



Acoustic Louvres

Model VAL-30 Standard Performance
Model VAL-60 High Performance

FEATURES

- Suitable for Intake and Exhaust
- Modular Construction
- High Noise Reduction
- All Weather Louvre
- Decorative Screen
- Low Pressure Loss

STANDARD CONSTRUCTION

The VAL-30 and VAL-60 Acoustic Louvres are constructed of high quality electrogalvanised steel parts are painted in baked white enamel finish while the perforated parts shall be in mill finish. The louvre frames are constructed of minimum 1.0mm thick steel sheet cold-formed into channels to give it rigidity. The blades are constructed of three composite components which include a top skin of minimum 0.7mm thick steel sheet cold-formed to give it rigidity, a layer of 0.5mm thick perforated steel sheet. Blades are fastened to the vertical frame at each end.

The louvres are constructed of standard height dimensions with blades spaced at 150mm standard spacings. The maximum louvre size per single piece construction is 1500mm width by 2400mm height. For Larger sizes, the louvres will be supplied in multiple modules for assembly on site by the installer. Where required the blade may be lined with a protective layer of polyester film behind the perforated sheet. This is necessary if the louvre is exposed to heavy rain.

The acoustic louvres ay be supplied in single bank and double bank louvres depending on the noise reduction required. The model VAL-30 is the single bank louvre with a depth of 300mm while the model VAL-60 is the double bank louvre with a depth of 600mm. In addition to better noise reduction, the VAL-60 louvre is much more resistand to drastic weather due to the inverted "V" blade arrangement.

APPLICATION

The acoustic louvres can be used in air-conditioned and ventilation systems systems where it is necessary to reduce the noise from mechanical and electrical equipment such as:

- Air-conditioning and ventilation equipment
- Electric generation equipment
- Underground carpark, etc.

They may be used as decorative screen or enclosure of equipment such as:

- Cooling towers
- Air-cooled condensers
- Refrigeration plants, etc.

Acoustic Louvre screens and enclosures allow the flow of air required by the equipment effectively reduce the noise of these equipment to the appropriate ambient levels.

ACOUSTIC AND AERODYNAMIC PERFORMANCE

The VAL-30 and VAL-60 Acoustic Louvres have been tested in a reverberation chamber using a substitution technique generally according to British Standard B.S. 2750 for noise reduction and pressure loss. The noise reduction and pressure loss. The noise reduction index of our louvre are shown in table 1. Pressure loss data are presented in figures 1 and 2. The actual performance of the acoustic louvres depend on the properties of the space on both sides of the louvre.

Table 1. Noise Reduction Index

	125	250	500	1000	2000	4000	8000
VAL-30	5	7	12	18	20	15	15
VAL-60	9	12	19	29	33	32	37

During selection and sizing of acoustic louvres, consider the space available, the specified noise criteria, maximum allowable pressure loss through the louvre and the air volume to be handled by the louvre. With the specified noise criteria, select whether to use VAL-30 or VAL-60 louvre. With the required air volume and pressure loss consideration, size the acoustic louvre with figure 1 or 2.

Carry out acoustic calculation to select the model of acoustic louvre; assuming that VAL-30 is able to meet noise criteria. Based on the louvre height of 2400mm; from figure 1 the maximum face velocity of the louvre is 5 m/s and based on this velocity the louvre width should be: $100,000 / 3,600 / 5 / 2.4 = 2,315\text{mm}$

So, selected louvre size is 2315 x 2400mm

WEIGHT AND DIMENSIONS *All weights in Kg*

Height (mm)	Width (mm)									
	600	750	900	1050	1200	1350	1500	1650	1800	1950
600	16	20	24	28	32	36	40	44	48	52
750	21	27	33	39	45	51	57	63	69	75
900	26	33	40	47	54	61	68	75	82	89
1050	31	39	47	55	63	71	79	87	95	103
1200	37	46	55	64	73	82	91	100	109	118
1350	42	52	62	72	82	92	102	112	122	132
1500	47	58	69	80	91	102	113	124	135	146
1650	52	64	76	88	100	112	124	136	148	160
1800	58	71	84	97	110	123	136	149	162	175
1950	63	77	91	105	119	133	147	161	175	189
2100	68	83	98	113	128	143	158	173	188	193
2250	74	90	106	122	138	154	170	186	202	218

Note: Weights in table are for VAL-30 louvres, multiply of 2 for VAL-60

Figure 1. Pressure Loss of VAL-30 Louvres

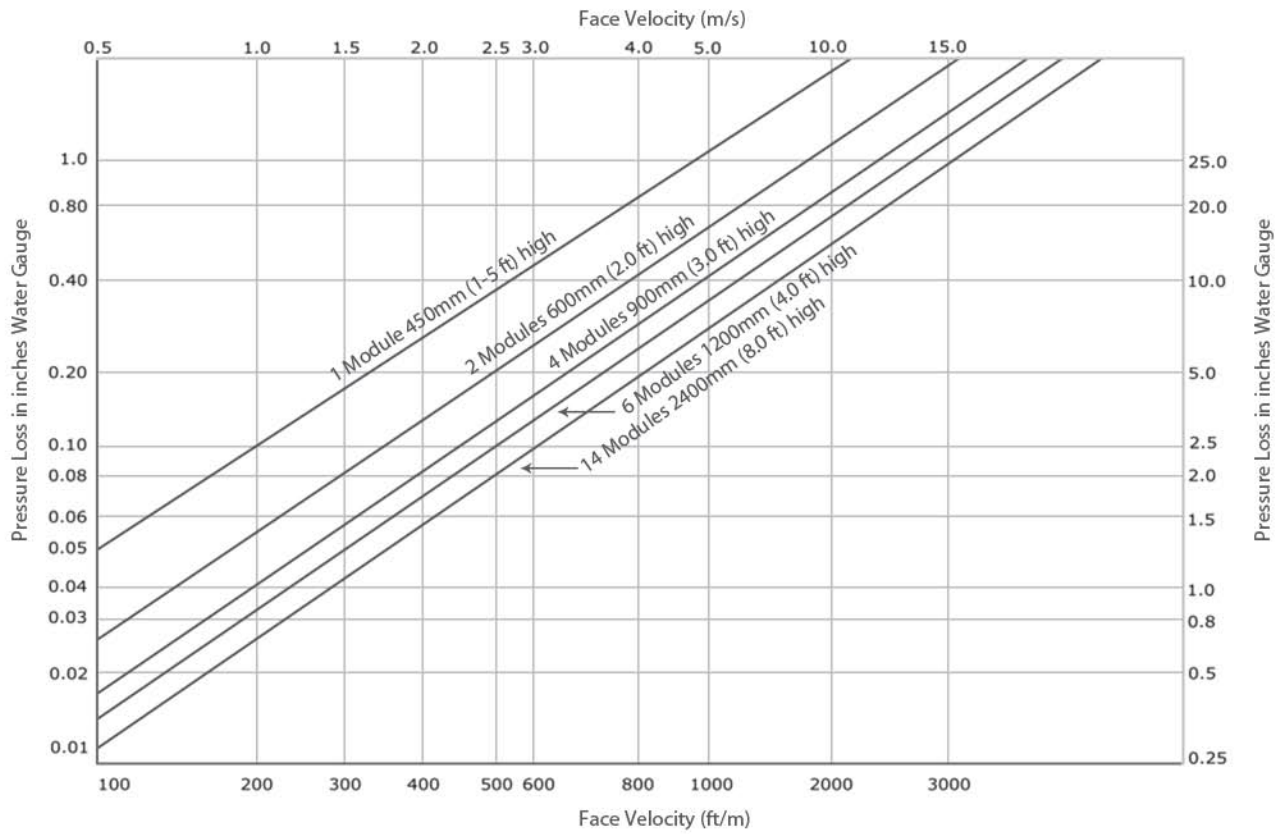
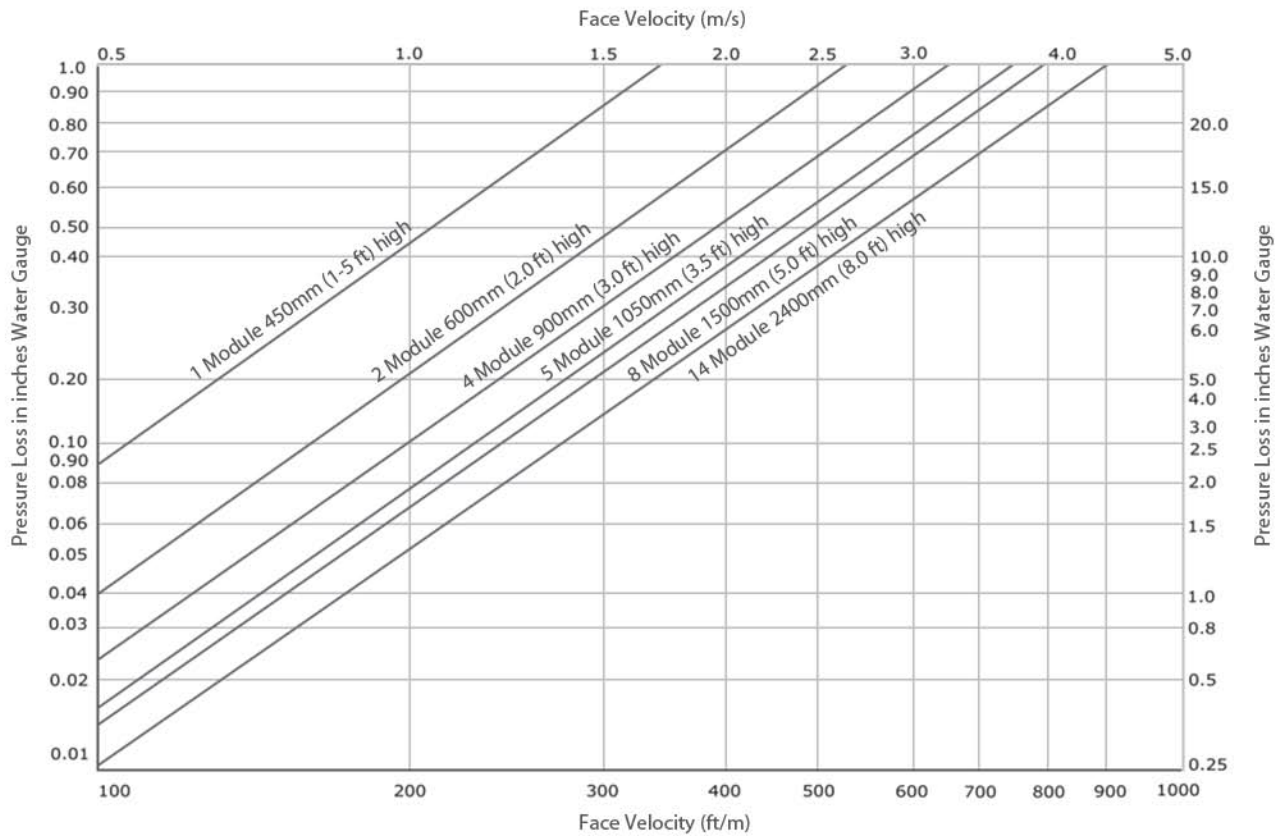


Figure 2. Pressure Loss of VAL-60 Louvres



INSTALLATION DETAILS

Where necessary due to weight considerations it is possible to fit the casing only into the builder's work from the inside (or outside if a fixing angle is fitted). This is followed by sliding the vanes in one at a time from the inside. It should be noted that all louvres are supplied as factory assembled units and must be partially dismantled on site prior to this method of installation.

Figure 3: Methods of Installing Louvres

