

# Finger Tip Fitting

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- [Step-by-step guide](#)
- [Drilling an Oval Thumb](#)

# Anatomy of a Finger Tip Fit

## Key principles

- Fingers are inserted to first joint
- Thumb is seeded all the way into the bowling ball, up to the base of the thumb
- More advanced grip
- Higher revolution rate at point of release
- Stronger ball reaction which allows the bowler to achieve larger entry angles



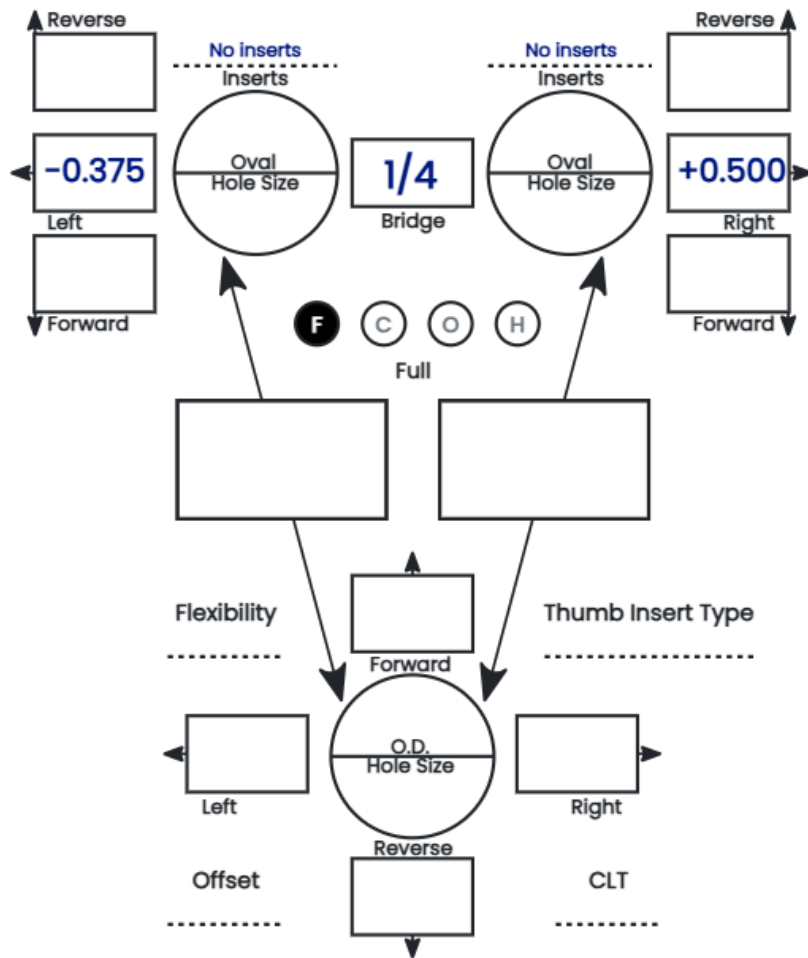
# Step-by-step guide

Following these steps will ensure a proper fit

1. Warm up your hand ( either massage or bowl)
  2. Measure the MIDDLE FINGER
  3. Measure THUMB FLEXIBILITY
  4. Measure FINGER & THUMB hole sizes
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## Constants to fill out on the spec sheet

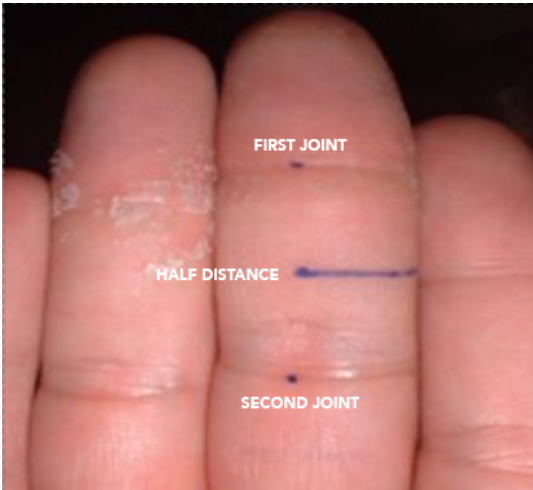
- Before starting the measurement, you can already write down some data on your spec sheet.
  1. Bowler Hand (Left or Right)
  2. Bridge between the fingers =  $1/4$
  3. Lateral pitches:  $3/8$  (middle finger) and  $1/2$  (ring finger)
  4.  $5/16$ 's rule



# Mark the bowler's hand with a pen

## 1. Mark the MIDDLE FINGER

- Find and mark the bending point of the FIRST joint.
- Find and mark the bending point of the SECOND joint.
- Measure the distance between both lines.
- Divide that distance in half.
- Draw a line.
- Use this line with your fitting tools.



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## 5/16's Rule:

This rule is used to find the measurement of the RING finger.

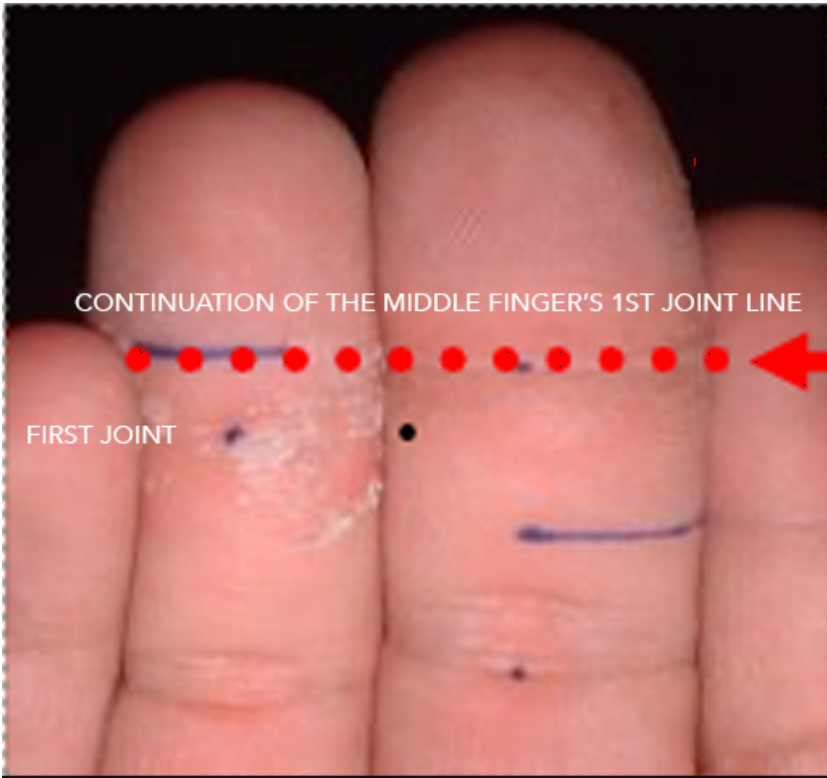
1. Find and mark the FIRST joint of the RING FINGER
2. Slightly cup the client's hand, similar to the curvature of a bowling ball.
3. Draw a line from the FIRST joint of the MIDDLE FINGER onto the RING FINGER
4. Measure the distance between both lines on the RING FINGER.
5. Use the following equation: Measurement from #4 is hereby designated X. ---  $5/16 - X = +/-$  distance of the RING FINGER

Ex #1 : If X (distance between both lines on the ring finger.) is  $7/16$  ---  $5/16 - 7/16 = -1/8$

The span of the RING FINGER is  $1/8$  shorter than the span of the MIDDLE FINGER.

Ex #2: If X is  $1/8$  ---  $5/16 - 1/8 = 3/16$

The span of the RING FINGER is  $3/16$  longer than the span of the MIDDLE FINGER.



## Using the fitting tools

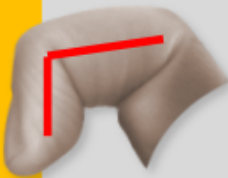
- BT Ball Fitter
- Innovative Fitting Ball

**Prendre un photo avec le bal**

**fitter pour montrer where to measure ??**

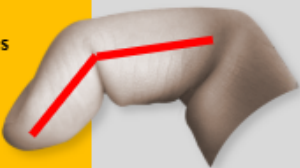
## Fingertip Pitches

70  
degrees



If the first finger joint is flexible, then zero pitch will work with the correct span.

45  
degrees



If the first finger joint will not bend beyond this point, then use 1/4"-3/8" reverse pitch in the customers fingers

30  
degrees



If the first finger joint will not bend beyond this point, then use 1/2"-3/4" reverse pitch in the customers fingers

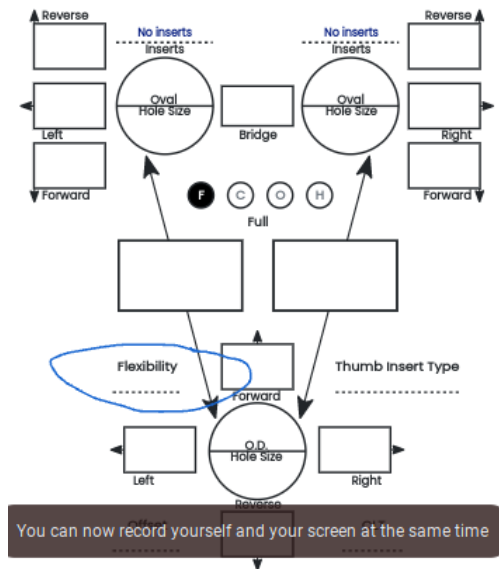
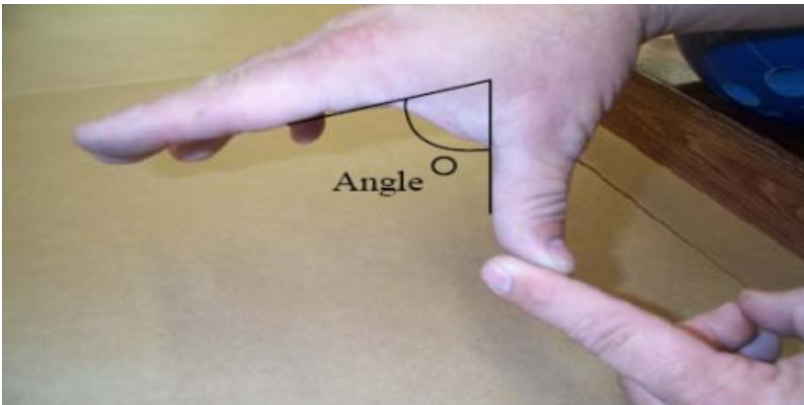
**Pitch what you see! 3/4 or more is very possible and sometimes required**

## Evaluate the thumb flexibility

The bowler's hand must be relaxed.

- Pull back on the thumb to measure the flexibility
- Follow the chart provided for the correct pitch based on span/flexibility

*give a link to the chart ??*



**You might modify pitch for the following reasons:**

**-A longer thumb (Over 2 5/8")**

- Add 1/16 - 1/8" reverse

**- A shorter thumb (Under 2")**

- Subtract 1/16 - 1/8" reverse

**- Very moist skin**

- Add 1/16 - 1/8" reverse

**- Extremely dry skin**

- Subtract 1/16 - 1/8" reverse

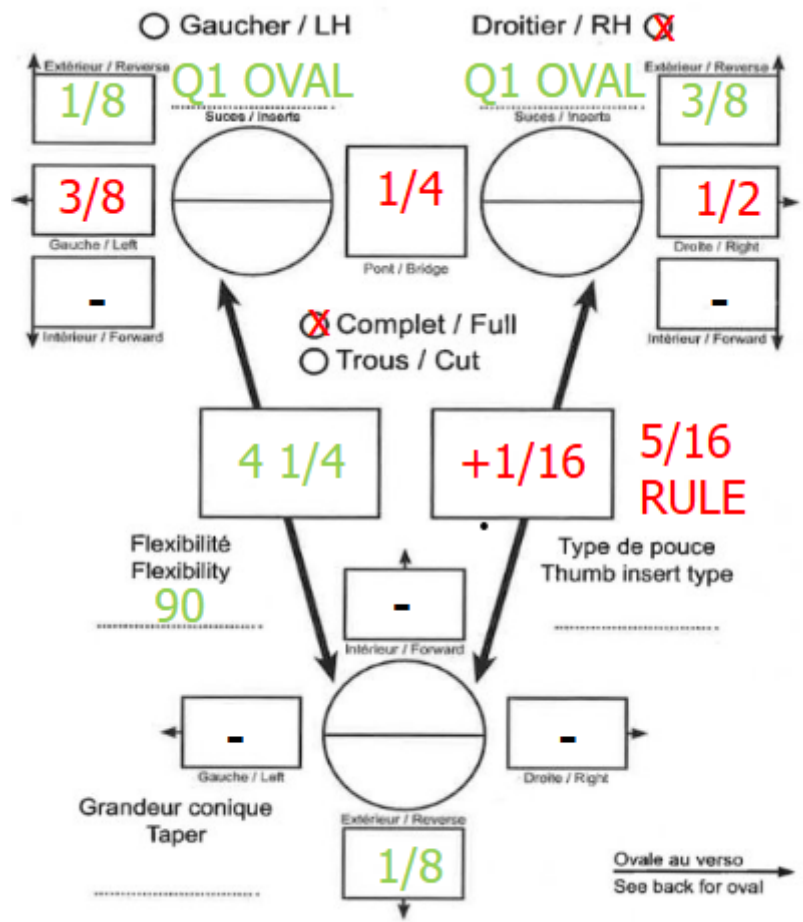
**- If the bowler uses excessive grip pressure**

- Check hole sizes to determine if they are too large
- 

# Recap of measurements

## FINGERS:

- Check finger flex.
- For 80+% of your clients use REVERSE pitch only.
- ALWAYS REMEMBER TO COMPENSATE FOR GRIPS.
- Write down pitch on spec sheet to avoid confusion.



## THUMB:

- Refer to thumb pitch chart.
- No lateral pitch for beginner/novice bowlers

## Choosing Ball Weight:

Choosing the correct ball weight is crucial for first time and novice bowlers. Improper weight can make a comfortable grip uncomfortable.

- If the bowler is using a house ball comfortably for one game, and then gets tired... The same weight as the house ball, when fitted properly, should be fine
- If the bowler uses a house ball for three games with little to no problem, two pounds heavier than the house ball with a proper fit, should be fine
- For Junior bowlers; 10% of their body weight + 2 pounds as a maximum. You could also do same weight as their age to one pound less than their age will be fine
- Always let the customer test out the weight of the ball before drilling, to confirm the choice ( put undrilled ball in a see-saw)

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## Checking the Hand

Your customers hand will not always be perfect, the importance of checking for the unusual cannot be overstated.

Possible modifications are necessary for:

- Arthritic joints
- Tendinitis
- Sensitive nerve or tendon
- Pain, soreness or swelling
- Callus, pathological callus
- Missing fingers



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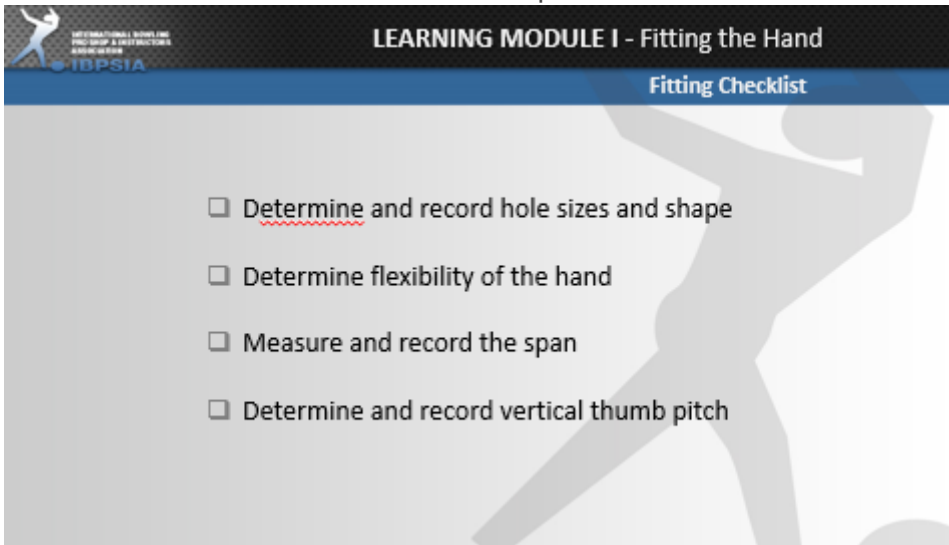
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# Fitting Checklist:

- Determine and record hole sizes and shape
- Determine flexibility of the hand
- Measure and record the span
- Determine and record vertical thumb pitch



## MEASURE THUMB AND FINGERS HOLE SIZE:

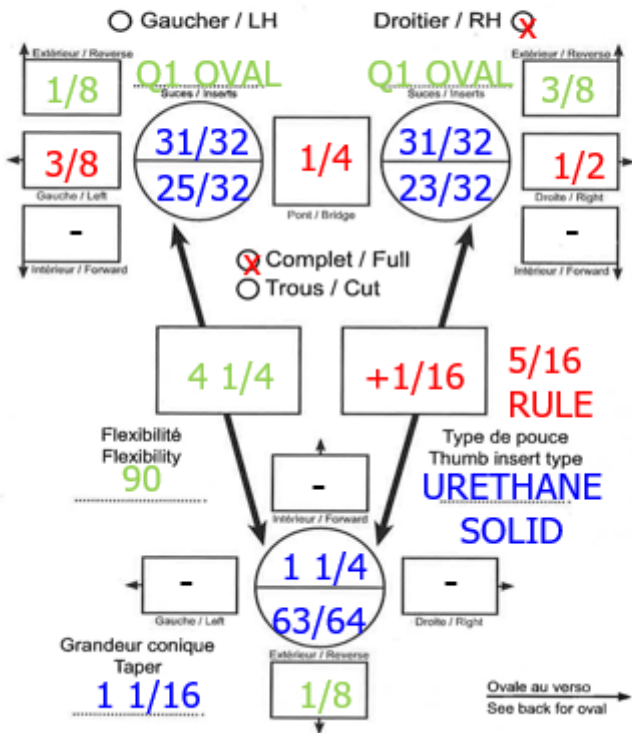
### -FINGERS

- . Check using grips
- . Grip should be slide in with slight restriction. Once inside hole, it will contract slightly.
- . Indicate OD size

### -THUMBS

- . If round , aim small and work with tool.
- .If oval, consult chart.
- . Measure base of thumb for taper.

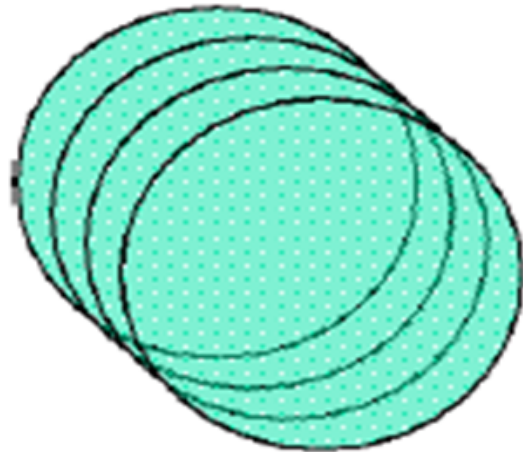
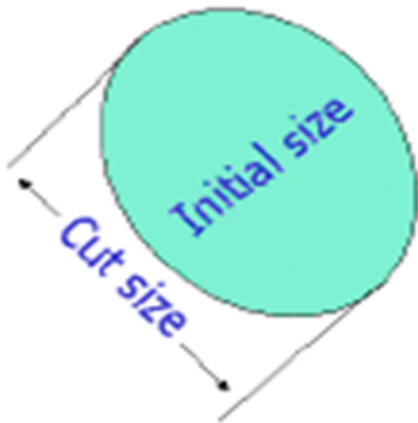
# FINGER TIP FIT



# Drilling an Oval Thumb

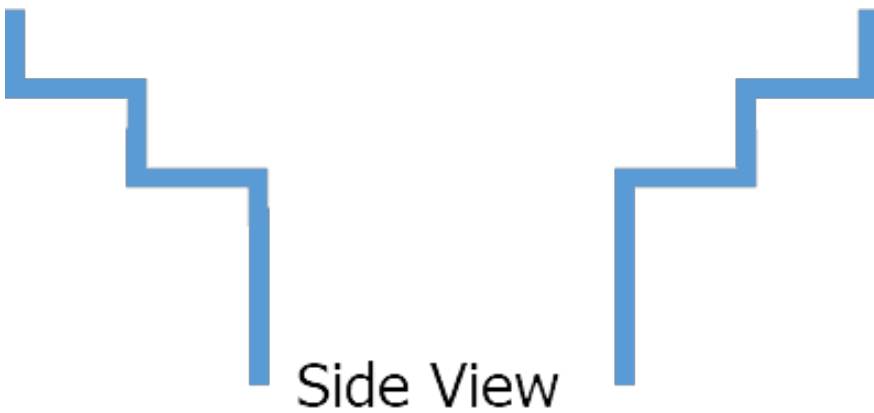
## 3 Measurements

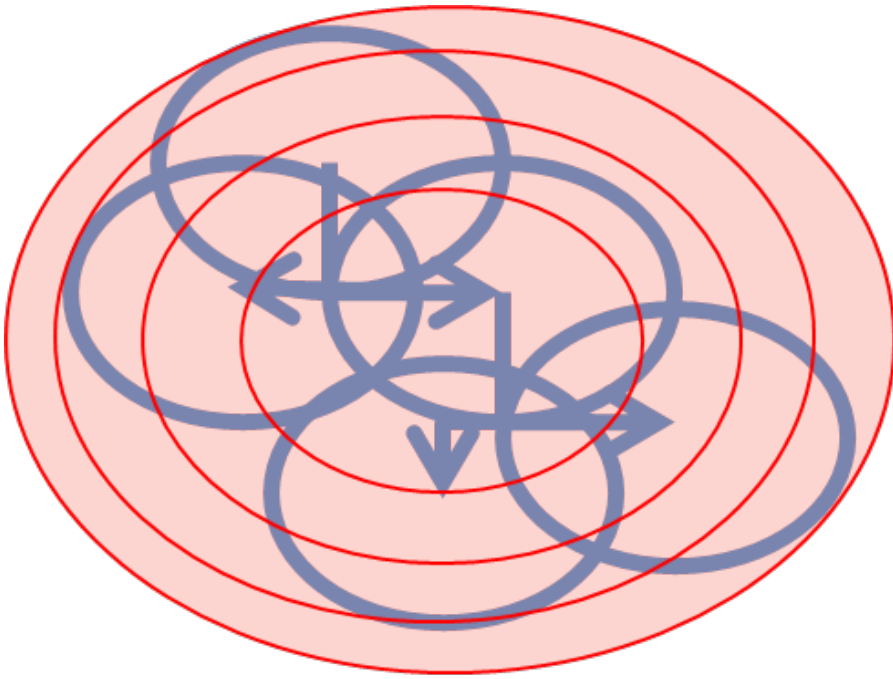
- Smallest - Starting bit
- Largest - Width of oval
- Oval direction



# Taper base of thumb

- Measure the base of the thumb
- Start with that bit
- Go down 1/8" max
- 1/32 step downs
- Go till the starting bit





Top view

