2.5.1.1 VLS — Storm system for bowlers using thumb

VLS — Storm system for bowlers using thumb

> `2.5.1a` layout

The **VLS (Versatile Layout System)** is a ball layout method developed by **Storm Bowling** that determines pin and mass bias placement using a bowler's track, PAP (Positive Axis Point), and a small set of straightforward measurements. Spectre Cloud implements VLS as one of its four supported layout types, and this page explains how the system works and how it is represented within a Spectre Cloud spec sheet for bowlers who use their thumb.

Note: VLS is a Storm Bowling proprietary system. The implementation in Spectre Cloud is intended to reflect Storm's published VLS methodology. For the most current version of the VLS system, consult Storm's official fitting and drilling documentation. ⚠ *Verify with your Spectre team: confirm that Spectre Cloud's VLS implementation is up to date with Storm's current published system.*

□□ What Is VLS?

VLS is designed to make ball layouts accessible and repeatable without requiring deep knowledge of ball motion physics. It uses a bowler's track and a pin distance to position the pin relative to the VAL (Vertical Axis Line), then places the mass bias at a defined location below the fingers. The result is a layout that is easy to communicate, easy to replicate, and well-suited for pro shops serving a wide range of skill levels.

- □ Developed and published by Storm Bowling — widely recognised and used across the industry.
- □ Accessible to fitters of all experience levels — relatively few inputs required.
- □ Produces consistent, repeatable results when PAP and track are measured accurately.
- □ Suitable for the majority of thumb bowlers from recreational to competitive league level.
- □ Less granular than Dual Angle for fitters who need precise control over skid, flip, and continuation independently.

□□ VLS Inputs for Thumb Bowlers

For a bowler who uses their thumb, VLS requires the following measurements and values to be recorded in the spec sheet. Spectre Cloud will prompt for each of these when VLS is the selected layout type.

Input	What It Defines	Typical Range
PAP Distance	Distance from the bowler's PAP to the pin	3" – 5"
VAL Angle	Angle of the pin relative to the bowler's Vertical Axis Line	0° – 90°
MB (Mass Bias) Position	Placement of the mass bias relative to the grip center	Defined by Storm VLS chart
Track	The bowler's ball track — used to orient the layout correctly	High, medium, or low track

Note: Typical ranges above are general guidelines. Always refer to Storm's published VLS charts and the bowler's actual PAP measurement for precise values. ⚠ *Verify with your Spectre team: confirm the exact input fields Spectre Cloud displays for VLS thumb bowlers, and whether any additional fields are required beyond those listed above.*

□□ VLS in a Spectre Cloud Spec Sheet

When VLS is selected as the layout type on a spec sheet — either as the account default (see 2.5.1) or chosen manually — Spectre Cloud displays the VLS input fields in the layout section of the sheet. Entering the bowler's PAP, VAL angle, MB position, and track produces a complete VLS layout record that is saved to the bowler's history alongside all other spec sheet data.

- VLS layout data is stored with the spec sheet and visible in the bowler's drilling history.
- When a spec sheet is cloned for a new ball, VLS inputs carry forward — review and update as needed for the new equipment.
- Arsenal Plus users can access suggested layouts and layout conversion tools based on the recorded VLS data. ⚠ *Verify with your Spectre team: confirm the extent of Arsenal Plus integration with VLS-type spec sheets.*

VLS vs. Thumbless Bowlers

This page covers VLS for bowlers who **use their thumb**. Thumbless (two-handed or one-handed no-thumb) bowlers have a different PAP location and track profile, which affects how VLS inputs are measured and entered. ⚠ *Verify with your Spectre team: confirm whether a separate page (e.g. 2.5.1.2) covers VLS for thumbless bowlers, and whether Spectre Cloud handles thumbless VLS differently in the UI.*

- Thumb bowlers: PAP is typically located to the right of the track centerline (right-handed) with a standard positive axis tilt.
- Thumbless bowlers: PAP location and tilt differ significantly — do not use thumb-bowler VLS inputs for a thumbless bowler without adjustment.

Tips for Accurate VLS Layouts

- Measure the bowler's PAP from a freshly thrown ball using a fresh ink or powder track — an old or smudged track will produce an inaccurate PAP and an off-target layout.
- Confirm the bowler's track type (high, medium, low) before entering layout values — track type directly affects where VLS places the pin relative to the VAL.
- Cross-reference your inputs against Storm's published VLS chart for the intended ball motion result before drilling.
- After drilling, record any observed ball motion notes in the spec sheet comments field — this builds a reference history that helps refine future layouts for the same bowler.

Related Sections

- 2.5.1 — Default layout type: VLS, 2LS, Dual Angle, None
- 2.5.1.2 — VLS: thumbless bowlers *(if applicable)*
- 2.5.2 — Next setting in this chapter *(if applicable)*
- 4.x — Spec Sheet: selecting and entering a layout
- 7.x — Arsenal Plus: suggested layouts and layout conversion

Tip: VLS is an excellent default layout system for shops that serve a broad bowler base. Its simplicity and Storm's wide brand recognition mean most bowlers — and most staff — will already have some familiarity with it, making conversations about layout choices easier on the shop floor.

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