DATA SHEET

ECONOMECH

HEATONGREEN
Dust Control Limited

ECONOMECH

Overview

The Economech range of filter units is designed to be used for extraction systems, on a variety of dusts from processes that are intermittent, offering a cost effective solution to those dust extraction problems. The filter unit is cleaned by an automatically operated mechanical shake mechanism, which is energised, when the fan set has been shut down.

There are numerous configurations of the Economech, tailored to suit the requirements of a particular collection process. The Economech was first introduced in March 1982 and has been working successfully throughout industry, since that time, demonstrating a track record of reliability and performance.

Product Features

- 11 models with filter sizes from 7m² to 100m²
- Robust welded steel construction
- Range of filter media available to suit different applications
- 8 sizes of fan from 0.75kw to 11kw
- Highly efficient automatic cleaning system
- Compact physical size
- Fully weatherproofed units as a standard option
- Secondary filters as a standard option
- Stainless steel construction available

HEATONGREEN
Dust Control Limited

ECONOMECH

Mechanical Shake Filter Units

Standard Specification

Construction of filter body:	Mild steel fully welded panel construction with two access doors to the front of the unit. Integral hopper section with optional inlet position and quick release collection bin.
Filter bags:	350gms/m² Polyester Needlefelt (other medias available to suit application)
Filter inserts:	Galvanised mild steel wire construction.
Fan:	Backward inclined, laminar bladed centrifugal type running at 2 pole speed, directly coupled to IP55 flanged mounted motor.
Shaker:	Automatic shake down of the filters after shutdown mode by 6 pole face mounted motor connected to the shaker bar by an eccentric linkage mounted externally on the unit side panel.
Fan starter/ shaker controller:	Full specification comprises main fan starter (either Direct on Line or Star Delta), an electronic timer circuit, DOL shaker motor contactor, integral isolator and fusing. All components are mounted in a steel enclosure to IP54 complete with start, stop/clean and emergency stop buttons.
Electrical:	380/440V 3Ph 50Hz supply. Fan and shaker motor pre-wired to terminal box for wiring to fan starter/ shaker controller*. Controller to be mounted separately to unit.
Paint finish	To HGDC standard paint finish (copy available on request) in colour to suit customer requirements.

Please note:

*When an ATEX compliant unit is required, Zone 22 motors are fitted and these are not pre-wired to a terminal box. All wiring to be carried out by a competent electrician. If a silencer box is fitted, a gland plate and access door is fitted so that the motor can be wired without having to remove the whole silencer box.

Image 1

Economech filter unit access doors removed showing filter bags and integral fanset. Fan and shaker motors pre-wired to terminal box mounted on unit.

Image 2

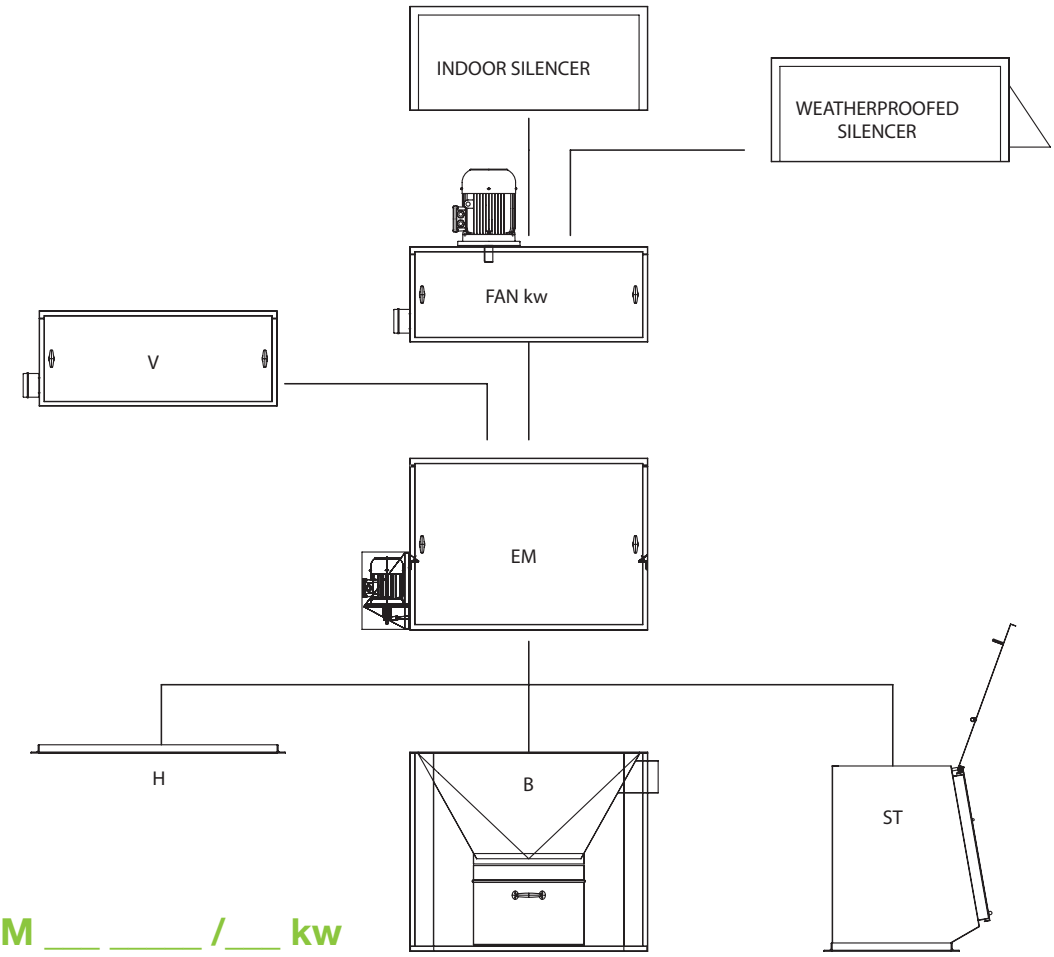
Standard fan starter/ shaker controller with stop/ clean and emergency stop buttons and isolator.

HEATONGREEN
Dust Control Limited

ECONOMECH

Mechanical Shake Filter Units

Unit Configurations



EM ___ _____ /___ kw

Economech

Index

B = Collection bin
V = Venting unit
BV = Venting unit with collection bin
H = Flanged open base
ST = Sack tipping unit

Unit sizes **70 to 330** are single modules
Unit sizes **400 to 660** are double modules
Unit sizes **750 to 1000** are triple modules

Unit Size

70 = 7m²
100 = 10m²
150 = 15m²
200 = 20m²
250 = 25m²
330 = 33m²
400 = 40m²
500 = 50m²
660 = 66m²
750 = 75m²
1000 = 100 m²

Fan size

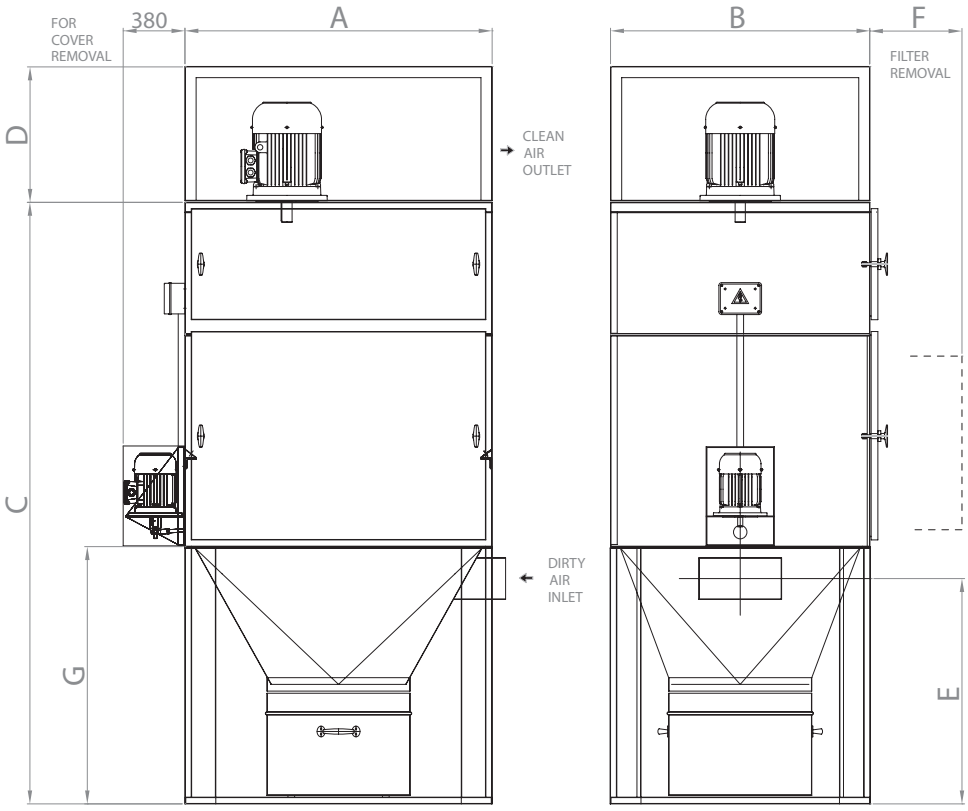
0.75kw
1.1kw
1.5kw
2.2kw
4.0kw
5.5kw
7.5kw
11kw

HEATONGREEN
Dust Control Limited

ECONOMECH

Mechanical Shake Filter Units

SIngle Bodied Economech EMB



Doubled body units and triple bodied units also available, see p.5 Other configurations available, see p.7 and 9
For further information sales@heatongreen.co.uk or telephone 01924 430430

UNIT SIZE	AREA	A	B	C	D	E	F	G	INLET SIZE
70	7m²	572	572	1859	250	597	600	691	152 x 102
100	10m²	762	572	1973	280	597	600	691	229 x 102
150	15m²	762	762	2240	315	839	800	958	229 x 152
200	20m²	954	762	2240	315	839	800	958	229 x 152
250	25m²	1144	762	2240	355	839	800	958	305 x 152
330	33m²	1144	966	2240	355	839	1000	958	305 x 152

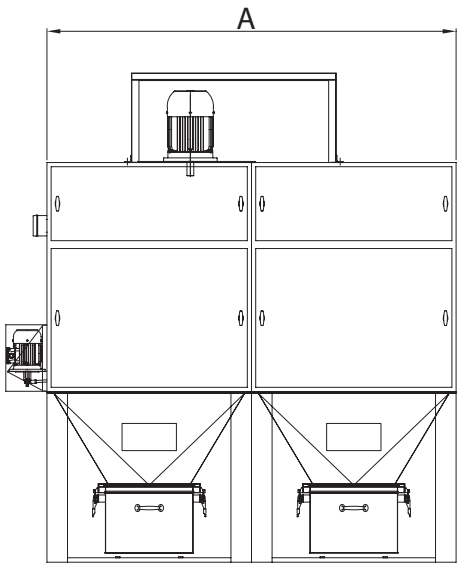
HEATONGREEN
Dust Control Limited

ECONOMECH

Mechanical Shake Filter Units

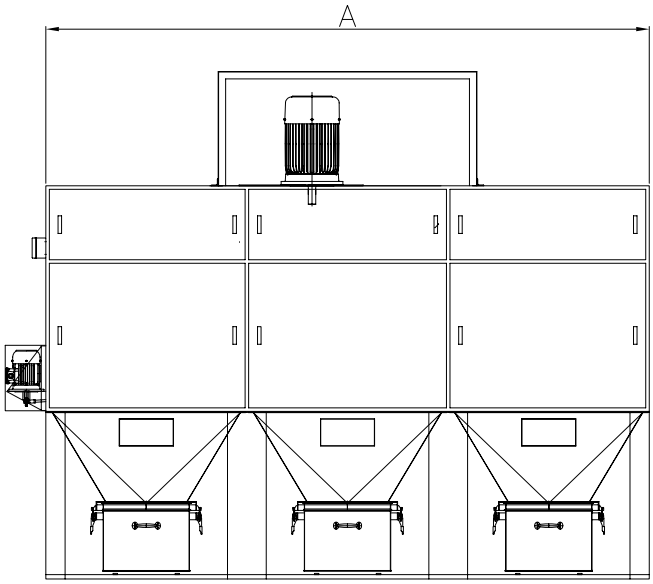
Double Bodied Economech EMB

UNIT SIZE	AREA	A	INLET SIZE
400	40m²	1908	2 x 229 x 152
500	50m²	2288	2 x 305 x 152
660	66m²	2288	2 x 305 x 152



Triple Bodied Economech EMB

UNIT SIZE	AREA	A	INLET SIZE
750	75m²	3432	3 x 305 x 152
1000	100m²	3432	3 x 305 x 152



NOTE: For all other dimensions, see p. 4
Multiple fans are available

HEATONGREEN
Dust Control Limited

ECONOMECH

Mechanical Shake Filter Units

Explosion relief

Many dusts handled are potentially explosive albeit they would have to form a dust cloud, there must be sufficient oxygen to support the explosion and a source of ignition.

In the case of the Economech filter unit, it has been certified internally as Category 2D, it cannot create ignition sources in normal operation, nor in the event of a foreseeable malfunction. This makes the equipment compatible with a Zone 21 internal volume. However, if there is the potential of an ignition source from the process, then the DSEAR Regulations require provision of explosion protection, for example, explosion relief.

The ATEX Directive has put the onus on the owner of the plant to provide the necessary information to enable the supplier to correctly size the explosion relief panel(s). The explosibility of the dust, given as its Kst value, will enable the explosion relief panel(s) to be calculated using the standard EN14491:2012. Panels are manufactured to the standard EN14797:2006. When fitted, the panel(s) should be installed so that, in the event of an explosion, it would discharge into a safe designated area.

A rupture indicator would also be included with each panel in order that, in the event of a rupture, a signal can be relayed to the electrical control panel to initiate shutdown of the fan set fitted to the filter unit.

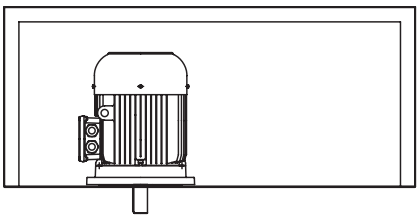
Economech EMB150 fitted with explosion relief bursting panel and rupture indicator

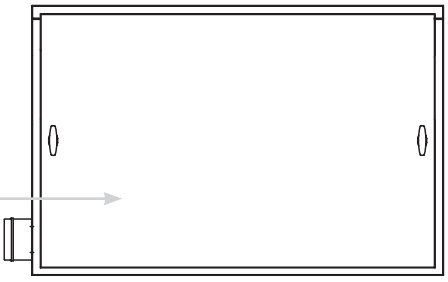
HEATONGREEN
Dust Control Limited

ECONOMECH

Mechanical Shake Filter Units

Secondary Filtration

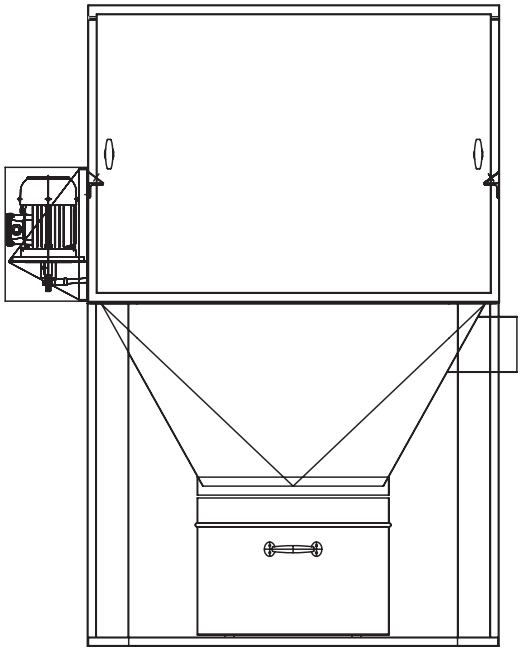




Clean air filter section housing the F8 or H13 filter elements. Doubled body units and triple bodied units also available.

For further information sales@heatongreen.co.uk

When handling dusts that are potentially hazardous and the clean air from the Economech is being returned to the workplace, additional secondary filter elements with classification F7 or H13 or equivalent may need to be considered. These are fitted after the primary filter element in the clean air section of the unit. F7 filters are suitable as “police” filters to guard against bag failure whilst H13 filters may allow the filtered air to be returned within the workplace. H13 filters have efficiencies of 99.997% and are sometimes known as “absolute filters” or “HEPA filters”. Secondary filtration limits the airflow volume and increases the differential pressure drop across the filter elements.

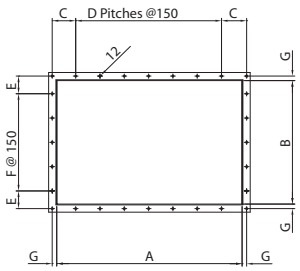


HEATONGREEN
Dust Control Limited

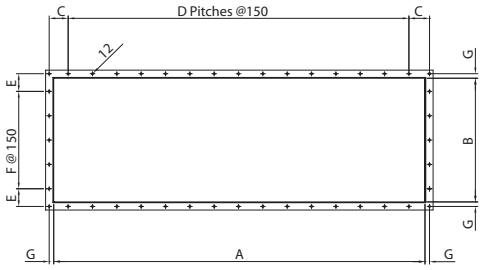
ECONOMECH

Base Flange Details EMH

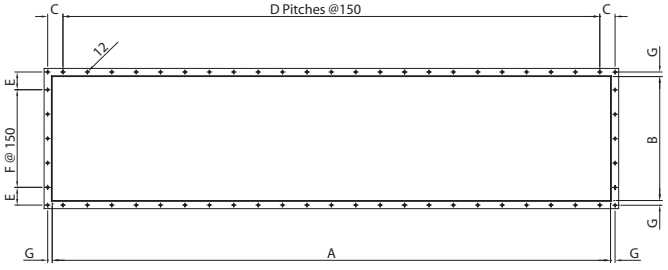
EMH70 to 330



EMH400 to 660



EMH750 and 1000



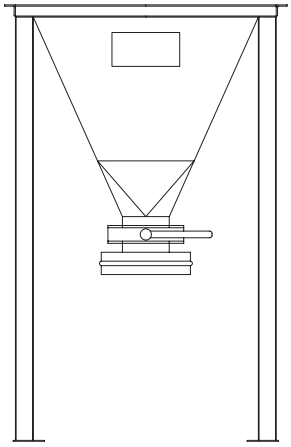
UNIT SIZE	70	100	150	200	250	330	400	500	660	750	1000
A	572	762	762	954	1144	1144	1908	2288	2288	3432	3432
B	572	572	762	762	762	966	762	762	966	762	966
C	159	104	104	125	145	145	152	117	117	94	94
D	2	4	4	5	6	6	11	14	14	22	22
E	159	159	104	104	104	131	104	104	131	109	138
F	2	2	4	4	4	5	4	4	5	5	5
G	23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

HEATONGREEN
Dust Control Limited

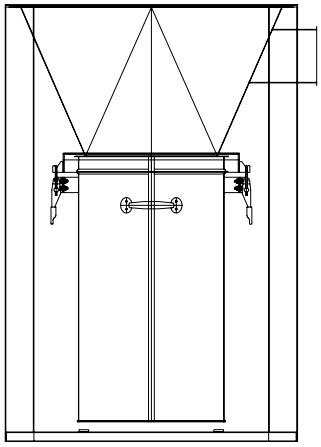
ECONOMECH

Alternative Hopper Arrangements

Bagging Off Spigots EMB 150 to 330



High Capacity Bins EMB 200 to 330



Approximate Unit Weights In Kgs

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

For more information on these or our other products please call 01924 430430

Alternatively you can email us at sales@heatongreen.co.uk

Atlas Quarry Works, Howard Street
Batley, West Yorkshire WF17 6AA
Telephone: 01924 430430
Facsimile: 01924 430898
sales@heatongreen.co.uk
www.heatongreen.co.uk