

Rules for Woodworkers

A survey of tools
for making
precise
measurements

BY MARIO RODRIGUEZ

In the early stages of a project, preliminary measuring can be performed quickly and casually. Cutting large sheet goods or long boards to manageable dimensions doesn't require great accuracy. But as the parts are cut to final dimensions and joinery begins, even careful measuring with a tape measure will not provide the accuracy required for smack-dab machine setups or snug-fitting joints. At this stage a woodworker will benefit from the precision obtained from a ruler.

Basic shop rulers (the words rule and ruler are interchangeable and both in widespread use) are a varied group of short (usually 6 in. or 12 in.) strips of steel, available in different thicknesses and widths, engraved with clear, contrasting markings. Their compact size and the clarity of the markings make this group of specialized layout tools indispensable.

Besides the standard ruler design, numerous variations have been invented: There are rulers marked with perforations that accept a sharp pencil point, rulers that are triangular in section for rigidity, rulers that are hooked at one end for better registration with the work, and rulers that have a bend down the middle to al-

Flat rulers

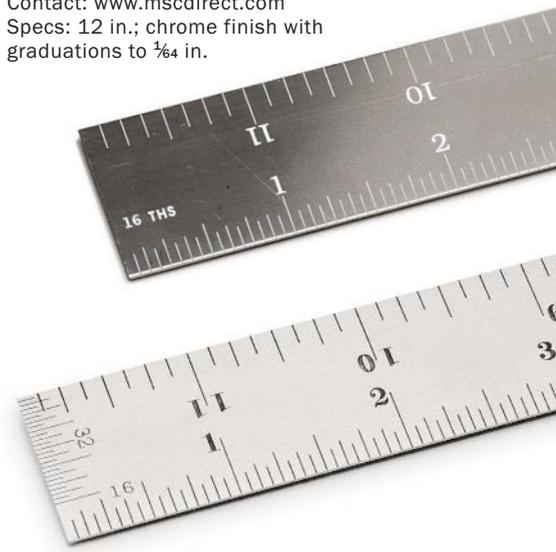
Available in 6-in. and 12-in. versions, a flat ruler with clear markings and a nonreflective surface places less strain on the eyes when you're doing close-up, detailed work.



A cutting edge. Steel rulers make excellent straightedges for cutting veneer. Thicker rulers work best because they provide a solid edge to guide the knife.

PEC TOOLS

Model: 402-012 EZ
Price: \$9.89
Contact: www.msdirect.com
Specs: 12 in.; chrome finish with graduations to $\frac{1}{64}$ in.



STARRETT

Model: C 304SRE-12
Price: \$31.50
Contact: www.starrett.com
Specs: 12 in.; satin finish with graduations to $\frac{1}{64}$ in.

low them to measure adjacent sides. I used each type of ruler to discover their strengths and weaknesses.

The flat ruler is the workhorse of the workbench

Most 6-in. and 12-in. rulers are about 1 in. wide with an average thickness of about $\frac{1}{2}$ in., making them slightly flexible. The measurement graduations are usually reversed along the opposite edge and reversed again on the other side. Some rulers go down to $\frac{1}{64}$ -in. graduations, while others go down to $\frac{1}{16}$ in.

How much accuracy you need in a ruler depends on the work you're doing. For instance, to check the accuracy of machined workpieces, graduations to $\frac{1}{16}$ in. usually are adequate. Also, for this job it helps to have a thin, narrow ruler, which allows you to check the depth of the narrowest plow or the tightest corner of a mortise. When measuring and laying out full-size details on drawings and story poles, I think it's useful to have a ruler with more precision—one with $\frac{1}{32}$ -in. graduations.

How much do you have to spend for a flat metal ruler? I compared the \$9.89 Pec Tools 12-in. ruler to the \$31.50 Starrett 12-in. ruler and

found the former adequate for the majority of shop measuring tasks. However, the Starrett ruler was machined better. The edges were crisp without being sharp, and the satin finish was smooth and uniform, providing a true nonglare finish. When you're in the shop surrounded by gleaming surfaces and harsh light, a ruler with a nonreflective surface makes reading the numbers a little easier on the eyes. The graduations on the Starrett were easier to read than those on the less-expensive ruler from Pec Tools. I don't know whether the Starrett model was any more accurate than the Pec Tools model, but it sure was nicer to look at and to use.

Because of its low profile, a flat ruler is perfect for setting up cuts on machinery, as the graduated edge can be held flush with the sawtooth or knife blade.

Flat rulers also work well as straightedges. For instance, when cutting edging or small pieces of veneer, I sometimes use a metal ruler as a straightedge to guide and support my marking knife or veneer saw. The thin profile provides excellent visibility exactly where the blade is cutting and a dead-straight edge. In this situation, I prefer a heavier ruler (close to $\frac{1}{16}$ in. thick) that gives a

Specialized rulers

A USEFUL HOOK

Rulers with hooks on one end allow distances parallel to an edge to be marked accurately, which is useful when inlaying borders or stringing.

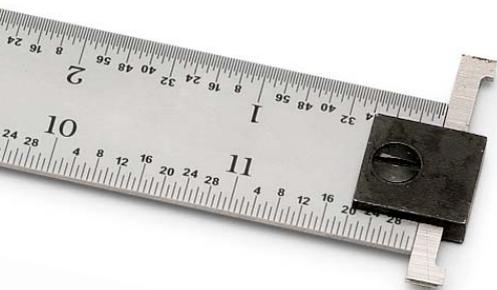


higher “curb” for better supporting my knife or saw.

Specialized rulers are of mixed value

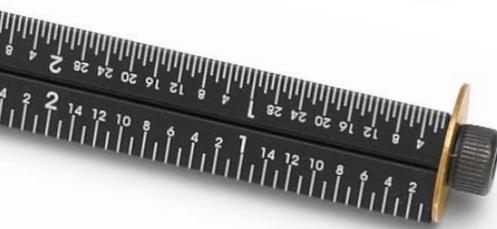
Over time, manufacturers have developed rulers purpose-built for particular aspects of woodworking.

Hook rulers—The designs are meant to assist in registering the end of the ruler to the edge of the workpiece. However, in use the hook got in the way. The Lee Valley ruler’s adjustable hook had sharp edges that could damage a workpiece easily. The hooks on both Bridge City triangular rulers were removable but stood a good chance of getting lost.



LEE VALLEY

Model: 12N08.11
Price: \$21.95
Contact: www.leevalley.com
Specs: 12 in.; matte finish with graduations to $\frac{3}{64}$ in.



BRIDGE CITY TOOL WORKS

Model: 1101-137
Price: \$19.95
Contact: www.bridgecitytools.com
Specs: 12 in.; black finish with graduations to $\frac{1}{32}$ in.; includes millimeter scale and center finder.

Triangular rulers—Available in 6-in. and 12-in. lengths from Bridge City Tools, triangular rulers provide an additional surface for graduations. On two sides there are $\frac{1}{16}$ -in. and $\frac{1}{32}$ -in. graduations that ascend in opposite directions, and on the third side there are millimeters and a center-finding ruler. On the plus side, these rulers were hard to lose on a cluttered bench, and the black surface didn’t create any glare. On the negative side, I had to unscrew the end hook and spend a lot of time turning the ruler around until I found the scale I was looking for. Also, my eyes were strained by the concentration of numerals in a small space.

Center-finding rulers—These come in handy when laying out complex casework and frame-and-panel work or positioning hardware. The 12-in.-long Center Point ruler has $\frac{1}{16}$ -in. graduations along one edge, while the opposite edge is a half scale (1 in. takes up $\frac{1}{2}$ in. of space) and goes up to 24 in. To use this ruler I first measured the actual distance on the 12-in. scale, then referred to the same number along the opposite edge: The location of that number was half the actual width, or the center of the object.



CENTER-FINDING RULERS

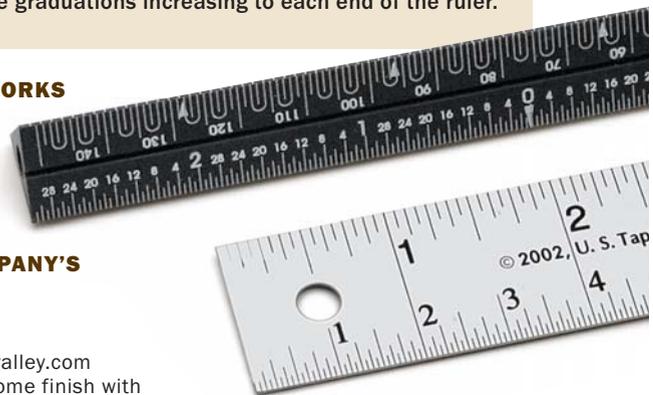
These come in two versions: One (left) has two scales on a face; the lower one is half the scale of the upper one. The other version (below) has “0” at the ruler’s center with the graduations increasing to each end of the ruler.

BRIDGE CITY TOOL WORKS

Model: 1101-124
Price: \$14.95
Specs: 6 in. (see above)

U.S. TAPE COMPANY'S CENTER POINT

Model: 60N46.02
Price: \$8.95
Contact: www.leevalley.com
Specs: 12 in.; chrome finish with graduations to $\frac{1}{16}$ in.





PERFORATED RULERS

This right-angle ruler has a series of slots and holes in it, allowing you to mark the same exact length on adjacent surfaces of a board, useful when cross-cutting or in joinery. Although it's designed for use with a 0.5-mm mechanical pencil, a conventional pencil with a very sharp point also works.

The Bridge City triangular rulers are examples of another type of center-finding ruler that is marked "0" at the midpoint. From that point the graduations increase in both directions. To find the exact center, the ruler is moved across the workpiece until the same number on the ruler is at both ends of the workpiece.

Perforated rulers—This type of ruler made by Inkra has small perforations at $\frac{1}{32}$ -in. intervals. The slots and holes are slightly offset so that they don't run into each other while providing pinpoint accuracy. Designed for use with a 0.5-mm mechanical pencil, these rulers also work with a regular pencil sharpened to a fine point. I suspect that once you get used to these rulers you will spurn any other kind, but I spent too much time making sure I stuck the pencil in the right hole.

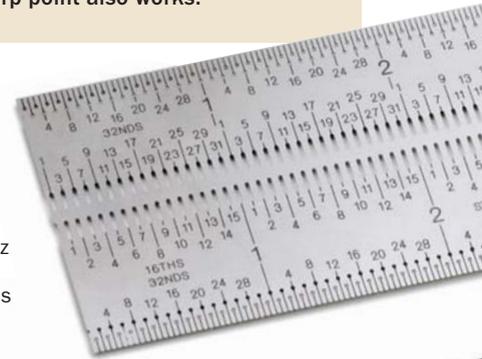
Bend or corner ruler—Bent to turn a 90° corner, this ruler let me mark two perpendicular surfaces without moving the ruler. By measuring two surfaces at the same time, the ruler ensured a slightly higher degree of accuracy. Is the corner ruler essential? No, not at all, but each time I used it I shaved a few minutes off my layout work. Like the other Inkra rulers, this one is perforated.

Folding extension ruler—This type of ruler was not as accurate as the other rulers I've described, but many a fine piece of furniture has been made using no other measuring device. The extension ruler offers acceptable accuracy to within $\frac{1}{16}$ in. and has very clear markings—at least until they eventually wear away. A folding extension ruler takes up more room than a tape measure but supports itself over a longer length. Get one with a brass extension for taking inside measurements into tight corners. □

Mario Rodriguez is a contributing editor.

INKRA MARKING RULER

Price: \$19.99
Contact: www.inkra.biz
Specs: 12 in.; chrome finish with graduations to $\frac{1}{32}$ in.



INKRA BEND RULER

Price: \$24.99
Contact: www.inkra.biz
Specs: 90° bent edge; 12 in.; chrome finish with graduations to $\frac{1}{32}$ in.



FOLDING RULER

The brass extension of this folding ruler is useful for measuring the inside diagonals of a drawer to check for squareness.

STARRETT

Model: 20K12.02
Price: \$29.95
Contact: www.starrett.com
Specs: 72 in.; painted finish with graduations to $\frac{1}{16}$ in.; 6-in. sliding extension

