



European Technical Assessment **ETA 07/0071** of 10/05/2017

I General Part

Technical Assessment Body issuing the ETA	VTT Expert Services LTD
Trade name of the construction product	PAROC eXtra, Sonus and UNS 37 partition kits
Product family to which the construction product belongs	Non-load bearing partition kits for dry rooms
Manufacturer	Paroc Group Energiakuja 3, P.O. Box 240 FI-00181 Helsinki
Manufacturing plants	Annex N
This European Technical Assessment contains	12 pages including 2 Annexes which form an integral part of this assessment
This European Technical Assessment is issued in accordance with regulation (EU) No 305/2011, on the basis of	ETAG 003 Guideline for European Technical Approval for Internal Partition Kits for use as non-loadbearing walls, edition December 1998, amended April 2012 used as European Assessment Document (EAD)
This version replaces	ETA 07/0071 issued on May 28, 2012

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II Specific Part

1 Technical description of the product

The non-load bearing partition kits with PAROC eXtra, Sonus and UNS 37 stone wool insulation comprises galvanised steel or timber studs with one, two or three layer gypsum board surfaces on both sides and thermal insulation inside the walls. The gypsum boards are fastened onto steel or timber studs with defined fastenings. The tightening of the joints of the partitions is made by gypsum plaster.

The tightening between the partition and ceiling and floor is done on site according to the installation instructions of the gypsum board manufacturer either with acrylic sealant (acoustic walls) or with mineral wool of reaction to fire class A1 or with non-combustible sealant. Sealing products are not part of this ETA. The tightening of possible gaps like electrical installations shall be done to secure the air tightness of the gap and in case of fire walls also with non-combustible materials.

The distance between the studs is maximum 600 mm. The cross section dimensions of the steel studs are 66 - 70 mm or 95-100mm mm and timber studs 66-70 mm.

The materials are presented in Annex 1 and different types with size limitations of the partition kits are presented in the Annex 2.

2 Specification of the intended uses in accordance with the applicable EAD

2.1 Intended uses

The PAROC eXtra, Sonus or UNS 37 partition kits are intended to be used as non-load bearing partitions in dry spaces especially where the partitions have fire resistance and/or sound insulation requirements.

The partition kit is fastened to the load bearing structure with air tight sealing and according to the manufacturer's instructions. The fastening devices are not part of this ETA.

The provisions made in this ETA are based on an assumed intended working life for a partition kit of 25 years provided that the kit is subjected to appropriate use and maintenance. The indications given on the working life cannot be interpreted as a guarantee given by the producer or the approval body, but are to be used as a means for selecting the appropriate product in relation to the expected economically reasonable working life of the works.

3 Performance of the product and references to the methods used for its assessment

Table 1. Basic requirements for construction works and essential characteristics

BASIC REQUIREMENT AND ESSENTIAL CHARACTERISTICS	PERFORMANCE
BWR 1. Mechanical resistance and stability	(not relevant)
BWR 2. Safety in case of fire	
Reaction to fire	Gypsum boards conforming to EN 520 are classified as Euroclass A2-s1,d0
	Thermal insulation material is classified to Euroclass A1
	Steel profiles are classified to Euroclass A1
	Timber studs are classified to Euroclass F
Resistance to fire	EI 30, EI 60 or as EI 90 depending on the partition construction type (Annex 2)
BWR 3. Hygiene, health and the environment	
Influence on air quality	No dangerous materials *)
Water vapour permeability	No performance assessed (not relevant)
	The wall will be levelled and painted or wall papered depending on the purposes of end use
BWR 4. Safety and accessibility in use	
Resistance to structural damage from impact loads	All partition types: Use category I
Resistance to structural damage and functional failure from eccentric vertical load	No performance assessed
Safety against personal injury by contact	When properly installed, the wall system does not contain sharp or abrasive components liable to cause personal injury
Resistance to point vertical loads	No performance assessed
Rigidity of partitions to be used as a substrate for ceramic tiling	No performance assessed
Protection against deterioration caused by hygrothermal conditions	No performance assessed
Protection against deterioration caused by corrosion	The system is used in dry conditions
Protection against deterioration caused by biological agents	There are no provisions for biological agents to act in the materials in dry conditions.
Protection against deterioration caused by cleaning agents	The wall will be levelled and painted or wall papered and will thus not be in contact with cleaning agents.
Aspects of durability Resistance to functional failures	All partition types: Use category I

BWR 5. Protection against noise	
Airborne sound insulation	R _w (100 - 3150 Hz) between 38 - 65 dB depending on the partition construction type (Annex 2) or No performance assessed
Sound absorption	No performance assessed
BWR 6. Energy economy and heat retention	
Thermal resistance	No performance assessed
Thermal inertia	No performance assessed

* In addition of the specific clauses relating to dangerous substances contained in this European Technical Assessment, there may be other requirements applicable to the products falling within its scope (e.g. transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the Construction Products directive, these requirements need also to be compiled with, when and where they apply.

* Fibre lengths and diameters of the mineral wool according to the EUCEB rules.

4 Assessment and verification of constancy of performance (hereinafter AVCP) system applied, with reference to its legal base

According to the European Commission in Mandate Construct 97/243 Rev.1, Annex 3 is system 3.

5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD.

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited at VTT Expert Services Ltd.

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by VTT Expert Services Ltd



Tiina Ala-Outinen
Business Manager



Pertti Jokinen
Product Manager

ANNEX 1 MATERIALS AND COMPONENTS

The following table contains materials and components used in the manufacturing of the kit.

Partition walls 2, 3, 4 and 5 presented in Annex 2 meet the fire resistance requirements EI 90, partition walls 1 and 6 meet the fire resistance requirements of EI 60 and partition wall 7 the fire resistance requirements of EI 30 according to classification standard EN 13501-2:2007+A1:2009 when following is taken into account. The height of the wall may be increased to 4 m for structures presented in Annex 2.

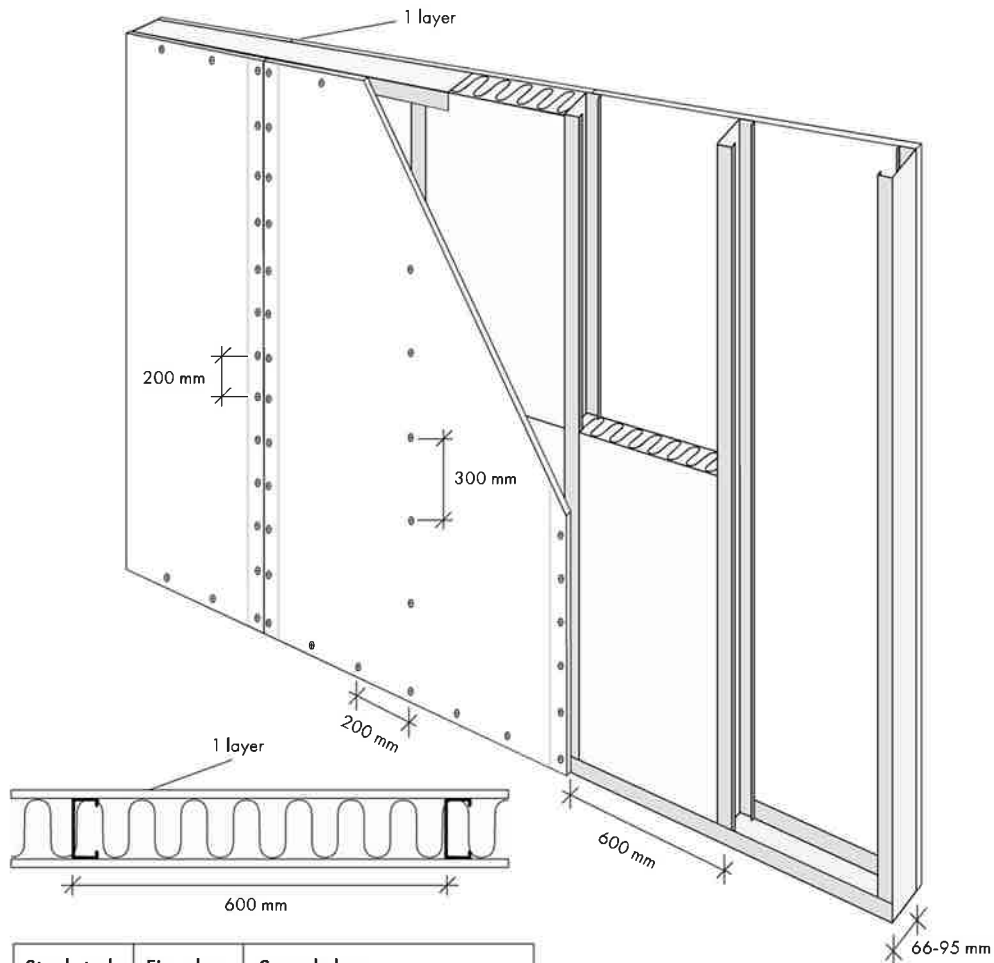
MATERIAL OR COMPONENT FUNCTION	MATERIAL OR COMPONENT TYPE AND SPECIFICATION
Wooden studs	Solid timber or LVL (Laminated Veneer Lumber) See requirements for Partition walls 6 and 7 presented in Annex 2
Steel studs	Thickness of steel 0,46 mm. Weight of zinc is 275 g/m ² , which is equal to 20 µm. The standard EN 14195 for metal framing for gypsum board systems define the steel acc. EN 10326 or 10327. See requirements for Partition walls 1, 2, 3, 4, 5 and 7 presented in Annex 1
Gypsum boards	Gypsum board type A according to standard EN 520 and the weight of the boards is minimum 8,2 kg/m ²
Joint sealing material	Gypsum based plaster 0,2 - 0,3 kg/m ³
Timber batten or steel strip	Timber batten 15 mm x 95 mm or 100 mm wide steel strip shall be installed behind the horizontal joint of the gypsum boards
Thermal insulation	Nominal density of stone wool insulation PAROC eXtra is 28 kg/m ³ , PAROC UNS 37 26 kg/m ³ and PAROC Sonus 20 kg/m ³
	Insulation is installed to fulfil the cavity totally and slabs are supported in place with screws 4.2 x 38 mm 2 pcs/slab on the plain side of the steel studs and nails 2.1 x 50 mm 3 pcs/slab on both sides of the timber studs.
Acrylic sealant	According to the recommendations of the gypsum board producers

ANNEX 2

March 2017

Partition 1

- Ceiling and floor profile 66-100 mm, min size \square - 66 x 55 mm
- Steel studs 66-95 mm, c 600 mm, min size \square - 66 x 40 mm, t = 0,46 mm
- 1 layer of gypsum board 12,5 mm on each side. Gypsum board type A min weight 8,2 kg/m²
A gap of 10 mm between the vertical studs and the head track
Paper strips and gypsum based float in the joints
- PAROC UNS 37/PAROC EXTRA 66-100 mm
- Gypsum screws L = 25 mm 3,9 x 25 mm
- Max height 4000 mm



Steel studs	Fire class	Sound class
95 mm	EI 60	$R_w = 45 \text{ dB}$ $R_w + C_{50-3150} = 40 \text{ dB}$ $R'_w = 36 \text{ dB}$ $R'_w + C_{50-3150} = 32 \text{ dB}$
66 mm	EI 60	$R_w = 40 \text{ dB}$ $R_w + C = 37 \text{ dB}$

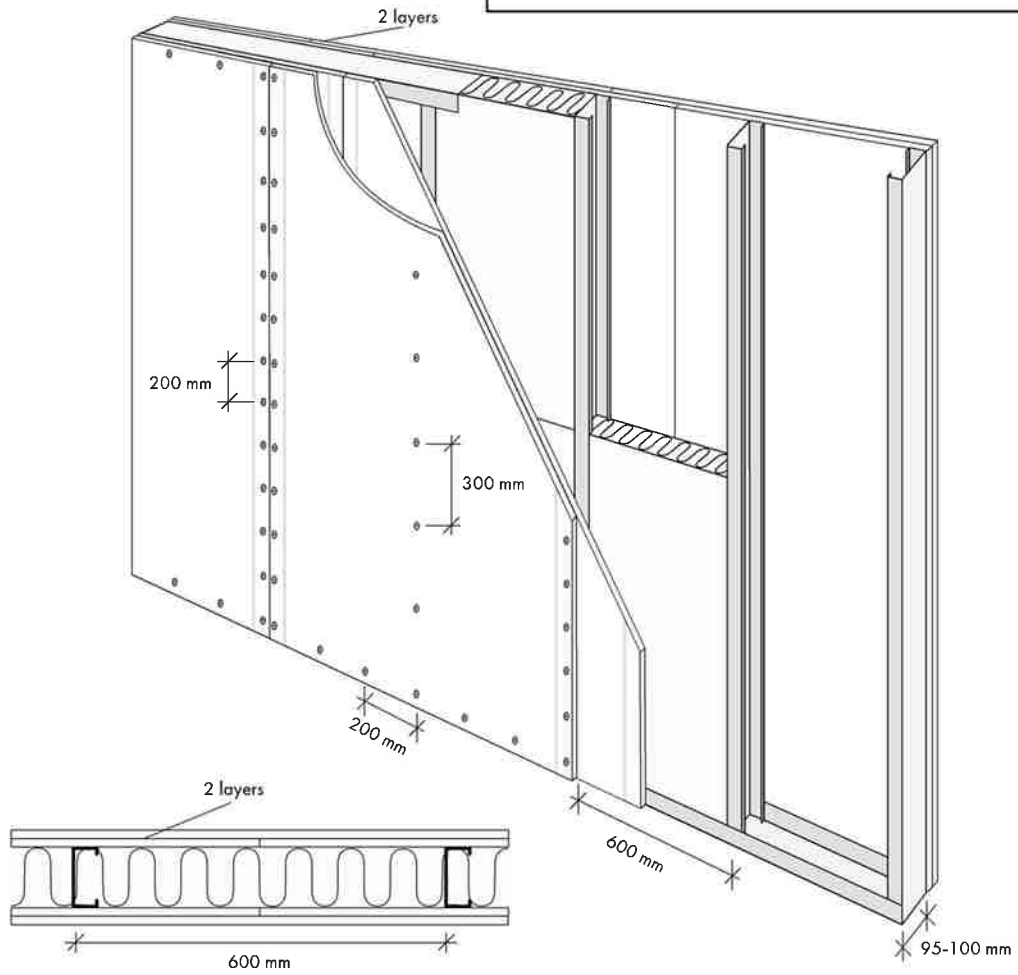
Total wall thickness: 91-120 mm

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Partition 2

February 2017

- Ceiling and floor profile 95-100 mm
- Steel studs 95-100 mm, c 600 mm
- 2 layers of gypsum board 12,5 mm on each side
- PAROC UNS 37/PAROC EXTRA 95-100 mm
- Gypsum screws L = 35 mm
- Max height 4000 mm



Fire class	Sound class
EI 90	$R_w = 55 \text{ dB}$ $R_w + C_{50-3150} = 48 \text{ dB}$ $R'_w = 44 \text{ dB}$ $R'_w + C_{50-3150} = 40 \text{ dB}$

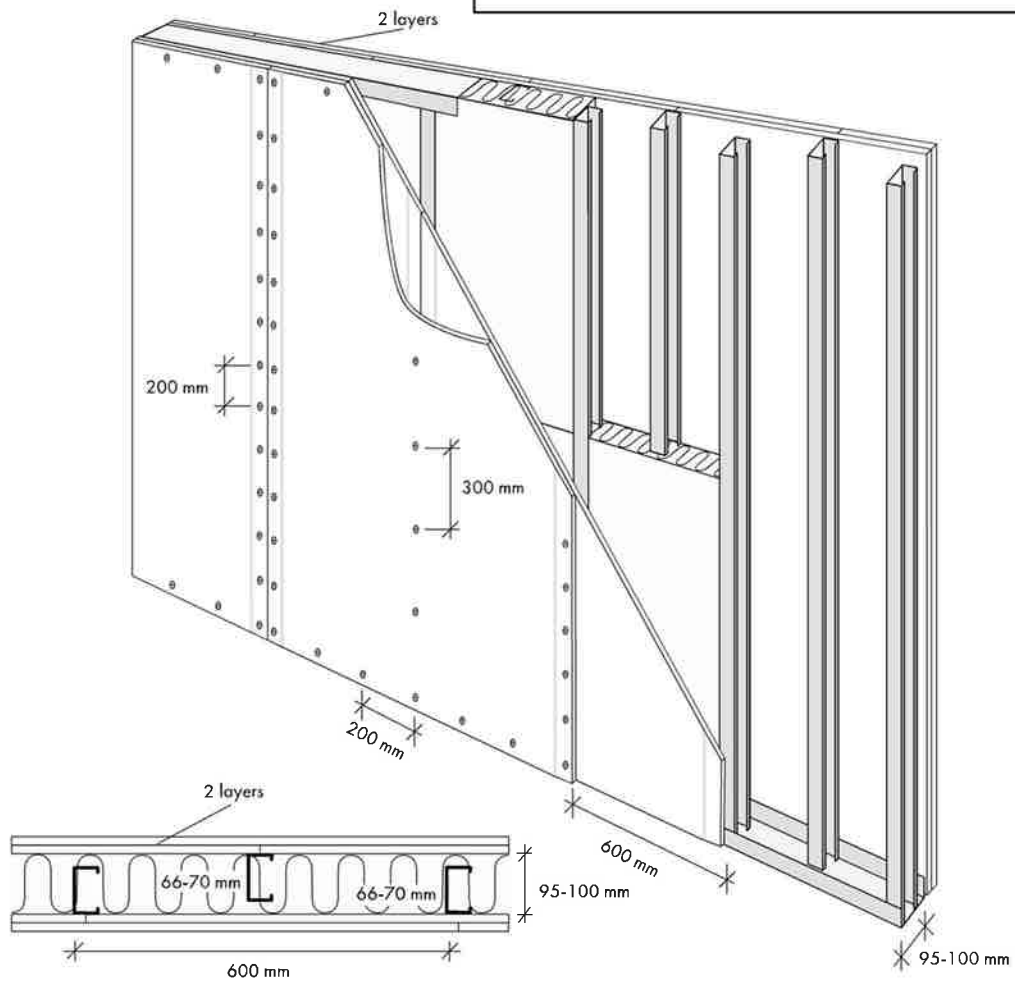
Total wall thickness: 145-150 mm



Partition 3

February 2017

- Ceiling and floor profile 95-100 mm
- Steel studs zig zag 66-70 mm, c 600 mm
- 2 layers of gypsum board 12,5 mm on each side
- PAROC UNS 37/PAROC EXTRA 95-100 mm
- Gypsum screws L = 35 mm
- Max height 4000 mm



Total wall thickness: 145-150 mm

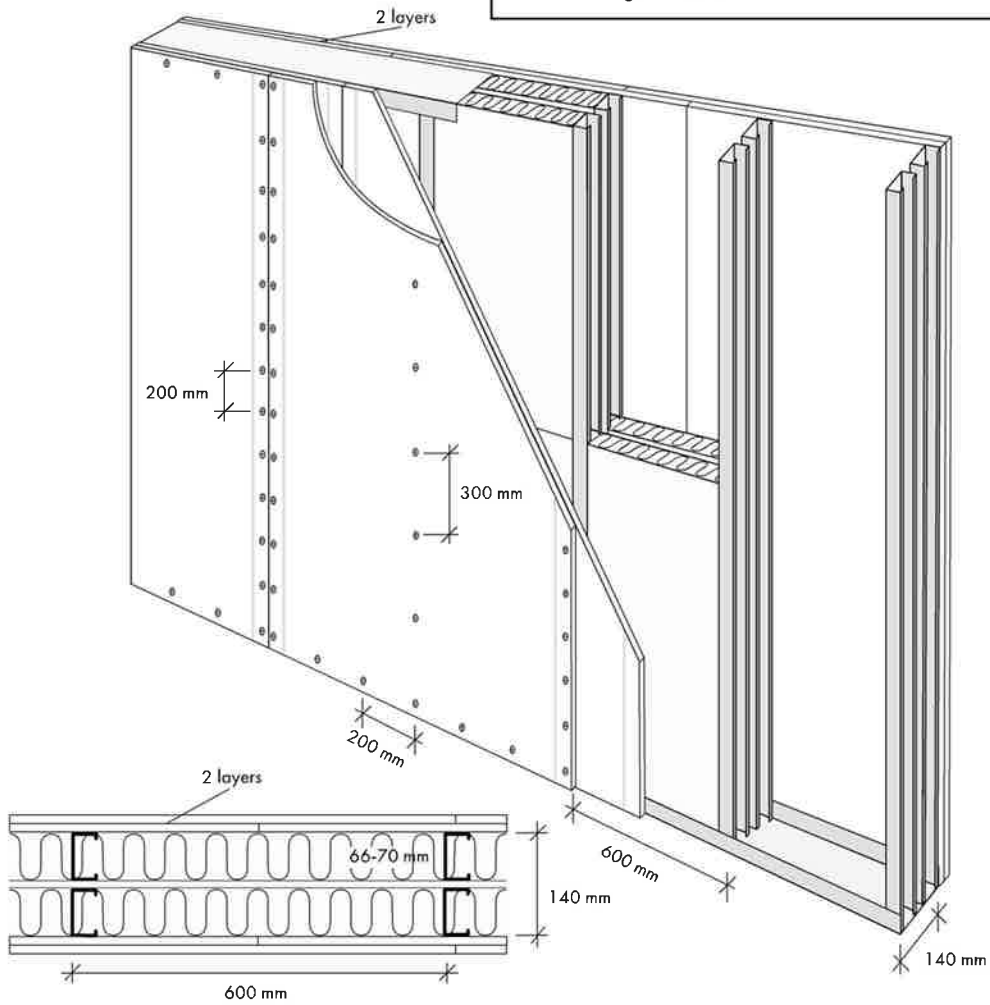
Fire class	Sound class
EI 90	$R_w = 58 \text{ dB}$ $R_w + C_{50-3150} = 51 \text{ dB}$ $R'_w = 48 \text{ dB}$ $R'_w + C_{50-3150} = 44 \text{ dB}$



Partition 4

February 2017

- Ceiling and floor profile 140-150 mm
- Steel studs 2 x 66-70 mm with airgap
- 2 layers of gypsum board 12,5 mm on each side
- PAROC UNS 37/PAROC EXTRA 2 x 66-70 mm
- Gypsum screws L = 35 mm
- Max height 4000 mm



Total wall thickness: 190-200 mm

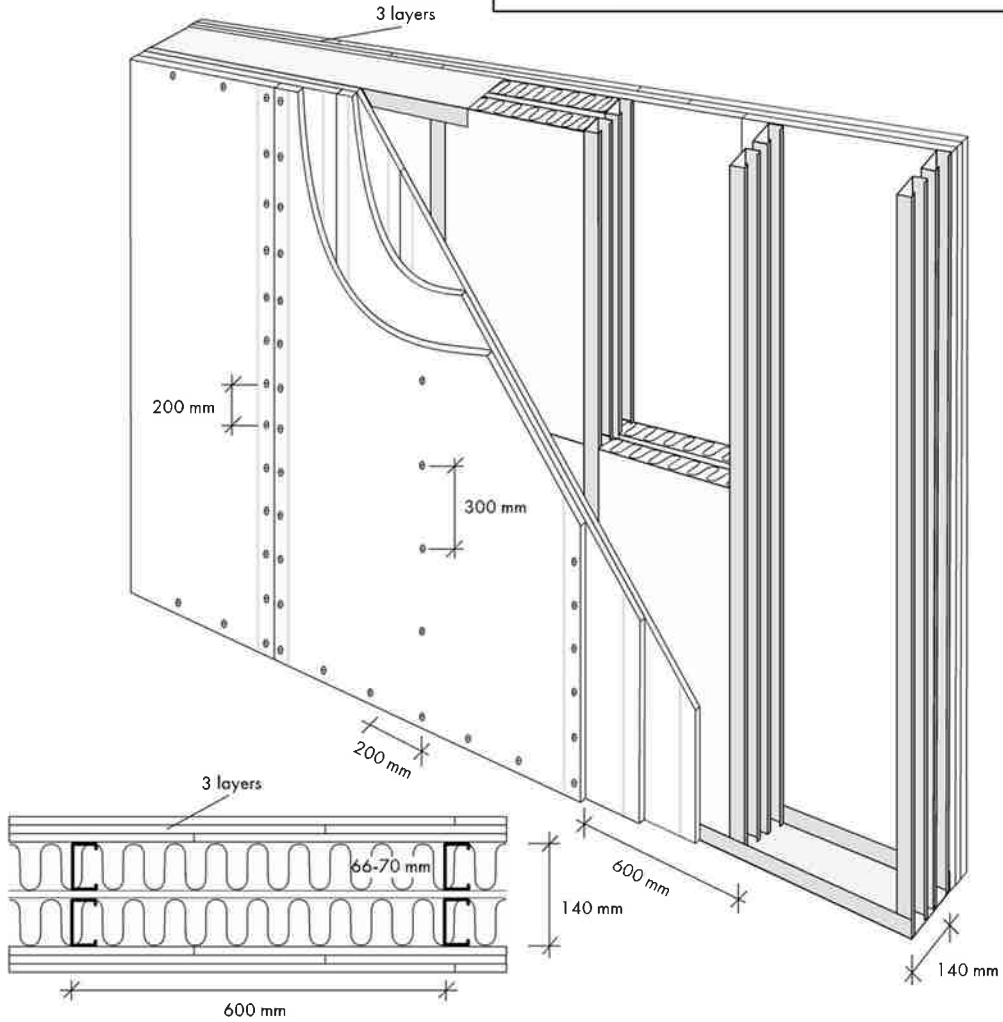
Fire class	Sound class
EI 90	$R_w = 63 \text{ dB}$ $R_w + C_{50-3150} = 56 \text{ dB}$ $R'_w = 56 \text{ dB}$ $R'_w + C_{50-3150} = 52 \text{ dB}$



Partition 5

February 2017

- Ceiling and floor profile 140-150 mm
- Steel studs 2 x 66-70 mm with airgap
- 3 layers of gypsum board 12,5 mm on each side
- PAROC UNS 37/PAROC EXTRA 2 x 66-70 mm
- Gypsum screws L = 45 mm
- Max height 4000 mm



Total wall thickness: 215-225 mm

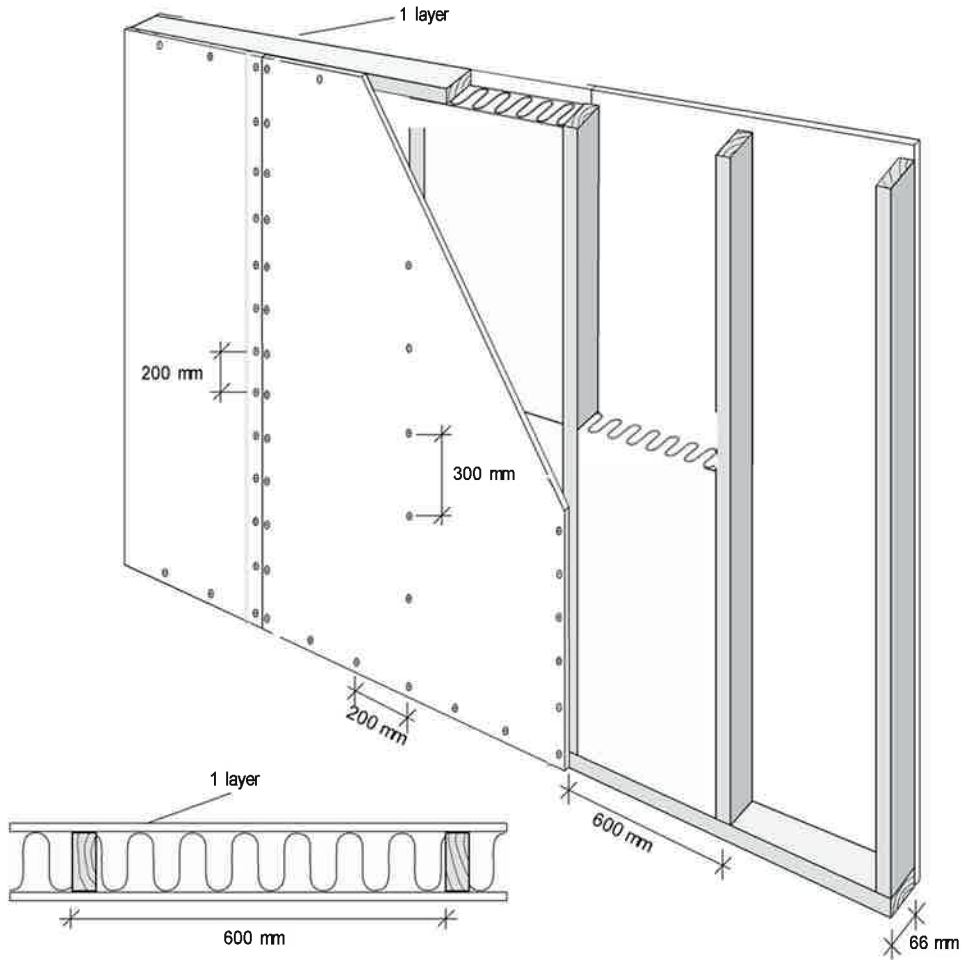
Fire class	Sound class
EI 90	$R_w = 65 \text{ dB}$ $R_w + C_{50-3150} = 61 \text{ dB}$ $R'_w = 60 \text{ dB}$ $R'_w + C_{50-3150} = 56 \text{ dB}$



Partition 6

March 2017

- Ceiling and floor profile 66 mm, min size 66 x 35 mm²
- Wooden studs 66 mm, c 600 mm, min size 66 x 35 mm²
- 1 layer of gypsum board 12,5 mm on each side
Gypsum board type A min weight 8,2 kg/ m²
Paper strips and gypsum based float in the joints
- PAROC UNS 37/ PAROC EXTRA 66 mm
- Gypsum screws L = 3,5 x 35 mm
- Max height 4000 mm



Fire class	Sound class
EI 60	R _w = 40 dB R _w + C = 37 dB

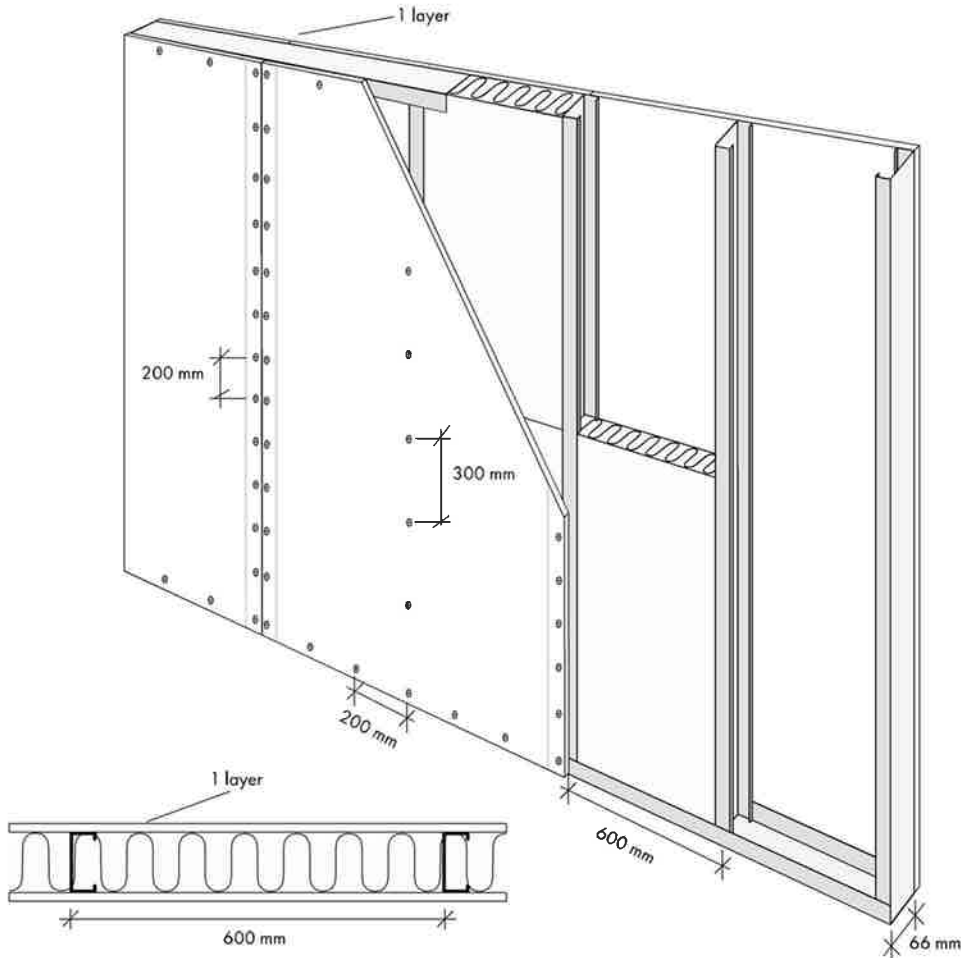
Total wall thickness: 91 mm



Partition 7

March 2017

- Ceiling and floor profile 66 mm, min size [- 66 x 55 steel 66 x 35 mm² wood
- Steel or wooden studs 66 mm, c 600 mm, min size [- 66 x 40 t= 0,46 mm steel 66 x 35 mm wood
- 1 layer of gypsum board 12,5 mm on each side. Gypsum board type A min weight 8,2 kg/m²
A gap of 10 mm between the vertical steel studs and the head track
Paper strips and gypsum based float in the joints
- PAROC Sonus 66 mm
- Gypsum screws L = 25 mm • Max height 4000 mm



Fire class	Sound class
EI 30	R _w = 38 dB (wood), 40 dB (steel) R _w + C = 34 dB (wood), 37 dB (steel)

Total wall thickness: 91 mm

