

Cutting Edge Technology!

Knives Down The Lane – Razor Sharp Backend – Slices Through The Pins

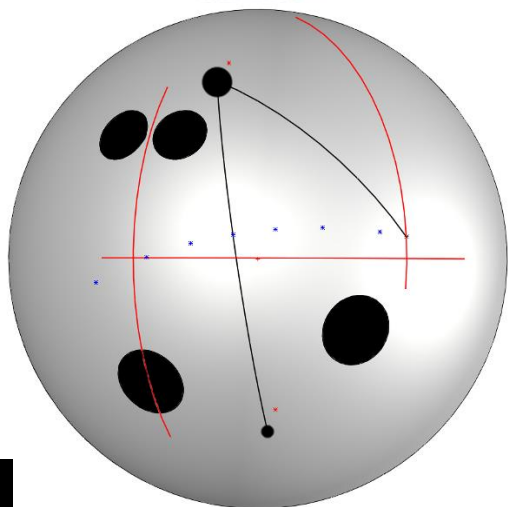
Choose the layout for the desired ball motion and tune the surface.

Katana Drilling Suggestions

	Layout Specs	Low RG	Int Diff	Total Diff	Diff Ratio	RG PAP
	Undrilled	2.503	0.020	0.050	0.40	
A	Length with Strong Finish 50x 4 ½"x 40 (P3 hole)		0.037	0.062	0.60	2.545
B	Length with Backend 70x 5"x 75		0.025	0.038	0.66	2.530
C	Max Flare Early Roll 65x 4"x 30 (Double Thumb)		0.044	0.070	0.63	2.537
D	Less Hook with Continuation 90x 2 ¼"x 50 (P1 hole)		0.020	0.032	0.63	2.531

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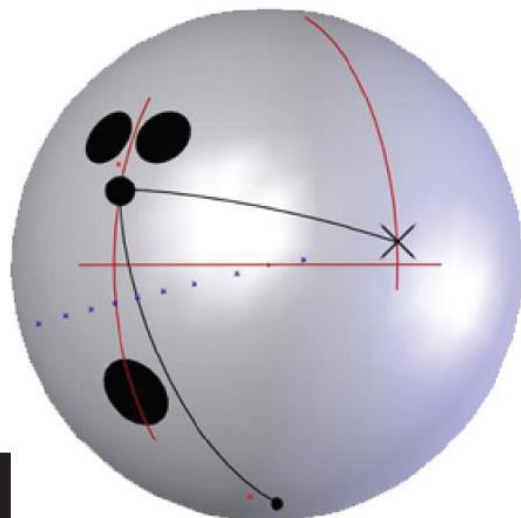
Length with Strong Finish



A

Layout:
50 x 4 1/2" x 40
with P3 Hole

Length with Backend



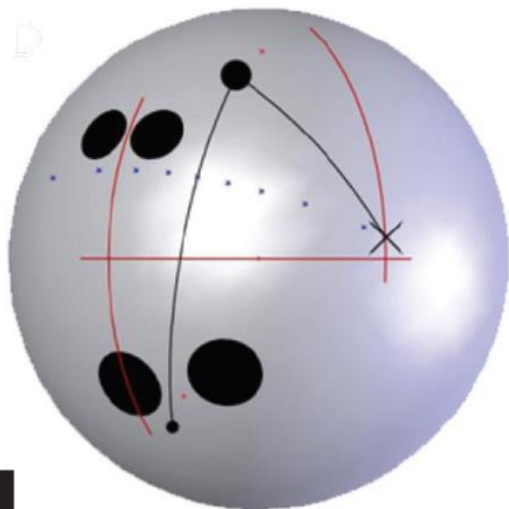
B

Layout:
70 x 5" x 75

Axis point used for these layouts is 5" over by 3/8" up.
The dotted line shows the axis migration path of the drilled ball.

Suggested Asymmetrical Layouts (Continued)

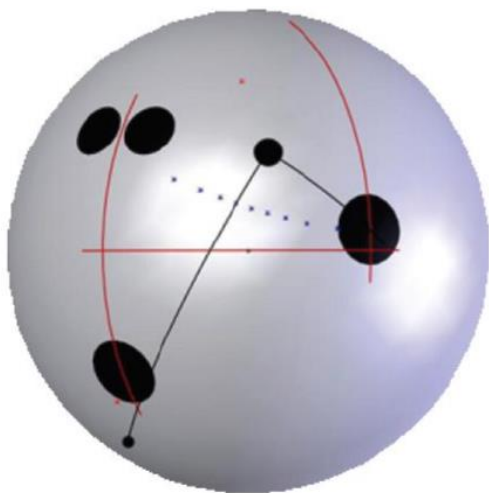
Max Flare Early Roll



Layout:
65 x 4" x 30
with Double Thumb Hole

C

Less Hook with Continuation

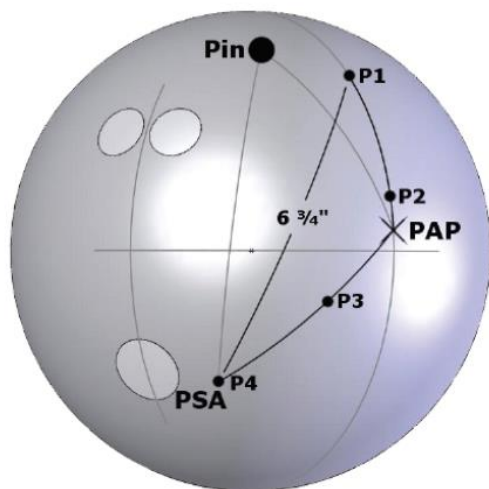


Layout:
90 x 2 1/4" x 50
with P1 Hole

D

**Axis point used for these layouts is 5" over by 3/8" up.
The dotted line shows the axis migration path of the drilled ball.**

Balance Holes for Asymmetrical Layouts: *If, and when, a balance hole is needed, we recommend using the “Gradient Line Balance Hole System”. The Gradient Line extends from the PSA to P1 passing through the PAP.*



Balance Hole Locations on the Gradient Line

Balance hole Position	Location	Change in Ball Reaction
P1	6 ¾" from the PSA on the VAL	Weakens ball reaction
P2	1/3 of the distance from the P1 to the PSA	Maintains ball reaction
P3	2/3 of the distance from the P1 to the PSA	Strengthens ball reaction
P4	PSA	Maximizes ball reaction

Ball Surface & Cleaning: ***RADICAL** bowling balls are manufactured with a predetermined surface preparation. With the assistance of a qualified pro shop, sanding, scuffing, or smoothing the surface texture may be needed to optimize performance for different styles of players on different lane conditions. We cannot overemphasize the importance of regularly cleaning your **RADICAL** ball with a quality bowling ball cleaner IMMEDIATELY AFTER each use. Doing so will insure a more consistent reaction and maximize the life of your **RADICAL** bowling ball.*

Determining the Bowler’s Initial Axis Tilt: *Initial Axis Tilt is best determined by measuring the distance across the bowler’s initial ball track on the surface of the ball. A measurement of > 11 ¼" (< 12 degrees) indicates a high track bowler. A measurement of 10 ¼" to 11 ¼" (12 to 18 degrees) indicates a medium track bowler. A measurement of < 10 ¼" (> 18 degrees) indicates a low track bowler.*