

DIVISIONE: **Constructions**  
DIVISION:

LABORATORIO: **Technical Physics/Acoustics**  
LABORATORY:

<b>RAPPORTO DI PROVA</b> <i>(Test Report)</i>	Pag. <b>1</b> di/of pag. <b>6</b>
N° <b>0099/DC/ACU/09</b>	Data: <b>31/07/2009</b> Date:

IDENTIFICAZIONE E DESCRIZIONE DEL CAMPIONE:  
SPECIMEN DESCRIPTION:

**Acoustic silencer UFO**

Silencer for air intakes of building façades

DATI IDENTIFICATIVI DEL CLIENTE:  
CLIENT:

**EDIL PLAST S.r.l. - FIRST Corporation**  
**Via Mastro Giorgio, 2**  
**I-47100 Forlì (FC)**

NORMA DI RIFERIMENTO:  
REFERENCE STANDARD:

**UNI EN ISO 140-3 :2006 – UNI EN ISO 717-1 :2007**

DISTRIBUZIONE ESTERNA: OUTSIDE DISTRIBUTION:  <b>Client</b>	DISTRIBUZIONE INTERNA: INSIDE DISTRIBUTION:  <b>Laboratory</b>
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ENTE DI ACCREDITAMENTO:  
ACCREDITATION BODY:

Mod. 17 - Rev. 6



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(Test Report)

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## GENERAL DATA

Product supply date: 26/01/2009  
Date of test: 26/01/2009  
Sampling: sample supplied by Client

### Standard reference identification

**UNI EN 20140-10:** Acoustics -- Measurement of sound insulation in buildings and of building elements -- Laboratory measurements of airborne sound insulation of small building elements -- July 1993.

**UNI EN ISO 717-1:** Acoustics -- Rating of sound insulation in buildings and buildings elements -- Part 1: Airborne sound insulation -- July 2007.

### Identification of test method

Measurement of the element-normalized level difference of small elements  $D_{n,e}$  according to UNI EN 20140-10 and calculation of rating  $D_{n,e,w}$  according to UNI EN ISO 717-1.

Standard procedure: YES  
Standard procedure deviations: NO  
Calculation check: YES

## DECLARATIONS

The test results contained in this report relate only to the sample tested.

The test report shall not be reproduced except in full without the written approval of the Head of Laboratory.

Except where stated, characteristics of products were taken from client description and were not verified by the laboratory.

Additional test report.

This test report is a translation of the original test report n. 0020/DC/ACU/09 issued on 06/04/2009.

No additional test has been carried out on the sample.

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Certificazione e Testing

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pag. 6Data: 31/07/2009  
Date:**Description of test method**

Generation of a diffuse sound field using white noise in the source room

Measurement of sound pressure level both in the source room and the receiving

Measurement of reverberation time in the receiving room

Calculation of the element-normalized level difference according to formula  $D_{n,e} = L_1 - L_2 + 10 \cdot \log \left( \frac{A_0 \cdot T}{0,16 \cdot V} \right)$ 

where:

 $D_{n,e}$  = element-normalized level difference (dB) $L_1$  = average sound pressure level in the source room (dB) $L_2$  = average sound pressure level in the receiving room (dB) $T$  = average reverberation time of receiving room (s) $V$  = volume of the receiving room (m<sup>3</sup>) $A_0$  = reference surface area (for laboratory tests  $A_0 = 10 \text{ m}^2$ )**Climatic conditions during the test**

Room temperature = 24 °C

Relative humidity = 45 %



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## DESCRIPTION OF TESTED OBJECT

### Acoustic silencer UFO

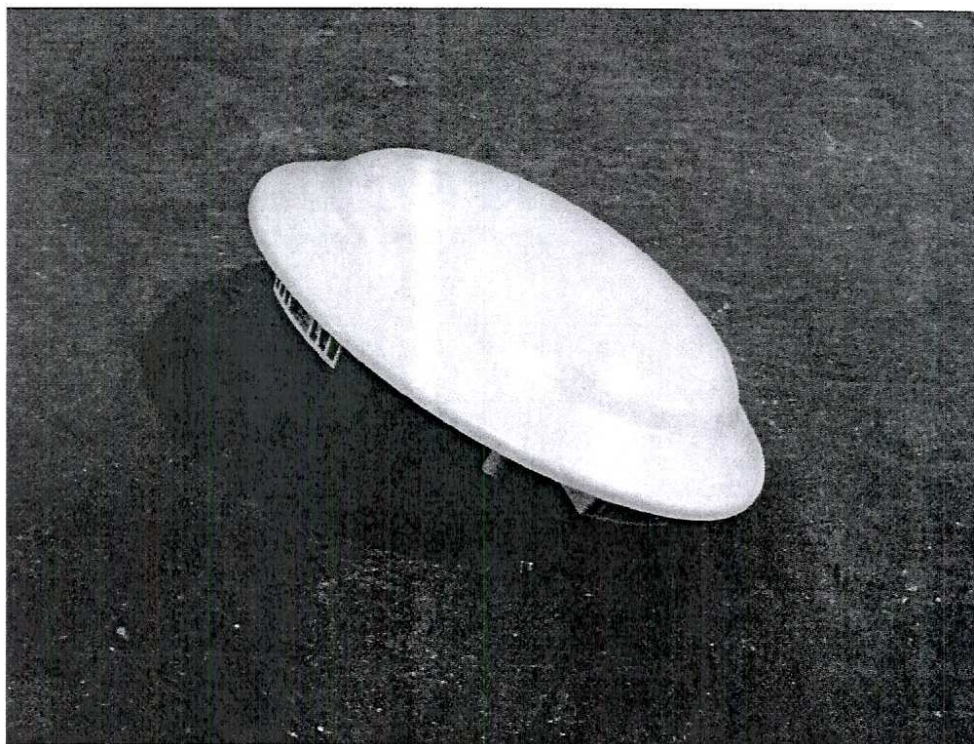
Silencer for air intakes of building façades, mounted on external side; on inner side a TU125 grid has been mounted  
Dimensions of air intake: diameter 120 mm, length 350 mm

### Mounting conditions

Tested object has been installed in a high-insulating heavy masonry wall

### Annexes

Annex n.	Description	Pages
1	Technical drawings	1







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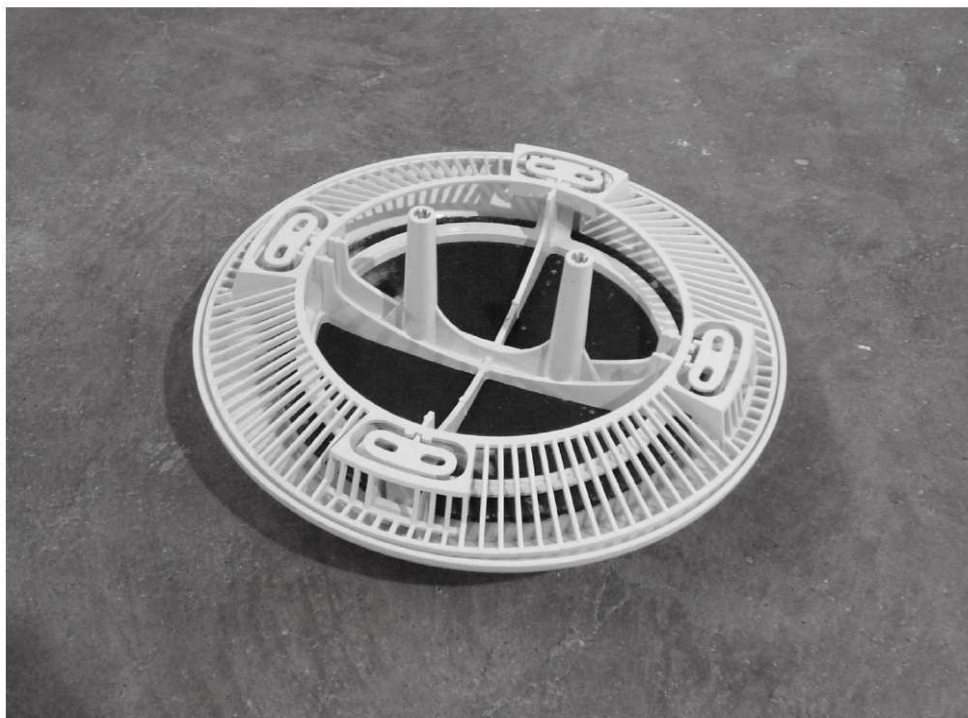
Certificazione e Testing

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Stato di rifugioA

Modelli inserimento

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Data: 31/07/2009

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**TEST RESULTS**Tested element: **Acoustic silencer UFO**

Reference area

 $A_0 = 10\text{m}^2$ 

Number of specimens

 $N = 1$ 

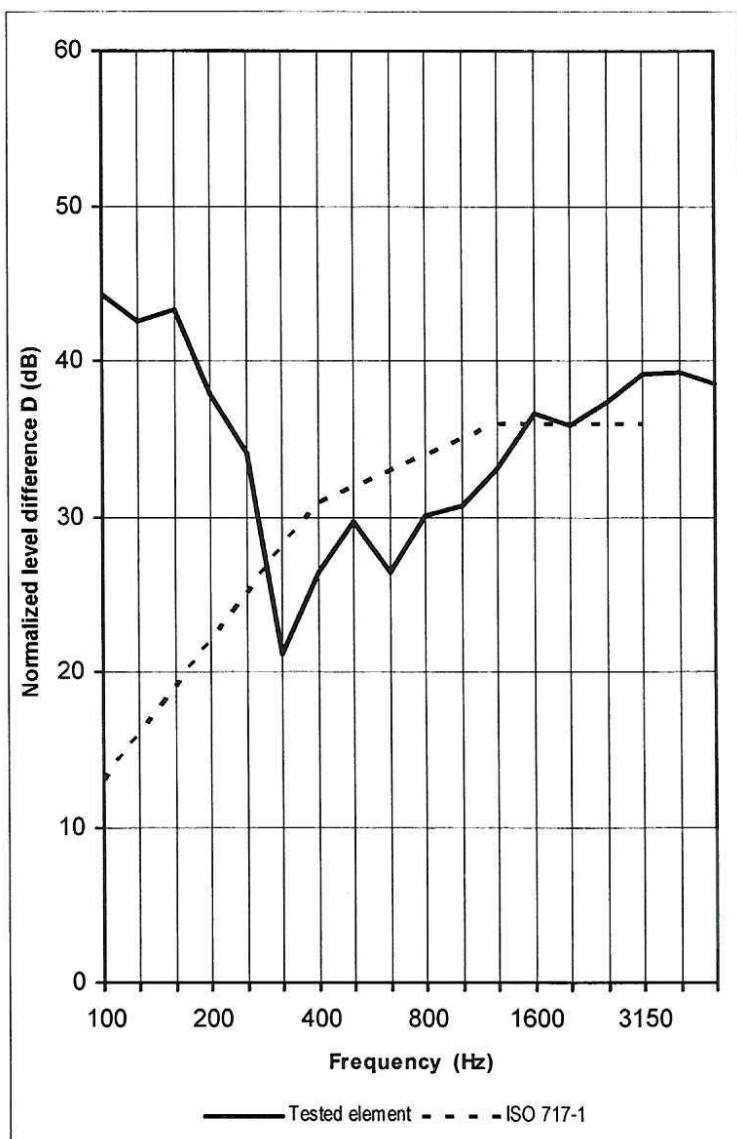
Receiving room volume

 $V = 69,6\text{m}^3$ 

Source room volume

 $86\text{m}^3$ 

FREQ. Hz	Dn,e dB
100	44,3
125	42,5
160	43,3
200	37,9
250	34,1
315	21,1
400	26,4
500	29,7
630	26,4
800	30,1
1000	30,7
1250	33,1
1600	36,6
2000	35,9
2500	37,4
3150	39,1
4000	39,3
5000	38,5

 $D_{n,e,W} (C; C_{tr}) = 32 (-1 ; -2) \text{ dB}$ 

Rating according to ISO 717-1 (in the band 100 ÷ 3150 Hz) based on laboratory measurements:

**IL RESP. Divisione Costruzioni**  
Division Head

Paolo Mele

**IL RESP. DEL CENTRO**  
Managing Director

Pasqualino Cau