

Fill in these particulars.

Full name of Centre

Centre Number

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Site (where appropriate)

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Forename(s)

Surname

Another	Pupil
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Date of Birth

Scottish Candidate Number

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Title of Computer-Aided 3D Modelling Presentation

Iron

NOTE: The Student Record has been designed to record the work of your Computer-Aided 3D Modelling Presentation. It should also help to ensure that your Computer-Aided 3D Modelling Presentation meets the assessment requirements. Teacher/ lecturers **must** refer to "Guidance on Assessment - Computer-Aided 3D Modelling Presentation" (Diet 2008/ 2009) **before** attempting to complete this form.

Assessment Requirements

- 1 The Computer-Aided 3D Modelling Presentation, which is worth 30% of the total marks for the Advanced Higher Graphic Communication assessment, must be your own work.
- 2 The Computer-Aided 3D Modelling Presentation should consist of **six to ten pages of work**. A3, A4, or a mixture of A3 and A4 page formats may be used.
- 3 In completing the Student Record, **all** photocopied, scanned, captured, or clip art images used **must** be acknowledged. A description of any work carried out to enhanced, photocopied, scanned, captured, or clip art images must also be declared; as well as acknowledging the source of all other images.
- 4 All CAD, Illustration or computer graphic work produced by following a directed approach, such as by step-by-step guide or wizard is **not valid** for assessment purposes.
- 5 The candidate declaration must be completed for a submission to be valid.

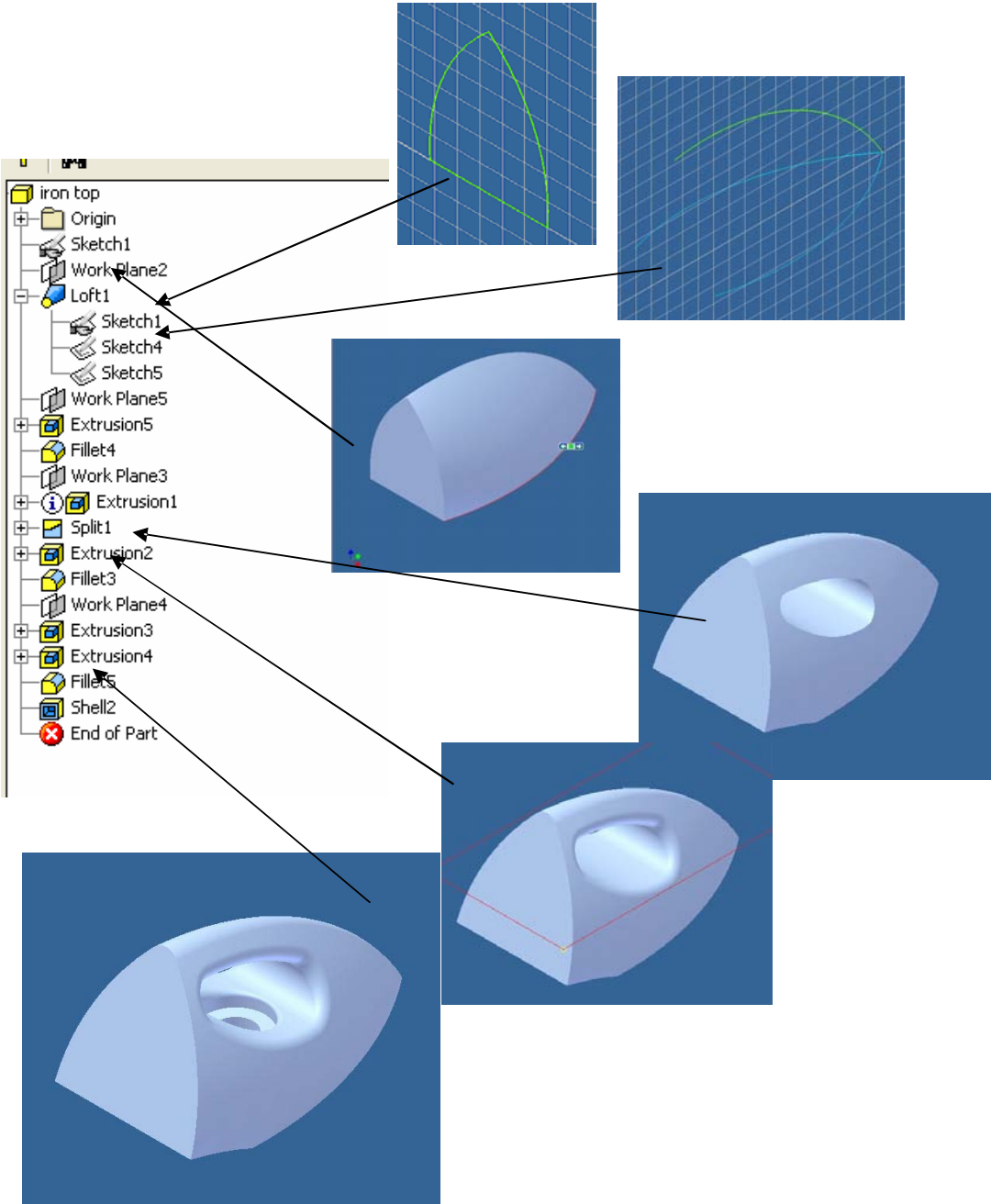
I have read and understood the assessment requirements of the Computer-Aided 3D Modelling Presentation.

Signature of Candidate _____ Date _____

Graphic Communication Advanced Higher – Computer-Aided 3D Modelling Presentation

The Student Record should be used by candidates to provide a description of their 3D modelling techniques and how they were used in the model.

Development of Modelling Technique 1

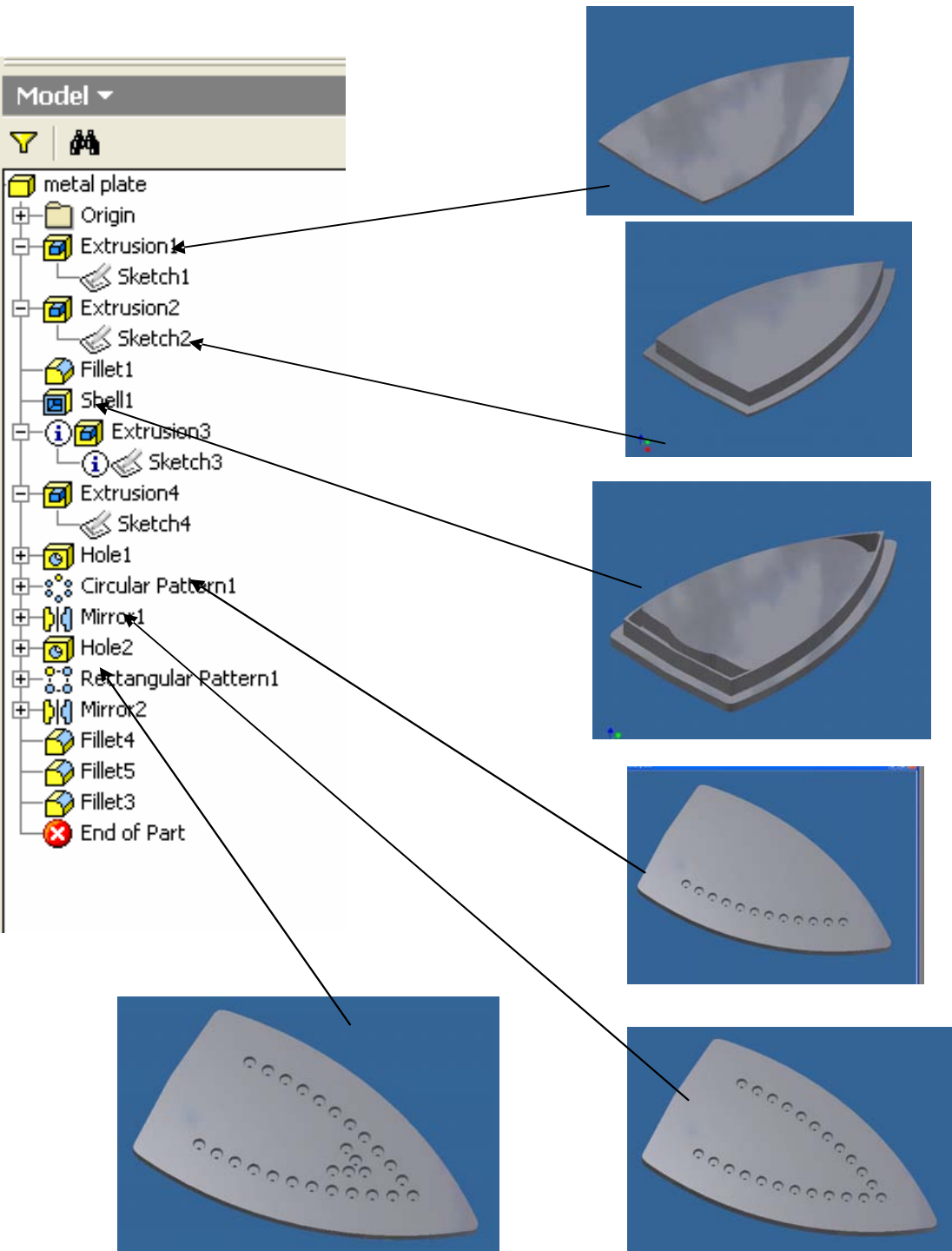
Please provide a description of how technique was used to create the model or items within the environment.	
Name of modelling technique:	Solid created between two or more entities (LOFT)
Situation of technique – Model *	
	

*Delete as appropriate

Graphic Communication Advanced Higher – Computer-Aided 3D Modelling Presentation

The Student Record should be used by candidates to provide a description of their 3D modelling techniques and how they were used in the model.

Development of Modelling Technique 2

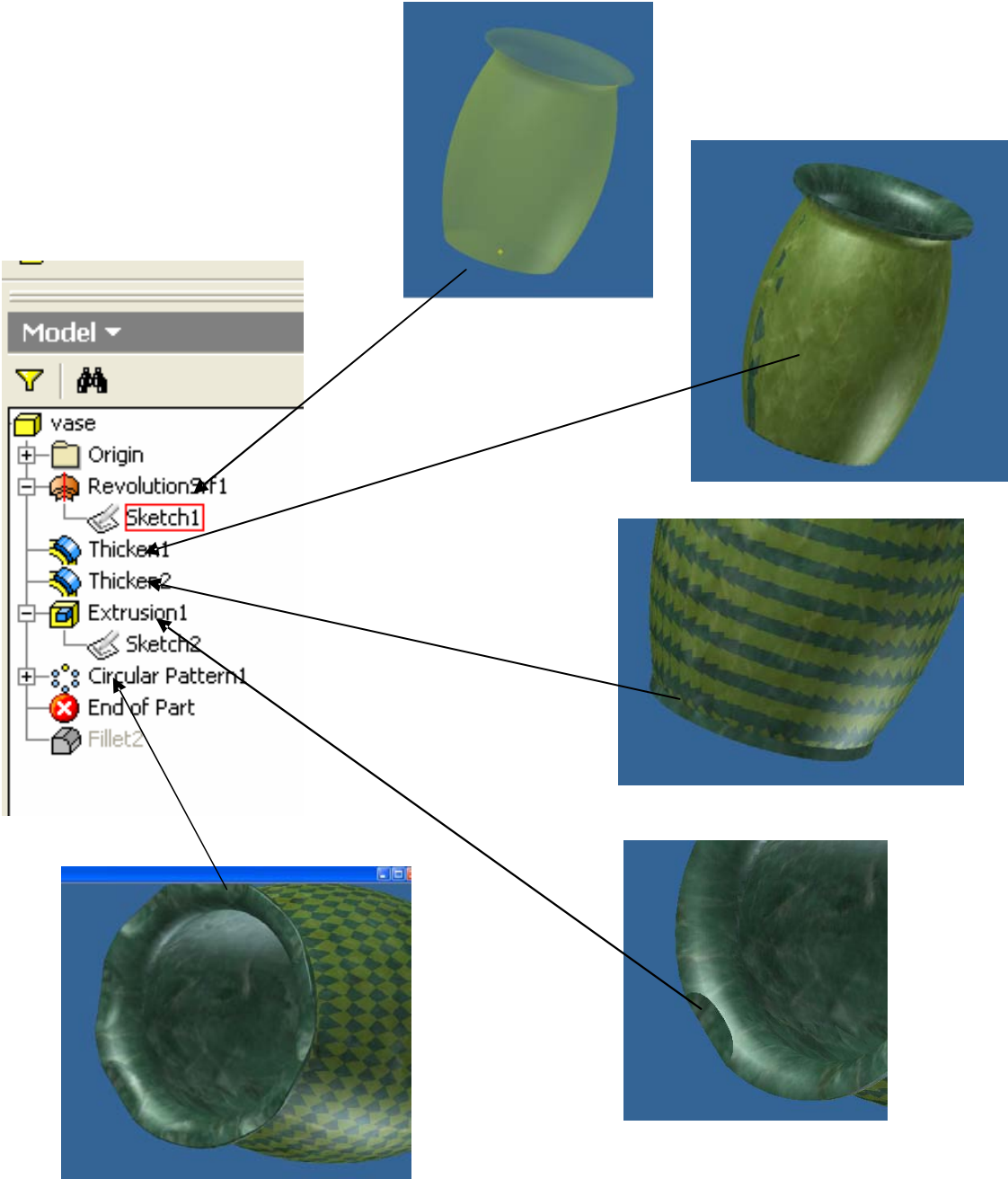
Please provide a description of how technique was used to create the model or items within the environment.	
Name of modelling technique:	Solid created by extrusion
Situation of technique – Model	
 <p>The image displays a CAD software interface with a model tree on the left and six 3D views of a metal plate on the right. The model tree lists the following features: metal plate, Origin, Extrusion1, Sketch1, Extrusion2, Sketch2, Fillet1, Shell1, Extrusion3, Sketch3, Extrusion4, Sketch4, Hole1, Circular Pattern1, Mirror1, Hole2, Rectangular Pattern1, Mirror2, Fillet4, Fillet5, Fillet3, and End of Part. The six 3D views show the metal plate from different angles, highlighting the various features and their placement. Arrows point from the model tree to the corresponding 3D views: Extrusion1 to the top view, Extrusion2 to the side view, Extrusion3 to the front view, Extrusion4 to the bottom view, Circular Pattern1 to the top view, and Rectangular Pattern1 to the bottom view.</p>	

***Delete as appropriate**

Graphic Communication Advanced Higher – Computer-Aided 3D Modelling Presentation

The Student Record should be used by candidates to provide a description of their 3D modelling techniques and how they were used in the model.

Development of Modelling Technique 3

Please provide a description of how technique was used to create the model or items within the environment.	
Name of modelling technique:	Object created through Surface of Revolution
Situation of technique – Environment*	
	

*Delete as appropriate

Graphic Communication Advanced Higher – Computer-Aided 3D Modelling Presentation

The Student Record should be used by candidates to provide a description of their 3D modelling techniques and how they were used in the model.

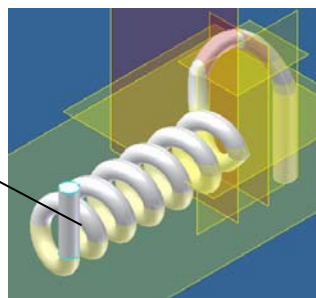
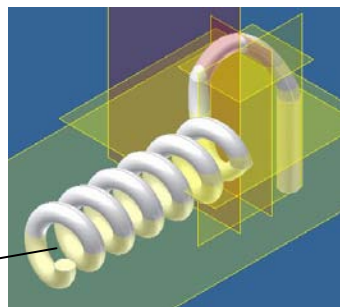
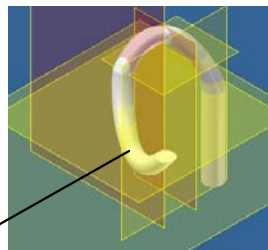
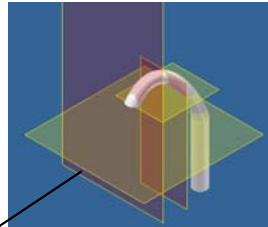
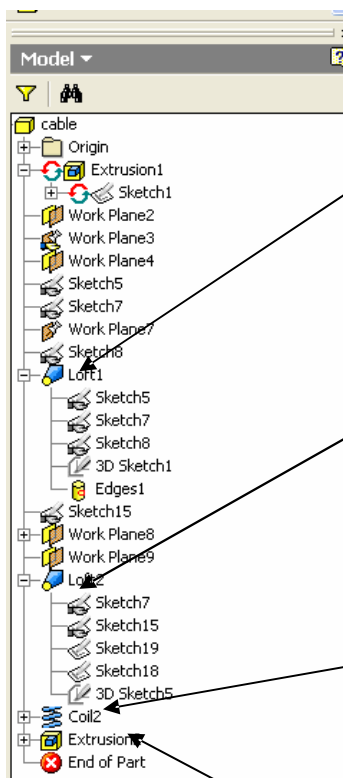
Development of Modelling Technique 4

Please provide a description of how technique was used to create the model or items within the environment.

Name of modelling technique:

Extrusion Along a Path

Situation of technique – Model

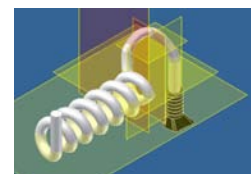


For the cable a cylinder was created. A number of work planes were created and circular sketches were created on each one. A 3D sketch was created between each sketch. The circles were then lofted using the 3D sketch as a path.

This process was then repeated using a different set of work planes allowing the cable to return on itself.

A work axis was then created and another sketch was put on the end of the cable. A coil was then created using the work axis as a path.

The cable was then extruded to form a straight section which was inserted into the grommet.

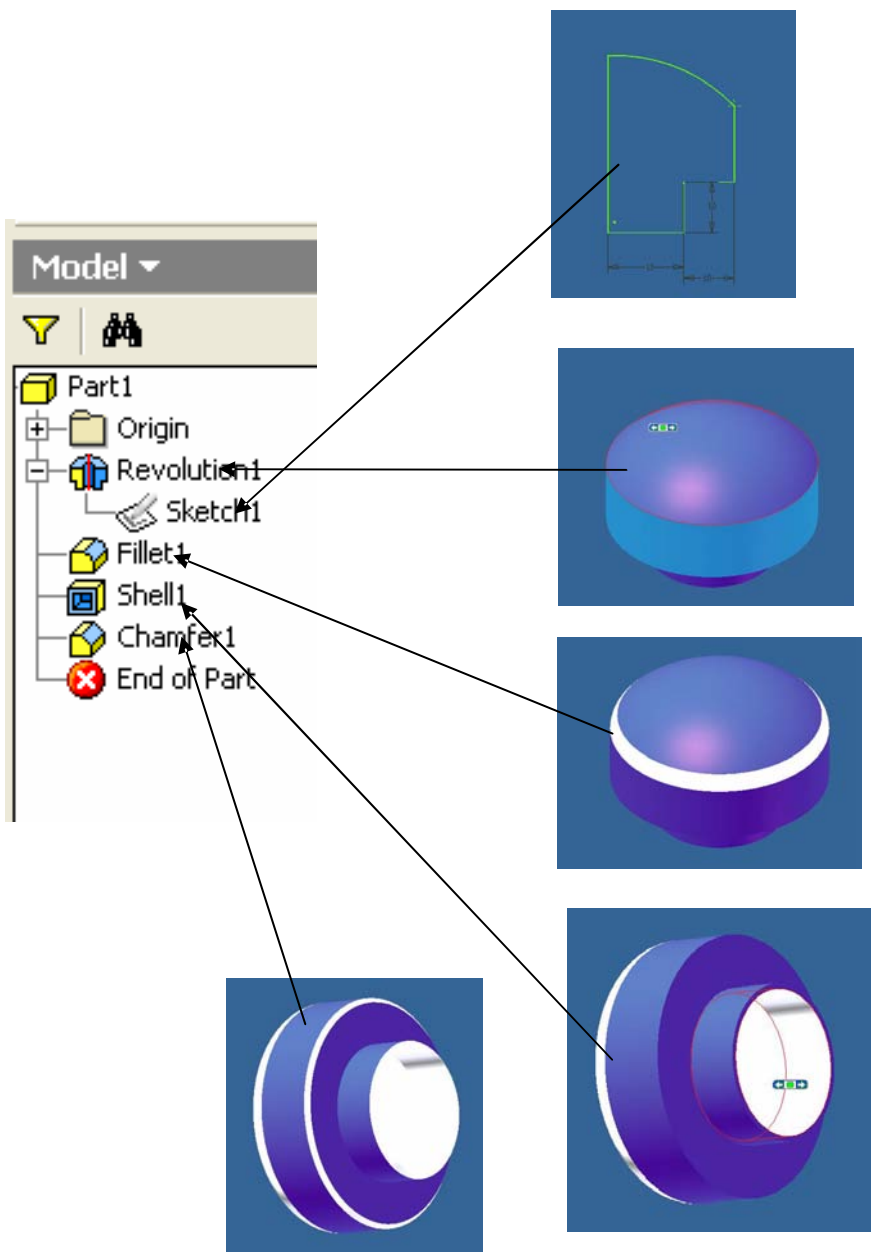


*Delete as appropriate

Graphic Communication Advanced Higher – Computer-Aided 3D Modelling Presentation

The Student Record should be used by candidates to provide a description of their 3D modelling techniques and how they were used in the model.

Development of Modelling Technique 5

Please provide a description of how technique was used to create the model or items within the environment.	
Name of modelling technique:	Solid of Revolution
Situation of technique – Model	
	

*Delete as appropriate

Graphic Communication Advanced Higher – Computer-Aided 3D Modelling Presentation

Candidates are advised to label each item/ page number for each technique and a description of the graphic should be given for each technique. A description of any clip art, library items, images and modelling elements not created by the student should be given here.

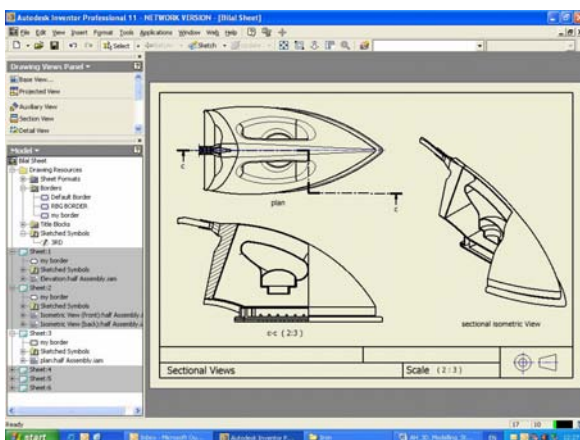
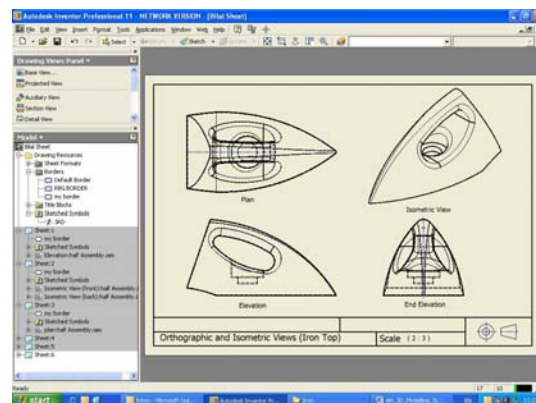
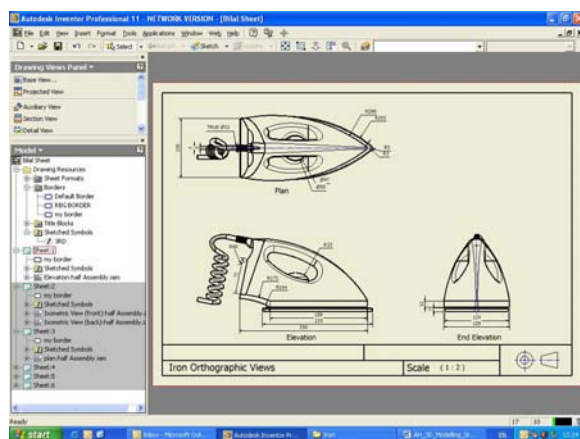
Computer Platform used: PC _____

Software used: Inventor 11 _____

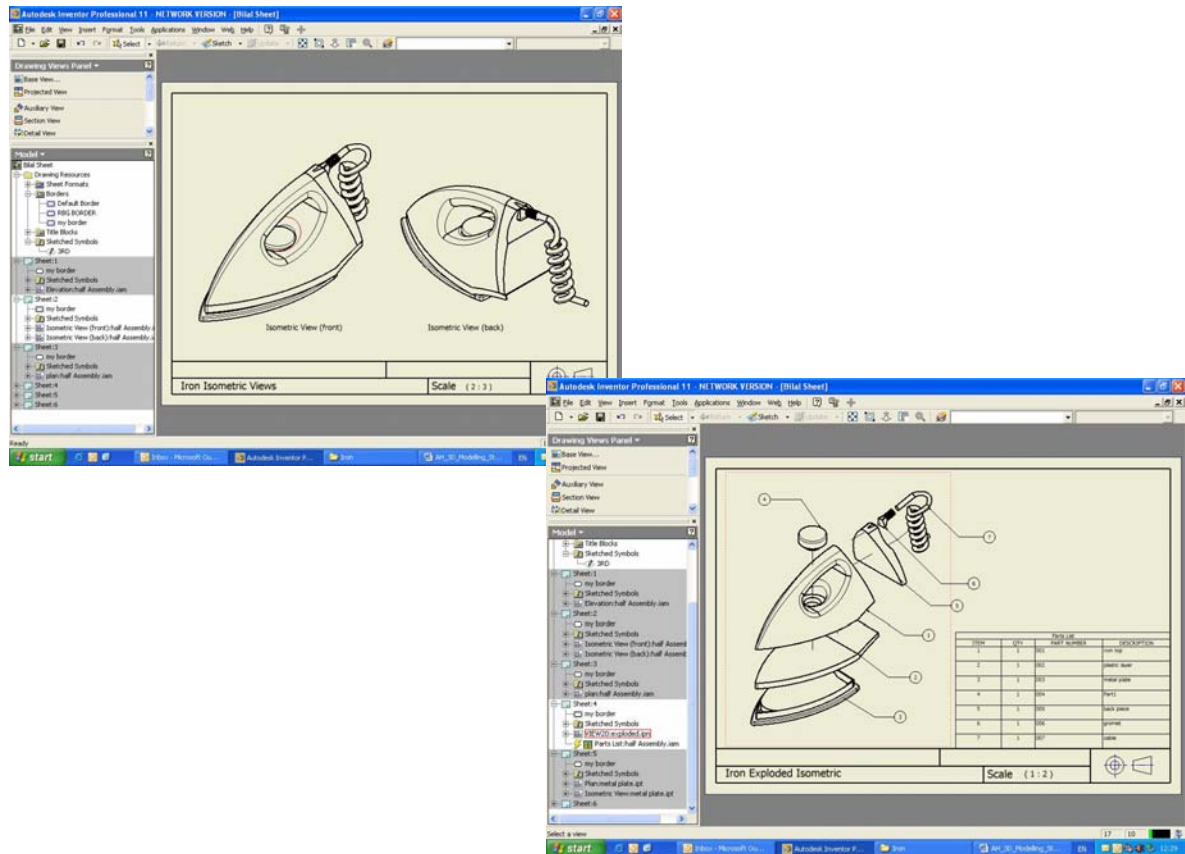
Software used: _____

Please provide a brief description of how the 2D drawings were created.

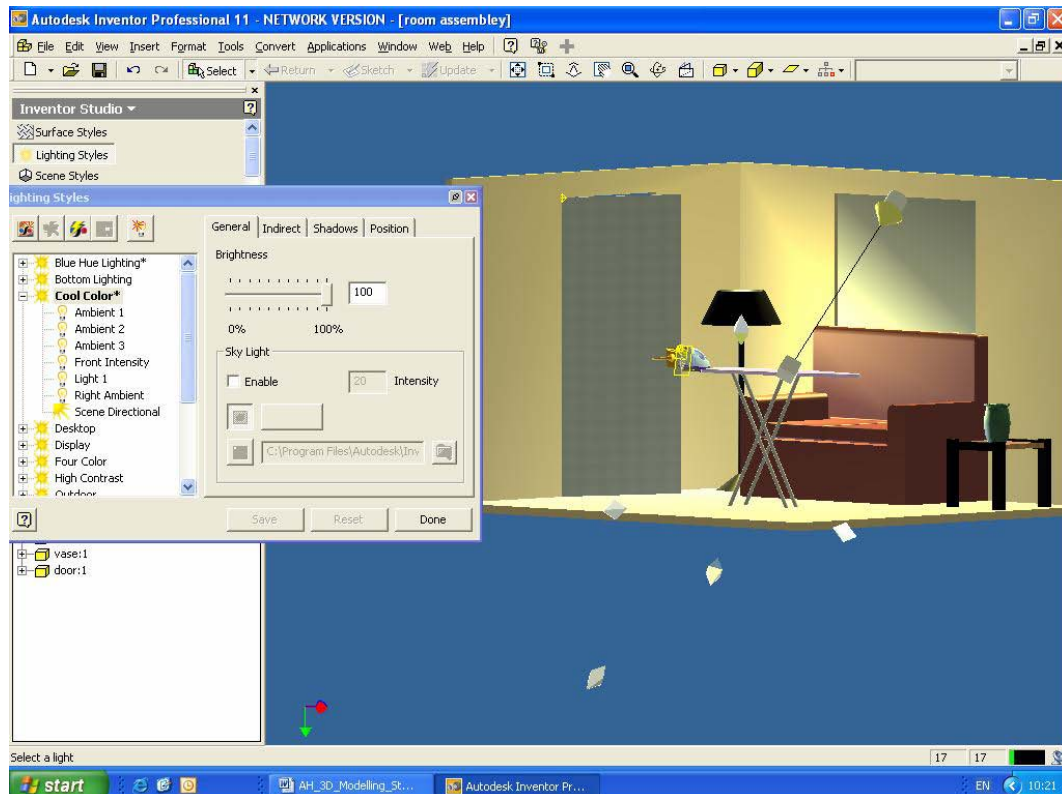
Orthographic



Pictorial



Materials & Lights

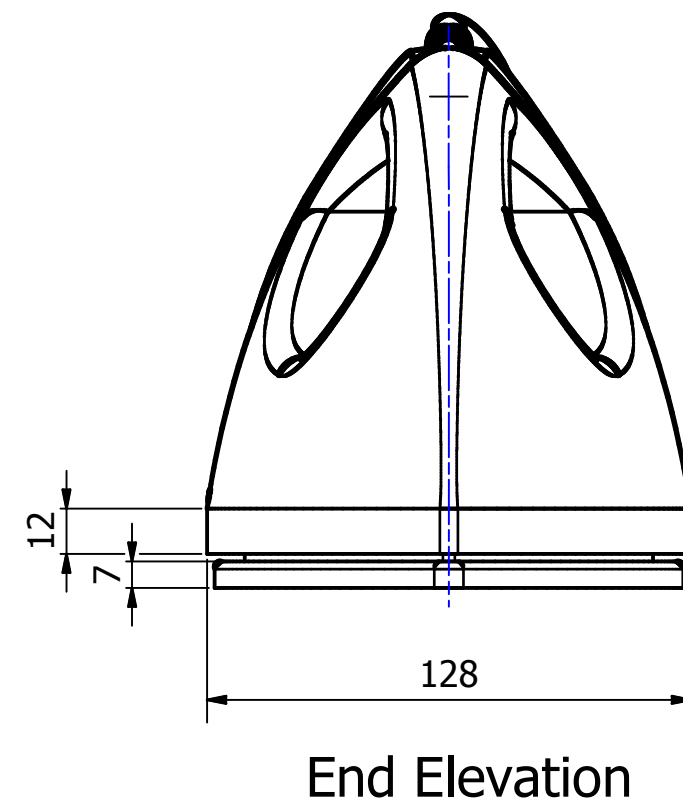
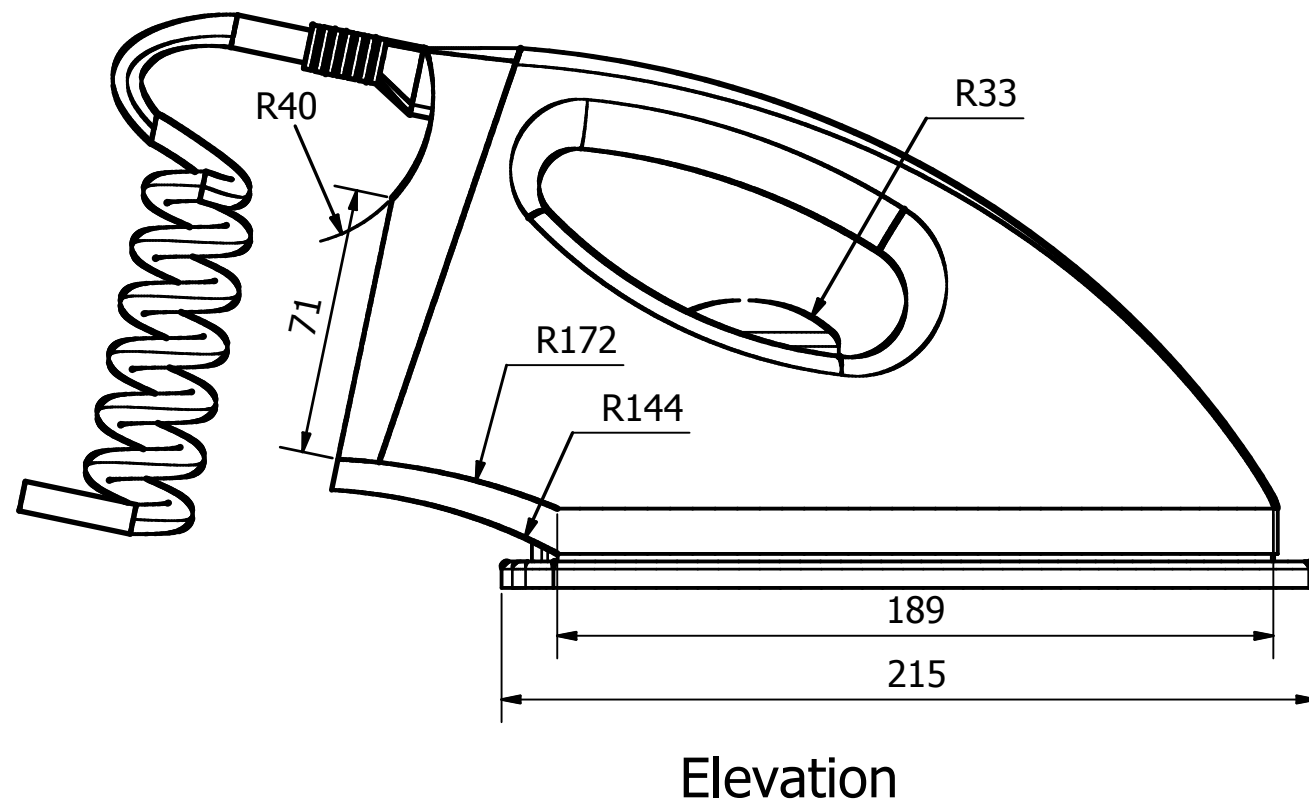
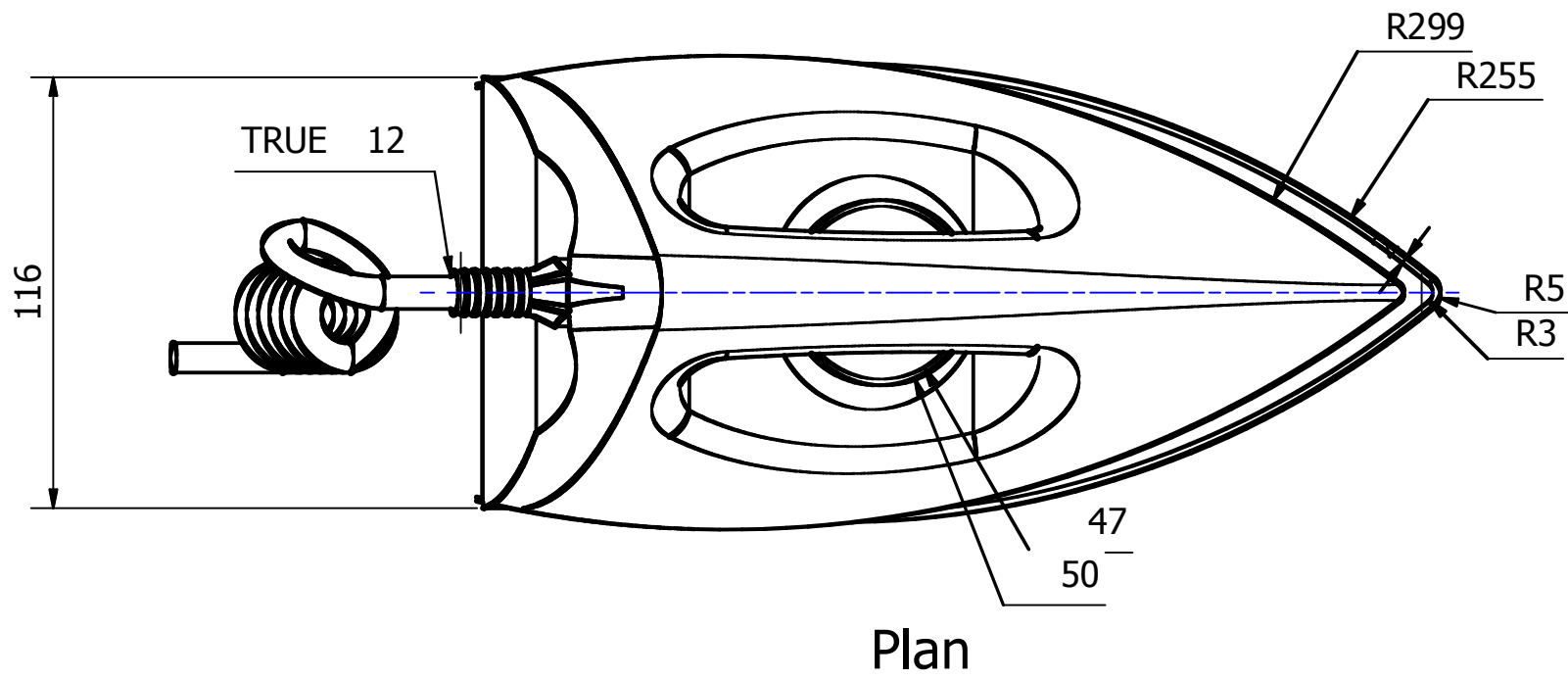


Graphic Communication Advanced Higher Teacher/ Lecturer Assessment of Computer-Aided 3D Modelling Presentation

Teacher/ lecturers must refer to “Guidance on Assessment – Computer-Aided 3D Modelling Presentation” (Diet 2008/ 2009) before attempting to complete this form.

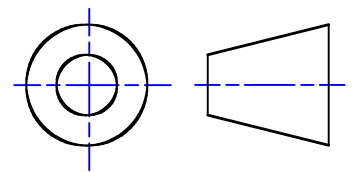
Candidate _____

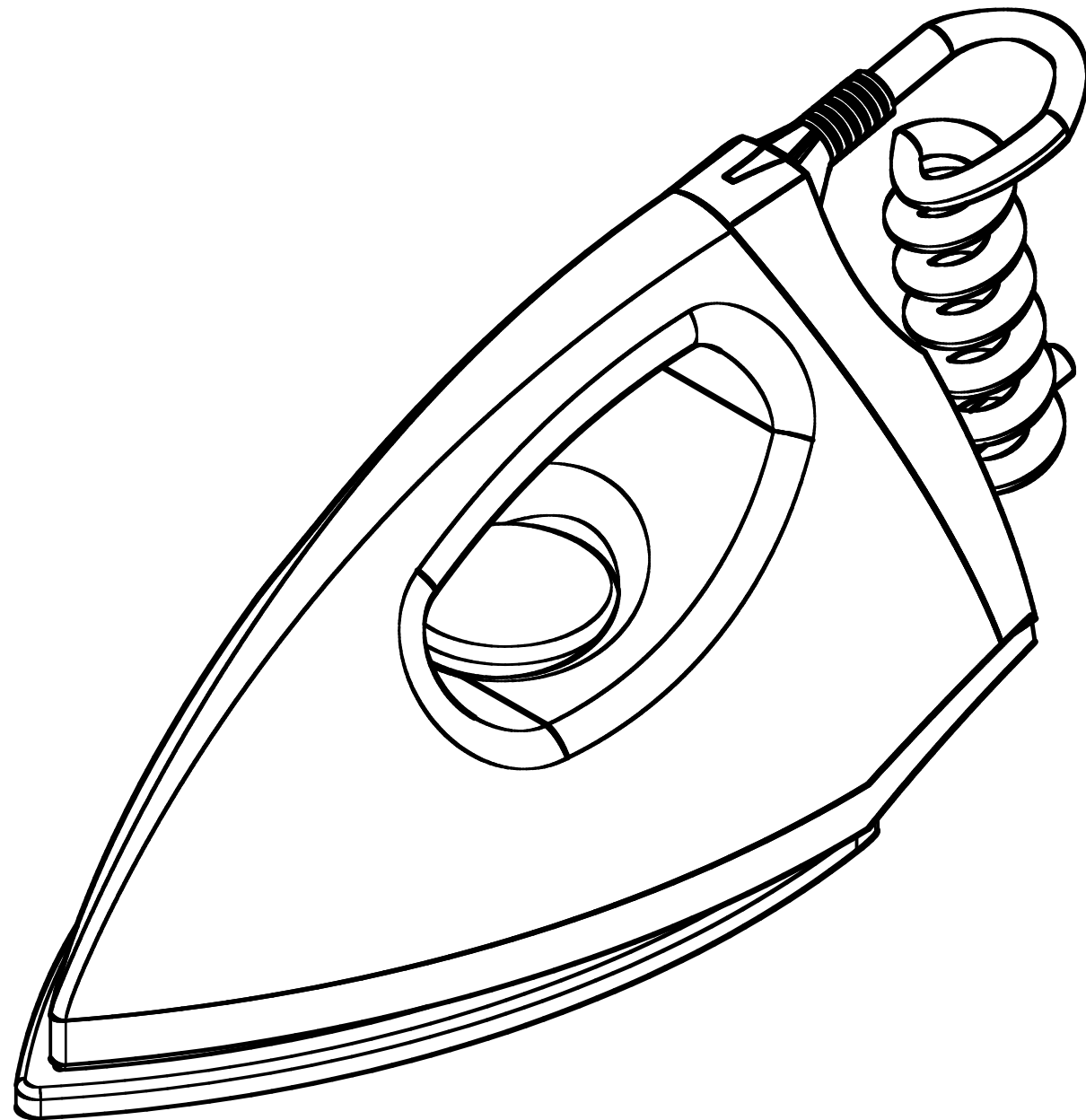
Item No.(s)	Assessment Criteria	Max. Marks	Mark Awarded	Official Use
	Section 1. 3D Modelling			
	(a) Modelling Technique 1	6		
	(b) Modelling Technique 2	6		
	(c) Modelling Technique 3	6		
	(d) Modelling Technique 4	6		
	(e) Modelling Technique 5	6		
	Section 2. Presentation			
	(a) Creation of three Related Orthographic Views	6		
	(b) Creation of Additional Views (i) Orthographic	4		
	(ii) Line Pictorial	4		
	(c) Annotation	4		
	Section 3. Visualisation			
	(a) Adding Materials and Lights	6		
	(b) Producing a Suitable Environment	6		
Total Marks		60		



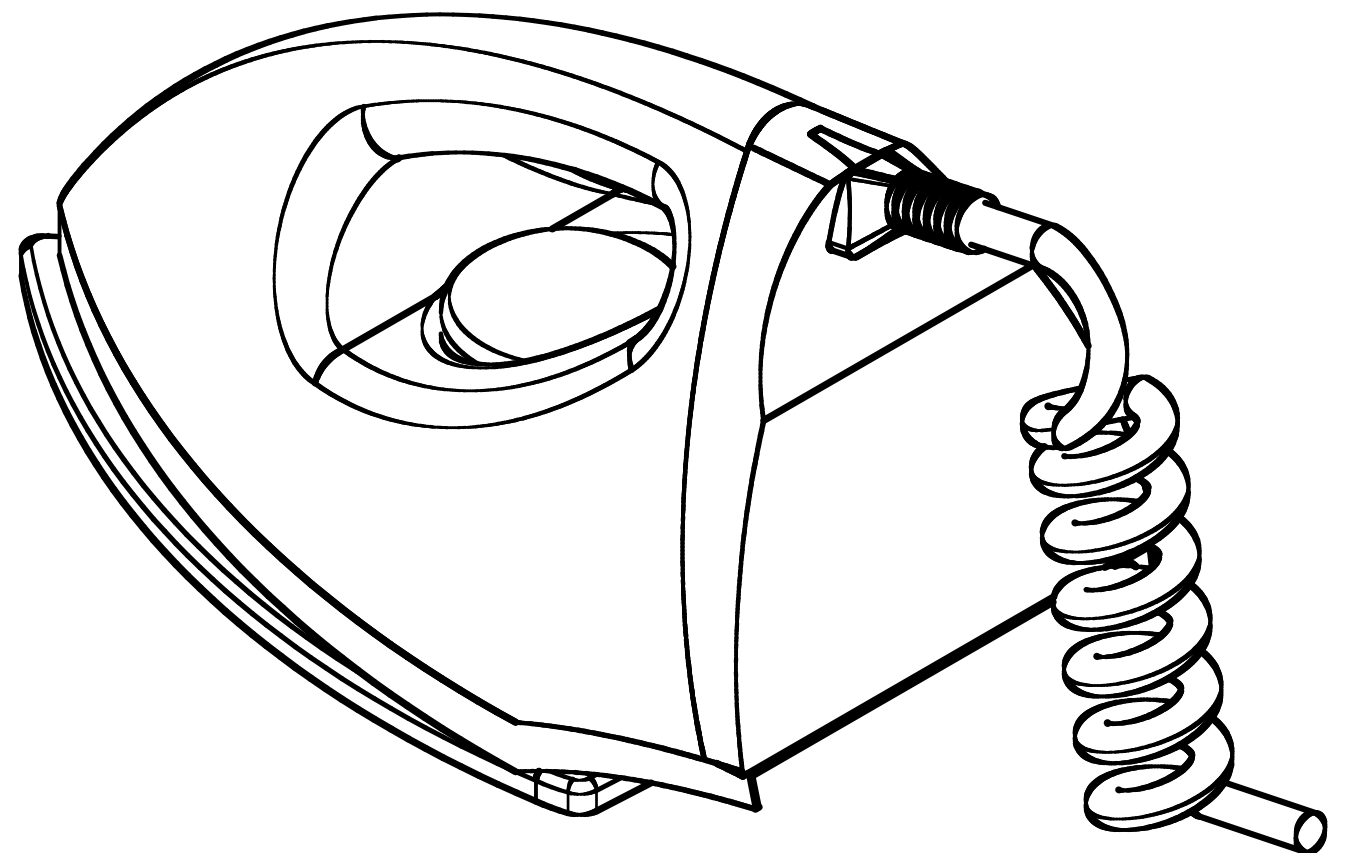
Iron Orthographic Views

Scale (1 : 2)

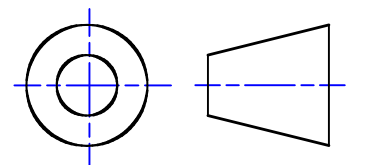


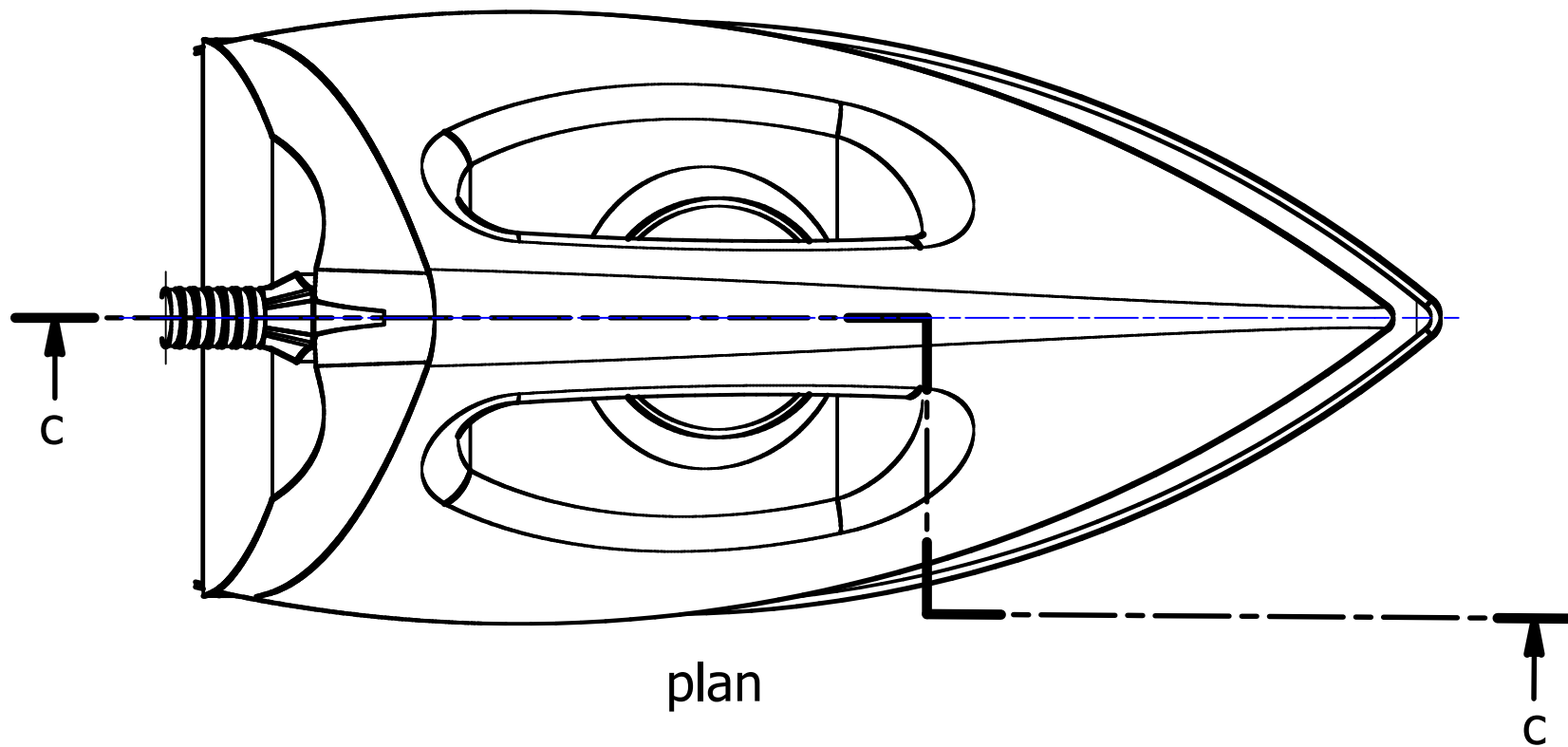


Isometric View (front)

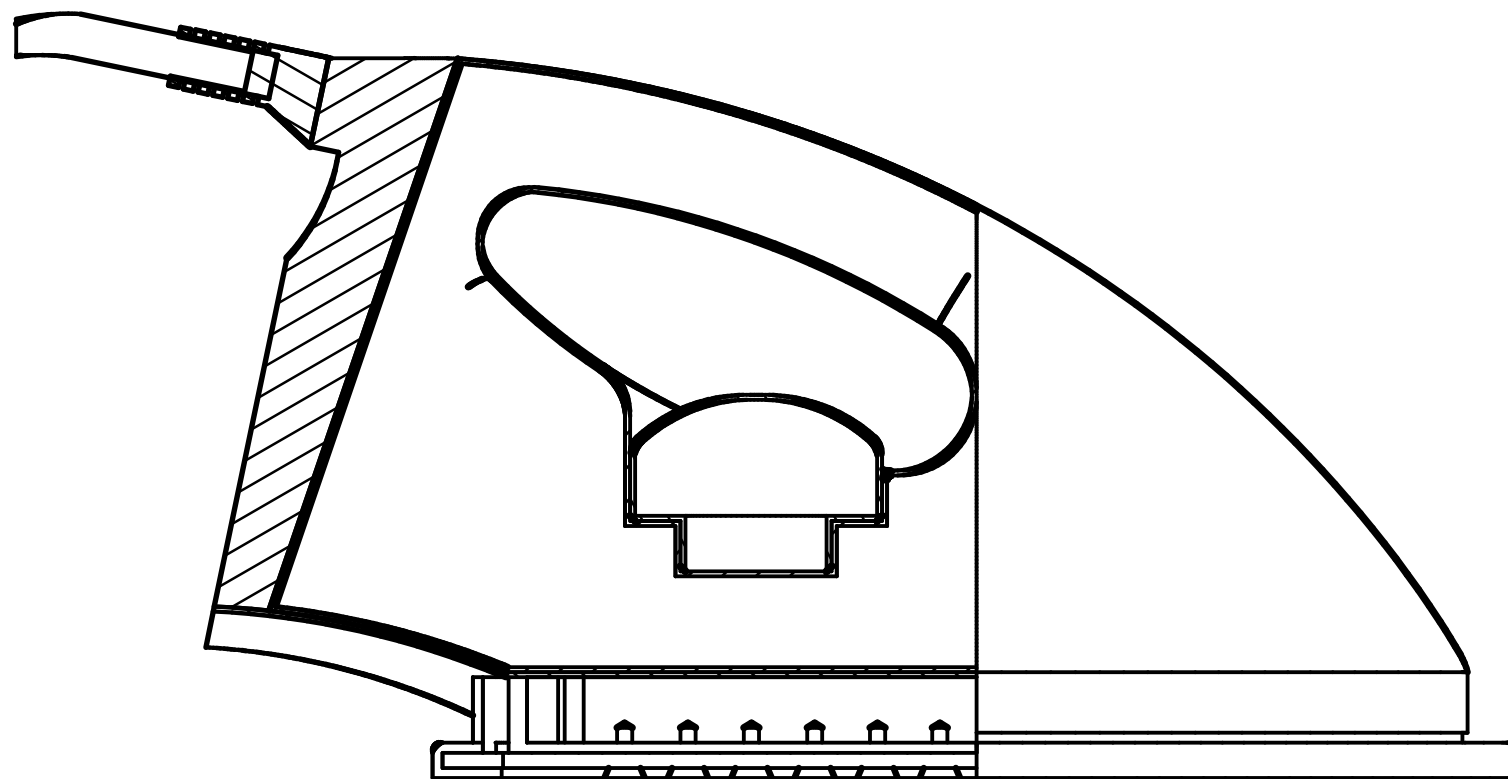


Isometric View (back)

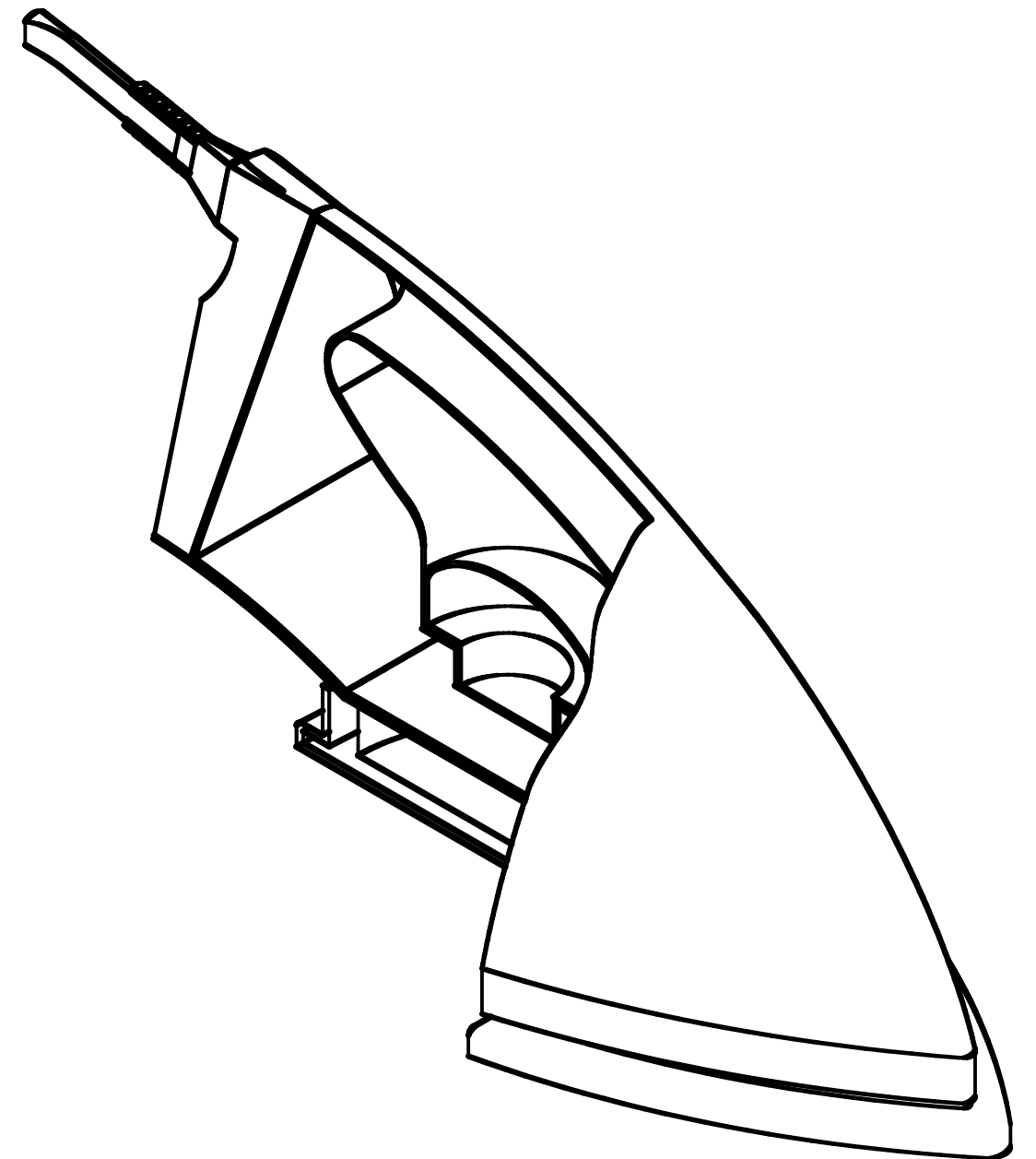




plan



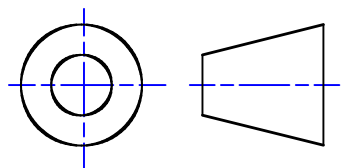
c-c (2:3)

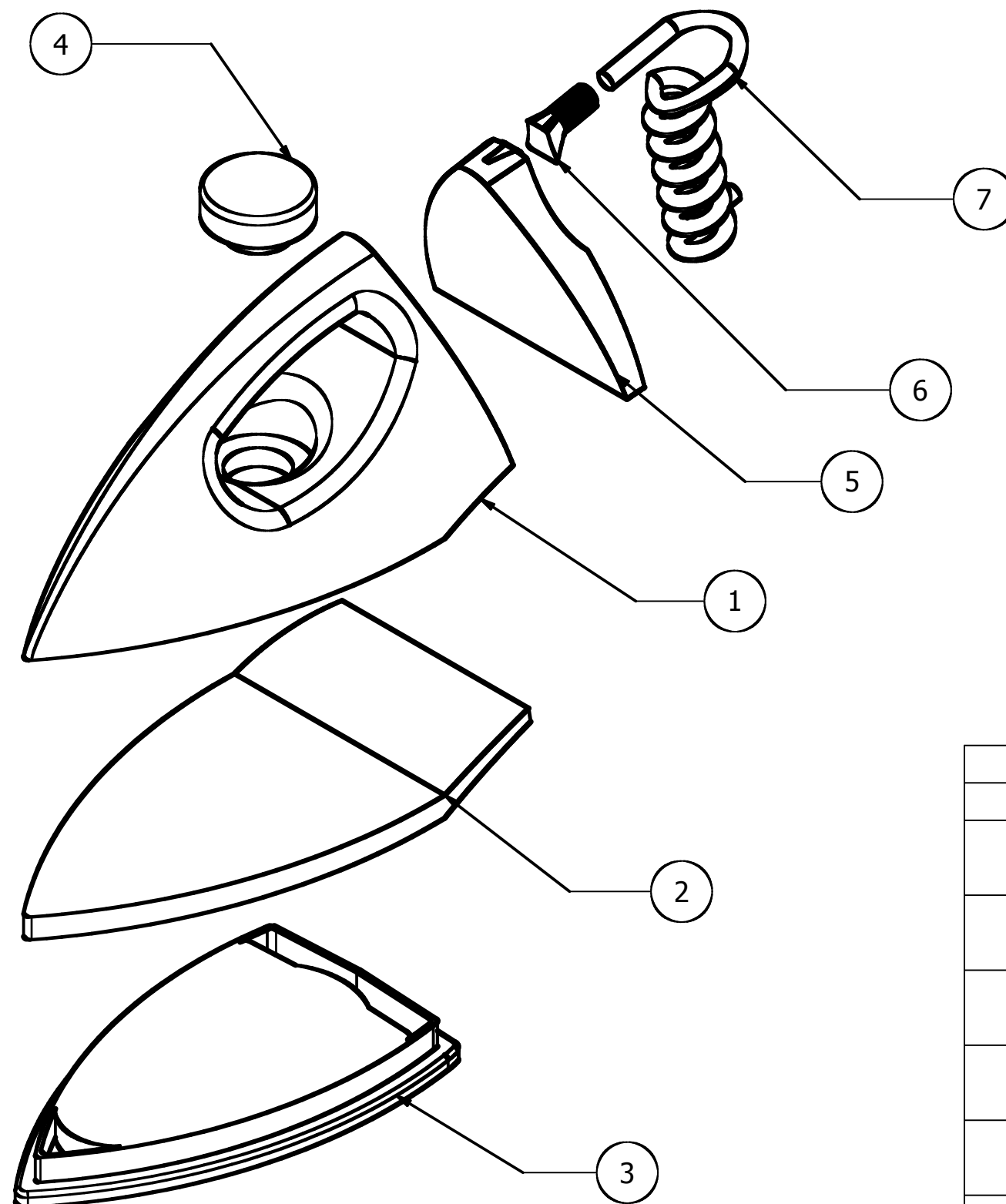


sectional isometric View

Sectional Views

Scale (2 : 3)

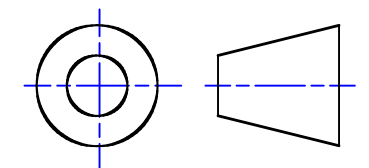


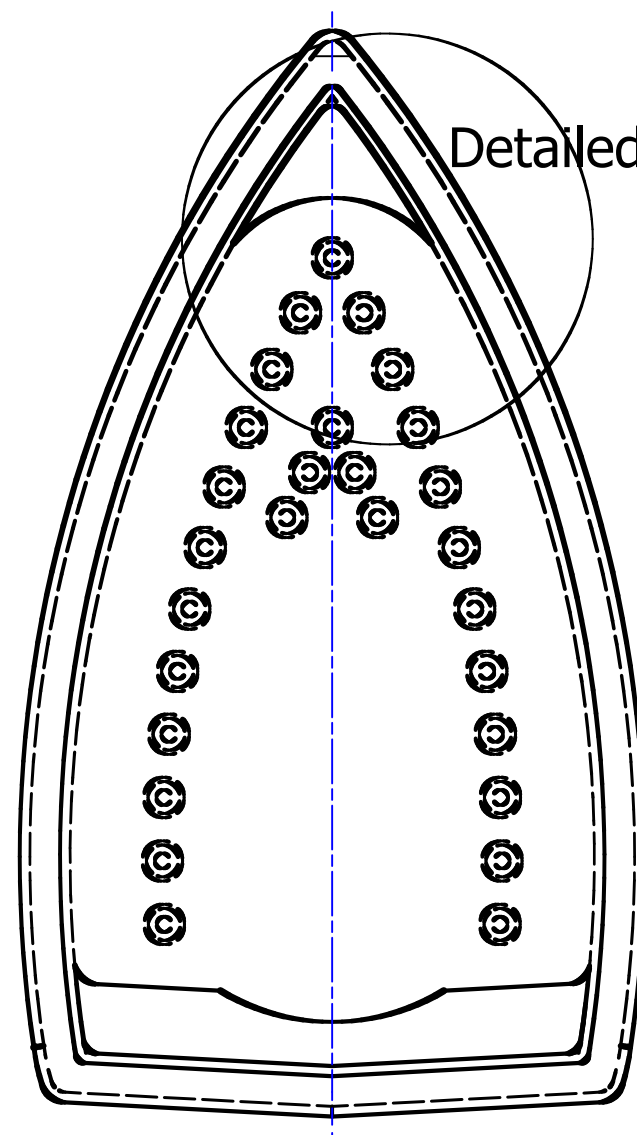


Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	001	iron top
2	1	002	plastic layer
3	1	003	metal plate
4	1	004	Part1
5	1	005	back piece
6	1	006	gromet
7 (2:5)	1	007	cable

Iron Exploded Isometric

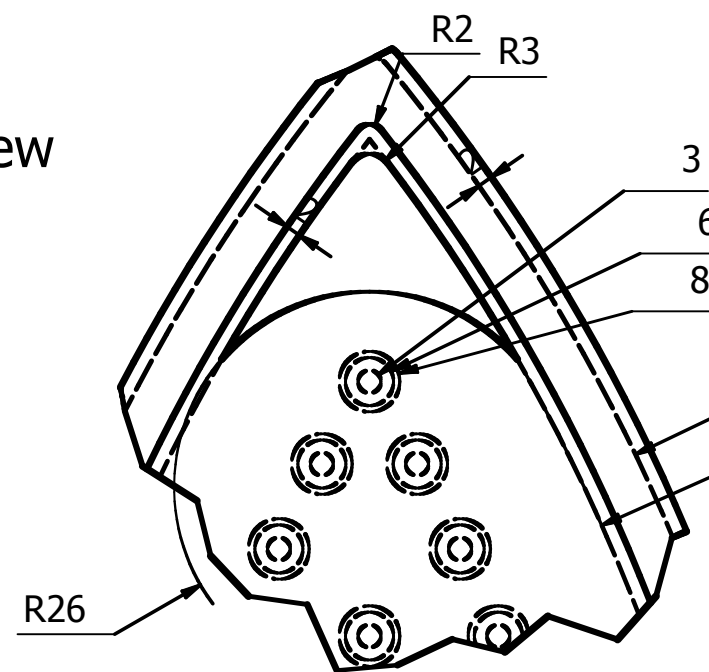
Scale 1:2



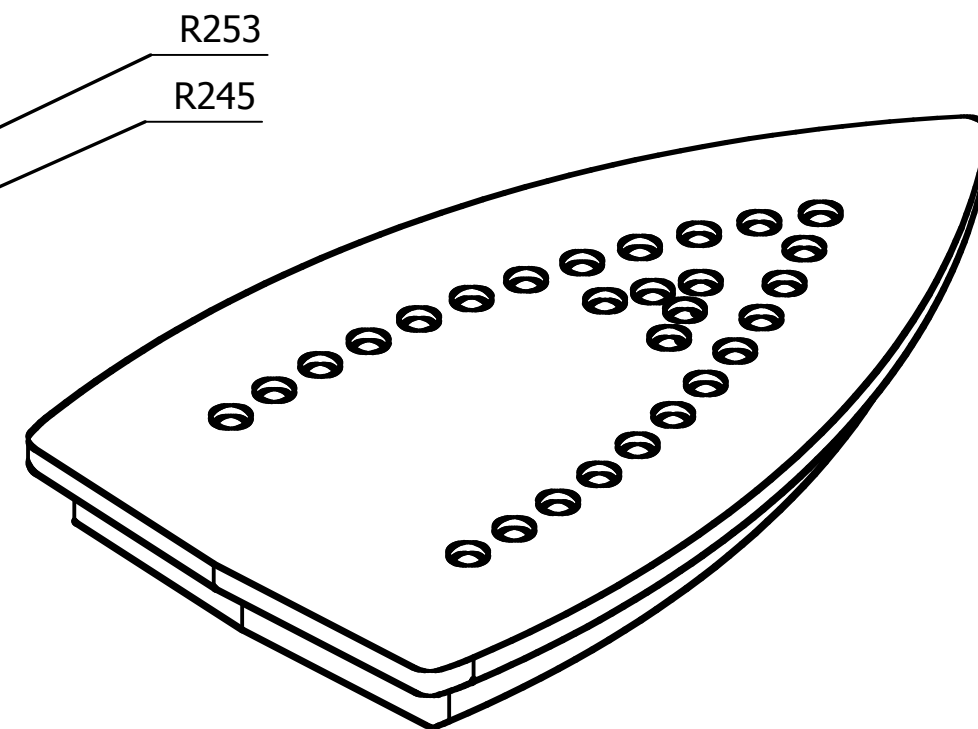


Detailed View

Plan



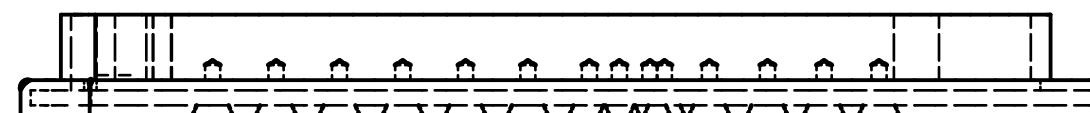
Detailed View (1 : 1)



Isometric View



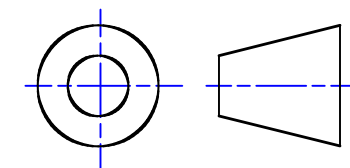
Elevation

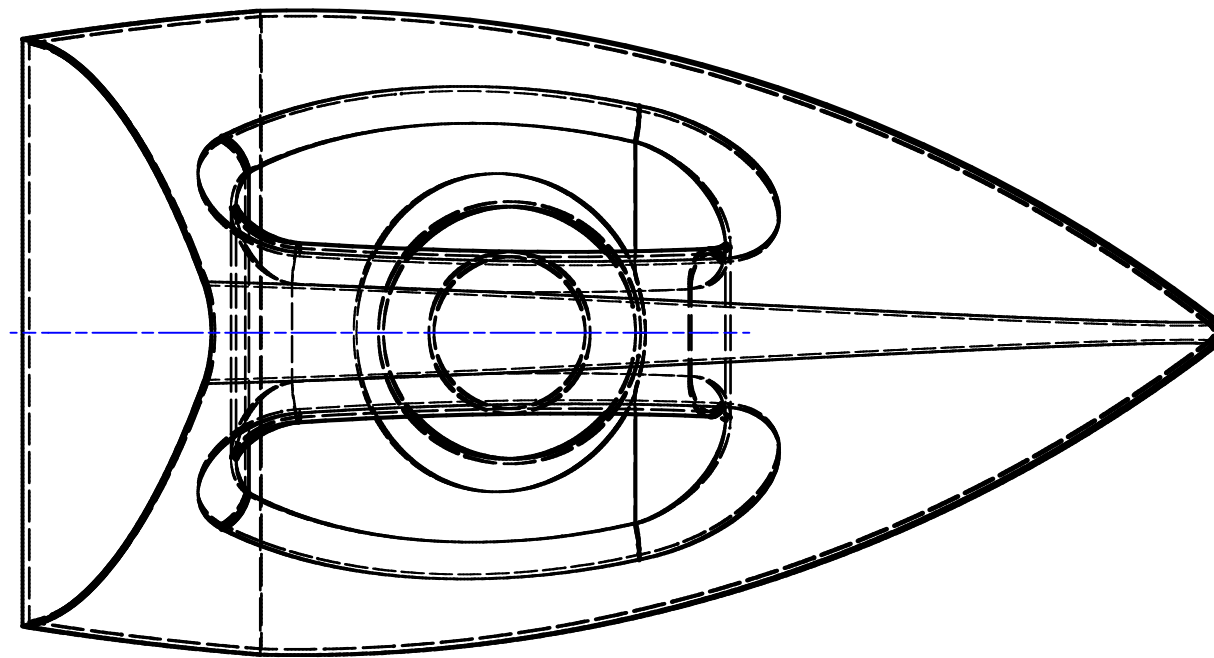


End Elevation

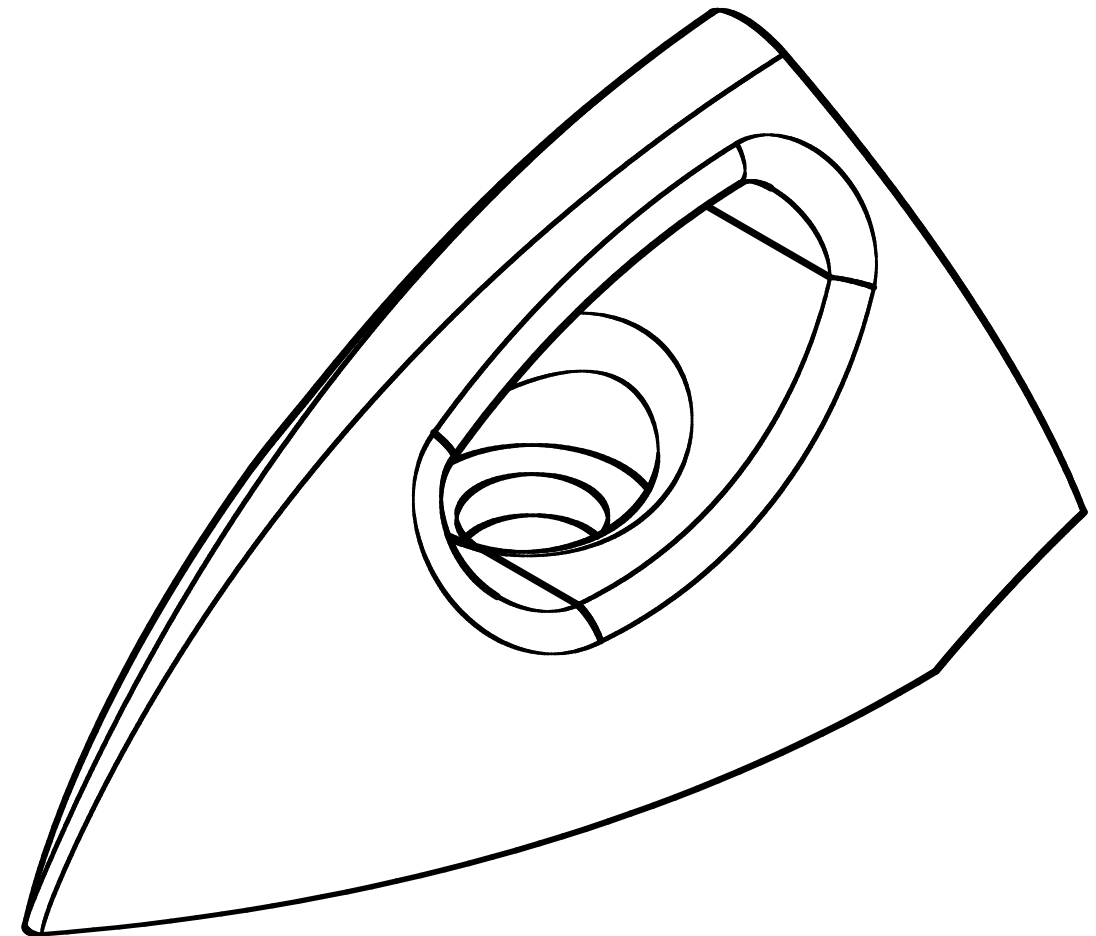
Orthographic and Isometric Views (Metal Plate)

Scale (2 : 3)

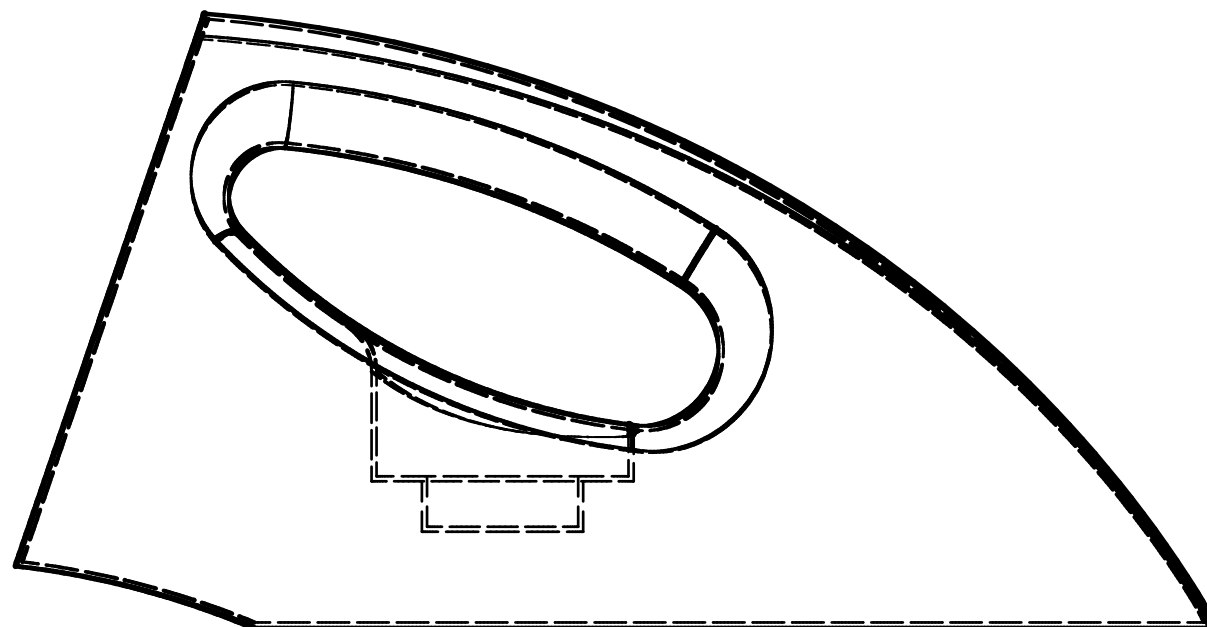




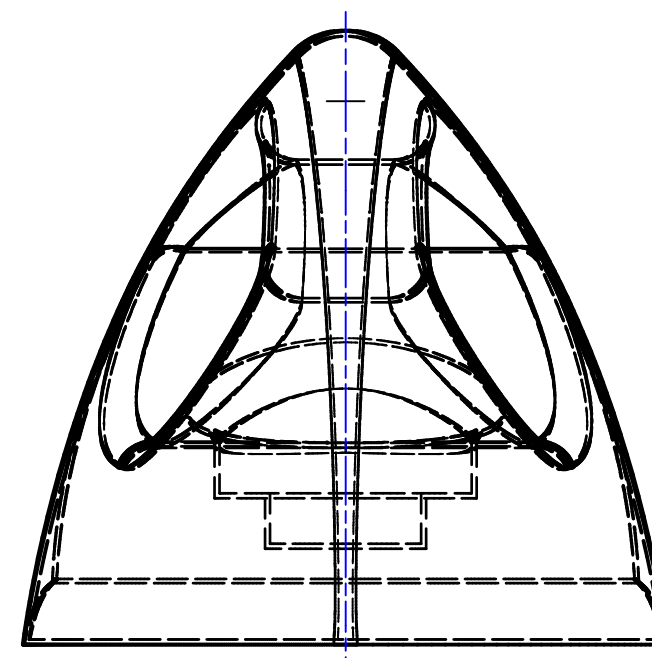
Plan



Isometric View



Elevation



End Elevation

Orthographic and Isometric Views (Iron Top)

Scale (2 : 3)

