

25<sup>th</sup> February 2021

Carnell Warren Associates Duke Street Woking Surrey GU21 5BA

For the attention of Mr Josh Taylor

Our reference: 10220-R2-MGR-CW Subject: 24 Heath Drive, London NW3

Dear Sirs,

We hereby acknowledge receipt of your email of the 25<sup>th</sup> of February 2021 and we have pleasure in requoting below for the acoustic enclosure now required to achieve the following noise level for daytime and night time running of the condensers:-

At 1 metre from Neighbours window: 28 dBA ( daytime ) and 23-25dBA ( nightime - assuming 3-5dB reduction for night set back operation )

In designing the enclosure we have again used the following sound pressure level of the condensers as the basis of our design:-

Equipment	,	Sound	Pressi	ıre Leve	el (dB re	ef 2 x 10	<sup>5</sup> N/m <sup>2</sup>	)	dBA
	63	125	250	500	1k	2k	4k	8k	
Daikin RXYSQ10TY1 – SPL at 1m free field	65	58	54	53	50	46	41	34	55

Note: The above data was taken from Daikin's standard data book.

The enclosure, we believe, is to be sited at the bottom of the garden of 24 Heath Drive in the right hand corner of the garden. The nearest neighbour's window is 21 metres away from the acoustic enclosure.

#### **QUOTATION**

To design, manufacture, deliver to site and install an Emtec PAC30 acoustic enclosure 2450mm wide x 1300mm deep x 1850mm high with inlet Emtec RAAC/33/300S silencer and outlet Emtec LAAC15-105 acoustic louvre, a PVC flexible connector from the condenser fans to the outlet louvre and an Emtec DAC33 door for maintenance of the condenser. Enclosure to handle 3.04 m³/sec of condenser air with a static pressure loss of less than 20 pascals. All external surfaces of enclosure to be polyester powder coated to a standard, non-metallic, RAL colour. Four off Emtec/VMC RD-2 Black anti-vibration mounts to be supplied to the AC Contractor.

Price: Supply, deliver and install ... £7,514.00

Emtec Products Ltd T: +44(0)20 8848 3031 E: sales@emtecproducts.co.uk W: emtecproducts.co.uk Unit L, Turnpike Way High Wycombe Buckinghamshire HP12 3TF







<u>Note:</u> It is assumed that a flat level concrete plinth of at least 2550mm wide x 1400mm deep will be provided for us to place our enclosure onto. It is also assumed that the condenser will be positioned on the plinth, by others, 400mm from the front long edge of the plinth and 380mm from the far side of the plinth ( next to the boundary )

#### Terms and Conditions of Quotation

Validity : Prices are fixed for acceptance for 60 days.

Drawings : 2-3 weeks from receipt of order.
Delivery : 4-5 weeks from approval of drawings.

Carriage : Included.

Installation : Assumes free and unrestricted access to site, uninterrupted working between

0800 and 1730 Monday to Friday excluding Bank Holidays, free use of

110V/240V electricity supply within 15m of all points of installation and that all site preparation and disconnection of services will be carried out prior to the

arrival of Emtec Products Ltd. on site.

Exclusions All craneage, lifting and scaffolding.

All builderswork, including making good.

All disconnection and reconnection of services.

All removal of debris and carting away.

V.A.T. : Chargeable extra at the appropriate rate.

Payment : Nett 30 days from date of invoice subject to credit clearance.

We attach herewith our sketch No. QF/10220/GA1(B) which outlines the leading dimensions of the proposed enclosure.

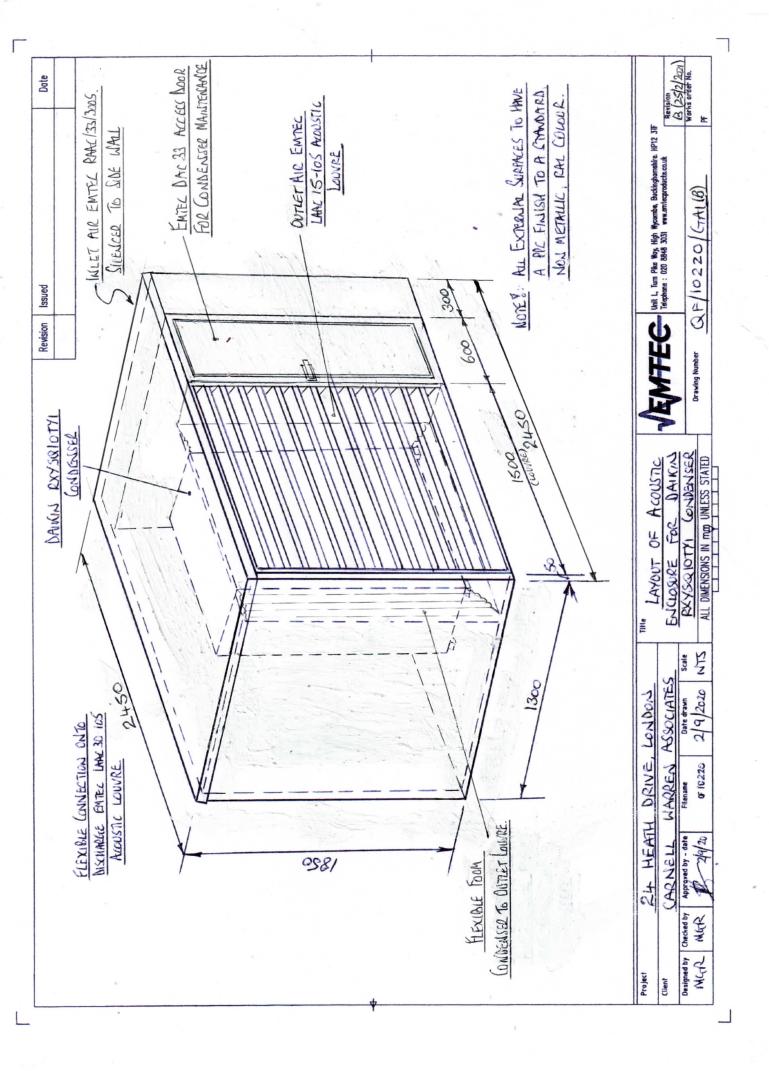
Our data sheets No. 108-v04; 110-v04; 103/v01 and R12/93 give details of the Emtec products offered in our quotation.

We trust that the above is now fully in line with your requirements, but should you have any queries with regard to our proposals, please do not hesitate to contact the undersigned.

Yours faithfully,

Mike Roberts

Director





# **Acoustic Panel Systems PAC 40 & PAC 30**

## **Usage**

EMTEC PAC 40 and PAC 30 Acoustic Panel systems have been specifically designed to meet the increasing requirements to shield personnel from high noise levels emitted from plant and machinery. When considering The Control of Noise at Work Regulations, EMTEC PAC 40 and PAC 30 Acoustic Panel systems will attenuate most noise emissions to below the lower exposure action value.



Acoustic Panels have a plain exterior surface and a perforated inner surface with an acoustically absorbent media being contained between the two skins. The inner perforated surface allows exposure of the acoustically absorbent media to the noise source in order to reduce reverberation within the area around the enclosed machinery. If necessary, the external surface of the panel can be acoustically damped to eliminate local resonances.

EMTEC PAC 40 and PAC 30 Acoustic Panels can be used as barriers between quiet and noisy areas or in the form of housings around noisy plant. The panels are supplied complete with floor, roof and intermediate vertical joiners to allow fast and simple site erection. As part of an individual enclosure design, ventilation systems, complete with suitable silencers, can be provided in order to dissipate the heat emissions from the enclosed machinery. Access doors, inspection windows and acoustically sealed openings for the passage of piping, cables etc. can also be provided with no reduction in the acoustic performance of the final design.

Typical applications of EMTEC PAC 40 and PAC 30 Acoustic Panels are the enclosure of Turbo-compressors, Diesel-driven Generators, Pumps, Fans and Presses. Audiometric Rooms and Quiet Booths for personnel within noisy factory environments can also be constructed from EMTEC Acoustic Panels.

For further information or to discuss your particular requirements it is advisable to consult an EMTEC engineer who will assist in the development of a cost effective design that meets the acoustic criteria

## **Construction & Physical Properties**

EMTEC PAC 40 and PAC 30 Acoustic Panels are formed from a 1.2mm plain galvanised steel outer sheet and a 32% free-area 0.7mm punched perforated galvanised steel inner sheet. The panels are suitably stiffened to prevent deformation during site erection. The acoustic media contained in the panels is inert, water repellent, no-hygroscopic and non-combustible. The acoustic media is protected with a non-woven mineral tissue behind the perforated inner face to prevent particle migration occurring.

If a higher sound reduction is required, EMTEC PAC 40HD acoustic panels can be specified. These are formed from a 1.6mm plain galvanised steel outer sheet and a 32% free-area 0.7mm punched perforated galvanised steel inner sheet, and incorporate an internal layer of 9mm plasterboard.

EMTEC PAC 40 and PAC 30 Acoustic Panels can be supplied with external surfaces finished in pre-coated steel or panels can be polyester powder coated to a standard RAL colour.

Hatches, doors, windows and sealed openings are normally fitted on site, and all the necessary fittings and fixings are supplied with the panels. Cellular rubber seals are incorporated into floor and roof channels as well as around the periphery of doors and windows. Wall and roof joiners are mastic sealed during installation to maintain the acoustic integrity of the system.

Structural steelwork or internal supports for ducting, silencers or other equipment can be incorporated into individual enclosure designs and details of all aspects of the acoustic enclosure would be provided by EMTEC to the client for approval prior to manufacture.

EMTEC PAC 30 & PAC 40 Acoustic Panel properties:

PAC.40 standard depth (thickness) - 100mm
PAC.30 standard depth (thickness) - 50mm
Maximum height PAC 30 & PAC 40 - 2450mm
Maximum panel width PAC 30 - 1100mm
Maximum panel width PAC 40 - 1000mm
PAC 40 typical system mass per unit area - 25 kg/m²
PAC 40HD typical system mass per unit area - 36 kg/m²
PAC 30 typical mass per unit area - 21 kg/m²

## **Typical Specification Examples**

The Diesel-driven Generator Set shall be enclosed in a self-contained EMTEC PAC 40 Acoustic Panel enclosure to maintain the noise level prescribed in the specification. The enclosure will be complete with two double-leaf access doors, sealed openings around the electrical cables and exhaust piping, an inspection window and an adequate ventilation system to dissipate the heat emission from the generator set. The outside surfaces of the enclosure shall be polyester powder coated to RAL9010 (white).

#### **Acoustic Performance – Sound Reduction**

Emtec's type PAC Acoustic Panels have been tested in accordance with EN10140-2:2010 at SRL Technical Services Ltd. The test report is available on request. The Rw(C;Ctr) rating provided below is according to EN 717-1:2013.

Acoustic Panel Type	Sound Red	uction Index i	n dB at Octav	e Band Centr	e Frequencie	s (Hz)			
	63*	125	250	500	1k	2k	4k	8k*	Rw
PAC 40	15	17	25	35	39	45	47	46	37 (-2;-7)
PAC 40HD	19	22	27	37	44	50	53	52	40 (-2;-6)
PAC 30	13	17	23	30	34	41	42	41	33 (-1;-5)

<sup>\*</sup>indicates frequency beyond standard and not UKAS accredited

## **Acoustic Performance – Acoustic Absorption**

Emtec's type PAC Acoustic Panels incorporate 45kg/m³ mineral fibre slabs manufactured from long stranded mineral fibres that are bonded into slabs. Emtec do not manufacture this acoustic media, but use products from reputable manufacturers of mineral wool products. The following figures have been extrapolated from manufacturers' published literature and are issued for design guidance.

Acoustic Panel Type	Absorption Coefficient of Panel's Internal Surface at Octave Band Centre Frequencies (Hz)								
	63	125	250	500	1k	2k	4k	8k	SAA
PAC 40	0.25	0.55	0.90	0.95	0.95	0.95	0.85	0.80	0.97
PAC 40HD	0.20	0.40	0.85	0.90	0.95	0.95	0.85	0.80	0.97
PAC 30	0.15	0.20	0.55	0.85	0.90	0.90	0.80	0.70	0.87

## **Design, Manufacture and Installation**

Emtec Products Ltd. offer a comprehensive design service and it is advisable to contact us at an early stage in the Plan of Work so we can collaborate in the development of a design that meets your particular acoustic criteria. Attention to detail is paramount and complete enclosure systems that include silencers, ventilations systems, filtration, fire protection and detection systems, lighting and structural supports can be designed, manufactured and installed by Emtec Products Ltd. Our site management and installation teams are experienced in delivering projects in all sectors, working on developments that include tall buildings, airports, railway systems, hotels, hospitals and schools, as well as domestic projects for private clients.







# **Acoustic Louvres Type LAAC 15-105**

## **Usage**

EMTEC LAAC 15-105 Acoustic Louvres are external weather louvres with acoustically absorbent blade elements specifically designed to reduce the level of noise passing through the opening into which the louvre is mounted.

The louvre blade profile helps minimise the resistance to airflow whilst rejecting up to 90% of wind driven rain.



EMTEC LAAC 15-105 Acoustic Louvres can be installed as individual units or by bolting more than one unit together (horizontally or vertically) openings of any size can be accommodated. Each louvre has a robust outer framework which acts as vertical mullions and horizontal transoms when several units are fixed together. If a continuous blade effect is preferred this can also be supplied.

The main uses of EMTEC Acoustic Louvres are in the control of mechanical fan noise when used as the termination of ducted air systems. Both exhaust air outlets and fresh air intakes can be fitted with EMTEC acoustic louvres. EMTEC Acoustic Louvres can also be used as plantroom ventilation louvres in order to attenuate general plant noise and as general purpose ventilation louvres in order to reduce external aircraft or traffic noise. In all these applications the louvres are normally built into structural openings and a number of alternative fixing arrangements can be supplied.

EMTEC Acoustic Louvres can be used as screens around equipment such as chillers, cooling towers or condensing units where an acoustic barrier is required and large volume airflows must be accommodated. In this application EMTEC Acoustic Louvres may be supplied complete with corner units, supporting steelwork, gates and blanked sections in order to form a complete self-contained structure. It is advisable that such applications be discussed with an EMTEC engineer who will be pleased to assist you in the formulation of a design.

## **Construction & Physical Properties**

Standard EMTEC LAAC 15-105 Acoustic Louvres are manufactured from galvanised sheet steel. The louvre frame and the upper surface of the blades are formed from plain sheet and the underside of the blades from perforated sheet. The acoustic media contained within the louvre blades is inert, non-flammable mineral wool and where a birdscreen is fitted to the rear face of the louvre this is made from galvanised steel wire mesh having 12mm x 12mm spacings.

EMTEC LAAC 15-105 Acoustic Louvres can also be supplied in aluminium, stainless steel or pre-coated steel. The galvanised sheet steel and aluminium options are normally supplied with a polyester powder coated finish to compliment the architectural design of the final installation.

External or internal flanges can be supplied to fix louvres into structural openings and are normally manufactured from the same material as the louvre itself. Flanges can be pre-drilled to allow fixing to the adjacent structure. The louvre casing can alternatively be pre-drilled through the sides to allow louvre modules to be bolted together or when units are to be fixed into the reveal of an opening. Louvre fixing details are normally supplied at the time of order but can be furnished on request.

#### EMTEC LAAC 15-105 Acoustic Louvre module properties:

Standard module depth (thickness) - 150mm Smallest module height - 245mm Free area at smallest module height - 14% Maximum module height - 2450mm Free area at maximum module height - 32% Maximum module width - 2400mm Typical mass per unit area - 40kg/m<sup>2</sup> - 105mm Blade pitch Blade angle - 40°

## **Typical Specification Examples**

#### Into Builderswork Opening:

EMTEC LAAC 15-105 Acoustic Louvres shall be installed in the positions indicated on the drawings to maintain the acoustic criteria provided in the specification. The acoustic louvres shall be constructed from galvanised steel and be supplied complete with external mounting flanges and birdscreen guards fixed to the rear face of the louvres. The external surfaces of the louvres shall be polyester powder coated to a standard RAL colour.

#### As Acoustic Screen:

A screen of EMTEC LAAC 15-105 Acoustic Louvres shall be installed around the roof mounted chiller to a height of 2450mm. The screen shall be mounted on a pre-formed concrete plinth, 300mm high by 350mm wide, and supplied complete with pressed galvanised steel corner units, rear structural support frame and a louvred access gate. The support frame shall be self-colour galvanised steel and the louvres shall be polyester powder coated to a standard RAL colour.

#### **Acoustic Performance**

Emtec's type LAAC 15-105 louvre has been tested in accordance with EN10140-2:2010 at SRL Technical Services Ltd. The test report is available on request. The Rw(C;Ctr) rating provided below is according to EN 717-1:2013.

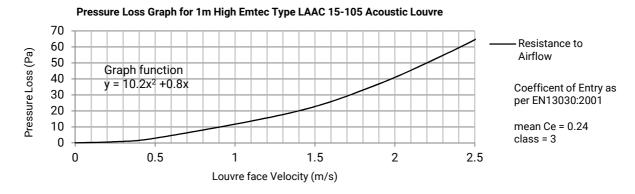
Acoustic Louvre Type	Sound Redu	uction Index i	n dB at Octav	e Band Centro	e Frequencies	s (Hz)			
	63*	125	250	500	1k	2k	4k	8k*	Rw
LAAC 15-105	4	4	5	7	14	16	15	12	12 (0;-2)

<sup>\*</sup>indicates frequency beyond standard and not UKAS accredited

## **Aerodynamic Performance**

Emtec's type LAAC 15-105 louvre has been tested in accordance with EN13030:2001 at BSRIA. The test report is available on request. It may be necessary to establish the correct size of acoustic louvre knowing that a certain pressure loss is required for a given volume of air. In this case the face velocity of the louvre is read off the chart below and the louvre dimensions established from the formula:

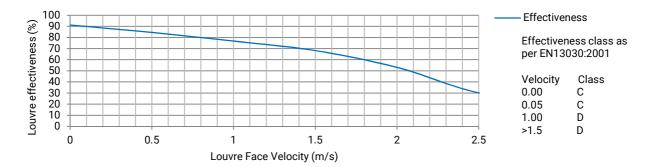
 $A_L = Q / V_L$  where:  $A_L = Louvre Face Area (m^2)$   $V_L = Louvre Face Velocity$   $Q = Airflow (m^3/s)$ 



#### **Rainwater Penetration**

Emtec's type LAAC 15-105 louvre has been tested in accordance with EN13030:2001 at BSRIA. The test report is available on request. The louvre is subjected to fan driven wind speed of 13 m/s and water sprayed at 75 l/h. In addition to simulated wind and rain, air is drawn through the louvre at various face velocities. Effectiveness is measured as a percentage of the water rejected by the louvre.

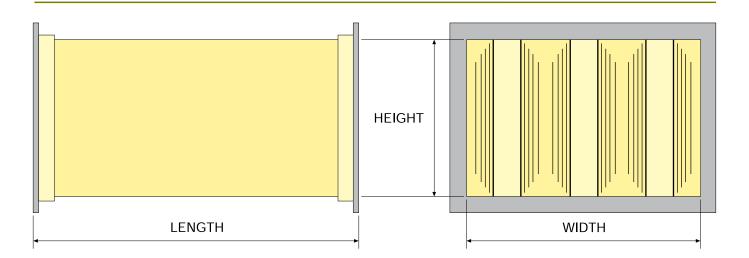
#### Effectiveness of Louvre with Simulated Wind and Rain for Emtec Type LAAC 15-105 Acoustic Louvre







## **Rectangular Duct Silencer Type RAAC 33**



### Usage

The EMTEC RAAC 33 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 33 Rectangular Duct Silencer has inter-baffle separation of 100mm and the individual baffle elements are 200mm wide. This gives a modular width of 300mm and with this combination gives high attenuation over a relatively short silencer length. An increase in duct cross sectional area may be required to optimise the silencer's pressure loss and self noise.

RAAC 33 Silencers are supplied with duct widths equal to any multiple of 300mm, 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.

## Technical 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)				sertion d cen				at
	63	125	250	500	1K	2K	4K	8K
600	4	8	15	23	33	34	33	22
900	5	9	17	27	38	40	38	26
1200	6	12	22	36	45	46	40	28
1500	6	17	28	44	47	47	42	29
1800	7	19	32	48	49	48	44	32
2100	8	21	37	50	50	50	46	35
2400	9	23	42	50	50	50	48	38
2700	10	24	44	50	50	50	50	41
3000	11	25	46	50	50	50	50	44

Duct Velocity (m/sec)				to D eate					t
	63	125	250	500	1K	2K	4K	8K	
+ 4	-2	-3	-6	-6	-6	-5	-5	-6	
+ 8	-4	-6	-9	-9	-8	-7	-8	-8	
-4	+ 1	+ 2	+ 2	+ 3	+ 3	+ 2	+ 1	+ 1	
-8	+ 2	+ 2	+ 3	+ 4	+ 5	+ 4	+ 2	+ 1	

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

Duct Face Velocity (m/sec)								10-12
	63	125	250	500	1K	2K	4K	8K
3	40	38	37	35	38	36	32	28
5	51	48	48	46	44	46	44	38
8	59	56	55	56	56	56	54	47
10	64	62	62	64	64	62	60	55

The silencer self noise levels .given in the table opposite are for a face area of 0.5m<sup>2</sup>. 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 -7 -3 +2 +3 +7 +10 +13 PWL (dB)

#### **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)

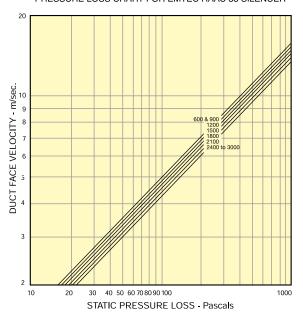
Conversely for a known duct size and airflow the pressure loss across the silencer can be obtained from the chart opposite.

#### Selection Example:

Assuming the airflow is  $5m^3$ /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 4.8m/sec is obtained. The duct area is then given as  $A = Q/v = 5/4.8 = 1.04m^2$ . If a width of 1200mm is now selected (being 4 x modular width) the height will be 900mm and the final selection will be as shown below.

EMTEC RAAC/33/1200 Silencer - 1200mm x 900mm x 1200mm long.





#### **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 33 Rectangular Duct Silencer has an approximate volumetric weight of 175 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 33 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 1.5m<sup>2</sup>) can be supplied in modules for on site assembly. For individual requirements please consult an EMTEC engineer.







## 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.



# Neoprene Mountings Series R/RD

Available in 4 sizes - 5 durometers

Load Range - 10 lbs. to 4,000 lbs.

Deflections to 1/4" with type R to 1/2" with type RD

Corrosion Proof

Molded in colored oil-resistant neoprene

5 colors for error free identification

### **Typical Applications**

Air Handling Units Business Machines

Compressors Fans Instrument Panels

Machine Tools Pumps

Motor Generators Transformers

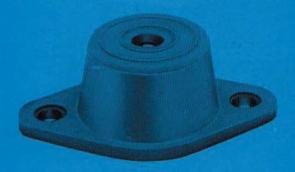
#### To Specify:

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





#### TYPE R/RD



#### TYPE RP/RDP



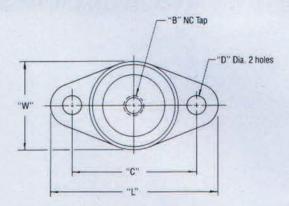
#### Dimensions: ins. (mm)

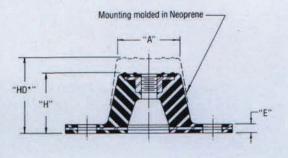
TYPE	L	W	H	"HD	A	В	C	D	E
R-1 or RD-1	31/6" (79.4)	134" (44.4)	1" (25.4)	144" (31.7)	13/4" (31.7)	¥16" (8.0)	2%e" (60.4)	11/32" (8.8)	¥16" (4.8)
R-2 or RD-2	37/e" (98.6)	2%" (60.4)	1¼" (31.7)	1%4" (44.4)	1¾a" (44.4)	¥8" (9.6)	3" (76.2)	11/32" (8.8)	7/32" (5.6)
R-3 or RD-3	5½" (139.7)	3%a" (85.8)	1¾4** (44.4)	276" (73.2)	2½" (63.5)	(12.7)	4 Vn" (104.8)	916" (14.4)	(6.3)
RI-4 or RD-4	6%" (158.7)	456" (117.6)	1%8" (41.4)	2¥4" (69.8)	3" (76.2)	1½" (12.7)	5" (127.0)	<sup>3/16</sup> " (14.4)	3/8" (9.6)

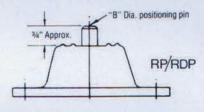
HD dimension applies to double deflection Type RD mountings only.

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









	Color	Ma	x. Load		ection (mm)
Туре	Code	lbs.	(kg)	R	RD
Name of the last o	BLUE	35	(15.8)		
R-1	BLACK	45	(20.4)	0.20	0.40
RD-1	RED	70	(31.7)	(5.0)	(10.1)
1 00000000	GREEN	120	(54.4)		
120.20	BLUE	135	(61.3)		
R-2	BLACK	170	(77.0)	0.25	0.50 (12.7)
PD-2	RED	240	(109.0)	10000000	
110.2	GREEN	380	(172.5)	(6.3)	
	GRAY	550	(249.7)		
10200	BLACK	250	(113.5)		
R-3	RED	525	(238.3)	0.25	0.50
RD-3	GREEN	750	(340.5)	(6.3)	(12.7)
1100	GRAY	1100	(499.4)		
211	BLACK	1500	(681.0)		
R-4	RED	2250	(1021.5)	0.25	0.50
or RD-4	GREEN	3000	(1362.0)	(6.3)	(12.7)
1,100,19	GRAY	4000	(1816.0)		- GAGETAN



#### 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.



Type RP or RDP
IF BOLT HOLE IS
INACCESSIBLE

Type RP or RDP mountings with pin (equal in diameter to dimension B above) that simply fits freely into threaded or unthreaded bolt holes.





#### TYPE RCM



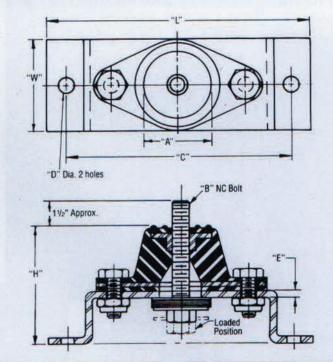
Thru bolt makes mounting and supported equipment captive. It prevents failure of mounting due to excessive horizontal and vertical shock. Recommended for shipboard and vehicular installations, or engine installations with high starting torque.

#### Dimensions: ins. (mm)

TYPE	L	W	H	A	8	C	D	E
RCM-2	7" (177.8)	234" (57.0)	244" (69.8)	134" (44.4)	%6" (9.6)	5%4" (146.0)	1 ¥32" (8.8)	(6.3)
RCM-3	9½*	3 ½"	3%"	29'16"	1/2"	8"	916"	\$16"
	(241.3)	(89.0)	(89.0)	(65.2)	(12.7)	(203.2)	(14.4)	(8.0)
HCM-4	11"	4½"	344"	3¥4"	1/2**	91/2"	916"	%s"
	(279.4)	(114.3)	(95.2)	(95.2)	(12.7)	(241.3)	(14.4)	(9.6)

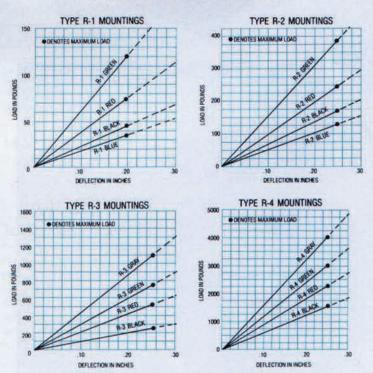


A non-skid ribbed neoprene covering on base plate eliminates the need for bolting to floor.



	Color	Max	c. Load	Deflection
Туре	Code	lbs.	(kg)	ins. (mm)
	BLACK	170	(77.0)	1/4"
RCM-2	RED	240	(109.0)	(6.3)
	GREEN	380	(172.5)	(0,3)
	BLACK	250	(113.5)	
00110	RED	525	(238.3)	1/4"
RCM-3	GREEN	750	(340.5)	(6.3)
	GRAY	1100	(499.4)	
	BLACK	1500	(681.0)	
00114	RED	2250	(1021.5)	1/4"
RCM-4	GREEN	3000	(1362.0)	(6.3)
	GRAY	4000	(1816.0)	

#### **LOAD DEFLECTION CURVES**



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



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