

# ***KBS Shaft Reference Charts***

*Prepared by Matthew Mora - Head Builder, KZG*

*The following charts were created to illustrate the trimming characteristics of the KBS Tour and KBS Tour 90 steel shafts.*

*The trimming measurements indicated on each chart can be found on the KBS website ([www.kbsshfts.com](http://www.kbsshfts.com)).*

*A 'Mitchell Golf' frequency meter was used to measure CPM (Cycles Per Minute).*

*Although KBS uses the FM Precision Golf Frequency chart, the KZG chart is also referenced for each frequency.*

*All iron head weights used are listed on each chart as reference. Varying head weights will change the expected CPM readings. The shaft weight used for each chart is listed, as well, for reference.*

*CPM measurements for KBS shafts are meant to be measured with a 2.5" clamp. Included are 5" clamp measurements for reference.*

*The KBS Tour 90 shafts are meant to be lighter and softer than the KBS Tour. Per KBS, the KBS Tour 90 is manufactured at a softer frequency to produce higher trajectories and increased spin rates.*

*Please email all questions and inquiries regarding these charts to [mmora@kzgolf.com](mailto:mmora@kzgolf.com).*

SHAFT MODEL: KBS TOUR 90 - REGULAR	SHAFT WEIGHT: 99g
TARGET FLEX: Minimum Trim (KBS)	

IRON	HEAD WT.	LENGTH	DRYFIT 2.5	DRYFIT 5	TIP TRIM	2.5" CLAMP			5" CLAMP		
						CPM	FREQ KZG	FREQ RIFLE	CPM	FREQ KZG	FREQ RIFLE
4	251	38.5	250	266	0	250	0.4	1.2	266	2.0	2.8
5	258	38			0.5	252	0.2	0.9	269	1.9	2.6
6	263	37.5			1	257	0.3	1.0	274	2.0	2.7
7	270	37			1.5	260	0.2	0.8	277	1.9	2.5
8	277	36.5			2	264	0.2	0.8	282	2.0	2.6
9	284	36			2.5	267	0.1	0.7	285	1.9	2.5
PW	291	35.75			2.5	266	-	0.4	286	1.9	2.4
PW	291	35.5			2.5	268	-	0.4	288	1.9	2.4

NOTES: Produces MID-HIGH Trajectory

SHAFT MODEL: KBS TOUR 90 - REGULAR	SHAFT WEIGHT: 99g
TARGET FLEX: Mid Trim (KBS)	

IRON	HEAD WT.	LENGTH	DRYFIT 2.5	DRYFIT 5	TIP TRIM	2.5" CLAMP			5" CLAMP		
						CPM	FREQ KZG	FREQ RIFLE	CPM	FREQ KZG	FREQ RIFLE
4	251	38.5	250	266	1.5	258	1.2	2.0	273	2.7	3.5
5	258	38			2	260	1.0	1.7	276	2.6	3.3
6	263	37.5			2.5	264	1.0	1.7	281	2.7	3.4
7	270	37			3	268	1.0	1.6	285	2.7	3.3
8	277	36.5			3.5	271	0.9	1.5	289	2.7	3.3
9	284	36			4	276	1.0	1.6	294	2.8	3.4
PW	291	35.75			4	275	0.8	1.3	291	2.4	2.9
PW	291	35.5			4	276	0.7	1.2	293	2.4	2.9

NOTES: Produces MID Trajectory

SHAFT MODEL: KBS TOUR 90 - REGULAR	SHAFT WEIGHT: 99g
TARGET FLEX: Maximum Trim (KBS)	

IRON	HEAD WT.	LENGTH	DRYFIT 2.5			2.5" CLAMP			5" CLAMP		
						CPM	FREQ KZG	FREQ RIFLE	CPM	FREQ KZG	FREQ RIFLE
4	251	38.5	250	266	3	265	1.9	2.7	280	3.4	4.2
5	258	38			3.5	268	1.8	2.5	283	3.3	4.0
6	263	37.5			4	272	1.8	2.5	289	3.5	4.2
7	270	37			4.5	276	1.8	2.4	293	3.5	4.1
8	277	36.5			5	279	1.7	2.3	296	3.4	4.0
9	284	36			5.5	282	1.6	2.2	300	3.4	4.0
PW	291	35.75			5.5	283	1.6	2.1	299	3.2	3.7
PW	291	35.5			5.5	285	1.6	2.1	302	3.3	3.8

NOTES: Mid Trim produces MID Trajectory

SHAFT MODEL: KBS TOUR 90 - STIFF	SHAFT WEIGHT: 103g
TARGET FLEX: Minimum Trim (KBS)	

IRON	HEAD WT.	LENGTH	DRYFIT 2.5			2.5" CLAMP			5" CLAMP		
						CPM	FREQ KZG	FREQ RIFLE	CPM	FREQ KZG	FREQ RIFLE
4	251	38.5	267	281	0	267	2.1	2.9	281	3.5	4.3
5	258	38			0.5	269	1.9	2.6	284	3.4	4.1
6	263	37.5			1	274	2.0	2.7	288	3.4	4.1
7	270	37			1.5	277	1.9	2.5	292	3.4	4.0
8	277	36.5			2	280	1.8	2.4	296	3.4	4.0
9	284	36			2.5	285	1.9	2.5	301	3.5	4.1
PW	291	35.75			2.5	284	1.7	2.2	300	3.3	3.8
PW	291	35.5			2.5	287	1.8	2.3	303	3.4	3.9

NOTES: Mid - High Trajectory

SHAFT MODEL: KBS TOUR 90 - STIFF	SHAFT WEIGHT: 103g
TARGET FLEX: Mid Trim (KBS)	

IRON	HEAD WT.	LENGTH	DRYFIT 2.5	DRYFIT 5	TIP TRIM	2.5" CLAMP			5" CLAMP		
						CPM	FREQ KZG	FREQ RIFLE	CPM	FREQ KZG	FREQ RIFLE
4	251	38.5	267	281	1.5	274	2.8	3.6	293	4.7	5.5
5	258	38			2	276	2.6	3.3	297	4.7	5.4
6	263	37.5			2.5	280	2.6	3.3	302	4.8	5.5
7	270	37			3	284	2.6	3.2	307	4.9	5.5
8	277	36.5			3.5	288	2.6	3.2	312	5.0	5.6
9	284	36			4	292	2.6	3.2	316	5.0	5.6
PW	291	35.75			4	291	2.4	2.9	315	4.8	5.3
PW	291	35.5			4	293	2.4	2.9	318	4.9	5.4

NOTES: Mid Trajectory

SHAFT MODEL: KBS TOUR 90 - STIFF	SHAFT WEIGHT: 103g
TARGET FLEX: Maximum Trim (KBS)	

IRON	HEAD WT.	LENGTH	DRYFIT 2.5	DRYFIT 5	TIP TRIM	2.5" CLAMP			5" CLAMP		
						CPM	FREQ KZG	FREQ RIFLE	CPM	FREQ KZG	FREQ RIFLE
4	251	38.5	267	281	3	280	3.4	4.2	303	5.7	6.5
5	258	38			3.5	282	3.2	3.9	306	5.6	6.3
6	263	37.5			4	287	3.3	4.0	311	5.7	6.4
7	270	37			4.5	290	3.2	3.8	315	5.7	6.3
8	277	36.5			5	293	3.1	3.7	319	5.7	6.3
9	284	36			5.5	299	3.3	3.9	325	5.9	6.5
PW	291	35.75			5.5	297	3.0	3.5	324	5.7	6.2
PW	291	35.5			5.5	300	3.1	3.6	326	5.7	6.2

NOTES: Mid Trajectory

SHAFT MODEL: KBS TOUR - REGULAR	SHAFT WEIGHT: 118g
TARGET FLEX: 4.0 TRIM (KBS)	

IRON	HEAD WT.	LENGTH	DRYFIT		TIP TRIM	2.5" CLAMP			5" CLAMP		
			2.5	5		CPM 2.5	FREQ KZG	FREQ RIFLE	CPM 5	FREQ KZG	FREQ RIFLE
3	244	39	261	283	1	269	2.7	3.5	284	4.2	5.0
4	251	38.5			1.5625	272	2.6	3.4	289	4.3	5.1
5	258	38			2.125	276	2.6	3.3	293	4.3	5.0
6	263	37.5			2.6875	280	2.6	3.3	298	4.4	4.9
7	270	37			3.25	284	2.6	3.2	302	4.4	5.0
8	277	36.5			3.8125	288	2.6	3.2	306	4.4	5.0
9	284	36			4.375	292	2.6	3.2	310	4.4	5.0
PW	291	35.75			4.9375	295	2.8	3.3	313	4.6	5.1
PW	291	35.5			4.9375	298	2.9	3.4	316	4.7	5.2

NOTES: High Trajectory

SHAFT MODEL: KBS TOUR - REGULAR	SHAFT WEIGHT: 118.5
TARGET FLEX: 4.5 TRIM (KBS)	

IRON	HEAD WT.	LENGTH	DRYFIT		TIP TRIM	2.5" CLAMP			5" CLAMP		
			2.5	5		CPM 2.5	FREQ KZG	FREQ RIFLE	CPM 5	FREQ KZG	FREQ RIFLE
3	244	39	260	282	2	274	3.2	4.0	288	4.6	5.4
4	251	38.5			2.5625	278	3.2	4.0	292	4.6	5.4
5	258	38			3.125	281	3.1	3.8	297	4.7	5.4
6	263	37.5			3.6875	286	3.2	3.9	302	4.8	5.5
7	270	37			4.25	291	3.3	3.9	306	4.8	5.4
8	277	36.5			4.8125	295	3.3	3.9	311	4.9	5.5
9	284	36			5.375	298	3.2	3.8	315	4.9	5.5
PW	291	35.75			5.9375	301	3.4	3.9	323	5.6	6.1
PW	291	35.5			5.9375	304	3.5	4.0	324	5.5	6.0

NOTES: Mid Trajectory

SHAFT MODEL: KBS TOUR - REGULAR	SHAFT WEIGHT: 117
TARGET FLEX: 5.0 (KBS)	

IRON	HEAD WT.	LENGTH				2.5" CLAMP			5" CLAMP		
						CPM	FREQ KZG	FREQ RIFLE	CPM	FREQ KZG	FREQ RIFLE
3	244	39	261	282	3	278	3.6	4.4	296	5.4	6.2
4	251	38.5			3.5625	281	3.5	4.3	300	5.4	6.2
5	258	38			4.125	285	3.5	4.2	304	5.4	6.1
6	263	37.5			4.6875	289	3.5	4.2	311	5.7	6.4
7	270	37			5.25	294	3.6	4.2	317	5.9	6.5
8	277	36.5			5.8125	297	3.5	4.1	322	6.0	6.6
9	284	36			6.375	301	3.5	4.1	327	6.1	6.7
PW	291	35.75			6.9375	304	3.7	4.2	330	6.3	6.8
PW	291	35.5			6.9375	307	3.8	4.3	333	6.4	6.9

NOTES: Low Trajectory

SHAFT MODEL: KBS TOUR - REGULAR	SHAFT WEIGHT: 117.6
TARGET FLEX: 5.5 (KBS)	

IRON	HEAD WT.	LENGTH				2.5" CLAMP			5" CLAMP		
						CPM	FREQ KZG	FREQ RIFLE	CPM	FREQ KZG	FREQ RIFLE
3	244	39	262	283	4	282	4.0	4.8	303	6.1	6.9
4	251	38.5			4.5625	286	4.0	4.8	307	6.1	6.9
5	258	38			5.125	288	3.8	4.5	311	6.1	6.8
6	263	37.5			5.6875	294	4.0	4.7	317	6.3	7.0
7	270	37			6.25	297	3.9	4.5	321	6.3	6.9
8	277	36.5			6.8125	301	3.9	4.5	326	6.4	7.0
9	284	36			7.375	306	4.0	4.6	331	6.5	7.1
PW	291	35.75			7.9375	308	4.1	4.6	334	6.7	7.2
PW	291	35.5			7.9375	310	4.1	4.6	337	6.8	7.3

NOTES: Low Trajectory

SHAFT MODEL: KBS TOUR - STIFF	SHAFT WEIGHT: 128g
TARGET FLEX: 5.0 (KBS)	

IRON	HEAD WT.	LENGTH	DRYFIT		TIP TRIM	2.5" CLAMP			5" CLAMP		
						CPM	FREQ KZG	FREQ RIFLE	CPM	FREQ KZG	FREQ RIFLE
3	244	39	274	292	1	281	3.9	4.7	299	5.7	6.5
4	251	38.5			1.5625	285	3.9	4.7	302	5.6	6.4
5	258	38			2.125	288	3.8	4.5	306	5.6	6.3
6	263	37.5			2.6875	293	3.9	4.6	311	5.7	6.4
7	270	37			3.25	297	3.9	4.5	316	5.8	6.4
8	277	36.5			3.8125	301	3.9	4.5	321	5.9	6.5
9	284	36			4.375	306	4.0	4.6	327	6.1	6.7
PW	291	35.75			4.9375	308	4.1	4.6	329	6.2	6.7
PW	291	35.5			4.9375	311	4.2	4.7	332	6.3	6.8

NOTES: Mid Trajectory

SHAFT MODEL: KBS TOUR - STIFF	SHAFT WEIGHT: 129.4
TARGET FLEX: 5.5 (KBS)	

IRON	HEAD WT.	LENGTH	DRYFIT		TIP TRIM	2.5" CLAMP			5" CLAMP		
						CPM	FREQ KZG	FREQ RIFLE	CPM	FREQ KZG	FREQ RIFLE
3	244	39	274	291	2	287	4.5	5.3	305	6.3	7.1
4	251	38.5			2.5625	291	4.5	5.3	310	6.4	7.2
5	258	38			3.125	294	4.4	5.1	314	6.4	7.1
6	263	37.5			3.6875	299	4.5	5.2	319	6.5	7.2
7	270	37			4.25	304	4.6	5.2	324	6.6	7.2
8	277	36.5			4.8125	308	4.6	5.2	329	6.7	7.3
9	284	36			5.375	312	4.6	5.2	335	6.9	7.5
PW	291	35.75			5.9375	314	4.7	5.2	341	7.4	7.9
PW	291	35.5			5.9375	317	4.8	5.3	341	7.2	7.7

NOTES: Mid Trajectory

SHAFT MODEL: KBS TOUR - STIFF	SHAFT WEIGHT: 129.7
TARGET FLEX: 6.0 (KBS)	

IRON	HEAD WT.	LENGTH	DRYFIT 2.5		DRYFIT 5	TIP TRIM	2.5" CLAMP			5" CLAMP		
							CPM	FREQ KZG	FREQ RIFLE	CPM	FREQ KZG	FREQ RIFLE
3	244	39	274	291		3	293	5.1	5.9	313	7.1	7.9
4	251	38.5				3.5625	296	5.0	5.8	318	7.2	8.0
5	258	38			4.125	299	4.9	5.6	322	7.2	7.9	
6	263	37.5			4.6875	304	5.0	5.7	328	7.4	8.1	
7	270	37			5.25	308	5.0	5.6	333	7.5	8.1	
8	277	36.5			5.8125	312	5.0	5.6	339	7.7	8.3	
9	284	36			6.375	316	5.0	5.6	343	7.7	8.3	
PW	291	35.75			6.9375	319	5.2	5.7	348	8.1	8.6	
PW	291	35.5			6.9375	322	5.3	5.8	351	8.2	8.7	

NOTES: Mid Trajectory

SHAFT MODEL: KBS TOUR - STIFF	SHAFT WEIGHT: 130
TARGET FLEX: 6.5 (KBS)	

IRON	HEAD WT.	LENGTH	DRYFIT 2.5		DRYFIT 5	TIP TRIM	2.5" CLAMP			5" CLAMP		
							CPM	FREQ KZG	FREQ RIFLE	CPM	FREQ KZG	FREQ RIFLE
3	244	39	274	291		4	297	5.5	6.3	320	7.8	8.6
4	251	38.5				4.5625	301	5.5	6.3	325	7.9	8.7
5	258	38			5.125	304	5.4	6.1	328	7.8	8.5	
6	263	37.5			5.6875	309	5.5	6.2	334	8.0	8.7	
7	270	37			6.25	313	5.5	6.1	339	8.1	8.7	
8	277	36.5			6.8125	317	5.5	6.1	344	8.2	8.8	
9	284	36			7.375	322	5.6	6.2	350	8.4	9.0	
PW	291	35.75			7.9375	324	5.7	6.2	353	8.6	9.1	
PW	291	35.5			7.9375	327	5.8	6.3	356	8.7	9.2	

NOTES: Low Trajectory



SHAFT MODEL: KBS TOUR - X-STIFF	SHAFT WEIGHT: 131
TARGET FLEX: 6.0 (KBS)	

IRON	HEAD WT.	LENGTH				2.5" CLAMP			5" CLAMP		
						CPM	FREQ KZG	FREQ RIFLE	CPM	FREQ KZG	FREQ RIFLE
3	244	39	282	299	1	288	4.6	5.4	304	6.2	7.0
4	251	38.5			1.5625	292	4.6	5.4	309	6.3	7.1
5	258	38			2.125	295	4.5	5.2	313	6.3	7.0
6	263	37.5			2.6875	300	4.6	5.3	319	6.5	7.2
7	270	37			3.25	303	4.5	5.1	323	6.5	7.1
8	277	36.5			3.8125	308	4.6	5.2	329	6.7	7.3
9	284	36			4.375	312	4.6	5.2	335	6.9	7.5
PW	291	35.75			4.9375	314	4.7	5.2	340	7.3	7.8
PW	291	35.5			4.9375	317	4.8	5.3	341	7.2	7.7

NOTES: High Trajectory

SHAFT MODEL: KBS TOUR - X-STIFF	SHAFT WEIGHT: 132g
TARGET FLEX: 6.5 (KBS)	

IRON	HEAD WT.	LENGTH				2.5" CLAMP			5" CLAMP		
						CPM	FREQ KZG	FREQ RIFLE	CPM	FREQ KZG	FREQ RIFLE
3	244	39	283	299	2	294	5.2	6.0	315	7.3	8.1
4	251	38.5			2.5625	297	5.1	5.9	319	7.3	8.1
5	258	38			3.125	300	5.0	5.7	322	7.2	7.9
6	263	37.5			3.6875	306	5.2	5.9	330	7.6	8.3
7	270	37			4.25	310	5.2	5.8	334	7.6	8.2
8	277	36.5			4.8125	314	5.2	5.8	339	7.7	8.3
9	284	36			5.375	318	5.2	5.8	344	7.8	8.4
PW	291	35.75			5.9375	321	5.4	5.9	348	8.1	8.6
PW	291	35.5			5.9375	324	5.5	6.0	351	8.2	8.7

NOTES: Mid Trajectory

SHAFT MODEL: KBS TOUR - X-STIFF	SHAFT WEIGHT: 132g
TARGET FLEX: 7.0 (KBS)	

IRON	HEAD WT.	LENGTH	DRYFIT 2.5	DRYFIT 5	TIP TRIM	2.5" CLAMP			5" CLAMP		
						CPM	FREQ KZG	FREQ RIFLE	CPM	FREQ KZG	FREQ RIFLE
3	244	39	284	300	3	299	5.7	6.5	321	7.9	8.7
4	251	38.5			3.5625	303	5.7	6.5	326	8.0	8.8
5	258	38			4.125	306	5.6	6.3	330	8.0	8.7
6	263	37.5			4.6875	311	5.7	6.4	336	8.2	8.9
7	270	37			5.25	315	5.7	6.3	341	8.3	8.9
8	277	36.5			5.8125	319	5.7	6.3	346	8.4	9.0
9	284	36			6.375	324	5.8	6.4	352	8.6	9.2
PW	291	35.75			6.9375	326	5.9	6.4	355	8.8	9.3
PW	291	35.5			6.9375	330	6.1	6.6	358	8.9	9.4

NOTES: Low Trajectory

SHAFT MODEL: KBS TOUR - X-STIFF	SHAFT WEIGHT: 133.5g
TARGET FLEX: 7.5 (KBS)	

IRON	HEAD WT.	LENGTH	DRYFIT 2.5	DRYFIT 5	TIP TRIM	2.5" CLAMP			5" CLAMP		
						CPM	FREQ KZG	FREQ RIFLE	CPM	FREQ KZG	FREQ RIFLE
3	244	39	285	301	4	304	6.2	7.0	328	8.6	9.4
4	251	38.5			4.5625	307	6.1	6.9	332	8.6	9.4
5	258	38			5.125	311	6.1	6.8	336	8.6	9.3
6	263	37.5			5.6875	316	6.2	6.9	342	8.8	9.5
7	270	37			6.25	320	6.2	6.8	348	9.0	9.6
8	277	36.5			6.8125	325	6.3	6.9	354	9.2	9.8
9	284	36			7.375	329	6.3	6.9	359	9.3	9.9
PW	291	35.75			7.9375	332	6.5	7.0	363	9.6	10.1
PW	291	35.5			7.9375	335	6.6	7.1	366	9.7	10.2

NOTES: Low Trajectory