





## Drilling Angles shown are for 5" PAP – Adjust for other PAPs

The Hitter Pearl Drilling Chart						
Layout	Layout Specs	Low RG	Int Diff	Total Diff	Performance Differential	RG PAP
Undrilled	-	2.488	0.015	0.053	0.055	
Maximum Flip	Pin Over 70° x 3-1/2" x 20°		0.025	0.059	0.064	2.508
Most Versatile	Pin Over 45° x 4" x 35°		0.020	0.054	0.057	2.515
Smoother Motion	Pin Over 20° x 4-1/2" x 40°		0.012	0.048	0.049	2.523
Midlane Hook	Pin Under 40° x 4-1/4" x 75°		0.014	0.043	0.045	2.518
Smaller Hook	Pin Besides 90° x 2 1/4" x 45°		0.010	0.040	0.041	2.498
	Layout Undrilled Maximum Flip Most Versatile Smoother Motion Midlane Hook	Layout Layout Specs  Undrilled -  Maximum Flip Pin Over 70° x 3-1/2" x 20°  Most Versatile Pin Over 45° x 4" x 35°  Smoother Motion Pin Over 20° x 4-1/2" x 40°  Midlane Hook Pin Under 40° x 4-1/4" x 75°	Layout Specs Low RG  Undrilled - 2.488  Maximum Flip Pin Over 70° x 3-1/2" x 20°  Most Versatile Pin Over 45° x 4" x 35°  Smoother Motion Pin Over 20° x 4-1/2" x 40°  Midlane Hook Pin Under 40° x 4-1/4" x 75°	Layout         Layout Specs         Low RG         Int Diff           Undrilled         -         2.488         0.015           Maximum Flip         Pin Over 70° x 3-1/2" x 20°         0.025           Most Versatile         Pin Over 45° x 4" x 35°         0.020           Smoother Motion         Pin Over 20° x 4-1/2" x 40°         0.012           Midlane Hook         Pin Under 40° x 4-1/4" x 75°         0.014	Layout         Layout Specs         Low RG         Int Diff         Total Diff           Undrilled         -         2.488         0.015         0.053           Maximum Flip         Pin Over 70° x 3-1/2" x 20°         0.025         0.025         0.059           Most Versatile         Pin Over 45° x 4" x 35°         0.020         0.054           Smoother Motion         Pin Over 20° x 4-1/2" x 40°         0.012         0.048           Midlane Hook         Pin Under 40° x 4-1/4" x 75°         0.014         0.043	Layout         Layout Specs         Low RG         Int Diff         Total Diff         Performance Differential           Undrilled         -         2.488         0.015         0.053         0.055           Maximum Flip         Pin Over 70° x 3-1/2" x 20°         0.025         0.059         0.064           Most Versatile         Pin Over 45° x 4" x 35°         0.020         0.054         0.057           Smoother Motion         Pin Over 20° x 4-1/2" x 40°         0.012         0.048         0.049           Midlane Hook         Pin Under 40° x 4-1/4" x 75°         0.014         0.043         0.045

This chart uses a 5" horizontal axis co-ordinate. Adjust the drilling angle for other horizontal co-ordinates. Always use the pin to PAP distance and VAL angle to get the desire ball motion.

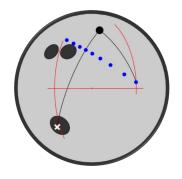
"Performance Differential" is a term used to accurately describe the track flare of a ball. The TRUE amount of track flare of a drilled ball is related to both the intermediate and total differential of the drilled ball. The "Performance Differential" of the drilled ball measures the relationship between the intermediate and total differential to give an accurate measure of the amount of track flare in the drilled ball.



## **Suggested Layouts for Asymmetric Cores**

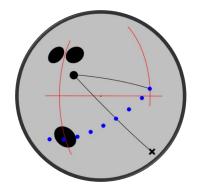
A – Maximum Flip

Pin Over 70° x 3½" x 20°



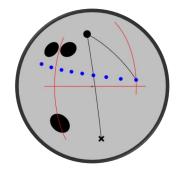
**D-Midlane Hook** 

Pin Under 40° x 4 1/4" x 75°



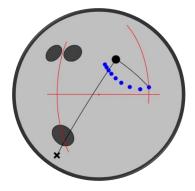
B - Most Versatile

*Pin Over* 45 x 4" x 35°



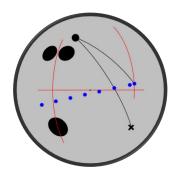
E-Smaller Hook

Pin Under 90° x 2 1/4" x 45°



C - Smoother Motion

Pin Over 20° x 4-1/2" x 40°



The "X" on the diagrams indicates the Preferred Spin Axis (PSA / Mass Bias) of the drilled ball, and the line that connects the PSA and PIN after drilling is referred to as the "Pin to Spin Line". The important feature of the "Pin to Spin Line" is that the ball revs up when the migrating axis crosses this line so the sooner the migrating axis crosses the "Pin to Spin Line", the sooner the ball revs up.