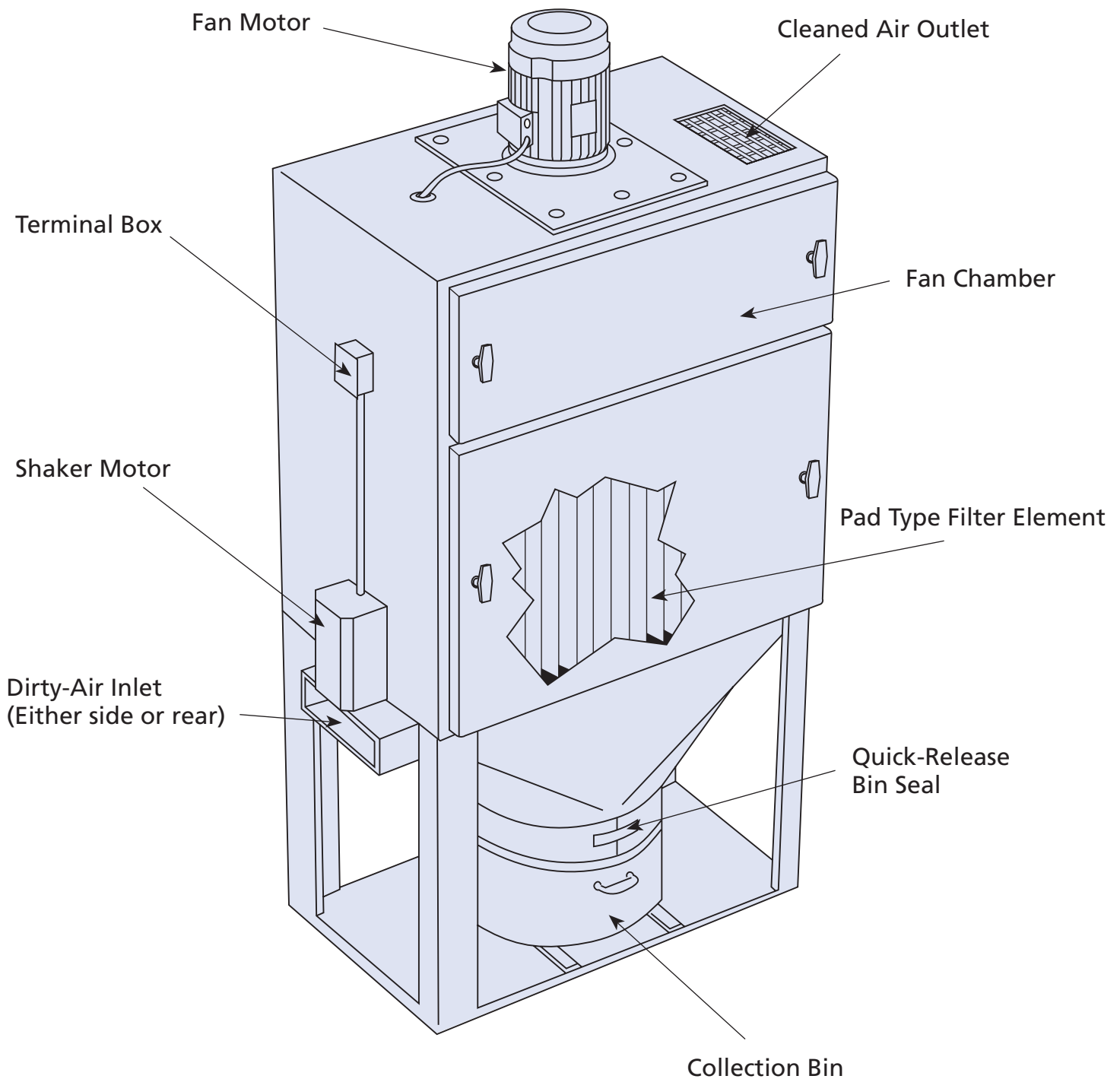


# ECONOMECH DUST CONTROL UNITS



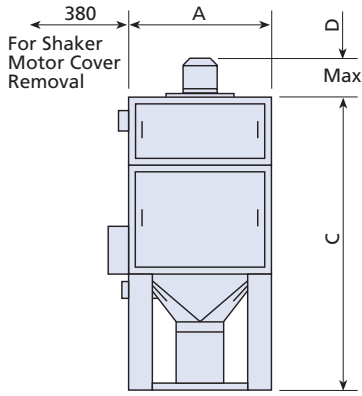
## OPERATION PRINCIPLE

Dust-laden air enters the hopper section via the dirty-air inlet where partial pre-separation takes place. Heavier particles fall directly into the collection bin whilst the fine dust is carried up into the filter element to be retained on the outer surface.

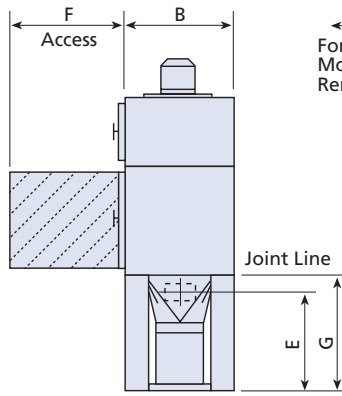
The cleaned air passes through the filter into the fan chamber from where it is discharged either back into the working environment or to atmosphere depending upon the dust being collected.

# SINGLE BODY UNITS

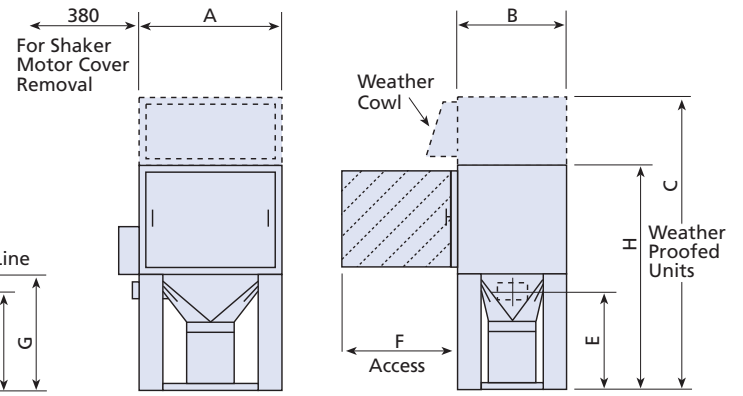
## STANDARD UNITS TYPE EMB



EMB70 - EMB330

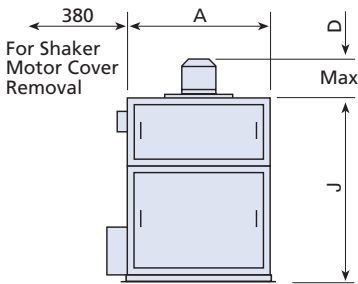


## VENTING UNITS WITH BIN TYPE EMBV

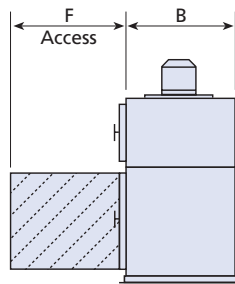


EMBV70 - EMBV330

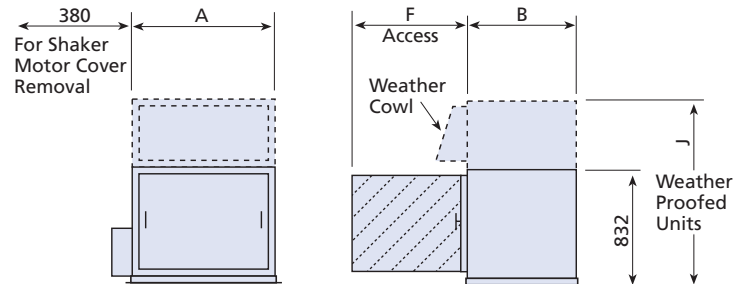
## HOPPER UNITS TYPE EMH



EMH 70 - EMH 330

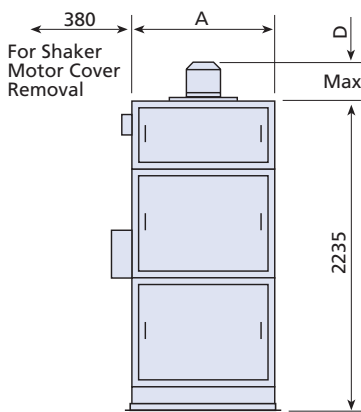


## VENTING UNITS TYPE EMV

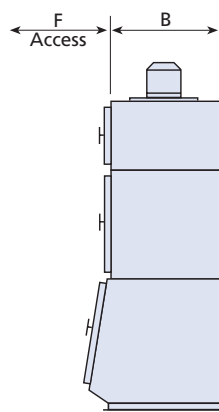


EMV 70 - EMV 330

## SACK TIPPING UNITS TYPE EMST



EMST 100 - EMST 330

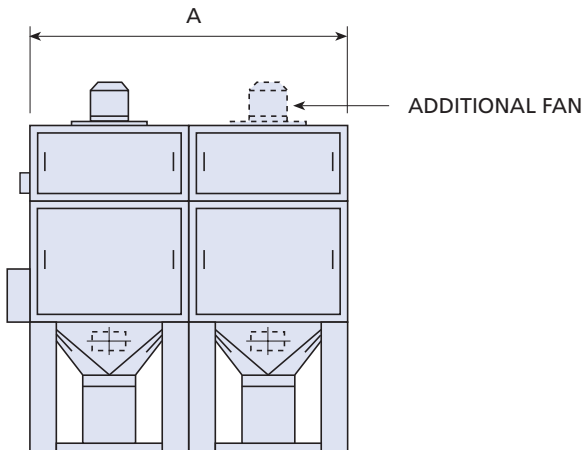


**NB. EMV AND EMBV UNITS ALSO AVAILABLE IN DOUBLE AND TRIPLE BODY CONFIGURATIONS**

UNIT SIZE	AREA	A	B	C	D	E	F	G	H	J	INLET SIZE
70	7m <sup>2</sup>	572	572	1859	250	597	600	691	1483	1208	152 x 102
100	10m <sup>2</sup>	762	572	1973	280	597	600	691	1483	1322	229 x 102
150	15m <sup>2</sup>	762	762	2240	315	839	800	958	1750	1322	229 x 152
200	20m <sup>2</sup>	954	762	2240	315	839	800	958	1750	1322	229 x 152
250	25m <sup>2</sup>	1144	762	2240	355	839	800	958	1750	1322	305 x 152
300	30m <sup>2</sup>	1334	762	2240	355	839	800	958	1750	1322	305 x 152
330	33m <sup>2</sup>	1144	966	2240	355	839	1000	958	1750	1322	305 x 152

# DOUBLE BODY UNITS

## STANDARD UNITS TYPE EMB

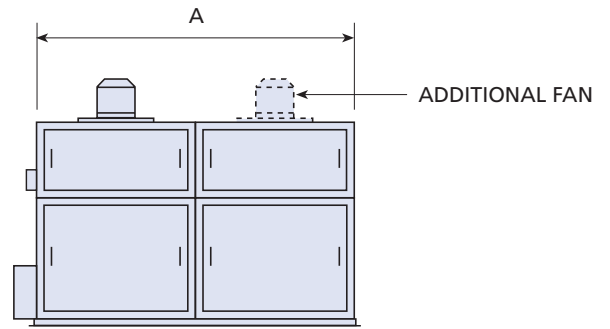


EMB 400 - EMB 660

UNIT SIZE	AREA	A	INLET SIZE
400	40m <sup>2</sup>	1908	2 x 229 x 152
500	50m <sup>2</sup>	2288	2 x 305 x 152
600	60m <sup>2</sup>	2668	2 x 305 x 152
660	66m <sup>2</sup>	2288	2 x 305 x 152

NB. ALL OTHER DETAILS AS SINGLE BODY UNITS

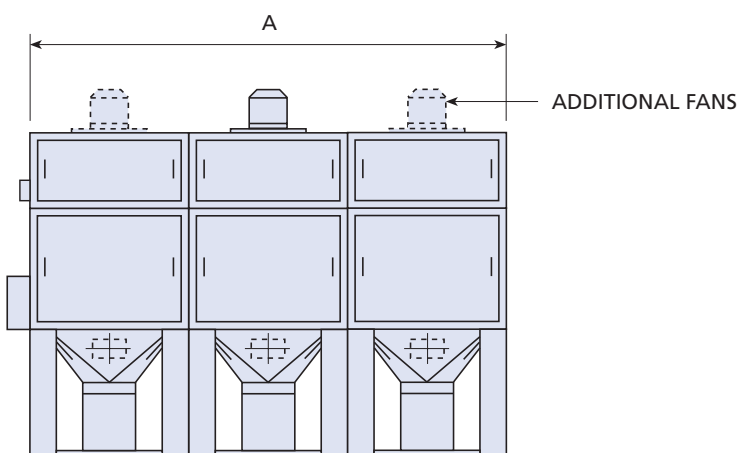
## HOPPER UNITS TYPE EMH



EMH 400 - EMH 660

# TRIPLE BODY UNITS

## STANDARD UNITS TYPE EMB

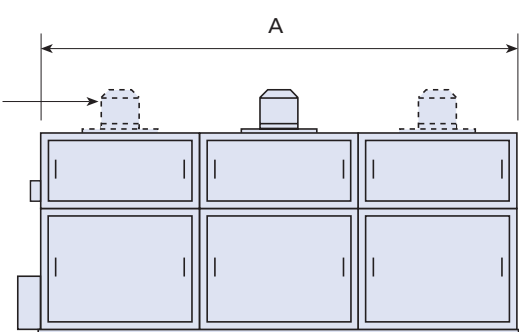


EMB 750 & EMB 1000

UNIT SIZE	AREA	A	INLET SIZE
750	75m <sup>2</sup>	3432	3 x 305 x 152
1000	100m <sup>2</sup>	3432	3 x 305 x 152

NB. ALL OTHER DIMENSIONS AS SINGLE BODY UNITS

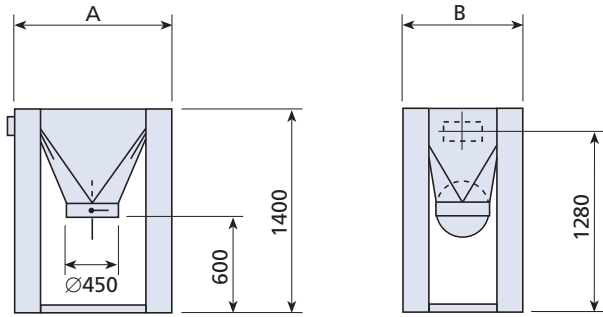
## HOPPER UNITS TYPE EMH



EMH 750 & EMH 1000

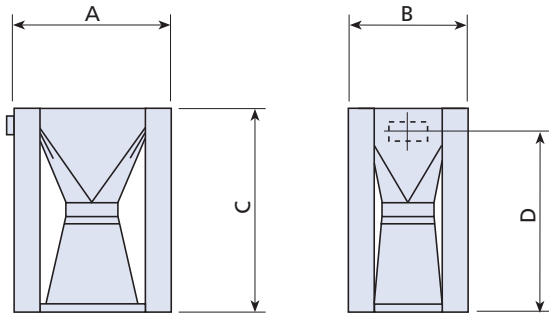
# ALTERNATIVE HOPPER SECTIONS

## BAGGING OFF UNITS TYPE EMB



EMB150 - EMB330

## HIGH CAPACITY BIN UNITS TYPE EMB

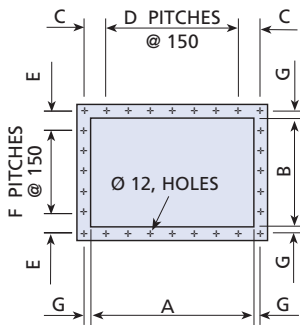


EMB200 - EMB330

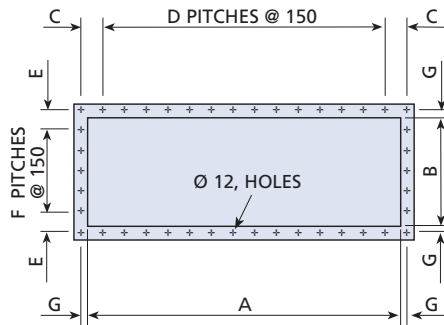
UNIT SIZE	A	B	C	D	INLET SIZE
150	762	762	-	-	229 x 152
200	954	762	1400	1286	229 x 152
250	1144	762	1260	1146	305 x 152
300	1334	762	1260	1146	305 x 152
330	1144	966	1260	1146	305 x 152

NB. THE ABOVE HOPPERS ARE ALSO AVAILABLE IN DOUBLE AND TRIPLE BODY CONFIGURATIONS.

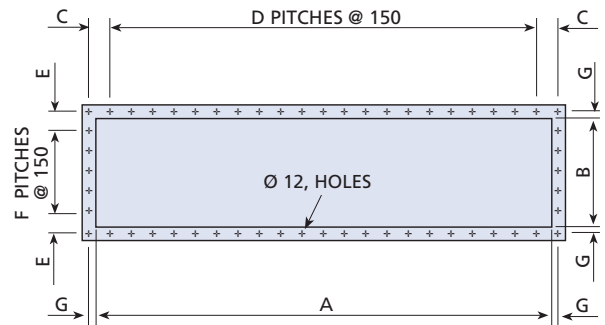
## BASE FLANGE DETAILS



EM70 EM330



EM400 - EM660

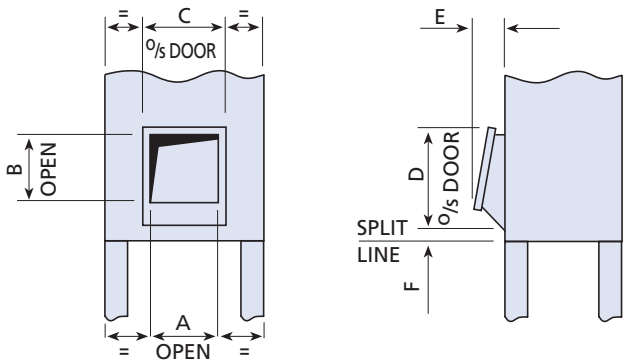


EM750 - EM1000

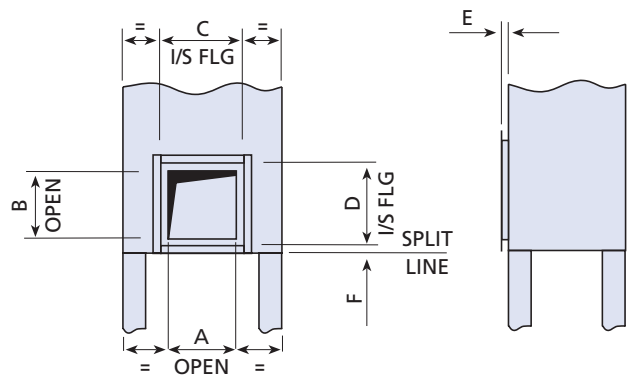
UNIT SIZE	A	B	C	D	E	F	G
70	572	572	159	2	159	2	23
100	762	572	104	4	159	2	23
150	762	762	104	4	104	4	23
200	954	762	125	5	104	4	23
250	1144	762	145	6	104	4	23
300	1334	762	90	8	104	4	23
330	1144	966	145	6	131	5	23
400	1908	762	152	11	104	4	23
500	2288	762	117	14	104	4	23
600	2668	762	157	16	104	4	23
660	2288	966	117	14	131	5	23
750	3432	762	94	22	109	5	28
1000	3432	966	94	22	138	5	28

# EXPLOSION RELIEF DETAILS

## DOOR TYPE EXPLOSION RELIEF



## MEMBRANE TYPE EXPLOSION RELIEF

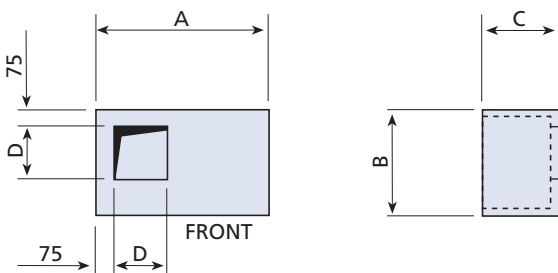


The above explosion relief panel sizes are based on ST1 classified dusts and published as a guide only.

Explosion panel vent size is determined by calculation from recognised methods using information specific to the dust being handled.

UNIT SIZE	DOOR TYPE						MEMBRANE TYPE					
	A	B	C	D	E	F	A	B	C	D	E	F
70	360	270	385	380	130	205	360	360	450	450	40	170
100	410	295	435	400	130	205	380	410	470	500	40	145
150	530	295	555	400	130	205	380	520	470	610	40	85
200	530	390	555	520	165	145	500	530	590	620	40	85
250	530	440	555	580	175	115	530	560	620	650	40	70
300	610	440	635	580	175	115	560	610	650	700	40	55
330	530	440	555	580	175	115	530	560	620	650	40	70

## SILENCER DETAILS



UNIT SIZE	A	B	C	D
70	572	572	380	150
100	762	572	380	220
150	762	762	380	220
200	954	762	380	280
250	1144	762	460	330
300	1064	762	460	330
330	1144	966	460	330
1000	1064	966	560	360

## UNIT WEIGHTS - Kg (APPROX)

UNIT SIZE	UNIT TYPE				
	EMB	EMH	EMV	EMVB	EMST
70	170	145	85	115	-
100	200	170	100	135	220
150	225	190	120	160	245
200	255	210	145	190	275
250	300	250	170	220	320
300	330	275	195	250	350
330	360	300	210	275	380
400	410	330	233	305	-
500	470	375	270	353	-
600	540	435	320	420	-
660	580	480	370	485	-
750	680	545	435	570	-
1000	800	645	510	670	-

# SPECIFICATION

## CONSTRUCTION

An all-welded, mild steel panel construction with two access doors to the front of the unit. Housed within the main body section are the filter elements and where applicable the extraction fan. The filter shaker motor is mounted externally on the unit side panel. Standard EMB and EMVB type units are complete with integral hopper section, with optional inlet positions and a quick-release dust disposal bin.

All joints are suitably sealed with air tight compounds.

## FILTER ELEMENTS

The filter elements are mounted in the main body section of the unit and are of a pad type configuration, each pocket having a wire mesh type insert to retain its shape.

A range of filter media is available although most applications will be served by a pre-shrunk, satin-weave cotton, which gives a high filtration efficiency with low pressure drop.

For dusts with acidic or alkaline properties it will be necessary to select the most suitable media from the range of synthetic fabrics.

## FABRIC CLEANING

Cleaning of the filters is of the automatic shake after shut down mode, whereby when the main fan is de-energised a pre-set timer allows a suitable run down period before activating the 6 pole shaker motor. The shaft of the shaker motor is connected to an eccentric boss, in turn connected through two rod end bearings to the shaker bar, which provides location and spacing of the filter pockets.

## FAN PERFORMANCE CURVES

Standard Bin and Hopper Type Units are normally supplied with one of the fan sizes indicated on the FAN CURVES CHART.

However, other fans may be provided to suit non-standard applications.

In the case of Sack Tipping Units these are always supplied with a fan sized to give a control velocity of 1m./sec. through the sack tipping door.

The performance curves below indicate volumes and pressure available at the inlet to the unit with the filter element in the clean condition. An allowance for 'filter dirty' condition (usually an additional 50-70 mm. WG) must be added to the pressure drop calculations prior to fan selection.

## CONTROLLER

A standard controller is supplied with fan-assisted units and comprises of a main fan starter (either Direct On Line or Star Delta, depending on the motor size), an electronic timer circuit, D.O.L. shaker motor contactor, integral isolator and fusing. The controller is built to meet the IEE Regulations 16th Edition and the Electricity at Work Act No.635.

All components are mounted in a steel enclosure to IP55 complete with start, stop/clean and emergency stop buttons.

## FAN

Fans are of the backward inclined, laminar bladed centrifugal type running at two pole speed, direct coupled to a t.e.f.c. squirrel caged flange mounted motor.

## ELECTRICAL

Our standard equipment is supplied suitable for a supply of 380/440 Volts 3 phase 50 Hz.

Units with an intergral fan and shaker motors pre-wired to an external terminal box for wiring to the automatic controller. Venting unit controllers are wired direct to the Shaker Motor Terminal Box.

## ADDITIONAL FEATURES

The Economech range of Dust Control Units can be fitted with Explosion Relief, Sound Attenuation and Secondary Filter features, the latter being positioned to operate under negative pressure and usually applied on toxic or noxious dust.

All standard units are suitable for both internal and external location with externally located units requiring only minor modifications.

**PRESSURE / VOLUME FAN CURVES**

