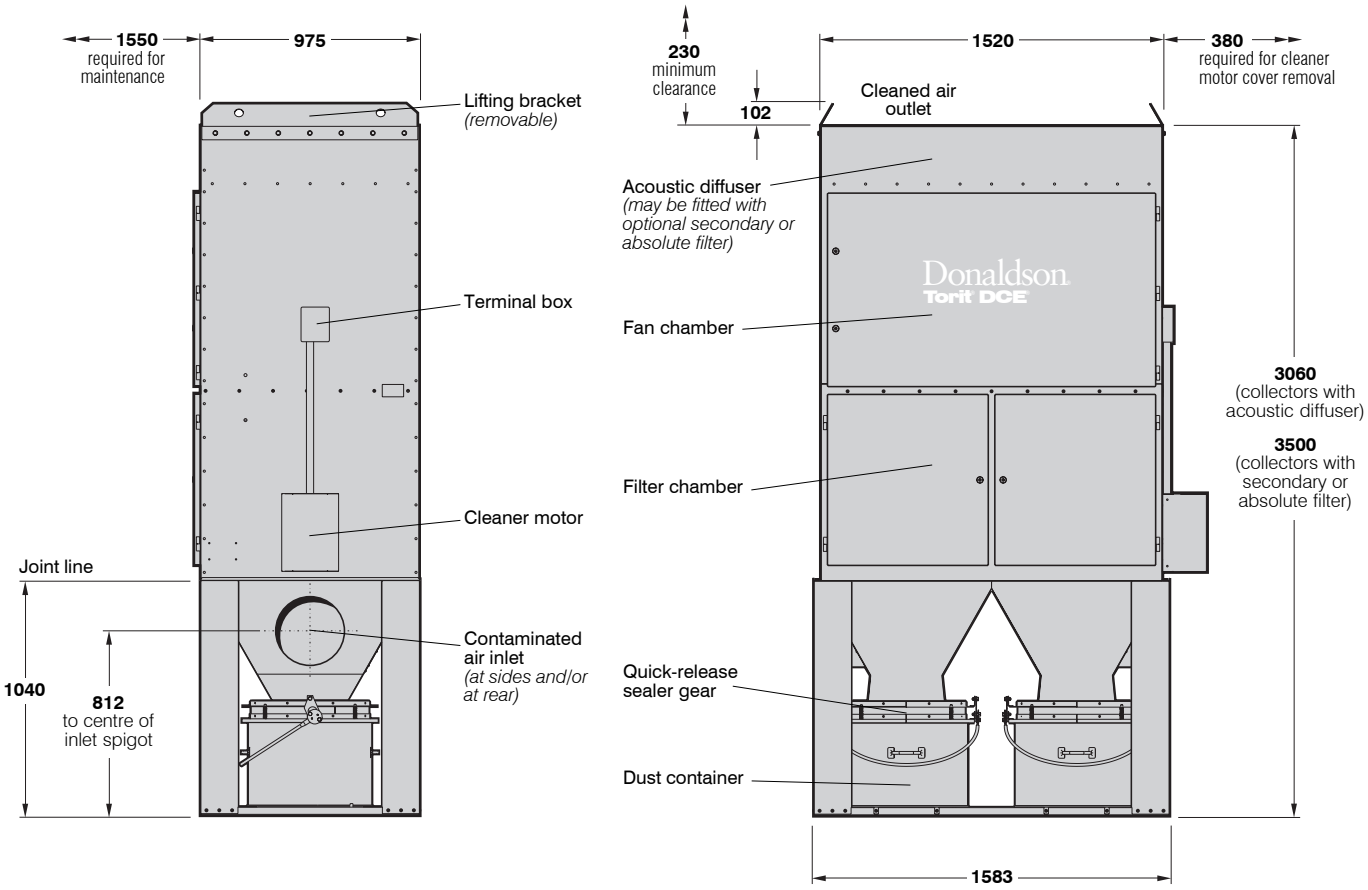
Unimaster Dust Collectors

Series UMA 450



SIDE ELEVATION

FRONT ELEVATION

UNIMASTER DUST COLLECTOR WITH DUST CONTAINERS

Suitable for inside locations

SPECIFICATIONS

Type	Filtration area	Inlet spigot (inside dia.)	Fan	Motor rating	Dust container (x2)	Net weight (approx.)
UMA 456	42 m^2	∅ 305 mm	K10 K11	5.5 kW 7.5 kW	80 litre	672 kg* 737 kg*

*Increase weight by 110 kg for collectors with secondary or absolute filter

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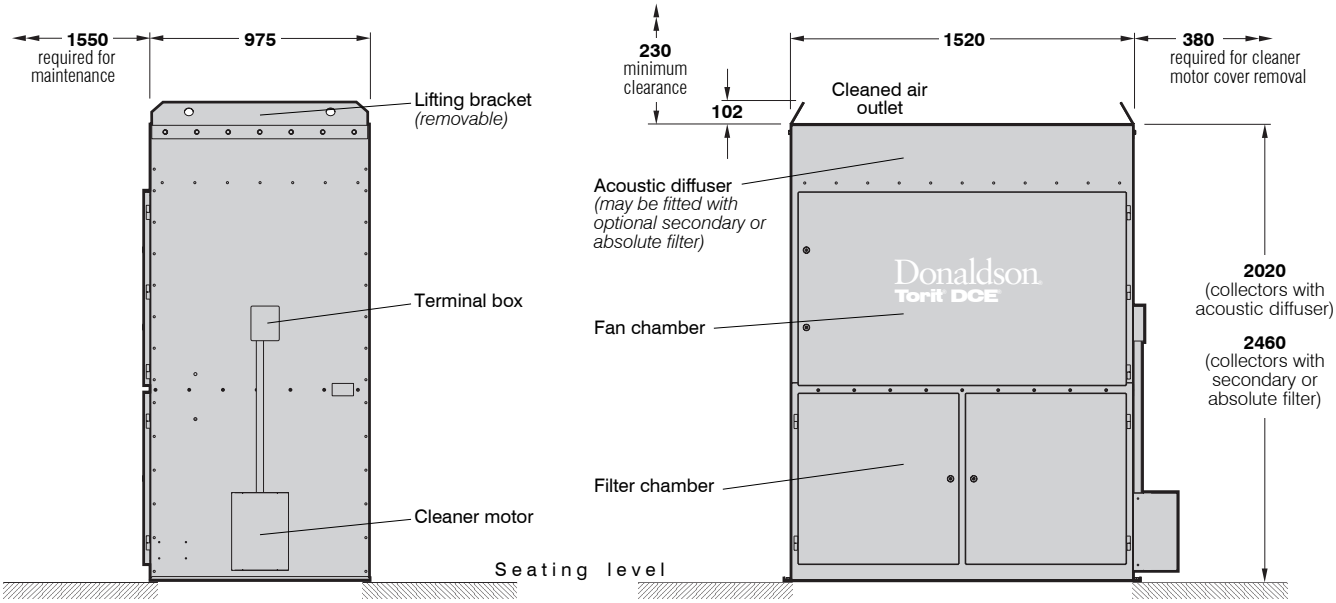


SIDE ELEVATION

FRONT ELEVATION

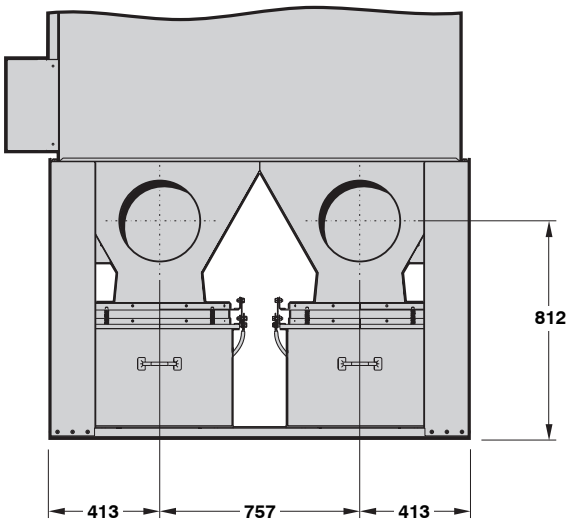
UNIMASTER HOPPER TYPE DUST COLLECTOR

Suitable for inside locations

SPECIFICATIONS

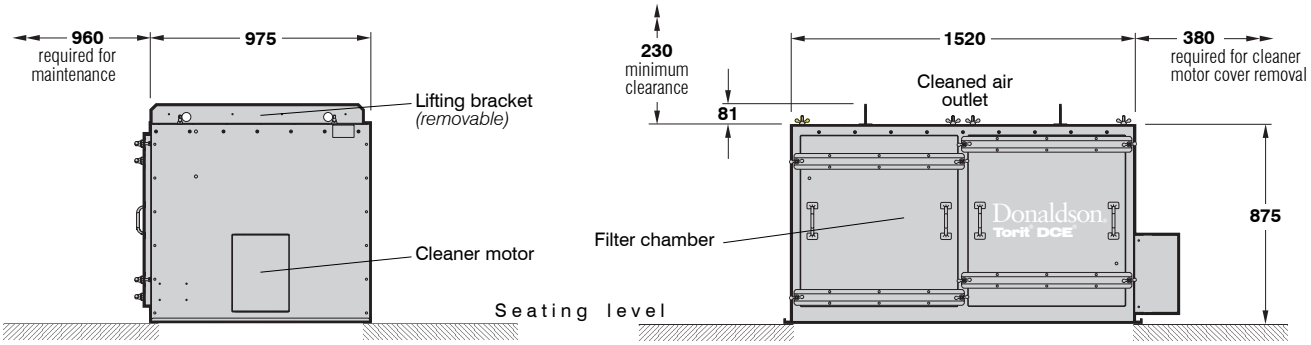
Type	Filtration area	Fan	Motor rating	Net weight (approx.)
UMA 450H	42 m²	K10 K11	5.5 kW 7.5 kW	537 kg* 568 kg*

*Increase weight by 110 kg for collectors with secondary or absolute filter



REAR ELEVATION

POSITION OF REAR CONTAMINATED AIR INLETS



SIDE ELEVATION

FRONT ELEVATION

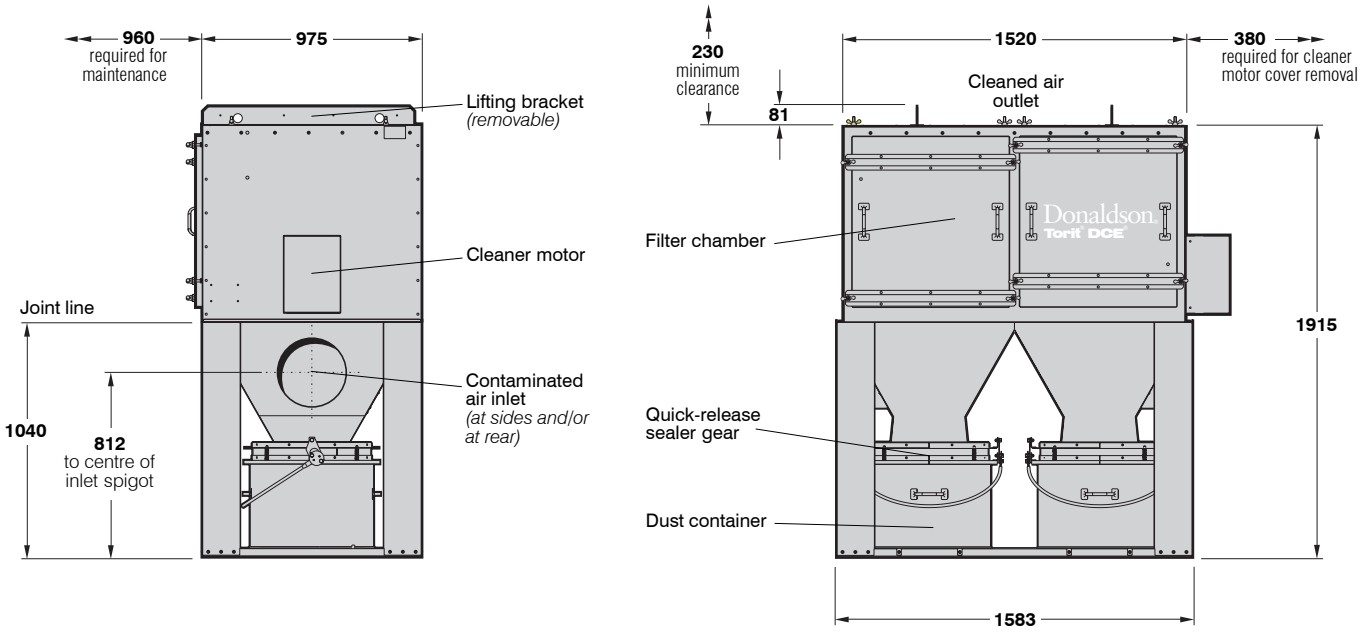
UNIMASTER VENTING TYPE DUST COLLECTOR

Suitable for inside locations and outside when fitted with optional weather cowl

SPECIFICATIONS

Type	Filtration area	Net weight (approx.)
UMA 450V	42 m²	279 kg*

*Increase weight by 45 kg for collectors with weather cowl



SIDE ELEVATION

FRONT ELEVATION

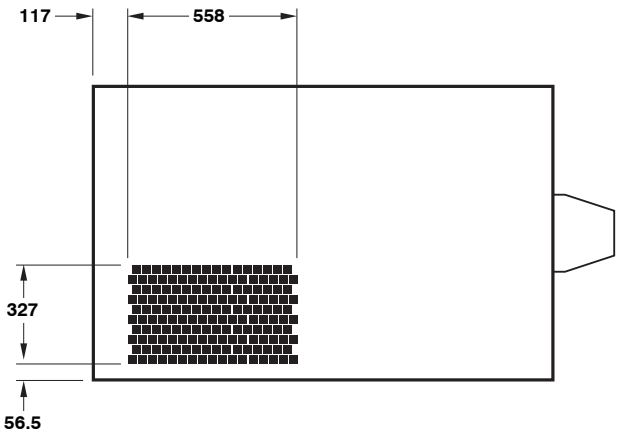
UNIMASTER VENTING TYPE DUST COLLECTOR WITH DUST CONTAINERS

Suitable for inside locations and outside when fitted with optional weather cowl

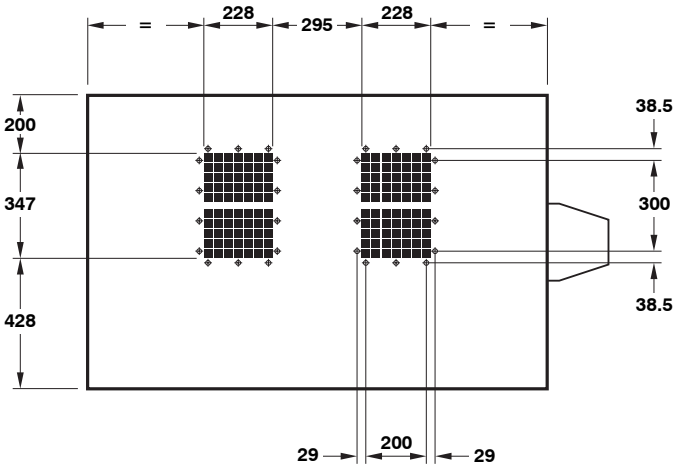
SPECIFICATIONS

Type	Filtration area	Inlet spigot (inside dia.)	Dust container (x2)	Net weight (approx.)
UMA 456V	42 m²	Ø 305 mm	80 litre	414 kg*

*Increase weight by 45 kg for collectors with weather cowl



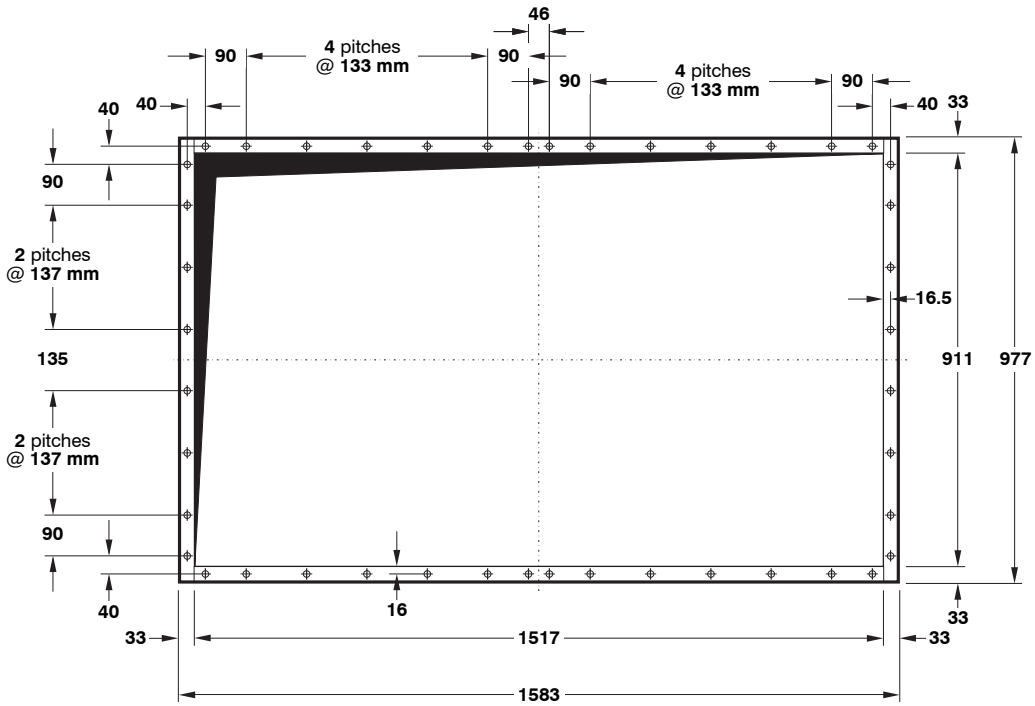
Standard and Hopper type collectors



Venting type collectors

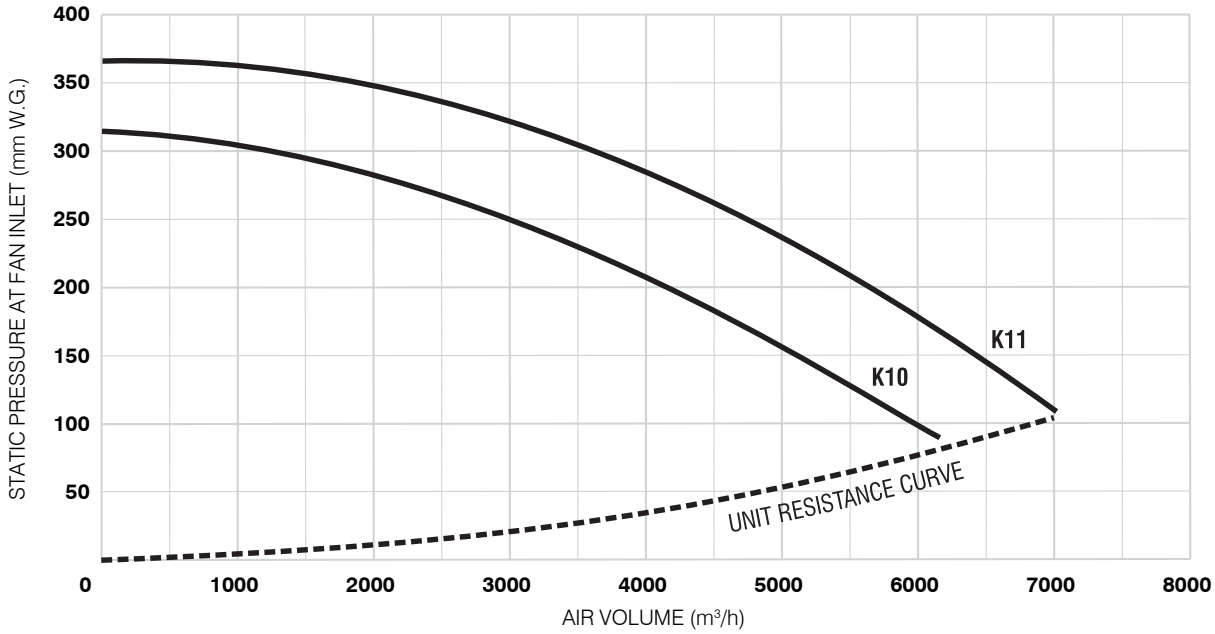
All holes ∅3.5 mm. Pitch centres: 100 mm

CLEANED AIR OUTLET DETAILS



APERTURE AND MOUNTING FLANGE DETAILS FOR HOPPER AND VENTING TYPE COLLECTORS

All holes ∅12 mm for M10 bolts



UNIT PERFORMANCE CURVES

FAN SELECTION

These curves indicate static pressure available at fan inlet for a given volume when fitted inside a Unimaster dust collector.

To select the most suitable fan for a given application:

1. Determine the air volume, in m³/h, needed to entrain the dust.
2. Read off the unit resistance, in mm W.G., at air volume required.
3. Assess pressure drop over filter bags prior to cleaning, usually 50 to 100 mm W.G.
4. Estimate pressure drop through connected system – i.e. between point of entrainment and collector inlet.
5. The sum of **2**, **3** and **4** = W.G. required.
6. Consult graph for fan performances available.

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 Lep,d of 85 dB(A) or more are also specified.

All Unimaster dust collectors, when fitted with an acoustic diffuser, secondary filter or absolute filter, operating an 8 hour shift, are below this action limit.

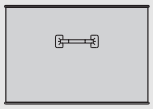
WEIGHTED SOUND PRESSURE LEVELS

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.

K10	K11
74 dB(A)*	76 dB(A)

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

DUST CONTAINER



80 litre
(3 cu.ft.)

Size	Approx net weight
80 litre	6 kg

A reasonable total load for removal by hand would be 25 kg

Typical dust densities

Dust	Density with 50% voidage
Sander	0.13 kg/litre
Graphite	0.80 kg/litre
Sand	1.33 kg/litre
Iron	3.58 kg/litre
Steel	3.72 kg/litre

ELECTRICAL REQUIREMENTS

UCS Controller

Voltage input: 380-420V, Three Phase, 50Hz
440-480V, Three Phase, 60Hz
or to suit local voltage

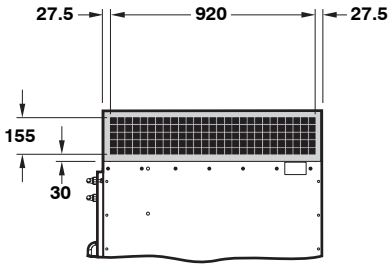
DESIGN LIMITS (standard equipment)

Temperature range: –10° to +60°C

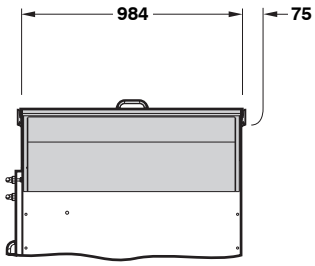
Pressure limits: Collectors with fan: as fan performance curves from shut-off to operating pressure
Venting type collectors: –300 mm W.G. to +250 mm W.G.

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

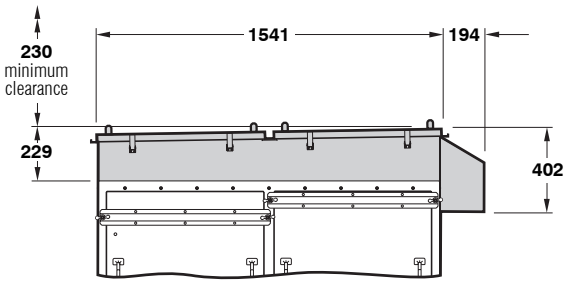
Equipment suitable for use in a potentially explosive atmosphere (Directive 94/9/EC) satisfying the requirements for group II category 2D and 3D T135°C is available



SIDE ELEVATION
(Detail of cleaned air outlet with weather cowl and lid removed)

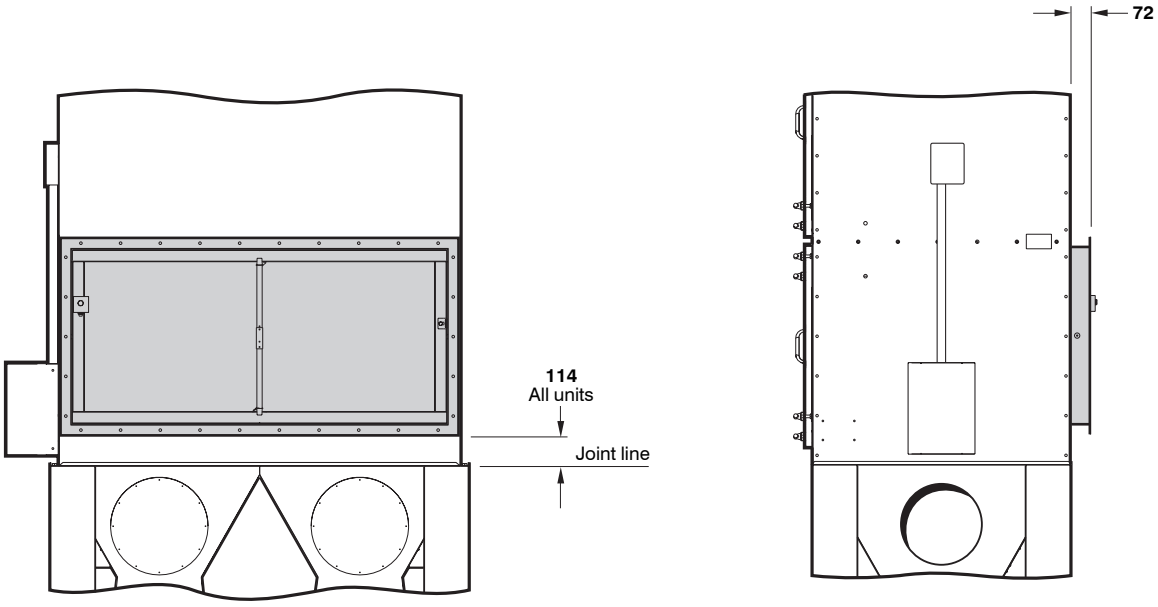


SIDE ELEVATION



FRONT ELEVATION

OPTIONAL WEATHER COWL

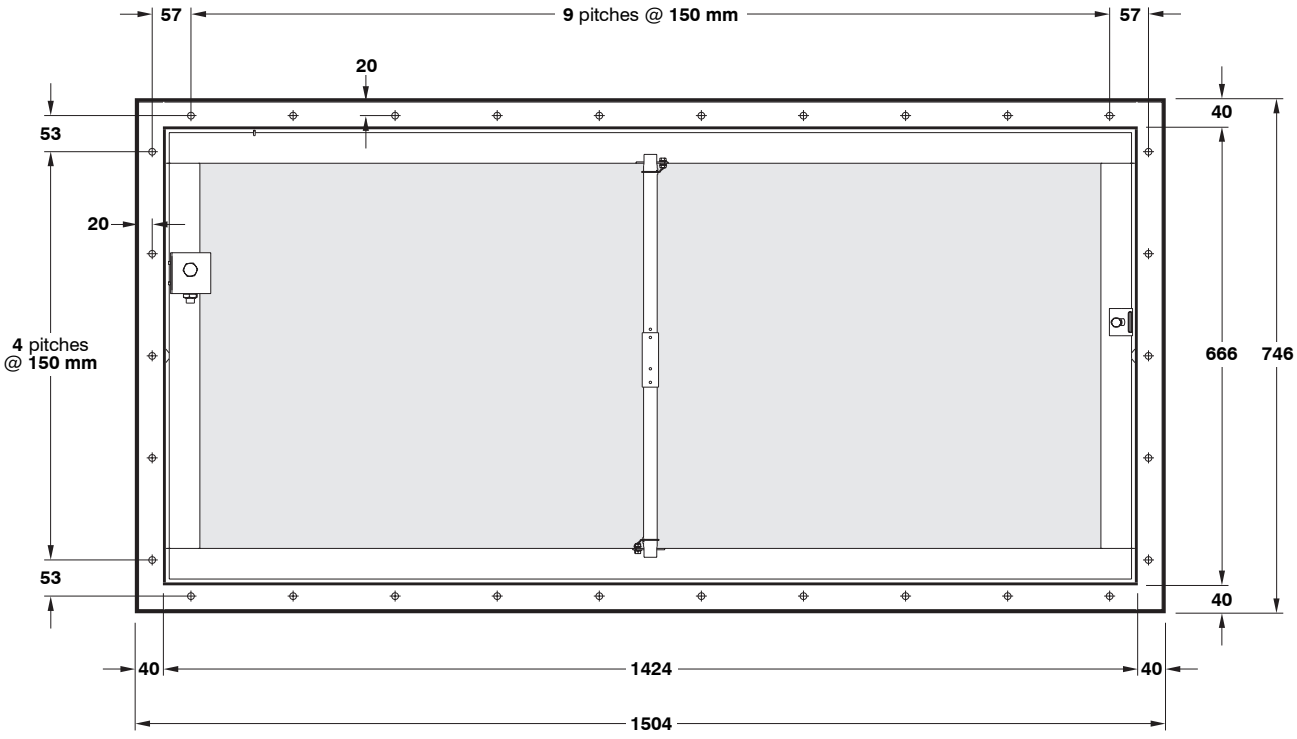


REAR ELEVATION

SIDE ELEVATION

POSITION OF OPTIONAL EXPLOSION RELIEF FLANGE

If a vent duct is not connected to the explosion relief flange, then a minimum clearance of 500 mm should be made to the rear 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

All holes ∅10 mm for M8 bolts

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