

Project proposal

Client: ---

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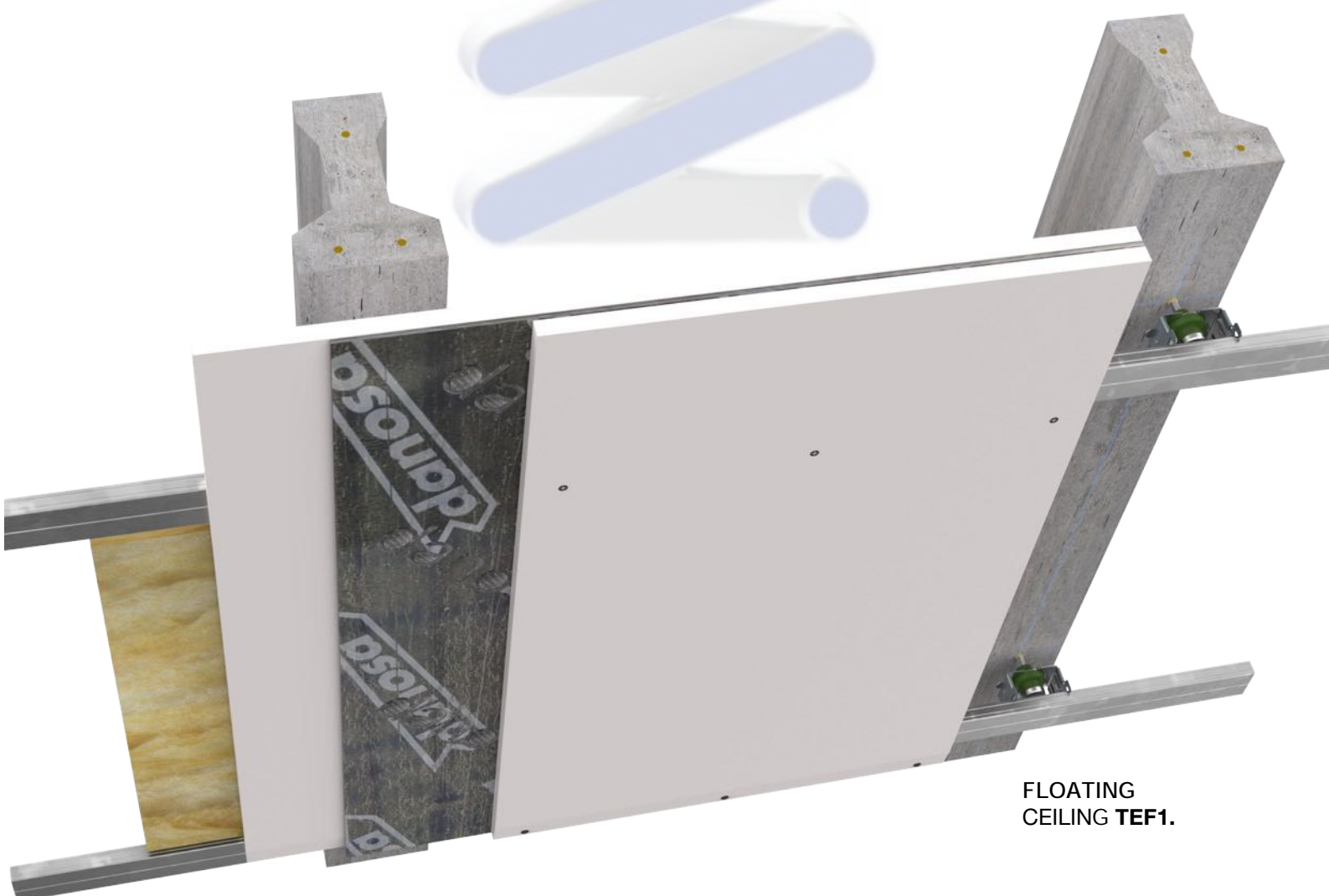
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Proposal No: 030072021/CONST.

Project: ACOUSTIC CEILING PACKAGE/TEF1

ACOUSTIC CEILING TREATMENT UNDER CONCRETE SLAB FOR RESIDENTIAL PROPERTIES



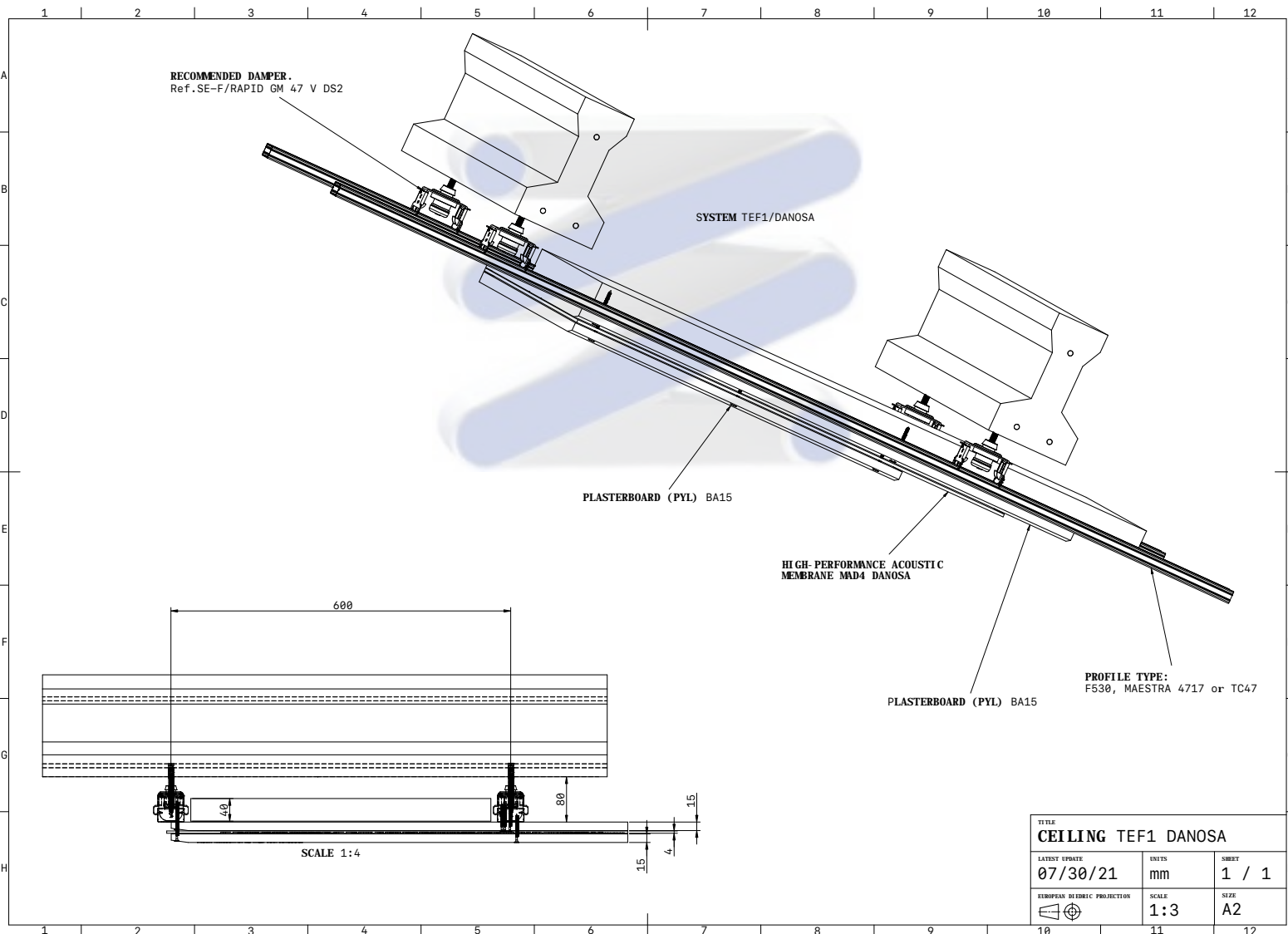
FLOATING
CEILING TEF1.

ACOUSTIC CEILING "TEF1".

Objective

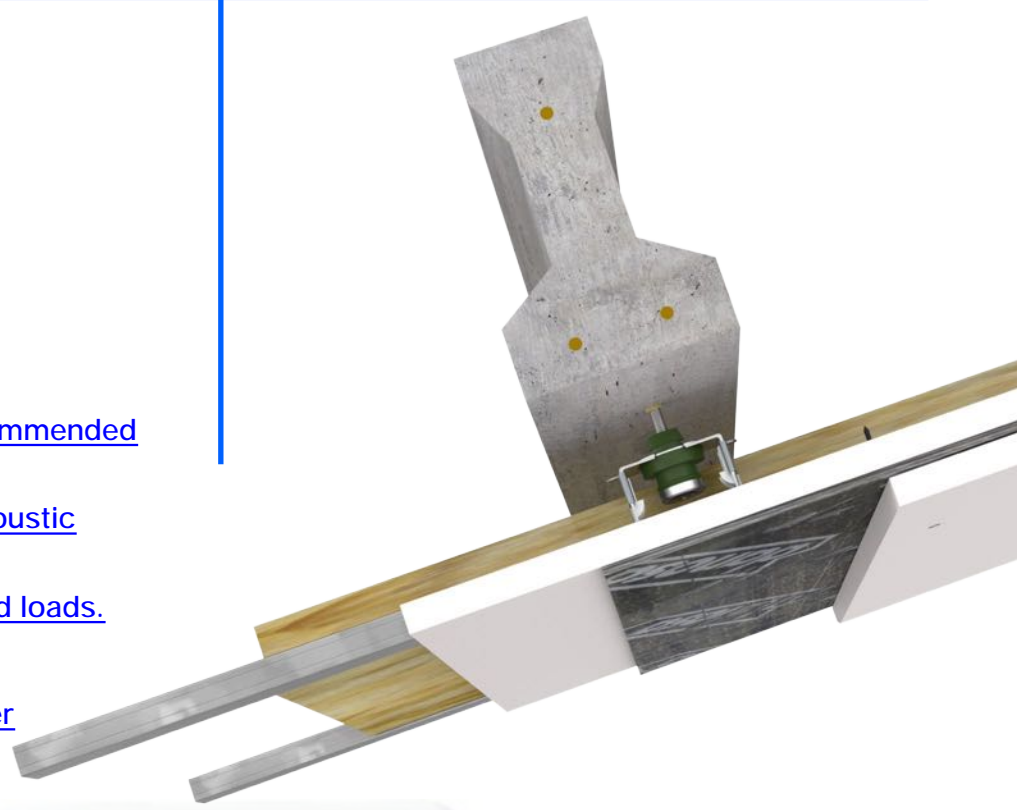
Calculation of acoustic plugs for the design of an **ACOUSTIC CEILING** solution using **STEEL + RUBBER** dampers under the existing slab.

Design information.

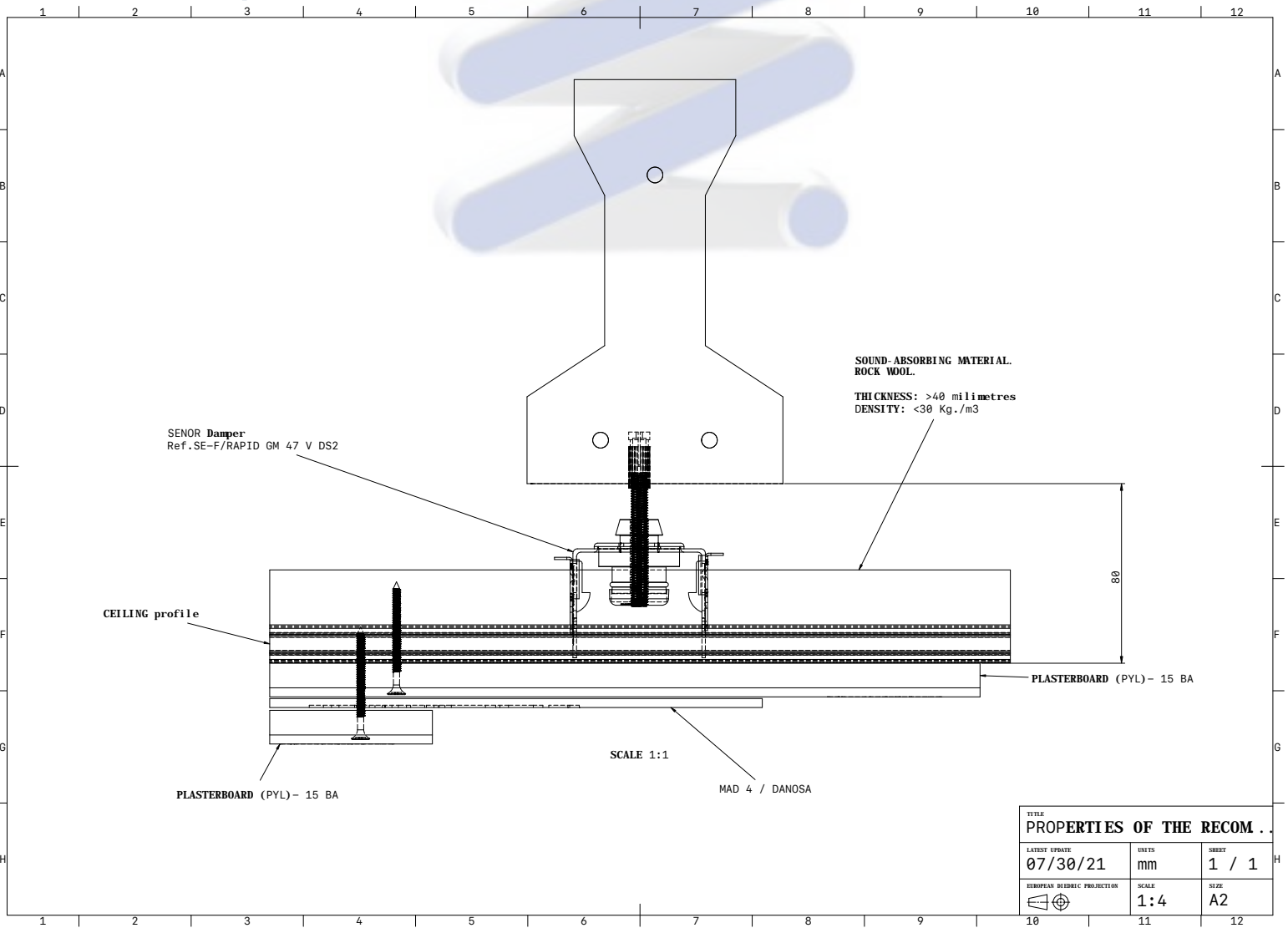


Contents

1. [Properties of the recommended System](#)
2. [Modulation of the acoustic plugs](#)
3. [Material properties and loads.](#)
4. [Results](#)
5. [Recommended damper](#)
6. [Disclaimer](#)



1. Properties of the recommended System.



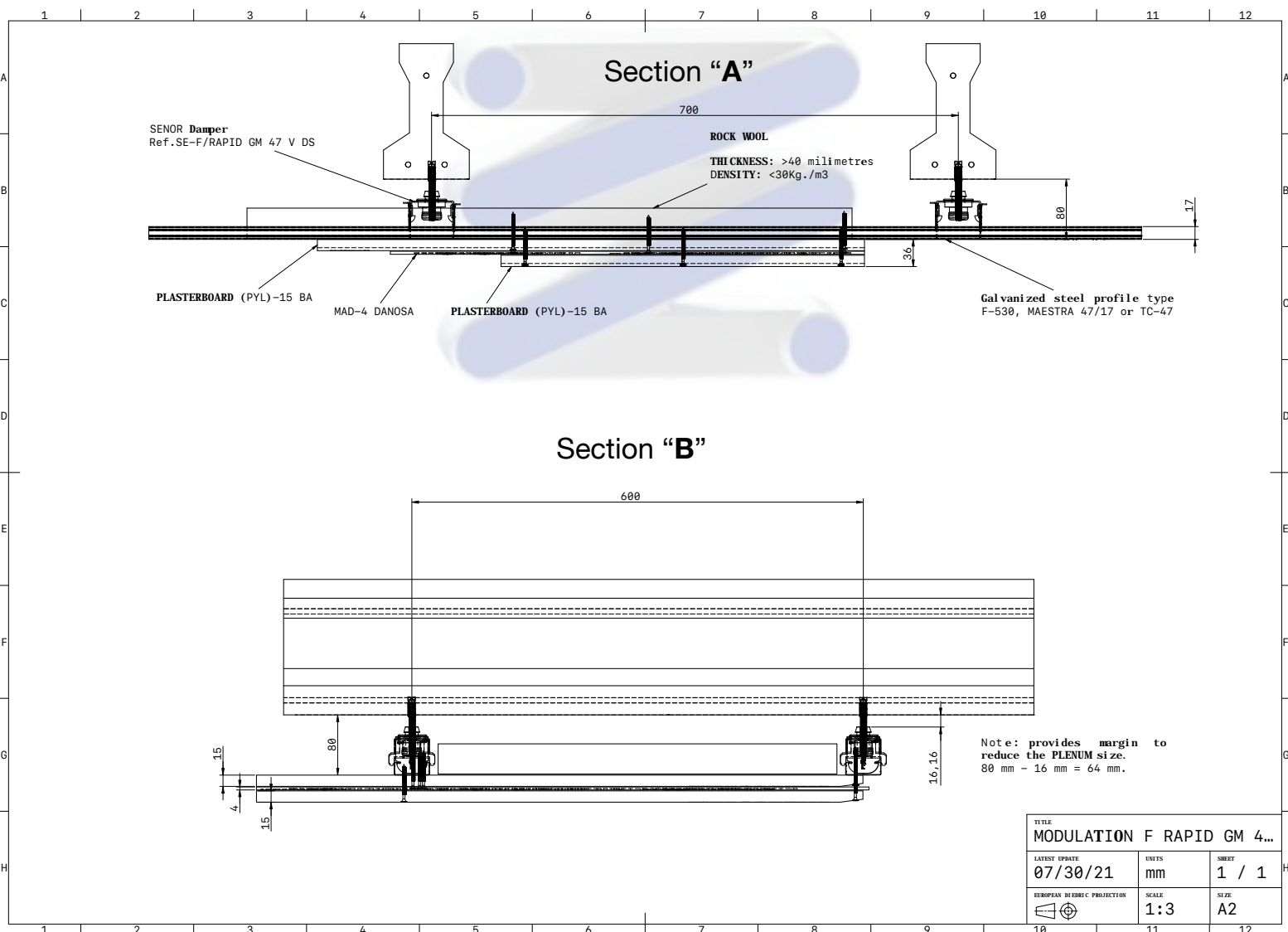
2. Modulation of the acoustic supports.

The modulation adopted for the STEEL + RUBBER dampers with a locking device has been as follows:

Placement of the SE-F RAPID/GOMA 47 VDS2-M6 damper on the F-530 ceiling profile: 0,7 metres. (A). Aligning them with the concrete beams of the slab.

The spacing between primary profiles F-530: 0,6 metres. (B).

“SEE DETAIL”



3. Material properties and loads.

The total load will be distributed evenly across the entire ceiling structure. By creating a sufficiently rigid metal framework, the load distribution will be supported throughout the entire structure.

MATERIALS AND LOADS TABLE.

TECHO DANOSA TEF1+ F RAPID GM 47					
A	B	C	D	E	F
DESCRIPCIÓN	UNIDAD	VOLUMEN (m ³)	DENSIDAD DEL MATERIAL (Kg / m ³)	Kg m ² (Kg)	
PAQUETE ACÚSTICO EN TECHOS					
PYL15	2	0,015	810	24,3	
4,00 MAD	1	0,004	1500	6	
OTROS	1	0	0	4	
PERFIL PRIMARIO 45/48	1,66	0,00056	3500	3,25	
AISLAMIENTO ROCKDAN 231/40	1	0,040	30	1,2	
SUPERFICIE TECHO m²				100	
PESO TOTAL m²				38,75	

MODULACIÓN	DISTANCIA ENTRE AMORTIGUADORES		RESULTADOS OBTENIDOS	
	DISTANCIA "A"	DISTANCIA "B"	FLECHA (mm)	F.RESONANCIA (Hz)
Nº AMORTIGUADORES m ²	0,7	0,6	4,771	8,25
2,38				
TOTAL Nº OF HANGERS	CARGA ESTÁTICA (Kg)		16,28	
238,10	CARGA DINÁMICA (Kg)		17,90	
Ref.SE-F RAPID GM 47 V DS2-M6	WINDOWS CUANDO SELECCIONES EL PERFIL, PULSA SIMULTANEAMENTE: CTRL + ALT + L		GRADO DE AISLAMIENTO %	
			Hz (w)	%
			50,00	97,20



4. Results.

After analysing the Table, we see that the selected damper satisfactorily meets the specified loads. In Table 1. the damper has a natural frequency of 8,25Hz, achieving a soundproofing level of / above 97,0%.

5. Recommended damper.

OPTION 1: SE-F RAPID/GOMA 47 V DS2: https://www.senor.es/p_3-F-RAPID-GOMA-47DS_104.html

Testing machine

03:46

Kg
Print
Fullscreen

F/RAPID GM 47 VDS2
1

Receta

ENSAYO ROTURA

realizada en Máquina A

Force [10,00 Kg ... 400,00 kg]

▼ 0,00 Kg ● 103,98 Kg ▲ 267,10 Kg

Position [160,528 mm]

▼ 0,009 mm ● 18,613 mm ▲ 33,950 mm

▼ minimum ● average ▲ maximum

Eliminar trabajo

Force

17,90 Kg

Position

4,771 mm

6. Disclaimer.

This report should not be used as the sole measure of the suitability of a design idea under specific environmental conditions.

SENOR has made every effort to ensure that its products provide the maximum possible guidance and assistance. However, this does not replace sound engineering judgement, which remains the responsibility of the user.

A qualitative engineering approach should ensure that the results of these calculations are evaluated alongside the practical experience of designers and analysts, and ultimately, supported by experimental test data. The results contained in this report are considered reliable, but should not be regarded as providing any form of guarantee of purpose validity.

PROJECT MANAGER: David Muñoz "SENOR"

