

## SMARTDEC® ISO

Anti-microbe Insulated Green Flexible Duct

**Smartdec® ISO a unique Green insulated flexible duct thermal and acoustical properties, which contains no PVC!**  
An Emission free flexible duct for residential, new build & renovation applications consist out of a durable multiple layer Polypropylene fabric wall construction, with an interlocked spring-helix for a smoother inside. Inside duct wall is laminated with an environmental friendly **DECPROTECT™ Anti-bacterial & Anti-fungal Inner liner** to create an airtight inner surface with excellent properties regarding:

- ✓ **DECPROTECT™** microbial resistance according to ISO 846 Class A and C (Class 0);
- ✓ Pressure loss; see technical data
- ✓ HVAC uses EN13180
- ✓ Sound ISO 7235
- ✓ Leakage D/ATC 2 up to +1000Pa
- ✓ The polypropylene duct wall offers good resistance to non-oxidizing acids/bases/ fatty agents/most organic solvents
- ✓ Highly impermeable to water;
- ✓ Acoustic advantages

### APPLICATIONS:

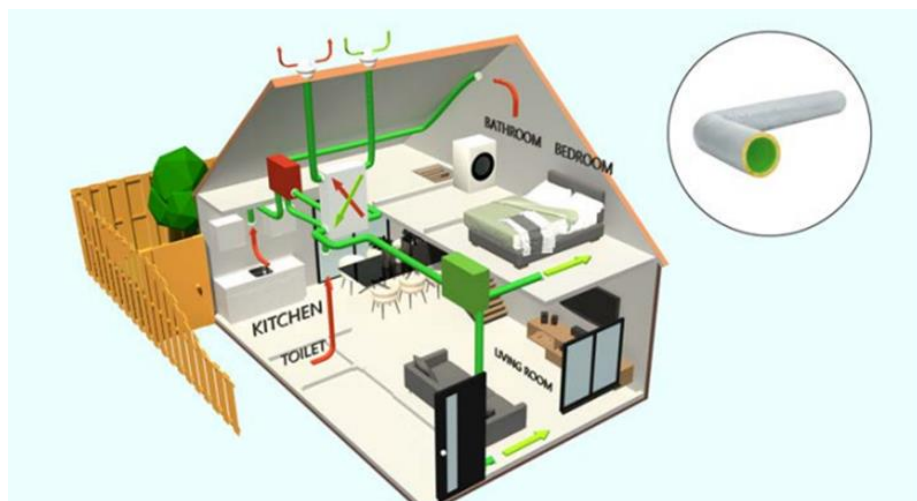
- Residential ventilation;
- Standard ductwork EN 13180;
- Air treatment installations;
- Distribution, plenum boxes;
- Retrofit ventilation channels;

### Unique selling points:

- ✓ No PVC
- ✓ No Emissions
- ✓ Smartdec® Inner liner anti-microbe
- ✓ Energy saving by less pressure loss
- ✓ Environmental friendly
- ✓ Durable
- ✓ Easy to install
- ✓ 100% recyclable

### Specification

Article code:	<b>SMADI [Ø]</b>
Color:	Inner core Green, Outside jacket Silver Grey durable PE
Diameter range:	82-315mm
Temperature range:	-30°C to 60°C
Operating pressure:	up to 1000Pa
Operating air velocity:	max. 4m/s
Min bending radius:	$R=0.54 \times \varnothing + 25\text{mm}$
Airtightness class:	ATC 2 Class D till 1000Pa
ISO 22196 antimicrobial:	99,9% effectiveness
ISO 16869 fungistatic:	99,9% effectiveness
ISO 184 Method A (11/2020)	class 0
Hygienic packaging:	Each length is packed individual
Mounting:	See mounting instruction
Standard length in meter:	10Mtr



Reach/RoHs Compliant

Directive 2011/65/EU RoHS

Phthalates according to 1907/2006/EC REACH

Test result: Pass - The test items meets the requirements of the test specification



#### LIABILITY:

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#### 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.

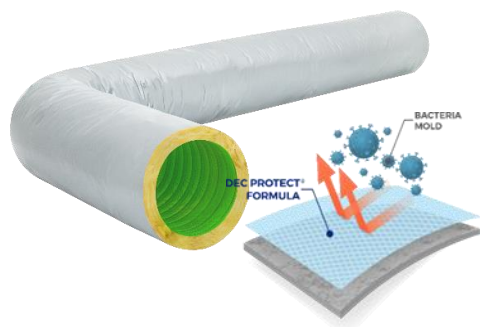
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#### RESTRICTIONS:

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





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### Insulation properties:

Mineral wool blanket: 25mm yellow  
R-value mineral wool: 0.65 m<sup>2</sup> K/W  
Vapor barrier: Polyethylene



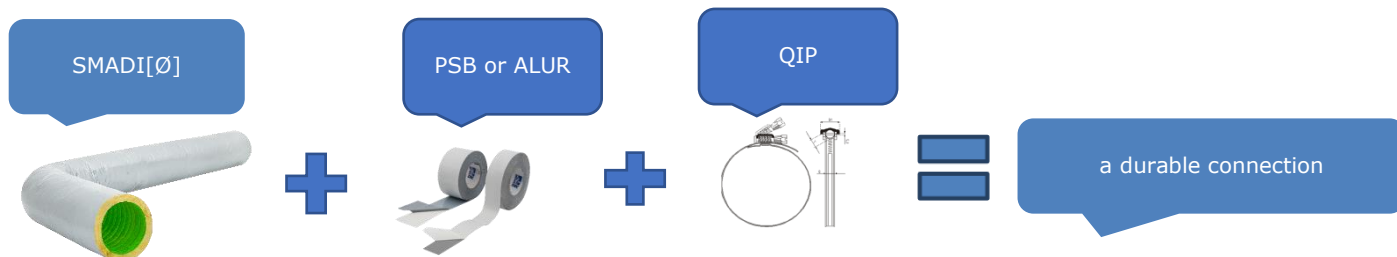
[www.blauer-engel.de/uz132](http://www.blauer-engel.de/uz132)

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

The **Smartdec® ISO** is also available, on request, with a 50mm compressed mineral wool layer out of 2x25mm, the article number is: **SMADI50[Ø]**

The Outer jacket is recyclable and made from a strong Polyethylene material.

### Mountings instructions:



### In summary all you need to build an flexible ductwork system:

- ✓ **Smartdec® ISO** diameter according installation space, air volume and aimed pressure loss;
- ✓ **Smartdec® ISO** length; when a longer length is used than 2 meter;
- ✓ fixated the fully stretched duct each 2 meters by brackets **[SBRØ]**,
- ✓ To fixate the connect ends to the HVAC components **[PSB]** + **[QIPØ]**
- ✓ Please take care the **Smartdec®** innerduct is always fully stretched.

### In addition to your needs;

- Air valves for example **[RONDØØ]** exhaust/supply ;
- Other DEC ventilation components; see DEC's Delivery program [www.decinternational.com](http://www.decinternational.com)

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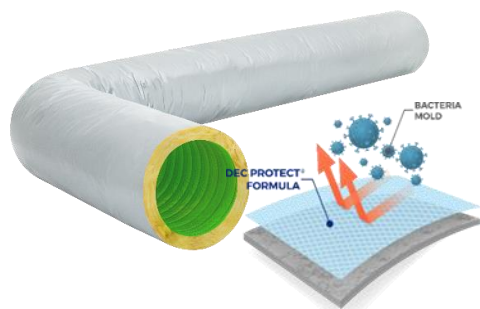
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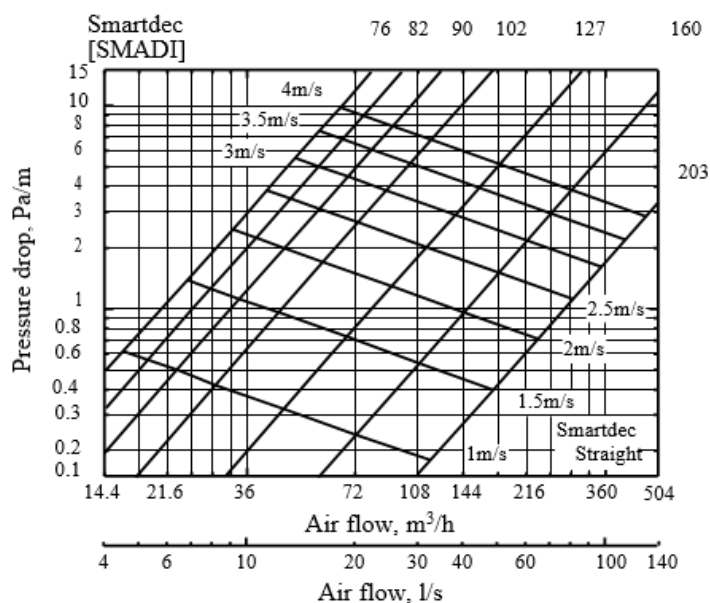




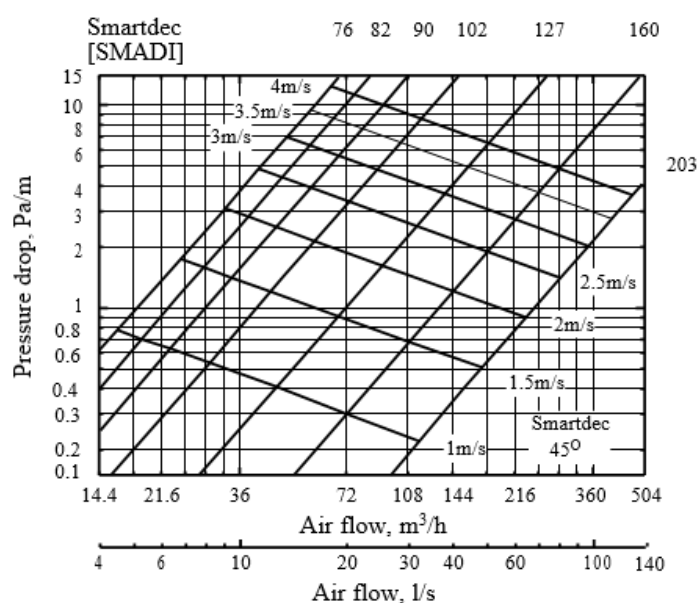
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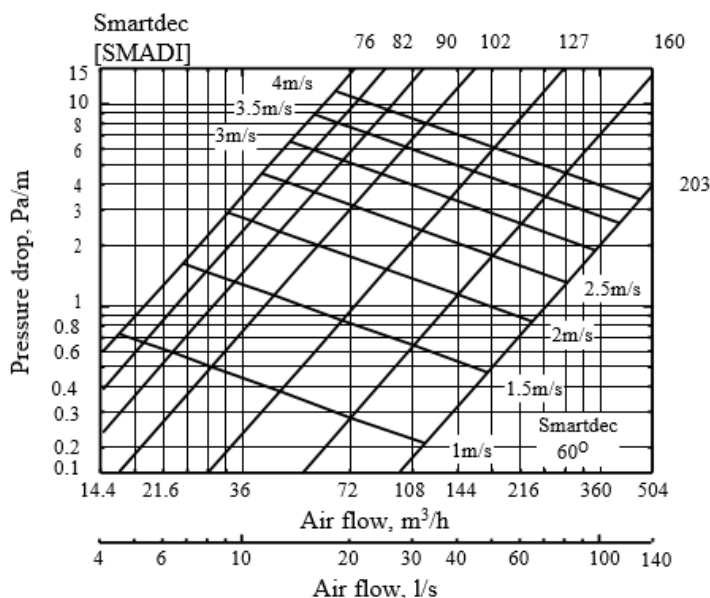
Pressure drop Straight length



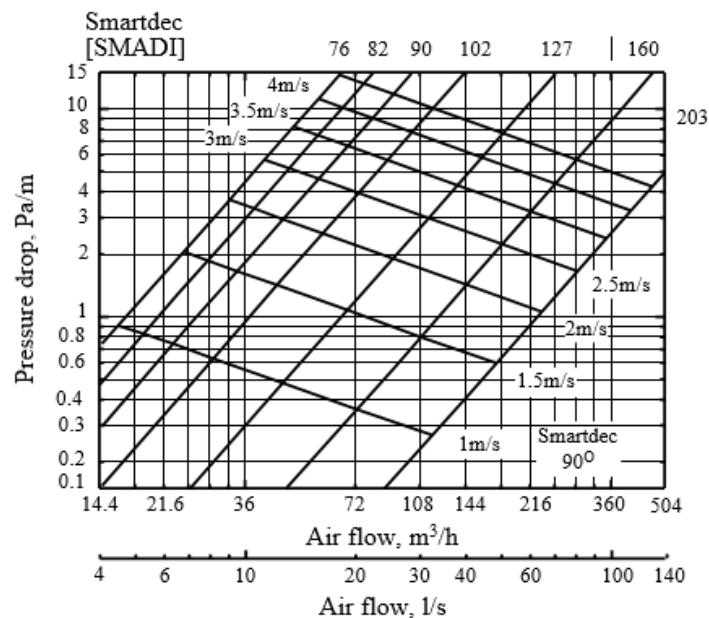
Pressure drop at 45°



Pressure drop at 60°



Pressure drop at 90°



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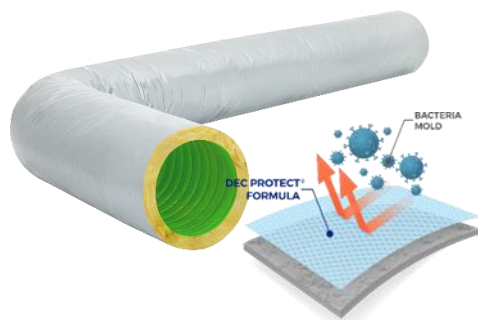
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**Sound attenuation: ISO 7235**

### SMARTDEC ISO

Anti-microbe Acoustical Insulated Green Flexible Duct, which contains no PVC, consist out of a durable multiple layer Polypropylene fabric wall construction, with an interlocked spring-helix for a smoother inside.

Duct wall is coated with an environmental friendly **DECPROTECT™** Anti-bacterial & Anti-fungus treatment.

#### SMARTDEC ISO - (Innercore Green + barrier + 25 mm glass wool + Outside jacket Silver Grey)

Ø (mm)	L (mm)	Insertion loss $D_i$ (dB)							
		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
80	5000	4.7	1.3	2.1	2.8	5.4	13.7	38.9	21.3
100	5000	3.8	1.4	2.2	3.8	8.5	20.5	41.0	23.4
125	5000	9.4	2.1	1.5	3.4	7.7	15.7	39.5	18.8
160	5000	5.6	5.2	3.9	3.6	8.2	19.2	39.4	23.7
180	5000	0.7	1.1	2.4	2.2	6.5	22.5	37.7	15.0
200	5000	0.4	0.9	1.7	3.0	5.7	17.2	28.4	13.8

#### SMARTDEC ISO - (Innercore Green + barrier + 25 mm glass wool + Outside jacket Silver Grey)

Ø (mm)	L (mm)	Transmission loss $D_t$ (dB)							
		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
80	5000	42.2	33.5	28.4	20.6	20.4	18.8	17.0	19.4
100	5000	31.9	27.5	22.8	19.7	18.3	19.8	18.9	19.3
125	5000	35.8	27.1	26.2	18.3	18.1	16.9	17.0	18.5
160	5000	39.7	32.7	27.9	20.9	21.3	21.1	21.4	18.1
180	5000	33.7	24.7	23.7	17.7	17.4	16.0	18.8	16.2
200	5000	32.9	18.9	19.8	16.8	17.6	17.2	19.2	9.8

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