

## CHOOSING YOUR NEW KART SEAT

There are many factors to consider when selecting a new kart seat. If you have had a seat in the past. Do you know the size and shape? Does it still fit? If not, where are the gaps or pressure points? Will the rigidity suit your new kart/engine combination? If you are in a team, will they be happy if you choose a different shape?

## CHOOSING A SHAPE

Shape does not make as much difference as some teams would have you believe, but they will be nervous of miss positioning the seat and may want you to use the shape they are regularly fitting. This is fine until the seat is not the right fit for you. An ill-fitting seat can cause a driver to damage their body, or hold themselves in the kart by using the steering wheel, neither of which are good for ultimate performance. Different shapes are fine if the compared seats are made of the same materials and they are put in the chassis with the drivers back in exactly the same place, then they will handle the same. That said a significant back angle change will alter the handling, especially for larger driver and this scenario should be viewed differently.

### T11

The most popular shape used is the much copied 58° T11. The T11 has a huge range of 22 sizes. Drivers from a 12-year-old up to a 130 kg man, are all catered for. Many of the T11 sizes solve age old problems. Wide top (WT) sizes have been made for drivers with a slim hip and an athletic torso, (or maybe a thick rib protector). Also, available are a series of wide hip (WH) sizes for drivers that end up with severe bruising on the pelvis bone. If you are 12 years old or above and over 1.5 m, the T11 is the seat you will most likely use.

### T5

The 63° T5 is ideal for the 8 to 12 year old drivers. The more upright seating position helps them keep good control by helping to put power into the steering, and it also helps a shorter driver to see over the steering wheel. This shape is only available in child sizes up to the XScd.

### T14

Just as in the T5 the T14 range is tailored towards the younger drivers. The sizes start with one tailored for the 6 to 7 year old Bambino class called a Mini. The T14 has a back angle which is suited to aiding the vision and strength for children and has extra leg support. This additional leg support helps small drivers who perhaps have changed to a faster class, or who just need extra help in holding their body in the kart.

### T9.5

The reclined 48° T9.5 is for very tall drivers over 1.9 m. This seat can then be used to good effect as it lowers the centre of gravity for drivers whose height makes the kart unstable on fast corners

### T15

The T15 seat is based on the popular T8 shape and sits slightly more upright at a 63° angle. This angle suits poorly steering historic karts, as it takes the weight off the rear axle.

With its narrow back, the T15 shape also helps pro kart racers fit an XL, XXL sized seat between the two large four stroke engines. The larger sides of a T15 are also better for deeper chested drivers and are available in sizes ML, L, XL and XXL. This seat has added width at the top over the old T8 to take account of the thickness of rib protectors which are universally used nowadays.

## CHOOSING A SIZE

This is important, as a good fit is essential for the protection of the driver and the handling of the kart. If a driver is loose in a seat they will pull down to steer with the inner hand, pulling themselves out of the kart and making it bounce at the slightest provocation.

To assess whether the size of a seat that you have in your possession is correct, sit the driver in the seat and feel the gaps over the femur leg bone, pelvis hip bone and down the length of the ribs, from top to bottom. This must be done with their rib protection in place, but the race suit is not so important, unless it has integral padding. The rib protector when worn tight, should not move inwards as the driver sits back in the seat. Once sat back in the seat, it should be difficult to squeeze your fingers between the seat, ribs, hip and leg bones. It's important that all the points are evenly pressured and no one element is either loose or pinching. If one area feels loose, some firm foam placed between driver and seat is acceptable. If it is pinching anywhere, you need a bigger size.

To assess the size without having a seat in your vicinity, we find that denim jeans waist size, weight and height are good indicators. Coupled with information about the chest circumference and rib protector type. An overly thick rib protector can make two sizes difference and leave you with very loose hips, so this is to be avoided (i.e. buy a thin P1) or account for it with a WT wide top T11 seat.

SIZE GUIDE	T11	T11 HAND	T9.5	T5	T7	T14	T15
<p>This guide shows the available size and rigidity range of each shape</p> <p>Seats sizes highlighted in red are made in our special production process for accuracy and quality</p> <p>Black = Hand Laminated composite</p> <p>WT = Wide top version available</p> <p>WH = Wide hip version</p> <p>TB = Tall back version</p> <p>CD = Cut down low back version</p>	C	STB	MS	CCD	Mini	MINI	ML
	XS	MANWH	ML	CL	C	CCD	L
	XSWT	MLWH	L	XSCD	S	CL	XL
	SCD		XL		MS	XSCD	XXL
	S				ML		
	SWH				L		
	SWT				XL		
	HAR				XXL		
	MAN				XXXL		
	MANWT						
	MS						
	MSWT						
	ML						
	MLWT						
	L						
	XL						
XXL							
RIGIDITIES AVAILABLE IN EACH SHAPE	T11	T11 HAND	T9.5	T5	T7	T14	T15
Ultra Flexible	T11VTI	T11HVTI	T9.5VTI	T5VTI		T14VTI	T15VTI
Flexible	T11VG	T11HVG	T9.5VG	T5VG		T14VG	T15VG
Interim rigidity	T11t	T11Ht	T9.5t	T5t		T14t	T15t
Standard rigidity	T11	T11H		T5	T7		T15

## TILLETT RACING SEATS SIZE ADVICE

SHAPES AND SIZES SHOWN ARE THE MOST POPULAR SIZES USED. ADDITIONAL SIZES AVAILABLE.  
THIS SIZING DIAGRAM SHOULD BE USED AS A GUIDE ONLY

SHAPE	SIZE	TYPICAL AGE RANGE	AVERAGE WEIGHT	AVERAGE HEIGHT	TYPICAL P1	NOTES
T7	Mini	4-5	18 kg	.9 m	Mini	<i>Tiny seat for a very young Bambino, fully covered and padded</i>
T14	Mini	5-7	25 kg	.9 m	Mini	<i>Bambino kart seat</i>
T7	C	7-9	28 kg	1 m	C	<i>Fully covered and padded</i>
T14	CCD	7-9	30 kg	1 m	C	<i>These seats are as the T5 Ccd with leg support</i>
T5	CCD	7-9	30 kg	1.2 m	C	<i>This seat is the most common minikart seat and has a small flat bottom</i>
T5	CL	8-10	35 kg	1.3 m	C	<i>This seat is exactly half way between the Ccd and the XScd T5</i>
T14	CL	8-10	35 kg	1.3 m	C	<i>Interim size between the Ccd and the XScd T14 with leg support</i>
T11	C	11-13	35kg	1.5 m	C	<i>Seat for Minikart drivers that are very tall and thin</i>
T7	XSCD	9-11	35 kg	1.3 m	C	<i>Fully covered and padded</i>
T5	XSCD	11-12	40 kg	1.4 m	XS	<i>First size for drivers normally coming out of Minikart or Cadets</i>
T14	XSCD	11-12	40 kg	1.4 m	XS	<i>First size for drivers normally coming out of Minikart or Cadets, with leg support.</i>
T14	XS	12 -13	40 kg	1.5 m	XS	<i>Size that sits between the XS T11 and the S T11.</i>
T11	XS	11-13	45 kg	1.5 m	XS	<i>These seats are taller in the back than the T5 XScd and more reclined</i>
T7	SCD	10-12	45 kg	1.3 m	XS	<i>Fully covered and padded</i>
T11	SCD	11-14	55 kg	1.4 m	XS	<i>Low back small for shorter heavy juniors</i>
		<b>WAIST SIZE</b>	<b>WAIST SIZE FROM JEANS IS USED WHEN SIZING TEENAGERS AND ADULTS</b>			
T7	S	26	50 kg	1.4 m	XS	<i>Fully covered and padded</i>
T14	S	28	55 kg	1.5 m	XS	<i>S T11 size and angle with leg support</i>
T11	S	28	55kg	1.6 m	XS	<i>Popular Junior size, seems to fit a large percentage of lady drivers</i>
T11	S TB	28	60 kg	1.7 m	S	<i>Tall back S for adult height very thin drivers</i>
T11	S WH	30	62 kg	1.7 m	S	<i>Tall back S for adult height very thin drivers with wide a wide pelvis bone</i>
T11	S WT	28	62 kg	1.7 m	S	<i>Wide top S with the seat widened to the Manetti size at the ribs</i>
T11	HAR	28	65 kg	1.8 m	S	<i>A size 5 mm wider than S, adult height</i>
T7	MSCD	28	60 kg	1.4 m	S	<i>Fully covered and padded</i>
T7	MS	28	65 kg	1.7 m	S	<i>Fully covered and padded</i>
T11	MAN	30	68 kg	1.85 m	S	<i>Very popular size for the adult professional driver. Often known as size 2</i>
T11	MAN	32	70 kg	1.85 m	M	<i>A size to help drivers with a wide pelvis bone that get bruised</i>
T11	MAN	30	75 kg	1.85 m	M	<i>Manetti with an MS size across the ribs</i>
T9.5	MS	30	70 kg	1.9 m	M	<i>Reclined seat for tall drivers</i>
T11	MS	32	78 kg	1.85 m	M	<i>7 mm bigger than the Manetti</i>
T11	MS WT	32	80 kg	1.85 m	M	<i>MS with a ML top</i>
T7	ML	32	75 kg	1.8 m	M	<i>Fully covered and padded</i>
T9.5	ML	32	78 kg	1.9 m	M	<i>Reclined seat for tall drivers</i>
T11	ML	34	80 kg	1.85 m	M	<i>One cm bigger than the MS</i>
T15	ML	34	80 kg	1.85 m	M	<i>Popular with deep chested drivers due to extra side depth and leg support</i>
T11	ML WH	36	85 kg	1.85 m	M	<i>A size to help drivers with a wide pelvis bone that gets bruised</i>
T11	ML WT	34	85 kg	1.85 m	L	<i>ML with an L top</i>
T7	L	36	90 kg	1.85 m	L	<i>Fully covered and padded</i>
T9.5	L	36	90kg	1.9 m	L	<i>Reclined seat for tall drivers</i>
T11	L	36	90 kg	1.85 m	L	<i>1.5 cm bigger than the T11 ML</i>
T15	L	36	90 kg	1.85 m	L	<i>Popular with deep chested drivers due to extra side depth and leg support</i>
T7	XL	38	100 kg	1.85 m	L	<i>Fully covered and padded</i>
T9.5	XL	38	100 kg	1.9 m	L	<i>Reclined seat for tall drivers</i>
T11	XL	38	100 kg	1.85 m	L	<i>1.5 cm bigger than the T11 L</i>
T15	XL	38	100 KG	1.85 m	XL	<i>Popular with deep chested drivers. Size often used in rental karts</i>
T7	XXL	42	120 kg	1.85 m	XL	<i>Fully covered and padded</i>
T11	XXL	42	120 kg	1.85 m	XL	<i>This size covers most of the very largest drivers</i>
T15	XXL	42	120 kg	1.85 m	XL	<i>Deeper than the T11 XXL will suit the older driver better</i>
T7	XXXL	44	140 kg	1.85 m	XL	<i>Fully covered and padded</i>

\* SIZE ADDITION EXPLAINED - CD (CUT DOWN), CL (CADET LARGE), WT (WIDE TOP), WH (WIDE HIP), TB (TALL BACK)

## CHOOSING A RIGIDITY

Tillett Racing Seats were the first to discover that seat stiffness affected lap times. Changing the seat rigidity alters the amount of weight transferred to the outside front tyre, it is also partly responsible for the amount the inside rear wheel can lift through the corners. This gives you the ability to balance a chassis that may not be perfectly adjusted for the track surface, driving style or weather conditions.

Standard OEM seats supplied with many karts are made to a price and are often inconsistent in rigidity and strength. To make sure that the seat you buy this year will be the same size and rigidity as one you buy next, Tillett Racing Seats are made to set specifications. They are also unique in that they can be bought in four different rigidities. The common rigidities which are available in each shape are shown on the size / rigidity guide.

Flexible VTi, and VG - The flexible VG seats are used in many different classes and are a favourite with drivers of kart classes where limited torque from the engine mean that inner wheel drag can sap power. "V" seats, as they are called, are made of non-standard composite materials; They are lightweight, and we find that the VG rigidity is one of our most popular specifications for competitive drivers.

Using a similar construction, there is also the ultra-flexible VTi, and this is ordered by customers determined to get the most flexible seat possible. The two stroke Bambino/ Cadet / Minikart classes prefer this specification, but it is not widely used in adult sized karts.

The "t" – The "t" interim rigidity is currently the most popular stiffness with OK Junior, OK Senior, X30 and KZ and sits in between the Standard and VG rigidities. The small "t" will come after the shape code, For example T5t.

The T11t spec was used to win the 2022 KZ World Championship with Viktor Gustafsson at the wheel.

Standard Rigidity - This was standard stiffness for many years but has become the most rigid seat in the Tillett kart seat range. The extra hard R and XR are no longer offered, as modern karts require the seat to flex. The standard rigidity model of each shape only has the letter T plus its number, for example the T11. The more rigid "Standard" seats are still used in four stroke classes where the engine provides ample torque and kart types where rigidity is not a performance factor.