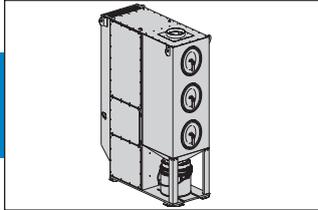


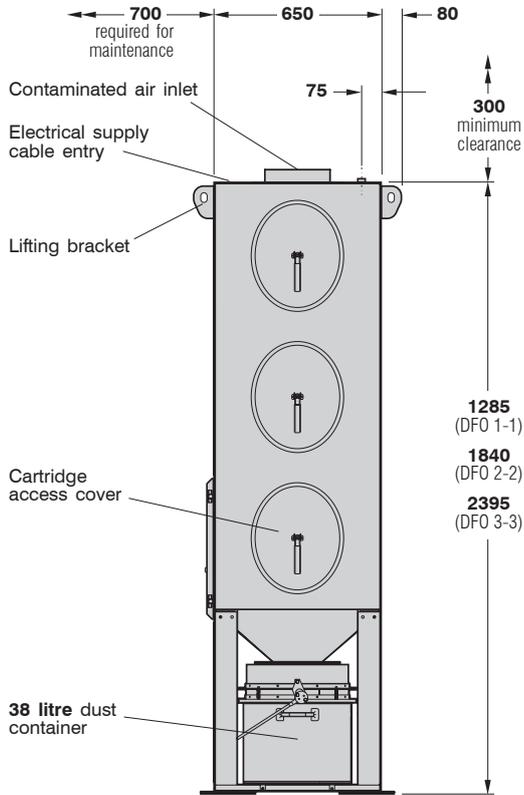
# Downflo® Oval Dust Collectors

Series DFO 1-1, 2-2 and 3-3

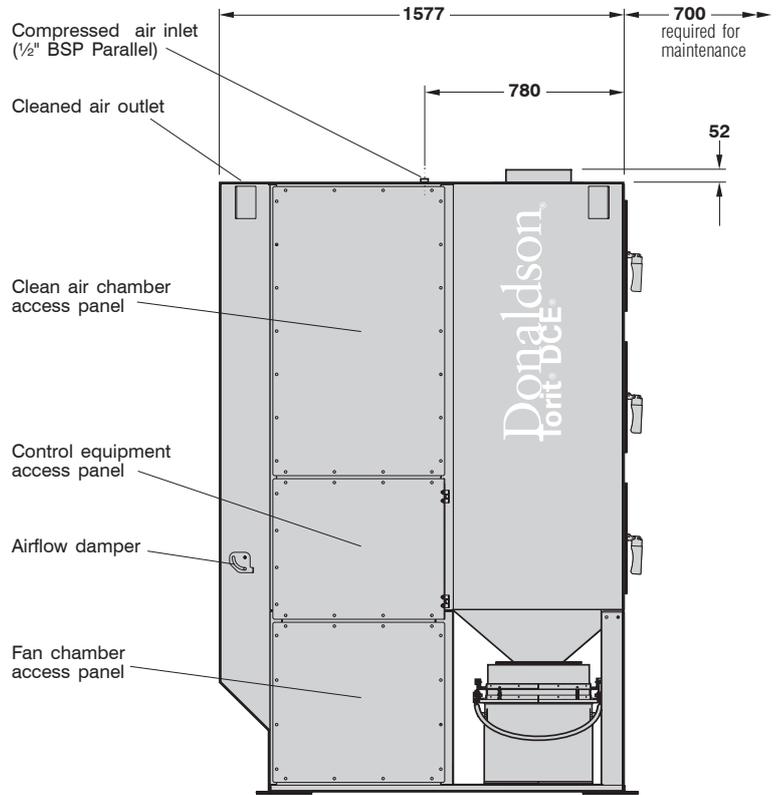


## DFO STANDARD DUST COLLECTOR

Suitable for inside locations and outside when fitted with optional weather cowl.  
(DFO 3-3 illustrated).



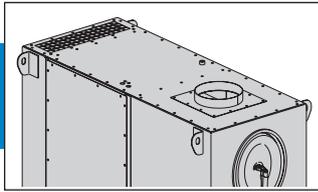
FRONT ELEVATION



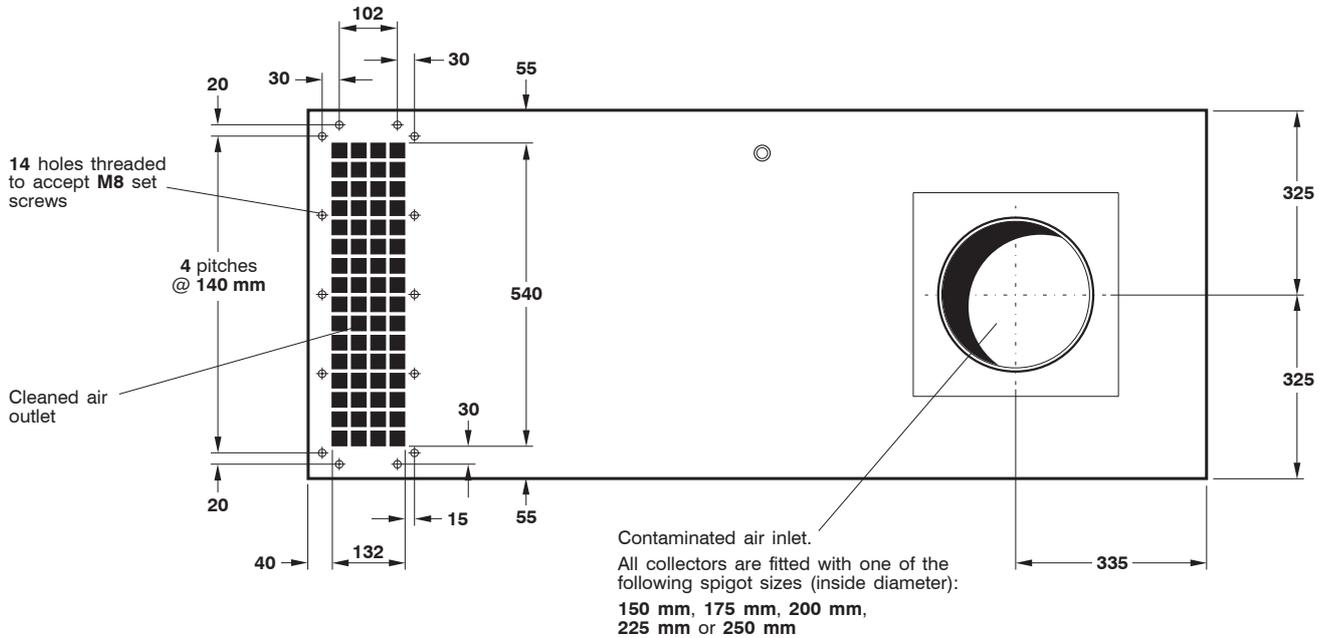
SIDE ELEVATION

Type	Filtration area (Ultra-Web®)	Number of cartridges	Fan	Motor rating	Net weight (approx.)
DFO 1-1	17.7 m <sup>2</sup>	1	K3	1.5 kW	355 kg
			K5	2.2 kW	364 kg
DFO 2-2	35.4 m <sup>2</sup>	2	K3	1.5 kW	445 kg
			K5	2.2 kW	454 kg
			K7	3.0 kW	450 kg
DFO 3-3	53.1 m <sup>2</sup>	3	K5	2.2 kW	580 kg
			K7	3.0 kW	576 kg
			G8	5.5 kW	601 kg

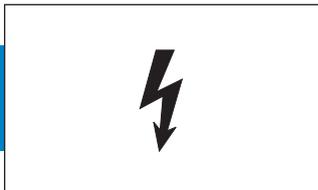
**Downflo® Oval Dust Collectors – Series DFO 1-1, 2-2 and 3-3**



**CLEANED AIR OUTLET AND  
CONTAMINATED AIR INLET DETAILS**



PLAN ELEVATION



**ELECTRICAL REQUIREMENTS**

**EVC Controller (standard) or UCS Controller (optional)**

- DFO 1-1 collectors: 1-way controller
- DFO 2-2 collectors: 2-way controller
- DFO 3-3 collectors: 3-way controller

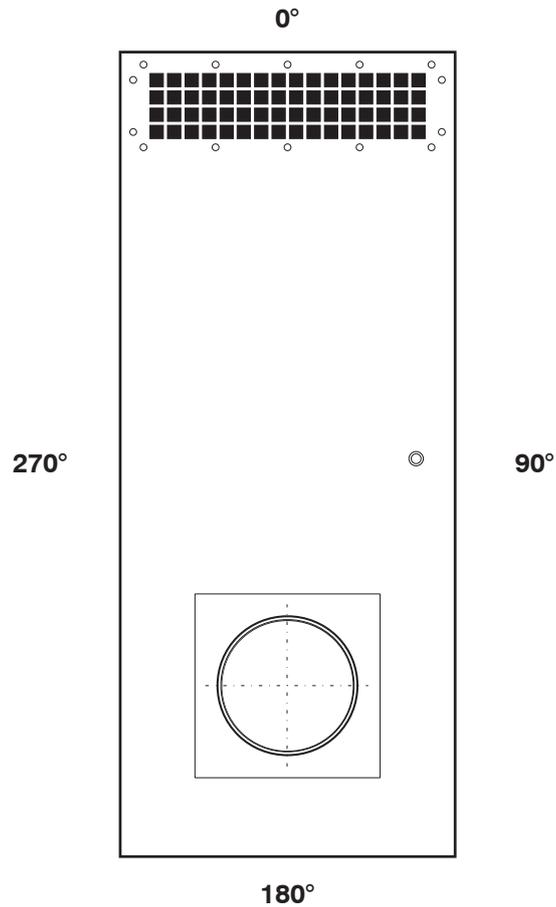
Voltage input (EVC Controller): AC version: 105-120V, 200-240V (±10%)  
 DC version: 24V

Voltage input (UCS Controller): 220-240V, Single Phase, 50Hz (for collectors with K3 fans only)  
 218-242V / 380-420V, Three Phase, 50Hz  
 or to suit local voltage

Fan motor: To suit local voltage



**ORIENTATION**



**DESIGN LIMITS (standard equipment)**

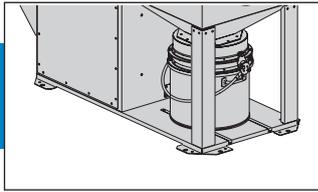
**Temperature range:** -10° to +60°C

**Pressure limits:** as fan performance curves from shut-off to operating pressure

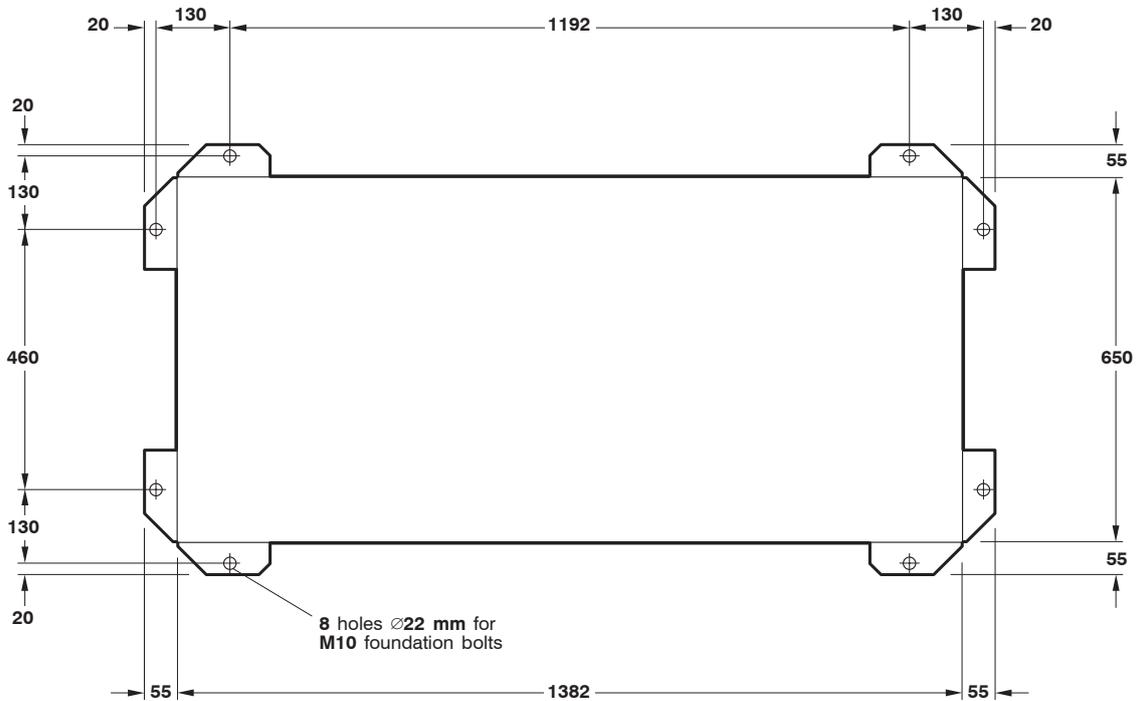
**Dimension tolerances:** ±3 mm on main dimensions; ±2 mm on detail dimensions

**Paint finish:** Quick air drying RAL 5019 (blue), spatter finish, semi-gloss

**Downflo® Oval Dust Collectors – Series DFO 1-1, 2-2 and 3-3**



**FOUNDATION DETAILS**



PLAN ELEVATION



**COMPRESSED AIR REQUIREMENTS**

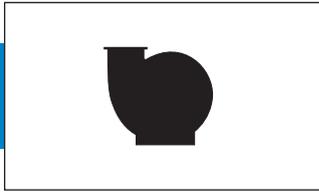
Type	Working compressed air pressure <sup>a</sup>		Atmospheric air volume – F.A.D. <sup>b</sup> at 12 sec. intervals <sup>c</sup>		Pulse duration
	bar	psig	m <sup>3</sup> /h	cfm	
<b>DFO 1-1</b>	4.2	60	3.6	2.1	100 millise.
<b>DFO 2-2</b>	4.2	60	5.5	3.2	100 millise.
<b>DFO 3-3</b>	4.2	60	6.8	4.0	100 millise.

<sup>a</sup>Normal operating pressure

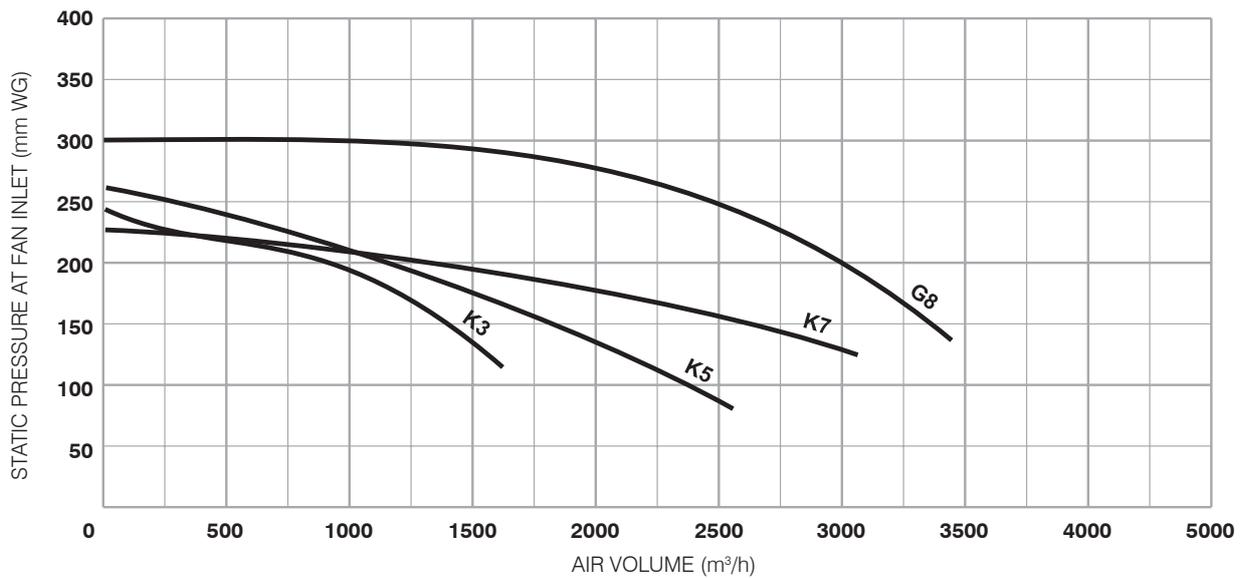
<sup>b</sup>Recommended atmospheric air volume of clean, dry compressed air

<sup>c</sup>Recommended initial settings; these may be varied with experience

Downflo® Oval Dust Collectors – Series DFO 1-1, 2-2 and 3-3



FAN SELECTION



Fan performance curves

To select the most suitable fan for a given application:

- 1 Determine the air volume, in m³/h, needed to entrain the dust.
- 2 Estimate pressure drop through connected system – i.e. between point of entrainment and collector inlet.
- 3 Assess pressure drop over dust collector, prior to replacing filter cartridges, usually 100 mm WG.
- 4 The sum of **2** and **3** = static pressure at inlet.
- 5 Consult graph for fan performance available.

**Downflo® Oval Dust Collectors – Series DFO 1-1, 2-2 and 3-3**



**NOISE LEVELS**

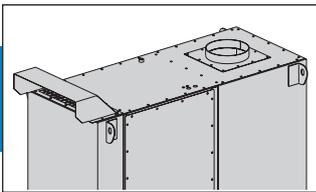
Machinery noise levels are an important consideration in the design and selection of new equipment. Several EC Directives and National Laws/Regulations adopting these directives make reference to airborne noise emissions. Actions that employers are required to comply with if employees are subjected to a daily personal noise exposure  $L_{ep,d}$  of 80 dB(A) or more are also specified.

All DFO 1-1, 2-2 and 3-3 dust collectors, operating an 8 hour shift, are below this action limit.

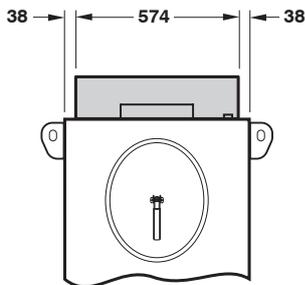
All readings were taken in normal industrial areas, i.e. semi-reverberant surroundings, with local equipment silent. Measurements were taken at maximum air flow conditions at 1.0 metre radius from the equipment housing and 1.6 metres above base level, using a precision sound level meter and octave filter.

	<b>K3</b>	<b>K5</b>	<b>K7</b>	<b>G8</b>
DFO 1-1	70 dB(A)	71 dB(A)	–	–
DFO 2-2	70 dB(A)	71 dB(A)	72 dB(A)	–
DFO 3-3	–	71 dB(A)	72 dB(A)	75 dB(A)

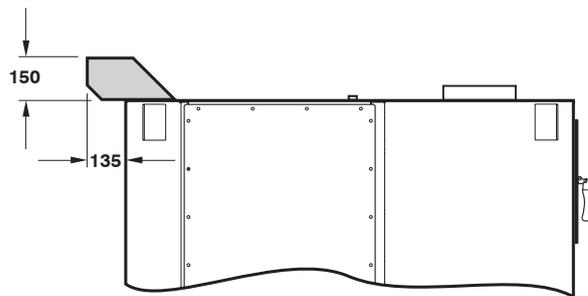
Noise levels of installed equipment may vary due to site conditions.



**OPTIONAL WEATHER COWL**



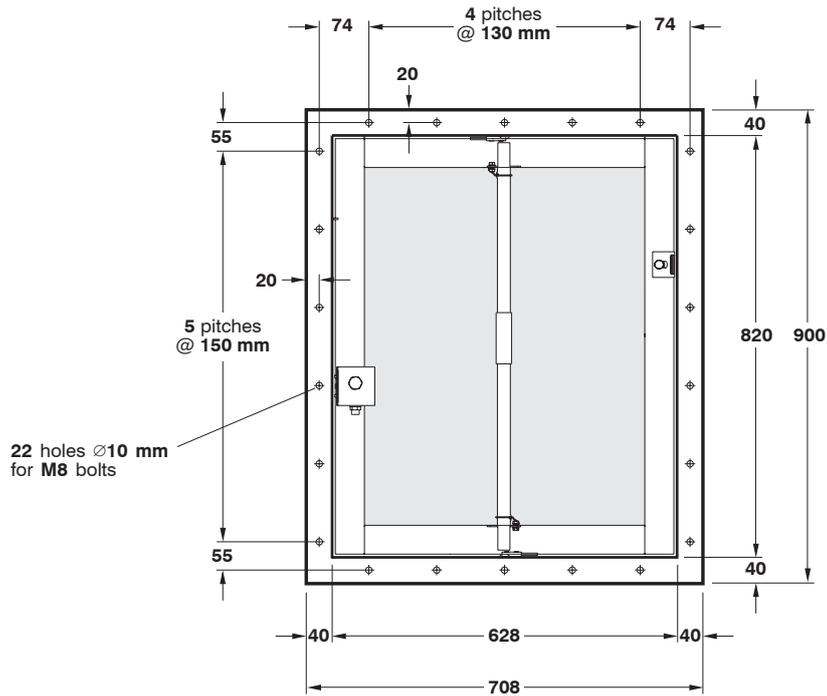
FRONT ELEVATION



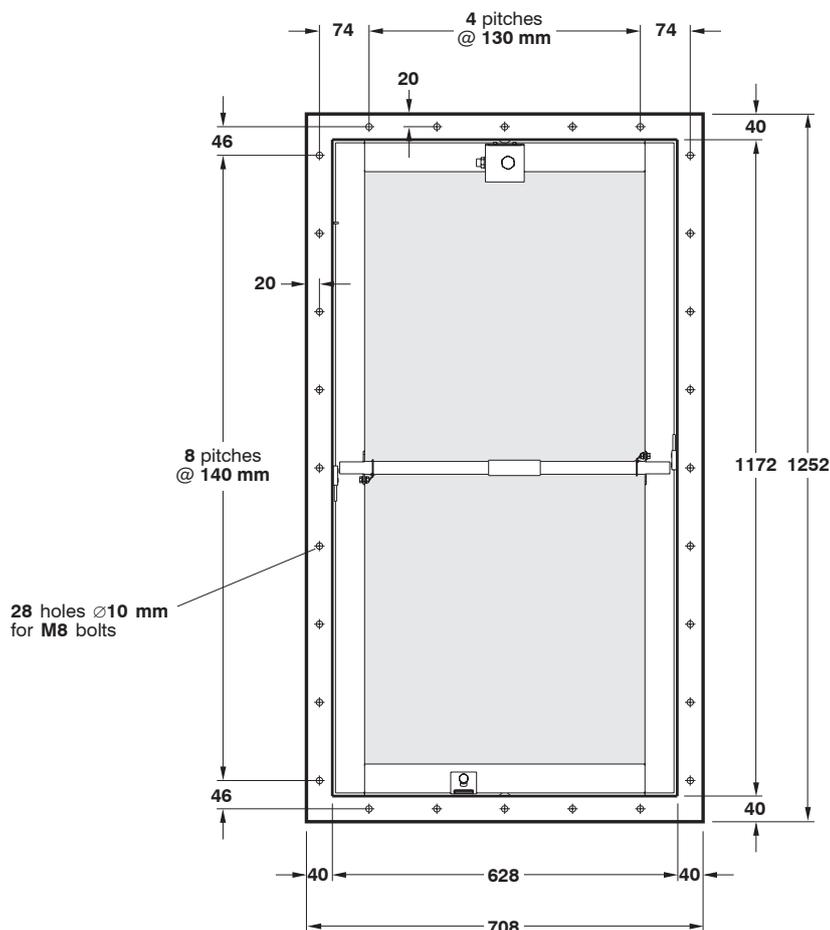
SIDE ELEVATION



**Downflo® Oval Dust Collectors – Series DFO 1-1, 2-2 and 3-3**

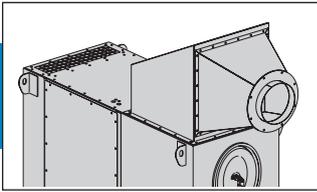


**Optional explosion relief flange mounting details for DFO 2-2**

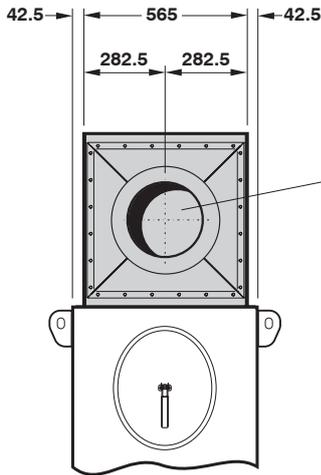


**Optional explosion relief flange mounting details for DFO 3-3**

**Downflo® Oval Dust Collectors – Series DFO 1-1, 2-2 and 3-3**

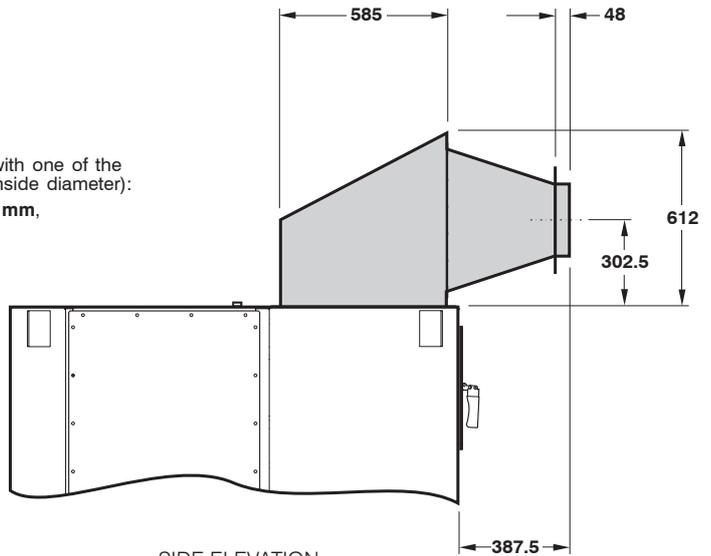


**OPTIONAL ABRASION RESISTANT INLET**

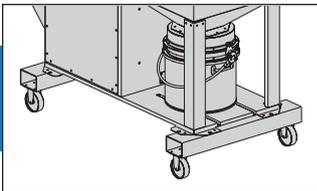


FRONT ELEVATION

Contaminated air inlet.  
All collectors are fitted with one of the following spigot sizes (inside diameter):  
**150 mm, 175 mm, 200 mm, 225 mm or 250 mm**

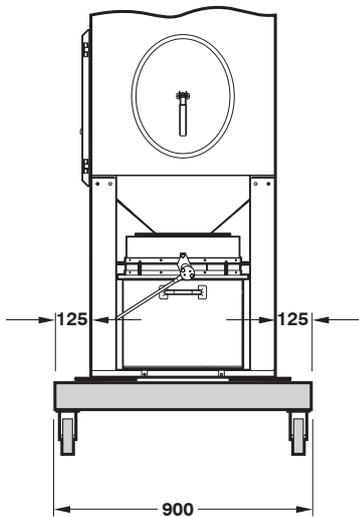


SIDE ELEVATION

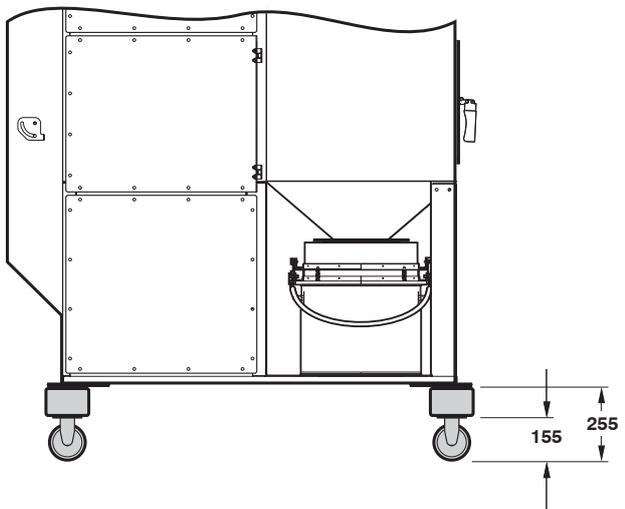


**OPTIONAL CASTOR ASSEMBLY**

Option only available on DFO 1-1 and DFO 2-2 collectors and not available on collectors with explosion relief.

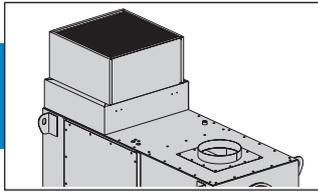


FRONT ELEVATION

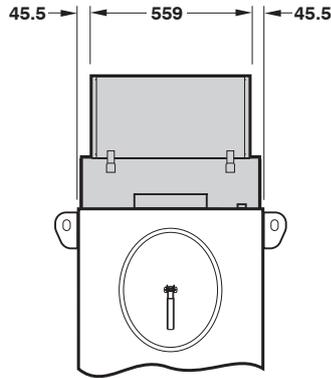


SIDE ELEVATION

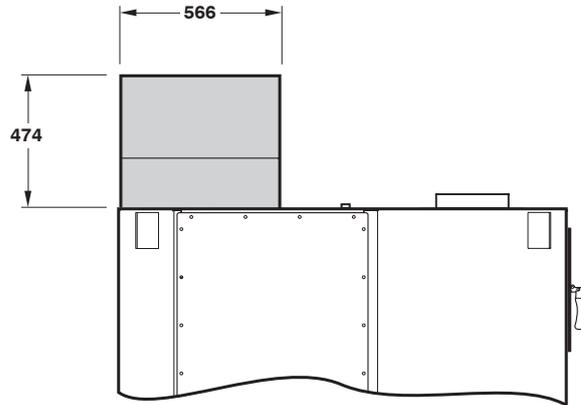
**Downflo® Oval Dust Collectors – Series DFO 1-1, 2-2 and 3-3**



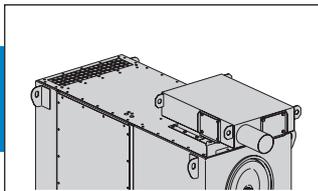
**OPTIONAL HEPA FILTER ASSEMBLY**



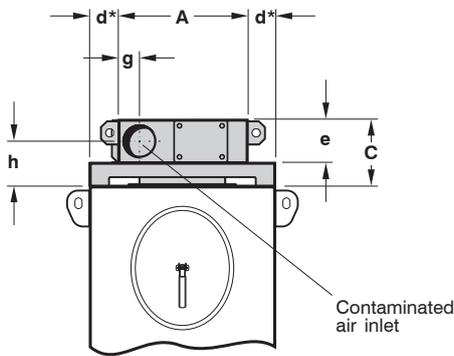
FRONT ELEVATION



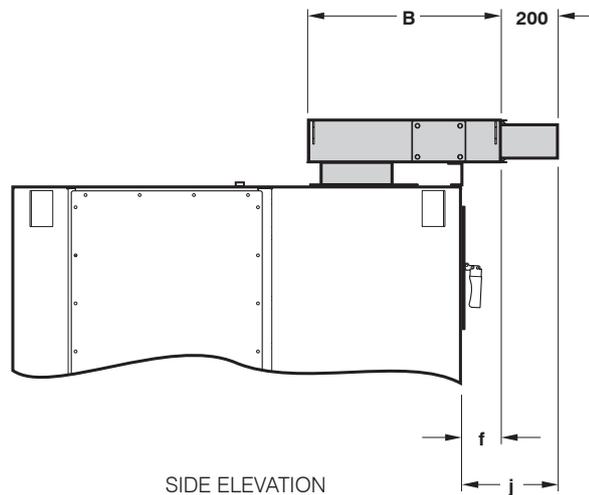
SIDE ELEVATION



**OPTIONAL SPARK TRAP INLET**  
(DFO 1-1 illustrated)



FRONT ELEVATION

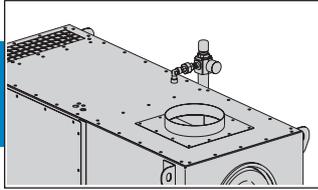


SIDE ELEVATION

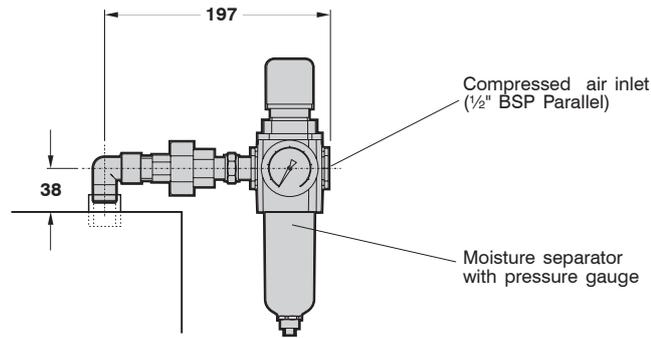
Type	DIMENSIONS in mm									Inlet spigot (inside dia.) mm
	A	B	C	d*	e	f	g	h	j	
<b>DFO 1-1</b>	455	675	228	97.5	150	143	75	152.5	343	Ø113
<b>DFO 2-2</b>	585	775	288	32.5	210	243	95	167.5	443	Ø153
<b>DFO 3-3</b>	715	875	328	32.5*	250	343	115	202.5	543	Ø193

\* On the DFO 3-3, the spark trap inlet is wider than the collector and overhangs each side by the figure shown

Downflo® Oval Dust Collectors – Series DFO 1-1, 2-2 and 3-3



OPTIONAL COMPRESSED AIR ASSEMBLY



FRONT ELEVATION



ADDITIONAL OPTIONS

- Flexible extraction arm – refer to Publication 2716.
- 'Plug and go' arrangement – collector provided with a pre-wired flexible supply cable and plug to suit local electrical requirements.
- ATEX requirements – collector suitable for use in a potentially explosive atmosphere (Directive 94/9/EC) satisfying the requirements for group II category 2D and 3D T135°C. (Not all collector configurations are available to ATEX requirements).
- UCS Controller – fan starter and differential pressure operation.
- 'Safe change' cartridge arrangement – allows filter cartridges to be changed without exposing hazardous contaminants to atmosphere.
- Filtration media:
  - Ultra-Web conductive
  - Ultra-Web spun-bonded
  - Ultra-Web spun-bonded antistatic
  - Ultra-Web flame retardant
  - Ultra-Web flame retardant conductive
  - Fibra-Web
  - Fibra-Web conductive
- Disposable bin liner with pressure balance arrangement – to assist in the safe removal of toxic or noxious dusts from the dust container.

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**Downflo® Oval Dust Collectors – Series DFO 1-1, 2-2 and 3-3**



[www.donaldson.com](http://www.donaldson.com)

Humberstone Lane  
Thurmaston  
Leicester LE4 8HP  
England

Tel +44 (0)116 269 6161  
Fax +44 (0)116 269 3028

Email: [IAF-uk@donaldson.com](mailto:IAF-uk@donaldson.com)

Research Park Building No. 1303  
Interleuvenlaan 1  
B-3001 Leuven (Heverlee)  
Belgium

Tel +32 (0)16 383 970  
Fax +32 (0)16 383 938

Email: [IAF-europe@donaldson.com](mailto:IAF-europe@donaldson.com)