

How to use the PollexBox™

The PollexBox™ measures:

1) **Palmar abduction of the first metacarpal:** the angle between the 1st and 2nd metacarpal and 2) **Full thumb palmar abduction:** the angle between the entire thumb and the second metacarpal. Either the left or right thumb can be measured.

Place Anatomical Marks on the Patient's Thumb:

1. The thumb CMC joint on the dorsum of the thumb
2. The middle of the dorsal thumb metacarpal head
3. The middle of the thumb nail.

Position the Patient:

- Seat patient at a table with the elbow at 90° of flexion.
- Position the thenar crease on the lower edge of the box, allowing free movement of the thumb across the top surface of the box. Using the laser line light provided, align the CMC joint mark with the 90° line of the protractor. (Fig.1)
- While measuring, the patient's fingers rest against the side of the box and are stabilized by the examiner. (Fig.1)

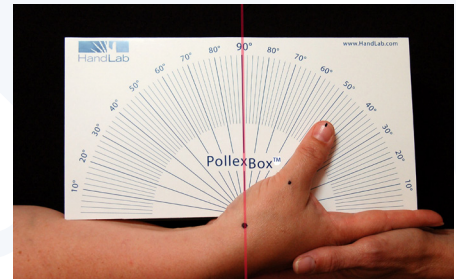


Figure 1

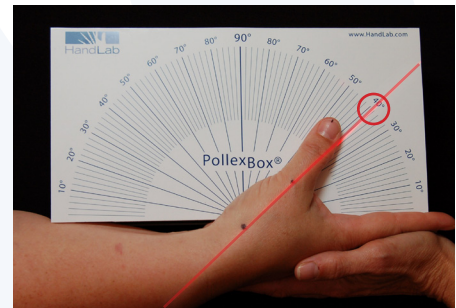


Figure 2

Active Measurements: Instruct the patient to move the thumb to maximum palmar abduction in a single fluid movement and maintain this position. (Fig.2)

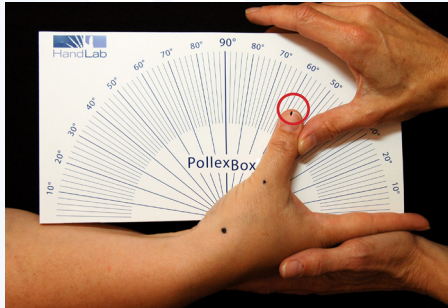


Figure 3

1. **Palmar abduction of the first metacarpal:** Align the laser light line with the thumb CMC joint mark and the mark at the middle of the head of the thumb metacarpal. The laser light should fall parallel to one of the protractor degree markings. (If the laser light is not parallel, the CMC joint is not positioned at the 90° mark and should be correctly re-positioned.) Record the degree line where the light falls. (Red circle: Fig. 2)

2. **Full thumb palmar abduction:** Record the degree line where the mark on the middle of the thumb nail falls. (Red circle: Fig. 3)

Passive Measurements: Examiner moves the thumb to maximal palmar abduction and holds it there while the subject is instructed to relax. (Fig. 3) Measure as above.

More Information at www.HandLab.com:

Measurement Recording Forms (PDF & JPG) and Articles with Normative/Reliability Data

The PollexBox™ was developed by the departments of 1) Plastic and Reconstructive Surgery and 2) Rehabilitation Medicine and Physical Therapy at Erasmus University Medical Center in Rotterdam, the Netherlands and is now available from HandLab.



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