Silencer splitter

TUNE-PA

Description

TUNE-PA is the basic element in the TUNE-PS silencer.

TUNE-PA is manufactured with a frame of galvanized sheet and mineral wool absorption material covered by a plastic inter-liner and wire mesh to prevent the migration of fibres into the airstream and to protect the acoustic media from grease and oil in kitchen applications.

The TUNE-PA is available in width 100 and 200 mm.

The TUNE-PA is also available in other lengths than shown in the tables. For Special materials and sizes, please con- tact Lindab sales.

The appearance of odd-sized products may differ from the photo images.

Tools for attenuator design

NOTE that dimensioning your silencer is a delicate bal- ance between numbers of splitters (n) and air pressure in the duct. More splitters provide a better attenuation, but also generate a higher pressure drop which could result in higher energy consumption.

To calculate the attenuator you can use our IT-online tool LindQST, where splitter distance, length and height can be optimized for the best perofmance.

Order code

Product **TUNE-PA** **B** **b** **l**

TUNE-PA

Splitter width (B) in mm

100 or 200 mm

Height (b) in mm

Min. – Max. 200 – 2400 mm

(Single TUNE-PA splitter max. 1200 mm*)

Length (l) in mm

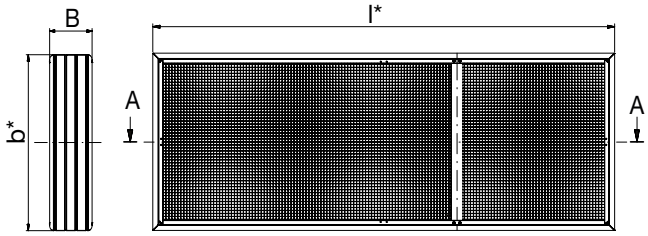
Min. - Max. 450 - 2500 mm

Example: TUNE-PA - 200 - 900 - 1500

In case that height >1200 mm the spiller will be made in 2 pieces.

* The max. height can be increased by stacking two splitters on top of each other.

Dimensions



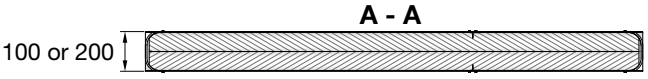
B = 100 or 200

b* = Manufactured height of the splitter is duct height -5 mm

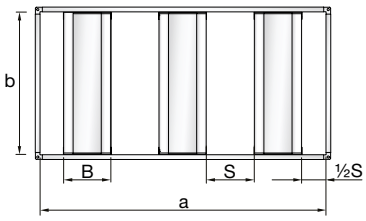
l* = Manufactured length of splitter is duct length -50 mm

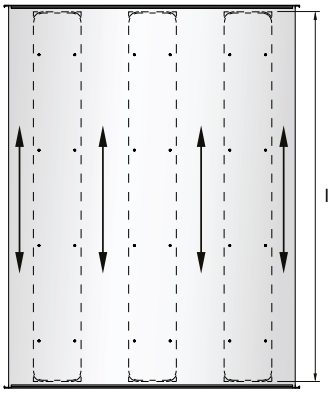
Example: Duct 900w x600h x 1500l, splitter size 595 x 1450 mm

Absorption material covered with black glass fleece surface on outside of visible splitter insulation.



TUNE-PA in duct





Length of splitter should be 50 mm shorter than length of duct.
Due to the symmetrical construction of the TUNE-PA, no special concerns are needed when installing the splitter. Even the airflow direction can later be changed without having to turn the splitter around.

See how to find the numbers of splitters (n) in duct and how to calculate (S) from a given (a) in the seperate rectangular / splitters installation instruction.

Sound sliencer splitter TUNE-PA

Technical data

Splitter Width (B) = 100

Splitter distance (S) = 60 mm

Length l_{nom} [mm]	Insertion loss [dB] for centre frequency [Hz]								Pressure value ξ
	63	125	250	500	1k	2k	4k	8k	
550	1	2	6	15	27	18	12	8	4,3
1050	3	5	14	26	54	31	20	14	5,4
1550	5	8	21	36	50	43	28	20	6,5
2050	6	10	28	46	50	50	36	26	7,6
2550	8	13	35	50	50	50	44	32	8,7

Splitter Width (B) = 100

Splitter distance (S) = 100 mm

Length l_{nom} [mm]	Insertion loss [dB] for centre frequency [Hz]								Pressure value ξ
	63	125	250	500	1k	2k	4k	8k	
550	1	1	4	12	17	11	7	6	1,6
1050	2	3	9	20	50	19	12	9	2,1
1550	4	5	14	28	50	27	17	13	2,5
2050	5	6	19	35	50	35	22	17	2,9
2550	6	8	24	43	50	43	27	21	3,3

Splitter Width (B) = 100

Splitter distance (S) = 140 mm

Length l_{nom} [mm]	Insertion loss [dB] for centre frequency [Hz]								Pressure value ξ
	63	125	250	500	1k	2k	4k	8k	
550	1	1	3	10	12	8	5	4	0,9
1050	2	2	7	17	25	14	9	7	1,1
1550	3	3	11	23	37	20	12	10	1,3
2050	4	5	15	30	50	26	16	13	1,5
2550	5	6	19	37	50	32	20	16	1,7

Splitter Width (B) = 200

Splitter distance (S) = 60 mm

Length l_{nom} [mm]	Insertion loss [dB] for centre frequency [Hz]								Pressure value ξ
	63	125	250	500	1k	2k	4k	8k	
550	3	5	15	23	32	22	14	11	17,5
1050	4	11	27	44	50	38	22	15	20,3
1550	6	17	40	50	50	50	30	19	23,2
2050	8	22	50	50	50	50	38	23	26,1
2550	9	28	50	50	50	50	46	27	29,0

Splitter Width (B) = 200

Splitter distance (S) = 100 mm

Length l_{nom} [mm]	Insertion loss [dB] for centre frequency [Hz]								Pressure value ξ
	63	125	250	500	1k	2k	4k	8k	
550	2	4	11	16	19	13	9	7	5,7
1050	3	8	19	31	40	22	13	9	6,6
1550	4	12	28	45	50	31	18	12	7,5
2050	6	16	36	50	50	40	23	15	8,5
2550	7	20	45	50	50	49	28	17	9,4

Splitter Width (B) = 200

Splitter distance (S) = 140 mm

Length l_{nom} [mm]	Insertion loss [dB] for centre frequency [Hz]								Pressure value ξ
	63	125	250	500	1k	2k	4k	8k	
550	2	3	8	13	14	9	6	5	2,7
1050	3	7	15	24	29	15	10	7	3,2
1550	4	10	22	36	44	21	13	9	3,6
2050	5	13	29	47	50	28	16	11	4,0
2550	6	17	35	50	50	34	20	13	4,5

NB. Max. attenuation specified is 50 dB in the tables above.

The pressure loss Δp in Pa can be calculated from the pressure value ξ: $\Delta p = 0{,}6 \times v^2 \times \xi$, where (v) is the velocity on the face area of the silencer.