

- Insulated
- Aluminium laminated
- Acoustically insulated



## Acoustic laminated aluminium flexible ducts type SONOFLEX EC

**SONOFLEX EC** is a thermally and acoustically insulated duct, consisting of a micro-perforated inner duct, a yellow fibreglass insulation and a 2-layer aluminium laminate outer jacket. A polyester barrier is applied between the fibreglass insulation and the inner duct to avoid the diffusion of insulation particles in the air stream.

### Application

- The **SONOFLEX EC** flexible ducts are used in ventilation, air conditioning, and air handling systems where high mechanical strength, temperature, fire-resistance, and thermal and sound attenuating qualities are required

### Composition

- Micro-perforated inner duct consisting of 1 layer of 9  $\mu$  aluminium and 1 layer of polyester 12  $\mu$ , total thickness without glue: 21  $\mu$
- Metalized polyester outer jacket, consisting of 1 layer of 7  $\mu$  aluminium and 1 layer of 12  $\mu$  polyester, total thickness without glue: 19  $\mu$
- Fibreglass insulation:
  - Density : 14 kg/m<sup>3</sup>
  - Thickness: 25 mm
  - Thermal conductivity: 0,040 W/m K
  - Colour: yellow
- 1 Polyester barrier 12 $\mu$  between insulation and inner duct
- Wire spacing: a steel spiral spring with a pitch of 36mm (Ø102-315 mm)
- Colour: Aluminium

### Specifications

- Temperature range: From - 30°C til + 140°C
- Air velocity (max): 20 m/s
- Operating pressure (max): -180 til +2500 Pa
- Bend radius: 0.54 x D + 25mm
- Diameter range: 102 mm - 315 mm
- Fire class: B - s1, d0 according to EN13501-1
- As the product does not contain PVC, no toxic vapours are released should fire occur

### Packaging

- Each standard length of 10 m is compressed in an individual, reinforced cardboard box of height 800 mm

### Chemical resistance

- Good resistance to many organic solvents
- Moderate resistance to acid and base

### Static properties

- The **SONOFLEX EC** is suitable for applications where static discharges have to be avoided. Grounding the duct can help minimize static electricity build-up.

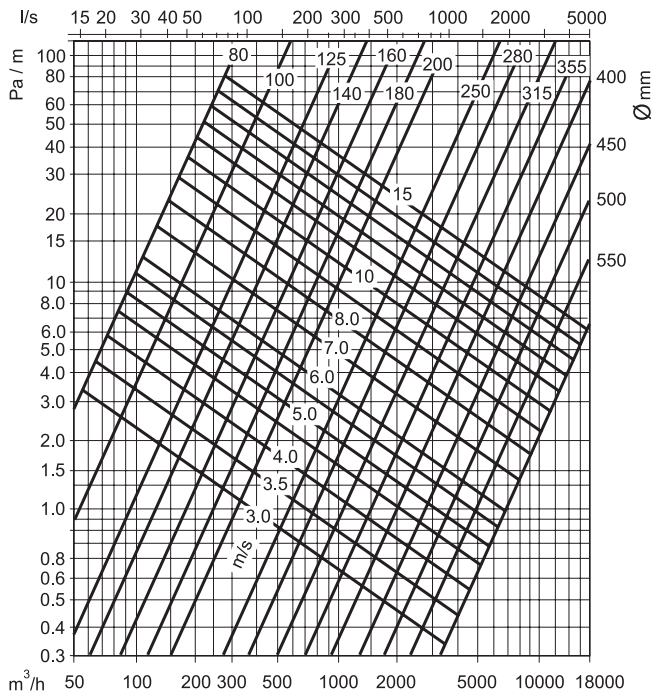
### Restrictions

- The **SONOFLEX EC** ducts are not suitable for transporting air with a high concentration of acid and base
- The **SONOFLEX EC** can not be used for discharging combustion gases from open fire places and oil-fired boilers

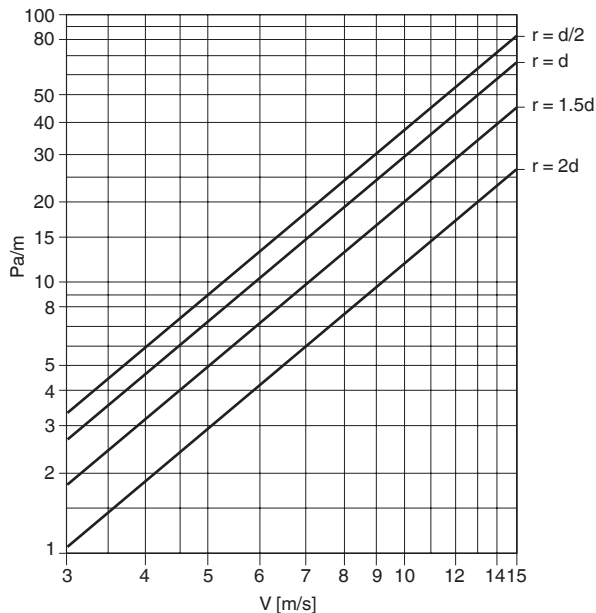
### Accessories

- Clamps, type **MCA**
- Aluminium tape, type **ALUTAPE 40**

### Pressure loss graph



### Pressure loss in 90° bend



| SONOFLEX EC |       | Sound attenuation |     |     |     |             |      |      |      |
|-------------|-------|-------------------|-----|-----|-----|-------------|------|------|------|
| Ø [mm]      | L [m] | 63                | 125 | 250 | 500 | dB - f [Hz] |      |      |      |
|             |       |                   |     |     |     | 1000        | 2000 | 4000 | 8000 |
| 102         | 1     | 11                | 15  | 21  | 25  | 34          | 29   | 31   | 22   |
|             | 2     | 13                | 17  | 22  | 25  | 43          | 48   | 31   | 22   |
|             | 3     | 16                | 17  | 28  | 39  | 43          | 48   | 32   | 22   |
| 127         | 1     | 9                 | 13  | 21  | 24  | 26          | 26   | 31   | 21   |
|             | 2     | 13                | 13  | 21  | 26  | 34          | 37   | 32   | 24   |
|             | 3     | 14                | 18  | 27  | 38  | 41          | 44   | 33   | 25   |
| 152         | 1     | 5                 | 5   | 12  | 19  | 19          | 24   | 25   | 15   |
|             | 2     | 8                 | 11  | 20  | 28  | 35          | 37   | 27   | 15   |
|             | 3     | 10                | 13  | 31  | 32  | 33          | 40   | 29   | 25   |
| 165         | 1     | 5                 | 8   | 12  | 29  | 28          | 27   | 31   | 18   |
|             | 2     | 14                | 15  | 17  | 27  | 35          | 44   | 36   | 26   |
|             | 3     | 17                | 17  | 25  | 37  | 39          | 37   | 37   | 27   |
| 203         | 1     | 2                 | 6   | 13  | 23  | 22          | 27   | 23   | 17   |
|             | 2     | 8                 | 11  | 21  | 26  | 39          | 29   | 34   | 20   |
|             | 3     | 22                | 21  | 23  | 35  | 38          | 36   | 39   | 28   |
| 254         | 1     | 4                 | 10  | 17  | 19  | 19          | 21   | 14   | 14   |
|             | 2     | 3                 | 7   | 17  | 24  | 27          | 27   | 23   | 19   |
|             | 3     | 5                 | 10  | 20  | 30  | 32          | 28   | 32   | 24   |
| 315         | 1     | 3                 | 16  | 18  | 17  | 19          | 16   | 10   | 8    |
|             | 2     | 5                 | 13  | 21  | 20  | 22          | 24   | 16   | 11   |
|             | 3     | 9                 | 18  | 21  | 25  | 30          | 28   | 23   | 16   |

**Order example****SONOFLEX EC , 254**

Explanation :

**SONOFLEX EC** = Type of flexible duct**254** = Diameter of flexible duct