



Western Water Constructors, Inc.
Submittal Cover

Job no. 16-05



CONTRACT NAME: Manteca WQCF Digester Improvements
SPEC SECTION: 11371 Air Compressor Accessories
SUBMITTAL TITLE: Air Filter - O&M
FILE NAME: 137-R2\_11371-02\_Air Filter-OM

SUB #: 137
REV #: 2
CODE: 11371-02
DATE: 8/14/2017

WWC REVIEW/COMMENTS: [X] NO EXCEPTIONS [ ] EXCEPTIONS / DEVIATIONS AS NOTED

Product originally submitted under submittal #082.

REVIEWED BY: ST

SIGNED: [Signature]

WWC HAS REVIEWED THIS SUBMITTAL FOR CONFORMANCE WITH THE PROJECT PLANS & SPECIFICATIONS.

OWNER REVIEW:

Table with columns: ITEM, DESCRIPTION, REVIEW STATUS (A, B, C, D, E). Row 1: 1, Air Filter O&M, [ ] [ ] [ ] [ ] [ ]

LEGEND: A = No Exceptions Taken B = Make Correction Noted C = Correct & Resubmit
D = Rejected E = Accepted for Record

OWNER COMMENTS:

REVIEWER'S NAME: \_\_\_\_\_

REVIEWER'S SIGNATURE: \_\_\_\_\_

DATE: \_\_\_\_\_

EQUIPMENT SUMMARY FORM

1. EQUIPMENT ITEM Air Compressor Particulate Filter
2. MANUFACTURER Van Air model F200-55-1/2-B-AD-PD5
3. EQUIPMENT IDENTIFICATION NUMBER(S) DIG-FLT-07-597  
(maps equipment number)
4. LOCATION OF EQUIPMENT Digester Control Building #2
5. WEIGHT OF INDIVIDUAL COMPONENTS (OVER 100 POUNDS) 3.5  
  

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6. NAMEPLATE DATA - Horsepower N/A  
Amperage \_\_\_\_\_  
Voltage \_\_\_\_\_  
Service Factor (S.F.) \_\_\_\_\_  
Speed \_\_\_\_\_  
ENC Type \_\_\_\_\_  
Capacity \_\_\_\_\_  
Other \_\_\_\_\_
7. MANUFACTURER'S LOCAL REPRESENTATIVE  
Name Accurate Air Engineering  
Address 710 N. Sacramento Street, Lodi, CA 95241  
Telephone Number 209-334-4340
8. MAINTENANCE REQUIREMENTS Drain coalescing filters every shift.  
Check differential pressures weekly on coalescing. When differential pressure reaches 10 psi  
install clean elements.
9. LUBRICANT LIST N/A
10. SPARE PARTS (recommendations) Replacement filter element # 26-2070
11. COMMENTS \_\_\_\_\_  

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# F200 Series

## Compressed Air and Gas Filters



**F E A T U R E S**

Heavy duty cast aluminum housings

Maximum working pressure 250 PSIG

Nine filtration grades

Push on filter elements

### BENEFITS OF THE F200 SERIES

Rugged construction // Low maintenance // Easy to service

[vanairsystems.com](http://vanairsystems.com)

# The F200 Series from Van Air Systems

Compressed air is a vital utility in many industries. Yet contamination plagues many air systems. Compressor lubricants and oil aerosols. Dust. Dirt. Scale. These damaging contaminants lead to lost productivity and increased down time. It doesn't have to be this way. Turn to F200 Series filters. The toughest most reliable industrial filters for compressed air and other gases.

## Simple is better.

Each F200 filter includes a rugged cast aluminum housing and a filter element constructed with stainless steel support cores and high performance filter media. A filter element comes pre-installed in every housing. Van Air Systems' filter elements are easy to install. Simply push the element into place for a snug fit. Unlike competitive filters, F200 filters use no awkward tie rods or fasteners.

## How it works.

Simple operation is key. Compressed air or gas enters the inlet side of the head and passes through the single filter element. In oil removal applications, air or gas flows from the inside to the outside of the element. In particulate removal applications the flow pattern is from the outside of the element to the inside. Clean air or gas exits the opposite side of the head.

## Approved for Natural Gas.

F200 filters are approved for sweet natural gas service. Use F200 filters to protect instruments, valves, burners, and heaters at the wellhead, metering station, compressor station, and gas plant.



## F200 Series accessories



Manual Drain



Wall Mounting Kit



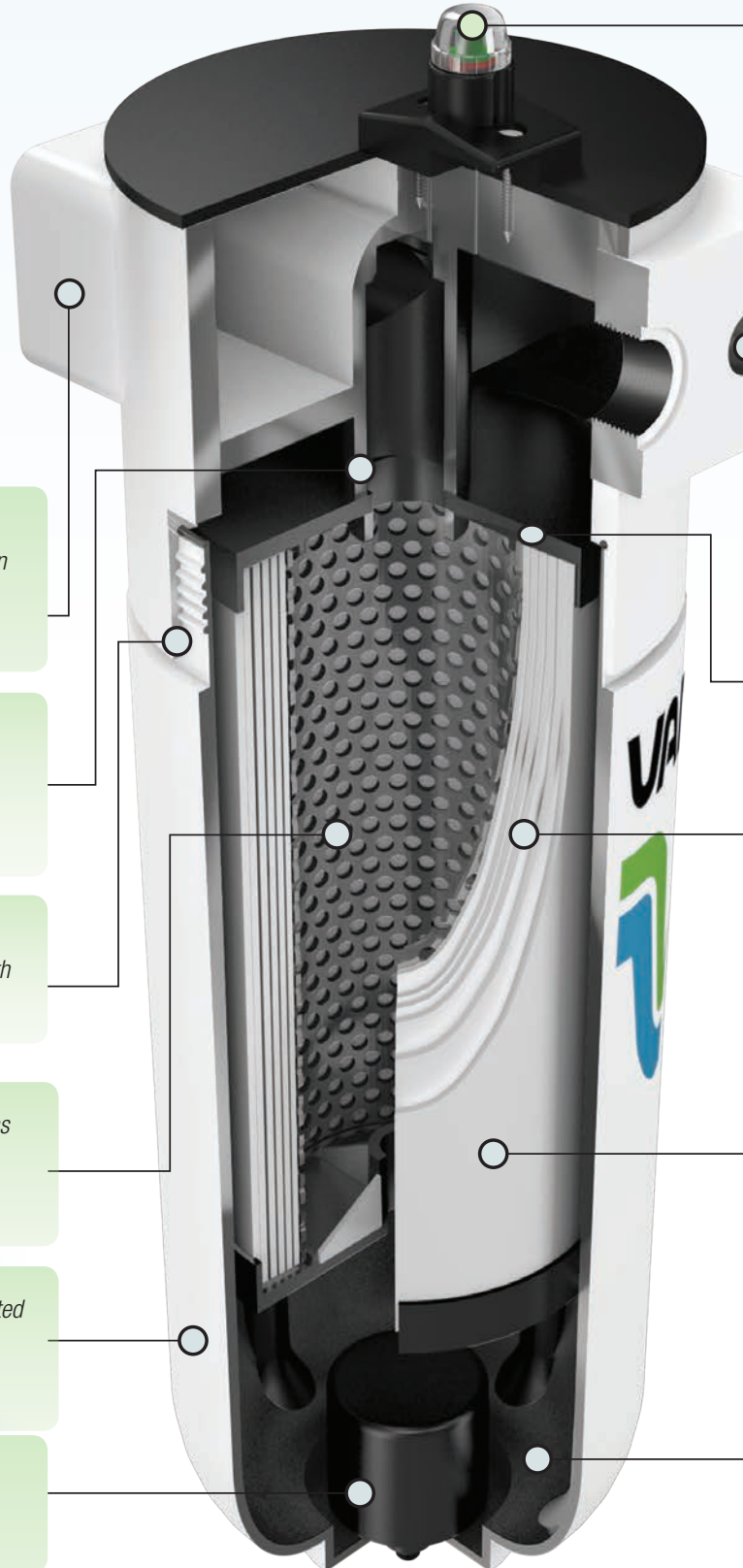
PD-5 Differential Pressure Indicator



PD-6 Pop-up Differential Pressure Indicator

# Rugged design, durable construction

Strength and durability matter. That's why every F200 filter is designed and constructed for the industrial user.



Durable epoxy powder coating is chip and stain resistant.

Push-on elements are easy to change – no tie-rods or fasteners are required

Precision machined threads allow for smooth assembly and removal

Inner and outer stainless steel support cores for maximum strength

Housings are constructed of heavy-duty cast aluminum

Internal automatic drain (optional, not for natural gas service)

A pop-up differential pressure indicator shows when the element must be changed

Through holes for tandem mounting of filters, for use with CK connector kit

Corrosion resistant, end caps for rust prevention

Multiple layers of borosilicate fiberglass media remove particulates and coalesce oil mists

A chemical resistant polyester outer drainage layer stands up to synthetic lubricants and facilitates flow of coalesced liquids – this media is superior to the exterior foam used in many competitive filter elements.

All housings are internally e-coated for superior corrosion resistance

# F200 Series filter selection

F200 – 100 -1 – B – MD – PD6

## FLOW & IN/OUT CONN

SCFM @ 100 PSIG	NPT
15	1/4"
25	1/2"
25	3/8"
55	1/2"
85	3/4"
100	1"
150	1"
265	1 1/4"
350	1 1/2"
400	2"
500	2"
600	3"
800	3"
1000	3"
1250	3"

## FILTER ELEMENT

Element Grade	Description
AA	25 Micron, Extra Coarse
A	5 Micron, Coarse Coalescing
B	1 Micron, General Purpose Coalescing
C	.01 Micron, High Efficiency Coalescing
RAA	25 Micron, Extra Coarse Particulate
RA	5 Micron, Coarse Particulate
RB	1 Micron, General Purpose Particulate
RC	.01 Micron, High Efficiency Particulate
RD	.01 Micron, Vapor Adsorbing

## DIFFERENTIAL PRESSURE INDICATOR

Indicator	Description
PD-6A-C	Pop-up Indicator for F200-15 & 25 (coalescing)
PD-6A-P	Pop-up indicator for F200-15 & 25 (particulate)
PD-5	Differential Pressure Indicator for F200-55 & larger
PD-6	Pop-up Indicator for F200-55 & larger

## DRAIN

Drain Type	Description
MD	Manual Drain
AD	Internal Auto Drain (not for natural gas service)
DA	Drain Adapter (1/4" mNPT x 1/2" fNPT)

## How to select a filter

1. Determine the flow rate and pressure at the point in the air or gas system where the filter is to be installed.
2. Select the filter model with a flow rating equal to or exceeding the operating requirement. For filter flow ratings at pressures other than 100 PSIG, consult the table on the next page or contact Van Air Systems.
3. Choose the filter element letter grade that meets the purity level required by the application.
4. Select a drain type.
5. Select a differential pressure indicator.



## Clean, trouble-free compressed air and gas

Rugged housings and long-lasting elements give you the best value for your money. They'll provide dependable filtration to reduce your downtime, maintenance and operating costs.

Van Air F200 series filters are currently providing these benefits in a wide range of applications:

- Instrument air & gas
- Pre-filter and after-filter for deliquescent & regenerative dryers and refrigerated dryers
- Pneumatic hand tools
- Abrasive blasting
- Dust collectors
- Air cylinders
- Air Motors
- Fuel gas

# Filter application guide & suggested installation

## Typical uses

- Plant air
- Shot / sand blast
- Point of use

## Dryer dew point

20°F - 55°F supression

## Deliquescent dryer



Air Compressor Receiver Tank

Air-cooled After-cooler

Moisture Separator

Filter Grade A

D Series Deliquescent Dryer

Filter Grade B

## Typical uses

- Instrument air
- Plant air
- Process air
- Blanketing / padding
- Nitrogen generation
- Pipeline purging

## Dryer dew point

-40°F -100°F

## Heatless regenerative dryer



Air Compressor Receiver Tank

Air-cooled After-cooler

Moisture Separator

Filter Grade C

HL Series Dryer

Filter Grade RB

## Point of use

- Bulk containment removal



Filter Grade RA or RAA

## Point of use

- Instrumentation
- Air cylinders, air motors
- Pneumatic conveyors



Filter Grade RB

Filter Grade RC

## Point of use

- Oil vapor adsorption
- Food and beverage applications
- Odor removal



Filter Grade RB

Filter Grade RC

Filter Grade RD

## FILTRATION GRADES

Element Grade	Purpose	Particle Removal Down To	Efficiency	Max Oil Carryover PPM w/w	Max Inlet Temp °F	Clean Dry Pressure Drop PSI	End Cap Color	Flow Direction
AA	Extra coarse coalescing	25µ	100@25µ	7.8	225	0.40	White	In/Out
A	Coarse coalescing	5µ	100@5µ	3.9	225	0.50	Green	In/Out
B	General purpose coalescing	1µ	99.99@.6µ	0.78	175	0.75	Red	In/Out
C	High efficiency coalescing	.01µ	99.9999@.6µ	0.008	125	1.50	Blue	In/Out
RAA	Extra coarse particulate	25µ	100@25µ	NA	225	0.40	Black	Out/In
RA	Coarse particulate	5µ	100@5µ	NA	225	0.50	Green	Out/In
RB	General purpose particulate	1µ	99.99@.6µ	NA	225	0.75	Red	Out/In
RC	High efficiency particulate	.01µ	99.9999@.6µ	NA	225	1.50	Blue	Out/In
RD	Vapor absorbing	.01µ	99.9999@.6µ	0.004	80	1.50	White <sup>†</sup>	Out/In

<sup>†</sup>RD elements have no outer drainage layer. The perforated stainless steel outer core is visible.

## STANDARD EQUIPMENT

- Cast aluminum housing
- Maximum working pressure: 250 PSIG (17.2 BARG)
- Interior epoxy coating
- Exterior epoxy coating and epoxy powder coat finish
- Manual ball valve
- Pop-up differential pressure indicator
- O-ring seals
- Inlet/outlet – NPT
- Push on element
- Initial element included

## OPTIONAL EQUIPMENT

- Internal “AD” float drain (not for natural gas service)
- PD-5 dial type pressure differential indicator
- Wall mounting bracket
- EDV Series electronic drain (supplied loose)
- Drain adapter

## DIMENSIONS & SPECIFICATIONS

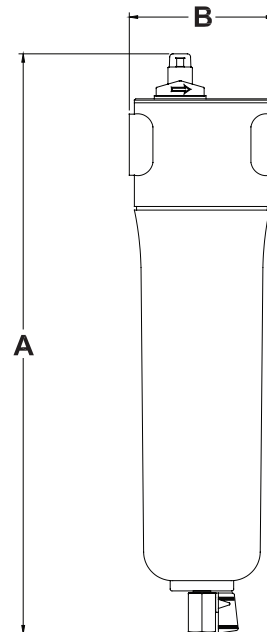
Model No.	A		B		In/Out Conn.	Weight		Drain Connection	Replacement Element	# of Elements
	in	cm	in	cm		lbs	kg			
F200-15-1/4-(* )	9 1/4	24	2 13/16	8	1/4" NPT	1.4	0.5	1/4" NPS	E200-15/25-(* )	1
F200-25-3/8-(* )	9 1/4	24	2 13/16	8	3/8" NPT	1.4	0.5	1/4" NPS	E200-15/25-(* )	1
F200-25-1/2-(* )	9 1/4	24	2 13/16	8	1/2" NPT	1.4	0.5	1/4" NPS	E200-15/25-(* )	1
F200-55-1/2-(* )	11 3/4	30	3 7/16	9	1/2" NPT	3.5	1.5	1/4" NPS	E200-55-(* )	1
F200-85-3/4-(* )	14- 9/16	37	4 15/16	13	3/4" NPT	6.2	2.7	1/4" NPS	E200-85-(* )	1
F200-100-1-(* )	14-9/16	37	4 15/16	13	1" NPT	6.3	2.8	1/4" NPS	E200-100-(* )	1
F200-150-1-(* )	20-7/16	52	4 15/16	13	1" NPT	7.6	3.4	1/4" NPS	E200-150-(* )	1
F200-265-1¼-(* )	20-7/16	52	4 15/16	13	1 1/4" NPT	7.7	3.4	1/4" NPS	E200-265-(* )	1
F200-350-1½-(* )	21-3/8	55	5 5/16	14	1 1/2" NPT	9.8	4.4	1/4" NPS	E200-350/400-(* )	1
F200-400-2-(* )	21-3/8	55	5 5/16	14	2" NPT	9.8	4.4	1/4" NPS	E200-350/400-(* )	1
F200-500-2-(* )	29-3/8	75	5 5/16	14	2" NPT	12.2	5.4	1/4" NPS	E200-500-(* )	1
F200-600-3-(* )	25-3/8	64	7 7/8	20	3" NPT	22.5	10.1	1/4" NPS	E200-600-(* )	1
F200-800-3-(* )	30-7/8	78	7 7/8	20	3" NPT	25.5	11.5	1/4" NPS	E200-800-(* )	1
F200-1000-3-(* )	35-3/4	91	7 7/8	20	3" NPT	32.4	14.6	1/4" NPS	E200-1000-(* )	1
F200-1250-3-(* )	35-3/4	91	7 7/8	20	3" NPT	32.4	14.6	1/4" NPS	E200-1250-(* )	1

Notes: Due to our policy of continuous improvement, dimensions and specifications may change without notice. Before pre-piping, request a certified drawing.

## FLOW CAPACITIES AT VARIOUS PRESSURES PSIG (BARG)

Model No.	50 (3.4)		100 (6.9)		150 (10.3)		200 (13.8)		250 (17.2)	
	SCFM	NM3/HR	SCFM	NM3/HR	SCFM	NM3/HR	SCFM	NM3/HR	SCFM	NM3/HR
F200-15-1/4-(* )	8	13	15	24	22	35	28	45	35	56
F200-25-3/8-(* )	14	23	25	40	36	58	47	76	58	93
F200-25-1/2-(* )	14	23	25	40	36	58	47	76	58	93
F200-55-1/2-(* )	31	50	55	88	79	127	103	166	127	204
F200-85-3/4-(* )	48	77	85	137	122	196	159	256	196	315
F200-100-1-(* )	56	90	100	161	144	232	187	301	231	371
F200-150-1-(* )	85	137	150	241	215	346	281	452	346	556
F200-265-1¼-(* )	149	240	265	426	381	613	496	798	612	984
F200-350-1½-(* )	197	317	350	563	503	809	655	1053	808	1299
F200-400-2-(* )	226	363	400	643	574	923	749	1204	923	1484
F200-500-2-(* )	282	453	500	804	718	1155	936	1505	1154	1856
F200-600-3-(* )	338	544	600	965	862	1386	1123	1806	1385	2227
F200-800-3-(* )	451	725	800	1286	1149	1848	1497	2407	1846	2968
F200-1000-3-(* )	564	907	1000	1608	1436	2309	1872	3010	2308	3711
F200-1250-3-(* )	700	1134	1250	2010	1795	2886	2340	3763	2885	4639

(\* ) Filter Element Grade



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## F200 Series - PDF Downloads

### Installation, Operation and Maintenance Manuals

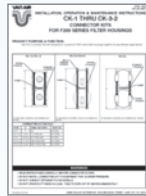
F200



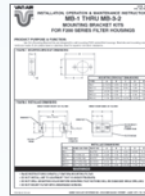
Auto Drain Kit



Connector Kit



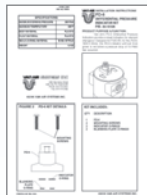
Mounting Bracket Kit



PD-5



PD-6

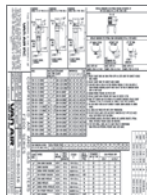


PD-6a



### Drawings

F200



### Instructional Video

F200 Series

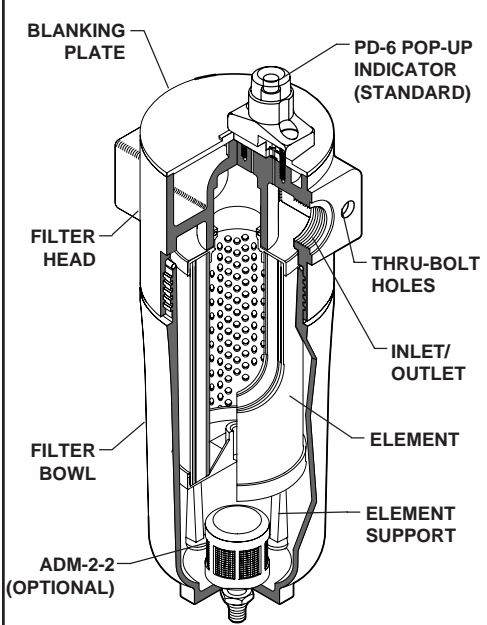
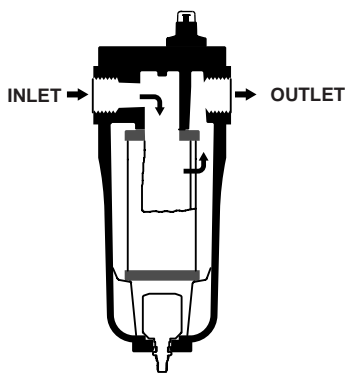
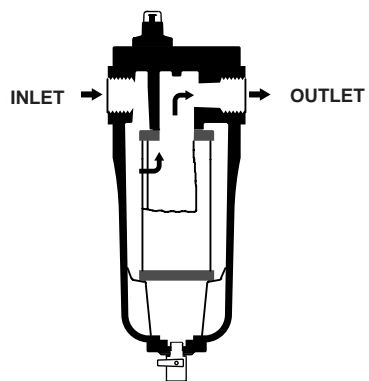


# INSTALLATION, OPERATION & MAINTENANCE INSTRUCTIONS

## F200 SERIES COMPRESSED AIR & GAS FILTERS

### PRODUCT PURPOSE & FUNCTION:

Van Air's F200 series filters are designed to remove contaminants from compressed air & gas systems. Available in 1/4" to 3" connection sizes and flow capacities from 15 to 1000 scfm (at 100 psig) in 14 housings and 9 filtration grades, the F200 series can remove oil aerosols, oil vapors, water and particulates. Housings are made of cast aluminum and coated with an epoxy powder coating for corrosion resistance. All units include push-on elements with durable polyester drain layer (except RD grade). Accessories include differential pressure indicators, wall mounting kits, connector kits, and automatic drain valves.

FILTER DETAILS		FLOW DIRECTION THROUGH ELEMENT			
		<b>(COALESCING) IN/OUT</b> 		<b>(PARTICULATE) OUT/IN</b> 	
FILTRATION GRADES					
APPLICATION	ELEMENT GRADE	PURPOSE	NOMINAL PARTICULATE REMOVAL	ELEMENT FLOW DIRECTION	COLOR CODE
Oil Removal (Liquids)	AA	Extra Coarse Coalescing	25.00µ	IN/OUT	BLACK
	A	Coarse Coalescing	5.00µ	IN/OUT	GREEN
	B	General Purpose Coalescing	1.00µ	IN/OUT	RED
	C	High Efficiency Coalescing	0.01µ	IN/OUT	BLUE
Particulate Removal (Solids)	RAA	Extra Coarse Particulate	25.00µ	OUT/IN	BLACK
	RA	Coarse Particulate	5.00µ	OUT/IN	GREEN
	RB	General Purpose Particulate	1.00µ	OUT/IN	RED
	RC	High Efficiency Particulate	0.01µ	OUT/IN	BLUE
Oil Vapor Removal	RD	Vapor Absorbing	0.01µ	OUT/IN	BLACK

OPERATING CONDITIONS	
<b>MAXIMUM WORKING PRESSURE</b>	
All Models	250 PSIG
<b>OPERATING TEMPERATURE</b>	
Minimum	35°F
Maximum	225°F
<b>MAXIMUM RECOMMENDED INLET TEMPERATURE</b>	
AA, A, RAA, RA, RB, and RC Series	225°F
B Series	175°F
C Series	125°F
RD Series	80°F

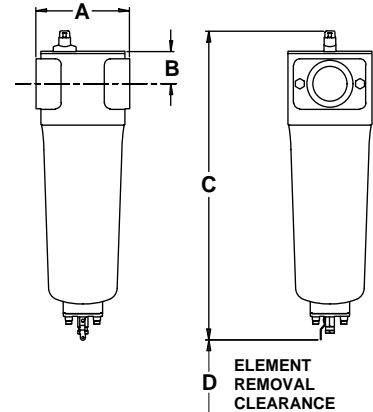
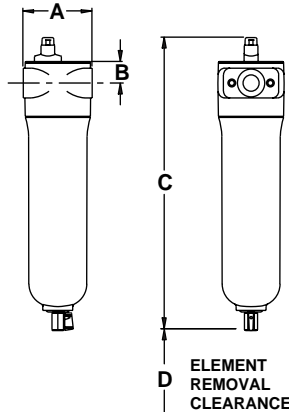
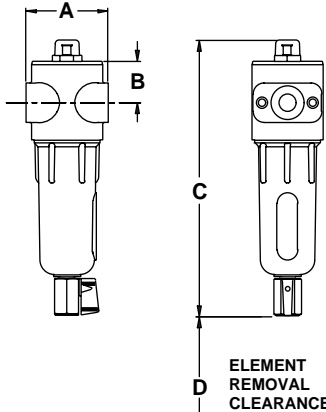
WARNINGS
<ul style="list-style-type: none"> <li>• DO NOT REPLACE ANY ITEM ON FILTER WHILE IT IS PRESSURIZED.</li> <li>• DO NOT OPERATE A LEAKING FILTER. TAKE FILTER OUT OF SERVICE IMMEDIATELY.</li> <li>• DO NOT OPERATE ABOVE MAXIMUM WORKING PRESSURE (MWP) AT MAXIMUM OPERATING TEMPERATURE (°F).</li> <li>• USE THE PROPER RULES FOR THE GAS BEING PROCESSED.</li> </ul>

## FILTER HOUSING DIMENSIONS & WEIGHTS

**DIMENSIONS FOR:**  
 F200-15-1/4  
 F200-25-3/8  
 F200-25-1/2

**DIMENSIONS FOR:**  
 F200-55-1/2    F200-150-1    F200-400-2  
 F200-85-3/4    F200-265-1-1/4    F200-500-2  
 F200-100-1    F200-350-1-1/2

**DIMENSIONS FOR:**  
 F200-600-3  
 F200-800-3  
 F200-1000-3



FILTER MODEL	FLOW** (SCFM)	IN/OUT CONN. (NPT)	A (INCHES)	B (INCHES)	C*** (INCHES)	D (INCHES)	HOUSING WEIGHT**** (LBS)	ELEMENT WEIGHT**** (LBS)
F200-15-1/4-(* )	15	1/4"	2-13/16	1-5/8	9-1/4	3	1.3	0.1
F200-25-3/8-(* )	25	3/8"	2-13/16	1-5/8	9-1/4	3	1.3	0.1
F200-25-1/2-(* )	25	1/2"	2-13/16	1-5/8	9-1/4	3	1.3	0.1
F200-55-1/2-(* )	55	1/2"	3-7/16	1-5/16	11-3/4	4	3.2	0.3
F200-85-3/4-(* )	85	3/4"	4-15/16	1-5/8	14-9/16	4	5.7	0.5
F200-100-1-(* )	100	1"	4-15/16	1-5/8	14-9/16	4	5.7	0.6
F200-150-1-(* )	150	1"	4-15/16	1-5/8	20-7/16	6	6.7	0.9
F200-265-1-1/4-(* )	265	1-1/4"	4-15/16	1-5/8	20-7/16	6	6.7	1
F200-350-1-1/2-(* )	350	1-1/2"	5-5/16	2-1/16	21-3/8	6	8.7	1.1
F200-400-2-(* )	400	2"	5-5/16	2-1/16	21-3/8	6	8.7	1.1
F200-500-2-(* )	500	2"	5-5/16	2-1/16	29-3/8	6	9.9	2.3
F200-600-3-(* )	600	3"	7-7/8	2-3/4	24-1/2	8	19.8	2.7
F200-800-3-(* )	800	3"	7-7/8	2-3/4	30-1/16	8	21.9	3.6
F200-1000-3-(* )	1000	3"	7-7/8	2-3/4	34-3/4	12	28.1	4.3

\*Insert appropriate filtration grades here; for example F200-15-1/4-B.  
 \*\*\*Dimensions include filter housing, PD-6 and manual drain.

\*\*Flow is based on SCFM @ 100 PSIG @ 100°F.  
 \*\*\*\*For total filter weight, add element weight to housing weight.

## FLOW CAPACITIES AT VARIOUS OPERATING PRESSURES (SCFM)

FILTER MODEL	25 PSIG	50 PSIG	75 PSIG	100 PSIG	125 PSIG	150 PSIG	175 PSIG	200 PSIG	225 PSIG	250 PSIG
F200-15-1/4	8	11	13	15	17	18	20	21	23	24
F200-25-3/8	13	18	22	25	28	31	33	35	38	40
F200-25-1/2	13	18	22	25	28	31	33	35	38	40
F200-55-1/2	28	39	48	55	62	67	73	78	83	87
F200-85-3/4	43	60	74	85	95	104	112	120	128	134
F200-100-1	50	71	87	100	112	122	132	141	150	158
F200-150-1	75	107	131	150	168	183	198	212	225	237
F200-265-1-1/4	133	188	231	265	297	323	350	374	398	419
F200-350-1-1/2	175	249	305	350	392	427	462	494	525	553
F200-400-2	200	284	348	400	448	488	528	564	600	632
F200-500-2	250	355	435	500	560	610	660	705	750	790
F200-600-3	300	426	522	600	672	732	792	846	900	948
F200-800-3	400	568	696	800	896	976	1056	1128	1200	1264
F200-1000-3	500	710	870	1000	1120	1220	1320	1410	1500	1508

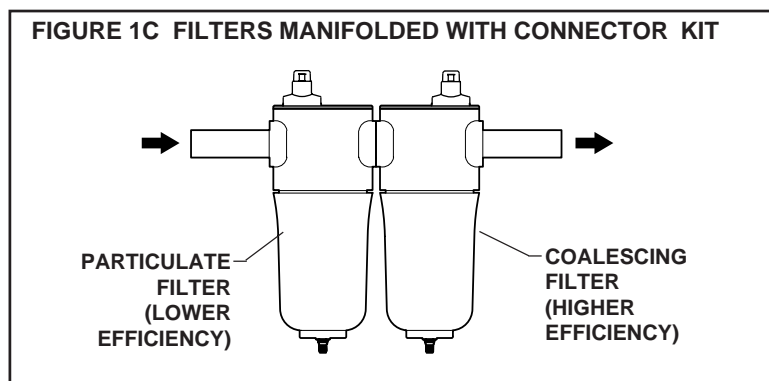
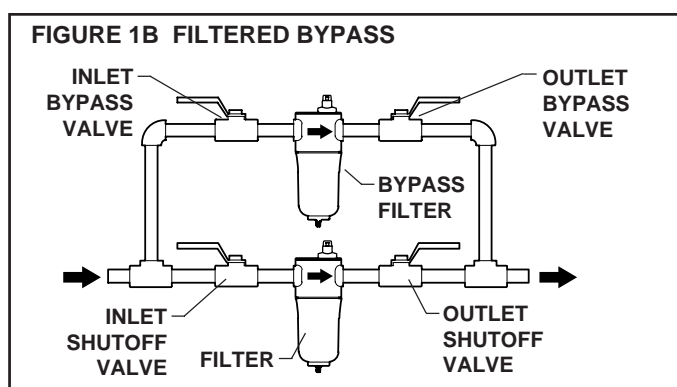
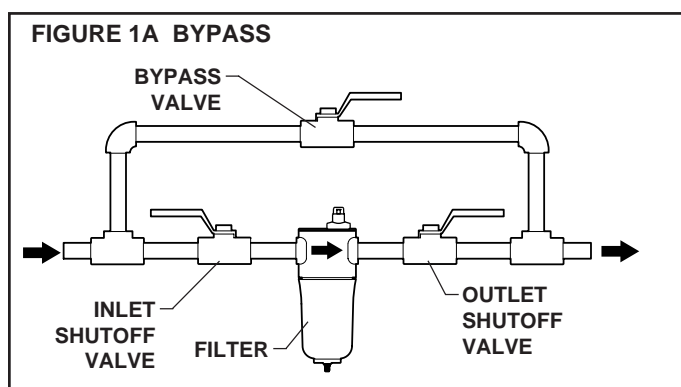
## INSTALLATION

1. Before installing filter, check operating temperature and pressure conditions to verify that they are within the specified ranges. **(See Operating Conditions on page 1).** Also verify that system flow rate corresponds to the rated capacity of the filter. Operating at flows above rated capacity will result in increased pressure drop.
2. Locate Filter at the point of lowest operating temperature to ensure that water and oil vapor do not condense downstream of the filter. Filter should be installed close to the point of use to minimize the risk of pipe scale, dirt, etc. recontaminating the compressed air or gas. This is particularly important when installing a new filter on an existing system that has not had proper filtration.
3. Install filter vertically. Provide required minimum clearance below filter to allow for replacement of element. **(See Element Removal Clearance on page 2).**
4. Protect filter from reverse flow conditions. Do not install filter downstream of quick opening valves.
5. Remove filter head from the bowl by turning bowl counter-clockwise. Pull element from locator. Set bowl and element aside for use later.
6. Install inlet and outlet shutoff valves to facilitate replacement of element. Bypass piping is recommended **(See Figure 1A and 1B).** **MAKE SURE VALVES ARE CLOSED BEFORE PROCEEDING.**
7. Connect filter head into piping. Avoid reducers or bushings to match inlet size. The resulting restriction will increase pressure drop. Make sure head is installed with flow arrows pointing in proper direction. Use pipe thread compound as required.

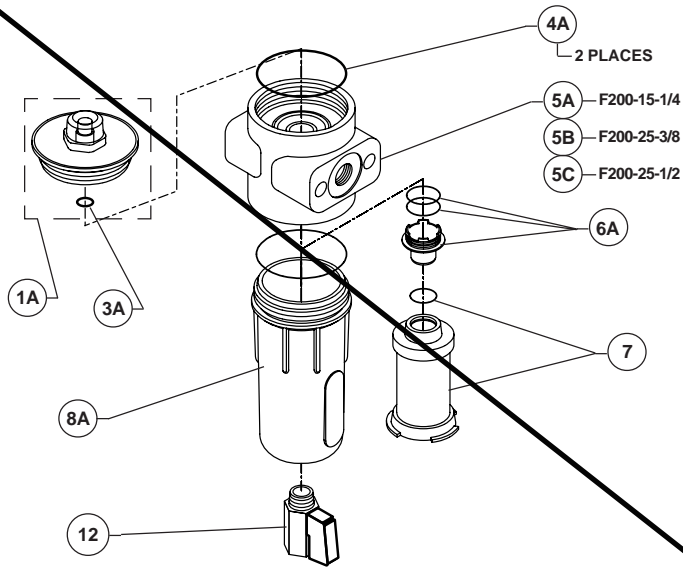
### IMPORTANT

**INSTALL FILTER HEAD INTO THE PIPING WITH ARROWS POINTING IN THE PROPER DIRECTION TO ENSURE PROPER OPERATION. (SEE FLOW DIRECTION DIAGRAM BELOW).**

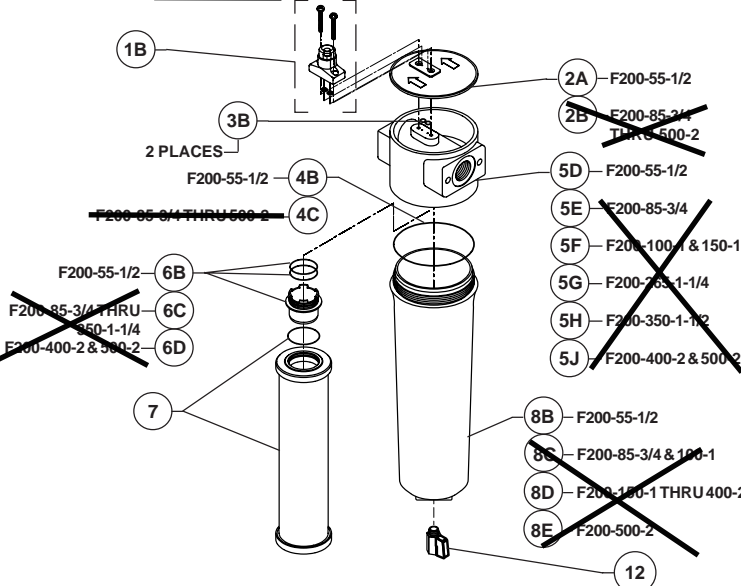
8. Install element by pushing onto element locator on filter head.
9. Check to make sure that the o-ring in the head is in the proper position. Thread filter bowl into filter head and tighten either by hand (models F200-15 through 55) or with strap wrench (models F200-85 through 1000). Do not over tighten. Over-tightening could damage filter bowl or make it difficult to remove.
10. Make sure drain valve on bottom of filter is closed. On filters equipped with ADM2-2 auto drain, provide a drain line to remove accumulated water and oil.
11. Pressurize system and slowly open inlet and outlet shutoff valves.
12. Check piping for leaks. Depressurize system and repair leaks as needed.
13. Re-pressurize system and slowly open inlet and outlet shutoff valves. Close bypass valve if provided.
14. Filter is now in service.



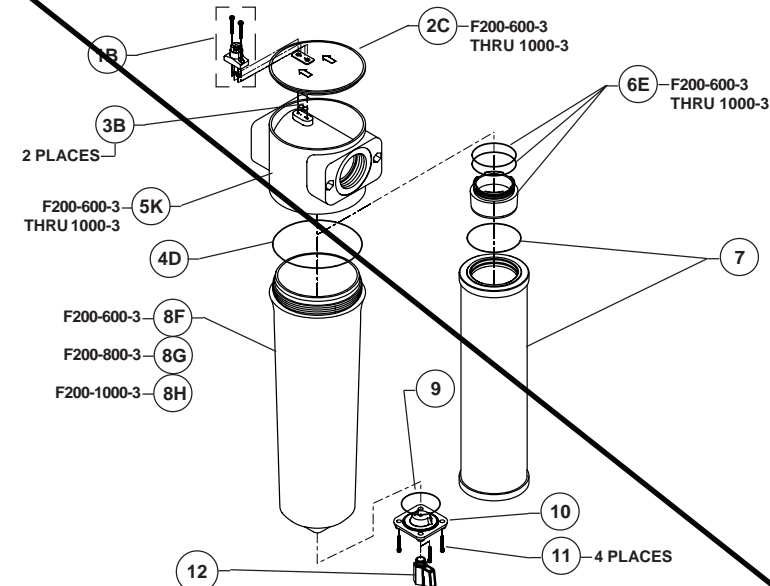
**FIGURE 2A F200-15-1/4 THRU 25-1/2 REPLACEMENT PARTS**



**FIGURE 2B F200-55-1/2 THRU 500-2 REPLACEMENT PARTS**



**FIGURE 2C F200-600-3 THRU 1000-3 REPLACEMENT PARTS**



**Finding a part number**

1. Find the figure that references your filter.
2. Find the replacement part you need and the item number of that part.
3. Find the item number in the first column of the **Replacement Parts** table.
4. Find the part description that best describes the part.
5. See the last column for the part number.

**REPLACEMENT PARTS**

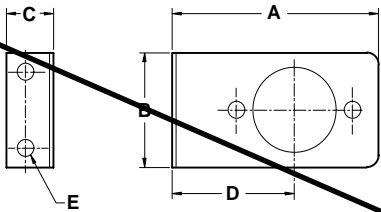
ITEM	PART DESCRIPTION	FIG 2-	QTY	PART NO.
1A	PD-6A-C DIFFERENTIAL PRESSURE INDICATOR KIT FOR COALESCING FILTERS	A	1	84-10126
	PD-6A-P DIFFERENTIAL PRESSURE INDICATOR KIT FOR PARTICULATE FILTERS	A	1	84-10127
1B	PD-6 DIFFERENTIAL PRESSURE INDICATOR KIT	B,C	1	84-10125
2A	BLANKING PLATE FOR F200-55-1/2	B	1	326-00110
2B	BLANKING PLATE FOR F200-85-3/4 THRU 500-2	B	1	326-00120
2C	BLANKING PLATE FOR F200-600-3 THRU 1000-3	B	1	326-00130
3A	BLANKING PLATE O-RING FOR F200-15-1/4 THRU 25-1/2	A	1	475-00110
3B	BLANKING PLATE O-RING FOR F200-55-1/2 THRU 1000-3	B,C	2	475-00006
4A	BODY O-RING FOR F200-15-1/4 THRU 25-1/2	A	2	475-01000
4B	BODY O-RING FOR F200-55-1/2	B	1	475-00146
4C	BODY O-RING FOR F200-85-3/4 THRU 500-2	B	1	475-00242
4D	BODY O-RING FOR F200-600-3 THRU 1000-3	C	1	475-00362
5A	1/4" NPT FILTER HEAD FOR F200-15-1/4	A	1	201-00100
5B	3/8" NPT FILTER HEAD FOR F200-25-3/8	A	1	201-00110
5C	1/2" NPT FILTER HEAD FOR F200-25-1/2	A	1	201-00120
5D	1/2" NPT FILTER HEAD FOR F200-55-1/2	B	1	201-00130
5E	3/4" NPT FILTER HEAD FOR F200-85-3/4	B	1	201-00140
5F	1" NPT FILTER HEAD FOR F200-100-1 & 150-1	B	1	201-00150
5G	1-1/4" NPT FILTER HEAD FOR F200-265-1-1/4	B	1	201-00160
5H	1-1/2" NPT FILTER HEAD FOR F200-350-1-1/2	B	1	201-00170
5J	2" NPT FILTER HEAD FOR F200-400-2 & F200-500-2	B	1	201-00180
5K	3" NPT FILTER HEAD FOR F200-600-3 THRU 1000-3	C	1	201-00200
6A	EPL1 ELEMENT ADAPTOR FOR F200-15-1/4 THRU 25-1/2	A	1	326-00005
6B	EPL2 ELEMENT ADAPTOR FOR F200-55-1/2	B	1	326-00010
6C	EPL3 ELEMENT ADAPTOR F200-85-3/4 THRU 265-1-1/4	B	1	326-00015
6D	EPL4 ELEMENT ADAPTOR FOR F200-350-1-1/2 THRU 500-2	B	1	326-00020
6E	EPL5 ELEMENT ADAPTOR FOR F200-600-3 THRU 1000-3	C	1	326-00025
7	REPLACEMENT ELEMENTS (REFER TO PAGE 5)			
8A	FILTER BOWL FOR F200-15-1/4 THRU 25-1/2	A	1	201-01000
8B	FILTER BOWL FOR F200-55-1/2	B	1	201-01010
8C	FILTER BOWL FOR F200-85-3/4 & 100-1	B	1	201-01020
8D	FILTER BOWL FOR F200-150-1 THRU 400-2	B	1	201-01030
8E	FILTER BOWL FOR F200-500-2	B	1	201-01040
8F	FILTER BOWL FOR F200-600-3	C	1	201-01050
8G	FILTER BOWL FOR F200-800-3	C	1	201-01060
8H	FILTER BOWL FOR F200-1000-3	C	1	201-01070
9	DRAIN ADAPTOR O-RING	C	1	475-00142
10	DRAIN ADAPTOR PLATE	C	1	261-00006
11	DRAIN ADAPTOR SCREW	C	4	460-00100
12	MANUAL DRAIN 1/4" KIT	A,B, C	1	84-10852

**REPLACEMENT ELEMENTS**

<b>FILTER MODEL</b>	<b>ELEMENT MODEL</b>	<b>PART NUMBER</b>		<b>FILTER MODEL</b>	<b>ELEMENT MODEL</b>	<b>PART NUMBER</b>
F200-15-1/4, F200-25-3/8 & F200-25-1/2	E200-15/25-AA	26-10400		F200-265-1-1/4	E200-265-RB	26-2108
	E200-15/25-RAA	26-10401			E200-265-C	26-2086
	E200-15/25-A	26-10402			E200-265-RC	26-2119
	E200-15/25-RA	26-10403			E200-265-RD	26-2156
	E200-15/25-B	26-10404			F200-350-1-1/2 & 400-2	E200-350/400-AA
	E200-15/25-RB	26-10405		E200-350/400-RAA		26-10410
	E200-15/25-C	26-10406		E200-350/400-A		26-10411
	E200-15/25-RC	26-10407		E200-350/400-RA		26-10412
	E200-15/25-RD	26-10408		E200-350/400-B		26-10413
	F200-55-1/2	E200-55-AA		26-10032	→	E200-350/400-RB
E200-55-RAA		26-10107	E200-350/400-C	26-10415		
E200-55-A		26-2059	E200-350/400-RC	26-10416		
E200-55-RA		26-2092	E200-350/400-RD	26-10417		
E200-55-B		26-2070	F200-500-2	E200-500-AA		26-10418
E200-55-RB		26-2103		E200-500-RAA		26-10419
E200-55-C		26-2081		E200-500-A		26-10420
E200-55-RC		26-2114		E200-500-RA		26-10421
E200-55-RD		26-2151		E200-500-B		26-10422
F200-85-3/4		E200-85-AA	26-10034			E200-500-RB
	E200-85-RAA	26-10109	E200-500-C		26-10424	
	E200-85-A	26-2061	E200-500-RC		26-10425	
	E200-85-RA	26-2094	E200-500-RD		26-10426	
	E200-85-B	26-2072	F200-600-3		E200-600-AA	26-10427
	E200-85-RB	26-2105			E200-600-RAA	26-10428
	E200-85-C	26-2083			E200-600-A	26-10429
	E200-85-RC	26-2116			E200-600-RA	26-10430
	E200-85-RD	26-2153			E200-600-B	26-10431
	F200-100-1	E200-100-AA	26-10035			E200-600-RB
E200-100-RAA		26-10110	E200-600-C	26-10433		
E200-100-A		26-2062	E200-600-RC	26-10434		
E200-100-RA		26-2095	E200-600-RD	26-10435		
E200-100-B		26-2073	F200-800-3	E200-800-AA		26-10436
E200-100-RB		26-2106		E200-800-RAA		26-10437
E200-100-C		26-2084		E200-800-A		26-10438
E200-100-RC		26-2117		E200-800-RA		26-10439
E200-100-RD		26-2154		E200-800-B		26-10440
F200-150-1		E200-150-AA	26-10036			E200-800-RB
	E200-150-RAA	26-10111	E200-800-C		26-10442	
	E200-150-A	26-2063	E200-800-RC		26-10443	
	E200-150-RA	26-2096	E200-800-RD		26-10444	
	E200-150-B	26-2074	F200-1000-3		E200-1000-AA	26-10040
	E200-150-RB	26-2107			E200-1000-RAA	26-10115
	E200-150-C	26-2085			E200-1000-A	26-2067
	E200-150-RC	26-2118			E200-1000-RA	26-2100
	E200-150-RD	26-2155			E200-1000-B	26-2078
	F200-265-1-1/4	E200-265-AA	26-10037			E200-1000-RB
E200-265-RAA		26-10112	E200-1000-C	26-2089		
E200-265-A		26-2064	E200-1000-RC	26-2122		
E200-265-RA		26-2097	E200-1000-RD	26-2159		
E200-265-B		26-2075				

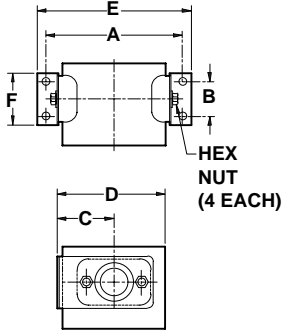
# ACCESSORIES

MOUNTING BRACKET KITS



**MOUNTING BRACKET DIMENSIONS**

TYPE	A	B	C	D	E
MB-1	2-15/16"	1-9/16"	13/16"	1-3/4"	1/4"
MB-1-2	2-15/16"	1-9/16"	13/16"	1-3/4"	1/4"
MB-2	4-5/16"	2-3/8"	1"	2-9/16"	5/16"
MB-2-2	4-3/4"	2-3/4"	1"	2-3/4"	5/16"
MB-3-2	7-1/8"	4-15/16"	1-3/16"	3-15/16"	3/8"



**INSTALLED MOUNTING BRACKET KIT DIMENSIONS**

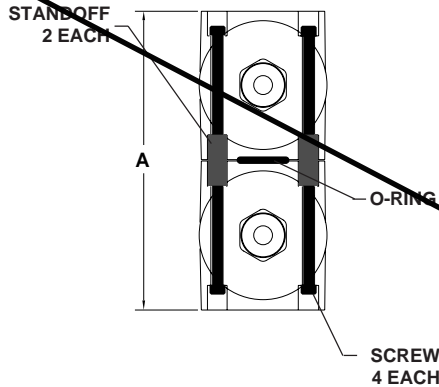
TYPE	USED ON	PART NO	A	B	C	D	E
MB-1	55	84-0720	4-1/2"	1-1/4"	1-3/4"	3-5/16"	5-1/4"
MB-1-2	15 THRU 25	84-10130	3-3/4"	1-1/4"	1-3/4"	3"	4-7/16"
MB-2	85 THRU 265	84-0721	5-15/16"	1-9/16"	2-9/16"	4-7/8"	6-11/16"
MB-2-2	350 THRU 500	84-10131	6-1/2"	2"	2-3/4"	5-1/4"	7-5/16"
MB-3-2	600 THRU 1000	84-10132	9-5/16"	3-3/4"	3-15/16"	7-7/16"	10-1/4"

KITS FOR MB-1 THRU MB-2-2 INCLUDES (2) MOUNTING BRACKETS, (2) TIE RODS, (2) WASHERS, & (2) NUTS.

KIT FOR MB-3-2 INCLUDES (2) MOUNTING BRACKETS, (4) SCREWS, (4) WASHERS, & (4) NUTS.

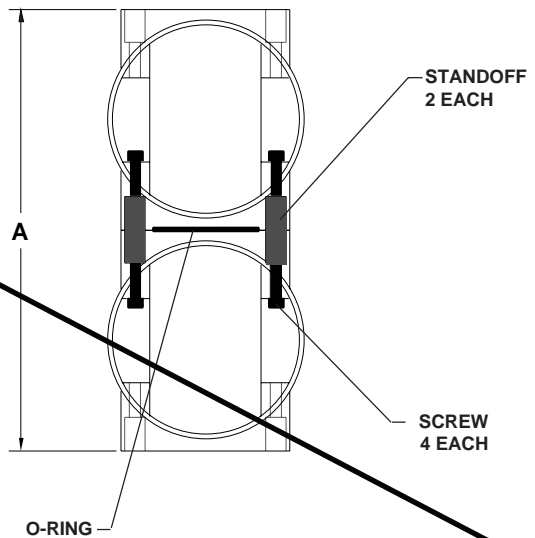
CONNECTOR KITS

**CK-1 & CK-1-2**



**CK-2, CK-2-2 & CK-3-2**

NOTE: BLANKING PLATES REMOVED FOR CLARITY.

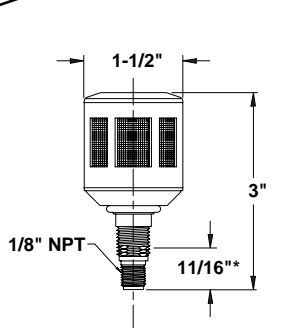


**CONNECTOR KIT DETAILS**

MODEL	A	USED FOR (GF200-)	PART NO
CK-1	7"	55	84-0723
CK-1-2	5-3/4"	15 THRU 25	84-10133
CK-2	9-7/8"	85 THRU 265	84-0724
CK-2-2	10-11/16"	350 THRU 500	84-10134
CK-3-2	15-3/4"	600 THRU 1000	84-10135

DRAIN KITS

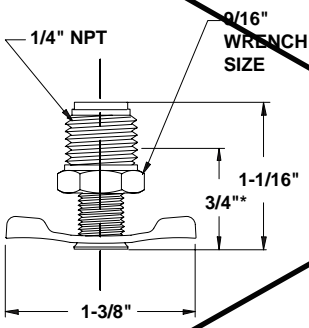
**ADM-2-2 AUTO DRAIN (P/N: 84-10120)**



KIT INCLUDES (1) AUTO DRAIN, (1) NUT, (1) O-RING & INSTRUCTION SHEET.

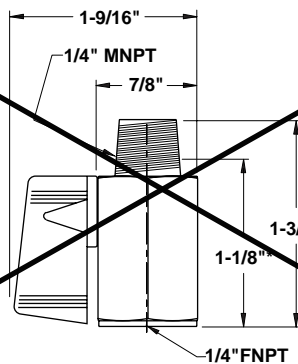
\* DIMENSION EXTENDING OUT OF FILTER HOUSING

**1/4" PETCOCK MANUAL DRAIN (P/N: 84-10850)**



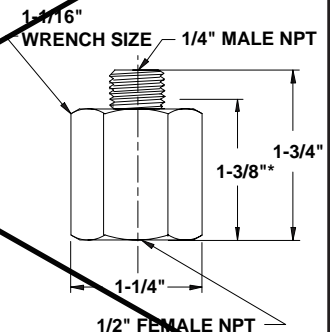
\* DIMENSION EXTENDING OUT OF FILTER HOUSING

**1/4" BALL VALVE MANUAL DRAIN (P/N: 84-10852)**



\* DIMENSION EXTENDING OUT OF FILTER HOUSING

**1/4" TO 1/2" DRAIN ADAPTER (P/N: 84-10851)**



\* DIMENSION EXTENDING OUT OF FILTER HOUSING

## ACCESSORIES CONT'D

DIFFERENTIAL PRESSURE INDICATOR KITS

PD-4 (P/N: 84-0764)	PD-5 (P/N: 84-10001)	PD-6 (P/N: 84-10125)
<p>FITS ALL MODELS EXCEPT F200-15-1/4 THRU 25-1/2.</p> <p>KIT INCLUDES (1) PD-4, (2) SCREWS, (4) O-RINGS &amp; INSTRUCTION SHEET. *DIMENSIONS EXTENDING ABOVE FILTER HOUSING.</p>	<p>FITS ALL MODELS EXCEPT F200-15-1/4 THRU 25-1/2.</p> <p>KIT INCLUDES (1) PD-5, (2) SCREWS, (4) O-RINGS &amp; INSTRUCTION SHEET. *DIMENSIONS EXTENDING ABOVE FILTER HOUSING.</p>	<p>FITS ALL MODELS EXCEPT F200-15-1/4 THRU 25-1/2.</p> <p>KIT INCLUDES (1) PD-6, (2) SCREWS, (4) O-RINGS &amp; INSTRUCTION SHEET.</p> <p style="text-align: center;"><b>PD-6A-C (P/N: 84-10126)</b> <b>PD-6A-P (P/N: 84-10127)</b></p> <p>FITS MODELS F200-15-1/4 THRU 25-1/2 ONLY.</p> <p>PD-6A-C FOR COALESCING FILTERS PD-6A-P FOR PARTICULATE FILTERS</p> <p>KIT INCLUDES (1) PD-6A, (2) O-RINGS &amp; INSTRUCTION SHEET. *DIMENSIONS EXTENDING ABOVE FILTER HOUSING.</p>

## MAINTENANCE

- Drain coalescing filters every shift.
- Check differential pressures weekly on coalescing and particulate filters (AA, A, B, C, RA, RB, and RC grades). When differential pressure reaches 10 psid, install clean elements. On adsorbing filters (grade RD), install clean elements when hydrocarbon vapors are first detected downstream or every six months, whichever comes first.
- For correct replacement element model numbers, see label on filter housing, the bottom endcap of the element, or page 5 of this instruction manual.
- When changing out element, inspect housing o-ring for nicks and/or cracks. If nicks and/or cracks are present, replace o-ring.

### TROUBLE SHOOTING

CONDITION	POTENTIAL CAUSE	RECOMMENDATION
Initial pressure drop too high	Filter undersized for flow rate.	Install larger filter.
	Filter grade too fine.	Install coarser grade element.
	Filter inlet smaller than pipe size.	Install larger filter.
Oil carryover	Oil present in system before installing filter.	Clean piping.
	Excessive inlet oil >50ppm.	Check compressor and/or gas/oil separator if compressor is rotary vane or screw type. Check lube rate if reciprocating compressor. Install coarse coalescer for prefiltration.
	Filter installed backwards.	Check flow direction (See page 1).
	Filter bowl not being drained.	Drain more frequently.
	High differential pressure.	Check element if excessive (7-10 psid or above), replace element if necessary.
	Defective seal.	Check o-ring in element.
	Incorrect element grade.	Use finer grade.
	By-pass valve leaking or open.	Close valve. Check seals on valve.
	Unfiltered gas entering from source down stream of filter.	Relocate filter or install additional filter.
Short element life	High operating temperatures.	Install, clean, replace or relocate aftercooler, or relocate filter.
	Cooling by refrigerated dryer.	Install grade C filter downstream of dryer.
	Excessive contamination.	Install coarse particulate filter immediately upstream of existing filter.
	High compression temperatures causing varnish/carbon formation.	Use compression lubricant with good temperature stability. Lower lube rates where possible. Use coarser grade filter element.
	Oil/water emulsion overloading element.	Inspect moisture separator. Remove water with better separation.
	High viscosity oil or freeze-up due to low ambient temperature.	Raise ambient temperatures. Heat trace inlet piping and housing.

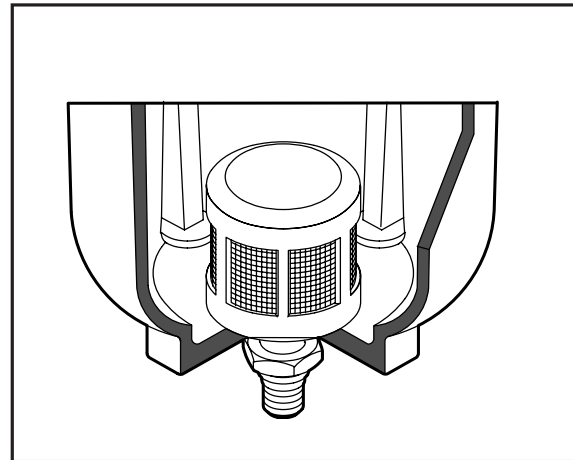
APRIL 2000  
P/N: 432-10022

SPECIFICATIONS	
MAXIMUM WORKING PRESSURE	250 PSIG
MAXIMUM TEMPERATURE	225°F
BODY MATERIAL	PLASTIC
FLOAT MATERIAL	PLASTIC
SEALS (O-RING) MATERIAL	BUNA-NITRILE
WEIGHT	1.8 OZ

**VAN AIR** INSTALLATION INSTRUCTIONS  
**ADM-2-2**  
**AUTO DRAIN KIT**  
 P/N: 84-10120  
 (FOR F200 SERIES FILTERS)

**PRODUCT PURPOSE & FUNCTION:**

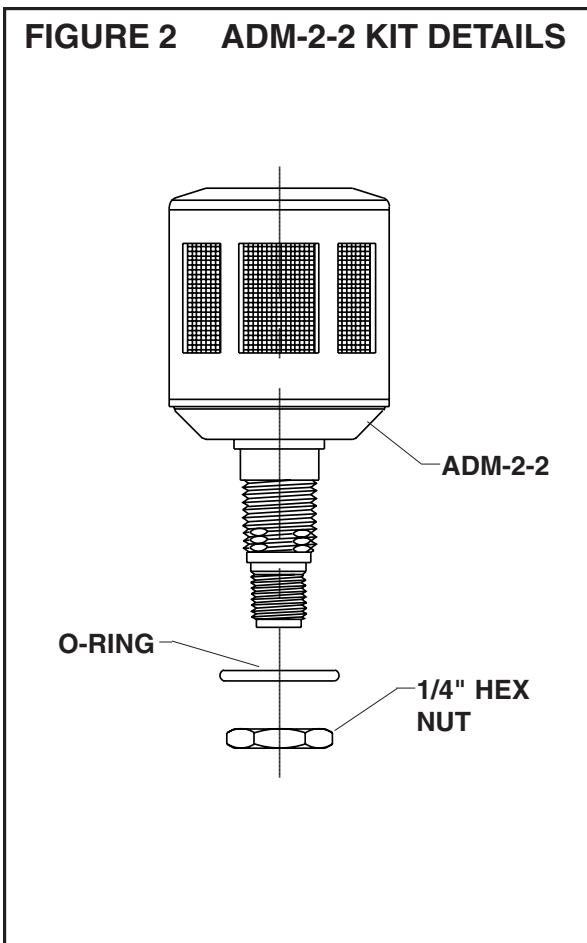
Van Air's ADM-2-2 Auto Drain provides automatic draining of effluent without the need for external power of any kind. With a screen mesh protecting the float from dirt, the ADM-2-2 functions without interruption.



2950 Mechanic Street  
 Lake City, PA 16423-2095  
 Phone: 814-774-2631  
 Fax: 814-774-3482

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**FIGURE 2 ADM-2-2 KIT DETAILS**



**KIT INCLUDES:**

QTY	DESCRIPTION
1	ADM-2-2
1	O-RING
1	1/4" HEX NUT

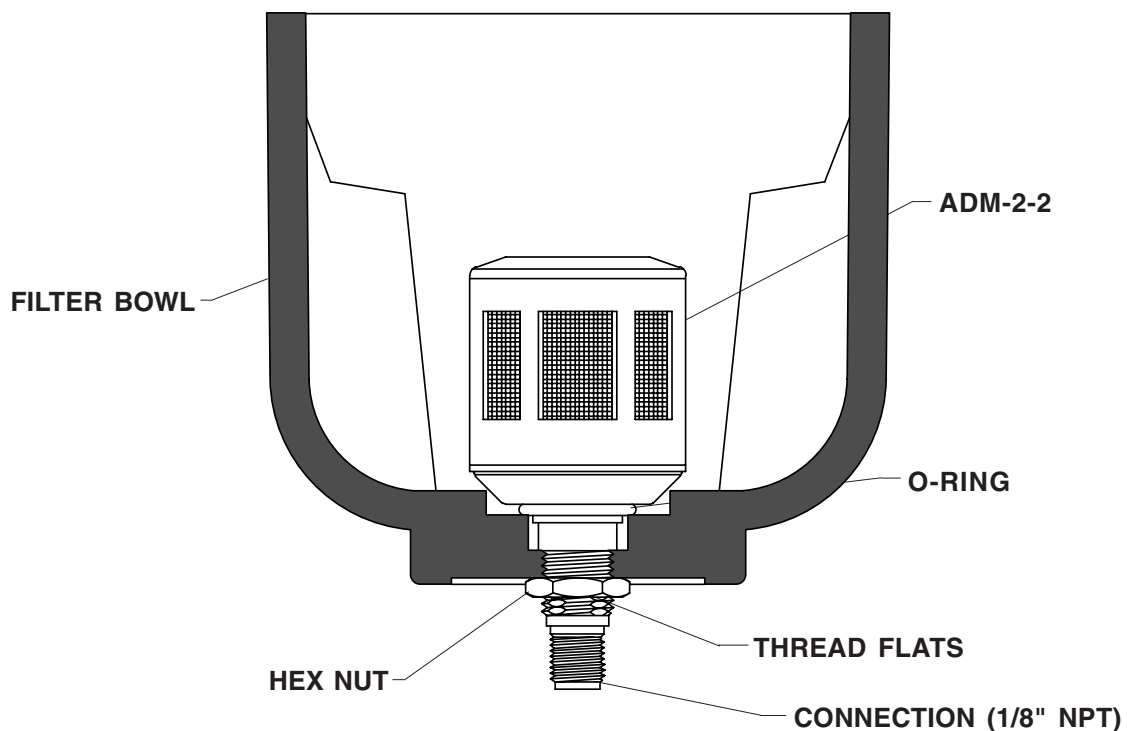
## WARNINGS

- DO NOT INSTALL ADM-2-2 TO EQUIPMENT WHILE UNDER PRESSURE.
- FOLLOW INSTRUCTIONS FOR ADM-2-2 WHEN INSTALLING INTO AIR SYSTEM.
- DO NOT OPERATE UNIT ABOVE 250 PSIG.

## INSTALLATION (Reference Figure 1)

1. Place o-ring onto ADM-2-2.
  2. Thread the ADM-2-2 into the drain hole of the filter bowl and tighten firmly by
  3. hand.
- Thread the 1/4" hex nut onto the outlet of the ADM-2-2 and tighten down with a 7/16" wrench on the thread flats and 5/8" wrench on the hex nut.

**FIGURE 1** INSTALLATION DETAILS



**SAFETY PRECAUTIONS**

Safety is everybody's business and is based on your use of good common sense. All situations or circumstances cannot always be predicted and covered by established rules. Therefore, use your past experience, watch out for safety hazards and be cautious.



**Filters****source.com**Inc

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APRIL 2000  
P/N: 432-10001

## INSTALLATION INSTRUCTIONS

# PD-5

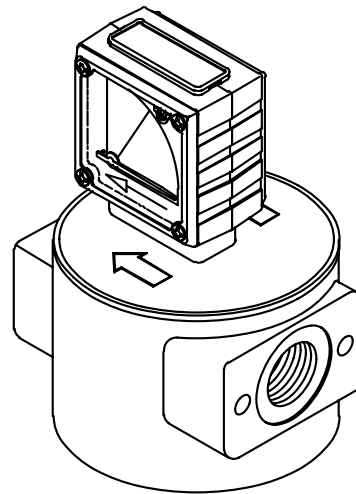
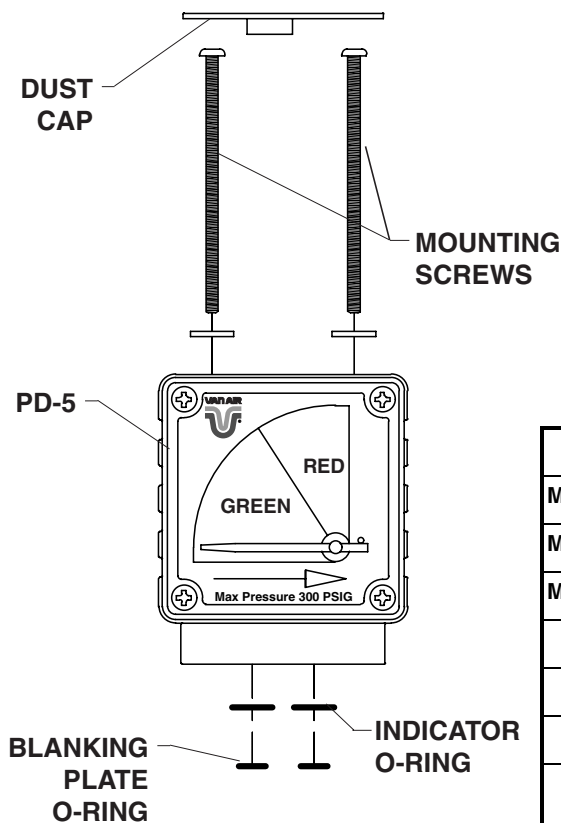
## DIFFERENTIAL PRESSURE INDICATOR KIT

P/N: 84-10001

### PRODUCT PURPOSE & FUNCTION:

Van Air's PD-5 Differential Pressure Indicators provide a visual indication for element changeout. Designed for F200-55-1/2 thru F200-1000-3 filters, the PD-5 indicator needle will point to red when a pressure drop of 10 PSID has occurred.

**FIGURE 1 PD-5 KIT DETAILS**



### SPECIFICATIONS

MAXIMUM WORKING PRESSURE	300 PSIG
MAXIMUM TEMPERATURE	225°F
<b>MATERIAL</b>	
BODY	NYLON 6
LENSES	POLYCARBONATE
SEALS (O-RINGS)	BUNA-NITRILE
MAGNETS	ANISOTROPIC FERRITE
WEIGHT	3.4 OZ

### WARNINGS

- DO NOT INSTALL PD-5 TO EQUIPMENT WHILE UNDER PRESSURE.
- FOLLOW INSTRUCTIONS FOR PD-5 WHEN INSTALLING INTO AIR SYSTEM.
- DO NOT OPERATE UNIT ABOVE 300 PSIG.
- A ZERO DIFFERENTIAL PRESSURE DOES NOT MEAN THAT THE FILTER IS DEPRESSURIZED. NEVER REMOVE THE INDICATOR AND/OR FILTER BOWL WITHOUT DEPRESSURIZING THE FILTER HOUSING AND ADJACENT PIPING. FAILURE TO DO SO MAY RESULT IN SERIOUS PERSONAL INJURY AND/OR DAMAGE TO THE FILTER HOUSING AND/OR INDICATOR.

## INSTALLATION (Reference Figure 2)

1. Remove the blanking plate from the filter head by removing the (2) screws. Note the orientation of the flow direction arrows so the plate may be reinstated correctly.
2. Turn blanking plate upside down. Remove the (2) small o-rings and discard.
3. Drill a 3/32" hole in the center of each o-ring recess. **NOTE: The PD-5 will not function if these holes are not drilled.**
4. Remove PD-5 from its packaging.
5. Install (2) new blanking plate o-rings, included in the installation kit, into the recesses on the bottom side of PD-5. **NOTE: The blanking plate o-rings are slightly smaller than the indicator o-rings.**
6. Remove dust cap from top of PD-5 so that mounting screws are exposed.
7. Install the (2) indicator o-rings into the recesses on the bottom side of the indicator.
8. Assemble and mount PD-5 and blanking plate to filter head as shown in **Figure 2**.
9. Tighten indicator screws firmly. **Do not overtighten as damage may occur to the PD-5 and/or filter head.**
10. Reinstall dust cover on indicator.

