



GAUTENG PROVINCE

Department: Education

REPUBLIC OF SOUTH AFRICA

MECHANICAL TECHNOLOGY

PRACTICAL ASSESSMENT TASK

WELDING AND METALWORK

GRADE 11

2026

This document consists of 29 pages

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1. INTRODUCTION/BACKGROUND

The 16 Curriculum and Assessment Policy Statements subjects which contain a practical component all include a Practical Assessment Task (PAT), i.e. a Practical or Performance Assessment Task. These subjects are:

- AGRICULTURE: Agricultural Management Practices, Agricultural Technology
- ARTS: Dance Studies, Design, Dramatic Arts, Music, Visual Arts
- SCIENCES: Computer Applications Technology, Information Technology
- SERVICES: Consumer Studies, Hospitality Studies, Tourism
- TECHNOLOGY: Civil Technology, Electrical Technology, **MECHANICAL TECHNOLOGY** and Engineering Graphics and Design.
- MATHEMATICS: Technical Mathematics

A PAT allows the educator to directly and systematically observe applied competence. The PAT comprises the application/performance of the knowledge, skills and values particular to that subject and counts 25% (i.e. 100 marks) of the total promotion/certification mark out of 400 for the subject.

The PAT is implemented across the first three terms of the school year, which is broken down into different practical skills that make up the PAT.

Any profession requires of its members a thorough grounding in both theory and practice, and **MECHANICAL TECHNOLOGY** is no exception. It is emphasized that the goal of the Practical Assessment Task is to produce a skilled learner in each specialisation field. A nation's true wealth is in its manpower and education should aim to develop the talents of the learner so that he/she can contribute to the well-being of society by using scientific and technological resources with the greatest efficiency and by continuing to develop them.

To prepare a learner to develop skills in **MECHANICAL TECHNOLOGY**, in each specialisation field:

- An attitude where the learner can selectively assimilate ideas, gather evidence and facts, and drawing logical conclusions and put them to good use creatively and with imagination;
- A capability to express ideas and information clearly by speech, writing, sketching or drawing;
- A willingness and capability to accept and exercise responsibility, to make decisions, and to learn by experience.

Attributes such as these cannot all be achieved in a classroom. A sound knowledge of engineering science is essential to equip the **MECHANICAL TECHNOLOGY** learner with the necessary practical capabilities for the required processes. Training is the art of acquiring essential skills to bridge between trade theory and practice.

Practical application in the workshop must therefore be made an interesting and challenging experience, mentally and physically, with encouragement to the learner to use his/her initiative, curiosity and persistence in finding things. The giving of some degree of responsibility during practical application is very important as a stimulus and to develop self-confidence.

2. TEACHER GUIDELINES

2.1 Administration of the PAT

Learners have the option to choose to complete any of the TWO options:
OPTION 1 – ROCKET STOVE or OPTION 2 – WALL BRAAI.

Teachers are requested to make copies of the different assessment criteria of the PAT document. These documents need to be distributed to the learners at the beginning of the year. The Practical Assessment Task for Grade 11 is internally set by the PED and moderated.

Teachers must attach due dates for the different terms of the PAT task (refer to the CAPS document). In this manner, learners can easily assess their progress. Instances where formal assessments take place, it is the responsibility of the teacher to administer assessment.

The PAT should be completed in the first three terms. The PAT should be based and completed under controlled conditions (Refer to the Mechanical Technology CAPS Grade 10–12).

Educators **MUST** build a prototype of the task in order to be able to demonstrate to the LEARNERS how the final product will look like. It will guide the LEARNERS with visual presentation. It provides the educator with insight into possible challenges regarding machines, equipment or material and what possible manufacturing procedures he/she need to follow in the workshop in order to complete the PAT.

2.2 Assessment of PAT

Frequent and developmental feedback is needed to guide and give support to the learner to ensure that the learner is on the right track.

Both formal and informal assessment should be conducted in different terms to ensure that the embedded skills are covered for the PAT. Informal assessment can be conducted only to monitor progress of the term in which the learners are engaged. Formal assessment should always be conducted by the teacher and will be recorded.

On completion of each phase in each term, the marks for the completed phase need to be recorded onto the school administration system.

2.3 Moderation of PAT

During moderation of the PAT, the term tasks will be presented to the moderator with the assessment criteria and marks obtained.

Where required the moderator should be able to call on the learner to explain the function, principles of operation and also request the learner to demonstrate the skills acquired through the capability tasks for moderation purposes.

Upon completion the moderator will, if necessary, adjust the marks of the group up or downwards depending on the decision reached because of moderation.

The task must be clearly marked with the correct initials and surname of each LEARNER. Internal moderation **MUST** be conducted on each phase by the internal moderator on school level.

2.4 CONSEQUENCES OF ABSENCE/NON-SUBMISSION OF TASKS.

If a learners' Practical Assessment Task is incomplete or unavailable with valid reason, the learner will be given three weeks before the commencement of the final end-of-year examination to submit outstanding task. Should the learner fail to fulfill the outstanding PAT requirement, such a learner will be awarded a zero for that PAT component.

A learner's results are regarded as incomplete if he/she does not offer any component of the PAT task. He/she will be given another opportunity based on the decision of the Head of the assessment body.

Should the learner fail to fulfill the outstanding PAT requirement, the marks for these components will be omitted and the final mark for Mechanical Technology will be adjusted for promotion purposes in terms of the completed

2.5 DECLARATION OF AUTHENTICITY

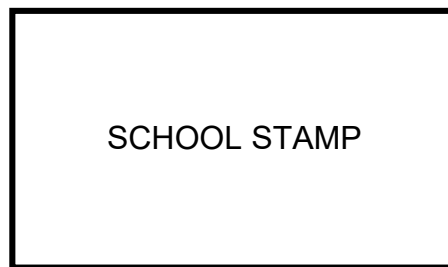
NAME OF THE SCHOOL:

NAME OF LEARNER:

(FULL NAME(S) AND SURNAME)

EXAMINATION NUMBER:

NAME OF TEACHER:



I hereby declare that the project submitted for assessment is my own, original work and has not been previously submitted for moderation.

SIGNATURE OF LEARNER

DATE

As far as I know, the above declaration by the LEARNER is true and I accept that the work offered is his or her own.

SIGNATURE OF TEACHER

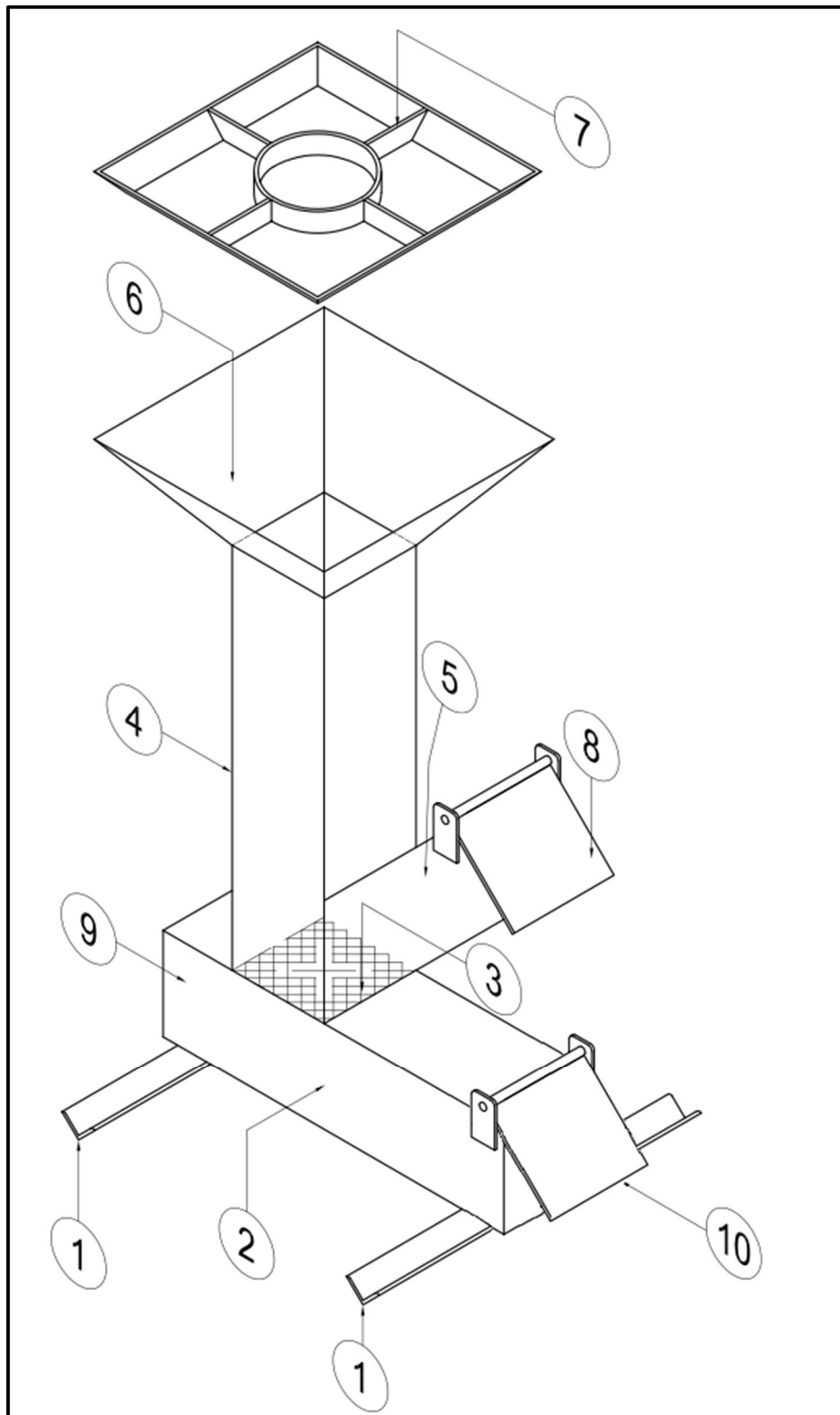
DATE

3. LEARNER GUIDELINES

3.1 Instructions to the learners

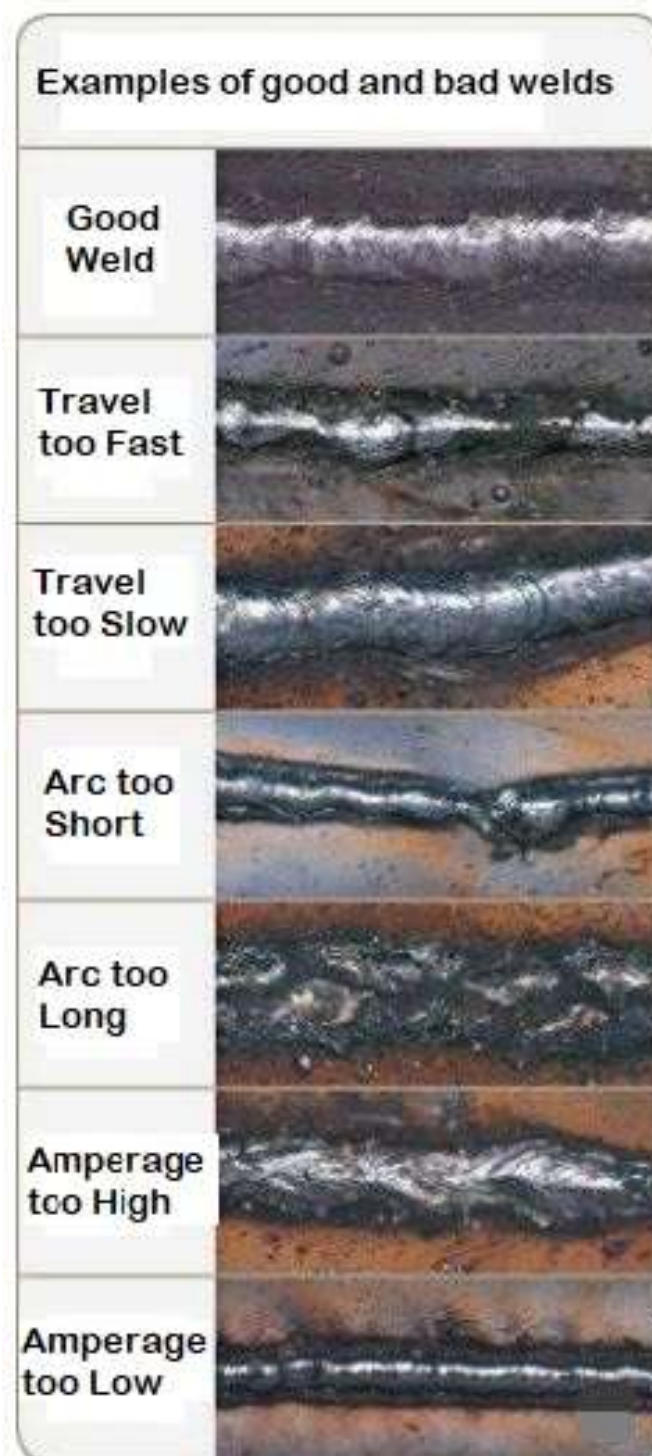
- Learners have to build the following tasks: ROCKET STOVE.
- The PAT must be completed according to the time frames set out in each of the tasks.
 - Phase 1 – Must be completed by end of Term 1
 - Phase 2 – Must be completed by end of Term 2
 - Phase 3 – Must be completed by end of Term 3
 - Phase 4 – Development must start in Term 1 and Phase 4 must be completed by end of September (Term3).
- Learners are required to actively engage in all practical assessment tasks.
- Learners who are un-cooperative will receive demerits or a zero-mark allocation for that section of the work.
- Learners, who act unsafely in the workshop and place other learners in danger, will be removed from the workshop and given additional corrective tasks to improve their safety awareness.
- Phase 1 – 4 make a complete project. Learners must work attentively and always use all safety precautions.
- You **MUST** conduct self-assessment in the marking rubric provided **BEFORE** you take your completed phase for assessment by the educator.

GRADE 11 WELDING & METALWORK PAT: OPTION 1: ROCKET STOVE



RESOURCES REQUIRED FOR PAT

	COMPONENTS	MATERIAL	DIMENSIONS	QTY
1	Base supports	25x25x3 mm angle iron OR 25 x 25 x 1,6 mm square tube	350 mm	2
2	Horizontal pipe	100 x 100 x 2 mm square tube	400 mm	1
3	Inside grid support	Expanded metal / own design	100 x 100 mm	1
4	Vertical pipe	100 x 100 x 2 mm square tube	375 mm	1
5	Charge pipe	100 x 100 x 2 mm square tube	300 mm	1
6	Transition piece	2 mm sheet metal	According to template	4
7	Cooking top	20 x 3 flat bar	1800 mm	1
8/10	Cover flap	2 mm sheet metal	100 x 120 x 2 mm	2
	Cover flap hinge	Ø8 mm round bar	115 mm	2
	Hinge support	20 x 3 mm flat bar / 45 x 2 mm sheet metal offcuts	45 mm	4
9	Fixed cover	2 mm sheet metal	100 x 100 x 2 mm	1

EXAMPLES OF QUALITY OF WELDS**Examples**

RUBRIC FOR MARKING, CUTTING, DRILLING, WELDING, FINISHING AND PRESENTATION

CATEGORY	Excellent (5)	Good (4)	Average (3)	Poor (2)	Incomplete (1)
MARKING OF PARTS	All parts marked and accurate according to dimensions. ± 1 mm deviation from required dimensions.	Nearly all parts marked and accurately dimensions obtained. ± 2-3 mm deviation from required dimensions.	Most parts marked and most accuracy obtained. ± 4 mm deviation from required dimensions.	Some parts partially marked / some accuracy obtained. ± 5 mm deviation from required dimensions.	Poor and wrongly marked / inaccurate. ± 6 mm deviation from required dimensions.
CUTTING AND DRILLING	All parts cut/drilled accurately according to dimensions. ± 1 mm deviation.	Nearly all parts cut/drilled accurately. ± 2-3 mm deviation	Most parts marked and cut/drilled accurately. ± 4 mm deviation	Some accuracy obtained with some deviation from dimensions. ± 5 mm deviation	Section poorly cut /drilled inaccurately or wrong dimensions. ± 6 mm deviation
WELDING QUALITY	No welding defects visible. Beading neat and complete fusion of metals achieved. All slag is removed.	Neat welding done. Good beading with some minor defects visible. Good fusion achieved. All slag is removed.	Some beading visible. Presence of some welding defects. Not complete fusion achieved. All slag is partially removed.	Poor welding done. Lot of welding defects visible. Poor or no fusion achieved. Some burning through metal occurred.	Bad welding. Lot of welding defects with no fusion and holes burned through.
FINISHING AND PRESENTATION	Weld areas are cleanly finished, ground and painted. Project excellent presented. Excellent functionality obtained.	Nearly all welded areas are cleanly finished, ground and painted. Project well presented. Will function well.	Most welded areas are cleanly finished, ground and painted. Average presentation. Project will function.	Some welded areas are cleanly finished, ground and painted. Poor presentation with limited functionality.	No welded areas cleanly finished, ground and painted. No complete assembly. Bad presentation with no functionality.

PHASE 1

SECTION C: WELDING AND METALWORK

4: ROCKET STOVE:

4.1 HORIZONTAL PIPE (2) and BASE SUPPORTS (1)

Phase: 1
Start date: February 2026
Completion date: March 2026
Mark allocation: 50 (**50**)

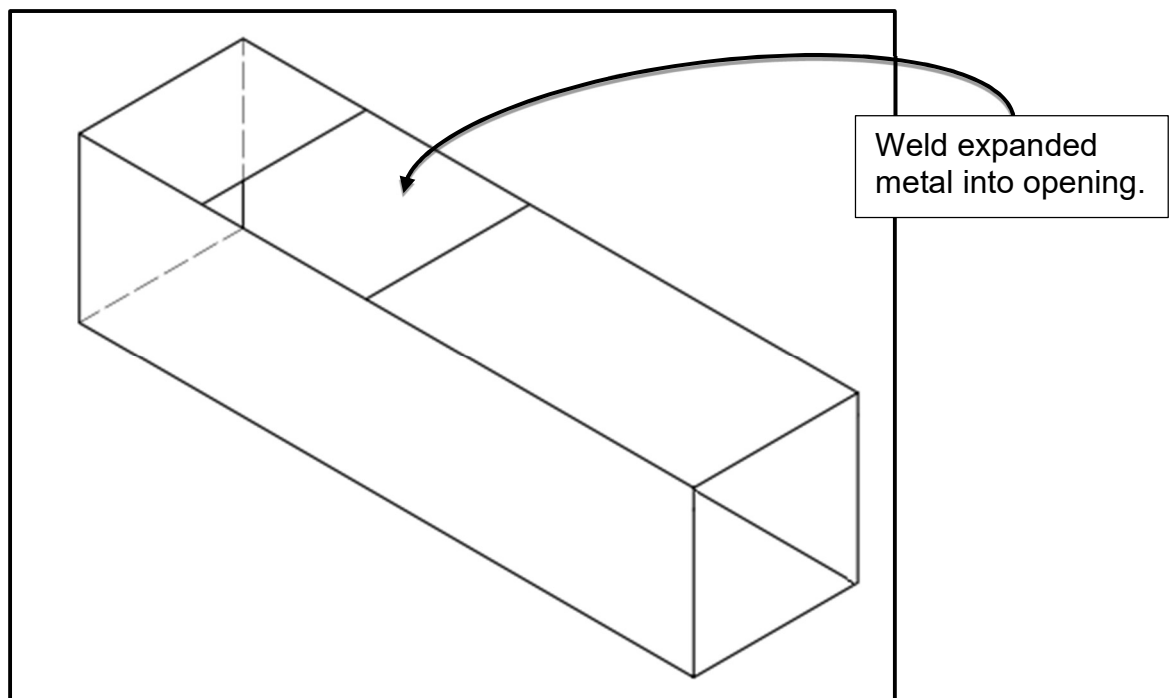
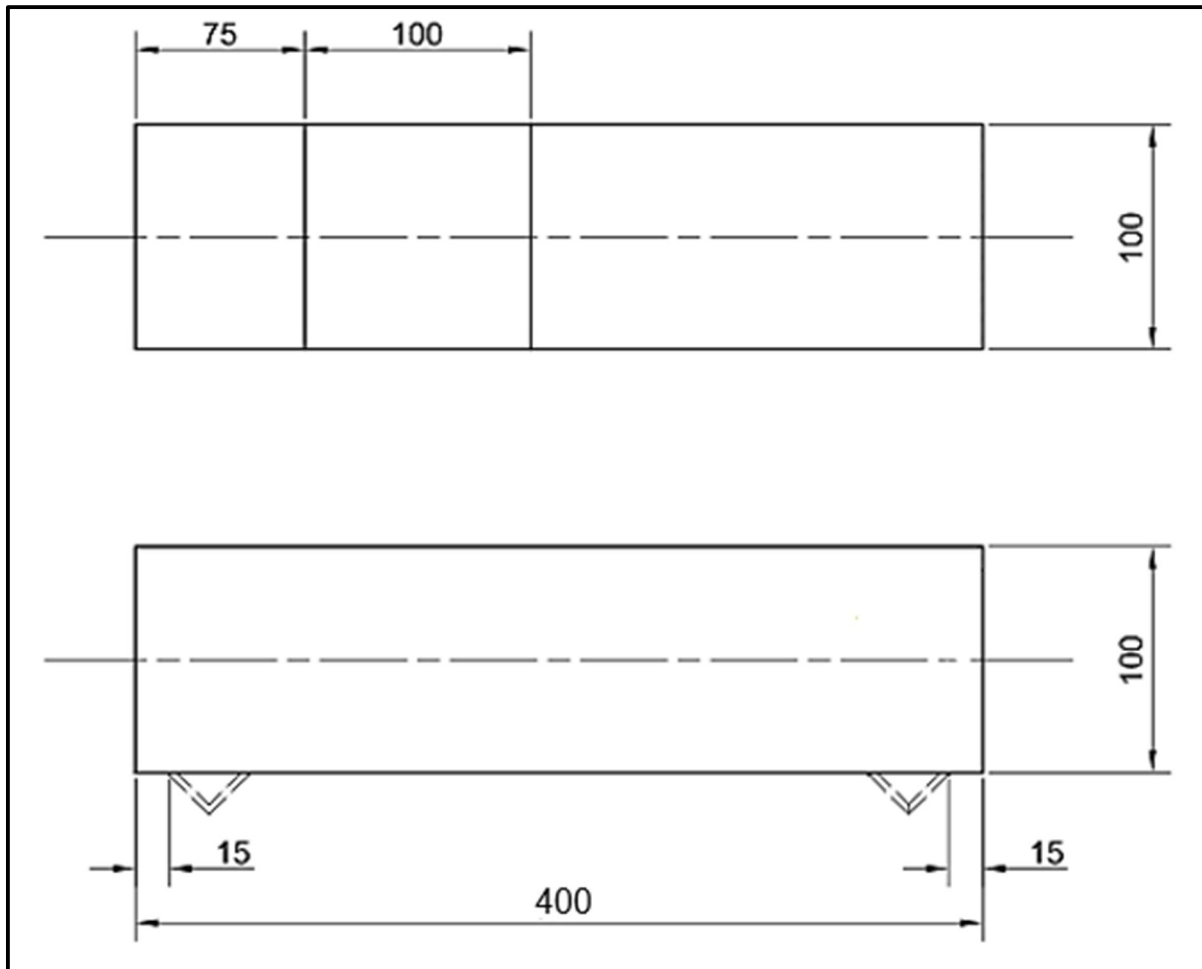


FIGURE 1

**FIGURE 2 – Base**

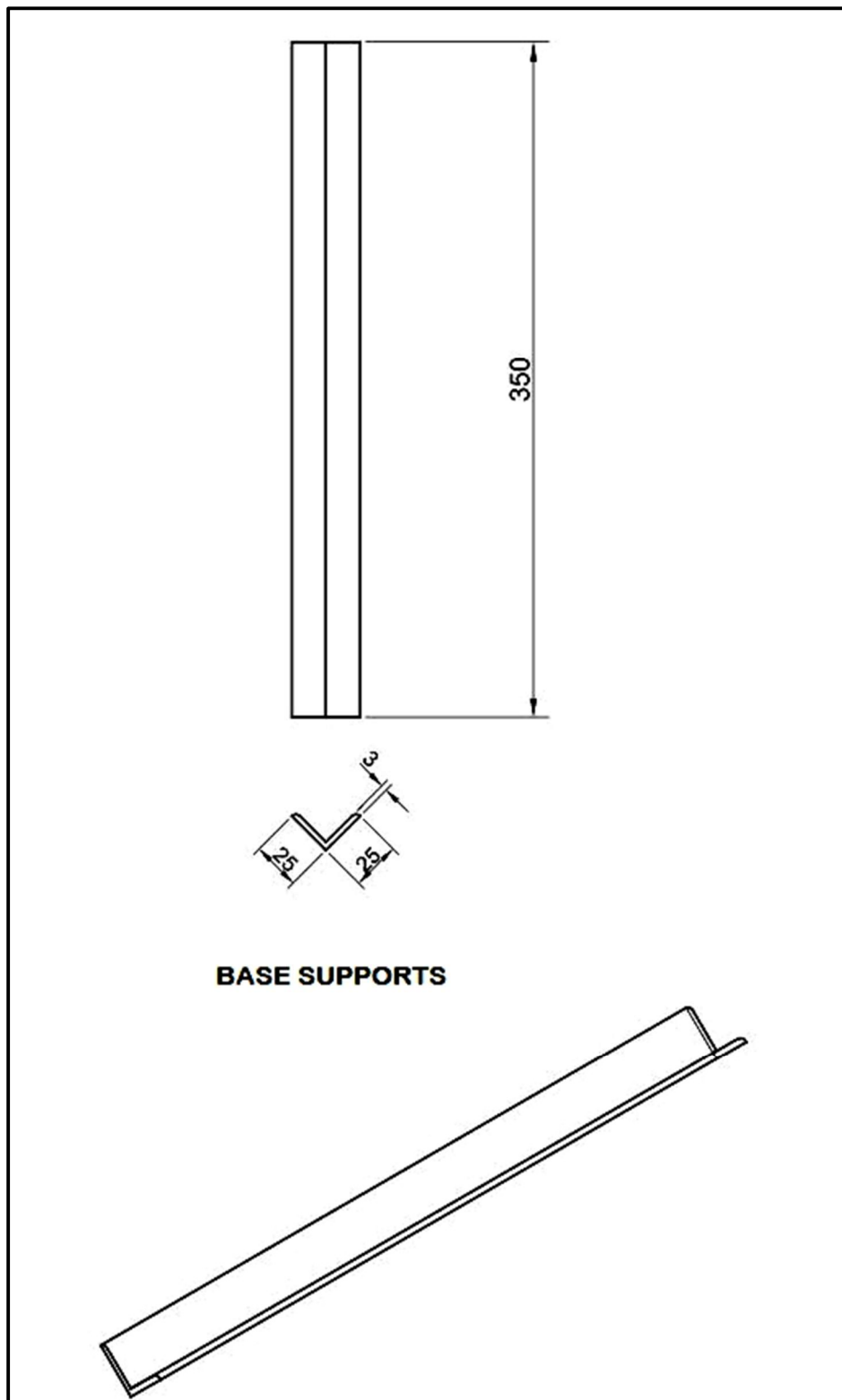


FIGURE 3 – Base supports

MECHANICAL TECHNOLOGY								
WELDING AND METALWORK								
MARKSHEET – BASE SUPPORTS & HORIZONTAL PIPE – PHASE 1								
GRADE		11	DATE					
PROJECT		ROCKET STOVE						
LEARNER NAME:								
FACETS		MARKS	LEARNER – Self-Assessment	Teacher Assessment	Internal Moderation	Provincial Moderation	External Moderation	TEACHER COMMENTS
			1	2	3	4	5	
BASE SUPPORTS	Cut angle iron/square tubing to size	5						
	Clean 2 supports from all burrs	5						
HORIZONTAL PIPE	Measure and mark to size 400 mm	5						
	Cut to size – 400 mm	5						
	Mark out and cut out 100 x 100 expanded metal	10						
	Weld expanded metal	10						
	Weld base supports in position. (2 x 5)	10						
TOTAL:		50						
MODERATOR COMMENTS:								
NAME & SIGNATURE OF TEACHER								
NAME & SIGNATURE OF TECHNICAL DEPARTMENTAL HEAD								
NAME & SIGNATURE OF SUBJECT MODERATOR								

PHASE 2

4.2 VERTICAL PIPE (4) and CHARGE PIPE(5)

Start date: April 2026

Completion date: June 2026

Mark allocation: 65 (50)

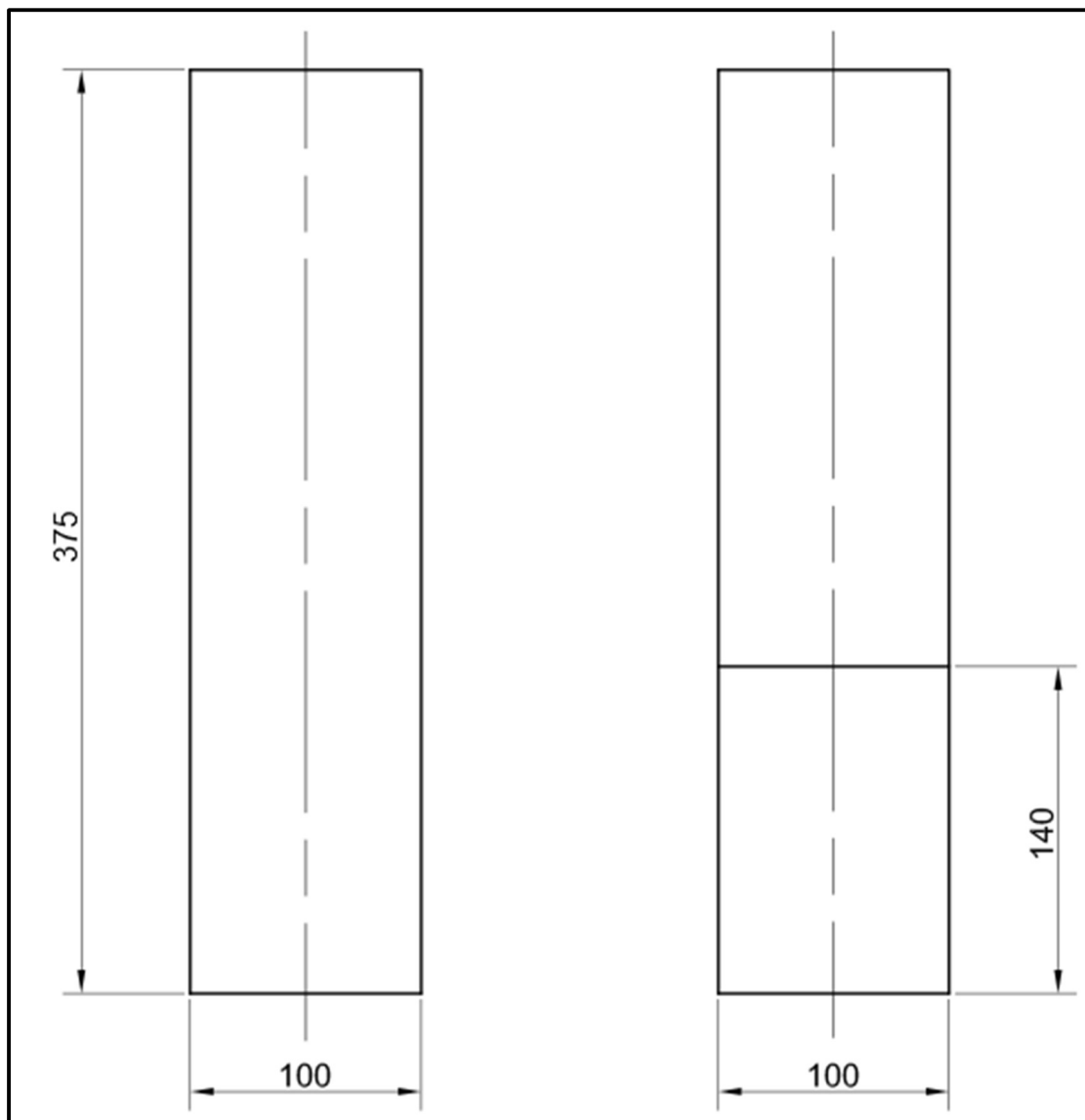


FIGURE 4 – Vertical Pipe

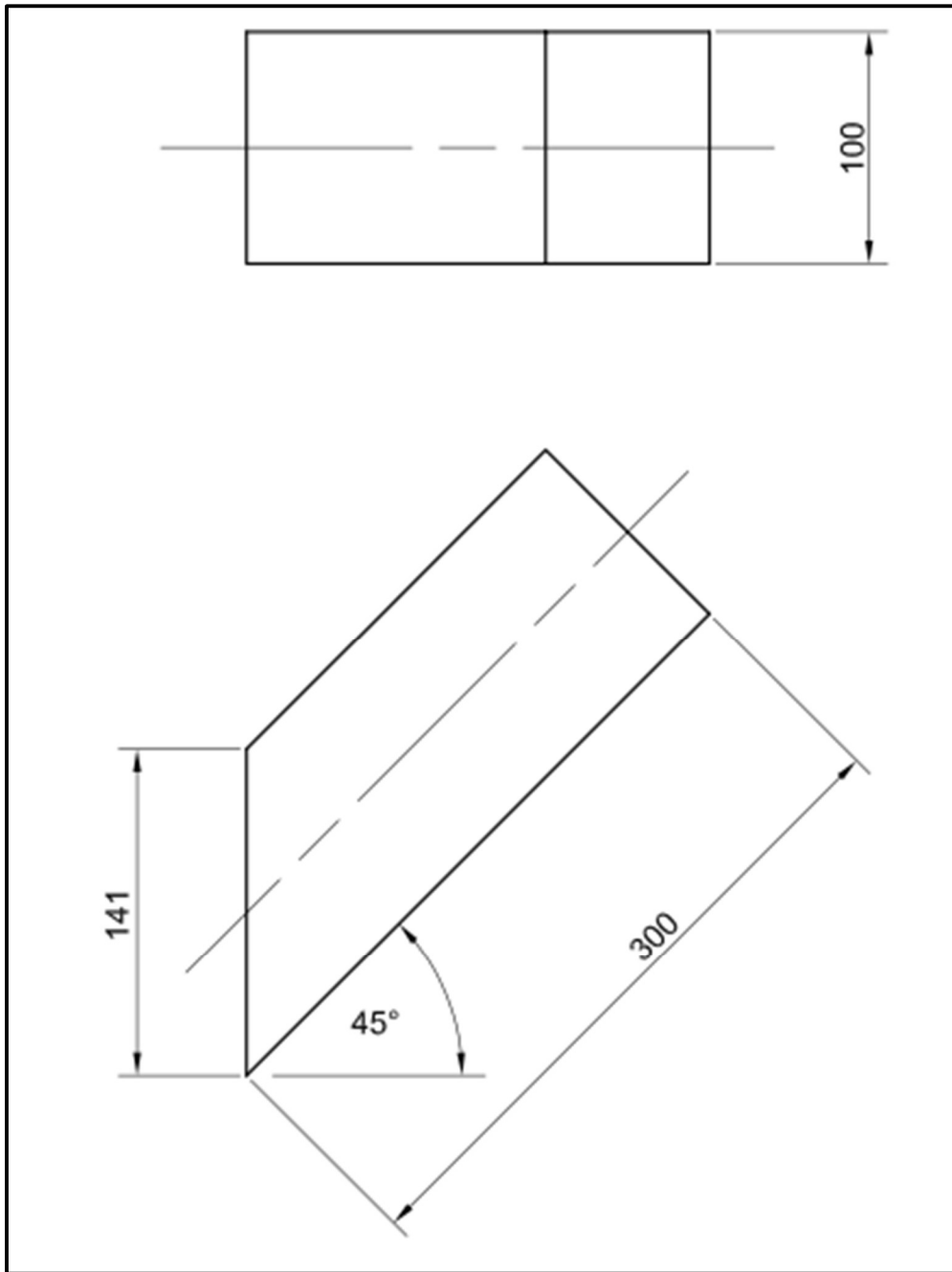


FIGURE 5 – Charge Pipe

MECHANICAL TECHNOLOGY								
WELDING AND METALWORK								
MARKSHEET – VERTICAL PIPE and CHARGE PIPE – PHASE 2								
GRADE		11	DATE					
PROJECT		ROCKET STOVE						
LEARNER NAME:								
FACETS		MARKS	LEARNER –	Teacher Assessment	Internal Moderation	Provincial Moderation	External Moderation	TEACHER COMMENTS
			Self-Assessment					
			1	2	3	4	5	
VERTICAL PIPE	Measure and mark the length of 375 mm	5						
	Measure and mark the 140 mm opening	5						
	Cut to size 375 mm	5						
	Cut 140 x 100 mm opening	5						
	File all burrs	5						
CHARGE PIPE	Measure and mark length to 300 mm	5						
	Measure and mark 45° angle	5						
	Cut to size 300 mm	5						
	Cut to 45°	5						
	File all burrs	5						
	Weld vertical pipe to charge pipe (3 sides x 5)	15						
Sub- total:		65						
TOTAL:		50						
MODERATOR COMMENTS:								
NAME & SIGNATURE OF TEACHER								
NAME & SIGNATURE OF TECHNICAL DEPARTMENTAL HEAD								
NAME & SIGNATURE OF SUBJECT MODERATOR								

PHASE 3

4.3 DEVELOPMENT – SQUARE TO SQUARE ON-CENTRE HOPPER (6)

Start date: July 2026
Completion date: September 2026
Mark allocation: 100 (50)

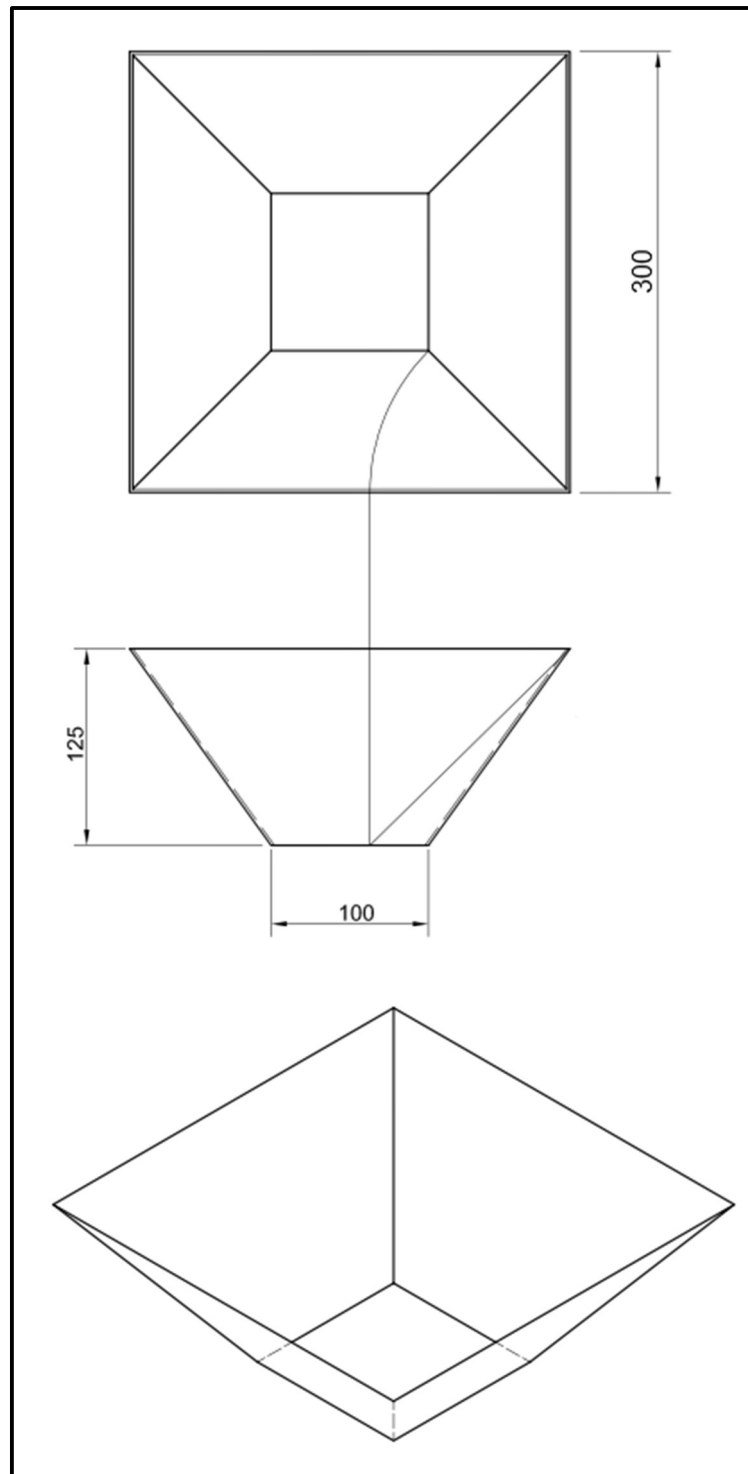


FIGURE 6 – Hopper

Template Development:

1. By the use of Technical Drawing equipment, create a template of a square-to-square transition piece shape with a square dimension on bottom of 300 x 300mm (Vertical height of the transition piece is 125 mm).
2. Use calculations to calculate the correct length of each of the sector lines and create a template which you must use to transfer measurements to a plate when creating the square-to-square transition piece.
3. Label your template with your name and the evidence of all calculations must in your portfolio file.

Procedure:

1. Transfer your template measurements to sheetmetal.
2. When transferring your template to the steel plate, make use of a scribe so that your measurements indicated does not get lost when cutting out of the template occur.
3. By the use of plasma cutter or guillotine, cut out your profile on the outside lines.
4. Finish the template outside perimeter with an angle grinder to specification.
5. Draw your template lines where you need to fold your plate to the correct angle.
6. Bend each side until the two ends meet up perfectly.
7. Tag weld in place and do permanent welding when satisfied of squareness.
8. Attach finished transition to Phase 1/2 shell and weld together.
9. Tag weld onto the formed transition piece. Ensure the pieces are positioned correctly and then weld permanently.
10. Clean any slag of where all welding has taken place.
11. Project can be finished by painting it with heat resistant paint.

N.B. The development of the transition piece can be done as a two part development or four pieces spotwelded and finished welding afterwards.

WORKSHEET 3.1: TEMPLATE DEVELOPMENT.

LEARNER NAME:

3.1.1 Measure true length of sides from template and write them down according to scale

(5)

NOTE: This worksheet MUST be evident in the LEARNER's portfolio of evidence.

MECHANICAL TECHNOLOGY							
WELDING AND METALWORK							
MARKSHEET – SQUARE TO SQUARE ON-CENTRE HOPPER – PHASE 3							
GRADE		11		DATE			
PROJECT		ROCKET STOVE					
LEARNER NAME:							
FACETS	MARKS	LEARNER – Self-Assessment	Teacher Assessment	Internal Moderation	Provincial Moderation	External Moderation	TEACHER COMMENTS
		1	2	3	4	5	
Template measurements (Worksheet 3.1)	5						
Develop template	5						
Cutting of template	5						
Transfer of template to steel plate	5						
Cutting of hopper parts (4 sides x 5)	20						
Weld of hopper (4 corners x 5)	20						
Weld of hopper to vertical pipe (4 sides x 5)	20						
Weld of vertical to horizontal pipe. (4 sides x 5)	20						
SUBTOTAL	100						
TOTAL	50						
MODERATOR COMMENTS:							
NAME & SIGNATURE OF TEACHER							
NAME & SIGNATURE OF TECHNICAL DEPARTMENTAL HEAD							
NAME & SIGNATURE OF SUBJECT MODERATOR							

PHASE 4

4.4 COOKING FRAME (7), CHARGE PIPE COVER (8 & 10) and FIXED COVER (9)

Start date: February 2026
Completion date: September 2026
Mark allocation: 100

4.4.1 Charge Pipe Covers (8 & 10)



Example – Charge Pipe Cover

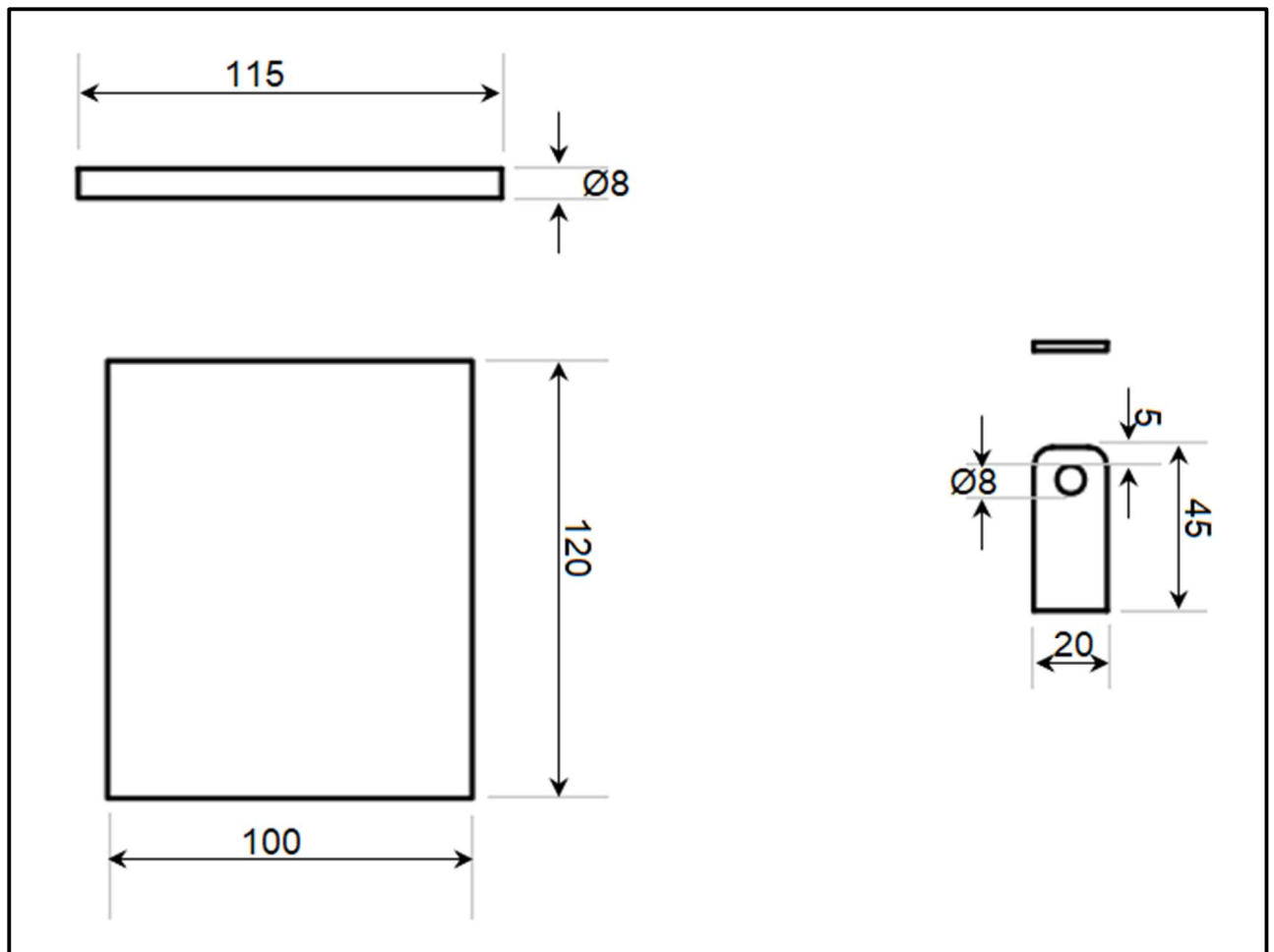


FIGURE 7 - Charge Pipe Cover

4.4.2 Horizontal Pipe Fixed Cover (9)

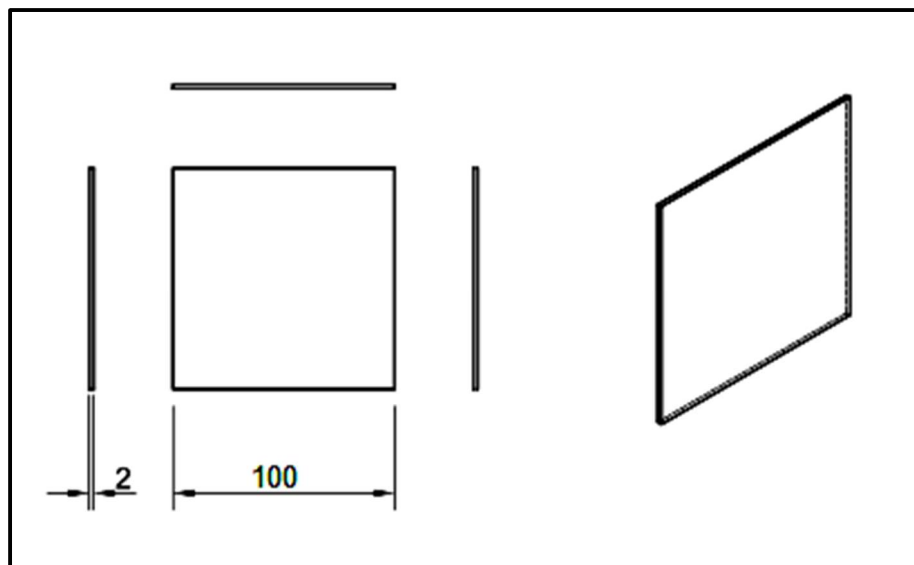
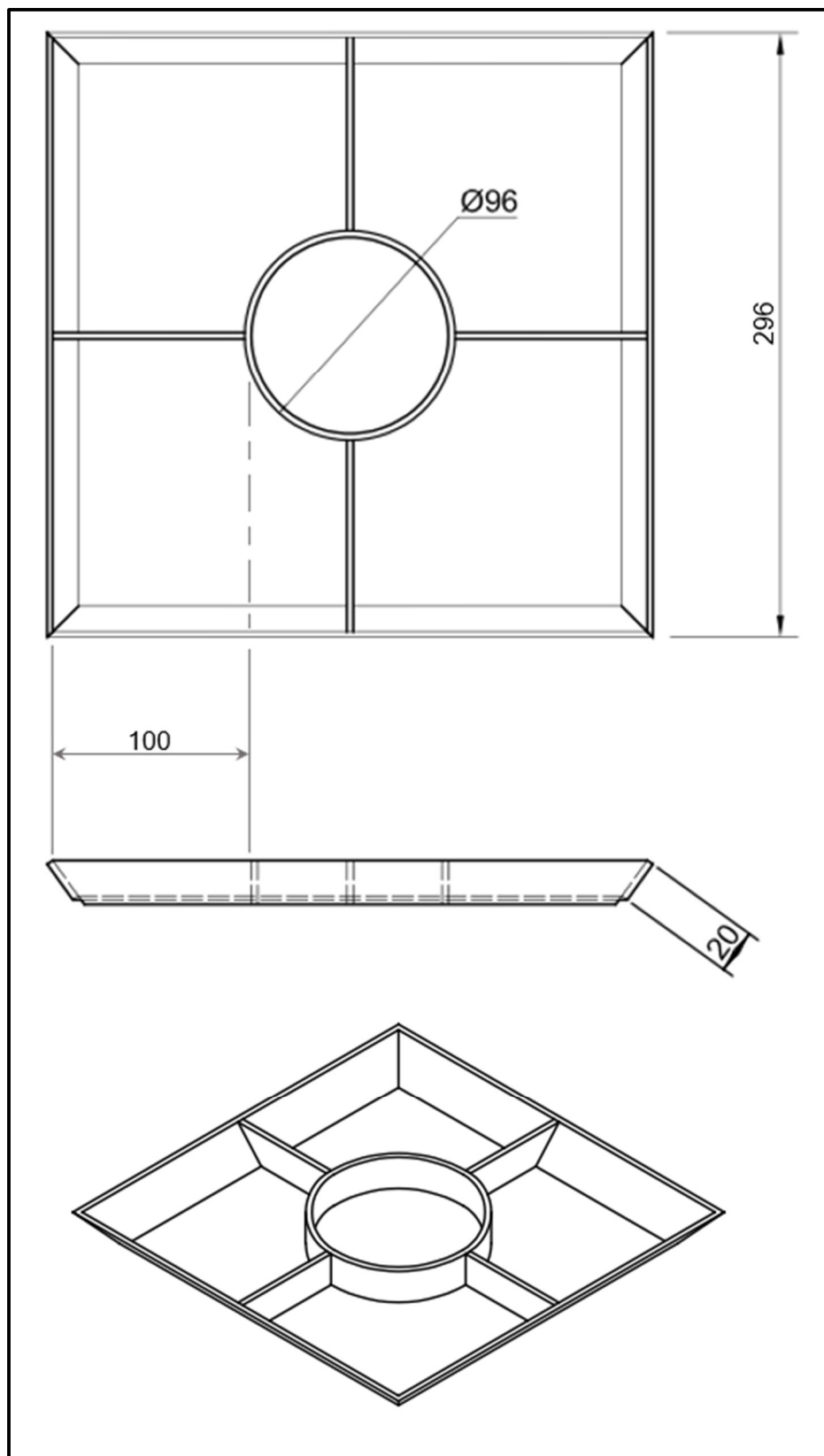


FIGURE 8 - Horizontal Pipe Fixed Cover

4.4.3 Cooking Frame (11)**FIGURE 9 - Horizontal Pipe Fixed Cover**

WORKSHEET 4.1: COOKING FRAME CALCULATIONS.**LEARNER NAME:****4.1.1** Calculate the corner angle and length of frame sides.

(5)

4.1.2 Calculate the true length of circular center support.

(5)

NOTE: This worksheet MUST be evident in the LEARNER's portfolio of evidence.

MECHANICAL TECHNOLOGY								
WELDING AND METALWORK								
MARKSHEET – COOKING FRAME , CHARGE PIPE COVER and FIXED COVER								
PHASE 4								
GRADE	11	DATE						
PROJECT	ROCKET STOVE							
LEARNER NAME:								
FACETS		MARKS	LEARNER – Self-Assessment	Teacher Assessment	Internal Moderation	Provincial Moderation	External Moderation	TEACHER COMMENTS
			1	2	3	4	5	
HORIZONTAL PIPE COVER	Cut out cover 100 x 120 mm	5						
	Cut out Ø8 mm shaft to 115 mm length	5						
	Cut out hinge supports – 20 x 45 mm (2 supports x 5)	10						
	Drill Ø8 mm holes in hinge supports (2 holes x 5)	10						
	Weld cover plate to hinge – 3 x 10 mm runs (3 runs x 5)	15						
	Weld hinge supports to charge pipe 2 x welds per support (4 welds x 5)	20						
	Supports 45° to charge pipe (2 supports x 5)	10						
Horizontal pipe cover sub- total:		75						
SUB-TOTAL 1:		15						
CHARGE PIPE COVER	Cut out cover 100 x 120 mm	5						
	Cut out Ø8 mm shaft to 115 mm length	5						
	Cut out hinge supports – 20 x 45 mm (2 supports x 5)	10						
	Drill Ø8 mm holes in hinge supports (2 holes x 5)	10						
	Weld cover plate to hinge – 3 x 10 mm runs (3 runs x 5)	15						
	Weld hinge supports to charge pipe 2 x welds per support (4 welds x 5)	20						
	Supports 45° to charge pipe (2 supports x 5)	10						
Charge pipe cover sub-total:		75						
SUB-TOTAL 2:		15						
HORIZON -TAL PIPE	Cut out cover 100 x 100 mm	5						
	Weld cover in place to horizontal pipe (4 welds x 5)	20						
	Cover 90° in place to pipe	5						
Horizontal pipe cover sub-total:		30						
SUB-TOTAL 3:		10						

COOKING FRAME	Calculate angle of ends of frames (Worksheet 4.1 – 4.1.1)	5						
	Cut out frame sides 296 mm (4 sides x 5)	20						
	Cut out centre supports 100 mm (4 supports x 5)	20						
	Calculate true length of circular centre support of frame (Worksheet 4.1 – 4.1.2)	5						
	Cut circular centre support to length	5						
	Roll circular centre support	5						
	Weld circular centre support	5						
	Weld frame corners (4 corners x 5)	20						
	Weld 4 supports to frame and rolled centre (8 welds x 5)	40						
	Frame corners 90° (4 corners x 5)	20						
	Frame fits in hopper	5						
	Cooking frame sub-total:	150						
SUB-TOTAL 4:		50						
Finishing (grinding-finish and painting)		5						
Presentation (functionality)		5						
SUB-TOTAL 1:		15						
SUB-TOTAL 2:		15						
SUB-TOTAL 3:		10						
SUB-TOTAL 4:		50						
TOTAL:		100						
MODERATOR COMMENTS:								
NAME & SIGNATURE OF TEACHER								
NAME & SIGNATURE OF TECHNICAL DEPARTEMENTAL HEAD								
NAME & SIGNATURE OF SUBJECT MODERATOR								

MECHANICAL TECHNOLOGY												
WELDING AND METALWORK												
MARKSHEET – TOTALS												
GRADE		11		DATE								
PROJECT		ROCKET STOVE TOTALS										
		LEARNERS										
FACETS	MARKS											
		1	2	3	4	5	6	7	8	9	10	
PHASE 1	50											
PHASE 2	50											
PHASE 3	50											
PHASE 4	100											
TOTAL:	250											
Total PAT Mark:	100											
NAME & SIGNATURE OF TEACHER												
NAME & SIGNATURE OF TECHNICAL DEPARTMENTAL HEAD												
NAME & SIGNATURE OF PRINCIPAL												
NAME & SIGNATURE OF SUBJECT MODERATOR												

GRADE 11 WELDING & METALWORK PAT: OPTION 2: WALL BRAAI

4. WELDING AND METALWORK (SPECIFIC)

TASK: WALL BRAAI:

Term: 1 to 3

Starting date: January 2023

Completion date: September 2023

Follow the ensuing criteria and standards:

- The design of the wall braai is shown in the given figures.
- Keep affordability in mind. (**Standard dimensions of sheet metal**)
- Overall sizes must be within ± 2 mm of the required measurement.
- Tools and equipment must not be damaged.
- All appropriate safety procedures must be adhered to.
- Welded joints must be cleaned of all slag.
- After all dimensions have been marked out, record marks.
- All edges must be cleaned off burrs.
- The project must be well presented.
- **NOTE: The same assessment criteria must be used as for OPTION 1 – Rocket Stove.**
- ***NB!! Learners to PRACTICE welding and welding techniques BEFORE attempting the final product.***

RESOURCES REQUIRED FOR THE PAT:

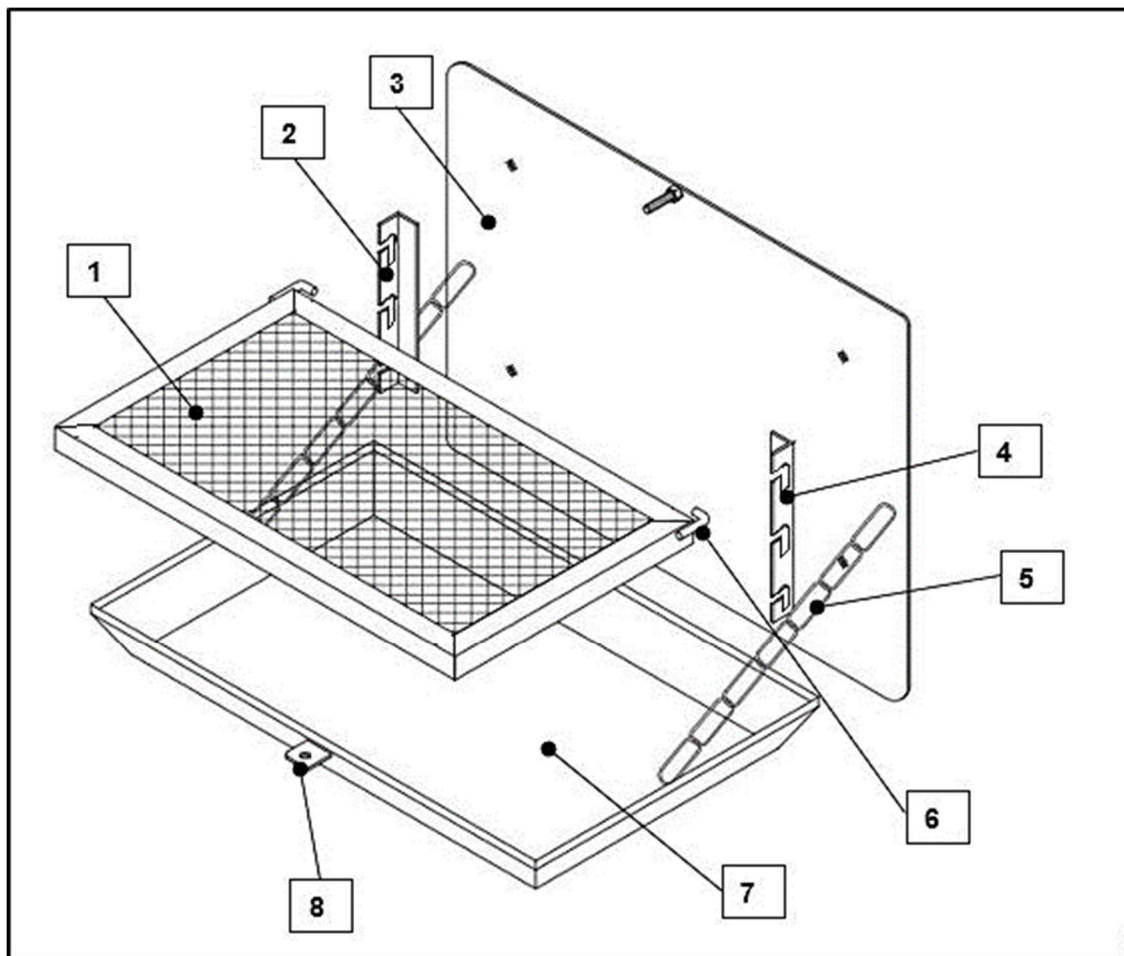
Each learner will require the following:

PARTS LIST (MAIN ITEMS)				
Part No	Part	Quantity	Dimensions	Material
1	Grid frame	2	295 x 25 x 2/3	Angle Iron
		2	445 x 25 x 2/3	Angle Iron
	Grid	1	485 x 290 x 2	Grid Iron
2 & 4	Grid Support	2	180 x 25 x 2/3	Angle Iron
3	Back Plate	1	570 x 420 x 2	Mild Steel – 2 mm sheet metal
5	Chain	2	Chain length $\pm$ 200 mm	Mild Steel
6	Grid Hinge	2	65 x 8	Round bar
7	Ash Tray	1	According to calculations	Mild Steel – 2 mm sheet metal
	M8 Bolt	1	M8 x 45	Mild Steel
	M8 Wing Nut	1	M8	Mild Steel
8	Tray catch	1	30 x 30 x 2	Mild Steel

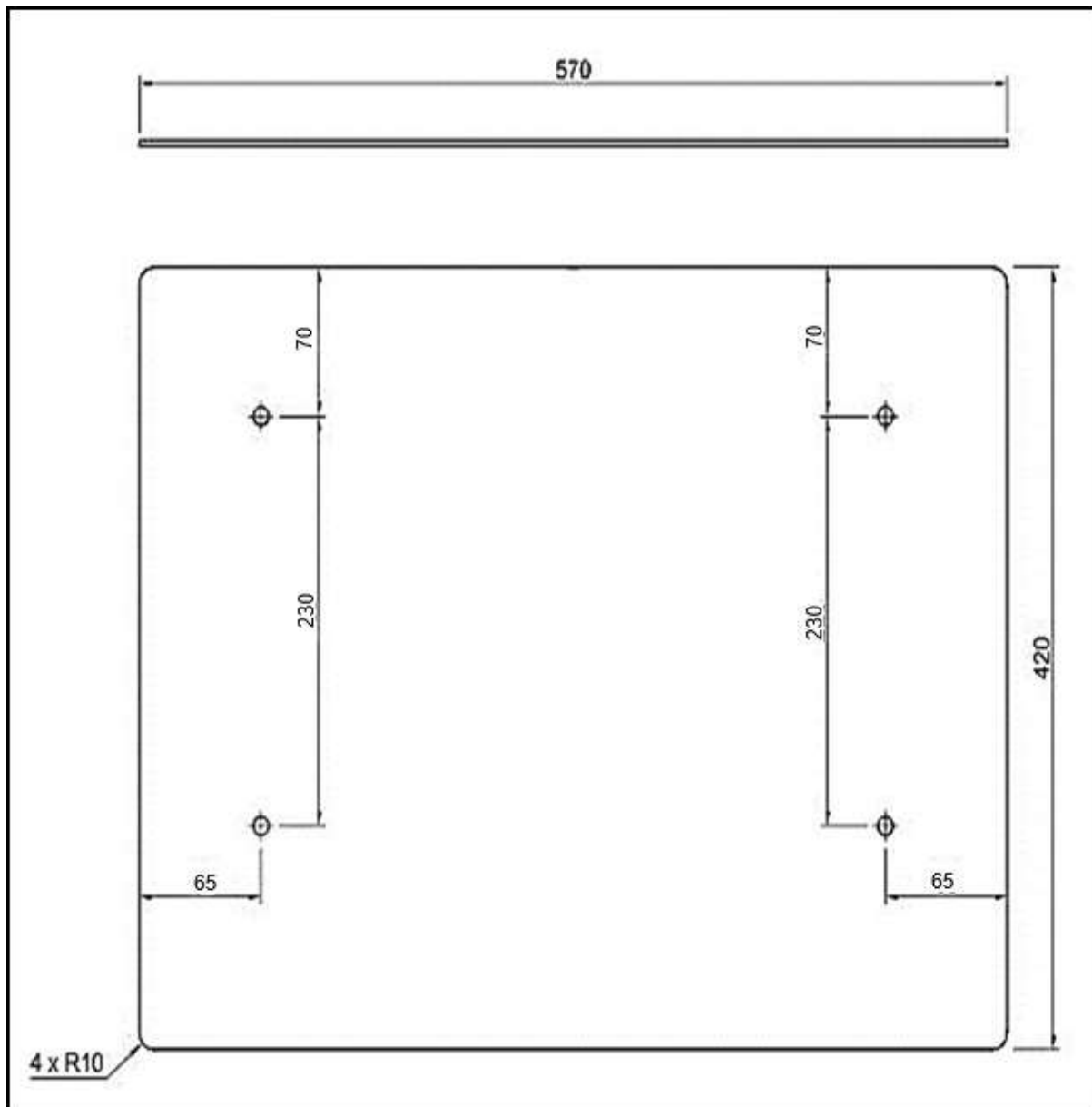
WALL BRAAI CONCEPT DESIGNS

NOTE: These examples are illustrations for perception only to illustrate the concept of the design of the braai. The LEARNER must adhere to the design specifications in the figures provided.

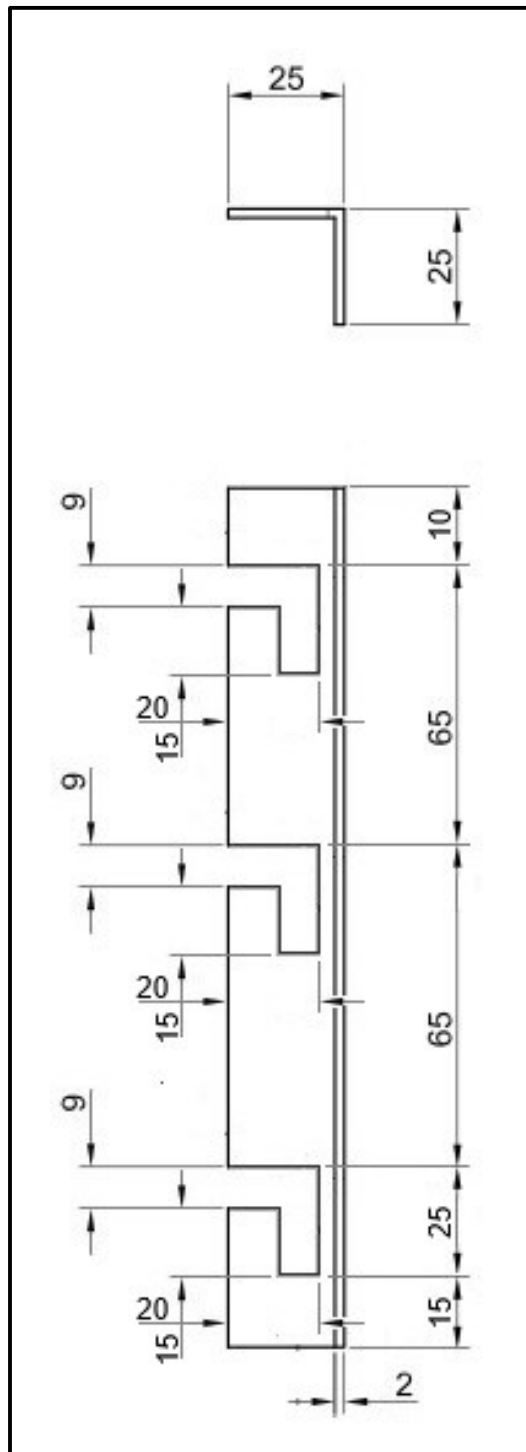
**EXAMPLE 1****EXAMPLE 2****EXAMPLE 3**

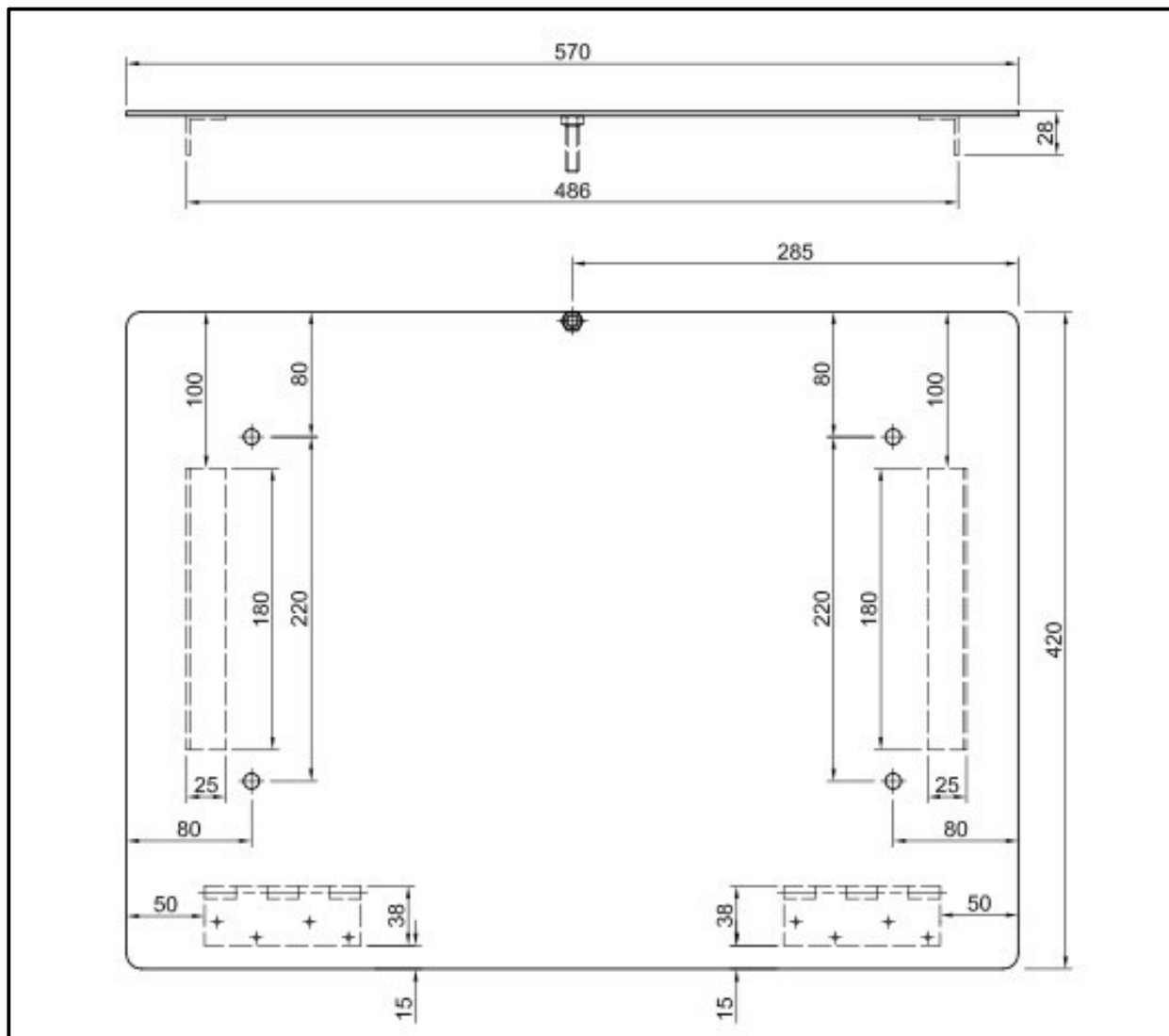
FIGURE 1: THE COMPLETE EXPLODED VIEW OF THE WALL BRAAI**FIGURE 1**

PARTS	
1	Braai grid
2	Grid support
3	Back plate
4	Grid support
5	Chain
6	Grid hinge
7	Ash tray
8	Tray stopper

PHASE 1: BACK PLATE**January–March 2025****FIGURE 2: BACK PLATE**

MECHANICAL TECHNOLOGY								
WELDING AND METALWORK								
MARK SHEET – BACK PLATE – PHASE 1								
GRADE		11	DATE					
PROJECT		WALL BRAAI						
LEARNER NAME:								
FACETS		MARKS	Learner – Self-assessment	Teacher Assessment	Internal Moderation	Provincial Moderation	External Moderation	TEACHER COMMENTS
			1	2	3	4	5	
BACK PLATE	Measure, mark and cut sheet metal to size. (2 x 5)	10						
	Mark position of holes and drill. (4 x 5)	20						
	Clean all burrs (holes and edges).	10						
	Squareness of plate (2 x 5)	10						
PHASE 1 TOTAL:		50						
MODERATOR COMMENTS:								
NAME AND SIGNATURE OF LEARNER								
NAME AND SIGNATURE OF TEACHER								
NAME AND SIGNATURE OF TECHNICAL DEPARTMENTAL HEAD								
NAME AND SIGNATURE OF PROVINCIAL MODERATOR								
NAME AND SIGNATURE OF EXTERNAL MODERATOR								

PHASE 2: GRID SUPPORT AND BACK PLATE ASSEMBLY
April–June 2025**FIGURE 3: GRID SUPPORT**

PART PLACEMENT**FIGURE 4: PART PLACEMENT**

MECHANICAL TECHNOLOGY								
WELDING AND METALWORK								
MARK SHEET – GRID SUPPORT AND BACK PLATE ASSEMBLY – PHASE 2								
GRADE		11		DATE				
PROJECT		WALL BRAAI						
LEARNER NAME:								
FACETS		MARKS	Learner – Self-assessment	Teacher Assessment	Internal Moderation	Provincial Moderation	External Moderation	TEACHER COMMENTS
			1	2	3	4	5	
GRID SUPPORT	Measure, mark and cut angle iron to 180 mm. (2 x 5)	10						
	Mark out and cut SIX slots. (6 x 5)	30						
	Clean all burrs.	5						
ASSEMBLY	Weld grid support onto back plate. Use alternate welding. (2 x 5)	10						
	Weld chain in place.	10						
	Position TWO hinges in place and weld. (2 x 5)	10						
	Weld finishing.	5						
Subtotal:		80						
PHASE 2 TOTAL:		50						
MODERATOR COMMENTS:								
NAME AND SIGNATURE OF LEARNER								
NAME AND SIGNATURE OF TEACHER								
NAME AND SIGNATURE OF TECHNICAL DEPARTMENTAL HEAD								
NAME AND SIGNATURE OF PROVINCIAL MODERATOR								
NAME AND SIGNATURE OF EXTERNAL MODERATOR								

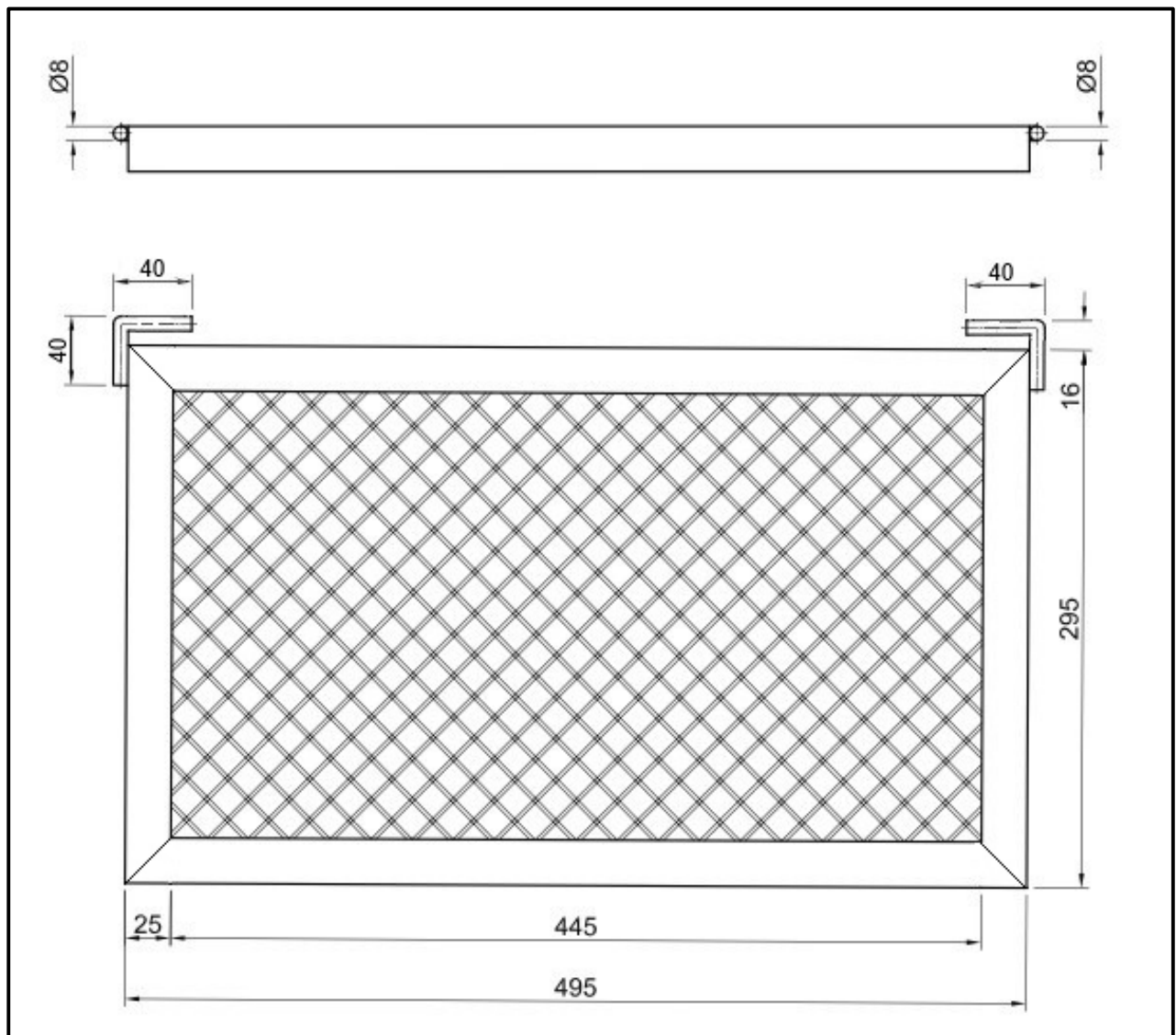
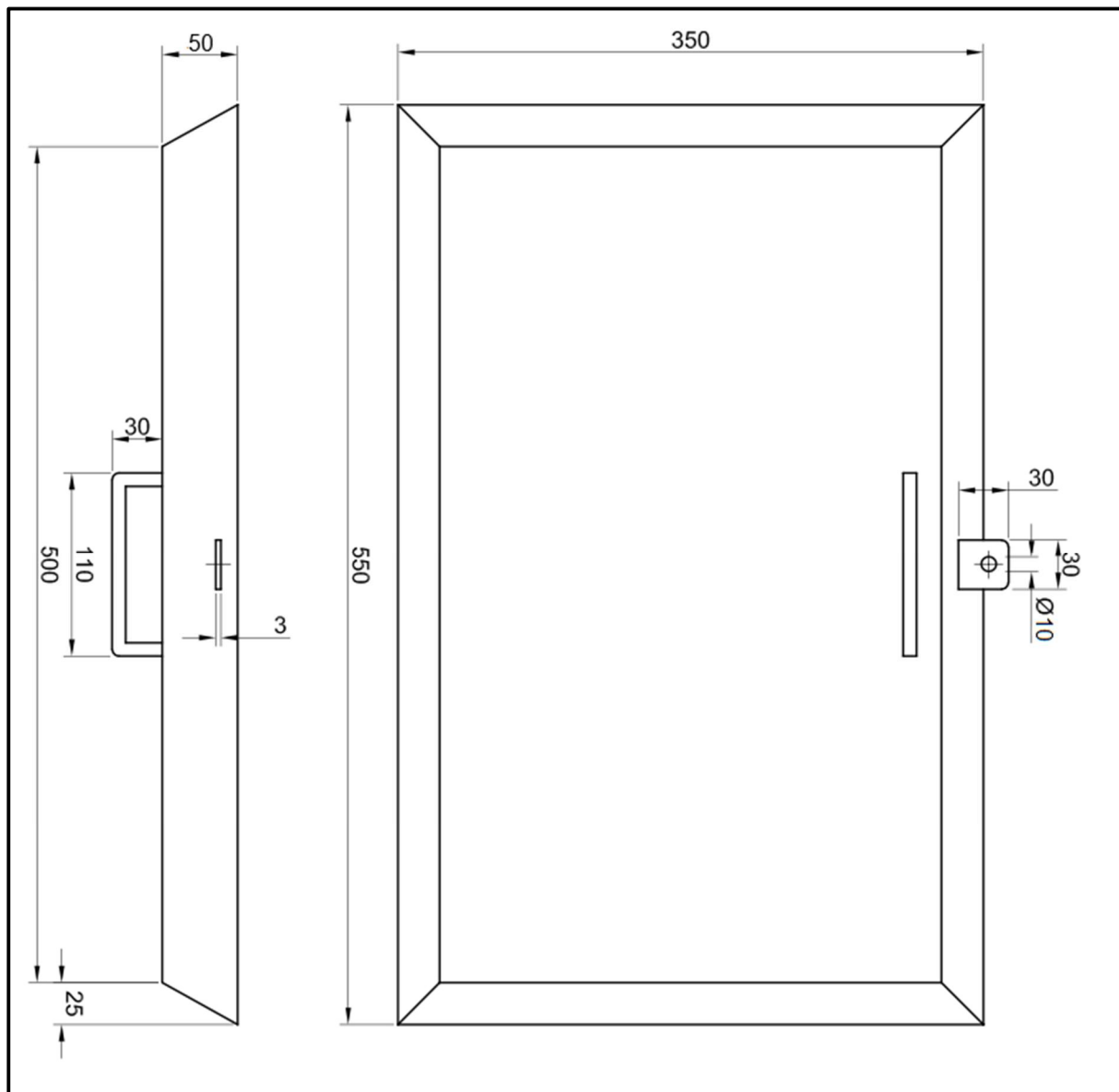
PHASE 3: GRID
July–August 2025

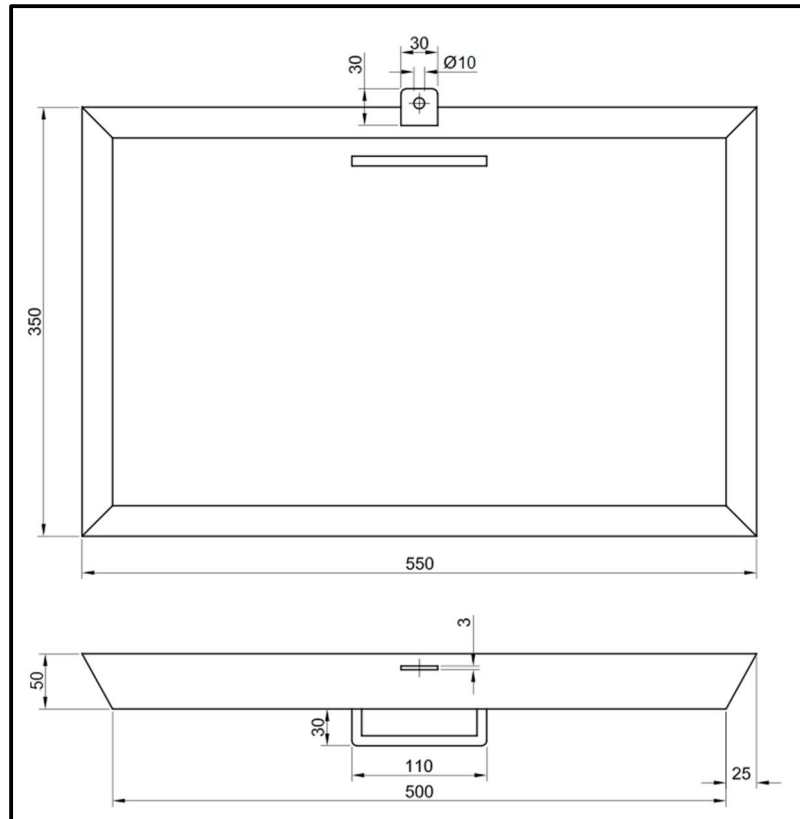
FIGURE 5: GRID
(Grid frame angles must be cut at 45° .)

MECHANICAL TECHNOLOGY								
WELDING AND METALWORK								
MARK SHEET – GRID – PHASE 3								
GRADE		11	DATE					
PROJECT		WALL BRAAI						
LEARNER NAME:								
FACETS		MARKS	Learner – Self-assessment	Teacher Assessment	Internal Moderation	Provincial Moderation	External Moderation	TEACHER COMMENTS
			1	2	3	4	5	
GRID FRAME	Cut grid frame pieces to size of 495 mm x 2 and 295-mm x 2. (4 x 5)	20						
	Clean burrs.	5						
	Weld pieces to shape according to the drawing. (4 x 5)	20						
	Cut expanded metal and weld onto grid frame.	10						
	Cut grid hinge and bend to shape.	10						
	Weld grid hinges in position.	10						
Subtotal:		75						
PHASE 3 TOTAL:		50						
MODERATOR COMMENTS:								
NAME AND SIGNATURE OF LEARNER								
NAME AND SIGNATURE OF TEACHER								
NAME AND SIGNATURE OF TECHNICAL DEPARTMENTAL HEAD								
NAME AND SIGNATURE OF PROVINCIAL MODERATOR								
NAME AND SIGNATURE OF EXTERNAL MODERATOR								

PHASE 4: ASH TRAY AND FINAL ASSEMBLY
January–August 2025**FIGURE 6: ASH TRAY**

PHASE 4 WORKSHEET: ASH TRAY CALCULATION

LEARNER NAME:



(10)

NOTE: This worksheet MUST be available in the LEARNER's portfolio of evidence.

MECHANICAL TECHNOLOGY								
WELDING AND METALWORK								
MARK SHEET – ASH TRAY AND FINAL ASSEMBLY – PHASE 4								
GRADE		11	DATE					
PROJECT		WALL BRAAI						
LEARNER NAME:								
FACETS		MARKS	Learner – Self-assessment	Teacher Assessment	Internal Moderation	Provincial Moderation	External Moderation	TEACHER COMMENTS
			1	2	3	4	5	
ASH TRAY	Calculate true length of slope and size of sheet metal required.	10						
	Mark out shape and cut.	5						
	Bend to shape.	5						
	Weld corners.	5						
	Cut tray catch to size. Drill Ø10 hole.	10						
	Measure, mark and cut handle to size.	5						
	Bend handle to shape and weld onto ash tray.	10						
ASSEMBLY	Weld ash tray onto hinges.	10						
	Attach grid frame onto back plate.	5						
	Test assembled WALL braai for alignment.	10						
	Align and weld tray catch	10						
	Clean and paint.	10						
	Fit for purpose.	5						
PHASE 4 TOTAL:		100						
MODERATOR COMMENTS:								
NAME AND SIGNATURE OF LEARNER								
NAME AND SIGNATURE OF TEACHER								
NAME AND SIGNATURE OF TECHNICAL DEPARTMENTAL HEAD								
NAME AND SIGNATURE OF PROVINCIAL MODERATOR								
NAME AND SIGNATURE OF EXTERNAL MODERATOR								

MECHANICAL TECHNOLOGY											
WELDING AND METALWORK											
COMPOSITE MARK SHEET – TOTALS											
GRADE		11	DATE								
PROJECT		WALL BRAAI									
		LEARNERS									
PHASES	MARKS										
		1	2	3	4	5	6	7	8	9	10
PHASE 1	50										
PHASE 2	50										
PHASE 3	50										
PHASE 4	100										
TOTAL:	250										
TOTAL PAT MARK:	100										
NAME AND SIGNATURE OF TEACHER											
NAME AND SIGNATURE OF TECHNICAL DEPARTMENTAL HEAD											
NAME AND SIGNATURE OF PRINCIPAL											
NAME AND SIGNATURE OF PROVINCIAL MODERATOR											
NAME AND SIGNATURE OF EXTERNAL MODERATOR											

SCHOOL STAMP