CompAir
by Gardner Denver

CFT Modular Filter Range

Oil-free air at the point of use

> Max. remaining oil content of 0.003 mg/m^3 is cleaner than Class 1 therefore CFT Delivers Class 0 air quality for total oil when used with CF grade filters

"Technically Oil Free Air" from Oil Lubricated & Oil Free Compressors

When compressed air is required to meet ISO8573-1 Class 1 air quality via oil free or oil lubricated compressors the CFT Oil Vapour Removal filter is an essential component of the compressed air system.

CFT Oil Vapour Removal filters are designed to reduce oil vapour and also overcome the issues of traditional loose filled carbon towers.

Manufactured from extruded aluminium, the CFT is smaller and lighter than equivalent carbon towers. Compact activated carbon cartridges utilise a unique filling technique to maximise packing density of the adsorbent bed.

Retained to prevent movement,100% of the activated carbon bed is then utilised during operation, guaranteeing performance, whilst the heavy attrition, dusting and blocked particulate filters associated with carbon tower designs is eliminated. The use of cartridges also provides trouble free maintenance, reducing system downtime.

Oil free plant air can be affected by many factors such as pressure, temperature, air flow, oil concentration and humidity. The CFT selection process considers all of these factors to ensure consistent outlet air quality over 12 months of continuous operation.

Benefits:

Air quality guarantee
CFT is matched to all inlet parameters maintaining effective operation for 12 months. Correct sizing ensures seasonal variations in temperature do not affect delivered air quality

Suitable for use with oil lubricated and oil free compressors
CFT provides "Technically Oil Free Air" when used in conjunction with water separators and coalescing filters

ISO8573-1 Class 1 for total oil delivered air quality
Tested in accordance with ISO8573-5 and third party performance validated by Lloyds Register

Plant scale or application specific oil vapour removal
Can be installed in the compressor room for plant scale protection, at point of use to protect critical applications (or both if old, contaminated piping is in use)

FDA Title 21 compliant & EC1935 exempt
Materials of construction make CFT suitable for use with applications in the food, beverage and pharmaceutical industries

Unique adsorbent fill technique
Providing maximum packing density, eliminating dusting, performance degradation and blocked outlet filters

Modular construction
Large capacity bed reduces the number of units required but still offers a compact and lightweight design with flexible inlet / outlet connectivity

Easy maintenance
Servicing of CFT is easy as piping can remain in-situ, whilst use of active carbon cartridges offers quick, clean, simple maintenance

CFT Oil Vapour Removal Filter

Point of Use Oil Vapour Removal Grade D Filtration Performance

Filtration Grade	Filter Type	Particle Removal (incl. Water & Oil Aerosols)	Max Remaining Oil Content at 35°C (95°F)	Filtration Efficiency	Test Method Used	Inlet Challenge Concentration	Initial Dry Differential Pressure	Initial Saturated Differential Pressure	Adsorbent Life	Precede with Grade
CFT	Oil Vapour Removal	N/A	0.003 mg/m³ 0.003 ppm (w)	N/A	ISO8573-5	0.05 mg/m³	<350 mbar <5 psi	N/A	*12 months	B + C

*When corrected to match systems conditions.

Product Selection

Stated flows are for operation at 7 bar g (100 psi g), 35°C (95°F) for flows at other conditions use correction factors below.

Model	Pipe Size	Flow @ 7 bar g, 20°C				Replacement Cartridge	No. Required
		L/s	m³/min	m³/hr	cfm		
CFT052GD	2	87	5.2	314	185	CE052D	1
CFT106GD	2	177	10.6	637	375	CE106D	1
CFT212GD	2	354	21.2	1274	750	CE212D	1
CFT319GD	2½	531	31.9	1911	1125	CE319D	1
CFT425GD	2½	708	42.5	2549	1500	CE425D	1
CFT531GD	2½	885	53.1	3186	1875	CE531D	1
2 x CFT550GD	2½	1770	106.2	6371	3750	CE531D	2
3 x CFT550GD	2½	2655	159.3	9557	5625	CE531D	3
4 x CFT550GD	2½	3540	212.4	12743	7500	CE531D	4
5 x CFT550GD	2½	4424	265.5	15928	9375	CE531D	5

Correction Factors Temperature (CFT)

Oil Lubricated Compressors		
°C	°F	Correction Factor
25	77	1.00
30	86	1.00
35	95	1.00
40	104	1.25
45	113	1.55
50	122	1.90

Correction Factors Temperature (CFT)

Oil Free Compressors		
°C	°F	Correction Factor
25	77	1.00
30	86	1.00
35	95	1.00
40	104	1.02
45	113	1.04
50	122	1.05

Correction Factors Pressure (CFP)

bar g	psi g	Correction Factor
3	44	2.00
4	58	1.60
5	73	1.33
6	87	1.14
7	100	1.00
8	116	1.00
9	131	1.00
10	145	1.00
11	160	1.00
12	174	1.00
13	189	1.00
14	203	1.00
15	218	1.00
16	232	1.00

Correction Factors - Inlet Dewpoint (CFD)

Dewpoint	°C	°F	Correction Factor
Dry	-70 to +3	-100 to +38	1.00
Wet	> +3 and above	> +38 and above	4.00

It is assumed inlet oil vapour concentration does not exceed 0.05mg/m³ at 35°C (95°F).

For applications with higher oil vapour concentrations, please contact CompAir for accurate sizing.

Filter Selection - Grade CFT

To correctly select an CFT oil vapour removal filter, the flow rate of the CFT must be adjusted for the minimum operating pressure, maximum operational temperature and pressure dewpoint of the system.

1. Obtain the minimum operating pressure, maximum inlet temperature, maximum compressed air flow rate and dewpoint of the compressed air at the inlet of the CFT.
2. Select correction factor for maximum inlet temperature from the CFT table to compressor type (always round up e.g. for 37°C use 40°C correction factor).
3. Select correction factor for minimum inlet pressure from the CFP table that corresponds type (always round down e.g. for 5.3 bar use 5 bar correction factor).
4. Select correction factor for pressure dewpoint from the CFD table.
5. Calculate minimum filtration capacity
   Minimum filtration Capacity = Compressed Air Flow x CFT x CFP x CFD
6. Using the minimum filtration capacity, select a CFT model from the flow rate tables above (CFT selected must have a flow rate equal to or greater than the minimum filtration capacity).
   If the minimum filtration capacity exceeds the maximum values of the models shown within the tables, please contact CompAir for advice regarding larger multi-banked units

Weights and Dimensions

Model	Connection [inch]	Dimensions [mm]			Weight [kg]
		Height	Width	Depth	
CFT052GD	2	245	87	314	28.5
CFT106GD	2	590	177	637	62.5
CFT212GD	2	735	354	1274	71.2
CFT319GD	2½	888	531	1911	92.8
CFT425GD	2½	1065	708	2549	100.6
CFT531GD	2½	1234	885	3186	122.0