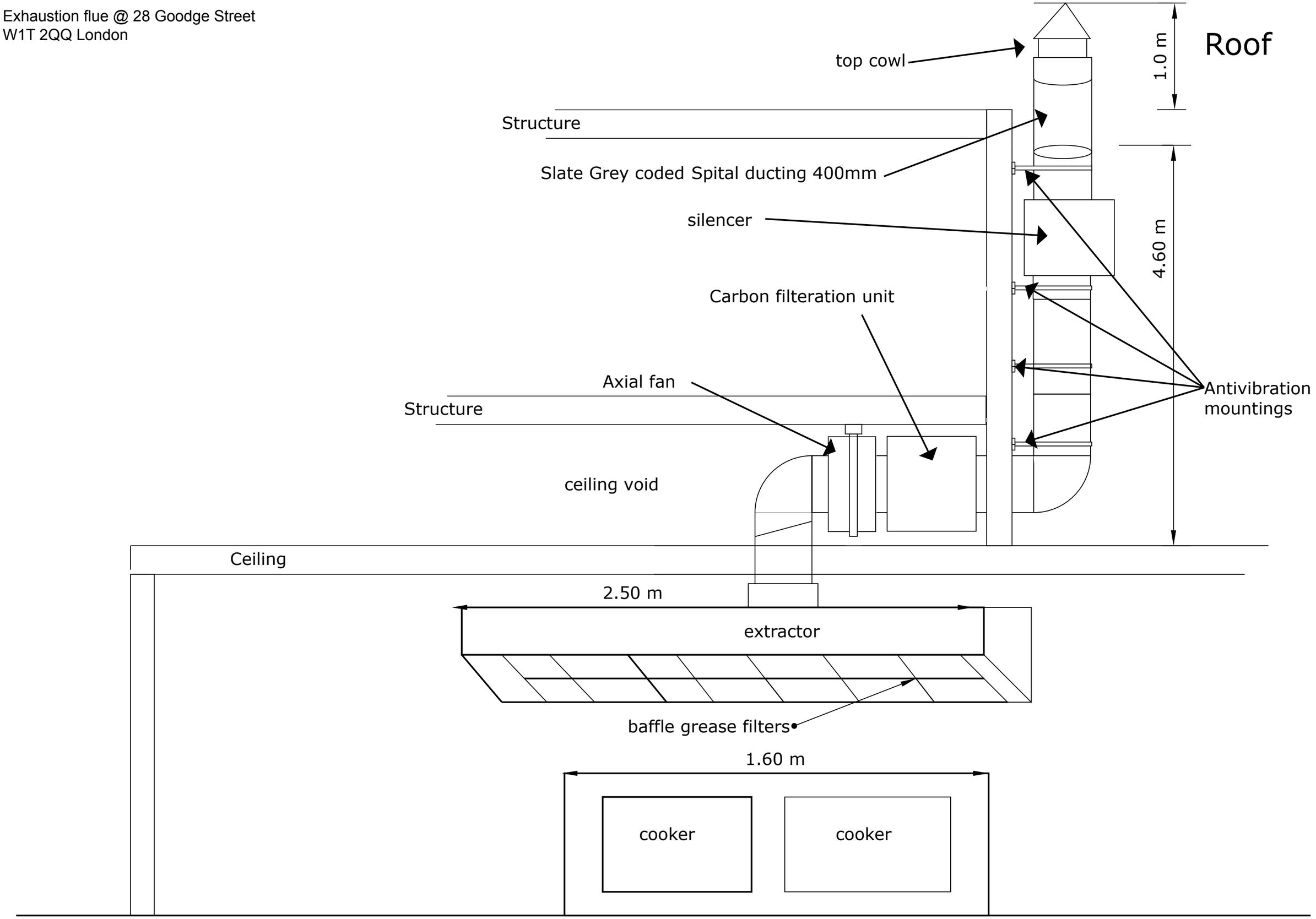
Exhaustion flue @ 28 Goodge Street
W1T 2QQ London



Canopy Extraction Calculations For 28 Goodge Street

Type of Extract Hood:
One wall canopy supplied with 500 x 400 x 50mm s/steel baffle filters.

Face Velocity across Extraction Hood:
Hood length: 2.5m x depth 1.2m = 3m/2
Face velocity: 3m/2 x 0.5m/s = 1.5m3/s (design volume)

Total no of Filters in Extract Hood:
Design volume: 1.5m3/s – 5 filters = 0.3m3/s
Total no of filters 5 off (75 pa)

Duct Air Speed:
Duct dimensions: 0.400 dia = 0.13 (air across duct section)
Design duty: 1.5m3/s- 0.13m2 = 11.5m3/s

Carbon Filter Calculations:
Activated carbon cells 600 x 600 x 600mm @ 0.9m3/s volume equates to (0.1 sec dwell time)
Design volume: 1.5m3/s – 0.9m3/s = 1.6 (cells required)
To achieve desired dwell time of 0.2 sec three cells would be required

Discharge Flue Efflux Velocity Calculations:
400mm diameter = 0.13m2
Design duty: 1.5m3/s – 0.13m2 = 11.5 (efflux velocity 11.5m/s)

Products Selected For 28 Goodge Street

Pre Filter:

Three M74- 2424 energy save pleated pre filter.

Carbon Filter Block:

Three DC242424 carbon filter block

Fan:

Flakt woods 400mm diameter JM AEROFOIL 2 STAGE AXIAL FLOW FAN.

Max noise level 52dB

Silencers:

Two RSD 400/1200.

Noise reduction to 22dB

Manufacturing Air Filters in the UK for Over 40 Years

M7 Pleated Panel Filter
ENERGYSAVER

JASUN ENVIROCARE PLC

General Description

The EnergySaver panel filter is a disposable product offering a basic level of filtration, or pre-filtration in HEVAC applications. This product is made using patented Kimberly Clark
media which combined in the unique way Jasun Filtration construct the filter can offer energy savings of up to 40%. With this product you will also reduce your carbon foot print.

POWERED BY INTREPID® Filtration Media

Construction

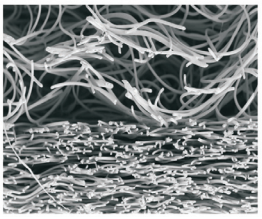
This product is constructed by bonding a pleat pack of G Line media into a water repellent AquaKote card frame

Kimberley Clark Patented Intrepid Media

- Has a Graduated Density for even dirt loading , resulting in greater dust holding
- Hydrophobic – so will not load with moisture in the air
- Has a constant efficiency due to its extra electrostatic charge
- Superior Efficiency V's Particle size (see table)
- Has a low pressure drop
- Is made form continuous fibres so will not shed
- Hugely extended area results in long life

ENERGY SAVER

cross section of the Intrepid media



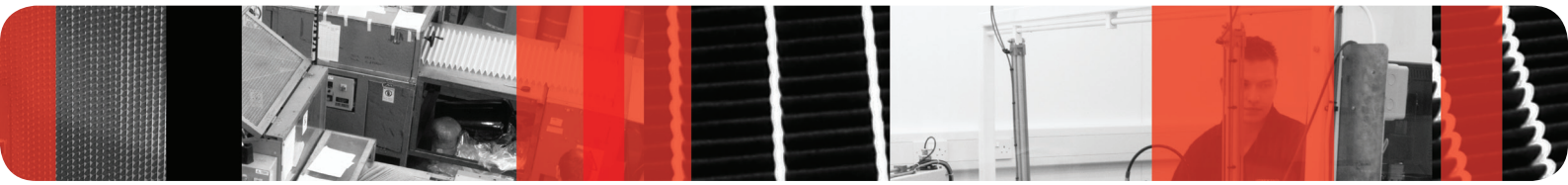
Filter Efficiency to BS EN 779		G4
Rating to ASHRAE 52.2 Test Standard		Merv 7
Filter Thickness	Rated Airflow	Initial Pressure Drop
20mm	1.50m/sec	34Pa
45mm	2.67m/sec	42Pa
95mm	2.67m/sec	38Pa
Final Recommended Pressure Drop		200Pa

FM 29257
BS EN ISO 9001:2008

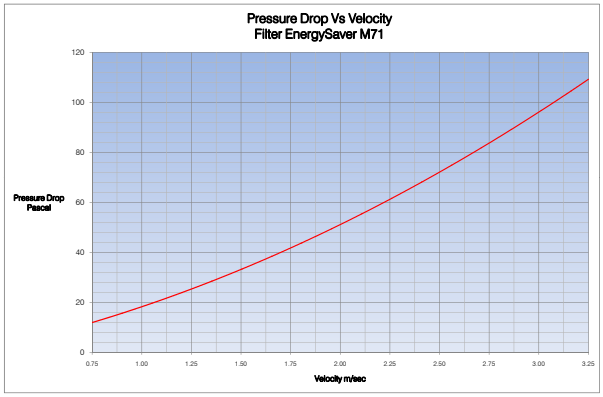
EMS 81914
BS EN ISO 14001:2004

Issue Date 17 September 2012 9:36 AM

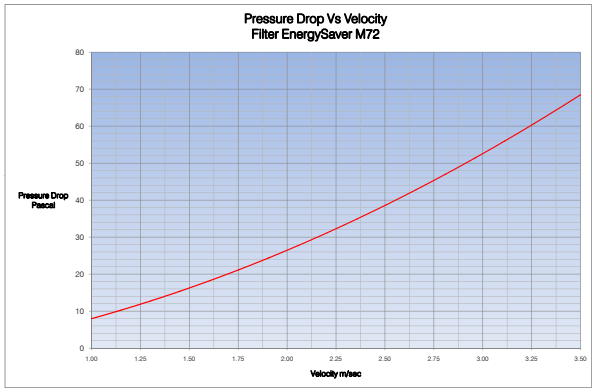
EnergySaver Panel Filter (M7)STANDARD SIZES



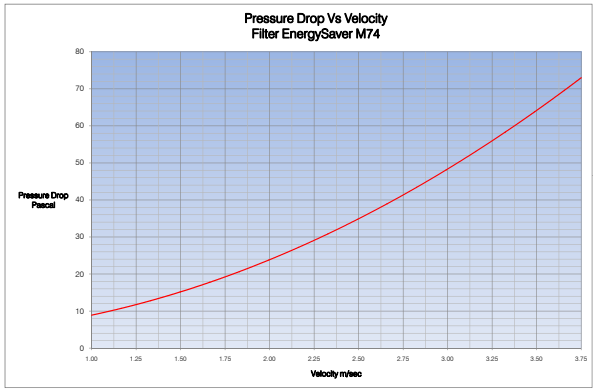
No.	Nominal Size Inches	Height (mm)	Width (mm)	Depth (mm)	Rated Airflow m^3/hr
M74-1010	10x10x4	241	241	95	559
M74-1020	10x20x4	241	495	95	1149
M74-1212	12x12x4	292	292	95	821
M74-1224	12x24x4	292	594	95	1670
M74-1515	15x15x4	368	368	95	1304
M74-1520	15x20x4	368	495	95	1754
M74-1616	16x16x4	394	394	95	1495
M74-1620	16x20x4	394	495	95	1878
M74-1625	16x25x4	394	622	95	2360
M74-1818	18x18x4	445	445	95	1907
M74-1831	18x31x4	445	775	95	3321
M74-2020	20x20x4	495	495	95	2360
M74-2024	20x24x4	495	594	95	2832
M74-2025	20x25x4	495	622	95	2965
M74-2424	24x24x4	594	594	95	3400



No.	Nominal Size Inches	Height (mm)	Width (mm)	Depth (mm)	Rated Airflow m^3/hr
M72-1010	10x10x2	241	241	45	559
M72-1020	10x20x2	241	495	45	1149
M72-1212	12x12x2	292	292	45	821
M72-1224	12x24x2	292	594	45	1670
M72-1515	15x15x2	368	368	45	1304
M72-1520	15x20x2	368	495	45	1754
M72-1619	16x19x2	394	470	45	1783
M72-1620	16x20x2	394	495	45	1878
M72-1624	16x24x2	394	594	45	2254
M72-1625	16x25x2	394	622	45	2360
M72-1818	18x18x2	445	445	45	1907
M72-1820	18x20x2	445	495	45	2121
M72-1824	18x24x2	445	594	45	2545
M72-2020	20x20x2	495	495	45	2360
M72-2024	20x24x2	495	594	45	2832
M72-2025	20x25x2	495	622	45	2965
M72-2424	24x24x2	594	594	45	3400



No.	Nominal Size Inches	Height (mm)	Width (mm)	Depth (mm)	Rated Airflow m^3/hr
M71-1010	10x10x1	241	241	20	314
M71-1020	10x20x1	241	495	20	644
M71-1212	12x12x1	292	292	20	460
M71-1224	12x24x1	292	594	20	937
M71-1515	15x15x1	368	368	20	731
M71-1520	15x20x1	368	495	20	984
M71-1619	16x19x1	394	470	20	1000
M71-1620	16x20x1	394	495	20	1053
M71-1624	16x24x1	394	594	20	1264
M71-1625	16x25x1	394	622	20	1323
M71-1818	18x18x1	445	445	20	1069
M71-1820	18x20x1	445	495	20	1189
M71-1824	18x24x1	445	594	20	1427
M71-2020	20x20x1	495	495	20	1323
M71-2024	20x24x1	495	594	20	1588
M71-2025	20x25x1	495	622	20	1663
M71-2424	24x24x1	594	594	20	1905



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Multicarb Activated Carbon Discarb Units

JASUN ENVIROCARE PLC

General Description

These filters are manufactured for ease of installation and incorporation into ducted air systems. They can be used on both supply for purifying incoming air, and can be used on the extract to remove toxic gasses and odours generated within a process.

Construction

These modules are manufactured by mounting a series on carbon panel filters with a sealed case. The airflow is epitomize by presenting the filtering surfaces in a “V” formation.

Each carbon panel is sealed into the filter case so as to ensure no air can bypass the carbon granules.

The panels are manufactured using long established bonding techniques which hold the activated carbon granules in a rigid biscuit. The biscuit is encapsulated in a carbon impregnated cloth which prevents any leakage of granules or powder.

The unique bonding method used by Jasun Envirocare ensures that, unlike our competitors filters, that the panels will remain intact and rigid even if wet.

Typical Applications

- Reduction of Cooking Odours
- Removal of Kerosene Exhaust Fumes
- General Odour Reduction
- Neutralisation of Ammonia and its Derivatives
- Removal of Formaldehyde
- Removal of Airborne Pollutants and Contaminants
- Removal of Acid Gases (H_2S, SO_2, NOX, HCl)

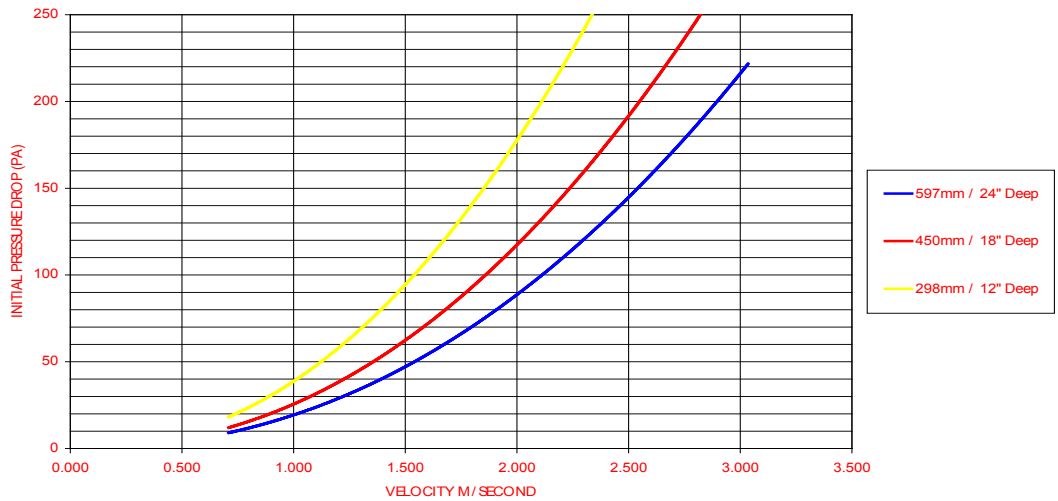
Please check with our sales department when specifying carbon filters as most applications require a bespoke solution specifically tailored for the job in hand.

Designed in Britain, Made in Britain

Multicarb Cells STANDARD SIZES

No.	Nominal Size (Inches)	Height (mm)	Width (mm)	Depth (mm)	Weight of Carbon (Kg)	Cell Weight	Capacity @ 0.1 Second Dwell Time
DC-CF1	24 x 24 x 8	594	594	197	10	22	800
DC-CF1-HALF	24 x 12 x 8	594	291	197	5	11	400
DC242412/8	24 x 24 x 12	594	594	292	13	24	990
DC121212	12 x 12 x 12	297	297	297	6	12	450
DC181812	18 x 18 x 12	445	445	297	13	25	990
DC241212	24 x 12 x 12	594	297	297	13	25	990
DC242412	24 x 24 x 12	594	594	297	25	36	1900
DC-CF2	24 x 24 x 16	594	594	397	18	34	1370
DC-CF2-HALF	24 x 12 x 16	594	291	397	9	18	685
DC-WA15-208	24 x 6 x 18	144	600	440	7	13	533
DC121218	12 x 12 x 18	292	292	451	10	15	761
DC181818	18 x 18 x 18	445	445	451	19	26	1445
DC241218	24 x 12 x 18	594	297	451	18	26	1369
DC242418	24 x 24 x 18	594	594	451	36	52	2740
DC121224	12 x 12 x 24	292	292	597	13	19	990
DC181824	18 x 18 x 24	445	445	597	25	36	1900
DC241224	24 x 12 x 24	594	297	597	25	36	1900
DC242424	24 x 24 x 24	594	594	597	50	61	3800

LINEAR VELOCITY M/SECOND V'S PRESSURE DROP
MULTICARB ACTIVATED CARBON CELLS



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General

If the noise level of a fan exeeds the required level, additional measures can be taken to reduce it. The use of attenuators, working on the principle of absorbtion, is a very effective method. This type of attenuator offers high damping figures creating only low additional resistances.
HELIOS offer attenuators that are optimal to the HELIOS fan range. Circular and rectangular attenuators are available in virtually any size. All attenuators can of course be used together with fans by others.
HELIOS attenuators are made from galvanised steel, fitted with high quality mineral wool, covered against air flow with scrim to prevent erosion.

Technical information

Attenuation

The amount of attenuation is determined using the principle of comparison. It compares the noise reduction within a pipe or ducting with and without the attenuator.
When measuring without an attenuator, it is replaced by a straight piece of rigid, noise hard ducting. The attenuation is calculated to:

$D_e = L_o - L_m$ dB
L_o: Sound level without attenuator
L_m: Sound level with attenuator

The efficiency of an attenuator is largely dependent on the frequency of the sound source, therefore the attenuation is stated over the octave spectrum. Low frequency noise is more difficult to attenuate than high frequency. Therefore a larger or more resistive attenuator is required.

It is necessary to know the noise spectrum of a fan (octave or tierce spectrum) to choose an attenuator. When selecting an attenuator for a system the attenuating effect of other components like bends, transformation pieces etc. must be considered in addition to the noise level of the fan.
To avoid regeneration of noise through the air speed over the duct surface the air velocity should be minimised.

Fast selection of an attenuator

For easy estimating of a retangular or circular attenuator the average attenuation figure is given in the red underlined column (right hand column) of the attenuator's table. This figure is to be deducted from the sound power level (L_{WA} total) of the fan.

The result is the sound power level (L_{WA} reduced) of the fan, reduced by attenuation. The difference with this selection method (if compared to the frequency band calculation) it is an approximation. More exactly values can be reached using the calculation to the octave band.

Example:

Given:
Fan model VARD 225/2
Chosen: Circular attenuator RSD 225/600 (length = 600 mm)

Sound power level of fan
L_{WA} total = 81 dB(A)
Average attenuation figure for attenuator
reduction = 15 dB(A)
= reduced soud power level
L_{WA} reduced = 66 dB(A)

Key

L_{WA} total = Sound power level of the fan in dB(A) (from table above fan's performance curve).

Average attenuation = calculated attenuation figure of the attenuator in dB(A) (red column in the attenuator's table).

L_{WA} reduced = reduced sound level in dB(A) using an attenuator.

Sound level calculation

To calculate the relevant sound level the attenuator sound reduction must be substracted from the fan sound level. This should be done in frequency bands. For better attenuation several attenuators of the same diameter can be installed one after another.

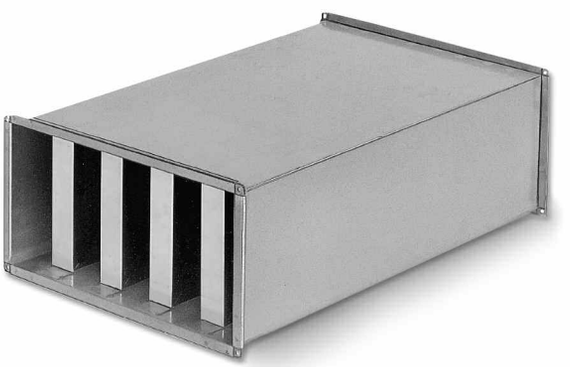
Rectangular attenuator KSD

Specification – Installation

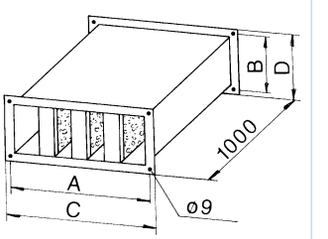
Casing made from galvanised steel with flanges to fit the fan's dimensions. To be installed in-line with ducting on inlet or exhaust. To reduce vibration transmission from the fan, a flexible connector (accessories VS or VS…Ex) should be installed between fan/attenuator and ducting.

Pressure drop

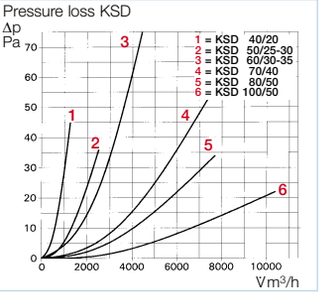
The attenuator will add an additional resistance to the duct system (see chart), which must be considered when selecting a fan. The figures shown refer to an equal inlet into the attenuator. Turbulences from the fan's exhaust can be reduced if 1 metre of straight ducting is fitted between fan and attenuator. Otherwise allow for a higher resistance.



Dimensionsin mm see table



Pressure loss KSD



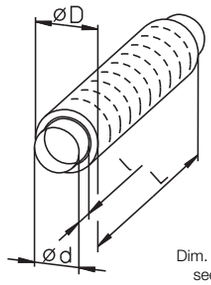
Type		Ref. No.	Duct size in mm	Dimensions in mm A	B	C	D	Nominal weight kg	Attenuation D_e dB 125	250	500	1000	2000	4000	8000	Average attenuation
KSD	**400/200**	8728	400/200	420	220	443	240	13	8	11	23	31	31	26	18	17
KSD	**500/250..**	8729	500/250-300	520	270/320	540	340	16.5	6	9	19	25	25	20	15	14
KSD	**600/300..**	8730	600/300-350	620	320/370	640	390	20	7	10	21	28	28	23	16	12
KSD	**700/400**	8731	700/400	720	420	740	440	25	6	8	18	24	24	20	14	12
KSD	**800/500**	8732	800/500	820	520	840	540	31	7	9	19	26	26	21	15	14
KSD	**1000/500**	8733	1000/500	1020	520	1040	540	35	5	7	16	21	21	17	12	11

■ Flexible circular attenuator FSD

☐ **Specification – Installation**
Robust flexible aluminium ducting with inner perforated face retaining the resin bounded attenuation packing of 50 mm thickness. Spigotted on both ends to fit into nominal size ducting or to be fixed with pipe clamp connectors BM on fan or ducting. The flexible body allows an easier installation.

☐ **Pressure drop**
The pressure drop is 4 times the equivalent normal rigid ducting value.

FSD



Dim. in mm see table

☐ Information	Page
Selection noise assessment	318

Type	Ref. No.	Dimensions in mm L	ø D	ø d	l	Attenuation in dB at Hz 250	500	1000	2000	Nominal weight kg	Average attenuation
FSD 100	0676	1000	210	99.5	60	17	33	48	40	1.1	25
FSD 125	0677	1000	240	124.5	60	13	27	47	22	1.5	20
FSD 160	0678	1000	262	159.5	60	12	26	45	20	2.0	19
FSD 200	0679	1000	313	199.5	60	10	22	31	10	2.5	16
FSD 250	0680	1000	363	249.5	85	8	15	26	8	3.2	12
FSD 315	0681	1000	418	314.5	85	7	15	25	8	4.2	11
FSD 355	0682	1000	464	354.5	85	5	13	19	8	4.7	9
FSD 400	0683	1000	514	399.5	90	5	13	19	8	5.3	9

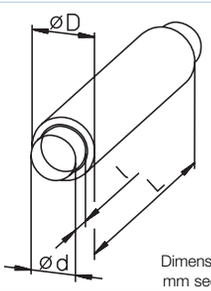
■ Spigotted circular attenuator SRSD

☐ **Specification – installation**
Robust casing made from galvanised steel with inner perforated face retaining the 50 mm thick mineral wool lining. Spigotted on both ends to fit into nominal size ducting or to be fixed with pipe clamp connectors (accessory BM).

☐ **Pressure drop**
The pressure drop is twice the normal rigid ducting value.

SRSD

AVAILABLE IN THE UK ONLY!



Dimensions in mm see table

Type	Ref. No.	Dimensions in mm L	D	d	l	Attenuation in dB at Hz 250	500	1000	2000	4000	8000	Nominal weight kg	Average attenuation
SRSD 100/ 300	8901	300	202	98	40	8	13	20	23	20	12	2.6	11
SRSD 100/ 600	8902	600	202	98	40	12	20	37	47	36	17	4.7	18
SRSD 100/ 900	8903	900	202	98	40	15	29	44	50	42	25	6.7	27
SRSD 100/1200	8904	1200	202	98	40	20	33	42	46	44	29	8.8	31
SRSD 125/ 300	8905	300	227	123	40	7	13	20	21	19	12	2.9	11
SRSD 125/ 600	8906	600	227	123	40	12	22	36	44	32	26	5.3	20
SRSD 125/ 900	8907	900	227	123	40	14	26	44	46	35	22	7.7	24
SRSD 125/1200	8908	1200	227	123	40	16	33	47	53	46	29	10.1	31
SRSD 150/ 300	8909	300	252	148	40	5	10	15	22	16	9	3.3	8
SRSD 150/ 600	8910	600	252	148	40	8	15	31	34	22	12	6.0	13
SRSD 150/ 900	8911	900	252	148	40	10	25	43	49	26	18	8.7	23
SRSD 150/1200	8912	1200	252	148	40	13	29	49	52	30	18	11.4	27
SRSD 160/ 300	8913	300	262	158	40	5	10	15	22	16	9	3.4	8
SRSD 160/ 600	8914	600	262	158	40	8	15	31	34	22	12	6.2	13
SRSD 160/ 900	8915	900	262	158	40	10	25	43	49	26	18	9.1	23
SRSD 160/1200	8916	1200	262	158	40	13	29	49	52	30	18	11.9	27
SRSD 200/ 300	8917	300	302	198	40	3	7	15	16	10	6	3.9	5
SRSD 200/ 600	8918	600	302	198	40	7	14	30	26	15	11	7.3	12
SRSD 200/ 900	8919	900	302	198	40	8	20	42	41	18	15	10.6	18
SRSD 200/1200	8920	1200	302	198	40	10	26	48	51	22	16	14.0	24
SRSD 250/ 300	8921	300	327	223	40	2	6	15	13	10	4	4.6	4
SRSD 250/ 600	8922	600	327	223	40	6	12	25	18	10	7	8.6	10
SRSD 250/ 900	8923	900	327	223	40	8	16	30	27	12	9	12.6	14
SRSD 250/1200	8924	1200	327	223	40	11	22	36	38	18	12	16.6	20
SRSD 315/ 300	8925	300	417	313	40	2	5	14	12	8	4	5.5	3
SRSD 315/ 600	8926	600	417	313	40	6	10	18	13	10	6	10.3	8
SRSD 315/ 900	8927	900	417	313	40	7	15	22	17	12	9	15.2	13
SRSD 315/1200	8928	1200	417	313	40	9	20	29	21	15	12	20.0	18
SRSD 400/ 300	8929	300	502	398	40	6	4	11	10	6	4	6.6	2
SRSD 400/ 600	8930	600	502	398	40	5	10	14	11	8	6	12.6	8
SRSD 400/ 900	8931	900	502	398	40	7	13	19	14	10	8	18.5	11
SRSD 400/1200	8932	1200	502	398	40	8	18	24	20	14	7	24.5	16

Specification – Installation

Casing made of galvanised steel, acoustically lined with high quality mineral wool covered with cloth to prevent erosion. Acoustic lining retained by perforated steel sheet. Dimensions and tapped flange holes of all sizes fit fan's nominal diameter (R 20). Tapped holes in accordance to DIN 24155, Pt. 2.

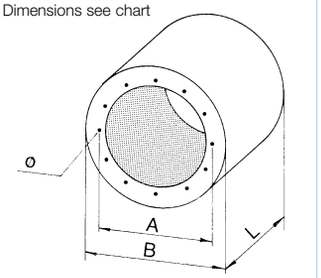
Isolation standard

To increase the attenuation, several attenuators can be installed in-line.

Pressure drop

The resistance of the RSD attenuators is very low. When designing the system consider twice the pressure drop of rigid ducting.

Dimensions see chart



RSD

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Selection- Sound level calculation	318

Type Nominal-ø	Ref. No.	Basic length	Dimensions in mm L	A	B	Hole ø	Nominal weight kg	Isolation standard D_e dB 125	250	500	1000	2000	4000	8000	Average attenuation
RSD 225/ 300	8734	1	300	259	404	6 x M 6	7	2	5	9	14	13	8	6	8
RSD 225/ 600	8735	2	600	259	404	6 x M 6	12	4	10	17	27	25	17	14	15
RSD 225/ 900	8736	3	900	259	404	6 x M 6	17	7	13	25	33	31	20	16	20
RSD 250/ 300	8737	1	300	286	404	6 x M 6	7	3	5	8	8	9	7	5	8
RSD 250/ 600	8738	2	600	286	404	6 x M 6	12	5	10	16	24	19	14	10	15
RSD 250/ 900	8739	3	900	286	404	6 x M 6	16	6	12	22	28	21	15	11	18
RSD 280/ 400	8740	1	400	322	454	8 x M 8	10	4	5	8	14	9	8	6	8
RSD 280/ 800	8741	2	800	322	454	8 x M 8	18	7	9	16	28	18	17	14	14
RSD 280/1200	8742	3	1200	322	454	8 x M 8	25	9	12	23	37	23	20	16	18
RSD 315/ 400	8743	1	400	356	504	8 x M 8	11	3	3	7	13	8	7	5	5
RSD 315/ 800	8744	2	800	356	504	8 x M 8	19	6	8	14	26	16	12	9	12
RSD 315/1200	8745	3	1200	356	504	8 x M 8	28	9	12	21	36	18	17	14	18
RSD 355/ 400	8746	1	400	395	564	8 x M 8	13	3	4	7	11	7	6	4	6
RSD 355/ 800	8747	2	800	395	564	8 x M 8	23	6	7	13	22	14	12	8	11
RSD 355/1200	8748	3	1200	395	564	8 x M 8	33	8	11	17	29	18	15	10	17
RSD 400/ 400	8749	1	400	438	564	12 x M 8	12	3	4	6	9	7	5	3	6
RSD 400/ 800	8750	2	800	438	564	12 x M 8	21	6	6	12	18	13	12	8	9
RSD 400/1200	8751	3	1200	438	564	12 x M 8	30	7	10	14	22	18	13	9	15
RSD 450/ 400	8752	1	400	487	634	12 x M 8	17	4	5	8	10	8	7	5	8
RSD 450/ 800	8753	2	800	487	634	12 x M 8	27	6	7	13	18	13	12	9	11
RSD 450/1200	8754	3	1200	487	634	12 x M 8	38	8	10	18	23	17	14	10	15
RSD 500/ 600	8755	1	600	541	714	12 x M 8	27	4	5	9	11	9	9	6	8
RSD 500/ 900	8756	2	900	541	714	12 x M 8	36	6	8	14	16	13	13	9	12
RSD 500/1200	8757	3	1200	541	714	12 x M 8	45	8	11	22	24	17	16	12	17
RSD 560/ 600	8758	1	600	605	804	8 x M 10	32	3	5	9	9	8	8	6	8
RSD 560/1200	8759	2	1200	605	804	8 x M 10	52	6	10	19	19	16	13	10	15
RSD 630/ 600	8760	1	600	674	900	8 x M 10	44	3	5	8	8	8	7	5	8
RSD 630/1200	8761	2	1200	674	900	8 x M 10	68	5	10	16	15	15	11	8	15
RSD 710/ 600	8762	1	600	751	1000	8 x M 10	51	3	5	7	7	7	6	4	8
RSD 710/1200	8763	2	1200	751	1000	8 x M 10	80	5	10	14	13	13	10	7	15
RSD 800/ 600	8764	1	600	837	1100	12 x M 10	57	2	5	7	6	6	5	4	8
RSD 800/1200	8765	2	1200	837	1100	12 x M 10	88	5	9	13	11	11	9	6	14
RSD 900/ 900	8766	1	900	934	1220	12 x M 10	82	2	4	10	9	6	5	4	6
RSD 900/1800	8767	2	1800	934	1220	12 x M 10	135	4	9	21	17	13	9	8	14
RSD 1000/ 900	8768	1	900	1043	1350	12 x M 10	96	2	4	8	7	5	4	3	6
RSD 1000/1800	8769	2	1800	1043	1350	12 x M 10	157	4	7	16	14	10	7	6	11
RSD 1120/ 900	8770	1	900	1174	1350	12 x M 10	81	2	3	7	6	4	3	3	5
RSD 1120/1800	8771	2	1800	1174	1350	12 x M 10	136	3	6	14	11	8	6	5	9
RSD 1250/ 900	8772	1	900	1311	1460	12 x M 10	86	1	2	5	4	3	2	2	3
RSD 1250/1800	8773	2	1800	1311	1460	12 x M 10	146	2	4	11	9	7	5	4	6

Aerofoil - JM Aerofoil

- Eleven sizes are offered from 315mm to 1000mm diameter.
- Volume flows of up to 19m^3/s
- Static pressures up to 800 Pa
- High energy efficiency
- Low installed noise levels
- Motor protection IP 55
- All casings are hot dipped galvanised
- Overheat protection is fitted as standard
- Inverter controllable

Sizes

31JM - (315mm) to 100JM - (1000mm).
Larger sizes up to 2800mm diameter are also available. Please enquire.

Fan Performance

All fans are tested to the latest internationally recognised standard IS05801 Part 1 (1997), installation category D (AMCA approved) for aerodynamic performance and BS848 Part 2 (1985) for acoustic performance. Coupled with a wide range of fan diameters, the adjustable pitch Aerofoil impeller gives the exact performance required, with a non overloading fan characteristic.

Impellers

A unique high efficiency aerofoil section blade with a purposely smoothed hub and clamp plate for adjustable pitch angle availability.
The Fläkt Woods impellers are all high pressure die cast to offer thin aerofoil sections for low generation of noise. Every cast aluminium component is X-ray examined using Real Time Radiography inspection prior to assembly. The maximum pitch angles shown allow for speed control by frequency inverter (3ph only).

Motors

All motors are totally enclosed air stream rated class F insulation. Constructed from aluminium or cast iron as standard with special 'T' slot or pad mounted fixings. Single speed motors are suitable for speed control by voltage regulation where indicated. Three phase motors are suitable for use with frequency inverters.
Two speed motors, where available, are pole change type, or dual wound where indicated.
Suitable for horizontal through to vertical shaft operation. Supplied IP55, with removable drain plugs. Sealed for life bearings lubricated with wide temperature range grease. The BT, CT, F22 and PM112 motors are all fitted with overheat protection thermostat as standard, D motors are fitted with thermistor.
These motors are suitable for inverter speed control down to 20% of full speed.

Electrical Supply

220-240 V / 50 Hz / 1 ϕ
380-420 V / 50 Hz / 3 ϕ

Temperature Range

-40°C to 50°C as standard. (All motors are not suitable for starting at temperatures lower than -20°C.) Fans that include BT or CT motors can be continuously operated at temperatures up to 70°C. When these fans are operating in excess of 50°C they should be run at full speed only. Other fans can be operated up to 70°C with appropriate deration of motors.
Most standard 3ϕ fans can be offered for a one off emergency operation at 200°C for 2 hours.

Casings

JM Aerofoil fans are available in either a long cased form, complete with an externally mounted pre-wired electrical terminal box, or short cased for duct or plate installation. Casings are spun from sheet steel with integral pre-drilled and radiused inlet flanges. The galvanised finish gives a high resistance to corrosion and is ideal for external as well as internal use.

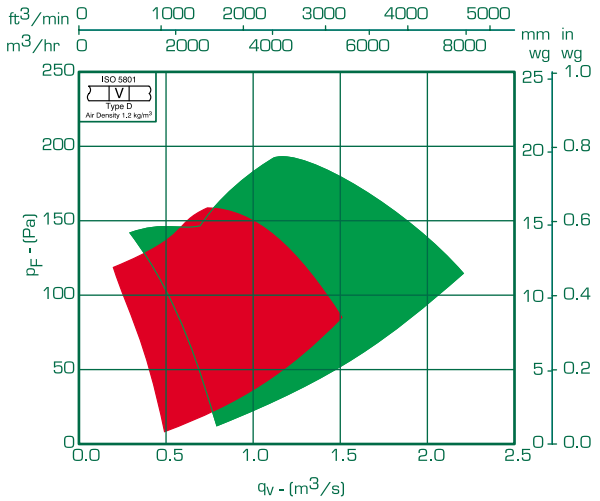
Accessories

Silencers, Mounting feet, Vibration isolators, Matching flanges, Flexible connectors, Air operated non return dampers, Guards, Bell mouth inlets. Electronic and transformer type speed controllers and frequency inverters.

Aerofoil fan 40JM - 45JM

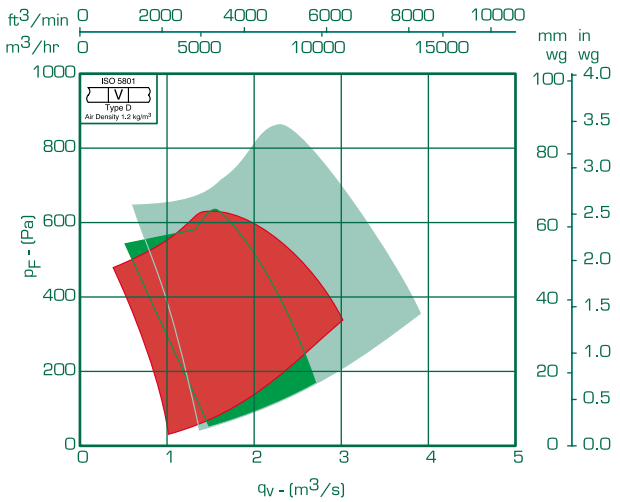
4 Pole

40JM/ 16/ 4/ 5/ ... 45JM/ 16/ 4/ 5/ ...



2 Pole

40JM/ 16/ 2/ 5/ ... 45JM/ 16/ 2/ 5/ ... 45JM/ 20/ 2/ 6/ ...



Product Code	Speed rev/ min	m³/ s at Pa (Static)									
		0	50	100	150	200	250	300	400	500	600
40JM/ 16/ 4/ 5/ 40	1420	1.50	1.31	1.06							
40JM/ 16/ 2/ 5/ 32	2840	2.60	2.51	2.42	2.35	2.27	2.18	2.08	1.86	1.61	
45JM/ 16/ 4/ 5/ 30	1420	1.80	1.61	1.40	1.1						
45JM/ 16/ 4/ 5/ 40	1420	2.20	1.95	1.72							
45JM/ 16/ 2/ 5/ 20	2840	2.65	2.60	2.54	2.48	2.40	2.31	2.20	2.02	1.80	
45JM/ 20/ 2/ 6/ 34	2910	3.85	3.80	3.70	3.60	3.52	3.40	3.31	3.12	2.90	2.70

Electrical Data

Product Code	Speed rev/ min	Motor	220-240V/ 50Hz/ 1ϕ					Sound Level dBA
			Product Number	Pitch Angle (°)	Motor Rating (kW)	Full Load Current (at 230V) (A)	Starting Current (at 230V) (A)	
40JM/ 16/ 4/ 5/ ...	1420	BT9	JL411452	34-40	0.3	2.1	5.3	52
40JM/ 16/ 2/ 5/ ...	2840	CT9	JL411203	24-28	1.4	8.3	27	66
45JM/ 16/ 4/ 5/ ...	1420	BT9	JL461452	24-30	0.3	2.1	5.3	52
45JM/ 16/ 2/ 5/ ...	2840	CT9	JL461201	16-18	1.4	8.3	27	66

Product Code	Speed rev/ min	Motor	380-420V/ 50Hz/ 3ϕ					Sound Level dBA
			Product Number	Pitch Angle Max (°)	Motor Rating (kW)	Full Load Current (at 400V) (A)	Starting Current (at 400V) (A)	
40JM/ 16/ 4/ 5/ ...	1420	BT9	EX431452	40	0.3	0.9	4.6	52
40JM/ 16/ 2/ 5/ ...	2840	CT9	EX431203	32	1.7	3.7	19	66
45JM/ 16/ 4/ 5/ ...	1420	BT9	JL481452	26	0.3	0.9	4.6	52
45JM/ 16/ 4/ 5/ ...	1420	CT5	EX481460	40	0.58	1.7	6.5	56
45JM/ 16/ 2/ 5/ ...	2840	CT9	JL481202	20	1.7	3.7	19	66
45JM/ 20/ 2/ 6/ ...	2910	F22	EX481205	34	3.8	7.2	64	72

† BT4 - 3ϕ

Sound pressure levels quoted are average dBA at 3 m distance over a sphere, under free field conditions and are presented for comparative purposes only.

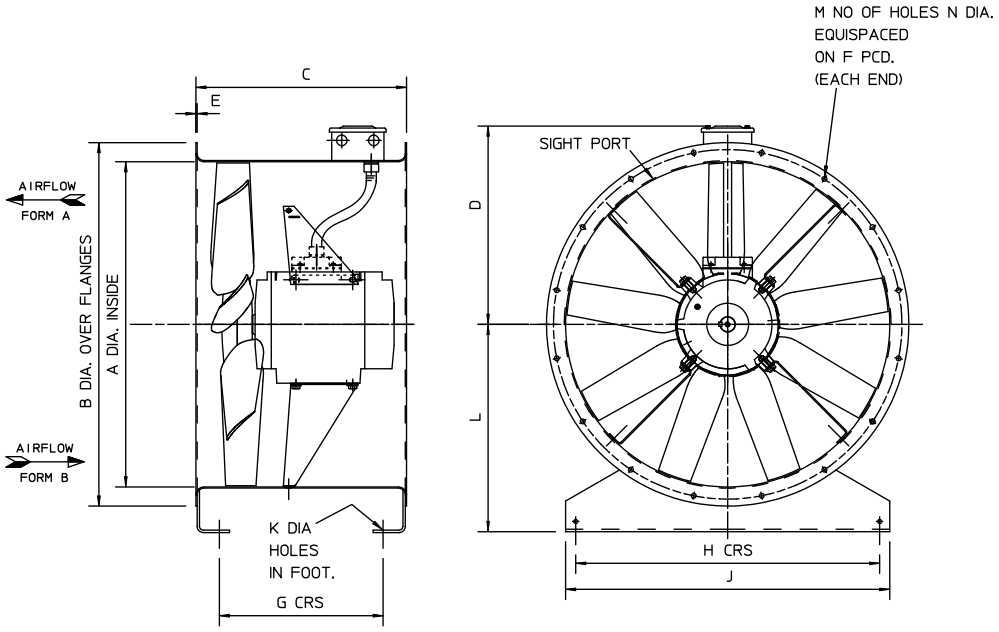
Fans that include BT or CT motors can be continuously operated at temperatures up to 70°C.
When these fans are operating in excess of 50°C they should be run at full speed only.

For Short cased fans please omit the prefix from the product number and state S-type on enquiries/orders.
Product numbers shown are for Long cased fans.

Product(s) despatched ex works on a 15 working days lead time.

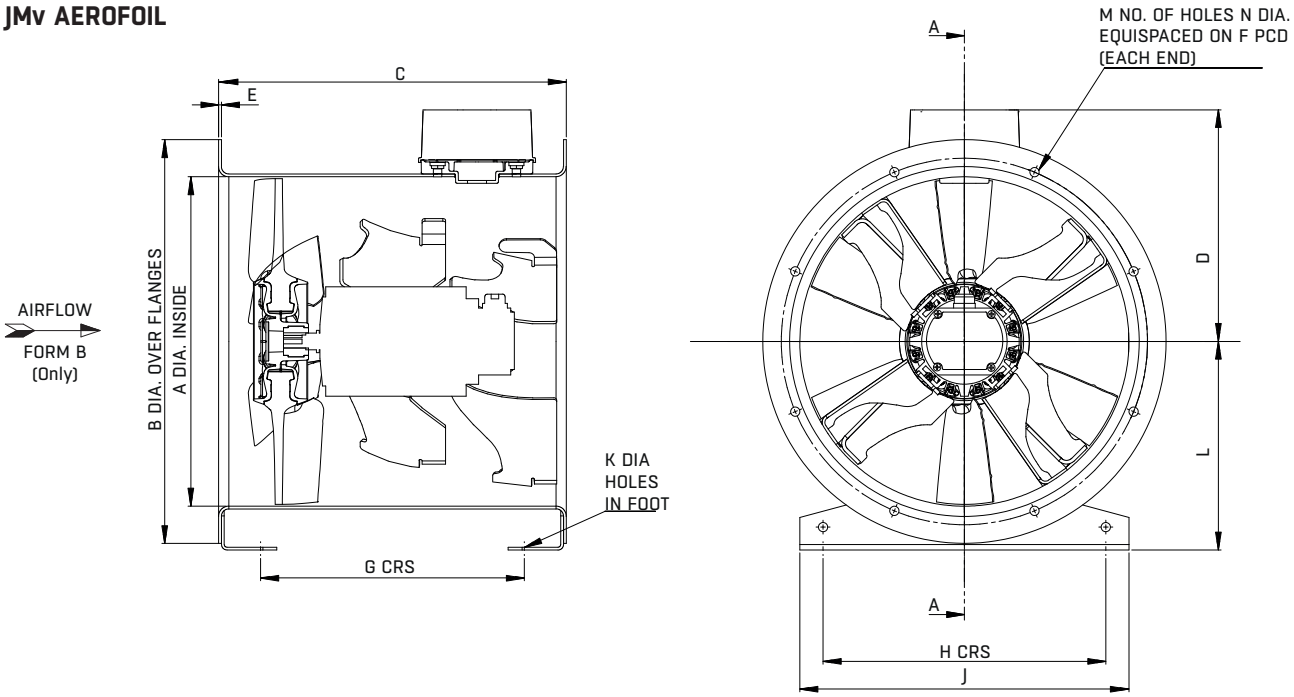
DRAWINGS

JM AEROFOIL



NOTE-
DIMENSIONS SHOWN IN MM/WEIGHT IN KG
THIS DRAWING SHOWS DIMENSIONS THAT SHOULD BE USED AS A GUIDE ONLY AND ARE SUBJECT TO CHANGE
CERTIFIED DRAWINGS ARE AVALIBLE ON REQUEST

JMv AEROFOIL



All dimensions in mm.