

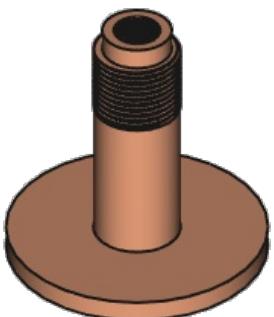
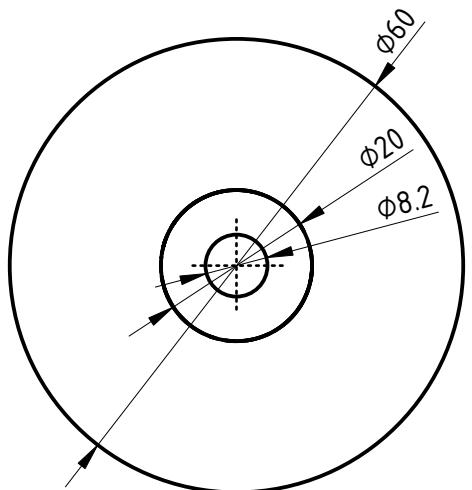
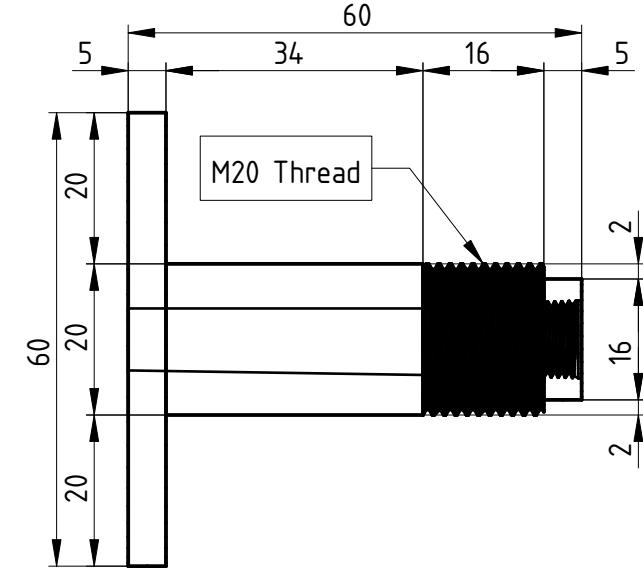
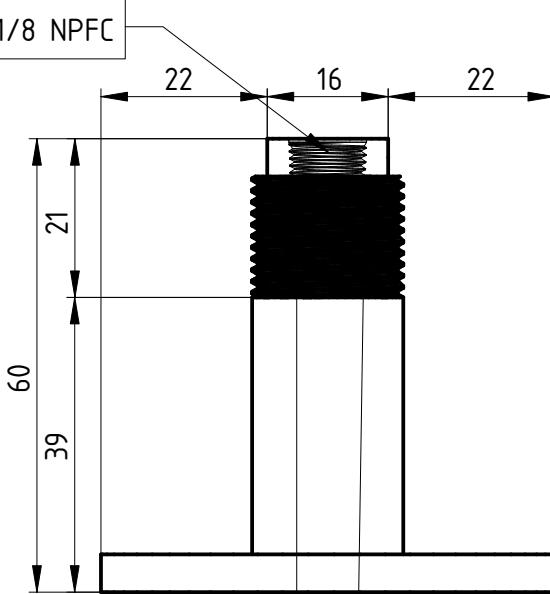
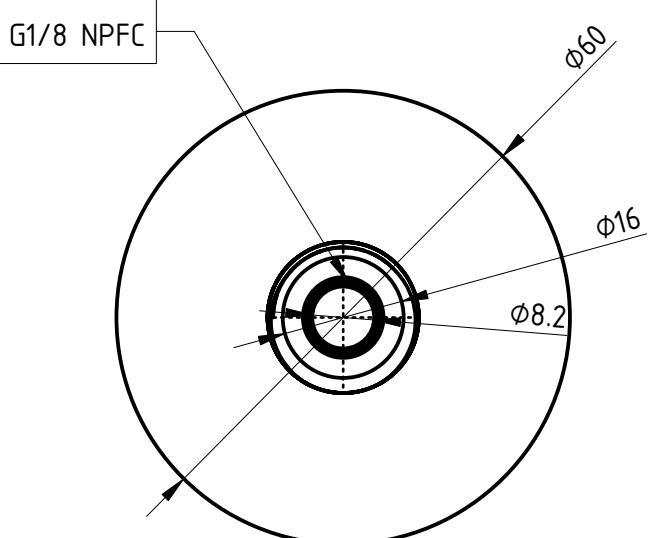
Category	Description	Category / Material	Assembly	Quantity	Common	Weight (kg)	Manufacturer	Original Part No.
Box Door Assembly	M8 Slotted Round Nuts (DIN 546) - Stainless Steel (A1)	Nuts	Door Hinge	4	Y	0.006	Accu Components	HSRN-M8-A1
	M8 x 20mm Stainless (A2) Cross-Slotted Mushroom Head Screws (NFE 25-129)	Screws	Door Hinge	4	N	0.011	Accu Components	SFFM-M8-20-A2
	M8 x 70mm Phillips Pan Head Machine Screws - Polyamide	Screws	Door Hinge	4	Y	0.005	Accu Components	SIP-M8-70-PA
	M8 High Nylon Locking Nuts (DIN 982) - Stainless Steel (A2)	Nuts	Door Hinge	4	N	0.0053	Accu Components	HNHN-M8-A2
	M6 x 70mm Phillips Pan Head Machine Screws - Polyamide	Screws	Door Slam Latch Assembly	8	Y	0.002264	Accu Components	SIP-M6-70-PA
	M6 Hexagon Nylon Locking Nuts (DIN 985) - Stainless Steel (A2-70)	Nuts	Door Slam Latch Assembly	8	Y	0.0021	Accu Components	HNN-M6-A2
	40 Series 3 Hole - Slotted Inside Corner Bracket (Part No. 40-4280)	Aluminum Profile	Door Hinge	4	N	0.132	80/20	40-4280
	Turntable 40	Aluminum Profile	Box-Side Swivel	2	Y	1	Paletti Profilesystem	SA5225N
	Door Slam Latch GN936	Aluminum Profile	Door Slam Latch Assembly	2	N	0.5	Ganter Norm	GN 936-72-SCL-SW
	Box Door	CoraPan Al 85, 50mm	Box Door	1	N	0.923	UZH Workshop	7 / 34
Box - Side Hinge Assembly	Door Latch Frame	3mm Stainless Steel Sheet	Door Slam Latch Assembly	2	N	0.070	UZH Workshop	11 / 33
	M8 Slotted Round Nuts (DIN 546) - Stainless Steel (A1)	Nuts	Door Hinge	4	Y	0.006	Accu Components	HSRN-M8-A1
	M8 x 70mm Phillips Pan Head Machine Screws - Polyamide	Screws	Door Hinge	4	Y	0.005	Accu Components	SIP-M8-70-PA
	M12 x 70mm Full Thread Cap Head Screws - Nylon	Screws	Box-Side Latch wall mount	6	N	0.0094	Accu Components	SSC-M12-70-N
	M12 High Nylon Locking Nuts (DIN 982) - Stainless Steel (A2)	Nuts	Box-Side Latch wall mount	6	N	0.019	Accu Components	HNHN-M12-A2
	M6 x 16mm Phillips Pan Head Machine Screws - Nylon (X8)	Screws	Box-Side Latch wall mount	8	N	0.001	Accu Components	SIP-M6-16-V2-N
	M6 Hexagon Nylon Locking Nuts (DIN 985) - Stainless Steel (A2-70)	Nuts	Box-Side Latch wall mount	8	Y	0.0021	Accu Components	HNN-M6-A2
	Turntable 40	Aluminum Profile	Box-Side Swivel	2	Y	1	Paletti Profilesystem	SA5225N
	Profile 40x40 1N semi, natural (including cutting charge) - 365 mm	Aluminum Profile	Door Hinge Bar	2	N	0.6935	Paletti Profilesystem	SP5481N
	Profile Cap 40x40	Aluminum Profile	Door Hinge Bar	4	N	0.005	Paletti Profilesystem	SZ0010S
Radiator Assembly	Box-Side Handle Frame	3mm Stainless Steel Sheet	Box-Side Latch Mount	2	N	0.249	UZH Workshop	10 / 33
	NexXxoS Monsta 280mm Radiator	Heat Exchanger	Radiator Assembly	2	N	2.02	Alphacool	14190
	Wide Temperature Range Fan San Ace 120T	Fans	Radiator Assembly	4	N	0.42	Sanyo	9GT1212P1S00
	Fan grill for 120mm axial fans, chrome	Safety Component	Radiator Assembly	4	N	0.033	Aquatuning	80015
	Vibration damper 120mm fan, Bblack	Seals	Radiator Assembly	4	N	0.008	Aquatuning	80023
	M3 x 40 cross countersunk galvanized screws (DIN 965)	Screws	Radiator Assembly	16	N	0.005	Aquatuning	94544
	M3 x 6 hexagonal fillister head screw (ISO 7380) - Black nickel	Screws	Radiator Assembly	16	N	0.001	Aquatuning	94612
	Stainless Steel Standoff M/F AF5.5x28 F=M3x7 M=M3x6	Standoffs	Radiator Assembly	16	N	0.005	Ettinger	005.13.289
	M3 x 10 Hexagonal countersunk screw (ISO10642) A2 Stainless Steel	Screws	Radiator Assembly	16	N	0.00056	Ettinger	001.19.342
	Plastic Press-Fit Binding Barrels and Screws - 2" Min.Thickness	Assembly Screws	Radiator Assembly	36	Y		McMaster-Carr	90249A750
	HF extension G1/4 to G1/4 20mm - Chrome	Hydraulics	Cooling Manifold	2	N	0.032	Alphacool	17220
	HF L-connector G1/4 outer thread to G1/4 inner thread - Chrome	Hydraulics	Cooling Manifold	7	N	0.036	Alphacool	17044
	Eiszapfen double nipple G1/4 to G1/4, 4mm - Chrome	Hydraulics	Cooling Manifold	6	N	0.02	Alphacool	17398
	HF extension G1/4 to G1/4 10mm - Chrome	Hydraulics	Cooling Manifold	2	N	0.016	Alphacool	17218
	HF connection terminal TEE T-piece round, G1/4 - Chrome	Hydraulics	Cooling Manifold	4	N	0.087	Alphacool	17029
	HF double nipple G1/4 to G1/4, 10mm - Chrome	Hydraulics	Cooling Manifold	3	N	0.02	Alphacool	17199
	Eiszapfen 20mm L-connector G1/4 IT to G1/4 IT - Chrome	Hydraulics	Cooling Manifold	1	N	0.031	Alphacool	17589
	HF screw-in seal plug G1/4 - Chrome	Hydraulics	Cooling Manifold	2	N	0.017	Alphacool	17197
	Brass Pipe Nipple, Threaded on Both Ends, 1/4 BSPT, 4" Long	Hydraulics	Cooling Manifold	1	N		McMaster-Carr	4824K172
	Brass Pipe Nipple, Threaded on Both Ends, 1/4 BSPT, 6" Long	Hydraulics	Cooling Manifold	1	N		McMaster-Carr	4824K192
	Right-Angle Tee Adapter, 1/4 BSPP Female x BSPT Male	Hydraulics	Cooling Manifold	1	N		McMaster-Carr	9491N148
	Straight Reducer, 1/2 BSPP Male x 1/4 BSPP Male	Hydraulics	Pressure Relief Valve	1	N		McMaster-Carr	9491N104
	Straight Connector, 1/2 BSPP Female	Hydraulics	Pressure Relief Valve	1	N		McMaster-Carr	4810T527
	Straight Adapter, 1/2 NPT Female x 1/2 BSPT Male	Hydraulics	Pressure Relief Valve	1	N		McMaster-Carr	1786N131
	Extended-Life Adjustable Pressure-Relief Valve, for Oil, 1/2 NPT	Safety Component	Pressure Relief Valve	1	N		McMaster-Carr	4460K81
	Low-Pressure, 90 Degree Adapter, 3/4 NPT Female x Male	Hydraulics	Pressure Relief Valve	1	N		McMaster-Carr	4464K39
	Low Pressure, Straight Reducer, 3/4 x 1/2 NPT Male	Hydraulics	Pressure Relief Valve	1	N		McMaster-Carr	4464K891
	Relief Pass Throug	70mm TECAPEEK PLS Rod	Pressure Relief Valve	1	N	0.059	UZH Workshop	28 / 33
	Cooling Assembly Plane	2mm Stainless Steel Sheet	Radiator Assembly	1	N	0.744	UZH Workshop	12 / 33
	Fan Shroud 120 to 140 mm	Cooling	Radiator Assembly	4	N	0.058	Bitspower	BP-FA140120-BK
W	Cooling Passthrough Inner R	70mm TECAPEEK PLS Rod	Cooling Passthrough	1	N	0.083	UZH Workshop	26 / 33

Cooling Passthrough Assem	Cooling Passthrough Inner L	70mm TCAPEEK PLS Rod	Cooling Passthrough	1	N	0.058	UZH Workshop	25 / 33
	Cooling Passthrough Outer	70mm TCAPEEK PLS Rod	Cooling Passthrough	2	N	0.053	UZH Workshop	27 / 33
	Straight Threaded Adaptor, G 1/4 Male to G 1/4 Male, Threaded Connection Style	Hydraulics	Quick Disconnect Coupling	2	N		Legris	0901 0013 (LF3000 Series)
	Stainless Steel Pipe Fitting, 90° Circular Elbow, Female G 1/4 x Male G 1/4	Hydraulics	Quick Disconnect Coupling	2	N		RS PRO	499-3300
	DBG, flat-face quick-disconnect coupling, double shut-off, dry break, Socket	Hydraulics	Quick Disconnect Coupling	2	N		Gather	34148 - DBG2F-FL-F02-G1/4
	DBG, flat-face quick-disconnect coupling, double shut-off, dry break, Plug	Hydraulics	Quick Disconnect Coupling	2	N		Gather	34149 - DBG2F-FL-F02-G1/4
	Unistrut pipe clamp Ø 48 → 50mm, steel	Supports	Cooling Pipes Support	6	N		E-Klips, ABB	PCH-4850
	M8 x 70mm Phillips Pan Head Machine Screws - Polyamide	Screws	Cooling Pipes Support	4	Y	0.005	Accu Components	SIP-M8-70-PA
Air Intake Assembly	M8 x 21mm Heavy Duty Flat Washers (DIN 7349) - Stainless Steel (A2)	Washers	Cooling Pipes Support	12	N	0.00915	Accu Components	HDTW-M8-A2
	Solenoid Operated Valve 2/2 G1/8" 120kPa Air	Pneumatics	Air Intake Valve	1	N	0.105	SMC	PVQ31-5G-40-01F-H
	Male thread G1/8 Push-in Fitting	Pneumatics	Gas Fittings	1	N	0.0083	Festo	186107 QS-G1_8-6-I
	Double nipple G1/8	Pneumatics	Gas Fittings	1	N	0.01	Festo	NPFC-D-2G18-M-F1A
	Dry Air Inner Passthrough	Opaque White Acrylic	Air Passthrough	1	N	0.032	UZH Workshop	1 / 33
Electronics	Dry Air Outer Passthrough	Opaque White Acrylic	Air Passthrough	1	N	0.04	UZH Workshop	2 / 33
	16-Contact Circular Female Connector Receptacle	Electronics	Cable Pass-Through	4	N	0.18144	Amphenol Industrial	PT02A-20-16S
	16-Contact Circular Male Connector Recepticle	Electronics	Cable Pass-Through	4	N	0.037	Amphenol Industrial	PT02A-20-16P
	16-Contact Circular Female Connector Plug	Electronics	Cable Pass-Through	4	N	0.048192	Amphenol Industrial	PT06A-20-16P
	16-Contact Circular Male Connector Plug	Electronics	Cable Pass-Through	4	N	0.055	Amphenol Industrial	PT06A-20-16S
	2.2 x 4.5 mm Phillips Self Tapping Screws (DIN 7981C H) - Stainless Steel (A2)	Screws	Cable Pass-Through	32	N	0.00018	Accu Components	SIPT-No.2-3/16-A2
	Linear-lighting Alu Profile, 16mm width, 16mm height, 8mm DiffuseDis	Electronics	Led Assembly	2	N		Dengtec	AP-017-L-W16-H16-D8-L10.7
Support Walls	RS PRO 12V White LED Strip Light, 4000 → 4500K Colour Temp, 1m Length	Electronics	Led Assembly	2	N		RS-PRO	855-5937
	3M, SCOTCH 75 PERMAPACK, PERMACEL P 257 PPI, 1027	Adhesives	Led Assembly	1	N		3M	04.94.20.719.9
	Box Top	CoraPan Al 85, 50mm	Box Walls	1	N	0.8	UZH Workshop	6 / 33
	Box Base	CoraPan Al 85, 50mm	Box Walls	1	N	0.807	UZH Workshop	5 / 33
	Box Right Side Wall	CoraPan Al 85, 50mm	Box Walls	1	N	1.06	UZH Workshop	9 / 33
	Box Left Side Wall	CoraPan Al 85, 50mm	Box Walls	1	N	1.06	UZH Workshop	8 / 33
	Box Back Wall	CoraPan Al 85, 50mm	Box Walls	1	N	0.948	UZH Workshop	4 / 33
	Bottom Right Stiffener Plate	2mm Stainless Steel Sheet	Stiffener	1	N	0.829	UZH Workshop	21 / 33
	Bottom Left Stiffener Plate	2mm Stainless Steel Sheet	Stiffener	1	N	0.829	UZH Workshop	22 / 33
	Bottom Back Stiffener Plate	2mm Stainless Steel Sheet	Stiffener	1	N	0.734	UZH Workshop	23 / 33
Experimental Assembly	Top Right Stiffener Plate	2mm Stainless Steel Sheet	Stiffener	1	N	0.73	UZH Workshop	19 / 33
	Top Left Stiffener Plate	2mm Stainless Steel Sheet	Stiffener	1	N	0.73	UZH Workshop	20 / 33
	Top Back Stiffener Plate	2mm Stainless Steel Sheet	Stiffener	1	N	0.723	UZH Workshop	24 / 33
	RS PRO PVC Foam Tape, Black, 25mm x 15m x 6mm	Self Adhesive Tape	Door Assembly	4	N		RS Pro	205-0883
	Plastic Press-Fit Binding Barrels and Screws - 2" Min.Thickness	Assembly Screws	Radiator Assembly	40	Y		McMaster-Carr	90249A750
	Perforated Base Plate	6mm Aluminum Sheet	Experimental Assembly	1	N	1.72	UZH Workshop	3 / 33
	Side Rail Top	10mm Aluminum Profile	Rail Assembly	2	N	0.086	UZH Workshop	17 / 33
	Side Rail Bottom	10mm Aluminum Profile	Rail Assembly	2	N	0.083	UZH Workshop	16 / 33
	Side Rail Stop	10mm Aluminum Profile	Rail Assembly	2	N	0.003	UZH Workshop	18 / 33
	M6 x 70mm Phillips Pan Head Machine Screws - Polyamide	Screws	Rail Assembly	20	Y	0.000226	Accu Components	SIP-M6-70-PA
Experimental Assembly	M4 x 10mm Full Thread Cap Head Screws (DIN 912) - Stainless Steel (A2)	Screws	RailStopAssembly	4	N	0.0018	Accu Components	SSCF-M4-10-A2
	ezTrac Optical Rail, 12.0 in. Length	Stages	Sliding Optical Rail	1	N		Newport	9020NF
	M5 x 8mm Phillips Countersunk Screws (DIN 965H / EN ISO 7046-2) - Stainless Steel (A2)	Screws	Sliding Optical Rail	3	N	0.00145	Accu Components	SIK-M5-8-A2
	XZ Linear Stage, Triple Divide, 14 mm Travel, M4 & M6	Stages	DUT Plane assembly	5	N		Newport	9065M-XZ
	Picomotor Piezo Linear Actuator, 0.5 in. Travel, 30 nm Resolution, 9.5 mm Shank	Stages	DUT Plane assembly	10	N		Newport	8301NF
	Picomotor Rotation Mount, Stainless Steel	Stages	DUT Plane assembly	5	N		Newport	8401-M
	Picomotor Controller Kit, Twelve-Axis	Stage Cotrnoller	Stage Assembly	1	N		Newport	8742-12-KIT
	Motion Controller, Picomotor, Open-Loop, 4 Channel	Stage Cotrnoller	Stage Assembly	1	N		Newport	8742
	RS-485 Cable, 6 in. Length	Stage Cotrnoller Accessory	Stage Assembly	1	N		Newport	8745-RS485-CBL
	Power Cable, 6 in. Length	Stage Cotrnoller Accessory	Stage Assembly	1	N		Newport	8745-PWR-CBL
Experimental Assembly	Stacking Plate Kit, L-Shaped	Stage Cotrnoller Accessory	Stage Assembly	1	N		Newport	8745-STK-KIT
	M4 x 6mm Cheese Head Screws (DIN 84) - Stainless Steel (A2)	Screws	DUT Plane assembly	40	N	0.00117	Accu Components	SFE-M4-6-A2
	M6 x 18mm Socket Button Screws (ISO 7380-1) - Stainless Steel (A2)	Screws	DUT Plane assembly	10	N	0.0044	Accu Components	SSB-M6-18-A2

M4 x 8mm Socket Countersunk Screws (ISO 10642) - Stainless Steel (A2)	Screws	DUT Plane assembly	5	N	0.00088	Accu Components	SSK-M4-8-A2
M1.4 x 12mm Slotted Countersunk Screws (DIN 963) - Stainless Steel (A2)	Screws	DUT Plane assembly	10	N	0.009	Accu Components	SFK-M1.4-12-A2
Horizontal Rotation Support Frame	3mm Stainless Steel Sheet	DUT Plane assembly	5	N	0.011	UZH Workshop	14 / 33
Vertical Rotation Support Frame	3mm Stainless Steel Sheet	DUT Plane assembly	5	N	0.091	UZH Workshop	15 / 33
DUT Rotation Attachement	50 X 30 mm Aluminum Block	DUT Plane assembly	5	N	0.032	UZH Workshop	13 / 33
M3 x 10mm Full Thread Cap Head Screws (DIN 912) - Stainless Steel (A2)	Screws	DUT Plane assembly	20	N	0.00088	Accu Components	SSCF-M3-10-A2
M3 Hexagon Nylon Locking Nuts (DIN 985) - Stainless Steel (A2)	Nuts	DUT Plane assembly	20	N	0.005	Accu Components	HNN-M3-A2
DUT Plane Support Bracket	Carbon Fiber Reinforced PEEK (CFK)	DUT Plane assembly	6	N	0.005	UZH Workshop	33 / 33

Stage Anchoring Assembly	Internal Bottom Support Plane	3mm Stainless Steel Sheet	Bottom Anchoring Assembly	1	N	1.36	UZH Workshop	29 / 33
	M6 x 70mm Phillips Pan Head Machine Screws - Polyamide	Screws	Bottom Anchoring Assembly	8	Y	0.000226	Accu Components	SIP-M6-70-PA
	M6 Non-Serrated Flanged Nylon Locking Nuts (DIN 6926) - Stainless Steel (A2)	Nuts	Bottom Anchoring Assembly	8	N	0.0031	Accu Components	HNFFN-M6-A2
	M5 x 20mm Socket Countersunk Screws (ISO 10642) - Stainless Steel (A2)	Screws	Stage Angle Attachmetnt	16	N	0.00285	Accu Components	SSK-M5-20-A2
	Stage Support Angle	12mm Aluminum Sheet	Box Stage Support Frame	2	N	0.952	UZH Workshop	30 / 34
	Stage Support Back Frame	12mm Aluminum Sheet	Box Stage Support Frame	1	N	3.01	UZH Workshop	32 / 33
	Stage Support Bottom Frame	12mm Aluminum Sheet	Box Stage Support Frame	1	N	3.07	UZH Workshop	31 / 33

Total Parts Count: **615**
 Individual Parts to Machine **33**
 Total Part Count to Machine **57**



DESIGNED BY:
Vagelis Gkougkousis
DATE:
August 2024

SIZE
A4

SCALE
1:1

WEIGHT (kg)
0.032

DRAWING NUMBER
1 / 33

MATERIAL: Opaque White Acrylic

SHEET
1 / 1

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F

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C

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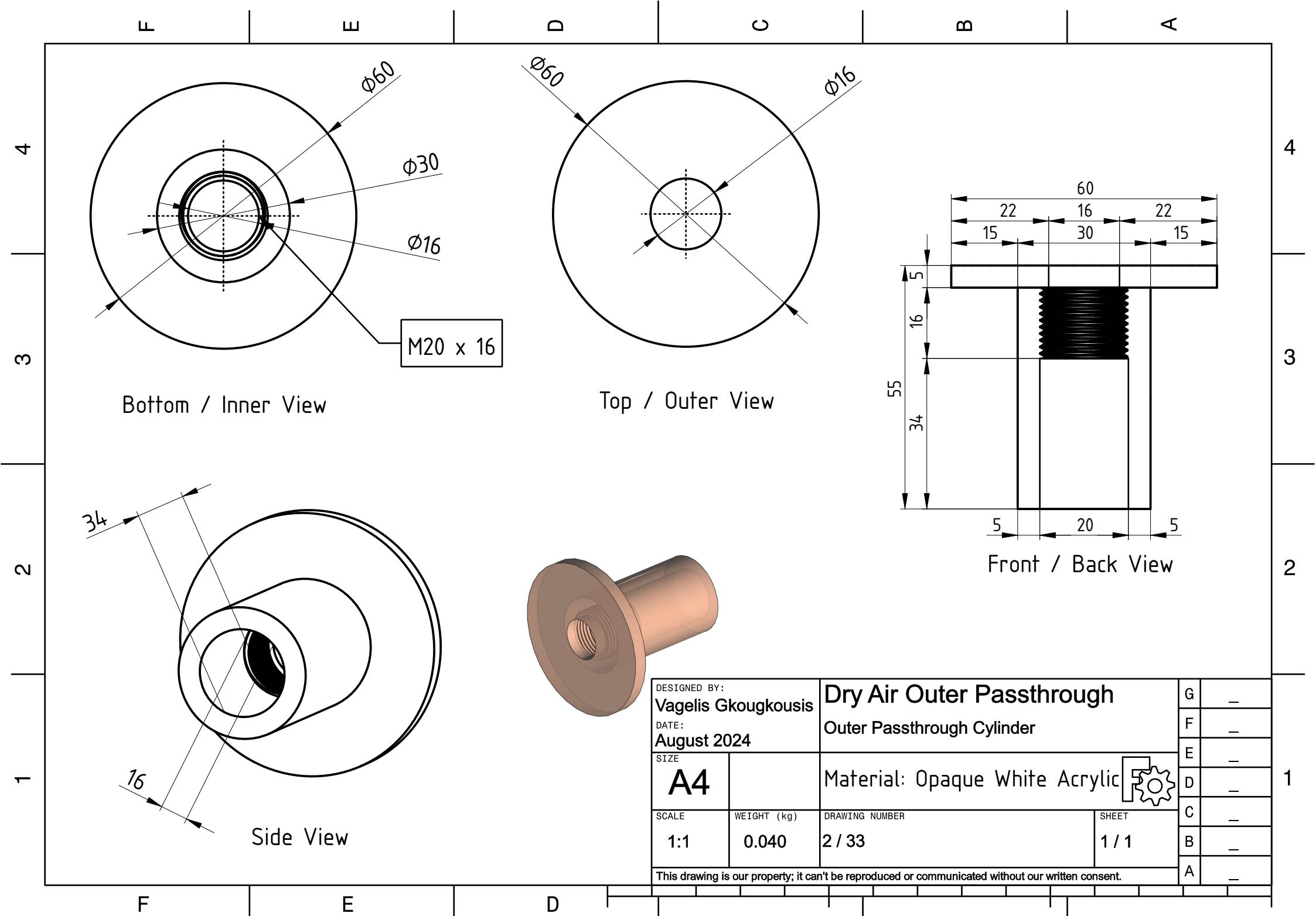
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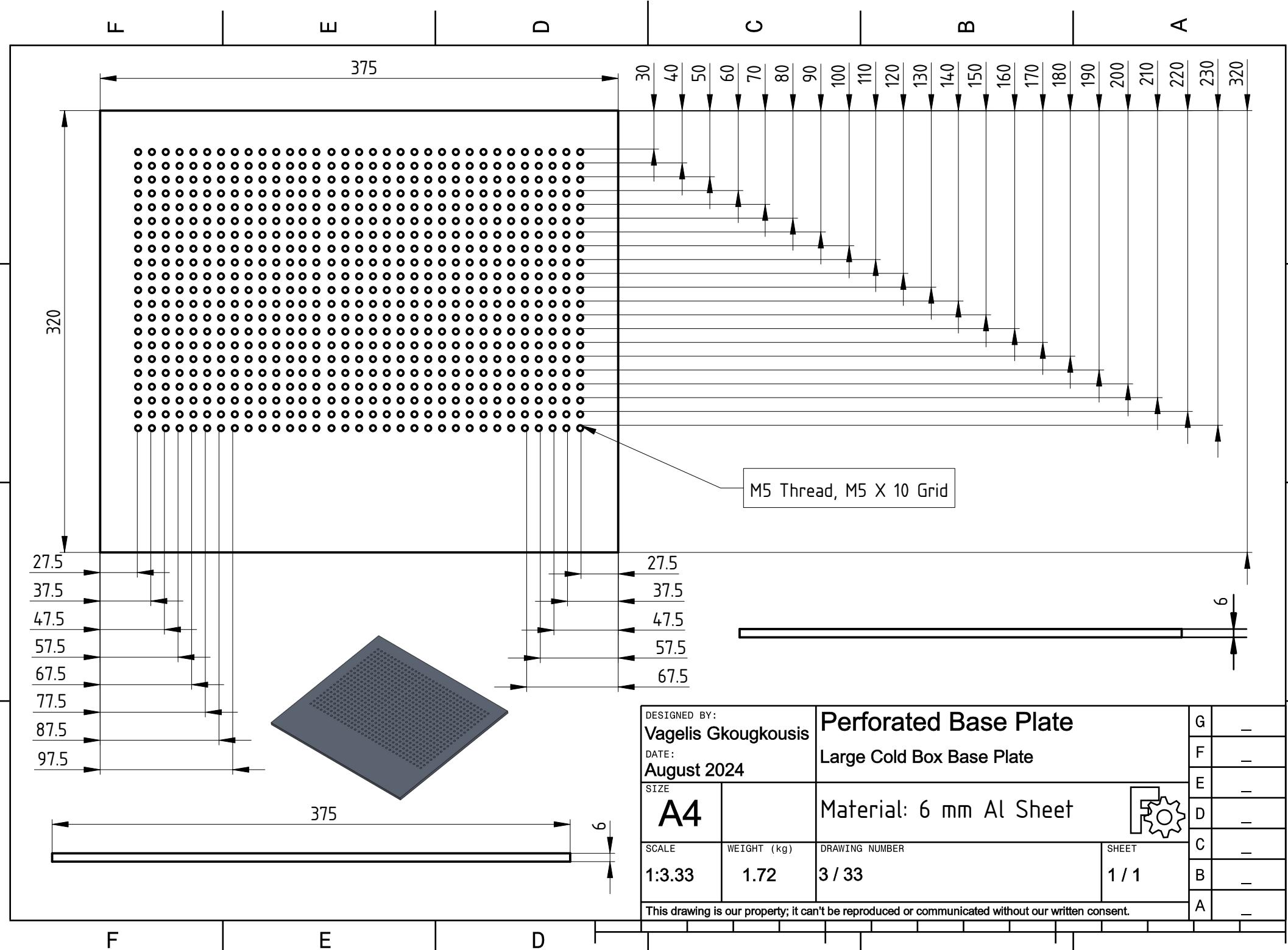
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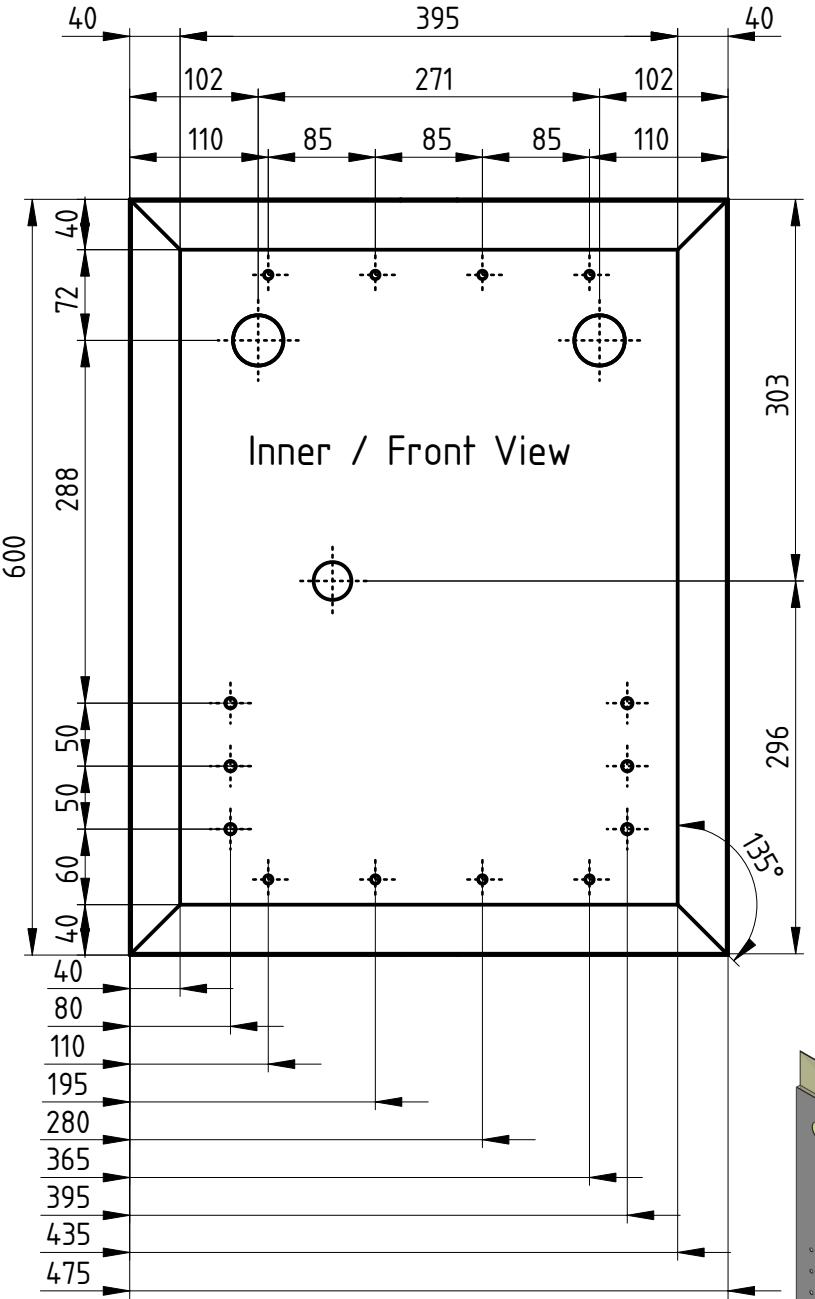
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-11

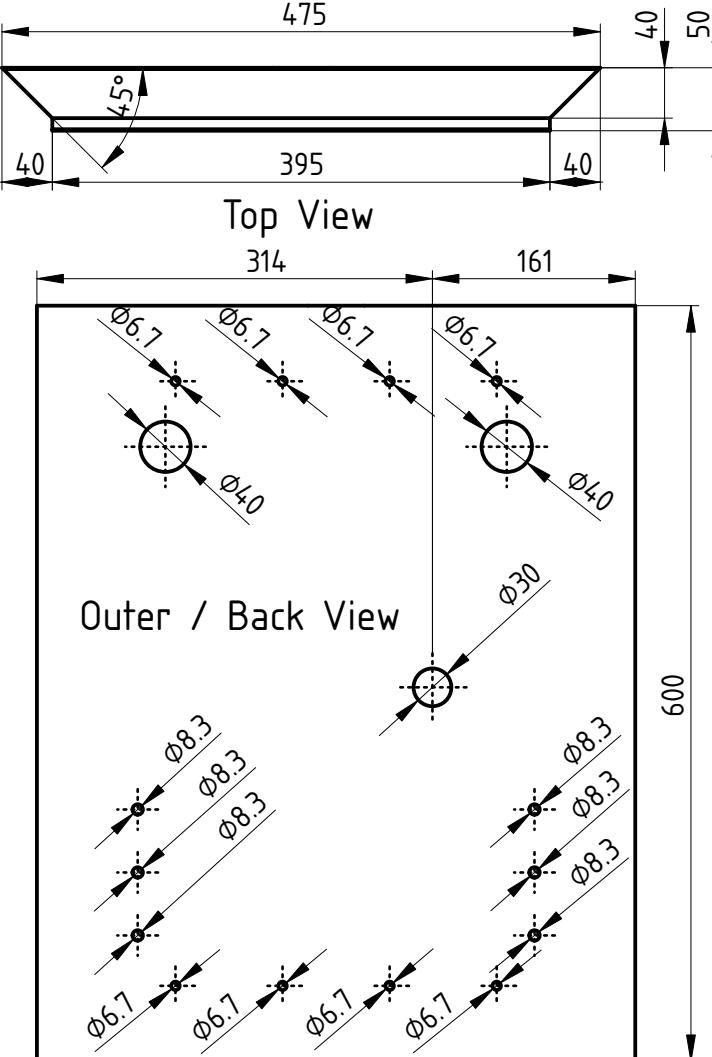
-12







Inner / Front View

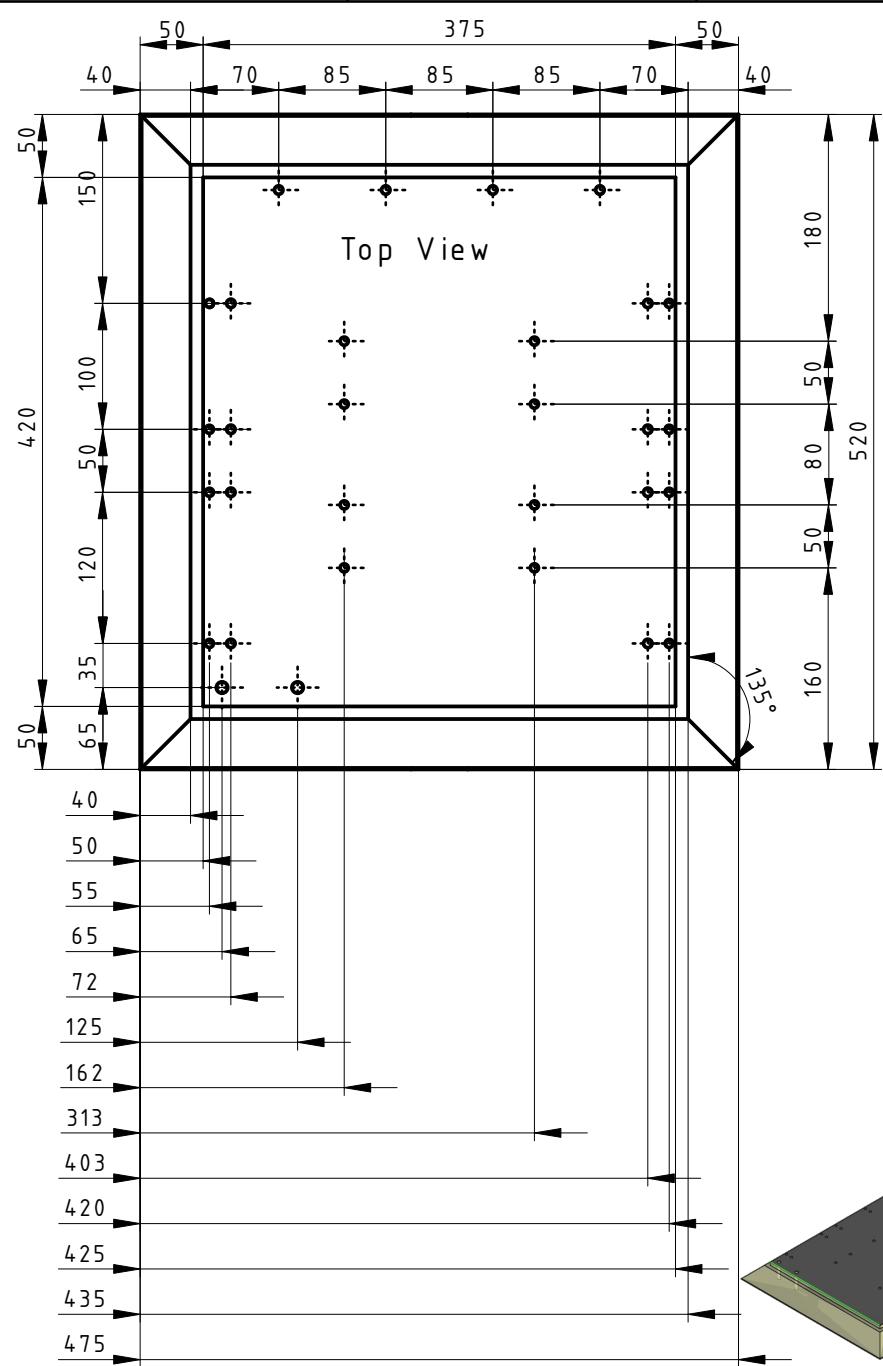


Top View

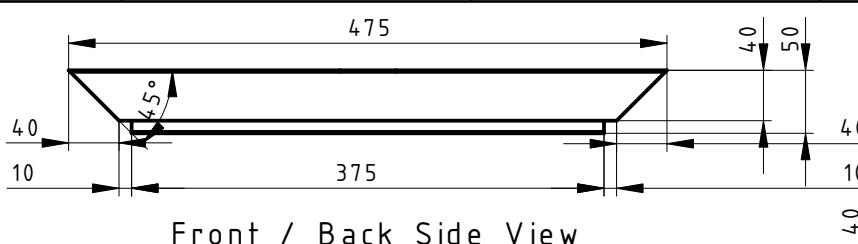
Outer / Back View

Left / Right Side View

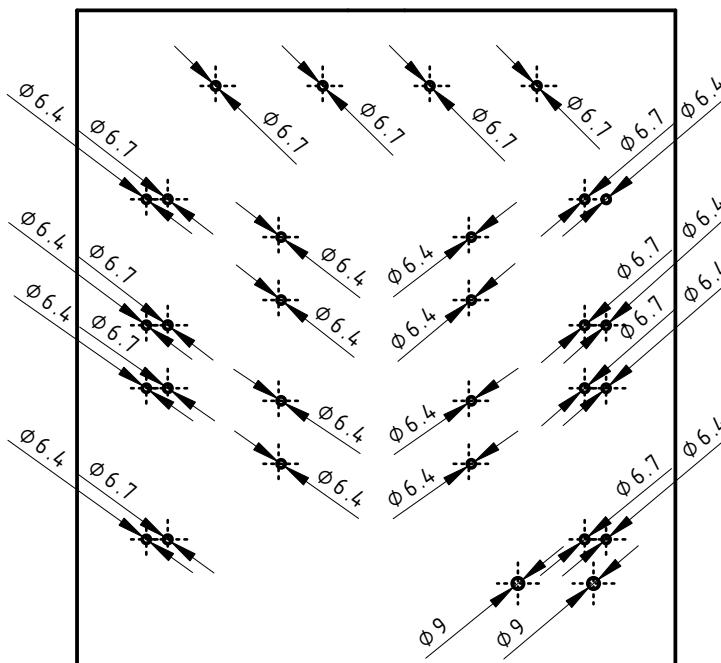
DESIGNED BY: Vagelis Gkougkousis		Box Back Wall		G	—
DATE: August 2024		SPS Cold Box Back Wall		F	—
SIZE A4		Material: CoraPan Al 85		E	—
SCALE 1:6	WEIGHT (kg) 0.948	DRAWING NUMBER 4 / 33	SHEET 1 / 1	D	—
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				B	—
				A	—



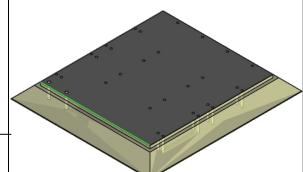
Top View



Front / Back Side View



Bottom View



DESIGNED BY:
Vagelis Gkougkousis
DATE:
August 2024

Box Base

SPS Cold Box Base

SIZE

A4

Material: CoraPan Al 85



SCALE

1

1

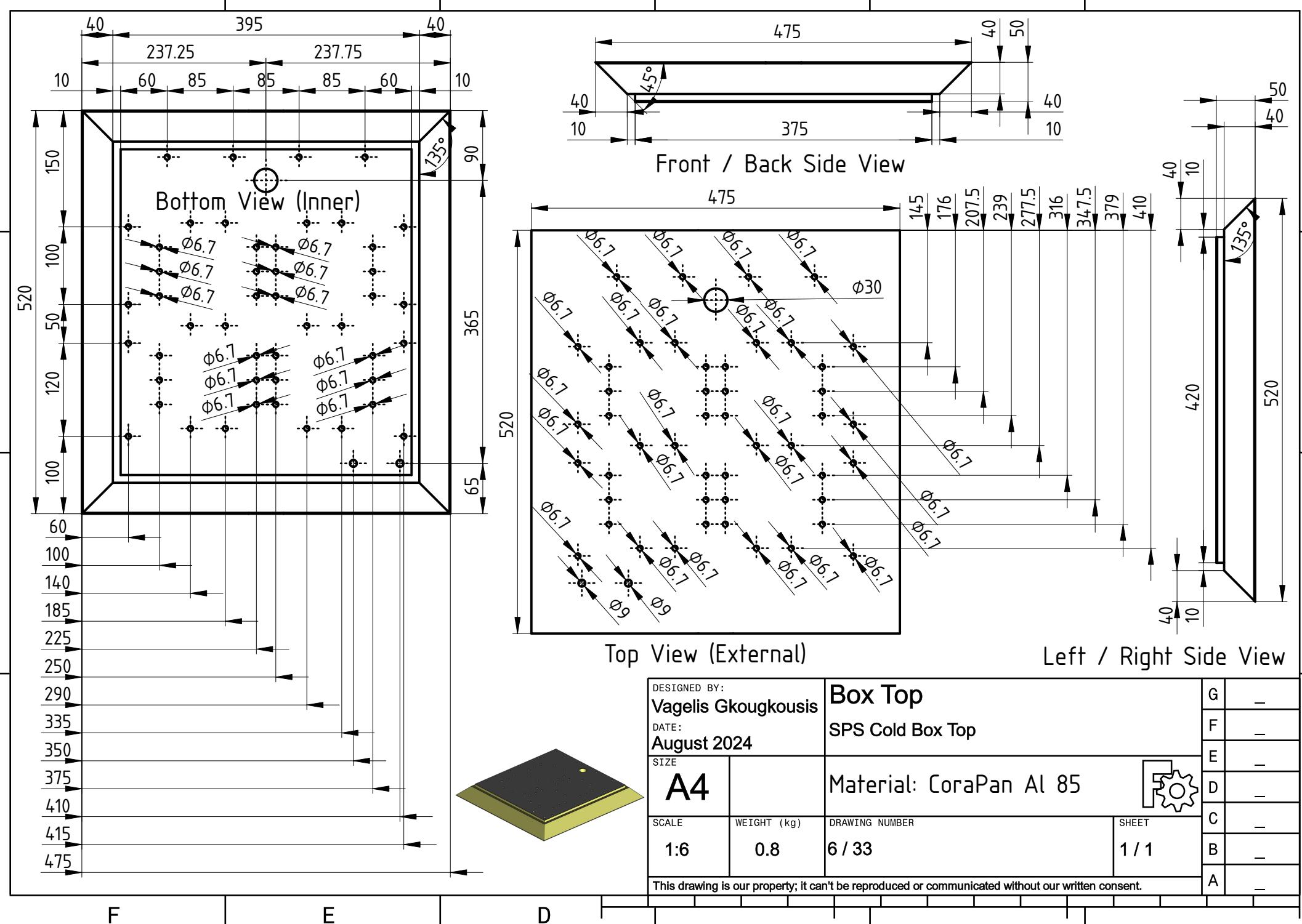
WEIGHT (kg)	DRAWING NUMBER
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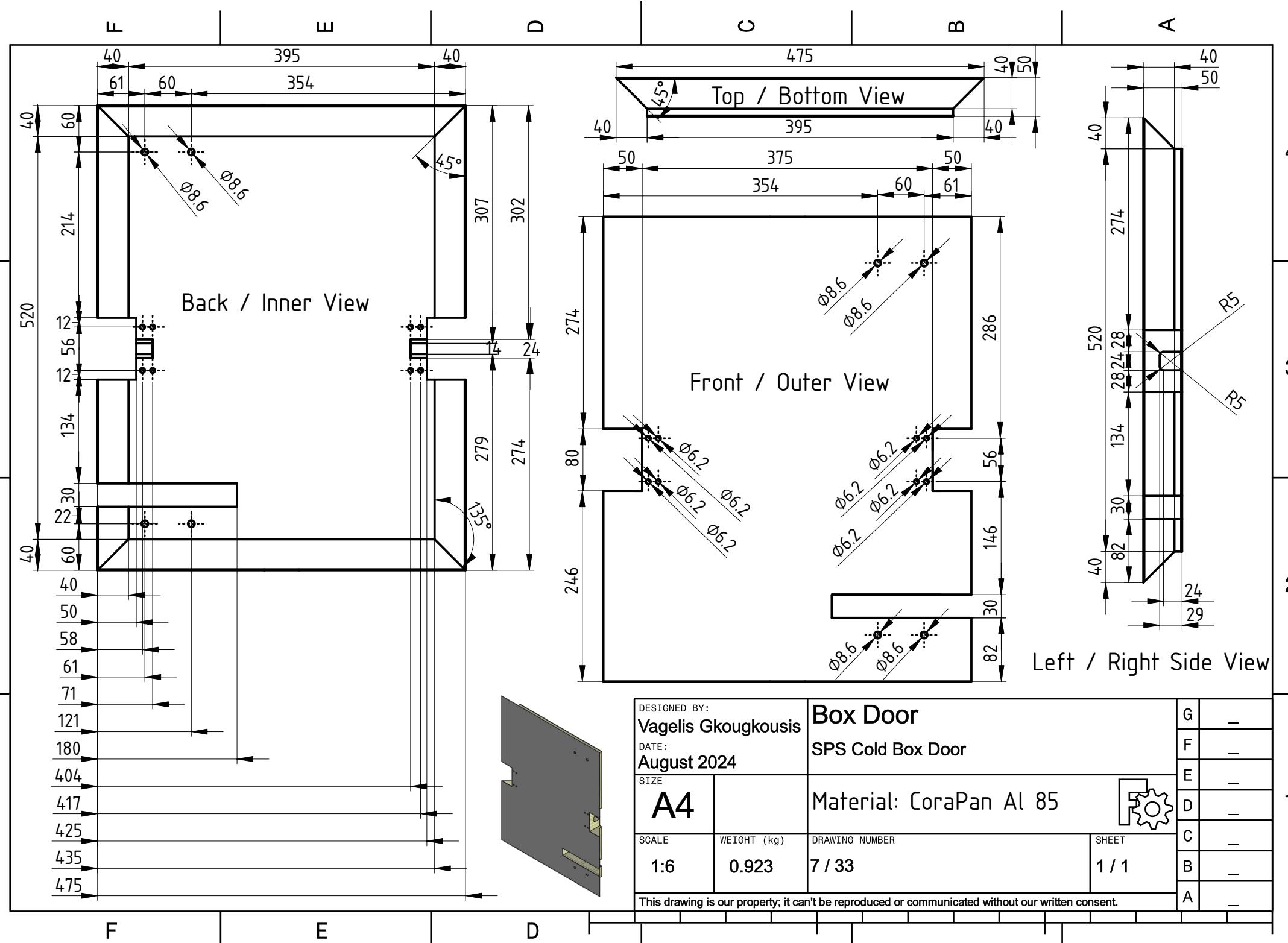
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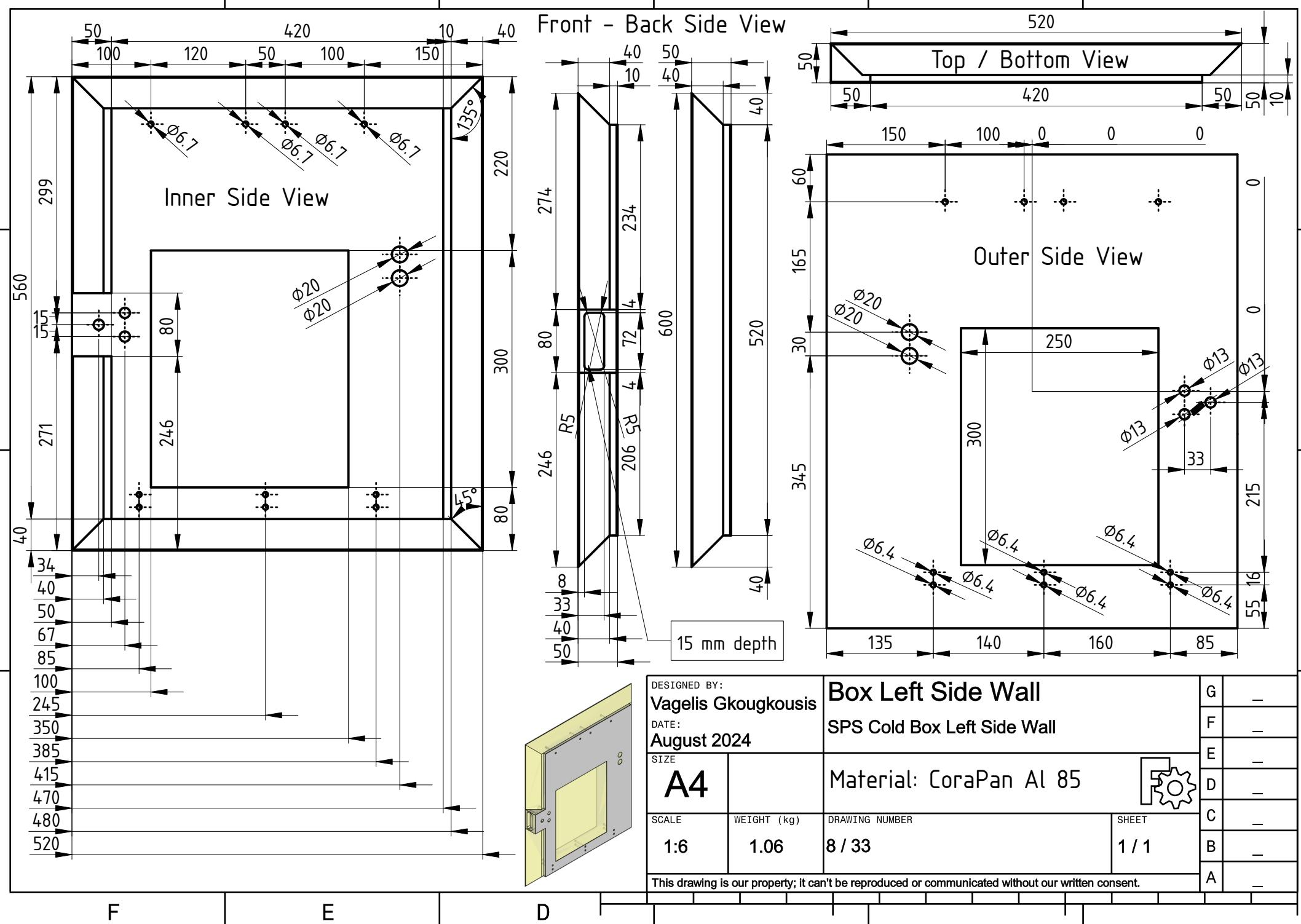
0.807 | 5 / 33

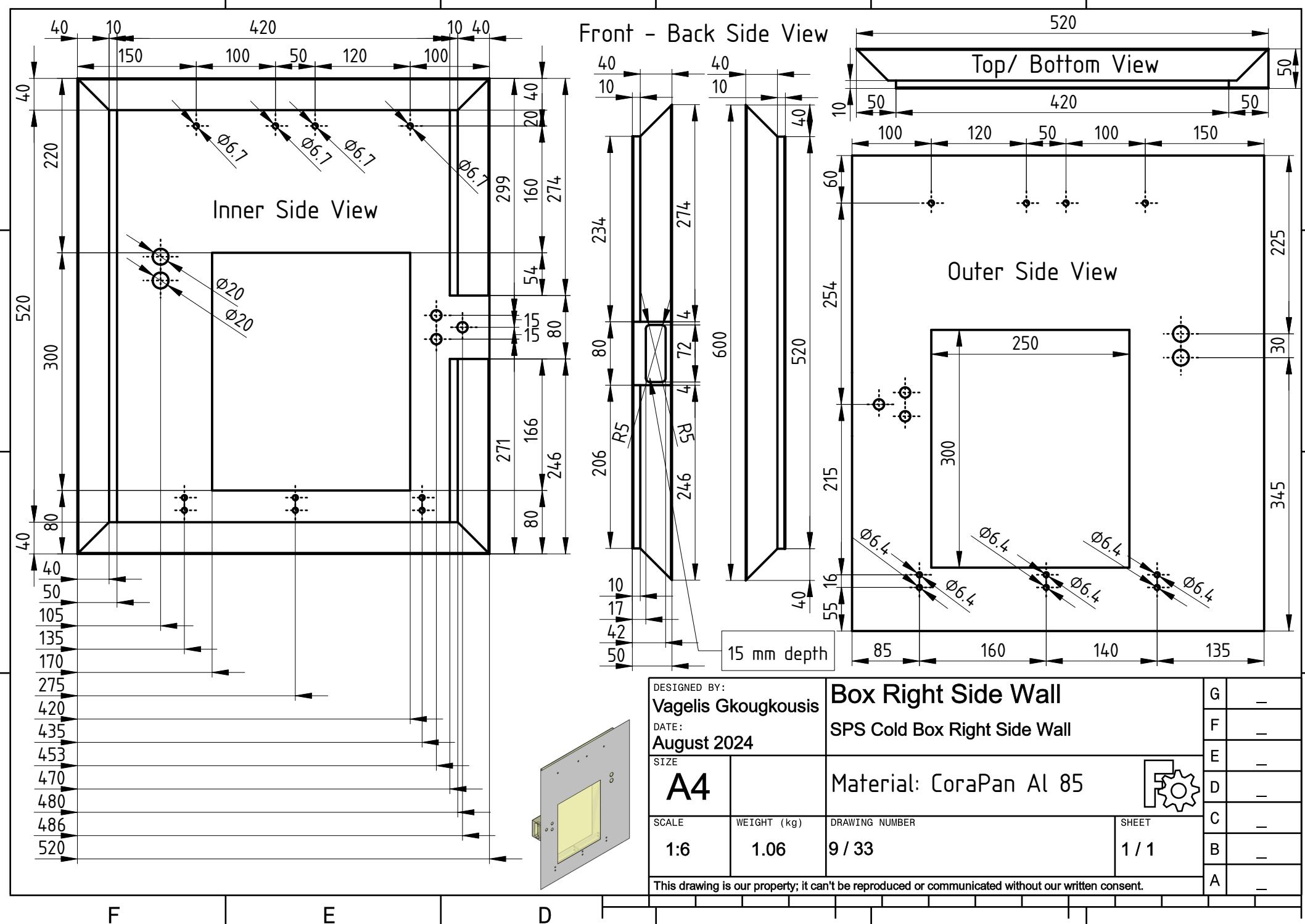
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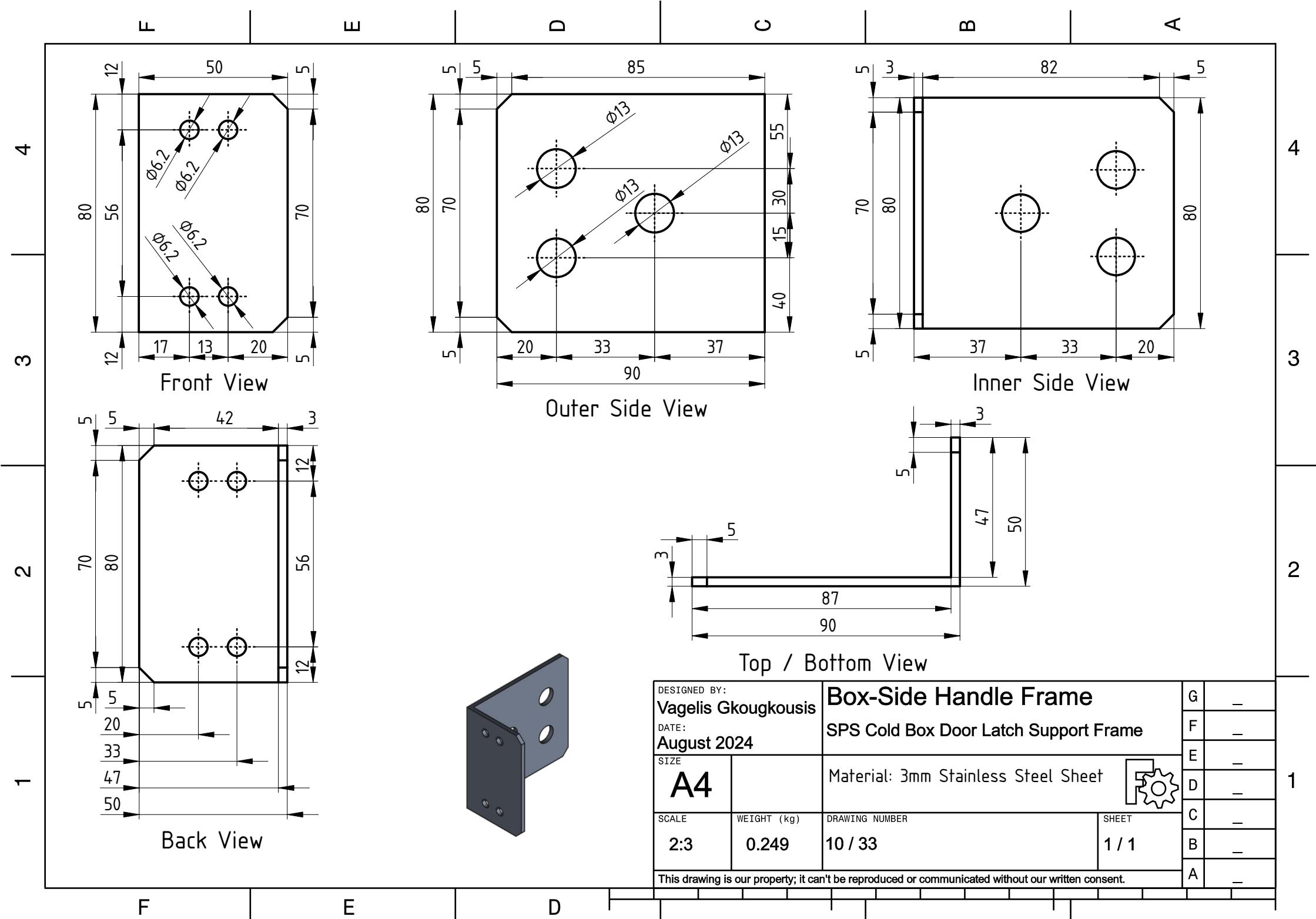
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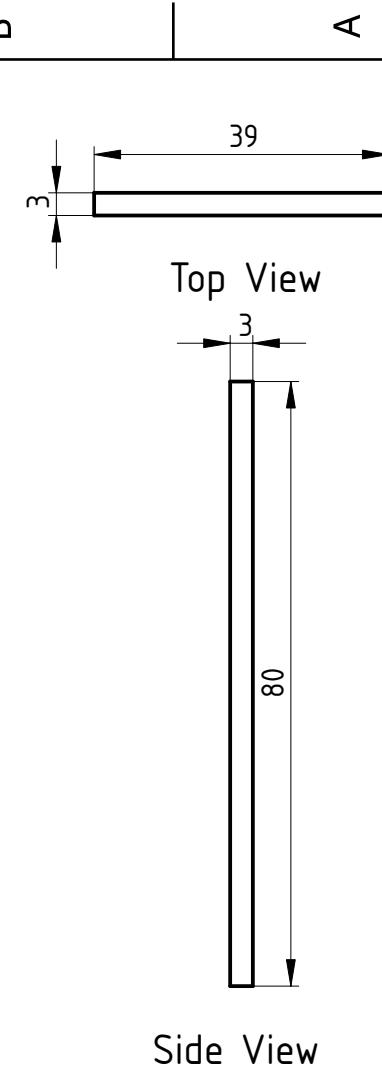
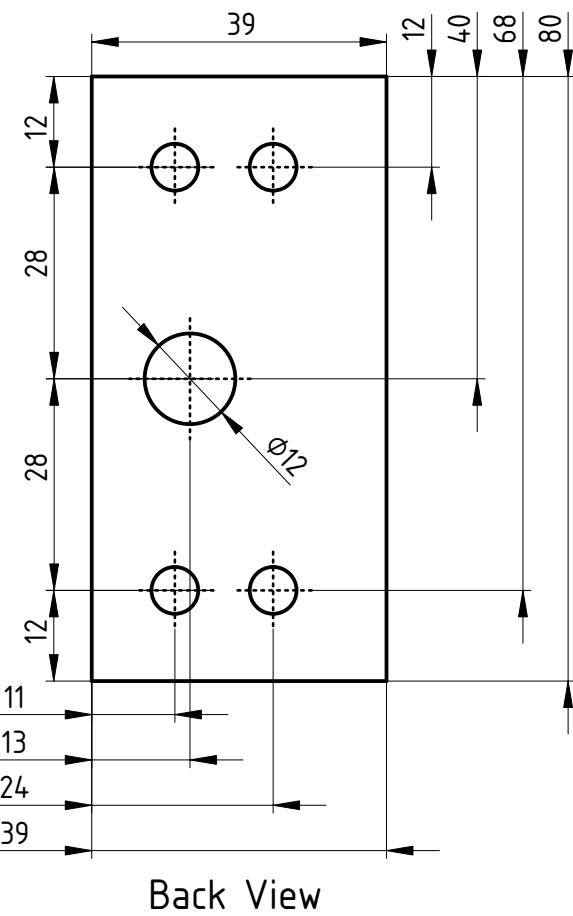
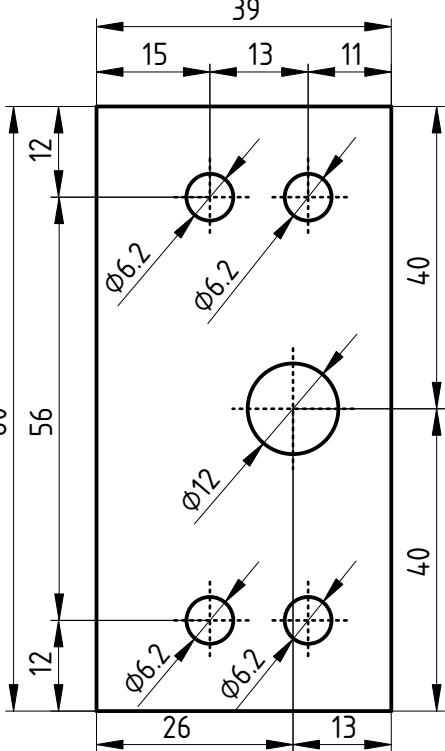












DESIGNED BY:
Vagelis Gkougkousis

DATE:
August 2024

Door Latch Frame

SPS Cold Box Door Latch Frame

SIZE

A4

Material: 3 mm Stainless Steel Sheet



SCALE

1:1

WEIGHT (kg)

0.070

DRAWING NUMBER

11 / 33

SHEET

1 / 1

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G

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F

E

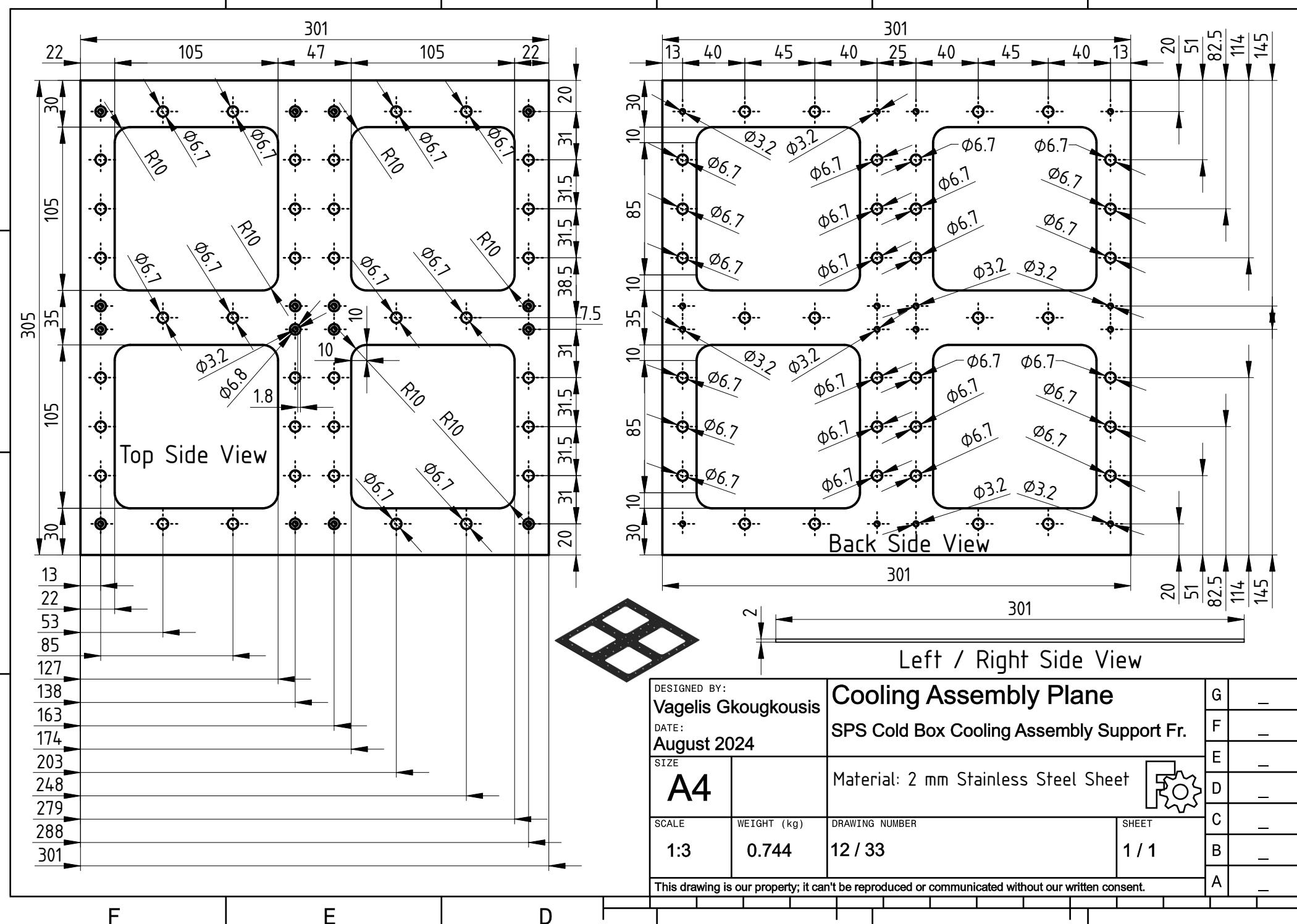
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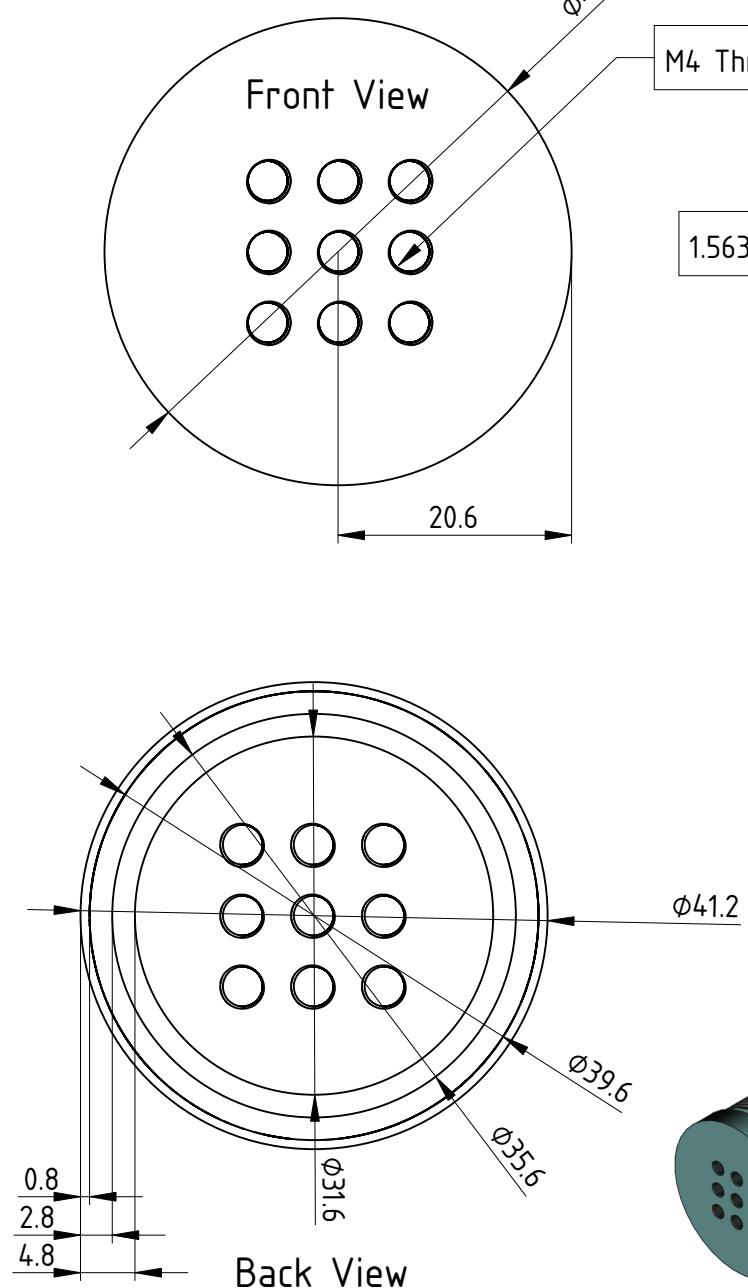
C

B

A

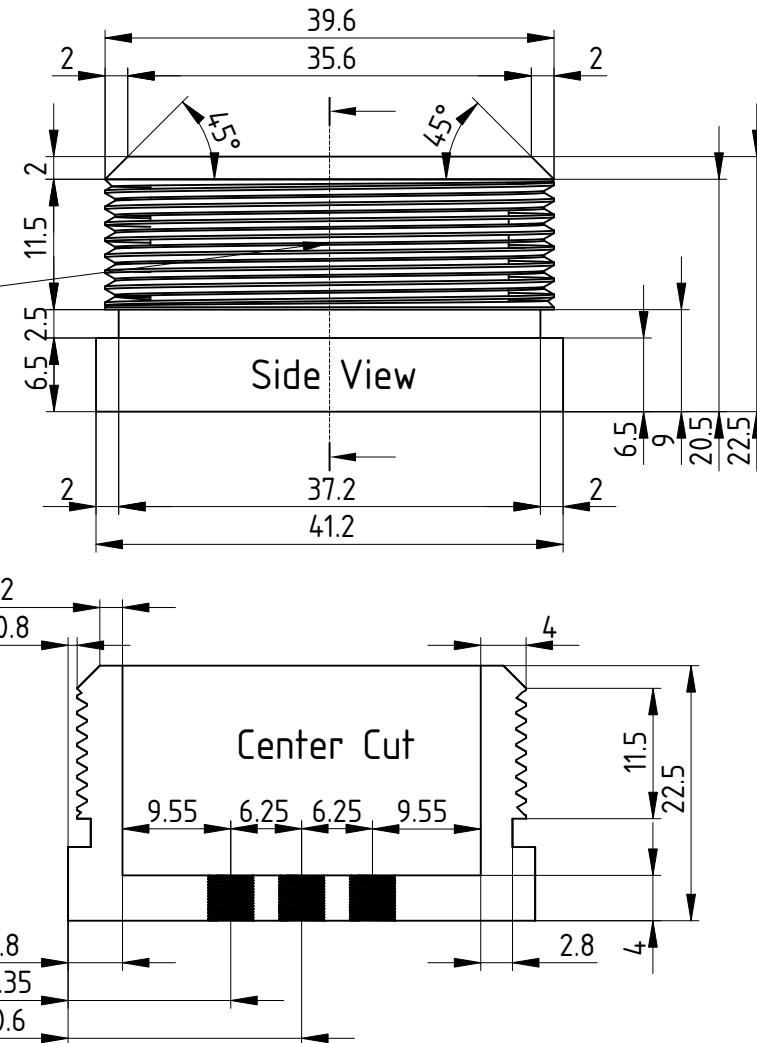
1





M4 Thread Thru, 6.25 Grid

1.563-20 UN-2A THREAD



DESIGNED BY:
Vagelis Gkougkousis
DATE:
August 2024

DUT Rotation Attachement

Rotation Stage Central Support Piece

SIZE
A4

Material: 50 X 30 mm Aluminum Block



SCALE

3:2

WEIGHT (kg)

—

DRAWING NUMBER

13 / 33

SHEET

1 / 1

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F

E

D

C

B

A

F

E

D

4

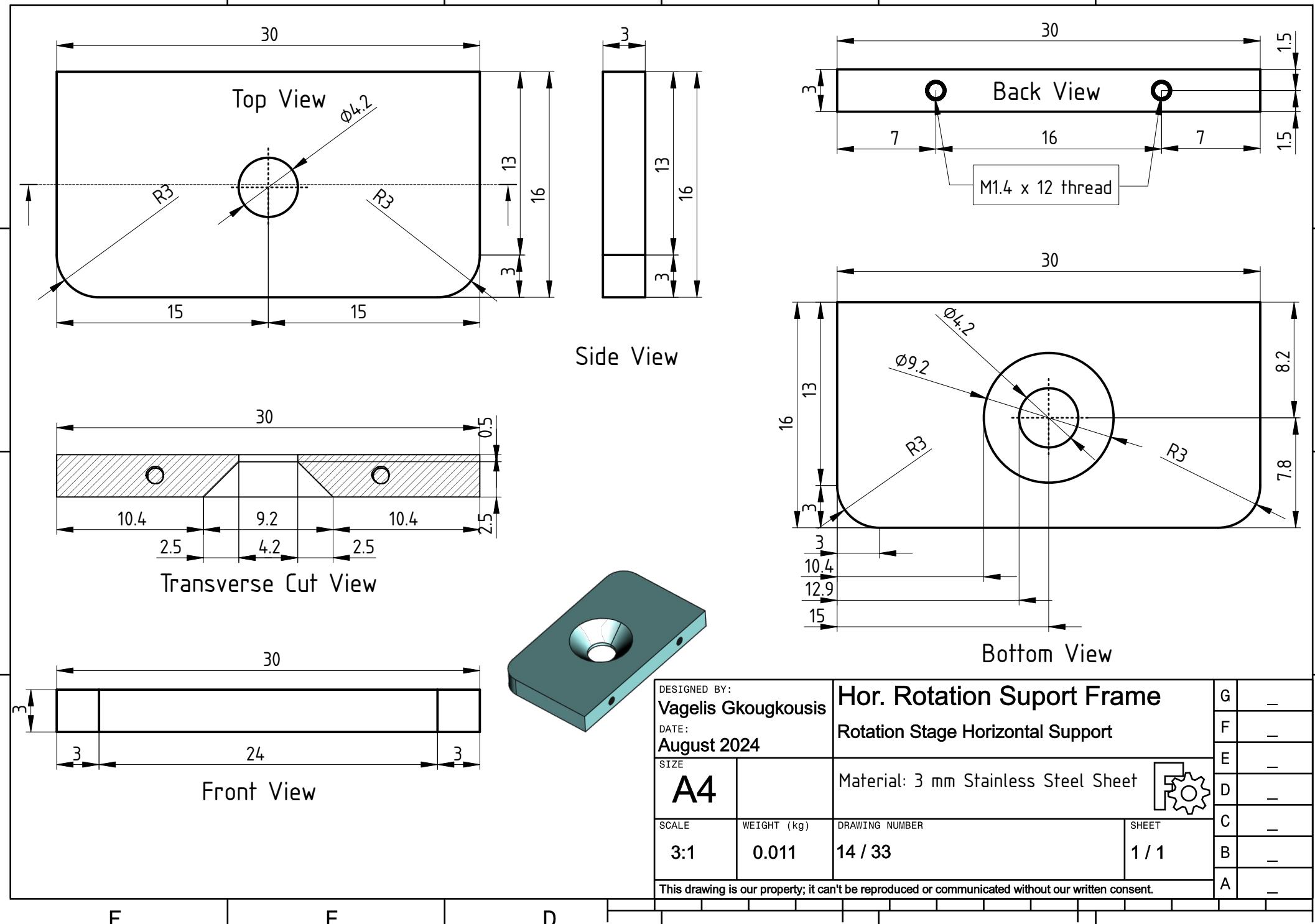
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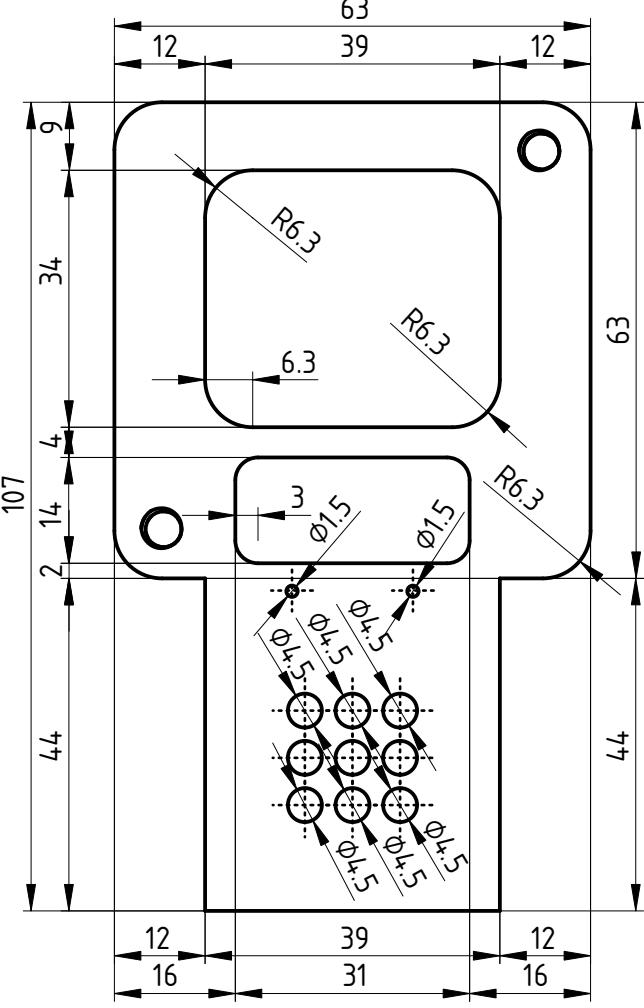
2

1

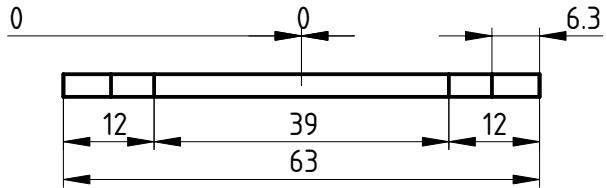
1

G —
F —
E —
D —
C —
B —
A —

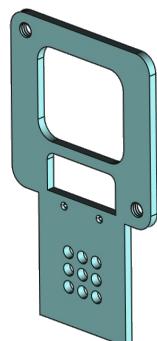




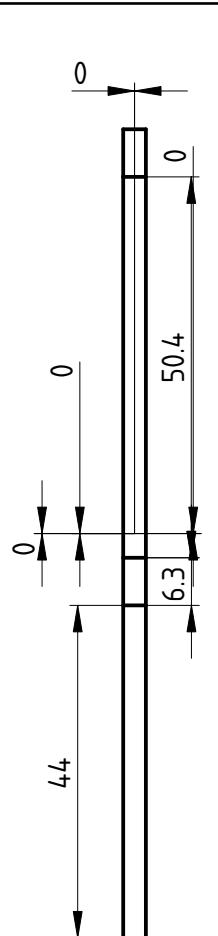
Front View



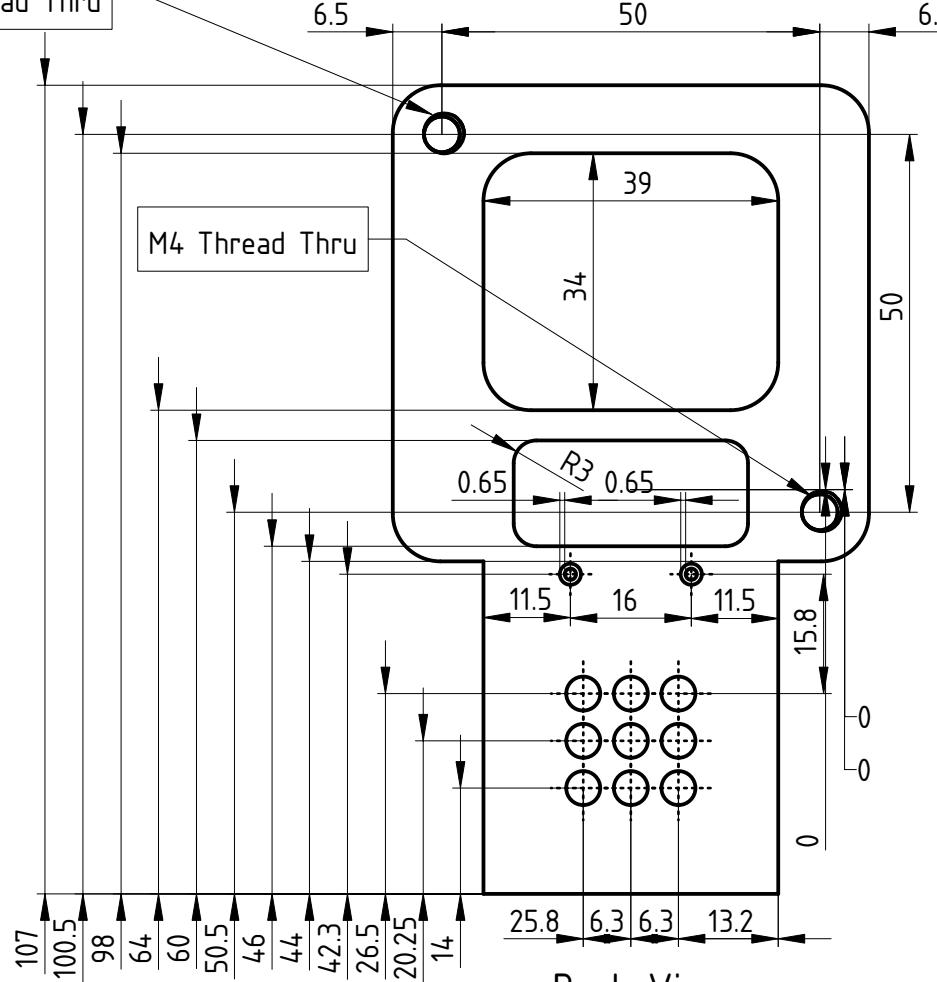
Top View



Side View

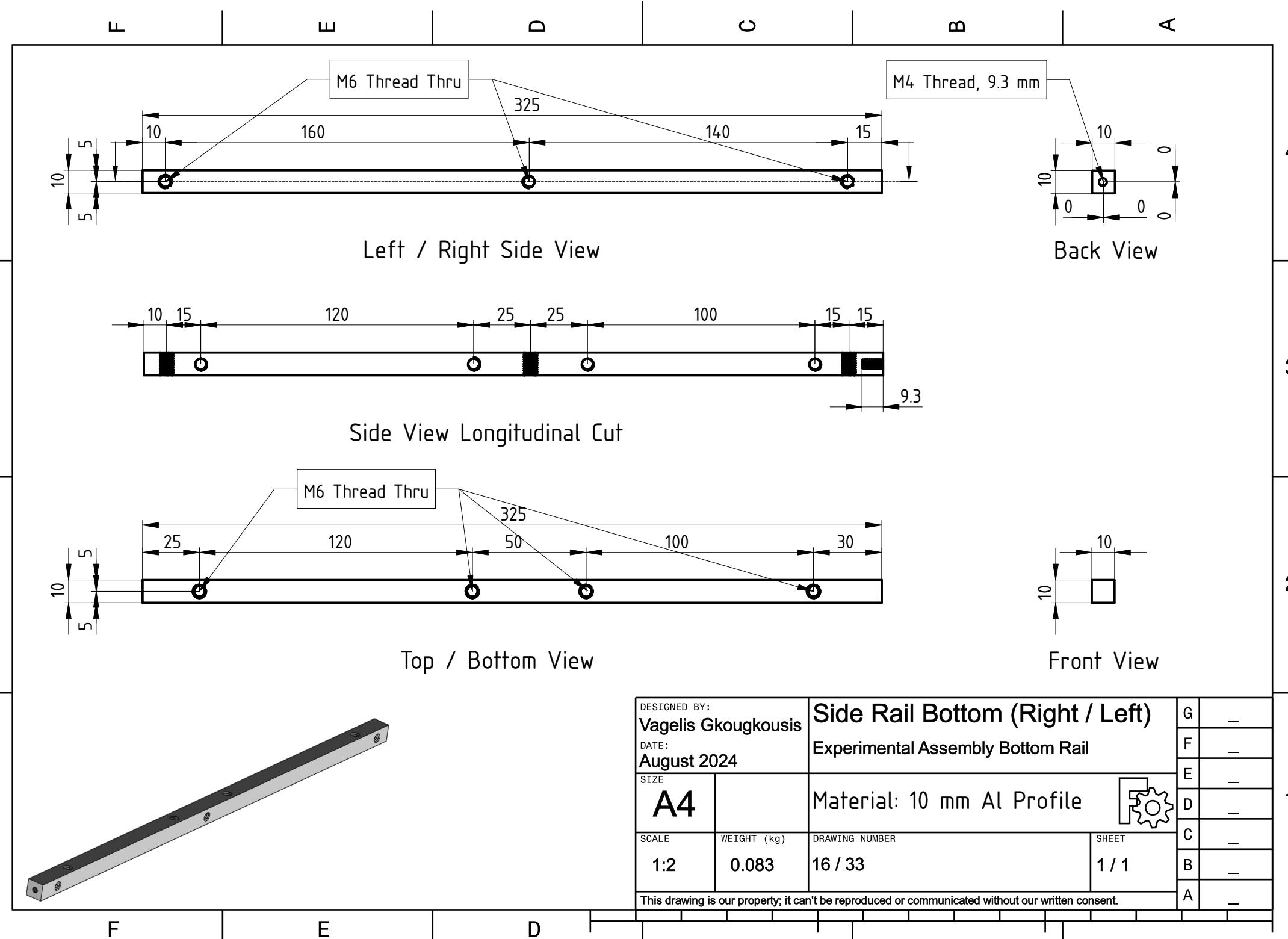


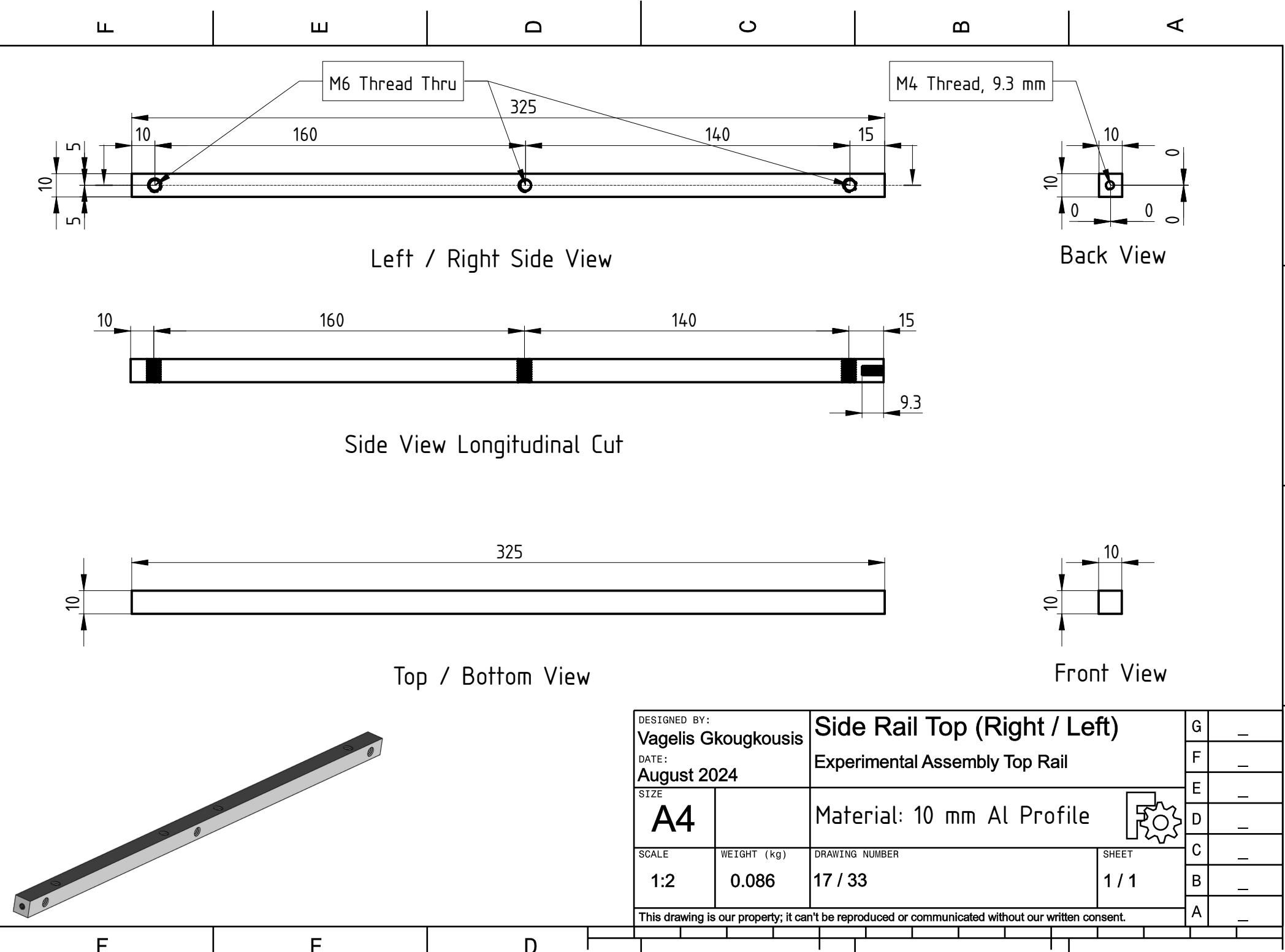
D



Back View

DESIGNED BY: Vagelis Gkougkousis		Vertical Rotation Support Frame		G	—
DATE: August 2024		Rotation Stage Vertical Support		F	—
SIZE A4		Material: 3 mm Stainless Steel Sheet		E	—
SCALE 1:1	WEIGHT (kg) 0.091	DRAWING NUMBER 15 / 33	SHEET 1 / 1	D	—
This drawing is our property; it can't be reproduced or communicated without our written consent.				C	—
				B	—
				A	—





F

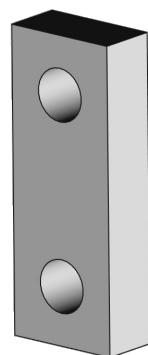
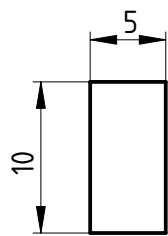
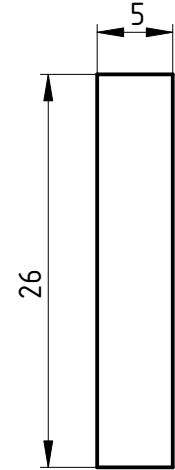
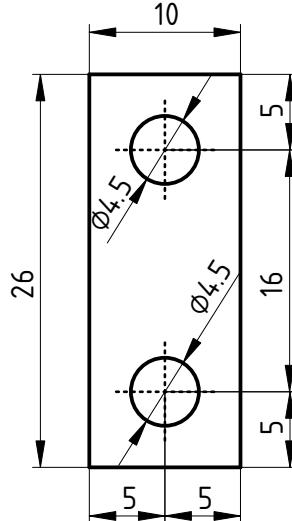
E

D

C

B

A



DESIGNED BY:
Vagelis Gkougkousis
DATE:
August 2024

Side Rail Stop
Experimental Assembly Side Rail Stop

SIZE

A4

Material: 10 mm Al Profile



SCALE

2:1

WEIGHT (kg)

0.003

DRAWING NUMBER

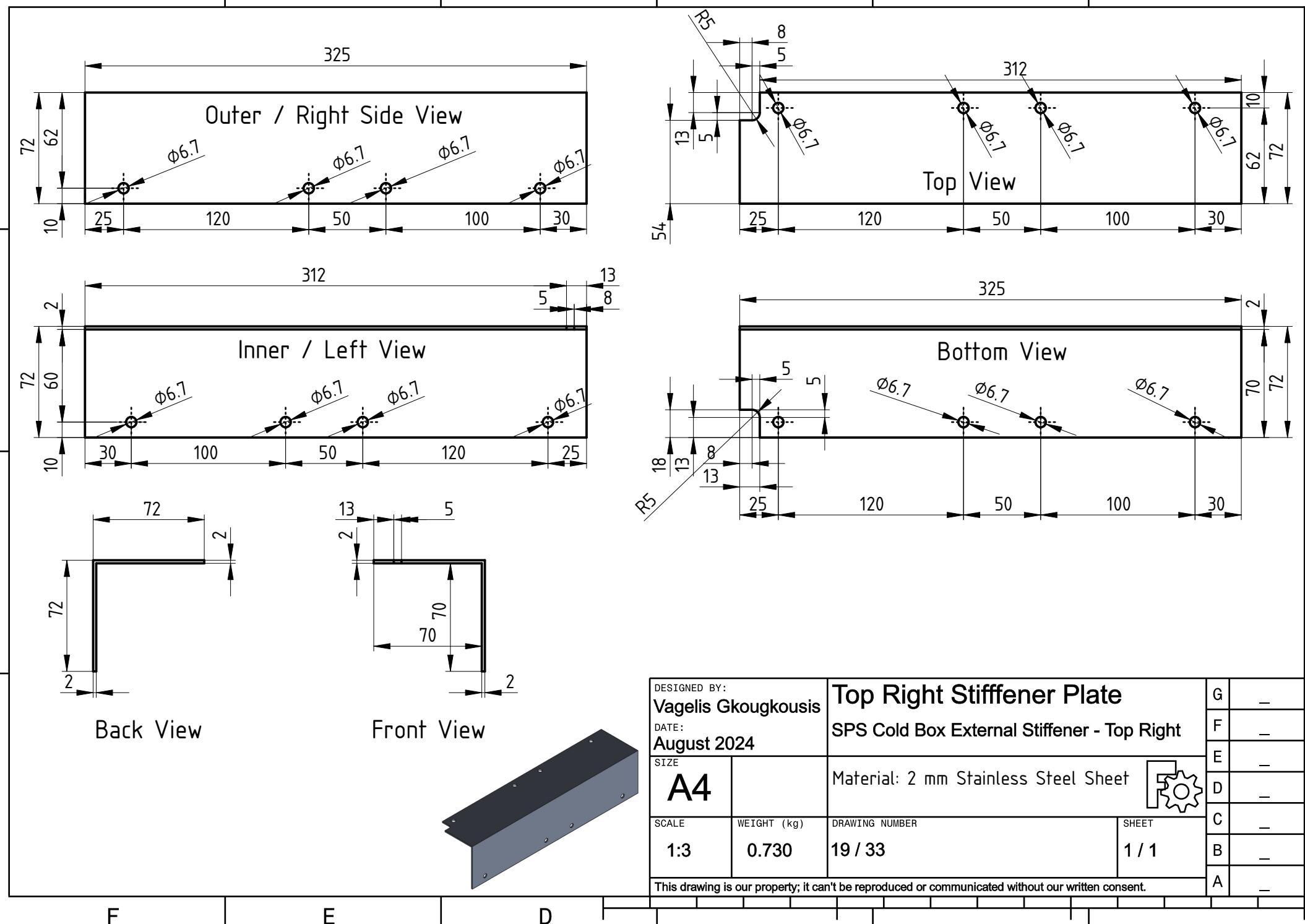
18 / 33

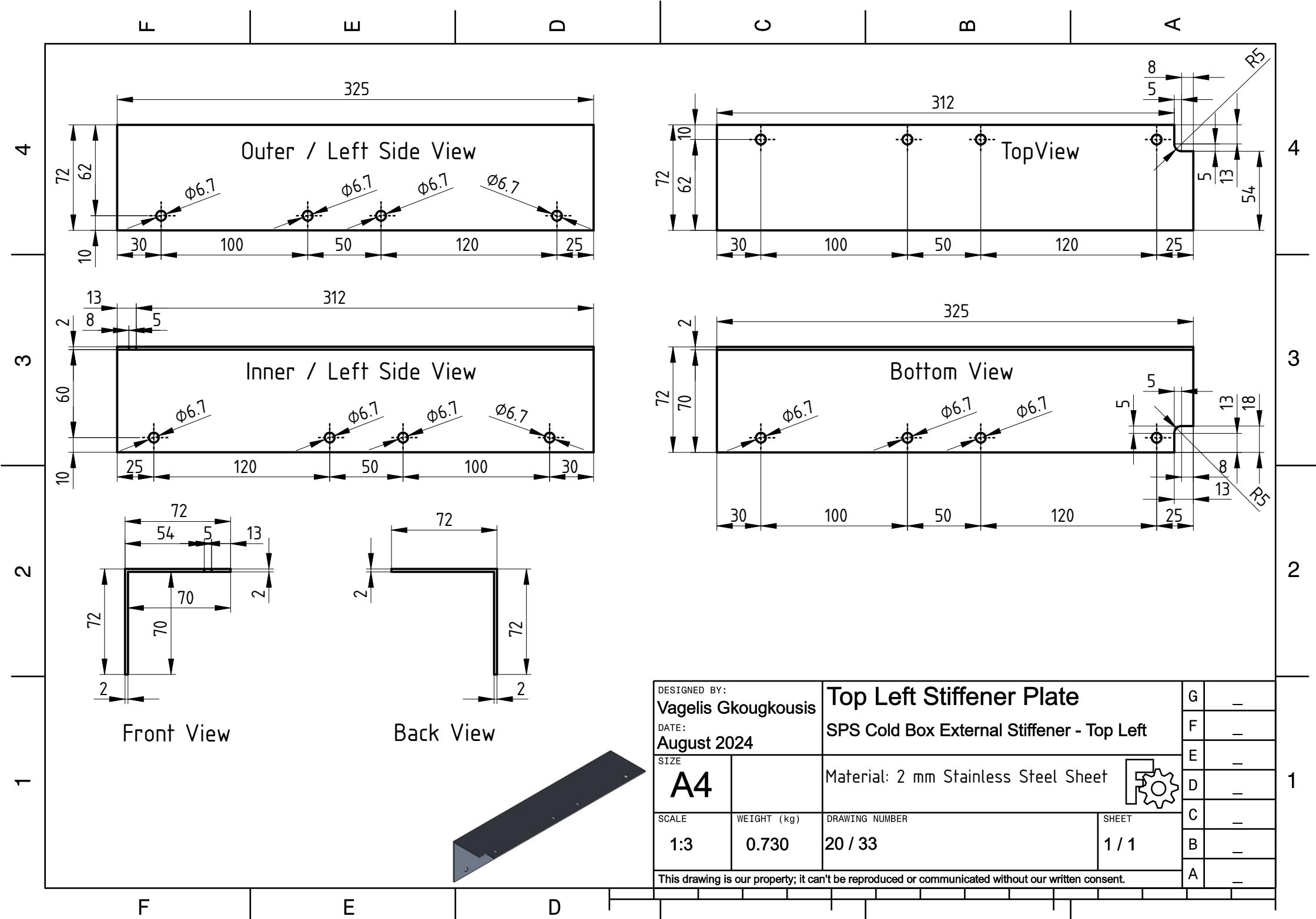
SHEET

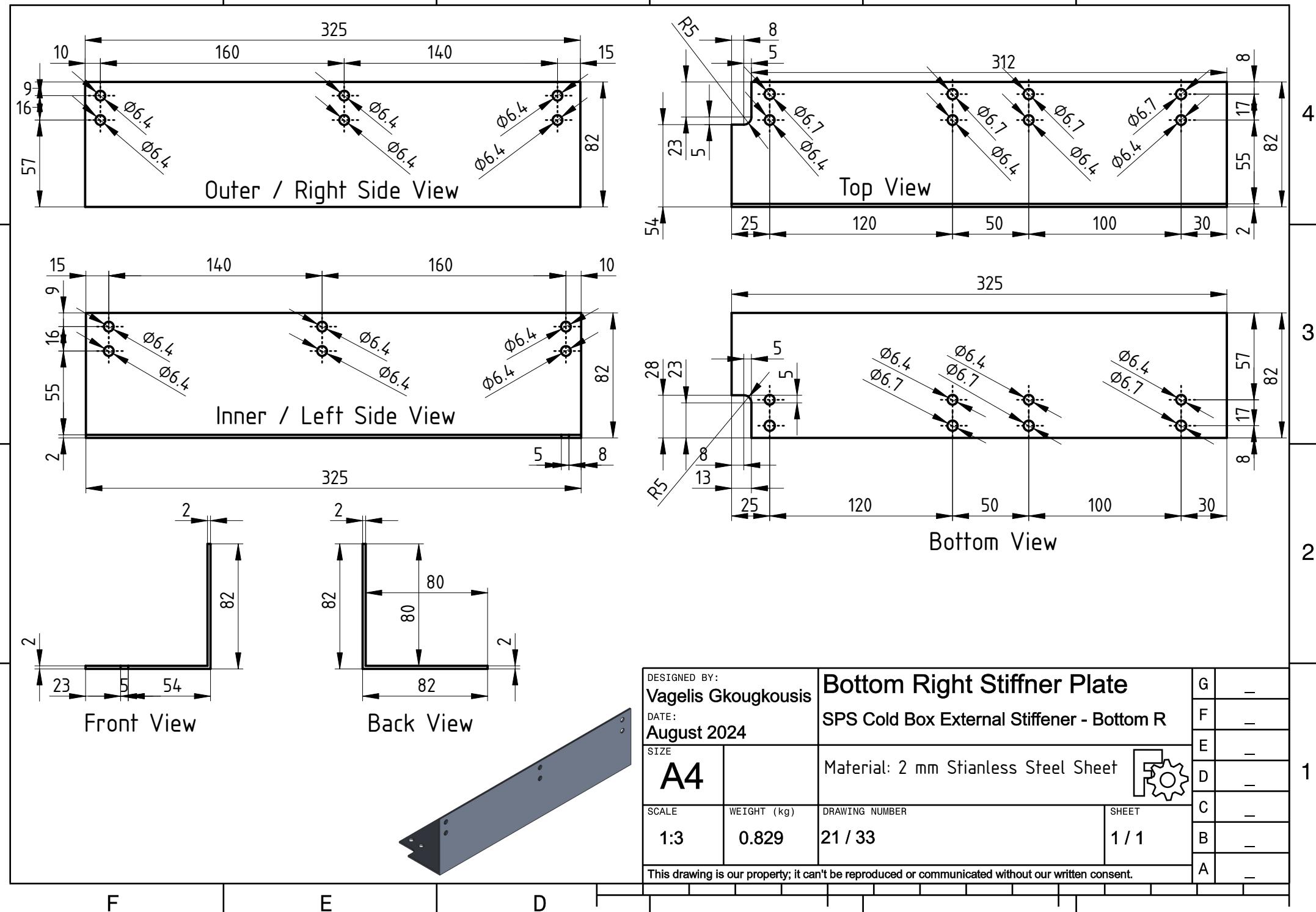
1 / 1

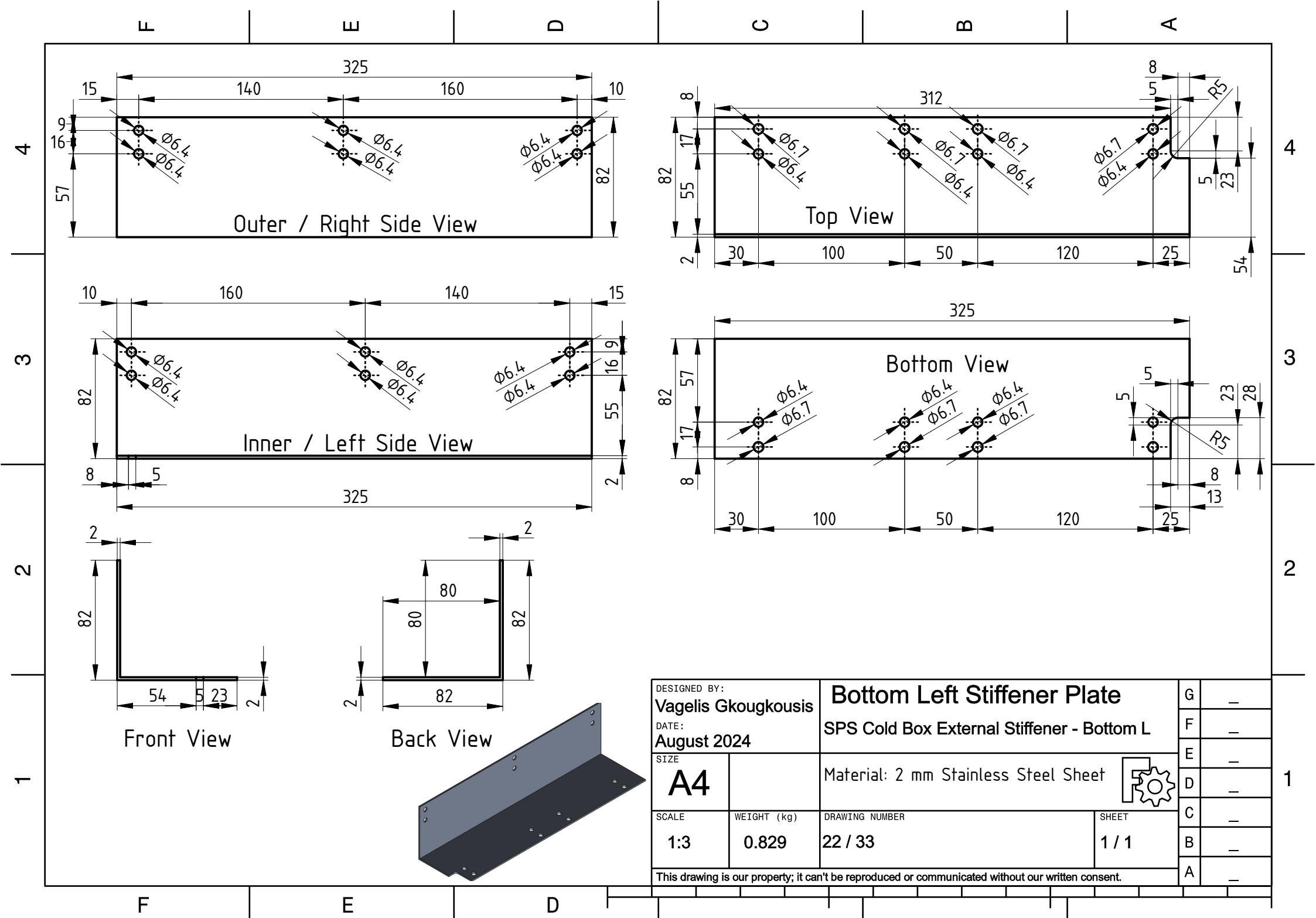
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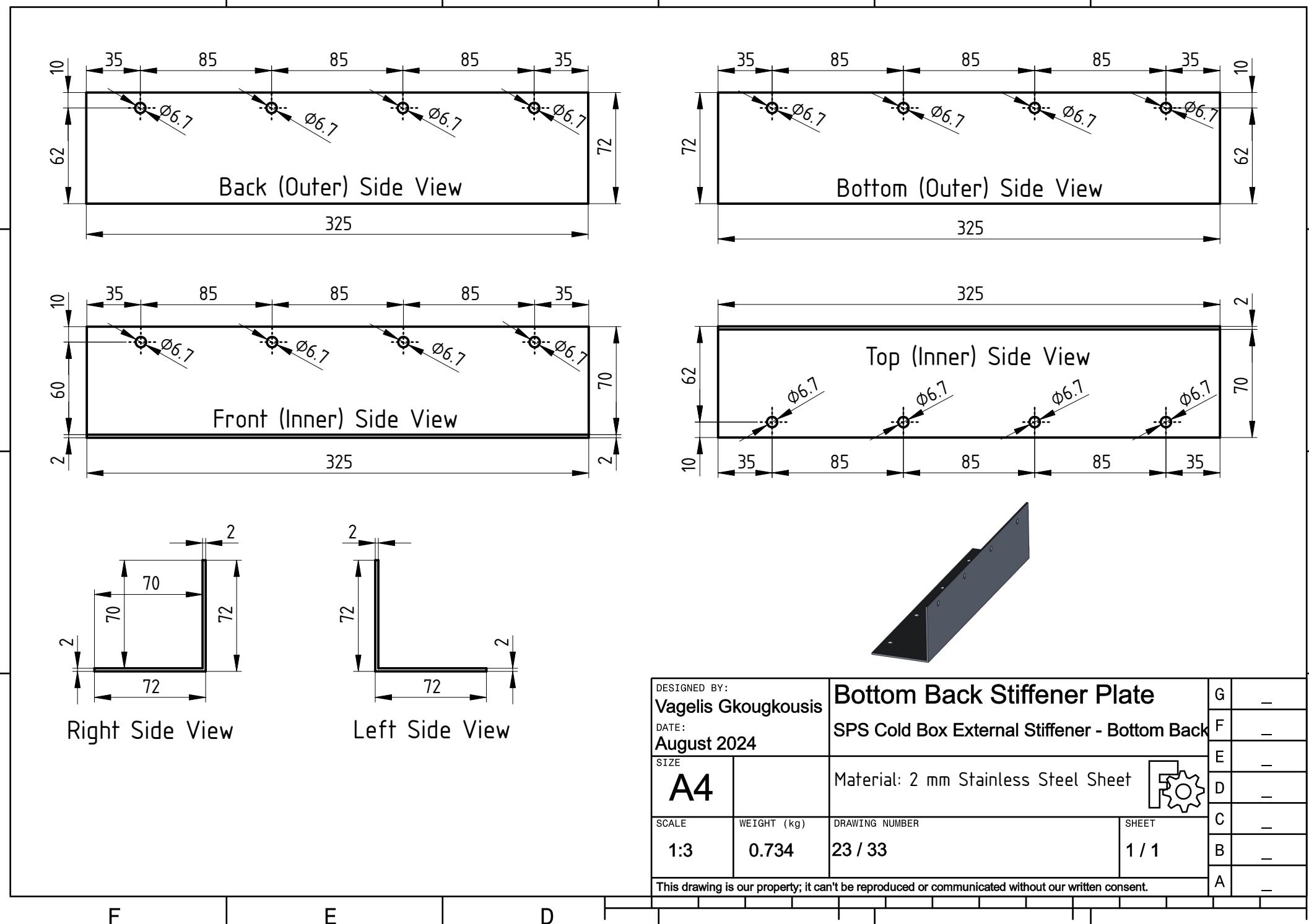
G	—
F	—
E	—
D	—
C	—
B	—
A	—











F

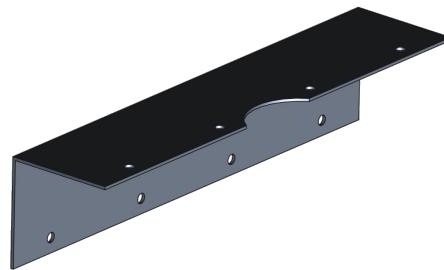
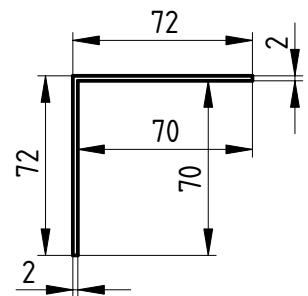
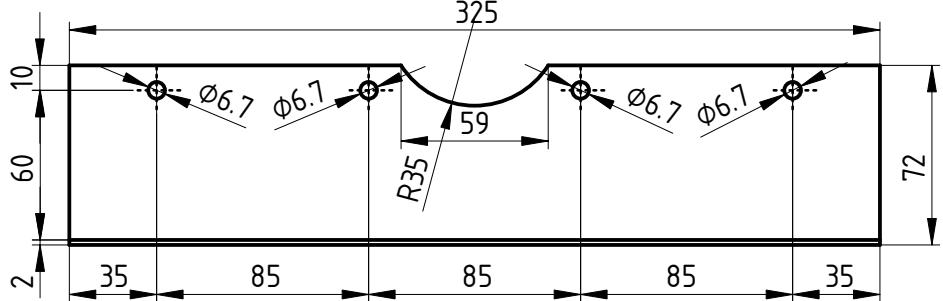
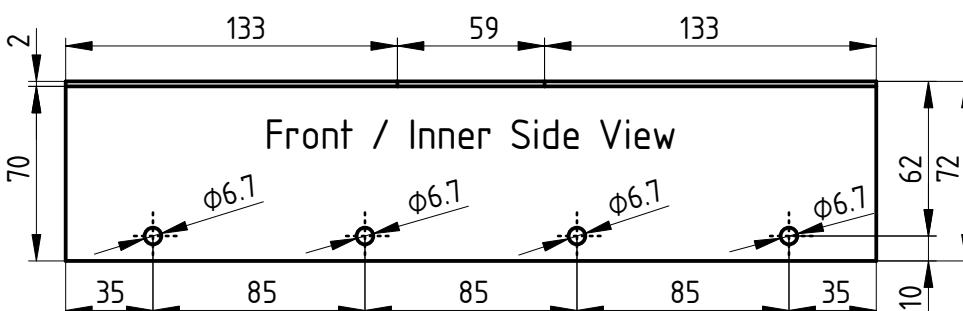
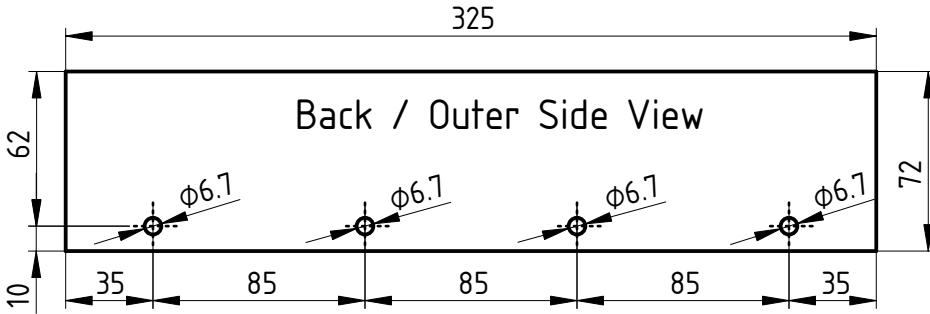
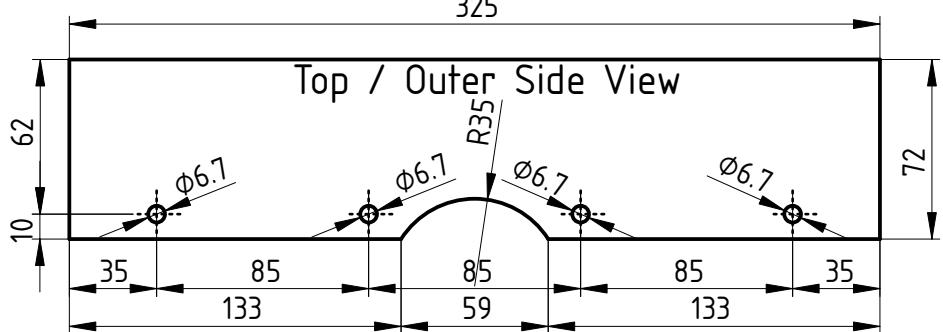
E

D

C

B

A

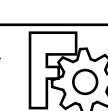


DESIGNED BY:
Vagelis Gkougkousis
DATE:
August 2024

Top Back Stiffener Plate
SPS Cold Box External Stiffener - Top Back

SIZE
A4

Material: 2 mm Stainless Steel Sheet



SCALE

1:3

WEIGHT (kg)

0.723

DRAWING NUMBER

24 / 33

SHEET

1 / 1

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4

3

2

1

4

3

2

1

F

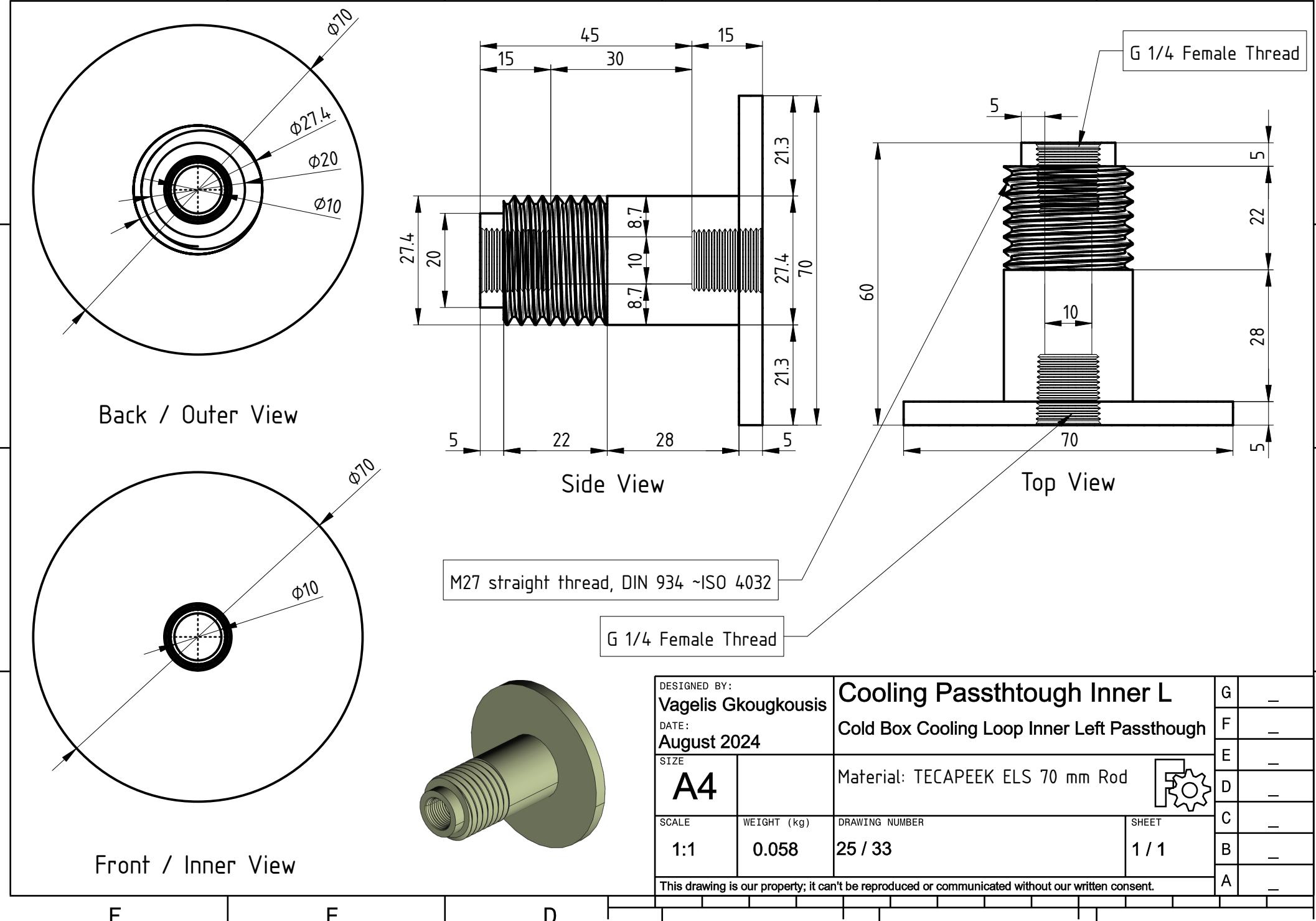
E

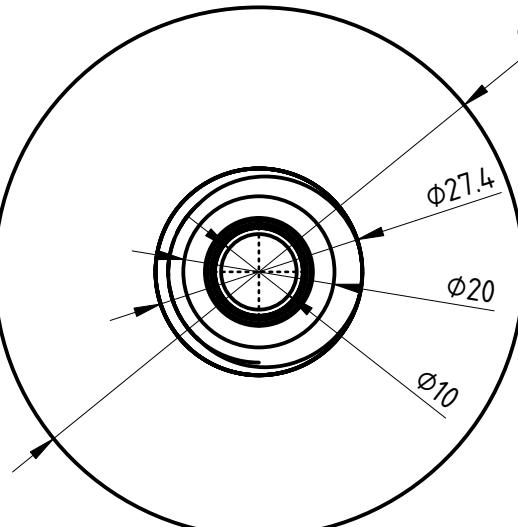
D

C

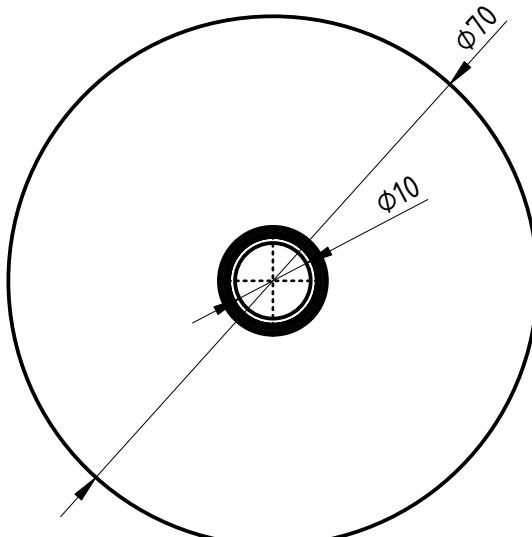
B

A

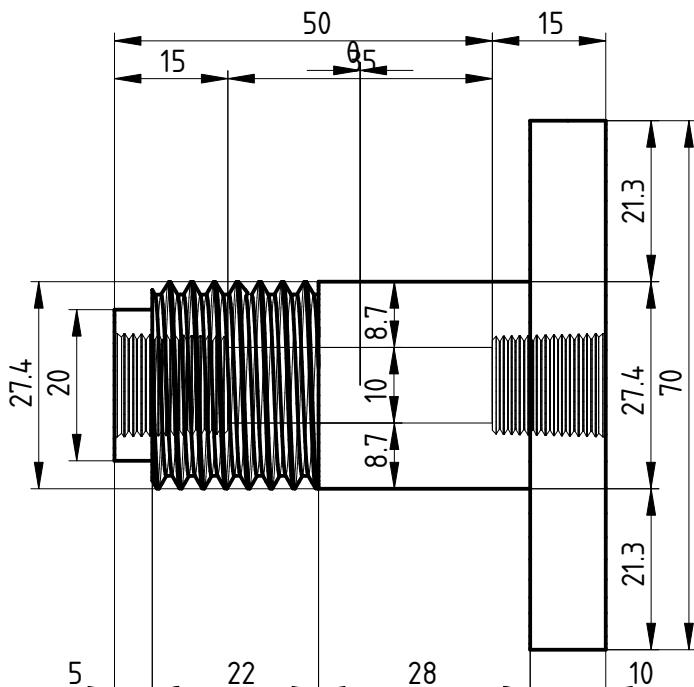
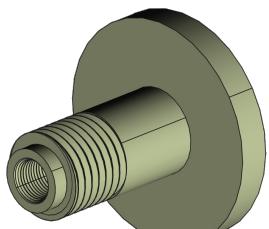




Back / Outer View



Front / Inner View



Default Text

M27 straight thread, DIN 934 ~ISO 4032

G 1/4 Female Thread

DESIGNED BY: Vagelis Gkougkousis		Cooling Passthrough Inner R	G	—
DATE: August 2024		Cold Box Cooling Loop Inner Right Passthrough		F —
SIZE A4		Material: TCAPEEK ELS 70 mm Rod		E —
SCALE 1:1	WEIGHT (kg) 0.083	DRAWING NUMBER 26 / 33	SHEET 1 / 1	D —
This drawing is our property; it can't be reproduced or communicated without our written consent.				C —
				B —
				A —

F

E

D

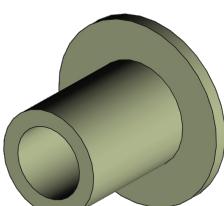
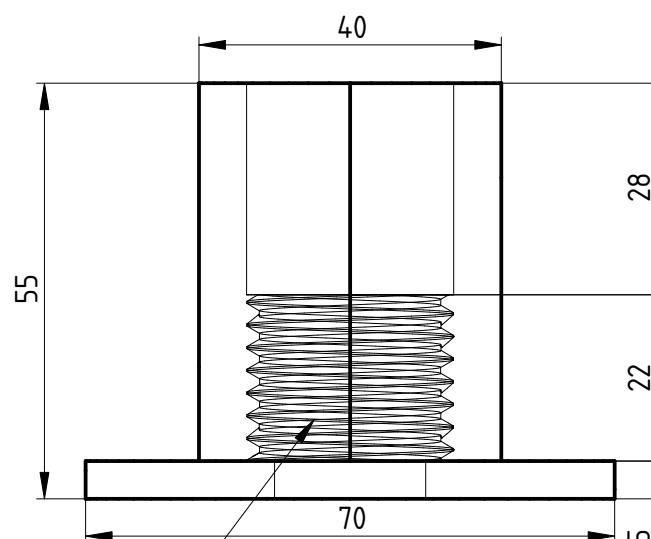
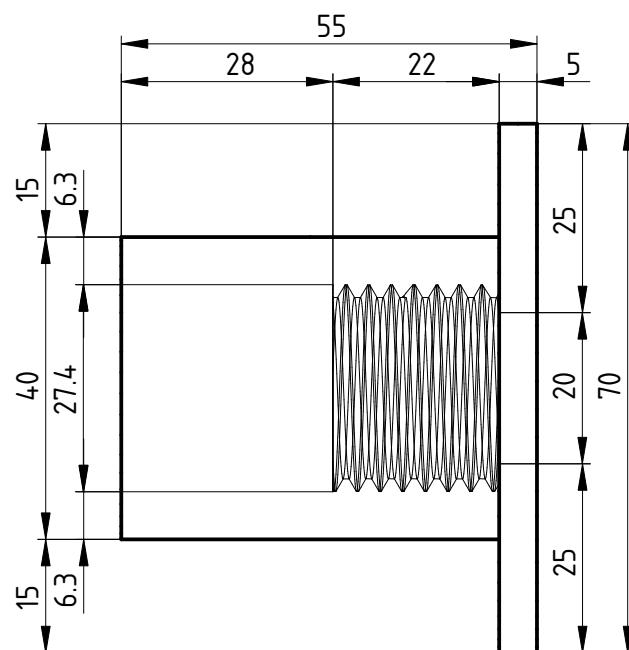
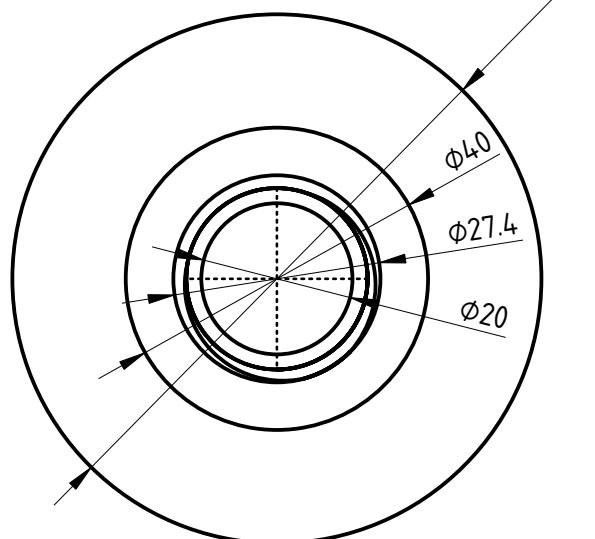
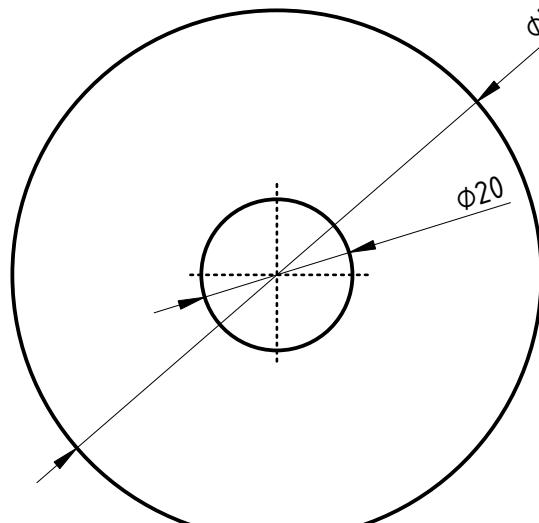
C

B

A

4

4



M27 straight thread, DIN 934 ~ISO 4032

DESIGNED BY:
Vagelis Gkougkousis
DATE:
August 2024

Cooling Passthrough Outer Cold Box Cooling Loop Outer Passthrough

SIZE

A4

Material: TECAPEEK ELS 70 mm Rod



SCALE

1:1

WEIGHT (kg)

0.053

DRAWING NUMBER

27 / 33

SHEET

1 / 1

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G	—
F	—
E	—
D	—
C	—
B	—
A	—

F

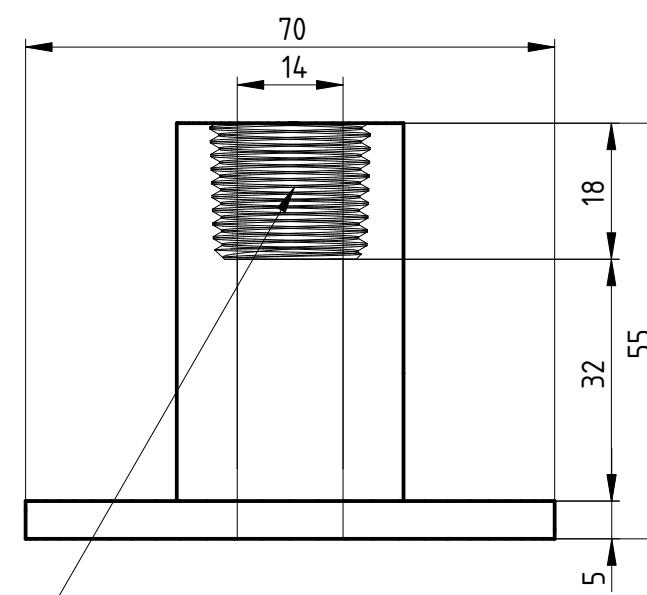
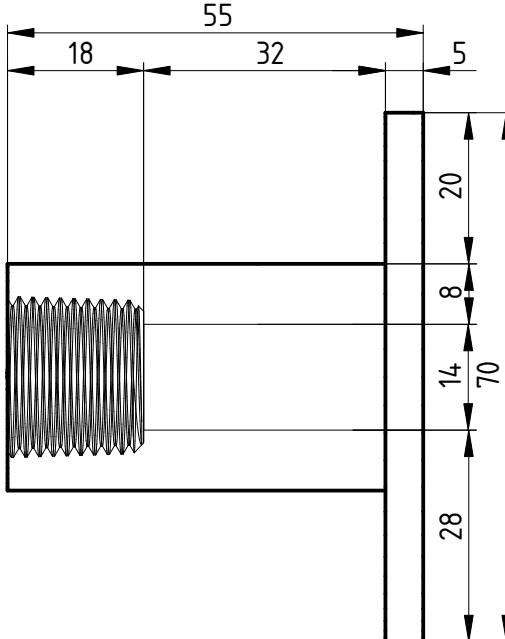
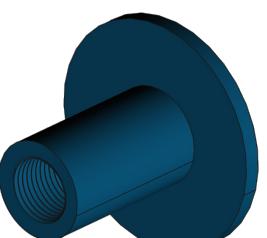
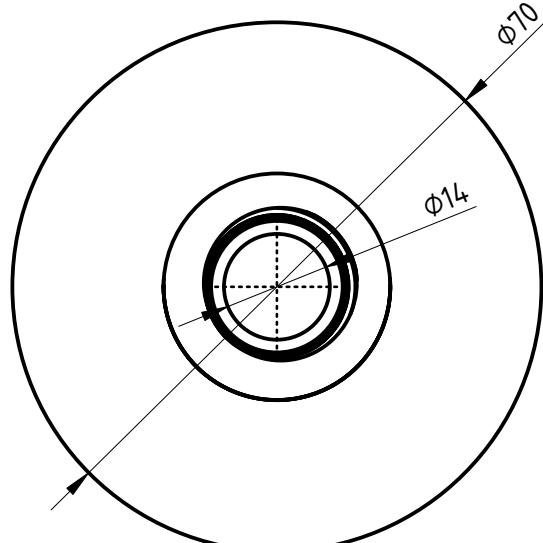
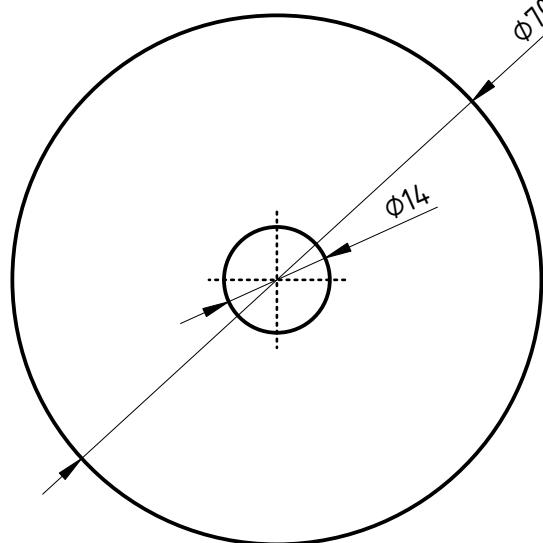
E

D

C

B

A



1/2 NPT Thread

DESIGNED BY:
Vagelis Gkougkousis
DATE:
August 2024

SIZE

A4

SCALE

1:1

Relief Pass Though
Cooling Loop Pressure Relief Passthrough

Material: TECAPEEK ELS 70 mm Rod



DRAWING NUMBER

28 / 33

SHEET

1 / 1

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G

—

F

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E

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D

—

C

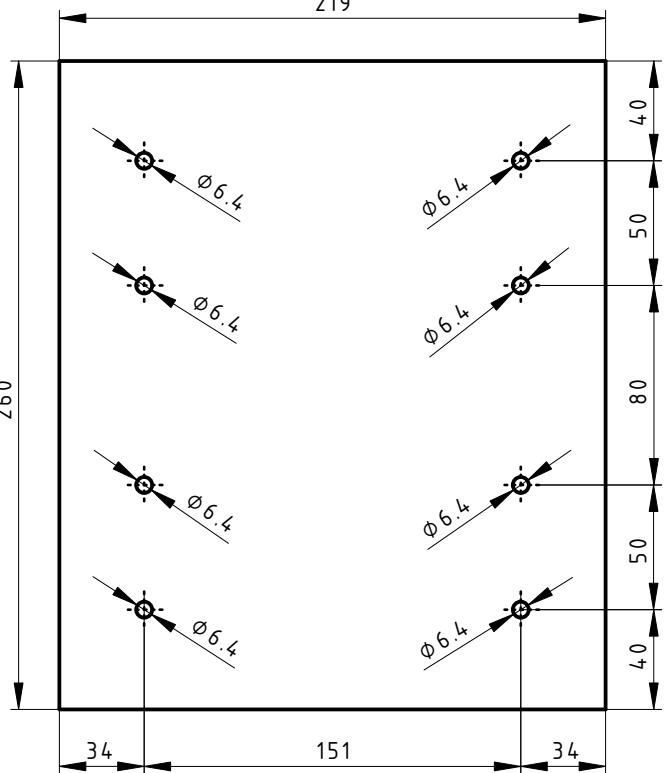
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B

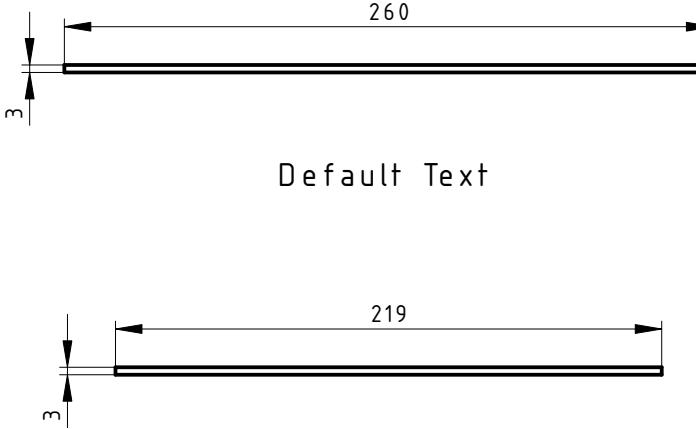
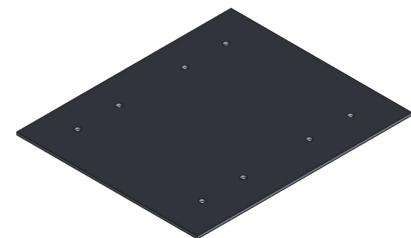
—

A

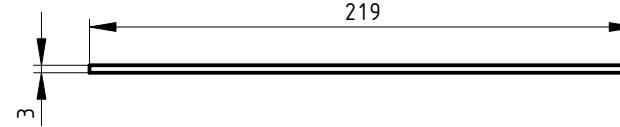
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Default Text

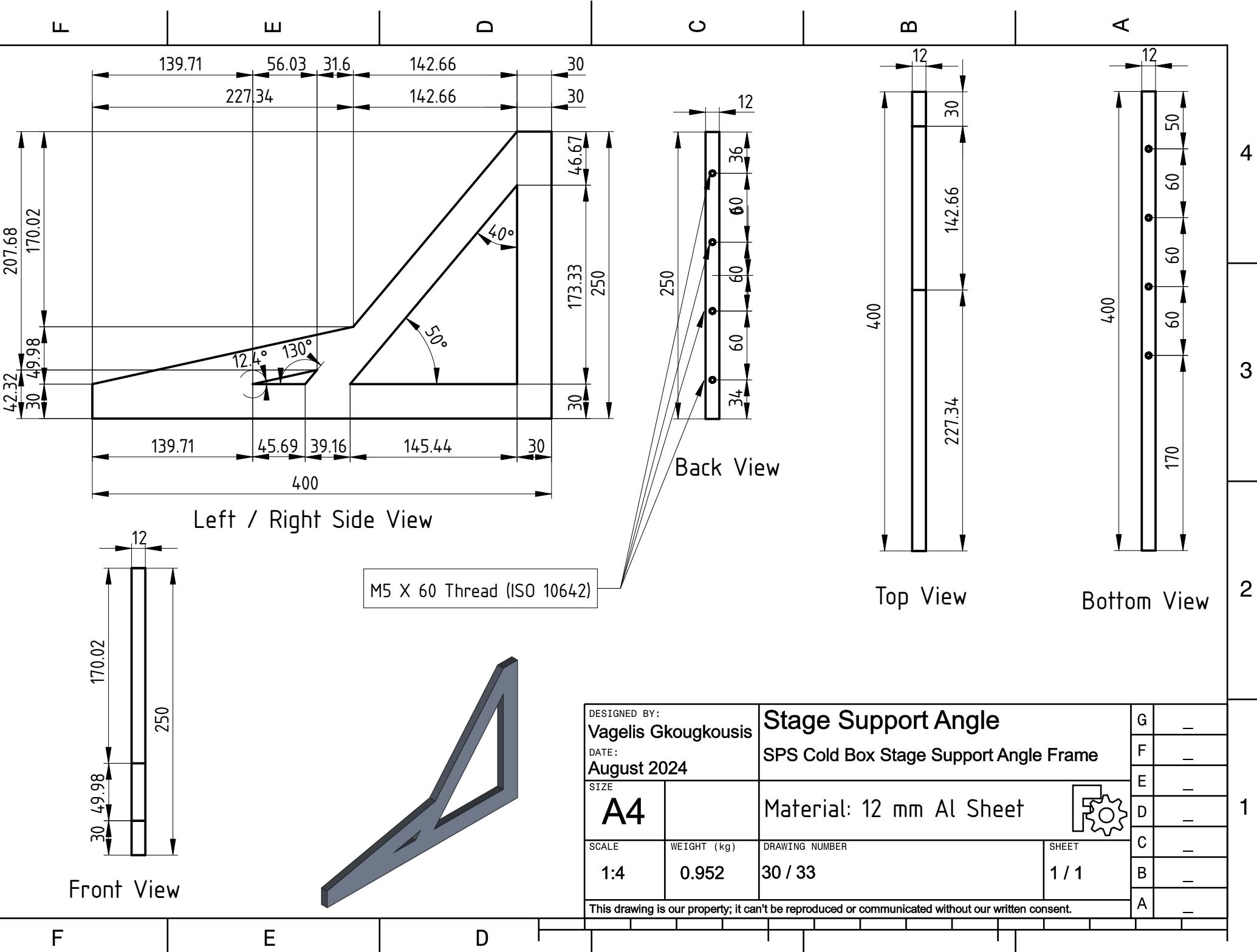


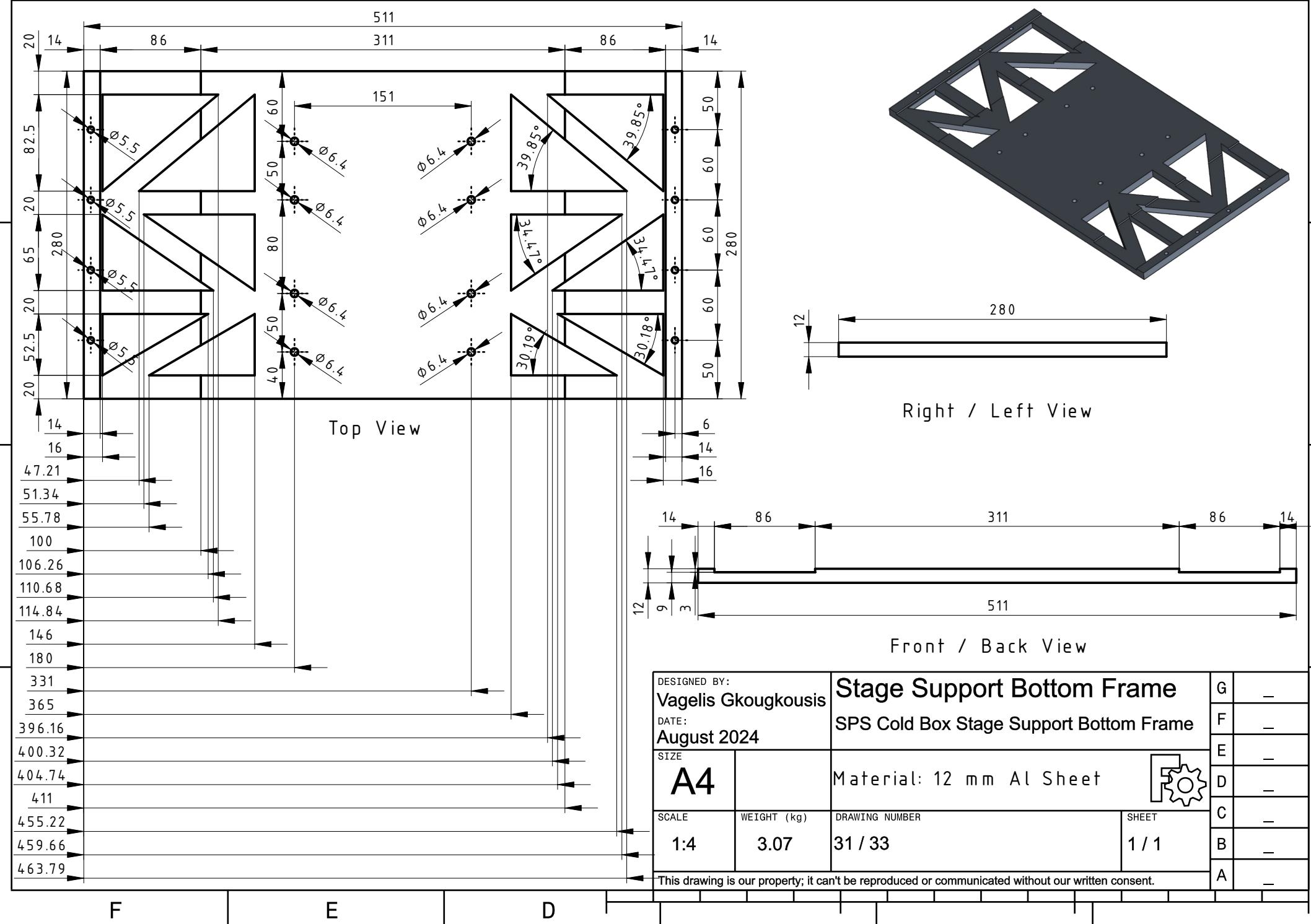
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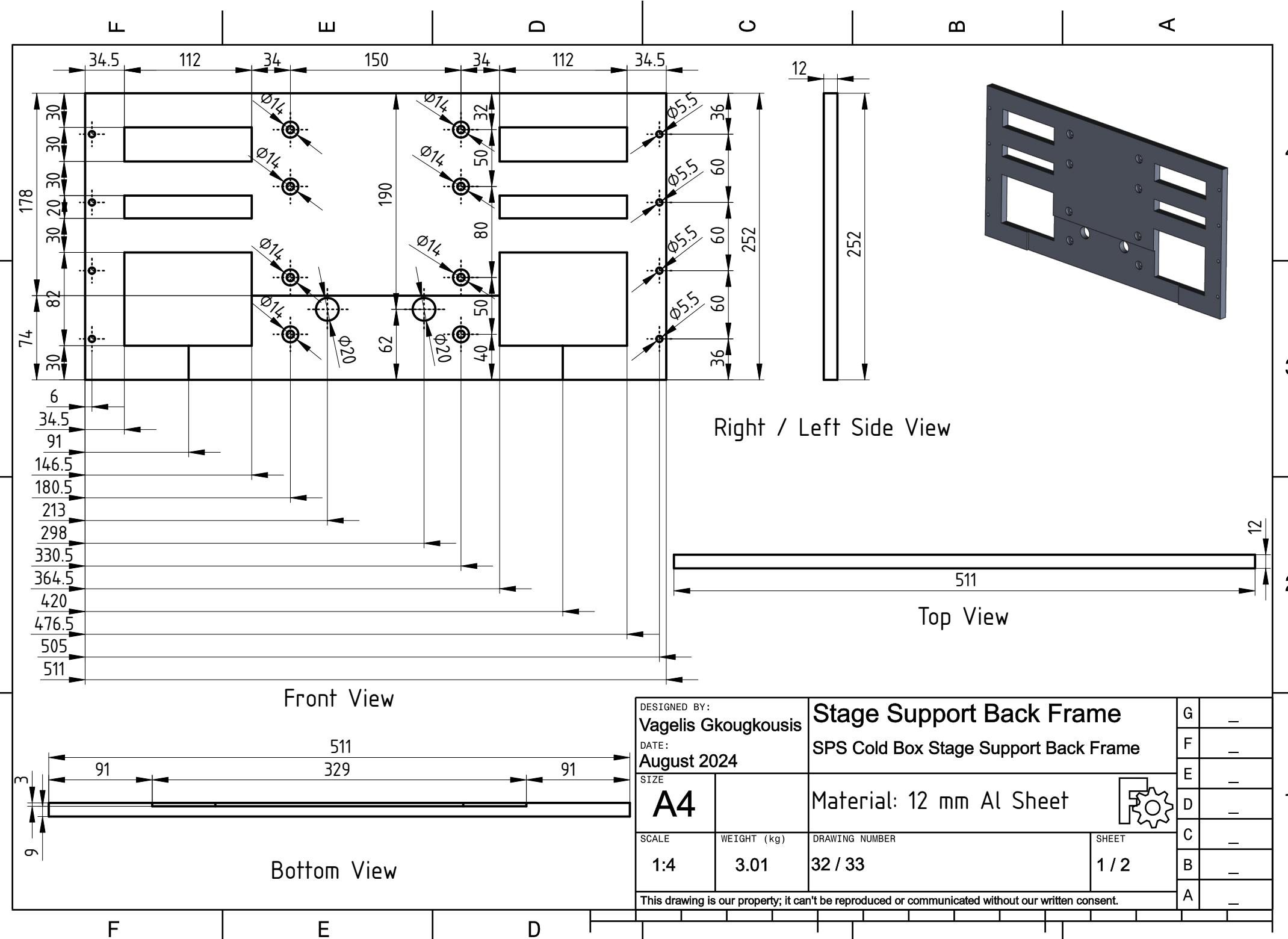


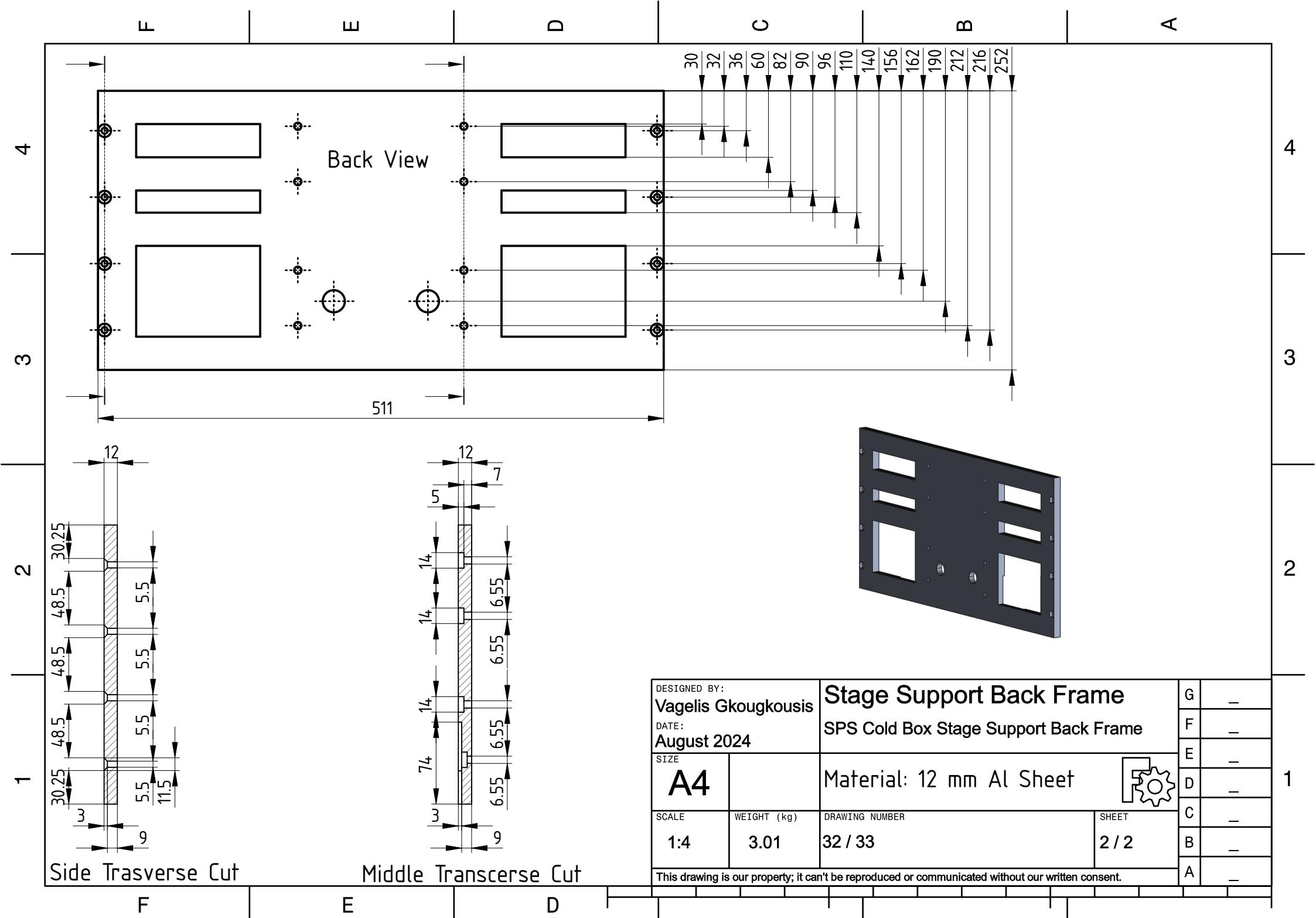
Default Text

DESIGNED BY: Vagelis Gkougkousis		Internal Bottom Support Plate		G —
DATE: August 2024		SPS Cold Box Internal Stage Support Plane		F —
SIZE A4		Material: 3 mm Stainless Steel Sheet		E —
SCALE 1:3	WEIGHT (kg) 1.36	DRAWING NUMBER 29 / 33	SHEET 1 / 1	D —
This drawing is our property; it can't be reproduced or communicated without our written consent.				









A technical drawing of a U-shaped component. The overall width is 18.55, divided into segments of 5.14, 13.4, and 13.41. The height is 13.45, with a 6 mm gap at the top. The bottom width is 12.5, and the side wall height is 6.25. The inner height of the U-shape is 13.45, with a 3.45 gap from the bottom. The inner width of the U-shape is 6, and the side wall thickness is 4. A watermark on the right reads "Yagelis Gkougkousis University of Zurich - 2024" and "egkougko@cem.ch".

Front View

A technical drawing of a rectangular component. The overall width is labeled as 18.55 at the top center. The height of the rectangle is 39.4, indicated by a vertical dimension line on the left. On the right side, there are two vertical dimension lines: one for the top edge labeled 13.45 and one for the bottom edge labeled 13.45. A horizontal dimension line at the bottom is labeled 5.14. Three circular holes are located in the center of the rectangle. Each hole has a diameter of $\varnothing 4.5$. The centers of the holes are aligned vertically. The distance from the top edge to the center of the top hole is 13.45. The distance from the bottom edge to the center of the bottom hole is also 13.45. The distance between the centers of the top and middle holes is 6.25. The distance between the centers of the middle and bottom holes is also 6.25.

Back View

A technical drawing of a U-shaped metal component. The overall width is 39.4. The top horizontal section has a height of 2.95. There are two U-shaped cutouts, each with a height of 6.4. The distance between the centers of the two U-shaped cutouts is 20. The distance from the bottom of the U-shaped cutouts to the bottom of the main U-shape is 13.6. The distance from the center of the top U-shaped cutout to the center of the bottom U-shaped cutout is 19.4. The total height of the U-shape is 33.5. There are four holes at the top corners, each with a diameter of 3.05. The distance from the left edge to the first hole is 4, and the distance from the right edge to the second hole is 4.

Right View

A technical drawing of a rectangular part. The overall width is 20 and the overall height is 39.4. There are two holes at the top, each with a diameter of Ø3.4, located 2.95 units from the top edge and 10 units from the left edge. There are two holes at the bottom, each with a diameter of Ø3.4, located 2.95 units from the bottom edge and 10 units from the left edge. The distance between the centers of the top holes is 20, and the distance between the centers of the bottom holes is 20.

Left View

Top / Bottom View

18.55

20

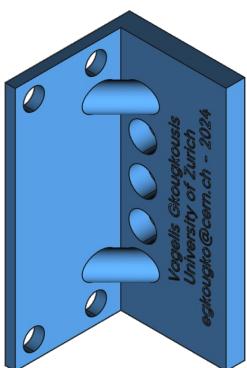
1.6

3

10.72

10.77

Top / Bottom View



DESIGNED BY: Vagelis Gkougkousis		DUT Plane Support Bracket			
DATE: August 2024		DUT Plane Stage Attachment Bracket			
SIZE A4		Material: 3D Printed CFRP (CFK)			
SCALE 2:1	WEIGHT (kg) 0.005	DRAWING NUMBER 33 / 33	SHEET 1 / 1		
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