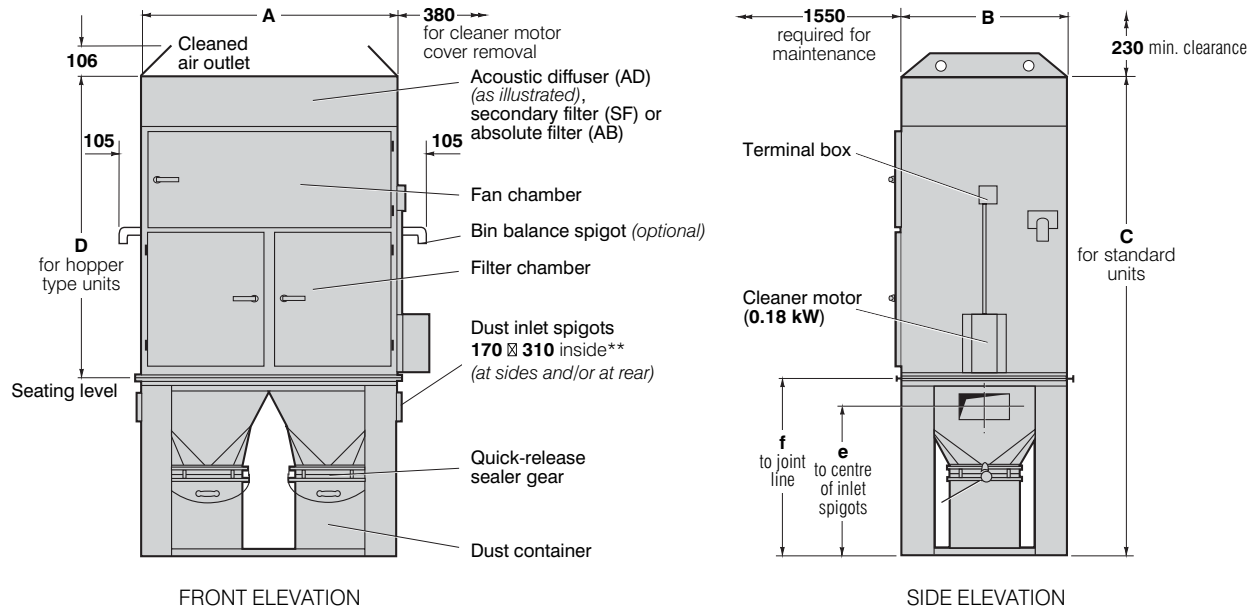


Unimaster Dust Filters

Series UMA 450



Unimaster standard and hopper type dust control units

Model UMA 454 AD illustrated. Suitable for inside locations.

SPECIFICATIONS

Unit type	Filtration area	DIMENSIONS in mm*						Fan type	Motor rating	Dust container (x2)	Approx net weight
		A	B	C	d	e	f				
454 AD	42m ²	1515	965	2886	∅	873	1056	K10 K11	5.5 kW 7.5 kW	55 litre	545 kg 610 kg
456 AD	42m ²	1515	965	3114	∅	1102	1284	K10 K11	5.5 kW 7.5 kW	80 litre	560 kg 620 kg
458 AD	42m ²	1515	965	3114	∅	1102	1284	K10 K11	5.5 kW 7.5 kW	110 litre	565 kg 625 kg
450H AD	42m ²	1515	965	∅	1830	∅	∅	K10 K11	5.5 kW 7.5 kW	∅	410 kg 460 kg
454 SF	42m ²	1515	965	3104	∅	873	1056	K10 K11	5.5 kW 7.5 kW	55 litre	615 kg 680 kg
456 SF	42m ²	1515	965	3332	∅	1102	1284	K10 K11	5.5 kW 7.5 kW	80 litre	630 kg 690 kg
458 SF	42m ²	1515	965	3332	∅	1102	1284	K10 K11	5.5 kW 7.5 kW	110 litre	635 kg 695 kg
450H SF	42m ²	1515	965	∅	2050	∅	∅	K10 K11	5.5 kW 7.5 kW	∅	480 kg 530 kg
454 AB	42m ²	1515	965	3304	∅	873	1056	K10 K11	5.5 kW 7.5 kW	55 litre	645 kg 710 kg
456 AB	42m ²	1515	965	3532	∅	1102	1284	K10 K11	5.5 kW 7.5 kW	80 litre	660 kg 720 kg
458 AB	42m ²	1515	965	3532	∅	1102	1284	K10 K11	5.5 kW 7.5 kW	110 litre	665 kg 725 kg
450H AB	42m ²	1515	965	∅	2250	∅	∅	K10 K11	5.5 kW 7.5 kW	∅	510 kg 560 kg

*Tolerance ∅3mm **DCE tolerance ∅ 0mm to ∅2mm (NOTE: Outside dimensions of duct connectors must not exceed inside dimensions of inlets)

SUPPLIED BY:



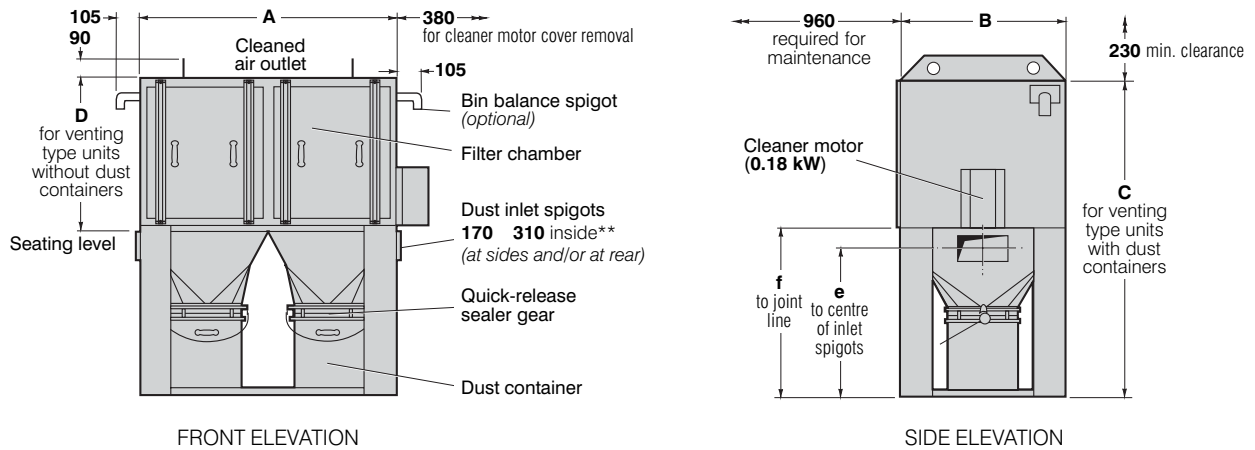
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Unimaster Dust Filters – Series UMA 450



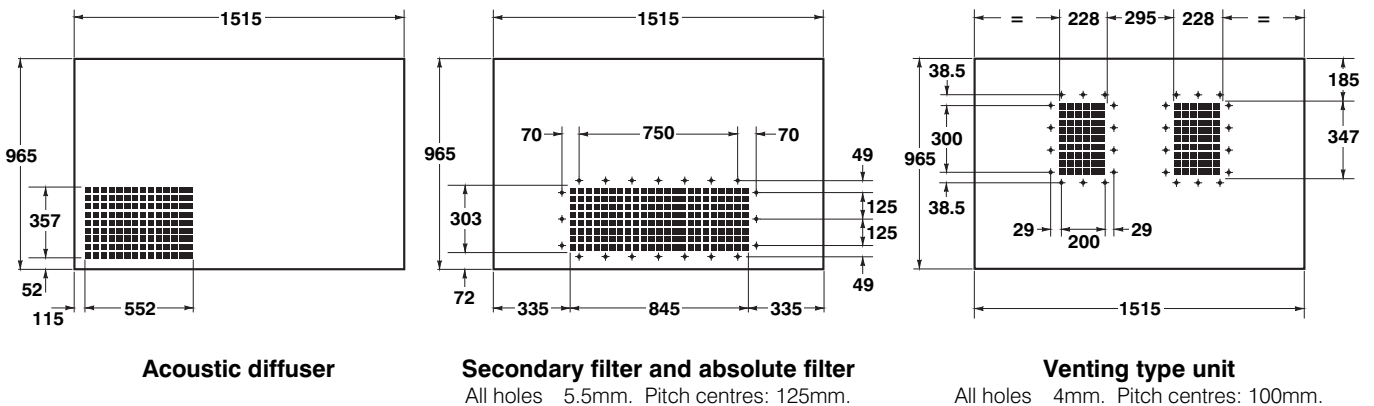
Unimaster venting type dust control units

Model UMA 454 V illustrated. Suitable for inside locations and outside when fitted with side outlet box and weather cowl.

SPECIFICATIONS								
Unit type	Filtration area	DIMENSIONS in mm*					Dust container (x2)	Approx net weight
		A	B	C	d	e		
454 V	42m ²	1515	965	1855	873	1018	55 litre	350 kg
456 V	42m ²	1515	965	2083	1102	1246	80 litre	360 kg
458 V	42m ²	1515	965	2083	1102	1246	110 litre	365 kg
450 V	42m ²	1515	965			874		215 kg

*Tolerance 3mm **DCE tolerance 0mm to 2mm (NOTE: Outside dimensions of duct connectors must not exceed inside dimensions of inlets)

DUST CONTAINERS				
Size	Base diameter	Height	Approx. net weight	Typical dust densities
55 litre (2ft ³)	420mm	400mm	5 kg	Dust Density with 50% voidage, in kg/litre Sander 0.13 Graphite 0.80 Sand 1.33 Iron 3.58 Steel 3.72
80 litre (3ft ³)	420mm	630mm	7 kg	
110 litre (4ft ³)	555mm	630mm	8 kg	
A reasonable total load for removal by hand would be 25 kg				



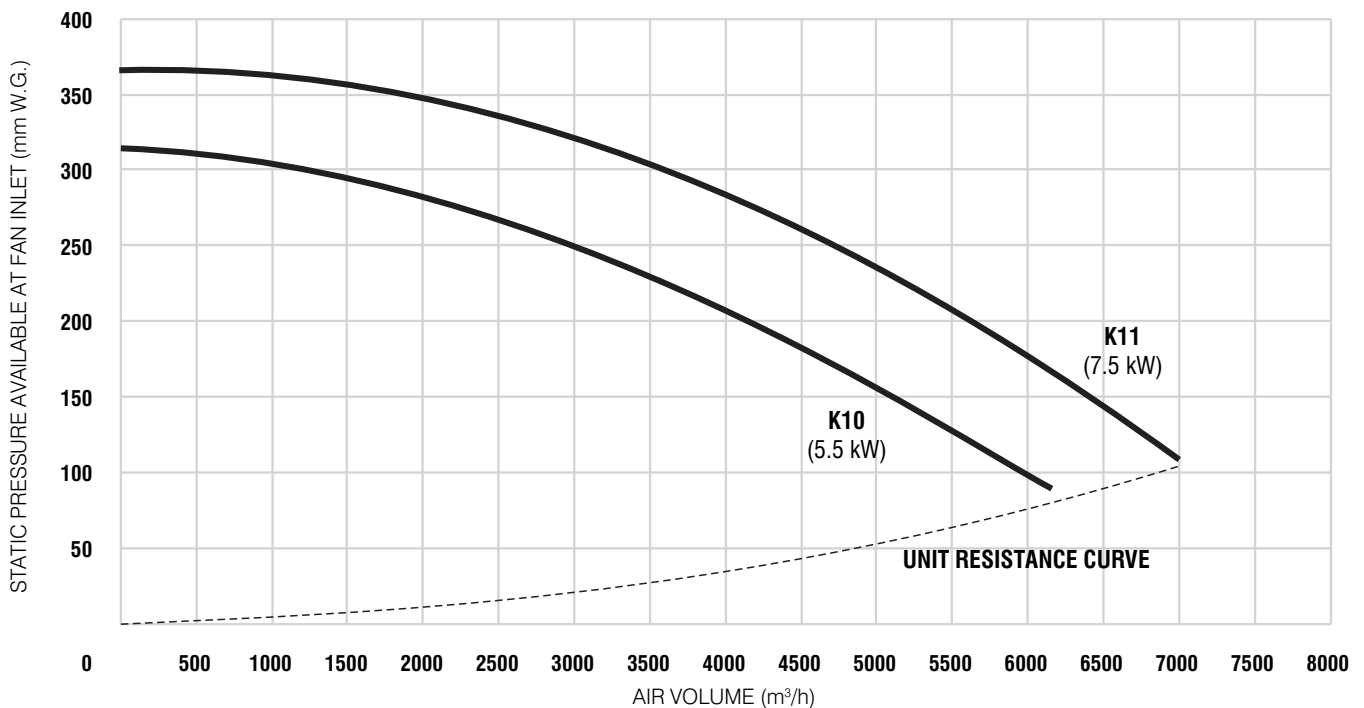
Acoustic diffuser

Secondary filter and absolute filter
All holes 5.5mm. Pitch centres: 125mm.

Venting type unit
All holes 4mm. Pitch centres: 100mm.

Cleaned air outlet details
All outlet grilles shown as punched.

Unimaster Dust Filters – Series UMA 450



UMA 450 performance curves

FAN SELECTION

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

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 across filter bags prior to cleaning, usually 50-100mm W.G.
- 4 Estimate pressure drop through connected system i.e. between point of entrainment and unit 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 $L_{ep,d}$ of 85 dB(A) or more are also specified.

All Unimaster UMA 450 dust control units are below this action limit.

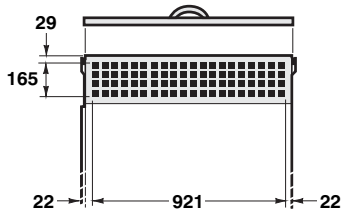
WEIGHTED SOUND PRESSURE LEVELS

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.

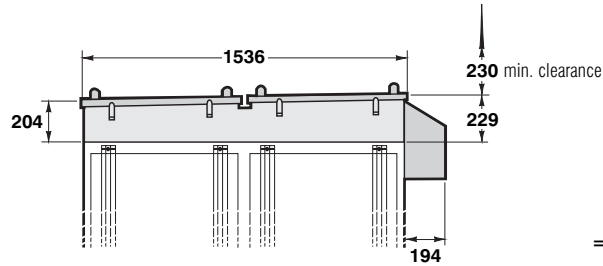
K10
74 dB(A)*

K11
76 dB(A)

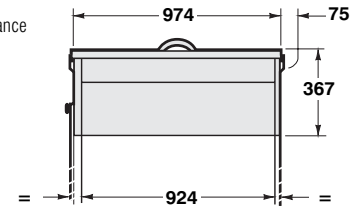
Noise measurements of installed equipment may vary due to site conditions. *Estimated data.



DETAIL OF CLEANED AIR
OUTLET WITH WEATHER
COWL REMOVED



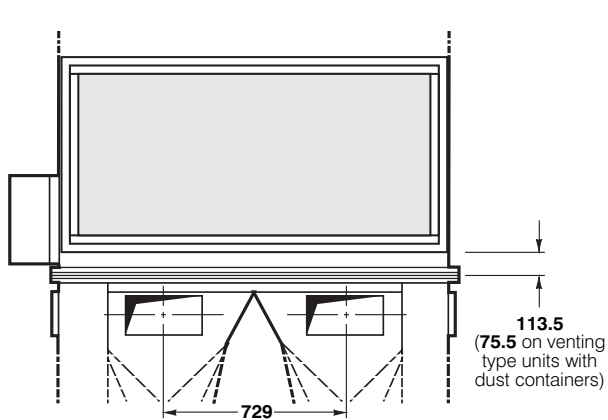
FRONT ELEVATION



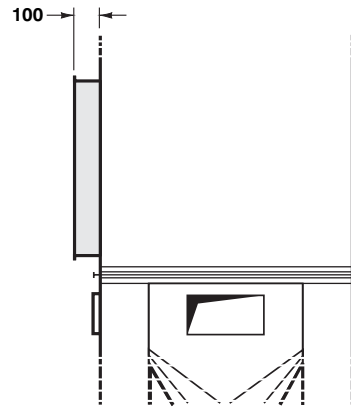
SIDE ELEVATION

Unimaster side outlet box and weather cowl

Model UMA 450 V illustrated. Outlet grille is shown as punched.



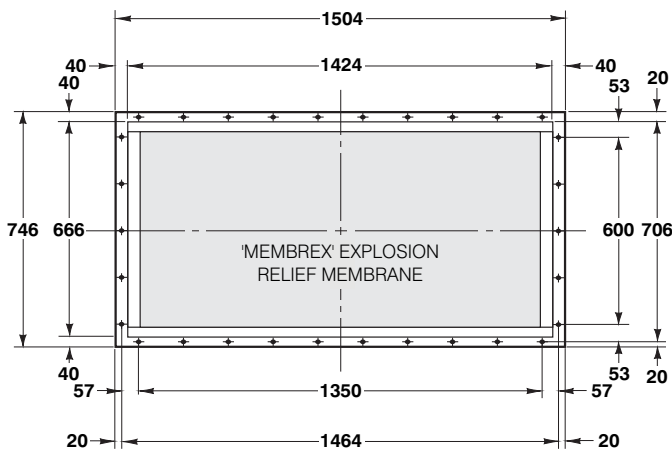
REAR ELEVATION



SIDE ELEVATION

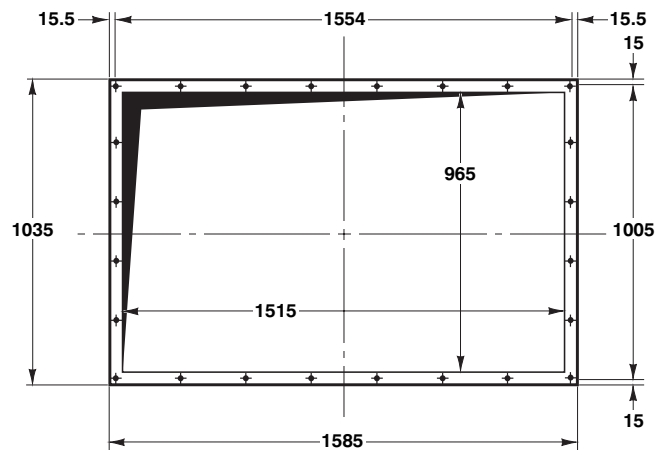
Explosion relief panel and rear dust inlet spigots

Model UMA 454, standard unit illustrated.



Explosion relief flange mounting details

All holes \varnothing 10mm for M8 bolts. Pitch centres: 150mm.



Aperture and mounting flange details for hopper and venting type units

All holes \varnothing 12mm for M10 bolts.
Pitch centres: 222mm horizontally; 201mm vertically.

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