

# 9.3.5 Oval cut chart for manual (NONE mode) calculations

## Oval cut chart for manual (NONE mode) calculations



9.3.5

reference

When Spectre Cloud's Oval Cut Direction is set to **NONE**, the app does not generate directional oval cut suggestions — the fitter determines the oval cut value manually and enters it directly on the spec sheet. This reference chart provides the standard oval cut sizes mapped to forward pitch values and ball track types, giving operators working in NONE mode a quick, reliable starting point for every fit without needing to consult an external chart or rely on memory.

### How to Use This Chart

Locate the bowler's **forward pitch value** in the left column and their **ball track type** across the top. The cell at the intersection gives the recommended starting oval cut size. Enter this value in the **Oval** field on the spec sheet.

-  This chart applies to **finger holes only** — thumb oval cuts are determined separately based on thumb anatomy and release characteristics.
-  Values are expressed in inches as fractions — the same unit used in Spectre Cloud's oval field.

- □ The chart gives a **starting point**, not a fixed prescription. Adjust based on the bowler's hand anatomy, insert type, and release feedback.
- □ This chart is designed for use with **NONE mode**. If your shop uses Forward/Back or Left/Right directional mode, the Oval Calculator generates directional output automatically — see sections 5.6.1–5.6.5.

# □ Oval Cut Chart — Forward Pitch vs. Ball Track

Forward pitch	Low track	Medium track	High track	Notes
Reverse pitch or 0	0 (round)	0 (round)	0 to 1/8"	Reverse or zero pitch rarely requires an oval. High track bowlers may benefit from a minimal oval for comfort even at zero forward pitch.
1/8" forward	0 to 1/8"	1/8"	1/8"	Small oval appropriate at this pitch level. Low track bowlers may not need any oval at 1/8" forward.
1/4" forward	1/8"	1/8" to 3/16"	3/16" to 1/4"	The most common pitch range for recreational and league bowlers. Oval size begins to have meaningful impact on feel.
3/8" forward	1/8" to 3/16"	1/4"	1/4" to 5/16"	Standard range for average to stiff flexibility bowlers. A 1/4" oval is the most frequently used size across this pitch value.
1/2" forward	3/16" to 1/4"	1/4" to 5/16"	5/16" to 3/8"	Higher forward pitch begins to require more meaningful oval correction. Track type has increasing influence at this level.

Forward pitch	Low track	Medium track	High track	Notes
5/8" forward	1/4"	5/16"	3/8"	Significant forward pitch — typically seen in bowlers with stiff hands or arthritic conditions. Larger oval essential for comfortable grip and release.
3/4" forward	1/4" to 5/16"	3/8"	3/8" to 1/2"	Very high forward pitch. Verify the pitch value before proceeding — values at this level are uncommon and worth confirming against the bowler's history.

⚠ **Verify with Spectre team:** Confirm the oval cut values in this chart against the IBPSIA-standard reference values used internally by Spectre Cloud. The values above are based on general industry practice and should be cross-checked against the app's own reference data before publishing.

## 📏 Determining Ball Track Type

Ball track type is assessed by examining the wear pattern on the ball surface from previous use, or estimated from the bowler's delivery characteristics if the ball is new.

Track type	Wear pattern location	Delivery characteristics
<b>Low track</b>	Track runs close to the thumb and finger holes — often within an inch of the holes	Typically associated with lower axis tilt, smoother roll, earlier transition through the pins
<b>Medium track</b>	Track runs roughly midway between the holes and the ball's equator	Most common track type — the standard assumption for an unknown bowler
<b>High track</b>	Track runs near the ball's equator, well away from the holes	Associated with higher axis tilt, stronger backend reaction, more angular breakpoint

📏 **Note:** For a new ball with no wear pattern yet established, estimate track type from the bowler's delivery observation or default to **medium track** as the starting assumption. The oval cut can be refined on a subsequent drilling once the track has developed.

# ⚖ Factors That Adjust the Chart Value

The chart gives the standard starting oval for the pitch and track combination. Several bowler-specific factors push the appropriate value above or below that starting point:

## Factors that suggest a larger oval than the chart value

- **Very stiff flexibility** — the bowler has difficulty fully gripping the ball and needs a more forgiving release path.
- **Large finger holes relative to finger size** — a looser fit benefits from a larger oval to maintain consistent finger contact through the swing.
- **Bowler reports fingers dragging or catching** after drilling to a previous smaller oval — direct feedback that the oval was insufficient.
- **Arthritis or joint swelling** — the grip entry and exit path needs more clearance than a standard fit.

## Factors that suggest a smaller oval than the chart value

- **Very flexible hand** — flexible bowlers often need less oval correction because the fingers exit the ball more cleanly regardless.
- **Tight insert fit** — a snug insert may not require oval correction at smaller pitch values where the fit is already secure.
- **Bowler prefers a firmer, more controlled feel** — some experienced fingertip bowlers intentionally use a smaller oval for a more precise release.
- **Previous drilling with this oval size felt too loose** — reduce by one increment and re-assess.

## ☐☐ Cross-Checking Against Spectre Cloud Auto-Suggestions

If you switch from NONE mode to a directional mode temporarily to check what the Oval Calculator would suggest for a given pitch and track combination, the directional output provides a useful cross-reference for your manual NONE mode entry:

- The total oval size component of a directional output should broadly agree with the chart value for the same pitch and track. A significant discrepancy is worth investigating before entering a value.
- Use this cross-check for unfamiliar bowler profiles or when the chart produces a value that seems unexpectedly large or small for the fit.
- Switch back to NONE mode before saving the spec sheet — running the calculator in directional mode and then saving under NONE produces a spec sheet without directional labels, which is correct for NONE mode operation but only if the switch back was completed.

## Quick Reference — Most Common Oval Cut Values

In practice, the majority of pro shop fittings fall within a narrow oval cut range. This condensed reference covers the most frequently encountered combinations:

Situation	Starting oval cut
Recreational bowler, standard fit, <input type="text" value="1/4"/> – <input type="text" value="3/8"/> forward pitch	<input type="text" value="1/4"/>
League bowler, medium track, <input type="text" value="3/8"/> forward pitch	<input type="text" value="1/4"/>
Senior bowler, stiff hands, <input type="text" value="1/2"/> + forward pitch	<input type="text" value="3/8"/>
Junior bowler, flexible, <input type="text" value="1/8"/> – <input type="text" value="1/4"/> forward pitch	<input type="text" value="1/8"/>
High rev bowler, high track, <input type="text" value="1/4"/> forward pitch	<input type="text" value="1/4"/>
Conventional bowler, any track, <input type="text" value="3/8"/> forward pitch	<input type="text" value="1/4"/>
Bowler with zero or reverse pitch	<input type="text" value="0"/> (round hole)
Arthritis — significant forward pitch, any track	<input type="text" value="3/8"/> to <input type="text" value="1/2"/>

## Entering the Value in Spectre Cloud (NONE Mode)

1. Confirm **Oval Cut Direction** is set to **NONE** in Settings — see section 5.5.1.

2. On the spec sheet, locate the **Oval** field for each finger hole.
3. Enter the oval cut size determined from this chart — for example,  $\frac{1}{4}$ ".
4. Because NONE mode produces a single unlabeled value, no axis direction is required — just the size.
5. Save the spec sheet. The oval value appears on the printed spec sheet as a single measurement without a directional label.

## Related Sections

- 5.5.1 — Setting up: Oval Cut Direction = NONE in Settings
- 5.5.2 — Using the oval cut chart to determine cuts manually
- 5.5.3 — When NONE mode is preferable (experienced fitters, custom setups)
- 5.6.5 — Choosing EDGE vs. CENTER: which method fits which bowler
- 9.3.1 — Pitch suggestion chart (flexibility vs. forward pitch)
- 9.3.2 — CLT chart (lateral tilt angle vs. lateral pitch)

□ **Tip:** Print this chart and laminate it alongside the pitch and CLT reference charts at the fitting counter and drill press. The three charts together — forward pitch by flexibility, lateral pitch by tilt angle, and oval cut by pitch and track — give any driller a complete manual reference for the most common fitting calculations without needing to open Settings, run the calculator, or leave the press. A well-maintained laminated reference at the press is one of the most practical tools in a busy shop, especially when training new staff who are building their fitting intuition alongside their technical knowledge.

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