

Aerodynamically optimised  
splitter frame



Conforms to VDI 6022

# Attenuators

## XK



### Splitter with high insertion loss with broadband attenuation even in the low frequency range

Sound attenuator splitters, installation kit to be used in ventilation and air conditioning systems

- Attenuation effect due to absorption
- Energy efficient due to aerodynamically formed frame (bullnose radius 20 mm)
- Acoustic data measured to ISO 7235
- Sound absorbing material is biosoluble and hence hygienically safe
- Sound absorbing material faced with glass fibre fabric as a protection against erosion due to airflow velocities up to 20 m/s
- For use in areas with potentially explosive atmospheres (according to EC Directive 2014/34/EU (ATEX)), zones 1, 2, and zones 21 and 22 (outside) according to EC Directive 1999/92/EC
- Operating temperature up to 100 °C, with expanded metal (variant L) up to 300 °C for a limited period of time

Optional equipment and accessories

- Expanded metal as an additional mechanical protection for the sound absorbing material
- Stainless steel variant A2 (1.4301), with optional perforated metal facing as an additional protection for the sound absorbing material
- Other stainless steel and aluminium variants as well as PUR coating upon request
- U-sheets and clamp sheets to join subdivided attenuator splitters

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## General information

### Application

- Sound attenuator splitters are used for the reduction of fan noise and air-regenerated noise in ventilation and air conditioning systems
- Attenuation effect due to absorption
- Broadband attenuation even in the high frequency range
- Hygiene tested and compliant with VDI 6022
- For use in areas with a potentially explosive atmosphere (EC Directive 2014/34/EU (ATEX)), zones 1, 2, 21 and 22 (outside) according to Directive 1999/92/EC

### Special characteristics

- Increased insertion loss even in the high-frequency range
- Energy savings due to aerodynamically profiled splitter frame
  - Up to 30 % lower differential pressure
- Hygiene tested and compliant with VDI 6022
- Multi-section construction available for large dimensions

### Nominal sizes

- H: 150 – 2500 mm
- L: 500, 750, 1000, 1250, 1500, 1750, 2000, 2250, 2500 mm
- Intermediate sizes of H and L are possible: 150 – 2500 mm in increments of 1 mm
- Undivided construction: H + L 600 mm min., 4000 mm max., 100 kg max.
  - Size limit for H or L: If one dimension is greater than 1500 mm, the other one must not exceed 1500 mm
- Height or length subdivided in case of a deviation and for sizes 2501 – 5000 mm
  - Height subdivided from H  $\geq$  2501 mm, otherwise with the length subdivided

### Variants

- XK100: splitter thickness 100 mm
- XK200: splitter thickness 200 mm
- XK230: splitter thickness 230 mm
- XK300: splitter thickness 300 mm

### Construction

#### Splitter surface

- F: Glass fibre fabric
- L: glass fibre fabric faced with expanded metal as an additional mechanical protection for the sound absorbing material

#### Materials and surfaces

- No entry: galvanised steel 1.0917
- A2: stainless steel 1.4301
  - Construction L: Glass fibre fabric with perforated metal facing as an additional mechanical protection for the sound absorbing material
- P1: Powder-coated, RAL 7001, silver grey

### Parts and characteristics

- Aerodynamically profiled frame
  - Reduced weight and increased rigidity due to special profile
  - Helps to optimise the airflow, hence reducing the air-regenerated noise
  - Reduces the pressure loss
  - Covers the edges of the sound absorbing material
- Sound absorbing material fitted to reduce air-regenerated noise by absorption

### Accessories

- UU-sheets/clamp sheets to join subdivided attenuator splitters (included with subdivided splitter constructions)

### Construction features

- Aerodynamically formed splitter frame (bullnose radius 20 mm) that helps to reduce turbulence on both the upstream and downstream sides; frame with grooves for increased rigidity
- Frame edges are folded to protect the infill
  - Operating temperature up to 100 °C; variant L up to 300 °C for 8h max.

### Material and surfaces

- Splitter frame and centre mullion made of galvanised sheet steel 1.0917 or stainless steel 1.4301
- Expanded metal cover made of galvanised steel 1.0917
- Perforated metal facing made of stainless steel 1.4301
- Sound absorbing material mineral wool
  - According to EN 13501, fire rating class A1, non-combustible
  - RAL quality mark RAL-GZ 388
  - Non-hazardous thanks to high biosolubility according to the German Ordinance on Hazardous Substances and Note Q of the European Regulation (EC) No. 1272/2008
  - Faced with glass fibre fabric, as a protection against erosion from airflow velocities of up to 20 m/s
  - Inert to fungal and bacterial growth according to EN 846

### Standards and guidelines

- Insertion loss and sound power level of air-regenerated noise tested to ISO 7235
- Meets the hygiene requirements of VDI 6022, VDI 3803 Part 1 and DIN 1946 Part 4
- EC Directive 2014/34/EC (ATEX): Equipment and protective systems intended for use in areas with potentially explosive atmospheres
- EC Directive 1999/92/EC (ATEX): Improvement of the safety and health protection of workers potentially at risk from explosive atmospheres

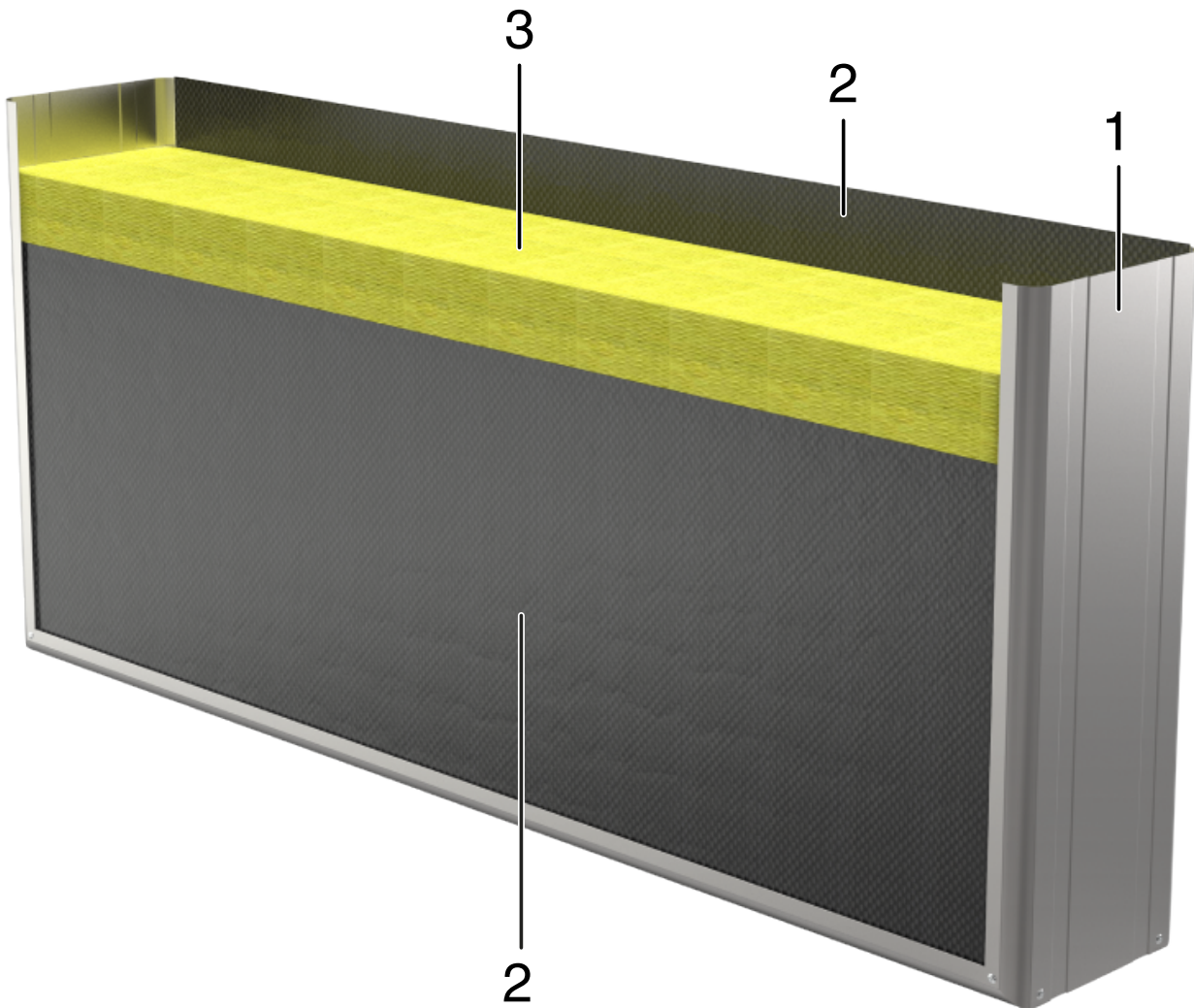
### Maintenance

- Low maintenance as construction and materials are not subject to wear

## Function

The attenuation effect of the XK splitters is due to absorption. The splitters have a mineral wool infill as sound absorbing material.

### Schematic illustration of XK



- 1 Splitter frame
- 2 Glass fibre fabric (facing)
- 3 Sound absorbing material

### Technical data

Splitter thickness	100, 200, 230, 300 mm
Nominal sizes (H × L)	150 × 450 – 1500 × 2500 mm, 450 × 150 – 2500 × 1500 mm
Height subdivide	2501 – 5000 mm or if H and L > 1500 mm
Length subdivided	2501 – 5000 mm or if H and L > 1500 mm
Intermediate sizes	In increments of 1 mm
Operating temperature	Up to 100 °C, variant L up to 300 °C for 8 h max.

The length (L) of sound attenuator splitters refers to the airflow direction.

### Quick sizing

Quick sizing tables provide a good overview of the insertion loss and of differential pressures for different airway widths and airflow velocities. Intermediate values can be calculated with our Easy Product Finder design program.

The differential pressures apply to sound attenuators with a height of 1 m.

#### XK100, XS100, insertion loss $D_e$ [dB] and differential pressure $\Delta p_t$ [Pa]

L	Airway width	Centre frequency $f_m$ [Hz]								$v_s$ [m/s]		
		63	125	250	500	1000	2000	4000	8000	6	10	14
500	50	4	8	6	18	35	40	27	22	10	29	56
500	100	4	4	4	15	27	22	15	10	8	23	45
1000	50	6	10	14	28	44	48	35	29	13	37	72
1000	80	5	7	10	24	38	38	27	20	10	28	55
1000	100	5	5	8	23	36	33	23	15	9	26	51
1500	50	7	13	21	38	> 50	> 50	43	37	16	44	87
1500	80	6	9	16	33	48	48	35	26	12	32	63
1500	100	6	7	13	30	45	45	31	21	10	29	56
2000	50	8	16	29	48	> 50	> 50	> 50	45	19	52	102
2000	80	7	10	21	41	> 50	> 50	43	33	13	36	70
2000	100	7	8	18	38	> 50	> 50	39	27	11	32	62
2500	50	10	18	36	> 50	> 50	> 50	> 50	> 50	22	60	118
2500	80	8	12	27	49	> 50	> 50	> 50	39	14	40	78
2500	100	8	9	22	45	> 50	> 50	48	33	12	34	67
3000	50	11	21	44	> 50	> 50	> 50	> 50	> 50	24	68	133
3000	80	10	14	33	> 50	> 50	> 50	> 50	45	16	44	85
3000	100	9	10	27	> 50	> 50	> 50	> 50	38	13	37	73

**XK200, XS200, insertion loss  $D_e$  [dB] and differential pressure  $\Delta p_i$  [Pa]**

L	Airway width	Centre frequency $f_m$ [Hz]								$v_s$ [m/s]		
		63	125	250	500	1000	2000	4000	8000	6	10	14
500	50	4	9	14	27	42	38	25	19	21	58	114
500	100	2	5	10	19	28	24	16	12	11	31	61
1000	50	5	14	21	43	> 50	> 50	36	25	24	67	131
1000	80	4	10	18	35	46	41	27	19	15	43	84
1000	100	4	9	16	32	41	35	23	16	13	35	69
1500	50	7	19	29	> 50	> 50	> 50	47	31	27	75	147
1500	80	6	14	24	49	> 50	> 50	35	23	17	48	94
1500	100	5	12	22	44	> 50	46	30	19	14	40	78
2000	50	9	24	36	> 50	> 50	> 50	> 50	37	30	83	164
2000	80	7	19	31	> 50	> 50	> 50	44	27	19	53	105
2000	100	6	16	28	> 50	> 50	> 50	37	23	16	44	86
2000	200	3	9	19	40	44	31	16	9	9	25	50
2500	50	11	29	44	> 50	> 50	> 50	> 50	42	33	92	180
2500	80	9	23	37	> 50	> 50	> 50	> 50	32	21	59	115
2500	100	8	20	34	> 50	> 50	> 50	44	27	17	48	94
2500	200	4	11	24	49	> 50	38	19	11	10	28	54
3000	50	13	34	> 50	> 50	> 50	> 50	> 50	48	36	100	197
3000	80	10	27	44	> 50	> 50	> 50	> 50	36	23	64	126
3000	100	9	23	40	> 50	> 50	> 50	> 50	30	19	53	103
3000	200	5	13	29	> 50	> 50	45	22	12	11	30	59

**XK230, XS230, insertion loss  $D_e$  [dB] and differential pressure  $\Delta p_i$  [Pa]**

L	Airway width	Centre frequency $f_m$ [Hz]								$v_s$ [m/s]		
		63	125	250	500	1000	2000	4000	8000	6	10	14
500	80	3	6	11	22	30	22	16	15	15	43	84
500	100	3	5	10	19	26	19	14	14	13	35	69
1000	80	4	10	18	32	42	34	23	19	18	49	97
1000	100	4	9	17	29	38	30	20	17	14	40	78
1000	200	3	6	12	20	23	17	11	10	8	23	44
1500	80	5	14	25	41	> 50	47	30	22	20	56	109
1500	100	5	13	23	38	49	41	26	20	16	45	88
1500	200	4	8	18	27	32	23	14	12	9	25	49
2000	80	6	18	32	> 50	> 50	> 50	37	26	22	62	121
2000	100	6	16	30	47	> 50	> 50	32	23	18	50	98
2000	200	4	11	23	35	40	28	17	14	10	28	54
2500	80	7	22	39	> 50	> 50	> 50	43	29	25	68	134
2500	100	7	20	37	> 50	> 50	> 50	38	26	20	55	108
2500	200	5	13	28	42	48	34	20	16	11	30	59
3000	80	8	26	46	> 50	> 50	> 50	50	32	27	74	146
3000	100	8	24	43	> 50	> 50	> 50	44	29	22	60	117
3000	200	6	16	33	50	> 50	40	24	18	12	33	64

**XK300, XS300, insertion loss  $D_e$  [dB] and differential pressure  $\Delta p_t$  [Pa]**

L	Airway width	Centre frequency $f_m$ [Hz]								$v_s$ [m/s]		
		63	125	250	500	1000	2000	4000	8000	6	10	14
500	80	3	7	15	22	29	26	18	12	21	58	113
500	100	3	6	13	20	26	23	16	11	17	46	91
1000	80	5	12	23	34	42	37	24	16	23	65	127
1000	100	4	11	21	31	38	33	22	14	18	51	101
1000	200	3	8	16	22	25	21	13	10	10	27	53
1500	80	6	17	32	45	> 50	47	30	20	26	72	141
1500	100	5	16	29	42	50	42	27	18	20	56	111
1500	200	3	12	22	29	33	27	17	11	11	29	57
2000	80	7	23	40	> 50	> 50	> 50	36	23	28	79	154
2000	100	6	21	37	> 50	> 50	> 50	32	21	22	62	121
2000	200	4	15	28	37	41	33	20	13	11	31	61
2500	80	9	28	49	> 50	> 50	> 50	42	27	31	86	168
2500	100	8	26	45	> 50	> 50	> 50	37	24	24	67	131
2500	200	5	19	34	45	50	39	24	15	12	33	65
3000	80	10	34	> 50	> 50	> 50	> 50	48	30	33	93	182
3000	100	9	31	> 50	> 50	> 50	> 50	43	27	26	72	141
3000	200	6	23	40	> 50	> 50	45	27	17	13	35	69

## Specification text

This specification text describes the general properties of the product. Texts for variants can be generated with our Easy Product Finder design program.

### Specification text

Sound attenuator splitters used for the reduction of fan noise and air-regenerated noise in air conditioning systems. Attenuation effect due to absorption. Energy-saving as well as hygiene tested. The installation kit consists of an aerodynamically profiled frame (bullnose radius of 20 mm) and sound absorbing material. The splitter frame reduces pressure losses and air-regenerated noise. The special profile helps to reduce the weight and increase the rigidity of the splitters. Frame edges are folded to protect the sound absorbing infill. Insertion loss and sound power level of air-regenerated noise measured according to EN ISO 7235. Hygiene compliant with VDI 6022, VDI 3803 Part 1 and DIN 1946 Part 4. Suitable for areas with potentially explosive atmospheres (ATEX), zones 1, 2, 21 and 22 (outside) according to Directive 1999/92/EC.

### Special characteristics

- Increased insertion loss even in the high-frequency range
- Energy savings due to aerodynamically profiled splitter frame
  - Up to 30 % lower differential pressure
- Hygiene tested and compliant with VDI 6022
- Multi-section construction available for large dimensions

### Material and surfaces

- Splitter frame and centre mullion made of galvanised sheet steel 1.0917 or stainless steel 1.4301
- Expanded metal cover made of galvanised steel 1.0917
- Perforated metal facing made of stainless steel 1.4301
- Sound absorbing material mineral wool
  - According to EN 13501, fire rating class A1, non-combustible
  - RAL quality mark RAL-GZ 388
  - Non-hazardous thanks to high biosolubility according to the German Ordinance on Hazardous Substances and Note Q of the European Regulation (EC) No. 1272/2008
  - Faced with glass fibre fabric, as a protection against erosion from airflow velocities of up to 20 m/s

- Inert to fungal and bacterial growth according to EN 846

### Construction

Splitter surface

- F: Glass fibre fabric
- L: glass fibre fabric faced with expanded metal as an additional mechanical protection for the sound absorbing material

Materials and surfaces

- No entry: galvanised steel 1.0917
- A2: stainless steel 1.4301
  - Construction L: Glass fibre fabric with perforated metal facing as an additional mechanical protection for the sound absorbing material
- P1: Powder-coated, RAL 7001, silver grey

### Technical data

- Splitter thickness: 100, 200, 230, 300 mm
- Dimensions: 150 × 450 – 1500 × 2500 mm, 450 × 150 – 2500 × 1500 mm
- Height subdivided: up to 5000 mm
- Length subdivided: up to 5000 mm
- Intermediate sizes: in increments of 1 mm
- Operating temperature: up to 100 °C, variant L up to 300 °C for 8 h max.

The length (L) of splitter sound attenuators refers to the airflow direction.

### Sizing data

- B [mm]
- H [mm]
- L (in airflow direction) [mm]
- $q_v$  (m<sup>3</sup>/h)
- $D_e$  At 250 Hz [dB]
- $\Delta p_{st}$  [Pa]

## Order code

XK - ... - F - A2 / 200 × 600 × 1500

1	2	3	4	5	6	7

**1 Type**

XK Sound attenuator splitter

**2 Variant**

No entry: TROX standard variants

**3 Splitter surface**

F Glass fibre fabric

L Glass fibre fabric and expanded metal

**4 Material**

No entry: galvanised steel (1.0917)

A2 Stainless steel (1.4301)

P1 Powder-coated RAL 7001, silver grey

**5 Splitter thickness [mm]**

100, 200, 230, 300

**6 Height [mm]**

150 – 5000

**7 Length in airflow direction [mm]**

150 – 5000

**Order example: XK-L/200×1500×1000****Splitter surface**

Glass fibre fabric and expanded metal

**Splitter thickness**

200 mm

**Height**

1500 mm

**Length**

1000 mm

**Assembly material SDK**

To be ordered separately if splitters are to be subdivided by others.

SDK - A2 / 200 / 2

1	2	3	4

**1 Type**

SDK Accessories for splitters

**2 Material**

No entry: galvanised steel (1.0917)

A2 Stainless steel (1.4301)

P1 Galvanised steel (1.0917) and powder-coated, RAL 7001 (silver grey)

**3 Splitter thickness T [mm]**

100 contains 2 U-sheets

200 contains 2 U-sheets

230 contains 2 U-sheets

300 contains 2 U-sheets

**4 Number of clamping plates for connection point**

No entry: without clamping plates (for H or L ≤ 750 mm)

2 for H or L 751 - 1000 mm

4 for H or L ≥ 1001 mm

**Order example: SDK-A2/200/2****Material**

Stainless steel (1.4301)

**Splitter thickness**

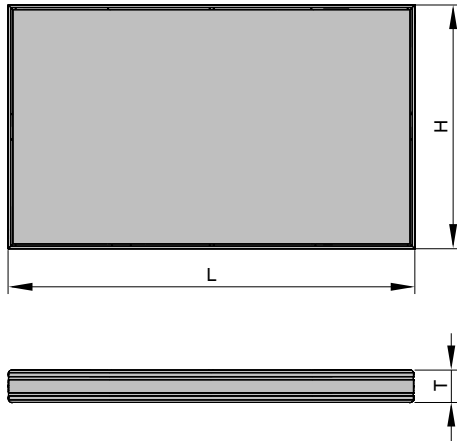
200 mm, with 2 U-sheets

**No. of clamp sheets**

2



## Dimensions



- H: 150 – 2500 mm
- L: 500, 750, 1000, 1250, 1500, 1750, 2000, 2250, 2500 mm
- Intermediate sizes of H and L are possible: 150 – 2500 mm in increments of 1 mm
- Undivided construction: H + L 600 mm min., 4000 mm max., 100 kg max.
- Size limit for H or L: If one dimension is greater than 1500 mm, the other one must not exceed 1500 mm
- Height or length subdivided is possible for sizes 2501 – 5000 mm

The total weight for intermediate sizes can be generated with our Easy Product Finder design program.

## Weights

### XK 100 – Glass fibre fabric (-F)

H	L								
	500	750	1000	1250	1500	1750	2000	2250	2500
500	3	3	4	5	6	7	8	9	9
750	3	4	5	6	7	9	10	11	12
1000	4	5	7	8	10	11	13	14	15
1250	5	6	8	10	12	14	15	19	20
1500	6	7	10	12	14	16	20	22	23
1750	7	9	11	14	16	X	X	X	X
2000	8	10	13	15	17	X	X	X	X
2250	9	11	14	16	19	X	X	X	X
2500	9	12	15	18	21	X	X	X	X

X = subdivided construction

### XK 100 – Glass fibre fabric and expanded metal (-L)

H	L								
	500	750	1000	1250	1500	1750	2000	2250	2500
500	4	5	7	8	9	11	12	14	15
750	5	7	9	11	13	15	17	19	21
1000	7	9	11	14	18	20	22	25	27
1250	8	11	14	18	21	24	27	32	35
1500	9	13	17	21	24	28	34	38	41
1750	7	9	11	14	16	X	X	X	X
2000	8	10	13	15	17	X	X	X	X
2250	9	11	14	16	19	X	X	X	X
2500	9	12	15	18	21	X	X	X	X

X = subdivided construction

### XK 100 – Glass fibre fabric and perforated sheet metal (-L-A2)

H	L								
	500	750	1000	1250	1500	1750	2000	2250	2500
500	4	5	7	10	12	14	16	18	20
750	5	7	10	13	16	19	23	26	29
1000	7	10	13	17	21	26	30	34	38
1250	8	12	16	21	27	32	37	41	48
1500	9	14	19	26	32	37	43	52	57
1750	16	23	30	37	43	X	X	X	X
2000	18	26	34	41	49	X	X	X	X
2250	21	29	38	46	55	X	X	X	X
2500	23	32	41	51	60	X	X	X	X

X = subdivided construction

### XK 200 – Glass fibre fabric (-F)

H	L								
	500	750	1000	1250	1500	1750	2000	2250	2500
500	4	6	7	9	10	12	13	15	16
750	6	8	10	12	13	16	18	20	22
1000	7	10	12	14	18	20	23	25	27
1250	9	12	14	18	21	24	27	32	35
1500	10	13	18	21	24	28	34	37	40
1750	12	16	20	24	28	X	X	X	X
2000	14	18	23	27	31	X	X	X	X
2250	15	20	25	30	35	X	X	X	X
2500	17	22	27	33	38	X	X	X	X

X = subdivided construction

### XK 200 – Glass fibre fabric and expanded metal (-L)



H	L								
	500	750	1000	1250	1500	1750	2000	2250	2500
500	6	8	10	12	14	16	18	20	22
750	8	10	13	16	19	22	25	28	31
1000	10	13	17	20	25	29	32	36	39
1250	12	16	20	26	30	35	39	45	50
1500	14	19	25	30	35	41	48	53	58
1750	16	23	29	35	41	X	X	X	X
2000	18	25	32	39	46	X	X	X	X
2250	21	28	36	43	51	X	X	X	X
2500	23	31	39	47	56	X	X	X	X

X = subdivided construction

#### XK 230 – Glass fibre fabric (-F)

H	L								
	500	750	1000	1250	1500	1750	2000	2250	2500
500	5	7	8	10	12	14	15	17	19
750	7	9	11	13	15	18	20	22	25
1000	8	11	14	16	20	23	26	28	31
1250	10	13	16	21	24	28	31	36	39
1500	12	15	20	24	28	32	38	42	46
1750	14	18	23	28	32	X	X	X	X
2000	16	21	26	31	36	X	X	X	X
2250	17	23	28	34	39	X	X	X	X
2500	19	25	31	37	43	X	X	X	X

X = subdivided construction

#### XK 230 – Glass fibre fabric and expanded metal (-L)

H	L								
	500	750	1000	1250	1500	1750	2000	2250	2500
500	6	8	11	13	15	18	20	22	24
750	8	11	14	18	21	24	27	30	33
1000	11	14	18	22	27	31	35	39	43
1250	13	18	22	28	33	38	43	49	54
1500	15	21	27	33	38	44	52	58	63
1750	18	25	31	38	44	X	X	X	X
2000	20	28	35	43	50	X	X	X	X
2250	23	31	39	47	55	X	X	X	X
2500	25	34	43	52	61	X	X	X	X

X = subdivided construction

**XK 230 – Glass fibre fabric and perforated sheet metal (-L-A2)**

H	L									
	500	750	1000	1250	1500	1750	2000	2250	2500	
500	8	11	14	16	19	23	26	29	32	
750	11	15	19	23	27	32	36	40	44	
1000	14	19	24	29	36	41	47	52	57	
1250	16	23	29	37	44	51	57	66	72	
1500	19	27	36	44	51	60	70	78	85	
1750	23	32	41	51	60	X	X	X	X	
2000	26	36	47	57	67	X	X	X	X	
2250	29	41	52	64	75	X	X	X	X	
2500	32	45	57	70	83	X	X	X	X	

X = subdivided construction

**XK 300 – Glass fibre fabric (-F)**

H	L									
	500	750	1000	1250	1500	1750	2000	2250	2500	
500	6	8	10	13	15	17	19	21	23	
750	8	11	14	17	19	23	26	28	31	
1000	10	14	17	21	26	29	33	36	40	
1250	13	17	21	26	30	35	39	45	50	
1500	15	19	25	30	35	41	48	53	58	
1750	18	23	29	35	41	X	X	X	X	
2000	20	26	33	39	46	X	X	X	X	
2250	22	29	36	43	50	X	X	X	X	
2500	24	32	40	47	55	X	X	X	X	

X = subdivided construction

**XK 300 – Glass fibre fabric and expanded metal (-L)**

H	L									
	500	750	1000	1250	1500	1750	2000	2250	2500	
500	7	10	13	15	18	21	24	27	29	
750	10	14	17	21	25	29	33	36	40	
1000	13	17	22	27	33	37	42	47	51	
1250	15	21	27	33	39	45	51	59	64	
1500	18	25	32	39	46	53	62	69	75	
1750	22	30	37	45	53	X	X	X	X	
2000	24	33	42	51	60	X	X	X	X	
2250	27	37	47	57	66	X	X	X	X	
2500	30	41	51	62	73	X	X	X	X	

X = subdivided construction

**XK 300 – Glass fibre fabric and perforated sheet metal (-L-A2)**

H	L									
	500	750	1000	1250	1500	1750	2000	2250	2500	
500	9	12	16	19	23	26	30	33	37	
750	12	17	22	27	31	37	41	46	51	
1000	16	22	28	34	41	48	54	60	66	
1250	19	27	34	42	50	58	65	75	82	
1500	23	31	41	50	59	68	80	89	97	
1750	27	37	48	58	68	X	X	X	X	
2000	30	42	54	65	77	X	X	X	X	
2250	34	47	60	73	86	X	X	X	X	
2500	37	52	66	80	95	X	X	X	X	

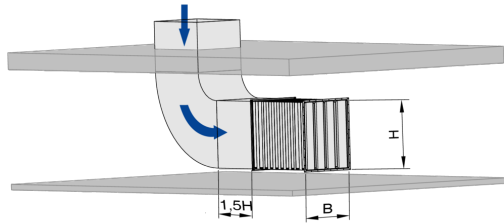
X = subdivided construction

## Installation details

### Installation and commissioning

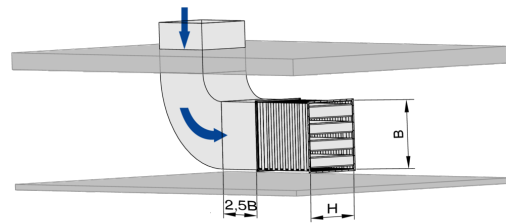
- Follow the installation manual and comply with the general codes of good practice in order to achieve the given performance data
- Up to height  $H = 1200$  mm, length  $L = 1500$  mm and 40 kg max.: any installation orientation, but we recommend upright installation of splitters
- From height  $H = 1201$  mm: upright installation only
- The length (L) of sound attenuator splitters and splitter sound attenuators refers to the airflow direction; be sure to note how width, height and length are defined, particularly in case of a vertical airflow
- A turbulent airflow may cause damage to the splitters
  - A straight upstream section is required upstream of the sound attenuator
  - The recommended minimum upstream section depends on the change of direction, change of cross-section and splitter arrangement
- Installation in ducts outside closed rooms requires sufficient protection against the effects of weather

Upstream conditions after bends, junctions or a narrowing or widening of the duct, vertical upstream section, splitters upright



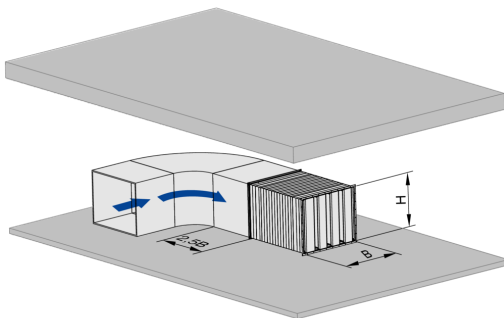
B Width of the sound attenuator  
H Height of the sound attenuator and the splitters

Upstream conditions after bends, junctions or a narrowing or widening of the duct, vertical upstream section, splitters lying flat



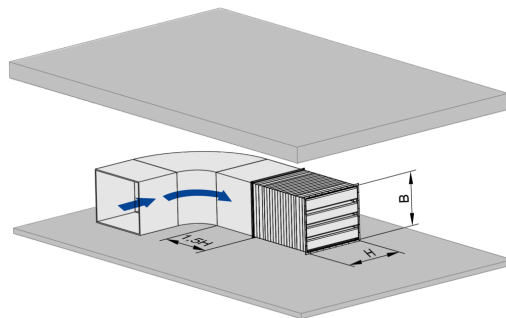
B Width of the sound attenuator  
H Height of the sound attenuator and the splitters  
Installation with the splitters lying flat only for splitters up to height 1200 mm

Upstream conditions after bends, junctions or a narrowing or widening of the duct, horizontal upstream section, splitters upright



B Width of the sound attenuator  
H Height of the sound attenuator and the splitters

Upstream conditions after bends, junctions or a narrowing or widening of the duct, horizontal upstream section, splitters lying flat



B Width of the sound attenuator  
H Height of the sound attenuator and the splitters  
Installation with the splitters lying flat only for splitters up to height 1200 mm

## Accessories - SDK

- U-sheets and clamp sheets to join attenuator splitters subdivided by others.
  - Depending on the splitter construction:
    - Material
    - Splitter thickness for U-sheets
    - No. of clamp sheets
  - Screws for fixing U-sheets and clamp sheets are to be provided by others.

No. of clamp sheets per splitter joint:

H or L  $\leq$  750 mm: without clamp sheet

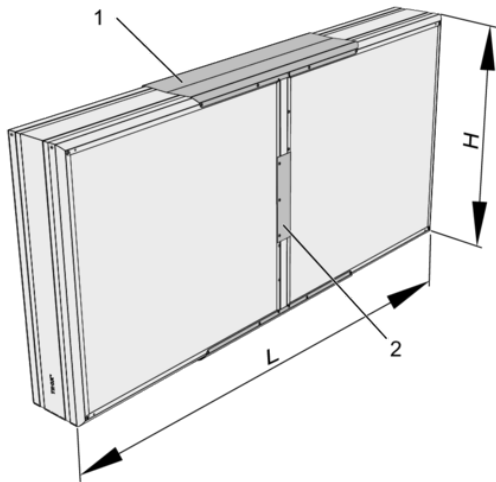
H or L 751 – 1000 mm: 2 clamp sheets (1 on each side)

H or L  $\geq$  1001 mm: 4 clamp sheets (2 on each side)

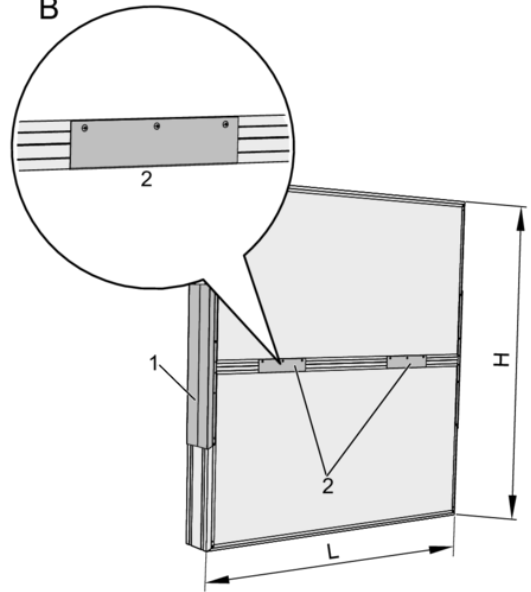
No. of U-sheets per splitter joint: 2

Follow the instructions in the installation manual.

A



B



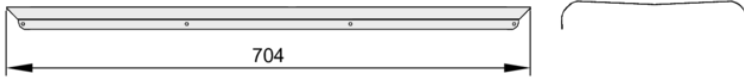
A Length subdivided

- H 1000 × L 4000 with 2 U-sheets, 2 clamp sheets

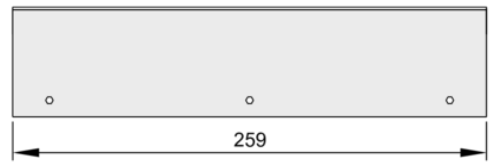
B Height subdivided

- H 2000 × L 2500 with 2 U-sheets, 4 clamp sheets

1



2



1 U-sheet

2 Clamp sheet



## Explanation

**L** [mm]

Length of sound attenuator including spigot (always in airflow direction)

**L<sub>1</sub>** [mm]

Length of part 1 of a splitter sound attenuator with the length subdivided

**L<sub>2</sub>** [mm]

Length of part 2 of a splitter sound attenuator with the length subdivided

**B** [mm]

Sound attenuator width and duct width

**B<sub>1</sub>** [mm]

Width of part 1 of a splitter sound attenuator with the width subdivided

**B<sub>2</sub>** [mm]

Width of part 2 of a splitter sound attenuator with the width subdivided

**H** [mm]

Sound attenuator height and duct height (upright splitters)

**T** [mm]

Splitter thickness

**S** [mm]

Airway width

**m** [kg]

Weight

**f<sub>m</sub>** [Hz]

Octave band centre frequency

**D<sub>e</sub>** [dB]

Insertion loss

**q<sub>v</sub>** [m<sup>3</sup>/h]; [l/s]

Volume flow rate

**Δp<sub>t</sub>** [Pa]

Total differential pressure

**v<sub>s</sub>** [m/s]

Airflow velocity

**Lengths**

All lengths are given in millimetres [mm] unless stated otherwise.

**Measured values**

All sound power levels are based on 1 pW. All values were measured in a TROX lab and to EN ISO 7235. Intermediate values may be achieved by interpolation. Lab measurements exceeding 50 dB are given as 50 dB, based on practical conditions.