <sup>3</sup> / <sub>4</sub>	<sup>3</sup> / <sub>4</sub>	6 <sup>7</sup> / <sub>8</sub>	2 <sup>1</sup> / <sub>2</sub>	1.7

\* Flow scfm based on 5.0 psi Δ p @ 100 psig inlet.

## MidFlow Particulate Filters



### SPECIFICATIONS

#### Metal Bowl

- Zinc, black coated
- Max. supply pressure 250 psig
- Operating temperature range 40°F to 200°F

#### Metal Bowl with sight

- Zinc, black coated
- Max. supply pressure 250 psig
- Operating temperature range 40°F to 160°F

#### Internal Float Drain

- Buna N float
- Note: limits bowl temperature and pressure rating
- Operating pressure range 30 to 175 psig
- Operating temperature range 40°F to 120°F

**Body** black coated aluminum

**Baffle** plastic

**Seals** Buna N

**Vane** plastic

#### Elements

- 40 micron sintered bronze
- 5 micron sintered bronze
- 3 micron absolute pleated fiber

#### KITS

- Internal float drain kit . . . . . 5200

#### Bowl Kits

- Metal with sight . . . . . BKF47W  
BKF48W
- Metal without sight . . . . . BKF47M  
BKF48M

#### Element Kits

- 40 micron . . . . . EK37, EK38
- 5 micron . . . . . EK37-5, EK38-5
- 3 micron absolute . . . . . EK37-3, EK38-3

#### Repair Kits

- Repair kit . . . . . RKF37  
RKF38
- Replacement sight kit . . . . . WK47

**Mounting Kit** see page 65

- Mounting kit . . . . . FBK7

### FEATURES

- 40 micron sintered bronze element offers depth filtration. High strength, recleanable
- 10 oz. or 20 oz. black coated metal bowl with liquid level sight
- Manual twist drain
- High Flow, low pressure drop

### OPTIONS

add suffix to part number in alpha and numeric order

#### Float Drain

An internal float rises as condensate accumulates in a filter bowl to activate the drain.

**F** Internal float drain . . . . . F373FW

#### Overnight Drains

An overnight drain operates when a compressed air system is shut down. It clears accumulated condensate from a filter bowl when pressure falls to 3 psig or less. It then closes when pressure rises to 6 psi.

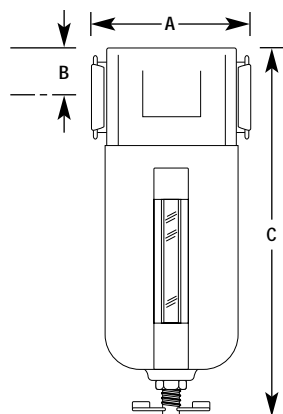
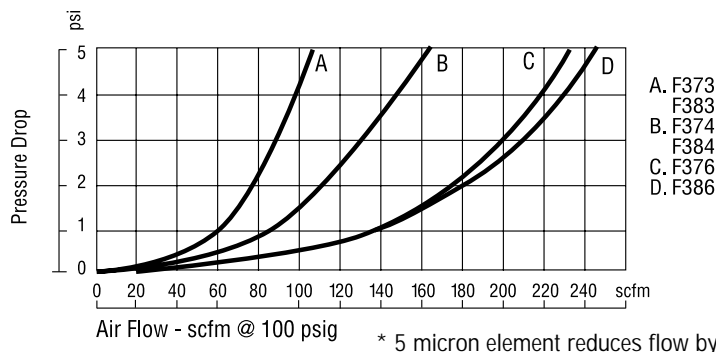
**K** Overnight drain . . . . . F373KW  
*Twist to manually drain.*

**M** Metal bowl without sight glass . . . . . F373M

**5** 5 micron element . . . . . F373W5

**3** 3 micron absolute element . . F373W3

### PERFORMANCE CHARACTERISTICS FOR 40 MICRON ELEMENT



### DIMENSIONS

PIPE SIZE	MODEL NO.	MAX. FLOW SCFM*	BOWL CAPACITY	DIMENSIONS (INCHES)			WEIGHT (LBS.)
				A	B	C	
3/8"	F373W	110	10 oz.	3 3/4	1 3/32	7 5/8	2.7
3/8"	F383W	110	20 oz.	3 3/4	1 3/32	10 7/8	3.8
1/2"	F374W	160	10 oz.	3 3/4	1 3/32	7 5/8	2.7
1/2"	F384W	165	20 oz.	3 3/4	1 3/32	10 7/8	3.8
3/4"	F376W	230	10 oz.	3 3/4	1 3/32	7 5/8	2.7
3/4"	F386W	245	20 oz.	3 3/4	1 3/32	10 7/8	3.8

\* Flow scfm based on 5.0 psi Δ p @ 100 psig inlet.

## High Flow Particulate Filters



### SPECIFICATIONS

#### Metal Bowl

- Steel, black coated
- Max. supply pressure 250 psig
- Operating temperature range 40°F to 200°F

#### Metal Bowl with sight

- Steel, black coated
- Max. supply pressure 250 psig
- Operating temperature range 40°F to 160°F

#### Internal Float Drain

- Buna N float
- Operating pressure range 30 to 175 psig
- Operating temperature range 40°F to 120°F

**Body** black coated aluminum

**Baffle** plastic

**Seals** Buna N

**Vane** aluminum

#### Elements

- 40 micron sintered bronze
- 5 micron sintered bronze
- 3 micron absolute pleated fiber

### KITS

- Internal float drain . . . . . 5200

#### Bowl Kits

- Metal with sight . . . . . BKF329W
- Metal without sight . . . . . BKF329M

#### Element Kits

- 40 micron . . . . . EKF329
- 5 micron . . . . . EKF329-5
- 3 micron absolute . . . . . EKF329-3

#### Repair Kits

- Repair kit . . . . . RKF329
- Replacement sight kit . . . . . WK35

### FEATURES

- 40 micron sintered bronze element offers depth filtration. High strength, recleanable.
- Metal bowl is standard with liquid level sight
- Manual twist drain

### OPTIONS

add suffix to part number in alpha and numeric order

**D** Differential pressure gauge . F329-10

#### DWFloat Drain

An internal float rises as condensate accumulates in a filter bowl to activate the drain.

**F** Internal float drain . . . . . F329-08FW

#### Overnight Drains

An overnight drain operates when a compressed air system is shut down. It clears accumulated condensate from a filter bowl when pressure falls to 3 psig or less. It then closes when pressure rises to 6 psi.

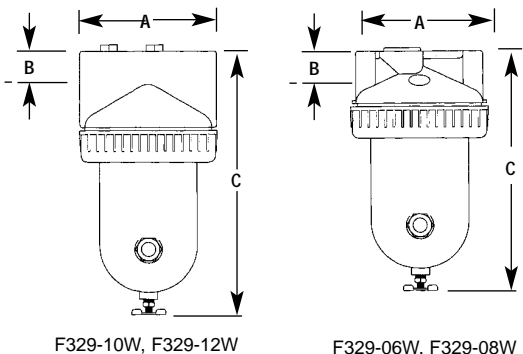
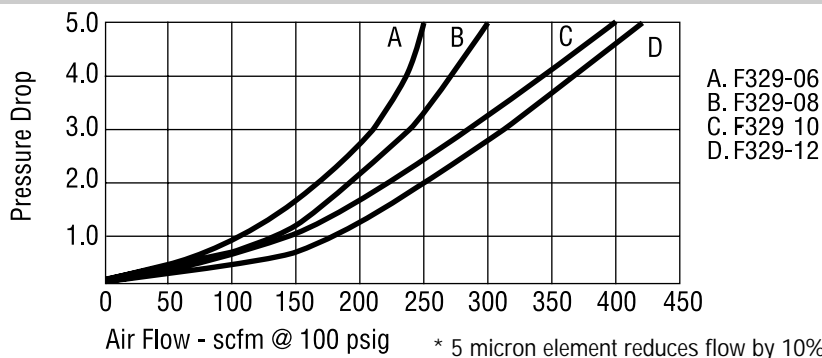
**K** Overnight drain for metal bowl . . . . . F329-08KW  
*Twist to manually drain*

**5** 5 micron element . . . . . F329-08W5

**3** 3 micron absolute element . F329-08W3

For Metal Bowl without sight delete W

### PERFORMANCE CHARACTERISTICS



### DIMENSIONS

PIPE SIZE	MODEL NO.	MAX. FLOW SCFM*	BOWL CAPACITY	DIMENSIONS (INCHES)			WEIGHT (LBS.)
				A	B	C	
3/4"	F329-06W	260	29 oz.	5 <sup>5</sup> / <sub>32</sub>	1 <sup>3</sup> / <sub>16</sub>	9 <sup>13</sup> / <sub>32</sub>	3.7
1"	F329-08W	300	29 oz.	5 <sup>5</sup> / <sub>32</sub>	1 <sup>5</sup> / <sub>16</sub>	9 <sup>13</sup> / <sub>32</sub>	3.7
1 1/4"	F329-10W	400	29 oz.	5 1/4	1 1/2	10 <sup>11</sup> / <sub>32</sub>	6.3
1 1/2"	F329-12W	425	29 oz.	5 1/4	1 1/2	10 <sup>11</sup> / <sub>32</sub>	6.3

\* Flow scfm based on 5.0 psi Δ p @ 100 psig inlet.

## High Flow Particulate Filters



### SPECIFICATIONS

#### Metal Bowl

- Steel, black coated
- Max. supply pressure 250 psig
- Operating temperature range 40°F to 200°F

#### Metal Bowl with sight

- Steel, black coated
- Max. supply pressure 250 psig
- Operating temperature range 40°F to 160°F

#### Internal Float Drain

- Buna N float
- Operating pressure range 30 to 175 psig
- Operating temperature range 40°F to 120°F

**Body** black coated aluminum

**Baffle** plastic

**Seals** Buna N

**Vane** aluminum

#### Elements

- 40 micron pleated fiber
- 5 micron pleated fiber
- 3 micron absolute pleated fiber

#### KITS

- Internal float drain . . . . . 5200

#### Bowl Kits

- Metal with sight . . . . . BKF364W
- Metal without sight . . . . . BKF364

#### Element Kits

- 40 micron . . . . . EKF358
- 3 micron . . . . . EKF358-3

#### Repair Kits

- Repair kit . . . . . RKF508
- Replacement sight kit . . . . . WK35

### FEATURES

- 40 micron pleated fiber element offers depth filtration. High strength, recleanable.
- Metal bowl is standard
- Twist drain

### OPTIONS

add suffix to part number in alpha and numeric order

**D** Differential pressure gauge . F358HF-08D

#### Float Drain

An internal float rises as condensate accumulates in a filter bowl to activate the drain.

**F** Internal float drain . . . . . F358HF-08F

#### Overnight Drains

An overnight drain operates when a compressed air system is shut down. It clears accumulated condensate from a filter bowl when pressure falls to 3 psig or less. It then closes when pressure rises to 6 psi.

**K** Overnight drain . . . . . F358HF-08K

*Twist to manually drain.*

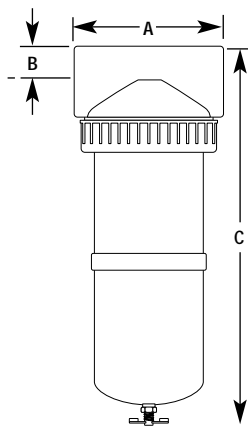
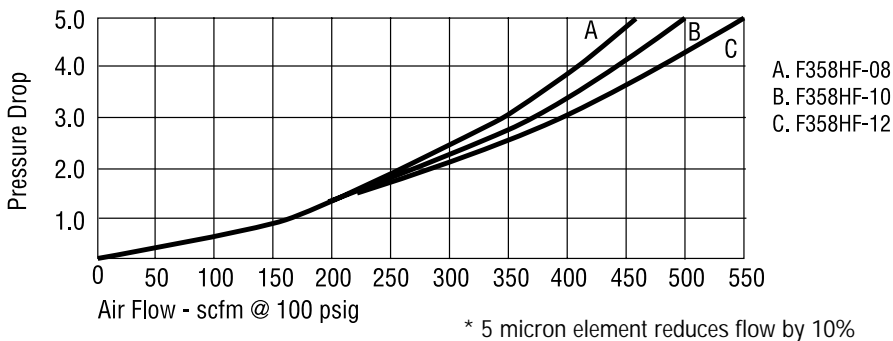
#### W Metal bowl

with sight glass . . . . . F358HF-08W

#### -3 3 micron

absolute element . . . . . F358HF-08-3

### PERFORMANCE CHARACTERISTICS FOR 40 MICRON ELEMENT



### DIMENSIONS

PIPE SIZE	MODEL NO.	BOWL CAPACITY	MAX. FLOW SCFM*	DIMENSIONS (INCHES)			WEIGHT (LBS.)
				A	B	C	
1"	F358HF-08	50 oz.	460	5 1/4	1 1/2	14 1/2	11
1 1/4"	F358HF-10	50 oz.	500	5 1/4	1 1/2	14 1/2	9
1 1/2"	F358HF-12	50 oz.	550	5 1/4	1 1/2	14 1/2	7.8

\* Flow scfm based on 5.0 psi Δ p @ 100 psig inlet.

## High Flow Particulate Filters



### SPECIFICATIONS

#### Metal Bowl

- Black coated aluminum
- Max. supply pressure 250 psig
- Operating temperature range 40°F to 200°F

#### Metal Bowl with sight

- Black coated aluminum
- Max. supply pressure 250 psig
- Operating temperature range 40°F to 160°F

**Body** black coated aluminum

**Baffle** plastic

**Seals** Buna N

### KITS

- Float for External Drain . . . . . 5200

#### Bowl Kits

- Metal with sight . . . . . BKF510W
- Metal without sight . . . . . BKF510
- Metal with sight . . . . . BKF518W
- Metal without sight . . . . . BKF518

#### Element Kits

- 40 micron . . . . . EKF3N1
- 3 micron . . . . . EKF3N1-3
- 40 micron . . . . . EKF3NHF
- 3 micron . . . . . EKF3NHF-3

#### Repair Kits

- Repair kit . . . . . RKF3N1  
RKF519
- Replacement sight kit . . . . . BSF510

### FEATURES

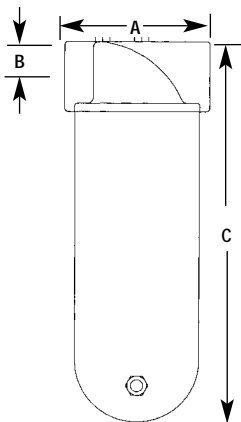
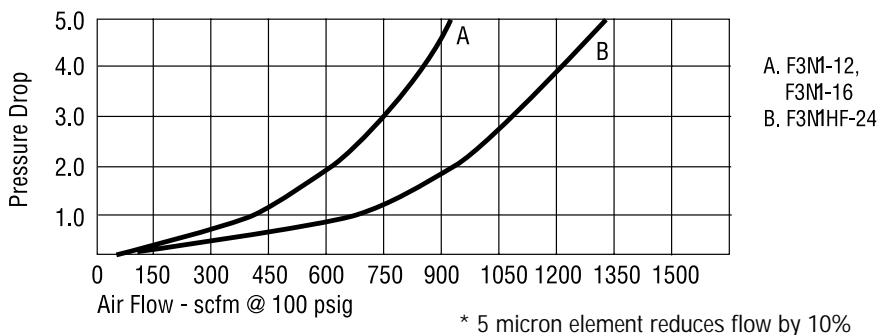
- 40 micron standard element offers depth filtration for 1½" and 2". High strength, recleanable.
- Metal bowl is standard
- Twist drain

### OPTIONS

add suffix to part number in alpha and numeric order

- D** Differential pressure gauge . F3N1-12D
- T** External Float Drain . . . . . F3N1-12T
- W** Metal bowl with sight glass . . . . . F3N1-12W
- 3** 3 micron absolute element . . . . . F3N1-12-3

### PERFORMANCE CHARACTERISTICS FOR 40 MICRON ELEMENT



### DIMENSIONS

PIPE SIZE	MODEL NO.	BOWL CAPACITY	MAX. FLOW SCFM*	DIMENSIONS (INCHES)			WEIGHT (LBS.)
				A	B	C	
1½"	F3N1-12	100 oz.	910	6½	2	17¾	13
2"	F3N1-16	100 oz.	910	6½	2	17¾	13
3"	F3NHF-24	200 oz.	1300	7⅝	2¼	27½	18

\* Flow scfm based on 5.0 psi Δ p @ 100 psig inlet.