THERMICAL INSULATED PRODUCTS

DEC International® produces different thermically insulated products for several purposes. The thermic insulation is suitable for preventing condensation and minimizing heat loss and loss of cold.

The thermically insulated product series consist of:



The **ISODEC**® series:

The **ISODEC**[®] series consists of an aluminium laminate inner duct, thermically insulated with a glass wool layer and provided with an either glass fibre strengthened outer jacket.



The ISOSLEEVE:

The **ISOSLEEVE** consists of an aluminium laminate outer jacket, strengthened with glass fibre and provided with a glass wool insulation layer.

The **ISODEC**® fulfills all the requirements and are classified as specified within: **EN 13180**: "Ventilation for buildings-Ductwork-Dimensions and mechanical requirements for flexible ducts"

Range of application in practice

- Insulation in ventilation and air supply systems
- Air conditioning systems
- Thermic insulation in order to prevent heat loss or loss of cold
- Preventing of condensation in ventilation systems

Restrictions in the range of application

The **ISODEC**[®] ducts are not suitable for transporting air with a high concentration of acid and base. Neither are the **ISODEC**[®] ducts suitable for discharging combustion gases.

PLEASE NOTICE:

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.

According to NEN 3883 tested by TNO:

Flame spread: class1Flame transfer: class1Smoke figure: 2

To select the appropriate thermically insulated product, consult the table on the next page.

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I SODEC®

	ISODEC®	ISODEC®	ISODEC®
	25	250	250 CE
Mechanical properties		200	200 02
Temperature range (°C) Inner duct Outer duct	-30 -+140 -30 -+140	-30 -+250 -30 -+140	-30 -+250 -30 -+140
Maximum operating pressure (Pa)	+2500	+3000	+3000
Maximum air velocity (m/s)	25	30	30
Diameter range (mm)	82 - 508	65 - 635	102 - 508
Fire classes according to			
Europe (EN 13502-1)	B-s1, d0	B-s1, d0	х
The Netherlands (NEN 6065/6066)	1	1	х
Germany (DIN 4102)	B2	B1	х
France (CSTB)	M1	MO/M1	MO/M1
Switzerland (BKZ)	х	5.3	х
United Kingdom (BS 476)	6, 7 and 20	6, 7 and 20	х
Austria (B3800)	B1	B1	х
Italy (CSI)	1-0	1-0	х
Technical data			
Article code	DI{Ø}	DIX{Ø}	DIXCE{Ø}
Material structure/ Construction	see product specific properties		
Wire spacing inner duct			
upto Ø 102 mm	25 mm	25 mm	-
Ø 102 mm and larger	36 mm	18 ²⁾ mm	36 mm
Minimum bending radius	0.54 x Ø + <u></u>	0.58 x Ø + <u>↑</u>	0.54 x Ø + <u>↑</u>
Standard length (meters)	10	10	10
Standard color	aluminium	aluminium	aluminium

X = not been tested

Product specific properties ISODEC®

The ISODEC® is also available, on request, with a 50 mm glass wool layer, the article number is: $DI(X)50\{\emptyset\}$

Material structure: - aluminium laminate / glass wool / aluminium laminate. Construction: : aluminum, polyester laminate. inner duct - glass wool blanket : 25 (or 50) mm, 16 kg/m³.

- outer jacket : aluminum, polyester laminate.

R-value glass wool: 0.69 (25 mm) or 1.4 (50 mm) m²K/W (ASTM C177-76).

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⁼ thickness of glass wool

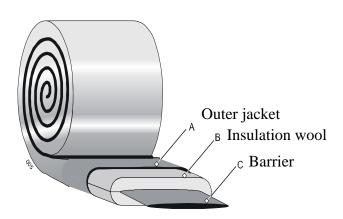
 $[\]hat{Z}$ = thickness of glass wool = two different wires have been used alternately

ISOSLEEVE

	ISOSLEEVE 25	ISOSLEEVE 50	
Mechanical properties			
Temperature range (°C)	-30 - +140	-30 - +140	
Maximum operating pressure (Pa)	+2000	+2000	
Maximum air velocity (m/s)	irrelevant	irrelevant	
Diameter range (mm)	52 - 635 ¹⁾	52 - 635 ¹⁾	
Fire classes according to			
Europe (EN 13501-1)	B-s1, d0	B-s1, d0	
The Netherlands (NEN 6065/6066)	3-1	3-1	
France (CSTB)	M1	M1	
Technical data			
Article code	DHB{Ø}	DHB50{Ø}	
Material structure	see product specific properties		
Construction	see product specific properties		
Standard length (meters)	10	10	
Standard color	aluminium	Aluminium	

Not been tested

Diameter acc. to inner duct



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ISOSLEEVE

Range of application in practice

- Insulation in air supply systems
- Air conditioning systems
- Insulation of rainwater discharge
- Reducing of heat loss
- Preventing/discharging of condensation

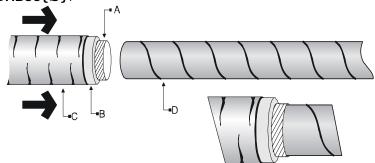
Restrictions in the range of application

The ISOSLEEVE 25 (or 50) is not suitable in rooms with a high concentration of acid and base.

Barrier

The **ISOSLEEVE 25** (and **50**) has standard a barrier. The barrier simplifies the mounting, and the installer will not have unnecessary contact with the glass wool.

The article numbers for the **ISOSLEEVE 25** and **50** with barrier are resp. **DHB** $\{\emptyset\}$ and **DHB50** $\{\emptyset\}$.



- A. Barrier
- B. Insulation wool
- C. Outer duct
- D. Rigid channel

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Product specific properties.

ISOSLEEVE 25/50

- Material structure:
 - polyester laminate / glass wool / aluminum laminate
- Construction:
 - inner duct
 Glass wool blanket:
 Outer jacket:
 iclosed polyester film
 25 (or 50) mm, 16 kg/m³
 aluminum, polyester laminate
- R value glass wool :0.69 (25 mm) or 1.4 (50 mm) m²K/W (ASTM C177-76)

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