STANDARD CONSTRUCTION

Casings

Shall be constructed from prime quality pre-galvanised sheet steel and joined using lock formed interlocking joints, mastic filled for higher pressure applications. The case thickness shall be 1mm up to 1500mm case width or height and 1.2mm for all sizes greater than 1500mm width or height. The case will be in one piece up to 1500mm in length over this the case may be made in two pieces. To maintain their structural integrity standard construction attenuators are limited to a maximum internal pressure of 2.5 KPa.

End Flanges

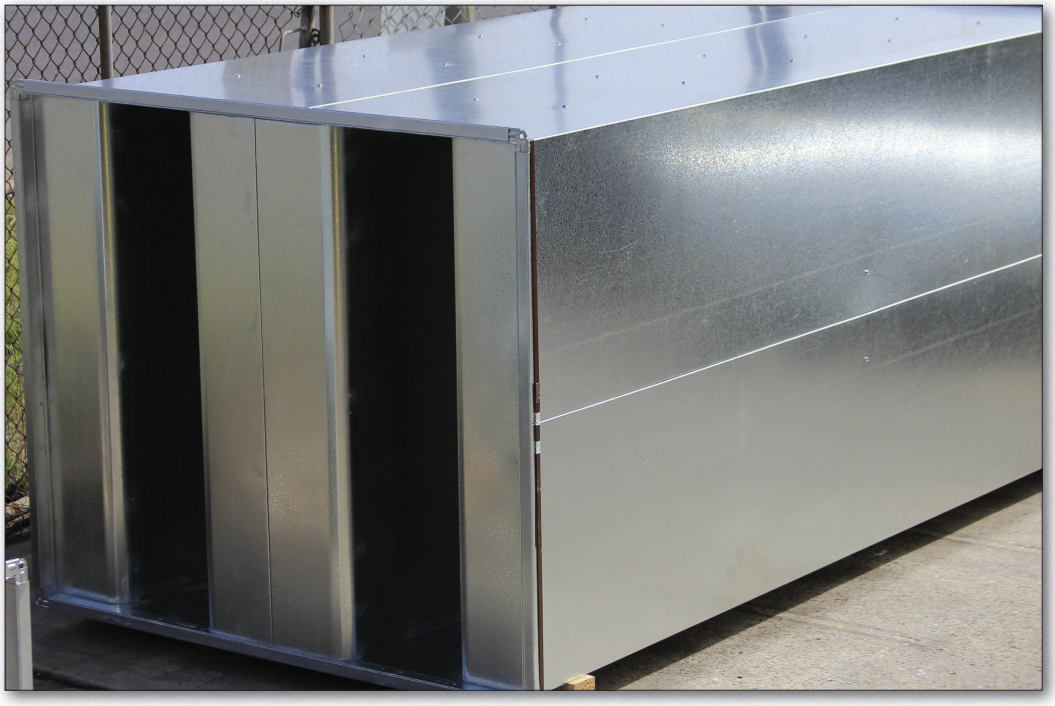
Shall be 35mm knock-on type rolled steel angle up to a maximum case width or height of 1500mm. If the width or height of the case is between 1500mm and 2400mm flanges will be made from 50 x 50 x 3 Duragal. Dimensions over 2400mm the Duragal increases to 50 x 50 x 5. In all cases the end flanges shall be welded to the end of the casing and painted with zinc-rich paint.

Acoustic Infill

Shall be either fibreglass or rockwool suitably faced to prevent fibre erosion at passage velocities to a maximum of 40 m/s. When tested in accordance with Australian Standards the infill shall have a 4 zero fire rating. The infill shall be retained behind 0.6mm pre-galvanised perforated sheet steel.

Attenuation Splitters

These shall be arranged within the casing to provide optimum acoustic and aerodynamic performance. The data sheets detail our most common selections, many others are available from our computer generated selection program. Please discuss this with our engineers. Side liners are incorporated as standard, there is however no lining on the top or bottom of the case between the splitters. This lining to the top and bottom of the silencer can be incorporated if required. The splitters shall be constructed from 0.9mm pre-galvanised sheet steel and retained within the casing by using self tapping screws that shall not protrude into the airways.

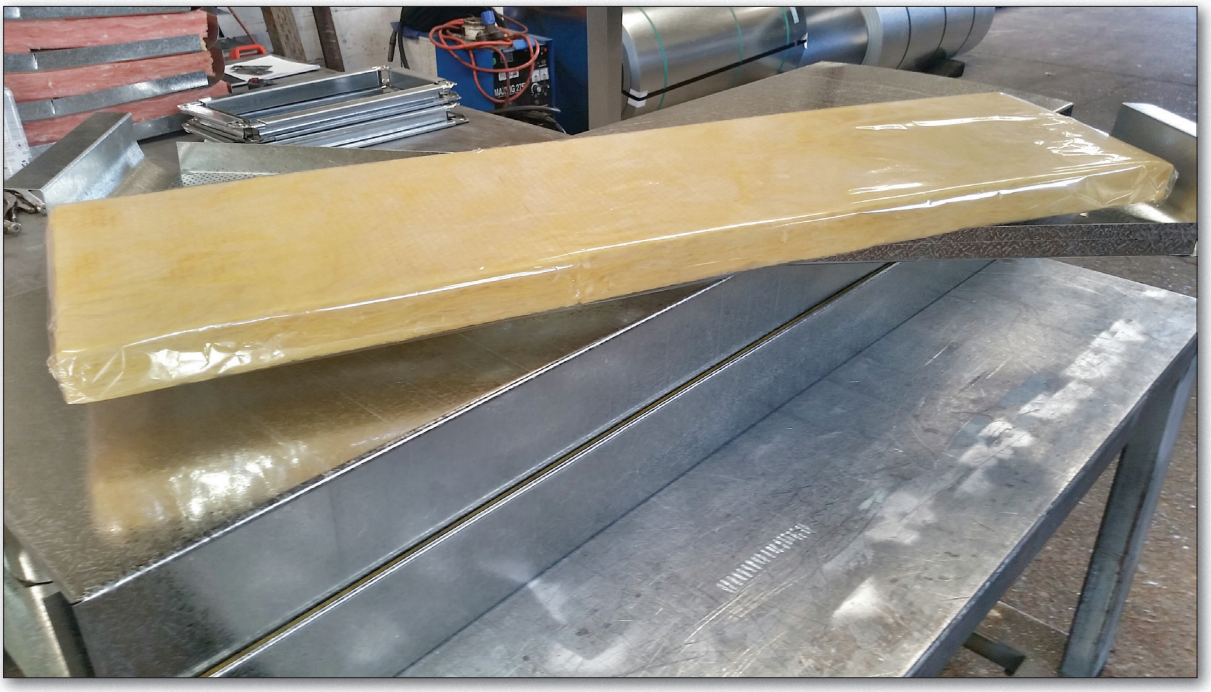


Melinex Lining

Melinex lining allows for steam cleaning where bacterial growth may be a problem. Melinex also protects against grease and oil absorption, essential where fire hazards are to be avoided. Melinex effects the acoustic performance, the specific performance details are listed on Page 26 Attenuation - Type BM. Page 27 gives the Aerodynamic Loss - Type BM.

Splitter under construction

To prevent damage to the melinex internal turbulence should be kept to a minimum. Consequently we have limited the pressure loss of our silencers as detailed in the technical performance graphs.



Acoustic material fully wrapped and sealed

SPECIAL CONSTRUCTION

High Internal Pressures

For applications in excess of 2.5 KPa internal pressures the construction should be discussed with our engineers. The materials of construction will not in general affect the acoustic performance, but may affect the aerodynamic characteristics.

Installation Effects

The location of the attenuators within the system can have significant affects upon the aerodynamic performance. We have listed in the Technical Data section general guidance for the increase in pressure loss to be expected for various configurations.

Exposed to the Weather Applications

For exposed to atmosphere applications a spun polyester facing to protect against rain absorption is available. This specific facing does not affect the acoustic performance hence our standard performance tables can be used.

Alternative Materials of Construction

For applications where corrosion could be a problem the use of different materials such as aluminum or stainless steel should be discussed with our engineers. Simple material changes should not in general affect the performance of the attenuator.

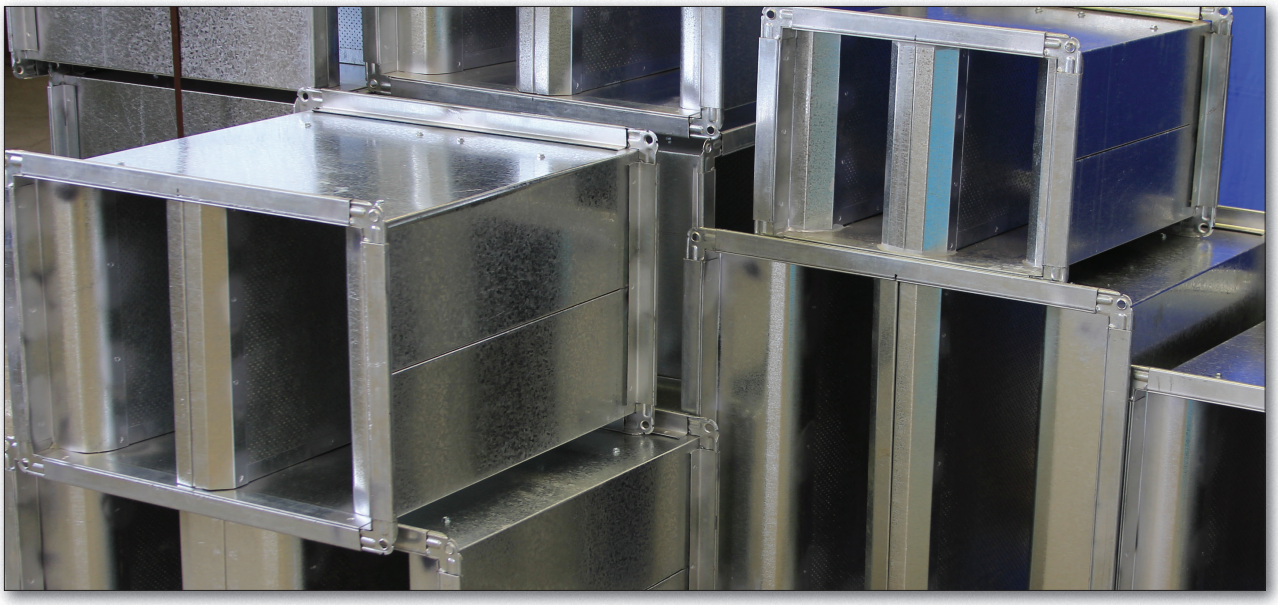
MAINTENANCE INSTRUCTIONS

Duct Silencers Installed Indoors

Duct silencers installed inside buildings are designed to be essentially maintenance-free for the life of the product. The same methods and routines used for periodic cleaning of the ductwork will also apply to the duct silencers. The acoustic media used in duct silencers is protected by the perforated metal liner so it will not erode during normal duct cleaning with vacuum equipment.

Duct Silencers Installed Outdoors

Duct silencers installed outdoors should be inspected at a minimum of every 6 months. Inspect the condition of the joints and replace loose or damaged sealant. Inspect the welds and casings for signs of rusting. Remove visible rust using a wire brush and re-coat with zinc-rich spray paint



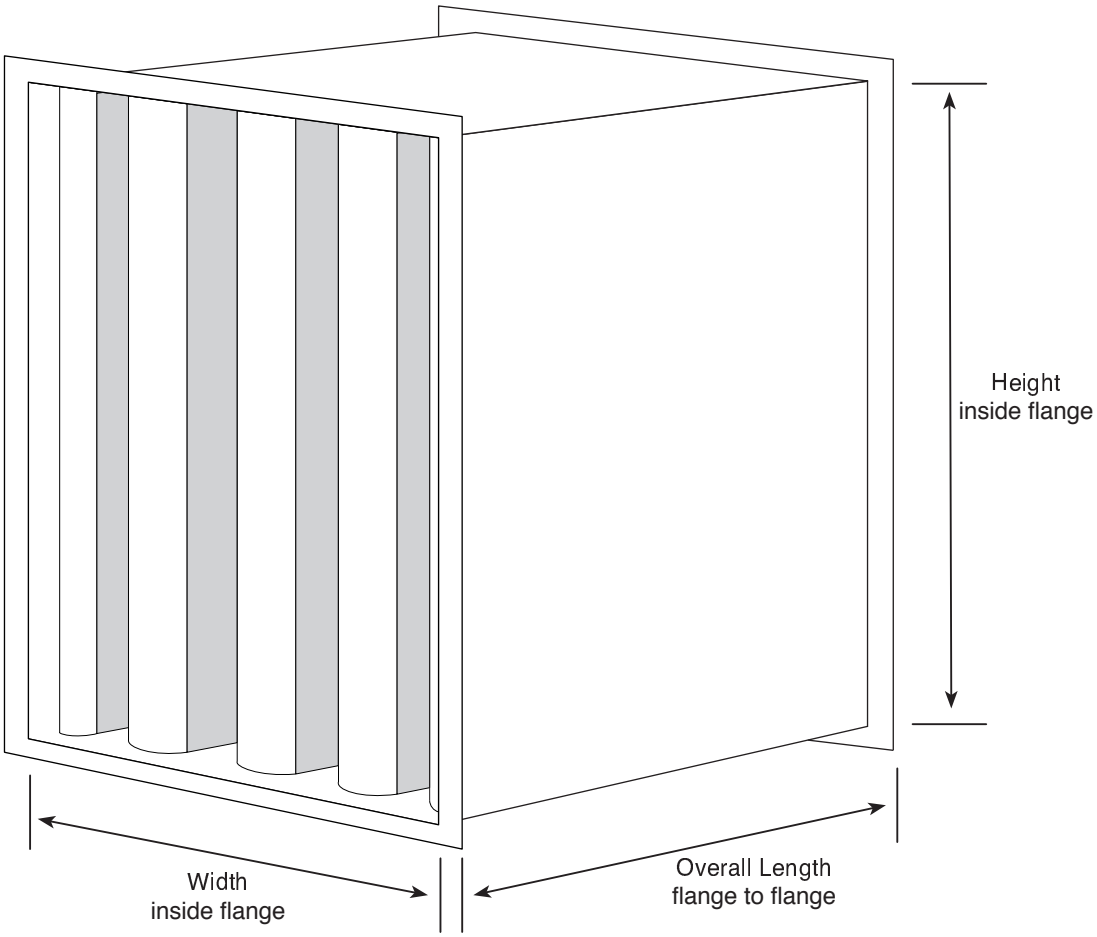
Silencers Exposed to Corrosive Elements

Silencers specified for installation in locations where the outer casings will be exposed to high temperature or corrosive elements are typically constructed with corrosive-resistant materials or finished with corrosion-resistive coatings. Similarly, silencers that must convey high-temperature or corrosive gases will be constructed internally with non-corrosive materials. Maintenance for these applications should be discussed with our engineers prior to manufacture, as this will be a function of the materials used and the corrosive elements which is specific to each individual application.

Silencers exposed to High Humidity

Silencers exposed to high humidity levels, such as those installed on cooling tower discharge fans, should be inspected frequently for signs of rusting. Remove visible rust using a wire brush and re-coat with zinc-rich spray paint. As a general rule, the lifetime of a silencer exposed to high humidity will be less than one installed in a dry indoor location.

Standard Dimensions



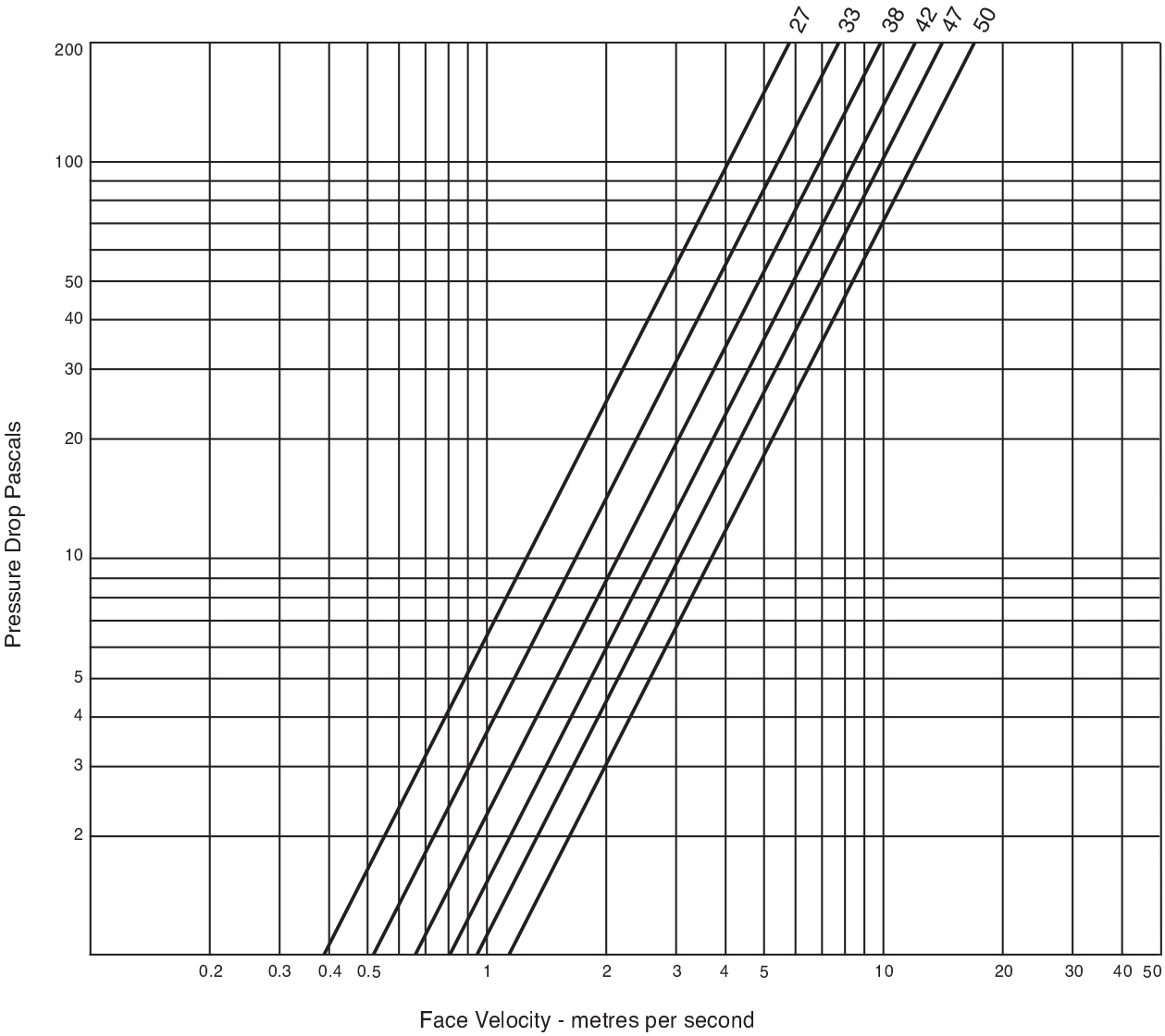
Definition of Models

BB	-	Symmetrical Double Bull Nose
BT	-	Bull Nose Entry Tapered Discharge
BM	-	Melinex Lined Type BB
TB	-	Thick Splitter Type BB
TT	-	Thick and Thin Silencer Combination

Attenuation - Type BB

Model	Length mm	Octave Band Centre Frequency Hz								K Factor	Standard Widths mm
		63	125	250	500	1K	2K	4K	8K		
27	600	5	9	16	24	33	30	22	21	8.50	275, 550, 825, 1100, 1375, 1650, 1925, 2200, 2475, 2750
	900	7	11	22	33	44	44	29	25	9.19	
	1200	8	14	28	40	50	50	36	29	9.88	
	1500	9	17	34	48	50	50	43	34	10.70	
	1800	10	19	40	50	50	50	49	38	11.52	
	2100	11	22	45	50	50	50	50	43	12.21	
	2400	12	24	49	50	50	50	50	47	13.03	
33	600	5	8	14	22	28	26	18	17	4.68	300, 600, 900, 1200, 1500, 1800, 2100, 2400, 2700, 3000
	900	7	10	20	30	37	35	24	21	5.14	
	1200	8	12	25	37	45	43	30	24	5.51	
	1500	8	15	30	45	50	50	35	27	5.88	
	1800	9	17	35	50	50	50	41	30	6.24	
	2100	10	19	40	50	50	50	46	33	6.61	
	2400	11	22	44	50	50	50	50	35	7.07	
38	600	4	7	13	20	25	23	17	16	2.98	325, 650, 975, 1300, 1625, 1950, 2275, 2600, 2925
	900	6	9	18	27	34	31	21	19	3.19	
	1200	7	11	22	35	42	38	26	21	3.46	
	1500	7	14	27	42	50	46	30	23	3.60	
	1800	8	16	31	47	50	50	34	25	3.88	
	2100	9	18	35	50	50	50	38	27	4.09	
	2400	10	20	40	50	50	50	42	29	4.36	
42	600	4	6	11	16	21	19	15	14	2.04	350, 700, 1050, 1400, 1750, 2100, 2450, 2800
	900	5	8	16	24	29	26	18	16	2.15	
	1200	6	10	20	31	37	32	21	17	2.38	
	1500	6	12	24	37	43	38	24	19	2.49	
	1800	7	14	27	42	49	43	28	20	2.66	
	2100	8	16	31	49	50	47	31	21	2.83	
	2400	9	18	36	50	50	50	33	22	2.95	
47	600	3	5	10	15	19	16	13	12	1.45	375, 750, 1125, 1500, 1875, 2250, 2650, 3000
	900	5	7	14	22	26	21	15	14	1.58	
	1200	5	9	18	28	34	27	18	15	1.67	
	1500	6	11	22	34	42	32	20	16	1.81	
	1800	7	13	25	40	48	37	23	17	1.90	
	2100	7	15	29	45	50	42	25	19	1.99	
	2400	8	16	33	50	50	46	27	20	2.13	
50	600	3	4	8	13	15	12	10	10	0.80	400, 800, 1200, 1600, 2000, 2400, 2800
	900	5	7	12	19	22	16	12	11	1.20	
	1200	5	8	16	25	29	21	14	13	1.24	
	1500	6	9	19	30	36	25	16	14	1.36	
	1800	7	11	24	36	43	29	18	15	1.48	
	2100	7	13	27	41	50	33	19	16	1.52	
	2400	8	14	30	47	50	37	21	17	1.64	

Aerodynamic Loss - Type BB



Aerodynamic Performance

This graph shows the approximate Pressure Loss for a 1200mm long silencer. For more accurate values for 1200mm long AND other lengths use this formula:

$$Pa = K \times 0.625 \times (\text{Face Velocity})^2$$

From appropriate table

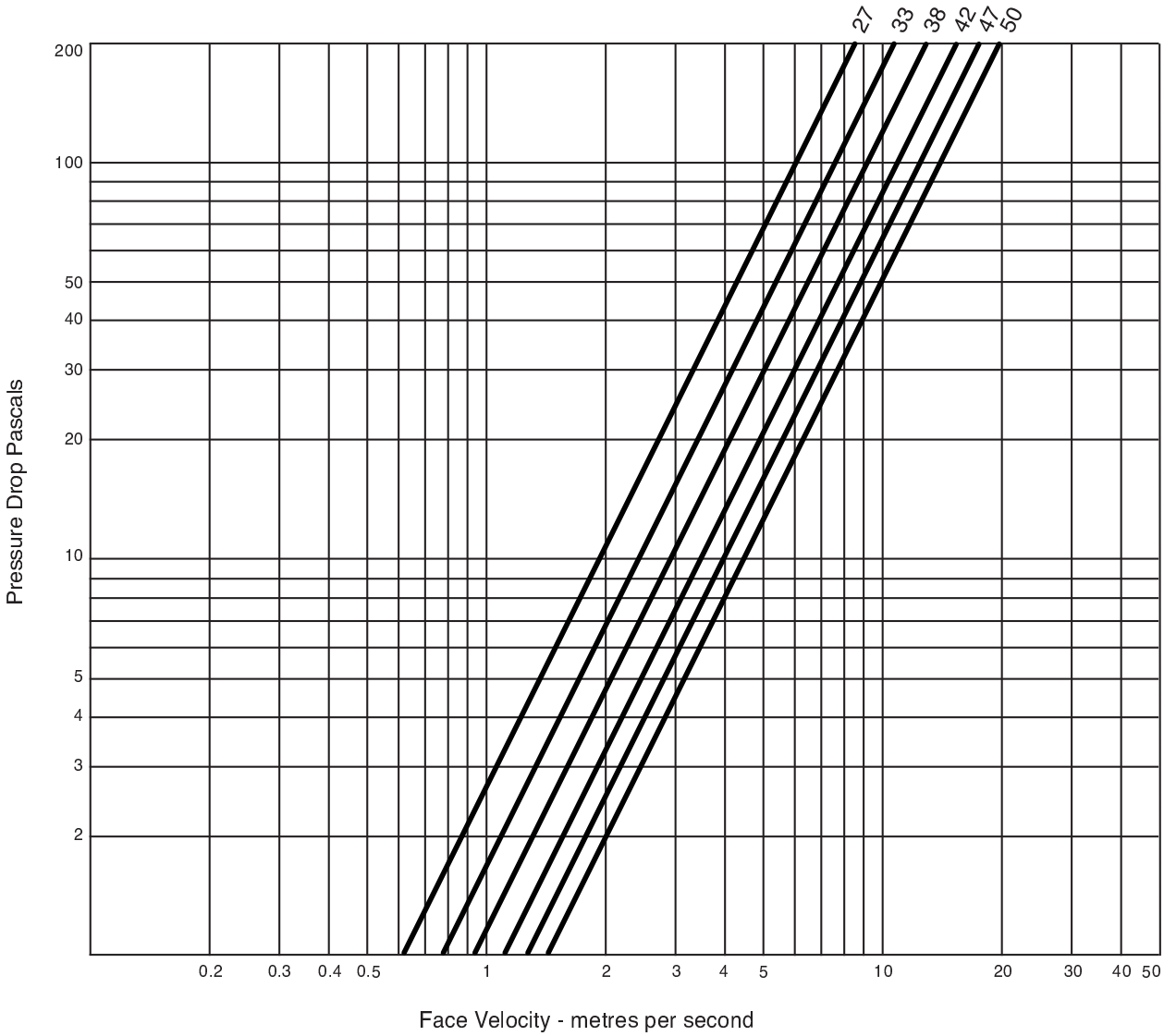
Calculate from: $\frac{\text{Vol } m^3/sec}{\text{Face Area } m^2}$

See also Technical Data page 99 for effects of installation and size.

Attenuation - Type BT

Model	Length mm	Octave Band Centre Frequency Hz								K Factor	Standard Widths mm
		63	125	250	500	1K	2K	4K	8K		
27	600	5	6	11	23	32	30	20	17	3.16	275, 550, 825, 1100, 1375, 1650, 1925, 2200, 2475, 2750
	900	7	11	19	33	38	35	27	23	3.77	
	1200	8	14	24	41	41	39	33	27	4.39	
	1500	9	17	29	46	44	42	37	31	4.94	
	1800	10	20	35	50	46	44	39	35	5.56	
	2100	12	23	40	50	50	45	43	41	6.17	
	2400	13	26	44	50	50	46	46	43	6.72	
33	600	5	6	10	19	33	26	14	13	2.02	300, 600, 900, 1200, 1500, 1800, 2100, 2400, 2700, 3000
	900	7	10	16	31	37	31	22	18	2.39	
	1200	8	12	21	40	40	36	28	21	2.75	
	1500	8	14	25	46	43	41	34	24	3.08	
	1800	9	16	30	50	45	43	38	27	3.44	
	2100	10	19	35	50	48	46	43	31	3.78	
	2400	11	22	40	50	50	48	47	34	4.13	
38	600	4	5	9	15	30	22	12	11	1.42	325, 650, 975, 1300, 1625, 1950, 2275, 2600, 2925
	900	6	9	15	26	32	27	18	15	1.66	
	1200	7	10	19	35	37	32	24	16	1.88	
	1500	7	12	23	42	41	37	28	19	2.11	
	1800	8	15	28	46	43	41	33	21	2.35	
	2100	9	17	32	50	47	44	38	24	2.58	
	2400	10	20	37	50	50	47	44	28	2.80	
42	600	4	5	9	13	25	18	10	9	1.09	350, 700, 1050, 1400, 1750, 2100, 2450, 2800
	900	6	7	14	22	30	23	15	12	1.25	
	1200	6	9	18	31	34	28	19	13	1.42	
	1500	7	11	21	39	39	34	24	15	1.56	
	1800	7	14	25	44	43	38	29	17	1.73	
	2100	8	16	30	48	46	42	34	20	1.89	
	2400	9	19	34	50	48	46	39	22	2.04	
47	600	4	4	8	12	22	15	9	7	0.80	375, 750, 1125, 1500, 1875, 2250, 2650, 3000
	900	5	7	13	20	26	20	13	9	0.90	
	1200	6	8	17	27	31	25	15	10	1.01	
	1500	7	10	20	34	37	29	18	12	1.11	
	1800	7	12	24	39	40	34	22	13	1.20	
	2100	7	15	28	44	45	38	25	14	1.31	
	2400	8	17	32	47	50	42	28	15	1.40	
50	600	4	4	8	12	14	12	9	6	0.64	400, 800, 1200, 1600, 2000, 2400, 2800
	900	5	6	12	18	21	16	11	7	0.72	
	1200	5	8	16	24	28	21	12	8	0.78	
	1500	6	10	20	30	35	24	14	9	0.86	
	1800	6	12	23	35	39	28	15	10	0.94	
	2100	7	14	27	40	45	32	17	10	1.01	
	2400	8	16	30	45	50	36	18	11	1.08	

Aerodynamic Loss - BT



Aerodynamic Performance

This graph shows the approximate Pressure Loss for a 1200mm long silencer. For more accurate values for 1200mm long AND other lengths use this formula:

See also Technical Data page 99 for effects of installation and size.

$$Pa = K \times 0.625 \times (\text{Face Velocity})^2$$

From appropriate table

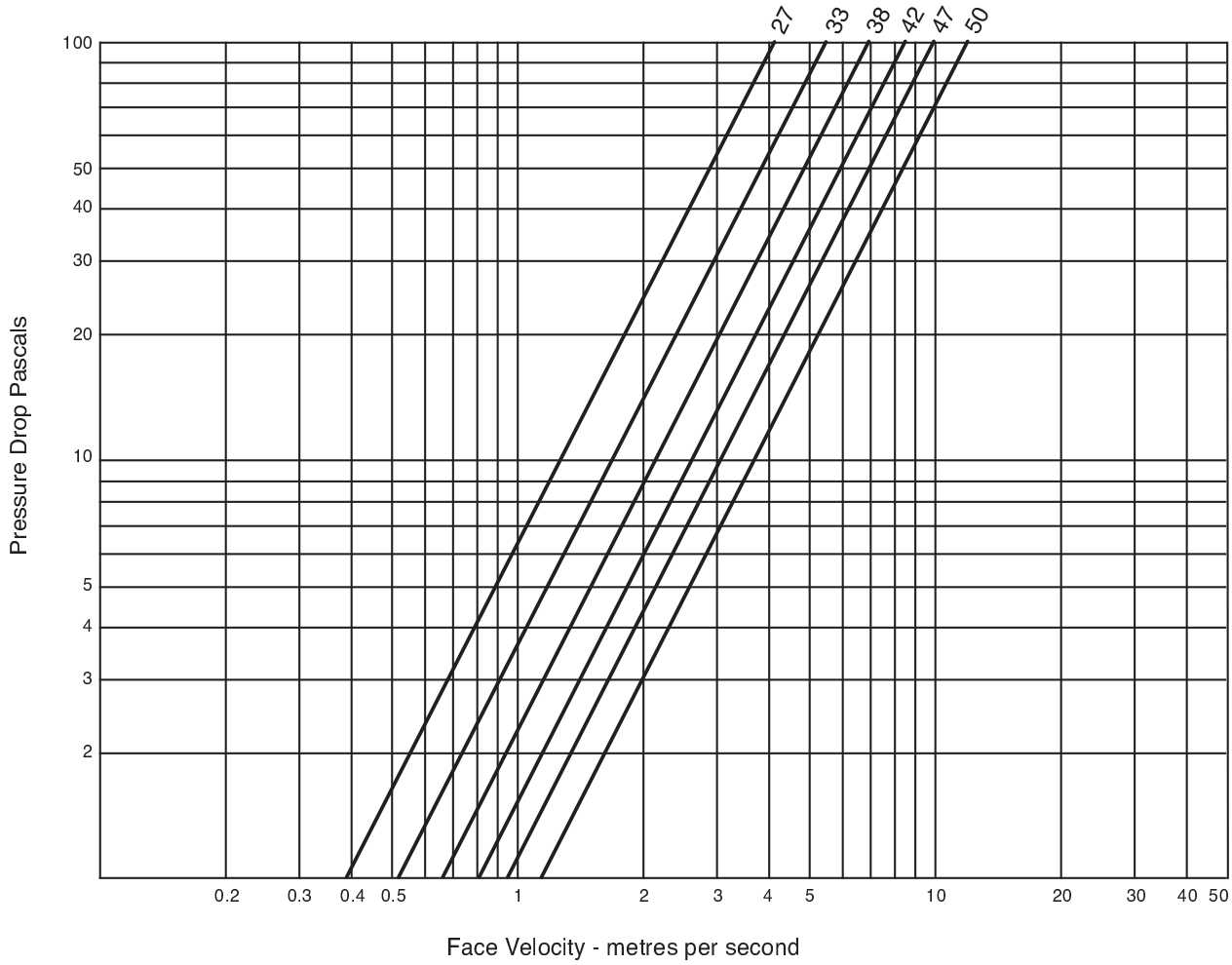
Calculate from: $\frac{\text{Vol } m^3/sec}{\text{Face Area } m^2}$

Attenuation - Type BM

Model	Length mm	Octave Band Centre Frequency Hz								K Factor	Standard Widths mm
		63	125	250	500	1K	2K	4K	8K		
27	600	6	9	14	23	26	20	15	14	8.50	275, 550, 825, 1100, 1375, 1650, 1925, 2200, 2475, 2750
	900	8	11	20	31	35	29	20	19	9.19	
	1200	9	14	25	38	40	38	25	23	9.88	
	1500	10	17	31	46	47	46	30	27	10.70	
	1800	11	19	36	50	50	50	34	30	11.52	
	2100	12	22	41	50	50	50	38	34	12.21	
	2400	13	24	44	50	50	50	42	38	13.03	
33	600	6	8	13	21	22	17	13	13	4.68	300, 600, 900, 1200, 1500, 1800, 2100, 2400, 2700, 3000
	900	8	10	18	29	30	23	17	17	5.14	
	1200	9	12	23	35	36	28	21	19	5.51	
	1500	9	15	27	43	42	33	25	22	5.88	
	1800	10	17	32	50	48	38	29	24	6.24	
	2100	11	19	36	50	50	43	32	26	6.61	
	2400	12	22	40	50	50	48	35	28	7.07	
38	600	4	7	12	19	20	15	12	12	2.98	325, 650, 975, 1300, 1625, 1950, 2275, 2600, 2925
	900	7	9	16	26	27	20	15	15	3.19	
	1200	8	11	20	33	34	25	18	17	3.46	
	1500	8	14	24	40	40	30	21	18	3.60	
	1800	9	16	28	45	46	35	24	20	3.88	
	2100	10	18	32	50	50	40	27	22	4.09	
	2400	11	20	36	50	50	45	29	23	4.36	
42	600	4	6	10	15	17	12	11	11	2.04	350, 700, 1050, 1400, 1750, 2100, 2450, 2800
	900	6	8	14	23	23	17	13	13	2.15	
	1200	7	10	18	29	29	21	15	14	2.38	
	1500	7	12	22	35	34	25	17	15	2.49	
	1800	8	14	24	40	39	28	20	16	2.66	
	2100	9	16	28	47	45	31	22	17	2.83	
	2400	10	18	32	48	47	33	23	18	2.95	
47	600	3	5	9	14	15	10	10	9	1.45	375, 750, 1125, 1500, 1875, 2250, 2650, 3000
	900	6	7	13	21	21	14	11	11	1.58	
	1200	6	9	16	27	27	18	13	12	1.67	
	1500	7	11	20	32	33	21	14	13	1.81	
	1800	8	13	23	38	39	24	16	14	1.90	
	2100	8	15	26	43	44	27	18	15	1.99	
	2400	9	16	30	48	49	30	19	16	2.13	
50	600	3	4	7	12	12	8	8	7	0.80	400, 800, 1200, 1600, 2000, 2400, 2800
	900	4	7	11	18	18	10	9	8	1.20	
	1200	6	8	14	24	23	14	10	10	1.24	
	1500	7	9	17	29	29	16	11	11	1.36	
	1800	8	11	22	34	34	19	13	12	1.48	
	2100	8	13	24	39	40	21	13	13	1.52	
	2400	9	14	27	45	46	24	15	14	1.64	

Aerodynamic Loss - Type BM

To prevent mechanical damage to the melinex due to air turbulence, we have limited the Pressure Drop to 100 Pa



Aerodynamic Performance

This graph shows the approximate Pressure Loss for a 1200mm long silencer. For more accurate values for 1200mm long AND other lengths use this formula:

$$Pa = K \times 0.625 \times (\text{Face Velocity})^2$$

From appropriate table

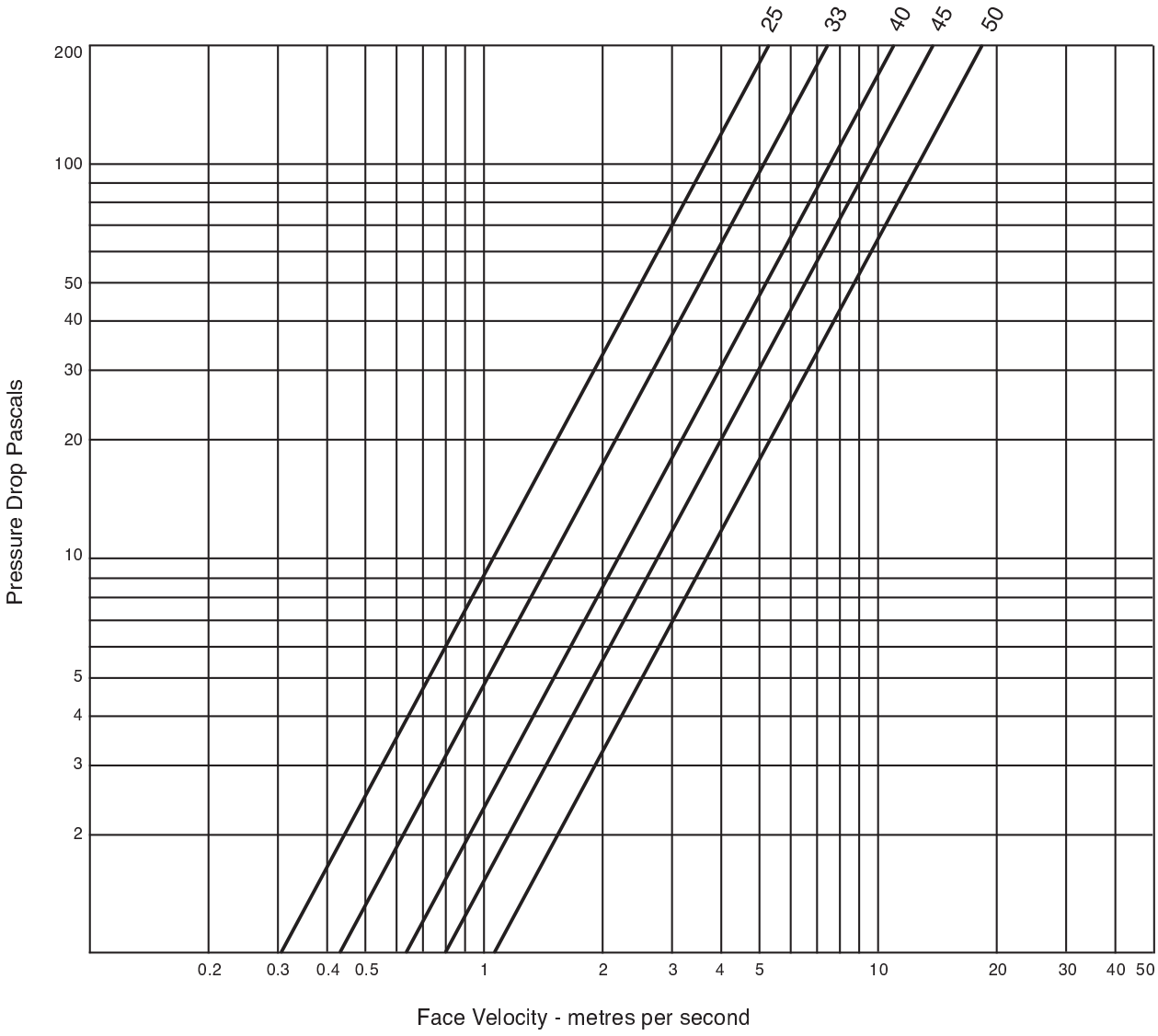
Calculate from: $\frac{\text{Vol } m^3/sec}{\text{Face Area } m^2}$

See also Technical Data page 99 for effects of installation and size.

Attenuation - Type TB

Model	Length mm	Octave Band Centre Frequency Hz								K Factor	Standard Widths mm
		63	125	250	500	1K	2K	4K	8K		
25	600	9	13	20	24	32	31	27	20	12.01	400, 800, 1200, 1600, 2000, 2400, 2800
	900	11	16	24	31	41	40	33	23	12.65	
	1200	12	19	29	38	50	49	39	27	13.30	
	1500	14	23	34	45	50	50	46	30	13.95	
	1800	16	27	38	50	50	50	50	34	14.60	
	2100	18	30	42	50	50	50	50	37	15.25	
	2400	19	33	47	50	50	50	50	41	15.89	
33	600	8	11	17	25	29	25	19	16	4.50	450, 900, 1350, 1800, 2250, 2700
	900	9	13	21	29	34	30	23	19	5.40	
	1200	11	16	25	36	39	34	28	22	6.30	
	1500	12	19	29	44	45	38	32	24	7.20	
	1800	13	22	32	49	50	45	36	27	8.10	
	2100	15	24	36	50	50	50	41	29	9.00	
	2400	18	26	39	50	50	50	45	30	9.90	
40	600	6	8	14	18	19	16	15	12	2.54	500, 1000, 1500, 2000, 2500, 3000
	900	7	10	17	24	25	20	17	13	2.79	
	1200	8	12	21	30	32	25	19	15	3.04	
	1500	9	15	24	36	38	29	21	16	3.29	
	1800	10	17	29	42	45	34	23	18	3.53	
	2100	11	19	32	48	50	38	25	19	3.78	
	2400	11	21	36	50	50	43	27	21	4.03	
45	600	6	9	12	16	18	16	14	13	1.40	550, 1100, 1650, 2200, 2750
	900	7	11	16	21	24	19	16	14	1.50	
	1200	8	13	20	26	30	22	18	15	2.00	
	1500	9	15	24	31	36	26	20	16	2.30	
	1800	10	17	27	37	42	30	22	17	2.60	
	2100	11	20	30	43	48	34	24	18	3.00	
	2400	12	22	33	49	50	38	26	19	3.30	
50	600	5	7	11	14	14	10	10	9	0.95	600, 1200, 1800, 2400, 3000
	900	5	9	14	18	18	12	12	10	1.13	
	1200	6	10	17	22	22	14	13	11	1.24	
	1500	6	12	20	27	27	17	14	12	1.35	
	1800	7	14	23	31	31	19	15	12	1.46	
	2100	7	16	27	35	36	21	16	13	1.57	
	2400	8	18	30	39	40	23	17	14	1.67	

Aerodynamic Loss - Type TB



Aerodynamic Performance

This graph shows the approximate Pressure Loss for a 1200mm long silencer. For more accurate values for 1200mm long AND other lengths use this formula:

See also Technical Data page 99 for effects of installation and size.

$$Pa = K \times 0.625 \times (\text{Face Velocity})^2$$

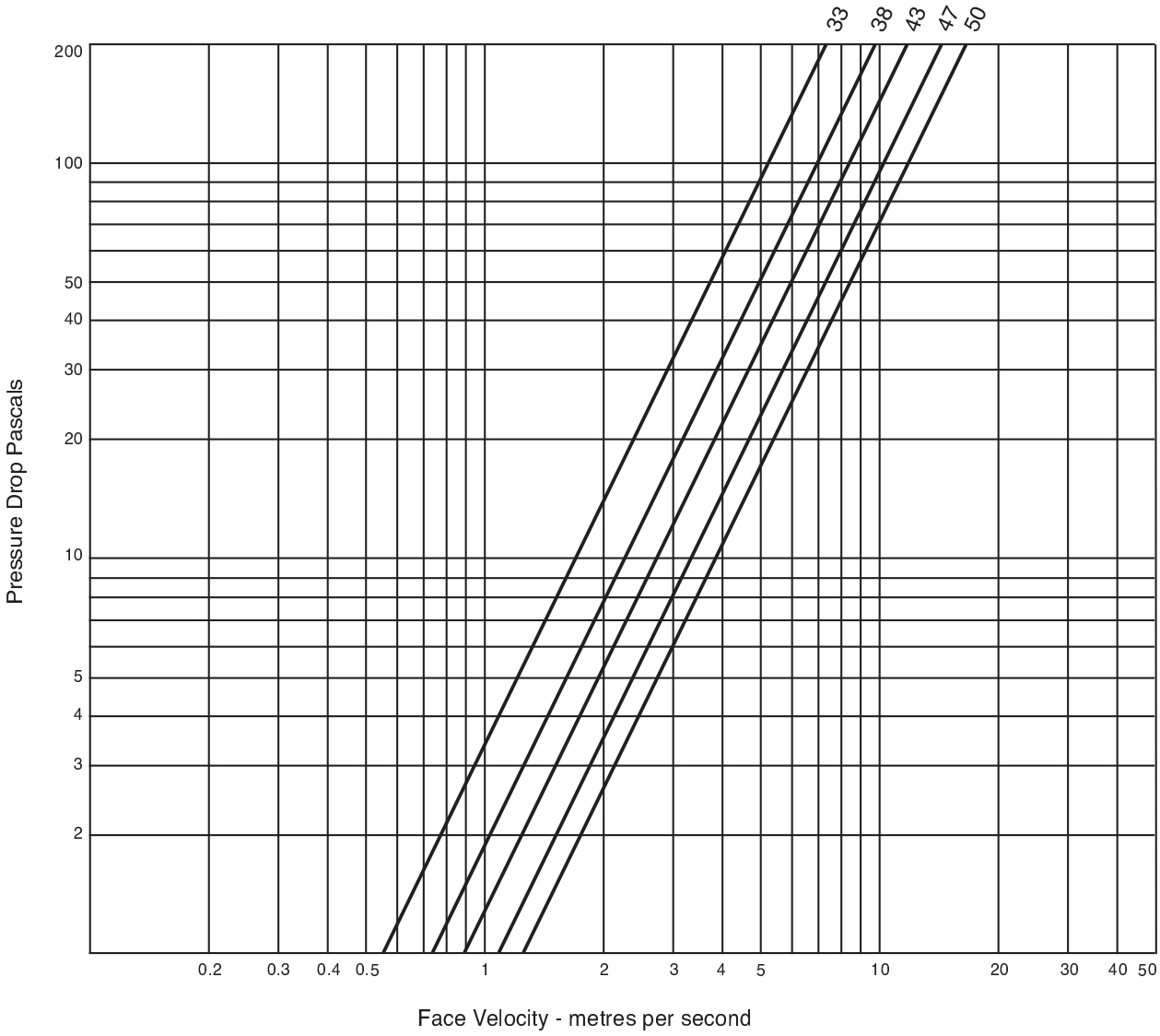
From appropriate table

Calculate from: $\frac{\text{Vol } m^3/sec}{\text{Face Area } m^2}$

Attenuation - Type TT

Model	Length mm	Octave Band Centre Frequency Hz								K Factor	Standard Widths mm
		63	125	250	500	1K	2K	4K	8K		
33	600	6	9	14	19	32	31	23	21	5.00	300, 600, 900, 1200, 1500, 1800, 2100, 2400, 2700, 3000
	900	8	12	18	25	42	41	29	24	5.40	
	1200	9	14	22	31	50	50	35	27	5.81	
	1500	10	17	27	38	50	50	41	31	6.21	
	1800	11	20	32	44	50	50	46	34	6.62	
	2100	13	23	36	50	50	50	50	37	7.02	
	2400	14	25	42	50	50	50	50	40	7.43	
38	600	6	8	12	17	29	26	20	18	2.76	325, 650, 975, 1300, 1625, 1950, 2275, 2600, 2925
	900	7	11	16	22	37	34	25	20	2.99	
	1200	8	13	20	28	45	42	29	22	3.25	
	1500	10	16	24	34	49	46	33	25	3.45	
	1800	11	18	22	41	50	48	37	28	3.71	
	2100	12	22	33	46	50	50	41	30	3.97	
	2400	13	23	37	49	50	50	44	32	4.81	
43	600	6	8	11	15	25	20	16	13	1.72	350, 700, 1050, 1400, 1750, 2100, 2450, 2800
	900	7	10	15	20	32	26	19	15	1.90	
	1200	8	12	18	26	39	33	22	17	2.07	
	1500	9	15	21	31	47	39	25	19	2.25	
	1800	10	17	25	37	50	46	28	21	2.43	
	2100	11	20	29	42	50	50	31	22	2.60	
	2400	12	22	32	48	50	50	34	24	2.78	
47	600	5	7	10	13	23	17	16	12	1.17	375, 750, 1125, 1500, 1875, 2250, 2625, 3000
	900	6	9	13	17	29	22	18	14	1.29	
	1200	7	11	16	22	36	27	20	16	1.41	
	1500	8	13	19	26	42	32	22	17	1.53	
	1800	9	16	22	31	49	37	24	19	1.65	
	2100	10	18	25	35	50	42	26	20	1.77	
	2400	11	20	29	40	50	47	28	22	1.89	
50	600	3	5	9	15	21	19	15	14	1.05	300, 600, 900, 1200, 1500, 1800, 2100, 2400, 2700, 3000
	900	4	6	14	23	29	26	18	16	1.10	
	1200	5	8	17	30	37	32	21	17	1.14	
	1500	5	9	21	36	43	38	24	19	1.26	
	1800	6	11	25	42	50	43	28	20	1.35	
	2100	6	12	28	49	50	47	31	21	1.40	
	2400	7	13	32	50	50	50	33	22	1.49	

Aerodynamic Loss - Type TT



Aerodynamic Performance

This graph shows the approximate Pressure Loss for a 1200mm long silencer. For more accurate values for 1200mm long AND other lengths use this formula:

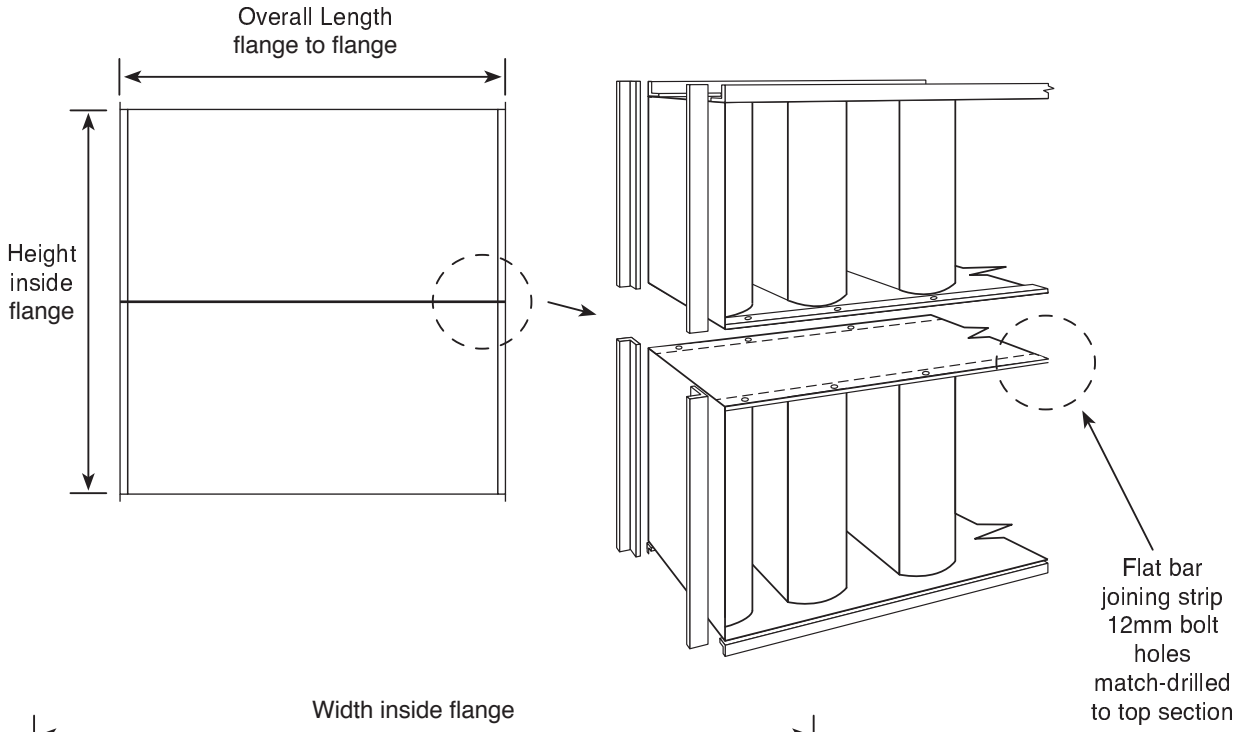
$$Pa = K \times 0.625 \times (\text{Face Velocity})^2$$

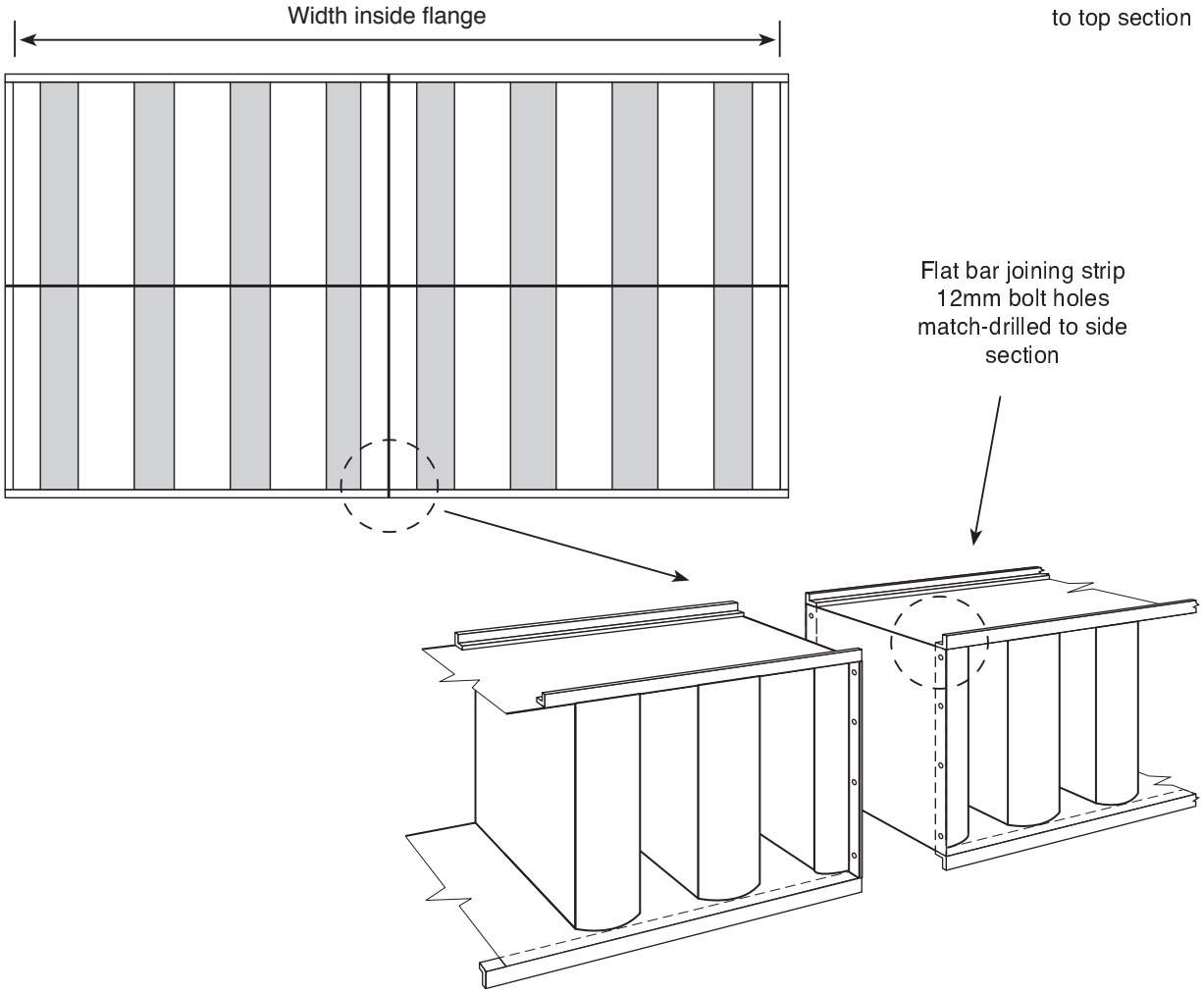
From appropriate table

Calculate from: $\frac{\text{Vol } m^3/sec}{\text{Face Area } m^2}$

See also Technical Data page 99 for effects of installation and size.

Multi-Section Rectangular Duct Silencer





Self Generated Noise Calculation

Example: **Model BM 38**
1300W x 500H
@ 2600 L/S

1. Calculate Face Velocity M/S $= \frac{\text{Volume}}{\text{Area}}$

Volume 2600 L/S /1000 = 2.6 m^3/s

Area 1.3 x 0.5 = 0.65 m^2

Therefore Face Velocity = 4 m/s

2. From Self Generated Noise Tables Type BM 38 (Page 35)
at 4 m/s Face Velocity = overall 35 dB based on 1m^2 face area.

3. Correcting for face area from Table or use formula 10 x log(Area m^2)

Correction for face are 10x log(area)								
Area (sq m)	0.125	0.25	0.5	1.0	2.0	4.0	8.0	16.0
Correction (dB)	-9	-6	-3	0	3	6	9	12

= 10 x log 0.64 = -1.94 dB, approx -2 dB

4. Corrected overall level = 35 - 2 = 33 dBA

5. Spectrum Shape at 4 m/s Type BM (Page 35)

Model	Octave Band Centre Frequency Hz							
	63	125	250	500	1K	2K	4K	8K
	Correction Spectrum dB							
BM 38	12	9	5	1	0	-7	-14	-19

6. Final Self Generated Noise Spectrum 33 dBA corrected from above (5)

Model	Octave Band Centre Frequency Hz							
	63	125	250	500	1K	2K	4K	8K
	Sound Power Level dB							
BM 38	45	42	38	34	33	26	19	14

Self Generated Noise - Type BB

Face Velocity m/s	Model						Spectrum Shape Octave Band Centre Frequency							
	27	33	38	42	47	50	63	125	250	500	1K	2K	4K	8K
3	38	34	29	27	25	23	12	9	5	1	0	-8	-16	-21
4	44	40	35	32	31	29	12	9	5	1	0	-7	-14	-19
5	49	45	41	38	36	34	12	9	5	1	0	-6	-12	-17
6	52	49	45	42	41	40	12	9	5	1	0	-5	-10	-15
7	56	53	51	49	47	45	12	9	5	1	0	-4	-8	-13
8	61	58	54	51	49	48	12	9	5	1	0	-3	-6	-11
9	66	62	57	53	52	50	12	9	5	1	0	-2	-4	-9
10	70	65	60	56	43	52	12	9	5	1	0	-1	-2	-7

Self Generated Noise - Type BT

Face Velocity m/s	Model						Spectrum Shape Octave Band Centre Frequency							
	27	33	38	42	47	50	63	125	250	500	1K	2K	4K	8K
3	32	28	23	21	19	17	12	9	5	1	0	-9	-20	-23
4	38	34	29	27	25	23	12	9	5	1	0	-8	-16	-21
5	44	40	35	32	31	29	12	9	5	1	0	-7	-14	-19
6	49	45	41	38	36	34	12	9	5	1	0	-6	-12	-17
7	52	49	45	42	41	40	12	9	5	1	0	-5	-10	-15
8	56	53	51	49	47	45	12	9	5	1	0	-4	-8	-13
9	61	58	54	51	49	48	12	9	5	1	0	-3	-6	-11
10	66	62	57	53	52	50	12	9	5	1	0	-2	-4	-9

Self Generated Noise - Type TT

Face Velocity m/s	Model					Spectrum Shape Octave Band Centre Frequency							
	33	38	43	47	50	63	125	250	500	1K	2K	4K	8K
3	34	30	27	25	23	12	9	5	1	0	-8	-16	-21
4	40	36	33	31	29	12	9	5	1	0	-7	-14	-19
5	45	42	39	36	34	12	9	5	1	0	-6	-12	-17
6	49	46	43	41	40	12	9	5	1	0	-5	-10	-15
7	53	52	49	47	45	12	9	5	1	0	-4	-8	-13
8	58	55	52	49	48	12	9	5	1	0	-3	-6	-11
9	62	58	55	52	50	12	9	5	1	0	-2	-4	-9
10	65	60	57	43	52	12	9	5	1	0	-1	-2	-7

Self Generated Noise - Type TB

Face Velocity m/s	Model					Spectrum Shape Octave Band Centre Frequency							
	25	33	40	45	50	63	125	250	500	1K	2K	4K	8K
3	40	34	28	26	23	12	9	5	1	0	-8	-16	-21
4	46	40	34	32	29	12	9	5	1	0	-7	-14	-19
5	51	45	40	37	34	12	9	5	1	0	-6	-12	-17
6	54	49	44	42	40	12	9	5	1	0	-5	-10	-15
7	58	53	50	48	45	12	9	5	1	0	-4	-8	-13
8	63	58	53	50	48	12	9	5	1	0	-3	-6	-11
9	68	62	56	53	50	12	9	5	1	0	-2	-4	-9
10	72	65	58	44	52	12	9	5	1	0	-1	-2	-7

Self Generated Noise - Type BM

Face Velocity m/s	Model						Spectrum Shape Octave Band Centre Frequency							
	27	33	38	42	47	50	63	125	250	500	1K	2K	4K	8K
3	38	34	29	27	25	23	12	9	5	1	0	-8	-16	-21
4	44	40	35	32	31	29	12	9	5	1	0	-7	-14	-19
5	49	45	41	38	36	34	12	9	5	1	0	-6	-12	-17
6	52	49	45	42	41	40	12	9	5	1	0	-5	-10	-15
7	56	53	51	49	47	45	12	9	5	1	0	-4	-8	-13
8	61	58	54	51	49	48	12	9	5	1	0	-3	-6	-11
9	66	62	57	53	52	50	12	9	5	1	0	-2	-4	-9
10	70	65	60	56	43	52	12	9	5	1	0	-1	-2	-7

How to Order

For non-standard widths, contact our engineers.

Model	Length	X	Width	X	Height
TB 40	*900*	*X*	*1000*	*X*	*500*
	overall flange face to face		*inside flange or outside case*		*inside flange or outside case*