

ALUDEC

ALUDEC ducts are completely flexible, light laminate ducts for various purposes. The ducts consist of several layers of aluminium and polyester, with a spiral inserted into the layer. The duct can be attached to round and oval connection parts without any problems. The fire resistance of the **ALUDEC** ducts has been tested in several countries, according to current international standards. For specific information about the various ducts consult the product information page.



The **ALUDEC** ducts have been constructed out of a “sandwich construction” developed by DEC. This means that the different layers of polyester and aluminium are overlapping each other completely. In case of fire, the system is able to function longer. The toxic vapours, caused by the fire, can be kept outside the room longer. This enables a safer evacuation of the building.

To select the appropriate **ALUDEC**-product consult the table on the next page.

ALUDEC

	ALUDEC AA3	ALUDEC 45	ALUDEC 70	Aludec 112
Mechanical properties				
Total thickness, without adhesion (microns)	45	45	70	87
Temperature range (°C)	-30 - +140	-30 - +140	-30 - +140	-30 - +250
Maximum operating pressure (Pa)	+2500	+2500	+3000	+3000
Maximum air velocity (m/s)	25	30	30	30
Diameter range (mm)	102 - 508	102 - 508	52 - 710	76 - 710
Fire class				
The Netherlands (NEN 6065/6066)	x	1	1	1
Germany (DIN 4102)	x	B2	B2	A2 ¹⁾
France (CSTB)	M1	M1	x	M0
Switzerland (BKZ)	x	x	x	6Q3 (8651)
United Kingdom (BS 476)	6, 7 and 20	6, 7 and 20	6, 7 and 20	x
Austria (B3800)	according to B1	according to B1	according to B1	according to B1
Sweden (SP Fire 106)	x	x	x	A15 ¹⁾
Italy (CSI)	x	1	1	1
Technical data				
Article number	DA3{Ø}	DA45{Ø}	DA70{Ø}	DA112{Ø}
Material structure	5 layers	5 layers	5 layers	4 layers
Construction				
aluminium	3	3	3	3
polyester	2	2	2	1
Wire spacing	see product specific properties			
Minimum bending radius	0.54 x Ø	0.56 x Ø	0.56 x Ø	0.58 x Ø
Standard length (metres)	10	10	10	10
Standard colour	aluminium	aluminium	aluminium	aluminium

x = not been tested

¹⁾ = sampling tests carried out by an independent german or swedish authority.



Applications in practice

Aludec AA3

- P general air supply systems, without special demands
- P air conditioning systems, without special demands

Aludec 45

- P general air supply systems, without special demands
- P air conditioning systems, without special demands

Aludec 70

- P air conditioning systems, without special demands
- P general air supply systems, without special demands
- P exhaust systems, without special demands

Aludec 112

- P air supply systems, where a higher temperature resistance is required
- P air conditioning systems, where a higher temperature resistance is required

Chemical resistance

The inside and the outside of the **Aludec** consist of aluminium and has a:

- P good resistance to many solvents
- P moderate resistance to acid and base
the resistance decreases if the relative air humidity of the air with chemicals, which has to be transported, increases

Static properties

The **Aludec** ducts are appropriate to ranges of applications, where static discharges have to be avoided.

Restrictions in the range of application

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

Product-specific properties

Aludec AA3

Wire spacing			
P	ø 102 mm and larger	%	36 mm

Aludec 45

Wire spacing			
P	ø 102 mm and larger	%	25 mm

Aludec 70

Wire spacing			
P	ø 52 mm	%	12 mm
P	ø 65 mm	%	18 mm
P	ø 76 mm and larger	%	25 mm

according to NEN 3883 tested by TNO

P	flame spread:		class 1
P	flame transfer:		class 1
P	smoke figure:		8

Aludec 112

Wire spacing			
P	ø 76 mm up to 90 mm	%	25 mm
P	ø 102 mm and larger	%	18mm, two different wires have been used alternately

according to NEN 3883 tested by TNO

P	flame spread:		class 1
P	flame transfer:		class 1
P	smoke figure:		2

according to DIN 4102

P	smoke figure:	10.7	<i>(the maximum average value of the light absorption)</i>
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Determination of the acute toxicity

- P 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".

