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**Office**: 0203 539 1475 | **After Hours:** 0759 500 3000 |

329 Grays inn Road,

WC1X8PX,

30th November 2021

#### KITCHEN EXTRACTION AND ODOUR CONTROL PROPOSAL

Fan Services was asked to carry out a site survey and put together a proposal for the above-mentioned address.

After concluding the odour risk assessment under the DEFRA guidance, the total score was 25 which leads to high level of odour filtration (please see attached Odour risk assessment). Our proposal as follows:

Above the cooking equipment a 4,000mm long x 1,200 deep X 500mm High extractor hood canopy. The canopy is manufactured in 304 grades with external dull polish grain and internal filter housing to removable/washable baffle type grease filters.

Primary grease filters are the first stage of filtration of a re-usable stainless-steel baffle type design. There will be enough primary grease filters fitted to cover the complete length of the canopy face above the cooking ranges which are highly efficient at grease removal.

The ductwork from the canopy hood will connect to the odour filtration unit 4X12''X24''' / 100KG heavy duty activated carbon filtration unit which is accommodated in a housing box with G4 Pleated Panel Pre-Filters (carbon filtration has a dwell time of around 0.3 to 0.4 seconds, please see attached tech spec for carbon and pre filter).

The filter housing unit will be designed to ensure ease of access for maintenance and to provide a good seal around the filters to prevent gases bypassing the filters.

The odour system is then connected to Helios GBW560/4 insulated box extractor fan unit with a transformer speed controller to reduce the harmonic of the fan when used on low speed. (please see attached fan technical specification).

The fan is mounted on using anti vibration rubber mountings to eliminate any vibration noise.

A 500 mm ductwork will run vertically to terminate one meter over the roof level with high velocity jet accelerator.

Fan Services LTD Registered office: 25 Lynmouth Avenue, EN1 2LP. Company number: 9863266 - VAT number 242953792

The external ductwork will incorporate a silencer type R02-06-1200 to achieve the insertion loss as per the Acoustic report provided by DAA group. The attenuator's acoustic media will be lined with 'Melinex' to enable the silencer to be regularly cleaned.

Attenuation has been selected so as to provide a system rating level of at least 10 dB(A) below the lowest existing background noise level for the proposed operating hours and when extrapolated to the nearest noise sensitive neighbouring residential property.

Ductwork access hatches to be installed every 1.5-meter centre for ongoing duct cleaning.

The system will be designed and installed in accordance to DW172.

#### **CLEANING, SERVICES AND MAINTAINCE SCHEDULE**

- 1- Extractor hood canopy filters to be cleaned weekly.
- 2- Pleated G4 Panel Filters before the carbon unit to be changed every 1 weeks.
- 3- Carbon units to be replaced every 3 months.
- 4- TR19 extractor system, ductwork cleaning to be scheduled every 3 months.

Kind regards,

Jay Zen

# Appendix 3: Risk Assessment for Odour

Odour control must be designed to prevent odour nuisance in a given situation. The following score methodology is suggested as a means of determining odour control requirements using a simple risk assessment approach. The odour control requirements considered here are consistent with the performance requirements listed in this report.

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

<sup>\*</sup> 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 <sup>1</sup> .
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 <sup>1</sup> .
Cooking type (odour and	Very high	10	Pub (high level of fried food), fried chicken,
grease loading)			burgers or fish & chips. Turkish, Middle
			Eastern or any premises cooking with solid
			fuel
	High	7	Vietnamese, Thai, Indian, <i>Japanese</i> ,
			Chinese, steakhouse
	Medium	4	Cantonese, Italian, French, Pizza (gas fired),
	Low	1	Most pubs (no fried food, mainly reheating and
			sandwiches etc), Tea rooms¹

Note 1: A planner may take a pragmatic view when assessing whether certain low risk kitchens require any odour abatement to be fitted. In reaching this decision the Planner may consider the nature of the food being cooked and/or the size of kitchen and/or its location.





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#### **Pleated Panel Filters**

## **Applications**

The Pleated Panel is a medium efficiency disposable filter, suitable for ventilation and air conditioning systems which require a higher efficiency and greater dust holding capacity than can be achieved with glass or synthetic panels.

The Pleated Panel can be used where glass panels are undesirable, such as in the food industry and hospitals.

#### Construction

Pleated filters consist of a dry non-woven fabric media, pleated to give an extended surface area, producing a low initial resistance for the same air volume.

The pleated assembly is contained within either a rigid all cardboard casing, or a cardboard frame with perforated cap-punch retaining grids.



#### **Technical**

Filter Classification: Grade G4 to EN779. **Pleated Material Flamability:** Fire Resistant to :-

**Underwriters Laboratories** Standard 900 class 2

Maximum operating temperature:

 $100^{\circ}\text{C} \text{ (212°F)}$  840 g/m² (2") and 1260 g/m² (4") to **Dust Holding Capacity:** 

EN779

#### **Resistance to Airflow**

	Face Velocity											
m/s				1.50 2.0		2.5		3.0				
fpm				300 400		500		600				
Pressure Drop	Pa	"wg	Pa	"wg	Pa	"wg	Pa	"wg	Pa	"wg		
2" Panel	22	0.09	27	0.11	50	0.20	70	0.28	-	-		
1" Panel	25	0.10	30	0.12	55	0.22	75	0.30	87	0.35		

Recommended discard resistance is 125 Pa (0.5"wg) in excess of clean resistances shown above for a 2" panel and 150 Pa (0.6"wg) for 4" panel.



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# Capacity Chart (2" Pleated Panels)

Data based on Face Velocity of 2.5 m/s (500 fpm)

SIZE	SIZE	Flow Rate
OT Inches	Actual mm	m³/s
10 x 10	242 x 242	0.14
12 x 12	289 x 289	0.20
15 x 15	369 x 369	0.33
18 x 18	445 x 445	0.48
20 x 10	495 x 242	0.29
20 x 16	495 x 394	0.48
20 x 20	495 x 495	0.60
25 x 16	620 x 394	0.60
25 x 20	620 x 495	0.76
24 x 12	594 x 289	0.43
24 x 20	594 x 495	0.73
24 x 24	594 x 594	0.88

Actual Face Size = Nominal Size less 6mm (0.25")

## Capacity Chart (4" Pleated Panels) Data based on Face Velocity of 3.0 m/s (600 fpm)

SIZE	SIZE	Flow Rate
OT Inches	Actual mm	m³/s
10 x 10	242 x 242	0.18
12 x 12	289 x 289	0.25
15 x 15	369 x 369	0.41
18 x 18	445 x 445	0.60
20 x 10	495 x 242	0.36
20 x 16	495 x 394	0.58
20 x 20	495 x 495	0.73
25 x 16	620 x 394	0.72
25 x 20	620 x 495	0.91
24 x 12	594 x 289	0.51
24 x 20	594 x 495	0.87
24 x 24	594 x 594	1.05

#### **Holding Frames and Casings**

Holding frames and casings for Disposable Pleated Panels are available singularly or in multiples, and can be manufactured to suit non-standard sizes and special applications. See leaflets (code AC8) for full technical information.

Code AC1/3b Ref 06/11



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## **Metal Cased Discarbs**

The metal cased 'Discarb' cells have the highest carbon loading in our range, and have standard or heavy-duty carbon panels permanently sealed into a galvanised sheet steel casing. This construction gives a very strong unit capable of handling large air volumes or where conditions dictate, increased contact time. The advantage of this unit is that with panels sealed in, there is no possibility of air leakage. Also, these units can be manufactured to almost any reasonable size, the limiting factors being the overall weight for handling purposes and the size of individual panels. When the unit has finished its useful life it is discarded and replaced with a complete new cell.



	Standard Duty Cells										
Nominal Size	Actual Size mm	Number of	Carb.	Discarb	Airf	low	Pressure				
WxHxL	WxHxL	Panels	Weight	Weight	m <sup>3</sup> /s	cfm	Ра				
12"x 12" x 12"	292 x 292 x 292	6	5 kg	9 kg	0.10	212	75				
12" x 12" x 18"	292 x 292 x 445	6	8 kg	14 kg	0.15	318	95				
12" x 12" x 24"	292 x 292 x 597	6	10 kg	18 kg	0.22	466	140				
18" x 18" x 12"	445 x 445 x 292	8	10 kg	17 kg	0.21	445	55				
18" x 18" x 18"	445 x 445 x 445	8	15 kg	25 kg	0.31	657	70				
18" x 18" x 24"	445 x 445 x 597	8	21 kg	33 kg	0.41	868	105				
24" x 24" x 12"	597 x 597 x 292	12	20 kg	31 kg	0.41	868	70				
24" x 24" x 18"	597 x 597 x 445	12	31 kg	45 kg	0.61	1292	90				
24" x 24" x 24"	597 x 597 x 597	12	42 kg	59 kg	0.81	1716	130				
12" x 24" x 24"	298 x 597 x 597	6	21 kg	35 kg	0.40	847	130				

	Extra Duty Cells											
Nominal Size	Actual Size	No. of	Carb.	Discarb	Airfl	ow	Pressure					
WxHxL	WxHxL	Panels	weight	weight	m³/s	cfm	Pa					
12"x 12" x 12"	292 x 292 x 292	6	6 kg	10 kg	0.13	275	125					
12" x 12" x 18"	292 x 292 x 445	6	9 kg	15 kg	0.20	424	175					
12" x 12" x 24"	292 x 292 x 597	6	12 kg	20 kg	0.27	572	250					
18" x 18" x 12"	445 x 445 x 292	8	12 kg	19 kg	0.30	635	95					
18" x 18" x 18"	445 x 445 x 445	8	19 kg	28 kg	0.41	868	125					
18" x 18" x 24"	445 x 445 x 597	8	25 kg	37 kg	0.54	1144	185					
24" x 24" x 12"	597 x 597 x 292	12	25 kg	35 kg	0.54	1144	125					
24" x 24" x 18"	597 x 597 x 445	12	38 kg	52 kg	0.80	1694	150					
24" x 24" x 24"	597 x 597 x 597	12	51 kg	68 kg	1.06	2245	225					
12" x 24" x 24"	298 x 597 x 597	6	26 kg	46 kg	0.53	1122	225					

The company reserves the right to change the specifications without notice. E & OE.

Code AC6/2a Ref 02/09



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### **Technical**

The capacities shown are based on a dwell time of 0.1 seconds .

For contact times of 0.3 seconds, reduce rated airflow to 1/3rd, pressure drop will also reduce to 1/3rd.

Max Temperature 40 Deg C

Max Humidity 80% RH

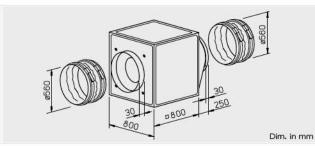
#### Non-standard sizes

Other sizes are available to suit individual requirements. Our Technical Department will be pleased to









#### ■ Special features of types **GB T120**

- Designed for moving dirty, humid and hot air volumes up to max. 120° C.
- Motor located outside of air flow.
- Temperature insulated partition panel between motor and impeller, lined with 20 mm thick, flame-retardant mineral wool.
- Easily accessible motor and impeller unit, removable without disassembling the system components.
- Inspection cover with handle, simply remove for cleaning and maintenance.
- Condensate collector with condensate spigot included in delivery. Drill hole for rain drainage (accessories) for outdoor installation is prepared.

#### Assembly GB T120

Installation must be carried out with condensation discharge showing downward. Flexible assembly by three possible centrifugal discharge directions via the discharge adapter. Outdoor installation is possible using outdoor cover hood and external weather louvers (accessories).

#### ■ Feature

#### Assembly of types GB

Arbitrary installation position and flexible assembly by five possible discharge directions via the discharge adapter. For wall mounting the wall bracket (accessories) have to be used. Outdoor installation is possible using outdoor cover

hood and external weather louvers (accessories).

#### Specification of both types Casing

Self-supporting frame construction from aluminium hollow profiles. Double-walled side panels from galvanised sheet steel, lined with 20 mm thick temperature insulating and flame-retardant mineral wool. Intake cone for ideal inflow as well as spigot and flexible sleeve (for the respective max. permissible air flow temperature) for duct connection. With discharge adapter (from square to circular) on the pressure side for low-loss discharge and flexible sleeve to reduce vibration transmission. Simple positioning by standard crane hooks.

#### Impeller

Condensation outlet

Smooth running backward curved aluminium centrifugal impeller highly efficient and direct driven. Energy efficient with a low noise development. Dynamically balanced together with the motor to DIN ISO 1940 Pt.1 - class 6.3.

Drain

View from below

Dim. in mm

#### Motor

Maintenance-free external rotor motor or IEC-standard motor protected to IP 54. With ball bearings and interference-free as standard.

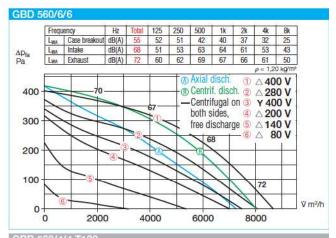
### Electrical connection Standard terminal box (IP 54)

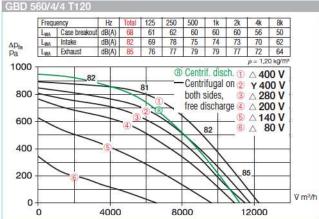
fitted on the motor; with GB T120 fitted on the motor support plate.

Туре	Ref. no.	Air flow	R.P.M.	Sound press.		Full Cu	rrent	Wiring		n air flow	Weight			mer conti			or protection
		volume (FID)		case breakout	power (nominal)	load	speed controlled	diagram		erature controlled	(net) kg	mot. prot		with mot. pro	out tect. unit		ising the Il contacts
		∜ m³/h	min-1	dB(A) in 4 m	kW	Α	Α	No.	+°C	+°C	kg	Type F	Ref. no.	Туре	Ref. no.	Туре	Ref. no.
1 Phase moto	, 230 V / 1	ph. / 50 Hz,	capacitor	motor, protec	tion to IP 5	4											
GBW 560/4	5508	9123	1409	45	1.83	7.93	10.4	867	45	45	92	MWS 10	1946	TSW 10	1498	MW 1)	1579
2 speed moto	, 3 Phase	motor, 400 V	/ 3 ph. / 5	0 Hz, Y/△ wi	ring, protec	tion to IP 54											
GBD 560/6/6	5522	7800/9000	705/885	35	0.51/0.80	0.90/1.85	1.90	867	60	60	80	RDS 4	1316	TSD 3,0	1502	MD	5849
GBD 560/4/4	5521	11500/13000	1110/1350	44	1.70/2.60	2.80/4.80	4.90	867	55	45	90	RDS 7	1578	TSD 7,0	1504	MD	5849
2 speed moto	, 3 Phase	motor, 400 V	/3 ph./5	0 Hz, Y/△ wi	ring, protec	tion to IP 54											
GBD 560/4/4	<b>120</b> 5778	11520/12300	1250/1400	48	1.85/2.50	3.20/6.80	6.80	520	120	120	105	RDS 7	1578	TSD 7,0	1504	MD	5849

<sup>1)</sup> incl. operation switch







#### ■ Motor protection

Motors have thermal contacts wired to the terminal block and must be connected to a motor protection unit.

#### Speed control

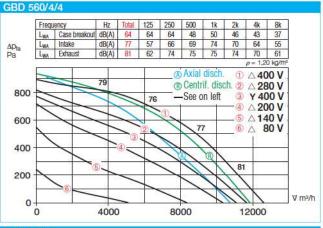
All types are speed controllable by voltage reduction using a transformer controller. The 3-phase models can also be 2 speed controlled by star/delta switch (accessories DS 2 or full motor protection unit M 4). The duties at different speeds are given in the performance curve.

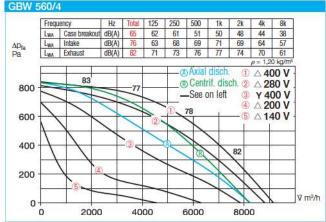
#### Sound levels

Total sound power levels and the spectrum figures in dB(A) are given for:

- Sound level case breakout
- Sound level intake
- Sound level exhaust

In the table below as well as underneath the performance curve you can find additionally the sound pressure levels at 4 m (free field conditions).





#### Accessories of both types

**Anti vibration mounts** for installation indoors. Set of 4.

**SDD-U** Ref. no. 5627

Wall bracket for wall mounting.

GB-WK 560 Ref. no. 5626

External weather louvers to cover exhaust opening.

GB-WSG 560 Ref. no. 5640

Outdoor cover hood for outdoor installation.

GB-WSD 560 Ref. no. 5749

#### On/Off and 2-speed switch for

3-phase Y/△ motors.

Type DS 2<sup>2)</sup> Ref. no. 1351

 full motor protection unit recommended: MD Ref. No. 5849

#### Specific accessories

for types GB
Condensate collector with condensate spigot for pipe connection.

**GB-KW 560** Ref. no. 5645

(Condensate collector with condensate spigot included in delivery with GB T120).

☐ for types GB T120

Rain drainage for outdoor installation (drill holes for rain drainage is already prepared).

GB-RA

Ref. no. 9418

Information	Page
Information for planning General techn. information	10 on on,
speed control	15 on
Accessory-Details	Page
Speed controller and full	
motor protection unit	525 on

# R02 Rectangular Silencers



#### R02 - 6 - Attenuator

Available in seven standard lengths R02 6 Rectangular Duct Mounted Silencers have excellent attenuation properties, achieved with sound absorbing infill splitters, retained in the attenuator casing by a perforated liner. The resistance to airflow is a function of the face velocity and length. It is not recommended to select the R02 6 Silencers with a face velocity above 6 metres per second without asking advice regarding re-generated self noise. We can advise on the selections and can perform system analysis to ensure the correct unit is specified.

- High performance rectangular duct silencer
- Seven standard lengths
- Many connection options
- · Cross section dimensions in 1mm increments
- System pressure within ducted systems to 1500 Pa
- Special lengths on request



# Insertion Loss (dB) - Centre Band Frequency

Product Code	Length (mm)	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
R02 - 6 - 600	600	2	3	6	7	12	14	11	10
R02 - 6 - 900	900	3	6	11	19	24	24	15	11
R02 - 6 - 1200	1200	4	7	15	26	29	32	20	14
R02 - 6 - 1500	1500	5	8	19	33	39	39	25	17
R02 - 6 - 1800	1800	6	10	21	36	45	45	28	19
R02 - 6 - 2100	2100	7	13	25	43	50	50	33	21
R02 - 6 - 2400	2400	7	15	28	49	50	50	38	25

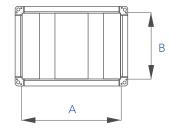
Insertion loss data is derived from continual testing to BS4718 and other standards in independent UKAS certified laboratories, which includes where appropriate, re-generated or self noise testing in both forward and reverse flow conditions. If you request system analysis from our technicians all predictions will be assessed using the relevant certified insertion loss data together with relevant dynamic corrections.

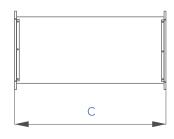
### Dimensional Data

Code	A Min	A Max	B Min	В Мах	C Min	C Max
R02 - 6	100	1200	100	1200	400	2400

# Resitance to Airflow (Pa)

Product Code	1.0m/s	1.5m/s	2.0m/s	2.5m/s	3.0m/s
R02 - 6 - 600	12	16	23	43	63
R02 - 6 - 900	12	16	24	44	64
R02 - 6 - 1200	13	17	25	45	67
R02 - 6 - 1500	13	17	25	46	68
R02 - 6 - 1800	13	18	26	47	72
R02 - 6 - 2100	14	19	27	51	74
R02 - 6 - 2400	15	19	28	54	78







# R02 Rectangular Silencers



# Material & Finish

All components are manufactured from mill finish hot dip galvanised mild steel conforming to EN10327 (BS2989). To prevent erosion of absorbing materials, the R Series Silencers are fitted with perforated splitters manufactured from galvanised mild steel conforming to EN10327 (BS2989) R Series Silencers utilise acoustic grade mineral fibre absorbing infill and are manufactured to the HVCA specification DW144 class B and M&E 100 for sheet steel thickness and stiffening.

**Pressure** Up to 1500 Pascals positive and negative. **Temperature** -12° to +100°C. **Location** Internally & externally mountable.

# Melinex Lining (Optional)

Where moist conditions exist (e.g. process systems) or for critically clean applications (e.g. hospitals) the sound absorbing material may be required to be fully sealed by Melinex lining to prevent fibre migration. This will however, effect the acoustic performance of the silencer. Please contact us to discuss your requirements.

# Alternative Specification

The above specification refers to our standard, stock range. We can also supply custom materials such as 304 and 316 grade stainless steels, cold reduced (CR4) mild steel and aluminium.

# **Dimensional Data**

Units smaller than the minimum and larger than the maximum with the same aero-acoustic performances are available, but may have different manufacturing methods and are therefore coded accordingly.

Connection Options					
MEX Flanges	20, 30 & 40mm				
Ductmate Flanges	25 & 35mm				
Circular Spigot	"SPIRAL FIT" circular spigots, can be offset.				
Rectangular Spigot	Rectangular spigots, can be offset				
Raw	Plan end for slip jointing etc.				

#### Installation

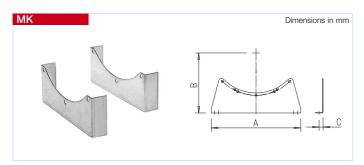
For recommendations for the support of the fan the principles of Part Six (pages 43-46) of the HVCA DW144 standard should be followed. Always use the correct size bolts as specified in the dimensional data table above. The arcuate holes are sized to allow the metric thread sizes to be utilised, for example, for an M10 fixing, the slot is made 19mm long by 13mm wide. Please contact us to confirm the suitability of any fan manufacturers product.

Equipment	Location					
Centrifugal Fans	Position at least one duct width from inlet or outlet.					
Axial Fans	Position at least one duct width from inlet or outlet.					
Mixed Flow Fans	Position at least one duct width from inlet or outlet.					
Ductwork Bends	Position at least three duct widths from inlet or outlet. One duct width will increase resistance by 90%, two by 20%. Ensure splitters are in parallel plane to bend.					
Ductwork Reducers	Direct couple only with reducers of maximum 15° cheek slope.					
Finned Coils & Filters	Leave 500mm plenum between silencer and coil or filter, and suitable reducer as specified in HVCA DW/144 1998.					

# Cleaning & Maintenance

Should the product require routine cleaning we recommend low-pressure air blasting, vacuuming or wiping the exposed surfaces with a damp cloth. It is not unusual for "White Zinc Oxide" to develop on galvanised silencers when the zinc in the galvanising reacts electrolytically with moisture. Silencers are of a passive nature and as such require no routine maintenance or lubrication.





#### Mounting feet

To fix Axial/VAR cased fans on ceiling, wall or floor. Made from galvanised sheet steel or hot dipped galvanised steel. Fixing holes fit casing flanges. Set includes a pair of feet, nuts and bolts.

If motors of high weight are installed, an extension duct (VR...) is recommended to move the centre of gravity within the mounting feet. Mount feet on the outer flange.

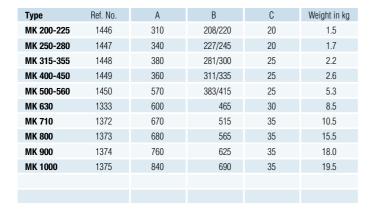
SDD-U	Dimensions in mm
	g g 

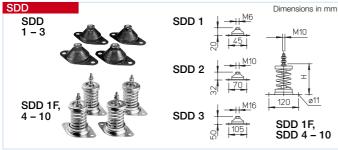
#### Anti vibration pads

The rubber mounting pads SDD-U are suitable as a base for installation of fans on flat, horizontal surfaces. They reduce the direct noise and vibration transmission to the building structure.

One set consists of 4 elements, which are positioned individually under the corners of the fan unit. Maximum compression: 40 kg/pad = total 160 kg.

SDD-U Ref. No. 5627





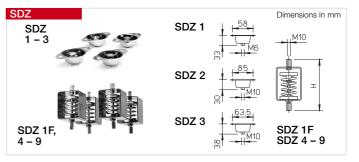
# Anti vibration mounts for compression

To reduce noise and vibration transmission of fans installed on horizontal surfaces.

Simple installation in combination with feet MK (accessory). Select size according to fan weight see table).

\* shown

Rubber elements are suitable for small to middle weights and ambients up to +60 °C. Spring elements are suitable for higher temperatures above +60 °C (e.g. smoke extraction).



Height in mm

190 - 220

#### Anti vibration mounts for suspension

To reduce noise and vibration transmission of fans installed hanging from ceilings. Specification as model SDD.

Ref No

1454

1943

Maximum fan

60

70

#### Important note for installation! Make sure that fan system is well balanced (centre of gravity of heavy motor may cause uneven loading of mounts).

Spring element

Туре		Ref. No.	Maximum fan weight in kg	H Height in mm	Spring element	Contents 1 set = 4 pieces
SDD	1	1452	80	*		
SDD	1F	1942	70	112 – 82	•	
SDD	2	1453	180	*		
SDD	3	1367	750	*		
SDD	4	1944	130	112 – 86	•	
SDD	5	1924	210	112 – 86	•	
SDD	6	1926	400	112 - 80	•	
SDD	7	1928	580	112 – 82	•	
SDD	8	1930	900	112 – 82	•	
SDD	9	1934	1300	112 – 85	•	
SDD	10	1951	1800	112 – 88	•	

2	1453	180	*			SDZ 2	1455	160	*		
3	1367	750	*			SDZ 3	1366	300	*		
) 4	1944	130	112 – 86	•		SDZ 4	1945	130	190 – 216	•	
) 5	1924	210	112 – 86	•		SDZ 5	1925	210	190 – 216	•	
0 6	1926	400	112 – 80	•		SDZ 6	1927	400	190 – 221	•	
7	1928	580	112 – 82	•		SDZ 7	1929	580	190 – 220	•	
8 (	1930	900	112 – 82	•		SDZ 8	1931	900	190 - 220	•	
9	1934	1300	112 – 85	•		SDZ 9	1935	1300	190 – 217	•	
10	1951	1800	112 – 88	•							
n in dimensional drawing					* shown in dimensional drawing						

Type

SDZ 1

SDZ 1F

Contents 1 set = 4 pieces