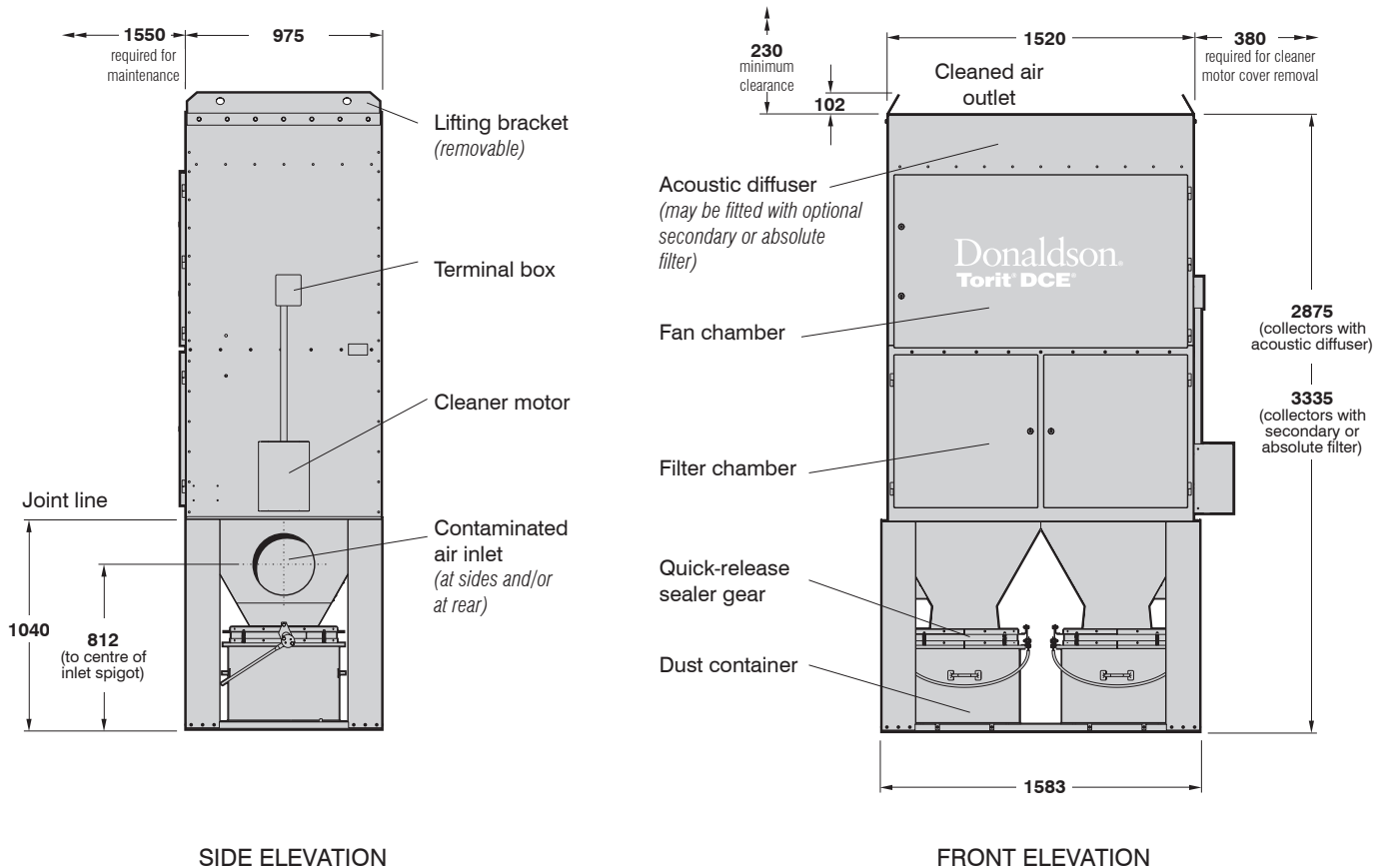


# Unimaster Dust Collectors

Series UMA 450



## UNIMASTER DUST COLLECTOR WITH DUST CONTAINER

Suitable for inside locations

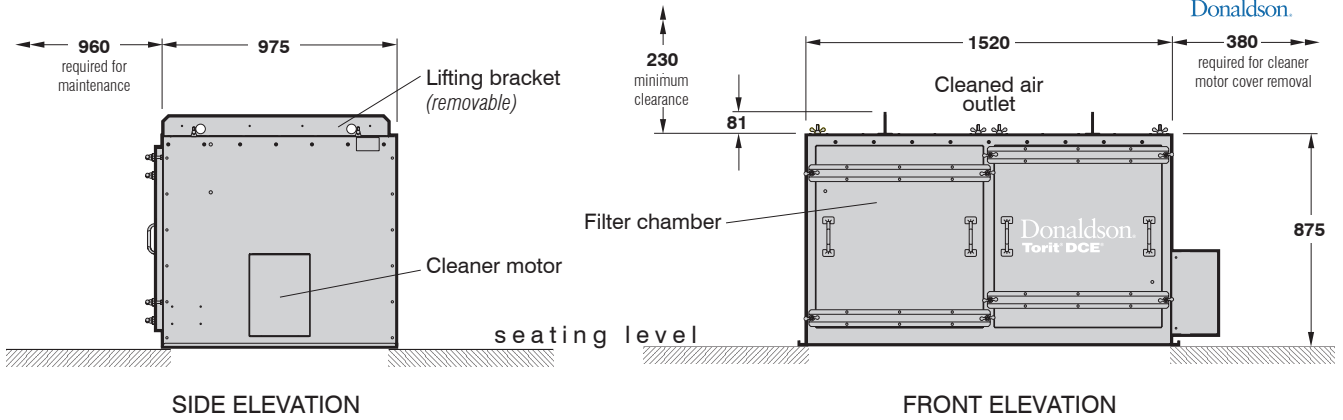
### SPECIFICATIONS

Type	Filtration area	Inlet spigot (inside dia.)	Fan	Motor rating	Dust container (x2)	Net weight (approx.)
UMA 456	42 m <sup>2</sup>	Ø 305 mm	KV10	5.5 kW	80 litre	672 kg*
			KV11	7.5 kW		737 kg*

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



**Unimaster Dust Collectors – Series UMA 450**

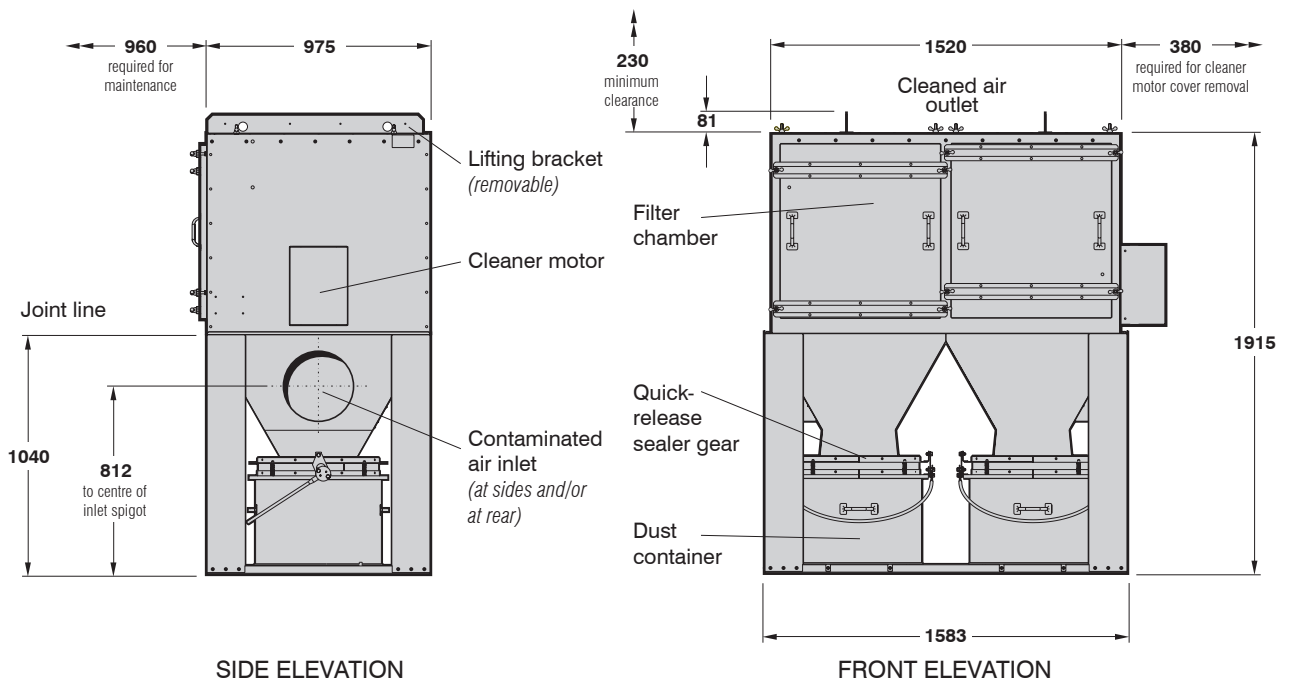


**UNIMASTER VENTING TYPE DUST COLLECTOR**

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

SPECIFICATIONS		
Type	Filtration area	Net weight (approx.)
UMA 450V	42 m <sup>2</sup>	279 kg*

\*Increase weight by 45 kg for collectors with weather cowl

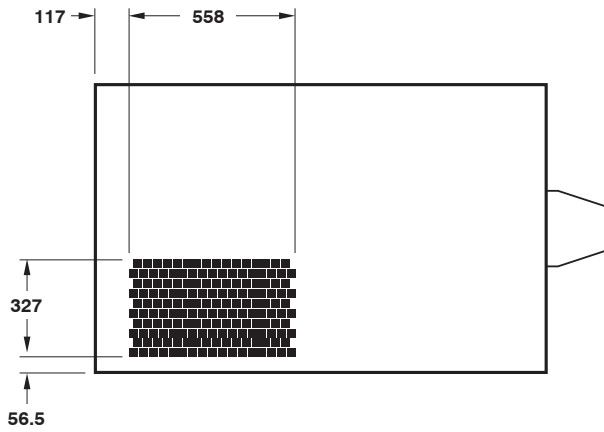


**UNIMASTER VENTING TYPE DUST COLLECTOR WITH DUST CONTAINERS**

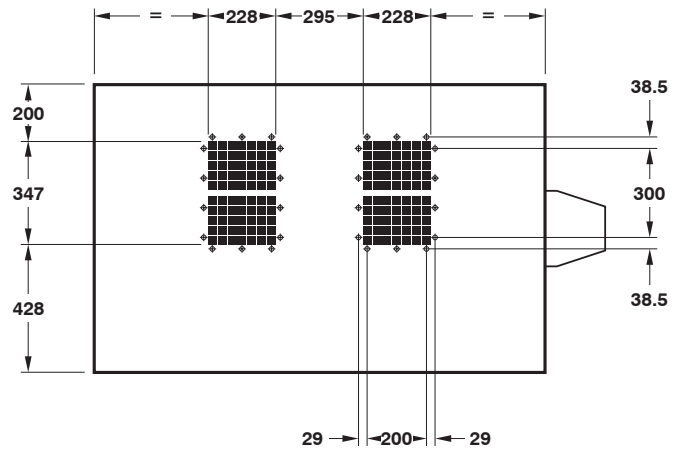
Suitable for inside locations and outside when fitted with optional weather cowl

SPECIFICATIONS				
Type	Filtration area	Inlet spigot (inside dia.)	Dust container (x2)	Net weight (approx.)
UMA 456V	42 m <sup>2</sup>	Ø 305 mm	80 litre	414 kg*

\*Increase weight by 45 kg for collectors with weather cowl



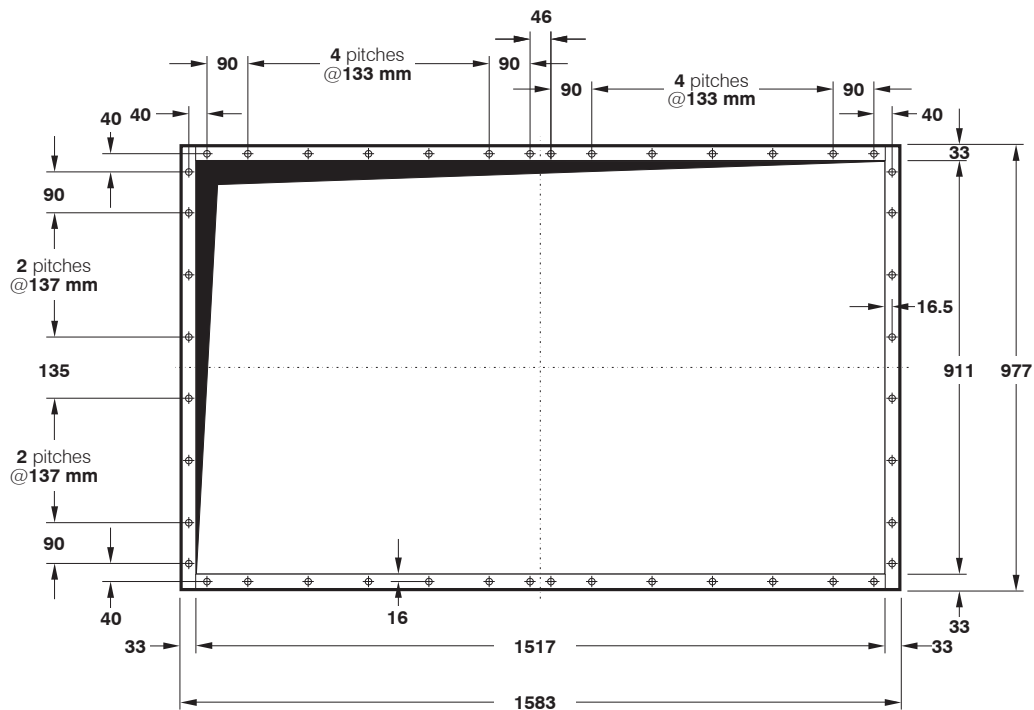
**Standard and Hopper type collectors**



**Venting type collectors**

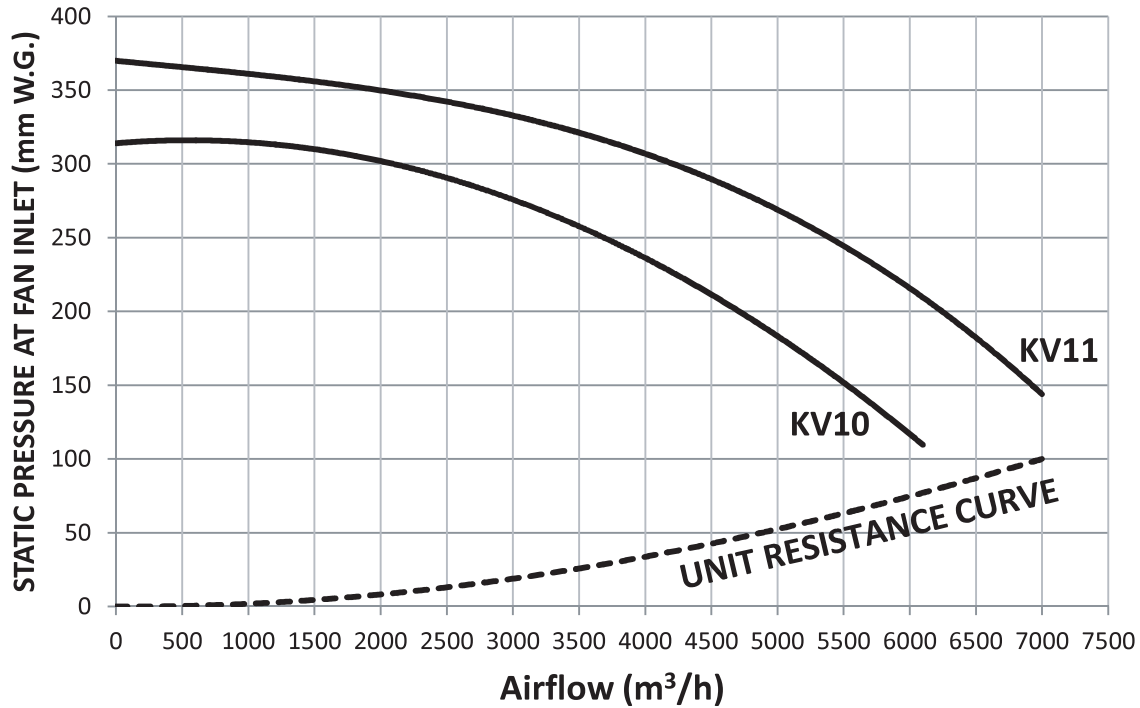
All holes  $\varnothing$  3.5 mm. Pitch centres: 100 mm.

**CLEANED AIR OUTLET DETAILS**



**APERTURE AND MOUNTING FLANGE DETAILS FOR HOPPER AND VENTING TYPE COLLECTORS**

All holes  $\varnothing$  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 mmW.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 level of 80 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.

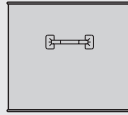
### WEIGHTED SOUND PRESSURE LEVELS

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.

KV10	KV11
74 dB(A)*	76dB(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**

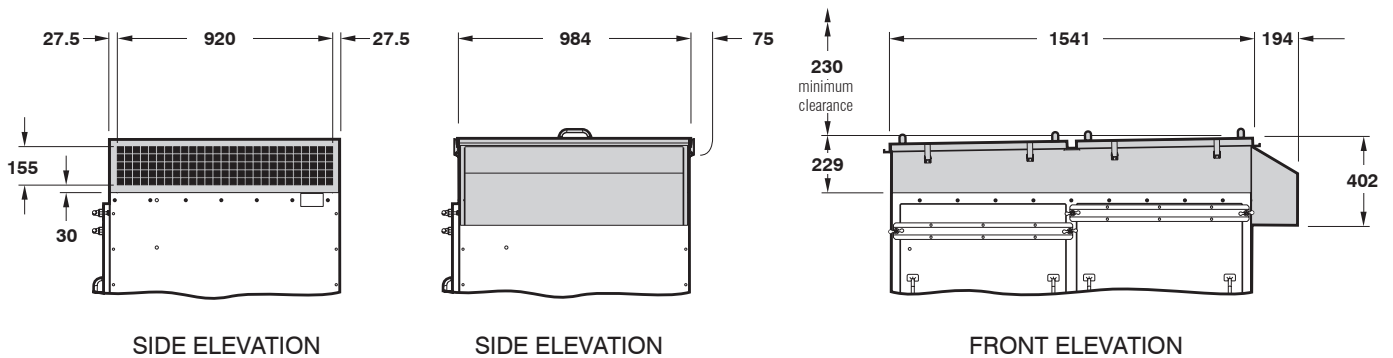
Voltage input: 380-420V, Three Phase, 50Hz  
440-480V, Three Phase, 60Hz  
or to suit local voltage

**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.

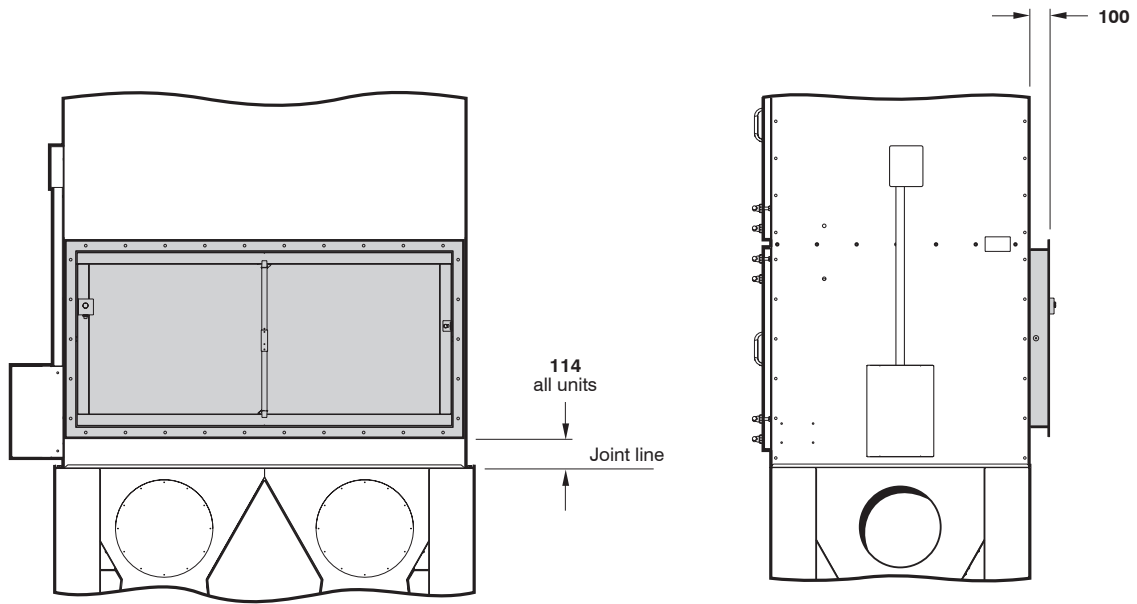
**Dimension tolerances:** ±3 mm on main dimensions; ±2 mm on detail dimensions



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

**OPTIONAL WEATHER COWL**

Unimaster Dust Collectors – Series UMA 450

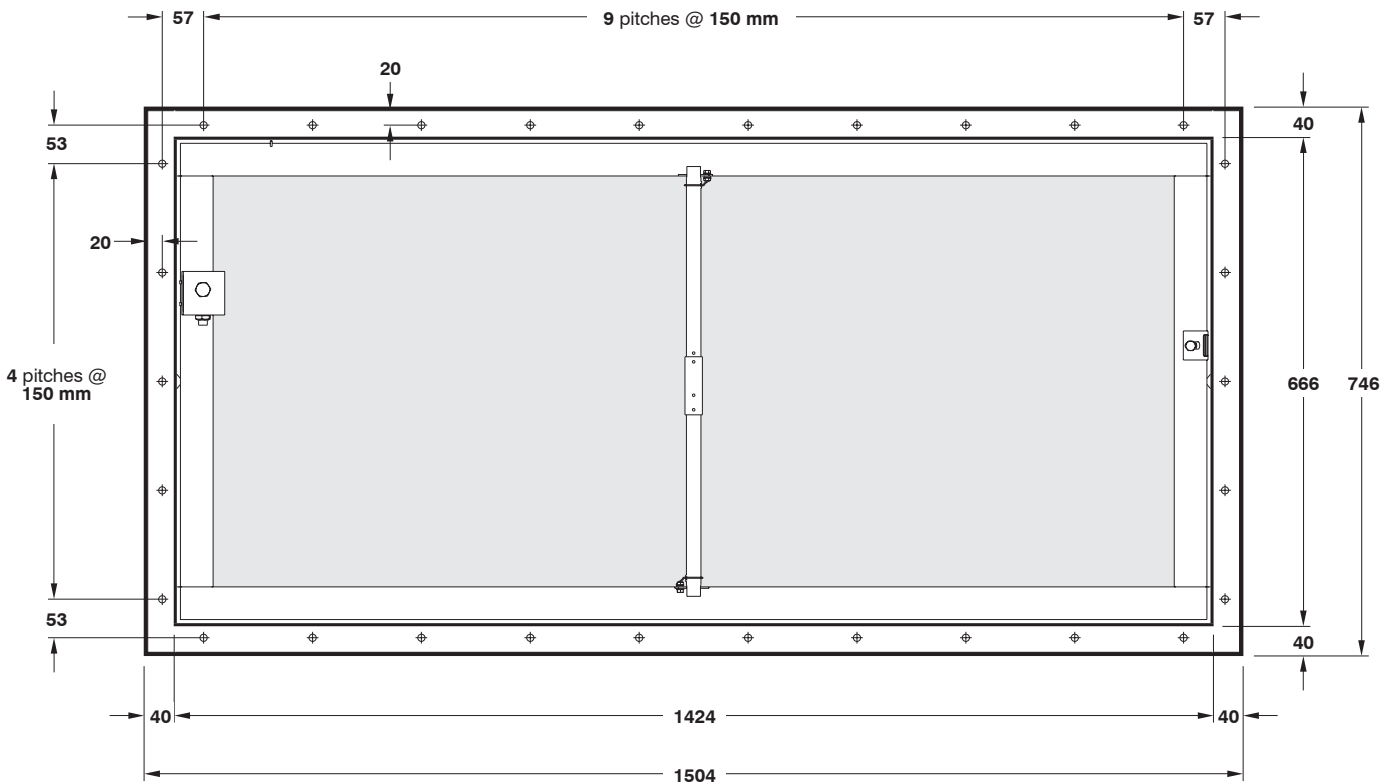


REAR ELEVATION

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 Ø10 mm for M8 bolts

