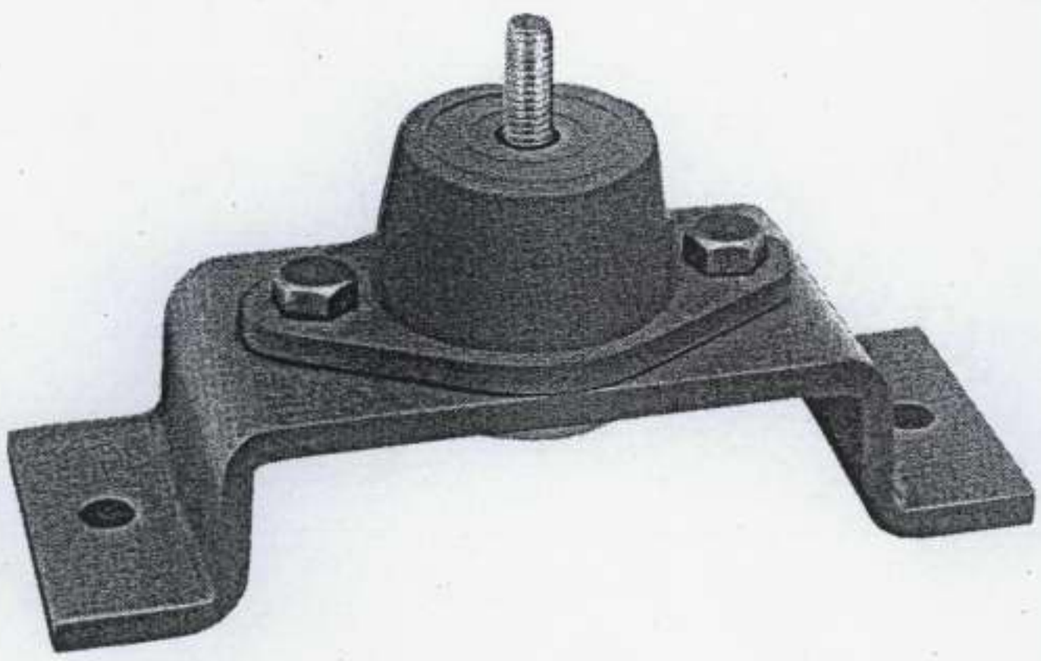
Bulletin No. R12/93 (UK)



VMC KORFUND

Neoprene Mountings

Series R/RD

Available in 4 sizes – 5 durometers
Load Range – 10 lbs. to 4,000 lbs.
Deflections to ¼″ with type R to ½″ with type RD
Corrosion Proof
Molded in colored oil-resistant neoprene
5 colors for error free identification

Effective Isolation for Floor Mounted Equipment

Series R & RD Neoprene Mountings are molded in colored oil-resistant neoprene. This unique color coding provides instant identification of loading capacity — simplifies stocking — prevents installation errors.

The VMC molding process embeds all metal parts in neoprene, preventing corrosion. Mountings can also be molded in other elastomers to meet special requirements.

Typical Applications

Air Handling Units Business Machines
Compressors Fans Instrument Panels
Machine Tools Pumps
Motor Generators Transformers

To Specify:

Neoprene mountings shall consist of a steel top plate and base plate completely embedded in coloured oil-resistant neoprene stock for easy identification of capacity. The mountings shall be Type R or RD, depending upon the required deflection of 1/4" to 1/2", as manufactured by VMC and as supplied by EMTEC Products Limited

EMTEC

EMTEC Products Limited, Enterprise House, Blyth Road, Hayes, Middlesex UB3 1DD

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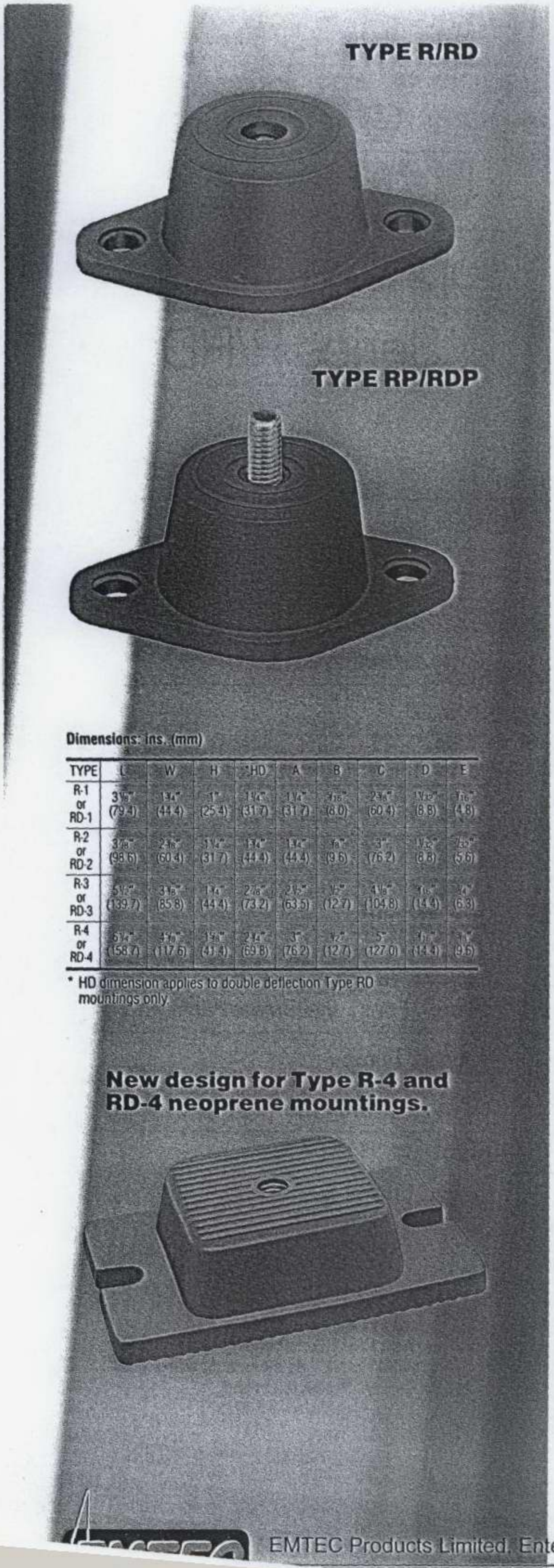
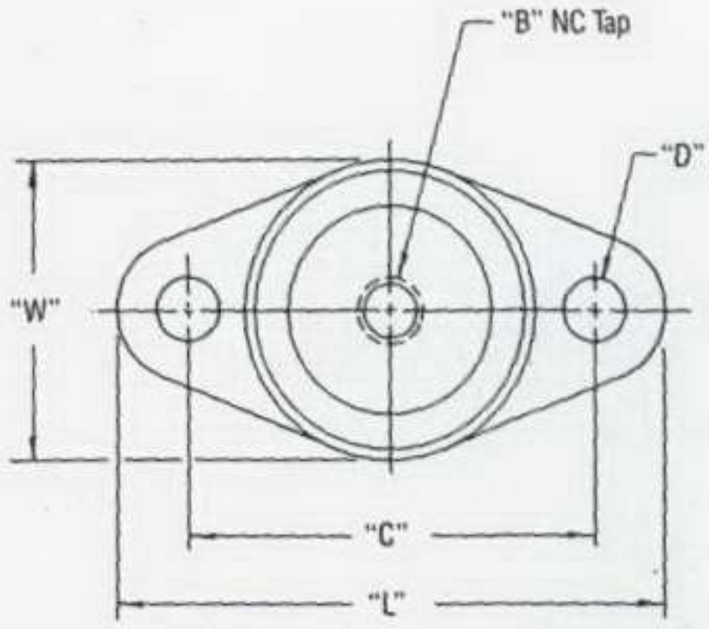
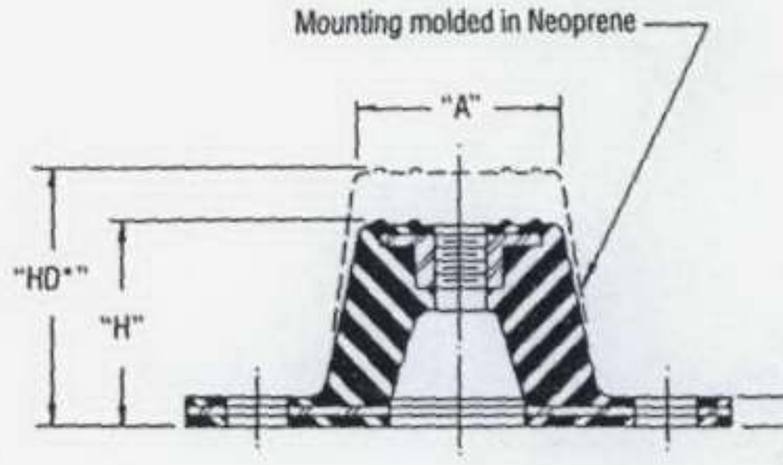
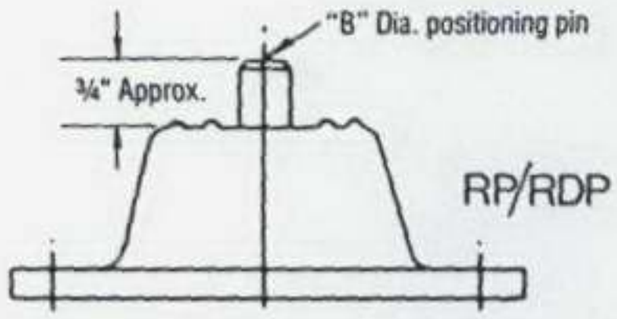








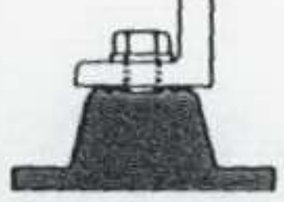
Dimensions: ins. (mm)

TYPE	L	W	H	*HD	A	B	C	D	E
R-1 or RD-1	3⅛" (79.4)	1¾" (44.4)	1" (25.4)	1¼" (31.7)	1¼" (31.7)	5/16" (8.0)	2⅜" (60.4)	1 11/32" (8.8)	3/16" (4.8)
R-2 or RD-2	3⅞" (98.6)	2⅜" (60.4)	1¼" (31.7)	1¾" (44.4)	1¾" (44.4)	⅜" (9.6)	3" (76.2)	1 11/32" (8.8)	7/32" (5.6)
R-3 or RD-3	5½" (139.7)	3⅜" (85.8)	1¾" (44.4)	2⅞" (73.2)	2½" (63.5)	½" (12.7)	4⅛" (104.8)	9/16" (14.4)	¼" (6.3)
R-4 or RD-4	6¼" (158.7)	4⅝" (117.6)	1⅝" (41.4)	2¾" (69.8)	3" (76.2)	½" (12.7)	5" (127.0)	9/16" (14.4)	3/8" (9.6)

* HD dimension applies to double deflection Type RD mountings only.

Type	Color Code	Max. Load lbs.	(kg)
R-1 or RD-1	BLUE	35	(15.8)
	BLACK	45	(20.4)
	RED	70	(31.7)
	GREEN	120	(54.4)
R-2 or RD-2	BLUE	135	(61.3)
	BLACK	170	(77.0)
	RED	240	(109.0)
	GREEN	380	(172.5)
	GRAY	550	(249.7)
R-3 or RD-3	BLACK	250	(113.5)
	RED	525	(238.3)
	GREEN	750	(340.5)
	GRAY	1100	(499.4)
R-4 or RD-4	BLACK	1500	(681.0)
	RED	2250	(1021.5)
	GREEN	3000	(1362.0)
	GRAY	4000	(1816.0)

New design for Type R-4 and RD-4 neoprene mountings.



Type R or RD

IF BOLTING IS PREFERRED—

Type R or RD mountings are furnished with a tapped hole in the center. This enables the equipment to be bolted securely to the mounting.

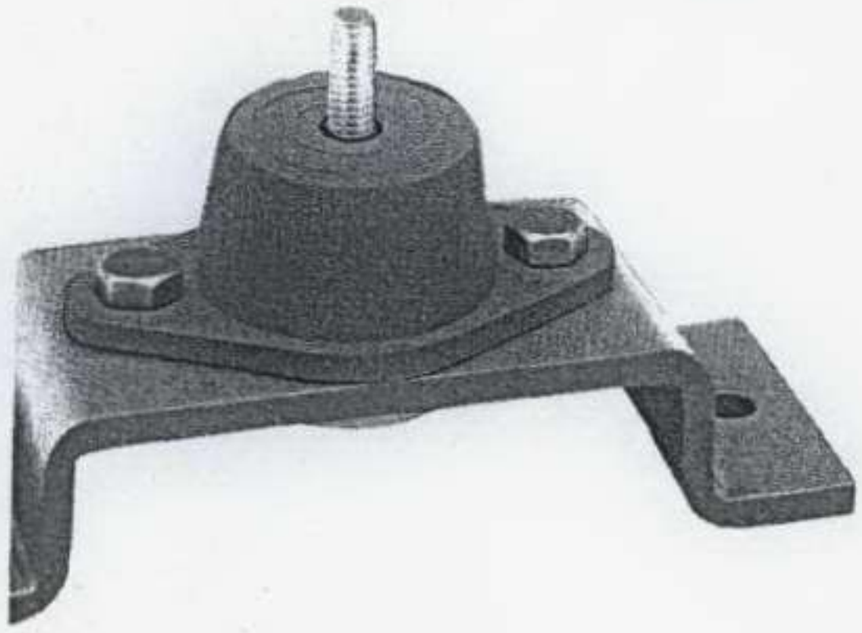
Type R or RD

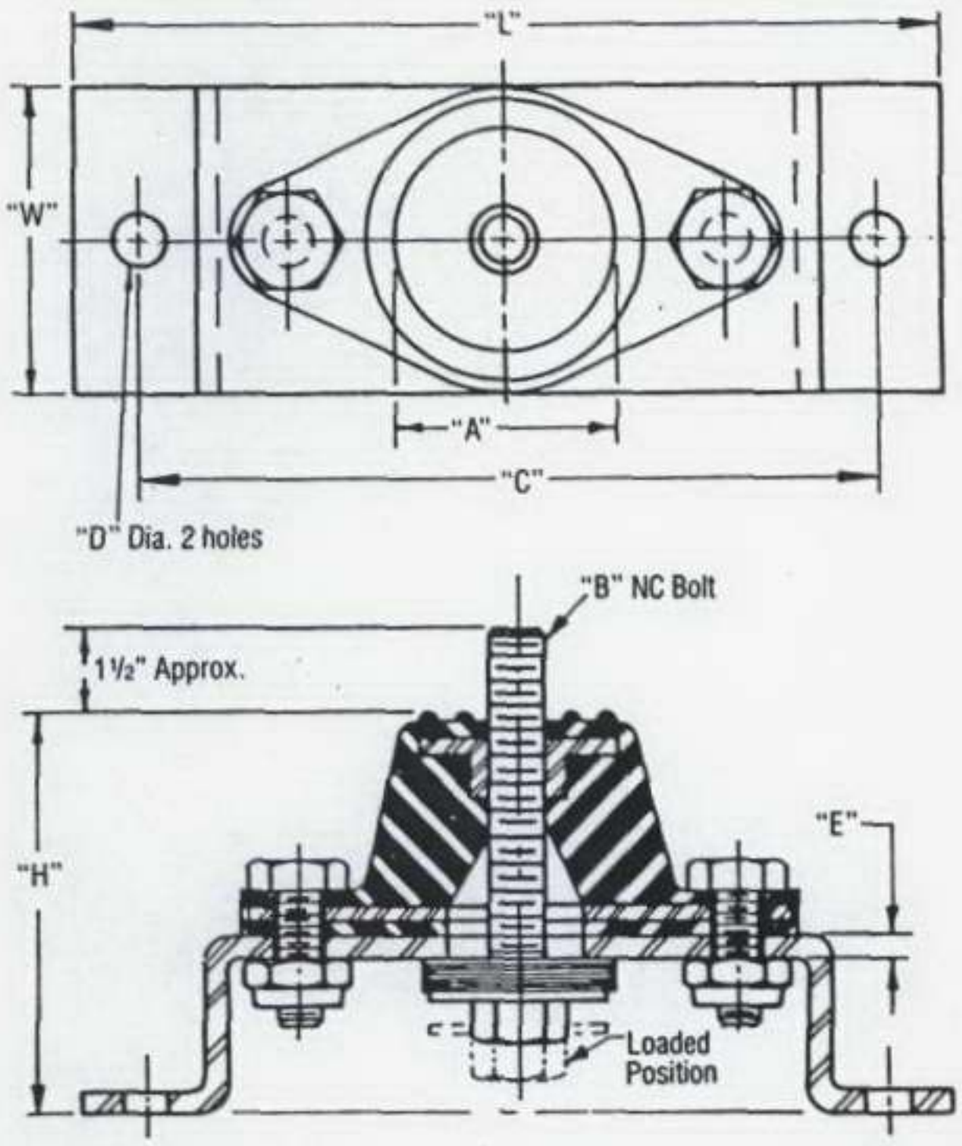
NO BOLTING REQUIRED—

Type R or RD mountings may be used without bolting under machines having no lateral or severe vertical motion.

EMTEC Products Limited, Enterprise House, Blyth Road, Hayes, Mi

TYPE RCM



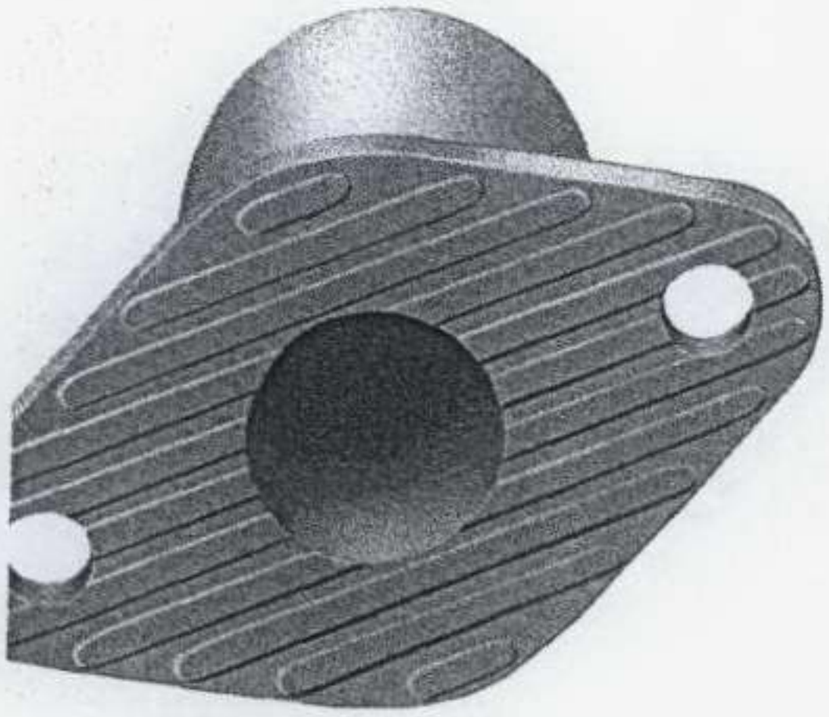


makes mounting and supported equipment captive. It
failure of mounting due to excessive horizontal and vertical
ecommended for shipboard and vehicular installations, or
stallations with high starting torque.

ons: ins. (mm)

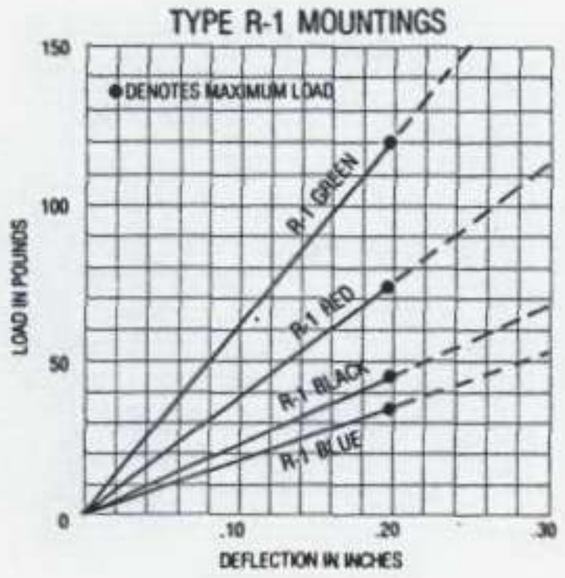
L	W	H	A	B	C	D	E
7" (177.8)	2¼" (57.0)	2¾" (69.8)	1¾" (44.4)	⅜" (9.6)	5¾" (146.0)	11/32" (8.8)	¼" (6.3)
9½" (241.3)	3½" (89.0)	3½" (89.0)	2 9/16" (65.2)	½" (12.7)	8" (203.2)	9/16" (14.4)	5/16" (8.0)
11" (279.4)	4½" (114.3)	3¾" (95.2)	3¾" (95.2)	½" (12.7)	9½" (241.3)	9/16" (14.4)	⅜" (9.6)

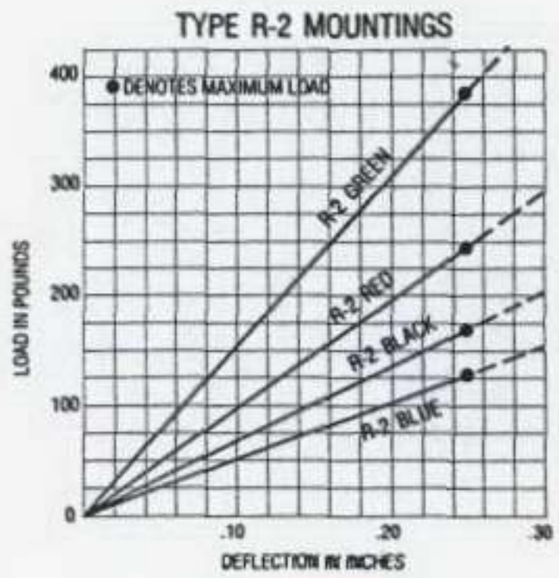
Type	Color Code	Max. Load lbs.	(kg)	Deflection ins. (mm)
RCM-2	BLACK	170	(77.0)	¼" (6.3)
	RED	240	(109.0)	
	GREEN	380	(172.5)	
RCM-3	BLACK	250	(113.5)	¼" (6.3)
	RED	525	(238.3)	
	GREEN	750	(340.5)	
	GRAY	1100	(499.4)	
RCM-4	BLACK	1500	(681.0)	¼" (6.3)
	RED	2250	(1021.5)	
	GREEN	3000	(1362.0)	
	GRAY	4000	(1816.0)	

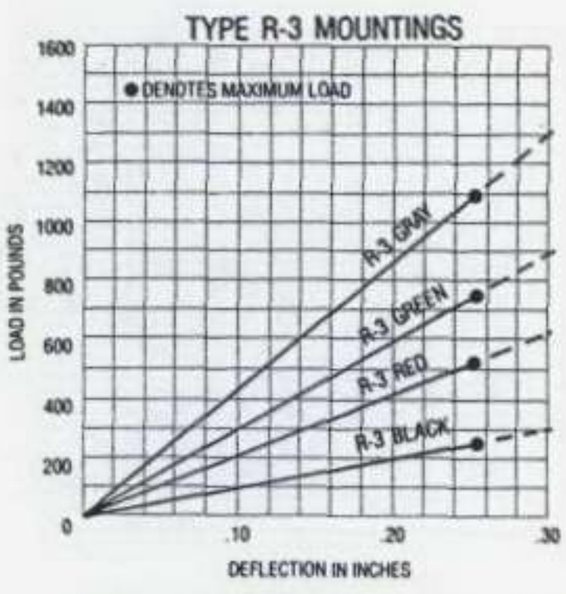


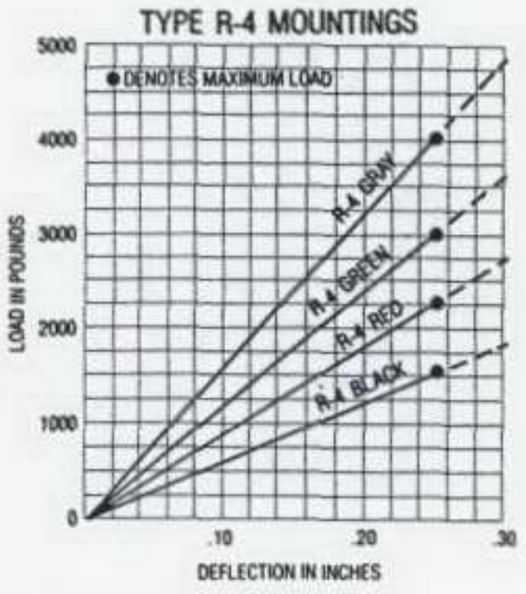
***n-skid ribbed neoprene covering on base
e eliminates the need for bolting to floor.***

LOAD DEFLECTION CURVES









Note: For Series RD mountings, double the deflection shown for given load.

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VMC
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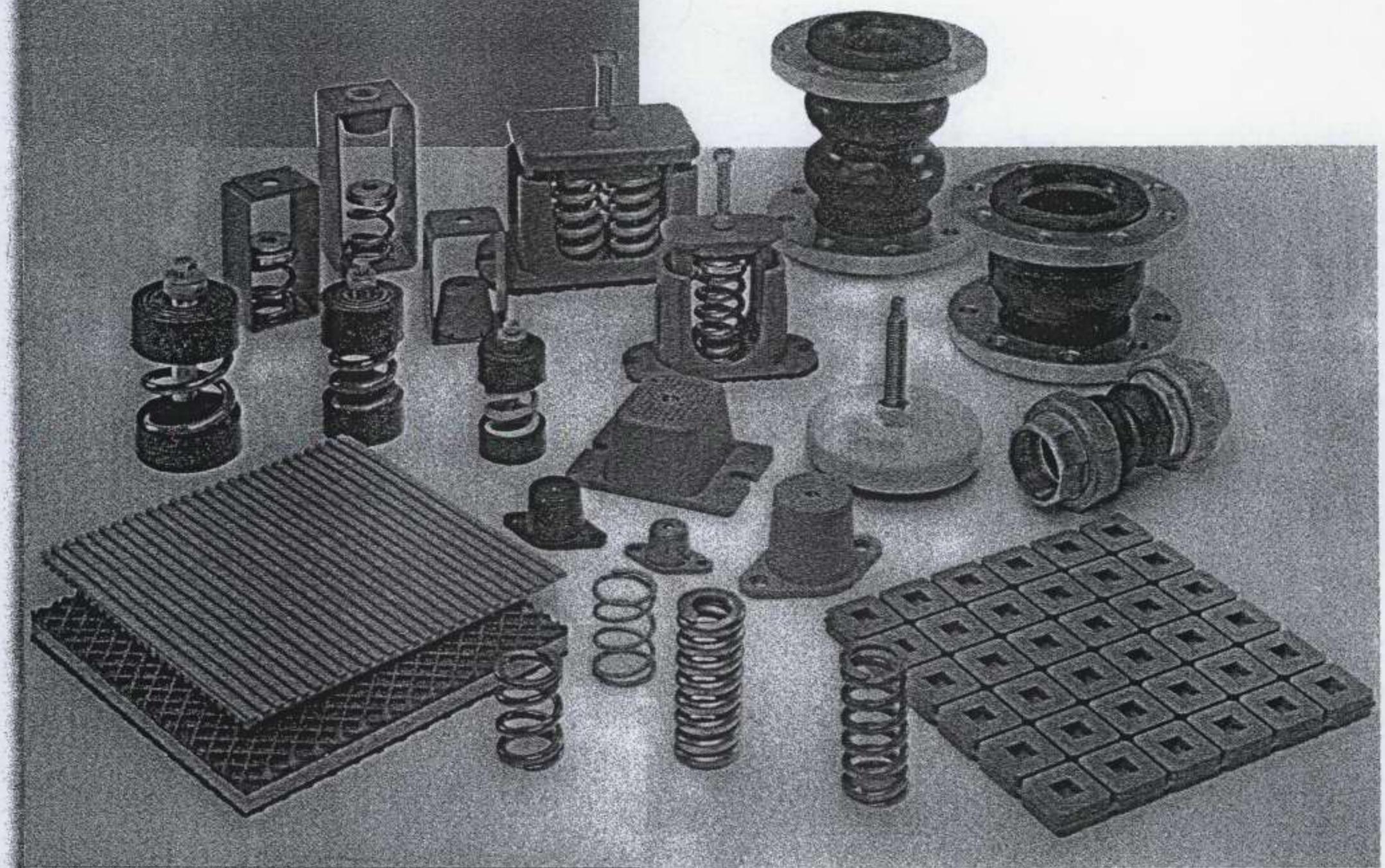
The Vibration Control People...



Vibration Mountings and Controls Inc.'s ongoing product development, marketing and distribution prowess has made us a world-wide leader in the design and fabrication of vibration isolation components and damping materials used in the heating, ventilating, air conditioning, petrochemical, chemical, manufacturing, utility, construction and transportation industries.

Computer supported engineering and the sophisticated skills of the VMC craftsmen continue to insure correctly designed and accurately manufactured product reliability for the vibration isolation of heating, ventilating and air-conditioning pumps, fans and compressors, heavy rotating machinery, diesel engines and railroad, off road and military vehicles.

VMC
KORFUND

Vibration Mountings & Controls, Inc.
Korfund Dynamics Company
Aeroflex, Inc, Subsidiary Companies

EMTEC

EMTEC Products Limited, Enterprise House, Blyth Road, Hayes, Middlesex UB3 1DD

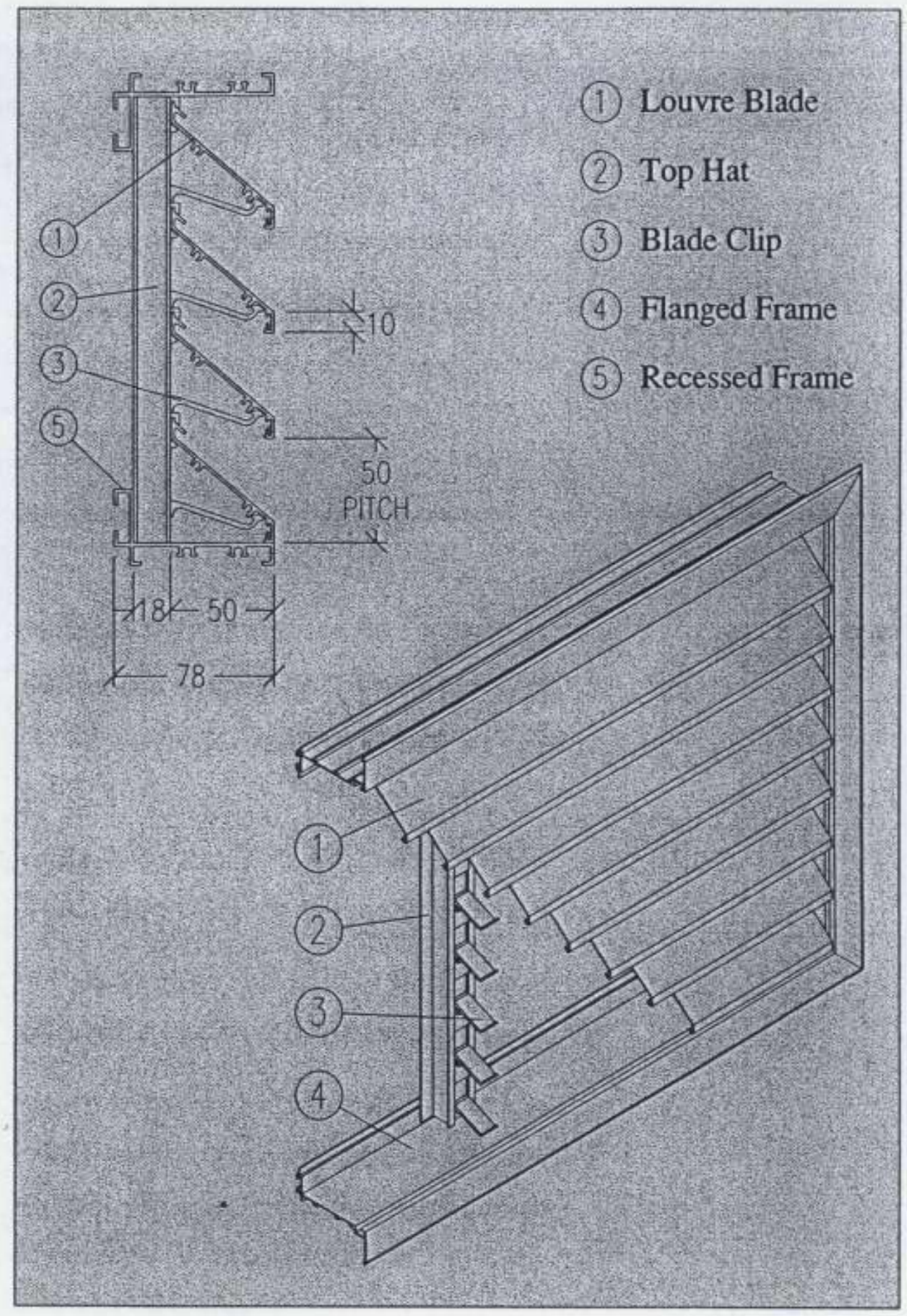
Telephone: 0181 848 3031 Facsimile: 0181 573 3605

Weather Louvre Type WLAC 50 AL

The EMTEC WLAC 50 (AL) is a small format, all-purpose, external weather louvre. These louvres can be supplied in either modular or continuous line format and are intended to prevent the passage of water through the opening into which the louvre is mounted.

The EMTEC WLAC 50 (AL) Weather Louvre has an aesthetically pleasing external appearance which compliments any architectural design. The aerodynamic shape of the individual blades minimises the resistance to airflow and the incorporation of water traps ensure that the ingress of rain is reduced.

EMTEC WLAC 50 (AL) Weather Louvres can be supplied and installed either as individual units or, by bolting two or more units together, openings or screens of any size can be catered for. A range of external frame profiles exist to enable the WLAC 50 (AL) Weather Louvre to be integrated into most cladding systems.



Louvre Performance

Effectiveness

The EMTEC WLAC 50 (AL) Weather Louvre has been fully performance tested at BSRIA in accordance with the HEVAC technical specification "Laboratory Testing & Rating of Weather Louvres subjected to Simulated Rain". This test involves sealing a sample louvre into a 1m² opening within a calibrated test rig which simulates harsh weather conditions.

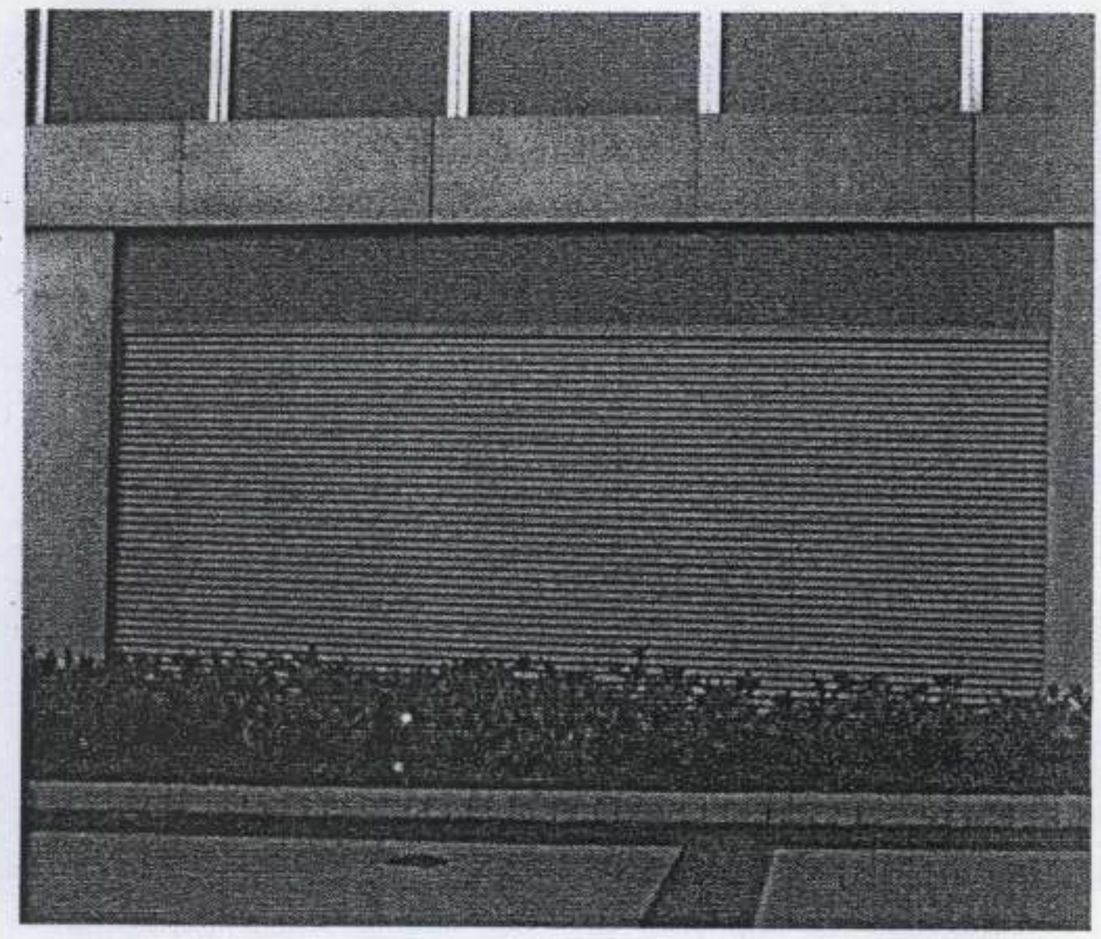
The amount of water penetrating the louvre openings is then measured under a range of air inlet velocities and an overall effectiveness rating is generated.

At the inlet velocities tested, the following HEVAC classifications were achieved:

CLASS C2 up to 2.0 m/s.

CLASS D2 up to 3.5 m/s.

Full details of the BSRIA test report are available from the EMTEC Products Ltd. technical department.



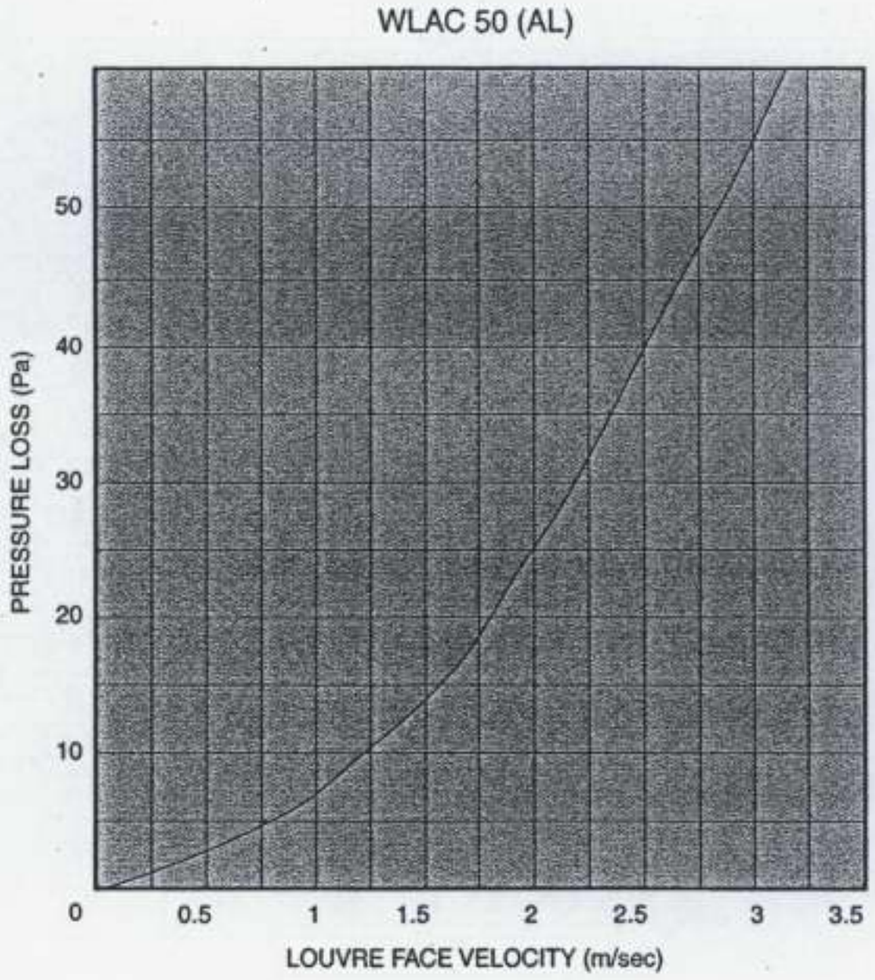
Aerodynamic

It may be necessary to establish the correct size of a weather louvre knowing that a certain pressure loss is required across the louvre for a given volume of air. In this case the face velocity of the louvre is read off the chart opposite and the louvre dimensions established using the formula:

Airflow (Q) =Louvre Face Area (A_L)
x Louvre Face Velocity (V_L)

Conversely, for a known opening size and airflow, the pressure loss across the louvre can be obtained from the chart opposite.

The coefficient of discharge or entry for the WLAC 50 (AL) louvre is 0.320 (HEVAC CLASS 2).



Physical

All EMTEC WLAC 50 (AL) extruded aluminium blade, frame and hat sections are manufactured from grade 6063-T6 high quality aluminium alloy with the retaining clips/spacer sections being extruded from a higher strength grade 6082-T6 aluminium alloy. On projects where additional flashing sections are required these are formed from grade S1C aluminium sheet to the required dimensions.

EMTEC WLAC 50 (AL) extruded aluminium louvre systems can be supplied in two different formats depending on the visual requirements: Modular format or Continuous Line format.

In Modular format the louvres are manufactured in our works and have external frames to all four sides. The maximum dimensions of an individual Modular Louvre are 2500mm x 2500mm.

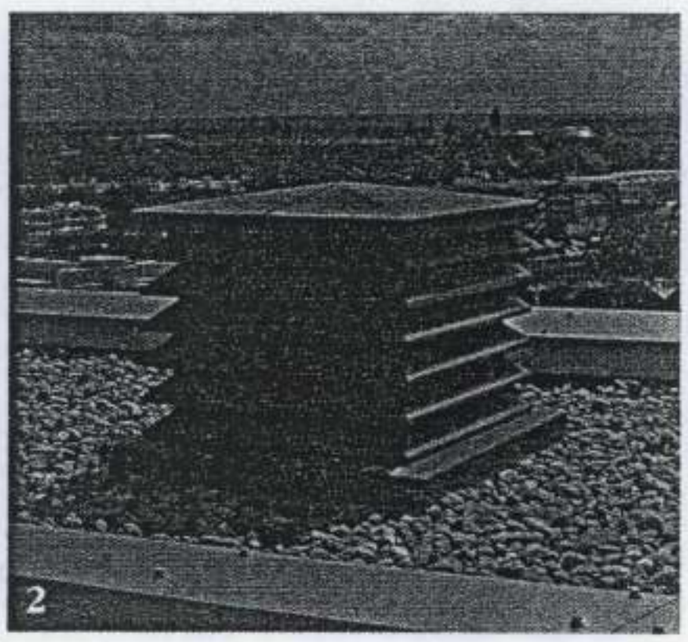
In Continuous-Line Format the louvres are assembled on site from a kit of parts pre-cut and finished to suit the builderswork openings. This system is very versatile and does not have any specific maximum dimensions. This is due to the louvre blades themselves being supported using the HAT section mullions at a maximum of 1000 mm centres which gives an infinite theoretical length to a louvre screen providing that the mullions can be fixed to a structural section for support.

Each louvre is supplied as standard with a birdmesh guard to the rear face and a polyester powder coat finish to a standard BS4800 or RAL non-metallic colour. The louvres can also be specified with optional finishes such as Anodising or Syntha Pulvin and with optional backings such as thermal or acoustic panels or attenuators.

1. WLAC 50 (AL)
   Louvred door.

2. WLAC 50 (AL)
   Louvred Turret.


1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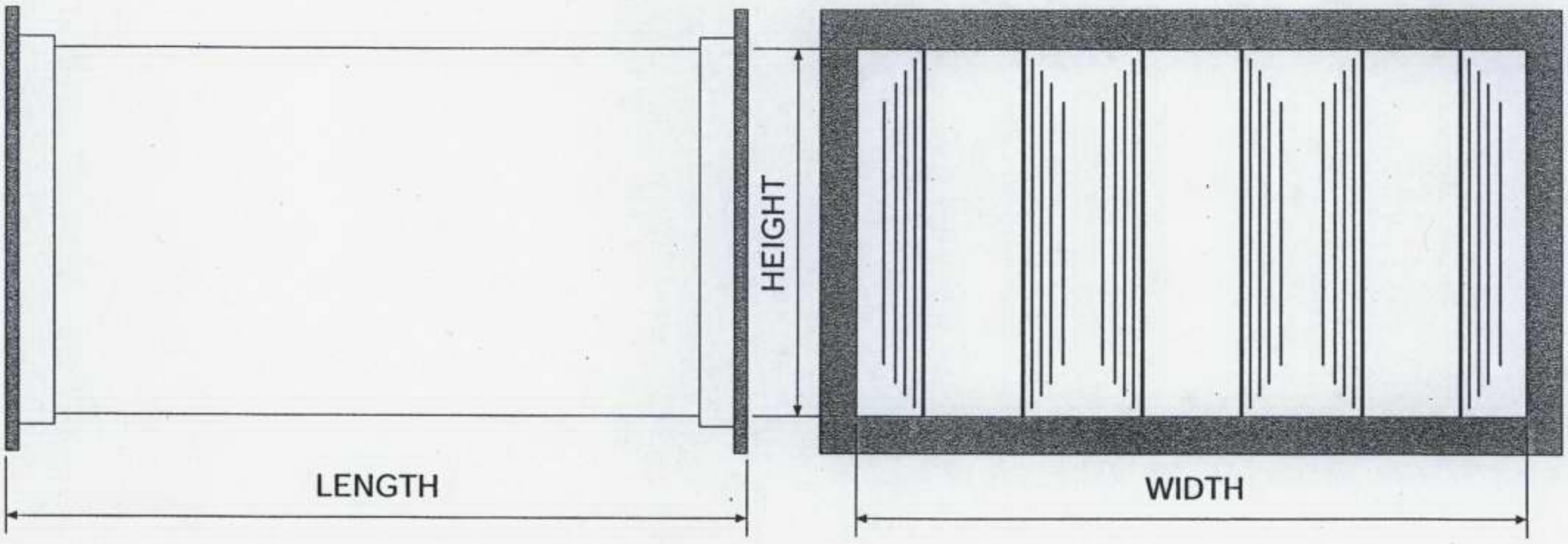
Emtec Products Ltd., Enterprise House, Blyth Road, Hayes, Middlesex, UB3 1DD. Tel: 020 8848 3031. Fax: 020 8573 3605. Email: sales@emtecproducts.co.uk

Rectangular Duct Silencer Type RAAC 43



Usage

The EMTEC RAAC 43 Rectangular Duct Silencer is an absorptive baffle attenuator which converts duct-borne noise energy into thermal energy within the acoustic media contained in the baffle elements.

The RAAC Rectangular Duct Silencer range has been specifically designed for use in ducted ventilation and air conditioning systems. The main applications of RAAC silencers are the reduction of mechanical noise generated by the primary air circulation fan and the elimination of secondary regenerated noise from terminal units, mixing chambers or pressure reducing devices.

EMTEC RAAC Rectangular Duct Silencers are also used to reduce the level of external noise (aircraft, traffic etc.) entering a building, to control and contain the noise of enclosed machinery (pumps, compressors, generating sets etc.) and the elimination of speech interference, transferred by interconnecting ducting, across office walls and partitions.

Selection of the correct RAAC silencer is by subtraction of the Dynamic Insertion Loss from the source sound level with corrections being made for the natural attenuation of the duct system to obtain the established space noise criteria. EMTEC engineers are available on request to assist you in the proper selection of silencers for your particular requirements.

Construction

The EMTEC RAAC 43 Rectangular Duct Silencer has inter-baffle separation of 150mm and the individual baffle elements are 200mm wide. This gives a modular width of 350mm and with this combination gives good attenuation over a reasonable silencer length without the need to dramatically change the cross section of the duct work in order to optimise the silencer's pressure loss and self noise.

RAAC 43 Silencers are supplied with duct widths equal to any multiple of 350mm, with duct heights to suit the customer requirements and in any one of nine standard lengths (600, 900, 1200, 1500, 1800, 2100, 2400, 2700 and 3000mm).

EMTEC RAAC Standard Rectangular Duct Silencers are constructed from high quality galvanised sheet steel. The casings are lockformed and comply with the latest HVCA ductwork standard. All joints are sealed with a suitable mastic sealant and the baffle elements and end flanges are retained by sealed fixings. In this standard form EMTEC RAAC Silencers can withstand duct static pressures up to 1250 pascals. For higher static pressures the casing of the silencer is constructed from mild steel sheet, all joints being continuously seam welded.

The baffle elements contain inert, non-flammable, tissue faced mineral wool retained in a galvanised sheet steel casing. The inlet profile of the baffle is aerodynamically shaped to minimise pressure losses and the side faces of the baffle are formed from stiffened perforated metal to ensure stability and integrity of the acoustic media even under adverse airflow conditions. The acoustic media can be further protected for special applications such as supplying air to clean rooms or operating theatres or extracting from kitchens, laboratories or highly contaminated industrial process areas. For such special applications an EMTEC engineer should be consulted to establish the most appropriate treatment.

Typical Specification

EMTEC RAAC Rectangular Duct Silencers shall be installed in the positions indicated on the drawings to maintain the acoustic criteria shown in the specification. The silencers shall have galvanised sheet steel casings with drilled, mild steel end flanges. The inlet section of the baffle elements shall be aerodynamically shaped. The acoustic media shall be inert, non-flammable, tissue faced mineral wool. The acoustic media shall be retained in position by perforated, galvanised steel face sheets stiffened to maintain the integrity of the baffle element even under adverse airflow conditions.

Acoustic

Length (mm)	Dynamic Insertion Loss (dB) at Octave band centres (Hz)							
	63	125	250	500	1K	2K	4K	8K
600	3	5	11	19	23	22	17	9
900	3	6	13	22	27	26	20	10
1200	4	8	17	27	33	33	24	13
1500	5	10	20	34	40	37	30	14
1800	5	13	23	39	45	41	32	17
2100	6	16	29	44	50	48	36	21
2400	7	18	31	48	50	50	39	23
2700	8	20	33	50	50	50	42	25
3000	9	22	35	50	50	50	45	28

Duct Face Velocity (m/sec)	Silencer Self Noise in dB ref 10^{-12} watts for different velocities							
	63	125	250	500	1K	2K	4K	8K
3	38	36	35	33	36	34	32	28
5	49	46	46	44	42	43	43	37
8	56	53	52	54	53	53	52	45
10	61	59	59	60	61	60	59	54

Duct Velocity (m/sec)	Corrections to D.I.L. in dB for duct velocities greater than 8 m/sec							
	63	125	250	500	1K	2K	4K	8K
+8	0	-2	-3	-3	-3	-2	-2	-3
+12	-1	-3	-4	-5	-6	-5	-4	-5
+16	-3	-5	-7	-8	-8	-6	-6	-6
-8	0	+1	+2	+2	+2	+1	+1	0
-12	+1	+2	+3	+3	+2	+2	+2	+1
-16	+2	+3	+3	+4	+3	+2	+2	+2

+ve velocities are for noise and airflow in the same direction and -ve velocities where noise and airflow are in opposite directions

The silencer self noise levels .given in the table opposite are for a face area of 0.5m². For areas greater or smaller the dB corrections shown below should be applied.

Face area (m²)	0.1	0.25	0.75	1	3	5	10
Corrections to PWL (dB)	-7	-3	+2	+3	+7	+10	+13

Aerodynamic

It may be necessary to establish the correct size of silencer knowing that a certain pressure loss is required across the silencer for a given volume of air. In this case the duct face velocity is read off the chart opposite and the silencer dimensions established from the formula below:

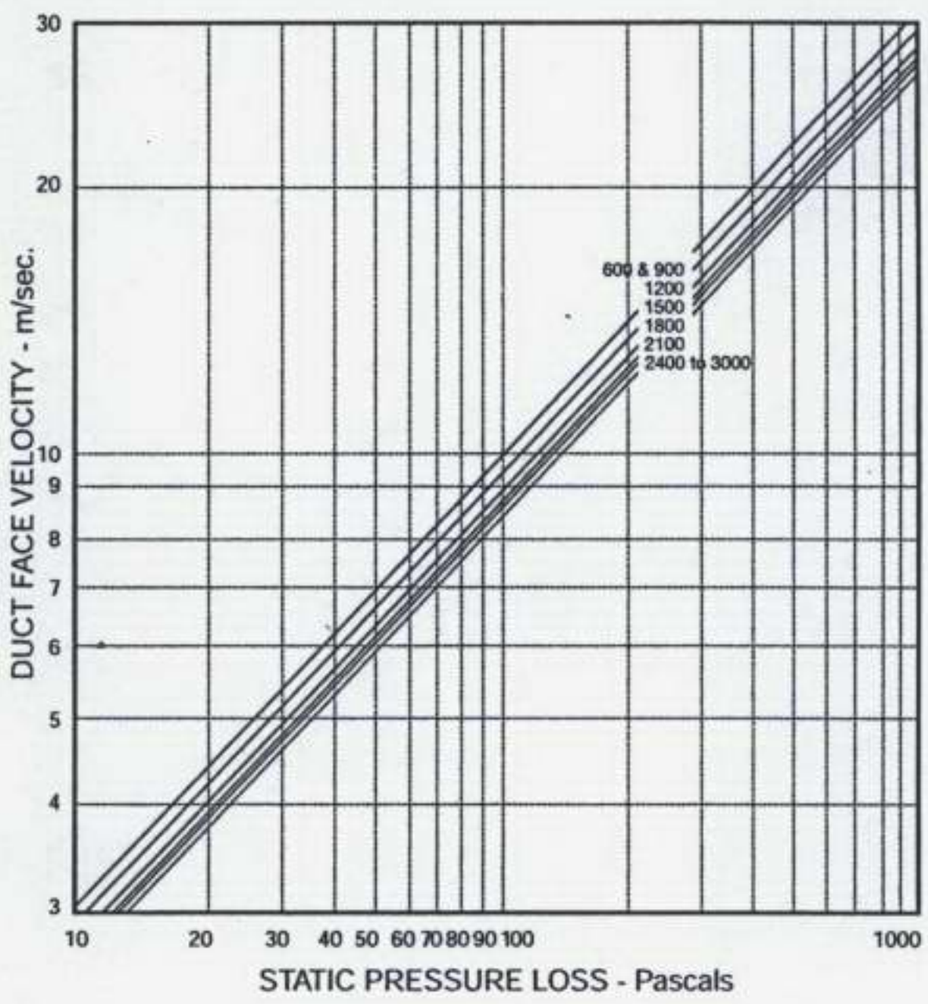
Airflow(Q)=Duct Area (A) x Duct Face Velocity (v)

Conversely for a known duct size and airflow the pressure loss across the silencer can be obtained from the chart opposite.

Selection Example:
Assuming the airflow is 5m³/sec and the maximum allowable pressure loss is 100 pascals. Assuming also that a 1200mm long silencer will meet the acoustic requirements by entering the chart opposite on the horizontal axis at 100 pascals, for a 1200mm long silencer, a duct velocity of 9.33m/sec is obtained. The duct area is then given as A=Q/v=5/9.33=0.54m². If a width of 1050mm is now selected (being 3 x modular width) the height will be 520mm and the final selection will be as shown below.

EMTEC RAAC/43/1200 Silencer -
1050mm x 520mm x 1200mm long.

PRESSURE LOSS CHART FOR EMTEC RAAC 43 SILENCER



Physical

EMTEC RAAC Rectangular Duct Silencers can be positioned at any point in a ductwork system consistent with good airflow and acoustic design considerations. The silencer performance may be compromised if the flow conditions immediately before or after the silencer location are excessively turbulent. For this reason it is recommended that a minimum length of straight ducting on both sides of the silencer be allowed equal to three times the largest duct dimension. When plantroom arrangements do not allow this minimum condition then it is advisable to incorporate turning or guide vanes into the duct design to ensure that the airflow is uniform across the silencer face area.

The EMTEC RAAC 43 Rectangular Duct Silencer has an approximate volumetric weight of 160 Kg/m³. Silencers should be installed onto angle or channel supports placed at right angles to the baffle elements across the width of the silencer. When lifting an EMTEC RAAC 43 Rectangular Duct Silencer into position on site it is important to ensure that the slings used are placed around the outside of the silencer casing and the silencer lifted with the baffle elements vertical. It is imperative that silencers not be lifted by their end flanges or by slinging through the internal airway passages.

Silencers of large dimension (above a face area of 1.5m²) can be supplied in modules for on site assembly. For individual requirements please consult an EMTEC engineer.

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