

1200×800 · 4×200 · L1500 mm REV 5 (copy)

Selection summary · Splitter silencer

PROJECT

Project

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Customer

—

Prepared by

Mariusz Młynarczyk

Project no.

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Location

—

Revision

A

28.4 dB

Overall insertion loss

8.4 Pa

Pressure drop

4.5 m/s

Gap velocity

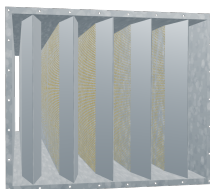
242 kg

Mass

3732 zł

Price

SELECTED GEOMETRY



Duct size **970 mm × 800 mm**

Splitters **5 × 100 mm**

Splitter length **2000 mm**

Air gap **94 mm**

Casing length **2237 mm**

Inlet nose **Rounded**

Outlet tail **Wedge 30°**

PERFORMANCE AT DUTY POINT

Air flow **6150 m³/h**

Duct velocity **2.2 m/s**

Free area **48 %**

Inlet sound power **89.3 dB(A)**

Outlet sound power **60.9 dB(A)**

Selection status

Outside the design limits

CONSTRUCTION

Casing sheet **Galvanized steel, 1.0 mm**

Cladding sheet **Galvanized steel, 0.8 mm**

Mineral wool **60 kg/m³**

Gap facing **Perforated galvanized steel**

End flanges **Both ends · 30 mm / 3.0 mm**

Bolt spacing / hole **150 mm / 11.0 mm**

Coating **None**

Acoustic performance

What the silencer takes away, and what the installation is left with

28.4 dB

Overall insertion loss

89 dB(A)

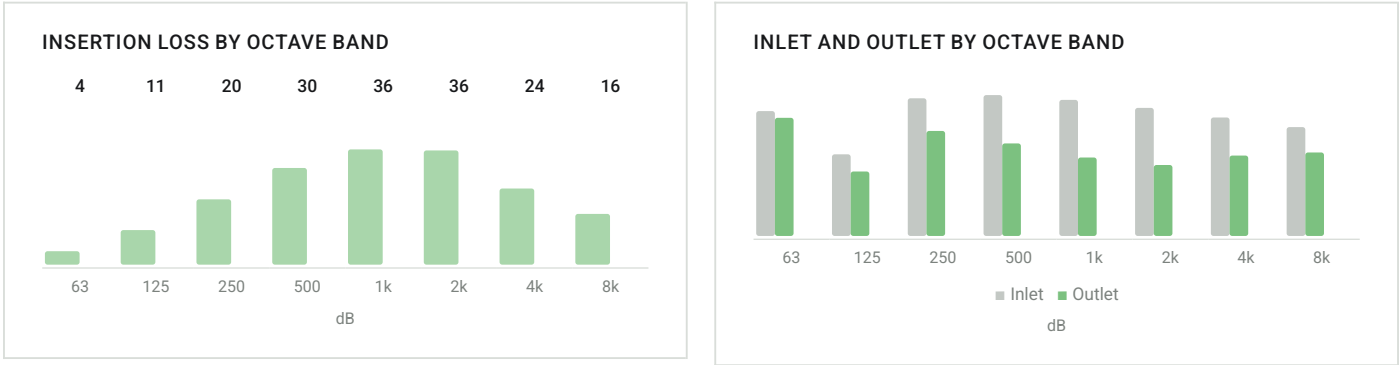
Inlet sound power

23 dB(A)

Flow noise

61 dB(A)

Outlet sound power

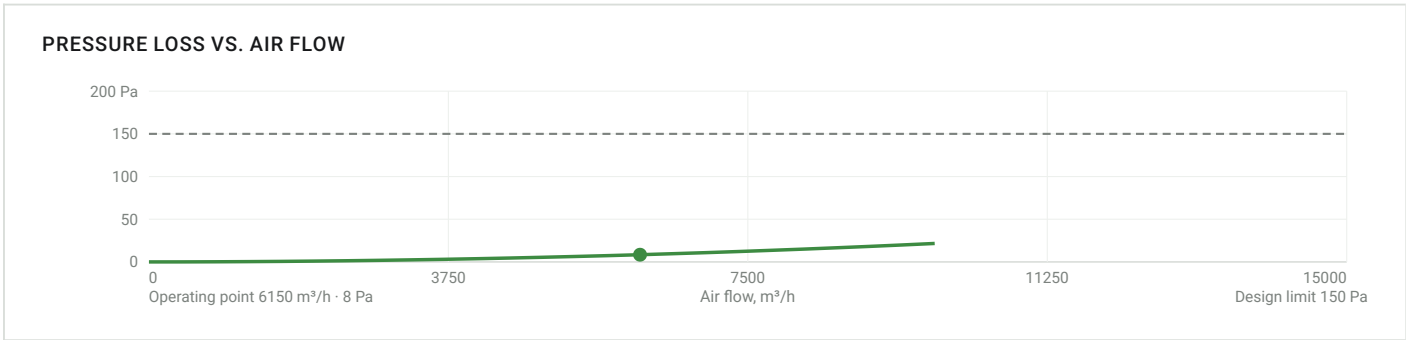


SOUND POWER SPECTRUM									
dB	63	125	250	500	1k	2k	4k	8k	Σ dB(A)
Inlet LW	78	51	86	88	85	80	74	68	89
Insertion loss	4	11	20	30	36	36	24	16	28
Flow noise LW	19	22	23	21	18	14	9	3	23
Outlet LW	74	40	66	58	49	44	50	52	61

Bands are sound power in the filter the spectrum was entered in; the Σ column is always A-weighted. Insertion loss is a difference of levels and carries no filter.

Aerodynamics and construction

Pressure loss, material specification and design limits

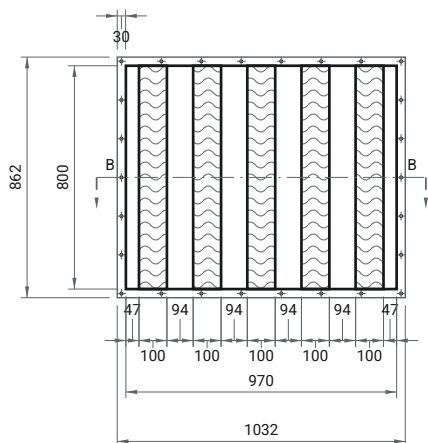


DESIGN CHECKS			
Pressure drop	PASS	Gap velocity	PASS
8.4 Pa	≤ 150 Pa	4.5 m/s	≤ 12 m/s
Overall length	FAIL	Insertion loss	PASS
2237 mm	≤ 2000 mm	28.4 dB	≥ 0 dB

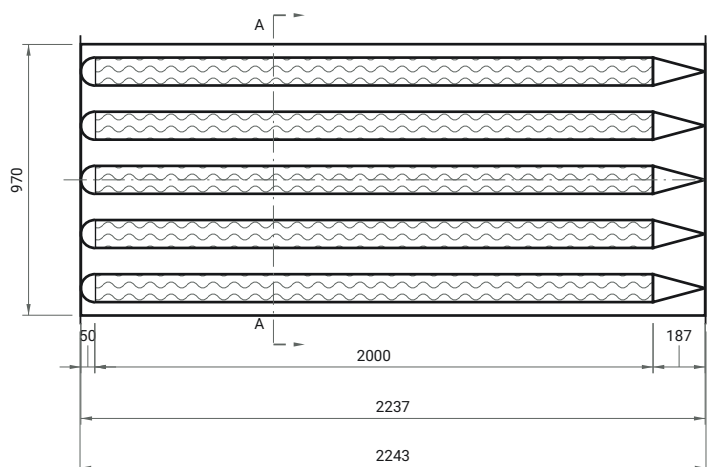
Dimensioned drawing

What goes to the workshop — front, plan and the splitter, one scale

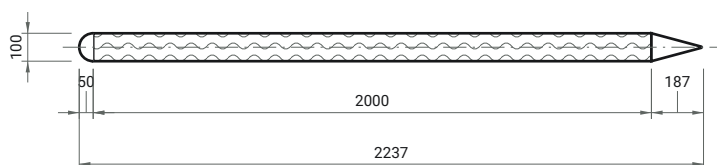
DIMENSIONED VIEWS



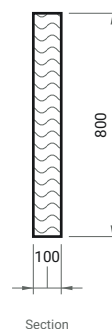
A—A Front, section through the package
5 × 100 · Galvanized steel 1.0 mm · Bolt holes 11 at 150



B—B Plan, section through the package
Inlet: Rounded · Outlet: Wedge 30°, R2.4



C Splitter
Mineral wool 60 kg/m³, Galvanized steel 0.8 mm perforated



Section

All dimensions in mm

All dimensions in mm

Materials and cost

Bill of materials and commercial summary

BILL OF MATERIALS

Item	Qty	Mass
Casing sheet	8.55 m ²	62 kg
Perforated cladding	21.79 m ²	127 kg
Mineral wool	0.79 m ³	48 kg
Flange steel	5.00 kg	5 kg
Bolts and rivets	52.00 pcs	—
Workshop labour	4.14 h	—
Consumables and coatings	1.00 unit	—
Packing and handling	1.00 unit	—

COMMERCIAL SUMMARY

Material weight 242 kg

Price 3732.33 zł

NOTES AND APPROVAL

Calculated from the entered geometry, material definitions and duty point.

This report is a selection summary. Manufacturing drawings and contractual terms take precedence.

Approved by / date