PING OPTIMAL LAUNCH & SPIN CHART

DRIVER BALL SPEED												
	180 mph/290 km/h	3.6° 3450 rpm	4.9° 3250 rpm	6.2° 3050 rpm	7.5° 2850 rpm	9° 2700 rpm	10.4° 2550 rpm	11.9° 2400 rpm	13.3° 2200 rpm	14.8° 2050 rpm	16.4° 1950 rpm	17.9° 1800 rpm
	170 mph/274 km/h	4.3° 3500 rpm	5.7° 3300 rpm	6.9° 3100 rpm	8.2° 2900 rpm	9.6° 2750 rpm	11° 2550 rpm	12.4° 2400 rpm	13.9° 2250 rpm	15.3° 2100 rpm	16.8° 1950 rpm	18.2° 1800 rpm
	160 mph/257 km/h	5.2° 3500 rpm	6.5° 3300 rpm	7.7° 3100 rpm	9° 2950 rpm	10.3° 2750 rpm	11.7° 2600 rpm	13° 2400 rpm	14.4° 2300 rpm	15.9° 2100 rpm	17.3° 1950 rpm	18.7° 1800 rpm
	150 mph/241 km/h	6.2° 3500 rpm	7.4° 3350 rpm	8.6° 3150 rpm	9.8° 2950 rpm	11.1° 2750 rpm	12.4° 2600 rpm	13.7° 2450 rpm	15.1° 2300 rpm	16.4° 2150 rpm	17.9° 2000 rpm	19.3° 1850 rpm
	140 mph/225 km/h	7.3° 3550 rpm	8.3° 3300 rpm	9.5° 3150 rpm	10.7° 2950 rpm	12° 2800 rpm	13.2° 2600 rpm	14.5° 2450 rpm	15.8° 2300 rpm	17.2° 2150 rpm	18.5° 2000 rpm	19.9° 1850 rpm
	130 mph/209 km/h	8.4° 3500 rpm	9.4° 3300 rpm	10.6° 3150 rpm	11.7° 2950 rpm	12.8° 2750 rpm	14.1° 2600 rpm	15.3° 2450 rpm	16.6° 2300 rpm	17.9° 2150 rpm	19.2° 2000 rpm	20.6° 1850 rpm
	120 mph/193 km/h	9.6° 3450 rpm	10.6° 3250 rpm	11.6° 3100 rpm	12.7° 2900 rpm	13.8° 2750 rpm	15° 2600 rpm	16.2° 2450 rpm	17.4° 2300 rpm	18.7° 2150 rpm	19.9° 2000 rpm	21.2° 1850 rpm
	110 mph/177 km/h	10.9° 3400 rpm	11.8° 3200 rpm	12.7° 3000 rpm	13.9° 2850 rpm	14.9° 2700 rpm	15.9° 2550 rpm	17.1° 2400 rpm	18.2° 2250 rpm	19.5° 2100 rpm	20.7° 1950 rpm	21.9° 1850 rpm
	100 mph/161 km/h	11.9° 3250 rpm	12.9° 3100 rpm	13.9° 2950 rpm	14.9° 2800 rpm	15.9° 2600 rpm	16.9° 2450 rpm	18° 2300 rpm	19.1° 2150 rpm	20.3° 2050 rpm	21.4° 1900 rpm	22.6° 1750 rpm
	90 mph/145 km/h	12.7° 3050 rpm	13.9° 2950 rpm	15° 2800 rpm	15.9° 2650 rpm	16.9° 2500 rpm	18° 2350 rpm	19° 2200 rpm	20° 2100 rpm	21.1° 1950 rpm	22.2° 1850 rpm	23.3° 1700 rpm
	80 mph/129 km/h	13.8° 2800 rpm	14.5° 2650 rpm	15.8° 2600 rpm	16.9° 2450 rpm	17.8° 2350 rpm	18.8° 2200 rpm	19.9° 2100 rpm	20.8° 1950 rpm	21.8° 1800 rpm	22.9° 1700 rpm	24° 1600 rpm
	ANGLE OF ATTACK	-10°	-8°	-6°	-4°	-2°	0°	2°	4°	6°	8°	10°

LEGEND
325 yds/297 m
300 yds/274 m
275 yds/251 m
250 yds/229 m
225 yds/206 m
200 yds/183 m
175 yds/160 m
150 yds/137 m
125 yds/114 m

FIRM FAIRWAYS OR WINDY CONDITIONS
FASTER BALL SPEEDS (>155 mph/249 km/h)
Decrease launch angle by 0.5˚-1˚
Decrease spin by 150-250 rpm
LOWER BALL SPEEDS (<125 mph/201 km/h)
Decrease launch angle by 1.5˚-3˚
Decrease spin by 250-400 rpm

SOFT FAIRWAYS
FASTER BALL SPEEDS (>155 mph/249 km/h)
Increase launch angle by 0.5˚-1˚
Increase spin by 150-250 rpm
LOWER BALL SPEEDS (<125 mph/201 km/h)
Increase launch angle by 1.5˚-3˚
Increase spin by 250-400 rpm

For a given angle of attack and ball speed, the table provides a recommended launch angle and spin rate to optimize distance in standard conditions. In general, launch angles within 1° and spin rates within 300 rpm of the chart would be near optimal.

NOTE: The angle of attack measurements are based on a radar-based launch monitor which tracks the center of the clubhead's movement as it approaches impact. For camera-based launch monitors, which measure the clubface's movement, the angle of attack measurements will be approximately 2 degrees higher. For example, for a +4 angle of attack measurement on a camera-based launch monitor, you should reference the +2 angle of attack column in the table.