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Dirección de Vivienda  
Laboratorio de Control de Calidad de la Edificación

## Tests Report Nº B2017-LACUS-IN-23\_En

### Laboratory measurement of sound insulation

AKUSTIKA ARLOA kudeatzailea:  
ACOUSTICS AREA managed by:



#### TEST SPECIMENS:

- 1) Closure
- 2) Closure with holes
- 3) Closure with holes sealed by *RiveStop D21X33PZ* mechanical system on one side
- 4) Closure with holes sealed by *RiveStop D21X33PZ* mechanical system on both sides

**APPLICANT:** CAUCHOS Y DERIVADOS JABE, S.L.  
Polígono 55 Karrika  
20140 ANDOAIN (Gipuzkoa)



**TESTING STANDARD:** EN ISO 10140-2:2010  
**TEST REPORT DATE:** 6<sup>th</sup> April, 2017  
**TRANSLATION DATE:** 26<sup>th</sup> April, 2017

Digitally signed by: SUSANA  
LOPEZ DE ARETXAGA  
ESCUDERO

**Technical Manager**

The technical-ownership of the ENAC N°4/LE456 accreditation falls to Fundación Tecnalia Research & Innovation, the same way as the technical signatures of this report.

The installations where the measurements are performed according to ENAC N°4/LE456 accreditation belong to the Acoustics Area of Basque Government's Building Quality Control Laboratory.

TECNALIA is Notified Body 1292 according to Regulation (EU) No 305/2011 - Construction products Regulation (CPR) for the specified tests.



#### THIS REPORT CONSISTS OF:

Total Nº of pages: 10 (+ Annexes I and II).

This document includes only and exclusively the tested specimen and the moment and conditions in which those measurements were made.

This document is the English version of the original report in Spanish B2017-LACUS-IN-23 (6<sup>th</sup> April, 2017). In case of law suit, the original document will be taken as reference.

It is expressly forbidden any total or partial reproduction of this document, except with a written conformity from TECNALIA.

The test specimen has been subjected to the test asked by the applicant, following the specified procedures in the used standards.

Test results are detailed in the inside pages. Uncertainties of measurements are available to the applicant.

**CONFIDENTIAL**



## 1.- AIM

This report presents the results of measurement of airborne sound insulation, according to EN ISO 10140-2, of 4 vertical closures, 2 of which included *RiveStop D21X33PZ* mechanical system, manufactured by *CAUCHOS Y DERIVADOS JABE, S.L.*

*RiveStop D21X33PZ* mechanical systems were selected and delivered by the test applicant. Mechanical systems were installed by personnel of *TECNALIA* in a closure provided by the laboratory, from 21<sup>st</sup> till 22<sup>nd</sup> March, 2017.

Tests were performed by personnel of *TECNALIA* (Construction Area - Technological Services Division) in the horizontal transmission rooms of the Acoustics Area of the Laboratory for Quality Control in Buildings of the Basque Government, placed at Aguirrelanda Street, N° 10, 01013 Vitoria – Gasteiz (Alava) Spain.

Details of the test procedure and evaluation are described in Annex II.



## 2.- TEST SPECIMENS DESCRIPTION

Specimen code	Specimen basic description
B2017-23-M404	Closure, as detailed in Figure 3
B2017-23-M405	Closure with holes, as detailed in Figure 2
B2017-23-M406	Closure with holes sealed by <i>RiveStop D21X33PZ</i> mechanical system on one side
B2017-23-M407	Closure with holes sealed by <i>RiveStop D21X33PZ</i> mechanical system on both sides

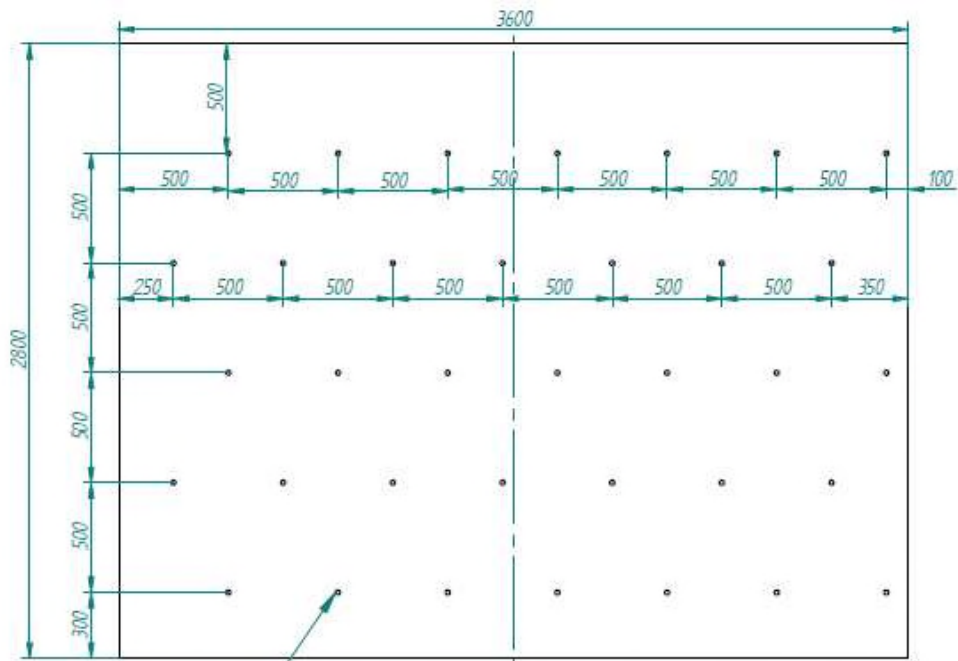


Description: elastic material with mechanical system

Rubber body  $\varnothing$  21 mm and 33 mm long

Total nominal length of piece: 69 mm

**Figure 1: RiveStop D21X33PZ mechanical system description**



Through hole  
 $\varnothing$ 22 mm  
(35 holes)

35 through holes of  $\varnothing$ 22 mm

**Figure 2: Sketch of closure with holes (B2017-23-M405)**



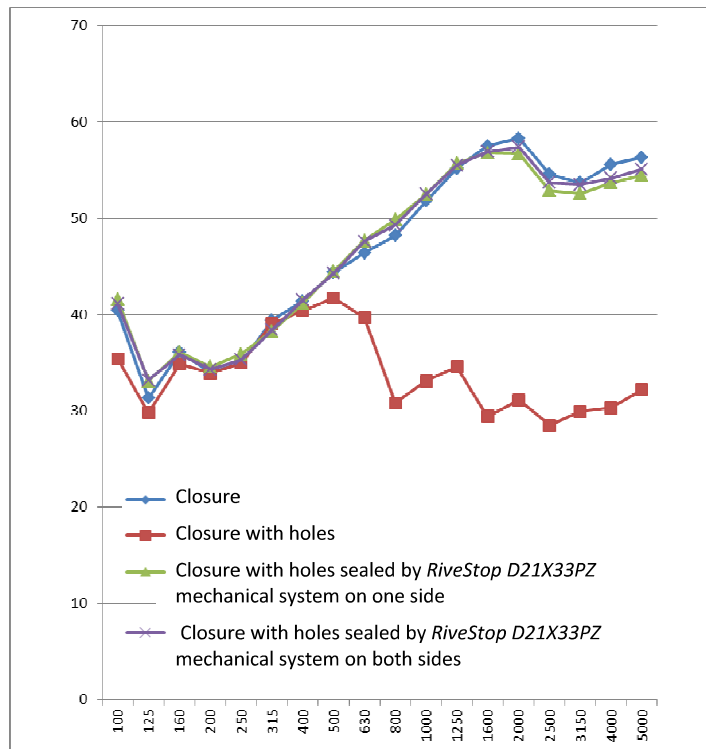
### 3.- RESULTS

Featuring the following results for each test specimen:

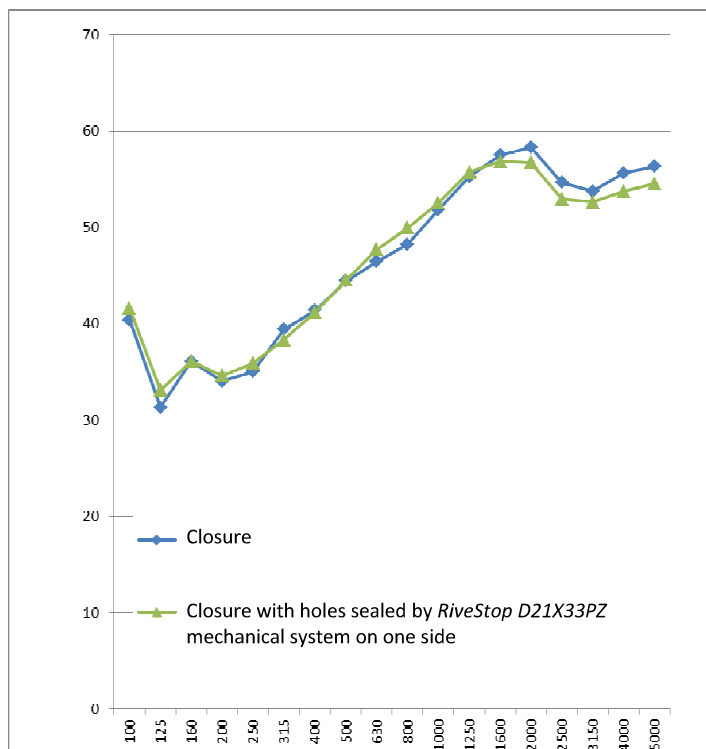
- The **Sound reduction index, R**, in third octave frequency bands from **100 to 5000 Hz**, in table and graph.
- The **Weighted sound reduction index,  $R_w$** , calculated according to EN ISO 717-1, from the sound reduction index, R.
- The **spectrum adaptation terms between 100 and 3150 Hz, C and  $C_{tr}$** , calculated according to EN ISO 717-1, which are the values, expressed in decibels, to be added to the global magnitude value ( $R_w$ , for example) to consider the characteristics of a particular noise spectrum, such as pink noise (C) and traffic noise ( $C_{tr}$ ).
- The following global values, calculated from Sound reduction index, R, according to *Documento Básico "DB-HR Protección frente al ruido - Código Técnico de la Edificación (CTE)*:
  - **A-weighted sound reduction index,  $R_A$** , from **100 to 5000 Hz**, expressed to one decimal place.
  - **A-weighted sound reduction index,  $R_{A,tr}$** , for exterior traffic noise from **100 to 5000 Hz**, expressed to one decimal place.

Also available in table and graph the obtained results for 4 test specimens.





**Graphic 1: Results for 4 test specimens**



**Graphic 2: Results of Closure with unsealed holes and with holes sealed using RiveStop D21X33PZ mechanical system on one side**