

Project

Bathhouse S4PVE and S3PVD



Author of the project: Hronos OÜ

Tallinn, ESTONIA

2022



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1 EXPLANATORY NOTE

1.1 Overview

1.1.1 Description

The project is a bath barrel with a diameter of 2 m and a length of 4 m. It has a spacious steam room for 4 people. This outdoor bathhouse can be complemented with a Harvia Pro 20 wood-burning stove, which allows heating for one hour, and an electric sauna heater, which allows heating up to 2 hours. Small outdoor bathhouse made of thermowood are more durable and resistant to decay than those made only from ordinary spruce. The bath barrel is available both assembled and as a bathhouse kit.

Materials:

Barrel - spruce/thermowood (thickness 40 mm)

Benches and floor - thermowood

Door - tempered brown glass in the steam room,
outside wooden door with lock

Roof - asphalt shingles

Rings - stainless steel (4 pcs.)

Options:

Foundation - not required

Thickness - 40 mm

Diameter - 2 m

Length – 4 m

Height – 2,1 m (without
chimney)

Glass door dimensions - 1700 mm
x 707 mm

Capacity – 4 people

Total area – 7,3 m²

1.1.2 Customer of the construction project

Baltresto Ltd

Harju County, Maardu City, Kaldas Road 2, 74114

1.1.3 Author of the project

Hronos OÜ

Harju County, Kuusalu Parish, Salmistu Village, Pedassaare Road 62, 74629

Responsible person: Andrei Vinshtein

Civil Engineer: Egor Gonchar

email hronosou@gmail.com

1.1.4 Primary documentation

1. Assembly manual for S4PVE and S3PVD

1.1.5 Normative documents

Date: 12/6/2022

Document No.: 105_PP_EK-308

Civil engineer: E. Gonchar

Responsible person: A. Vinshtein



- EV Building Legislation
- MKM Regulation 17.07.2015 nr 97 "Projection requirements"
- EVS 932: 2017 Construction project.
- EVS-EN 1990: 2002 Fundamentals of Structural Design
- EVS-EN 1991-1-1: 2002 Loads on building structures. Part 1-1: Total loads.
- - Volumetric weight, own weight, payload of buildings.
- - EVS-EN 1991-1-3: 2006 Loads on building structures. Part 1-3: General loads.
- Snow load
- - EVS-EN 1991-1-4: 2005 Loads on building structures. Part 1-4: Wind load
- - EVS-EN 1995-1-1: 2005 Design of wooden structures. Part 1-1: General. General rules and regulations for the design of buildings.

1.2 Estimated service life

- The service life calculated in accordance with EVS-EN 1990:2002 paragraph 2.3 is 50a (category 4).

1.3 Implications and reliability class

- According to EVS-EN 1990:2002 p.b.3:
- - Impact class: CC2
- - Reliability class: RC2

1.4 Load

1.4.1 Loads of own weight

- Empty loads are calculated in accordance with the standard EVS-EN 1991-1-1:2002 and the data provided by the manufacturers of building materials.

1.4.2 Regulatory payload

- Payload according to EVS-EN 1991-1-1:2002:

Type of premises	Class	Total load q_k , kPa	Point load Q_k , kN
Sauna floor	A	1,0	1,0
Roof	H	0,6	1,2

1.4.3 Snow load

- According EVS-EN 1991-1-3:2006:
- Snow load on the ground: $s_k=1,5\text{kN/m}^2$
- Snow load coefficient: $\mu=0,8$
- Snow load on the roof: $s=1,2\text{kN/m}^2$

1.4.4 Wind load

- Wind load: $q_p(z)=0,383\text{kN/m}^2$
- Landscape Type: III

1.4.5 Other loads



No.

1.4.6 Spare coefficients

- Constant loads in the limit state (side effects) $\gamma_{G, sup}=1,20$
- Load variables in the limit state (side effects) $\gamma_Q = 1.50$
- Constant loads in normal operating limit state $\gamma_G=1,0$
- Load variables in normal maximum operating state $\gamma_Q = 1.0$

1.5 General tolerances and quality classes of load-bearing structures

- Follow the manufacturer's instructions with each use of the construction product (transportation, storage, processing, preparation of the base, etc.).

Wooden constructions

- When building wooden structures, comply with the requirements and tolerances specified in the Estonian standard EVS-EN 1995-1-1:2005.
- Lumber properties must comply with EVS-EN 338:2016.
- Lumber tolerances must comply with EVS-EN 336:2013.
- Determination of the physical and mechanical properties of wood in accordance with EVS-EN 408:2010.

1.6 Fire resistance

The building belongs to the class of fire resistance TP3, fire resistance requirements are not set.

DIMENSIONAL DRAWINGS

SHEET LIST	D101
3D VIEW 1	D102
3D VIEW 2	D103
FLOOR PLAN	D104
FRONT FACADE; RIGHT FACADE	D105
SECTION S1; SECTION S2;	D106
DETAILS	D107

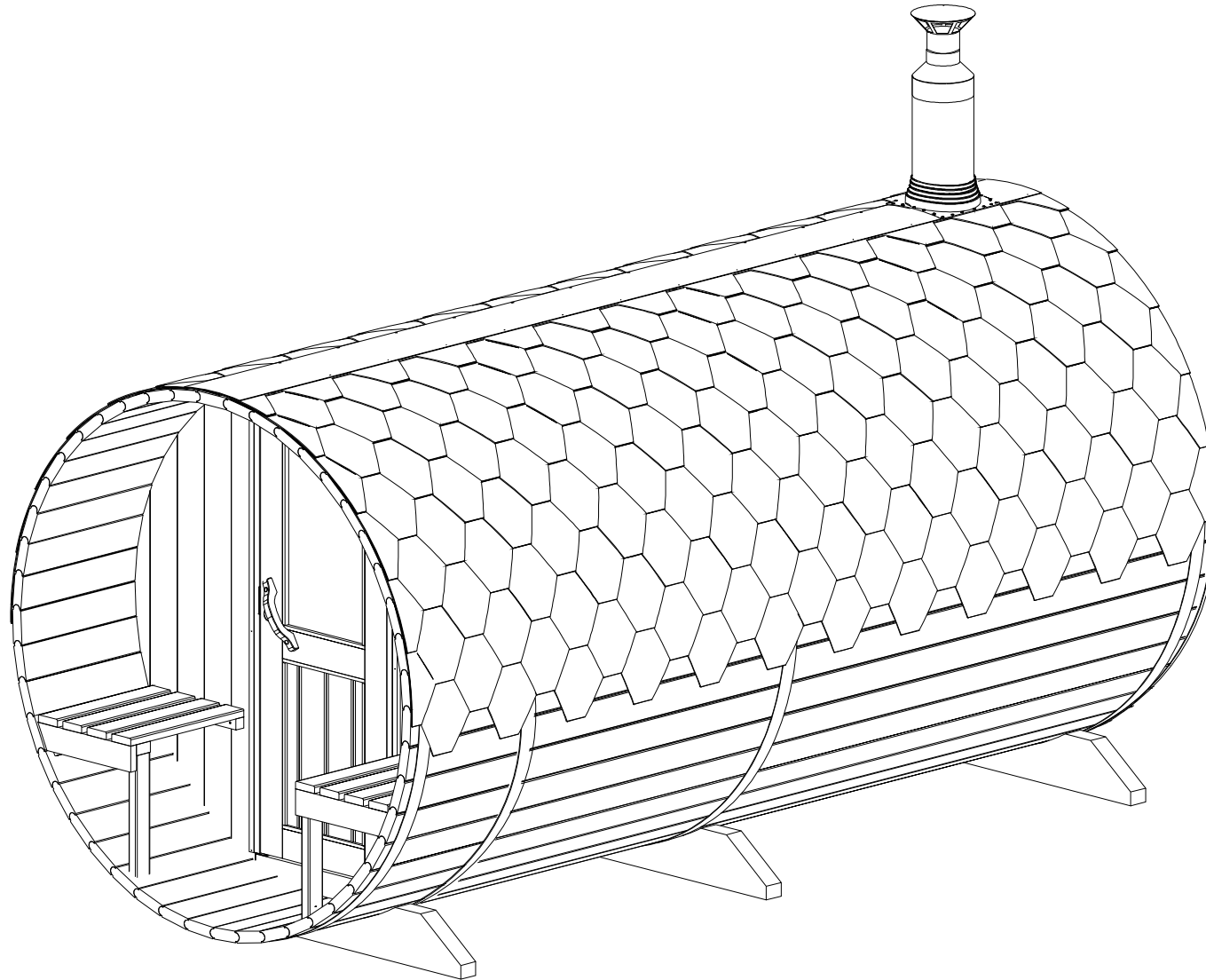
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CUSTOMER BALTRESTO	Draftsman Egor Gonchar	Compitent person Andrei Vinshtein	Date 12,06,2022	Scale
HRONOS OÜ Reg. nr 14731115. GSM: +372 5600 3664 MTR EEH011193 e-mail hronosou@gmail.com		Drowing SHEET LIST		
		Drowing number D101		



3D VIEW 1

1

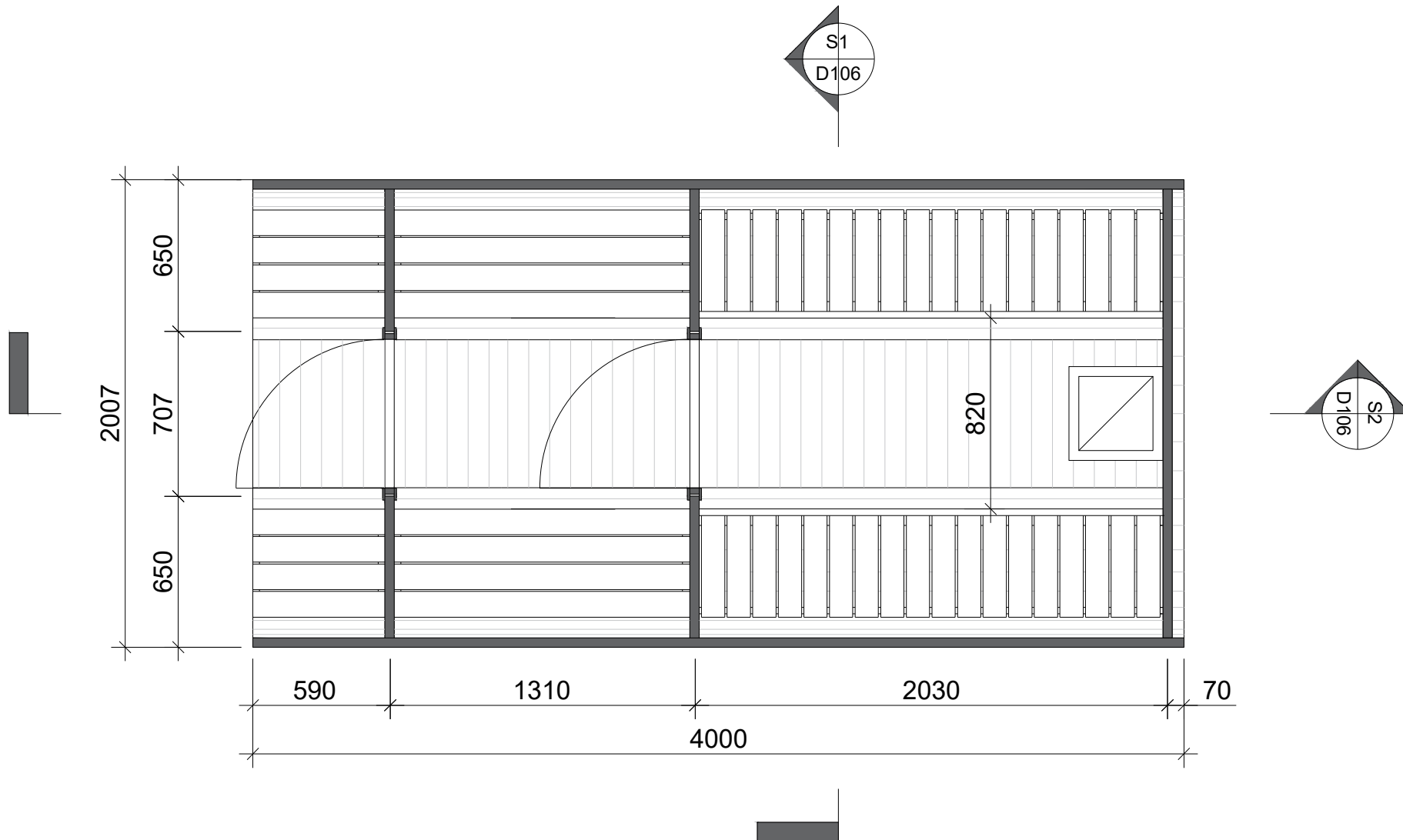
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CUSTOMER BALTRESTO	Draftsman Egor Gonchar	Compitent person Andrei Vinshtein	Date 12,06,2022	Scale
HRONOS OÜ Reg. nr 14731115. GSM: +372 5600 3664 MTR EEH011193 e-mail hronosou@gmail.com		Drowing 3D VIEW 1		
		Drowing number D102		



3D VIEW 2

2

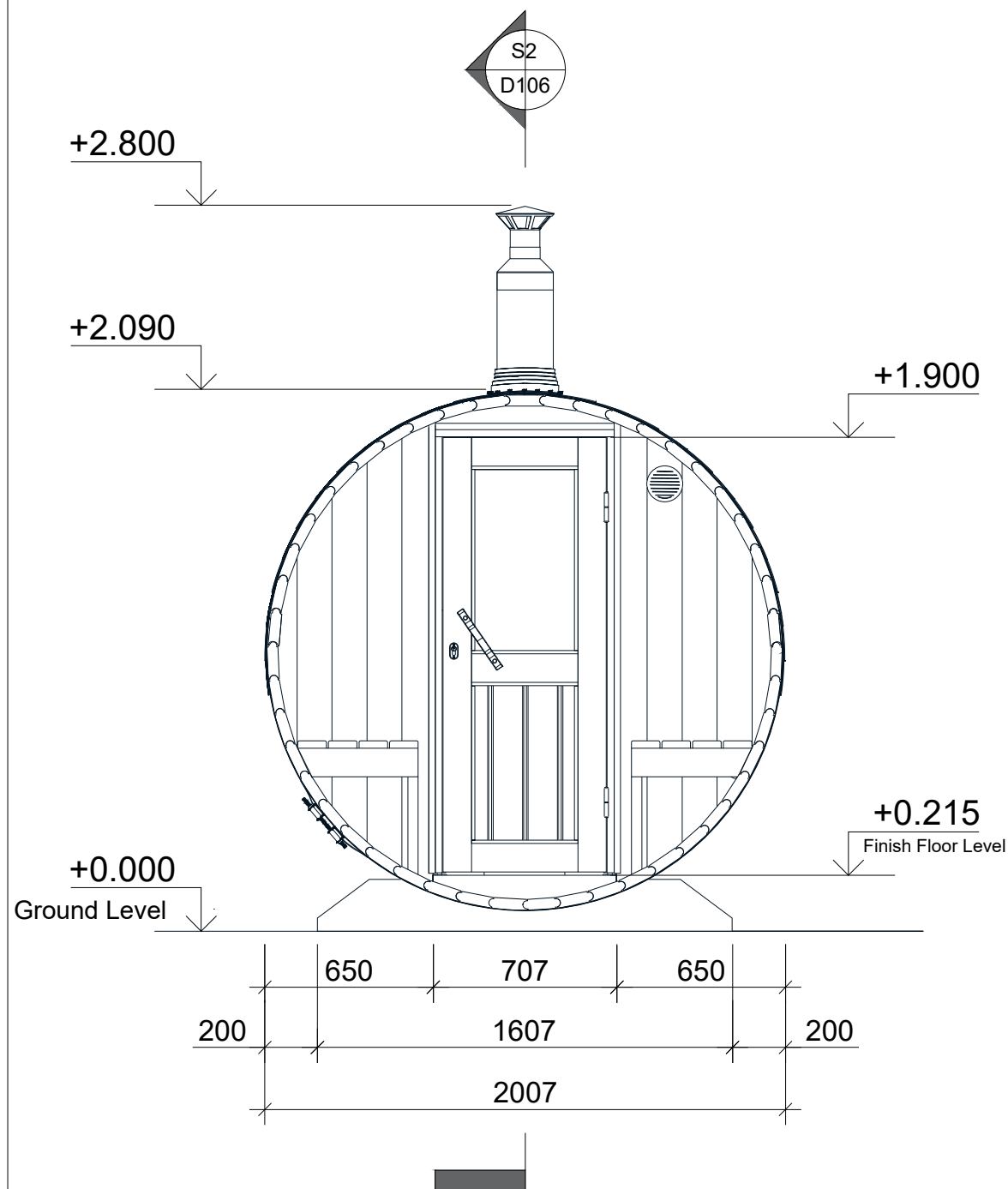
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HRONOS OÜ Reg. nr 14731115. GSM: +372 5600 3664 MTR EEH011193 e-mail hronosou@gmail.com		Drowing 3D VIEW 2		
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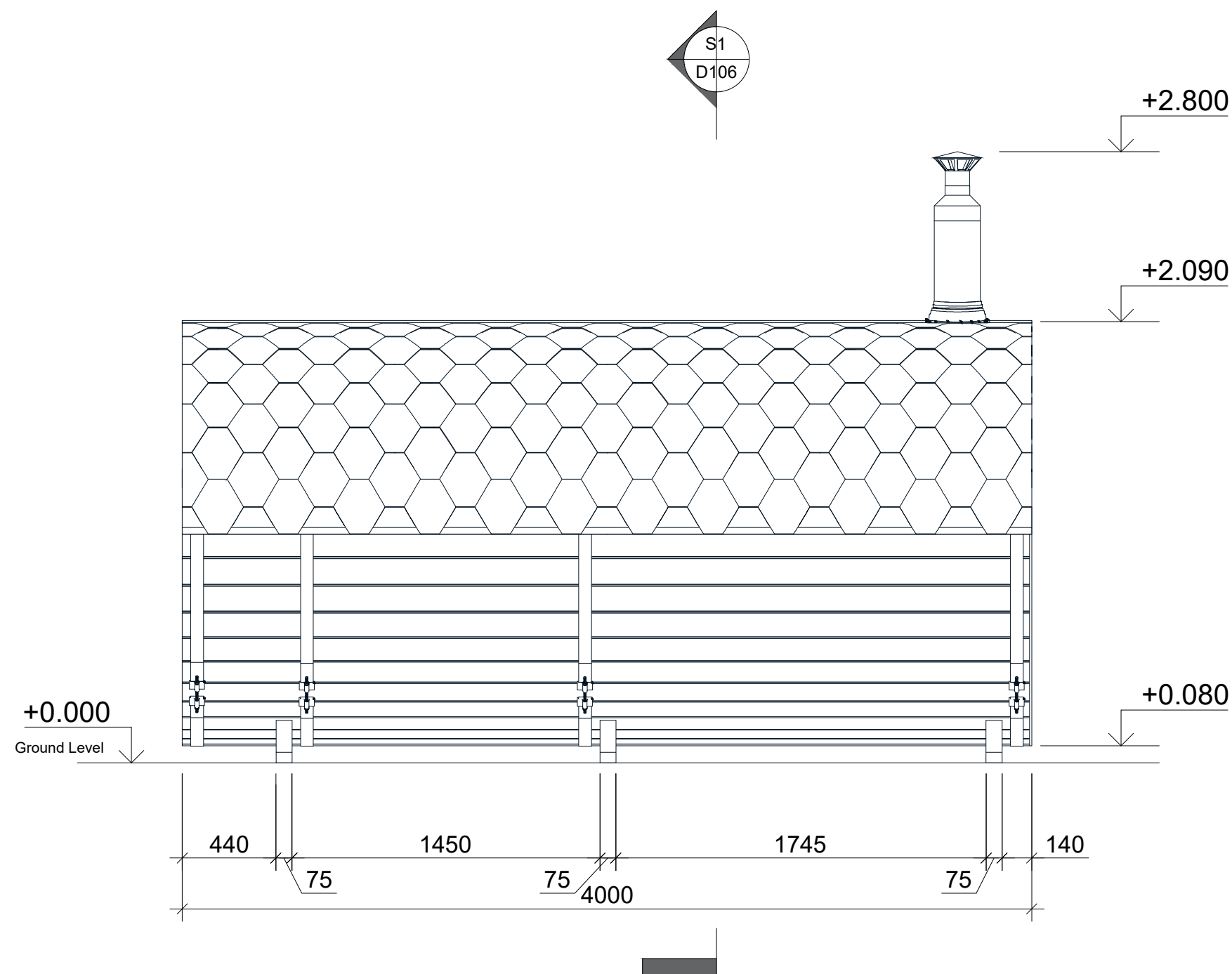
1 FLOOR PLAN
1 : 25



Object: BATHHOUSE S4PVE and S3PVD			Project number 105_PP_EK-3-08	
CUSTOMER BALTRESTO	Draftsman Egor Gonchar	Compitent person Andrei Vinshtein	Date 12,06,2022	Scale 1:25
HRONOS OÜ Reg. nr 14731115. GSM: +372 5600 3664 MTR EEH011193 e-mail hronosou@gmail.com			Drowing FLOOR PLAN	
			Drowing number D104	



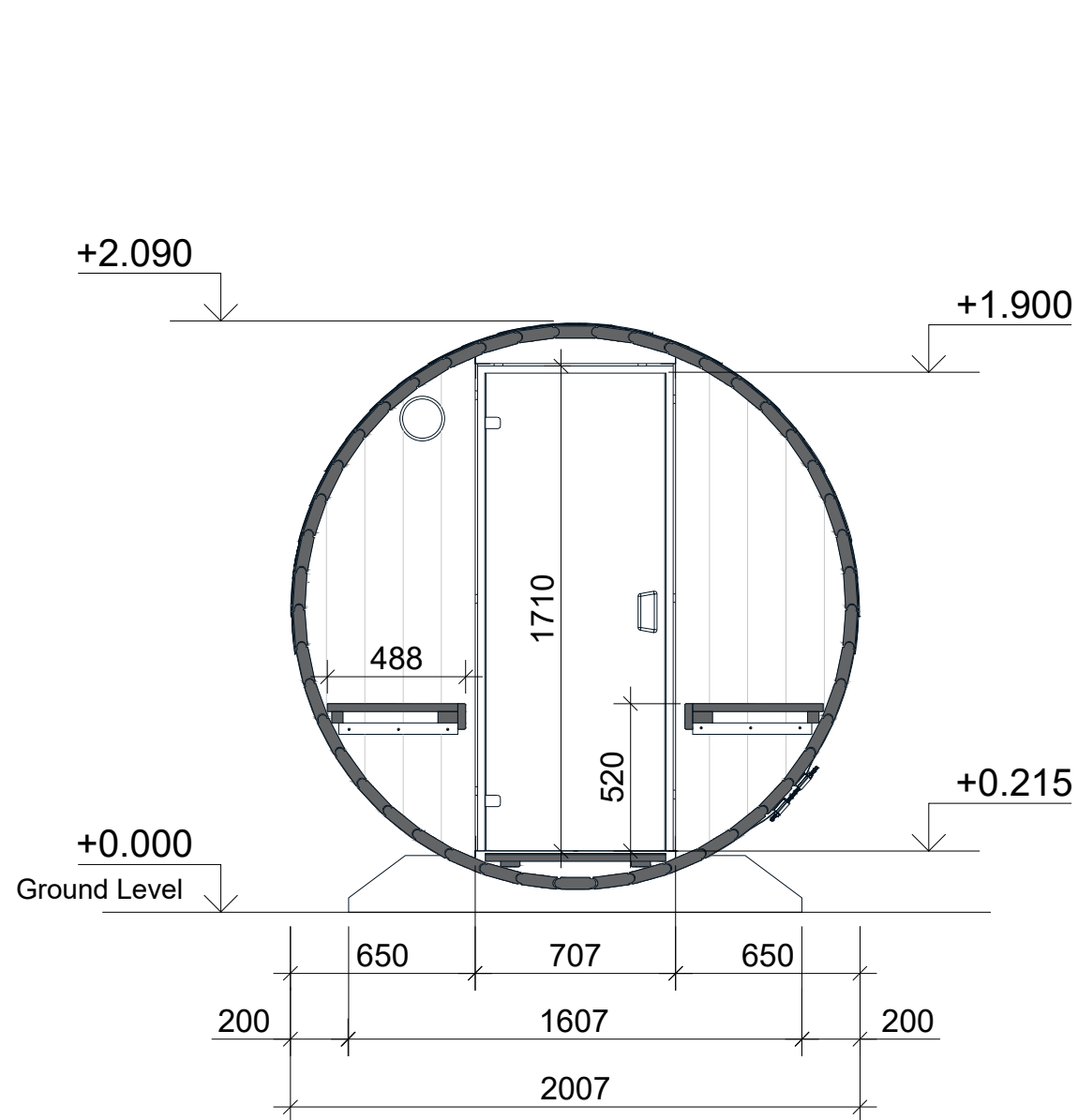
1 FRONT FACADE
1 : 25



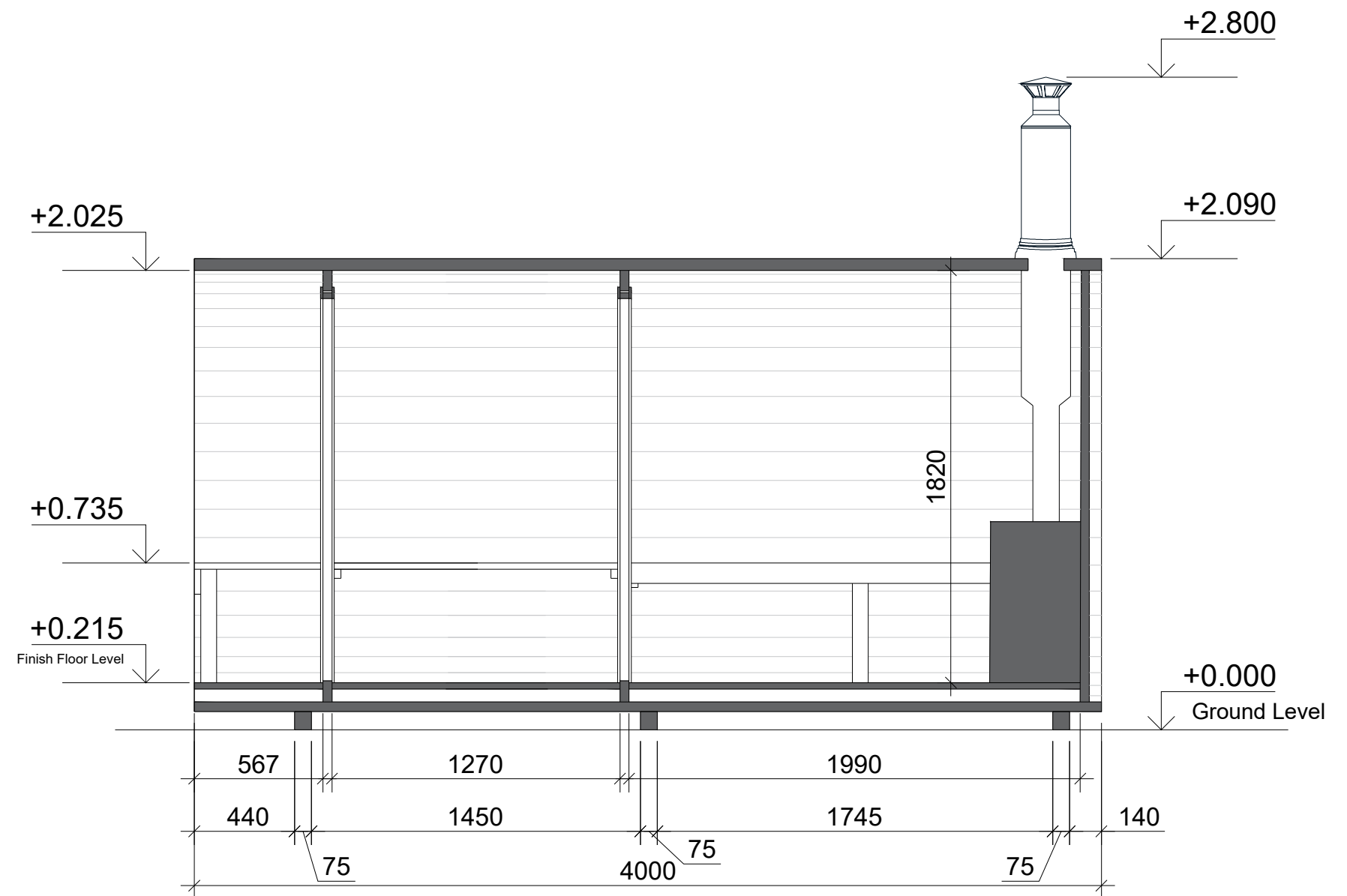
2 RIGHT FACADE
1 : 25



Object: BATHHOUSE S4PVE and S3PVD			Project number	105_PP_EK-3-08
CUSTOMER BALTRESTO	Draftsman Egor Gonchar	Compitent person Andrei Vinshtein	Date 12,06,2022	Scale 1:25
HRONOS OÜ Reg. nr 14731115. GSM: +372 5600 3664 MTR EEH011193 e-mail hronosou@gmail.com		Drowing FRONT FACADE; RIGHT FACADE		
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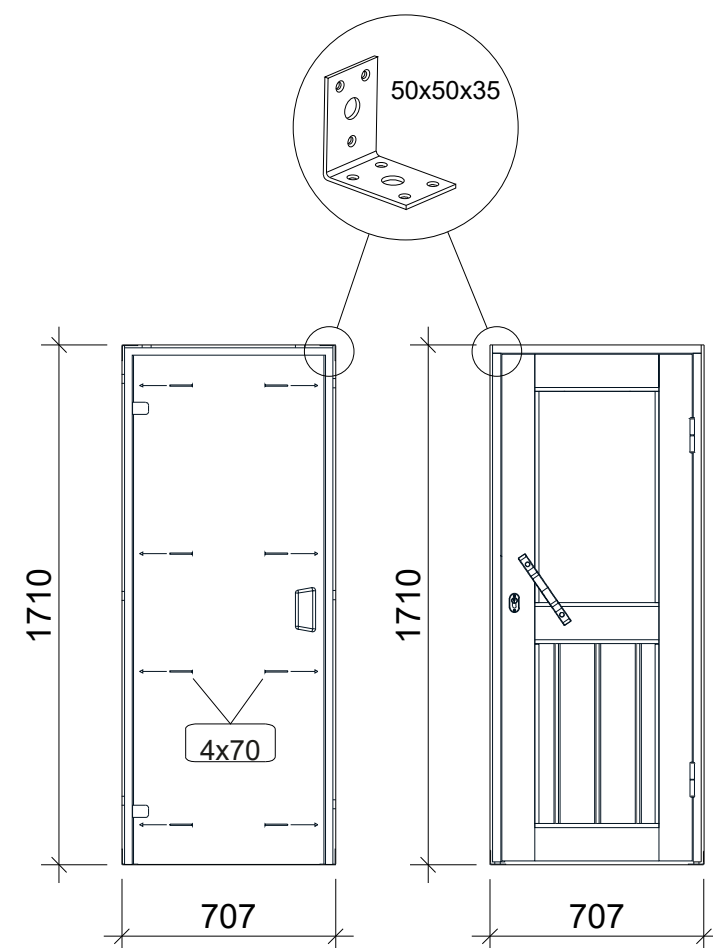
SECTION S1
S1 1 : 25



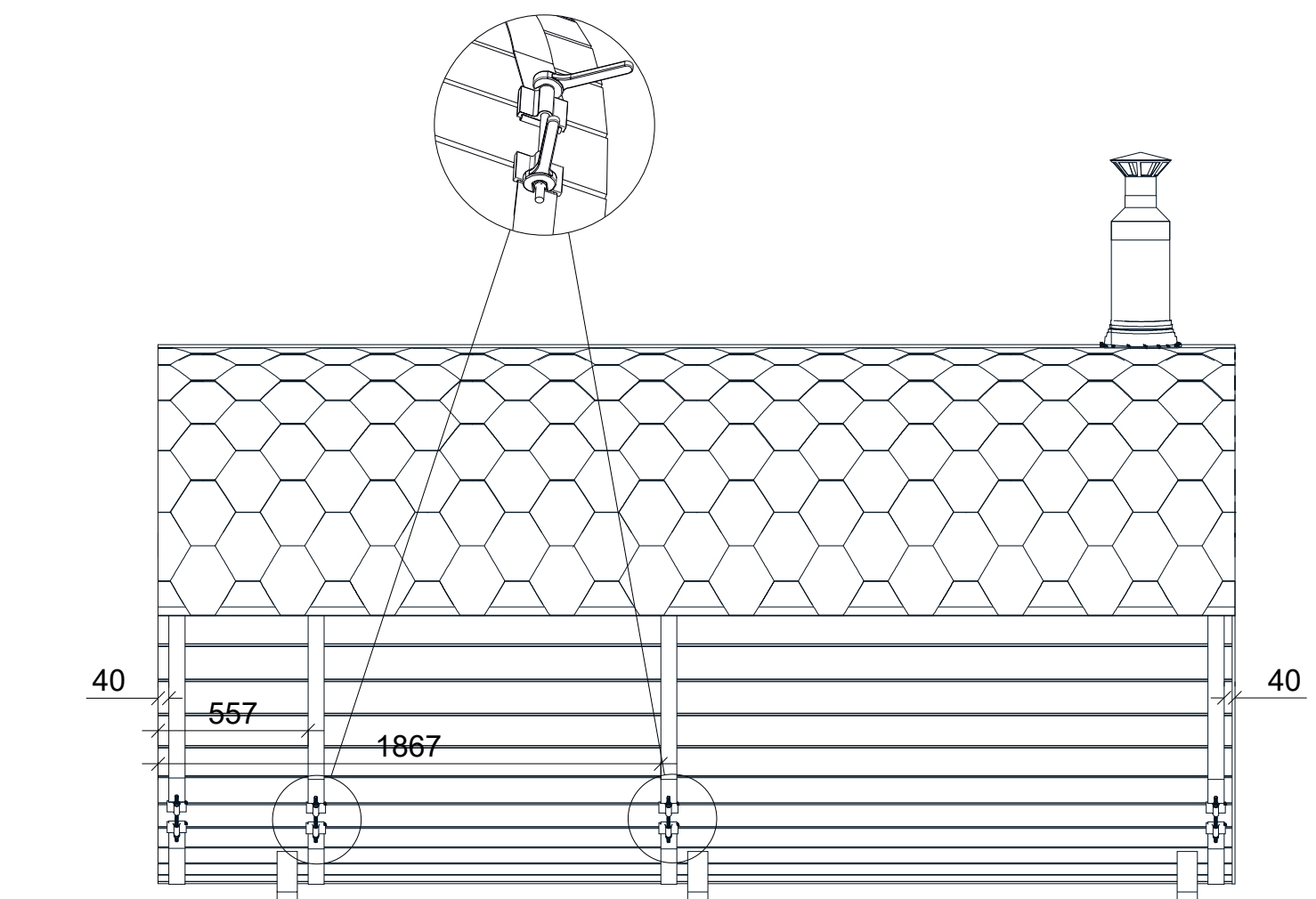
SECTION S2
S2 1 : 25



Object: BATHHOUSE S4PVE and S3PVD			Project number	105_PP_EK-3-08
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HRONOS OÜ Reg. nr 14731115. GSM: +372 5600 3664 MTR EEH011193 e-mail hronosou@gmail.com		Drowing SECTION S1; SECTION S2;		
		Drowing number D106		



S1 DOORWAYS
1 : 25



S2 FASTENING
1 : 25



Object: BATHHOUSE S4PVE and S3PVD			Project number 105_PP_EK-3-08	
CUSTOMER BALTRESTO	Draftsman Egor Gonchar	Compitent person Andrei Vinshtein	Date 12,06,2022	Scale 1:25
HRONOS OÜ Reg. nr 14731115. GSM: +372 5600 3664 MTR EEH011193 e-mail hronosou@gmail.com		Drowing DETAILS		
		Drowing number D107		