7.1.3 Hole Depth option — setting desired depth for each hole

Hole Depth option — setting desired depth for each hole

7.1.3 NEW arsenal

When drilling a bowling ball, hole depth is not a fixed value — it varies by bowler, ball construction, and fitting intent. Spectre Cloud's **Hole Depth** option allows you to record and manage the desired depth for each hole on a spec sheet, ensuring the depth specification travels with the drilling record rather than existing only in the driller's memory or on a separate note. This page explains what the Hole Depth option does, how to set it, and how it interacts with the rest of the spec sheet.

□□ What Hole Depth Controls

Hole depth specifies how deep each finger and thumb hole is drilled into the ball. It is distinct from hole size (diameter) and pitch — depth is the third spatial dimension of a drilled hole, and getting it wrong produces a hole that is either too shallow (the finger bottoms out uncomfortably) or too deep (the ball is weakened unnecessarily and the hole feels loose).

- □ Depth is set independently for each hole — middle finger, ring finger, and thumb can each carry a different depth specification.
- □ Depth values are stored on the spec sheet as part of the permanent drilling record.

- □ Correct depth recording means a re-drill or a second ball can replicate the same depth without the bowler needing to be present for a fitting check.
- □ For bowlers with inserts, depth is particularly important — the insert must seat at the correct depth to produce the intended grip feel.

□□ How Hole Depth Is Measured and Expressed

Hole depth in Spectre Cloud is expressed in inches, measured from the ball surface to the bottom of the drilled hole. The measurement is taken along the drill bit's axis of travel — not along the pitch angle — so it represents the true depth of the hole as drilled, not the straight-line distance from surface to bottom through the ball's interior.

- □ Typical finger hole depths for fingertip grips range from approximately `1 1/2"` to `2"` depending on finger length and insert type.
- □ Thumb hole depths vary more widely — from under `1 1/2"` for shallow fits to over `2"` for deep thumb slugs or long thumbs.
- □ Conventional grip finger holes are typically drilled slightly deeper than fingertip to accommodate the second knuckle insertion.

⚠ **Verify with Spectre team:** Confirm the typical depth ranges listed above against Spectre Cloud's IBPSIA-standard auto-suggestion values, and update if the app's defaults differ from the figures used here.

□□ Setting Hole Depth on Desktop

1. Open the spec sheet for the ball being drilled.
2. Locate the **Hole Depth** field within each hole's section — middle finger, ring finger, and thumb each have their own depth field.
3. Enter the desired depth in inches for each hole.
4. If Spectre Cloud provides an auto-suggested depth based on the finger measurements and grip type already entered, review the suggestion and adjust if needed before saving.
5. Save the spec sheet. Depth values are stored alongside all other hole specifications.

□□ Setting Hole Depth on Mobile

1. Open the spec sheet and scroll to the hole section for each finger and the thumb.

2. Tap the **Hole Depth** field for each hole and enter the desired depth using the numeric keyboard.
3. Work through middle finger, ring finger, and thumb in order before saving.

Factors That Determine the Right Depth

Hole depth is not a value you look up on a chart — it is derived from a combination of physical measurements, insert specifications, and fitting judgement. The following factors all bear on the correct depth for a given hole:

Finger length and joint position

The hole must be deep enough for the finger to seat at the correct knuckle position — first knuckle for fingertip, second knuckle for conventional. A hole that is too shallow prevents the finger from reaching its intended seating point; a hole that is too deep allows the finger to sink past it.

Insert type and seating requirements

Finger inserts have a defined seating depth — the hole must be drilled to exactly the depth at which the insert seats flush with or slightly below the ball surface. Different insert brands and styles have different seating depths; check the manufacturer's specification before drilling.

- Record the insert brand and model in the spec sheet notes field alongside the depth value — this makes future re-drills straightforward when the same insert is being used again.
- For oval inserts, the depth specification applies to the deepest point of the oval — confirm this with the insert manufacturer's documentation.

Ball construction and minimum safe depth

Some high-performance balls have asymmetric cores positioned close to the ball surface. Drilling too deep risks breaching the core or entering a material layer that affects structural integrity. For balls with complex core geometries, consult the manufacturer's drilling specifications before setting depth — particularly for the thumb hole, which is often the deepest.

Thumb slug depth

Thumb slugs have their own depth requirements determined by the slug's length and the required pitch bore engagement. A slug that is not fully seated — because the hole was drilled too shallow — sits proud of the ball surface and affects release feel. A hole drilled too deep for a short slug leaves a gap beneath the slug that can allow movement.

- Always drill the thumb hole to the slug manufacturer's specified depth, not to a general estimate.
- Record the slug length in the spec sheet notes as a cross-reference to the depth value.

Hole Depth and Re-Drills

When a ball is plugged and re-drilled, hole depth requires special attention. The plug material and the original hole geometry may affect how deep the new hole can safely be drilled in the same location. Consider the following when setting depth on a re-drill spec sheet:

- If the new hole is in a different location from the original, depth can be set normally from the ball surface.
- If the new hole overlaps with a plugged area, check the plug depth and condition before drilling — a shallow or incomplete plug can cause the drill bit to enter a void.
- Clone the original spec sheet as a starting point for the re-drill, then review and update the depth values explicitly — do not assume the previous depth is still correct after a plug.
- Do not carry forward depth values from a previous spec sheet without checking — the plug changes the effective starting surface and may require depth adjustment.

⚖ Hole Depth Across the Three Hole Types

Hole	Key depth consideration	Common depth range
Middle finger	Insert seating depth; finger joint position	`1 1/2"` — `2"`
Ring finger	Same as middle finger; often identical but measure independently	`1 1/2"` — `2"`
Thumb	Slug length and seating; pitch bore engagement; ball core proximity	`1 1/4"` — `2 1/4"`

Note: These ranges are general guidance. Individual bowlers, insert types, and ball constructions may require depths outside these ranges. Always derive depth from the physical fitting and equipment specifications rather than defaulting to a range midpoint.

Using Depth Values on Subsequent Visits

One of the most practical benefits of recording hole depth in Spectre Cloud is what it enables on future visits. When a bowler returns for a new ball or a re-drill, the depth values on their previous spec sheets provide an immediate reference point:

- A bowler who reports that their current ball feels perfect can have the same depth replicated on the new ball without a fitting check — the record has it.
- A bowler who reports that the current ball feels too tight or too shallow gives the previous depth as a starting point for adjustment — you know what to move away from.
- For shops with multiple drillers, depth records mean any staff member can handle a returning bowler's visit with the same precision as the original driller.

Related Sections

- 7.1.1 — What is the Arsenal section and how it connects to spec sheets
- 7.1.2 — Adding a ball to the Arsenal
- 7.1.4 — Viewing a ball's spec sheet history from the Arsenal
- 6.1.3 — Step 3: Set grip type and enter finger measurements
- 6.1.4 — Step 4: Enter thumb information (round or oval)
- 04.x — Spec Sheets: field reference and measurement guide

Tip: If a bowler cannot tell you their preferred depth and has no previous spec sheets to reference, drill to the insert manufacturer's specified seating depth as your starting point, then check the fit with the bowler before finalising. A test finger insert seated in the fresh hole takes thirty seconds to evaluate and prevents a depth-related re-drill far more reliably than any rule of thumb.

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