



Rider: Jeremy Wilimotte - Sydney, Australia photo: surfpaestemsuburbs



FOIL YOUR WAY.

AXIS. For wherever your foiling journey takes you.

From that first flight across a lake or harbour with a hand wing, or that initial lift off on a wave or behind a boat or ski, you're hooked.

Flying. Fast and free. Smooth and quiet. There's no other feeling like it.

And whether you foil across a number of water sports or prefer to focus your progression on one, AXIS will be with you every step of the way. Our range of masts, foils and fuselages is both extensive and inter-changeable, making it easy to maximise enjoyment and performance in your chosen foiling mode.





Inspired by a global community.

In every corner of the globe, passionate foil enthusiasts have discovered AXIS. They tell us our advanced foil design, precision engineering and stiffness of each connection point has enabled them to take their foiling to the next level, and the next.

While we're proud to have helped fuel these trail blazers' passion for foiling, now they inspire us. Every day the feedback and ideas flow in from wake

thieves in America's lake country, prone foilers in Western Australia, SUP foilers in California or wingers in the islands and canals of Europe. These diverse inputs ensure our design and innovation process never stops or narrows in focus. After all, we want as many people in as many places as possible, to share our passion of foiling.

Experience and innovation.

Our New Zealand based design team of engineers, marine architects, foil scientists and board designers is led by Adrian Roper. Internationally renowned windsurf, kitesurf and now foil innovator with more than 40 years of design and manufacturing experience. He oversees an agile process of feedback, computer aided design and testing that sees new concepts and range additions taken to the beach virtually every week. After

initial validation by the design group, the new design is then distributed among a wider rider team led by AXIS' boss, Evan Mavridoglou, for feedback. And not just advance level riders either, because at the heart of the AXIS design philosophy, is that our equipment must be easy to ride as well as high performance. By the time an AXIS product reaches your retail store, you know it will be good.

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Choose your foil sport,
discover the range.

On the following pages, we share with you the key models and sizes for the various foil sports. It is a guide only – based on both our own testing and the main themes in the customer feedback we've received. There will always be exceptions due to rider weight, skill and wind and water conditions, so take to the water, try new combinations and tell us what you've learned!

Please note, our model numbers relate to **wing span**, not foil area like many other brands fixate on. In our view, foil area is not as important as other design variables such as span, chord and camber in influencing the lift and speed qualities of a foil.





WINGFOIL

Getting started

Our retail partners and schools tell us their perfect combination for an 80kg/176lbs rider is the **1060 BSC (Broad Spectrum Carve)** front foil, the **Freeride 440/90** rear foil, the Short fuselage and the 75 aluminium mast. This combination is stable, easy to lift and very forgiving, but still a rewarding performer.

Alternatively, our **SES (Super Easy Start)** Packages available in **SES1040** and **SES940** configurations make choosing even easier (see page18).

Ride Guide

Starting out			
Rider Weight	Front foil	Rear foil	Fuselage
>95kg	BSC 1120/SES1040	500/90, 450/80	Short
70 - 95kg	BSC 1060/SES1040	440/90, 450/80	Short
<70kg	BSC 970/SES940	400/90, 450/80	Short

Pimping your ride

Once you're foiling confidently, you may want to transition to a longer Aluminium (**82, 90, 105**) or **Power Carbon** or **Power Carbon High Modulus (820, 900 or 1020)** mast to minimise the foils breaching the surface in rougher water or swells, and a smaller rear wing from the **Freeride Small** range. Alternatively, you may choose to blast straight into the new world that is **HPS, ART** and **Progressive** and **Speed** rear wings.

Maximising performance with HPS and ART wings

If you feel the need for speed, you'll want to upgrade to our **HPS (High Performance Speed)** front wings as soon as you're foiling confidently. Fast, yet still easy to ride, these foils are addictive. They will take a solid pumping technique to get foiling (or a couple of extra knots of wind) but once up,

you'll stay foiling through lulls, tacks and gybes. Such is their exceptional glide. Match the speed of these front foils with a low drag rear wing from either the **Progressive** or **Speed** range. Note that the reduced chord and lower camber of the **HPS** foils require a switch to the **Black** fuselage. You could stay on the short length, or more advanced riders looking for a looser turning (but less pitch stable) feel can go to the **Ultrashort** or

Crazyshort fuselage in either standard or Advance.

Please note this a guide only. Experienced windsurfers, kite foilers or uber athletes may choose to jump straight to our **HPS** foils after taking lessons or using hire gear for their first half dozen sessions.

Need some extra advice?

Email your question, plus ability, body weight and normal wind conditions to thefoilguru@AXISfoils.com

HPS & ART foil guide			
Hand wing size (m)	Front foil	Rear foil range	Fuselage Standard & Advance
6.0m	HPS 980, 1050 ART 1099, 999	Progressive, Speed	Short
4.8-5.5m	HPS 930, 980 ART 1099, 999	Progressive, Speed	Short or Ultrashort
3.0-4.8m	HPS 830, 880, 930 ART 899, 799, 699	Progressive, Speed	Short or Ultrashort

N.B. This is a rough guide only for an 80 kg (176 lbs) rider. Lighter riders, plus more advanced riders will select the smaller front foil sizes. Larger swell conditions will also dictate smaller front foils to control the extra lift generated by the swell energy when downwind surfing.



PRONE FOIL

We've loved receiving feedback from every corner of the world about which of our foils are working best for prone riders. And with such huge variances in wave intensity – from North Sea wind swells to Tahitian reef breaks – it's not surprising our riders' favourite foils vary too.

Our **PNG (Pump and Glide)** wings, as the name suggests, are superb for pumping back out to get on the next swell, and are ideal for smaller, weaker wave conditions. **BSC (Broad Spectrum Carve)** wings are faster, so suit waves of moderate intensity, but require a little more pumping effort. Pair these with our **Speed** or **Progressive** rear wings.

The **HPS (High Performance Speed)** wings are also making their mark in prone surfing. Their extra speed is well suited to more powerful and hollow surf, but even in average conditions riders are finding their low stall speed allows them to come out of a tight turn and keep on the foil. Pumpability is somewhere between the **PNG** and **BSC** foils.

SP (Surf Performance) wings remain a favourite for weak or barely breaking surf, with their v-shape providing surfboard like carving. However pumping is not as easy as the models above.

Finally, our new high aspect **ART** range. The low drag, long glide of these wings is seeing advanced riders with thighs of steel continuously linking waves together for over 30 minutes!

Ride Guide

Conditions	Front Wing/Range*	Rear Wing Range**	Fuselage Standard & Advance
Weak waves – gently shelving beaches and points and feathering reef breaks.	PNG (Pump and Glide) <75kg riders 850, 910, 910B	Freeride Small, Progressive, Speed	Short, Ultrashort, Crazyshort
	>75kg riders 910, 910B, 1010	Freeride Small, Freeride, Progressive, Speed	
Average waves – typically non-barrelling surf with moderate intensity waves.	SP (Surf Performance) <75kg riders 760	Freeride Small, Progressive	Short, Ultrashort, Crazyshort
	>75kg riders 860	Freeride Small, Freeride, Progressive	
Powerful waves (heavy reef breaks)	BSC (Broad Spectrum Carve) <70kg riders 740	Freeride Small, Progressive, Speed	Short, Ultrashort, Crazyshort
	<80kg riders 810	Freeride Small, Freeride, Progressive, Speed	
	>80kg riders 890		
Powerful waves (heavy reef breaks)	HPS (High Performance Speed) <70kg riders 650, 700	Freeride Small, Progressive, Speed	Short, Ultrashort, Crazyshort
	>75kg riders 830, 880		
	ART (AXIS Research Team) <70kg riders 699, 799, 899, 999	Freeride Small, Progressive, Speed	Short, Ultrashort, Crazyshort
	>75kg riders 1099, 999		

N.B. Lighter riders should select the smaller sizes, larger riders should select the bigger wings. If you're starting out, choose the larger sizes for an easier pop up on to the foil. Select the larger rear wing sizes to match the larger front wings. More advanced riders can choose shorter fuselages for tighter turning (but less pitch stability).



SUP FOIL

Like the prone foiling guide on the previous page, selecting your foil style will depend on the intensity of the waves you surf, but with bigger wing sizing to support the increased weight of the boards. How you prioritise turning over speed and pumpability may also influence your choice.

A number of our front wings work beautifully for SUP. **Pump and Glide (PNG)** front wings provide the ultimate pumpability and glide for linking together multiple waves. **Broad Spectrum Carve (BSC)** provide more speed while still being easy lifting, while **HPS & ART** wings provide all the speed you need for bigger waves.

Freeride 400/90 and the **Speed 420/60** are the most popular choices for rear wings, and the new **Progressive 400/65** is sure to be a hit too. To really loosen things up for tighter turning on small slow waves, try the **Freeride Small 370/80**.

Starting out we recommend the Short fuselage, then progress to the Crazyshort to really spice up your turns.

Evan's (Axis CEO) dream set up for SUP. **PNG850**, Crazyshort fuselage, **Progressive 400/65** rear wing and the **860** carbon mast.

Ride Guide

Conditions	Front Wing Range*	Rear Wing Range**	Fuselage Standard & Advance
Weak waves – gently shelving beaches and points and feathering reef breaks.	PNG (Pump and Glide)		
	<75kg riders 850, 910, 910B	Freeride Small, Progressive, Speed	Short
	>75kg riders 850, 910, 910B, 1010		
Average waves – typical non-barrelling surf with moderate intensity waves.	SP (Surf Performance)		
	<75kg riders 760	Freeride Small, Progressive, Speed	Short
	>75kg riders 860		
Powerful waves (heavy reef breaks)	BSC (Broad Spectrum Carve)		
	<75kg riders 810	Freeride Small, Progressive, Speed	Short, Ultrashort, Crazyshort
	<90kg riders 890, 970		
Powerful waves (heavy reef breaks)	HPS (High Performance Speed)		
	<80kg riders 830, 880, 930	Freeride Small, Progressive, Speed	Short, Ultrashort, Crazyshort
	>80kg riders 980, 1050		
Powerful waves (heavy reef breaks)	ART (AXIS Research Team)		
	<70kg riders 899, 999	Freeride Small, Progressive, Speed	Short Ultrashort, Crazyshort
	>75kg riders 1099, 999		

N.B. Lighter riders should select the smaller sizes, larger riders should select the bigger wings. If you're starting out, choose the larger sizes for an easier pop up on to the foil. Select the larger rear wing sizes to match the larger front wings. More advanced riders can choose shorter fuselages for tighter turning (but less pitch stability).



TOW FOIL

Our 'whip-in' community loves the strength and stiffness of their AXIS foil kit for its solid, dependable ride in critical situations. Our **HPS (High Performance Speed)** and **ART (AXIS Research Team)** wings are the popular choice for waves of consequence. Their low camber and thinner foil keep them turning freely yet predictably at high speed, while providing the pace to make (or outrun) fast, heavy sections. For smaller or weaker waves, **SP (Surf Performance)** or the smaller **BSC (Broad Spectrum Carve)** foils are the go-to.

Check out the preferred sizes for each range in this table. Because you're already up and foiling behind a boat or ski, wing size will mostly depend on wave size. The bigger the wave, the smaller the foil, to control lift and maximise your carving.

Ride Guide

Conditions	Front Wing Range*	Rear Wing Range**	Fuselage
Big and/or powerful waves. or higher skill levels	ART (AXIS Research Team) 999, 899, 799, 699	Progressive, Speed	Short, Ultrashort, Crazyshort, Advance Ultra, Crazy & Sillyshort
	HPS (High Performance Speed) 650, 700, 830, 880	Progressive, Speed	Short, Ultrashort, Crazyshort, Advance Ultra, Crazy & Sillyshort
	PNG (Pump and Glide) 850, 910B, 910B	Progressive, Speed	Short, Ultrashort, Crazyshort, Advance Ultra, Crazy & Sillyshort
Small and/or less powerful waves	SP (Surf Performance) 660, 760	Progressive, Speed	Short, Ultrashort, Crazyshort, Advance Ultra, Crazy & Sillyshort
	BSC (Broad Spectrum Carve) 810, 890	Progressive, Speed	Short, Ultrashort, Crazyshort, Advance Ultra, Crazy & Sillyshort

N.B. Lighter riders should select the smaller sizes, larger riders should select the bigger wings. If you're starting out, choose the larger sizes for an easier pop up on to the foil. Select the larger rear wing sizes to match the larger front wings. More advanced riders can choose shorter fuselages for tighter turning (but less pitch stability).



KITE FOIL

Ride Guide

With so much power in your hands, kite foilers can use much smaller wings. For solid breeze **HPS (High Performance Speed)** and **ART (AXIS Research Team)** wings are preferred for speed and control. For lighter breezes, you may choose to have an **SP (Surf Performance)** or the smaller **BSC (Broad Spectrum Carve)** wing in your quiver. Bigger riders prefer the larger of the options in this table.

Conditions	Front Wing*	Rear Wing**	Fuselage Standard & Advance
Solid breeze, full power	HPS (High Performance Speed)		
	650, 700, 830, 880	Progressive, Speed	Short, Ultrashort, Crazyshort
Light or Medium breezes, marginal power	SP (Surf Performance)		
	660, 760, 860	Progressive, Speed	Short, Ultrashort, Crazyshort
	BSC (Broad Spectrum Carve)		
	810, 890	Progressive, Speed	Short, Ultrashort, Crazyshort
	ART (AXIS Research Team)		
	899, 799, 699	Progressive, Speed	Short, Ultrashort, Crazyshort
Light, marginal power	PNG (Pump and Glide)		
	850, 910, 910B	Progressive, Speed	Short, Ultrashort, Crazyshort

N.B. Lighter riders should select the smaller sizes, larger riders should select the bigger wings. If you're starting out, choose the larger sizes for an easier pop up on to the foil. Select the larger rear wing sizes to match the larger front wings. More advanced riders can choose shorter fuselages for tighter turning (but less pitch stability).

Need some extra advice?

Email your question, plus ability, body weight and normal wind conditions to thefoilguru@axisfoils.com



WINDSURF FOIL

Windsurf foilers go FAST, so not surprisingly since their release, our **ART (AXIS Research Team)** and **HPS (High Performance Speed)** wings are the most popular choices. Size your **ART** and **HPS** wing larger if you're a heavier rider or have a larger, heavier board. For light wind riding our larger **PNG (Pump and Glide)** wings are popular.

For rear wings, beginner to intermediate riders choose the **500A/90**, while advanced riders typically opt for the **Progressive 475/68 or 450/67** rear wings or **Speed 420/60** for less drag and tighter turning.

Choose either our **Red** or **Black Windsurf fuselage**, based on your front wing choice.

Ride Guide

Conditions	Front Wing*	Rear Wing**	Fuselage
Solid breeze, full power or advanced riders.	HPS (High Performance Speed) 830, 880, 930, 980, 1050	420/60, 450/67, 475/68	Black Windsurf
	ART (AXIS Research Team) 799, 899, 999, 1099	420/60, 450/67, 475/68	Black Windsurf
Light breezes, marginal power	PNG (Pump and Glide) 850, 910B, 910, 1010, 1150, 1300	420/60, 500A/90	Red Windsurf
Surfing waves with solid breeze.	SP (Surf Performance) 660, 760, 860	420/60, 500A/90	Red Windsurf

N.B. Lighter riders should select the smaller sizes, larger riders should select the bigger wings. If you're starting out, choose the larger sizes for an easier pop up on to the foil. Select the larger rear wing sizes to match the larger front wings. More advanced riders can choose shorter fuselages for tighter turning (but less pitch stability).



PUMP & DOCK

Foiling is the new way to enjoy lakes and inland waterways and it's taking the world by storm. Whether you're dock launching or letting go of the rope behind a ski boat, AXIS will help you maximise your fun.

Re-known US foiler Devon @WakeThief tried more than 30 different hydrofoils before declaring the **AXIS PNG 1150** front wing the ultimate pump and wake wing. Its large area and unique high camber foil shape allows a rider to take off at low speeds, while the high aspect, low drag shape allows it to glide great distances, even for larger riders. Pump time of over five minutes has been recorded with this wing!

Following hours of testing Devon has settled on the 750mm x 19mm mast, short fuselage and **460/60 Pump** range rear wing as the perfect compliments to his **PNG 1150**.

This combination allows Devon to dock start and pump around the lake connecting multiple boat wakes to create an endless lake surfing experience.

When you pair this set up with a shorter, low volume board, the energy needed to pump the foil is reduced because the shorter, lighter boards experience less inertia ("swing weight") while pumping.

Ride Guide

Conditions	Front Wing*	Rear Wing**	Fuselage Standard & Advance
Pump, Lake & Wake	PNG (Pump and Glide)		
	1010, 1150, 1300, 1310	Pump, Progressive, Speed	Short, Ultrashort
	HPS (High Performance Speed)		
	980, 1050	Pump, Progressive, Speed	Short, Ultrashort
	ART (AXIS Research Team)		
	1099, 999	Pump, Progressive, Speed	Short, Ultrashort

N.B. Lighter riders should select the smaller sizes, larger riders should select the bigger wings. If you're starting out, choose the larger sizes for an easier pop up on to the foil. Select the larger rear wing sizes to match the larger front wings. More advanced riders can choose shorter fuselages for tighter turning (but less pitch stability).

Need some extra advice?

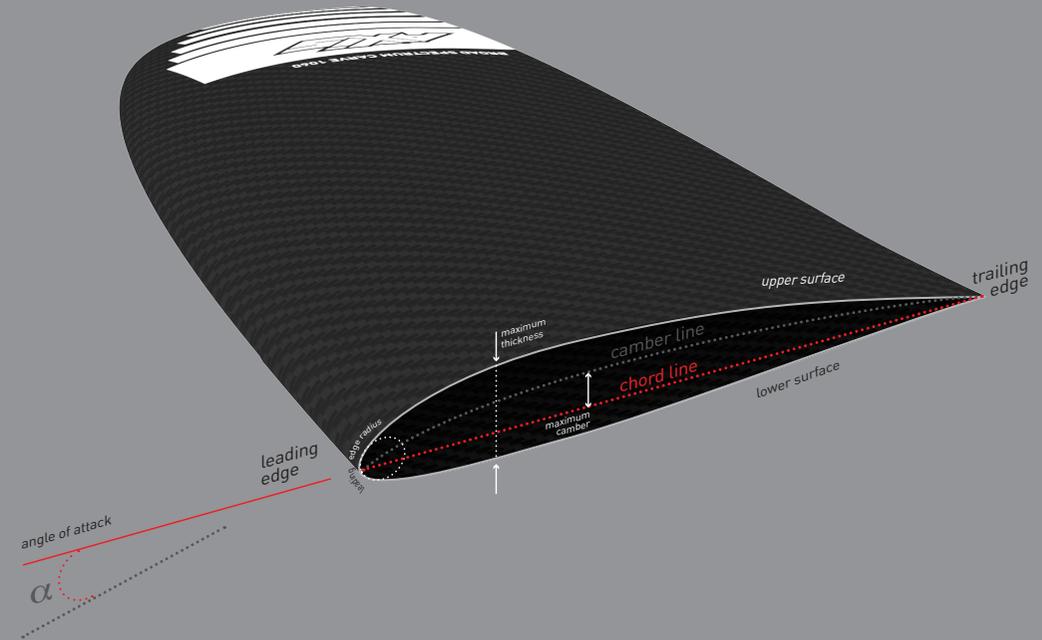
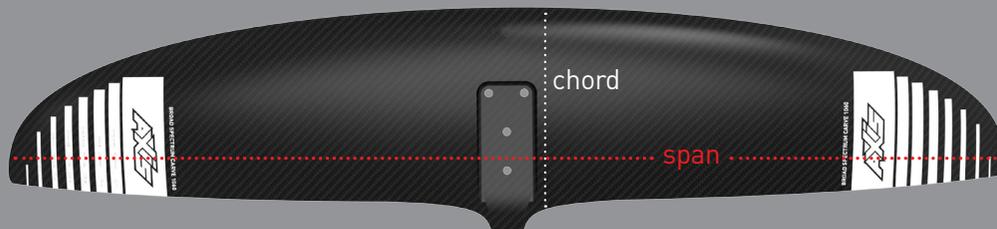
Email your question, plus ability, body weight and normal wind conditions to thefoilguru@axisfoils.com

The basics of foil design

This guide is designed to help explain the key variables in hydrofoil design. It will also help you better understand the design specifications of the AXIS range on the following pages.

Span: The length of the foil from wing-tip to wing-tip.

Chord: The width of the foil (90 degrees to the span). There is maximum chord and mean average chord. Maximum chord is the widest part of the chord normally at the middle of the wing, the mean average chord is the average chord over the entire wing. Span divided by mean average chord gives you the aspect ratio.



Thickness: How thick the foil is, normally expressed as a percentage of the chord.

Foil section: This refers to actual cross sectional shape and curve of the foil, i.e. is the front portion blunt or sharp? Where is the point of maximum thickness? This will have a huge bearing on the lift the foil produces and the speed range it will perform in without 'stalling' (when the water flow dis-engages from the foil surface causing you to crash back down).

Camber: Camber is a key element of the foil section. Unlike centre fins on surfboards, the cross section of hydrofoils is not symmetrical – the resulting pressure difference as water flows around the foil is what creates upward lift. The degree of this asymmetry is called the camber. The more camber, the more lift a foil will generate. However camber also increases drag.

Area: The total surface area of the foil. While the industry has made area the key variable with which foils are compared, for us it is no more important than the other design characteristics featured above. The performance of a hydrofoil is determined by how ALL these variables combine together. For example, it is totally possible to have a foil with less area than another to produce greater lift if the thickness and camber are greater.





ART

AXIS RESEARCH TEAM

The new **ART** range looks and feels like nothing else. On the water these wings blow your mind! The **ART's** sits at the forefront of wing design and development, pushing the boundaries of what's possible for a foil. The incredible speed and glide of these wings, coupled with effortless pump and efficiency, enables you to ride the smallest lump way further outside the surf zone than ever before. What separates these wings from the pack is how well they turn, rolling effortlessly between turns comparable to a more conventional wing.

Despite these high-performance features of the **ART range**, they are surprisingly user friendly.

The stall speed is incomparably low, giving even advanced beginner to intermediate riders an accessible platform for learning to pump and rapid progression.

The team here at **AXIS** are extremely excited to see how these very responsive, nimble yet confidently precise and planted wings take the down-winding, winging, wind foiling and surf markets by storm.

Thoroughly tested and approved after several rounds of refinement, these reduced chord, high aspect wings are the most advanced, hydrodynamically efficient foil designs on the market today. When combined with an **AXIS Carbon mast** and **AXIS Progressive** rear wings, they provide the ultimate friction free ride.

If you want a limited edition **ART** foil you'll need to be quick. Talk to your local retailer or order online today.

Note: **ART 1099** is not intended for jumping

ART foils are ideally matched with our **Progressive** or **Speed** rear wing ranges.

Angle of attack to fuselage
Up 1.00°



	wingspan	chord	mean average chord	actual area	projected area	volume	aspect ratio	product code
1099	1100mm (43.31in)	130mm (5.12in)	103.8mm	1144cm ² (177.3in ²)	1142cm ² (177in ²)	905cm ³ (55.2in ³)	10.6	AX22ART1099
999	999mm (39.37in)	135mm (5.3in)	101mm	1038cm ² (160.9in ²)	1010cm ² (156.6in ²)	871cm ³ (53in ³)	9.9	AX22ART999
899	899mm (35.43in)	120mm (4.72in)	92.2mm	850cm ² (131.8in ²)	830cm ² (128.6in ²)	690cm ³ (42in ³)	9.76	AX22ART899
799	799mm (34.25in)	120mm (4.72in)	88.4mm	730cm ² (113.2in ²)	707cm ² (109.6in ²)	540cm ³ (32.9in ³)	9.05	AX22ART799
699	699mm (27.5in)	100mm (3.92in)	77.6mm	556cm ² (86.2in ²)	543cm ² (84.2in ²)	412cm ³ (25.1in ³)	9.0	AX22ART699



**All ART foils
Black Fuselage**



BSC BROAD SPECTRUM CARVE

The ultimate all-rounder, and the place to start your foiling journey.

Our **Original Series (1020, 920, 820)** performed admirably during the first generation of foiling water sports and are still ideal beginner foils. When it was time to replace this model, we set out to significantly improve speed and range, without losing the easy lifting properties we all loved about the original series.

For the **BSC** range we completely changed the outline, increasing aspect ratio and reducing thickness for vastly improved speed and glide, while incorporating what we had learned from the **HPS** project in turn down and twist for optimum turning. However, like the **Original**, we developed a foil section with a high stall angle. This means it still operates well at slow speeds, so will be forgiving when you make a mistake gybing on a Wind foil or Wing foil. It will also get you up easily and keep you foiling when surfing slow or weak waves.

The result is a foil that has an incredibly wide range of operation – the ultimate all-rounder. One day you could be foiling tiny waves on your SUP, the next you could be screaming across the harbour with a hand wing, all on the same foil.

The **810 BSC** foil has quickly become our most popular prone foil, while the **1060** is the foil of choice for first season wing foilers. **BSC** is the go-to for SUP foiling too. If you want to wing and SUP foil with one setup, the **BSC** will be the ideal choice.

BSC foils are ideally matched with our **Freeride Small, Freeride, Progressive** or **Speed** rear wing ranges.

Angle of attack to fuselage
Up 2.00°

- stability ●●●●●●●●
- turning ●●●●●●●●
- speed ●●●●●●
- lift ●●●●●●●●
- glide ●●●●●●●●



1120 AX22BSC1120



1060 AX22BSC1060



970 AX22BSC970



890 AX22BSC890



810 AX22BSC810



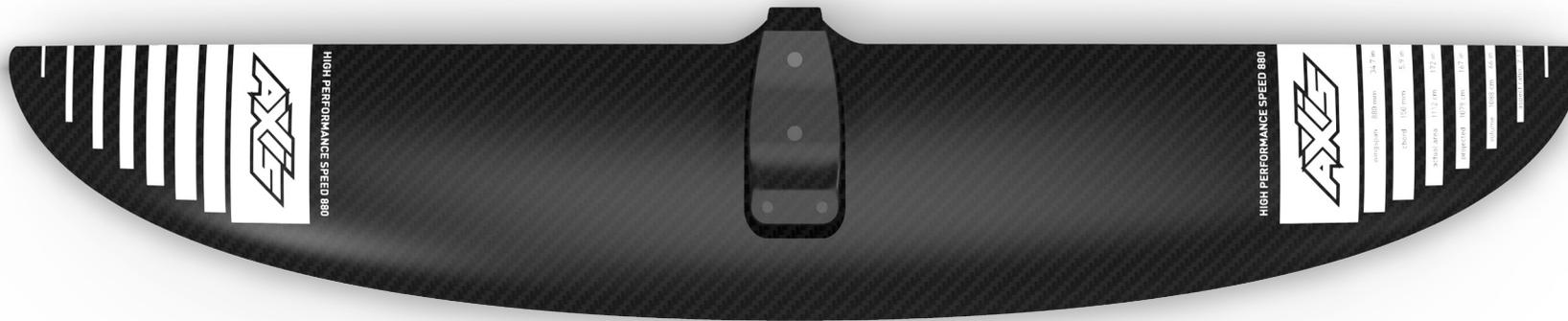
740 AX22BSC740

1120, 1060, 970 Red Fuselage

890, 810, 740 Black Fuselage

In general greater than 180mm chord better on red, less than 170mm better on black.

	wingspan	chord	actual area	projected area	volume	aspect ratio	product code
1120	1120mm (44in)	220mm (8.7in)	2102cm ² (326in ²)	2007cm ² (311in ²)	3581cm ³ (219in ³)	6.25	AX22BSC1120
1060	1060mm (42in)	200mm (8.0in)	1803cm ² (278in ²)	1726cm ² (268in ²)	2800cm ³ (171in ³)	6.51	AX22BSC1060
970	970mm (38.2in)	190mm (7.5in)	1572cm ² (244in ²)	1501cm ² (233in ²)	2313cm ³ (141in ³)	6.27	AX22BSC970
890	890mm (35in)	170mm (6.7in)	1290cm ² (200in ²)	1232cm ² (191in ²)	1697cm ³ (104in ³)	6.43	AX22BSC890
810	810mm (32in)	155mm (6.1in)	1070cm ² (166in ²)	1022cm ² (158in ²)	1284cm ³ (78in ³)	6.42	AX22BSC810
740	740mm (29.1in)	140mm (5.5in)	883cm ² (137in ²)	844cm ² (131in ²)	757cm ³ (46in ³)	6.49	AX22BSC740



HPS HIGH PERFORMANCE SPEED

High-performance foiling accessible to everyone.

This breakthrough high aspect foil was the result of a long and intensive design and prototyping process that included the development of our new 'black' fuselage to incorporate the reduced thickness and chord of the **HPS** foil section.

The camber of the **HPS**, a key variable in the lift versus drag trade-off, is also the lowest in the **AXIS** range.

But while this foil is unashamedly designed for speed and glide, the real achievement is how easy it is to use for almost all levels of rider. Where other brands' high aspect foils are usually an unstable 'expert only' ride, we've seen people jump on **HPS** and rip after a just a few sessions mastering basics on higher lift foils.

This is thanks to the beautifully balanced plan-shape and carefully considered down-turn and twist, that keeps this foil turning freely and handling predictably in all conditions.

AXIS HPS has quickly become our most popular foil for winging for all levels riders once they have the basics down. A true industry benchmark. It's also making its mark in Downwind, Prone and SUP foiling for faster or more powerful waves. Its high-speed suitability also makes it a natural choice for windsurf and kite foiling.

HPS foils are ideally matched with our **Freeride Small**, **Progressive** or **Speed** rear wing ranges.

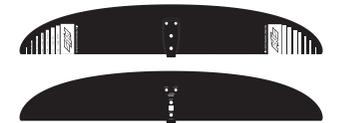
Angle of attack to fuselage
Up 1.00°



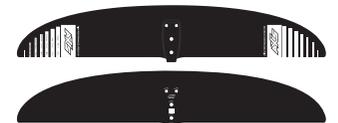
	wingspan	chord	actual area	projected area	volume	aspect ratio	product code
1050	1050mm (41in)	170mm (6.7in)	1502cm ² (233in ²)	1460cm ² (226in ²)	1665cm ³ (102in ³)	7.55	AX22HPS1050
980	980mm (38.6in)	160mm (6.3in)	1323cm ² (205in ²)	1283cm ² (199in ²)	1379cm ³ (84in ³)	7.49	AX22HPS980
930	930mm (36.6in)	155mm (6.1in)	1214cm ² (188in ²)	1179cm ² (183in ²)	1228cm ³ (75in ³)	7.34	AX22HPS930
880	880mm (34.7in)	150mm (5.9in)	1112cm ² (172in ²)	1079cm ² (167in ²)	1088cm ³ (66in ³)	7.17	AX22HPS880
830	830mm (32.7in)	145mm (5.8in)	1014cm ² (157.2in ²)	984cm ² (152in ²)	979cm ³ (59.7in ³)	7.00	AX22HPS830
700	700mm (27.5in)	160mm (6.3in)	890cm ² (138in ²)	870cm ² (135in ²)	1060cm ³ (65in ³)	5.63	AX22HPS700
650	650mm (25.5in)	140mm (5.5in)	769cm ² (119.2in ²)	744cm ² (115in ²)	716cm ³ (43.7in ³)	6.68	AX22HPS650



1050 AX22HPS1050



980 AX22HPS980



930 AX22HPS930



880 AX22HPS880



830 AX22HPS830



700 AX22HPS700



650 AX22HPS650

**All HPS foils
Black Fuselage**



PNG PUMP AND GLIDE

The ultimate Pump and Glide wing.

There's no other wing like the **Pump and Glide**. A unique combination of medium and high aspect, thinner foil and high camber, **PNG** gets you up easily – then keeps you going, and going, and going. The foil section design also has a high stall angle, which means it performs exceptionally at slower speeds.

Dock foilers need look no further. This is your foil. At the time of writing, the time to beat was 5 minutes 40 seconds on the **PNG 1150** matched with a **Pump 460/60** rear wing. Think you can beat it? Film your flight and tag it on **#foilpumpchallenge** on Instagram.

PNG is a firm favourite with SUP foilers too, maximising your ability to pump back out and foil straight onto the next wave. Lots of our AXIS customers have also learned to wing foil on this design. However, the same characteristics that make it a great pumping foil will also hold back its top speed.

PNG foils are ideally matched with our **Pump, Progressive or Speed** rear wing ranges.

Angle of attack to fuselage **Up 2.00°**



1310 AX22PNG1310



1300 AX22PNG1300



1150 AX22PNG1150



1010 AX22PNG1010



910 AX22PNG910



910B AX22PNG910B



850 AX22PNG850

1310, 1300, 1150, 1010. 910 Red Fuselage

910B, 850 Black Series

In general greater than 180mm chord better on red, less than 170mm better on black.

	wingspan	chord	actual area	projected area	volume	aspect ratio	product code
1310	1310mm (51.6in)	185mm (7.3in)	2080cm ² (322in ²)	2011cm ² (311.7in ²)	2445cm ³ (149in ³)	8.53	AX22PNG1310
1300	1300mm (51in)	180mm (7.0in)	1712cm ² (265in ²)	1700cm ² (263in ²)	1895cm ³ (116in ³)	9.94	AX22PNG1300
1150	1150mm (45.3in)	180mm (7.0in)	1778cm ² (276in ²)	1713cm ² (265in ²)	2116cm ³ (129in ³)	7.72	AX22PNG1150
1010	1010mm (39.8in)	170mm (6.7in)	1430cm ² (222in ²)	1430cm ² (222in ²)	1732cm ³ (106in ³)	7.13	AX22PNG1010
910	910mm (35.8in)	160mm (6.3in)	1267cm ² (196in ²)	1218cm ² (189in ²)	1458cm ³ (89in ³)	6.8	AX22PNG910
910B	910mm (35.8in)	160mm (6.3in)	1267cm ² (196in ²)	1218cm ² (189in ²)	1458cm ³ (89in ³)	6.8	AX22PNG910B
850	850mm (33.4in)	150mm (5.9in)	1102cm ² (170.8in ²)	1061cm ² (164.5in ²)	1044cm ³ (64in ³)	6.81	AX22PNG850



SP SURF PERFORMANCE

The specialist small wave prone foil.

This unique design features a dihedral, or V-shape where the foil joins the mast. When the foil is rolled over in a turn, this has the effect of reducing lift generated from the opposite side of the foil, as it will be on a more vertical angle. This greatly assists tight carving and loose turning when Prone, SUP, Wing, Wind, Tow or Kite foiling.

The foil section is the same as the **PNG** (thinner, high camber), further maximising its small or slow wave prowess and ability to achieve the holy grail – pumping back out and straight onto the next wave.

SP is not only for small wave riding. These wings are tons of fun for winging (**SP860**), windsurfing, kiting or behind the boat. When super loose riding is what you are looking for, the **SP** wings make it all possible.

SP foils are ideally matched with our **Freeride Small or Progressive** rear wing range.

Angle of attack to fuselage
Up 2.00°

- stability ●●●●●●●●
- turning ●●●●●●●●
- speed ●●●●●●
- lift ●●●●●●
- glide ●●●●●●



860 AX22SP860



760 AX22SP760



660 AX22SP660

Fuselage:

860, 760, 660 Red Fuselage

	wingspan	chord	actual area	projected area	volume	aspect ratio	product code
860	860mm [34in]	180mm [7.09in]	1293cm ² [200in ²]	1212cm ² [188in ²]	1700cm ³ [104in ³]	6.10	AX22SP860
760	760mm [30in]	190mm [7.48in]	1218cm ² [189in ²]	1130cm ² [175in ²]	1673cm ³ [102in ³]	5.11	AX22SP760
660	660mm [26in]	200mm [7.87in]	1113cm ² [173in ²]	1034cm ² [160in ²]	1582cm ³ [97in ³]	6.49	AX22SP660



1040 AX22SES1040



940 AX22SES940



450/80 AX22SES450/80



SES Red 725/19
AX22FUSELAGE725/19



AX22BASEPLATE19M



AX22MAST19M75



AX22SSCRSET

SES Packages

SUPER EASY START

As the name suggests, our new **SES** complete package is super easy to get started on, and it's even easier on your wallet with its innovative core and fibreglass front and rear wing construction.

A new concept from **AXIS**, the **SES** package is perfect for cost conscious learners, schools or riders who want one simple setup that works. And since it's **AXIS**, high quality of manufacturing, smart engineering and modularity are inherited in the **SES** packages' DNA.

The **SES** package is no slouch either. Drawing on the proven performance and easy turning of our **BSC** range, the **SES** has a slightly reduced aspect ratio for even easier and smoother lift. The **SES** wings have rounder tips for safety and ease of use.

Each package comes with its own front wing size: The **1040** for riders over 80kgs and the **940** for lighter riders. Completing the **SES** package is our **SES red fuselage** (725mm), a **SES** specific rear wing (**450/80**), our famously stiff 75cm aluminium 19mm mast and mast base, plus a

complete stainless steel bolts and spanner pack.

Of course you can upgrade to a longer mast or any **AXIS** foil components, compatible with the **AXIS** red fuselage and 19mm mast, as your skills progress.

SES is particularly suited for wing foiling but also great for Wake, SUP, plus Prone surfing and Pumping (with the smaller size front wing).

SES foils are ideally matched with our dedicated **SES** package rear wing, the **450/80** or any of our **Freeride** rear wing range.

Angle of attack to fuselage
Up 2.00°



Fuselage:

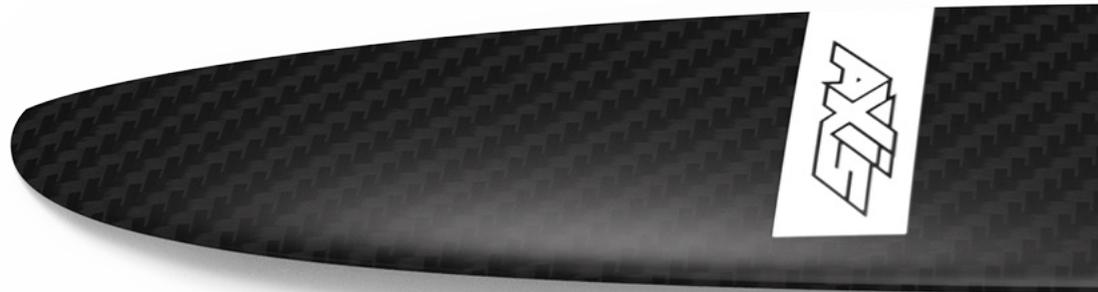
SES Red 725/19

	FRONT	wingspan	chord	actual area	projected area	volume	aspect ratio	product code
	1040	1040mm (40.94in)	220mm (8.66in)	1957cm ² (303.39in ²)	1864cm ² (288.92in ²)	3020cm ³ (184.29in ³)	5.80	AX22SES1040
	940	940mm (37.00in)	210mm (8.27in)	1668cm ² (258.61in ²)	1607cm ² (249.19in ²)	2380cm ³ (145.24in ³)	5.73	AX22SES940
	REAR							
18	450/80	450mm (17.72in)	80mm (3.15in)	306cm ² (47.45in ²)	301cm ² (46.78in ²)	150.1cm ³ (9.16in ³)	6.71	AX22SES450/80



Rear Wings

Our research team is constantly exploring the subtleties of rear wing design and the difference even small changes can make to performance and handling.



With five distinct ranges to cover all foiling disciplines, you can be sure that AXIS has the perfect rear wing for you. See the range summary and table to make your selection. As a rule of thumb, smaller rear wings will loosen up your set up for tight carving, but will also reduce stability and pumpability.

FREERIDE

These wider chord wings are the perfect choice for beginner wingers, windsurfers and SUP foilers. The design emphasis is on easy lift, stability and predictable turning. The **440/90**, paired with our **BSC 1060** front wing, is the popular choice for learning to wing foil.

FREERIDE SMALL

As above, but in smaller dimensions for advancing riders looking to get large wings turning more freely.

PUMP

These wings are unashamedly focussed on maximising the distance and glide from your pumping. The rear wing of choice for dock foilers paired with our larger **PNG** and **BSC** front wings.

PROGRESSIVE

Our very latest thinking in rear wing design, suitable for more advanced riders and perfectly paired with our **HPS**, **ART** or smaller **BSC** and **PNG** wings. Mostly flat but with a very subtle downturn, these wings combine excellent speed with sensational turning.

SPEED

With a high aspect plan shape and distinctive winglets on the tips, our **Speed** rear wings provide great yaw stability for a fast locked in feel for flying and pumping at serious canted angles.

FREERIDE



500A/90 AX22RWING-500A/90



500/90 AX22RWING-500/90



440/90 AX22RWING-440/90



400/90 AX22RWING-400/90

FREERIDE SMALL



390/80 AX22RWING-390/80



370/80 AX22RWING-370/80



340/80 AX22RWING-340/80

PROGRESSIVE



475/68 AX22RWING-475/68



450/67 AX22RWING-450/67



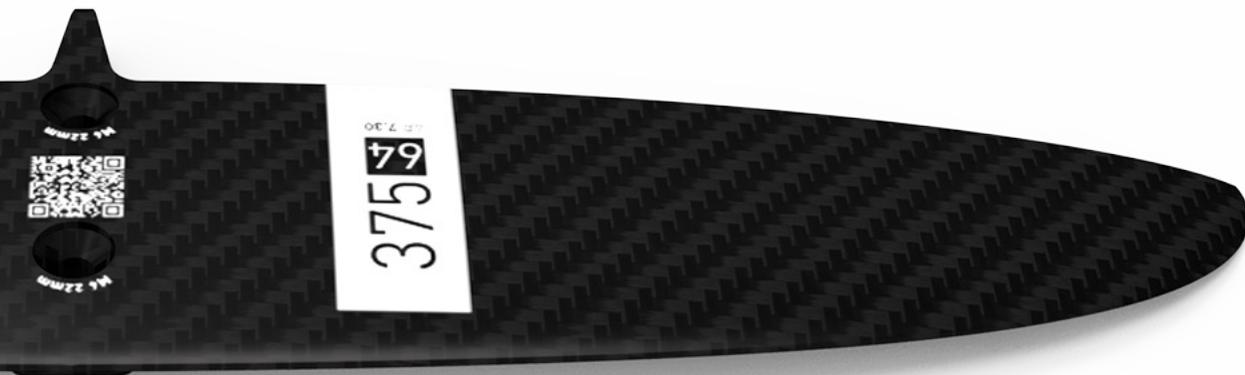
425/66 AX22RWING-425/66



400/65 AX22RWING-400/65



375/64 AX22RWING-375/64



PROGRESSIVE

SPEED

PUMP



350/63 AX22RWING-350/63

420/60 AX22RWING-420/60

460/60 AX22RWING-460/60



325/62 AX22RWING-325/62

380/60 AX22RWING-380/60



300/61 AX22RWING-300/61

400F/60 AX22RWING-400F/60



275/58 AX22RWING-275/58



250/56 AX22RWING-250/56

FREERIDE

	wingspan	chord	actual area	aspect ratio	Angle of attack to fuselage DOWN	product code
500A/90	500mm	90mm	360.77cm ² [55.92in ²]	7.17	2.5°	AX22RWING-500A/90
500/90	500mm	90mm	362.33cm ² [56.16in ²]	7.30	2.5°	AX22RWING-500/90
440/90	440mm	90mm	319.70cm ² [49.55in ²]	5.27	2.5°	AX22RWING-440/90
400/90	400mm	90mm	291.18cm ² [49.413in ²]	5.79	2.5°	AX22RWING-400/90

FREERIDE SMALL

390/80	390mm	80mm	254.52cm ² [39.45in ²]	6.23	2.5°	AX22RWING-390/80
370/80	370mm	80mm	239.54cm ² [37.13in ²]	6.01	2.5°	AX22RWING-370/80
340/80	340mm	80mm	221.01cm ² [34.26in ²]	5.53	2.5°	AX22RWING-340/80

PROGRESSIVE

475/68	475mm	68mm	269.02cm ² [41.23in ²]	8.48	1.5°	AX22RWING-475/68
450/67	450mm	67mm	250.72cm ² [38.86in ²]	8.15	1.5°	AX22RWING-450/67
425/66	425mm	66mm	227.72cm ² [35.30in ²]	8.02	1.5°	AX22RWING-425/66
400/65	400mm	65mm	211.16cm ² [32.73in ²]	7.66	1.5°	AX22RWING-400/65
375/64	375mm	64mm	192.71cm ² [29.87in ²]	7.30	1.5°	AX22RWING-375/64
350/63	350mm	63mm	179.20cm ² [27.78in ²]	6.92	1.5°	AX22RWING-350/63
325/62	325mm	62mm	168.12cm ² [26.06in ²]	6.36	1.5°	AX22RWING-325/62
300/61	300mm	61mm	150.24cm ² [23.29in ²]	6.07	1.5°	AX22RWING-300/61
275/58	275mm	58mm	133.20cm ² [20.65in ²]	5.76	1.5°	AX22RWING-275/58
250/56	250mm	56mm	117.00cm ² [18.14in ²]	5.42	1.5°	AX22RWING-250/56

PUMP

460/60	460mm	60mm	229.90cm ² [35.63in ²]	9.31	1.5°	AX22RWING-46V2
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SPEED

420/60	420mm	60mm	212.63cm ² [32.96in ²]	8.57	1.5°	AX22RWING-420/60
380/60	380mm	60mm	193.04cm ² [29.92in ²]	7.99	1.5°	AX22RWING-380/60
400F/60	400mm	60mm	196.24cm ² [30.42in ²]	8.22	1.5°	AX22RWING-40F/60

Compatible with both **Black Fuselage & Red Fuselage**

Masts...
Aluminium
or Carbon?
We love both.

POWER
CARBON 900



POWER
CARBON 900



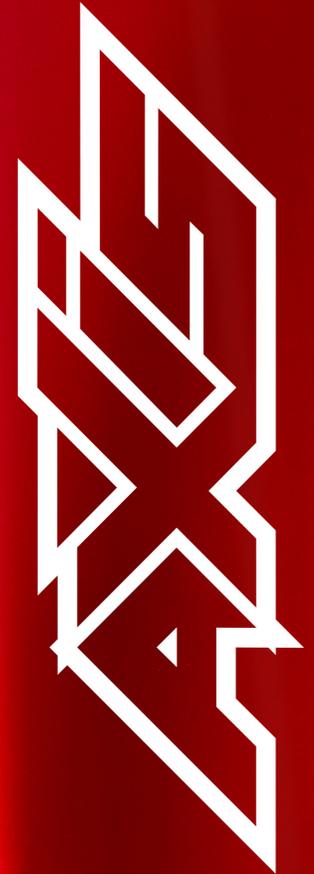
HIGH
MODULUS

← this end to base plate →



AXZMAST19M105

19mm Aluminium Mast 105



Power Carbon

Recent development in foil design and performance (high aspect ratios and broader spans) demand stiffer, more direct and positive connections than current masts deliver.

Bend (lateral distortion) and twist/torsion (rotation around the mast's length or torque axis) compromise connection, control, speed and ultimately the hydrodynamic efficiency of your hydrofoil's potential. The stiffer the mast, the better the connection to the foil system and more importantly the untapped potential of high-performance foil designs can be fully realised.

AXIS Power Carbon - High Modulus addresses these challenges, delivering bend resistance that is superior to the stiffest Alloy masts combined with next-level torque axis resistance. (Surpassing the stiffness of our 19mm Alloy mast which is the market stiffness benchmark)

The result is a positive connected feel, direct drive, immediate feedback and ultimate control. High aspect foils perform as they should, feel and control enter an entirely new realm.

The new High Modulus Carbon fibre used in our mast layout is considerably stiffer and stronger than the regular carbon fibre used in conventional constructions. Innovative, considered and balanced placement of materials in our proprietary production process paired with rigorous testing has delivered a breathtaking performance leap.

Opting for a one-piece design, we avoided the flow/drag and jointing issues associated with multi-part mast constructions.

AXIS Power Carbon Mast works perfectly with our complete range of foils, we believe every foiling discipline will benefit from unparalleled bend and twist resistance built into our new **Power Carbon** masts.

Available in two models, the **Power Carbon** and **Power Carbon - High Modulus** which goes even further to provide additional strength and 35% more bend resistance for ultimate performance for the discerning and heavier riders on the broadest of front foils.



AXIS Power Carbon and Power Carbon - High Modulus ship with mast covers

Bend resistance comparison



Force required to bring mast to failure





POWER CARBON
**HIGH
MODULUS**

VS

STANDARD
**POWER
CARBON**



Power Carbon

	length		product code
900	900mm (35.43in)	Wide High Aspect Front foils, Big wave and tow-ins, downwinder pros in open ocean, great for wing surf, wind foil and kite foil.	AX22MASTCRB90
820	820mm (32.28in)	Bigger surf, downwinders, advanced riding with all foils.	AX22MASTCRB82
750	750mm (29.53in)	Wing surf or 'surfy' option for kite foiling, good option for shallow areas.	AX22MASTCRB75

Compatible with both **Black Fuselage & Red Fuselage**



Power Carbon - High Modulus

	length		product code
1020	1020mm (40.16in)	Wide High Aspect Front foils, Big wave and tow-ins, wing surf, wind foil and kite foil.	AX22MASTPWCRB102
900	900mm (35.43in)	Wide High Aspect Front foils, Big wave and tow-ins, downwinder pros in open ocean, great for wing surf, wind foil and kite foil.	AX22MASTPWCRB90
820	820mm (32.28in)	Bigger surf, downwinders, advanced riding with all foils.	AX22MASTPWCRB82
750	750mm (29.53in)	Wing surf or 'surfy' option for kite foiling, good option for shallow areas.	AX22MASTPWCRB75

Compatible with both **Black Fuselage & Red Fuselage**





Aluminium

Our 19mm **Aluminium Mast** section was developed after countless hours of computer analysis, and resulted in a 2.24 times stiffness improvement over most other brands 15mm masts, and is even stiffer than most carbon masts available today. This provides a very direct and predictable feel, especially through manoeuvres, making it the best choice for beginner to intermediate riders. Many expert riders choose to stay with our 19mm Aluminium, preferring its superior stiffness and predictable feel, especially when used with larger front

wings (**1050** or larger). Their affordability also allows riders to carry a couple of mast lengths for different foiling disciplines, ocean conditions or locations, or upgrade to a longer mast once you've mastered the basics. With the modular nature of our system, it's a quick and easy changeout.

We also offer a 16mm mast option for lighter riders, or prone and kite foilers using smaller wings.

The 16mm mast is 1.67 times stiffer than most 15mm masts on the market.

Our Aluminium Masts work in conjunction with the **AXIS** base plate, for connection to the board, and our '**Doodad**' for connection to the fuselage. Often overlooked, the Doodad provides industry leading rigidity between mast, fuselage and foil. Compared with other brands you'll feel the difference immediately! Both the **Black** and **Red** fuselages can be fitted to all our aluminium masts.



19mm Base Plate
AX22BASEPLATE19M

16mm Base Plate
AX22BASEPLATE16M



Windsurf Tuttle Head
AX22TTLTADPTW



SUP Tuttle Head
AX22TTLTADPT

	length	19mm	16mm	usage	product code
105	1050mm (41.3in)	•	•	Big swell downwinders, more aggressive riding and speed kite foiling.	AX22MAST19M105
90	900mm (35.4in)	•	•	Big wave and tow-ins, downwinder pros in open ocean, standard for wing surf, wind foil and kite foil.	AX22MAST19M90
82	820mm (32.3in)	•	•	Bigger surf, downwinders, adv. riding with all foils.	AX22MAST19M82
75	750mm (29.5in)	•	•	Wing surf or 'surfy' option for kite foiling.	AX22MAST19M75
68	680mm (26.8in)	•	•	Prone surf foiling and all round SUP. Shallow wing foil.	AX22MAST19M68
60	600mm (23.6in)	•	•	Good starting point for all disciplines, shallow areas.	AX22MAST19M60
45	450mm (17.7in)	•	•	Ideal for your first flights.	AX22MAST19M45

19mm Mast Adapter / Doodad
AX22ADPT19MM

16mm Mast Adapter / Doodad
AX22ADPT16MM

Compatible with both **Black Fuselage & Red Fuselage**

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Red, Black or black **Advance** Fuselage?

Red Fuselage

Compatible with all but the **HPS, ART**, and the smaller **BSC** wings and compatible with both our Aluminium and Carbon masts. Available in Standard, Short, Ultrashort, Crazyshort and Windsurf sizes. Go longer for stability, shorter for manoeuvrability.

With the modular nature of the **AXIS** system, it's easy to progress to shorter fuselage lengths over time without having to change any other component.

Black Fuselage

Precision engineered for our super thin **ART** and **HPS** wings, but also suitable for the smaller sizes in our **PNG** and **BSC** wings. Compatible with both our Aluminium and Carbon series masts. Available in Standard, Short, Ultrashort, Crazy Short and Windsurf sizes. Go longer for stability, shorter for manoeuvrability.

	length	product code
Standard	765mm (30.11in)	AX22RFUSLAGE765
Short	680mm (26.77in)	AX22RFUSLAGE680
Ultrashort	625mm (24.60in)	AX22RFUSLAGE625
Crazyshort	585mm (23.03in)	AX22RFUSLAGE585
Windsurf	880mm (34.34in)	AX22RFUSLAGE880

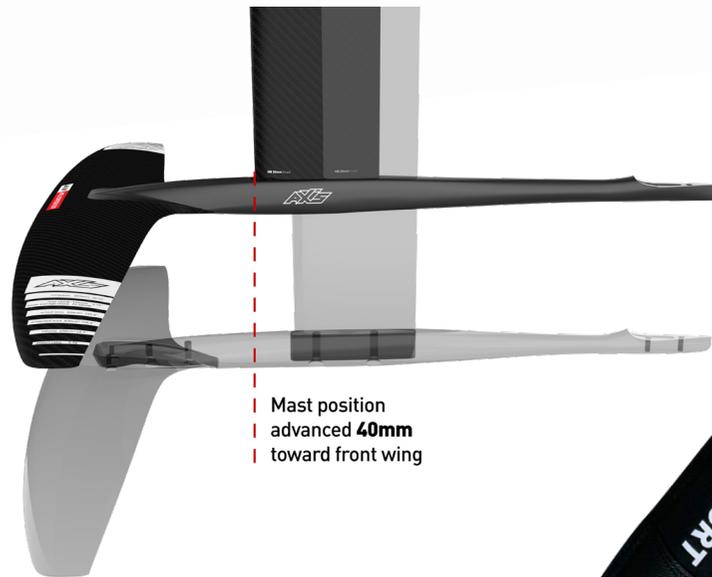
	length	product code
Standard	784mm (30.86in)	AX22BFUSLAGE784
Short	703mm (27.67in)	AX22BFUSLAGE703
Ultrashort	643mm (25.31in)	AX22BFUSLAGE643
Crazyshort	603mm (23.74in)	AX22BFUSLAGE603
Windsurf	899mm (35.39in)	AX22BFUSLAGE899



Red & Black Advance Fuselage (+40mm)

If you're into pushing the envelope in Prone, SUP or Wake these will blow your mind. Are you looking to push harder, carve tighter turns and want an even more connected surf experience? Our new **Red & Black Advance fuselage** configuration is for you.

This design sees the mast position advanced 40mm closer to the front foil, opening up entirely new options for surf performance.



Mast position advanced 40mm toward front wing



	length	product code
Ultrashort	640mm (25.2in)	AX22BFUSELAGE640AD
Crazyshort	600mm (23.6in)	AX22BFUSELAGE600AD
Sillyshort	560mm (22.04in)	AX22BFUSELAGE560AD
Short	675mm (26.57in)	AX22RFUSELAGE675AD
Ultrashort	620mm (24.40in)	AX22RFUSELAGE620AD
Crazyshort	580mm (22.83in)	AX22RFUSELAGE580AD

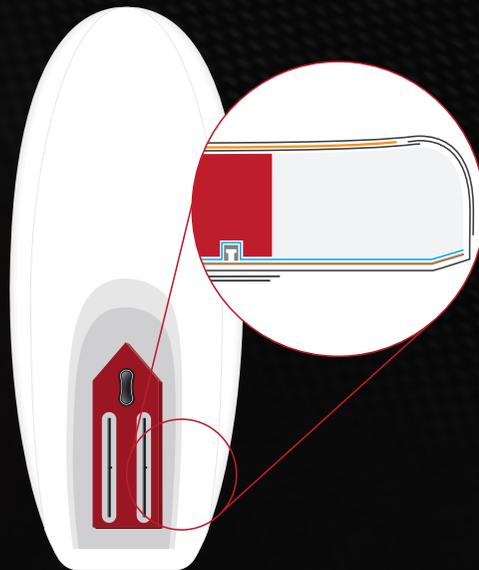
Foil Boards

Choose your ride...

AXIS Foils have boards for SUP foiling, wing surfing, surf foiling, pump foiling, wake foiling, downwind foiling and kite foiling.

Carbon enhanced construction

We've made this season's **Froth** and **Pump** models even tougher, while significantly increasing the stiffness to help transfer every ounce of your pumping energy into the mast and foil. Full carbon layers top and bottom add further strength and rigidity to a tough PVC foam sandwich. A super high-density foam block encases the mast track from the bottom to the deck, further supported with additional carbon layers.



tray 125





froth 6'8" – 4'4"

A Design Evolution

AXIS **froth** is famous for its perfect balance between performance, early lift and ease of ride – a stable platform that packs plenty of volume into a short length to reduce swing weight and increase your fun while sup or wingfoiling.

Our newest **froth** retains this personality, but we've made some important design changes – reflecting the movement towards higher aspect, lower drag foil designs that require more speed to lift-off.

First off, we've eliminated the angled cut-away on the tail. This increases the length of the planing surface to increase sub-foiling speed potential.

We've also reduced the rail bevel – in fact it now fades out completely at the tail adding more width to the planing surface and straightening the water flow for even faster acceleration up to foiling speed.

Also noticeable is the pulled in nose with rounded outline, to reduce the chances of catching in rougher water, compared to the more square nose from 2021. We've increased the thickness and volume up here too, to maintain a balance in buoyancy that will give you stability when on your knees or stepping up to get going.

A new deck concave gives your feet and toes improved leverage when initiating turns, while feeling safe and secure in a straight line when riding without straps.

Our unique tail pad design ensures any water captured in the concave, flows freely out the back.

How to size your froth

Unique to AXIS is the large range of sizes that will ensure you can achieve the volume that's right for you. For wingers starting out, we recommend 20-40 litres more than your body weight in kilograms. Intermediate riders should drop down to roughly the same litres as their body weight (or 10-15 litres above), while advanced riders can go as small as you dare – the only limit is your athleticism and the steadiness of the wind conditions. If it's gusty, stay closer to your body weight in litres. SUP foilers will naturally gravitate to the largest sizes in the range.



	length	width	volume	footstrap inserts	product code
160	6'8"	32"	160L	no	AX22FROTH160
145	6'4"	31"	145L	no	AX22FROTH145
135	5'11"	30"	135L	yes	AX22FROTH135
120	5'8"	29"	120L	yes	AX22FROTH120
110	5'6"	28"	110L	yes	AX22FROTH110
105	5'4"	27"	105L	yes	AX22FROTH105
95	5'2"	26.5"	95L	yes	AX22FROTH95
90	5'1"	26"	90L	yes	AX22FROTH90
85	5'0"	25.5"	85L	yes	AX22FROTH85
75	4'10"	25"	75L	yes	AX22FROTH75
65	4'8"	24.5"	65L	yes	AX22FROTH65
55	4'6"	24"	55L	yes	AX22FROTH55
45	4'4"	23"	45L	yes	AX22FROTH45

pump

4'10" – 4'0"

Our specialist prone surfing design, the **pump** is a brand new design this season while leveraging the catch-free, easy touch-and-go characteristics of its predecessor. The most noticeable changes are the move to a rounded pintail for sensitivity when carving, and a concave deck to increase turning leverage and grip. The bottom shape is our well proven flat to rail bevel with a super smooth entry rocker and a straight tail exit. In addition to prone foiling, The **pump** will remain a hit with wake and dock foilers too.



30

	length	width	volume	footstrap inserts	product code
44	4'10"	21"	44L	yes	AX22PUMP44
37	4'6"	20.5"	37L	yes	AX22PUMP37
30	4'2"	20"	30L	yes	AX22PUMP30
24	4'0"	19"	24L	yes	AX22PUMP24



tray

125, 110, 94

The AXIS **tray** foilboards are built thin, but not razor thin. They are 20mm thick of solid PVC foam. So water will never get sucked into the core. We built them with tracks so you can adjust the position of your foil to the right spot.

Built light and strong, with PVC core, and hand laminated with 2 sheets of carbon top and bottom, plus extra reinforcement on the tracks.

With a model for all levels of riders, **AXIS tray Carbon 125** is suited to beginners or heavier riders. **AXIS tray Carbon 110** foilboard is a great freestyle kite foilboard, pumping foilboard for dock starts, tow-in surf and wake foiling.

AXIS tray Carbon 94 is designed with the intermediate and advanced riders in mind.



	length	width	footstrap inserts	product code
125	1250mm (49.21")	500mm (19.68")	yes	AX22TRAY125
110	1100mm (43.30")	480mm (18.9")	yes	AX22TRAY110
94	940mm (37")	460mm (18.1")	yes	AX22TRAY94

downwind

8'6" – 7'6"



Inspired by Hawaiian style downwind boards, the **AXIS Downwind** boards are narrow, sleek designs that feature proven rocker lines. Prominent chines allow the tail to sink easily and work in combination with the straight elongated outline to keep the board tracking in a straight line. This makes paddling up onto foil far easier in any water state.

Constructed with EPS cores, full carbon and a tough PVC sandwich layer on the top surface only, these boards are built to be light for optimised performance. A super high density foam block encases the mast tracks and is sandwiched between deck and bottom.

Our signature red is highly visible for ultimate safety.

	length	width	volume	product code
7'6"	2285mm (7'6")	533mm (21")	110L	AX23DW110
8'0"	2438mm (8'0")	508mm (20")	120L	AX23DW120
8'6"	2590mm (8'6")	483mm (19")	130L	AX23DW130

hybrid

6'6" – 6'0"



The **AXIS Hybrid** is a novel new concept for us, aimed at real world riders who want to enjoy the downwind experience without having to commit to a board dedicated to that purpose.

The hybrid can be used for light wind winging, SUP foiling, downwind and more.

Constructed with EPS cores, full carbon and a tough PVC sandwich layer on the top surface only, these boards are built to be light for optimised performance.

A super high density foam block encases the mast tracks and is sandwiched between deck and bottom.



	length	width	volume	product code
6'0	1828mm (6'0")	559mm (22")	90L	AX23HYBRID90
6'2	1870mm (6'2")	584mm (23")	105L	AX23HYBRID105
6'4	1920mm (6'4")	609mm (24")	110L	AX23HYBRID110
6'6	1981mm (6'6")	660mm (26")	120L	AX23HYBRID120

Board Bags

Designed to fit your board perfectly, these bags feature a tried and tested, robust 600D and nylon webbing construction with reinforced sidewalls at tip and tail for added security and abrasion resistance.

A novel ventilation system positioned exactly where it will do the most good. Several convenient grab handles, and a dual zip system which allows riders to leave the foil attached to the board between sessions.



Foil boardbags 6'8" – 4'0"

	width	Internal dimensions for boards up to (in)	AXIS Froth or Pump fitting	product code
6'8"	32"	6'8" x 32" x 9"	160, 145	AX22FOILBBAG6'8"
6'0"	31"	6'0" x 31" x 9"	135	AX22FOILBBAG6'0
5'8"	29"	5'8" x 29" x 8"	120, 110	AX22FOILBBAG5'8"
5'6"	28"	5'6" x 28" x 8"	110, 105	AX22FOILBBAG5'6"
5'2"	26"	5'2" x 26" x 8"	95, 90, 85, 75	AX22FOILBBAG5'2"
4'8"	24"	4'8" x 24" x 7"	65, 55	AX22FOILBAG4'8"
4'4"	22"	4'4" x 22" x 6"	45, 37, 30	AX22FOILBBAG4'4"
4'0"	19"	4'0" x 19" x 5"	24	AX22FOILBBAG4'0"



Downwind 8'6" – 7'6"

	width	Internal dimensions for boards up to (in)	AXIS Downwind	product code
8'6"	21"	8'6" x 19" x 12"	8'6" - 120L	AX23DW120BB
8'0"	22"	8'0" x 20" x 12"	8'0" - 110L	AX23DW110BB
7'6"	23"	7'6" x 21" x 12"	7'6" - 100L	AX23DW100BB

Hybrid 6'6" – 6'0"

	width	Internal dimensions for boards up to (in)	AXIS Hybrid	product code
6'6"	24"	6'6" x 22" x 12"	6'6" - 120L	AX23HYBRID120BB
6'4"	25"	6'4" x 23" x 12"	6'4" - 110L	AX23HYBRID110BB
6'2"	26"	6'2" x 24" x 12"	6'2" - 105L	AX23HYBRID105BB
6'0"	28"	6'0" x 26" x 12"	6'0" - 90L	AX23HYBRID90BB



Quiver Bags

Whether you use them for travel, to organise the back of your car or to hide new additions from your partner, these quiver bags will keep all your precious foil gear safe and together.

Made from robust 600D and nylon webbing construction with reinforced sidewalls. We've incorporated a ventilation system disguised as a logo patch, internal pockets for fuselage, spares and tools.

We've sized them generously so they'll accommodate your quiver as it grows whether that extends to multiple wings, multiple masts or both.



Quiverbags 1150 & 1400

	Inside dimensions (mm)	Inside dimensions (in)	product code
1400	1400 x 400 x 200	55.1 x 15.7 x 7.8	AX22FOILQBAG1400
1150	1150 x 400 x 200	45.3 x 15.7 x 7.8	AX22FOILQBAG1150



Bits and pieces
...pimp your ride



Waist Coil Leash 8' S/M

A super comfortable leash that keeps excess length from dangling behind your board and foil. It stays out of the way of your legs and ankles, allowing you to move more freely.

AX22COILEASHWS



Waist Coil Leash 8' L/XL

A super comfortable leash that keeps excess length from dangling behind your board and foil. It stays out of the way of your legs and ankles, allowing you to move more freely.

AX22COILEASHW



STAINLESS Screw and Slider Set

4 x Stainless Steel bolts M8x25mm,
4 x sliders.

AX22SLIDERSET



TITANIUM Screwset and Toolset

A complete set of Titanium screws for our entire foil range, including 4 stainless sliders and Torx tools in both 8M and 6M.

AX22TSCRSET



STAINLESS Screwset and Toolset

A complete set of Stainless Steel screws for our entire foil range, including 4 stainless sliders and Torx tools in both 8M and 6M.

AX22TSCRSET



Titanium Screw and Slider Set

4 x Titanium bolts M8x25mm,
4 x sliders.

AX22TSLIDERSET



Anti-seize Lubricant

Anti-corrosive and anti-seize lubricant. Inhibits electrolytic corrosion between dissimilar metals that will not break down in salt water.

AX22TEFGEL



Windsurf Tuttle Head

Aluminum Windsurfing Tuttle Head Adapter slips into your tuttle fin box so you can then attach your favorite AXIS Aluminum mast. Fits 19mm masts.

AX22TTLTADPTW



SUP Tuttle Head

Aluminum Tuttle Head Adapter slips into your tuttle fin box so you can then attach your favorite AXIS Aluminum mast. Fits 19mm masts.

AX22TTLTADPT



Carbon Mast & Base Plate Cover

Available in sizes to perfectly fit your AXIS Carbon mast, 76, 86 and 96.

AX22CMASTCOVR76
AX22CMASTCOVR86
AX22CMASTCOVR96



Aluminum Mast & Base Plate Cover

Perfectly fitting both 16mm and 19mm AXIS Aluminum masts, including doodad and base plate. Available in sizes to suit your mast, 45, 60, 68, 75, 82, 90, 105.

AX22AMASTCOVR45
AX22AMASTCOVR60
AX22AMASTCOVR68
AX22AMASTCOVR75
AX22AMASTCOVR82
AX22AMASTCOVR90
AX22AMASTCOVR105



V Front Foot Strap

Not flashy, but all about functional detail. Strong, comfy and flexible so you can stand on them if you have to. 3 mounting holes on either size for superior fit.

AX22FOILVSTRP



Single Foot Strap

A single strap, made really strong and flexible. 3 mounting holes on either side for superior fit and comfort.

AX22FOILSTRP

REFERENCE

Wing Screw Guides

High Performance Speed (HPS) – Front Wing Screw Guide

HPS	front screws 4 - 4.5 Nm	middle screw 5.5 - 6 Nm	rear screw 4 - 4.5 Nm	product code
1050	M6 x 14mm	M8 x 20mm	M8 x 20mm	AX22HPS1050
980	M6 x 14mm	M8 x 20mm	M8 x 20mm	AX22HPS980
930	M6 x 14mm	M8 x 16mm	M8 x 20mm	AX22HPS930
880	M6 x 14mm	M8 x 20mm	M8 x 20mm	AX22HPS880
830	M6 x 14mm	M8 x 16mm	M8 x 20mm	AX22HPS830
700	M6 x 14mm	M8 x 16mm	M8 x 20mm	AX22HPS700
650	M6 x 14mm	M8 x 16mm	M8 x 20mm	AX22HPS650

Complete Screwsets: **AXIS Stainless Screwset** (AX22SSCRSET) or **AXIS Titanium Screwset** (AX22TSCRSET)

 Compatible with **Black Fuselage**

Broad Spectrum Carve (BSC) – Front Wing Screw Guide

BSC	front screws	middle screw	rear screw	product code
1120	M8 x 20mm	M8 x 20mm	M8 x 20mm	AX22BSC1120
1060	M8 x 20mm	M8 x 20mm	M8 x 20mm	AX22BSC1060
970	M8 x 20mm	M8 x 20mm	M8 x 20mm	AX22BSC970
890	M6 x 18mm	M8 x 20mm	M8 x 20mm	AX22BSC890
810	M6 x 14mm	M8 x 20mm	M8 x 20mm	AX22BSC810
740	M6 x 14mm	M8 x 20mm	M8 x 20mm	AX22BSC740

Complete Screwsets: **AXIS Stainless Screwset** (AX22SSCRSET) or **AXIS Titanium Screwset** (AX22TSCRSET)

 Compatible with **Red Fuselage**  Compatible with **Black Fuselage**

Torque Values for attaching AXIS Foil components

Note: These values are intended as a guide, historic tightening and use may effect these values, use discretion and common sense when setting up your equipment.

Foil attachment

Front or Rear wings to Alloy Fuselage (Red or Black)

M6 (T30) : 4 - 4.5Nm (40 lb-in) - all lengths

M8 (T40) : 5.5 - 6Nm (+/-50 lb-in) - all lengths

Carbon Mast attachment

Carbon Mast to Fuselage (Red or Black)

M8 30mm (T40) : 5.5 - 6Nm (+/-50 lb-in)

Alloy Component attachment

Base Plate to Mast (all sizes)

M8 35mm (T40) 6.0 - 6.5Nm (+/-50-55 lb-in)

Base Plate to Board using slider (all sizes M25 & M35)

M8 25/35mm (T40) 6.0 - 6.5Nm (+/-50-55 lb-in)

Fuselage through Doodad to Mast (all sizes)

M8 70mm (T40) 6.0 - 6.5Nm (+/-50-55 lb-in)

1.0 Nm = 8.85075 lb-in

Pump & Glide (PNG) – Front Wing Screw Guide

PNG	front screws 4 - 4.5 Nm	middle screw 5.5 - 6 Nm	rear screw 4 - 4.5 Nm	product code
1310	M8 x 20mm	M8 x 20mm	M8 x 20mm	AX22PNG1310
1300	M8 x 20mm	-	M8 x 20mm	AX22PNG1300
1150	M8 x 20mm	-	M8 x 20mm	AX22PNG1150
1010	M8 x 20mm	-	M8 x 20mm	AX22PNG1010
910	M8 x 20mm	-	M8 x 20mm	AX22PNG910
910B	M6 x 14mm	M8 x 20mm	M8 x 20mm	AX22PNG910B
850	M6 x 14mm	M8 x 20mm	M8 x 20mm	AX22PNG850

Complete Screwsets: **AXIS Stainless Screwset** (AX22SSCRSET) or **AXIS Titanium Screwset** (AX22TSCRSET)

 Compatible with **Red Fuselage**  Compatible with **Black Fuselage**

Surf Performance (SP) – Front Wing Screw Guide

SP	front screws	middle screw	rear screw	product code
860	M8 x 20mm	M8 x 20mm	M8 x 20mm	AX22SP860
760	M8 x 20mm	M8 x 20mm	M8 x 20mm	AX22SP760
660	M8 x 20mm	M8 x 20mm	M8 x 20mm	AX22SP660

Complete Screwsets: **AXIS Stainless Screwset** (AX22SSCRSET) or **AXIS Titanium Screwset** (AX22TSCRSET)

 Compatible with **Red Fuselage**

AXIS Research Team (ART) – Front Wing Screw Guide

ART	front screws	middle screw	rear screw	product code
1099	M6 x 14mm	M8 x 20mm	M8 x 20mm	AX22ART1099
999	M6 x 14mm	M8 x 20mm	M8 x 20mm	AX22ART999
899	M6 x 14mm	M8 x 16mm	M8 x 16mm	AX22ART899
799	M6 x 14mm	M8 x 16mm	M8 x 16mm	AX22ART799
699	M6 x 14mm	M8 x 16mm	M8 x 16mm	AX22ART699

Complete Screwsets: **AXIS Stainless Screwset** (AX22SSCRSET) or **AXIS Titanium Screwset** (AX22TSCRSET)

 Compatible with **Black Fuselage**

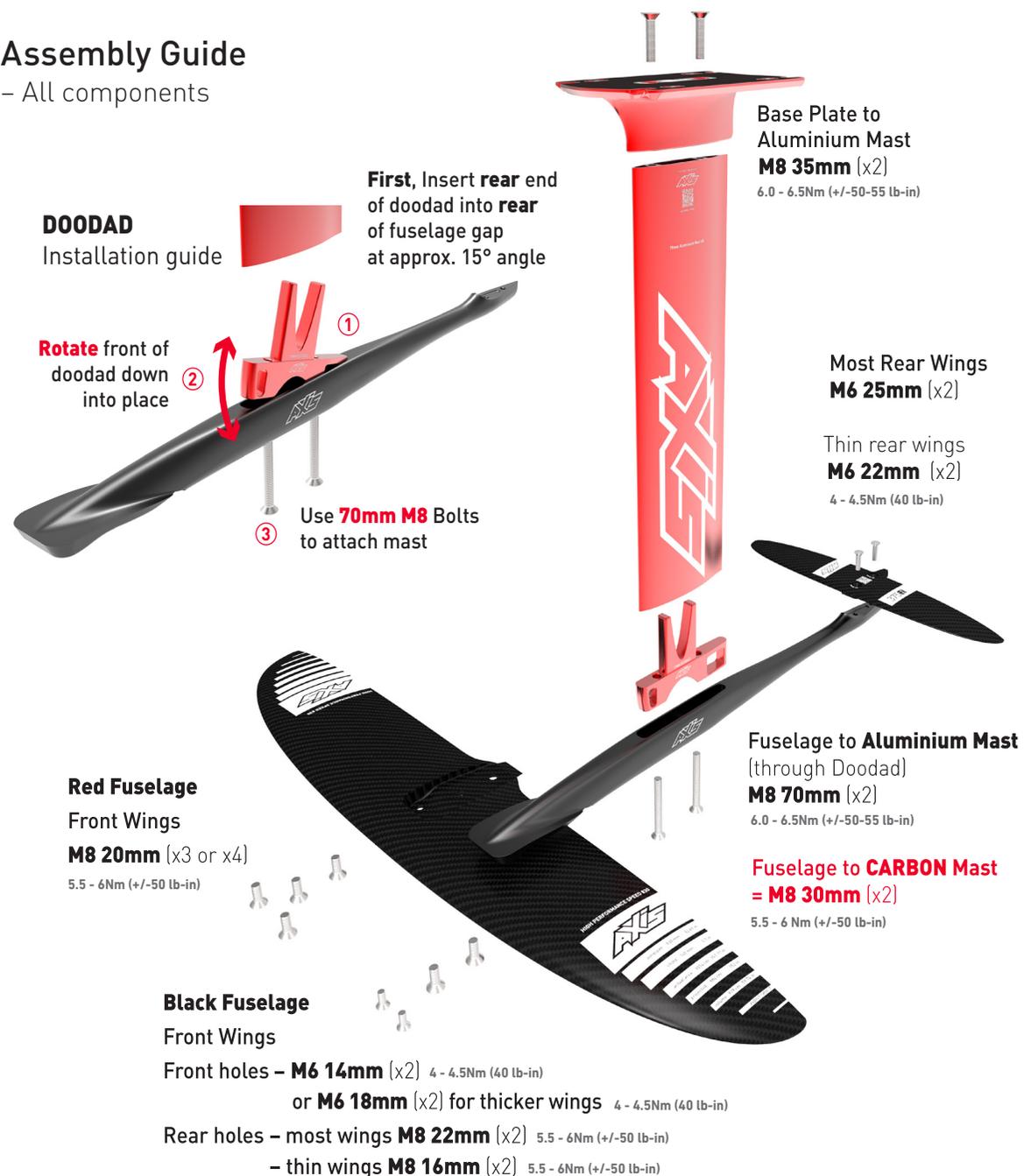
Rear Wing – Screw Guide

	front screw	back screw	wingspan	chord	product code
	4 -4.5 Nm	4 -4.5 Nm			
Freeride					
500A/90	M6 x 25mm	M6 x 25mm	500mm	90mm	AX22RWING-500A/90
500/90	M6 x 25mm	M6 x 25mm	500mm	90mm	AX22RWING-500/90
440/90	M6 x 25mm	M6 x 25mm	440mm	90mm	AX22RWING-440/90
400/90	M6 x 25mm	M6 x 25mm	400mm	90mm	AX22RWING-400/90
Freeride Small					
390/80	M6 x 25mm	M6 x 25mm	390mm	80mm	AX22RWING-390/80
370/80	M6 x 25mm	M6 x 25mm	370mm	80mm	AX22RWING-370/80
340/80	M6 x 25mm	M6 x 25mm	340mm	80mm	AX22RWING-340/80
Pump					
460/60	M6 x 22mm	M6 x 22mm	460mm	60mm	AX22RWING-46V2
Progressive					
475/68	M6 x 22mm	M6 x 22mm	475mm	68mm	AX22RWING-475/68
450/67	M6 x 22mm	M6 x 22mm	450mm	67mm	AX22RWING-450/67
425/66	M6 x 22mm	M6 x 22mm	425mm	66mm	AX22RWING-425/66
400/65	M6 x 22mm	M6 x 22mm	400mm	65mm	AX22RWING-400/65
375/64	M6 x 22mm	M6 x 22mm	375mm	64mm	AX22RWING-375/64
350/63	M6 x 22mm	M6 x 22mm	350mm	63mm	AX22RWING-350/63
325/62	M6 x 22mm	M6 x 22mm	325mm	62mm	AX22RWING-325/62
300/61	M6 x 22mm	M6 x 22mm	300mm	61mm	AX22RWING-300/61
275/58	M6 x 22mm	M6 x 22mm	275mm	58mm	AX22RWING-275/58
250/56	M6 x 22mm	M6 x 22mm	250mm	56mm	AX22RWING-250/56
Speed					
420/60	M6 x 22mm	M6 x 22mm	420mm	60mm	AX22RWING-420/60
380/60	M6 x 22mm	M6 x 22mm	380mm	60mm	AX22RWING-380/60
400F/60	M6 x 22mm	M6 x 22mm	400mm	60mm	AX22RWING-40F/60

Compatible with both **Black Fuselage & Red Fuselage**

Assembly Guide

– All components



M8 30mm (x4) (Use with sliders in AXIS Boards with **Black** Fin Boxes) 5.5 - 6Nm (+/-50 lb-in)

M8 25mm (x4) (Use with sliders in AXIS Boards with **White** Fin Boxes) 5.5 - 6Nm (+/-50 lb-in)

FRONT WING – USAGE GUIDE (Suggestions only, always adjust for rider ability, weight and local conditions)

High Performance Speed	HPS	Downwind	Surf	Tow Surf	SUP	Wing	Wake	Windsurf	Kite	Pump	product code
	1050	●●●●●	●●●●	●●●●	●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●	●●●●●
980	●●●●	●●●●	●●●●	●●●●	●●●●●	●●●●●	●●●●	●●●●●	●●●●	●●●●	AX22HPS980
930	●●●	●●●●	●●●●	●●●●	●●●●●	●●●●●	●●●	●●●●●	●●●●	●●●	AX22HPS930
880	●●●	●●●●	●●●●	●●●●	●●●●●	●●●●●	●●●	●●●●	●●●●●	●●●	AX22HPS880
830	●●●	●●●●	●●●●	●●●●	●●●●	●●●●●	●●●	●●●	●●●●●	●●●	AX22HPS830
700	●●	●●●●	●●●●	●●●●	●●●	●●●●●	●●	●●	●●●●●	●●	AX22HPS700
650	●	●●●	●●●●	●●●●	●●	●●●●	●	●	●●●●	●	AX22HPS650
Broad Spectrum Carve	BSC	Downwind	Surf	Tow Surf	SUP	Wing	Wake	Windsurf	Kite	Pump	product code
	1120	●●●●●	●●●	●●●	●●●●●	●●●●●	●●●●●	●●●●	●	●●●●●	AX22BSC1120
	1060	●●●●●	●●●●	●●●	●●●●●	●●●●●	●●●●●	●●●●●	●	●●●●●	AX22BSC1060
	970	●●●●●	●●●●	●●●●	●●●●●	●●●●●	●●●●●	●●●●	●●	●●●●●	AX22BSC970
	890	●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●	●●●●	●●●●	●●●●	AX22BSC890
	810	●●●	●●●●●	●●●●●	●●●●●	●●●●	●●●	●●●●	●●●●●	●●●●	AX22BSC810
	740	●●	●●●●●	●●●●●	●●●	●●●●●	●●	●●	●●●●●	●●	AX22BSC740
Pump & Glide	PNG	Downwind	Surf	Tow Surf	SUP	Wing	Wake	Windsurf	Kite	Pump	product code
	1310	●●●●●	●●	●●	●●●●	●●●●●	●●●●●	●●●	●	●●●●●	AX22PNG1310
	1300	●●●●●	●●	●●	●●●●	●●●●●	●●●●●	●●●●	●	●●●●●	AX22PNG1300
	1150	●●●●●	●●●	●●	●●●●	●●●●●	●●●●●	●●●●●	●	●●●●●	AX22PNG1150
	1010	●●●●●	●●●●	●●●	●●●●●	●●●●●	●●●●●	●●●●●	●	●●●●●	AX22PNG1010
	910	●●●●	●●●●●	●●●●	●●●●●	●●●●●	●●●●●	●●●●	●●●●	●●●●●	AX22PNG910
	910B	●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●	●●●●	●●●●●	AX22PNG910B
850	●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●	●●●●	●●●●●	AX22PNG850	
Surf Performance	SP	Downwind	Surf	Tow Surf	SUP	Wing	Wake	Windsurf	Kite	Pump	product code
	860	●●	●●●●●	●●●●●	●●●●●	●●●●	●●●	●●	●●●●●	●●	AX22SP860
	760	●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●	●●●	●●●●●	●●●	AX22SP760
660	●	●●●●●	●●●●●	●●	●●	●●	●	●●●●●	●	AX22SP660	
AXIS Research Team	ART	Downwind	Surf	Tow Surf	SUP	Wing	Wake	Windsurf	Kite	Pump	product code
	1099	●●●●●	●●●	●●	●●●●	●●●●●	●●●●	●●●●	●	●●●	AX22ART1099
	999	●●●●●	●●●●	●●	●●●●	●●●●●	●●●	●●●●	●	●●●	AX22ART999
	899	●●●●	●●●●	●●●	●●●	●●●●●	●●	●●●●	●●●	●●●	AX22ART899
	799	●●●	●●●	●●●●	●●	●●●●●	●●	●●●●	●●●●	●●●	AX22ART799
	699	●●	●●●	●●●●●	●●	●●●●●	●●	●●●●	●●●●	●●●	AX22ART699

■ Compatible with Red Fuselage
 ■ Compatible with Black Fuselage

REAR WING – USAGE GUIDE (Suggestions only, always adjust for rider ability, weight and local conditions)

	Downwind	Surf	Tow Surf	SUP	Wing	Wake	Windsurf	Kite	Pump	product code
Freeride										
500A/90	●●●	●●●	●●●	●●●	●●●	●●●	●●●●●	●●	●●●	AX22RWING-500A/90
500/90	●●●	●●●	●●●	●●●●●	●●●●●	●●●●●	●●	●●●	●●●●●	AX22RWING-500/90
440/90	●●●●●	●●●●	●●●●	●●●●●	●●●●●	●●●●●	●●	●●●	●●●●●	AX22RWING-440/90
400/90	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●	●●●●●	●●●●●	AX22RWING-400/90
Freeride Small										
390/80	●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●	●●●●	●●●●	AX22RWING-390/80
370/80	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●	●●●●●	●●●●	AX22RWING-370/80
340/80	●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●	●●●●●	●●●●	AX22RWING-340/80
Pump										
460/60	●●●●●	●●●●	●●●●	●●●●●	●●●●●	●●●●●	●●	●●●	●●●●●	AX22RWING-46V2
Progressive										
475/68	●●●●●	●●●●	●●●	●●●●	●●●●●	●●●●	●●●	●●●	●●●●	AX22RWING-475/68
450/67	●●●●●	●●●●	●●●	●●●●	●●●●●	●●●●	●●●	●●●	●●●●	AX22RWING-450/67
425/66	●●●●●	●●●●	●●●	●●●●	●●●●●	●●●●	●●●	●●●	●●●●	AX22RWING-425/66
400/65	●●●●	●●●●	●●●●	●●●●	●●●●●	●●●	●●●	●●●●	●●●	AX22RWING-400/65
375/64	●●●●	●●●●●	●●●●●	●●●	●●●●●	●●●	●●●	●●●●●	●●	AX22RWING-375/64
350/63	●●●●	●●●●●	●●●●●	●●●	●●●●●	●●●	●●●	●●●●●	●	AX22RWING-350/63
325/62	●●●●	●●●●●	●●●●●	●●●	●●●●●	●●●	●●●	●●●●●	●	AX22RWING-325/62
300/61	●●●●	●●●●●	●●●●●	●●●	●●●●●	●●●	●●●	●●●●●	●	AX22RWING-300/61
275/58	●●●●	●●●●●	●●●●●	●●●	●●●●●	●●●	●●●	●●●●●	●	AX22RWING-275/58
250/56	●●●●	●●●●●	●●●●●	●●●	●●●●●	●●●	●●●	●●●●●	●	AX22RWING-250/56
Speed										
420/60	●●●●●	●●●●	●●●●	●●●●	●●●●●	●●●●	●●●●●	●●●●●	●●●●	AX22RWING-420/60
380/60	●●●●●	●●●●	●●●●	●●●●	●●●●●	●●●●	●●●●	●●●●●	●●●●	AX22RWING-380/60
400F/60	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●	●●●●●	●●●●●	AX22RWING-40F/60

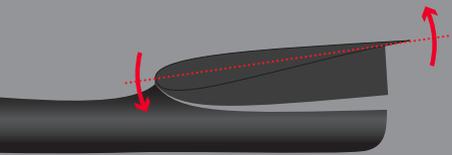
Compatible with both **Black Fuselage & Red Fuselage**

Foil angles & Shims

Demystifying Shims...
When and if you need one,
and how it all goes together

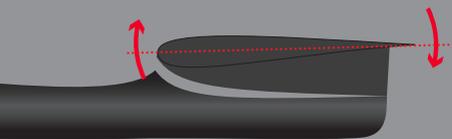
Positive Shimming

(Increasing the angle between front and back wing)



Negative Shimming

(Decreasing the angle between front and back wing)



Let's start with the front wing, it is normally set at an angle upwards from the fuselage.

The angle is measured from the **chord-line** of the foil section relative to the **main-line** through the fuselage. Most of the AXIS front wings are set around 1 degree upwards as this is about the sweet spot for the foil section used. (beginner, or slower foil sections set on a greater angle) More angle up creates more lift more drag, less angle creates less lift less drag. The idea being that the fuselage is as much as possible running at zero degrees through the water when foiling.

Most of the AXIS rear wings are set around 1.5 degrees downwards relative to the main-line of the fuselage. (the lower aspect learner rear wings set at a greater angle down) This creates a force to balance against your front foot pressure so that you can balance on the front wing.

This gives a stock difference between the front and rear wing of 2.5 degrees total. This is the most important number to consider by far. If the rear wing is angled down by an additional 1 degree the difference between the front and rear wing becomes 3.5 degrees and as such should be described as a **positive shim** as 3.5 degrees is greater than the stock 2.5 degrees. If the rear wing is angled down 1 degree less the difference becomes 1.5 degrees and is should be described as **negative shim** or minus shimming as the difference between the front and rear becomes less.

Most riders with a weight of around 85kg riding in normal conditions don't really need or benefit from shimming the rear wing. The foils should ride fine out of the box bolted straight on to the fuselage.

Positive shimming is useful for heavier riders to provide more front foot pressure

Negative shimming is useful for lighter riders as it reduces the front foot pressure and is faster

Regarding baseplate shimming, as described above the front wing rides at an angle, this angle is determined by the size of the foil, your weight and the speed that you are going. (there are more details which affect this but generally speaking)

Two riders different weights going the same speed on the same wing, the heavier rider will have a great angle (foil lifted more at the leading edge) to maintain the required lift whereas the lighter rider will ride at a flatter angle.

When you first take off on a foil you will have a greater angle of attack on the front wing to create the required lift and flatten it off as you go faster. You may even be riding at a negative angle of the front wing when really going fast.

All of this you don't really have to think about as your body adjusts automatically.

If you have too much angle on the front wing it will come up and out of the water. Too small an angle and your board will crash down.

The front wing is bolted to the fuselage and the mast is connected to the fuselage at 90 degrees. The mast is bolted to the baseplate at 90 degrees.

When AXIS builds a board it is generally designed for the 85kg rider (or the correct rider weight for the volume) to use with an AXIS foil in the center of the fin-boxes.

The board should feel balanced and ride relatively flat between front and back foot pressure and should not require a base plate shim to correct the angle.

Other brands will mount their boxes at their chosen position for another foil system and angle of the board might not feel quite right.

You can correct this quite easily with a baseplate shim. If you feel or can see watching a video that you are riding nose down or nose up most of the time a baseplate shim is required to correct the angle that the board flies at.

It should feel when you touchdown that the board touches just in front of the baseplate and this helps you pop back up without going off balance. If the angle is not right you will touch down with the nose first or tail first, both resulting in a crash. The baseplate shim can also make the pressure between your feet more comfortable and balanced feeling.

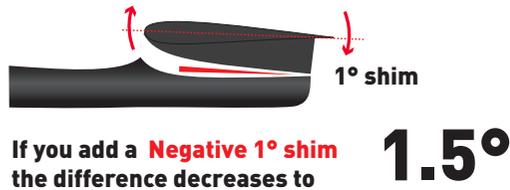


FRONT FOIL **Up 1°** REAR FOIL **Down 1.5°** then overall difference is **2.5°**

Adding a **Positive** shim (we call it **positive** because it is **increasing** the angle between front and back wing, usually achieved by lifting the back of rear wing) is useful for heavier riders to provide more front foot pressure, can have a slowing effect.

Adding a **Negative** shim (we call it **negative** because it is **decreasing** the angle between front and back wing, usually achieved by lifting the front of rear wing) is useful for lighter riders as it reduces the front foot pressure and can be faster.

Our stock setup with no shim is designed to work for the vast majority of riders.



FRONT WING

Angle Of Attack
To Fuselage **UP**

ART

1099	1.0°
999	1.0°
899	1.0°
799	1.0°
699	1.0°

HPS

1050	1.0°
980	1.0°
930	1.0°
880	1.0°
830	1.0°
700	1.0°
650	1.0°

BSC

1120	2.0°
1060	2.0°
970	2.0°
890	2.0°
810	2.0°
740	2.0°

PNG

1310	2.0°
1300	2.0°
1150	2.0°
1010	2.0°
910	2.0°
910B	2.0°
850	2.0°

SP

860	2.0°
760	2.0°
660	2.0°

REAR WING

Angle Of Attack
To Fuselage **DOWN**

FREERIDE

500A/90	2.5°
500/90	2.5°
440/90	2.5°
400/90	2.5°

FREERIDE SMALL

390/80	2.5°
370/80	2.5°
340/80	2.5°

PROGRESSIVE

475/68	1.5°
450/67	1.5°
425/66	1.5°
400/65	1.5°
375/64	1.5°
350/63	1.5°
325/62	1.5°
300/61	1.5°
275/58	1.5°
250/56	1.5°

PUMP

460/60	1.5°
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SPEED

420/60	1.5°
380/60	1.5°
400F/60	1.5°

■ Compatible with Red Fuselage
■ Compatible with Black Fuselage
■ Compatible with both Black Fuselage & Red Fuselage



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