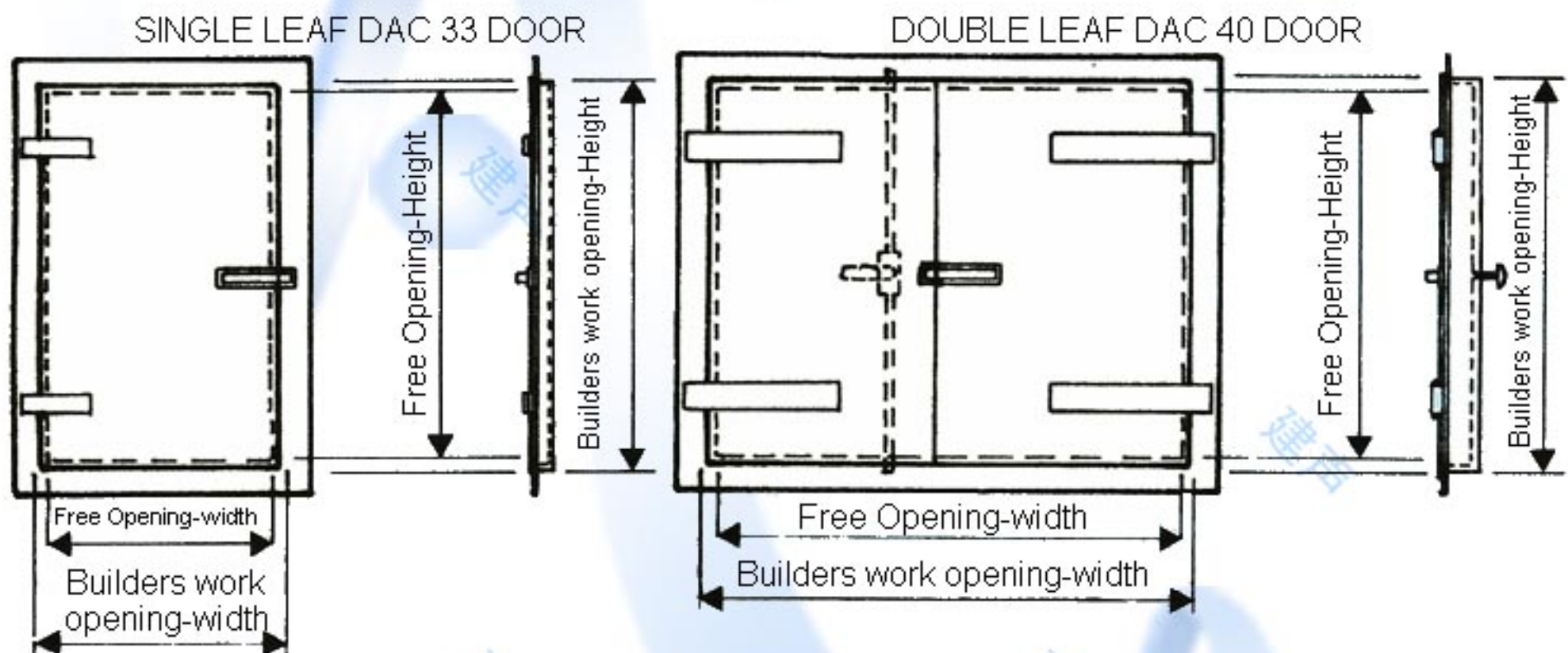


NOISESTOP

ACOUSTIC DOORS TYPE DAC40&DAC33

USAGE—NOISESTOP DAC 40 and DAC 33 Acoustic Doors are double skinned metal panel doors specifically designed to provide optimum noise reduction combined with ease of operating. The DAC 40 Acoustic Doors has a nominal thickness of 100mm, is fitted with two cellular rubber peripheral edge seals, and gives an average noise reduction of 39db across the audible frequency spectrum. The DAC 33 Acoustic Doors has a nominal thickness of 50mm, is fitted with a single cellular rubber peripheral edge seal and gives an average noise reduction of 33db. NOISESTOP DAC 40 and DAC 33 Acoustic Doors are supplied complete with their own mounting frame and fixings to immediate fitting into prepared structural openings. Single and double leaf doors are available with the mail door leaf opening either to the right or left as required. Typical applications of the NOISESTOP DAC range of acoustic doors are to permit access into such areas as Turbine or Diesel engine Test Cells, Generator Plantrooms, Ventilation or Air Conditioning Plantrooms, Plenum Chambers, Industrial Process Rooms, Quiet Havens and Audiometric Facilities. Almost any size of NOISESTOP Acoustic Doors can be manufactured to meet customer individual requirements and stable type arrangements and access doors within larger machine entrance doors can be designed. It is recommended that for your particular application you consult a NOISESTOP engineer who will be pleased to assist you in the detailed layout of a NOISESTOP DAC door to meet your exact physical requirements.



CONSTRUCTION—The NOISESTOP DAC range of Acoustic Doors are manufactured from high quality mild steel panels spot welded together to form a sandwich construction of considerable strength. Held between the two skins of the door is an inert non flammable wool and plaster media which effectively absorbs primary and secondary acoustic energy incident on the doors inner surface. The structural integrity of the door and its mounting frame is essential to ensure efficient compression of the peripheral edge seals. The mounting frames supplied with each door are of all welded construction and furnished complete with anchor fixings or bolts to allow for mounting into existing structural openings (see details of alternative frames on the reverse side of this data sheet). Each NOISESTOP DAC Acoustic Doors is furnished with heavy duty lubricated hinges and a quick release catch mechanism allowing personnel to exit from the enclosed space even when the door has been locked shut. Inspection windows can be provided if necessary and standard NOISESTOP DAC Acoustic Doors are supplied primed ready for final painting by the customer. Alternatively doors can be supplied with external and internal faces finished in plastic coated steel or painted to the customer specification.

TYPICAL SPECIFICATIONS—The double and single leaf access doors into the engine test area shall be NOISESTOP type DAC Acoustic Doors having an average sound reduction index of 39db across the audible frequency spectrum. The doors shall be supplied with a channel bottom cill in order to allow access into the test area by fork lift trucks. An angle frame with anchor fixings shall be provided to allow fitting into the prepared structural openings. The doors and their framework shall be carefully located into the structure ensuring that the complete assembly is plumb and square prior to final grouting into position. Each door leaf shall be provided with an inspection window and the complete assembly shall be primed ready for finish painting by the customers.

NOISESTOP

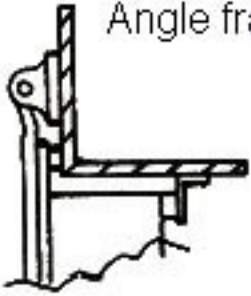
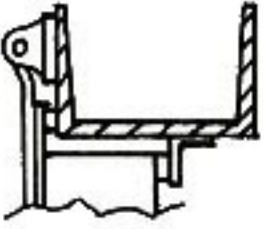



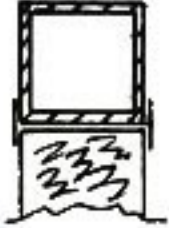
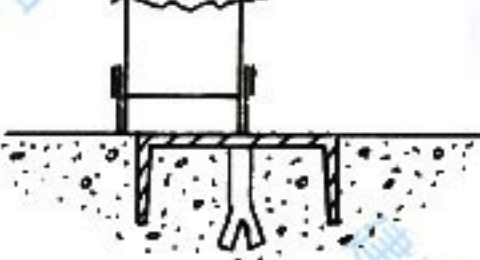
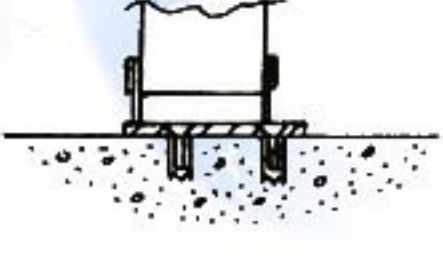

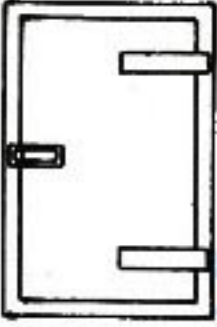
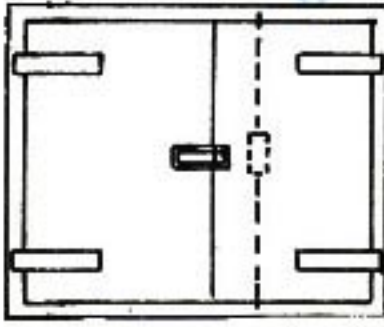
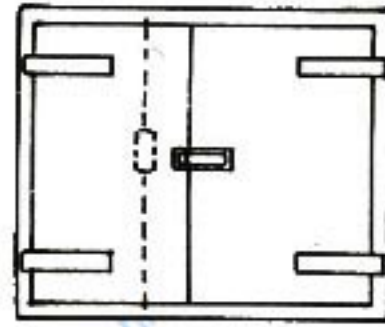
ACOUSTIC DOORS TYPE DAC40&DAC33

ACOUSTIC

ACOUSTIC LOUVRE TYPE	Sound Reduction Index in db at Octave band centre frequencies (Hz)							
	63	125	250	500	1K	2K	4K	8K
DAC40	23	25	34	39	44	48	50	49
DAC33	20	22	29	34	40	38	44	38

PHYSICAL:

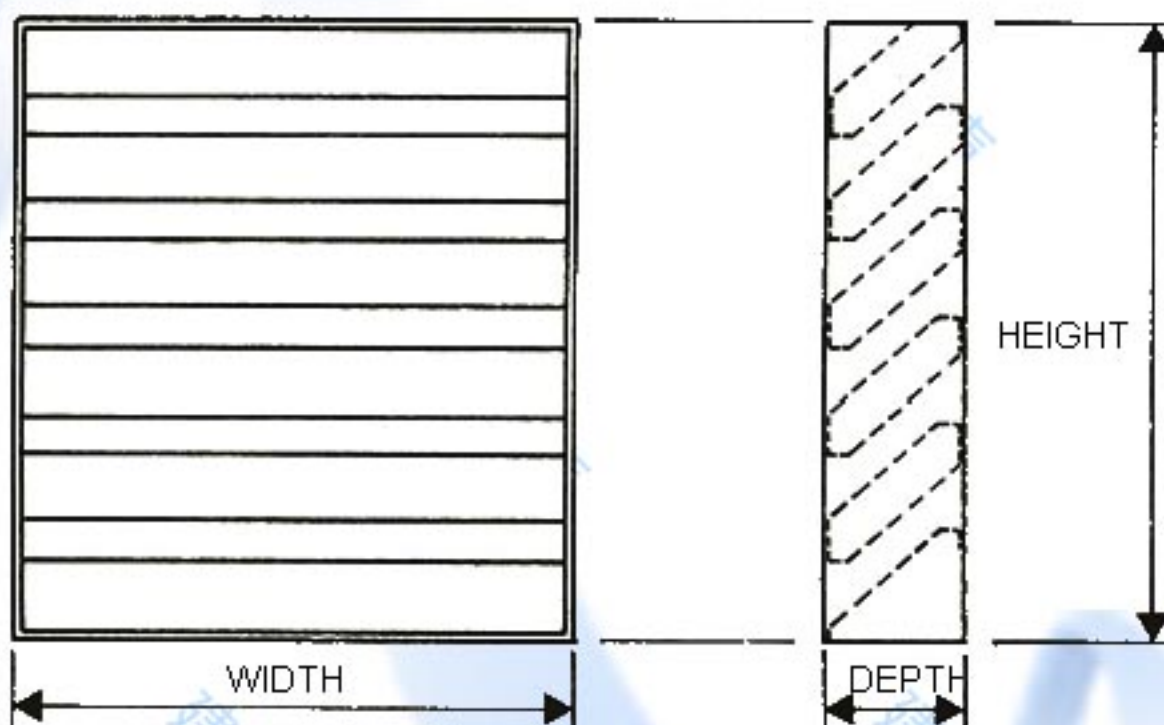
NOISESTOP DAC 40 and DAC 33 Acoustic Doors can be furnished with many optional variations to suit the individual requirements of particular installations. Besides the provision of inspection windows when required and the choice of surface finish the table below shows the full range of options available when choosing your NOISESTOP DAC Acoustic Doors (Note: All details shown are for DAC 40 Acoustic Doors). The options required should be clearly stated at the time of enquiry but will be finally confirmed by NOISESTOP on a detailed drawing issued for every door at the time of order. Customer approval of this drawing is always obtained prior to manufacture to ensure compatibility of final design requirements. NOISESTOP DAC 40 Doors weigh approximately 70kg/m² and DAC 33 Acoustic Doors approximately 40kg/m². It is imperative that the framework of all NOISESTOP DAC Acoustic Doors be plumb and square prior to final fixing as any major inaccuracies in the positioning of the frame may compromise the final acoustic performance achieved.

DOOR FRAME OPTIONS	 Angle frame	 Channel frame	 Box section frame	
FIXING OPTIONS	 Bolt fixing	 Anchor fixing	 Acoustic panel fixing	
NBOTTOM CILL OPTIONS	Detail as per door frame option	 Channel & curtain seals	 Screw plate & curtain seals	
DOOR OPENING OPTIONS	 L.H. opening	 R.H. opening	 L.H. opening	 R.H. opening
	Single leaf		Double leaf	

NOISESTOP

ACOUSTIC LOUVRE - LAAC30

USAGE-The NOISESTOP LAAC 30 Acoustic Louvre is an all purpose external weather louvre with acoustically absorbent blade element specifically designed to reduce the level of noise passing through the opening into which the louvre is mounted. The NOISESTOP LAAC 30 Acoustic Louvre has a pleasant external appearance and will compliment any architectural design. The aerodynamic shape of the individual blades minimises the resistance to airflow and the incorporation of water traps ensures that rain ingress is effectively eliminated. NOISESTOP LAAC 30 Acoustic Louvre can be installed as individual units or by bolting more than one unit together opening of any size can be accommodated. Each louvre has a robust outer framework which acts as a vertical mullion when several units are fixed together. If a continuous blade effect is preferred this can be supplied but individual requirements should be discussed with an NOISESTOP engineer. The main uses of NOISESTOP LAAC 30 Acoustic Louvre are in the control of mechanical fan noise, when used as the termination of a ducted air system, as fresh air intake and plantroom ventilation louvres in order to mask general purpose ventilation louvres in order to reduce aircraft or traffic noise. In all these application the louvres are normally built into structural openings and a number of alternative fixing arrangement can be supplied. NOISESTOP LAAC 30 Acoustic Louvre can also be used as a screen around equipment such as cooling towers or condensing units where an acoustic barrier is required and large volume airflows must be accommodated. In this application NOISESTOP LAAC 30 Acoustic Louvre may be supplied complete with corner units, supporting steelwork, doors and dummy sections in order to form a completely self contained structure. It is advisable that such applications be discussed with an NOISESTOP engineer who will be pleased to assist you in the formulation of a detailed design layout.



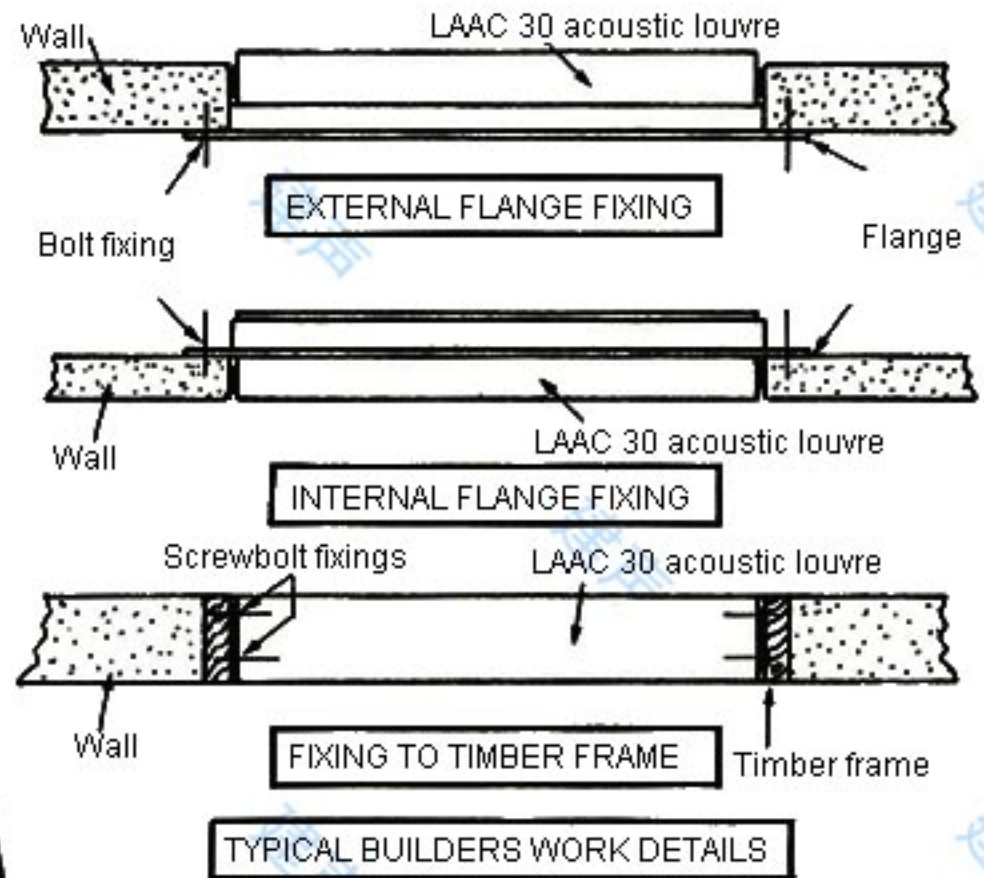
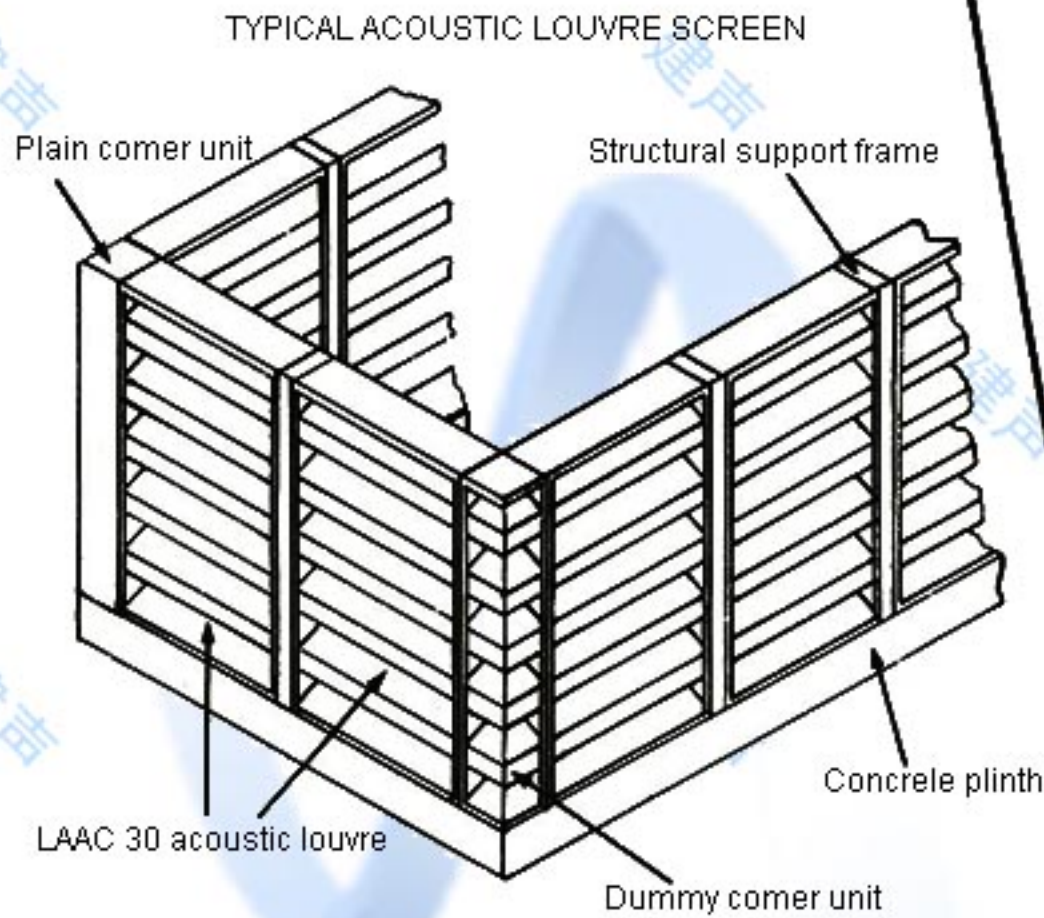
CONSTRUCTION—Standard NOISESTOP LAAC 30 Acoustic Louvre are manufactured from high quality galvanized sheet steel. The louver frame and upper surfaces of the blades are formed from plain sheet and the under side of the blades from perforated sheet. The acoustic media contained within the louvre blades 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 spacings. NOISESTOP LAAC 30 Acoustic Louvre can be supplied in aluminium, plastic coated steel or painted to suit the architectural and environmental design of the final installation. External or internal angle flanges can be supplied to fix louvres into structural openings and are normally manufactured from mild steel. The flanges are furnished already drilled for bolt fixing and if required can be constructed from the same material as the louvre itself. The louvre casing is pre-drilled through the sides of the unit to allow louvres to be bolted together or when units are to be fixed into a timber frame. Fixing details of individual louvres are normally supplied at the time of order but can be furnished on request. The height of the smallest NOISESTOP LAAC 30 Acoustic Louvre is 400mm and larger sizes increase in height by multiples of 225mm (i.e. 625, 850, 1075mm etc.) up to a maximum height for a single louvre unit of 2425mm. All NOISESTOP LAAC 30 Acoustic Louvre have a standard depth of 300mm and widths are made to suit the customers requirements up to a maximum width for a single louvre unit of 1200mm.

TYPICAL SPECIFICATIONS—(into builderswork opening)—NOISESTOP LAAC 30 Acoustic Louvre shall be installed in the position indicated on the drawings to maintain the acoustic criteria shown in the specification. The acoustic louvre shall be constructed from galvanised sheet steel and be supplied complete with internal mounting flanges and birdscreens fixed to the rear face of the louvres. —(as acoustic screen)—A screen of NOISESTOP LAAC 30 Acoustic Louvre shall be installed around the cooling tower to a height of 2400mm. The screen shall be mounted on a pre-formed concrete plinth 300mm high and 350mm wide and supplied complete with dummy corner units, structural supports and a dummy louvre access door. The louvres to form a self supporting structure and the external finish to be black plastic coated steel.

NOISESTOP

ACOUSTIC LOUVRE - LAAC30

PHYSICAL

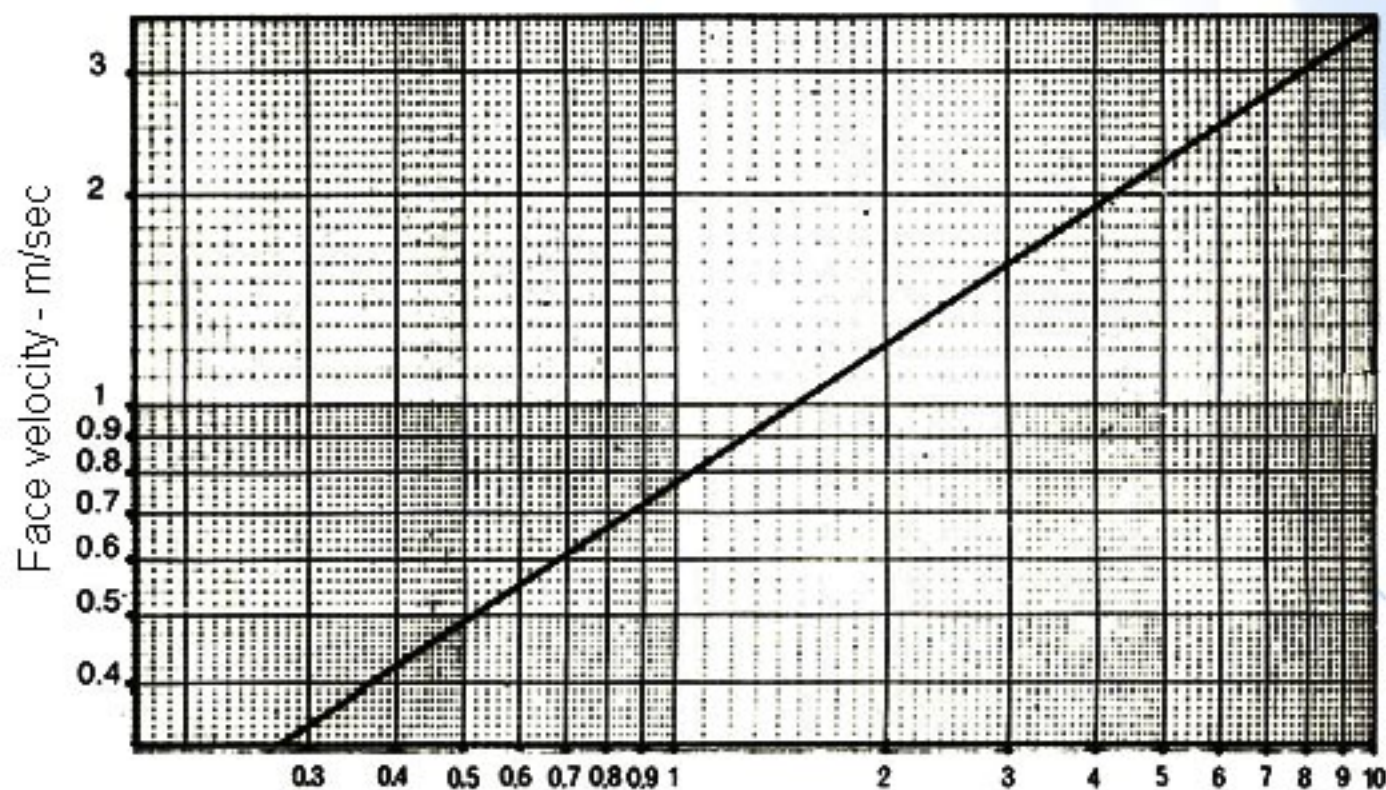


ACOUSTIC

Sound Reduction Index in db at Octave band centre frequencies (Hz)							
63	125	250	500	1K	2K	4K	8K
5	7	9	12	18	19	15	15

Aerodynamic – It may be necessary to establish the correct size of acoustic 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 from the formula:

Airflow (Q) = Louvre face area (AL) × Louvre Face Velocity (VL) 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 structural is to be made approximately 2000mm wide by 1500mm high From the formula above a louvre face velocity is established as VL = Q/AL = 5/1.5 = 1.666m/sec From the chart opposite this gives a pressure loss of 3.3mmw.g. The exact louvre height nearest to 1500mm is 1525mm which would give a final louvre selection as shown below: NOISESTOP LAAC30 Acoustic Louvres – 2000mm wide x 1525mm high

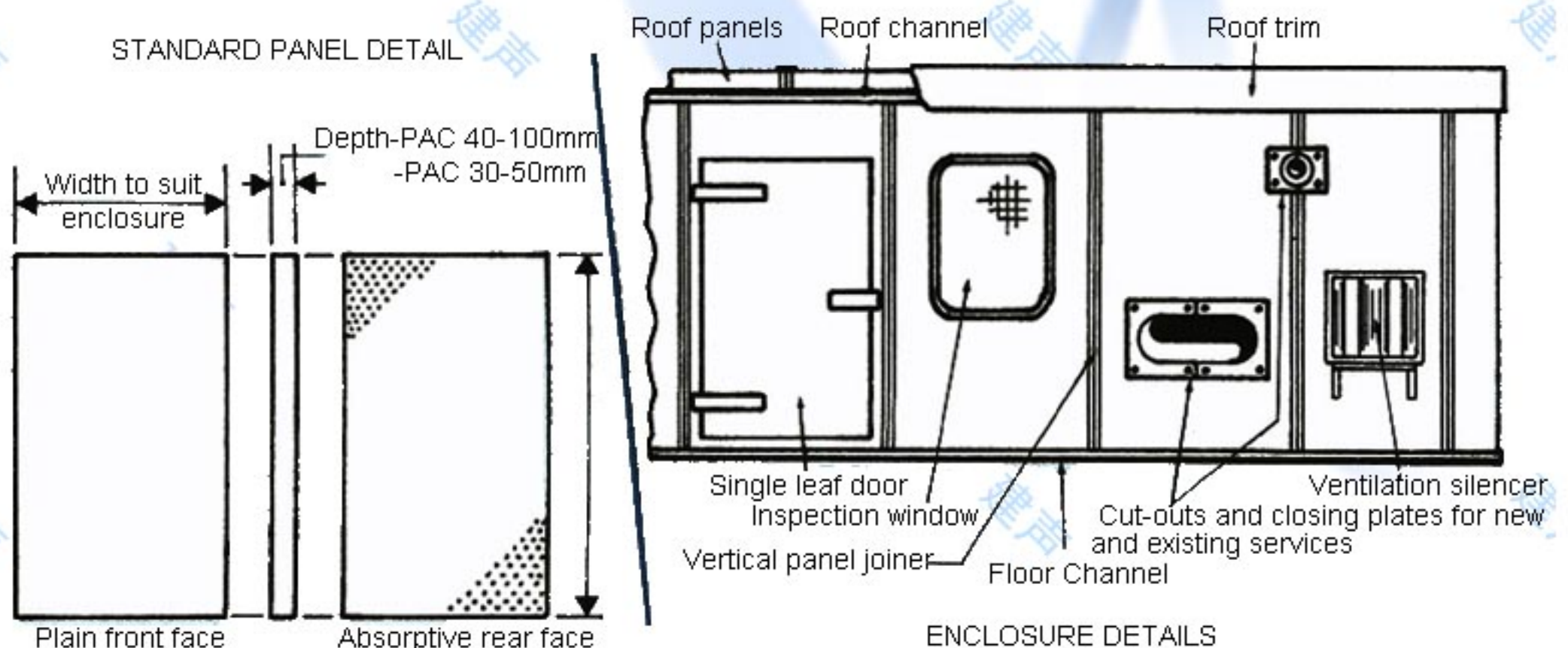


NOISESTOP

ACOUSTIC PANEL SYSTEMS – PAC40&PAC30

USAGE—NOISESTOP PAC40&PAC30 Acoustic Panels have been specifically designed to meet increasing requirement to shield personnel from high noise level emitted from certain plant and machinery. The NOISESTOP PAC40&PAC30 panel systems provide average attenuations across the audible frequency spectrum of 38db and 33db respectively and will attenuate most noise emissions to below the presently recommended safe working levels. NOISESTOP PAC40&PAC30 Acoustic Panels have a plain exterior surface and a perforated inner surface with an acoustically absorbent media being contained between the skins. The external surface of the panels is acoustically damped to eliminate local resonance and the inner perforated surface allows exposure of the acoustically absorbent media to the noise source in order to approximate the noise level around the enclosed machinery to free field conditions. NOISESTOP PAC40&PAC30 Acoustic Panels can be used as barriers between quiet and noisy areas or in the form of complete housings around noisy plant. The panels are supplied complete with floor, roof and intermediate vertical joints to allow fast and simple site erection. As part of an individual enclosure design ventilation system, 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 etc. can also be provided with no reduction in the acoustic performance of the final design. Typical applications of NOISESTOP PAC40&PAC30 Acoustic Panels are the enclosure of Turbo-generators, Turbo-compressors, Diesel driven generators, pumps, fans and mechanical presses. Audiometric Rooms and Quiet Havens for personnel can also be constructed from NOISESTOP PAC40&PAC30 Acoustic Panels. In order to discuss your particular requirements it is advisable to consult a NOISESTOP engineer who will be pleased to help in the formulation of a detailed design layout to meet your specific acoustic performance criteria.

CONSTRUCTION—Standard NOISESTOP PAC40&PAC30 Acoustic Panels are formed from a plain mild outer sheet and a perforated galvanised steel inner sheet. The inner surface is suitably stiffened to prevent deformation of the panel during site and the acoustic media contained in the panels is inert non-flammable mineral wool. The standard thickness of NOISESTOP PAC 40 Acoustic Panels is 100mm and of PAC 30 panels is 50mm. The normal finish of NOISESTOP PAC40&PAC30 Acoustic Panels is primed ready for finish painting on site by the customer but alternatively panels can be supplied with external surfaces finished in aluminium, galvanised steel, plastic coated steel or finish painted to the customers specification. Doors windows and sealed openings are normally fitted during site erection and all the necessary fittings and fixings are supplied with the panels. Double and single leaf doors are fitted with quick release safety catches so that personnel can escape from within enclosures even when the access door is inadvertently locked shut. Window panels are provided with silica gel absorbent elements to eliminate condensation within the air space formed by the two window panels. Cellular rubber seals are incorporated into floor and roof channels as well as around the periphery of doors and windows and all other jointers are mastic sealed during erection to maintain the acoustic integrity of the complete enclosure. Structural steelwork or internal supports for ducting, silencers or other equipment can be incorporated into individual enclosure designs and details of this and all other aspects of an enclosure are shown on a full set of drawings provided to the client for his approval prior to manufacture.



TYPICAL SPECIFICATION—The diesel driven generator set shall be enclosure in a self contained NOISESTOP PAC 40 Acoustic Panel enclosure to maintain the noise level laid down in the specification. The enclosure will be complete with two double leaf access doors, seals 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 enclosure shall be finished externally in one coat of grey primer for final painting by the contractor.

NOISESTOP

ACOUSTIC PANEL SYSTEMS – PAC40&PAC30

ACOUSTIC

ACOUSTIC PANEL	Sound Reduction Index in db at Octave band centre frequencies (Hz)								Sound Reduction Index in db at Octave band centre frequencies (Hz)							
	63	125	250	500	1K	2K	4K	8K	63	125	250	500	1K	2K	4K	8K
SYSTEM	63	125	250	500	1K	2K	4K	8K	63	125	250	500	1K	2K	4K	8K
PAC40	21	22	31	37	44	46	51	49	0.4	0.6	0.9	0.95	0.95	0.95	0.85	0.8
PAC30	18	20	28	32	40	41	44	38	0.2	0.4	0.8	0.9	0.95	0.9	0.8	0.7

PHYSICAL

A comprehensive erection service is available to install NOISESTOP PAC40&PAC30 Acoustic Panels Systems or alternatively site management can be provided to oversee erection by the customers personnel. Complete enclosure systems including silencers, ventilation systems, filtration and detection systems, lighting and structural supports can be designed, manufactured and installed by NOISESTOP Ltd. The sketch below shown an example of such a system installed around a Turbo-compressor. It is advisable to contact NOISESTOP Ltd. at an early stage as we will be pleased to assist you in the detailed design of an enclosure system to meet your particular acoustic criteria

