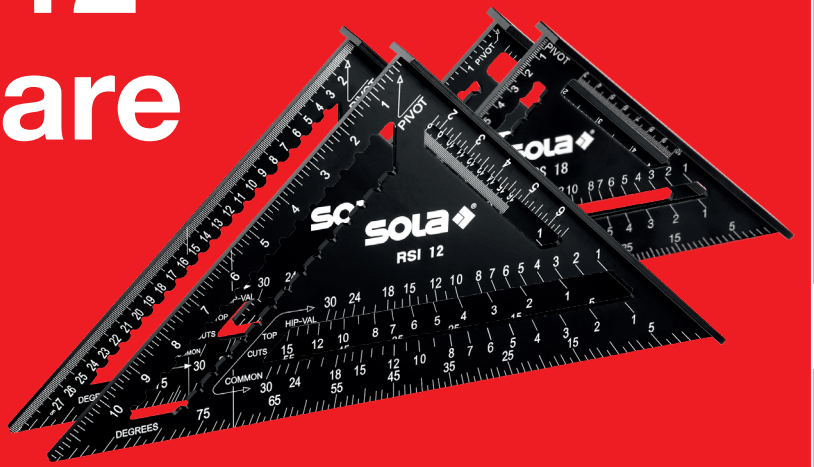
Operating Instructions

RS 18, RS 30, RSI 7, RSI 12 Rafter square



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Passion for Precision

Rafter Square Operating Instructions RS 18, RS 30, RSI 7, RSI 12 (original version)

About this Manual

Congratulations on the purchase of your new rafter square!
You have acquired a SOLA measurement device, which can make your work easier, faster, and more precise.

These operating instructions provide an overview of the various possible applications of the SOLA rafter square, as well as further information about rafter types and measurements.

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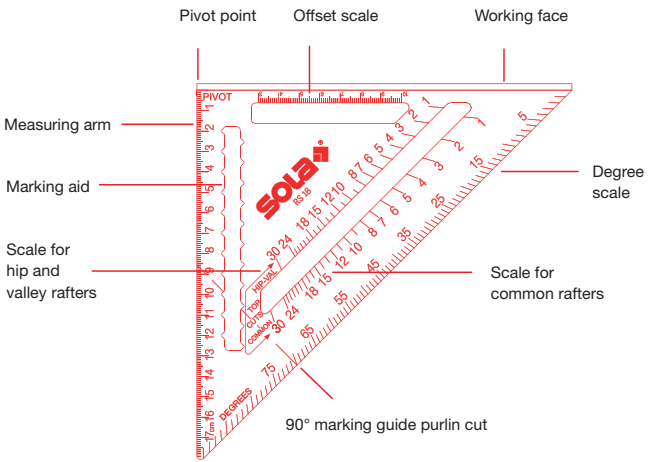
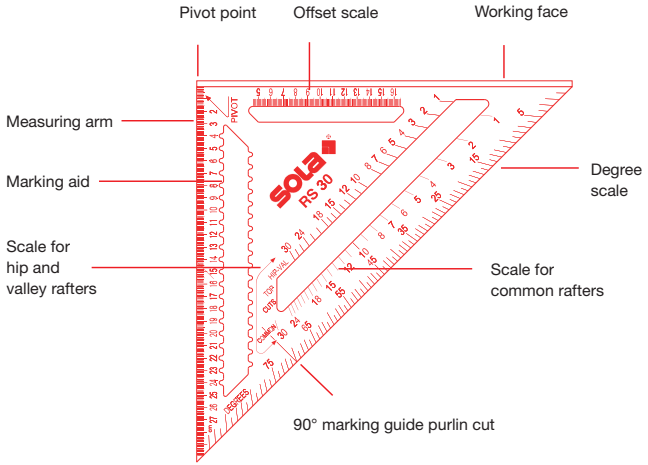
Contents

1. Description

a. Rafter square in MM version

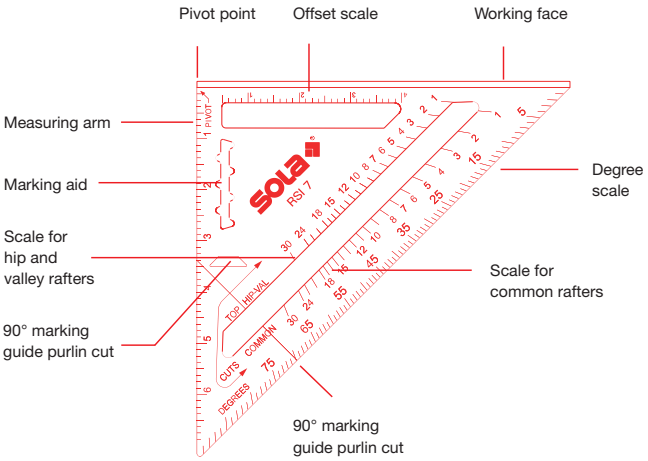


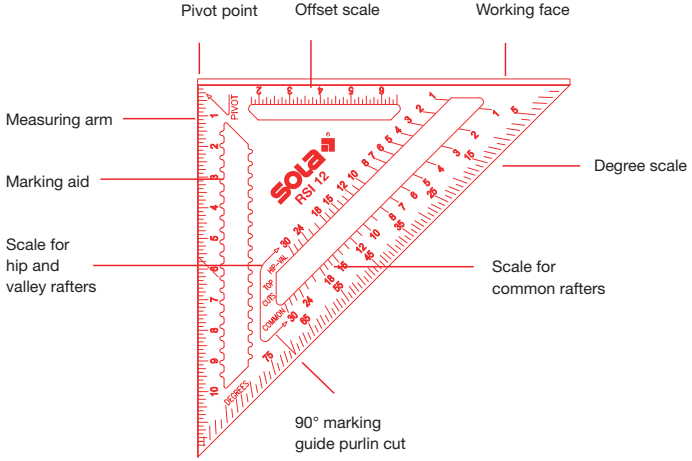
RS 18



RS 30

b. Rafter square in INCH version





2. Applications

90° angle

45° angle

Graduator (0–90°)

Offset line (parallel offset)

Marking guide and aid

Saw guide

Common rafters (COMMON)

Hip and valley rafters (HIP-VAL)

Note: The applications have been shown with the RSI 7 model by way of example.

3. Rafter Types

3.1 Common Rafter

A rafter that runs vertically (90°) from the house wall to the roof ridge when looking at the roof directly from above. When viewed from the side, its length forms the diagonal side (rafter length = hypotenuse) of a right-angled triangle, the vertical side of which is equal to the rafter rise (roof height) and the horizontal side of which corresponds to the rafter run (roof depth).

3.2 Valley Rafter

A rafter than runs from the top of the house wall to the roof ridge along the intersection of the gable extension with the main roof.

3.3 Valley Jack Rafter

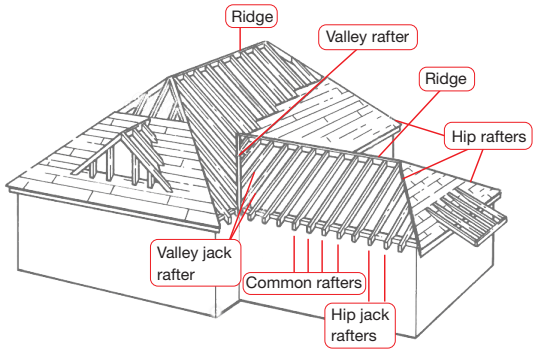
A rafter that runs from a valley rafter to the roof ridge at a 90° angle to the house wall.

3.4 Hip Rafter

A rafter that runs diagonally from the top of the house wall to the roof ridge in order to form an external corner of the roof.

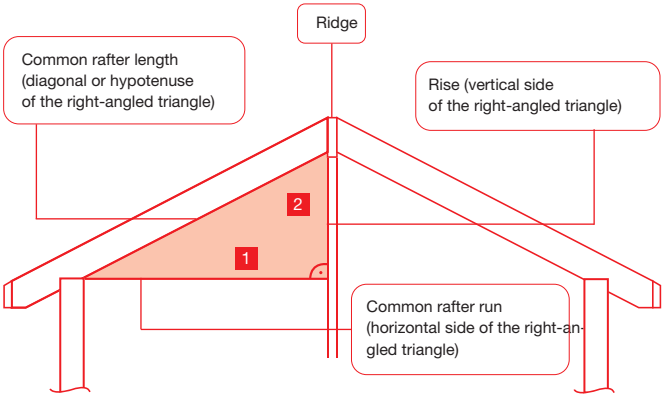
3.5 Hip Jack Rafter

A rafter that runs from the top of the house wall to a hip rafter at a 90° angle to the house wall.



4. Rafter Measurements

The use of the rafter square is based on two simple and common construction dimensions:
(1) rafter run (roof depth) and **(2)** rafter rise (roof height).



These dimensions can be obtained from construction plans, drawings or actual measurements.

4.1 Rafter Run

The run is the horizontal or level distance that the rafter spans. It is measured in feet or meters.

4.2 Rafter Rise

The rise is the vertical distance of a rafter between its highest and lowest point. It is measured in feet or decimeters.

4.3 Inch Rise (only for INCH version):

The rise is measured in inch per foot run. It is also called “inch rise per foot run”.

The inch rise, the rafter run, and the conversion table on the reverse of the square are sufficient to determine the rafter lengths and the cuts for normal, hip, valley, and jack rafters.

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4.4 Conversion Table RS 18/RS 30

Common rafter conversion table
Decimeter rise/meter = degree

1 = 5.71	6 = 30.96	11 = 47.73	16 = 57.99
2 = 11.31	7 = 34.99	12 = 50.19	17 = 59.53
3 = 16.70	8 = 38.66	13 = 52.43	18 = 60.95
4 = 21.80	9 = 41.99	14 = 54.46	19 = 62.24
5 = 26.57	10 = 45.00	15 = 56.31	20 = 63.43

4.5 Conversion Table RSI 7/RSI 12

Common rafter conversion table
Inch rise/foot = degree

1 = 4.75	6 = 26.50	11 = 42.50	16 = 53.25
2 = 9.50	7 = 30.25	12 = 45.00	17 = 54.75
3 = 14.00	8 = 33.75	13 = 47.25	18 = 56.25
4 = 18.50	9 = 37.00	14 = 49.50	19 = 57.75
5 = 22.50	10 = 40.00	15 = 51.50	20 = 59.00

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