5.4 — Method C: Vertical Only (V Mode)

5.4.1 Setting up: Oval Cut Direction = V in Settings

Setting up: Oval Cut Direction = V in Settings

5.4.1 **CALC** oval method

The third Oval Cut Direction option in Spectre Cloud is **V** — a pure vertical-only configuration that records and displays ovals with the **vertical dimension only**, without a paired horizontal value. Setting Oval Cut Direction to V tells Spectre Cloud that your shop's oval cuts are made exclusively on the vertical axis, and that your documentation workflow records only that single directional stretch rather than a full V × H pair.

If your shop records ovals as a two-value pair with vertical listed first, see **5.2.1 — Setting up: Oval Cut Direction = V/H** instead. This page covers the V-only configuration specifically.

□□ What "V" Cut Direction Means

When Oval Cut Direction is set to **V**, Spectre Cloud treats the oval as a single-axis measurement. Only the vertical stretch is entered and recorded — the horizontal dimension is not displayed as a separate value because it is assumed to equal the starting bit size with no horizontal stretch applied.

Setting	Values Recorded	Display Format	Example
V/H	Both axes	Vertical × Horizontal	`1-1/16 × 1`
H	Both axes	Horizontal × Vertical	`1-1/16 × 1`
V (this page)	Vertical axis only	Vertical stretch only	`1/16"` or `1-1/16"`

The practical effect is that spec sheets and oval records in V-only mode are more compact — a single measurement rather than a pair — which suits shops whose drill press setup and documentation tradition have never required a horizontal value to be recorded separately.

□□ How to Set Oval Cut Direction to V

□□ Desktop

1. Click your **Pro Shop name** or profile icon in the top-right corner of the screen.
2. Select **Settings** from the dropdown menu.
3. Navigate to the **Spec Sheet** or **Oval** settings section.
4. Locate the **Oval Cut Direction** option.
5. Select `V` (or `Vertical`, depending on how the option is labeled in your version).
6. Save your changes, or confirm the setting has been applied if Spectre Cloud saves automatically.

□□ Mobile / Tablet

1. Tap your **avatar icon** or shop name at the top of the screen.
2. Tap **Settings**.
3. Scroll to the **Spec Sheet** or **Oval** section.
4. Tap **Oval Cut Direction** and select `V` (or `Vertical`).
5. Confirm the selection is saved before leaving Settings.

□□ Who Typically Uses V-Only Notation

V-only oval documentation is less common than V/H or H-first pair recording, but it is a legitimate and practical choice for a specific subset of shops and workflows:

- □ **Shops whose drill press produces only vertical ovals** — if your press, oval attachment, or technique is physically incapable of introducing a horizontal stretch, recording only the V dimension is accurate and sufficient

- **Shops following a simplified spec sheet tradition** — some regional training programs and older pro shop conventions document ovals as a single stretch value rather than a dimensional pair, particularly for finger holes where horizontal variation is rare
- **High-volume operations prioritizing speed** — recording one value instead of two is faster, and for shops where horizontal ovals are never drilled, the second value would always be zero and adds no information
- **Shops migrating from paper records that used a single oval column** — if your historical spec cards have a single oval measurement field per hole, V-only mode in Spectre Cloud produces records that are consistent with that history

Important Considerations Before Choosing V-Only

- **V-only is appropriate only when horizontal stretch is genuinely absent** — if your press occasionally produces a measurable H component, V/H mode captures the full picture and V-only mode does not
- **The setting is account-wide** — all staff and all devices on your Spectre Cloud account will use V-only documentation once this is saved; confirm every driller in your shop works exclusively with vertical cuts before applying this setting
- **V-only records cannot be directly compared to V/H or H/V records** — if part of your bowler history was recorded as pairs and part as V-only, the records will be inconsistent; choose one format and standardize before entering historical data
- **Switching from V/H or H to V-only after saving records is not recommended** — existing pair-format records will not be reformatted; any new entries will appear as single values alongside older paired entries, creating ambiguity in spec history
- **Do not use V-only if horizontal ovals are even occasionally needed** — a single unexplained horizontal cut on a bowler's ball has nowhere to go in a V-only record; use V/H mode to retain the flexibility to record both axes when required

V-Only vs. V/H — Choosing the Right Setting

Shop Situation	Recommended Setting
Press produces vertical ovals only — horizontal stretch never occurs	**V-only**

Shop Situation	Recommended Setting
Press produces vertical ovals primarily but occasional H component is possible	**V/H**
Both axes are routinely stretched and documented	**V/H or H**
Historical paper records used a single oval column	**V-only** (for consistency with history)
Unsure whether H component occurs — want the complete record	**V/H**
Multi-staff shop where different drillers use different press setups	**V/H** (captures all possibilities)

□□ A Note on IBPSIA Standards

IBPSIA documentation guidelines generally favor recording both oval dimensions as a pair to ensure complete and reproducible spec records. V-only mode is a valid configuration in Spectre Cloud, but if your shop is IBPSIA-affiliated or serves bowlers who may have their equipment maintained at other shops, consider whether a single-axis record provides enough information for another driller to reproduce the fit accurately. When in doubt, V/H mode gives you the full record without requiring any extra measurement effort at the press.

Related Sections

- 5.2.1 — Setting up: Oval Cut Direction = V/H in Settings
- 5.3.1 — Setting up: Oval Cut Direction = H in Settings
- 5.4.2 — When to use V-only mode and which drill presses it suits
- 5.4.3 — Entering V-only cut values and reading output
- 2.x — Settings Overview

Tip: If you are setting up Spectre Cloud for the first time and are unsure whether your shop ever produces a horizontal oval component, start with **V/H mode** rather than V-only. V/H captures every possible cut combination, and you can always enter `0` for the H value on holes where no horizontal stretch was applied. Switching to V-only later — once you are confident it never applies — is straightforward. Switching the other way, after realising V-only was too restrictive, means reviewing your existing records for missing H data. ⚠ *Verify the exact label used for V-only mode in your version of Spectre Cloud — it may appear as* `V`*,* `Vertical`*, or* `V only` *in the Settings screen. Contact the Spectre team if this option does not appear in your Oval Cut Direction settings or if the behavior differs from the description above.*

5.4.2 When to use V-only mode

When to use V-only mode

> 5.4.2 oval method

V-only mode is the right configuration when your drilling workflow consistently produces a stretch on the **vertical axis alone** — toe to heel — with no measurable horizontal component, and when your documentation practice records that stretch as a single value rather than a dimensional pair. This page covers the specific situations where V-only mode is appropriate, the workflows and press setups it suits, and the cases where it is not the right choice even if vertical cuts dominate your work.

□□ The Core Condition for V-Only Mode

V-only mode is appropriate when **both** of the following are true simultaneously:

- □ Your drill press setup physically produces a stretch on the vertical axis only — the ball or bit does not move horizontally during the oval cut
- □ Your documentation practice records that stretch as a single measurement, not as one half of a V × H pair

If either condition is absent — if a horizontal component occasionally appears, or if your spec sheets have always used paired dimensions — V/H mode is the safer and more complete choice. V-only mode trades completeness for simplicity, and that trade only makes sense when the missing H value would always be zero.

□□ Workflows Where V-Only Mode Fits Naturally

Traditional Pivot-Arm Vertical Oval Technique

The most common source of a pure vertical oval is a **pivot-arm press** where the arm swings exclusively in the toe-to-heel direction. When the pivot is set up and aligned correctly for a vertical arc, the bit traces a path along the V axis only — the ball does not move side to side. Shops that have used this technique for years and have never introduced a horizontal component naturally document a single stretch value, and V-only mode reflects that exactly.

- □ Pivot arm confirmed to swing on the vertical axis only
- □ Ball cup locked against lateral movement during the oval cut
- □ Staff trained to make and record a single-axis vertical stretch

Simplified Finger Hole Fitting Workflows

Many experienced drillers work from a single oval measurement for finger holes — particularly when fitting conventional fingertip or semi-fingertip grips where the lateral dimension of the hole is not a variable in the fit equation. For these shops the second value in a V × H pair carries no fitting information and is omitted as a matter of workflow efficiency.

- □ Finger hole ovals driven entirely by forward pitch and span mechanics — no lateral fit adjustment needed
- □ Thumb holes handled separately with their own fit protocol, not mixed into the oval record
- □ Bowler population whose fit requirements have never required a horizontal oval adjustment

Solo Operator Shops with Consistent Equipment

A single driller operating a single press with a fixed oval attachment — where the setup never changes — can safely use V-only mode because the absence of a horizontal component is a known, stable fact about the equipment rather than something that needs to be verified hole by hole. The

consistency of the setup makes the single-axis record reliable over time.

- One driller, one press, one oval attachment — no variability between staff or equipment
- The setup has been used long enough to confirm it never introduces a horizontal stretch
- All historical records for this shop already use single-value oval notation

Shops Preserving Consistency with Paper Record History

If a shop's paper spec cards used a single oval column for decades — recording only the toe-to-heel stretch — switching to a paired format in Spectre Cloud creates a discontinuity in bowler history. A bowler whose 15 years of spec cards show `1/16"` in the oval column will have records that read differently from new entries showing `1-1/16 × 1`, even though they describe the same hole. V-only mode keeps the new digital records consistent in format with the historical paper records.

- Historical paper records use a single oval field — matching V-only output
- Long-term bowler relationships where fit history continuity matters
- No plans to introduce horizontal oval cuts going forward

Press Setups That Suit V-Only Mode

Press Type / Setup	V-Only Suitability	Notes
Pivot-arm press — vertical arc only	Ideal	Pivot swings toe to heel; ball cup locks laterally — pure V cut by design
Ball cup with forward/reverse adjustment only	Well suited	Cup moves on V axis only; no lateral adjustment mechanism present
Manual technique — driller controls direction	Suited when consistently vertical	Requires discipline and experience to avoid introducing lateral drift; verify with a gauge
Pivot-arm press — adjustable axis	⚠ Suited only when locked to vertical	If the pivot can swing in any direction, confirm it is set and locked to vertical before relying on V-only mode
Horizontal slide oval attachment	Not suited	Designed for H-axis cuts — produces horizontal ovals, not vertical; use H-only or H/V mode instead

Press Type / Setup	V-Only Suitability	Notes
CNC or programmable press — V axis only programmed	Fully suited	When the program controls V axis movement only, V-only mode accurately reflects the cut
Fixed-head press with no oval attachment	Not applicable	Cannot produce an oval of any kind without an attachment or deliberate technique

When V-Only Mode Is Not Appropriate

V-only mode should not be used in the following situations, even if vertical cuts are the dominant or preferred oval type in your shop:

- **Your press occasionally introduces a measurable H component** — even an infrequent horizontal stretch belongs in a V/H record; V-only will silently omit it
- **You drill thumb ovals with a horizontal component** — thumb holes frequently benefit from H-axis documentation; V-only mode cannot capture this without switching settings mid-session
- **Your shop has multiple drillers using different press setups** — one driller's purely vertical setup does not guarantee another's is the same; V/H mode captures the full picture regardless of who drilled the ball
- **You serve travelling competitive bowlers** — bowlers whose equipment may be serviced at other shops benefit from a complete paired oval record that any driller can reproduce without assumptions about axis direction
- **You are unsure whether your press produces a pure V cut** — measure a freshly drilled oval on both axes with a gauge before committing to V-only mode; if the H dimension differs from the starting bit by more than your measurement tolerance, a horizontal component is present

Confirming Your Press Before Switching to V-Only

If you are considering V-only mode for the first time, run this confirmation before changing the setting in Spectre Cloud:

1. Drill a test oval on a scrap ball or plug using your standard technique and attachment.

2. Measure the finished hole on **both axes** with a sizing gauge or digital caliper.
3. Compare the H dimension to your starting bit size. If they are equal within your measurement tolerance, no horizontal stretch was introduced — V-only mode is accurate for this setup.
4. If the H dimension is measurably larger than the starting bit, a horizontal component is present — use V/H mode and record both values.
5. Repeat this check after any change to your press setup, attachment, or technique.

Related Sections

- 5.4.1 — Setting up: Oval Cut Direction = V in Settings
- 5.4.3 — Entering V-only cut values and reading output
- 5.4.4 — Worked example: V-only oval from start to finish
- 5.3.2 — When to use H-only mode and which drill presses it suits
- 5.2.1 — Setting up: Oval Cut Direction = V/H in Settings

Tip: When in doubt between V-only and V/H, choose V/H. The cost of recording a second value that always turns out to be zero is minimal — one extra field entry per hole. The cost of discovering that your press has been introducing a small horizontal component all along, with no record of it, is a spec history that cannot fully reproduce any of those fits. V/H is the conservative choice that keeps your options open. ⚠ *The press setup descriptions above reflect general industry equipment categories. Verify that your specific press and attachment produce a pure vertical cut before relying on V-only mode for live spec records — contact the Spectre team if V-only mode behavior in the Oval Calculator differs from the description in this chapter.*

5.4.3 Entering V-only cut values and reading output

Entering V-only cut values and reading output

5.4.3 oval method

With Oval Cut Direction set to **V** and your press confirmed to produce a pure vertical stretch, entering a V-only cut in the Oval Calculator is the most streamlined input workflow Spectre Cloud offers — a single cut value plus the starting bit size, and the result is calculated immediately. This page covers how to enter that value, what the output displays, and how to read it correctly before transferring it to a spec sheet.

□□ What You Are Entering

In V-only mode the Oval Calculator requires two inputs per row. The horizontal dimension is not entered — Spectre Cloud treats it as equal to the starting bit size and does not prompt for it.

- □ **Starting bit size** — the diameter of the round bit used to open the hole before the oval cut
- □ **V cut value** — the vertical stretch applied beyond the round hole, entered as a fraction or decimal depending on your input mode
- □ **H value** — not entered; held internally at the starting bit size with no horizontal stretch
- □ **Resulting oval** — displayed as the V dimension only, or as a V × H pair with H equal to the starting bit, depending on your display configuration
- □ **DIFF** — calculated automatically as the decimal equivalent of the V cut value

How to Enter a V-Only Cut Value

Desktop

1. Open the **Oval Calculator** and confirm the mode selector shows **V** or **V-only**.
2. Click the **Starting Bit** field and enter the drill bit diameter — as a fraction (e.g., `1`) or decimal (e.g., `1.0`) depending on your input mode.
3. Press **↓ (arrow-down)** — focus moves to the **V cut** field.
4. Enter the vertical cut width (e.g., `1/16` or `0.0625`). Apply a minus sign if the cut was made in the negative vertical direction — see **5.2.6** for sign conventions.
5. Press **↓** to confirm. The oval result and DIFF appear immediately.

Mobile / Tablet

1. Open the **Oval Calculator** and confirm **V** or **V-only** mode is selected.
2. Tap the **Starting Bit** field and enter the bit diameter.
3. Tap the **V cut** field and enter the vertical stretch value. Apply a minus sign if the direction is negative.
4. The oval result and DIFF appear automatically once both fields are filled.

Reading the Output

After confirming the V cut entry, Spectre Cloud displays the calculated result for the row. In V-only mode the output is more compact than a full V/H session — the emphasis is on the vertical dimension and the DIFF, with the horizontal value either omitted from display or shown implicitly as equal to the starting bit.

Output Field	What It Shows	Example Value
V dimension	Starting bit size plus the V cut width — the larger of the two oval dimensions	`1-1/16"`
H dimension	Starting bit size only — unchanged, no horizontal stretch applied	`1"` (may be implicit rather than displayed)
Oval result	V dimension as the primary value — displayed alone or as V × H depending on display configuration	`1-1/16"` or `1-1/16 × 1`
DIFF	Decimal equivalent of the V cut value — always equal to the cut width in V-only mode	`0.0625`

Note: Whether Spectre Cloud displays the H dimension explicitly alongside the V dimension in V-only mode, or shows only the V result, may depend on your app version and display settings. ⚠ *Verify the exact output format against your live instance — contact the Spectre team if the display differs from the description above.*

□□ Example Outputs — Common V-Only Entries

Starting Bit	V Cut	V Dimension	H Dimension	DIFF
1"	1/32"	1-1/32"	1"	0.03125
1"	1/16"	1-1/16"	1"	0.0625
1"	3/32"	1-3/32"	1"	0.09375
1"	1/8"	1-1/8"	1"	0.125
1-1/16"	1/16"	1-1/8"	1-1/16"	0.0625
1-3/16"	1/8"	1-5/16"	1-3/16"	0.125

□□ Sense-Checking Your Output

Before confirming the row and moving on, verify the output against these expectations for a valid V-only result:

- □ **V dimension is always larger than H** — if the output shows H larger than V, check that the mode selector is set to V-only and not H-only; the inputs may have been applied to the wrong axis
- □ **H dimension equals your starting bit size exactly** — any difference indicates either a data entry error or that a horizontal component was introduced at the press; switch to V/H mode and record both values if the H reading differs from the starting bit
- □ **DIFF equals your V cut width in decimal** — in a pure V-only workflow these two values are always numerically identical; a mismatch points to a starting bit entry error
- □ **DIFF is non-zero** — a DIFF of `0.0000` in a row that should have an oval means the V cut field was confirmed as zero or left blank; review the entry before applying it to the spec sheet
- □ **Do not accept a V dimension equal to the starting bit size as correct** — if V equals the starting bit, no vertical stretch was recorded; the row describes a round hole, not an oval

Tips for V-Only Entry

- **Use the arrow-down key throughout** — starting bit to V cut to confirmation is a two-key workflow in V-only mode; it is the fastest oval entry sequence in the calculator (see **5.2.7**)
- **Add multiple rows with the + button for multi-hole sessions** — V-only mode supports multiple rows exactly as described in **5.2.5**; each row holds its own starting bit and V cut entry and produces its own result and DIFF independently
- **Cross-check against a physical gauge reading if available** — the V dimension in the output should match your gauge's toe-to-heel reading within your shop's measurement tolerance; if it does not, recheck the starting bit entry before confirming
- **Record the V cut width in your press notes even if only the result goes on the spec sheet** — knowing the cut width that produced a given oval helps reproduce the fit if the starting bit changes on a future drilling
- **Do not switch to V-only mode mid-session if a horizontal component is discovered at the gauge** — finish the session in V/H mode and record both values; switching modes partway through a spec sheet creates inconsistent records

V-Only Output on the Spec Sheet

When V-only oval data is applied to a spec sheet, the record will reflect the compact single-axis format. Drillers reading the spec sheet at a future date should understand that:

- The oval value shown is the **full V dimension** of the hole — not the cut width alone
- The **H dimension is implicitly equal to the starting bit size** — no horizontal stretch was recorded because none was applied
- The **DIFF confirms the stretch amount** — the decimal difference between the V dimension and the starting bit size gives the cut width directly

If your shop documents oval cut widths rather than final hole dimensions on spec sheets — writing `1/16"` rather than `1-1/16"` — confirm how Spectre Cloud formats the V-only output field on your spec sheet template before relying on it for staff communication.

Related Sections

- 5.4.1 — Setting up: Oval Cut Direction = V in Settings
- 5.4.2 — When to use V-only mode and which drill presses it suits
- 5.4.4 — Worked example: V-only oval from start to finish

- 5.2.4 — Reading the DIFF (decimal difference) auto-calculation
- 5.2.5 — Adding oval cut rows using the + button
- 5.2.6 — Entering V and H cut values (positive and negative)
- 5.2.7 — Confirming cuts using the arrow-down key

Tip: V-only mode's greatest advantage is speed — two fields, two keystrokes with arrow-down, one result. In a high-volume session with multiple holes all sharing the same starting bit, the entry rhythm becomes automatic quickly. If you find yourself pausing to wonder whether an H value should be entered, that pause is a signal to switch to V/H mode and measure both axes — the speed advantage of V-only is not worth a spec sheet that misses a horizontal component.