

## RENSON<sup>®</sup> FLEXIBLE LAMINATED DUCTS: ALUDEC

**RENSON ALUDEC** is a flexible, strong laminate duct for various purposes. The duct consists of several layers of aluminium and polyester, with a high tensile steel spiral helix enclosed between the layers. The duct can be attached to round and oval connection parts without any problems.

Due to the "sandwich construction", the different layers of polyester and aluminium are overlapping each other completely. In case of fire, the system is able to function longer.



## TYPES

REFERENCE	DESCRIPTION
66014103	Aludec-245 diameter 82 mm x 10 meter
66014104	Aludec-245 diameter 127 mm x 10 meter
66014107	Aludec-245 diameter 152 mm x 10 meter

## APPLICATION

- General air supply systems, without special demands
- Air conditioning systems, without special demands

## RESTRICTIONS

The Aludec ducts are not suitable for discharging combustion products from open fireplaces and oil-fired boilers. Neither are the Aludec ducts suitable for transporting air with a high concentration of acid and base.

## SPECIFICATIONS

- Temperature range: -30 °C to 140 °C
- Operating pressure: max. +2500 Pa
- Operating air velocity: max. 30 m/s
- Bending radius: min. 0.54 x Ø
- Standard length: 10 m

## CONSTRUCTION

- Number of layers: 5
  - whereof aluminium: 3 à 7 micron
  - whereof polyester: 2 à 12 micron
- Total thickness: 45 micron [without adhesive]
- Wire spacing: 18 mm
- Colour: aluminium

The **Aludec** duct fulfills all the requirements and is qualified as specified within EN 13180: "Ventilation for buildings – Ductwork – Dimensions and mechanical requirements for flexible ducts".

The consultant is responsible for the actual installation and mounting of the product. The mentioned values with respect to temperatures are not appropriate to be used to determine the physical properties. These properties are also dependent on humidity and the temperature of the air inside and outside of the H.V.A.C. system.

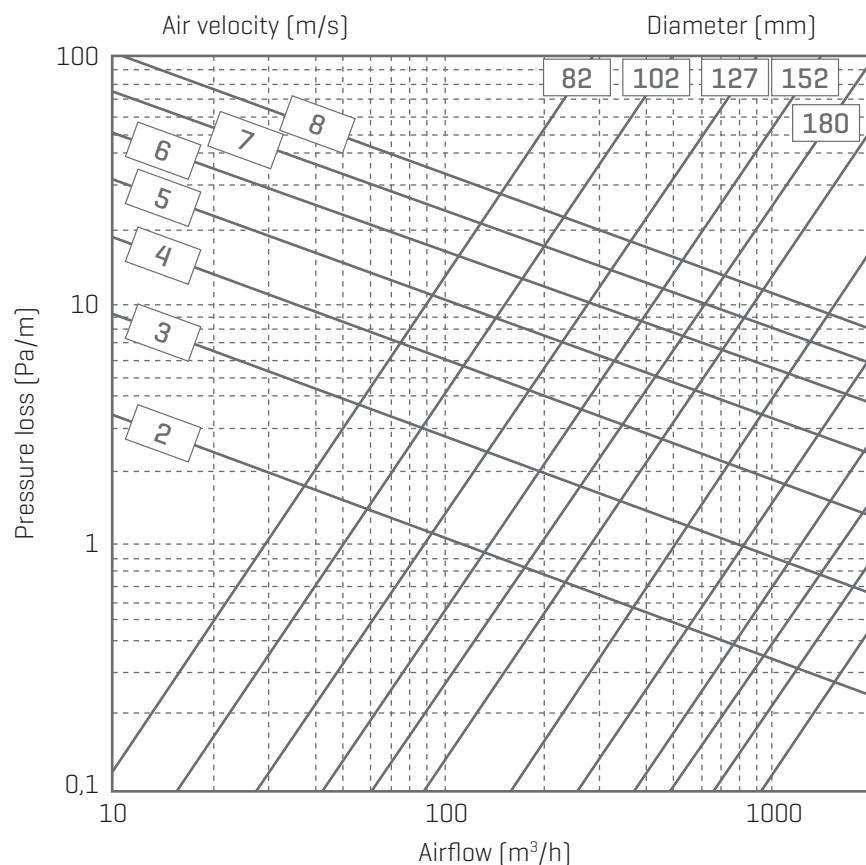
#### DETERMINATION OF THE ACUTE TOXICITY

Stated by the "Institut für Arbeitsmedizin" of the medical faculty of the technical university of Aken. Under the supervision of prof. dr. med. H.J. Einbrodt [specialist] classified as "non toxic".

## DIMENSIONS

	DIAMETER INNER FLEXIBLE	DIAMETER OUTER FLEXIBLE
Aludec 25 mm Ø 82	Ø 80	Ø 82
Aludec 25 mm Ø 127	Ø 125	Ø 127
Aludec 25 mm Ø 152	Ø 150	Ø 152

## PRESSURE LOSS (stretched tube)



## RENSON<sup>®</sup> FLEXIBLE INSULATED DUCTS: ISODEC

**RENSON ISODEC** consists of an aluminium laminate inner duct, thermally insulated with a glass wool layer and provided with an aluminium laminated outer jacket. The thermal insulation is suitable for preventing condensation and minimizing heat loss and loss of cold.



## TYPES

REFERENCE	DESCRIPTION
66014100	Isodec diameter 82 mm x 10 meter
66014101	Isodec diameter 127 mm x 10 meter
66014106	Isodec diameter 152 mm x 10 meter
66014129	Isodec diameter 180 mm x 1 meter
66014138	Isodec diameter 162 mm x 10 meter

## APPLICATION

- Insulation in air supply systems
- Ventilation systems
- Thermal insulation in order to prevent heat or cold loss
- Prevention / removal of condensation

## RESTRICTIONS

The Isodec ducts are not suitable for discharging combustion products from open fireplaces and oil-fired boilers. Neither are the Isodec ducts suitable for transporting air with a high concentration of acid and base.

## SPECIFICATIONS

- Temperature range: -30 °C to 140 °C
- Operating pressure: max. +2500 Pa
- Operating air velocity: max. 30 m/s
- Bending radius: min. 0.54 x Ø + 25mm
- Standard length: 10 m

## CONSTRUCTION

- Inner duct: Alu/poly laminate
- Glass wool blanket: 25 mm, 16 kg/m<sup>3</sup>
- Outer jacket: Alu/poly laminate
- R-value glass wool: 0.65 m<sup>2</sup> K/W [ASTM C177-76]
- Colour: Aluminium

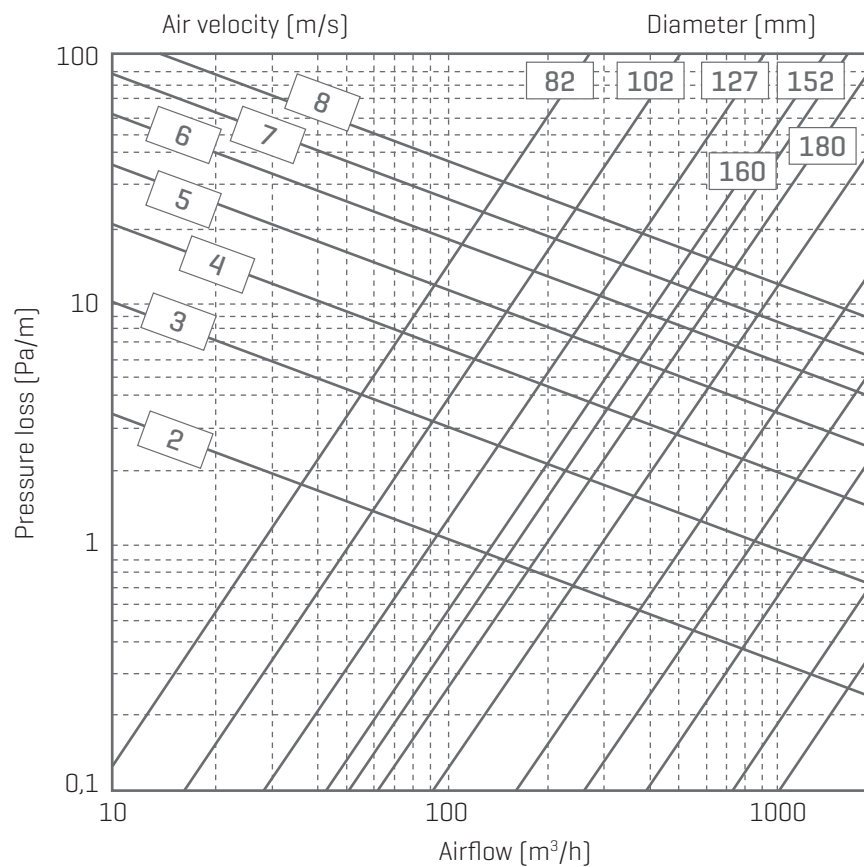
The **Isodec** duct fulfills all the requirements and is qualified as specified within EN 13180: "Ventilation for buildings – Ductwork – Dimensions and mechanical requirements for flexible ducts".

The consultant is responsible for the actual installation and mounting of the product. The mentioned values with respect to temperatures are not appropriate to be used to determine the physical properties. These properties are also dependent on humidity and the temperature of the air inside and outside of the HVAC system.

## DIMENSIONS

	DIAMETER INNER FLEXIBLE	DIAMETER OUTER FLEXIBLE
Isodec 25 mm Ø 82	Ø 80	Ø 82
Isodec 25 mm Ø 127	Ø 125	Ø 127
Isodec 25 mm Ø 152	Ø 150	Ø 152
Isodec 25 mm Ø 162	Ø 160	Ø 162

## PRESSURE LOSS (stretched tube)



**RENSON® FLEXIBLE SOUND DAMPER:  
 ACOUDEC (25 mm - 0.5 or 1 meter)**

The **RENSON ACOUDEC** consists of an inner tube of polypropylene fabric, thermal and acoustic insulated with fibreglass and a laminate outer cover with sealed ends for the connections.


**TYPES**

REFERENCE	DESCRIPTION	REFERENCE	DESCRIPTION
66014133	Acoudec 25 mm Ø 82 x 0.5 meter	66014125	Acoudec 25 mm Ø 82 x 1 meter
66014134	Acoudec 25 mm Ø 127 x 0.5 meter	66014126	Acoudec 25 mm Ø 127 x 1 meter
66014135	Acoudec 25 mm Ø 152 x 0.5 meter	66014127	Acoudec 25 mm Ø 152 x 1 meter
66014136	Acoudec 25 mm Ø 162 x 0.5 meter	66014128	Acoudec 25 mm Ø 162 x 1 meter
-	-	66014139	Acoudec 25 mm Ø 180 x 1 meter
66014140	Acoudec 25 mm Ø 200 x 0.5 meter	66014141	Acoudec 25 mm Ø 200 x 1 meter

**APPLICATION**

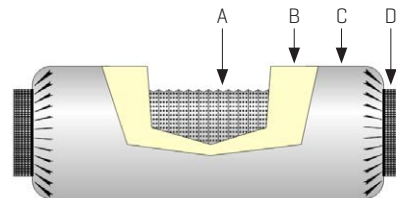
- Ventilation systems: recommended use when the length of the extraction point to the ventilation unit ≤ 3m
- Sound dampening
- Machine sounds reduction

**SPECIFICATIONS**

- Temperature range: -30 °C tot 140 °C
- Working pressure: max. +2500 Pa
- Airspeed: max. 25 m/s
- Bow radius: 0.54 x Ø + 25 mm

**CONSTRUCTION**

- Inner tube: Non-woven polypropylene fabric
- Fibreglass: 25 mm, 16 kg/m<sup>3</sup>
- Outer cover: alu/poly laminate
- R-Value fibreglass: 0.65 m<sup>2</sup> K/W [ASTM C177-76]
- Exterior: aluminium

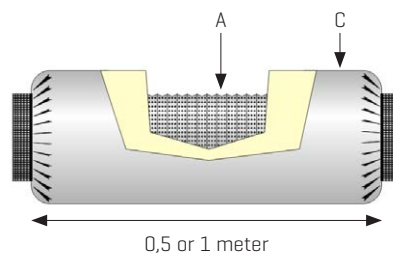


- A. Inner tube
- B. Fibreglass
- C. Outer cover
- D. Connexion

The **Acoudec** duct fulfills all the requirements and is qualified as specified within EN 13180: "Ventilation for buildings – Ductwork – Dimensions and mechanical requirements for flexible ducts".

## DIMENSIONS

	DIAMETER INNER FLEXIBLE [A]	DIAMETER OUTER FLEXIBLE [C]
Acoudec 25 mm Ø 82	Ø 80	Ø 130
Acoudec 25 mm Ø 127	Ø 125	Ø 175
Acoudec 25 mm Ø 152	Ø 150	Ø 200
Acoudec 25 mm Ø 162	Ø 160	Ø 210



## ACOUSTIC DAMPING

Dn [mm]	L [m]	Damping, dB - Mid-frequency, Hz								Di [dB]
		63	125	250	500	1000	2000	4000	8000	
Ø 80	0.5	18.2	9.3	27.2	28.8	26.4	33.2	48.7	31.7	30
Ø 125	0.5	14.8	8.1	19.1	20.7	19.9	26.4	26.7	13.0	35
Ø 150	0.5	16.9	4.0	11.1	16.7	19.7	28.5	19.4	12.0	33
Ø 160	0.5	10.2	7.8	11.2	17.3	18.8	26.1	17.7	12.5	32
Ø 80	1.0	13.6	22.4	40.2	38.7	36.5	41.3	51.6	45.8	39
Ø 125	1.0	11.7	18.9	32.4	29.9	28.8	34.5	40.9	24.5	32
Ø 150	1.0	12.2	10.9	29.7	30.1	29.0	38.3	34.6	20.4	32
Ø 160	1.0	19.3	25.4	30.5	27.1	23.8	32.2	27.8	17.3	28

Di = average damping [Test report number A1672-1 Peutz e.g. - The Netherlands]

**PRESSURE LOSS (stretched tube)**

