



## GDFT Oil Vapour Removal Filter

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

GDFT 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 GDFT 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 GDFT selection process considers all of these factors to ensure consistent outlet air quality over 12 months of continuous operation.

### “Technically Oil Free Air” from Oil Lubricated & Oil Free Compressors

#### Benefits:

- **Air Quality Guarantee**  
GDFT 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**  
GDFT 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 3rd 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 GDFT 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 light weight design with flexible inlet / outlet connectivity
- **Simple, easy maintenance**  
Servicing of GDFT is easy as piping can remain in-situ, whilst use of active carbon cartridges offers quick, clean, simple maintenance

# GDFT Oil Vapour Removal Filter

## Point of Use Oil Vapour Removal Grade V Filtration Performance

Filtration Grade	Filter Type	Particle Removal (inc 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
GDFT	Oil Vapour Removal	N/A	0.003 mg/m <sup>3</sup> 0.003 ppm (w)	N/A	ISO8573-5	0.05mg/m <sup>3</sup>	<350 mbar <5 psi	N/A	*12 months	G + H

\*When corrected to match systems conditions.

### Product selection

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

Model	Pipe Size	L/s	m <sup>3</sup> /min	m <sup>3</sup> /hr	cfm	Replacement Cartridge	No. Required
GDFT052GV	2	87	5.2	314	185	GDE052V	1
GDFT106GV	2	177	10.6	637	375	GDE106V	1
GDFT212GV	2	354	21.2	1274	750	GDE212V	1
GDFT319GV	2½	531	31.9	1911	1125	GDE319V	1
GDFT425GV	2½	708	42.5	2549	1500	GDE425V	1
GDFT531GV	2½	885	53.1	3186	1875	GDE531V	1
2 x GDFT531GV	2½	1770	106.2	6371	3750	GDE531V	2
3 x GDFT531GV	2½	2655	159.3	9557	5625	GDE531V	3
4 x GDFT531GV	2½	3540	212.4	12743	7500	GDE531V	4
5 x GDFT531GV	2½	4424	265.5	15928	9375	GDE531V	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	1.25
45	113	1.55
50	122	1.90

### 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)

	°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/m<sup>3</sup> at 35°C (95°F). For applications with higher oil vapour concentrations, please contact Gardner Denver for accurate sizing.

#### Filter Selection - Grade GDFT

To correctly select an GDFT oil vapour removal filter, the flow rate of the GDFT 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 GDFT.
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 GDFT model from the flow rate tables above (GDFT 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 Gardner Denver for advice regarding larger multi-banked units

### Weights and Dimensions

Model	Pipe Size	Height		Width		Depth		Weight	
		mm	ins	mm	ins	mm	ins	kg	lbs
GDFT052GV	2"	792	31.2	245	9.6	230	9.1	28.5	62.8
GDFT106GV	2"	1009	39.7	590	23.2	550	21.7	62.5	137.8
GDFT212GV	2"	1009	39.7	735	28.9	550	21.7	71.5	157.6
GDFT319GV	2½"	1009	39.7	888	35.0	550	21.7	92.8	204.6
GDFT425GV	2½"	1009	39.7	1065	41.9	550	21.7	100.6	221.8
GDFT531GV	2½"	1009	39.7	1234	48.6	550	21.7	122.0	269.0

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For additional information please contact Gardner Denver or your local representative. Specifications subject to change without notice.

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