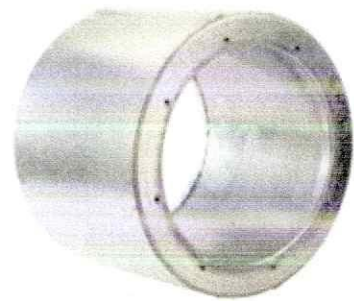




# FLANGED SILENCER

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## Overview

Ideal for:

- bolting directly to fan flange
- all axial fans
- cross talk elimination
- flexible or spiral ducting

### Overview

Elta Fans are able to provide 2 types of cylindrical silencers as standard; type DENP (without pod) and DEP (with pod), these are categorised as either compact silencers (EP / EP) or standard silencers (EP / EP).

### Construction

Both types are rigidly constructed in galvanised sheet steel, with a highly absorbent sound attenuating lining between the outer casing and the inner perforated steel lining. The end faces of the silencer has a series of threaded holes for direct mounting to the fixing flange / flexible collar. The EP (podded versions) will provide an improved level of attenuation. The inner acoustic pod is constructed from perforated steel sheet with a sound absorbent infill.

Melinex lined silencers must be used to prevent grease impregnation into the acoustic media for kitchen extract applications as prescribed in DW/172 HVAC Specification For Kitchen Ventilation Systems. For Melinex insertion losses, please contact Elta Fans. Silencers can be provided with differing lengths: 1D = 1 times diameter, 2D = 2 times diameter. The Velocity through podded silencer should not exceed 15m/s.

### Silencer Attenuation

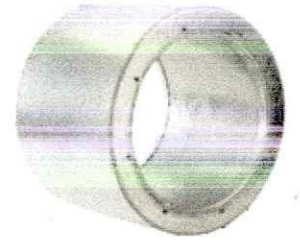
To determine the sound level of a fan fitted with a silencer, the dynamic insertion loss should be subtracted from the sound power level spectrum (dBW) of the fan. This should be done for the entire octave band mid-frequency spectrum. The fan dBW ratings and silencer attenuation apply equally to in duct applications, with a silencer connected between the fan and the duct system.

### Dynamic Insertion Loss

The silencer attenuation is defined as the "dynamic insertion loss". The values quoted in the tables represent the difference between the sound power level of a fan and silencer combination (dBW) and that of the fan alone (dBW). The dynamic insertion losses shown are the attenuations recorded under ideal working conditions. The achieved attenuation will vary according to the air velocity and flow pattern in the airways. Noise regeneration can occur at higher velocities, especially in EP silencers.

### Square / Rectangular Silencers

In highly noise sensitive areas, where the circular silencers cannot achieve the necessary attenuation levels, Elta Fans can design and build optional splitter silencers for greater effect.



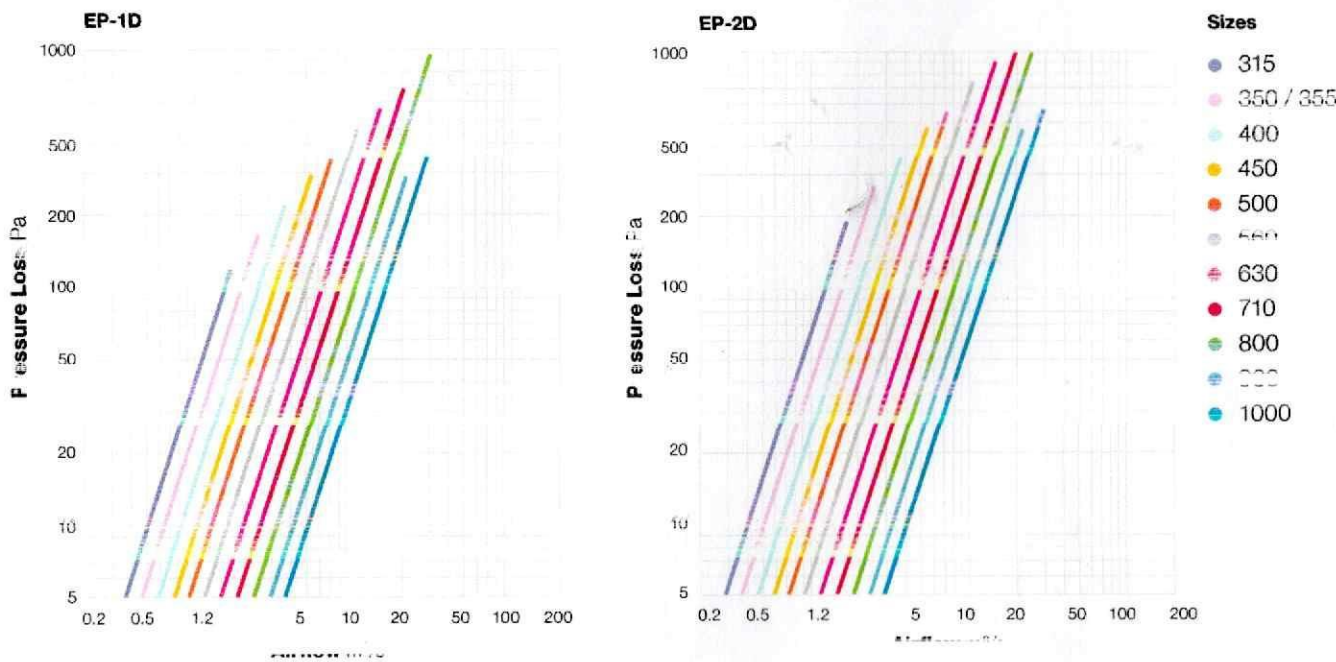
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Dynamic Insertion Loss & Pressure Graphs

Dynamic Insertion Loss

|                 |               | Insertion Loss @ Octave Band (Hz) |     |     |     |     |     |     |     |  |
|-----------------|---------------|-----------------------------------|-----|-----|-----|-----|-----|-----|-----|--|
| Silencer Length | Silencer Type | 63                                | 125 | 250 | 500 | 1k  | 2k  | 4k  | 8k  |  |
| 0250            | 1D ENP        | -2                                | -5  | -6  | -9  | -13 | -11 | -6  | -6  |  |
|                 | EP            | -4                                | -6  | -8  | -11 | -14 | -16 | -11 | -10 |  |
| 0315-0560       | 2D ENP        | -2                                | -5  | -6  | -9  | -13 | -11 | -6  | -6  |  |
|                 | EP            | -4                                | -6  | -8  | -11 | -14 | -16 | -11 | -10 |  |
| 0630-0800       | 1D ENP        | -2                                | -5  | -6  | -9  | -13 | -11 | -6  | -6  |  |
|                 | EP            | -4                                | -6  | -8  | -11 | -14 | -16 | -11 | -10 |  |
| 900-1000        | 2D ENP        | -2                                | -5  | -6  | -9  | -13 | -11 | -6  | -6  |  |
|                 | EP            | -4                                | -6  | -8  | -11 | -14 | -16 | -11 | -10 |  |

Podded Silencers Pressure Graphs



For 0250 podded pressure losses, please contact Elta Fans.

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Dimensional Data

Compact Ø400-630

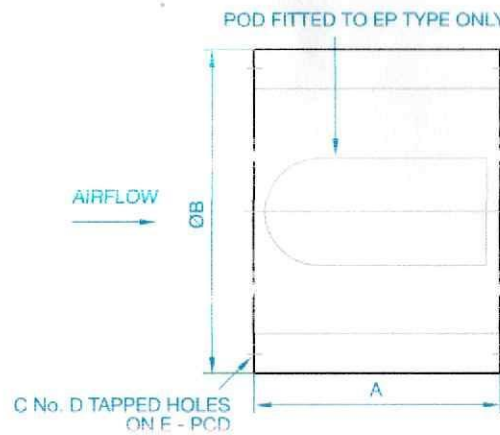
| Product Code   | Fan Dia | A 1D | A 2D | B   | C  | D   | E   | Weight kg |      |       |      |
|----------------|---------|------|------|-----|----|-----|-----|-----------|------|-------|------|
|                |         |      |      |     |    |     |     | 1DENP     | 1DEP | 2DENP | 2DEP |
| 068-0400-D**PC | 400     | 400  | 800  | 500 | 12 | M8  | 438 | 13        | 16   | 22    | 26   |
| 068-0450-D**PC | 450     | 450  | 900  | 602 | 12 | M8  | 487 | 15        | 18   | 27    | 31   |
| 068-0500-D**PC | 500     | 500  | 1000 | 700 | 12 | M8  | 536 | 18        | 22   | 32    | 37   |
| 068-0560-D**PC | 560     | 560  | 1120 | 712 | 16 | M10 | 605 | 22        | 26   | 39    | 46   |
| 068-0630-D**PC | 630     | 630  | 1260 | 782 | 16 | M10 | 674 | 26        | 32   | 48    | 57   |

\*1 or 2 - see A (length in mm) \*\*E (with pod) or EN - (without pod)

Standard Ø250-1000

| Product Code  | Fan Dia | A 1D | A 2D | B    | C  | D   | E    | Weight kg |      |       |      |
|---------------|---------|------|------|------|----|-----|------|-----------|------|-------|------|
|               |         |      |      |      |    |     |      | 1DENP     | 1DEP | 2DENP | 2DEP |
| 068-0250-D**P | 250     | 250  | 500  | 350  | 8  | M8  | 299  | 7         | 9    | 11    | 13   |
| 068-0315-D**P | 315     | 315  | 630  | 416  | 8  | M8  | 355  | 9         | 11   | 15    | 17   |
| 068-0350-D**P | 350     | 350  | 700  | 452  | 8  | M8  | 395  | 11        | 13   | 18    | 21   |
| 038-0355-D**P | 355     | 355  | 710  | 457  | 8  | M8  | 399  | 11        | 13   | 18    | 21   |
| 068-0400-D**P | 400     | 400  | 800  | 503  | 8  | M10 | 450  | 13        | 16   | 22    | 26   |
| 068-0450-D**P | 450     | 450  | 900  | 604  | 8  | M10 | 500  | 15        | 18   | 27    | 31   |
| 068-0500-D**P | 500     | 500  | 1000 | 657  | 12 | M10 | 560  | 18        | 22   | 32    | 37   |
| 068-0560-D**P | 560     | 560  | 1120 | 712  | 16 | M10 | 605  | 22        | 26   | 39    | 46   |
| 068-0630-D**P | 630     | 630  | 1260 | 782  | 12 | M10 | 674  | 26        | 31   | 48    | 57   |
| 068-0710-D**P | 710     | 710  | 1420 | 864  | 16 | M10 | 770  | 32        | 39   | 59    | 71   |
| 068-0800-D**P | 800     | 800  | 1600 | 954  | 16 | M10 | 860  | 40        | 49   | 74    | 90   |
| 068-0900-D**P | 900     | 900  | 1800 | 1102 | 16 | M12 | 970  | 47        | 57   | 87    | 105  |
| 068-1000-D**P | 1000    | 1000 | 2000 | 1203 | 16 | M12 | 1070 | 56        | 67   | 102   | 123  |

\*1 or 2 See A (length in mm) \*\*E With Pod / EN Without Pod \*M Melinex



Dimensions are in mm.