



Instrument Measuring: Why Precise Descriptions Are Necessary When Completing Count Sheets



BY RICK SCHULTZ

Using descriptions such as “small,” “medium,” “large,” “heavy,” “long,” etc. is not an acceptable unit of measure when noting the size of an instrument on an instrument count sheet. The science of surgery requires the precise selection of specific instruments for each individual, surgical tray and procedure. A “medium” scissor, in the eye of one technician or surgeon, may mean a completely different size scissor to another.

Just as a baking recipe should be carefully written and followed, the same can be said of every instrument count sheet. A recipe would never call for a handful of flour or a medium cup of sugar, just as an instrument count sheet should never simply describe a retractor as “large.” Each instrument description should include the instrument’s full name, as well as the length or size, measured in centimeters/millimeters or inches.

It is important to use the following measurement tips as a guide for verifying the size of certain instruments.

Vascular scissors are designed in various lengths, and with precise cutting angles. Count sheets should reflect the exact length and angle of the cutting blades. Using a protractor, the technician

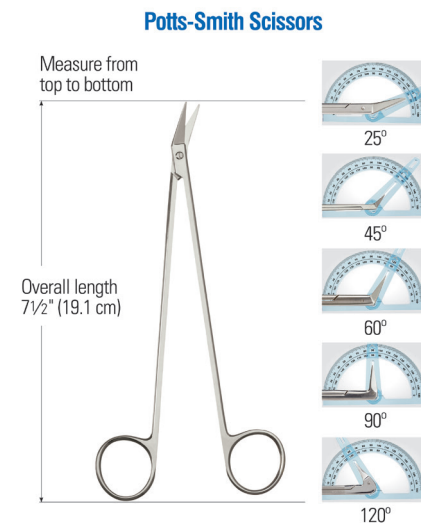


Figure 1

assembling the trays should be taught how to measure these scissors (See Figure 1). The sharpness test standard for vascular scissors is yellow scissor testing material.

Kerrison rongeurs are usually only referred to by their bite size, 1 mm thru 6 mm (See Figures 2 and 3). This bite size reference is only 25% of the specific measurements for this instrument. The four specific measurements of a Kerrison rongeur are:



Figure 2

- A. Jaw angle;
- B. Shaft length;
- C. Bite size; and
- D. Bite opening

The sharpness test standard for Kerrison rongeurs is to cut cleanly through one thickness of an index card or 100# card stock, without tearing.

Neurological/spinal surgery is very precise in regard to surgical instrument sizes. Cushing-style rongeurs (See Figure 4) have four distinct points of measure:

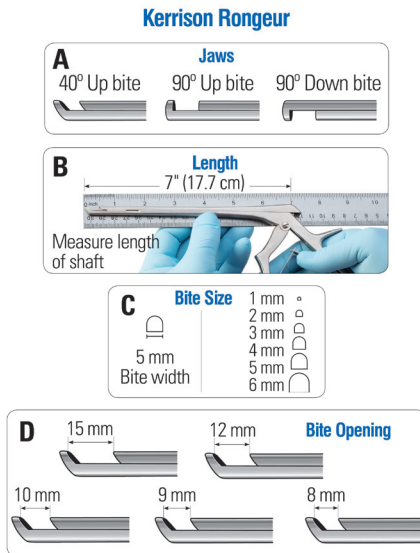


Figure 3

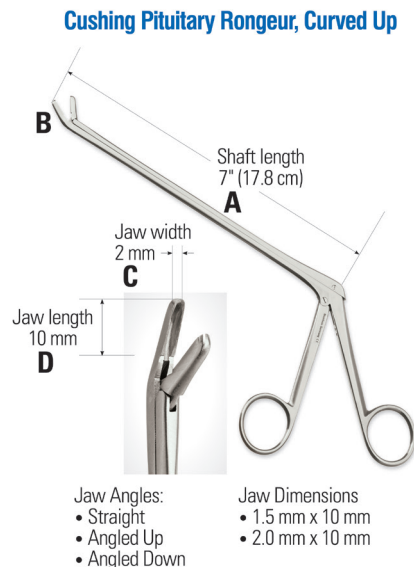


Figure 4

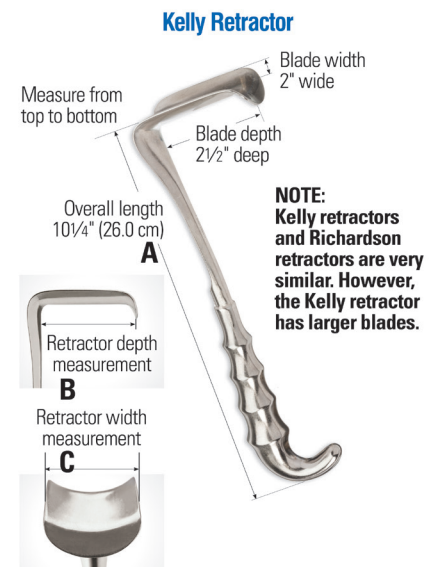


Figure 5

- A. Shaft length;
B. Jaw angle;
C. Jaw width; and
D. Jaw length

Like Kerrison rongeurs, the Cushing rongeur's measurements are key.

Kelly and Richardson retractors have different blade sizes. Kelly retractors (See Figure 5) are usually referred to as large retractors. Richardson retractors are smaller than Kelly retractors. The three key measurements for a retractor are:

- A. Length;
B. Depth; and
C. Width

Balfour retractors (See Figure 6) have similar measurements to Kelly retractors, with the exception of the spread of side blades. The three key measurements are:

- A. Width;
B. Depth; and
C. Spread of side blades

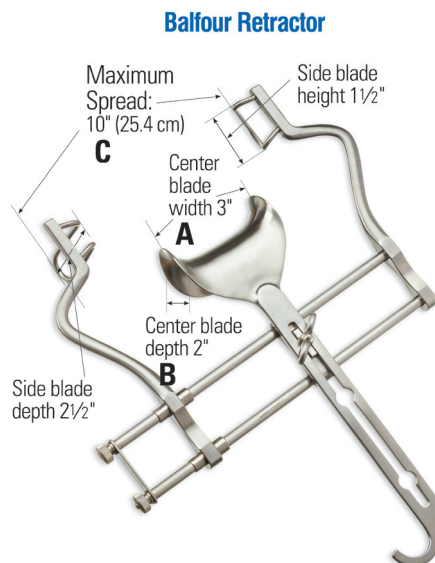


Figure 6

Balfour retractors also have side blades and center blades, and both measurements are important. These retractors have various snap-on side blades of different depths; many times, count sheets call for various side blades. Speculums are usually referred to as

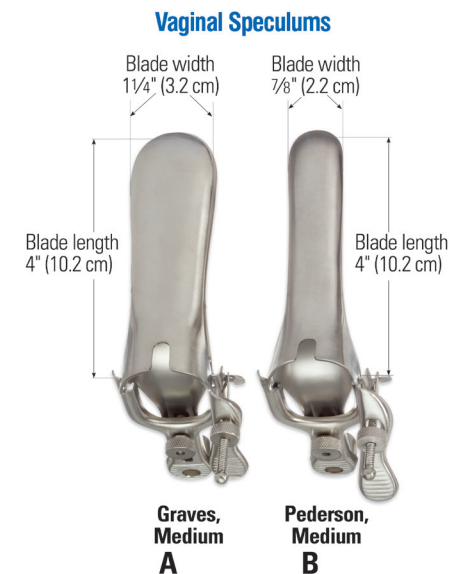
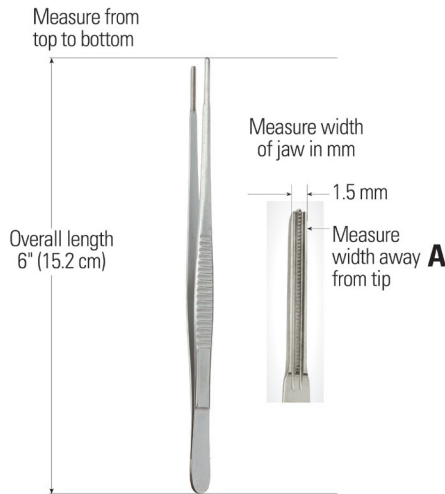
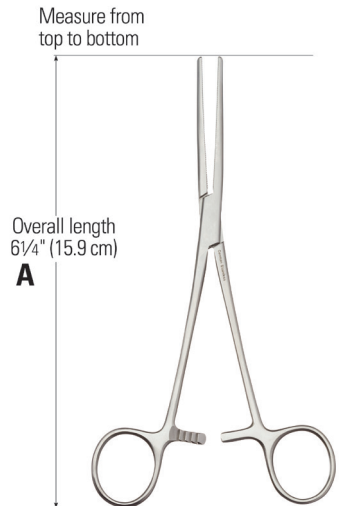


Figure 7

large and small or wide and narrow. The wider speculums are the Graves design (A) and speculums that tend to be narrow are the Pederson design (B). See Figure 7.

Debaquey forceps (See Figure 8) and Cooley forceps are often referred to as

**Debaquey Forcep****Figure 8****Rochester-Pean Forcep, Straight****Figure 9**

Q Why does our surgery department complain about the sharpness of micro-vascular scissors?

A These scissors have small cutting surfaces and need to be sharpened more often than standard scissors. A good frequency for sharpening would be six to eight times per year. *Note: Some micro-vascular scissors have an overall length of 6", 7" and 8", but the cutting blades are small; therefore, red scissor test material would not be used. Due to the size of the cutting surface, yellow scissor test material should be used as the sharpness test standard.*

small, medium and fat instead of the actual measurement in millimeters (mm). Those sizes reference the jaw width, just proximal from the tip (A). Common jaw widths are 1.5 mm, 2.0 mm, 2.5 mm and 3.0 mm.

Hemostats are always measured from the bottom of the rings to the distal tip (A). See Figure 9 for an image of a Rochester-Pean hemostatic forcep. If the hemostat is curved or angled, the measurement is still from rings to tip. **C**



RICK SCHULTZ, the Instrument Whisperer™, is an author, inventor and lecturer, and the retired Chief Executive Officer of Spectrum Surgical Instruments Corp. He served as contributing editor of IAHCMM's Central Service Technical Manual (Fifth, Sixth, Seventh, Eighth Editions). Rick authored the textbooks *Inspecting Surgical Instruments: An Illustrated Guide* and *The World of Surgical Instruments: The Definitive Inspection Textbook*, which was released in June 2018. Schultz was named IAHCMM's Educator of the Year in 2002, and in 2006, was named American Hospital Association Educator of the Year. In 2007, he was named by Healthcare Purchasing News as one of the 30 Most Influential People in Healthcare Sterile Processing. Schultz currently provides educational lectures to Central Service professionals at IAHCMM's annual conferences and conducts operating room personnel lectures across the country.