

Rigging and oars for Swift Cadet Mini and Swift Cadet

The Cadet Mini (40-50kg, 88lbs-110lbs) and Cadet (45-60kg, 99lbs-132lbs) are built to provide a very good rowing experience to young rowers.

The boats are genuine racing shapes (width and depth), and are short because of the low crew weight of these rowers. Because of this, the boats should be quite fast, ie. they will have quite low drag, especially compared to the alternative boats that these young rowers would probably row ie. normal racing singles for 65kg~ (145lb~), or wider "training singles".

To improve the experience, we have scaled down the rigger span and work height and offer a choice of 2 sizes for each 1x. Narrow spans for small rowers allow a good rowing arc length, and low work heights will help present the oar handles at the correct height to the rower.

Cadet Mini riggers:

	Work height	Span	Lateral Pitch	Recommended height of rower
Small	13	147cm (144-150)	1 degree	140-155cm (4'7"-5'1")
Medium	14.5	151cm (148-154)	1 degree	150-165cm (4'11"-5'5")

Cadet riggers:

	Work height	Span	Lateral Pitch	Recommended height of rower
Medium	14.5	151cm (148-154)	1 degree	150-165cm (4'11"-5'5")
Large	16	155cm (152-158)	1 degree	160-175cm (5'3"-5'9")

The same riggers cannot be used on both the Cadet 1x and the Cadet Mini 1x.

Custom riggers are not offered.

As well as wanting young rowers to enjoy the true rowing stroke, and assuming that young rowers are the least experienced, we want to avoid overloading them, as they will not have the muscle development that more experienced rowers have.

Therefore, to match the 3 sizes of riggers, Swift makes 3 sizes of "hatchet" type oars (244-256cm, 256-268cm, 268-280cm), each with 12cm of length adjustment.

If calculated as the ratio of outboard to inboard, then many club rowers have a gearing of about 2.3.

	Oar Length	1/2 overlap	span	inboard	outboard	gearing
Typical club rower in 1x	289	9	159	86.5	202.5	2.32

Our recommendations for young rowers are as below:

	Oar Length	1/2 overlap	span	inboard	outboard	gearing
Cadet Mini						
Small rigger for 140-145cm (4'7"-4'9")	244	6	144	76	168	2.21
Small rigger for 150-155cm (4'11"-5'1")	256	7	150	80	176	2.20
Medium rigger for 150-155cm (4'11"-5'1")	256	7	148	79	177	2.24
Medium rigger for 160-165cm (5'3"-5'5")	268	8	154	83	185	2.23
Cadet						
Medium rigger for 150-155cm (4'11"-5'1")	256	7	148	79	177	2.24
Medium rigger for 160-165cm (5'3"-5'5")	268	8	154	83	185	2.23
Large rigger for 160-165cm (5'3"-5'5")	268	8	152	82	186	2.27
Large rigger for 170-175cm (5'7"-5'9")	280	9	158	86	194	2.26

As we can see from this table, the shortest rowers will have the shortest oars, the narrowest span, and the lightest gearing (around 2.2).

Another important consideration with young rowers is the stiffness of the oar shaft. It is not fully understood by all coaches that only the fastest boats (M4x etc) should have the stiffest oars. Slower boats, such 1x and 2- should have more flexible oars, and this will be especially true with beginners in singles.

Therefore these oars are available only as Club Performance or Recreational, not as High Performance, the grade usually used by our racing customers.

Recreational oars are more flexible, heavier and cheaper than Club Performance.

Club Performance oars are more flexible, heavier and cheaper than High Performance.

In addition to these "hatchet" type oars, we are able to fit with 17cm wide Macon blades. These will increase the overall length by 6cm, but due to the smaller surface area of the blades, give a lower gearing.

For older and more experienced rowers who use the Cadet version, with their better muscle development, they may be fine with longer oars and higher gearing. For such rowers, Swift's 283-289cm oars may be best.