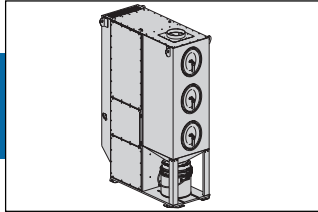


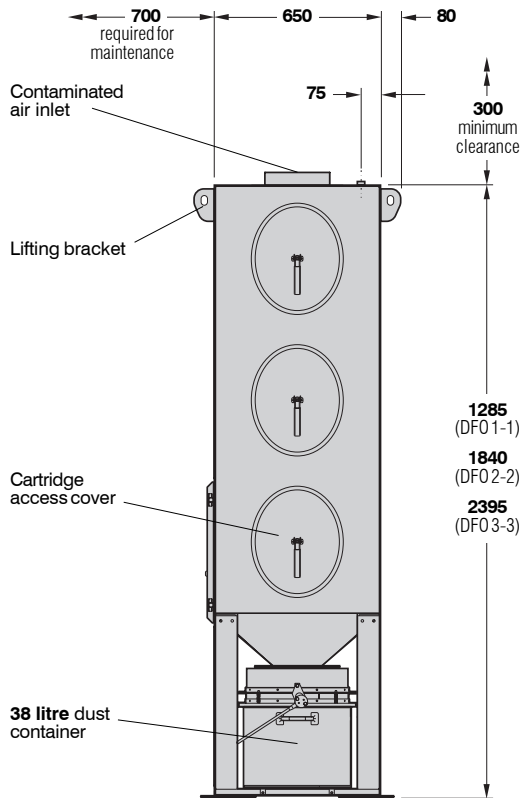
Downflo® Oval Dust Collectors

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

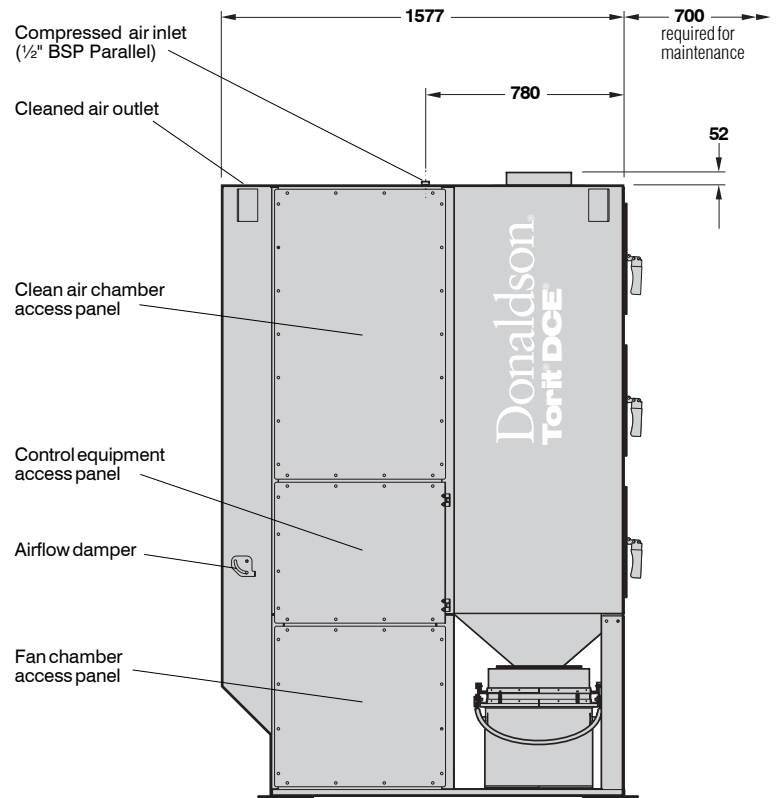


DFO STANDARD DUST COLLECTOR

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

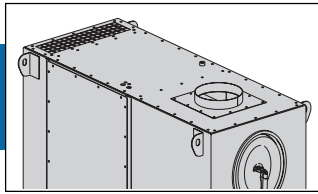


FRONT ELEVATION

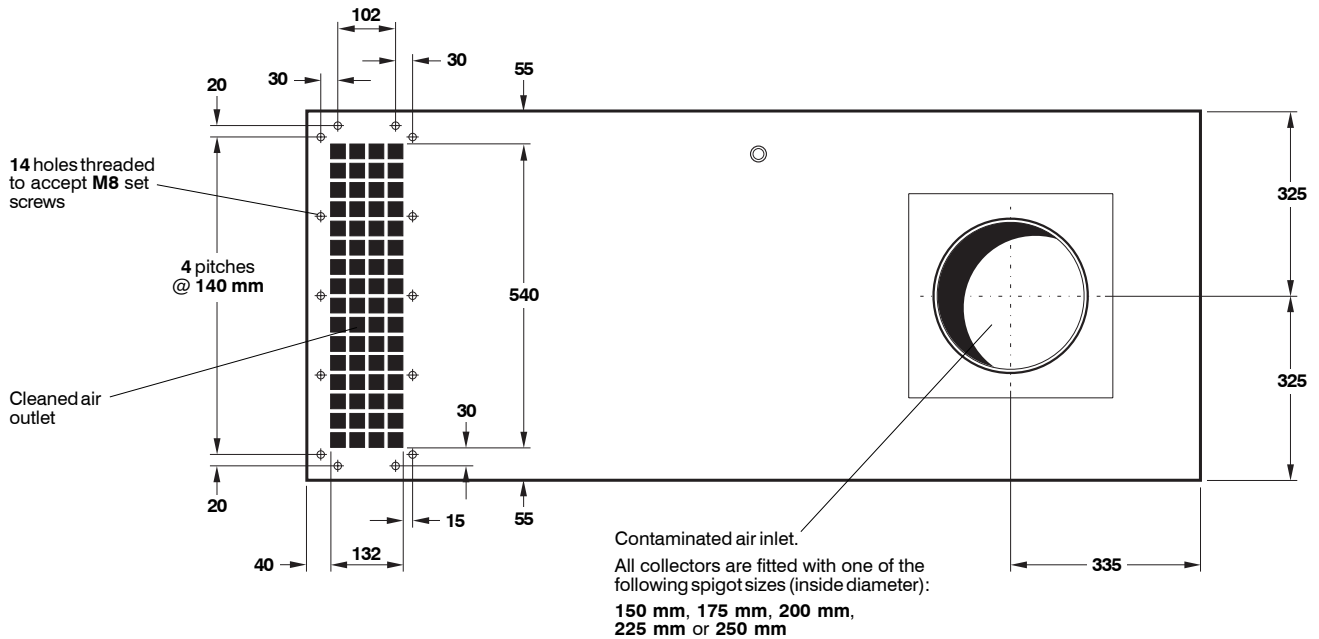


SIDE ELEVATION

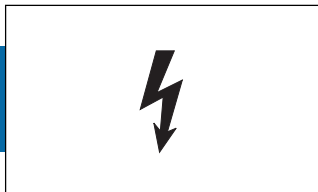
Type	Filtration area (Ultra-Web®)	Number of cartridges	Fan	Motor rating	Net weight (approx.)
DFO 1-1	17.7 m ²	1	K3	1.5 kW	355 kg
			K5	2.2 kW	364 kg
DFO 2-2	35.4 m ²	2	K3	1.5 kW	445 kg
			K5	2.2 kW	454 kg
			K7	3.0 kW	450 kg
DFO 3-3	53.1 m ²	3	K5	2.2 kW	580 kg
			K7	3.0 kW	576 kg
			G8	5.5 kW	601 kg



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



PLAN ELEVATION



ELECTRICAL REQUIREMENTS

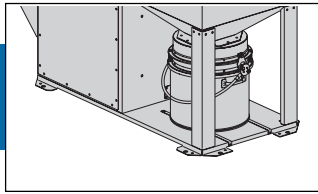
EVC Controller (standard) or UCS Controller (optional)

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

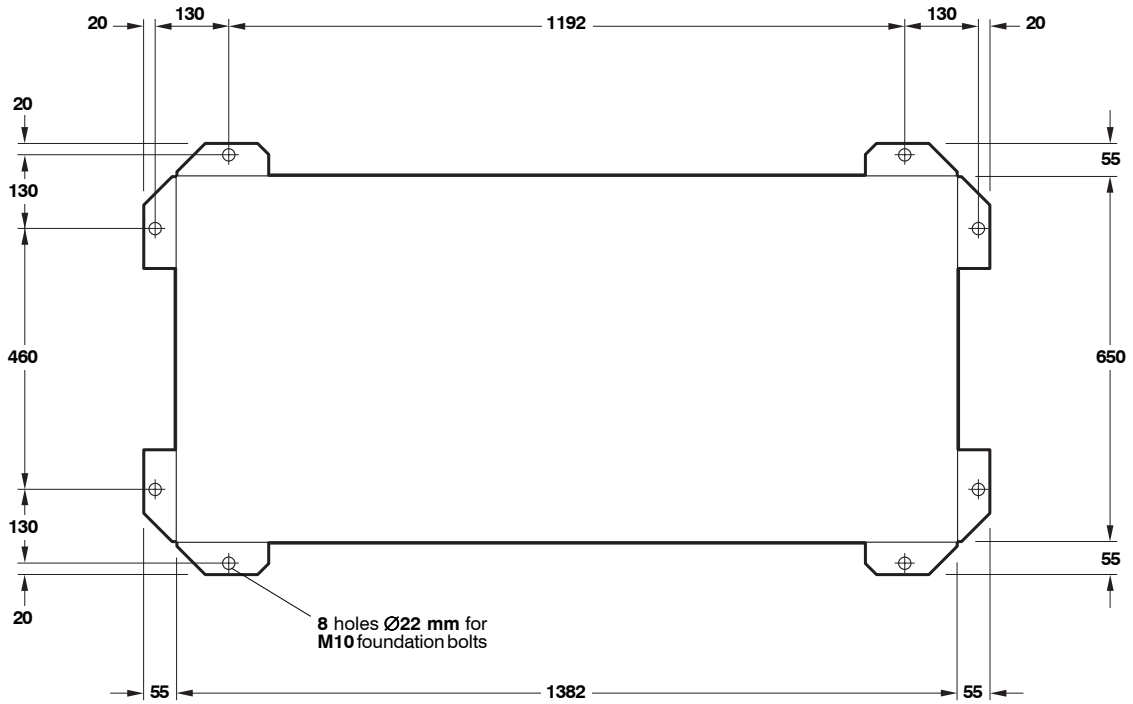
Voltage input (EVC Controller): AC version: 105-120V, 200-240V (±10%)
 DC version: 24V

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



FOUNDATION DETAILS



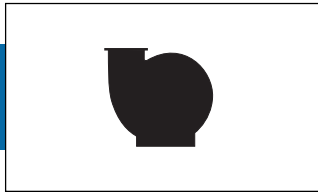
PLAN ELEVATION



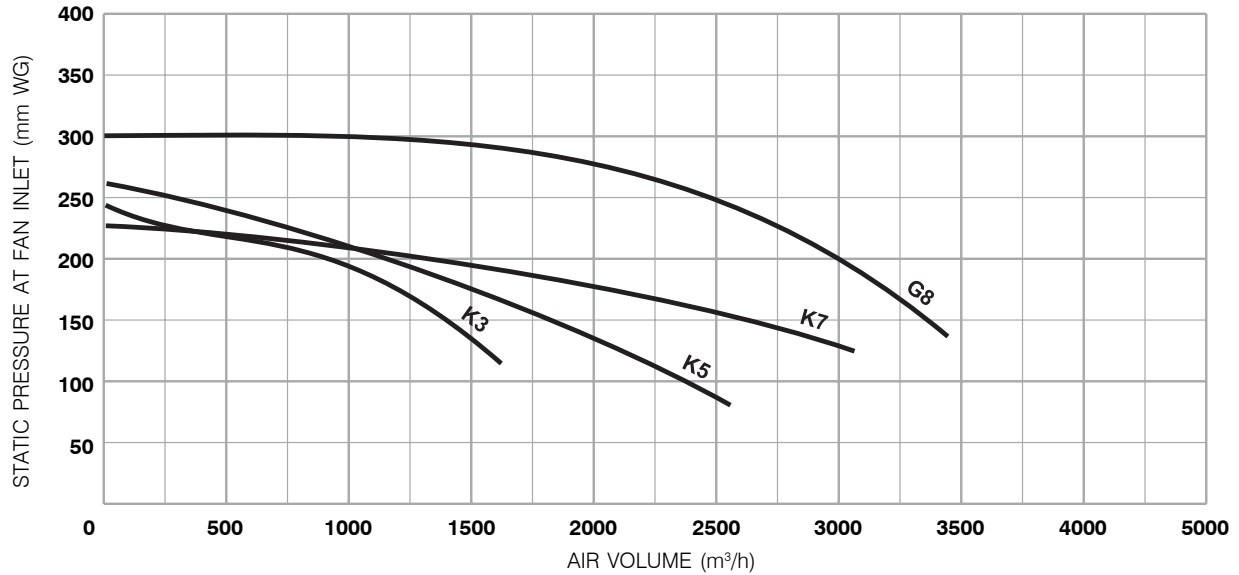
COMPRESSED AIR REQUIREMENTS

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

^aNormal operating pressure ^bRecommended atmospheric air volume of clean, dry compressed air
^cRecommended initial settings; these may be varied with experience



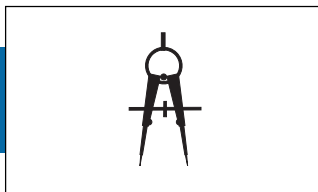
FAN SELECTION



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.



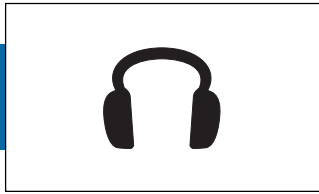
DESIGN LIMITS (standard equipment)

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



NOISE LEVELS

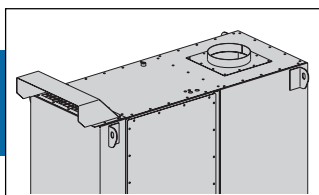
Machinery noise levels are an important consideration in the design and selection of new equipment. Several EC Directives and National Laws/Regulations adopting these directives make reference to airborne noise emissions. Actions that employers are required to comply with if employees are subjected to 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.

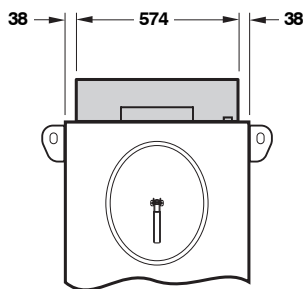
All readings were taken in normal industrial areas, i.e. semi-reverberant surroundings, with local equipment silent. Measurements were taken at maximum air flow conditions at 1.0 metre radius from the equipment housing and 1.6 metres above base level, using a precision sound level meter and octave filter.

	K3	K5	K7	G8
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)

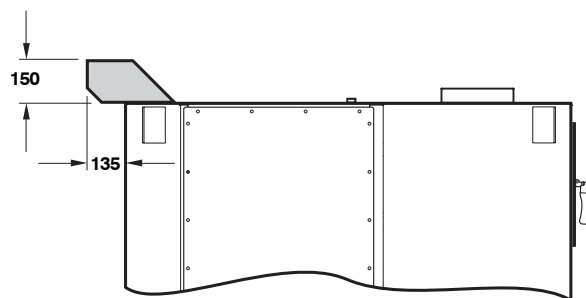
Noise levels of installed equipment may vary due to site conditions.



OPTIONAL WEATHER COWL

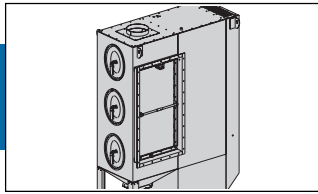


FRONT ELEVATION



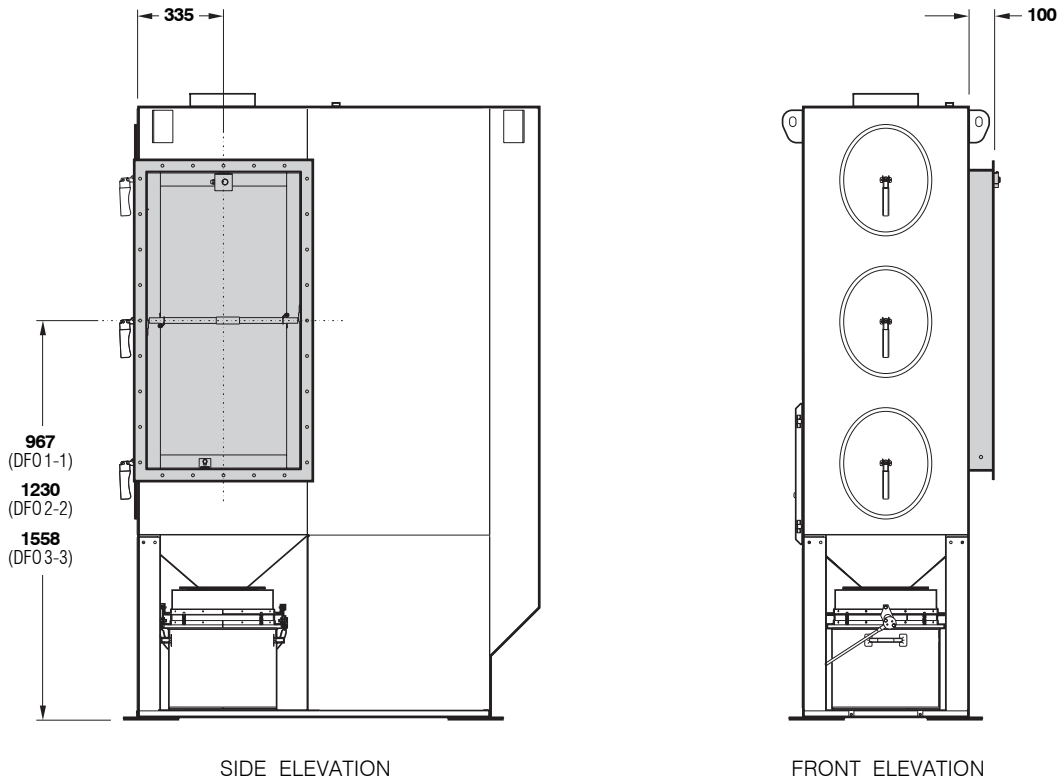
SIDE ELEVATION

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



OPTIONAL EXPLOSION RELIEF ASSEMBLY

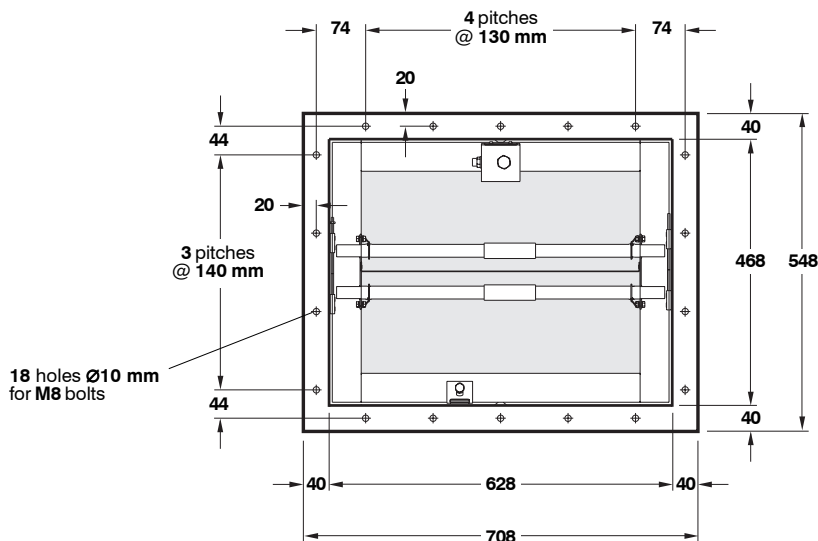
Collector suitable for handling potentially explosive dusts up to and including ST2 classification. For dusts with a higher ST classification or for fitting vent ducts, etc. refer to Donaldson Torit DCE Engineering.



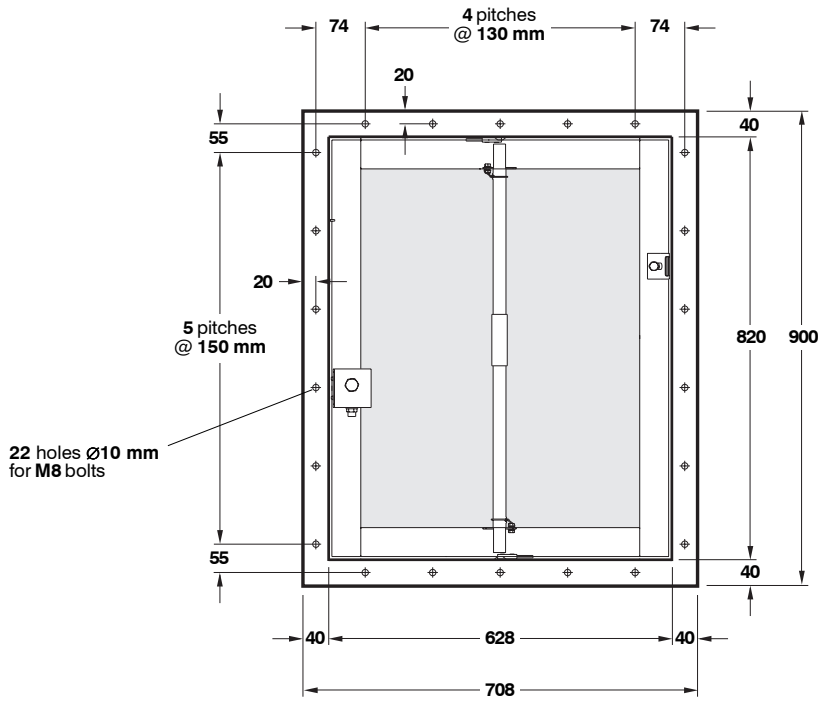
Position of optional explosion relief flange

(DFO 3-3 illustrated)

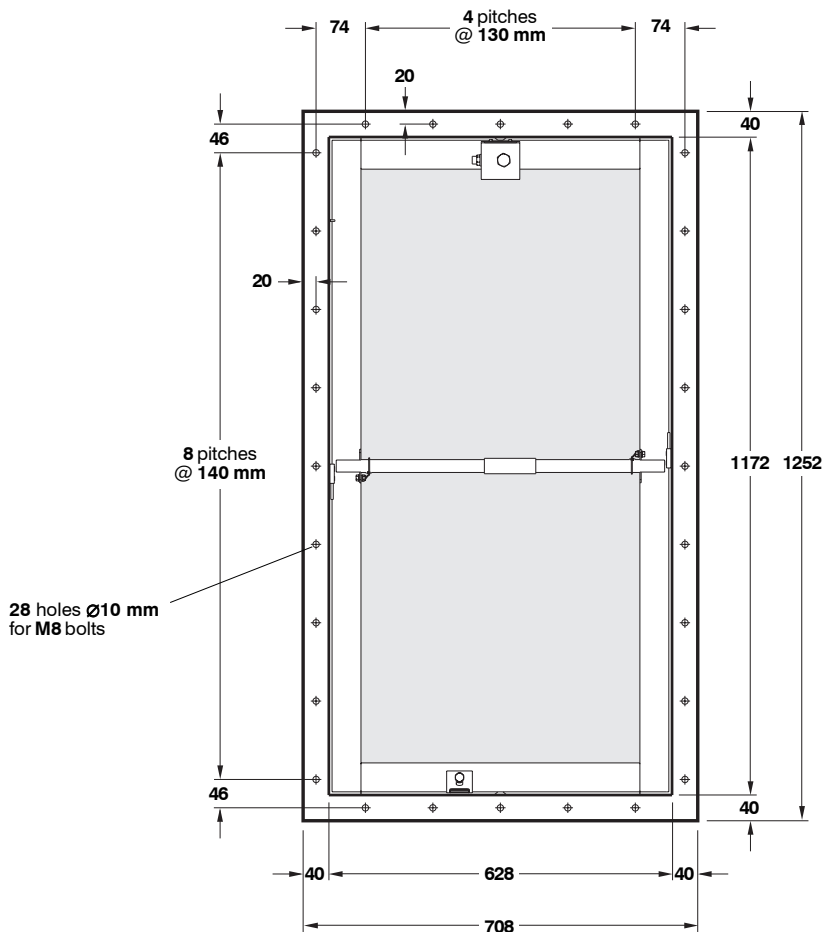
If a vent duct is not connected to the explosion relief flange, then a minimum clearance of 500 mm should be made to the side of the collector to ensure efficient operation of the explosion venting process. Consideration should be given to the local surrounding area in regards to the pressure and flame effects.



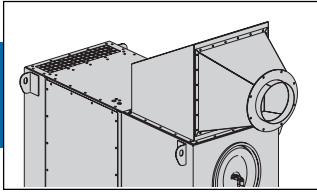
Optional explosion relief flange mounting details for DFO 1-1



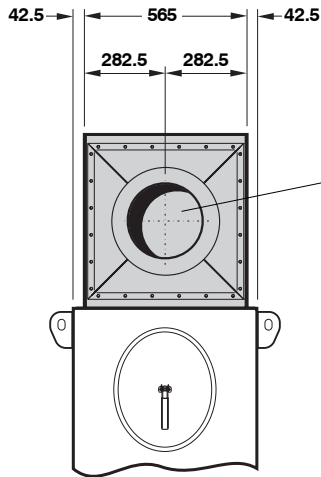
Optional explosion relief flange mounting details for DFO 2-2



Optional explosion relief flange mounting details for DFO 3-3

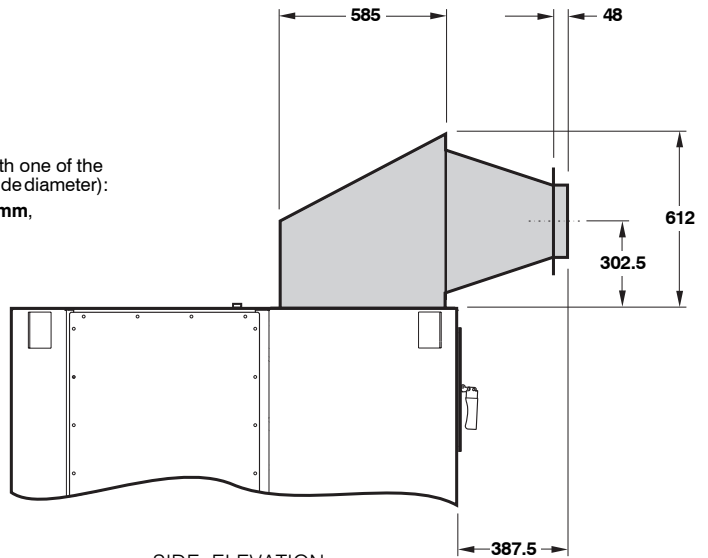


OPTIONAL ABRASION RESISTANT INLET

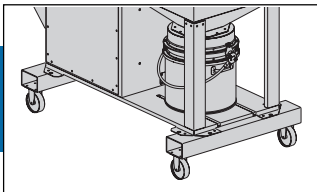


FRONT ELEVATION

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

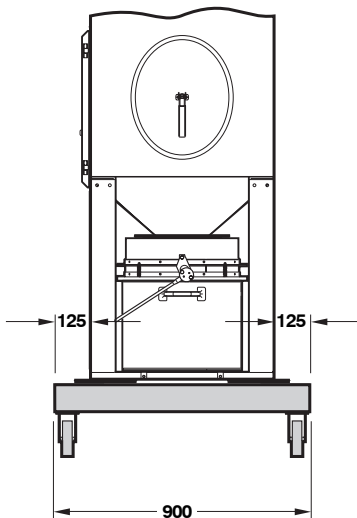


SIDE ELEVATION

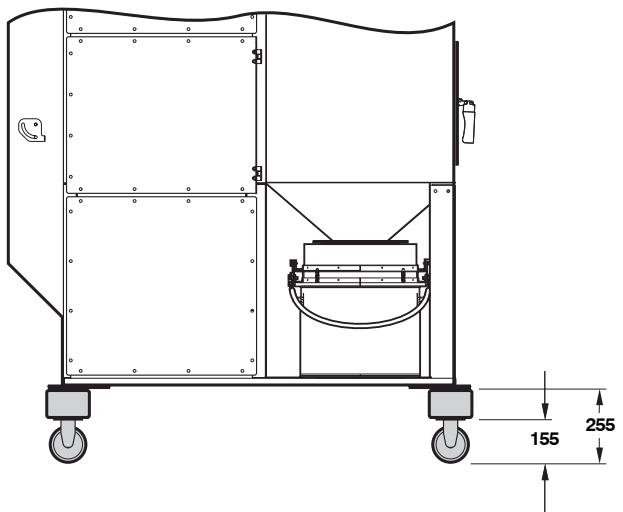


OPTIONAL CASTOR ASSEMBLY

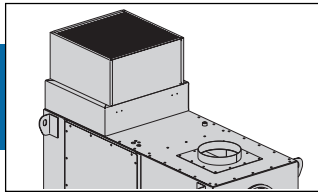
Option only available on DFO 1-1 and DFO 2-2 collectors and not available on collectors with explosion relief.



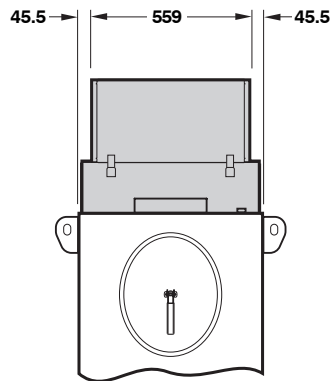
FRONT ELEVATION



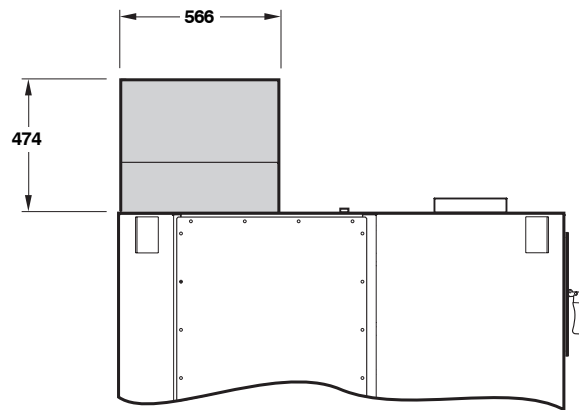
SIDE ELEVATION



OPTIONAL HEPA FILTER ASSEMBLY



FRONT ELEVATION



SIDE ELEVATION



ADDITIONAL OPTIONS

- **Spark trap inlet** – specific inlet arrangement to constrain sparks entering the collector.
- **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.



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



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