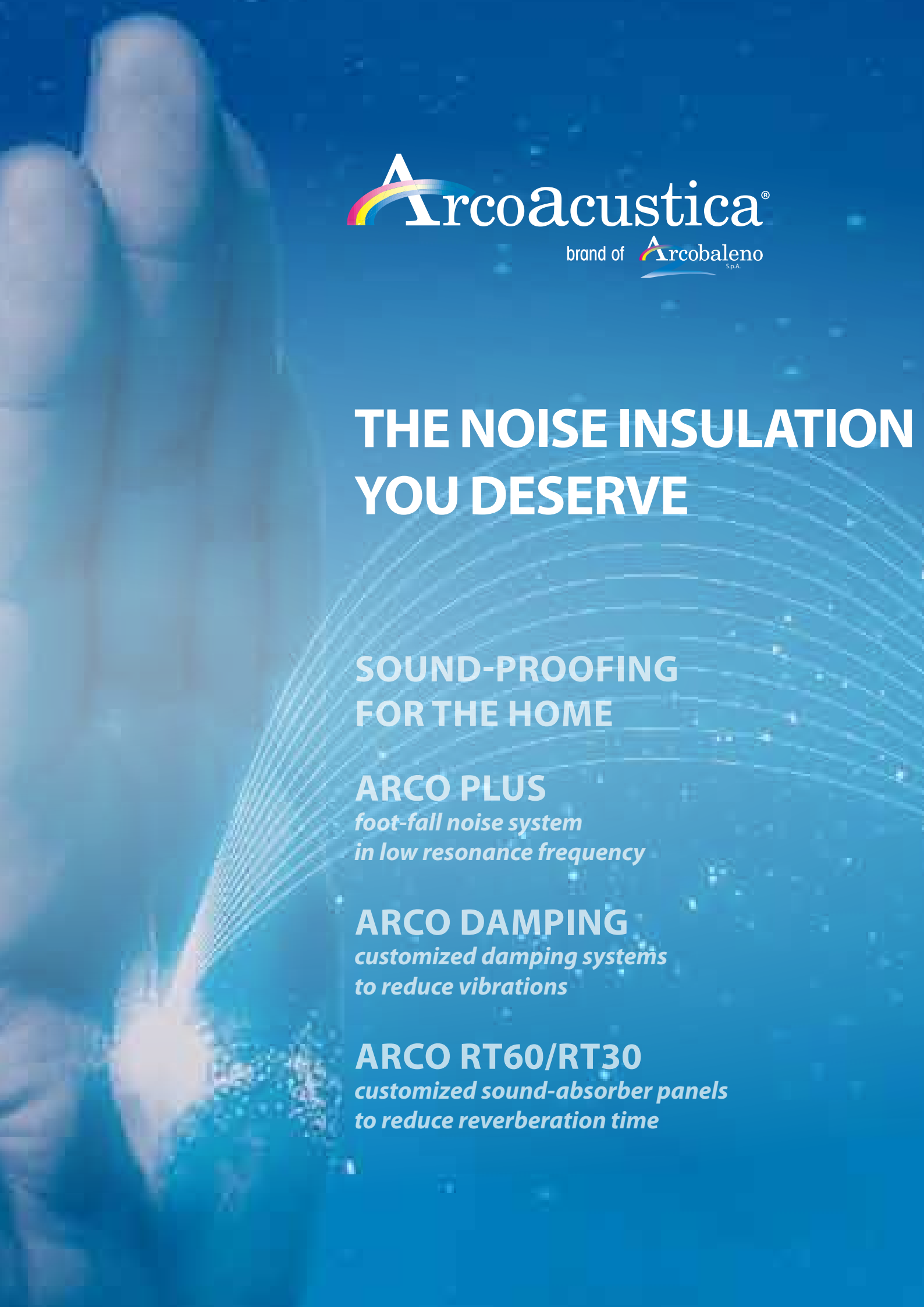

Arcoacustica®
brand of Arcobaleno S.p.A.
THE NOISE INSULATION YOU DESERVE
SOUND-PROOFING FOR THE HOME
ARCO PLUS
foot-fall noise system in low resonance frequency
ARCO DAMPING
customized damping systems to reduce vibrations
ARCO RT60/RT30
customized sound-absorber panels to reduce reverberation time


Arcoacustica®
brand of Arcobaleno S.p.A.

STANDARD SOLUTIONS

SOUND-PROOFING FOR THE HOME

- PROTECTION FROM THE INTERIOR NOISE
- PROTECTION FROM THE EXTERIOR NOISE
- PROTECTION FROM THE IMPACT NOISE
- PROTECTION FROM THE WATER'S DISCHARGE NOISE
- REVERBERATION TIME CONTROL AND ACOUSTIC COFORT'S UPGRADING

MISSION

Living and working in urban environments or more remote areas can have some unexpected drawbacks; our psychological and physical wellbeing, as well as our peace of mind can be put to the test by an invisible enemy - NOISE. Like an unpleasant life partner, it limits our actions, in some circumstances preventing us from working and resting peacefully, threatening our quality of life and even reducing our productivity.

We are committed to helping the growth of the industry in which we operate, and with our extensive professional experience as a Construction Company, we have decided to create highly specialised solutions in turnkey acoustic insulation.

We aim to design "tailor-made" sound insulation solutions that are totally different from what is available on the market, by accompanying and supporting our customers from the design phase to the final acoustic test at the site. The product range is technically complete with all applications and structural conditions. Our mission is to provide soundproofing for new buildings, restoration and recovery of historic buildings, acoustic treatment of structures deemed unsuitable and the development of new construction systems, and we pursue this with great determination.

We offer a method that involves collaboration with all the people involved in the work, resulting in increased quality of service for the end user.

Arcoacustica®

NOISE PROTECTION:

INTERIOR

WALL WITH CAVITY

Soundproofing/thermal insulation panels obtained by the combination of the latest generation of viscoelastic membranes and recycled sound- absorbing panels

ARCO WALL TECH
ARCO WALL FIBER
ARCO WALL WHITE
ARCO WALL DUE - ARCO WALL TOP

INTERNAL WALL CLADDING

Adhesive soundproofing membrane to be applied to gypsum-fibre panels and to be mounted onto the existing wall by direct mechanical fixing (no structure)

ARCO EASY
ARCO GIPS
ARCO HPS GIPS

PARTITION WALLING

Adhesive viscoelastic membranes of 5.0 and 10.0 kg/ m2, made with new-generation elastomers, applied on coated plasterboards and fixed to the metal structure.

ARCO WALL TECH
ARCO WALL FIBER
ARCO MASS
ARCO WALL WHITE

ArcoAcustica®

NOISE PROTECTION:

EXTERIOR

CAVITY WALL

Eco-compliant panels with outstanding soundproofing/ thermal insulation properties obtained from raw material recycling, and by combining with 100% recyclable viscoelastic (layered) masses to be applied inside the masonry or in combination with dry systems.

ARCO WALL TECH
ARCO WALL FIBER
ARCO WALL WHITE
ARCO TOPWALL DUE - ARCO WALL TOP

INTERNAL WALL CLADDING

Panel obtained by the joining of a plasterboard covered with an eco-friendly panel fitted to the wall and secured with polypropylene blocks.

ARCO GIPS
ARCO EASY
ARCO HPS GIPS

PARTITION WALLING

Adhesive viscoelastic membranes weighing 5.0 and 10.0 kg/m2, made with new-generation elastomers, mounted on coated plasterboards and fixed to the metal structure.

ARCO MASS
ARCO WALL FIBER
ARCO WALL TECH
ARCO MASS GIPS

ArcoAcustica®

NOISE PROTECTION:

IMPACT-PROOFING

FLOOR UNDERLAY

High-density surfacing obtained from the recycling of highly pressure-resistant elastomers, applied dry directly under the parquet floor.

ARCO FACILE
ARCO LOW CKR

FLOATING SCREED

Impact sound insulation coating obtained by joining a component with high mechanical strength and a resilient component applied under the floor screed.

ARCO HPS
ARCO MANT
ARCO FLOOR
ARCO LGT RUBBER
ARCO RUBBER

OVERLAY

An impact-resistant membrane with extraordinary mechanical strength, obtained by joining a non- woven fabric and a resilient component, applied directly to the untreated slab.

ARCO SOLAIO
ARCO ADVANCED
ARCO RUBBER

ArcoAcustica®

NOISE PROTECTION FROM:

MACHINERY

PIPING COVERING

Adhesive viscoelastic sheet made of new generation elastomers, with the option of a fireproof sound- absorbing layer for the drainage column coating.

ARCO MASS
ARCO PLAST
ARCO EASY

INDUSTRIAL / PUBLIC BUILDING CLADDING

Produced by joining plasterboard covered with an eco-friendly panel to be fitted to the wall itself with polypropylene blocks.

ARCO GIPS
ARCO EASY
ARCO HPS GIPS

LIFT SHAFT PLATING

Produced by joining plasterboard covered with an eco-friendly panel, fitted to the wall of the lift shaft and secured with polypropylene blocks.

ARCO GIPS
ARCO EASY
ARCO HPS GIPS
ARCO DUE

ArcoAcustica®

ACOUSTIC UPGRADING OF ENVIRONMENTS

SOUND ABSORBING SYSTEM

COMMERCIAL ENVIRONMENTS / OFFICES

MODULAR SUSPENDED CEILING

Customisable sound-absorbing "Quadro" made from thermoformed recycled PET combined with high-tech fabrics, fitted on 60x60cm suspended ceilings.

ARCO DESIGN

SCHOOLS/SWIMMING POOLS/SPORTS CENTRES

BAFFLES AND SOUND-ABSORBING PANELS

Sound-absorbing recycled panel covered with a high-strength fabric lining attached to existing structures with pendants and hooks. Customisable design.

ARCO RT60
ARCO RT30

RESTAURANTS/CATERING ESTABLISHMENTS

SOUND-ABSORBING PANELS

Sound-absorbing recycled panel, fixed to existing walls and secured with metal guides.

ARCO DESIGN
ARCO FORM
ARCO RT30

Arcoacustica®

TURNKEY SERVICE

RESEARCH AND DEVELOPMENT

OF NEW TECHNICAL SOLUTIONS

TARGETED SOLUTION DESIGN

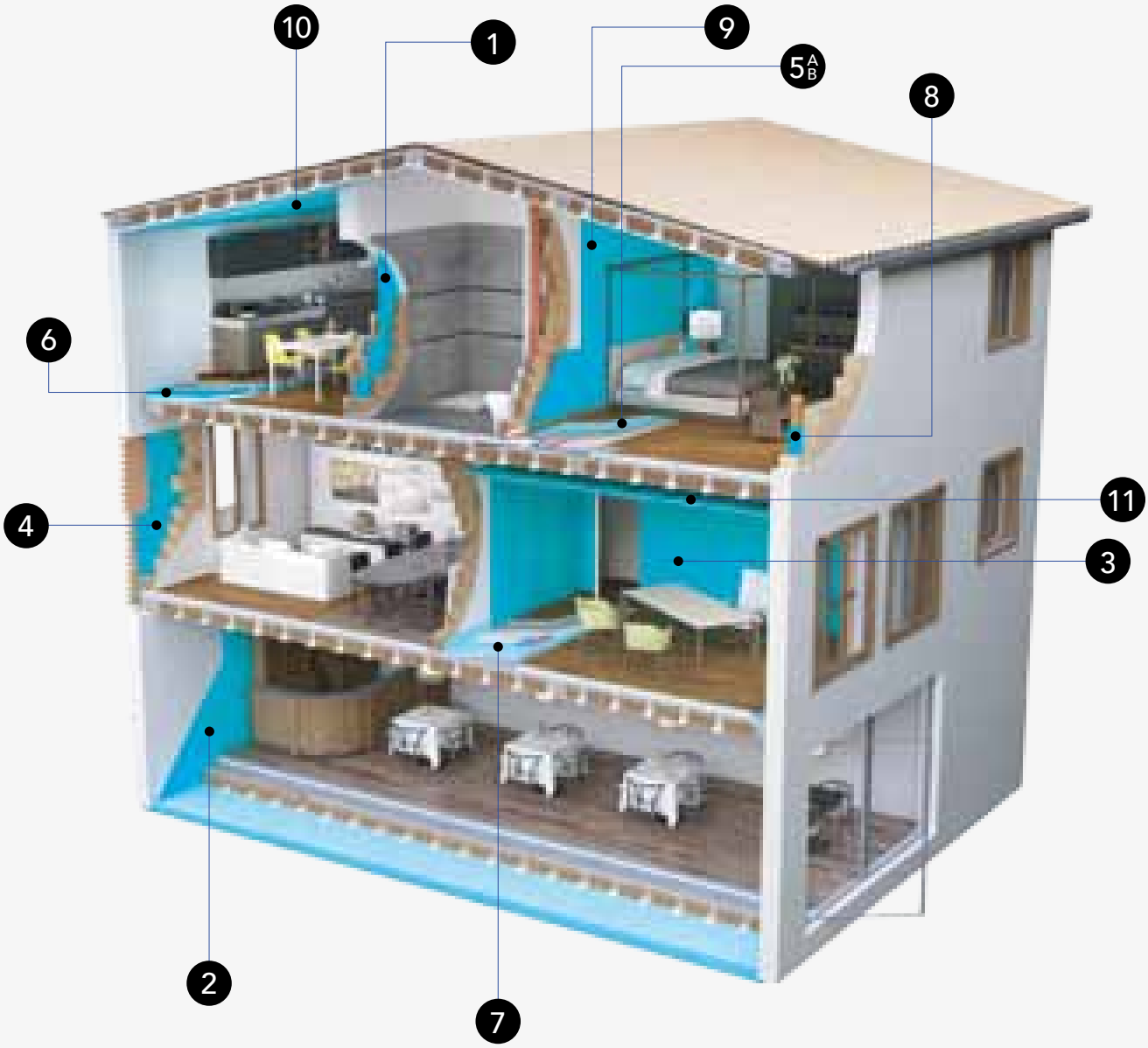
TRAINING OF WORKERS

ON-SITE PRODUCT SET-UP AND TECHNICAL SUPPORT

ACOUSTIC TESTING UPON COMPLETION OF THE WORKS

FINAL CERTIFICATION

Arcoacustica®

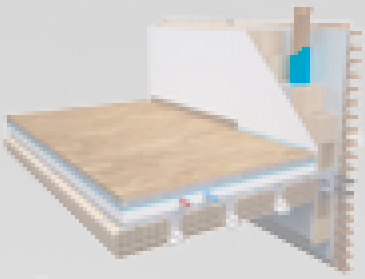


Arcoacustica®

APPLICATION OF PROTECTION SYSTEMS

1 CAVITY

5A UNDER PARQUET



8 PIPING COVERING

2 WALLCLADDING

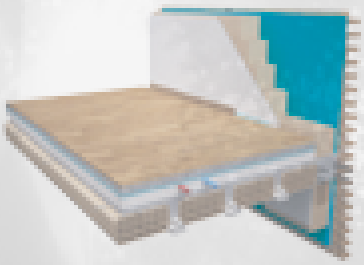
5B UNDER CERAMIC

9 INDUSTRIAL CLADDING

3 PARTITION WALL

6 FLOATING SCREED

10 SUSPENDED CEILING GRADUATED MODULAR



4 CAVITY

7 FLOOR OVERLAY

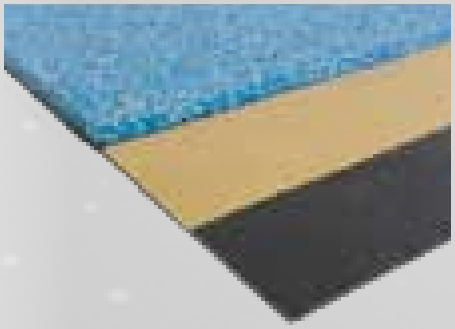
11 SOUND-ABSORBING BAFFLES

DESCRIPTION OF THE MAIN PRODUCTS

ARCO HPS

ARCO HPS is an impact-resistant system made by joining a waterproof and breathable membrane and a resilient component obtained from recycled latex and foam. The product is 100% recyclable. It is generally applied to new constructions in accordance with the design and application requirements of the floating screed. The product is available in various thicknesses.

APPLICATION Impact-resistant roll



ARCO FLOOR

ARCO FLOOR is an impact-resistant system made by combining a waterproof and breathable membrane and a resilient component obtained from recycled latex and foam. The product is 100% recyclable. It is generally applied to new constructions in accordance with the design and application requirements of the floating screed. The product is available in various thicknesses.

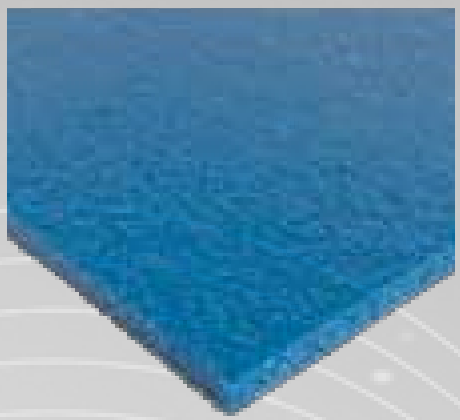
APPLICATION Impact-resistant roll

ARCO SOLAIO

ARCO SOLAIO is an impact-resistant system consisting of a combination of waterproof and breathable membrane and a high density resilient component obtained from recycled latex and foam. The product is 100% recyclable. This impact-resistant system involves the use of the product placed directly above the bare floor; the application of the product across the front of the floor means risks from flaws in fitting are minimised. The product is available in various thicknesses.

APPLICATION Impact-resistant roll

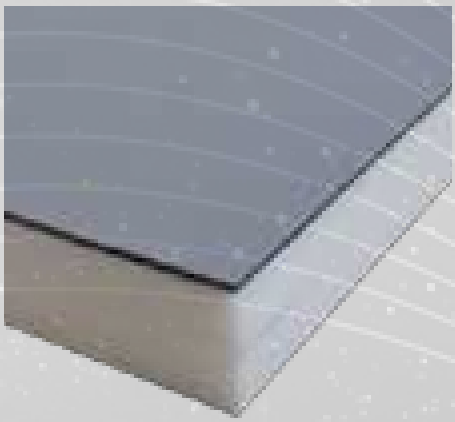
ARCO MANT



ARCO MANT is an impact-resistant system made with a special blend of ethylene-propylene-diene monomer and polyethylene. This new generation of impact-resistant material has the unique feature of combining lightness, elasticity, compressive strength and high soundproofing performance in a single product. The product is generally applied to new constructions in accordance with the design and application requirements of floating screed and is available in various thicknesses.

APPLICATION Impact-resistant roll

ARCO ADVANCED



ARCO ADVANCED is an electromagnetic induction impact- resistant system. The product is made by joining a TPO membrane and a polyether elastomer. It is available in thicknesses of 20.0, 30.0 and 40.0 mm. The product is 100% recyclable, rot-proof, water-insoluble, and non-irritating when it comes into contact with skin, eyes and respiratory system. It is generally applied to new constructions laid directly above the untreated slab and fixed to it through electromagnetic induction.

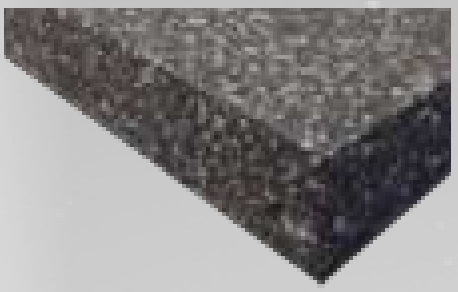
APPLICATION Impact-resistant roll

ARCO FACILE

ARCO FACILE is an impact-resistant system made with a high-density resilient component obtained by recycling latex and foam, and the product is 100% recyclable. The acoustic system involves the "dry" application of the component in direct contact with the wood finishing. The product is used mainly in the restoration of buildings.

APPLICATION Impact-resistant roll

DESCRIPTION OF THE MAIN PRODUCTS



ARCO WALL TECH

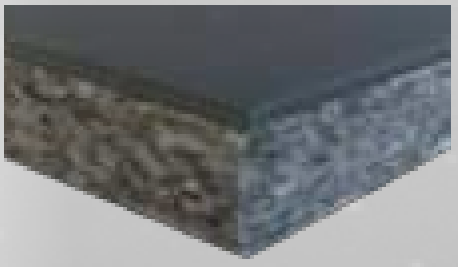
ARCO WALL TECH is an eco-friendly soundproofing product obtained by the recycling of special elastomers such as latex and foam rubber. The panel is applied to the cavity between double brick walls for acoustic isolation from airborne noise between different housing units. The product is 100% recyclable. The ARCO WALL TECH technical solution is used in the construction of new buildings.

APPLICATION Interior Air - Exterior panel

ARCO WALL FIBER

ARCO WALL FIBER is an environmentally-friendly soundproofing product obtained by the recycling of polyester fibre. The panel is applied in the cavity between double brick walls for sound insulation from airborne noise between different housing units. The product is 100% recyclable. The ARCO WALL FIBER technical solution is used in the construction of new buildings, in compliance with the procedure for arco internal cladding.

APPLICATION Interior Air - Exterior panel



ARCO WALL DUE

ARCO WALL DUE is an eco-friendly sound-absorbing/sound-insulating product, obtained by recycling polyurethane foam and latex, attached to a 3.5-cm-thick viscoelastic membrane. The product is rot-proof, non-soluble in water and non-irritating when coming into contact with skin, eyes and the respiratory system. It has long-lasting technical performance. The product is applied in the cavity between the two brick walls for acoustic insulation between different properties.

APPLICATION Interior Air (exterior air) panel

ARCO WALL TOP

ARCO WALL TOP is an eco-friendly sound-absorbing/soundproof product obtained by recycling polyurethane foam and latex, joined to two 35-mm-thick viscoelastic membranes. The product is rot-proof, non-soluble in water and non-irritating when coming into contact with skin, eyes and the respiratory system. It has long-lasting technical performance. The product is applied in the cavity between the two brick walls for acoustic insulation between different properties.

APPLICATION Interior Air (Exterior Air) Plate

ARCO EASY

ARCO EASY is a soundproof surfacing, which is adhesive on one side and is applied to fibre plasterboard. The finished product is laid onto the existing structure and attached to it with glue and polypropylene dowels. The ARCO EASY technical solution is used in the acoustic restoration of buildings for protection against airborne noise produced in the different housing units.

APPLICATION Interior Air (External Air) roll

ARCO GIPS

ARCO GIPS is produced by joining a special soundproofing component to a plasterboard slab; the product is fitted to the existing wall with glue and polypropylene blocks. The ARCO GIPS technical solution is used as part of the sound restoration of buildings for the protection against airborne noise coming from outside the building. The product is available in various thicknesses.

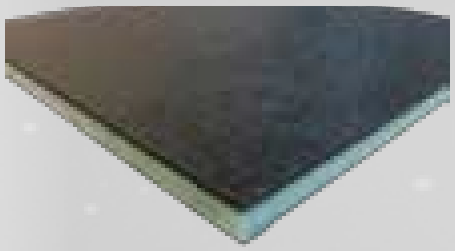
APPLICATION Discontinuous plants sheet

DESCRIPTION OF THE MAIN PRODUCTS

ARCO FASCIA AND ACCESSORIES

ARCO FASCIA is an adhesive foamed polyethylene band on one side, 6.0mm thick. The product is 100% recyclable, rot-proof, water-insoluble and non-irritating when it comes into contact with skin, eyes and respiratory system. It is used as a "perimeter joint" between the walls and the various types of impact-proofing laid in accordance with the procedure for floating screed.

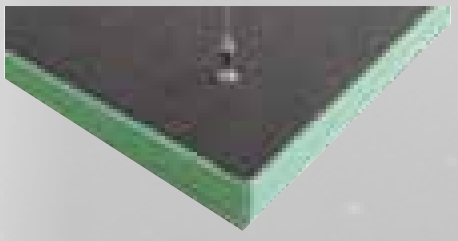
APPLICATION System accessories



ARCO PLAST

ARCO PLAST is a viscoelastic membrane joined to an adhesive polyester fibre. The product is used for the soundproofing of drainage systems. Arco PLAST is available in various thicknesses. After removing the protective film, the panel is fitted onto the drainage pipes made of PP, PE-HD and PVC inside the masonry of the building.

APPLICATION Impact-proofing of plants, aerial sheets

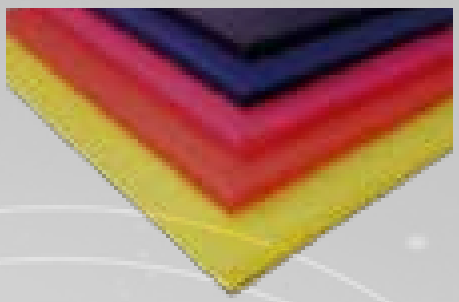


ARCO RT 60

ARCO RT60 is a sound-absorbing panel works due to the highly-porous materials it is made from. The panel comes in a standard size of 100x100cm, and is used on ceilings and/or walls with special metal guides. It is generally used in restaurants, classrooms, and crowded places. ARCO RT60 is available with different types of finish.

APPLICATION sound-absorbing Panels

ARCO DAMPING



ARCO DAMPING is the technical sector within which civil and industrial damping solutions are developed based on the surface mass analysis of the system (m), the elastic elastomer constant (k) and the resonance frequency of the system (f0). They are available in various thicknesses and types of bulk modulus.

APPLICATION Industrial damping plates - pcs

ARCO CIEMME

ARCO CIEMME is an damping system used to reduce the vibrations produced by heat pumps and cogenerators that feed the utilities inside the premises. The product is made for direct injection moulding of a specific mixture of polyurethane, silicone and centrifuged latex. ARCO CIEMME is available in three types of stiffness. Product use is provided for by the SDOF systems at the base of the machine without the use of the inertial partition plate.

APPLICATION Industrial damping plates - pcs

ARCO RAINBOW

YELLOW RAINBOW is an damping system used to reduce the vibrations produced by heat pumps and cogeneration units that feed the utilities inside the building. The product is made for direct injection moulding of a specific mixture of polyurethane, silicone and latex. YELLOW RAINBOW is available in four types of stiffness. For SDOF systems, the product is used at the base of the machine without the use of an inertial partition plate.

APPLICATION Under machine vibration dissipator - pcs


Arcoacustica®
brand of Arcobaleno S.p.A.

SPECIAL SOLUTIONS

ARCO PLUS

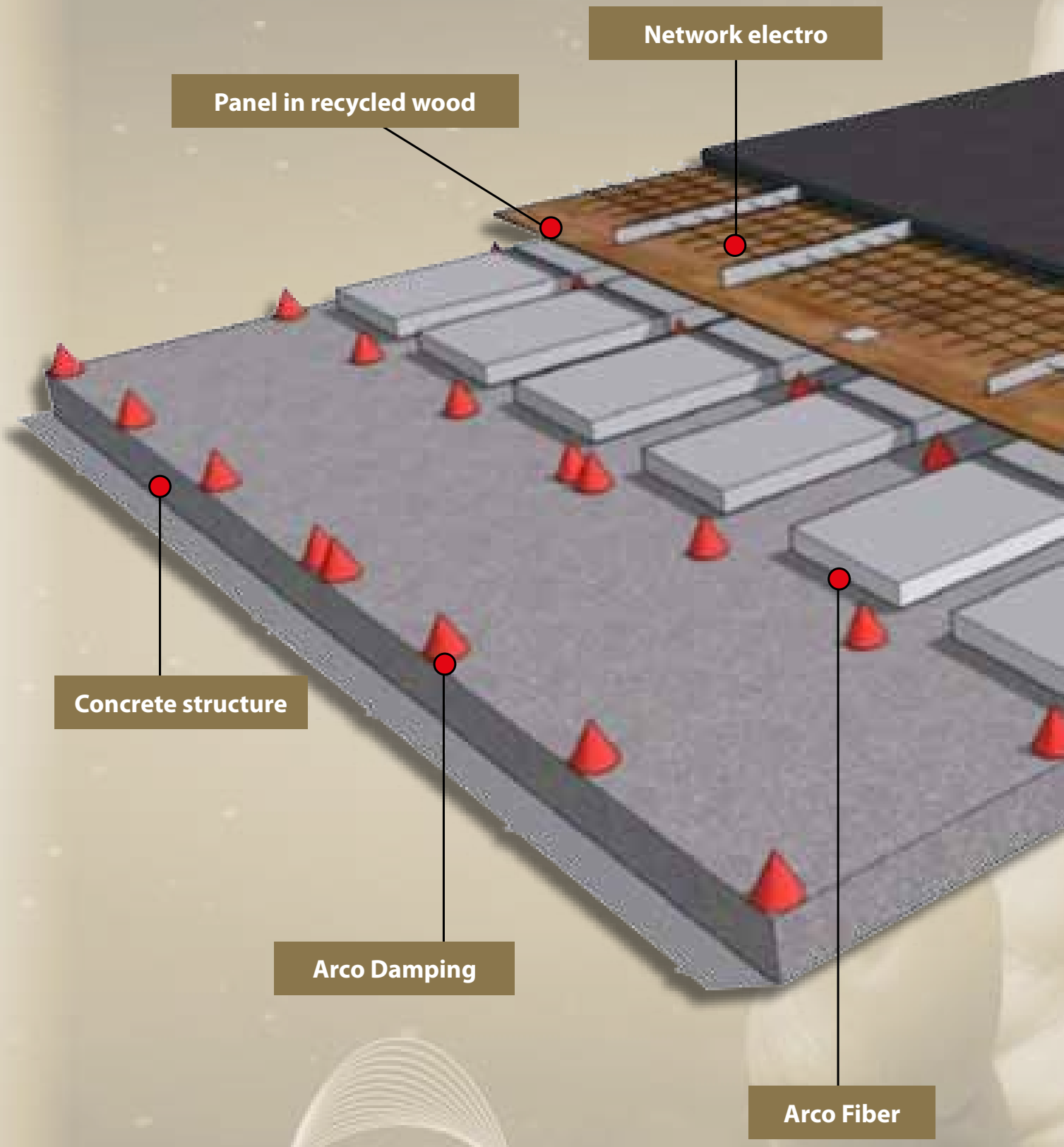
Innovative subflooring system in low frequency resonance

ARCO DAMPING

ARCO FIBER

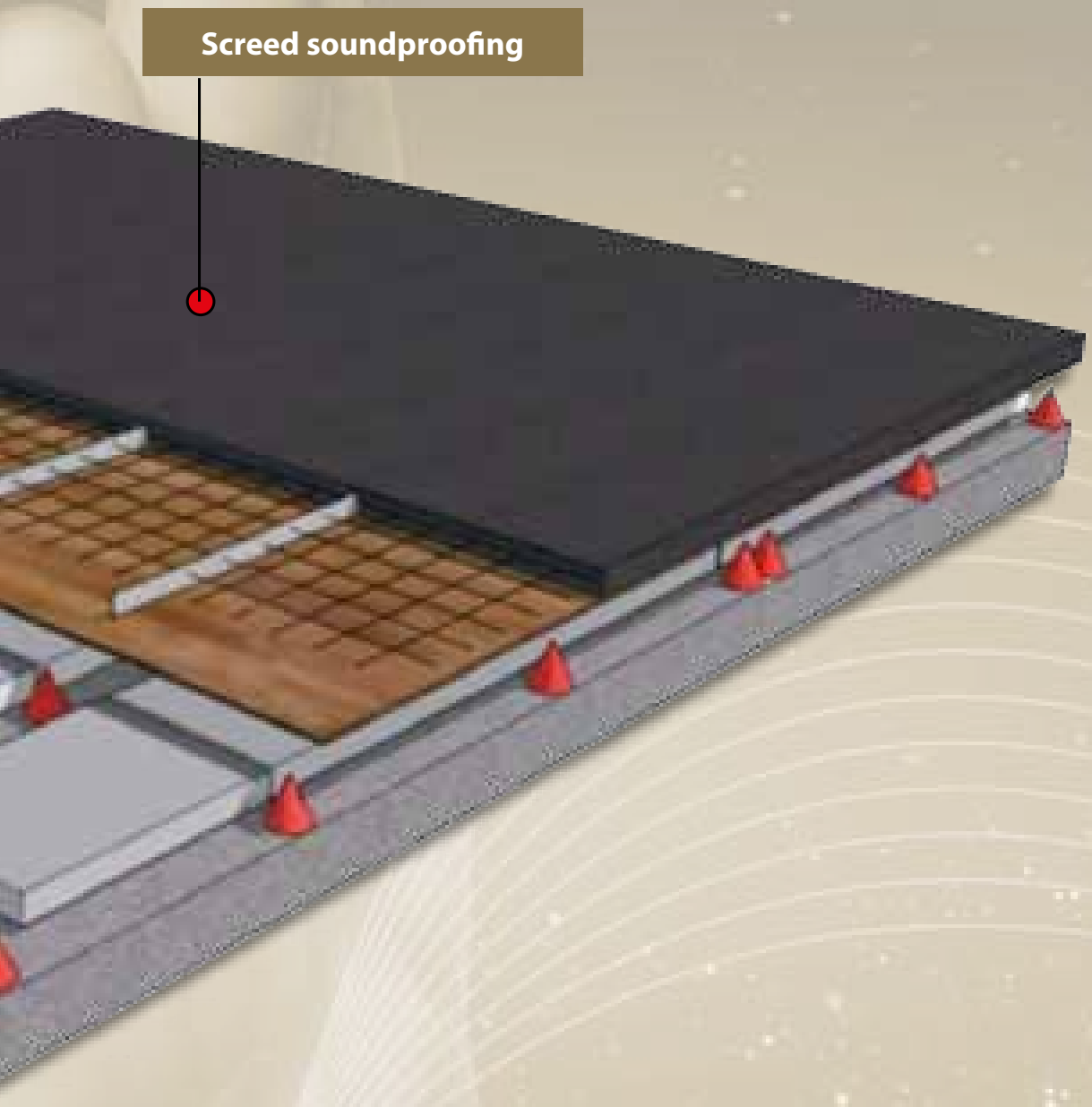
ARCO MASS DAMPER

ARCO FASCIA



There is no-one above you...

ARCO PLUS



Firesents **Arco PLUS**, an innovative design solution to definitively solve the problem of footstep noise within buildings.

The main novelty of **Arco PLUS** is represented by its extraordinary acoustic performance, unmatched by the best and most conventional sub-flooring sy- stems.

A further element of innovation is represented by the fact that each system created is made to measure, during the design phase, to the last detail (in- cluding structural nodes).

The **Arco PLUS** system has been tested by the prestigious C.S.T.B. (Centre Scientifique et Technique du Batiment i.e. the Scientific and Technical Centre of the Building Industry) in Marne-la-Vallee (France).

The result obtained in the laboratory is unprecedented:

Arco PLUS is therefore configured as the most advanced response to the noise problem of footsteps through floors.

The results

ΔLw=42.0 dB*
L'nw = 15.0 dB**

* Noise level reduction, test AC18-26075697 of 21/08/2018)
** Measurement of sound insulation in building 28/02/2020

Normally, traditional subflooring systems "work" effectively from 60.0 to 80.0 Hz.

The innovative character of the Arco PLUS system is represented by the fact that the resonance fre- quency is between 5.0 and 10.0 Hz.

As a result, energy from 50.0 Hz will no longer be perceptible in receiving environments, generating extremely low footstep levels, with values close to 30.0/35.0 dB.

Advantages of the system:

PERFORMANCE

Extraordinary acoustic performance even at low frequencies

CERTIFICATED

Tested by the prestigious C.S.T.B. (FR) centre

100% RECYCLABLE

Made with recycled and recyclable products

Technical specifications:

System resonance frequency between 5.0-10.0 Hz

System damping factor 33.0%

Available in thicknesses from 15.0 cm to 23.0 cm

Surface mass of floating screed 145.0 kg/m2
Reduction in walking noise level:
$\Delta Lw = 42.0$ dB

Soundproofing power rating index:
$Rw \geq 60.0$ dB

Increased soundproofing power:
$\Delta Rw \geq 6.0$ dB

Footstep noise level assessment index:
$Ln,w = 15.0$ dB

System installation sequence

Arco DAMPING tracking and positioning.

Welded mesh and steel bars application.

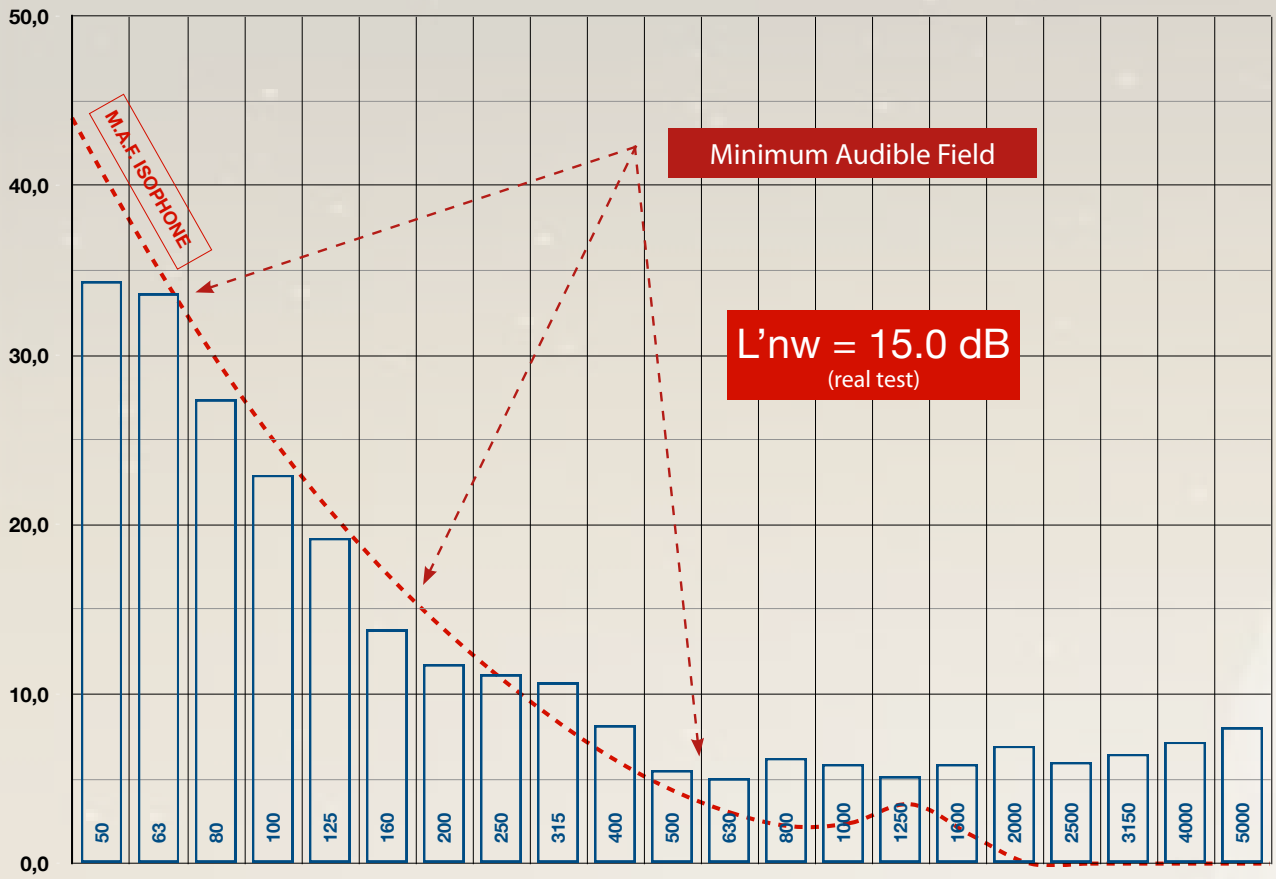
Arco FIBER panels between damping products

Arco MASS DAMPER applications.

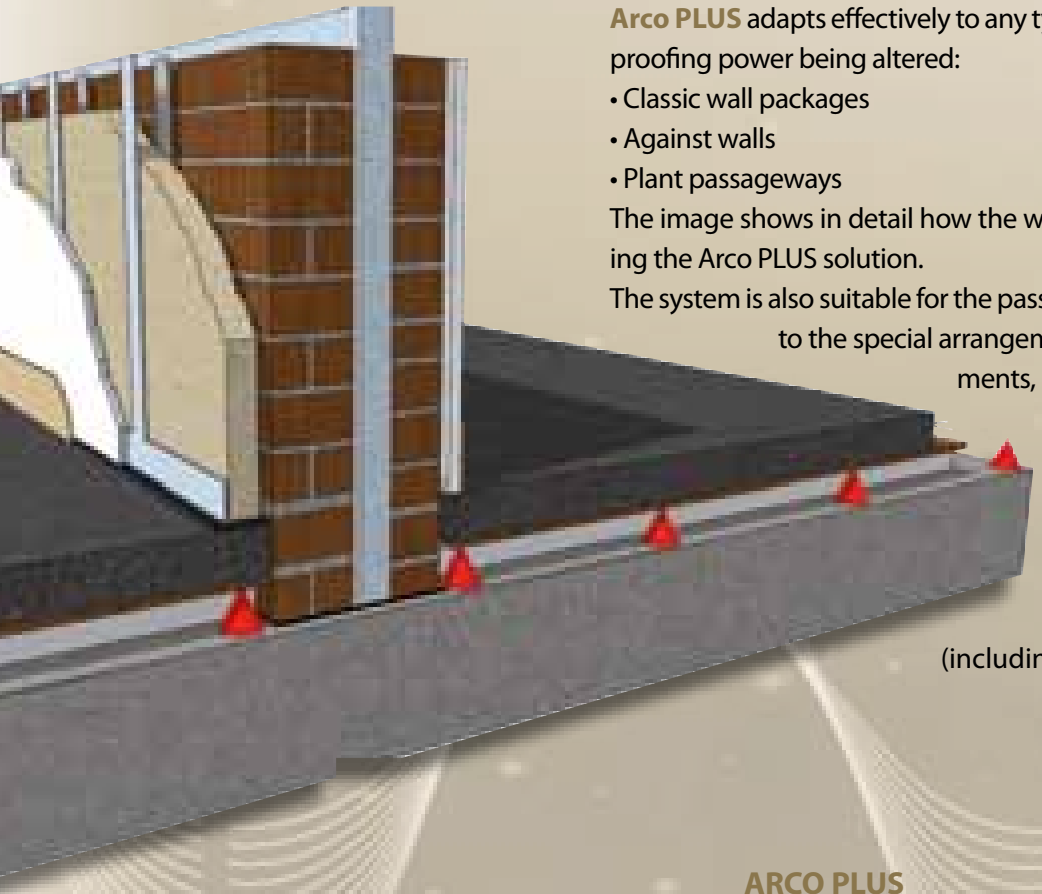
OBS panels applications on **Arco DAMPING**

Arco MASS DAMPER leveling.

Acousting system's performance



On side acustic test: Sound pressure level at different frequencies.



Arco PLUS adapts effectively to any type of building, without its sound-proofing power being altered:

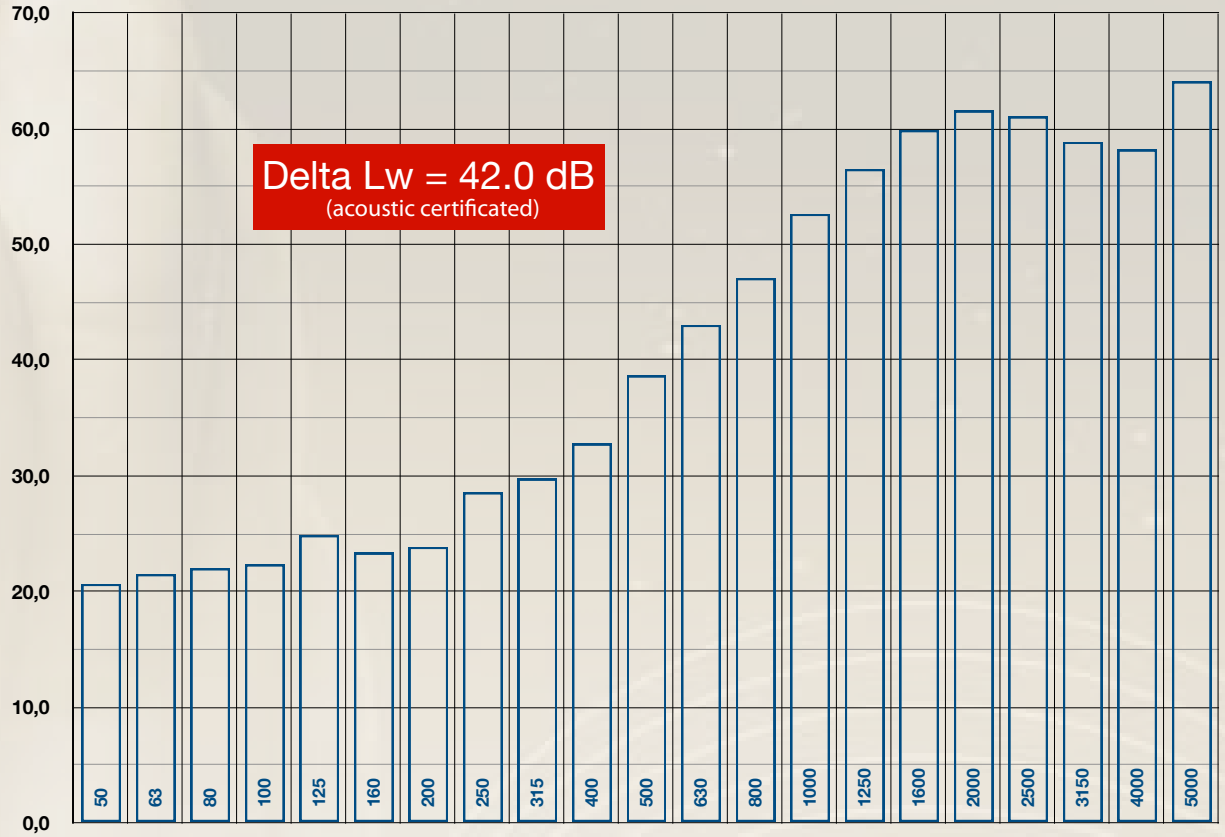
- Classic wall packages
- Against walls
- Plant passageways

The image shows in detail how the wallslab attachment node looks using the Arco PLUS solution.

The system is also suitable for the passage of cables and systems; thanks to the special arrangement of the elements, no interference is created.

Basic requirement:

The system correctly performs its function for floors weighing no less than 160 kg/sqm (including screed, tiles and OSB panels).

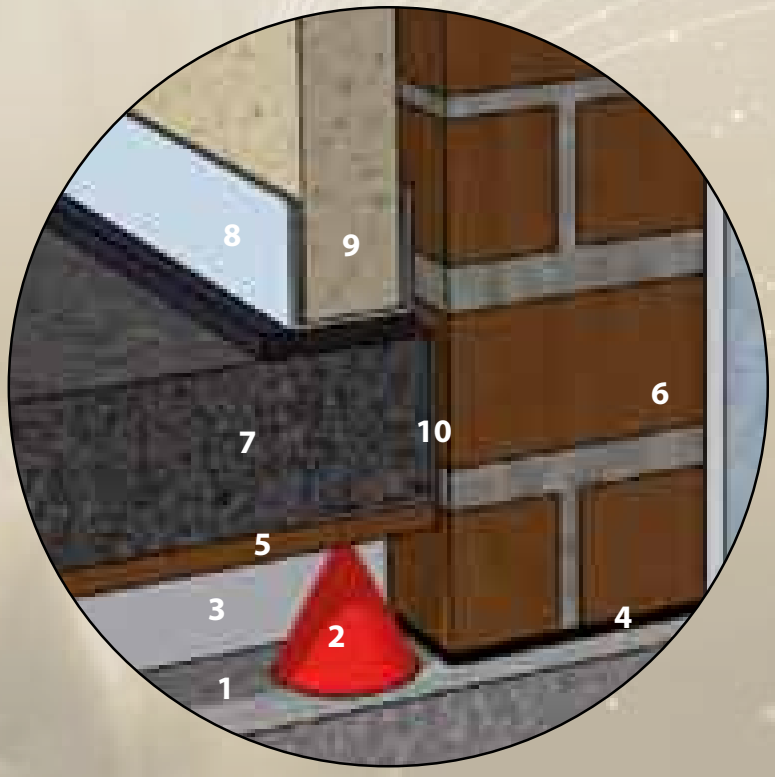


On side acustic test: Sound pressure level at different frequencies.

ΔLw=42.0 dB

C.S.T.B. acousting test report.

Information: CI,Δ = -11 dB, ΔL = 42 dB(A)

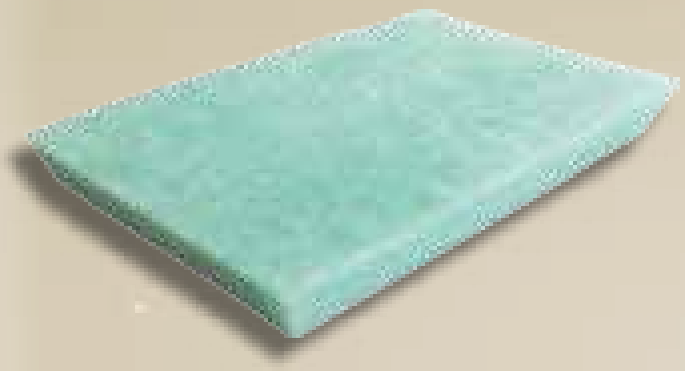


Aplication details

1. Concrete slab structure;
2. **Arco DAMPING**;
3. **Arco FIBER**;
4. **Arco STEP** at wall botton;
5. OSBwoodpanels;
6. Neighborhoodwalls;
7. **Arco MASS DAMPER**;
8. Pasterboardwall;
9. **Arco TECH**;
10. Separation with air cushion.

Components present in the system

Arco DAMPING is an damping system used to attenuate vibrations. The product is obtained by direct injection moulding of a specific mixture of polyurethane, silicone and latex.



Arco FIBER is an ecofriendly soundproofing/ sound absorbing product obtained from the recycling of PET. It maintains its technical performance over time, is rotproof and insoluble.

Arco MASS DAMPER is a thermal and acoustic insulating screed in cement conglomerate lightened with granules of environmentally friendly polymers.

Arco FASCIA is a 5.0 mm thick strip of adhesive polyethylene foam. It is used as a containment element for the screed and placed between the walls and the various types of subflooring installed

CSTB
le futur en construction

Rapport d'essais n° / *Test Report nr* HO 20 E19 064

Fluage en compression
Compressive creep

Temps en heures *Time in hours* t	Log (t)	Fluage en compression *Compressive creep* X_{ct} mm				Fluage en compression *Compressive creep* log (X_{ct}) mm			
		X_{ct1}	X_{ct2}	X_{ct3}	X_{ctm}	$Log(X_{ct1})$	$Log(X_{ct2})$	$Log(X_{ct3})$	$Log(X_{ctm})$
1	0	0,00	0,00	0,00	0,00				
5	0,70	0,00	0,00	0,00	0,00	-2,70	-3,00	-3,00	-2,88
24	1,38	0,01	0,00	0,01	0,01	-1,85	-3,00	-1,96	-2,06
48	1,68	0,02	0,00	0,01	0,01	-1,80	-3,00	-1,89	-2,00
120	2,08	0,03	0,00	0,02	0,02	-1,55	-3,00	-1,64	-1,76
168	2,23	0,06	0,01	0,05	0,04	-1,21	-2,10	-1,27	-1,38
216	2,33	0,04	0,02	0,03	0,03	-1,41	-1,60	-1,51	-1,50
288	2,46	0,05	0,02	0,04	0,04	-1,34	-1,60	-1,41	-1,44
336	2,53	0,05	0,02	0,04	0,04	-1,31	-1,60	-1,39	-1,42
456	2,66	0,05	0,02	0,05	0,04	-1,26	-1,60	-1,33	-1,37
552	2,74	0,07	0,02	0,06	0,05	-1,17	-1,60	-1,22	-1,30
792	2,90	0,08	0,05	0,07	0,06	-1,11	-1,33	-1,17	-1,20
1032	3,01	0,09	0,05	0,08	0,07	-1,07	-1,28	-1,11	-1,14
1296	3,11	0,09	0,07	0,09	0,08	-1,03	-1,19	-1,07	-1,09
1560	3,19	0,10	0,09	0,09	0,10	-0,98	-1,02	-1,02	-1,01
1896	3,28	0,12	0,10	0,11	0,11	-0,91	-1,00	-0,97	-0,96
2400	3,38	0,13	0,11	0,12	0,12	-0,88	-0,96	-0,92	-0,92
2904	3,46	0,14	0,20	0,08	0,14	-0,86	-0,69	-1,12	-0,86

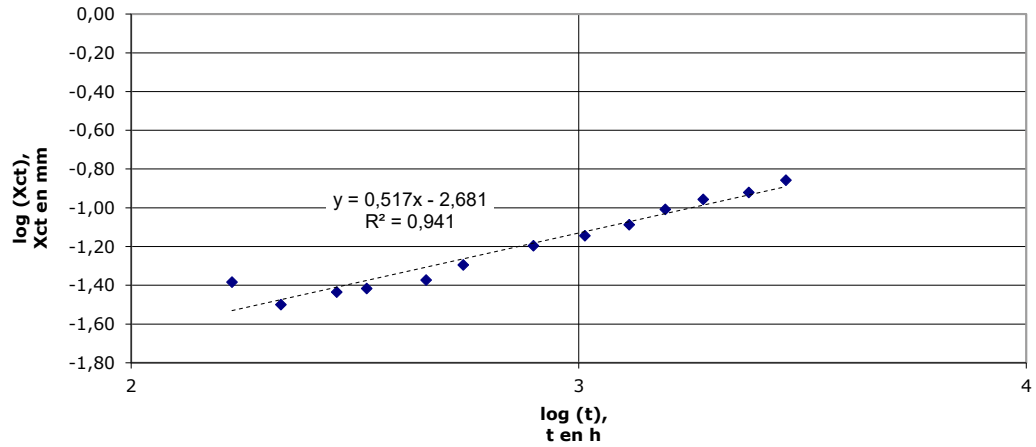


Figure 1 : Déformation due au fluage
Figure 1 : Deformation due to compressive creep

La figure ci-dessus, représente la déformation Xct en fonction du temps sous forme log/log pour la valeur moyenne des éprouvettes testées.
The above schema represents the deformation Xct versus time in log/log representation for the average value of specimen tested.

Commande N° 26082535
Trame Essais sur demande.docx 8/9

Compressive creep test report (page 8/9).

Certification of the system

CSTB
le futur en construction

cofrac
ACCRÉDITATION N° 1-0305 PORTÉE DISPONIBLE SUR WWW.COFRAC.FR
ESSAIS

Rapport d'essais n°/ *Test report n° AC18-26075697*

4.1.6 RÉSULTATS D'ESSAIS / *TEST RESULTS*

Chape flottante / *Floating screed :* Arco PLUS

Indice d'efficacité au bruit aérien ΔR / *Improvement of the airborne sound insulation ΔR* AD43

Numéro d'essai / *Test number :* 1

Date de l'essai / *Date of test :* 21/08/18

CARACTERISTIQUES PRINCIPALES *MAIN CHARACTERISTICS*	SOUS-COUCHE *Underlayer*	CHAPE *Floating screed*	PLANCHER SUPPORT *Base floor*
Dimensions en mm *Dimensions in mm*	/	4200 x 3600	4200 x 3600
Épaisseur en mm *Thickness in mm*	~ 85	90	140
Masse surfacique en kg/m² *Mass per unit area in kg/m²*	18	~145	325

RESULTATS / *RESULTS*

f	$R_{support}$	$R_{support+système}$	ΔR
100	$36,6^{+}_{(0,0)}$	$49,2^{+}_{(0,0)}$	$12,6^{+}$
125	$31,2^{+}_{(0,0)}$	$42,3^{+}_{(0,0)}$	$11,1^{+}$
160	$39,8^{+}_{(0,0)}$	$40,9^{+}_{(0,0)}$	$1,1^{+}$
200	$40,4^{+}_{(0,0)}$	$44,2^{+}_{(0,0)}$	$3,8^{+}$
250	$41,3^{+}_{(0,0)}$	$46,6^{+}_{(0,0)}$	$5,3^{+}$
315	$47,5^{+}_{(0,0)}$	$51,1^{+}_{(0,0)}$	$3,6^{+}$
400	$51,0^{+}_{(0,0)}$	$56,3^{+}_{(0,0)}$	$5,3^{+}$
500	$52,2^{+}_{(0,0)}$	$64,3^{+}_{(0,0)}$	$12,1^{+}$
630	$56,0^{+}_{(0,0)}$	$67,0^{+}_{(0,0)}$	$11,0^{+}$
800	$58,3^{+}_{(0,0)}$	$70,6^{+}_{(0,0)}$	$12,3^{+}$
1000	$59,1^{+}_{(0,0)}$	$72,6^{+}_{(0,0)}$	$13,5^{+}$
1250	$61,2^{+}_{(0,0)}$	$76,4^{+}_{(0,0)}$	$15,2^{+}$
1600	$63,1^{+}_{(0,0)}$	$78,5^{+}_{(0,0)}$	$15,4^{+}$
2000	$65,2^{+}_{(0,0)}$	$74,6^{+}_{(0,0)}$	$9,4^{+}$
2500	$67,9^{+}_{(0,0)}$	$72,9^{+}_{(0,0)}$	$5,0^{+}$
3150	$68,6^{+}_{(0,0)}$	$69,8^{+}_{(0,0)}$	$1,2^{+}$
4000	$71,7^{+}_{(0,0)}$	$75,0^{+}_{(0,0)}$	$3,3^{+}$
5000	$73,5^{+}_{(0,0)}$	$76,1^{+}_{(0,0)}$	$2,6^{+}$
Hz	dB	dB	dB

(+) : valeur corrigée. (+) : limite de poste.

R_w (C;C_{tr}) ≥ 55(-3;-8) dB

Pour information :
R_A = R_w+C ≥ 52 dB
$R_{A,tr}$ = R_w+C_{tr} ≥ 47 dB

R_w (C;C_{tr}) ≥ 60(-2;-6) dB

Pour information :
R_A = R_w+C ≥ 58 dB
$R_{A,tr}$ = R_w+C_{tr} ≥ 54 dB

$\Delta R_{w,lourd} \geq 6$ dB

$\Delta(R_w+C)_{lourd} \geq 5$ dB

$\Delta(R_w+C_{tr})_{lourd} \geq 6$ dB

Improvement of the airborne sound insulation Delta R test report (page 11/19).

Certification of the system

CSTB
le futur en construction

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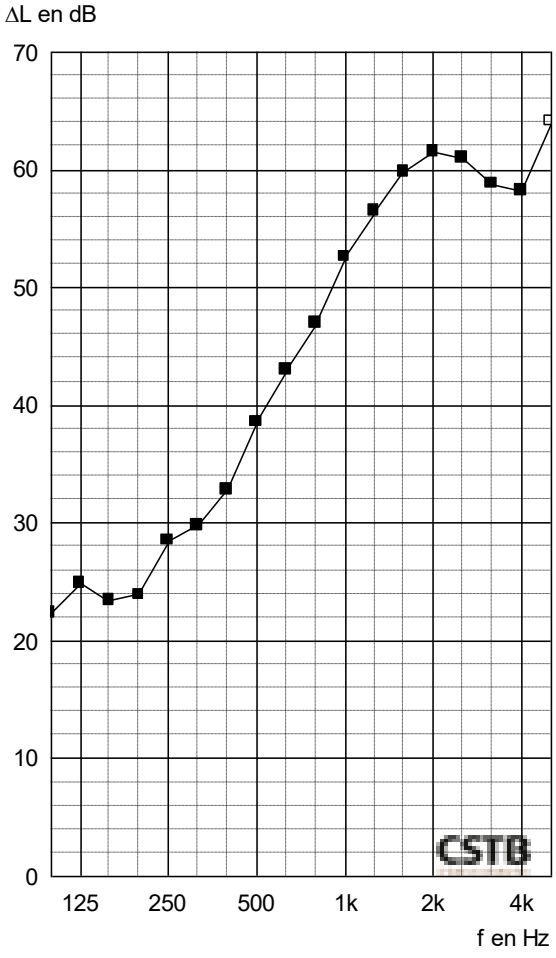
ESSAIS

Rapport d'essais n°/ *Test report n° AC18-26075697*

Sous couche sous chape flottante / *Floating screed :* Arco PLUS
Amélioration de l'isolation au bruit de choc ΔL / *Improvement of the impact sound insulation ΔL*
Numéro d'essai / *Test number :* 2
Date de l'essai / *Date of test :* 21/08/18

CARACTERISTIQUES PRINCIPALES *MAIN CHARACTERISTICS*	SOUS-COUCHE *Underlayer*	CHAPE *Floating screed*	PLANCHER SUPPORT *Base floor*
Dimensions en mm *Dimensions in mm*	/	4200 x 3600	4200 x 3600
Épaisseur en mm *Thickness in mm*	~ 85	90	140
Masse surfacique en kg/m² *Mass per unit area in kg/m²*	18	~145	325

RESULTATS / *RESULTS*



f	ΔL
100	22,4
125	24,9
160	23,4
200	23,9
250	28,5
315	29,8
400	32,8
500	38,6
630	43,0
800	47,0
1000	52,6
1250	56,5
1600	59,8
2000	61,5
2500	61,0
3150	58,8
4000	58,2
5000	64,1*
Hz	dB

(*) : valeur corrigée. (+) : limite de poste.

ΔL_w = 42 dB

Pour information :
C_{Δ} = -11 dB
ΔL = 42 dB(A)

Improvement of the impact sound insulation Delta L test report (page 12/19).


Arcoacustica®
brand of Arcobaleno S.p.A.

SPECIAL SOLUTIONS

SOUND ABSORBING PANELS

Reverberation time control and acoustic confort's upgrading

- **ARCO RT60 SINTHESI**
- **ARCO RT60**
- **ARCO RT 30**
- **ARCO FORM**
- **ARCO IMMAGINE**

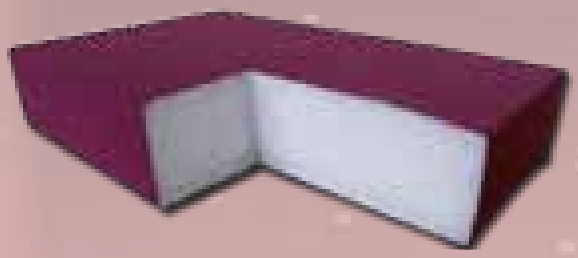
ARCO RT 60

ARCO RT 60 an innovative acoustic system designed for the containment and noise reduction in very reverberant environments through the use of hanging ceiling and wall panels. **ARCO RT 60** allows you to reach new frontiers of acoustic correction while creating innovative aesthetic looks. With its linear design and advanced, precision detailing, **ARCO RT 60** is desi- gned to insert discreetly and harmoniously in spaces requiring better acoustics.
The creation of shapes and the use of a wide range of colours and textiles give **ARCO RT 60** a high-quality design aesthetic.
Elegant chrome steel wires, adjustable to different heights, are the key feature of the suspended ceiling system.
ARCO RT 60 panel is available in a **SINTHESI** version featuring excellent fire retardant proper-

ties. Thanks to qualified technicians, you can install the components quickly and accurately, without affecting the client's work activities.

ARCO RT 60 panel has been designed to be recycled in compliance with environmental conservation. The acoustically upgraded result is ensured by the use of highly skilled technicians.

ARCO RT 60



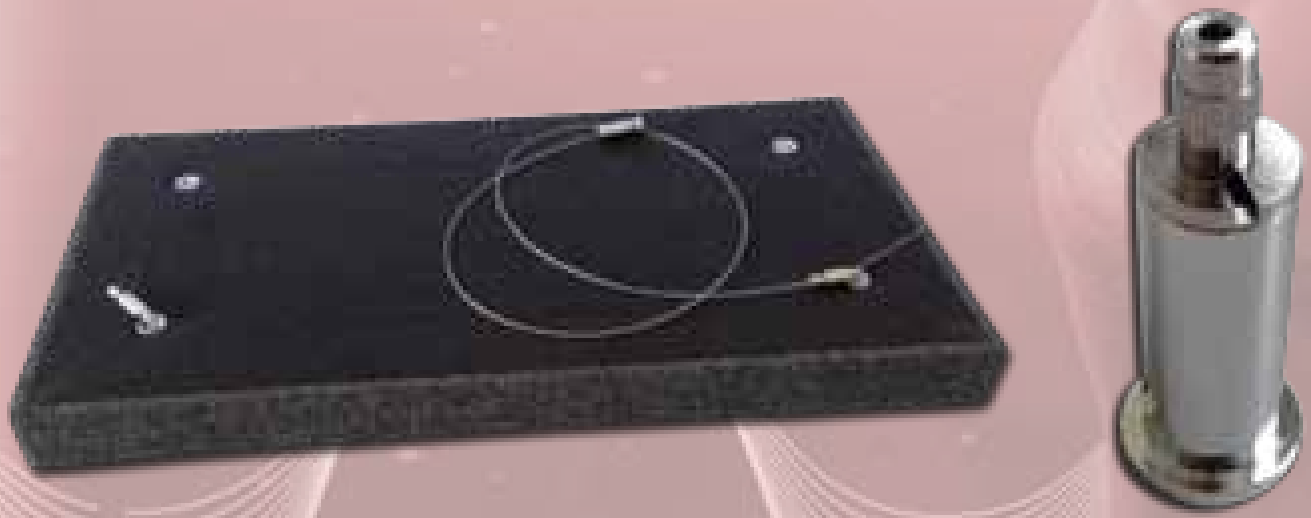
Equipment with excellent maistrure resistance and thermal insulation, the product is made from a heat bound polyester fibre panel obtained from recycled PET and a highly sound-absorbing fabric, available in various colours. Each panel comes with a ceiling mounting kit.

ARCO RT 60 SINTHESI

Excellent fire retardant properties and superb dimensional stability, the product comprises layers of rockwool and is covered with sound-absorbing fabric.

Each ARCO RT60 panel comes with a ceiling mounting kit that includes: 4 suspension wires, adjustable in height up to a maximum of 90 cm in order to make adjustments as desired in both height and the edges of the panel, as well as four elegant chrome junction blocks.

Panels RT60, "BAFFLES" System



Panels RT60,
application of "ISLAND"
of circular section

Panel installation detail

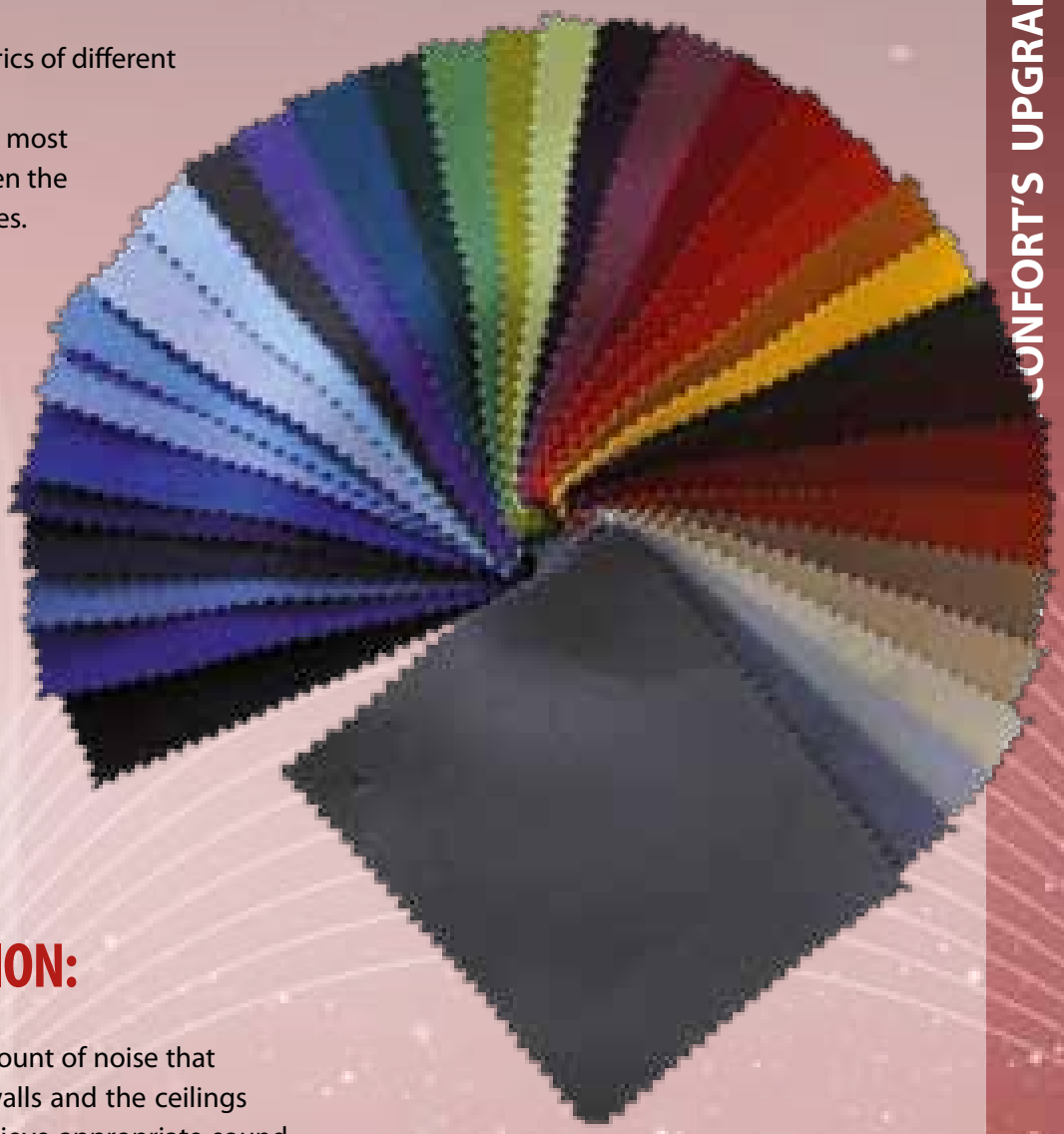
RT60 panels, customized wall application with printed image.

RT60 panels,
rectangular section
"ISLAND" application

ARCO RT 60
ARCO RT 60 SINTHESI

VARIETY OF COLOURS:

Through collaborations with designers, artists, architects and manufacturers, ArcoAcustica has developed a wide range of technical fabrics of different types of colourings.
The customer can choose the most suitable colour for their chosen the most suitable colours swatches.
The extraordinary technical capabilities of the finishing ensure maximum hygiene of the panel and the ease of thorough cleaning of dust and debris of the same in any kind of establishment.



SOUND ABSORPTION:

Sound absorption is the amount of noise that is directly absorbed by the walls and the ceilings of the rooms. In order to achieve appropriate sound absorption solutions, it is important to place the acoustic panels "in islands" or "on baffles" inside the premises to be reclaimed acoustically.
The distancing of the panels from the walls and ceiling help increase the absorption area, improving the quality of the treated area.

LIGHT REFLECTION:

The use of pale fabric colours is recommended if you want to create environments where brightness is a key requirement. If, on the other hand, the design goal is to contain the brightness of a space, darker colours should be preferred.
The use of white fabric allows reflection of the incident light of 89% compared to, for example, a grey fabric which provides a reflection only 65%.

Summary of key technical specifications:

The following tables show the key technical specifications of the two different panels. All technical details not shown in this technical data sheet are available from our website www.arcoacustica.com

ARCO RT60

Main Features	Procedure	Symbol	Value	U.m.
Dimensions	IM/AL 2014	W*L	100*200	cm
Fire reaction class	EN 13501-1	/	B-s1, d0	/
Fabric fire reaction	EN 13501-1	/	B-s1, d0	/
Tests for colour fastness	ISO 105 B02	/	5.0 ± 1	Blue scale
Load for cable	IM/AL 2014	Nc	100.0	kg
Cable length	IM/AL 2014	Lc	100.0	cm
Distance from ceiling	IM/AL 2014	Ds	30.0/50.0	cm
Airflow resistance	ISO 29053	r	3.2	kPa*s/m^2
Rating of sound absorption	ISO 11654 ISO 354	aw	0.85	/

ARCO RT60 SINTHESI

Main Features	Procedure	Symbol	Valore	U.m.
Dimensions	IM/AL 2014	W*L	100*200	cm
Layers of rockwool fire reaction class	EN 13501-1	/	A1	/
Fabric fire reaction	EN 13501-1	/	B-s1, d0	/
Tests for colour fastness	ISO 105 B02	/	5.0 ± 1	Blue scale
Load for cable	IM/AL 2014	Nc	100.0	kg
Cable length	IM/AL 2014	Lc	100.0	cm
Distance from ceiling	IM/AL 2014	Ds	30.0/50.0	cm
Airflow resistance	ISO 29053	r	30	kPa*s/m^2
Rating of sound absorption	ISO 11654 ISO 354	aw	0.7	/

The particular technical and aesthetic features of the **ARCO RT60** panel make it an innovative acoustic system that can be easily used in any space, including those with special environmental conditions.

ARCO RT 30 PANELS WITHOUT FABRIC

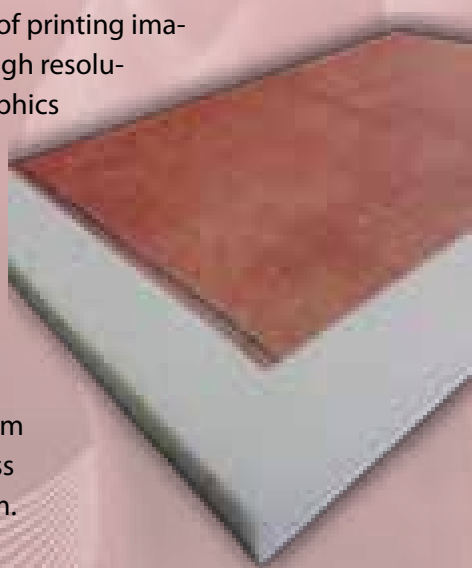
RT30 black panels, "BAFFLES" application

ArcoAcustica proposes a basic line for anti-glare panels with "ISOLA" and "BAFFLES" application without covering fabric: **RT 30**.
The **RT 30** sound-absorbing panels are made of smoothed polyester fiber of varying sizes including a ceiling hanger kit with steel cables for adjustment from above.

RT30 panels in white color, "BAFFLES" application

ARCO IMMAGINE

Arco IMMAGINE is the aesthetic evolution of the **Arco FORM** line. Same type of application as the **Arco FORM** panels but with the use of printing images in high resolution graphics chosen by the customer. The panel has a maximum thickness of 4.0 cm.



ARCO FORM

The line of anti-glare panels **Arco FORM** arises from the need to solve the problem of background noise in large and voluminous environments without sacrificing aesthetics.

Arco FORM is a smooth polyester fiber panel with wall or ceiling application through the use of special adhesives.

Arco FORM can have different sizes and geometric shapes.

Arco FORM panels with hexagonal shape, applied directly to the ceiling

Arco FORM panels with hexagonal shape, applied directly to the ceiling


Arcoacustica®
brand of Arcobaleno S.p.A.

SPECIAL SOLUTIONS

DAMPING SYSTEM

Technologically produced innovative to solve any vibration problem

ARCO DAMPING

ARCO RAINBOW

ARCO CIEMME

ARCO FLAWLESS

ARCO DAMPING

Arco Yellow Damping placed under a machine group

ARCO DAMPING

The question of containing the low-frequency vibrations produced from both industrial and civil machinery (e.g. shearing machines, presses, centrifuges, etc.) led ArcoAcustica to develop a new concept based on elastomers with excel- lent compression resistance and highly elastic properties.
The result is the product we have named **DAMPING**.

Arco Orange Damping (refrigeration unit)

APPLICATION OF THE PRODUCT

Arco Damping was designed as a damping system to be placed under certain kinds of industrial and civil machines or machine systems with the aim of resolving both the vibration issues produced by the units, and the noise they generate.

Application detail

Arco Yellow Damping

Arco Green Damping

ARCO DAMPING TECHNICAL SPECIFICATIONS

- designed and manufactured on measure according to the machine load.
- Arco Damping is manufactured from a mixture of polyurethane, silicone and latex.
- It is created using direct injection moulding technology .
- The product is odourless, waterproof, and resistant to UV rays.
- The damping system is available in five different levels of stiffness.
- Load condition between 0.05 N/mm2 and 0.92 N/mm2.
- Resonance frequency (f0) between 4.0 Hz and 9.0 Hz.

Detail of fixed stop connection

ARCO DAMPING

Main Features	Procedure	Symbol	Value	U.m.
Apparent dynamic stiffness	ISO 29052/1	s't	between 0.5 and 195.2	MN/m^3
Resistivity to air flow	ISO 29053	r	> 100.0	$kPa*s/m^2$
Dynamic stiffness	ISO 29052/1	s'	between 0.5 and 195.2	MN/m^3
Resonant frequency	ISO 29052/1	f0 (Ls)	2.0 < f0 < 4.0	Hz

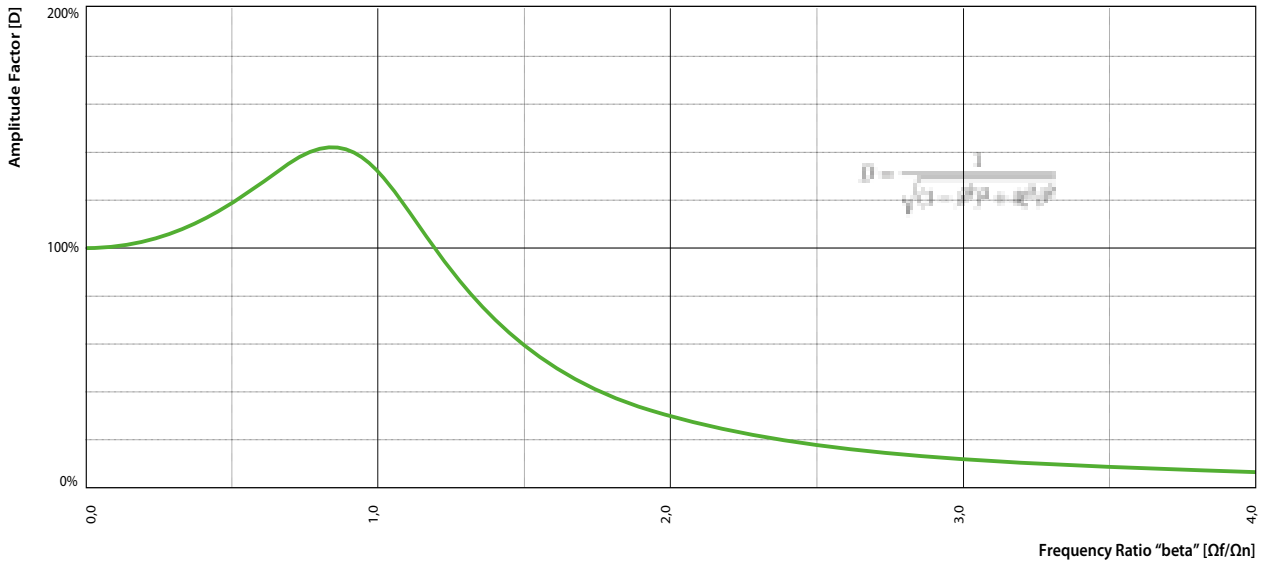
ARCO DAMPING

Arco Blue Damping - heat pump

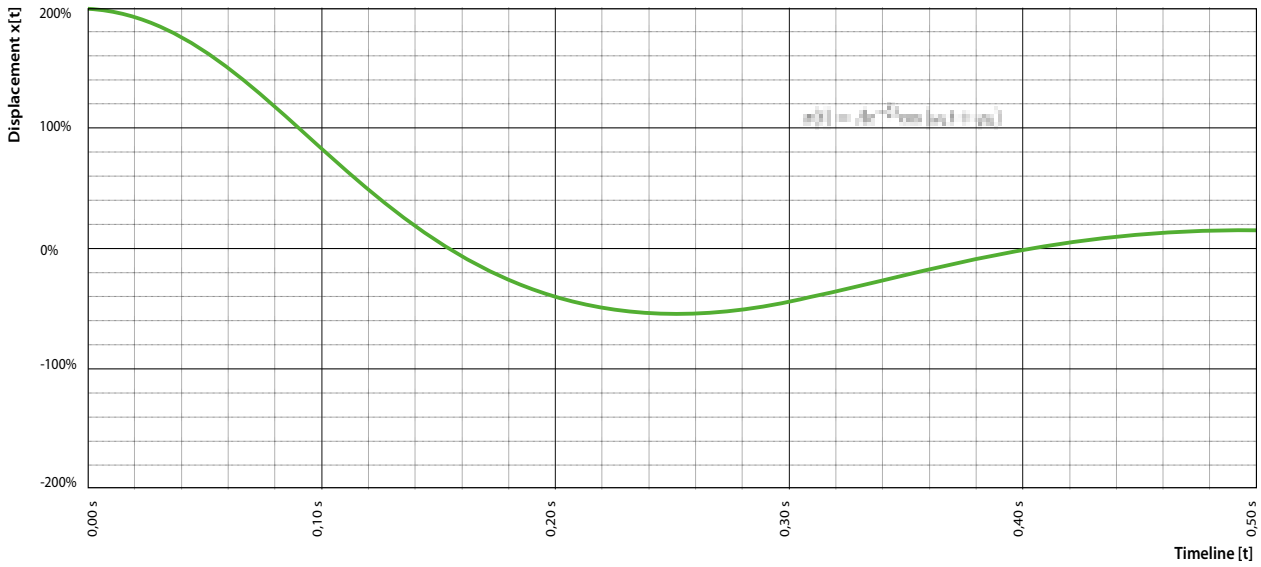
Arco Magenta Damping

Arco Magenta Damping

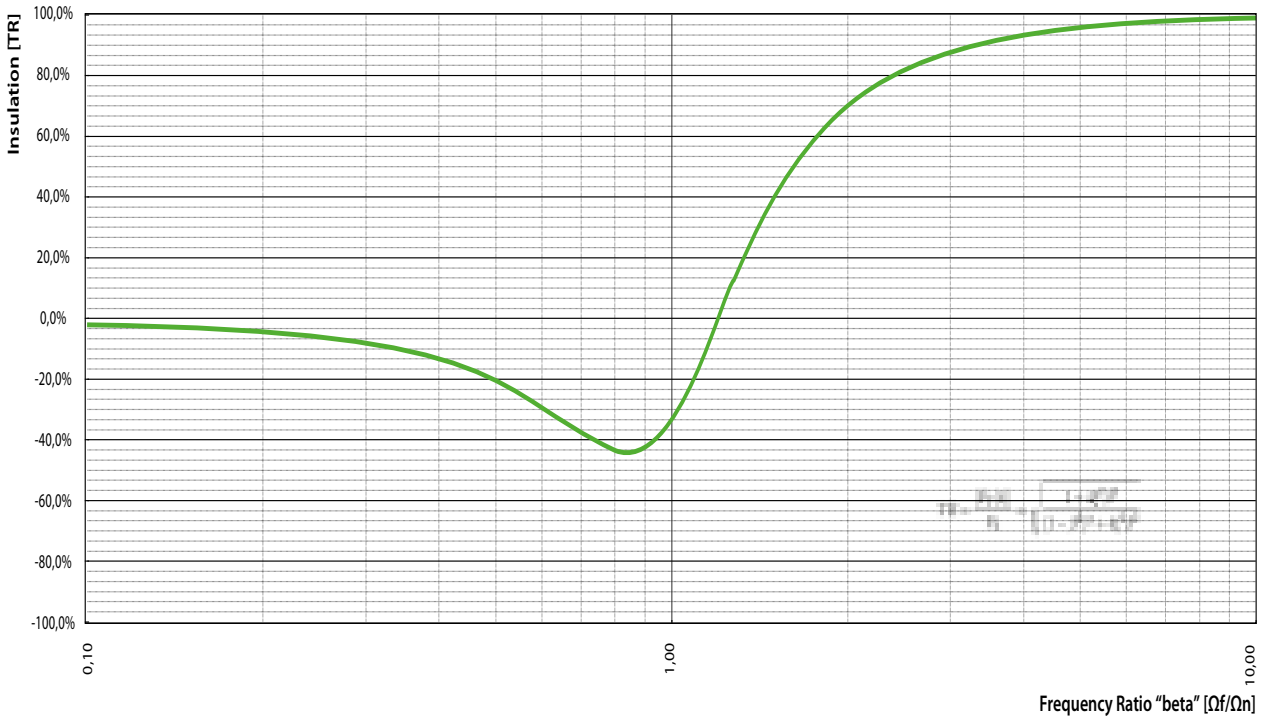
TECHNICAL CHARACTERISTICS



TECHNICAL CHARACTERISTICS



TECHNICAL CHARACTERISTICS



Arco Green Rainbow - heat pump

Arco Yellow Rainbow - during installation

TECHNICAL FEATURES

- Designed and built with maximum load characteristics;
- Obtained from a mixture of polyurethane, silicone and latex;
- Made with direct injection molding technology;
- Resistant to U.V.A. rays, odorless, waterproof;
- Available in 5 different types of compressive strength;
- Media load condition between 35.0 kg/each and 350.0 kg / each;
- Resonant frequency (f0) between 5.0 Hz and 9.0 Hz;
- Damping factor (ζ) between 18.7% and 35.7%.

APPLICATION OF THE PRODUCT

ARCO RAINBOW has been designed as a damping system to be placed under those industrial and civil machines or groups of machines with a low overall weight. The stiffness and damping characteristics allow to mitigate the negative effects produced by forcing with ordinary energy content.

Arco Violet Rainbow

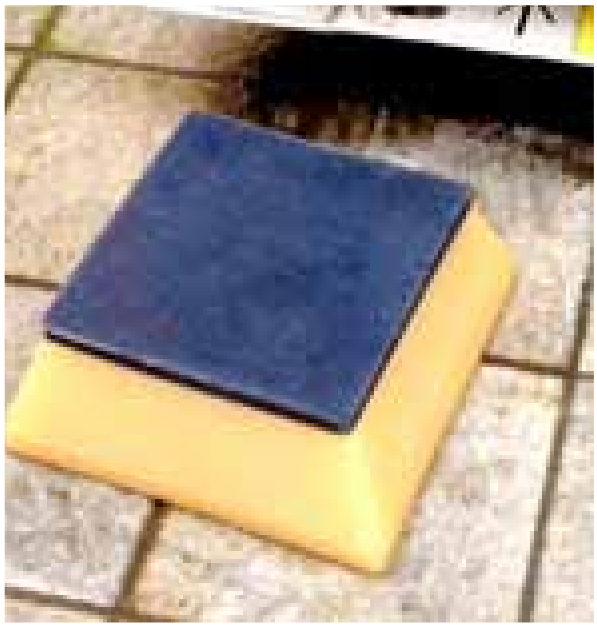
Particular support positioning

THE PROBLEM AND THE DIAGNOSIS

- Heat pump placed on a flat roof;
- Forcing heat pump rigidly connected to the ground;
- Perception of noise in the underlying environments;
- Forcing heat pump rigidly connected with pipes to the walls;
- RPM of the heat pump fan 1500 rpm;
- Vibration emission frequency inferred about 25.0 Hz;
- Weight of the forcer 950.0 kg;
- Geometric center of gravity coinciding with that of the masses.

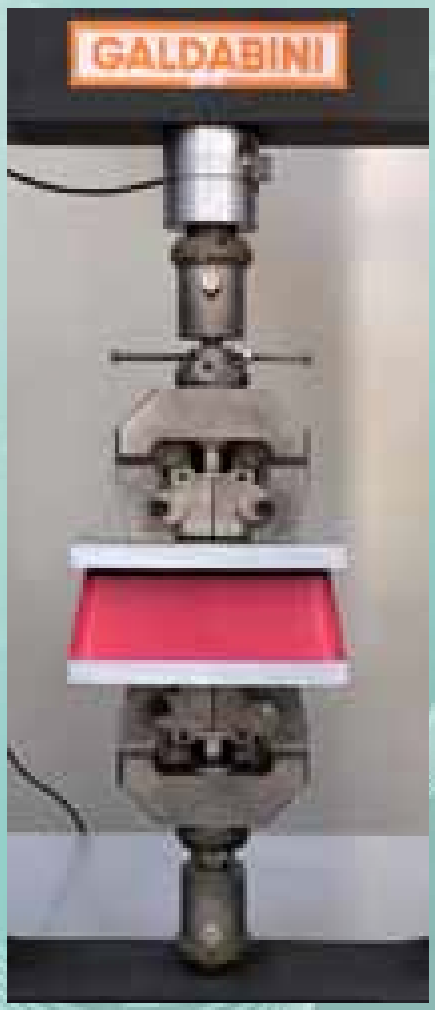
TECHNICAL CHARACTERISTICS

- Design of damping supports such as Arco VIOLET RAINBOW;
- Positioning of supports between fixed and forcing stop;
- Insertion of an additional damping system sleeve for the wall connection;
- System resonance frequency detected on site about 2.5 Hz;
- Damping factor detected on site about 33.5%;
- Harmonic oscillator transmissibility at 25.0 Hz frequency equal to -99.9%;
- Load that insists on each support about 237.5 kg;
- Support surface of damping supports parallel to XY axis.



The installation phase

Rainbow arch model:
high coefficient damping



Arco Green Damping - heat pump

Laboratory tests: Young Arco Magenta Damping module

Arco Green Damping - heat pump

Arco Green Soft Damping - heat pump

Arco Green Soft Damping - heat pump

ARCO CIEMME

Arco Ciemme - heat pump

APPLICATION OF THE PRODUCT

ARCO CIEMME has been designed as a damping system to be placed under those machines or industrial and civil machinery groups with very low overall weight The stiffness and damping characteristics allow to mitigate the negative effects produced by forcing with moderate energy content

TECHNICAL FEATURES

- Designed and built with maximum load characteristics;
- Obtained from a mixture of polyurethane, silicone and latex;
- Made with direct injection molding technology;
- Resistant to U.V.A. rays, odorless, waterproof;
- Available in 3 different types of compressive strength;
- Media load condition between 30.0 kg / each and 130.0 kg / each;
- Resonant frequency (f0) between 9.0 Hz and 14.0 Hz;
- Damping factor (ζ) between 18.7% and 35.7%.

Arco Ci.Emme - heat pump

Arco Ci.Emme - heat pump

FLAWLESS

ARCO FLAWLESS is damping system made and used for the attenuation of vibrations produced by boilers and very light machines, or as a connecting element for the connection of some parts on the support structure of the machines.

TECHNICAL FEATURES

- Designed and built with maximum load characteristics;
- Obtained from a mixture of polyurethane, silicone and latex;
- Made with direct injection molding technology;
- Resistant to U.V.A. rays, odorless, waterproof;
- Media load condition between 10.0 kg/each and 50.0 kg/each;
- Resonant frequency (f0) between 14.0 Hz and 16.0 Hz;
- Damping factor (ζ) between 18.7% and 35.7%.

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