



## Choosing your new kart seat

There are many factors to consider when choosing 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? Finally, 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 the 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 hang on the wheel, neither of which are good for ultimate performance. Different shapes are fine if they are put in the chassis with the drivers back in the same place and are made with the same materials, then they will handle the same. That said, a significant angle change of the back will alter the handling, especially for bigger driver and this scenario should be viewed differently.

#### T11

The most common shape used now is the much copied 58° T11 which is by far the most popular shape. 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. WT (Wide Top) 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 WH (Wide Hip) sizes for drivers that end up with severe bruising in this area.

If you are not below 12 years old, not above 1.8 m or over 35, this 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 and enables a shorter driver better vision over the steering wheel.

#### T8

The 63° T8 is very comfortable. It has leg support and deeper sides with a rounder back. We find that this deeper shape is very popular with older drivers.

#### T9.5

The reclined 38° T9.5 is for the very tall drivers. This can be used to good effect, lowering the centre of gravity for drivers whose height makes the kart unstable on fast corners.

## 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 he will pull to steer, pulling himself out of the kart, 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 leg bone, the hip bone and down the length of the ribs, from top to bottom. This must be done with any 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, your 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 stuck between driver and seat is acceptable. If it is pinching anywhere you need a different 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 over 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 P1) or accounted for with a WT wide top T11 seat.



# Tillett Kart Racing Seats size advice

Shapes and sizes shown are the more popular sizes used. Others are available

This guide should be treated as a starting point but it is not guaranteed to work every time

Shape	Size	Typical age range	Average weight	Average height	Typical P1 rib size	Notes on size
T8	Mini	4-5	18 kg	.9 m	C	Tiny seat for a very young Bambino
T8	Ccd (Cadet cut down)	5-7	25 kg	1 m	C	These seats are a low back version of the C T8
T8	C (Cadet)	7-9	30 kg	1.2 m	C	Usually the starting size for Mikart Cadet drivers. This seat has a small flat
T5	Ccd (Cadet cut down)	7-9	30 kg	1.2 m	C	This seat is a bit larger than the T8 C (Cadet) and has a small flat bottom
T5	CL (Cadet Large)	8-10	35 kg	1.3 m	C	This seat is exactly half way between the Ccd and the XScd T5
T5	XScd (Extra small cut down)	11-12	40 kg	1.4 m	XS	First size for drivers normally coming out of Minikart or Cadets
T11	XS (Extra Small)	11-13	45 kg	1.5 m	XS	These seats are taller in the back than the T5 XScd
T11	XS WT (Extra Small Wide Top)	12-13	45 kg	1.5 m	XS	Wider version often used because of the extra thickness in rib protection
T11	Scd	13-14	55 kg	1.5 m	XS	Low back small for shorter heavy juniors
		<b>Waist size</b>	<b>The waist size from jeans is used when sizing teenagers and adults</b>			
T11	S	28	55kg	1.6 m	XS	Popular Junior size, good for many lady drivers
T11	S TB	28	60 kg	1.7 m	S	Tall back S for adult height very thin drivers
T11	S WH (Wide Hip)	30	62 kg	1.7 m	S	Tall back S for adult height very thin drivers with wide hip bones
T11	S WT (Wide Top)	28	62 kg	1.7 m	S	Wide top S with the seat widend to the Manetti size at the ribs
T11	Harvey	28	65 kg	1.8 m	S	A size 5 mm bigger than S adult height
T11	Manetti	30	68 kg	1.85 m	S	Very popular size for the adult professional driver. Often known as size 2
T11	Manetti WH (Wide Hip)	32	70 kg	1.85 m	M	A size to help drivers with wide hips that get bruised
T11	Manetti WT (Wide Top)	30	75 kg	1.85 m	M	Manetti with an MS size across the ribs
T9.5	Manetti	30	70 kg	1.9 m	M	Reclined seat for tall drivers
T11	MS	32	78 kg	1.85 m	M	7 mm bigger than the Manetti
T11	MS WT (Wide Top)	32	80 kg	1.85 m	M	MS with a ML top
T9.5	MS	32	78 kg	1.9 m	M	Reclined seat for tall drivers
T11	ML	34	80 kg	1.85 m	M	one cm bigger than the MS
T9.5	ML	34	78 kg	1.9 m	M	Reclined seat for tall drivers
T11	ML WH (Wide Hip)	36	85 kg	1.85 m	M	A size to help drivers with wide hips that get bruised
T11	ML WT (Wide Top)	34	85 kg	1.85 m	L	ML with an L top
T11	L	36	90 kg	1.85 m	L	1.5 cm bigger than the T11 ML
T8	L	36	90 kg	1.85 m	L	Popular with deep chested drivers due to extra side depth and leg support
T9.5	L	36	90 kg	1.85 m	L	Reclined seat for tall drivers
T11	XL	38	100 kg	1.85 m	L	1.5 cm bigger than the T11 L
T8	XL	38	100 KG	1.85 m	XL	Popular with deep chested drivers. Size often used in rental karts
T9.5	XL	38	100 KG	1.85 m	XL	Reclined seat for tall drivers
T11	XXL	42	120 kg	1.85 m	XL	Bigger sizes are available but this covers most of the very largest drivers

## 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 8 different rigidities including the hybrid VGR /VRS. The rigidities which are available in each shape are shown on the size / rigidity guide.

Rigidities available in each shape										
	T8	T8 Handmade	T9	T9.5	T7	T5 Rev	NewT11	Handmade T11	T10	T250
Ultra Flexible		T8V/TI	T9V/TI	T9.5V/TI		T5V/TI	T11V/TI	T11V/TI	T10V/TI	
Flexible		T8V/G	T9V/G	T9.5V/G	T7V/G	T5V/G	T11V/G	T11V/G	T10V/G	
Interim rigidity	T8 Soft	T8t	T9t	T9.5t		T5t	T11t	T11t	T10t	
Standard rigidity	T8	T8 Hand	T9	T9.5	T7	T5	T11	T11	T10	T250
Rigid		T8R	T9R	T9.5R	T7R			T11R	T10R	T250R
Extra Rigid		T8XR	T9XR	T9.5XR				T11XR	T10XR	
Flexible centre with rigid edge		T8VGR	T9VGR	T9.5VGR				T11VGR	T10VGR	
Flexible with rigid sides				T9.5VRS						
<b>Lightweight carbon Kevlar versions</b>										
Ultra Flexible		T8KP	T9KP	T9.5KP	T7KP			T11KP	T10KP	
Flexible		T8KG	T9KG	T9.5KG	T7KG			T11KG	T10KG	T250KG
Standard rigidity		T8K	T9K	T9.5K	T7K			T11K	T10K	T250K
Rigid		T8CR	T9CR	T9.5CR	T7CR			T11CR	T10CR	T250CR
Extra Rigid		T8CXR	T9CXR	T9.5CXR				T11CXR	T10CXR	
Flexible centre with rigid edge		T8KGR	T9KGR	T9.5KGR				T11KGR	T10KGR	

**New Style T5 and New Style T11 seats** - These are made with a process that allows different rigidities to be made using a highly accurate mechanised process and the system can make seats weighing within 5g of each other. Therefore, the rigidity can be tuned to the specification equalling the tunability of the handmade seats. There are four rigidities in the “New style” specifications and all four are relevant to the rigidities commonly used by the kart chassis in use today. The New Style T5 and T11 are cut by robot to increase the accuracy of the product.

**The T8** - T8 seats are injected into a predetermined cavity and the edges are also cut by robot. Therefore, they are always consistent. For the T8 there are two options of flexibility, the T8 (standard) and T8 soft. Should you want more rigidity types in this shape, the T8 Hand (Handmade) version is also available to give the full range of rigidities in the T8 shape.

**Flexible VTi, and VG** - The flexible VG seats are a favourite with the Rotax Max drivers and almost always used to win the competitive Euro Max series. “V” seats are made of non-standard composite materials; they are lightweight, and we find that many people use the “VG” seat to good effect in all sorts of different classes. Using the same material specifications, there is also the ultra-flexible VTi and this is ordered by customers determined to get the most flexible seat possible. The two stroke Cadet / Minikart classes seem to prefer this specification.

**VG and VTi are two rigidity specifications that are available in the New Style T5 and T11 seats.**

**The “t”** – The “t” 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 T11t spec was used in an OTK chassis to win the 2017 KFJ World Championship with Dexter Patterson and Jorrit Pex used it to win the 2018 KZ European Championship.

**The “t” is one of the rigidities available in the New Style T5 and T11 seats.**

**Standard Rigidity** - This is based around basic uncovered seats. The standard rigidity model of each shape only has the letter T plus its number, for example the T8.

**“Standard” is one of the rigidities available in the New Style T5 and T11 seats.**

**It is also possible to make the following rigidity specifications in all the handmade seats.**

**Rigid “R”** - A thicker, stiffer version of the standard seat is shown by including the letter “R” after the T number.

**Extra Rigid XR** - Commonly known as ‘The Rope Seat’ due to its filled edge. The seat has enormous strength and rigidity around the perimeter, while still allowing the front to flex a little. This extra rigid specification is designated by placing the letters XR after the T + number. They have a dramatic effect on the chassis handling.

**The VGR** - For customers who require a rigid seat across the seat stays whilst still allowing some diagonal flex, we have the VGR. This seat has a solid rigid edge which controls the amount the seat can flex. The seat is like a regular soft VG seat in the middle but is much stiffer across the top edge and down the sides. With this seat in the chassis it will reduce the inner rear wheel lift but keep a proportion of the diagonal flexibility.

**The VRS** - This is a new version of the VGR that is soft down the centre of the entire seat with the solid rigid edge only existing along each side. This allows a seat like the T9.5 to be very reclined but still transfers weight to the front outside wheel, whilst the more flexible back edge allows more inner rear wheel lift than the VGR. This VRS reclined model seems to work well with tall drivers in cool conditions.

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