



# NCS Acoustics

DESIGN · MANUFACTURE · INSTALL



## HVAC Cylindrical Attenuators

For reduction of fan system noise

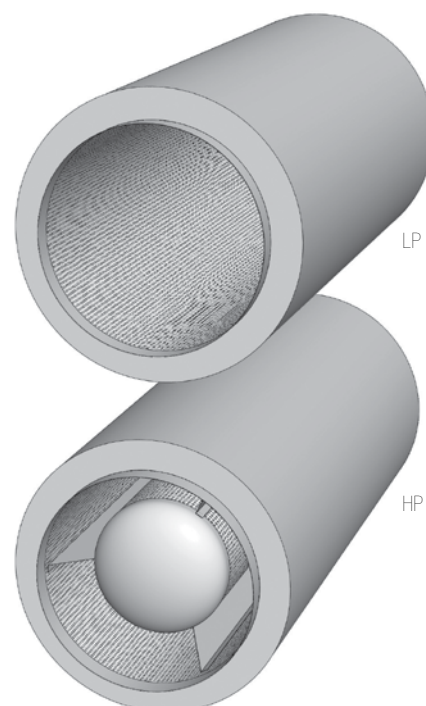


NCS Acoustic Cylindrical Attenuators are designed to provide attenuation for air movement systems.

They are specifically designed for direct connection to the inlet and outlet of axial flow type fans and can be adapted for induct applications.

They reduce ventilation and air conditioning system noise in numerous applications.

- Standard sizes from 150mm to 2000mm diameter.
- Special sizes available on request.
- All models can be lined with Melinex.



# LP & HP HVAC CYLINDRICAL ATTENUATORS

LP models are simple straight through units. HP models offer higher acoustic performance, due to the concentric acoustic pod. Available in three standard types or custom made.

- LP-1D** ..... Length = 1 x ID (Internal Diameter Size)
- LP-2D** ..... Length = 2 x ID
- LP-3D** ..... Length = 3 x ID
- HP-1D** ..... Length = 1 x ID + Pod
- HP-2D** ..... Length = 2 x ID + Pod
- HP-2D-1P** ..... Length = 2 x ID + Short Pod
- HP-3D-2P** ..... Length = 3 x ID + Short Pod

## CONSTRUCTION

Featuring a pre-galvanised sheet metal outer case fabricated from a minimum 1.15mm gauge steel sheet. The high density acoustic media is retained by pre-galvanised perforated sheet. The pre-galvanised end flanges may be fitted with threaded nut inserts to match the fan suppliers flange bolt pattern (315mm and above) or alternatively spigot connections for flexible connectors (preferred).

Special applications may require any of the following non-standard materials; PVC, stainless steel, powder coated and epoxy paint finishes.

Insertion loss figures are for fan attached systems. Attenuation figures published in this brochure have been derived from laboratory test data, modified by New Zealand based infield test results. NCS can provide a certificate of compliance that guarantees the acoustic performance.

## LP & HP INSERTION LOSS (dB)

ID (size)	Model	Frequency (Hz)							
		63	125	250	500	1k	2k	4k	8k
150 200 250	LP-3D	2	9	15	21	33	33	26	23
	LP-3D	3	6	10	21	33	29	16	14
	LP-3D	3	6	11	24	37	23	14	13
315 to 560	LP-1D	2	4	7	10	14	11	8	8
	LP-2D	4	8	12	17	23	17	13	12
	LP-3D	4	9	14	21	32	26	20	19
	HP-1D	4	6	9	13	19	19	16	14
	HP-2D	7	11	15	24	28	28	26	22
	HP-2D-1P	4	7	11	17	28	28	23	21
	HP-3D-2P	7	12	17	28	37	37	33	29
630 to 800	LP-1D	3	5	9	14	14	9	8	7
	LP-2D	6	8	14	23	24	14	13	10
	LP-3D	6	9	17	31	32	21	18	14
	HP-1D	4	6	10	17	23	21	19	11
	HP-2D	7	11	16	29	34	32	30	19
	HP-2D-1P	4	7	13	25	31	28	24	15
1000 to 1250	HP3D-2P	7	12	19	37	42	39	35	23
	LP-1D	3	5	10	14	13	8	7	7
	LP-2D	6	9	14	21	20	13	11	10
	HP-1D	4	6	12	20	19	15	14	12
	HP-2D	7	12	19	29	28	26	22	17
1400 to 2000	HP-2D-1P	4	8	17	28	27	21	18	15
	HP3D-2P	7	14	24	37	36	32	26	20
	LP-1D	4	5	11	14	11	8	6	6
	LP-2D	8	9	15	20	17	11	10	9
	HP-1D	6	8	12	21	19	14	11	9
1400 to 2000	HP-2D	10	14	22	22	21	21	16	14
	HP2D-1P	7	12	19	29	25	19	14	12
	HP3D-2P	11	18	29	30	27	26	19	17

## DIMENSIONS & MASS

ID (size)	Dimensions (mm)				MASS (kg)						
	OD	1D Len	2D Len	3D Len	LP-1D	LP-2D	LP-3D	HP-1D	HP-2D	HP-2D-1P	HP3D-2P
150	250	-	-	450	4.6	-	4.6	-	-	-	-
200	300	-	-	600	9.8	-	9.8	-	-	-	-
250	350	-	-	750	11.5	-	11.5	-	-	-	-
315	455	-	600	900	8	15	22	12	21	19	28
400	600	400	800	1200	16	29	41	22	38	35	49
450	650	450	900	1350	19	35	51	26	46	42	61
500	700	500	1000	1500	23	42	61	32	55	51	74
560	760	560	1120	1680	28	51	74	39	69	62	93
630	830	630	1200	1890	34	60	86	48	81	74	117
710	910	710	1420	2130	41	77	113	59	106	95	150
800	1000	800	1600	2400	51	95	140	73	133	118	192
1000	1200	1000	2000	-	72	138	-	108	200	174	309
1250	1450	1160	2360	-	105	205	-	160	302	-	-
1400	1600	1400	2800	-	139	268	-	214	401	-	-
1530	1730	1530	3060	-	164	317	-	255	481	-	-
1600	1800	1600	3200	-	178	345	-	279	527	-	-
1800	2000	1800	3600	-	222	431	-	354	674	-	-
2000	2300	2000	4000	-	312	603	-	481	917	-	-

Special sizes below 150mm ID and above 2000mm ID available on request.

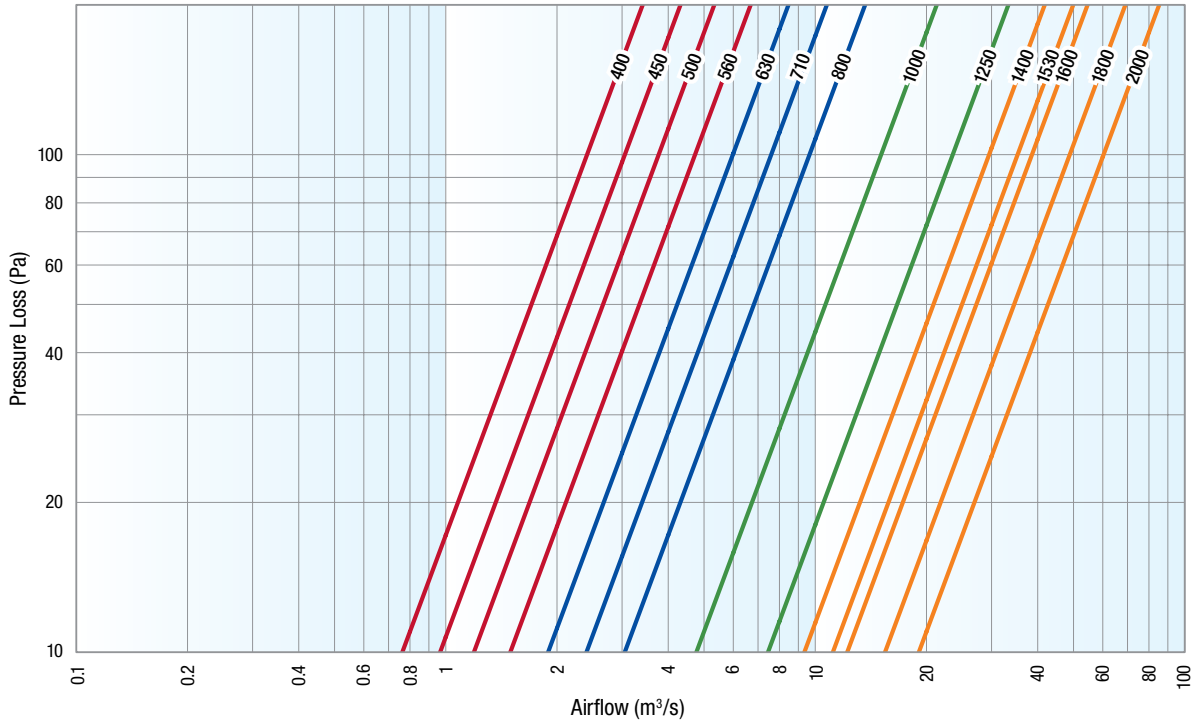
# LP & HP HVAC CYLINDRICAL ATTENUATORS

## PRESSURE LOSS

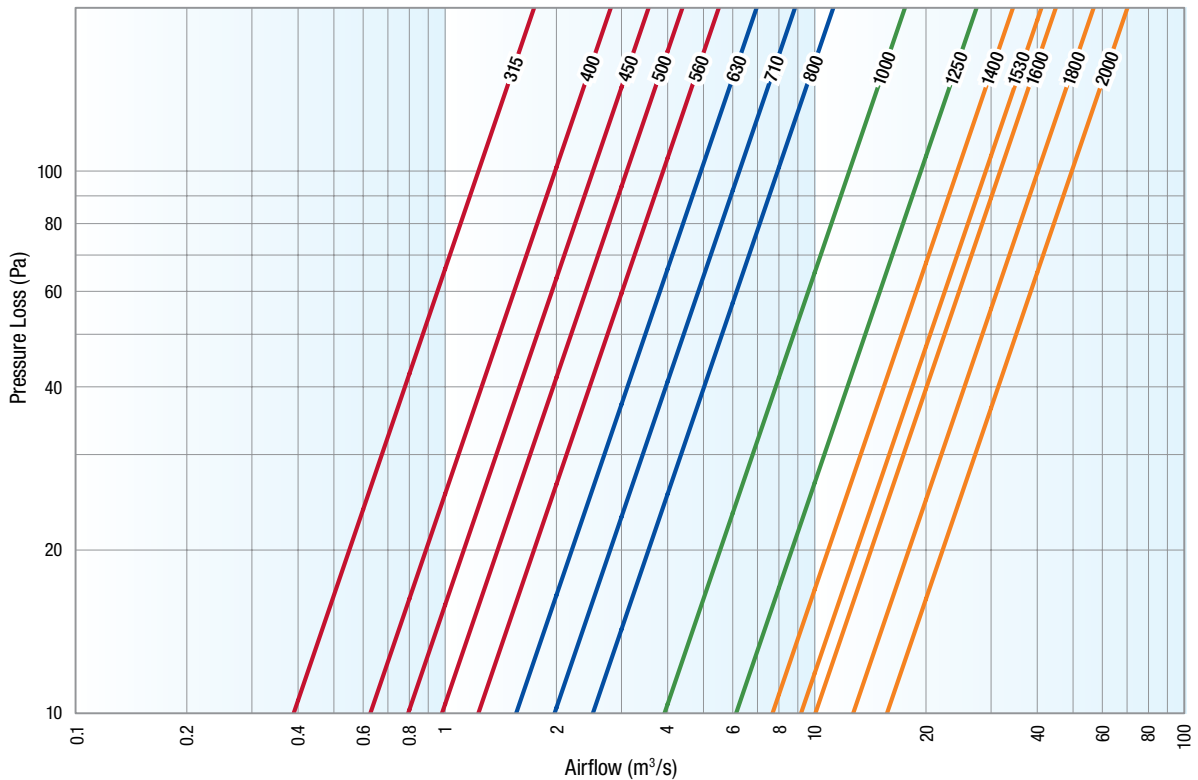
Pressure loss through LP type silencers is negligible as there is no restriction of the airway (normal duct friction applies). Pressure loss through HP type silencers is given by the following formulae and charts.

These charts assume ducted inlet and outlet conditions.

### HP-1D / HP-2D-1P PRESSURE LOSS



### HP-2D / HP-3D-2P PRESSURE LOSS



# MELINEX HVAC CYLINDRICAL ATTENUATORS

Melinex HVAC Cylindrical Attenuators are recommended for applications such as cooling towers, chillers, condensers and kitchen or fume extract systems. Also used for total fibre retention in hospitals, computer rooms, dairy and food industry applications.

## CONSTRUCTION

Melinex HVAC Cylindrical Attenuators feature a heat sealed, non porous membrane to protect the acoustic media from moisture or grease laden air.

## PRESSURE LOSS

The Melinex lining does not effect pressure loss, please refer to previous pressure loss graphs.

Insertion loss figures are for fan attached systems. Attenuation figures published in this brochure have been derived from laboratory test data, modified by New Zealand based infield test results. NCS can provide a certificate of compliance that guarantees the acoustic performance.

## MELINEX INSERTION LOSS (dB)

ID (size)	Model	Frequency (Hz)							
		63	125	250	500	1k	2k	4k	8k
150 200 250	LP-3D-M	6	9	12	19	25	22	17	17
	LP-3D-M	4	6	8	18	25	19	10	11
	LP-3D-M	2	4	7	16	22	13	8	8
315 to 560	LP-1D-M	2	4	6	9	11	7	5	6
	LP-2D-M	4	8	10	15	17	11	8	9
	LP-3D-M	4	9	11	18	24	17	13	14
	HP-1D-M	4	6	7	11	14	13	10	11
	HP-2D-M	7	11	12	21	21	19	17	17
	HP-2D-1P-M	4	7	9	15	21	19	15	16
630 to 800	HP-3D-2P-M	7	12	14	24	28	25	21	22
	LP-1D-M	3	5	7	12	11	6	5	5
	LP-2D-M	6	8	11	20	18	9	8	8
	LP-3D-M	6	9	14	27	24	14	12	11
	HP-1D-M	4	6	8	15	17	14	12	8
	HP-2D-M	7	11	13	25	26	21	19	14
	HP-2D-1P-M	4	7	11	22	23	19	16	11
1000 to 1250	HP3D-2P-M	7	12	15	32	32	26	23	17
	LP-1D-M	3	5	8	12	10	5	5	5
	LP-2D-M	6	9	11	18	15	9	7	8
	HP-1D-M	4	6	10	17	14	10	9	9
	HP-2D-M	7	12	15	25	21	17	14	13
	HP-2D-1P-M	4	8	14	24	20	14	12	11
1400 to 2000	HP3D-2P-M	7	14	19	32	27	21	17	15
	LP-1D-M	4	5	9	12	8	5	4	5
	LP-2D-M	8	9	12	17	13	7	6	7
	HP-1D-M	6	8	10	18	14	9	7	7
	HP-2D-M	10	14	18	19	16	14	10	11
	HP2D-1P-M	7	12	15	25	19	13	9	9
HP3D-2P-M	11	18	23	26	20	17	12	13	

## ADDITIONAL INFORMATION

### Installation

We offer installation, testing, monitoring and maintenance services. Alternatively, visit our website or contact us for the **Installation Guide** relevant to this product.

### Technical Guides

Visit our website or contact us for **Technical Guides** and the **Producer Statement** relevant to this product.

*Data correct at time of publication, please ensure you have the latest version by checking our website. NCS Acoustics Limited accepts no liability for use of data within this brochure. Materials may be updated at any time without notice.*

## OTHER MODELS & CUSTOM-MADE SOLUTIONS

Other models available, visit our website for the full range. Or contact us to discuss which model is best suited to your requirements. If none of our standard models are suitable, we can design and manufacture a solution for you.



Got a question? Call us to discuss  
with an experienced engineer:  
**+64 9 269 0001**

Or visit our website for more information:  
**www.ncsacoustics.co.nz**