



Commercial Kitchen Extraction & HVAC Systems Specialists
ESTABLISHED 2005

Specification Report

Project: Khado Karachi 255 west End Lane NW6 1XN

Prepared by: Fan Rescue Ltd

Date: 01/05/2024

Report No: OD65768576

Risk Assessment for Odour

We are pleased to provide an equipment selection for an odour control solution.

As with any project we get involved in we always recommend to our clients that they should closely follow the BESA DW 172/144 and EMAQ+dated 2018 specifications guide for guidance on odour control equipment selection.

This ensures that what the proposed will be in line with local authority's requirements and if the

system is maintained correctly they will not exhaust nuisance odours leading to complaints from nearby residents.

With this in mind we carried out a risk assessment as BESA DW 172/144 and EMAQ+dated 2018 specifications Guide.

Taking into consideration the level of discharge, proximity of receptors, size of kitchen and cooking type your project requires a high level of odour control to comply.

We have scored as below and as taken from Annex C: Risk Assessment for Odour;

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VAT number: 906 9111 32

Company Registered in England & Wales Number 5954579

Dispersion: Good = 5 , discharging 1 meters above ridge at 15m/s

Proximity of receptors: Close = 10, closest Sensitive receptors is less than 20 meters from kitchen discharge

Size of kitchen : medium = 3 , between 30-100 covers

Cooking type : high = 7 Indian

Total score = 25

The type of odour abatement system that complies is as below, taken directly from the BESA DW 172/144 and EMAQ+dated 2018 specifications Guide and must be to a high level of control;

Impact Risk	Odour Control Requirement	Significance Score*
Low to Medium	Low level odour control	Less than 20
High	High level odour control	20 to 35
Very high	Very high level odour control	more than 35

* based on the sum of contributions from dispersion, proximity of receptors, size of kitchen and cooking type:

Criteria	Score	Score	Details
Dispersion	Very poor	20	Low level discharge, discharge into courtyard or restriction on stack.
	Poor	15	Not low level but below eaves, or discharge at below 10 m/s.
	Moderate	10	Discharging 1m above eaves at 10 -15 m/s.
	Good	5	Discharging 1m above ridge at 15 m/s.
Proximity of receptors	Close	10	Closest sensitive receptor less than 20m from kitchen discharge.
	Medium	5	Closest sensitive receptor between 20 and 100m from kitchen discharge.
	Far	1	Closest sensitive receptor more than 100m from kitchen discharge.
Size of kitchen	Large	5	More than 100 covers or large sized take away.
	Medium	3	Between 30 and 100 covers or medium sized take away.
	Small	1	Less than 30 covers or small take away.
Cooking type (odour and grease loading)	Very high	10	Pub (high level of fried food), fried chicken, burgers or fish & chips.
	High	7	Kebab, Vietnamese, Thai or Indian.
	Medium	4	Cantonese, Japanese or Chinese.
	Low	1	Most pubs, Italian, French, Pizza or steakhouse.

The System

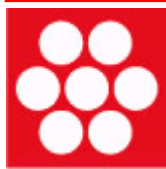
High level odour filtration system , the proposed filtration system consist of 2No disposable pre-filterG4 ,highly efficient removing filtering oil and grease particles , recommended to be replaced very 2 -3 weeks depending on the usage, followed by 1No RYD air ESP 5000B air unit built in with UV ozone light technology to eliminate cooking smoke and grease , recommended to be serviced every 3-6 months depending on the usage.

As you can see the system that has been specified is inline with BESA DW 172/144 and EMAQ+dated 2018 specifications Guide.

Please see attached technical Data information for each proposed plant



www.thebesa.com/HV020676/



VL4-2424

V Line Panel Filter 24x24x4

Description/Application

V Line - Disposable pleated panel filters

Description

Disposable pleated panel filter made with both a water resistant card frame and retaining face. The V Line panel filters use a flame retardant, 100% thermally bonded polyester filter media backed with an expanded galvanised steel mesh.

Application

General heating and air-conditioning.

As a pre-filter to bag filters.

Specification

EU Grade

G4

Efficiency (>95%)

5 Micron

Capacity

Rated Capacity (CFM): 2018

Rated Capacity (M³/hr): 3430

Resistance

Initial Resistance: 1"/25MM: 40Pa 2"/50MM: 40Pa 4"/95MM: 40Pa

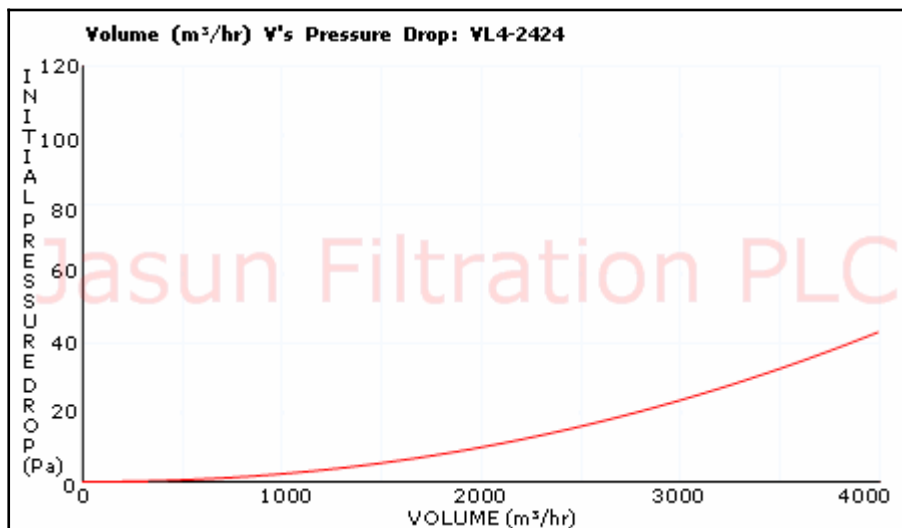
Final Resistance: 1"/25MM: 150Pa 2"/50MM: 150Pa 4"/95MM: 150Pa

Dimensions

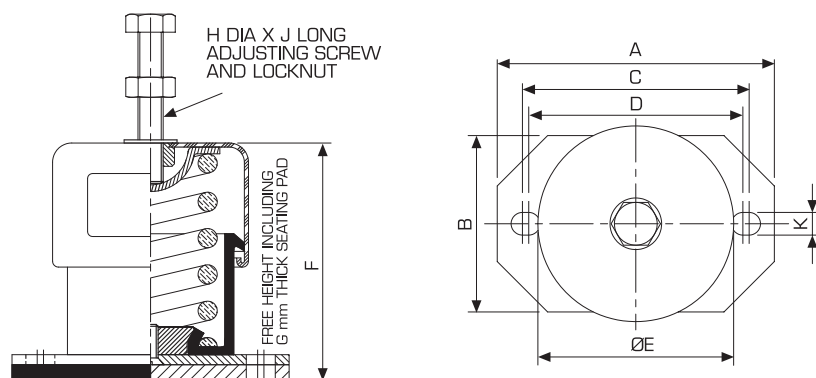
Nominal (Inches): 24x24x4

Actual (mm): 594x594x95

Visual



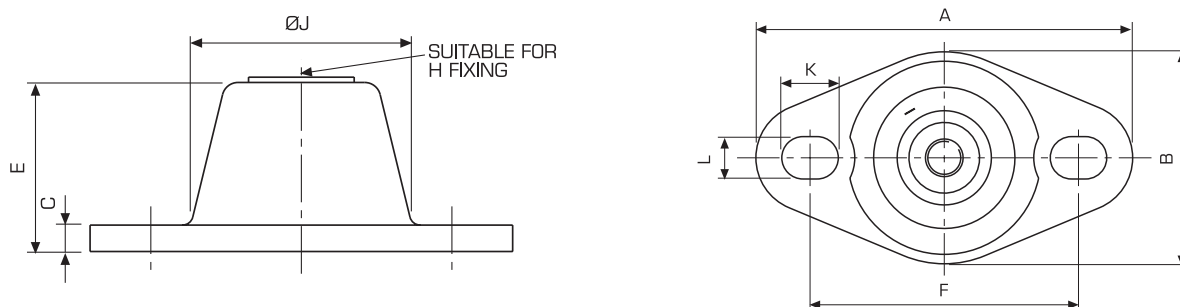
Enclosed Spring Vibration Isolators



Type	Load range per mounting (kg)	Product Number	A	B	C	D	E	F	G	H	J	K
ES20/10/ZSB Purple	10	503008	76	38	60	54	48	66	3	M8	40	6.5
ES20/15/ZSB Yellow	15	503009	76	38	60	54	48	66	3	M8	40	6.5
ES20/20/ZSB Grey	20	503010	76	38	60	54	48	66	3	M8	40	6.5
ES25/60/7SB Green	60	503015	110	70	90	85	78	94	6	M10	60	9
ES25/100/ZSB Blue	100	503016	110	70	90	85	78	94	6	M10	60	9

All dimensions shown in mm

Rubber in Shear Vibration Isolators



Note: These vibration isolators are not suitable for use with JM Aerofoil HT category 300/1 and 400/2 series smoke venting fans - please use spring isolators.

Type	Load range per mounting (kg)	Product Number	A	B	C	E	F	H	J	K	L
63.105.40	0-4	267321	64	43	2	20	50	M6	-	-	-
63.105.60	0-9	267322	64	43	2	20	50	M6	-	-	-
19.100.Yellow	5-28	267336	80	45	5	32	57	M8	41	12	9
19.100.Blue	9-50	267337	80	45	5	32	57	M8	41	12	9
19.101.Blue	23-180	267345	95	60	5	45	71	M10	56	14	9
19.101.Red	35-280	267346	95	60	5	45	71	M10	56	14	9
19.102.Red	48-400	267352	150	86	6	70	115	M12	82	22	11

All dimensions shown in mm

Bold text denotes next day delivery available if ordered by 4pm.

RY 5000B

Electrostatic Air Cleaner (Without Blower)



Industrial grade Electrostatic Air Cleaners for collection of dry and wet particulates like dust, oil mist, cooking fumes and various pollutants. Typical application include commercial kitchen exhausts, Air Handling Units (AHUs), factories, workshops, CNC machine shops and many other premises.

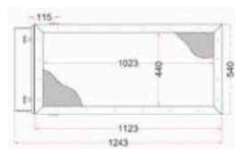


SPECIFICATIONS

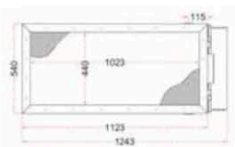
Dimensions/Weight	H:540 x W:1243 x L:620 mm / 90Kg
Cabinet	Galvanized Steel, 1.4mm / 16 Gauge
Finishing	Powder Coated, Dark Blue
Air Volume (Rated-Max)#	CFM: 3000 – 4100; CMH: 5000-7000; L/s: 1400-1900
Static Pressure	50 pa / 0.2"
Voltage & Power	230 VAC +/-10%, 50/60Hz , 75Watts
Ionising Voltages	High Voltage: 12KVdc, Low Voltage: 6KVdc
Power Supply	High Frequency solid state and self regulating design
Air Flow Direction	Default : Right to Left; Reversible : Left to Right
Features	<ul style="list-style-type: none"> *Short circuit, arc protection and auto restore power supply *BMS (Building Management System) terminals provided *Auto power cut-off when door is opened *Indicator LEDs for normal or wash indicator *Set of Terminals for remote LED normal or wash indicator
Particle size	From 0.01 microns - 10 microns
Efficiency	DOP Test, up to 95% single pass, up to 99% double pass, calculated. ASHRAE 52.2-2012, up to 96% single pass, up to 99% double pass, calculated. NIOSH 5026 OIL MIST FIELD TEST : UP TO 96%
MERV Ratings	Meets MERV 15 at velocity of 2.5m/s to 3.8m/s
Pre-Filter	Aluminum wire mesh, Washable x 2
Electrostatic Cell	H: 472mm, W: 550mm, L: 340mm
No of Cells / Weight	2/16.5Kg
No Of Plates per Cell	59
Total Collecting Area	12.14 Sq meters
Post Filter (Optional)	Aluminum Wire Mesh, Washable x 2
Installation	Ceiling Suspended; Wall or Frame Mounted, Multiple Units Stack



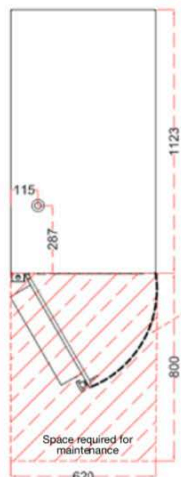
Front View



Air Intake View

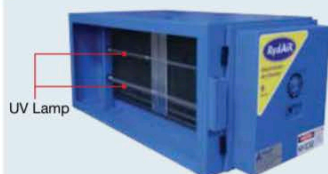


Air Discharge View



Top View

RY5000B with UV Ozone Lamp

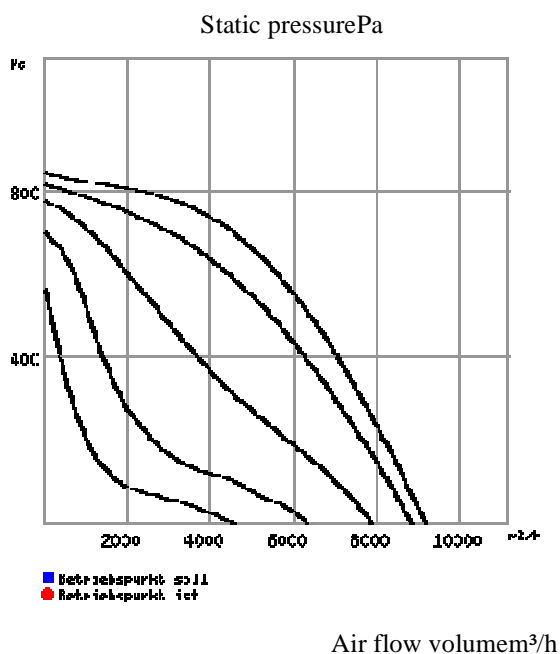


RY5000B-UV03

ODOUR CONTROL OPTION:

- UV ozone Lamp fitted after electrostatic cell
- Lamp Wattage : 150 watts (75 W x 2 lamps)
- Ozone output : 14 Grams/Hour
- Lamp Life : 13,000 Hours
- Lamp Operation Blue LEDs on Unit's Panel
- All accessories are contained in RY Unit

Product 5508 GBW 560/4

Image**Characteristics****Properties**

Ref.no.	5508									
Model	GBW 560/4									
Description	Gigabox with discharge adapter and flex. sleeve, 1-ph., controllable									
Actual pressure	static									
Actual volume										
Max.Vol.	9123 m³/h									
Speed	1409 min-1									
FLC un-controlled	7.93 A									
STC un-controlled	28.548 A									
Power	1.83 kW									
Voltage	230 V / 1 ph / 50 Hz									
Max. Temperatur	40 °C (40 °C if controlled)									
Wiring diagram no.	867									
Weight	92.00 kg									
Delivery time	On request									
Acoustic data:										
Sound in-duct	56 in 4 m									
Case breakout	45 in 4 m									
Spectrum			Hz							
Lwa	Intake	dB (A)	Total	125	250	500	1k	2k	4k	8k
			76	63	68	69	71	69	64	57
Lwa	Extract	dB (A)	82	71	73	76	77	74	70	61
			65	62	61	51	50	48	44	38
Lwa	Breakout	dB (A)								

Description

GBW 560/4

Gigabox with discharge adapter
and flex. sleeve, 1-ph., controllable










Cubical exhaust unit with supply and extract low-loss duct adapters including flexible sleeves to reduce vibration transmission and variable applicable side panels to suit to structural conditions. Simple positioning by standard crane hooks.

Self-supporting case framework from aluminium hollow profiles. Double skinned side panels with 20 cm thick temperature insulating and flame-retardant fibreglass mats. Side panels can be optionally replaced by accessories like external weather louver and condensate collector. Further accessories, like wall bracket and outdoor cover hood for optional installation in- or outdoors.

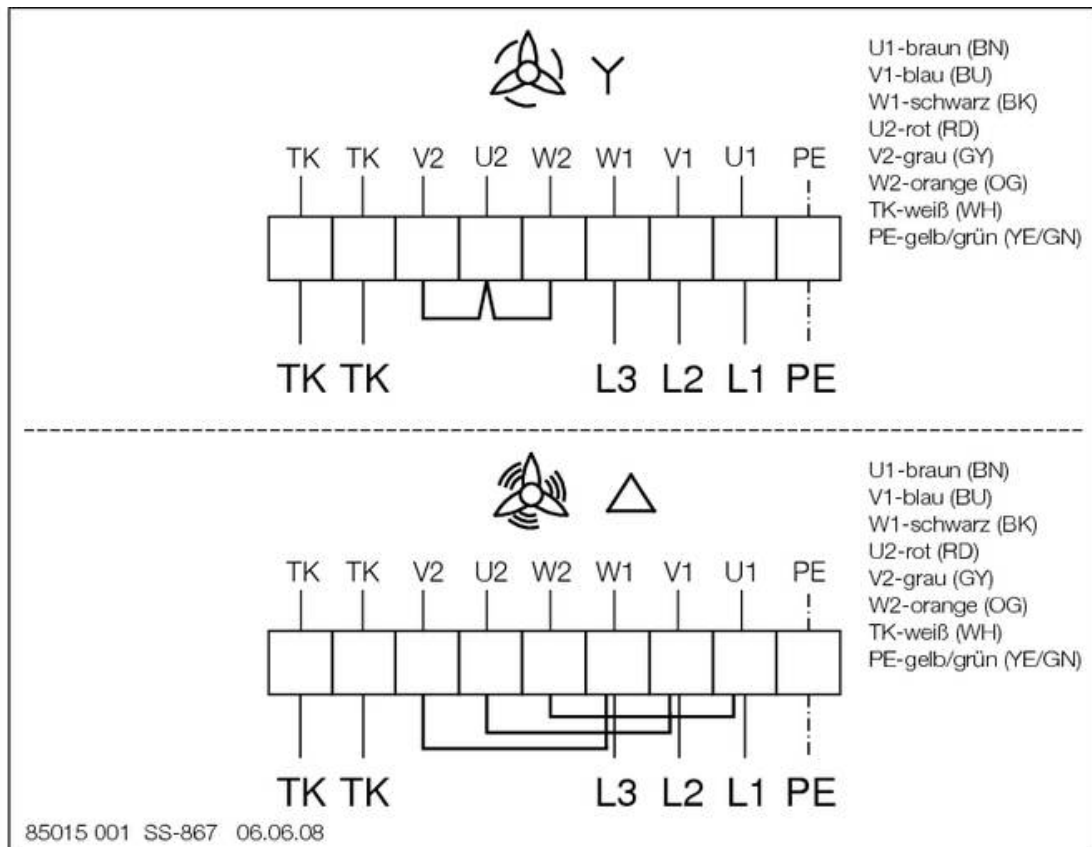
High efficiency backward curved centrifugal impeller, manufactured from aluminium, mounted on galvanised steel support plates, direct driven. The impeller together with the external rotor motor is dynamically balanced to quality standard G 2.5 to DIN ISO 1940 T.1.

Single phase, enclosed, maintenance free external rotor motor with thermal contacts wired to the terminal block, speed controllable by voltage reduction. Low-noise, sealed for life ball bearings. Mains supply via terminal box which is fitted externally on the motor as standard (IP 54).

Accessories

Image	Ref.no.	Model	Description	Group
	5645	GB-KW 560/630/EC500	Condensate collector for Gigabox ND 560, 630	G
	5626	GB-WK 400/450/500/560/630	Wall bracket for Gigabox ND 400, 450, 500, 560, 630	G
	5749	GB-WSD 560/630/EC500	Outdoor cover hood for Gigabox ND 560, 630	G
	5640	GB-WSG 560/630	External weather louver for Gigabox ND 560, 630	G
	1579	MW	FULL MOTOR PROTECTION UNIT FOR 1 PH MOTORS, 0.4 - 10 A	A
	1946	MWS 10	5 STEP TRANSFORMER CONTROLLER 1 PH, 230 V, 10 A 1-PH, 230 V, 10,0 A	R
	1594	RHS 3+1	ISOLATOR SWITCH 3+1 POLE, 400 V, IP 54	A
	5627	SDD-U	Anti vibration pad for installation on flat surface	G
	1498	TSW 10	TRAFO-DREHZAHLSSTELLER 1-PH, 230 V, 10,0 A	R

Wiring diagram



Dimensions