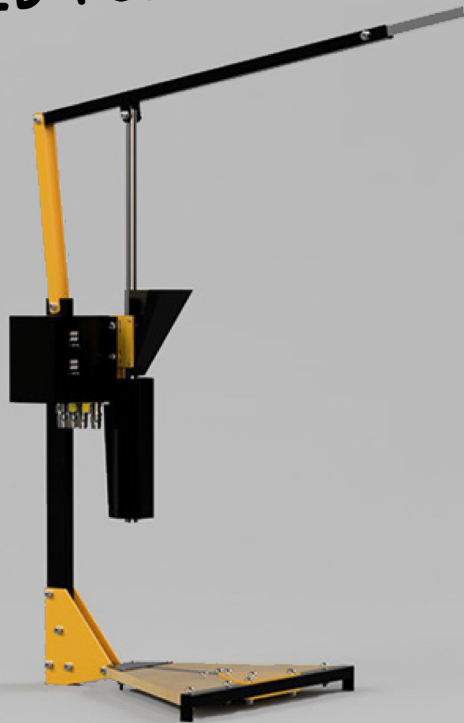
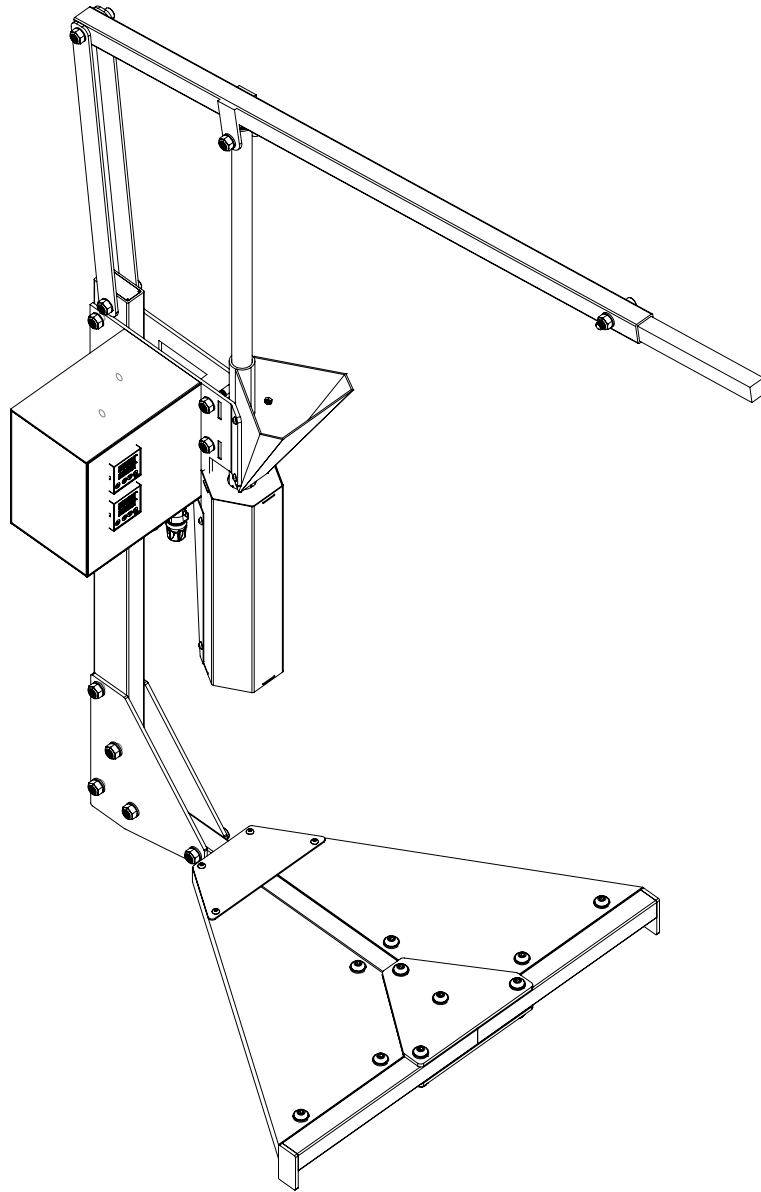


INJECTION MACHINE

DESIGNED FOR DISASSEMBLY





Prepare your tools and materials for the assembly of your Injection machine. For this you'll need all the parts you previously built.

To assemble everything together you'll need the following tools:

- 17 mm spanner or adjustable spanner
- 8 mm Spanner or adjustable spanner
- Allen key set

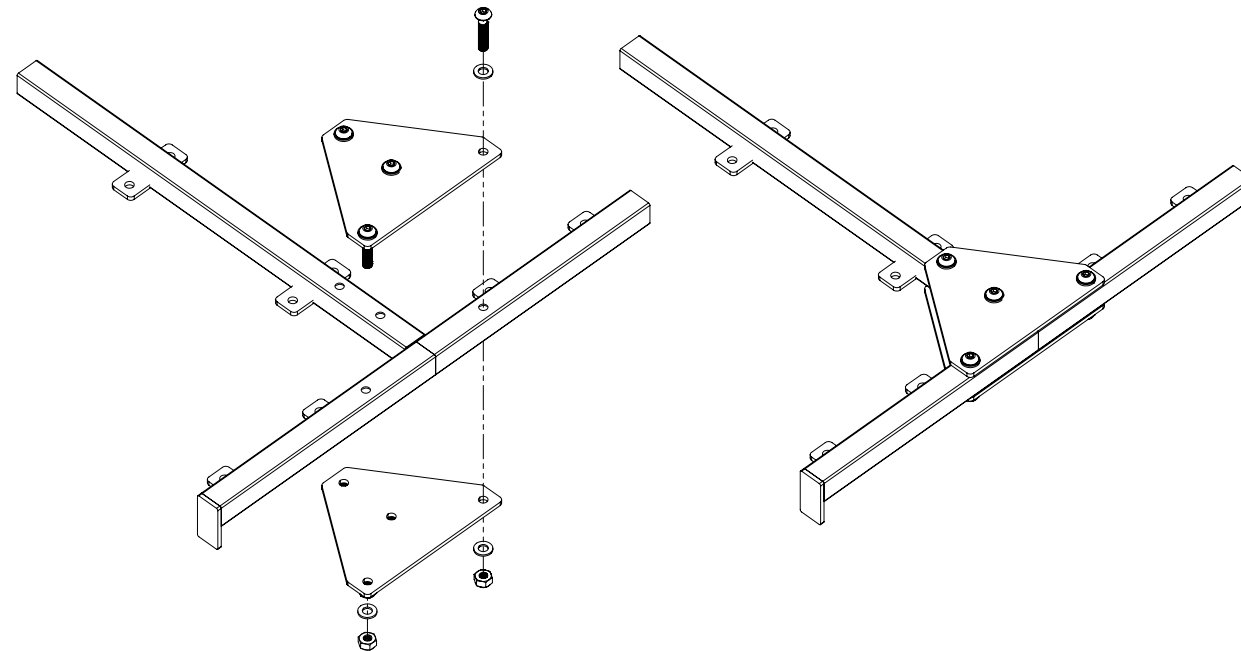
Let's start with the base!

This is the part of the machine that prevents it from tipping over when pulling the lever.

To assemble this part you'll need the following fixings:

- 4x M10 60 mm Button head bolts
- 8x M10 washers
- 4x M10 nuts

Now put together the parts to create a "sandwich" like you can see on the diagram.



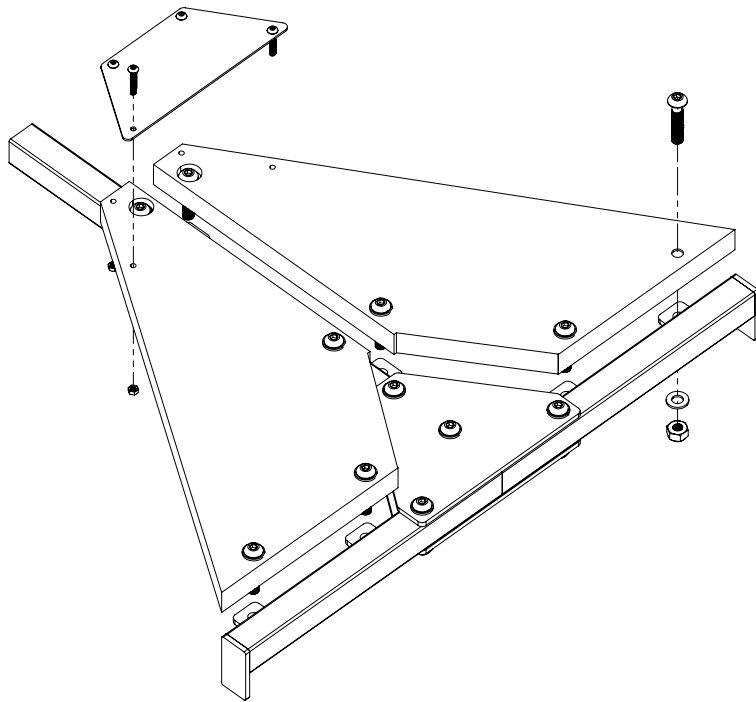
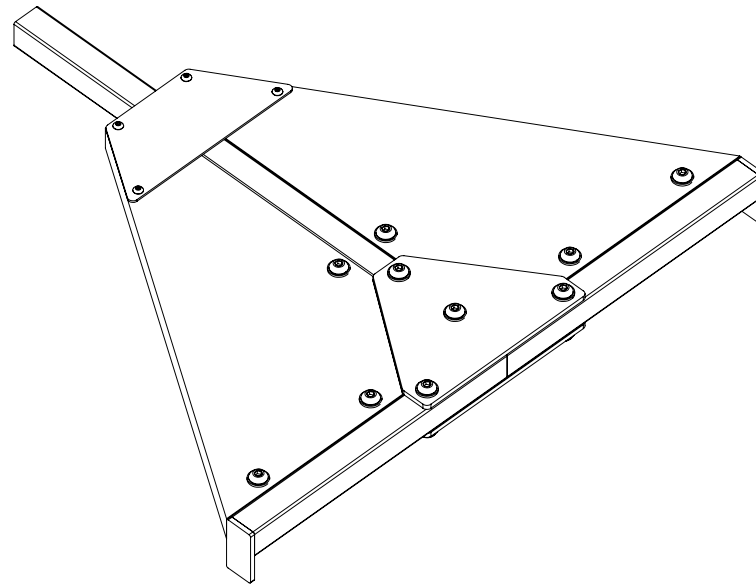
Remember! The order for bolting is: Bolt, washer, plate, tube, plate, washer, nut.

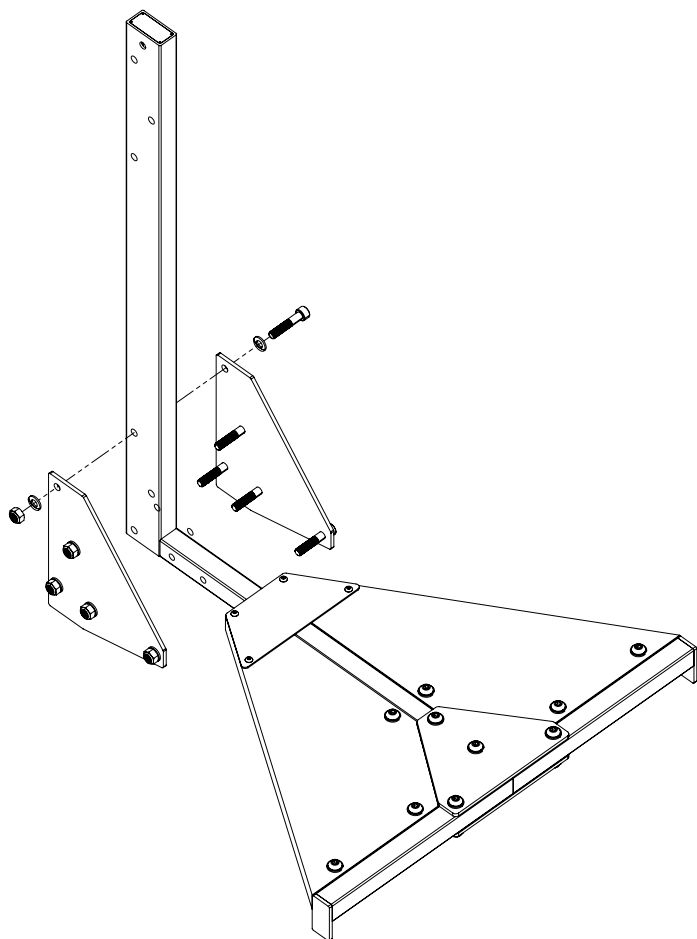
Now is time to attach the wood to the base.

For this you'll need

- 2 pieces of 12 mm plywood
- x4 M10 button head 30 mm bolts and
- x4 M10 nuts and washer per side.

The order is: Bolt, wood, metal wood holder, washer, nut.





Now we need to bolt together the connectors that are going to fix the base to the vertical beam (30x60 mm)
To assemble this part you'll need the following fixings:

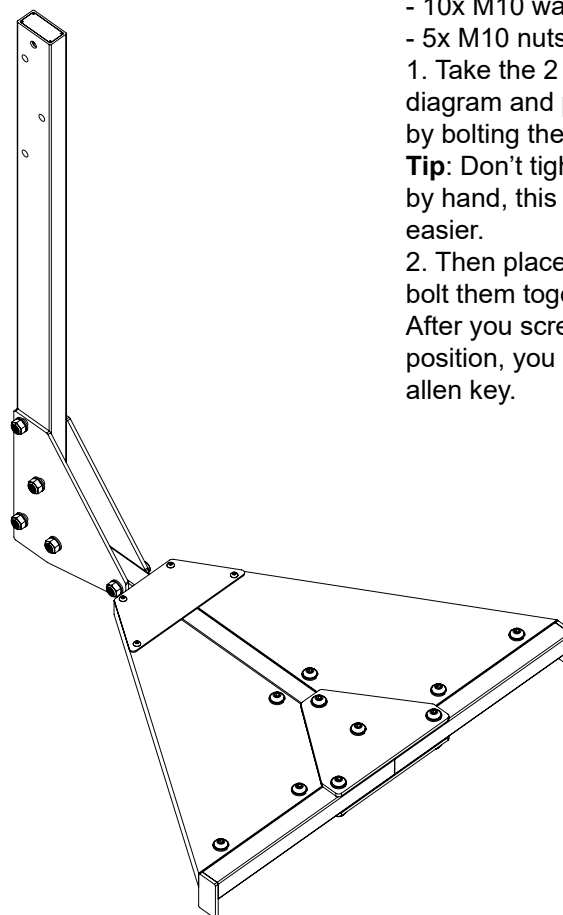
- 5x M10 60 mm Allen head bolts
- 10x M10 washers
- 5x M10 nuts

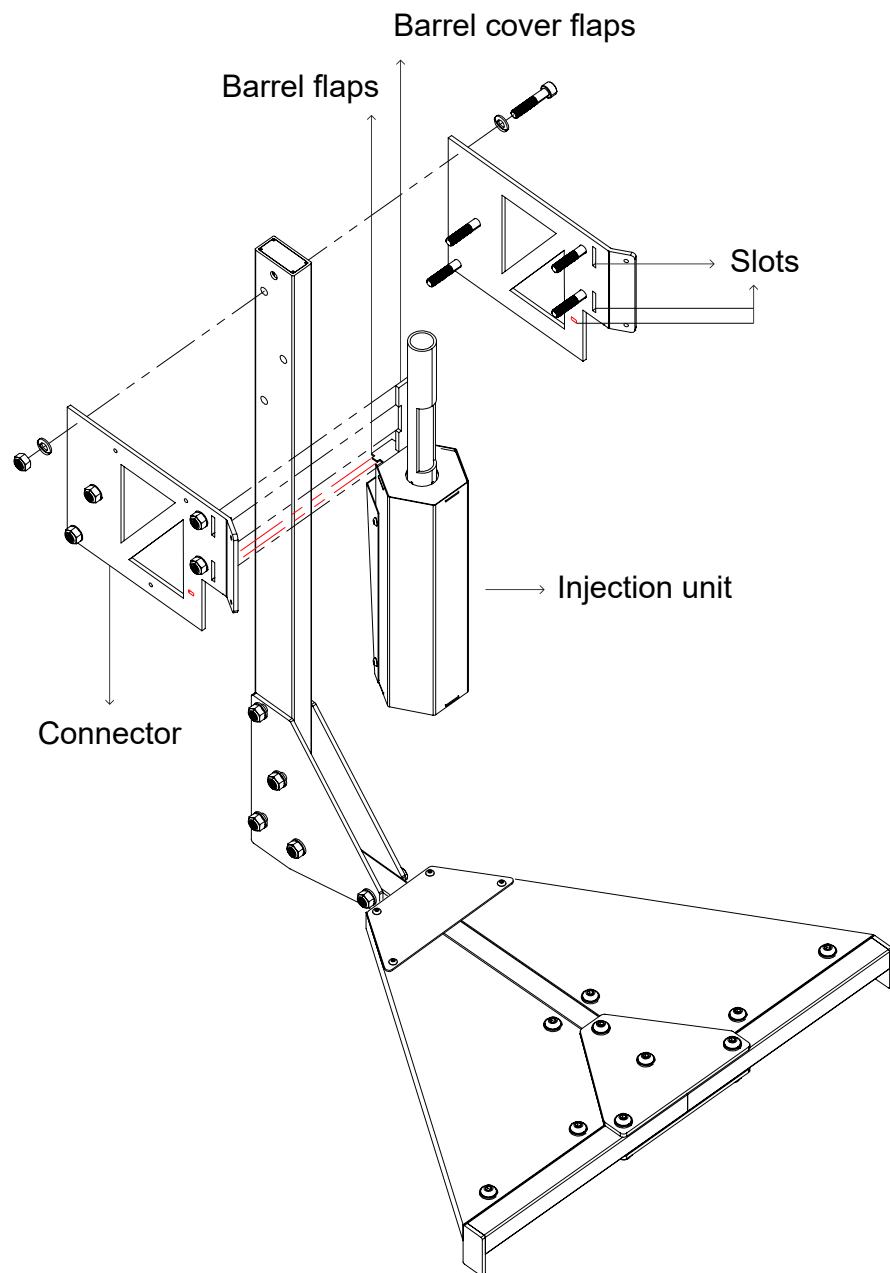
1. Take the 2 connectors that you can see on the diagram and place them parallel to each other, start by bolting them to the base first.

Tip: Don't tighten the bolts very hard at this point, just by hand, this will allow you to place the 30x60 beam easier.

2. Then place the 30x60 beam between the plates and bolt them together.

After you screw all the bolts in their corresponding position, you can tighten them all with a spanner and allen key.





Time to prepare the injection barrel to connect it to the rest of the frame.

To assemble this part you'll need the following fixings:

- 5x M10 60 mm Allen head bolts

- 10x M10 washers

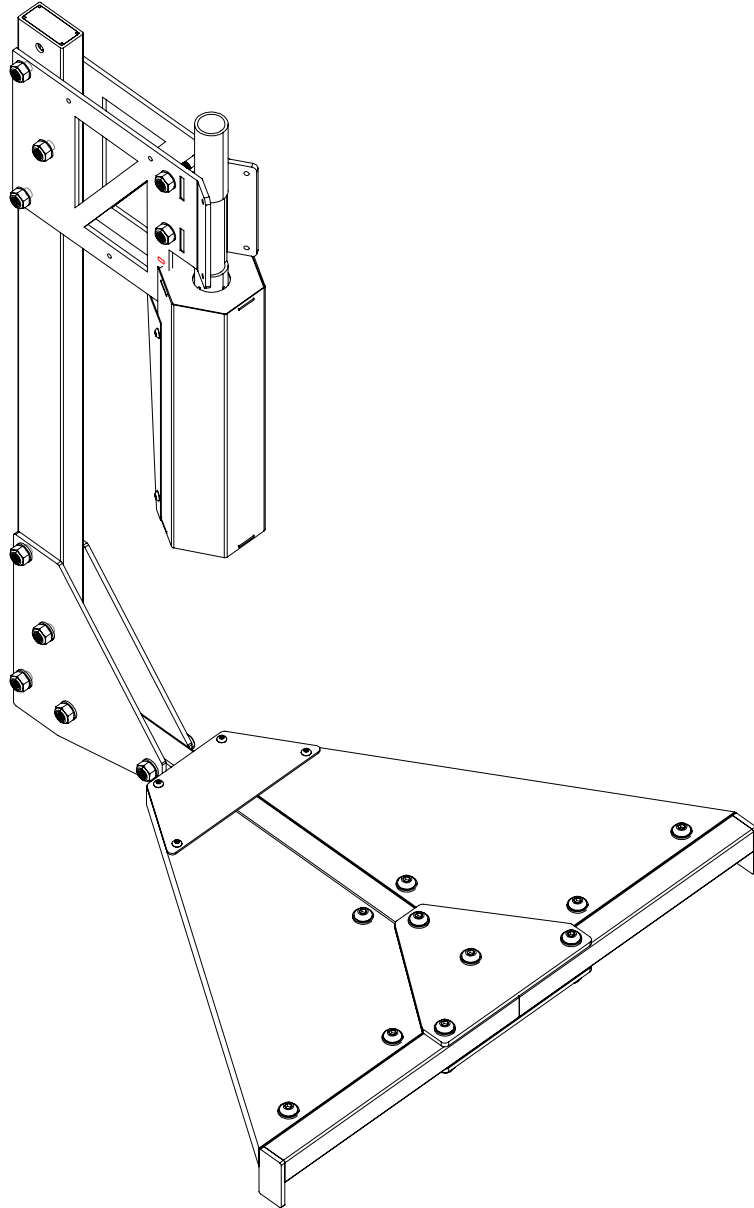
- 5x M10 nuts

1. Take the 2 connectors and place one on each side of the Injection Unit making sure the bent part is pointing outwards.

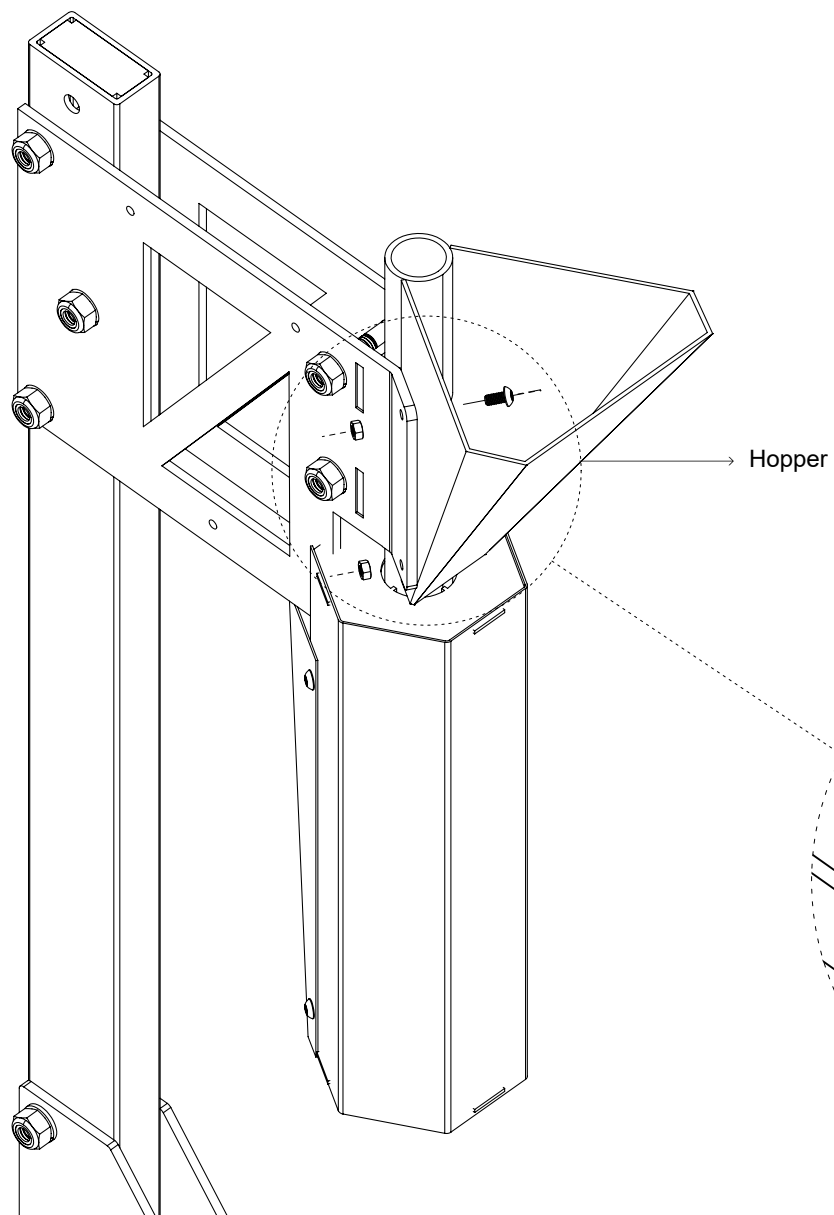
2. Attach the plates by sliding the slots of the connectors onto the flaps of the barrel plate and barrel cover. Once the slots are aligned with the flaps, use the bolts to secure the plates in place.

Tip: Don't tighten the bolts very hard at this point, just by hand, this will allow you to have more flexibility when placing the plates on each side of the 30x60 beam.

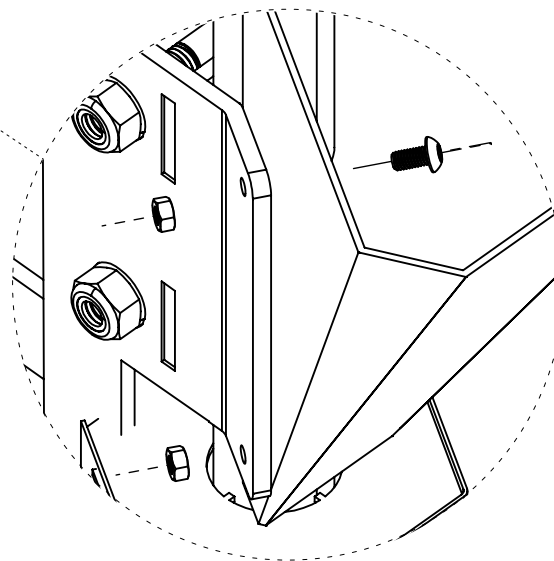
3. Attach the whole unit to the rest of the frame.

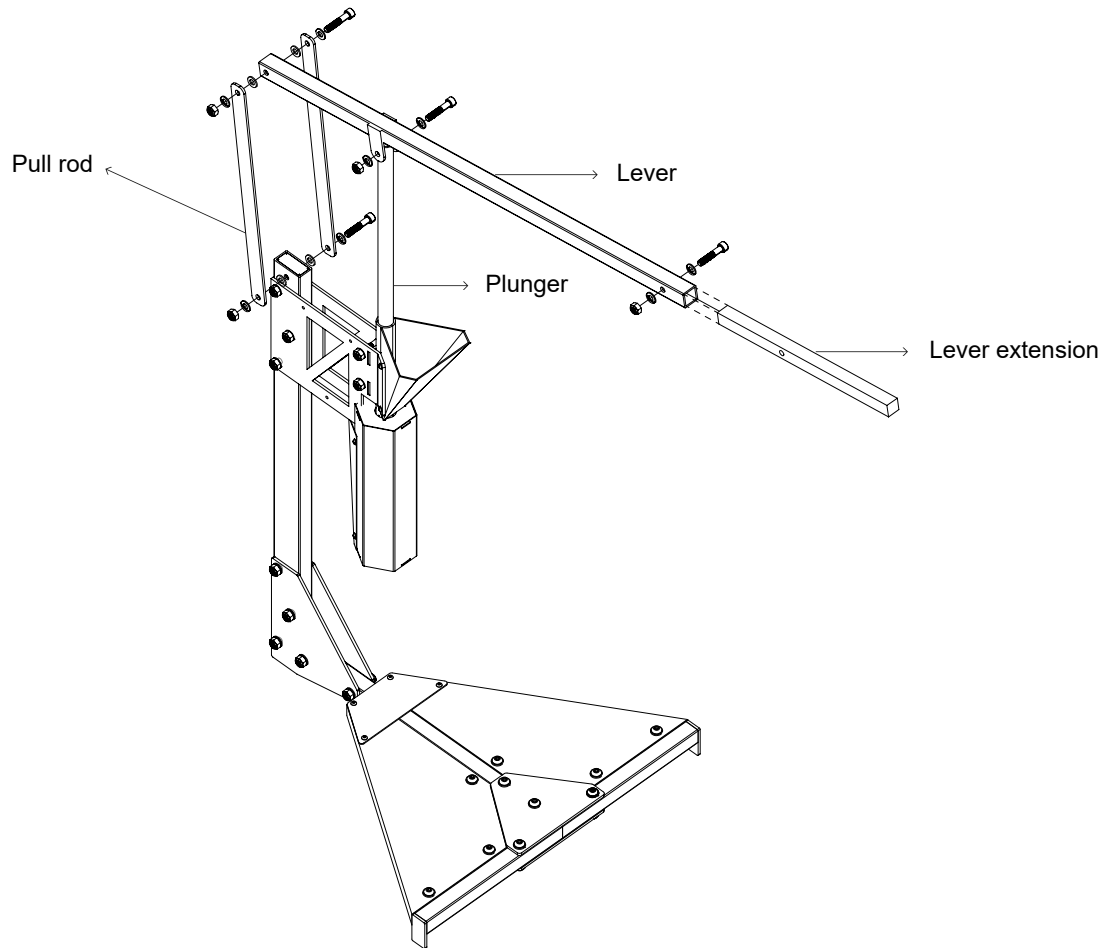


After you attached the Injection unit to the rest of the frame, now you can tighten the bolts using a spanner and allen key. Make sure everything is tight and steady.



1. Place the hopper in the front top part of the injection unit as you can see on the diagram below. Use the two flaps on the sides to attach the hopper to the Injection unit.
2. Use the M5 10 mm Button head bolts (from the inside of the hopper) and nuts (on the outside) to attach the hopper to the flaps.





To assemble this part you'll need the following fixings:

- 3x M10 60 mm Allen head bolts
- 1x M10 50 mm Allen head bolt
- 12x M10 washers
- 4x M10 locking nuts

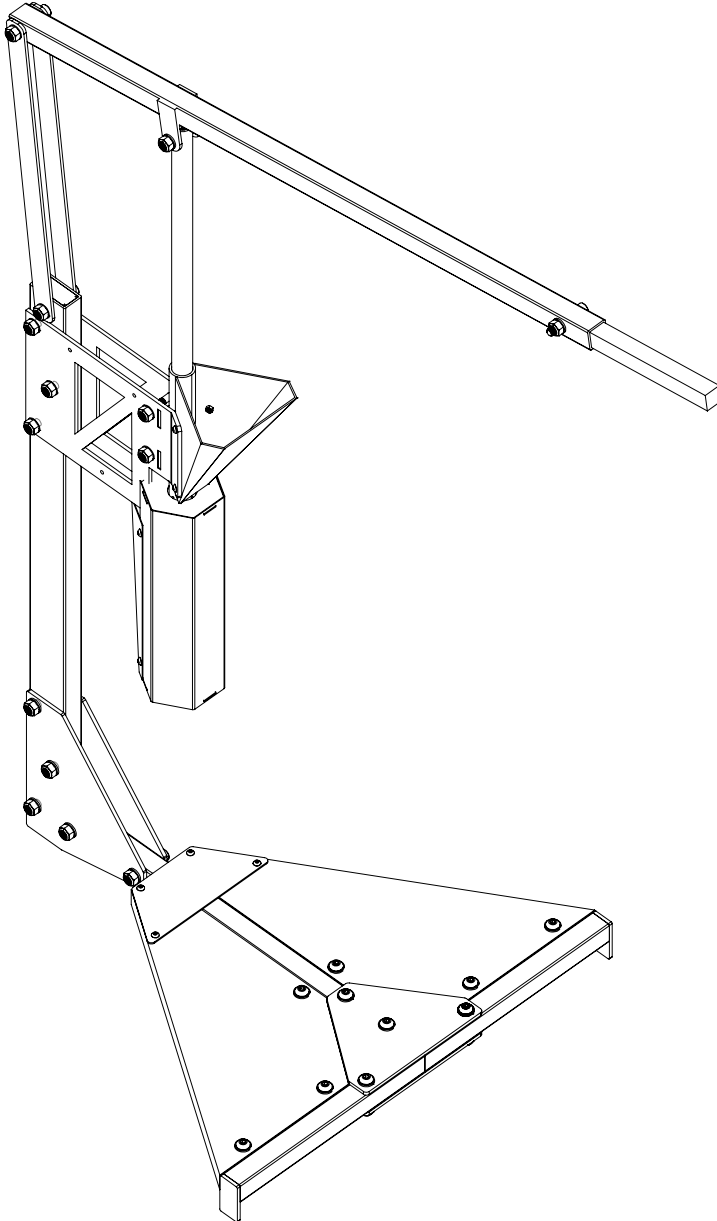
1. First you need to bolt together the lever with the 2 pull rods. The order for bolting is: Bolt, washer, pull rod, washer, lever, washer, pull rod, washer, locking nut.

2. Then you need to introduce the plunger in the Injection barrel and connect the plunger to the lever. The order for bolting is: Bolt, washer, lever flap, plunger, lever flap, washer, locking nut.

4. Bolt the other end of the pull rods to the 30x60 beam. The order for bolting is: Bolt, washer, pull rod, washer, beam, washer, pull rod, washer, locking nut.

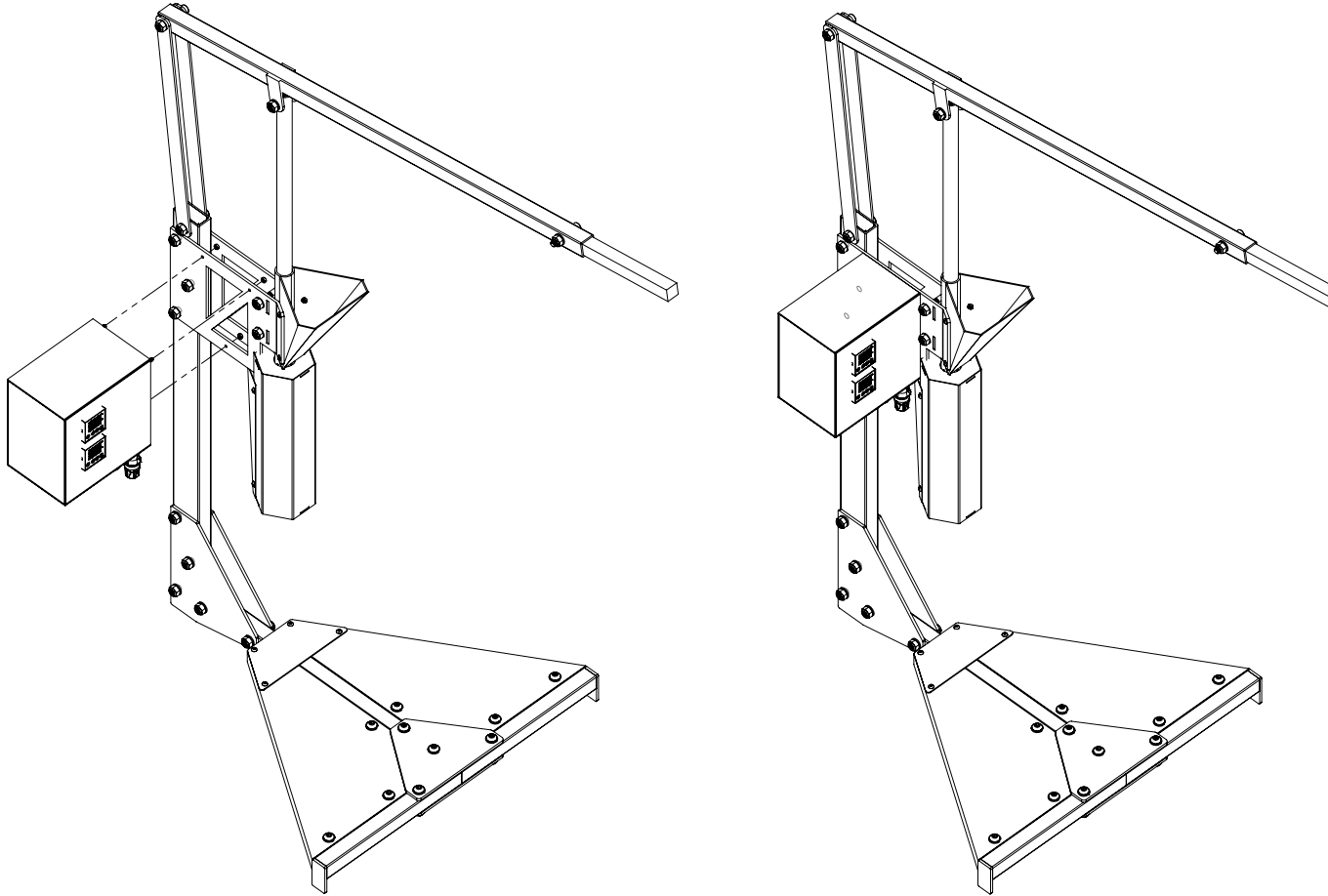
5. Take the stainless steel 25x25 square tube (Lever extension) and introduce it into the lever and secure it with bolts and nuts as you can see on the diagram. The order for bolting is: Bolt, washer, lever, lever extension, lever, washer, nut.

Note: We use locking nuts in this section to be able to secure the nuts without having to tighten them fully, because these are going to be the moving parts of the machine, therefore, we need some space between the parts for this to happen. If you tighten them too much you won't be able to pull the lever up and down easily.



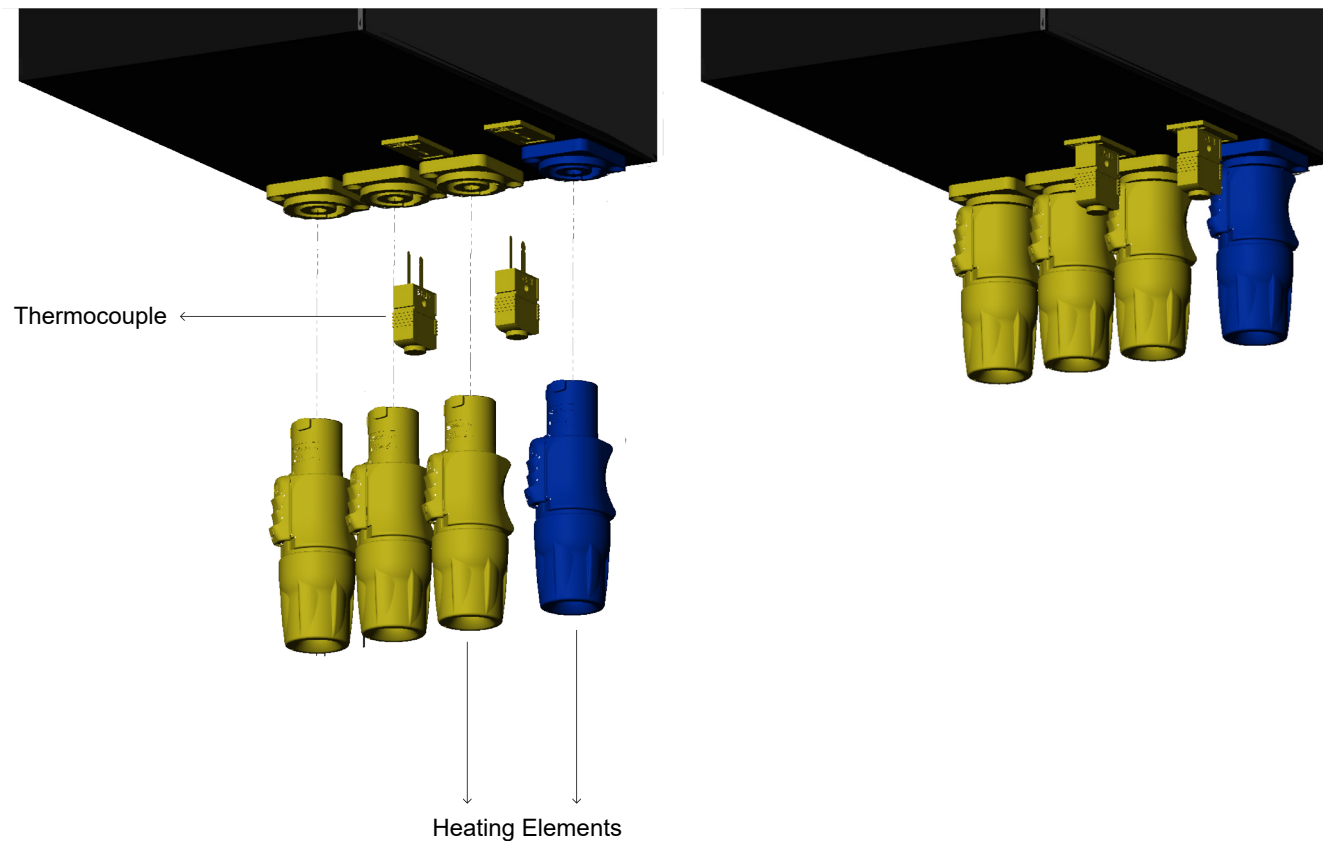
And this is how your injection machine should look like at this point.
Test the lever by pulling it up and down and make sure it moves smoothly.

1. Get the electronic box and place it on the left side of the machine. The box should already have 3x M5 bolts on it that fit in the holes of the connector plate.
2. Use the M5 nuts to secure it in place and tighten them with the 8mm spanner or an adjustable one.



To connect the heating elements and thermocouples to the electronic box we used powecon connectors, so that it can also be unplugged and dismantled for transportation.

There are 4 heating elements and 2 thermocouples, the 3 top heating elements (orange or yellow) should work with one of the thermocouples and the bottom heating element (blue connector) should go with the other thermocouple.



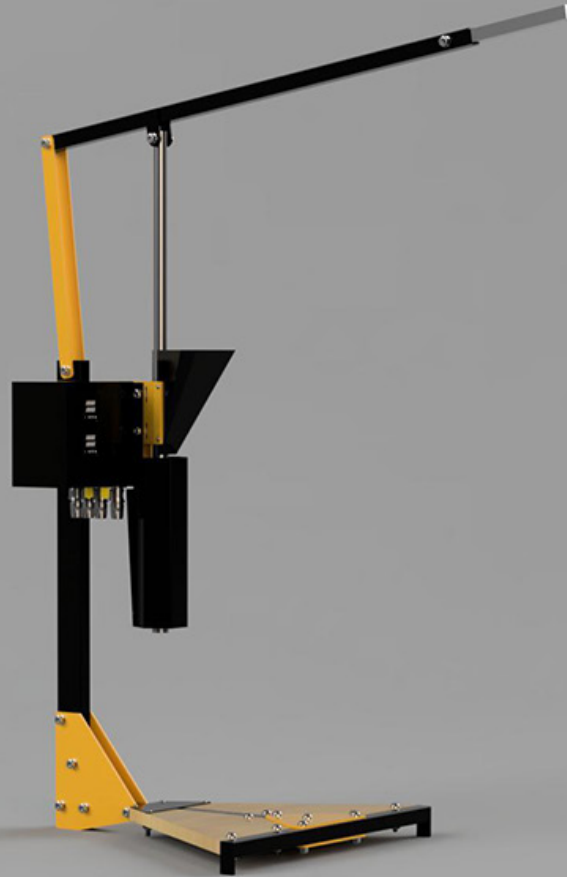
Nearly done, hurray!

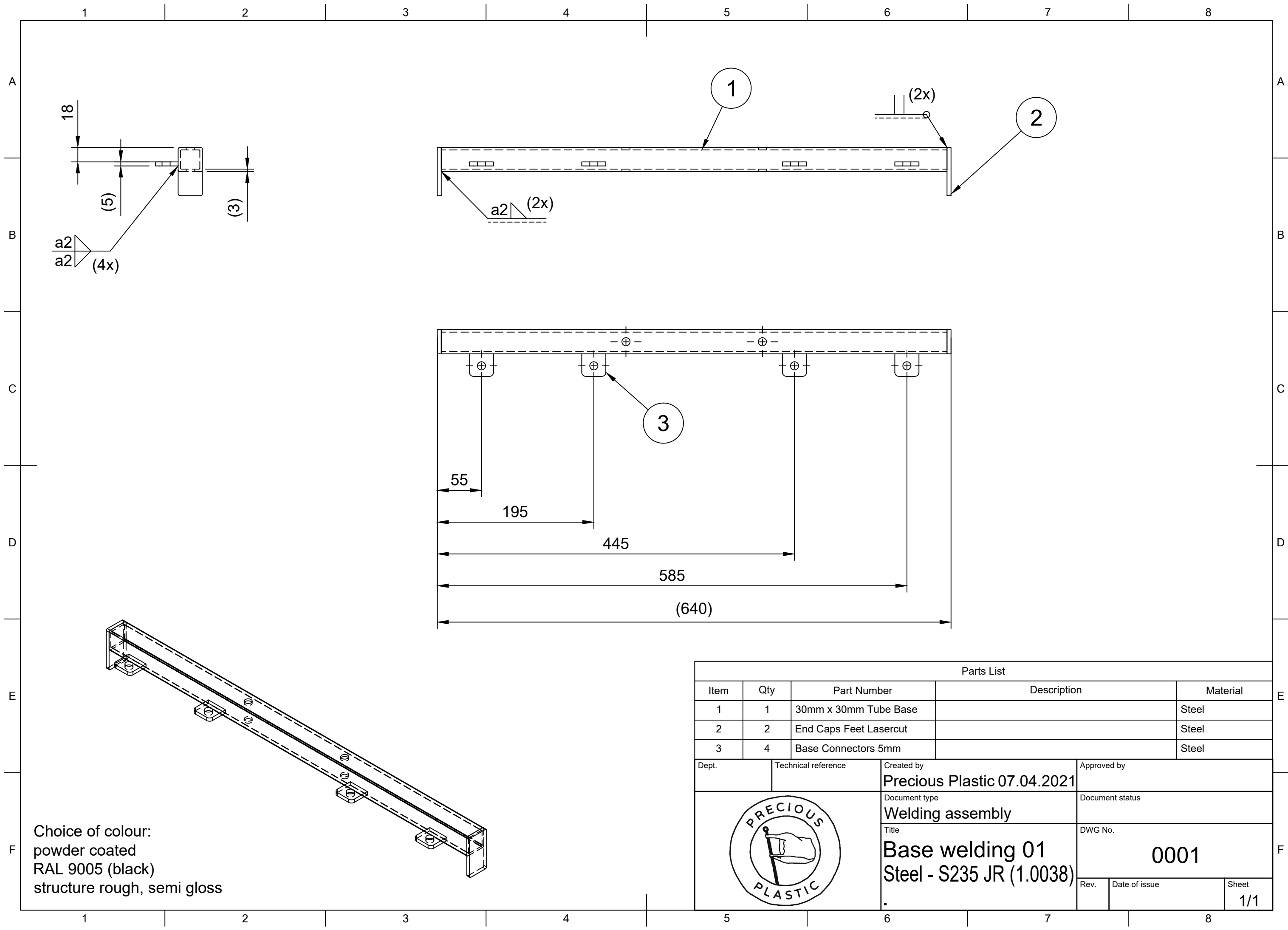
Now you'll need to connect the cable that's going to provide the power to the machine. For this we also used a kettle plug for easy transportation.

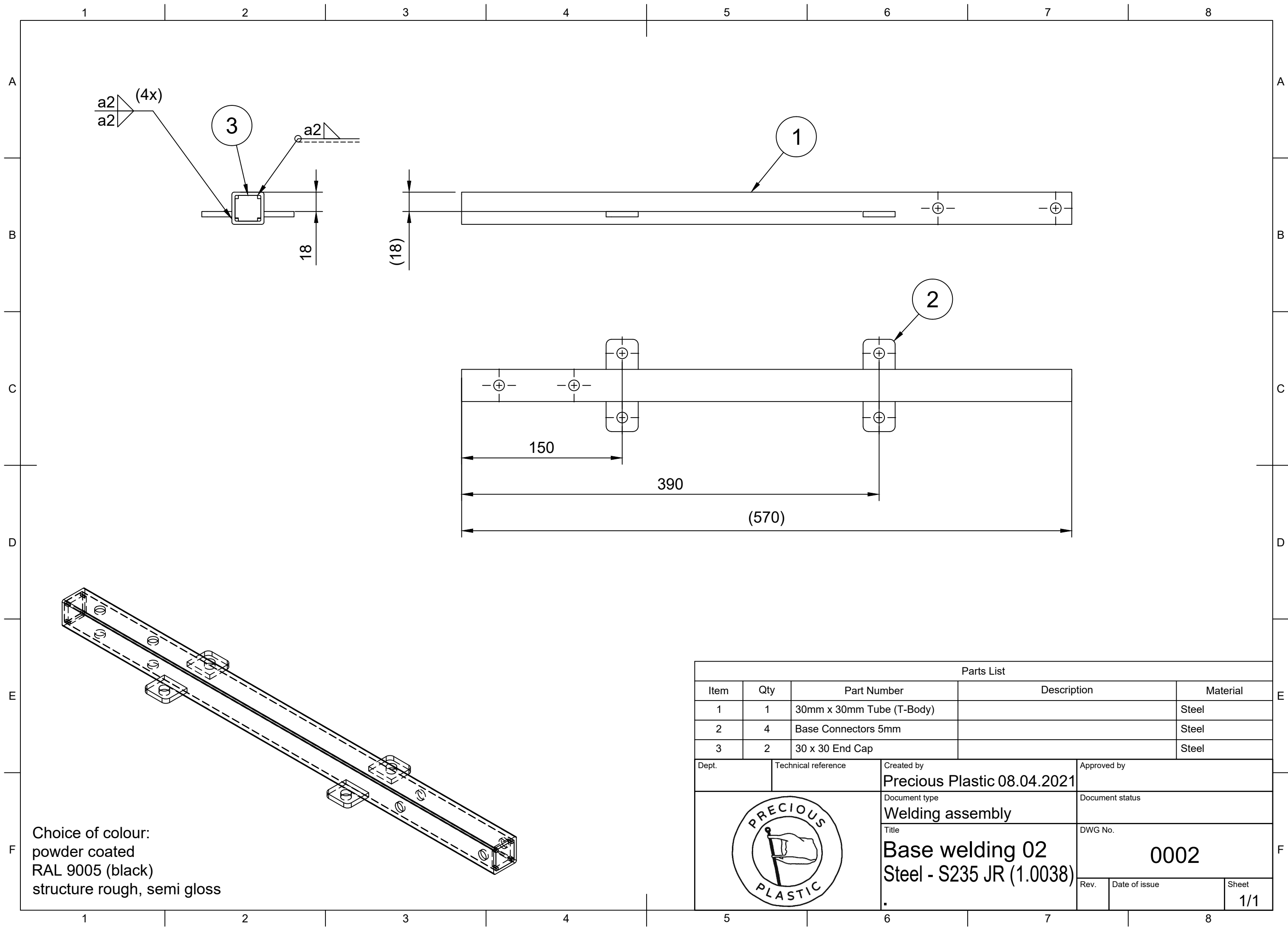
Now you can turn on your machine and start melting some plastic!

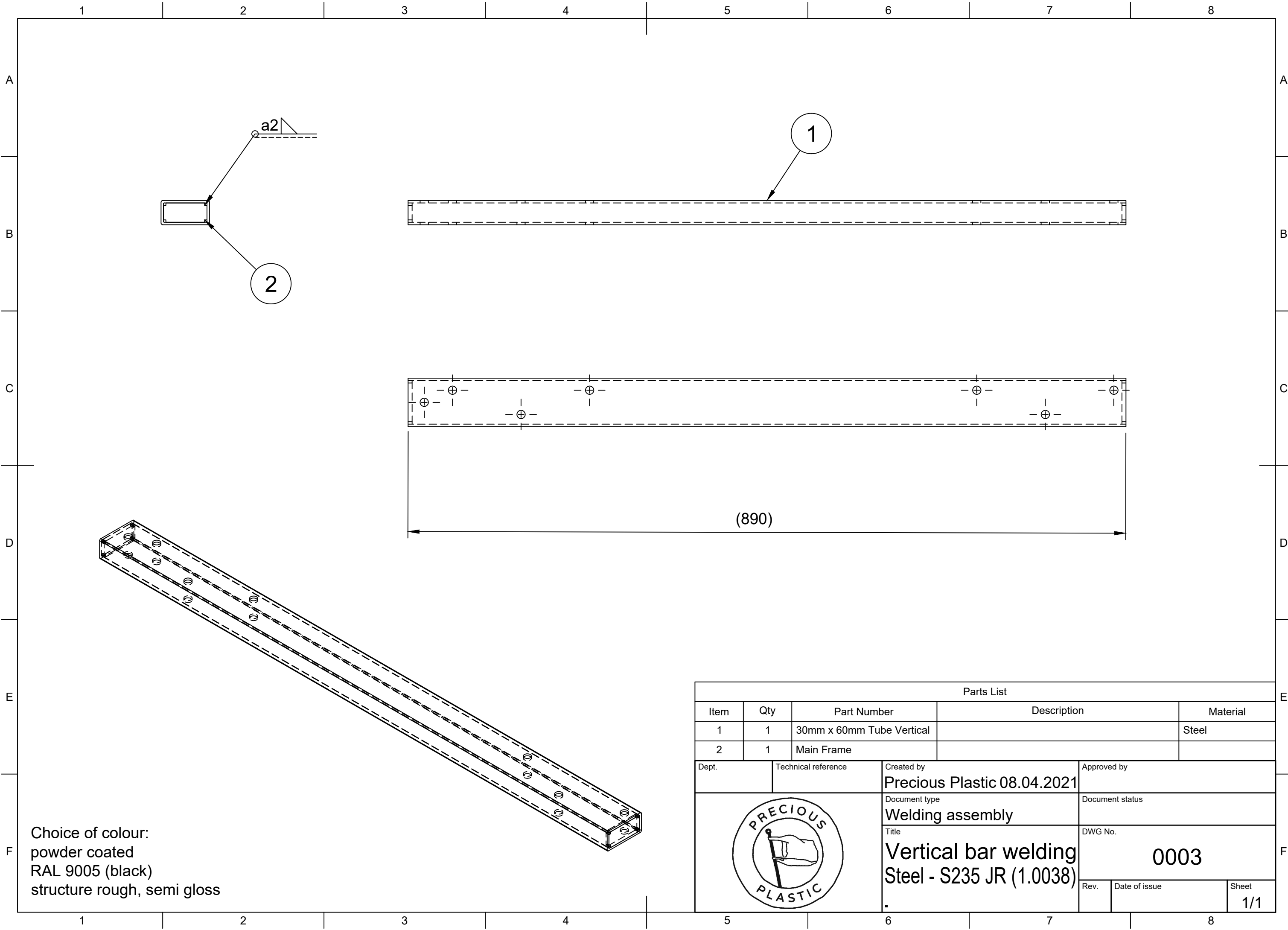
Happy melting :)!

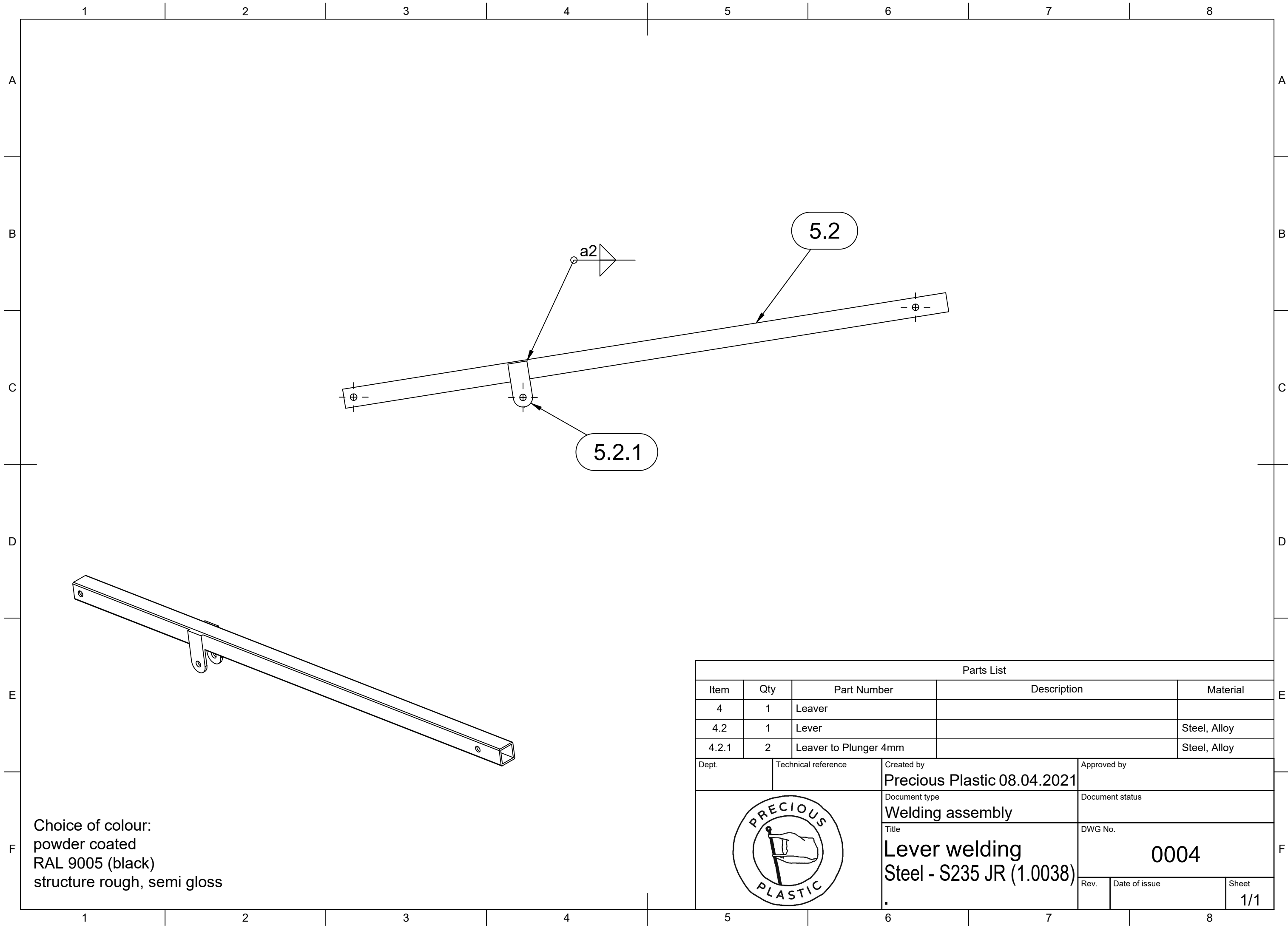


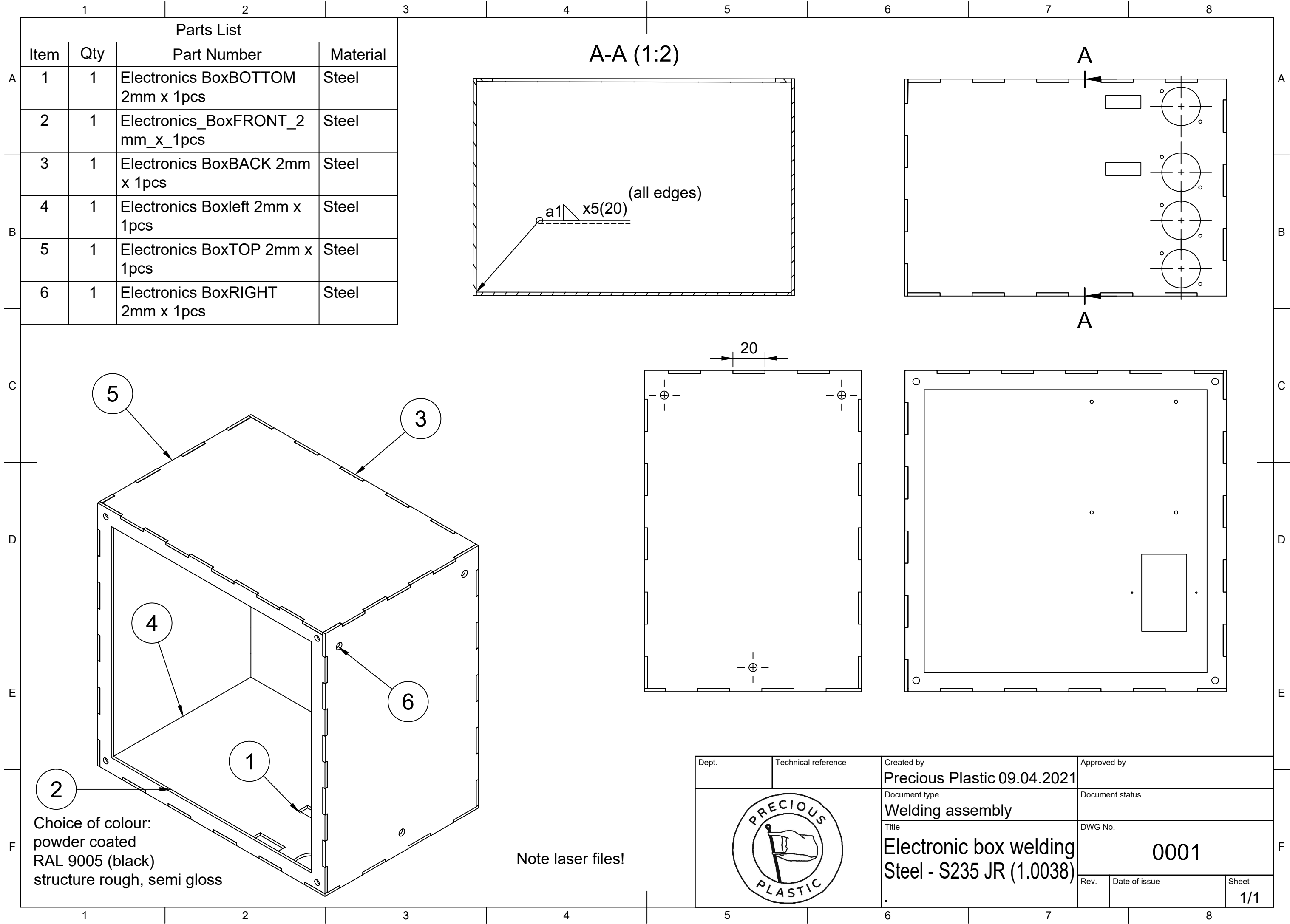


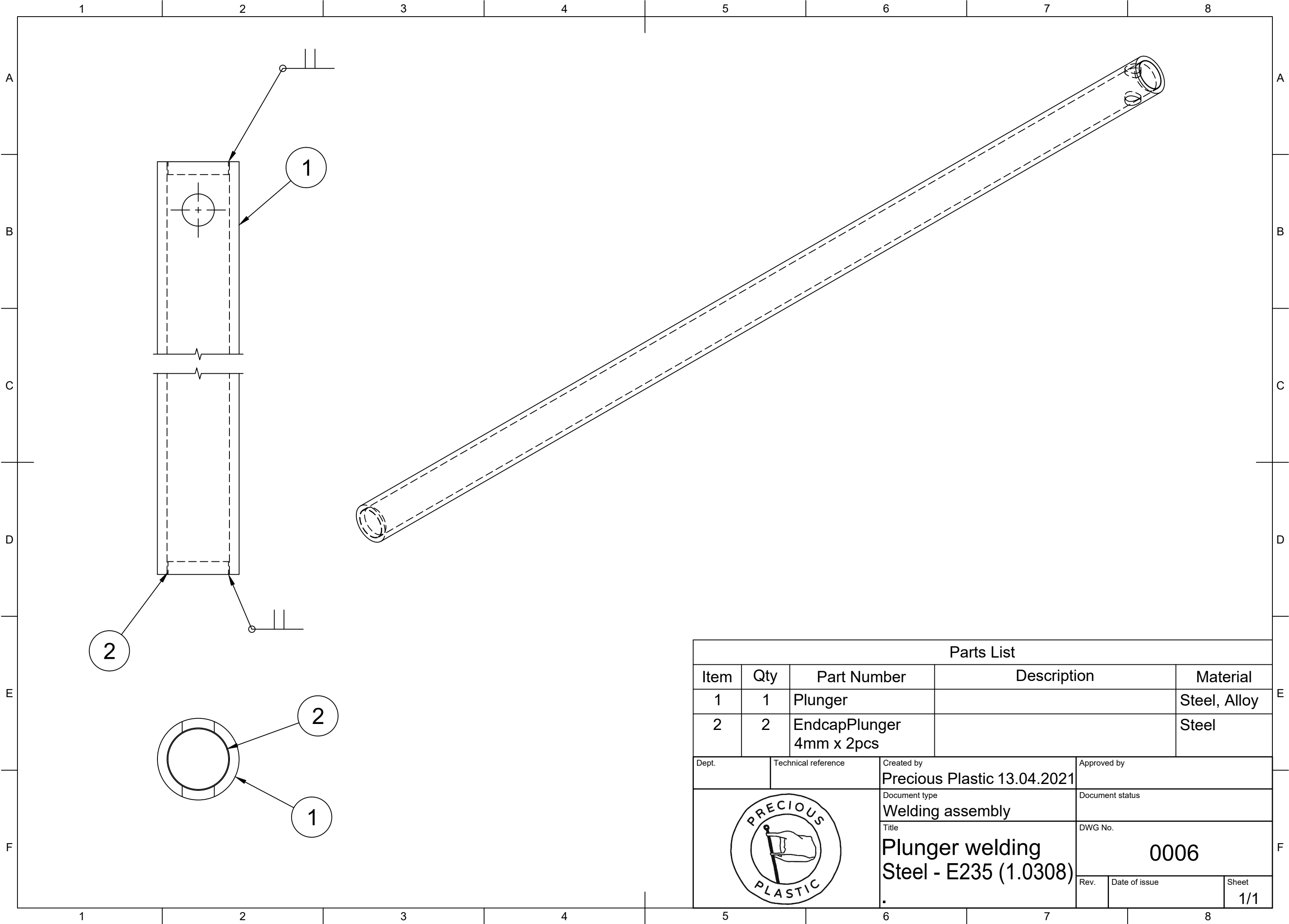




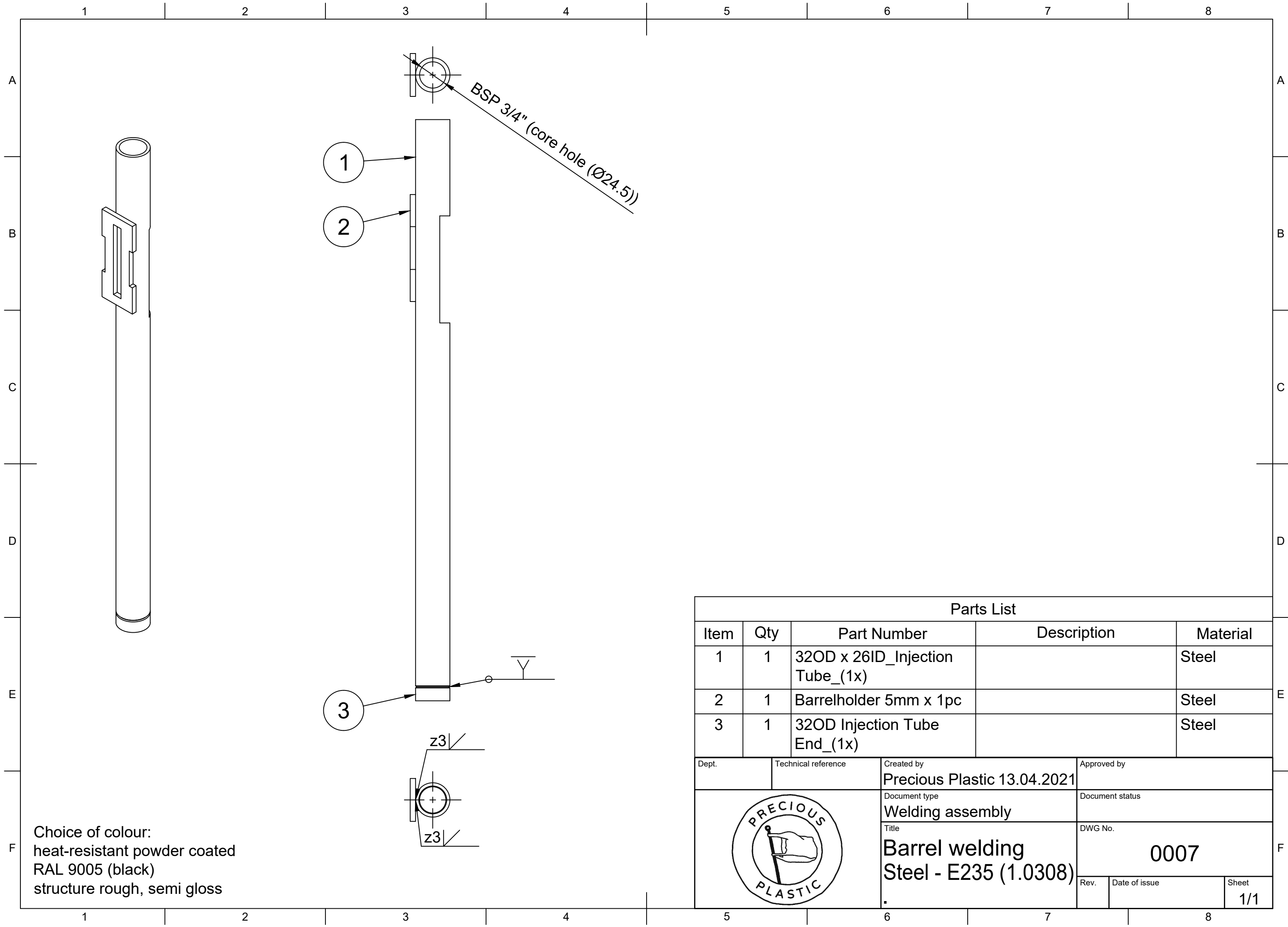


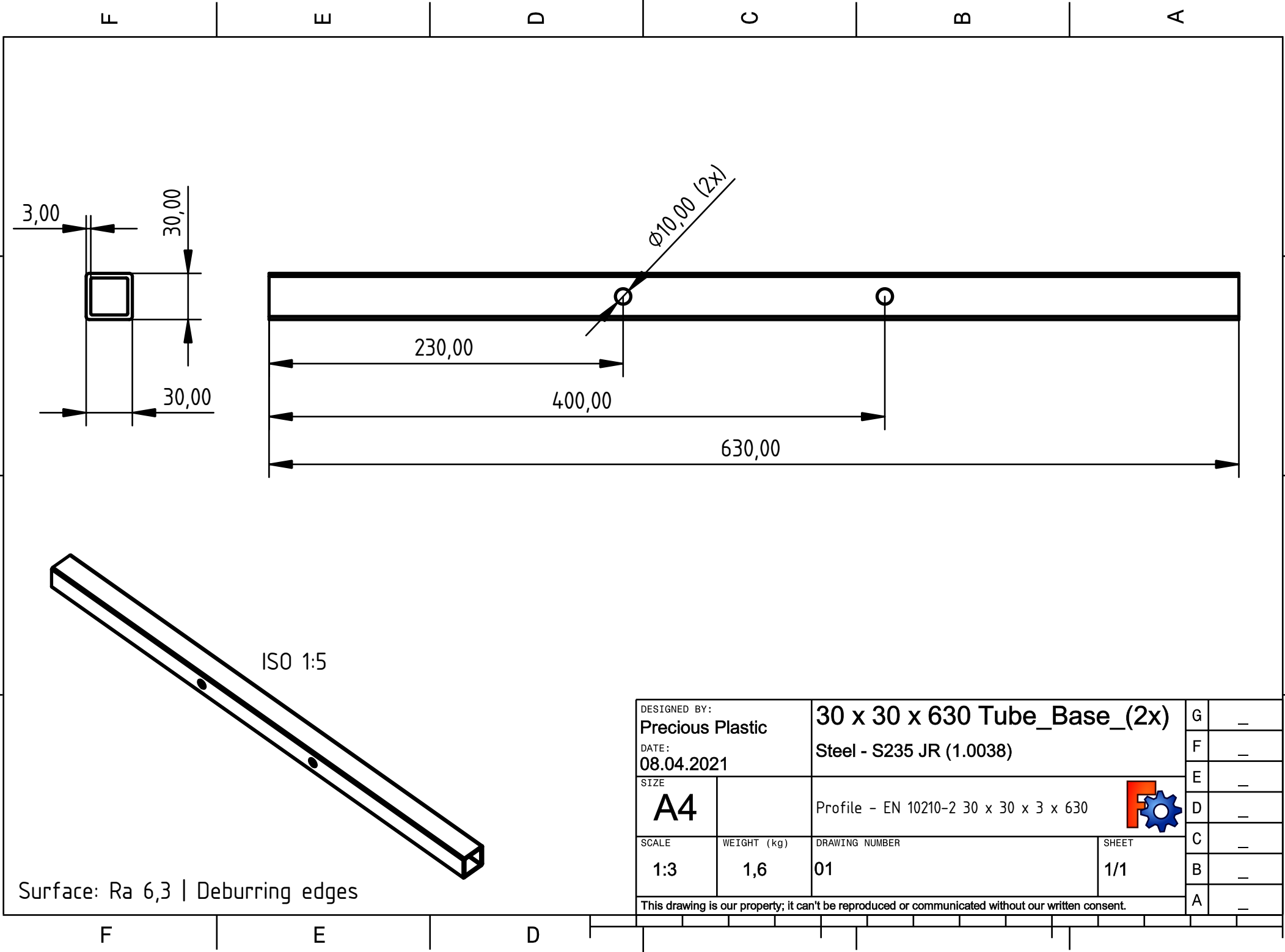


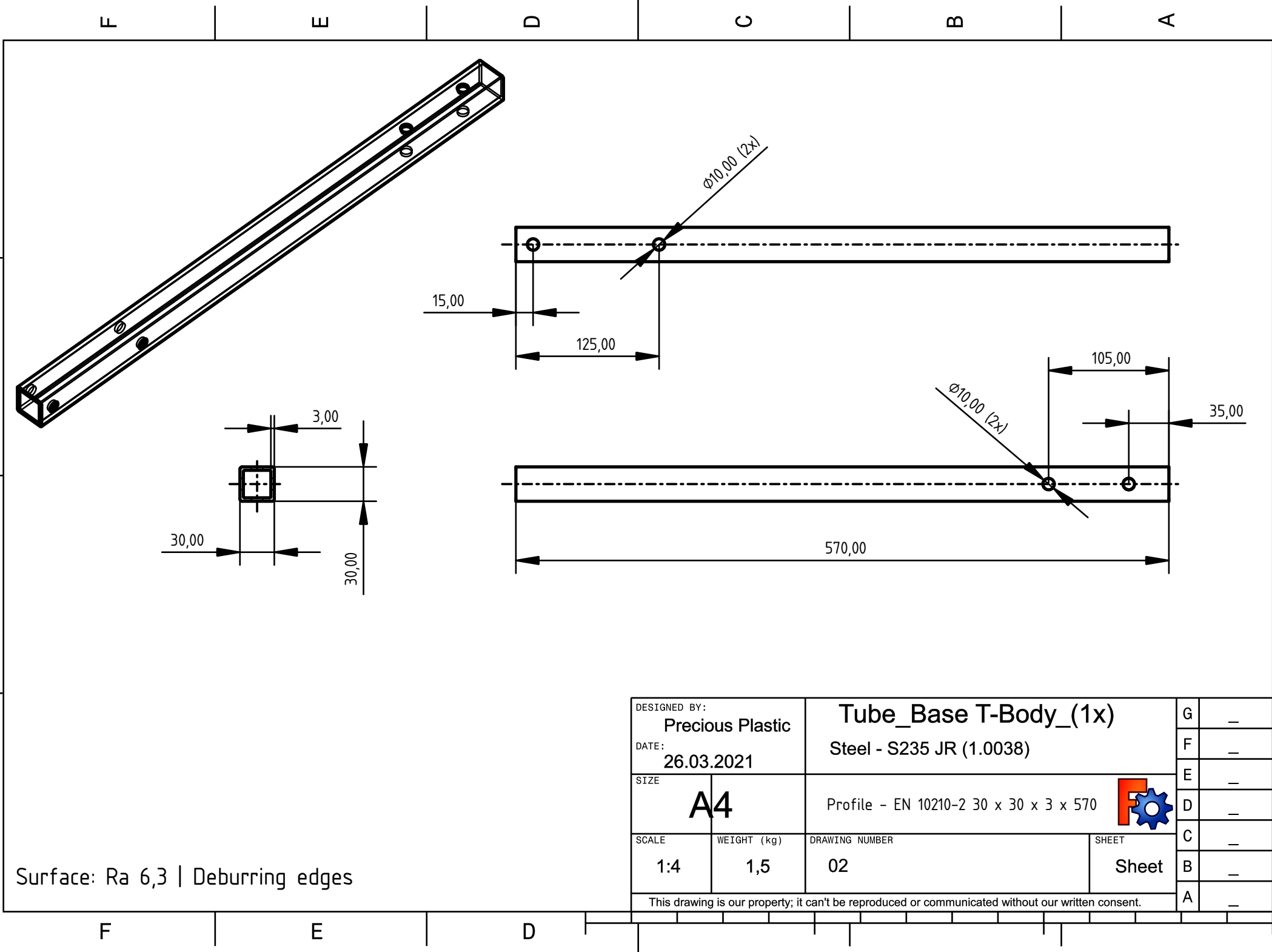




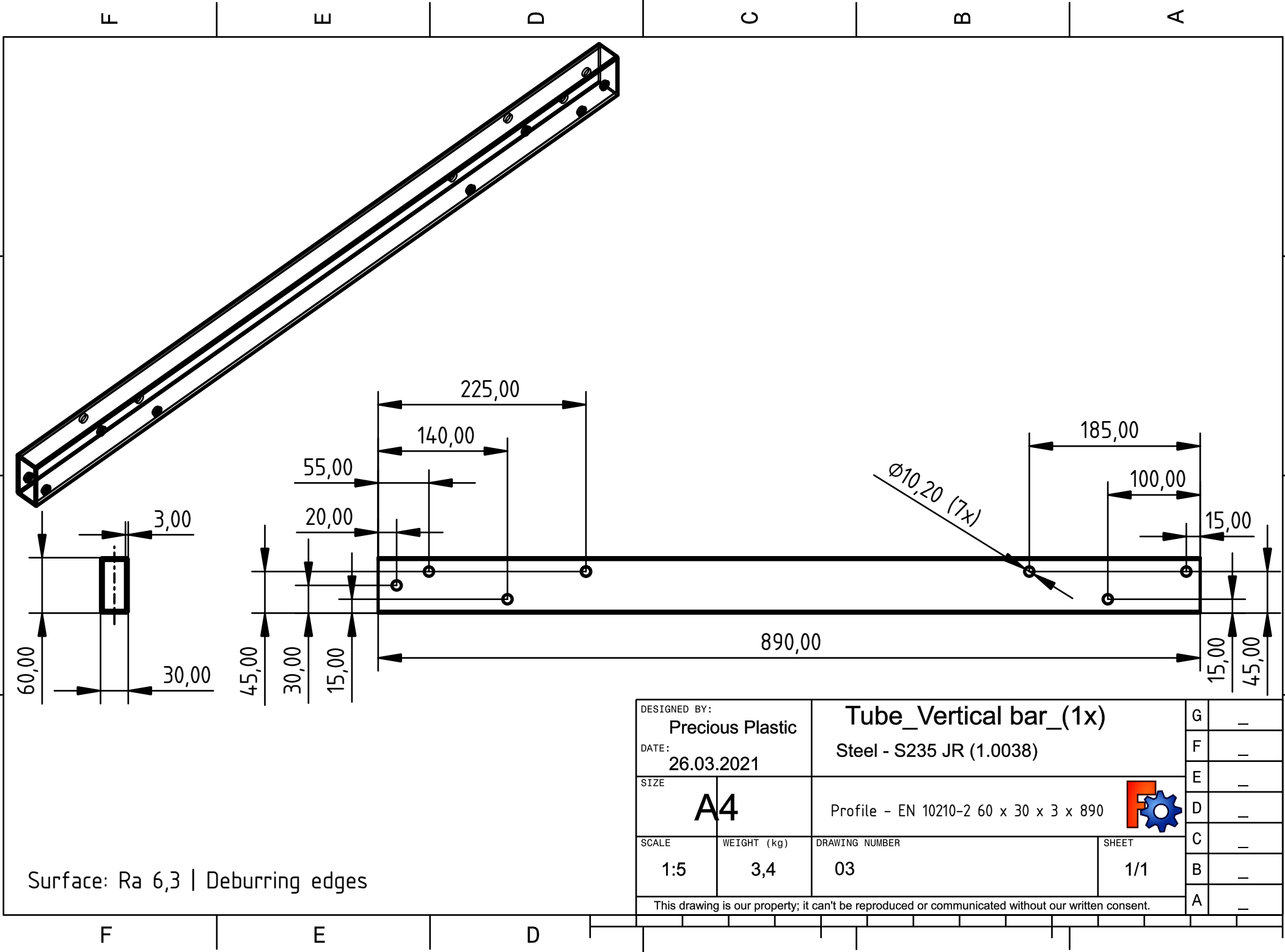
Parts List				
Item	Qty	Part Number	Description	Material
1	1	Plunger		Steel, Alloy
2	2	EndcapPlunger 4mm x 2pcs		Steel
Dept.		Technical reference	Created by Precious Plastic 13.04.2021	Approved by
			Document type Welding assembly	Document status
			Title Plunger welding Steel - E235 (1.0308)	DWG No. 0006
			Rev. .	Date of issue Sheet 1/1

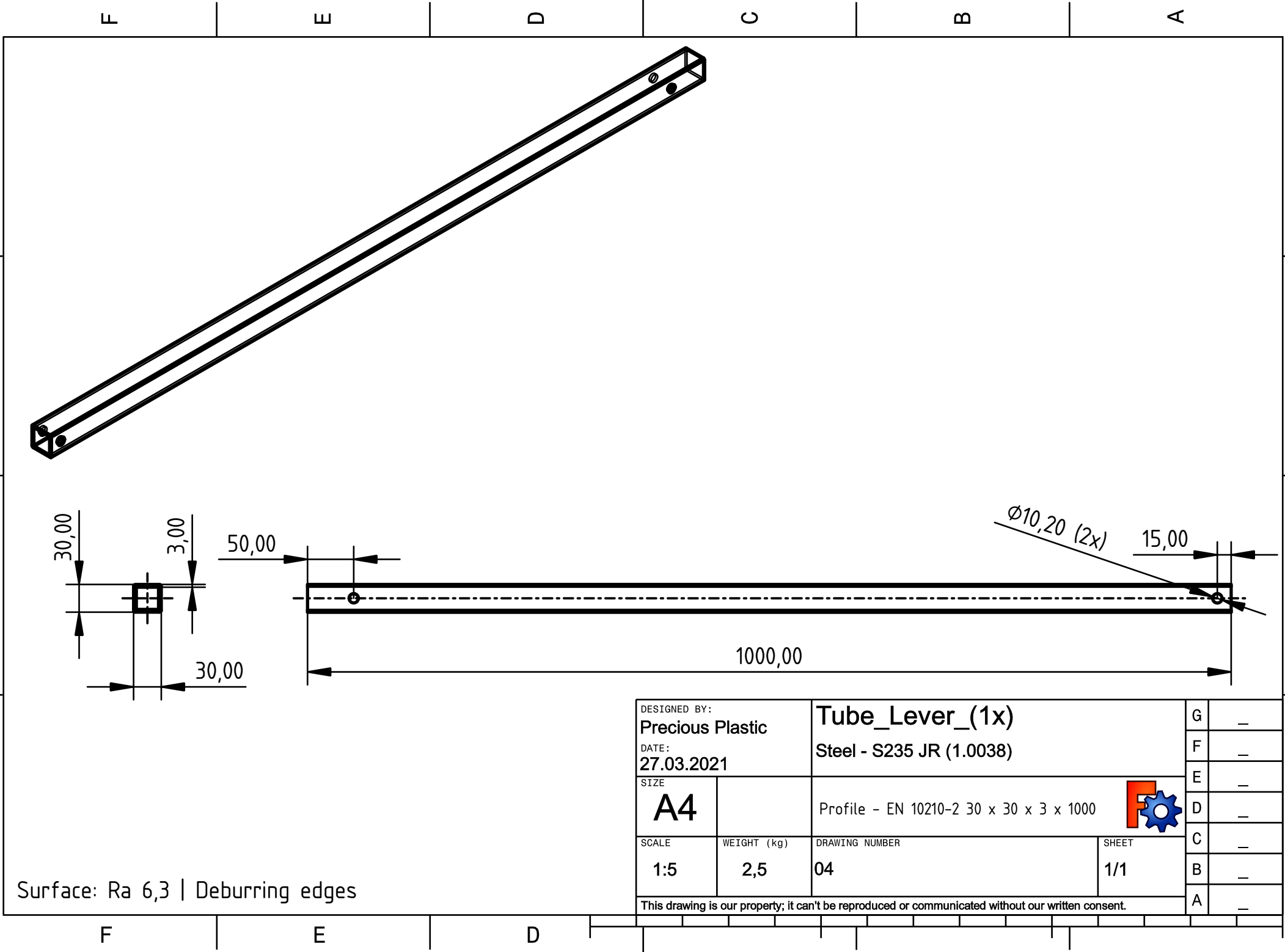






DESIGNED BY: Precious Plastic		Tube_Base T-Body_(1x) Steel - S235 JR (1.0038)		G	—
DATE: 26.03.2021				F	—
SIZE	A4	Profile - EN 10210-2 30 x 30 x 3 x 570 		E	—
				D	—
SCALE	WEIGHT (kg)	DRAWING NUMBER	SHEET	C	—
1:4	1,5	02	Sheet	B	—
This drawing is our property; it can't be reproduced or communicated without our written consent.				A	—





Surface: Ra 6,3 | Deburring edges

DESIGNED BY: Precious Plastic		Tube_Lever_(1x)		G	—
DATE: 27.03.2021		Steel - S235 JR (1.0038)		F	—
SIZE A4		Profile - EN 10210-2 30 x 30 x 3 x 1000 		E	—
				D	—
SCALE 1:5	WEIGHT (kg) 2,5	DRAWING NUMBER 04	SHEET 1/1	C	—
This drawing is our property; it can't be reproduced or communicated without our written consent.				B	—
				A	—

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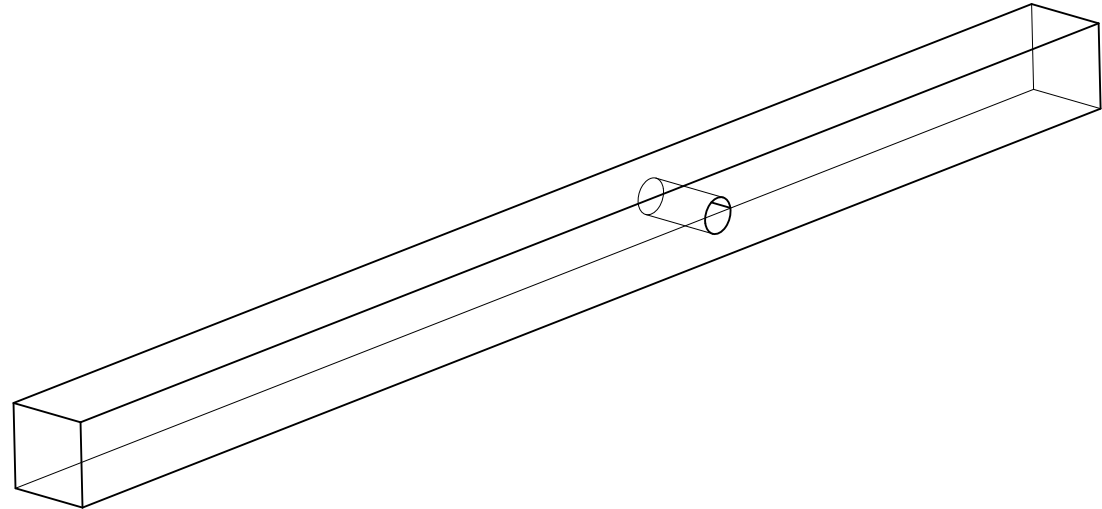
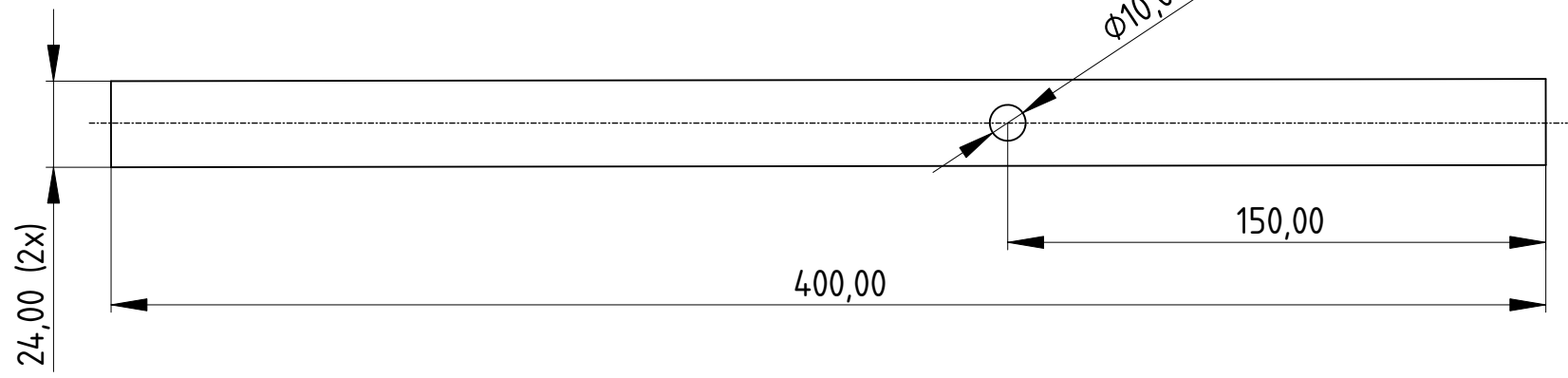
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2

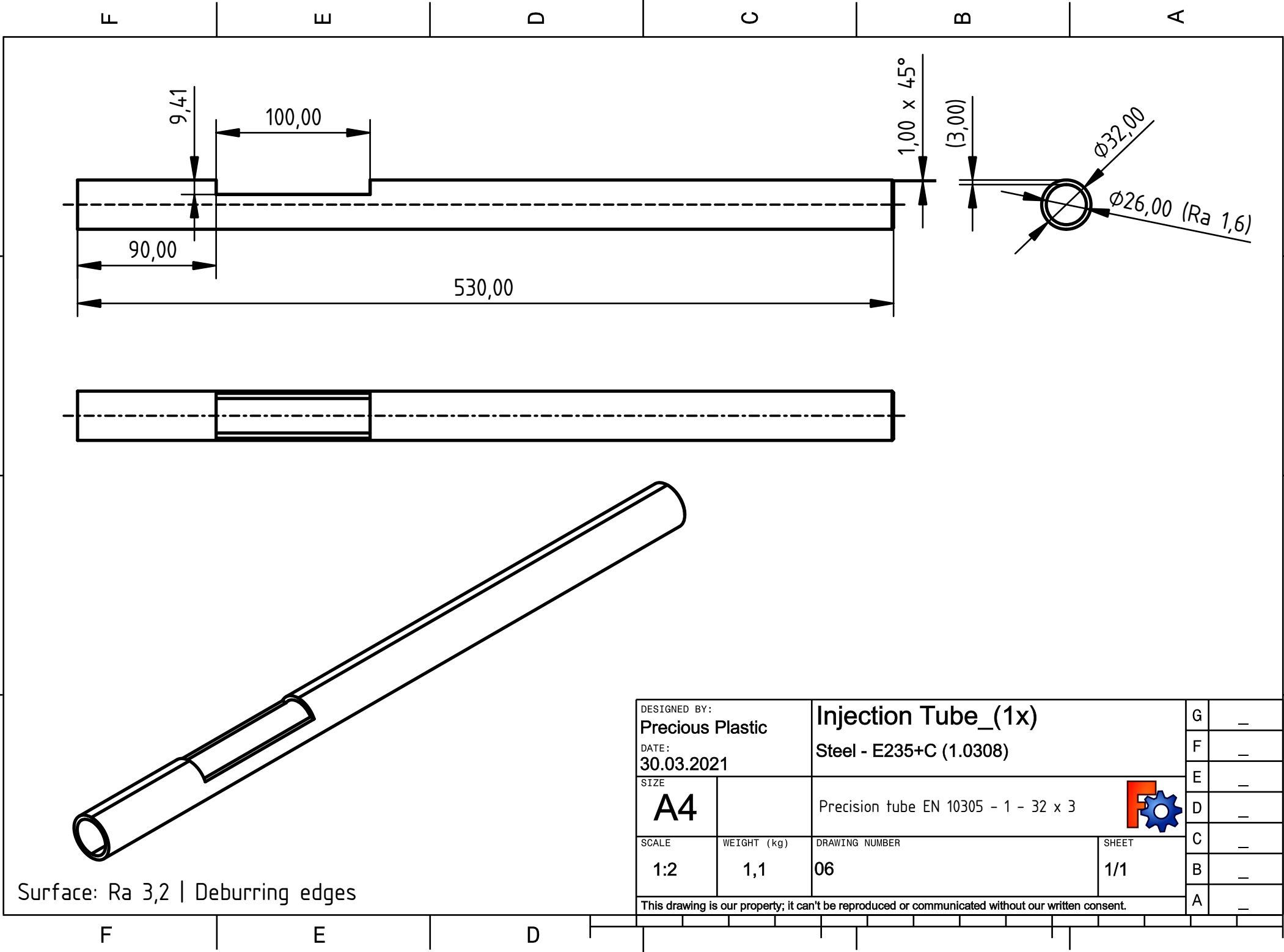
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1

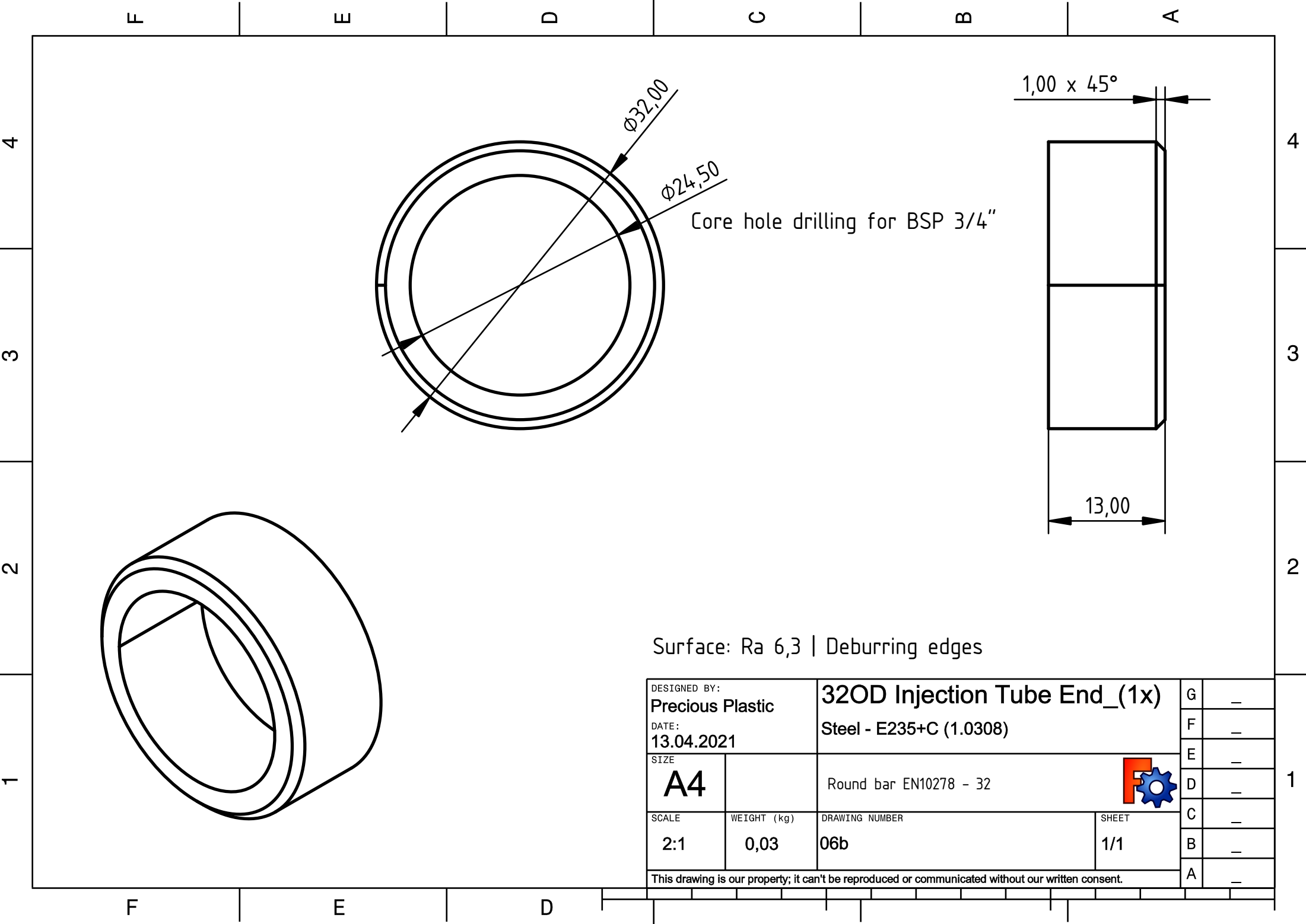


Surface: Ra 6,3 | Deburring edges

DESIGNED BY: Precious Plastic		Handle bar_(1x) Stainless Steel - X5 CrNi 18-10 (1.4301)		G	—
DATE: 29.03.2021				F	—
SIZE A4		Square bar - EN 10059 - 24 x 400 		E	—
SCALE 1:2	WEIGHT (kg) 0,8			DRAWING NUMBER 05	SHEET 1/1
				C	—
				B	—
				A	—
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DESIGNED BY: Precious Plastic		Injection Tube_(1x) Steel - E235+C (1.0308)		G	—			
DATE: 30.03.2021				F	—			
SIZE	A4	Precision tube EN 10305 - 1 - 32 x 3 		E	—			
SCALE				WEIGHT (kg)	DRAWING NUMBER	SHEET	D	—
1:2				1,1	06	1/1	C	—
This drawing is our property; it can't be reproduced or communicated without our written consent.				B	—			
				A	—			

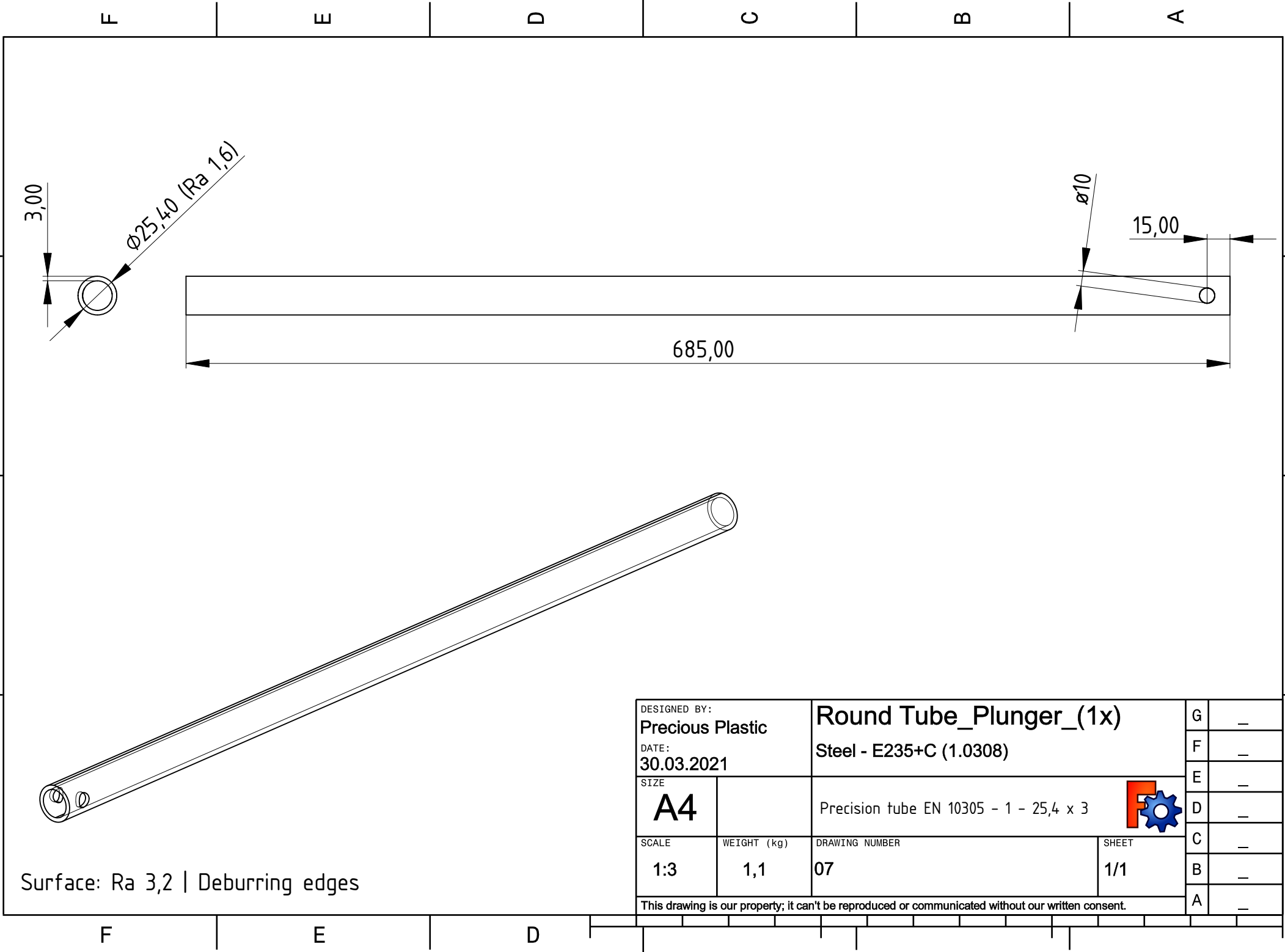


Core hole drilling for BSP 3/4"

Surface: Ra 6,3 | Deburring edges

DESIGNED BY: Precious Plastic		32OD Injection Tube End_(1x) Steel - E235+C (1.0308)		G	—
DATE: 13.04.2021				F	—
SIZE A4		Round bar EN10278 - 32		E	—
				D	—
SCALE 2:1	WEIGHT (kg) 0,03	DRAWING NUMBER 06b		C	—
				SHEET 1/1	B
This drawing is our property; it can't be reproduced or communicated without our written consent.				A	—





DESIGNED BY:

Precious Plastic

DATE:

30.03.2021

SIZE

A4

SCALE

1:3

WEIGHT (kg)

1,1

Round Tube_Plunger_(1x)

Steel - E235+C (1.0308)

Precision tube EN 10305 - 1 - 25,4 x 3

DRAWING NUMBER

07

SHEET

1/1



G

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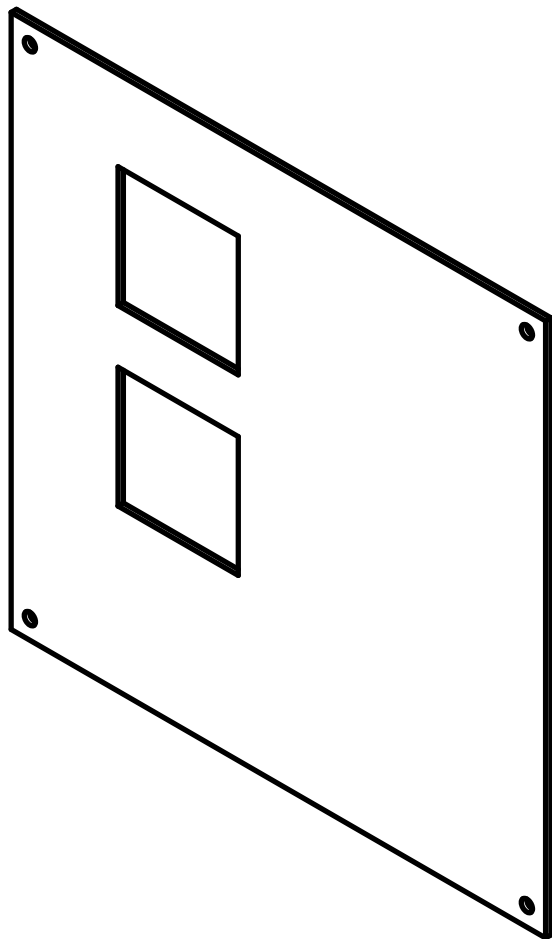
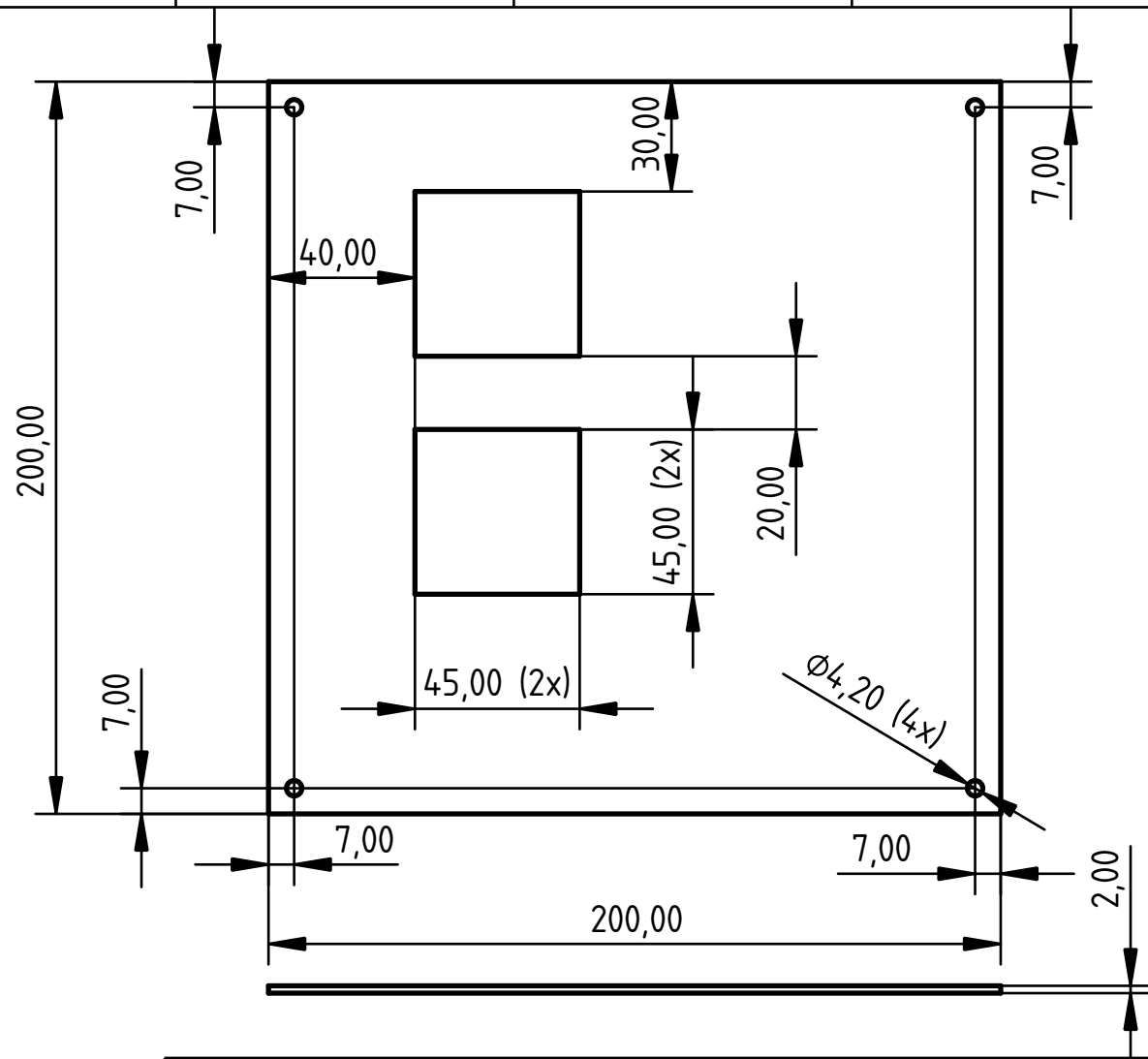
-

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This drawing is our property; it can't be reproduced or communicated without our written consent.

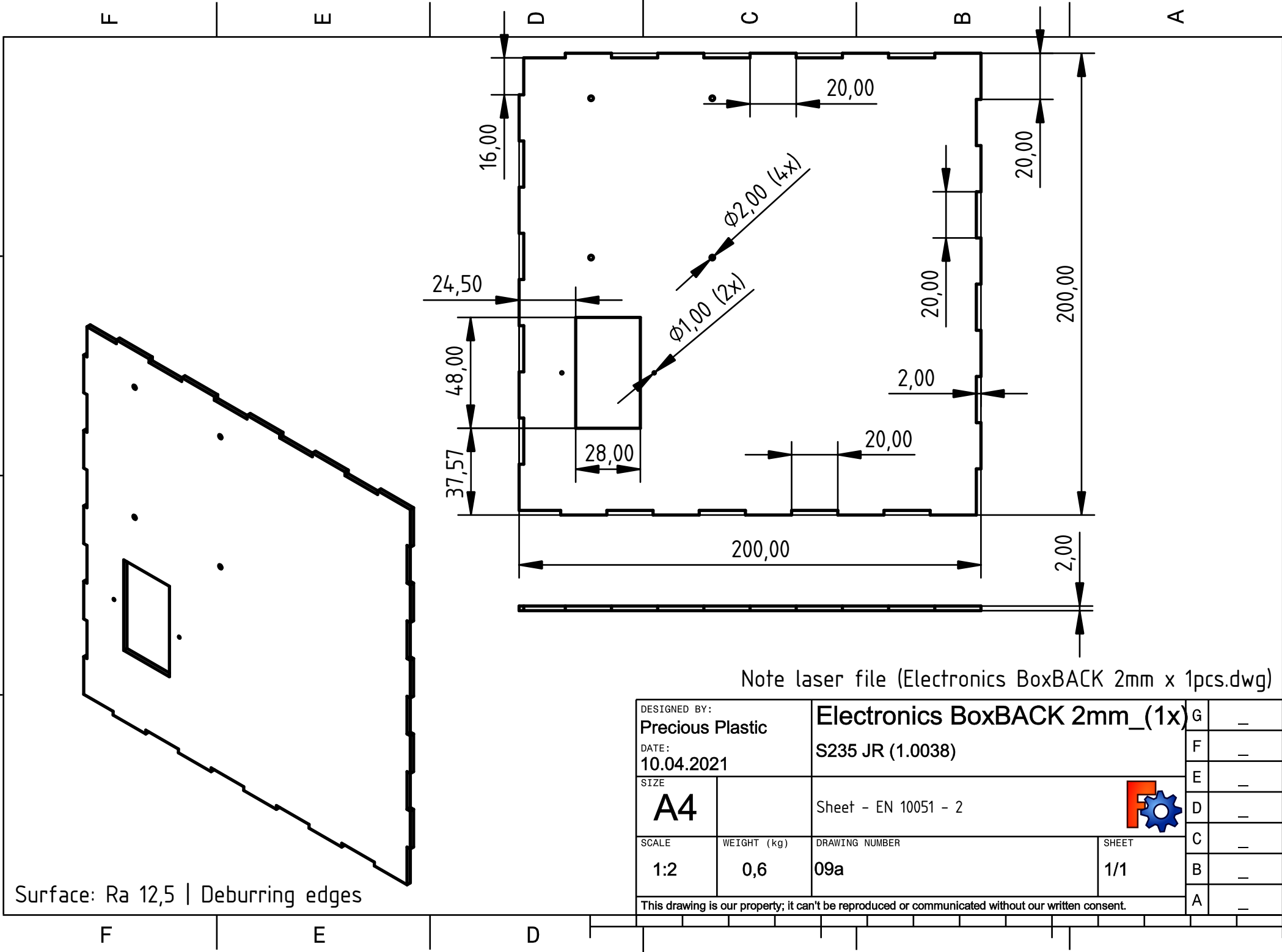
Surface: Ra 3,2 | Deburring edges



Note laser file! (Electronics BoxCOVER 2mm x 1pcs.dwg)

Surface: Ra 12,5 | Deburring edges

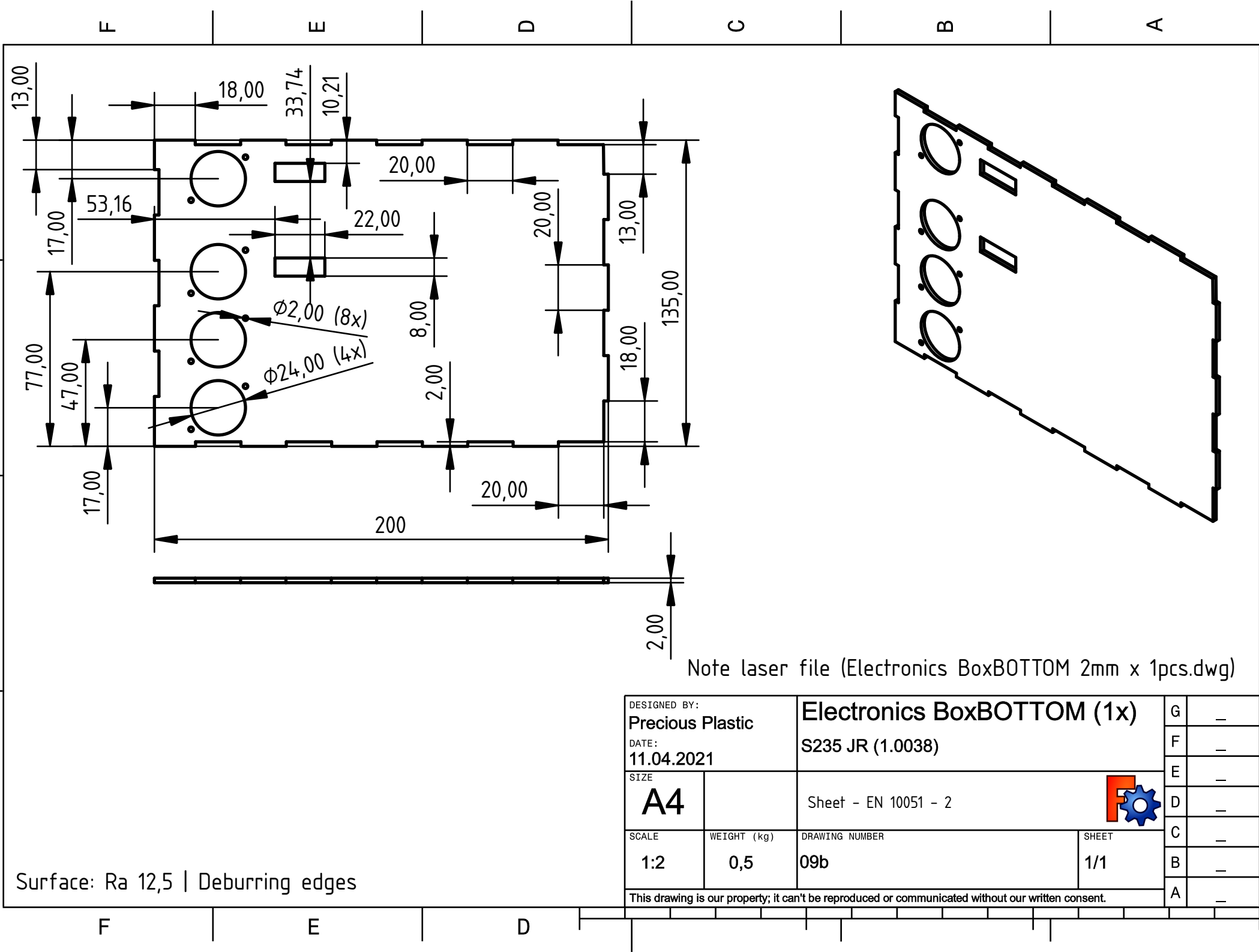
DESIGNED BY: Precious Plastic		Controller Front_(1x)		G	—
DATE: 30.03.2021		S235 JR (1.0038)		F	—
SIZE A4		Sheet - EN 10051 - 2		E	—
SCALE 1:2		DRAWING NUMBER 08		D	—
WEIGHT (kg) 0,6		SHEET 1/1		C	—
This drawing is our property; it can't be reproduced or communicated without our written consent.				B	—
				A	—



Surface: Ra 12,5 | Deburring edges

Note laser file (Electronics BoxBACK 2mm x 1pcs.dwg)

DESIGNED BY: Precious Plastic		Electronics BoxBACK 2mm_(1x) S235 JR (1.0038)		G	—	
DATE: 10.04.2021				F	—	
SIZE A4		Sheet - EN 10051 - 2			E	—
					D	—
SCALE 1:2	WEIGHT (kg) 0,6	DRAWING NUMBER 09a	SHEET 1/1	C	—	
This drawing is our property; it can't be reproduced or communicated without our written consent.				B	—	
				A	—	



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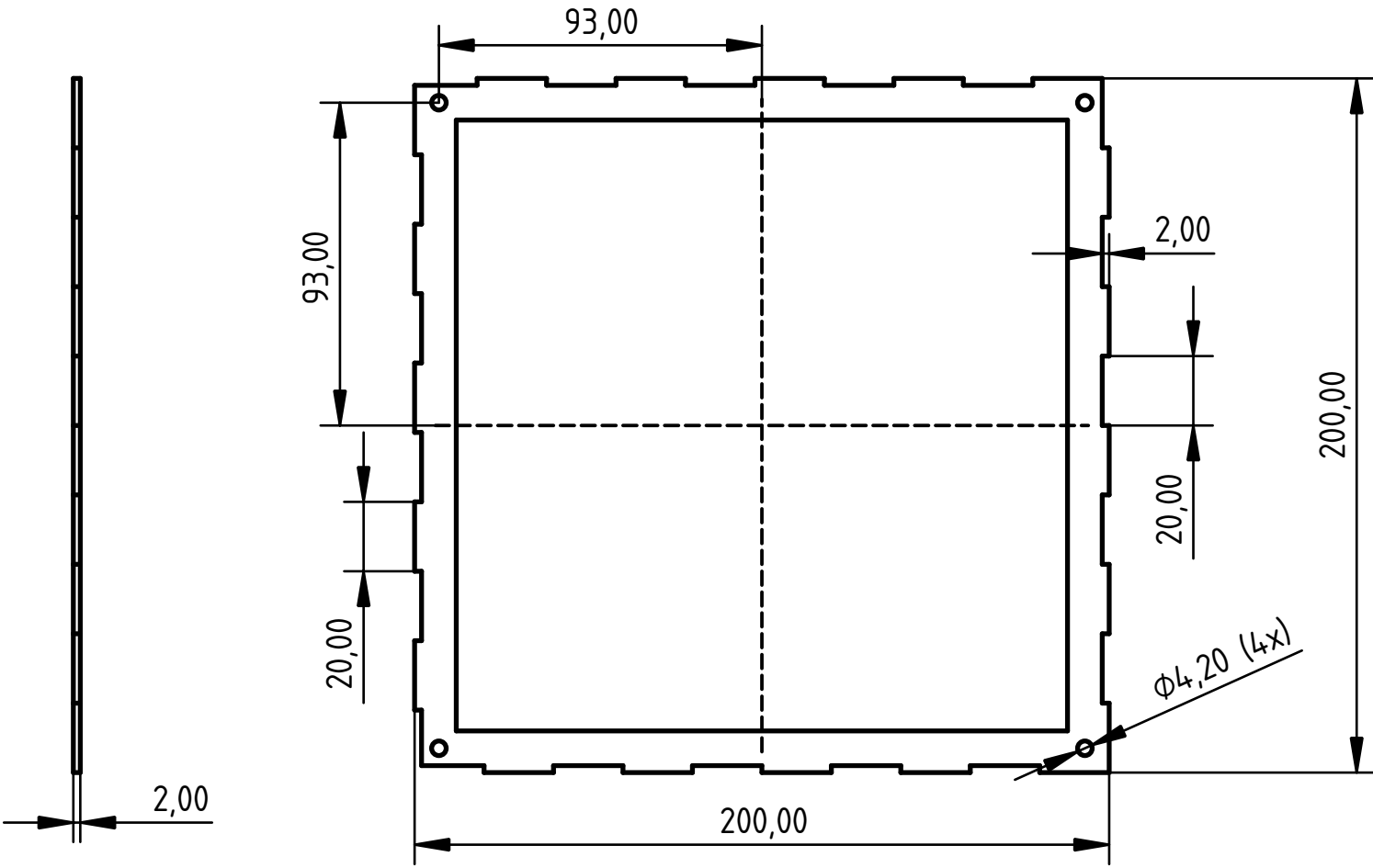
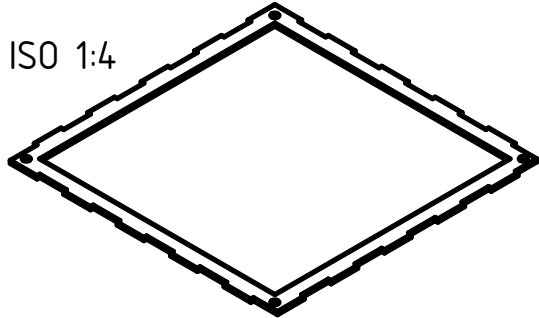
1

4

3

2

1

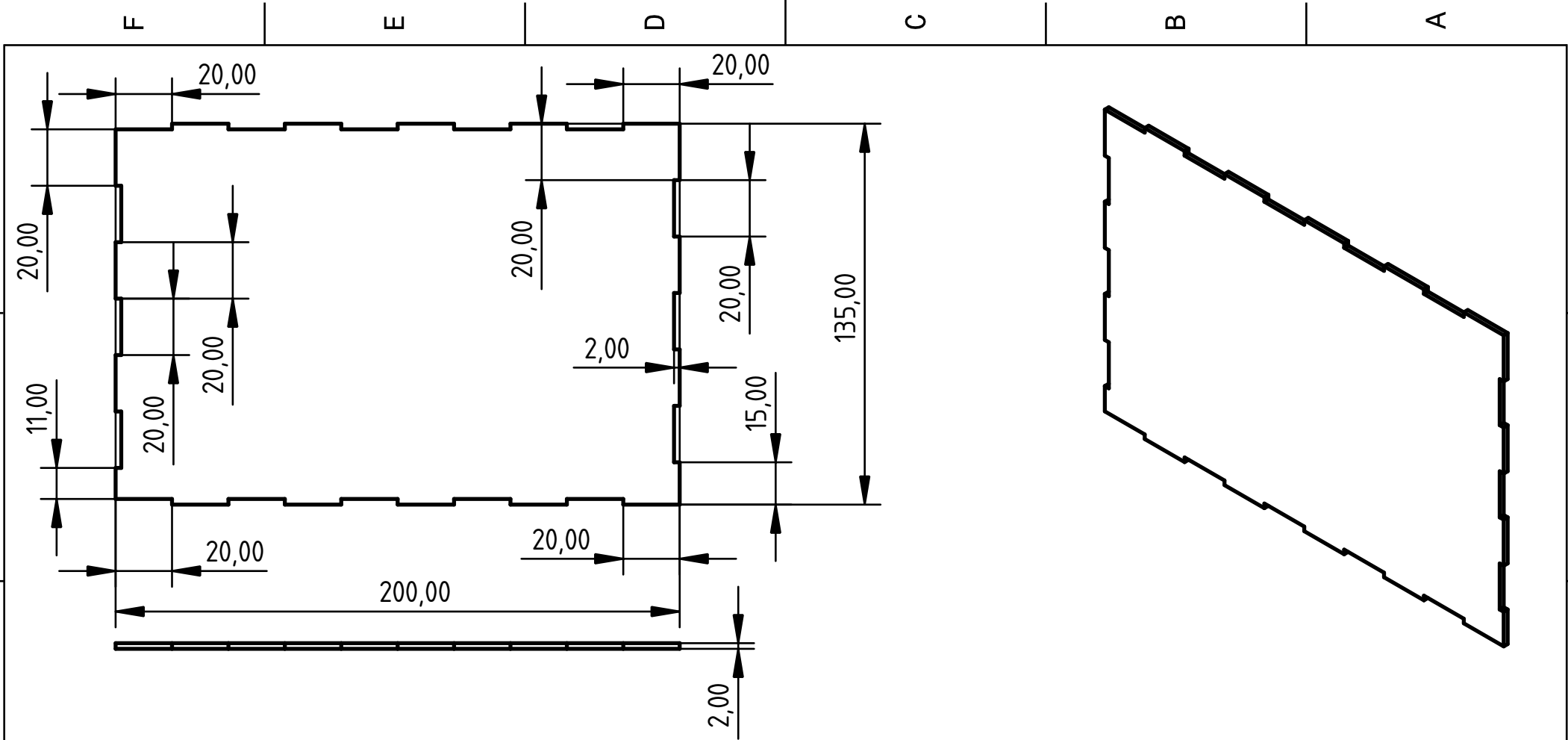


Surface: Ra 12,5 | Deburring edges

Note laser file (Electronics_BoxFRONT_2mm_x_1pcs.dwg)

DESIGNED BY: Precious Plastic		Electronics Box Mounting (1x)		G	—	
DATE: 08.04.2021		Steel - S235 JR (1.0038)		F	—	
SIZE A4		Sheet - EN 10051 - 2			E	—
					D	—
					C	—
					B	—
SCALE 1:2	WEIGHT (kg) 0,05	DRAWING NUMBER 09c	SHEET 1/1	A	—	
This drawing is our property; it can't be reproduced or communicated without our written consent.						

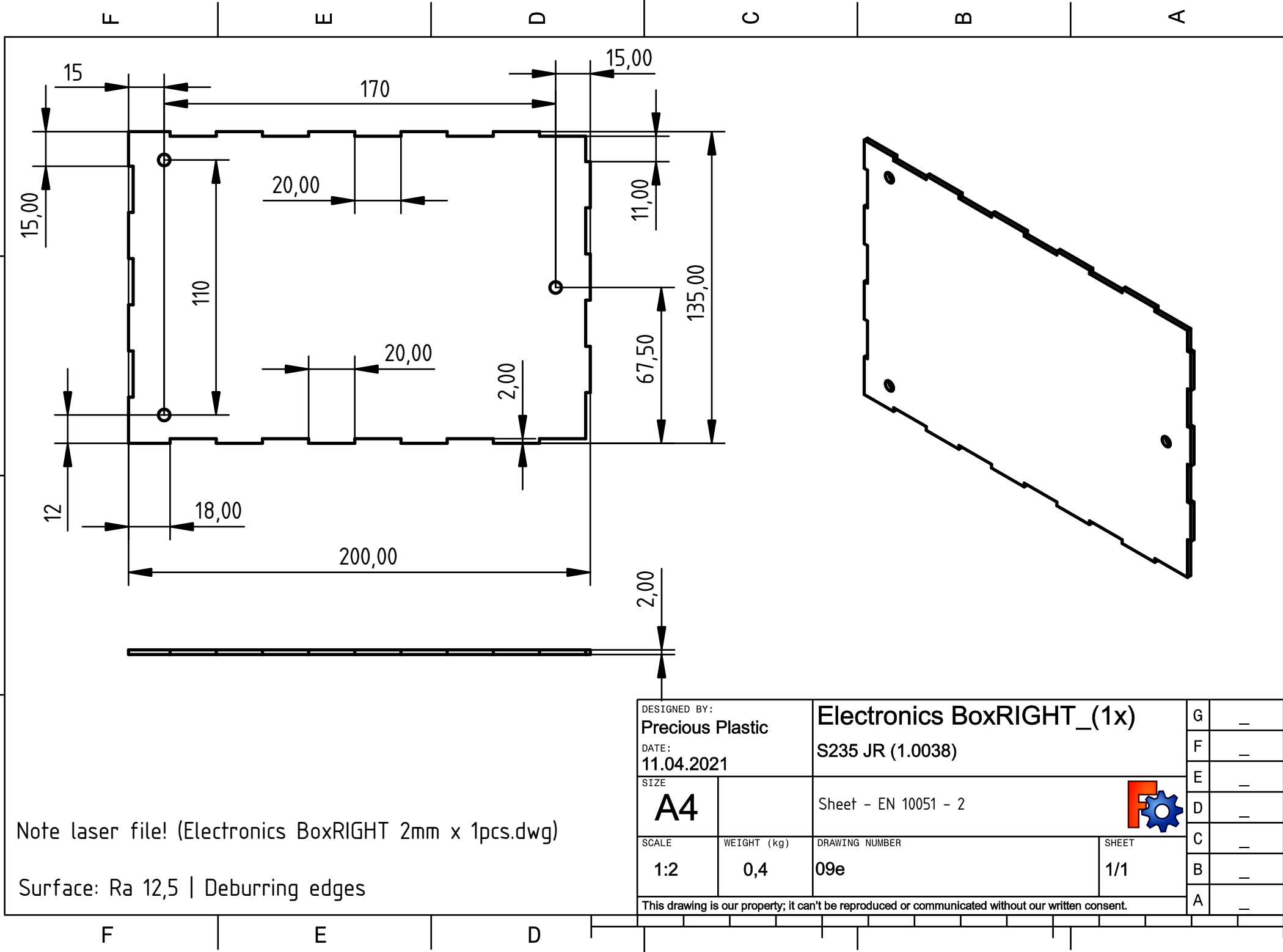




Note laser file (Electronics BoxLEFT 2mm x 1pcs.dwg)

DESIGNED BY: Precious Plastic		Electronics BoxLEFT 2mm_(1x) S235 JR (1.0038)		G	—
DATE: 11.04.2021				F	—
SIZE A4		Sheet - EN 10051 - 2 		E	—
				D	—
SCALE 1:2	WEIGHT (kg) 0,5	DRAWING NUMBER 09d		C	—
		SHEET 1/1		B	—
This drawing is our property; it can't be reproduced or communicated without our written consent.				A	—

Surface: Ra 12,5 | Deburring edges

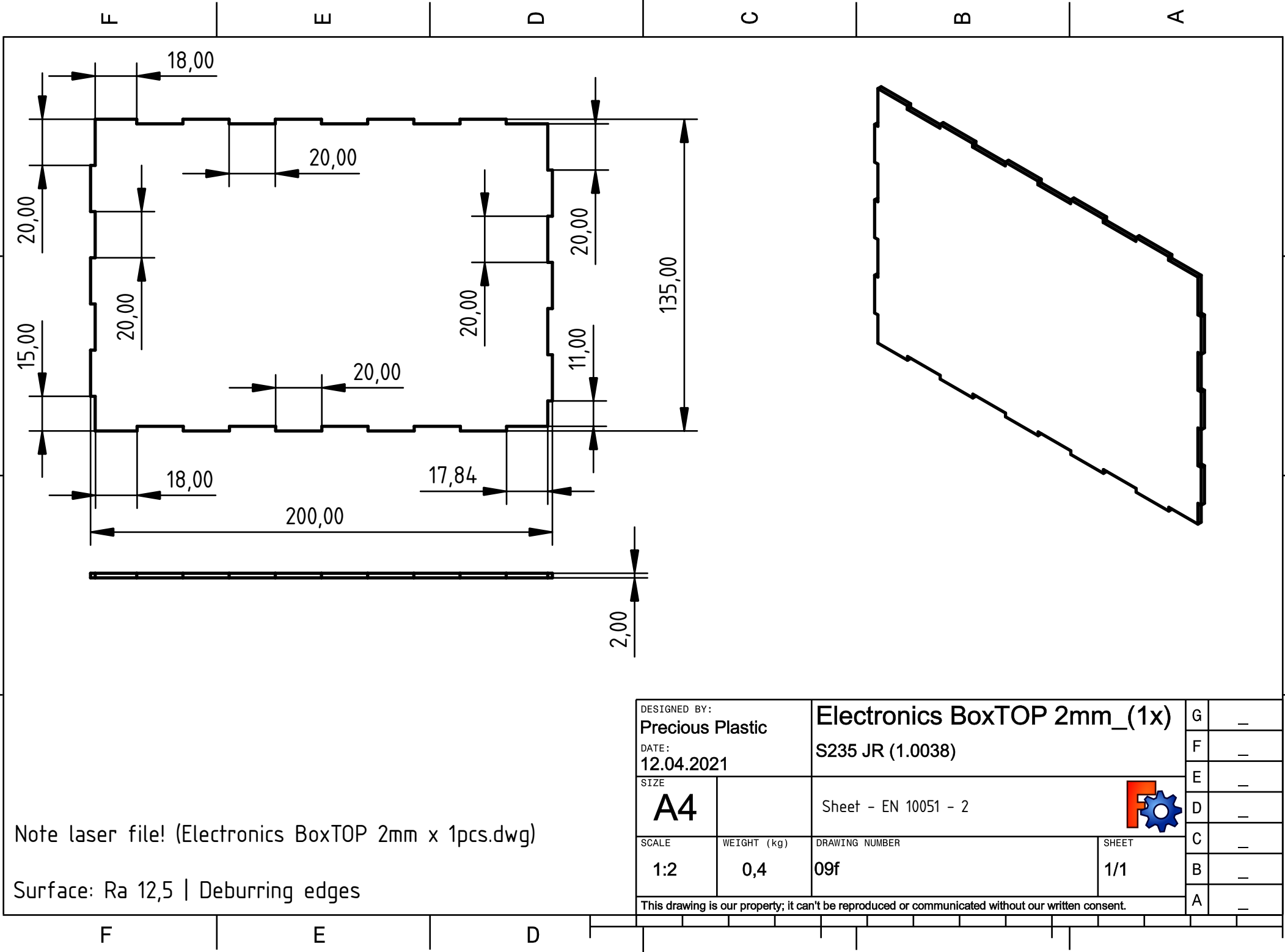


Note laser file! (Electronics BoxRIGHT 2mm x 1pcs.dwg)

Surface: Ra 12,5 | Deburring edges

DESIGNED BY: Precious Plastic		Electronics BoxRIGHT_(1x) S235 JR (1.0038)		G	—
DATE: 11.04.2021				F	—
SIZE A4		Sheet - EN 10051 - 2 		E	—
				D	—
SCALE 1:2	WEIGHT (kg) 0,4	DRAWING NUMBER 09e		C	—
				B	—
		SHEET 1/1		A	—
This drawing is our property; it can't be reproduced or communicated without our written consent.					

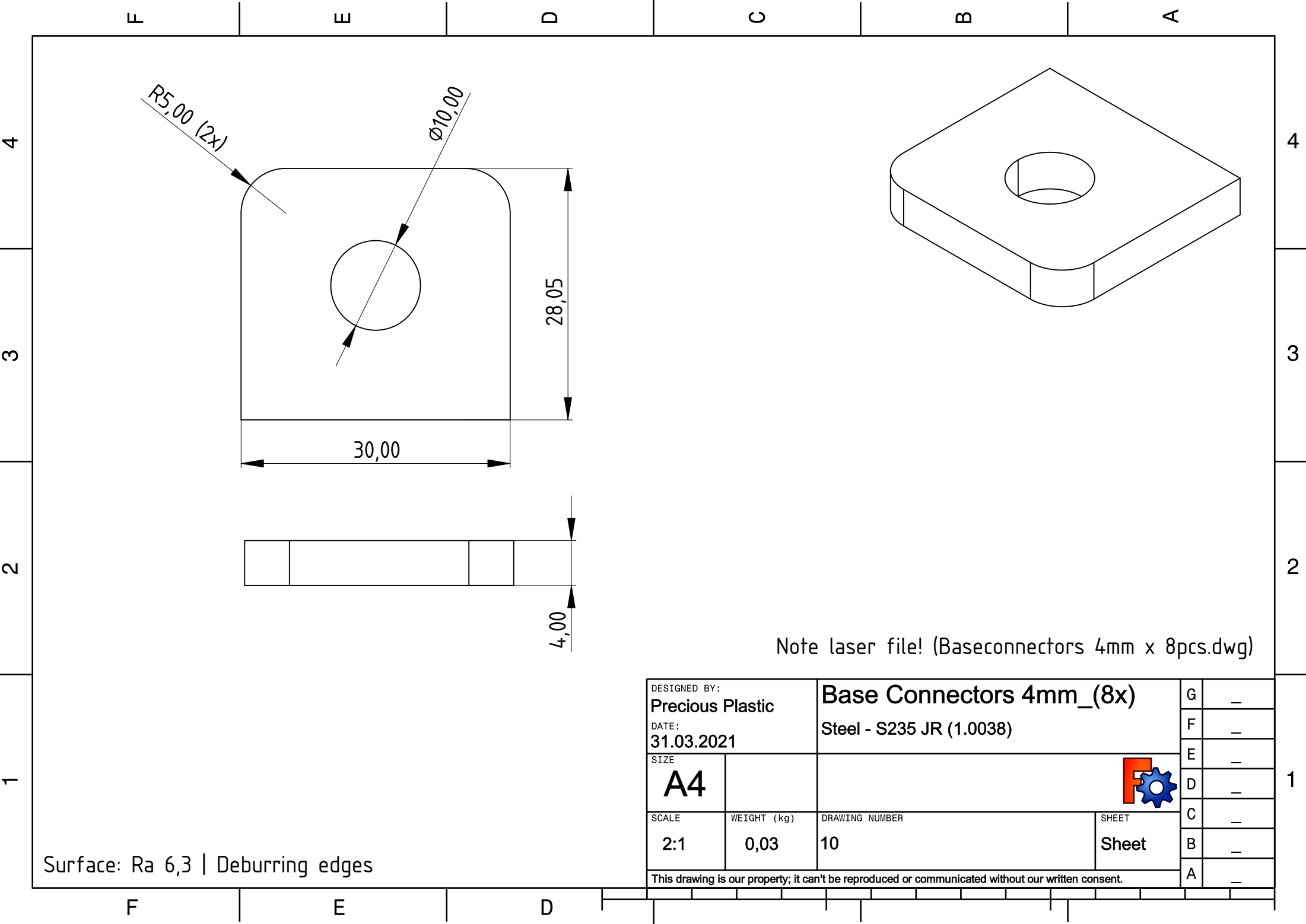




Note laser file! (Electronics BoxTOP 2mm x 1pcs.dwg)

Surface: Ra 12,5 | Deburring edges

DESIGNED BY: Precious Plastic		Electronics BoxTOP 2mm_(1x) S235 JR (1.0038)		G	—
DATE: 12.04.2021				F	—
SIZE A4		Sheet - EN 10051 - 2		E	—
				D	—
SCALE 1:2	WEIGHT (kg) 0,4	DRAWING NUMBER 09f		C	—
				SHEET 1/1	B
This drawing is our property; it can't be reproduced or communicated without our written consent.				A	—



Surface: Ra 6,3 | Deburring edges

Note laser file! (Baseconnectors 4mm x 8pcs.dwg)

DESIGNED BY: Precious Plastic		Base Connectors 4mm_(8x) Steel - S235 JR (1.0038)		G	—
DATE: 31.03.2021				F	—
SIZE A4				E	—
				D	—
SCALE 2:1	WEIGHT (kg) 0,03	DRAWING NUMBER 10		C	—
				B	—
		SHEET Sheet		A	—
This drawing is our property; it can't be reproduced or communicated without our written consent.					

F

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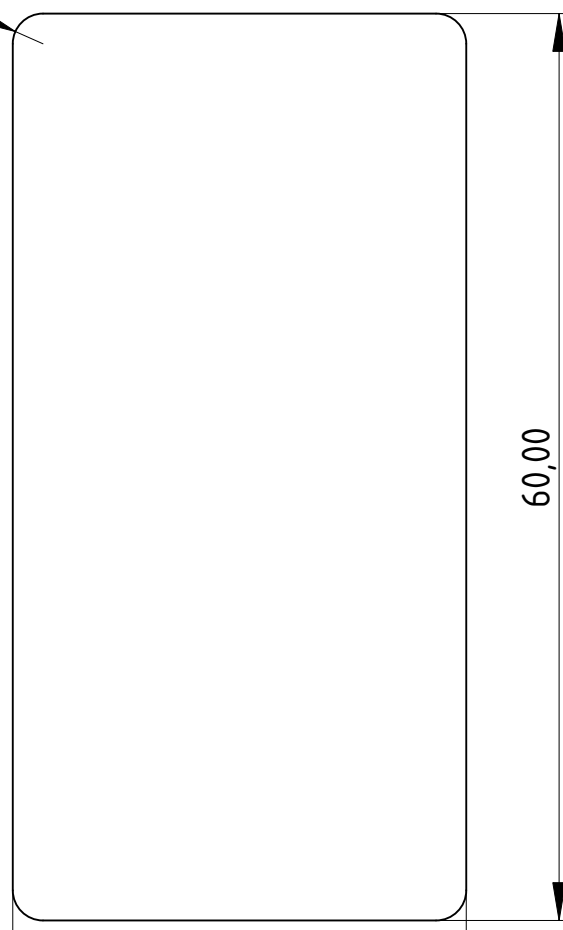
4

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R2,00 (4x)

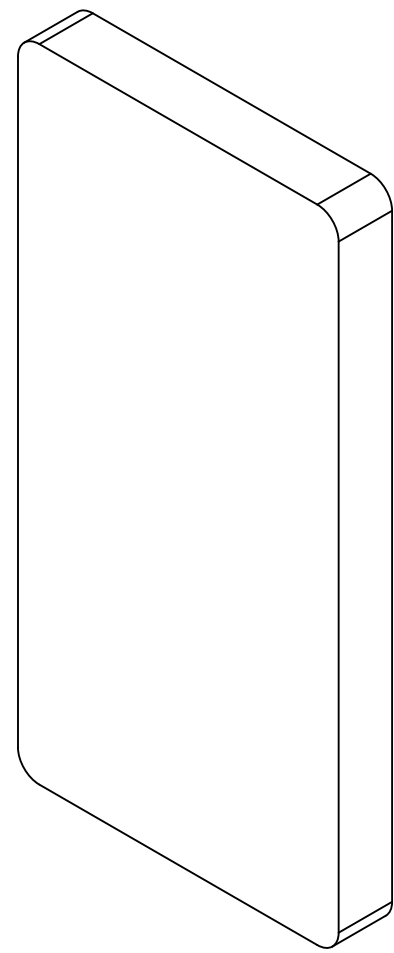


30,00

60,00



5,00



Surface: Ra 6,3 | Deburring edges

DESIGNED BY: Precious Plastic		End Caps Feet_(2x) Steel - S235 JR (1.0038)		G	—
DATE: 01.04.2021				F	—
SIZE A4				E	—
				D	—
SCALE 2:1	WEIGHT (kg) 0,09	DRAWING NUMBER 11	SHEET 1/1	C	—
				B	—
This drawing is our property; it can't be reproduced or communicated without our written consent.				A	—

F

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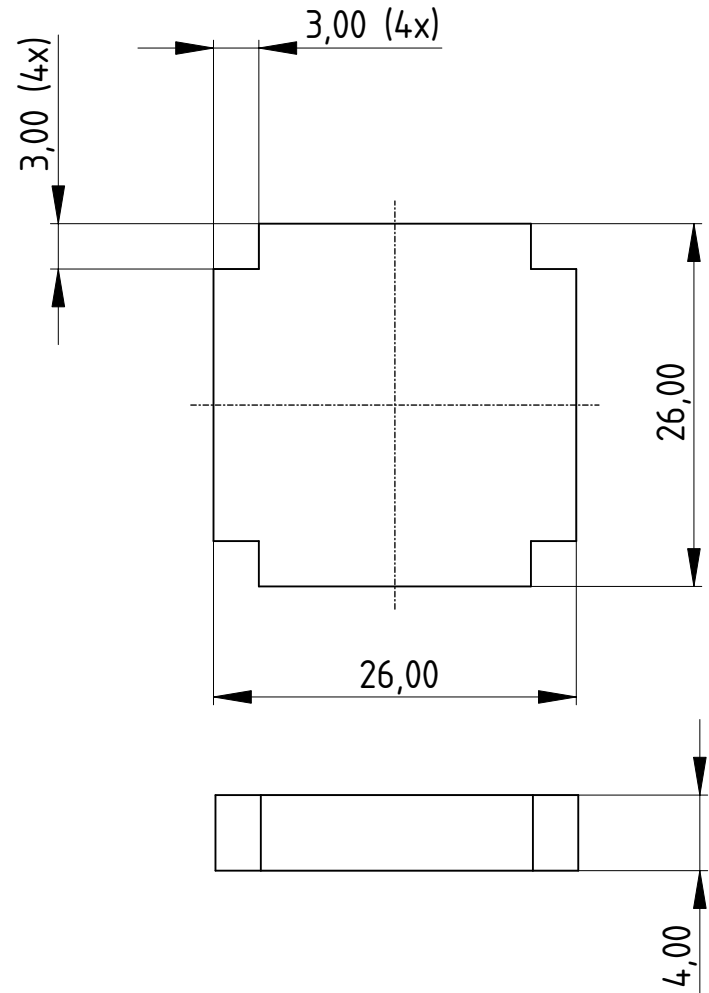
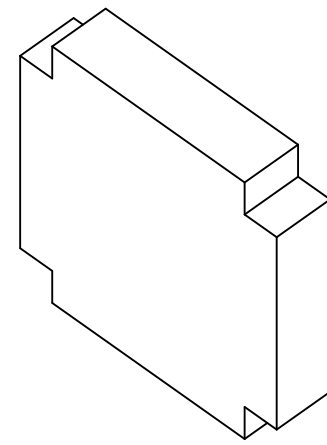
1

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3

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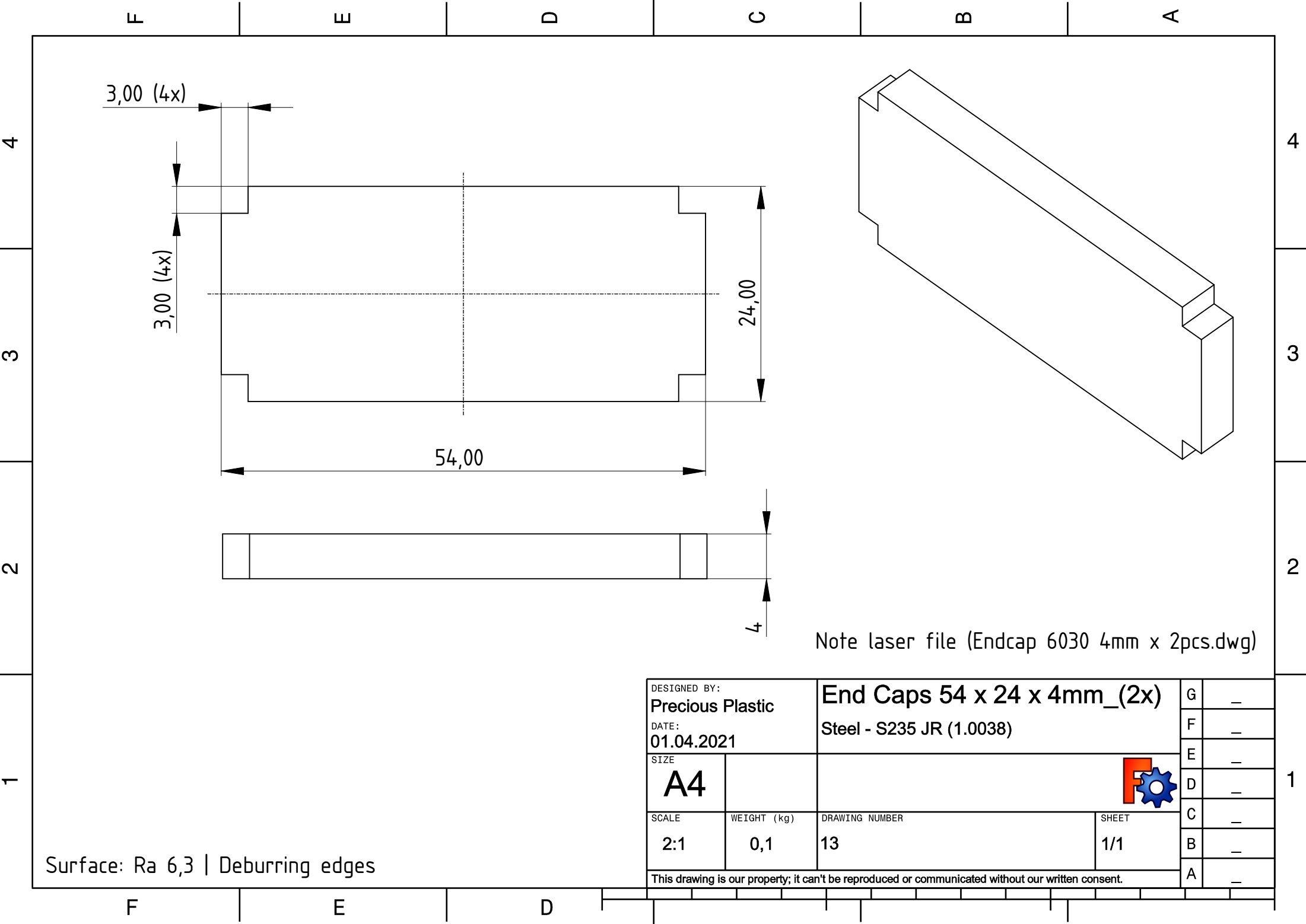
1



Note laser file (Endcap 3030 4mm x 2pcs.dwg)

Surface: Ra 6,3 | Deburring edges

DESIGNED BY: Precious Plastic		End Caps 26 x 26 x 4mm_(2x) Steel - S235 JR (1.0038)		G	—
DATE: 01.04.2021				F	—
SIZE A4				E	—
				D	—
SCALE 2:1	WEIGHT (kg) 0,09	DRAWING NUMBER 12		C	—
		SHEET 1/1		B	—
This drawing is our property; it can't be reproduced or communicated without our written consent.				A	—



Note laser file (Endcap 6030 4mm x 2pcs.dwg)

DESIGNED BY: Precious Plastic		End Caps 54 x 24 x 4mm_(2x) Steel - S235 JR (1.0038)		G	—
DATE: 01.04.2021				F	—
SIZE A4				E	—
				D	—
SCALE 2:1	WEIGHT (kg) 0,1	DRAWING NUMBER 13		C	—
		SHEET 1/1		B	—
This drawing is our property; it can't be reproduced or communicated without our written consent.				A	—

Surface: Ra 6,3 | Deburring edges

F

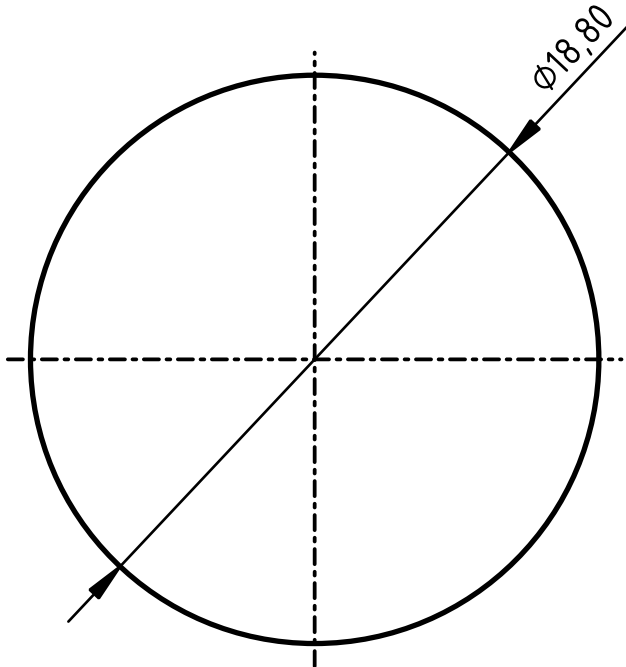
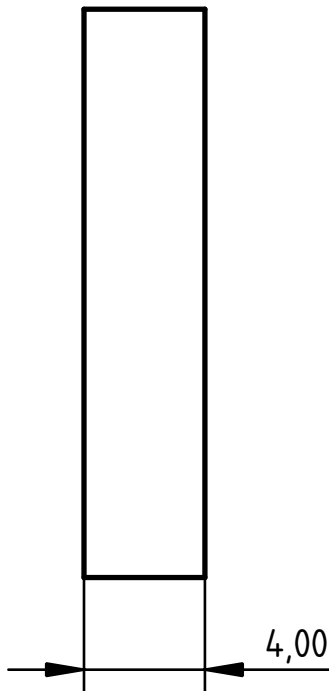
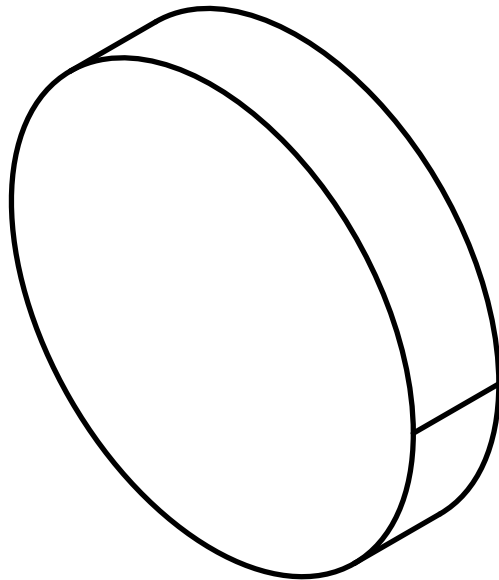
E

D

C

B

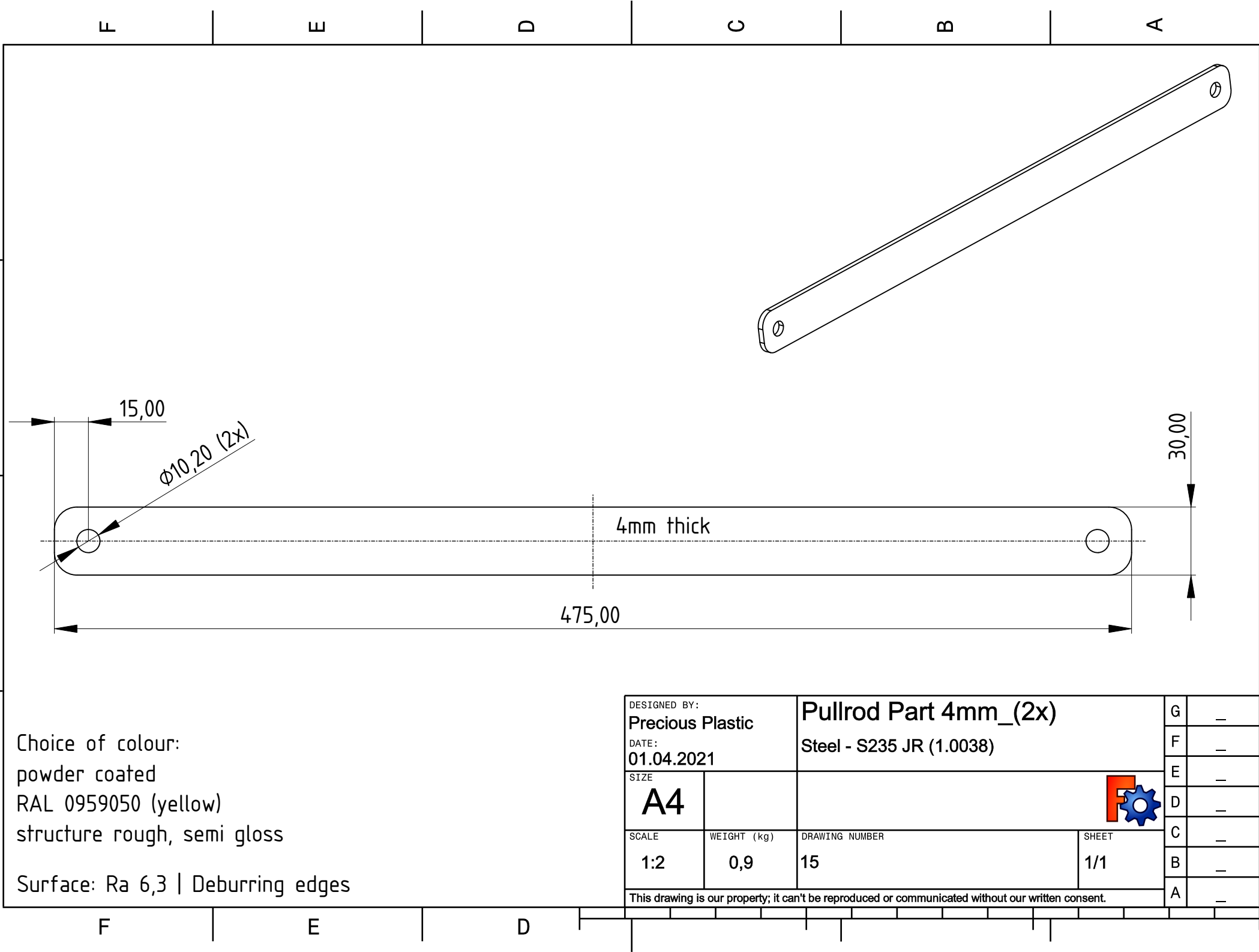
A



Note laser file (EndcapPlunger 4mm x 2pcs.dwg)

Surface: Ra 6,3 | Deburring edges

DESIGNED BY: Precious Plastic		EndcapPlunger 4mm x 2pcs Steel - E235 (1.0308)		G	—
DATE: 12.04.2021				F	—
SIZE A4				E	—
				D	—
SCALE 4:1	WEIGHT (kg) 0,04	DRAWING NUMBER 14		C	—
		SHEET 1/1		B	—
This drawing is our property; it can't be reproduced or communicated without our written consent.				A	—



F

E

D

C

B

A

4

4

3

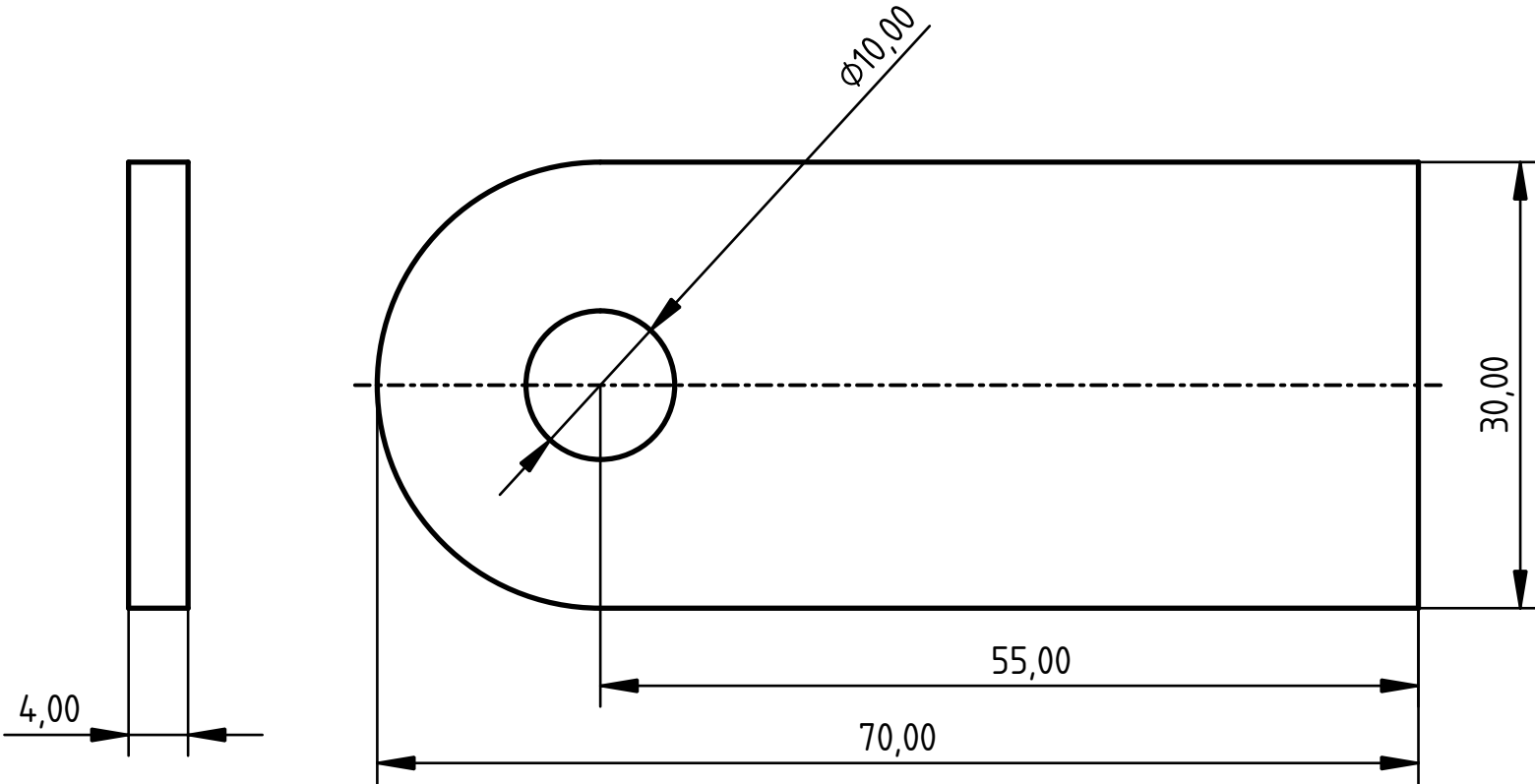
3

2

2

1

1



DESIGNED BY:

Precious Plastic

DATE:

01.04.2021

SIZE

A4

SCALE

2:1

WEIGHT (kg)

0,12

Leaver to Plunger 4mm_(2x)

Steel - S235 JR (1.0038)

DRAWING NUMBER

16

SHEET

1/1



G

—

F

—

E

—

D

—

C

—

B

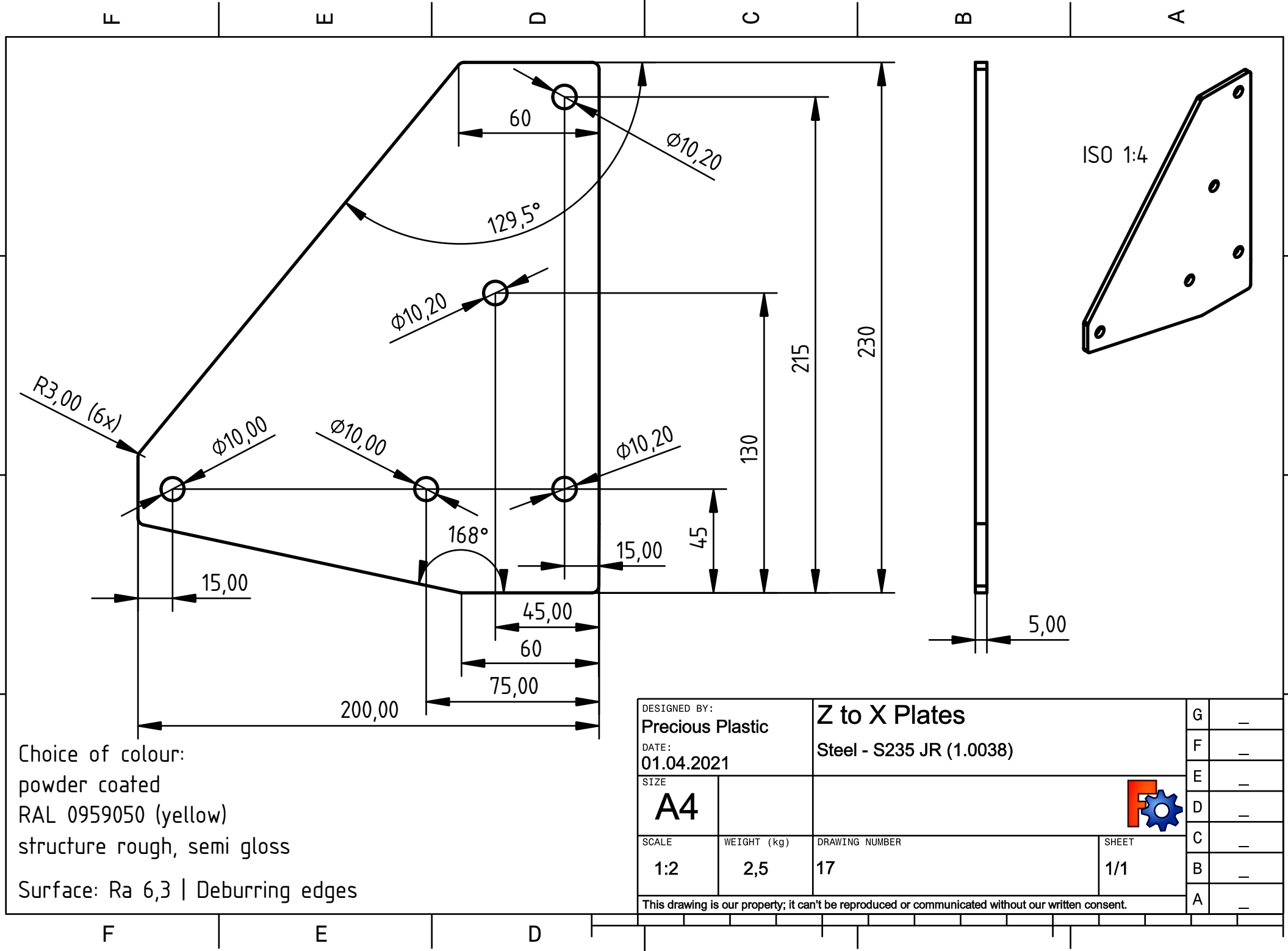
—

A

—

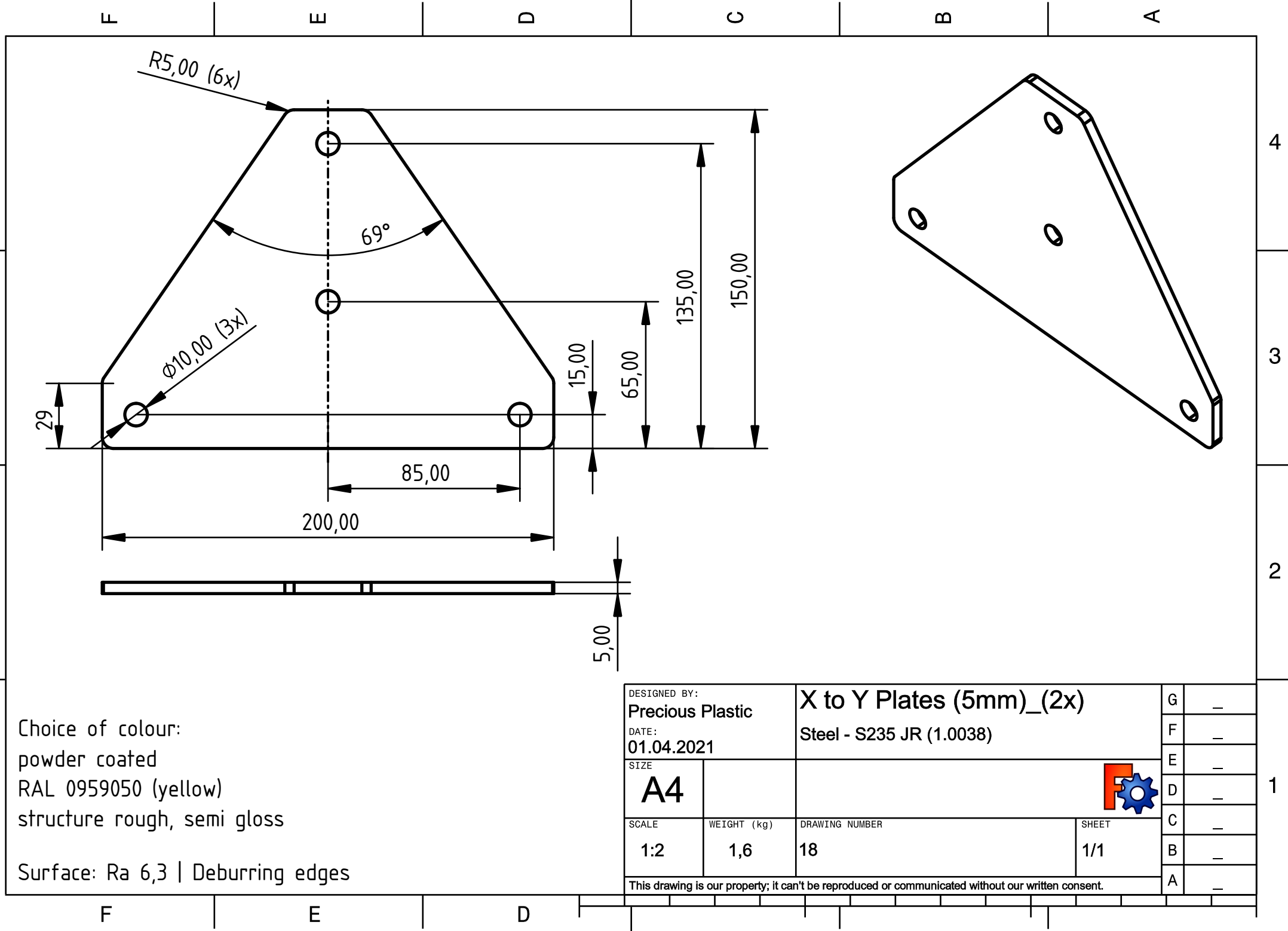
Surface: Ra 6,3 | Deburring edges

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Choice of colour:
powder coated
RAL 0959050 (yellow)
structure rough, semi gloss
Surface: Ra 6,3 | Deburring edges

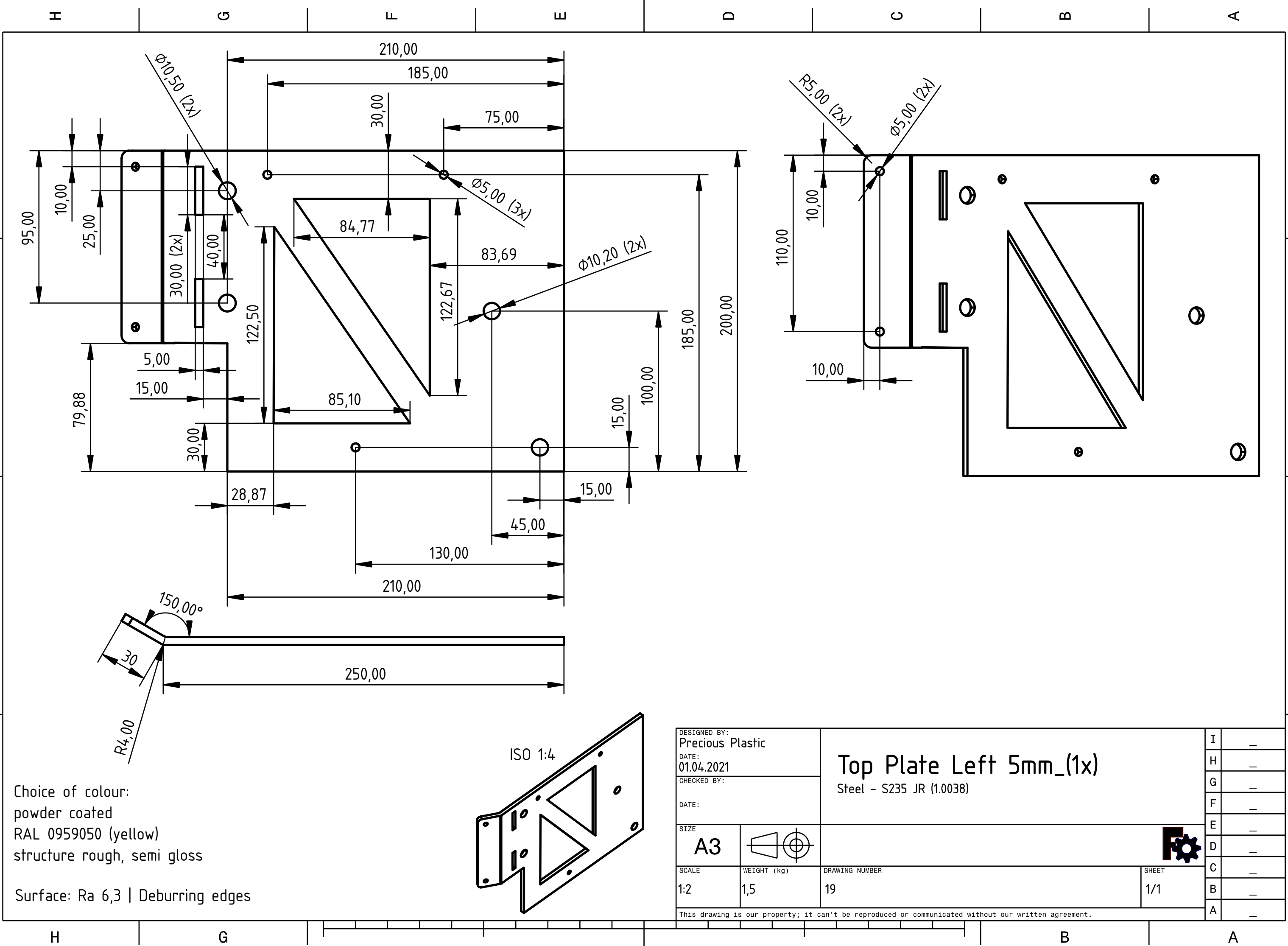
DESIGNED BY: Precious Plastic		Z to X Plates		G	—
DATE: 01.04.2021		Steel - S235 JR (1.0038)		F	—
SIZE				E	—
A4				D	—
SCALE	WEIGHT (kg)	DRAWING NUMBER		C	—
1:2	2,5	17		B	—
		SHEET		A	—
		1/1			
This drawing is our property; it can't be reproduced or communicated without our written consent.					

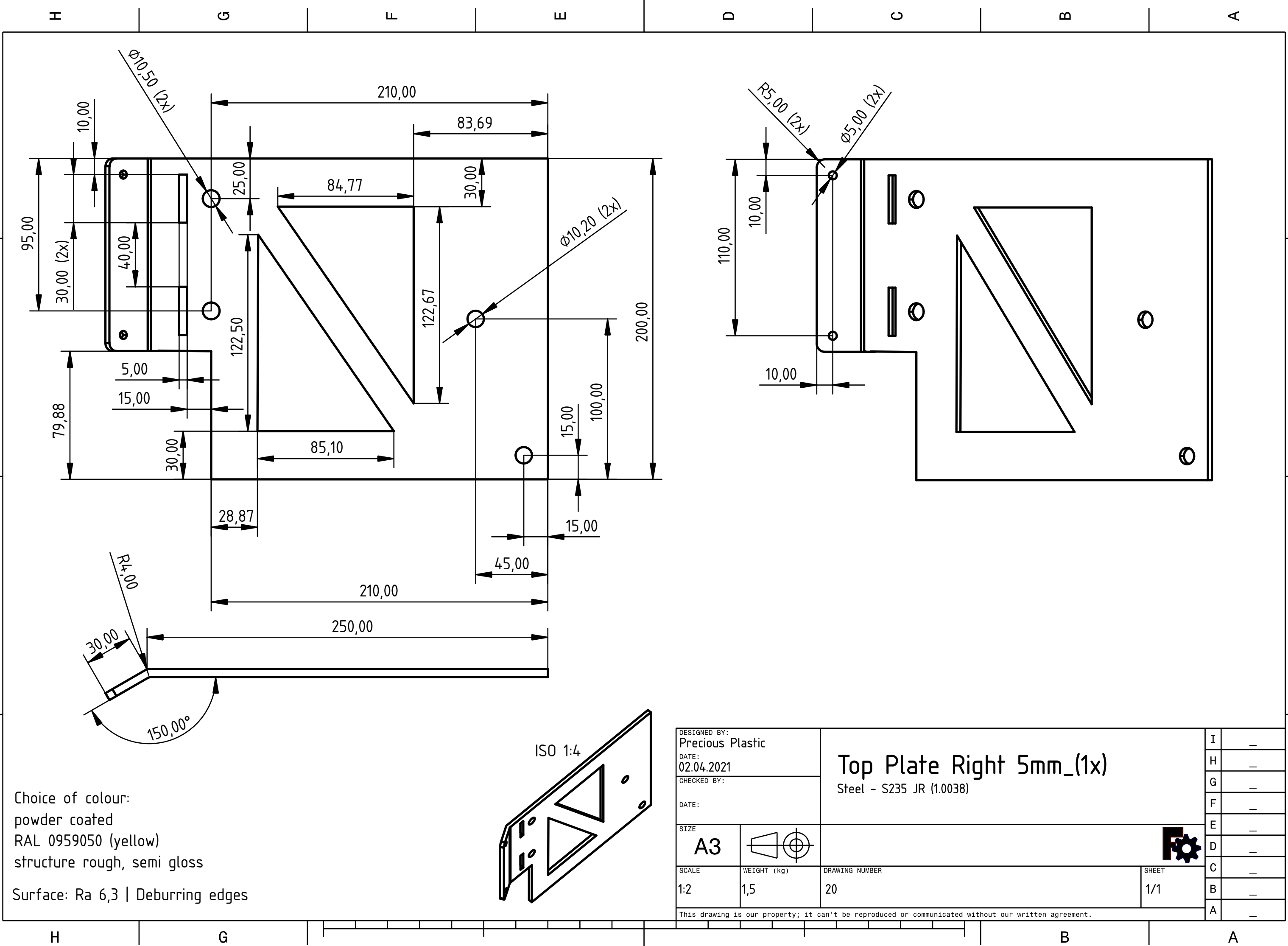


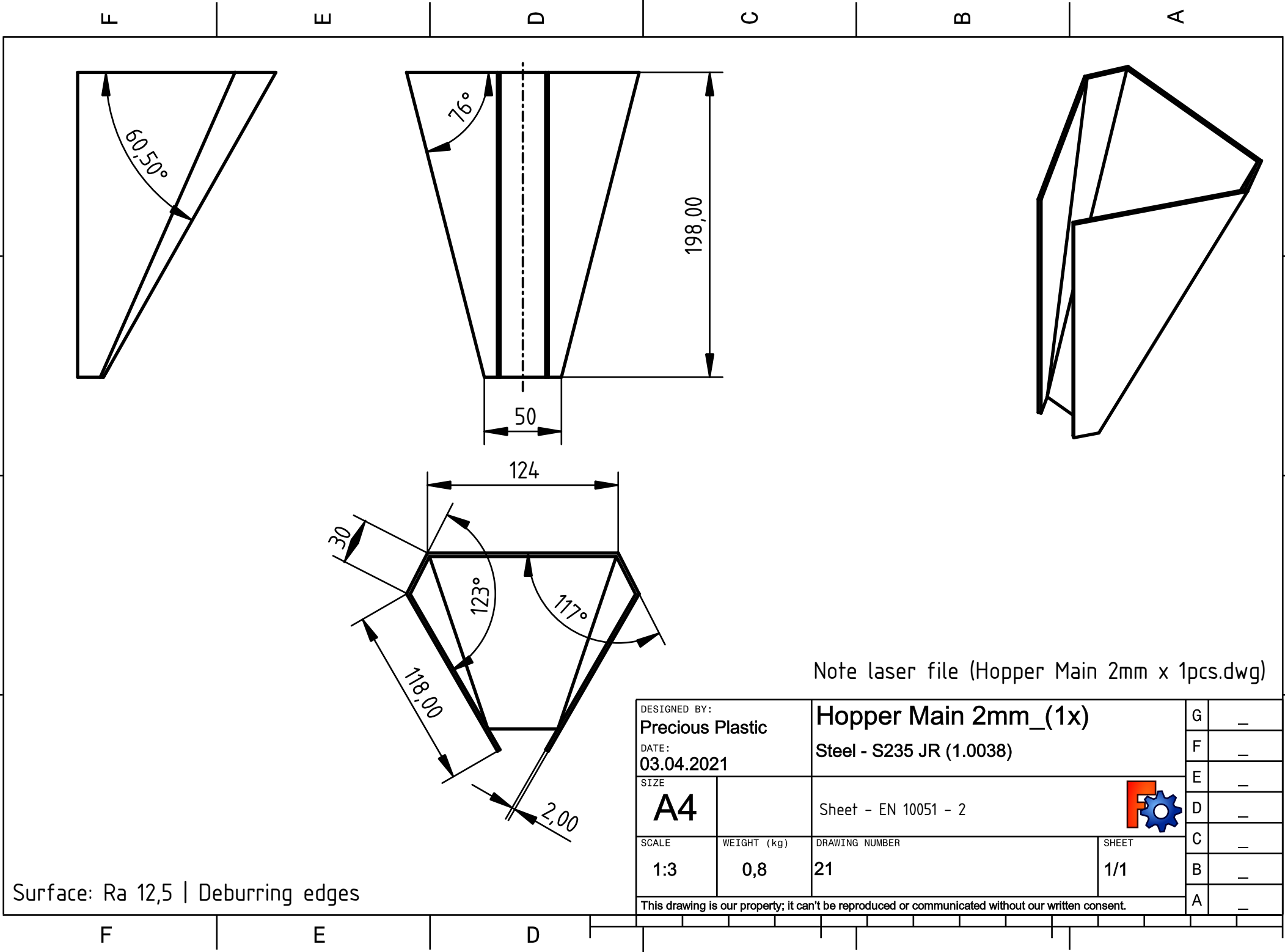
Choice of colour:
powder coated
RAL 0959050 (yellow)
structure rough, semi gloss

Surface: Ra 6,3 | Deburring edges

DESIGNED BY: Precious Plastic		X to Y Plates (5mm)_(2x) Steel - S235 JR (1.0038)		G	—			
DATE: 01.04.2021				F	—			
SIZE	A4			E	—			
SCALE				WEIGHT (kg)	DRAWING NUMBER	SHEET	D	—
1:2				1,6	18	1/1	C	—
This drawing is our property; it can't be reproduced or communicated without our written consent.				B	—			
				A	—			







Note laser file (Hopper Main 2mm x 1pcs.dwg)

DESIGNED BY: Precious Plastic		Hopper Main 2mm_(1x) Steel - S235 JR (1.0038)		G	—	
DATE: 03.04.2021				F	—	
SIZE A4	Sheet - EN 10051 - 2				E	—
					D	—
SCALE 1:3	WEIGHT (kg) 0,8	DRAWING NUMBER 21		SHEET 1/1	C	—
					B	—
This drawing is our property; it can't be reproduced or communicated without our written consent.					A	—

F

E

D

C

B

A

4

3

2

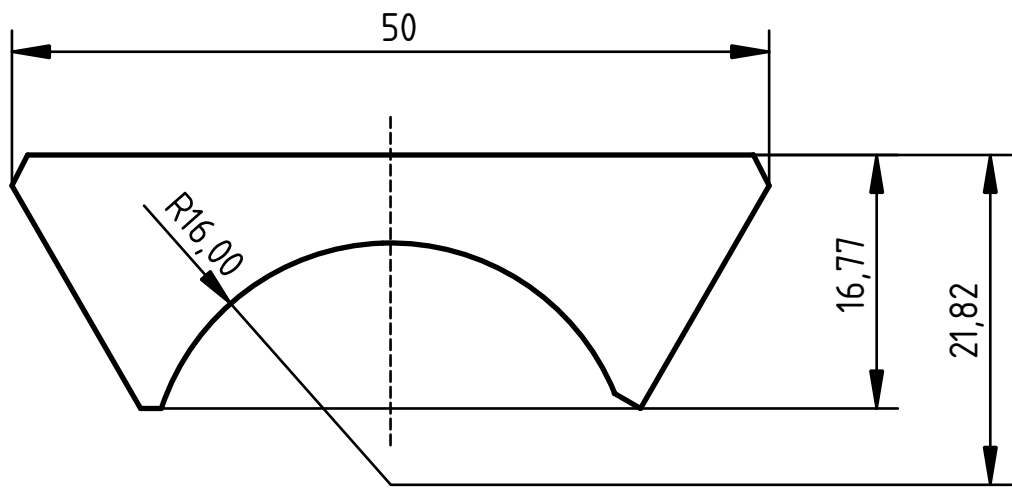
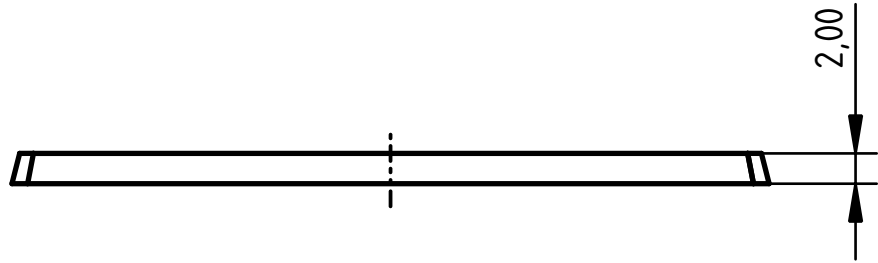
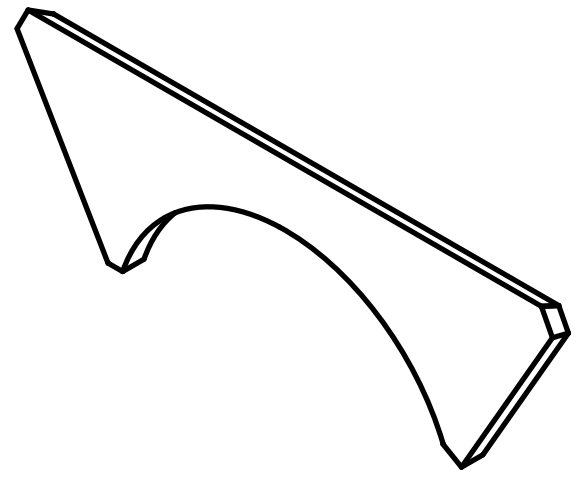
1

4

3

2

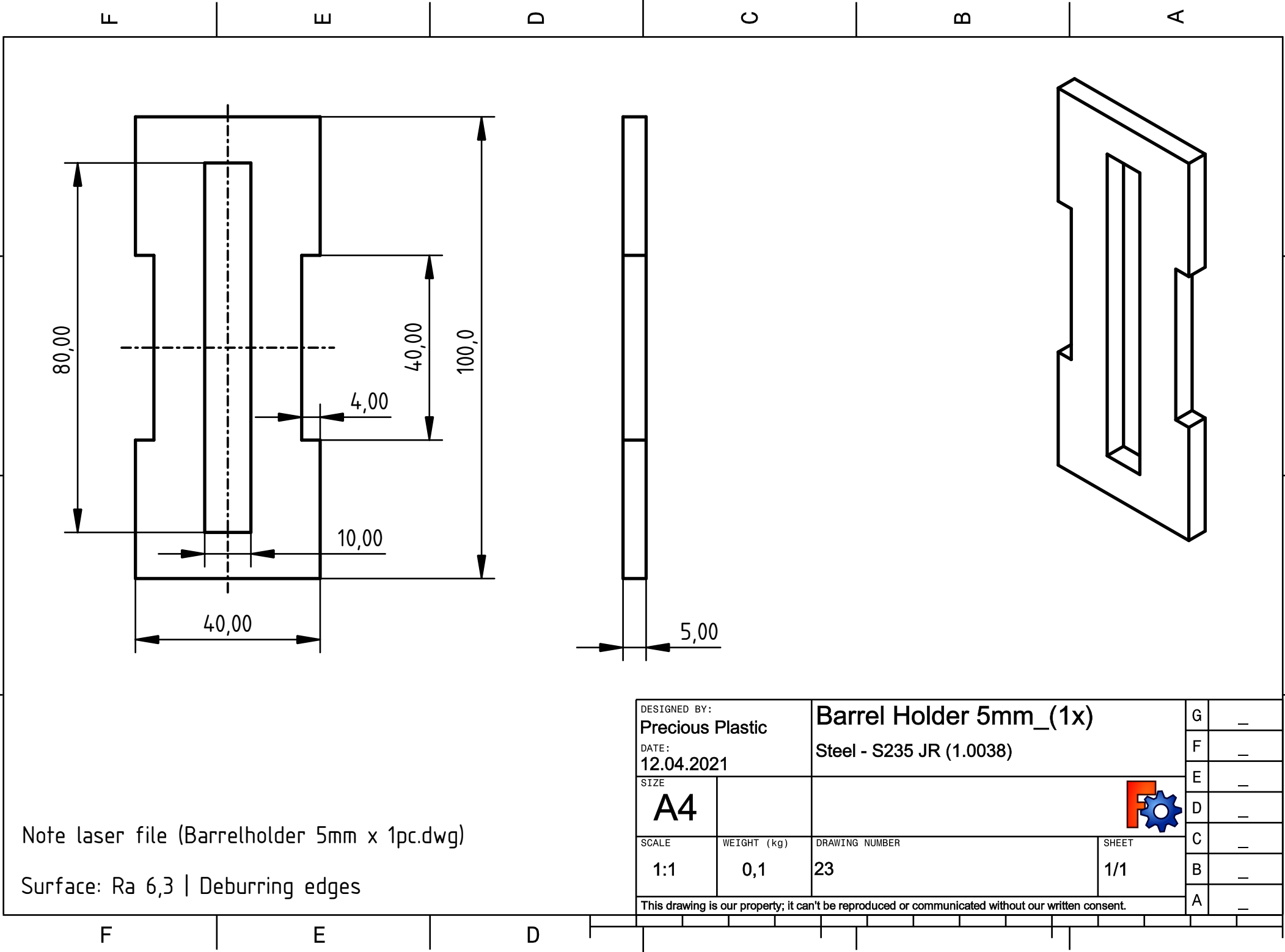
1



Note laser file (Hopper Base 2mm x 1pcs.dwg)

Surface: Ra 12,5 | Deburring edges

DESIGNED BY: Precious Plastic		Hopper Base 2mm Steel - S235 JR (1.0038)		G	—	
DATE: 03.04.2021				F	—	
SIZE A4		Sheet - EN 10051 - 2 		E	—	
				D	—	
SCALE 2:1	WEIGHT (kg) 0,01	DRAWING NUMBER 22		SHEET 1/1	C	—
					B	—
This drawing is our property; it can't be reproduced or communicated without our written consent.					A	—



Note laser file (Barrelholder 5mm x 1pc.dwg)

Surface: Ra 6,3 | Deburring edges

F

E

D

C

B

A

4

3

2

1

F

E

D

40,00

32,00

5,00

18,00

13,00

90,00

2,00 (3x)

20,00 (3x)

2,00

Choice of colour:
heat-resistant powder coated
RAL 9005 (black)
structure rough, semi gloss
Surface: Ra 6,3 | Deburring edges

R2,00 (4x)

2,00 (4x)

90,00

Ø36,00

90,00

120,00°

Note laser file! (BarrelShieldSpacer Top 2mm x 1pcs.dwg)

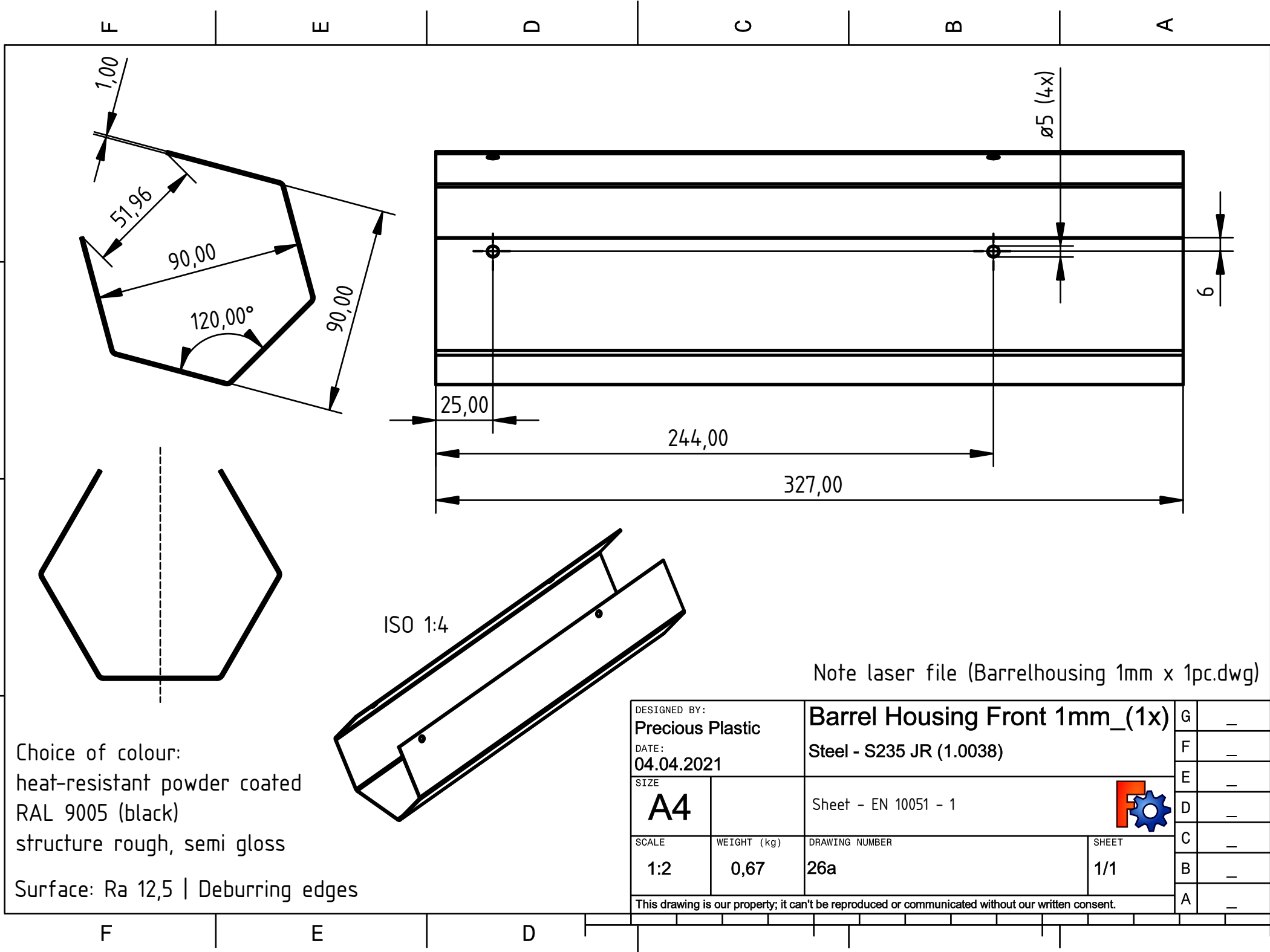
DESIGNED BY: Precious Plastic		Barrel Housing Top 2mm_(1x) Steel - S235 JR (1.0038)		G	—
DATE: 03.04.2021				F	—
SIZE A4				E	—
				D	—
SCALE 1:1	WEIGHT (kg) 0,05	DRAWING NUMBER 24		C	—
		SHEET 1/1		B	—
This drawing is our property; it can't be reproduced or communicated without our written consent.				A	—

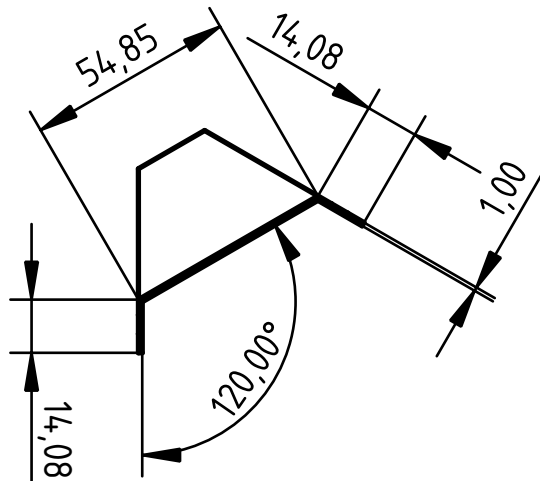
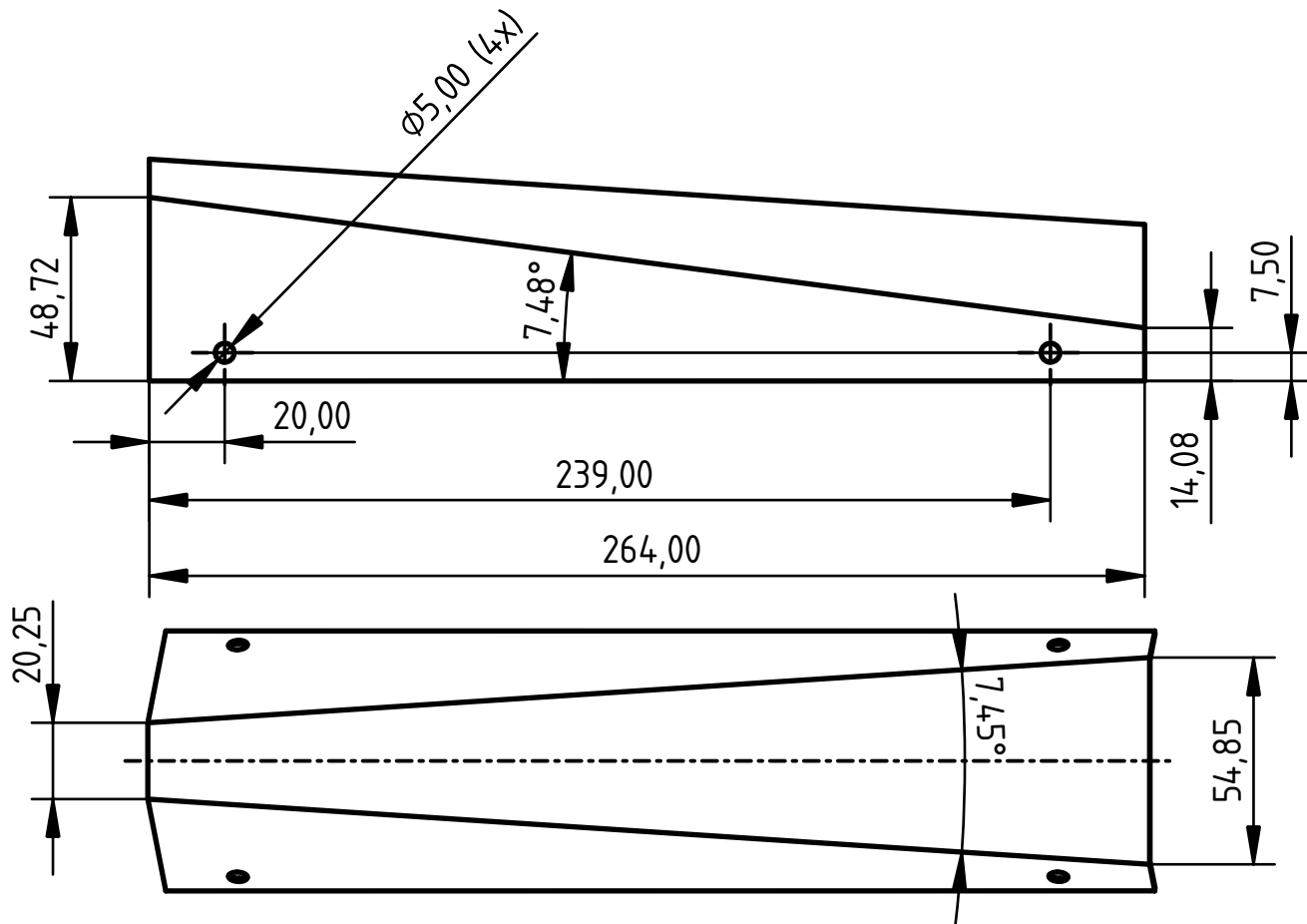
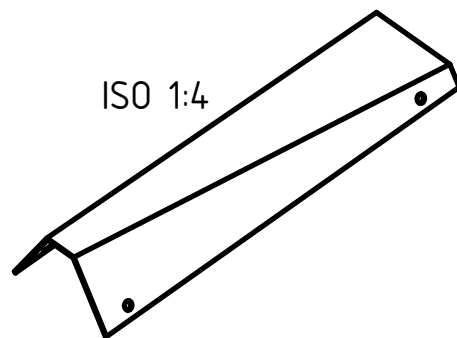
4

3

2

1



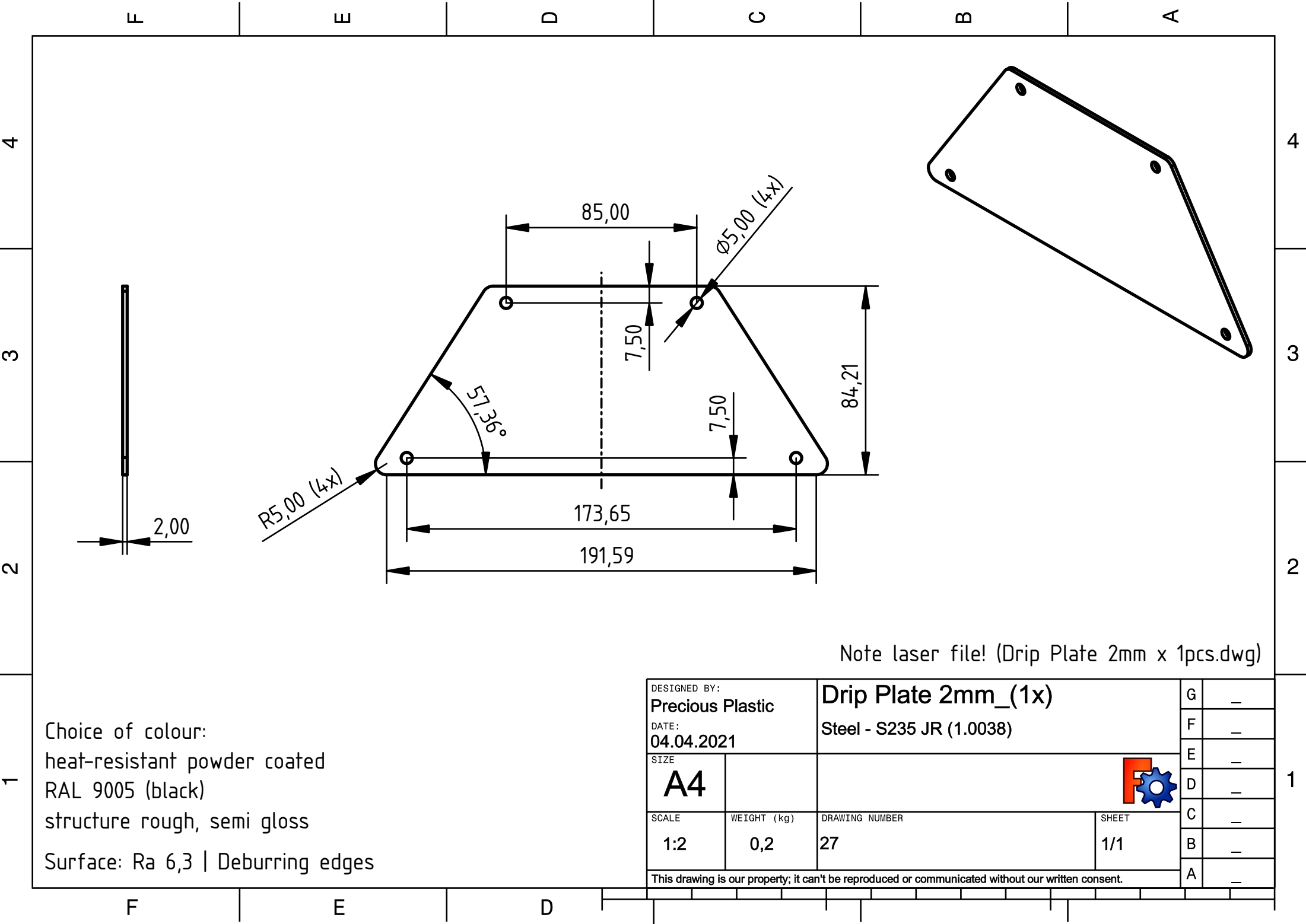


Choice of colour:
heat-resistant powder coated
RAL 9005 (black)
structure rough, semi gloss
Surface: Ra 12,5 | Deburring edges

Note laser file (Barrelhousing Back 1mm x 1pc.dwg)

DESIGNED BY: Precious Plastic		Barrel Housing Back 1mm_(1x) Steel - S235 JR (1.0038)		G	—
DATE: 04.04.2021				F	—
SIZE A4				E	—
				D	—
SCALE 1:2	WEIGHT (kg) 0,2	DRAWING NUMBER 26b		C	—
				B	—
This drawing is our property; it can't be reproduced or communicated without our written consent.				A	—

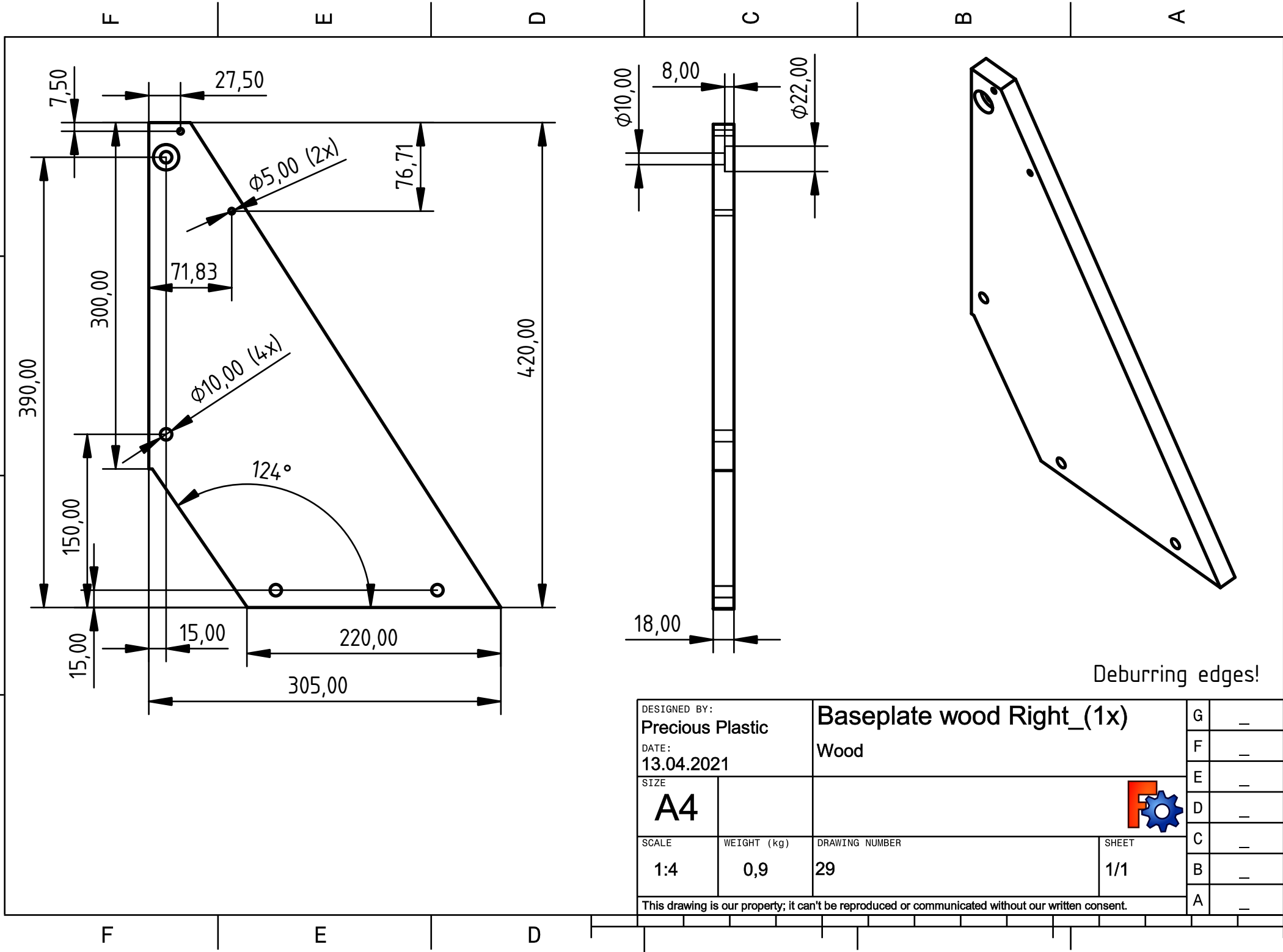




Choice of colour:
heat-resistant powder coated
RAL 9005 (black)
structure rough, semi gloss
Surface: Ra 6,3 | Deburring edges

Note laser file! (Drip Plate 2mm x 1pcs.dwg)

DESIGNED BY: Precious Plastic		Drip Plate 2mm_(1x) Steel - S235 JR (1.0038)		G	—
DATE: 04.04.2021				F	—
SIZE A4				E	—
				D	—
SCALE 1:2	WEIGHT (kg) 0,2	DRAWING NUMBER 27		SHEET 1/1	C —
This drawing is our property; it can't be reproduced or communicated without our written consent.					B —
					A —



Deburring edges!