Chicago Pneumatic

FILTERS FOR COMPRESSED AIR AND GAS

High-performance products.
Designed for you !

RELIABLE FILTRATION FOR SUPERIOR SYSTEM PROTECTION

Your compressed air system, production process and end product are three crucial elements that determine the success of your business. While air purity is an essential ingredient for the performance of your equipment processes, untreated air may cause extensive damage and lead to serious performance degradation.

During the compressed air process, the concentration of dirt particles, oil carryover and moisture increases. This creates an abrasive mixture that, when left as such, may bring about severe instrument failures and even contaminate your end product.

To protect your investment, equipment and processes, CP Compressors has developed a complete range of particulate, coalescing and adsorbing filters which efficiently reduce all types of contamination with minimal pressure drop. The innovative filtration solutions will suit the high quality air requirements of your specific process, while protecting your equipment and compressed air network from harmful contaminants.

COALESCING FILTER: CPFM

- The standard coalescing filter uses the Green M element and provides a reliable filter for overall filtration
- Excellent low pressure drop
- More effective than a particulate filter because it also removes lubricant and liquids in suspension
- Ideal as a pre-filter for removing bulk solids and liquids before

FINE COALESCING FILTER: CPFS

- The fine coalescing filter uses the Red S element and provides a high level of particulate and coalescing filtration
- Maximum coalescing efficiency available
- Excellent prevention of oil and fluid carryover into the system
- Provides technically oil-free air; exceeds ISO 8573 Class 1 for oil carryover

COALESCER FILTER MEDIA (OIL REMOVAL)					
GRADE	DESCRIPTION	COALESCING EFFICIENCY	MAXIMUM OIL CARRYOVER	MICRON RATING	PRESSURE DROP (PSID) @ RATED FLOW
M	Coalescing filter capable of separating emulsion and particles down to 0.1 micron, liquid and oil included. Maximum contents of residual oil 0.1 mg/m3.	98.5%	0.1	0.1	1.2
S	Coalescing filter capable of separating residual oil and extremely small particles down to 0.01 micron. It produces air technically free from oil.	99.981%	.008	.01	1.3

ADSORBER- CPFA

- The adsorbing filter uses the Silver A element and represents the filter that is not able to remove particulates, but is able to remove vapor and odors
- Activated carbon media provides sustained protection from harmful vapors and prevents them from moving downstream in the compressed air
- Should always be mounted after a CPFS or CPFM
- Used for sensitive applications where the highest air purities are desirable: medical, electronics, pharmaceutical, etc.

ADSORBER FILTER MEDIA (VAPOR REMOVAL)			
GRADE	DESCRIPTION	MICRON RATING	PRESSURE DROP (PSID) @ RATED FLOW
A	Activated carbon filter for the elimination of hydrocarbon vapor and odor. When installed after a CPFM or CPFS grade filter, it lowers the maximum contents of residual oil to 0.005 mg/m3.	.005	1.7

DUST FILTER: CPFD
PARTICULATE FILTER: CPFP

- The particulate filter uses the Yellow P element to filter large particulates that originate in the ambient environment
- Often used before the compressor and other large machinery where large quantities of air are ingested
- Excellent for applications where low pressure drop is a consideration

- The dust filter uses the Green D element to act as a particulate that removes 1 micron particulates
- A finer grade particulate filter for dust, this filter is often used as a pre-filter for coalescing filters
- Ideal for use throughout the compressed air circuit to remove pipe scale and debris that accumulate over time

PARTICULATE FILTER MEDIA (PARTICULATE REMOVAL)			
GRADE	DESCRIPTION	MICRON RATING	PRESSURE DROP (PSID) @ RATED FLOW
P	Particulate filter capable of separating particles down to 3 micron.	3.0	0.6
D	Particulate filter capable of separating particles down to 1 micron.	1.0	1.2

STANDARD FEATURES

Differential Pressure Gauge - Standard with Flanged Filters (Shipped Loose), 1/4" FNPT Connections

Installed Float Drain Valve Standard (Except Adsorber)

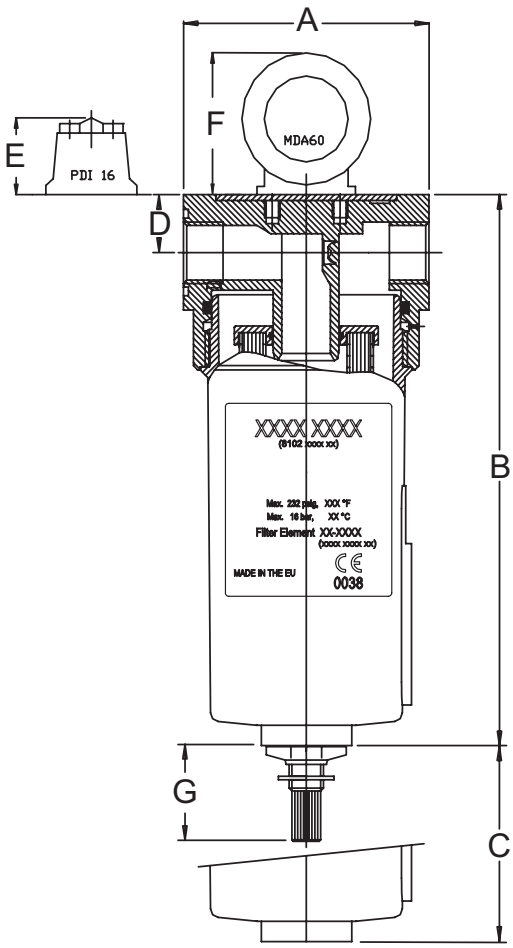
Installed Differential Pressure Gauge - Standard on 300-883 cfm Housings, Shipped Loose on 1413 cfm and Above Housings

Installed Differential Pressure Indicator Standard with 35-200 cfm Housings

- Pressure indicator for 200 cfm and below
- Push-to-fit element installation up to 471 cfm
- O-ring seals
- Max. operating pressure = 230 psi

- Mounted pressure gauge above 200 cfm
- 1 year warranty on filter housing
- Installed Float Drain Valve (except CPFA)
- Low pressure drop

NPT CONNECTION SPECIFICATIONS



NPT CONNECTION

Max Pressure:	232 PSIG (16 bar)
Max Temp.:	150ºF (65ºC) Adsorbers Max Working Temp 100ºF (38ºC)
Seals:	O-Ring
Materials:	Aluminum
Coatings:	Anti-Corrosion Treatment; Powder Coated Exterior
Design:	In-Line Threaded Bowl to Head

E = 1.4 in (35mm)
F = 3.3 in (83mm)
G = 1.3 in (34mm)

Note: "C" dimension indicates minimum clearance for element removal.

DIMENSIONS IN INCHES					
CONNECTIONS (NPT)	A	B	C	D	APPROX. WEIGHT (lbs)
3/8”	3.5	7.4	2.4	0.8	2.2
1/2”	3.5	7.4	2.4	0.8	2.2
3/4”	3.5	10.1	3.2	0.8	2.4
1”	4.9	10.3	3.9	1.3	5.3
1”	4.9	14.3	4.7	1.3	6.4
1 1/2”	4.9	17.8	5.5	1.3	7.9
1 1/2”	4.9	25.3	6.3	1.3	10.4
2”	6.4	27.4	20.5	1.9	19.0
2”	6.4	36.8	30.3	1.9	25.8
3”	9.8	42.1	30.7	2.9	61.1
3”	9.8	42.1	30.7	2.9	61.1

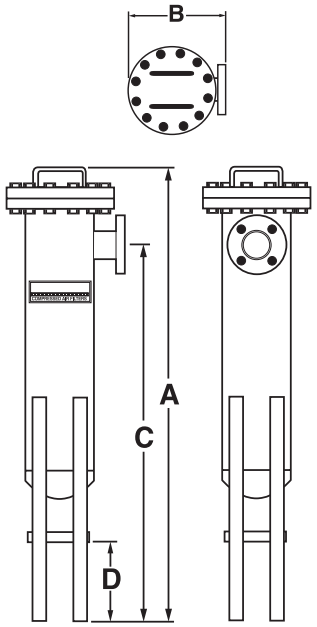
CORRECTION FACTOR (CF) FOR OPERATING PRESSURE CHANGES																
PSIG	14.5	29.0	43.5	58.0	72.5	87.0	101.5	116.0	130.5	145.0	159.5	147.1	188.6	203.1	217.6	232.1
CF	0.25	0.38	0.50	0.65	0.75	.088	1.00	1.13	1.25	1.38	1.50	1.63	1.75	1.88	2.00	2.13

Filter Size = Flow Rate divided by CF Flow Rate of Filter = Filter Size x CF

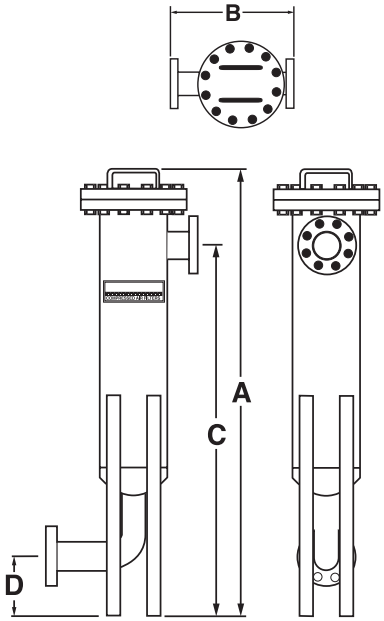
FLANGE CONNECTION SPECIFICATIONS

Max Pressure: 150 PSIG (10 bar)
Max Temp.: 175ºF (79ºC)

Seals: Nitrile standard/Viton optional
Materials: Carbon Steel Housing
Coatings: Primer with Enamel Finish coat
Design: ASME Coded and Stamped Vessel



Housing A
CPF-3-1500
CPF-4-2000
CPF-4-3000



Housing B
CPF-4-1500
CPF-6-2000
CPF-6-3000

DIMENSIONS IN INCHES					
CONNECTIONS (FLANGED)	A	B	C	D	APPROX. WEIGHT (lbs)
3”	59.75	15.06	50.00	12.00	165
4”	59.75	17.13	50.00	8.50	175
4”	60.00	21.38	50.25	15.00	320
6”	61.50	25.50	50.00	9.50	360
4”	75.38	21.38	64.00	15.00	385
6”	74.50	25.50	63.00	9.50	420

NPT CONNECTIONS

MODEL	CFM	NPT CONNECTIONS
CPF_-35	60	3/8"
CPF_-47	80	1/2"
CPF_-71	120	3/4"
CPF_-118	200	1"
CPF_-200	340	1"
CPF_-300	510	1 1/2"
CPF_-471	800	1 1/2"
CPF_-589	1000	2"
CPF_-883	1500	2"
CPF_-1413	2400	3"

Model Nomenclature

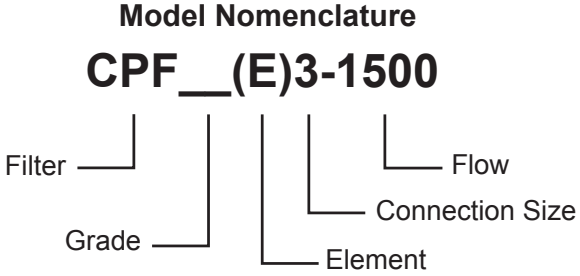
Insert letter for filter grade (shown here) based on required purity level. Add an "E" for the element only.

PART NUMBERS - FILTER & ELEMENT										
CFM	CPFM	CPFME	CPFS	CPFSE	CPFA	CPFAE	CPFD	CPFDE	CPFP	CPFPE
35	8102807495	2258290000	8102807503	2258290001	8102807511	2258290002	8102807529	2258290000	8102807537	2258290003
47	8102807545	2258290004	8102807552	2258290005	8102807560	2258290006	8102807578	2258290004	8102807586	2258290007
71	8102807594	2258290008	8102807602	2258290009	8102807610	2258290010	8102807628	2258290008	8102808733	2258290011
118	8102808741	2258290012	8102808758	2258290013	8102808766	2258290014	8102808774	2258290012	8102808782	2258290015
200	8102808790	2258290016	8102808808	2258290017	8102808816	2258290018	8102808824	2258290016	8102808832	2258290019
300	8102808840	2258290020	8102808857	2258290021	8102808865	2258290022	8102808873	2258290020	8102808881	2258290023
471	8102808899	2258290024	8102808907	2258290025	8102808915	2258290026	8102808923	2258290024	8102808931	2258290027
589	8102808949	2258290028	8102808956	2258290029	8102808964	2258290030	8102808972	2258290028	8102808980	2258290031
883	8102808998	2258290032	8102809004	2258290033	8102809012	2258290034	8102809020	2258290032	8102809038	2258290035
1413	8102809046	2258290036	8102809053	2258290037	8102809061	2258290038	8102809079	2258290036	8102809087	2258290039

FLANGE CONNECTIONS

MODEL	CFM	FLANGE CONNECTIONS
CPF_3-1500	1500	3"
CPF_4-1500	1500	4"
CPF_4-2000	2000	4"
CPF_6-2000	2000	6"
CPF_4-3000	3000	4"
CPF_6-3000	3000	6"

Model Nomenclature



Insert letter for filter grade (shown here) based on required purity level. Add an "E" for the element only.

		COALESCING		PARTICULATE		ADSORBING	
CFM	FLANGE	CPFC	CPFCE	CPFP	CPFPE	CPFA	CPFAE
1500	3"	1624502079	1624502097	1624502085	1624502100	1624502091	1624502103
1500	4"	1624502080	1624502097	1624502086	1624502100	1624502092	1624502103
2000	4"	1624502081	1624502098	1624502087	1624502101	1624502093	1624502104
2000	6"	1624502082	1624502098	1624502088	1624502101	1624502094	1624502104
3000	4"	1624502083	1624502099	1624502089	1624502102	1624502095	1624502105
3000	6"	1624502084	1624502099	1624502090	1624502102	1624502096	1624502105

FILTER GRADE					
	-M	-S	-A	-D	-P
Filter Type	Coalescing	Fine Coalescing	Activated Carbon	Dust Filter	Pre-Filter
Element Color	Green	Red	Silver	Green	Yellow
Flow Direction	IN to OUT	IN to OUT	IN to OUT	OUT to IN	IN to OUT
Solid Filtration Grade [µ]	0.1	0.01	-	1	3
Oil Filtration (ppm)	0.1	0.01	0.005	-	-
Initial Pressure Drop (psi)	1.2	1.3	1.7	1.2	0.6
Max. Temperature (C°)	66	66	35	66	66
Max. Pressure Drop (psi)	7.2	7.2	7.2	7.2	7.2

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