FRIAPHON®
DRAINAGE

THE COMFORT OF SILENCE

GIRPI
safety for your pipeworks

NOISE, A SOURCE OF STRESS

82% OF FRENCH PEOPLE QUESTIONED SAY THAT THEY ARE CONCERNED ABOUT NOISE AND ACOUSTIC POLLUTION.

NOISE IS A SOURCE OF STRESS
AND IS PROVEN TO BE DISRUPTIVE AND TROUBLING
IN ALL TYPES OF BUILDINGS, RESIDENTIAL OR COMMERCIAL.

WE SPEND ABOUT 80% OF OUR LIFETIME INSIDE BUILDINGS.

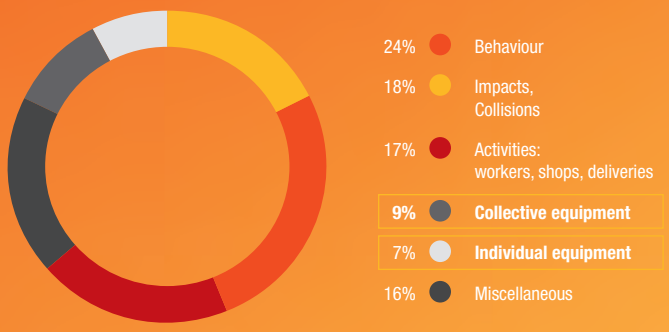
THEREFORE, IT IS VITAL THAT GENERAL CONTRACTORS
AND PROJECT MANAGERS MAXIMISE ACOUSTIC COMFORT
BOTH FOR NEW BUILDINGS AND RENOVATION WORK:
RESIDENTIAL, SCHOOLS, OFFICE BUILDINGS, HEALTH CARE FACILITIES.

THE MAIN SOURCES OF NOISE IN A BUILDING CAN BE SPLIT INTO 2 CATEGORIES

❶ Noise linked to human activity (conversations, footsteps).

❷ Noise from building equipment (fans, lifts, boilers). Technical choices in the building design can increase or decrease these noises.

THE MAIN CAUSES OF COMPLAINTS RELATED TO NOISE (FRANCE, 2013)

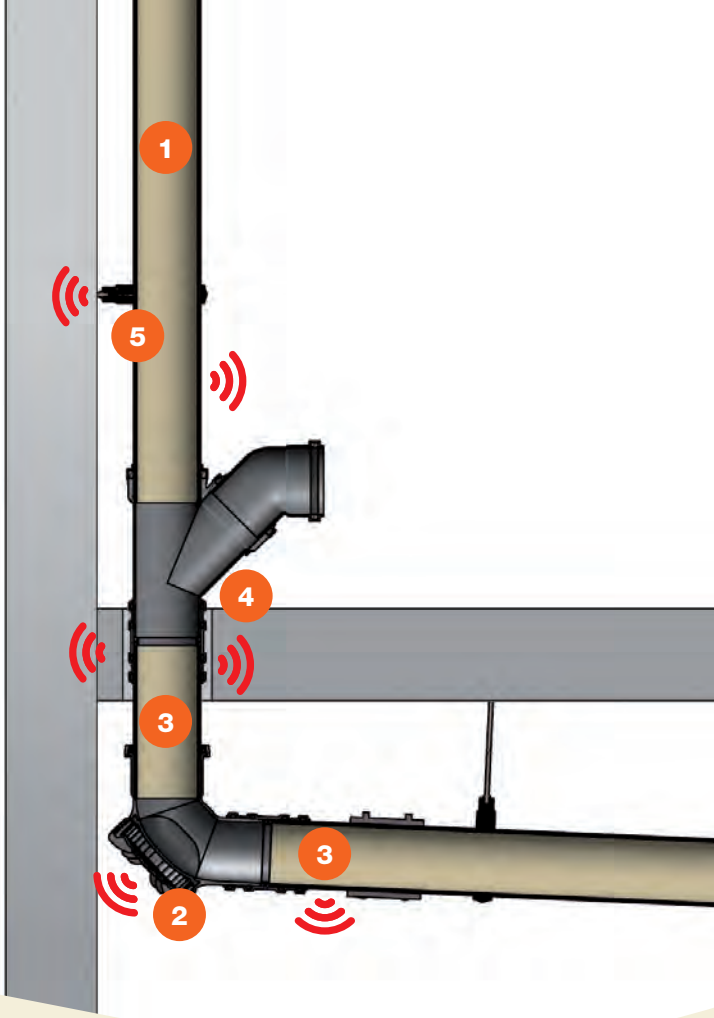


Sources: CIDB

THERE ARE TWO TYPES OF NOISE: AIRBORNE OR STRUCTURAL

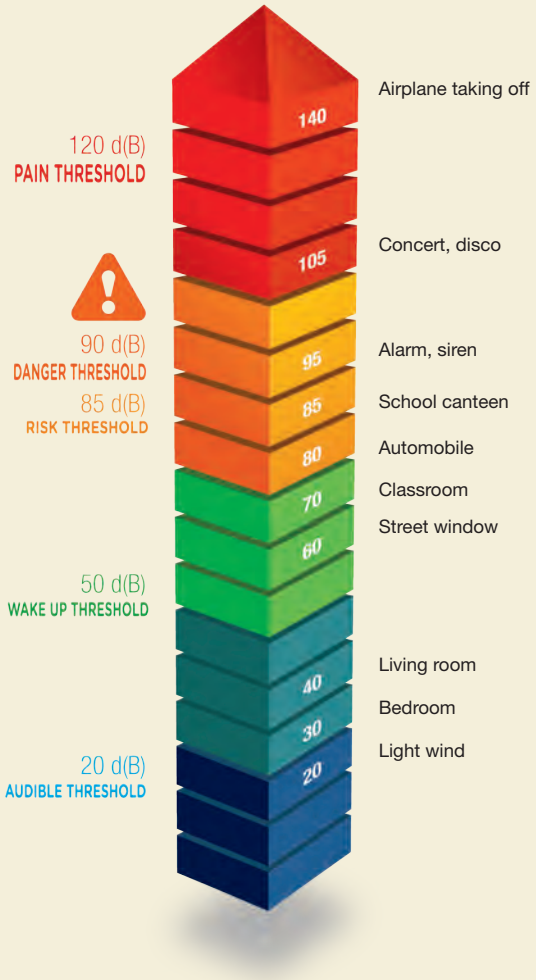
Airborne noise starts in the air and is disseminated (conversations, noise from TV…).

Structural noise is energy generated directly from a wall: impacts, vibrations, collective equipment (lifts, boilers...) or individual equipment (toilet flush, taps, plumbing…).



NOISE FROM SOIL AND WASTE WATER, RAINWATER

The pipe ❶, changes of direction ❷, failure to respect water routing ❸, contact with the structure ❹, bracketing system ❺ must all be subject to careful attention as they are sources of airborne or structural noise emissions.



THE IMPACT OF NOISE ON THE OCCUPANTS OF A BUILDING DEPENDS ON: ITS ARCHITECTURE, THE CHOICE OF ITS PIPEWORK MATERIALS, AND THE RESPECT OF GOOD INSTALLATION AND BRACKETING PRACTICES.

FRIAPHON®
SILENCE,
SOURCE OF COMFORT

TO WIN THE FIGHT AGAINST ACOUSTIC POLLUTION,
CHOOSE THE MOST EFFECTIVE SOLUTION: FRIAPHON®

KEY PRODUCTS TO OBTAIN ACOUSTIC COMFORT

1

ACOUSTIC PIPE

A pipe with a high surface mass manufactured to reduce acoustic emissions (airborne noise).

2

ACOUSTIC ELBOW

Cushioning section equipped with an elastomer membrane, to help minimise impact noise from water when changing direction. Its large curvature radius facilitates the flow, and its access cap allows simplified maintenance operations.

3

ACOUSTIC COUPLING

The coupling eliminates vibration transmission between the various elements of the system.

4

ACOUSTIC PATCH RING

It absorbs the vibrations, sources of noise. Can be installed under concrete slabs and at the bottom of stacks, absorbing vibrations.

5

PHONOKLIP® ACOUSTIC BRACKET

Reduces transmission of structural noise by disconnecting the pipe from the wall.

6

ACOUSTIC FITTINGS

155 references adapted to all project configurations and designed to maintain acoustic comfort all along the system.

APPLICATIONS

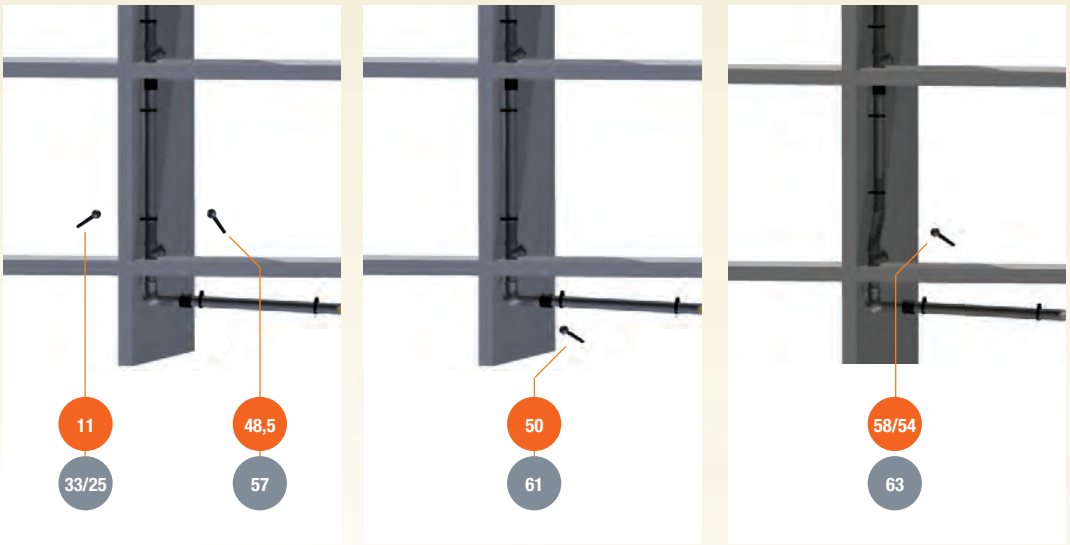
DISCHARGE OF SOIL AND WASTE WATER AND RAINWATER

- Construction of new buildings and renovation: residential, hotels, health care facilities…
- Buildings with high acoustic requirements

ACOUSTIC PERFORMANCE OF THE FRIAPHON® SYSTEM

THE ONLY ESA 5 RATED PLASTIC SOLUTION

STRAIGHT PIPE	SOFFIT	CHANGE OF DIRECTION

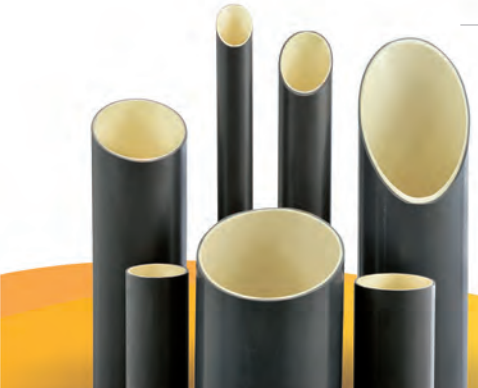


FRIAPHON PVC

1 and 2 -Tests completed at CSTB and Fraunhofer Intitute
3 - Test completed at Aliaxis RD

The result of 54 dB was obtained with an isolation kit composed of ST thermal elastomer insulation and heavy gauge phonic insulation: 4 to 8 kg/m²

The first acoustic system without heavy metals, exclusively stabilised with organic calcium, limiting its environmental impact. FDES (fiche de données Environnementales et Sanitaire / Environmental and Sanitary Declaration Sheets) according to EN 15804 standard available upon request.



GIRPI is committed to sustainable development, ISO 14001 certified, founding member of France GBC (Green Building Council), member of the HQE association (High Environmental Quality), partner of the Vinyl Foundation.

ACOUSTIC PERFORMANCE
ACOUSTIC COMFORT

NO CORROSION NO SCALE
NETWORK DURABILITY

Bs1d0 FIRE CLASSIFICATION EUROCLASSES
FIRE SAFETY

INSTALLATION TIME UNDER CONTROL
SIMPLIFIED INSTALLATION

RECYCLABLE
ENVIRONMENTALLY FRIENDLY

CHOOSE SAFETY
CERTIFICATIONS

ATEC N°14/14-1948
RATED ESA 5

FIRE REACTION RATING: Bs1d0 (EUROCLASSES)

ACOUSTIC TEST REPORTS BY CSTB AND FRAUNHOFER INSTITUTE

EPD: ENVIRONMENTAL PERFORMANCE DECLARATION

DEMANDING ACOUSTIC REGULATIONS

THE LEVELS OF ACOUSTIC PRESSURE GENERATED SHOULD NOT BE ABOVE THE VALUES PER APPLICATION BELOW

LEVEL OF ACOUSTIC PRESSURE	APPLICATIONS			
	HOUSING (NEW)	TEACHING FACILITIES	HOTELS	HEALTH CARE FACILITIES
	NRA: New Acoustic Regulations (1999)		Legislation of 25 April 2003 relating to noise limits	
30 dB(A)	Main rooms (living room and bedrooms)		Bedrooms	Bedrooms
33 dB(A)		Libraries, infirmaries, rest rooms, music rooms		Examination rooms, offices, waiting rooms
35 dB(A)	Other (kitchens, bathrooms)	Other (kitchens)		Health care rooms, operating theatres
40 dB(A)				Health care rooms, operating theatres
43 dB(A)		Class rooms, administration, meeting rooms		

ON 27 NOVEMBER 2012 A DECREE RELATING TO ACOUSTIC REGULATION AWARENESS WAS PUBLISHED. IT STATES THAT CONSTRUCTION PROJECT MANAGEMENT MUST RESPECT ACOUSTIC REGULATIONS IN FORCE. THAT APPROACH IS APPLICABLE DURING THE DESIGN AND EXECUTION PHASES AND IS COMPLETED BY A CONTROL AT HANDOVER FOR BUILDINGS OF 10 DWELLINGS OR MORE.

THE GUIDE TO ACOUSTIC MEASURES SUPPLEMENTS THE DECREE OF 27 NOVEMBER 2012

This guide is meant for professionals. It specifies the different regulatory and standard requirements to be taken into account when making acoustic measurements for residential buildings.

ACOUSTIC PERFORMANCES RECOMMENDED BY THE ESA GUIDE (EXAMPLES OF ACOUSTIC SOLUTIONS)

The guide of “ESA” published in January 2014 by the Ministry of Environment, Sustainable Development and Energy, and the Ministry of Housing is a design assistance guide. It does not have any regulatory value.

It presents the solutions which have been evaluated on the basis of NF EN 12354 and ACOUBAT standards in unfavourable configurations so that they will comply with the acoustic regulations in most cases. The acoustic quality of the products was evaluated according to the ESA3 to ESA5 performance scale.

THESE REQUIREMENTS CAN BE COMPLETED BY THE OBTENTION OF A CERTIFICATION

CERQUAL

HQE ASSOCIATION RECONNUE D'UTILITÉ PUBLIQUE

The certification is a voluntary process for project management teams. The obtention of the certificate implies an obligation to provide a building which complies with the quality requirements of the certifications or labels being applied for.

RECOMMENDATIONS AND RESULTS

RECOMMENDATIONS	STRUCTURAL NOISE ACCORDING TO EN14366	AIRBORNE NOISE ACCORDING TO EN14366	EXAMPLES OF ESA ACOUSTIC SOLUTIONS
ESA3	25/33 dB(A)**	53<Lna<57	Pipes and fittings in NF certified PVC-U
ESA4	25/33 dB(A)**	49<Lna<53	Pipes and fittings with certified acoustic characteristics
ESA5	25/33 dB(A)**	Lna<49	NF certified cast iron and **FRIAPHON®** piping systems

***: 33 dB with standard brackets, 25 dB with acoustic brackets*

RESULTS	STRUCTURAL NOISE ACCORDING TO EN14366	AIRBORNE NOISE ACCORDING TO EN14366	SOFFIT	CHANGE OF DIRECTION
PVC	25 dB(A) or 33 dB(A)	57 dB(A)	61 dB(A)	63 dB(A)
FRIAPHON®	11 dB(A)	48,5 dB(A)	50 dB(A)	58 (54*) dB(A)

**: By adding heavy gauge phonic insulation (4 to 8 kg/m²)*

FRIAPHON® OBTAINS THE BEST ESA 5 RATING.

IN THE ESA FRAMEWORK, FRIAPHON® ALLOWS FOR THE USE OF LOW ACOUSTIC PERFORMANCE MATERIALS FOR TECHNICAL SHAFTS. THE USE OF HIGH ACOUSTIC PERFORMANCE SHAFTS WITH FRIAPHON® MAKES IT POSSIBLE TO OBTAIN **ACOUSTIC COMFORT**.

GIRPI

safety for your pipeworks

an Aliaxis company

Rue Robert Ancel • CS 90133 • 76700 HARFLEUR • FRANCE
Tél. : +33 2 32 79 60 00 • Fax. : +33 2 32 79 60 27
contact@girpi.fr • www.girpi.fr

RCS LE HAVRE B 719 803 249 - SDV2VALGB15 – 09/15 – Crédits photos GIRPI, Fotographic Patrick Boulen – Fotolia