Sound silencer splitter TUNE-A

Description

TUNE-A is the basic element in the TUNE silencer series. TUNE-A is manufactured with a frame of galvanized sheet and mineral wool absorption material covered with glass fleece surface.

The TUNE-A is available in width 100, 150 and 200 mm. The TUNE-A is also available in other lengths than shown in the tables.

Special materials and sizes, please contact to Lindab sales.

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

Tools for dimensioning and planning

NOTE that dimensioning your silencer is a delicate balance between numbers of splitters (n) and pressure loss over the sound attenuator. More splitters give a higher attenuation, but also a higher pressure loss in duct. A higher pressure loss will result in a higher energy consumption to make system run.

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.

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

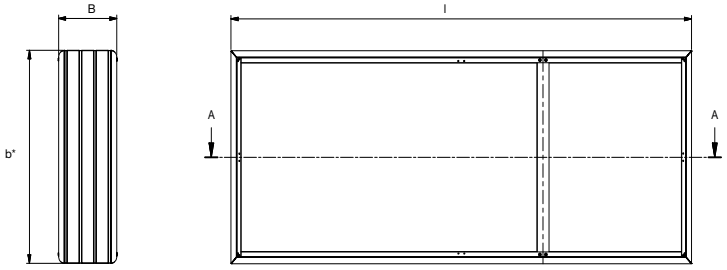
Product	**TUNE-A**	**B**	**b**	**l**
TUNE-A				
Splitter width (B) in mm				
100, 150 or 200 mm				
Height (b) in mm				
Min. – Max. 200 – 2400 mm				
(Single TUNE-A splitter max. 1200 mm*)				
Length (l) in mm				
Min. - Max. 450 - 2500 mm				

Example: TUNE- A - 200 - 900 - 1500

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

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

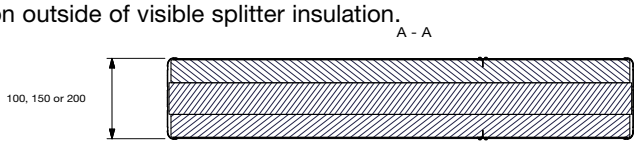
Dimensions



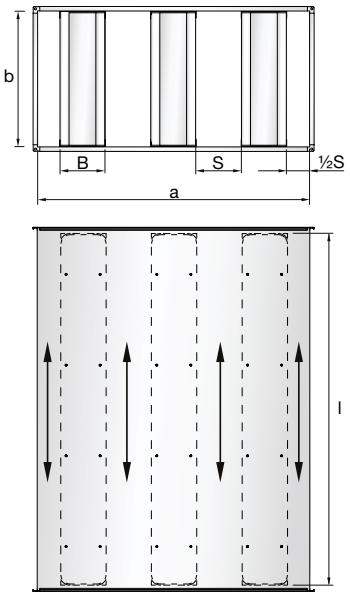
b* = Manufactured height of splitter is b-5 mm, to fit into duct.

B=100, 150 or 200
l = nominal length, which is 50 mm less than duct length. (Please state when order is made, if actual length is required)

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



TUNE-A in duct



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

Sound silencer splitter TUNE-A

Technical data

Splitter Width (B) = 100

Splitter distance (S) = 60 mm

Length l_{nom} [mm]	Insertion loss [dB] for centre frequency [Hz] 63	125	250	500	1k	2k	4k	8k	Pressure value ξ
550	1	4	7	14	25	27	21	16	4,3
1050	2	6	13	23	44	48	32	22	5,4
1550	4	8	19	31	50	50	43	29	6,5
2050	5	11	25	40	50	50	50	35	7,6
2550	7	13	32	48	50	50	50	41	8,7

Splitter Width (B) = 150

Splitter distance (S) = 60 mm

Length l_{nom} [mm]	Insertion loss [dB] for centre frequency [Hz] 63	125	250	500	1k	2k	4k	8k	Pressure value ξ
550	3	5	10	22	31	30	19	16	8,2
1050	6	10	19	35	50	50	33	24	10,5
1550	8	14	27	47	50	50	46	32	12,9
2050	11	19	36	50	50	50	50	40	15,2
2550	14	23	45	50	50	50	50	48	17,6

Splitter Width (B) = 100

Splitter distance (S) = 100 mm

Length l_{nom} [mm]	Insertion loss [dB] for centre frequency [Hz] 63	125	250	500	1k	2k	4k	8k	Pressure value ξ
550	1	2	5	11	20	17	13	10	1,6
1050	2	4	9	18	34	30	19	13	2,1
1550	3	5	13	24	49	43	26	17	2,5
2050	4	6	17	31	50	50	32	21	2,9
2550	5	8	22	37	50	50	39	25	3,3

Splitter Width (B) = 150

Splitter distance (S) = 100 mm

Length l_{nom} [mm]	Insertion loss [dB] for centre frequency [Hz] 63	125	250	500	1k	2k	4k	8k	Pressure value ξ
550	2	3	7	17	21	18	12	9	2,8
1050	4	6	14	27	42	34	20	14	3,6
1550	6	9	20	38	50	49	28	19	4,4
2050	8	12	26	48	50	50	36	24	5,2
2550	11	15	33	50	50	50	44	29	6,0

Splitter Width (B) = 100

Splitter distance (S) = 140 mm

Length l_{nom} [mm]	Insertion loss [dB] for centre frequency [Hz] 63	125	250	500	1k	2k	4k	8k	Pressure value ξ
550	1	2	4	10	17	12	9	7	0,9
1050	2	3	7	15	29	22	14	10	1,1
1550	3	4	10	21	41	32	18	12	1,3
2050	3	5	14	26	50	41	23	15	1,5
2550	4	6	17	32	50	50	28	18	1,7

Splitter Width (B) = 150

Splitter distance (S) = 140 mm

Length l_{nom} [mm]	Insertion loss [dB] for centre frequency [Hz] 63	125	250	500	1k	2k	4k	8k	Pressure value ξ
550	2	2	6	15	16	13	8	7	8,2
1050	3	5	11	24	32	25	14	10	10,5
1550	5	7	16	32	48	36	20	14	12,9
2050	7	9	21	41	50	48	26	17	15,2
2550	9	11	27	50	50	50	32	21	17,6

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 attenuator.

Sound silencer splitter TUNE-A

Technical data

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	2	6	12	24	36	38	28	18	17,5
1050	4	12	20	42	50	50	44	24	20,3
1550	5	17	27	50	50	50	50	31	23,2
2050	7	22	34	50	50	50	50	37	26,1
2550	8	27	41	50	50	50	50	44	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	5	10	19	24	20	15	11	5,7
1050	3	8	15	33	44	36	23	15	6,6
1550	4	12	21	46	50	50	32	19	7,5
2050	5	16	27	50	50	50	40	23	8,5
2550	6	20	33	50	50	50	49	27	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	1	4	8	16	18	14	10	8	2,7
1050	2	7	13	28	33	24	15	11	3,2
1550	3	10	18	39	49	35	21	14	3,6
2050	4	13	23	50	50	46	26	17	4,0
2550	5	16	28	50	50	50	32	20	4,5

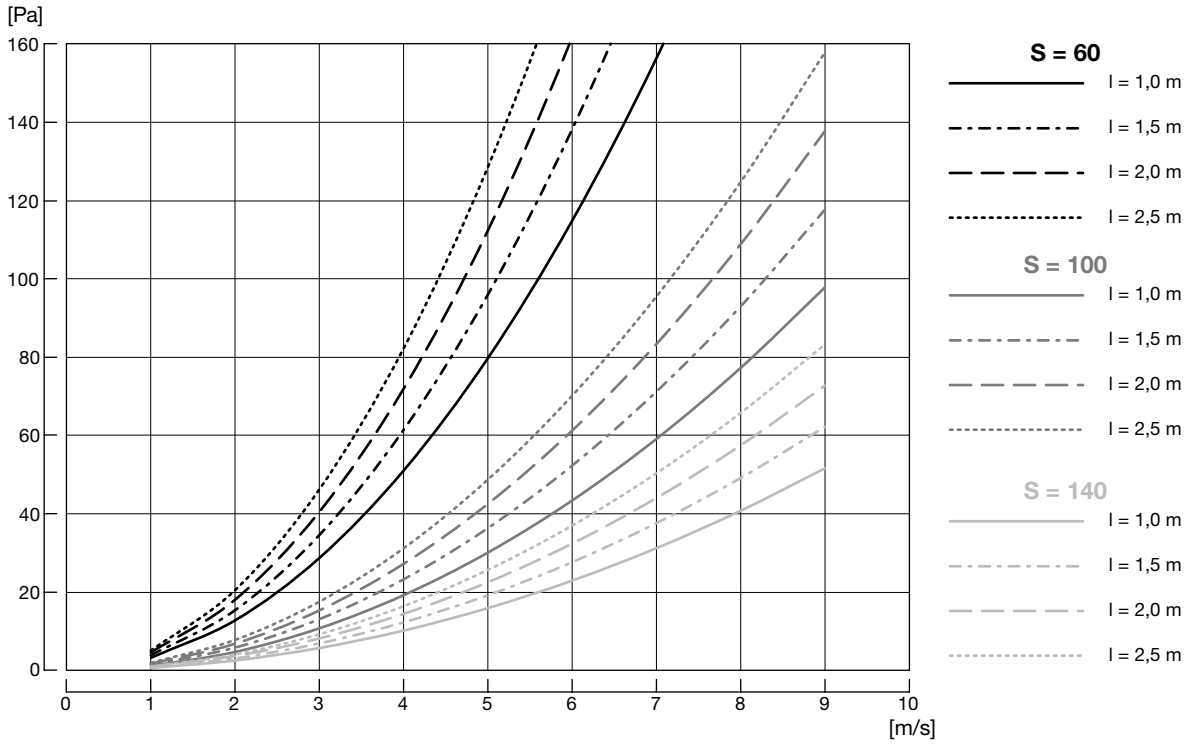
Rectangular straight attenuator TUNE-A

Technical data

Pressure loss

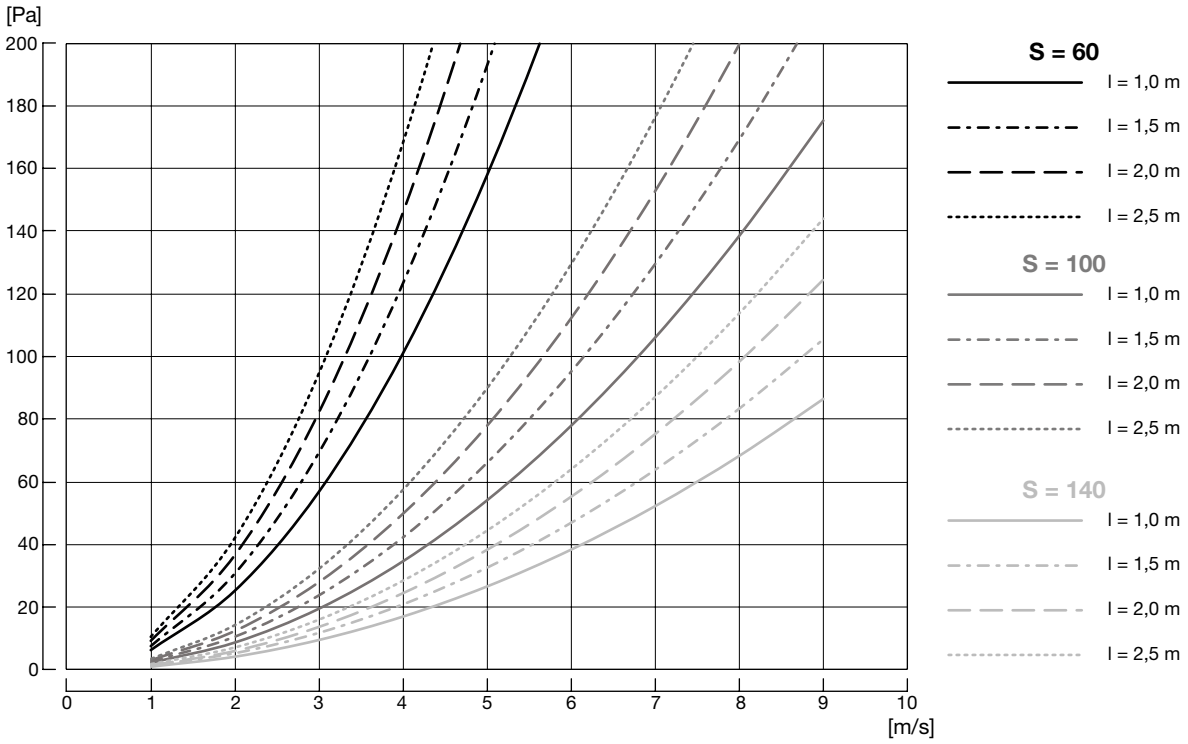
TUNE-S with splitter width (B) = 100

(S) is distance between splitters.



TUNE-PS with splitter width (B) = 150

(S) is distance between splitters.



Rectangular straight attenuator TUNE-A

Technical data

TUNE-PS with splitter width (B) = 200

(S) is distance between splitters.