

PROJECT 7—WATERTIGHT-DOOR HINGE ASSEMBLY

Introduction:

This assembly drawing includes detail drawings. Dimensions are given in millimeters.

Construction:

- Refer to the Project 7 print.
- Layout and construct the assembly from foam board and PVC pipe.

Assembly Notes:

Study the assembly print and determine a sequence for welding that will allow all welds to be completed, then tack-weld the assembly prior to final welding. A pair of 20mm thick “parallel bars” cut from the left-over $\frac{5}{8}$ ” foam board could be useful during assembly to support the model.

Worksheet Questions:

1. On the BOM, fill in the quantity and size for each part (in millimeters), and convert the sizes to inches to the nearest $\frac{1}{8}$ inch.

(answer on BOM or
and/or on next page)

2. In the top view, what is the vertical distance from the top of part 1 to the centerline of part 2?

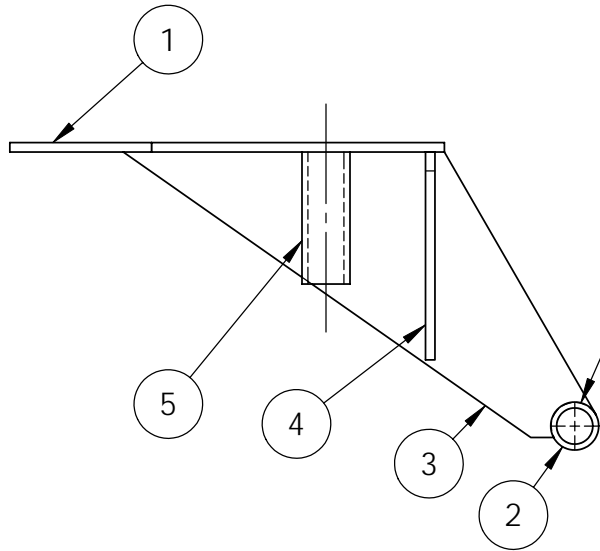
3. What is the center-to-center distance between parts 5?

4. What type of weld joins parts 3 and 5?

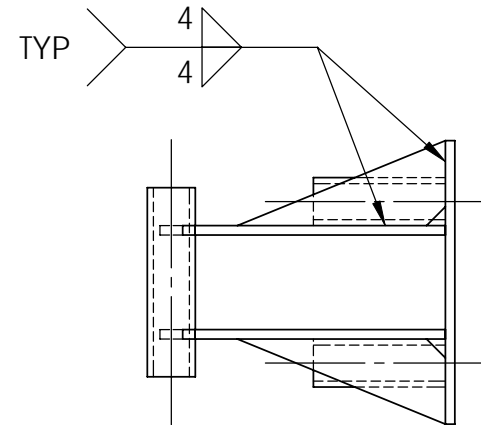
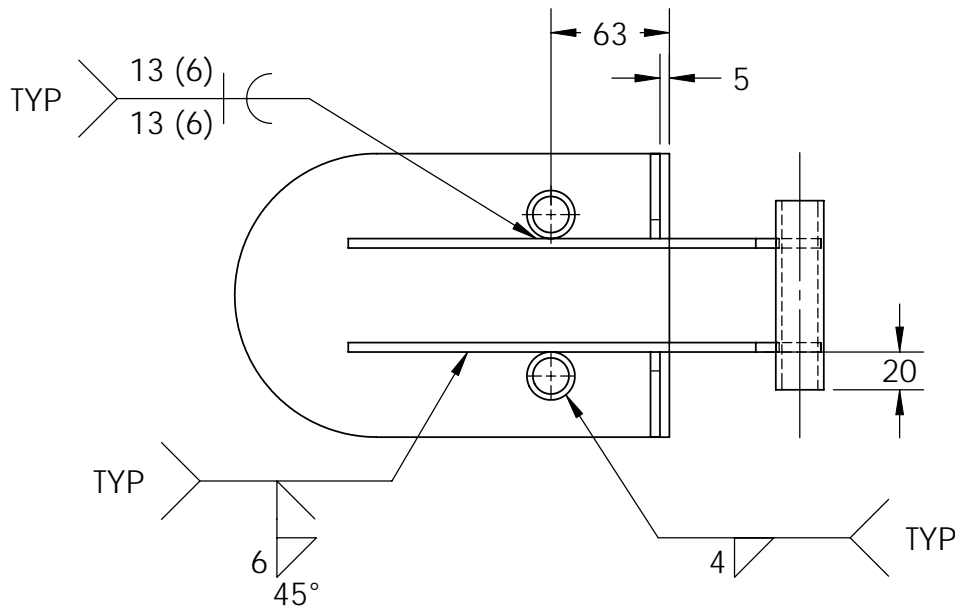
5. What is the tolerance on the angles on part 3?

Graphic for Question 1:

PART	QTY	DESCRIPTION	SIZE (MILLIMETERS)	SIZE (INCHES)
1		BASE		
2		BRG-VERT		
3		WEB		
4		RIB		
5		BRG-HORIZ		



ITEM NO.	QTY	DESCRIPTION	SIZE (MILLIMETERS)	SIZE (INCHES)
1		BACK PLATE		
2		HINGE TUBE		
3		WEB		
4		RIB		
5		SOCKET RECEIVER		



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UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN MILLIMETERS
TOLERANCES:
NO DECIMAL ± 1
ANGULAR: MACH ± 1 BEND ± 1
ONE PLACE DECIMAL ± 1
TWO PLACE DECIMAL ± 0.05
INTERPRET GEOMETRIC TOLERANCING PER: ANSI Y14.5-94
DO NOT SCALE DRAWING

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TITLE:

**WATERTIGHT DOOR
HINGE ASSEMBLY**

SIZE

A

DWG. NO.

Project 7

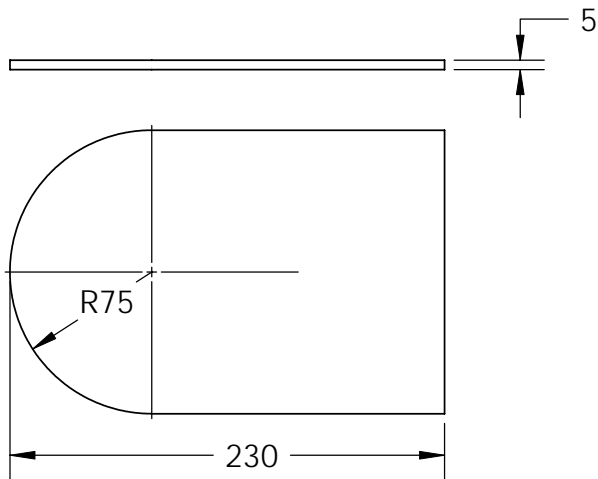
REV

B

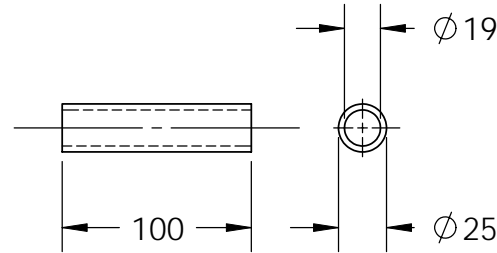
SCALE: 1:4

WEIGHT:

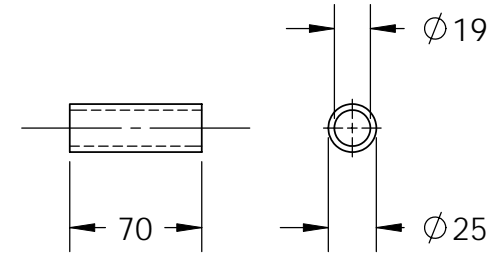
SHEET 1 OF 2



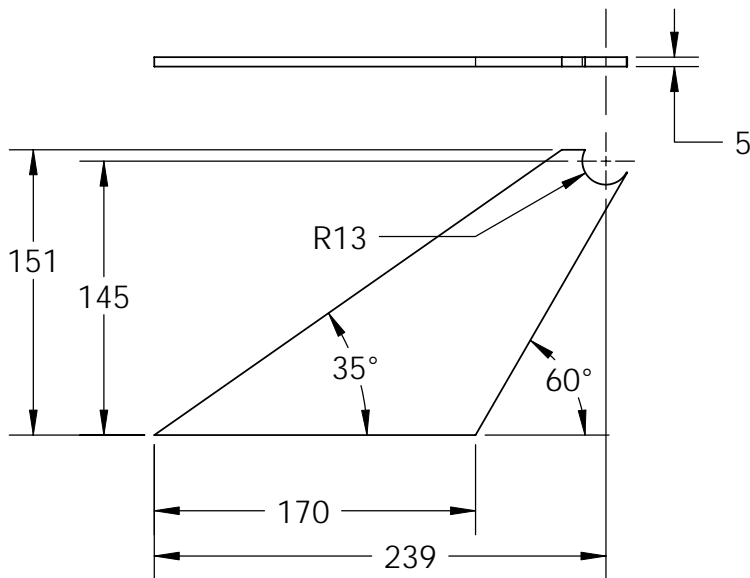
ITEM 1 - BACK PLATE
230 X 150 X 5 PLATE
1 REQD.



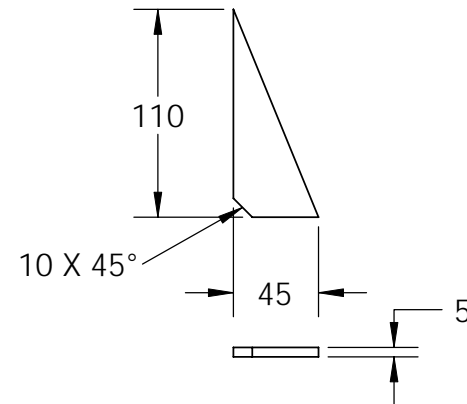
ITEM 2 - HINGE TUBE
19 ID x 25 OD x 100 LONG
1 REQD.



ITEM 5 - SOCKET RECEIVER
19 ID X 25OD X 70 LONG
2 REQD.



ITEM 3 - WEB
250 X 151 X 5 PLATE
2 REQD.



ITEM 4 - RIB
110 X 45 X 5 PLATE
2 REQD.

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TOLERANCES:
NO DECIMAL ± 1
ANGULAR: MACH ± 1 BEND ± 1
ONE PLACE DECIMAL ± 1
TWO PLACE DECIMAL ± 0.5

INTERPRET GEOMETRIC
TOLERANCING PER: ANSI Y14.5-94

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Technology Education Resources, LLC

TITLE:

**WATERTIGHT DOOR
HINGE DETAIL PARTS**

SIZE

A

DWG. NO.

Project 7

REV

B

SCALE: 1:4

SHEET 2 OF 2