RADICAL
BOWLING TECHNOLOGIES®

VEXED
VARIANT



Drilling Angles shown are for 5” PAP – Adjust for other PAPs

Vexed Variant Drilling Chart

	Layout	Layout Specs	Low RG	Int Diff	Total Diff	Differential Ratio	RG PAP
	Undrilled	-	2.490	**0.015**	**0.045**	0.33	
A	Maximum Performance	70° x 3-1/2" x 20°		**0.032**	**0.058**	0.55	2.502
B	Strong Performance	75° x 4" x 30°		**0.033**	**0.054**	0.61	2.505
C	Strong Control	45° x 4" x 35°		**0.020**	**0.044**	0.45	2.508
D	Moderate Control	90° x 2 1/4" x 45°		**0.016**	**0.042**	0.38	2.493
E	Smooth Control	20° x 3-1/2” x 20°		**0.012**	**0.044**	0.27	2.506
F	Most Control	20° x 4-1/2” x 40°		**0.011**	**0.036**	0.31	2.516

Differential Ratio relates to the reaction to friction, the higher the diff ratio the more responsive the ball will be to friction.

Strong Performance Drillings – Placing the center of the thumb 6.5 in. from the Pin, on a line drawn from the Pin to the PSA (High RG axis), yields the highest intermediate differential by **hitting the core protrusion**.

Control Performance Drillings – Placing the center of the thumb 5.5 in. from the Pin, on a line drawn from the Pin to the PSA (High RG axis), yields a moderate intermediate differential by **hitting part of the core protrusion**.

Smooth Performance Drillings – Placing the center of the thumb at least 3.75 in. from the Pin-to-Spin line drawn between the Pin and PSA (High RG axis) **misses the core protrusion** and yields the lowest intermediate differential. (See diagram)

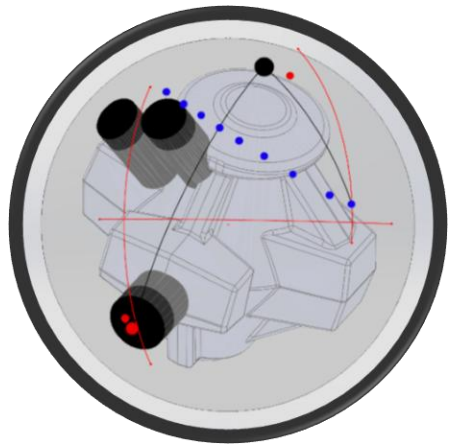
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Suggested Asymmetric Layouts

Strong Performance Drillings

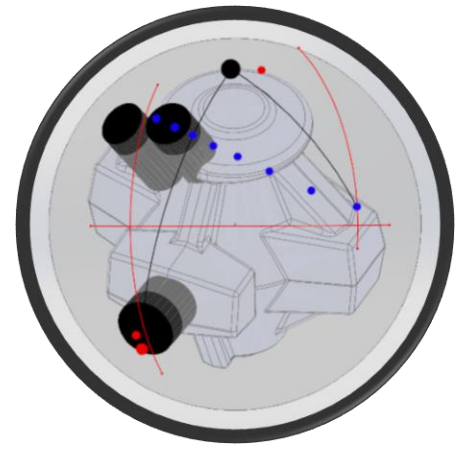
A – Maximum Performance

- **70° x 3-1/2" x 20°**
- ***Thumb Center is 6.5” from Pin***



B –Strong Performance

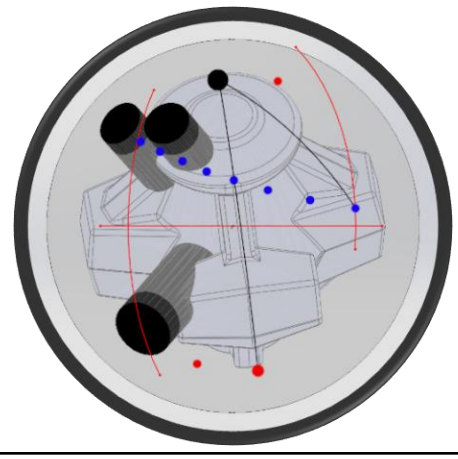
- **75° x 4" x 30°**
- ***Thumb Center is 6.5” from Pin***



Control Performance Drillings

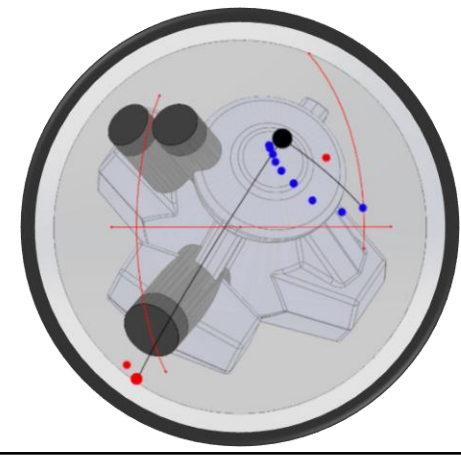
C – Strong Control

- **45° x 4" x 35°**
- ***Thumb center is 5.5” from Pin***



D –Moderate Control

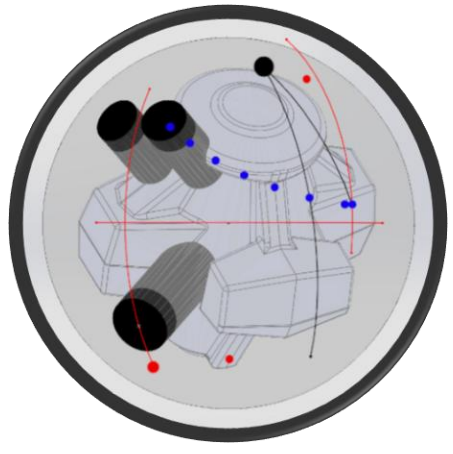
- **90° x 2 1/4" x 45°**
- ***Thumb center is 5.5” from Pin***



Smooth Performance Drillings

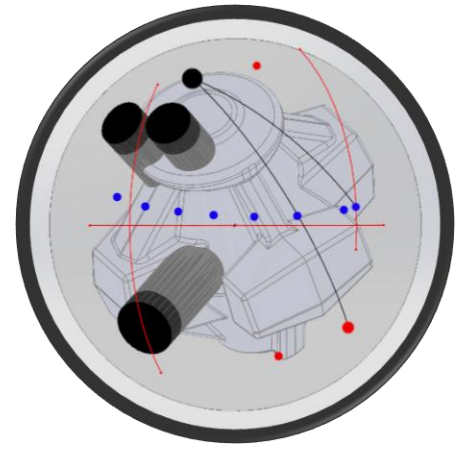
E – Smooth Control

- **20° x 3-1/2” x 20°**
- ***Thumb Center is 3.75” from Pin-Spin Line***



F – Most Control

- **20° x 4 1/2” x 40°**
- ***Thumb Center is 4” from Pin-Spin Line***



The Preferred Spin Axis (PSA), also known as the Mass Bias, of the drilled ball is denoted by a dot near the thumb hole. The line that connects the PSA and the pin after drilling is referred to as the “Pin-to-Spin Line.” An important feature of the Pin-to-Spin Line is that the ball begins to rev up when the migrating axis crosses this line. Therefore, the sooner the migrating axis crosses the Pin-to-Spin Line, the sooner the ball will begin to rev up.