

*Bon's Step Testing Gauge is used with a straightedge, level or square to assess masonry projects. The gauge can be used to evaluate inside and outside corners, level and plumb. This is the perfect tool for classroom grading or contest judging.*

### WHY USE A STEP TESTING GAUGE?

- Evaluate students the same way each time.
- Evaluate all students the same way.
- Eliminate guesswork when grading projects or judging competition.

The gauge is notched every  $\frac{1}{16}$  inch. On our sample project evaluation one point is deducted from a perfect score of 20 for each  $\frac{1}{16}$  inch the project deviates from the drawing specifications.

Precise locations to be evaluated should be specified before the project is started. Use our project evaluation as a guideline. You need to:

1. Select and draw evaluation points on a copy of your masonry project.
2. Determine the number of points given to each measurement taken.
3. Consider additional or alternative points to be evaluated based on the specific project your students are building.

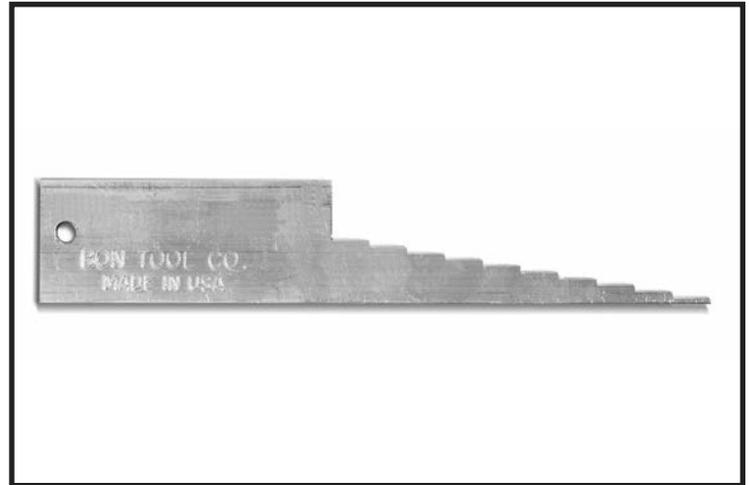
### USE A STRAIGHTEDGE LEVEL AND GAUGE TO EVALUATE PLUMB AND LEVEL

Set the straightedge on the plane chosen to evaluate plumb or level. Place the level used to build the project on the outside of the straightedge and hold it flush with the straightedge. Adjust the two together until you've reached exactly level or plumb according to the level.

Holding the straightedge and level in this position, insert the step testing gauge first on one end and then on the other to determine which side is further from true. Tally the greater score in the "steps off" column.

### USE A STRAIGHTEDGE AND GAUGE TO EVALUATE ALIGNMENT/ANGLES

Align the straightedge along the plane chosen to evaluate alignment. Insert the step testing gauge in the largest gap



along the straightedge. Deduct one point for each step the gauge is inserted.

### USE A SQUARE AND GAUGE TO EVALUATE SQUARE

Align the square used to build the project on the corner designated to evaluate square. Insert the step testing gauge in the largest gap along the square. Deduct one point for each step the gauge is inserted.

### USE A RULE OR TAPE TO EVALUATE HEIGHT AND LENGTH

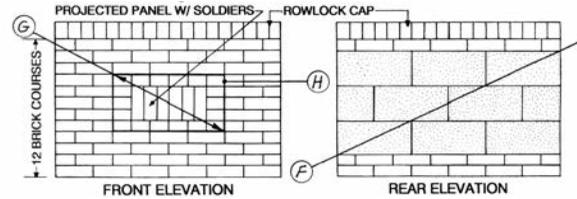
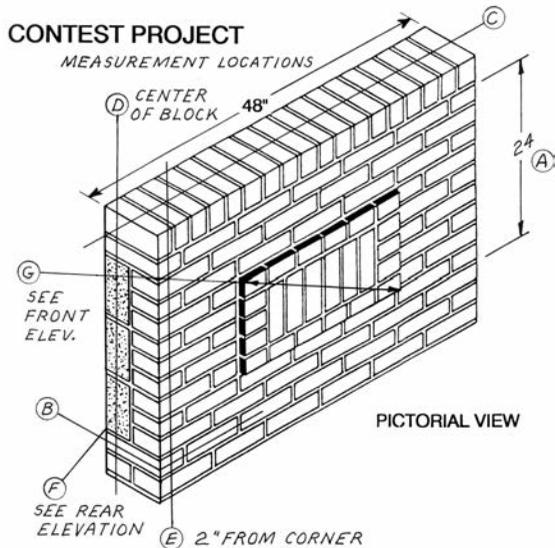
Since the first course is used to level the project, the height measurement should always begin above the first course as indicated on our sample drawing. No special considerations are necessary to measure length. Before the project begins consider instructing students to insert a line twig on the top of a designated course in the corner where the height measurement will be taken.

Measure the pre-determined points with the rule or tape used to build the project. Deduct one mark for each  $\frac{1}{16}$ " the project is less or more than the height or length specified on the project drawing or grading sheet.

Bon's Step Testing Gauge is the ideal tool to eliminate guesswork when measuring a finished masonry project. Please note for overall project and student evaluation you may want to consider other items to grade. A list of other items to consider includes: proper tool selection and manipulation of tools; safety practices; uniformity and smoothness of joints; accuracy of brick cuts; and brick selection.

## Step Testing Gauge Sample Project Evaluation

When grading a masonry project, locations to be evaluated should be determined in advance. (See measurement point A-H indicated on drawings.) This sample project drawing and grading sheet should act as a guide. Copy our step testing grading sheet to use in your classroom.



**Please note:** This is a sample project showing suggested evaluation points. You may want to consider other points to measure based on your specific project. This sample is for grading information purposes only. Students completing this project received additional information.

**Directions:** Use a step gauge and/or proper tool to subtract one step for each  $\frac{1}{16}$ " (one notch on the gauge) that the project deviates from the specifications. Deduct steps from a perfect score of 20 or give a maximum of 20 points if the measurement is exact. Do not use a step testing gauge to evaluate height and length.

MEASUREMENT	LOCATION	STEPS OFF	POINTS AWARDED
Plumb	Left Elevation See sample project D		
	Front Elevation See sample project E		
Level	Top Course See sample project C		
Alignment and Angles	Block Alignment See sample project F		
	Brick Alignment (Projected Panel) See sample project G		
	Right Elevation (Projected Panel) See sample project H		
Drawing Specifications	Height See sample project A		
	Square See sample project B		
	Length See sample project C		

Possible Points 180

Score



# Step Testing Gauge Grading Sheet

**Directions:** Determine measurement locations (A-I) on project and maximum points allowed for each measurement. Use a step testing gauge and/or proper tool to subtract one step for each  $\frac{1}{16}$ " (one notch on the gauge) that the project deviates from the specifications. Deduct steps off maximum maximum points to score. Do not use a step testing gauge to evaluate height and length. Tool selection and safety practices must be evaluated while project is being completed.

MEASUREMENT	LOCATION	MAXIMUM POINTS POSSIBLE	STEPS OFF	POINTS AWARDED
Plumb	Left Elevation - A			
	Front Elevation - B			
Level	Top Course - C			
Alignment and Angles	Alignment Point - D			
	Alignment Point - E			
	Alignment Point - F			
Drawing Specifications	Square - G			
	Height - H			
	Length - I			
Uniformity & Smoothness of Joints	_____		_____	
Accuracy of Masonry Cuts	_____		_____	
<b>THE FOLLOWING SHOULD BE EVALUATED AS THE PROJECT IS BEING CONSTRUCTED</b>				
Safety Practices	_____		_____	
Proper Tool Selection	_____		_____	
<b>OTHER POINTS TO EVALUATE</b>				
Other				
Other				
<b>MAXIMUM POSSIBLE POINTS</b> _____ <b>TOTAL POINTS AWARDED</b> _____				

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