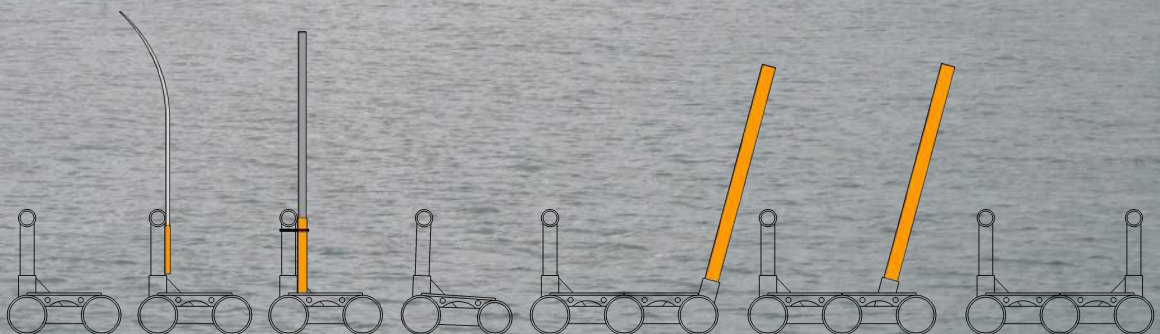


TOFORD AQUACULTURE

CELEBRATING 20 YEARS OF CAGE FARMING



TOFORD AQUACULTURE

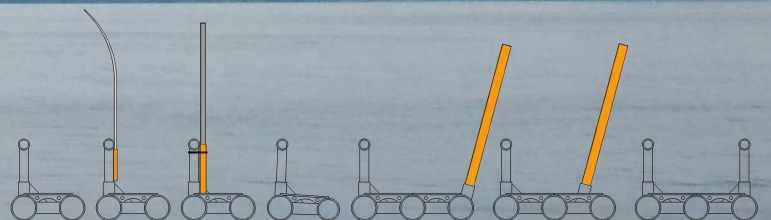
RESPECT THE SEA

As a member of a coastal community that largely depends on the ocean, we've learned to respect the power of the sea for what it provides and what it can take away, and our respect is reflected in our works, in what we designed and in what we make.



Table of Content

- 2. About Our Cage Design and Manufacturing
- 5. Our Cages
- 6. Standard and Optional Features
 - Double-Wall Neck
 - Signature Cool-to-Touch Orange Handrail
 - Optional Features
- 8. Balanced Stanchions
- 10. Circular Cages
- 11. Double Collar Stanchions
 - Standard Stanchions
 - Balanced Stanchions
- 12. Predator Series Stanchions
 - Anti-Flyer Stanchion
 - Anti-Seal Stanchion
- 14. Extra-Wide Predator-Proof Cage
- 16. Square Cages
- 17. Blue Ocean Platform
- 18. Pontoon Walkway
- 19. Single Pipe Cages
- 20. Raft Boat
- 23. HDPE Pipes
- 25. Turnkey Solution
- 26. Repair Service



TOFORD AQUACULTURE

CELEBRATING 20 YEARS OF CAGE AQUACULTURE!

At Toford Aquaculture, our cages are built on the foundation of our extensive knowledge and experience in HDPE pipe manufacturing since 1990. Building on our HDPE pipe expertise we manufactured our first aquaculture cage in 1995. Over the years as customers demand larger and stronger cages, our capability have also grown with our customers.

OVER 1100 CAGES DELIVERED!

Since 1995 our professional team have built, assembled and delivered over 1100 cages across most parts of Asia - notably Japan, Taiwan, Philippine, Malaysia and Indonesia - and to customers as far as Mexico and Russia.

Our project scope have grown from small 20m-diameter cage projects that needed only a small crane to today's projects with 80m-diameter cages that required several large cranes to lift.

TYPHOON READY!

Today we are trusted by our customers worldwide, especially by ones in areas with frequent Typhoon activities for our typhoon ready cages with unmatched strength and durability delivered by Toford.

Standard 20m diameter cage with 250m stanchions - Amakusa, Kyushu, Japan



At Toford Aquaculture, we insist on using only the top quality HDPE100 materials for the manufacturing of our brackets and cages.

A GOOD CAGE STARTS WITH GOOD PIPES

To cut cost, many suppliers use lower density and lower quality PE material which may look equally strong and sturdy, and works just as fine in the first few years, but they don't have the same durability and strength after just a few years of heavy abuse.

Moreover, unlike most stanchions on the market today that are made by injection moulding or rotational moulding, we believe in stanchions that are constructed and welded from top quality HDPE100 pipes and materials for their superior strength and design flexibility. Because our stanchions are not constrained by moulds, we can easily cater to the design needs of our customers without the lengthy and complex process of mould design.

UNMATCHED DESIGN FLEXIBILITY!

To manufacture Toford's brackets, the pipes are cut to shape and butt-fused together by computer-controlled machines to ensure consistent heating temperature during the melting process; precision timing to minimize temperature loss when joining pipes together

after the initial melting; and constant applied pressure during the fusing process to ensure pipes are properly fused together. Our extensive experience has taught us that these are the critical control points for the strongest butt-fused joints and consistent quality, making Toford's brackets superior in terms of strength and durability, and most importantly, making our cages typhoon ready.

Quality is in the Details

In addition to the computer controlled butt-fusion process that ensures the strength and durability of our brackets with consistency, every one of our brackets is hand-finished with additional welding for extra reinforcement by our finest technicians.

Every visible edge of our brackets is carefully trimmed and routed with the finest craftsmanship; the routed edges are not only for the aesthetics, but also to eliminate potential sources of chafe and net damage which could lead to fish escapes.

Professional Installation Service

To ensure the highest quality possible, all cages are assembled by our team of certified professionals with years of international field experience.





From the early days of small scale project to the large scale projects of today, our capability have also grown to serve the growing demands of our customers.



OUR CAGES

From the early days of 200mm brackets to today's 630mm brackets, Toford has continued to invest in research and development to serve the evolving needs of our customers, enabling them to focus on raising fish and not worry about the structural integrity of the cages.

MOST COMPREHENSIVE CAGE OFFERINGS!

Today we have the most comprehensive cage offerings on the market. Our stanchions can be used to construct cages in either 1, 2 or 3 floating pipe configurations, forming cages in circular or square shape, or as a platform.

Standard Circular Cages remain the most popular configuration demanded by our customers. They are built using our standard stanchions with collars for two equal-size floating pipes that are 250mm in diameter to the largest 630mm in diameter, forming cages as small as 13m in diameter to as large as 100m.

Balanced Stanchions are specially designed to address the issue of uneven walkways/ platform and handrail deformation as the result of unbalanced loading of the floating pipes.

Square Cages are also available in various sizes and configurations - as a standalone cage

from 7x7m to 31x31m, or can be grouped together in a platform configuration such as our Blue Ocean Platform.

Blue Ocean Platform is composed by our triple and/or standard double collar stanchions, this platform configuration is for more moderate and sheltered waters, it features an extra wide center aisle walkway using our triple collar stanchions and optional walkway around the outer perimeter of the cages using either double or triple collar stanchions for maximum operation flexibility and easy access from cage to cage.

Extra-Wide Predator-Proof Cage is especially designed to safeguard farms that are



constantly under attack by predators. Built using our extra-wide triple collar stanchions, this cage is equipped with anti-seal net pole and anti-flyer carbon fiber net support; the 2-3m extra-wide distance keeps the seals from reaching the holding net from above and



CAGES - STANDARD AND OPTIONAL FEATURES

Double-Wall Neck

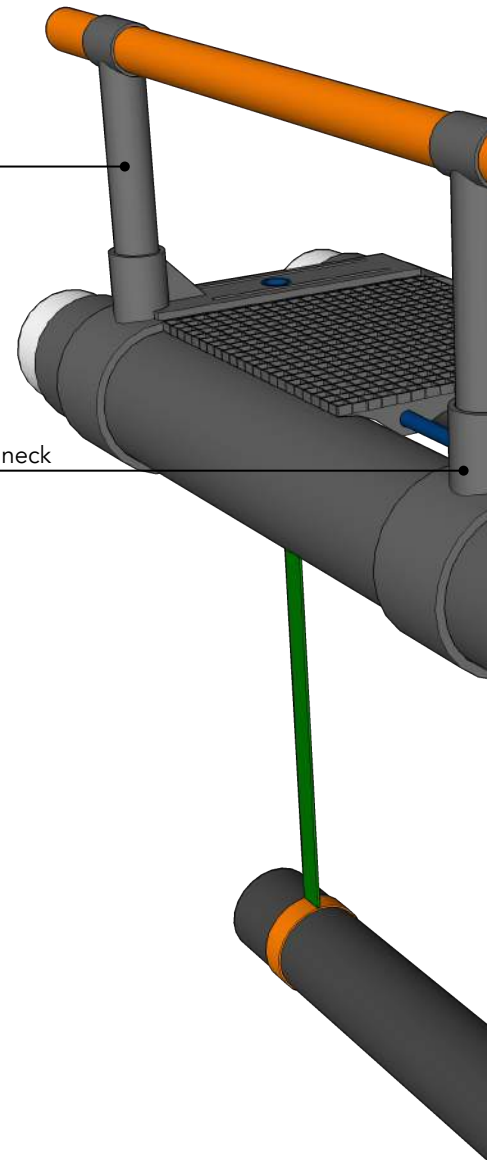
Our special double-wall neck, a standard for all our brackets, has the handrail upright securely butt-fused together with the handrail socket at our facility, which eliminates any wiggle movements between the handrail upright and the socket.

The widening of the handrail socket is a common issue seen at farms with cages built using two-piece brackets - brackets and handrail upright that are shipped in two pieces and then assembled and secured with pegs at the job site.

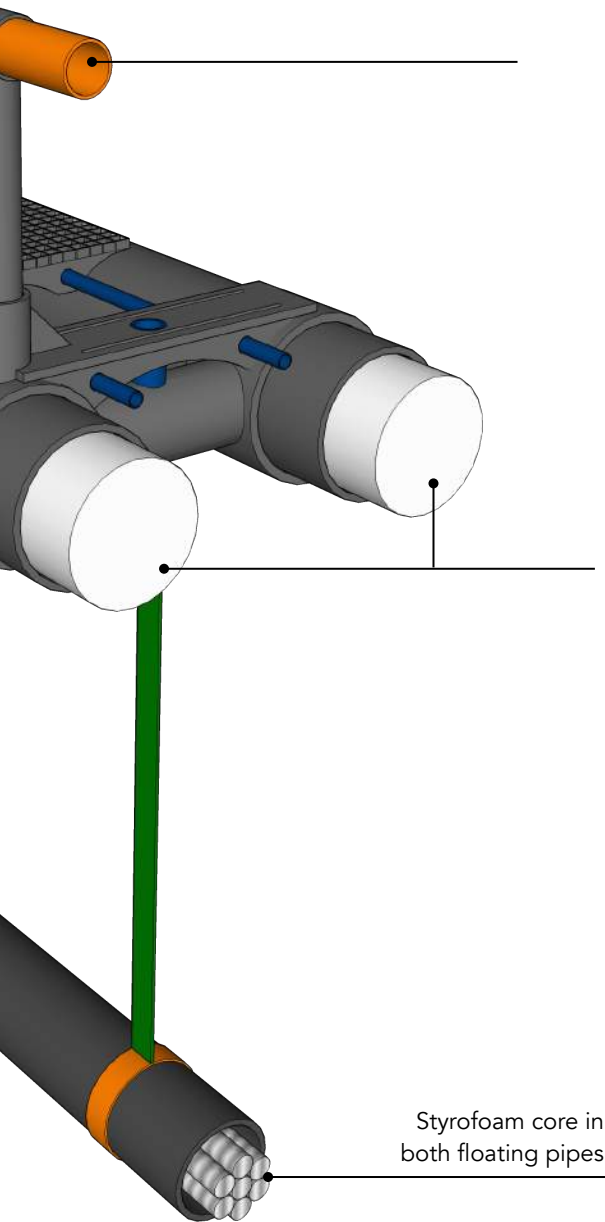
Because the handrails uprights must be inserted into the handrail upright socket of the brackets at the assembly site, there must be enough wiggle room in order to insert the handrails into the sockets. It is this extra wiggle space that leads to the widening of the handrail sockets, eventually development of cracks, and ultimately leading to the collapse of handrail circle.

Extra sturdy uprights
Made with HDPE100-SDR11

Extra durable double-wall neck



Standard double-wall neck for extra strength and durability



Signature Cool-to-Touch Orange Handrail

Orange handrail is our signature and standard feature for all our cages since the very beginning with the first cage we delivered back in 1995, and has since been adapted by many in the industry.

The orange handrails are not only highly visible out on the sea on darker or stormy days, they are also cooler to touch after prolonged exposure to the sun.

The bright orange makes the cage easily spottable by ships from afar, thus reducing the likelihood of collisions, safeguarding valuable fish stocks and investments.

The bright color also does not absorb heat as much as conventional black pipes, making our orange handrails cooler to touch - up to **20° cooler**, making them safe for the farmers to touch with their bare hands.

Polystyrene Fillings

All our cages come with styrofoam fillings inside one or both floating pipes as a standard feature for a virtually unsinkable cage.

Sinker Tube

For controlling the shape and volume of the net under strong current and for when there is a need to crowd the fish stocks for assessment, treatment, or harvest. Choices of water, steel wire cable or chains are available for the required weight and rigidity. The tube is secured by either choices of rope strops or stainless steel brackets.



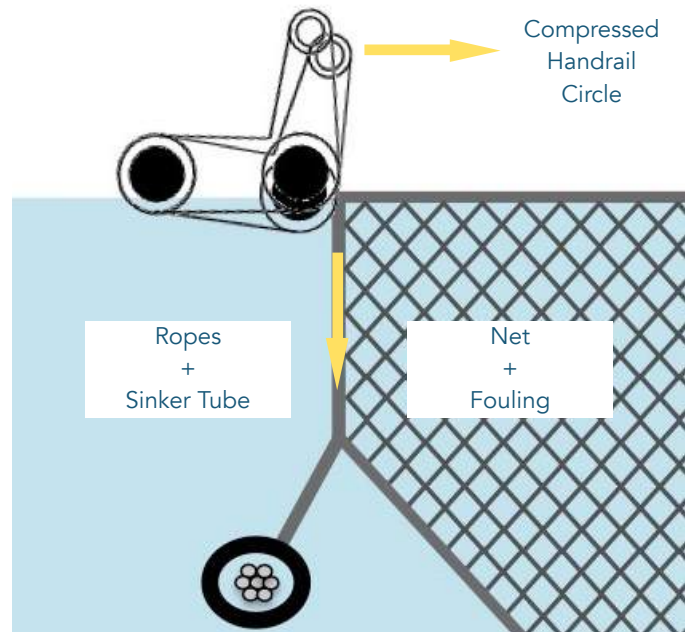
355m cage with KikkoNet and sinker tube

CAGES - BALANCED STANCHION

Our balanced stanchion is specially designed to address two issues commonly seen at farms: outer floating pipe floating higher than the inner floating pipe thus resulted in unlevelled working platform, and handrail pipe deformation as the result of compression of the handrail circle.

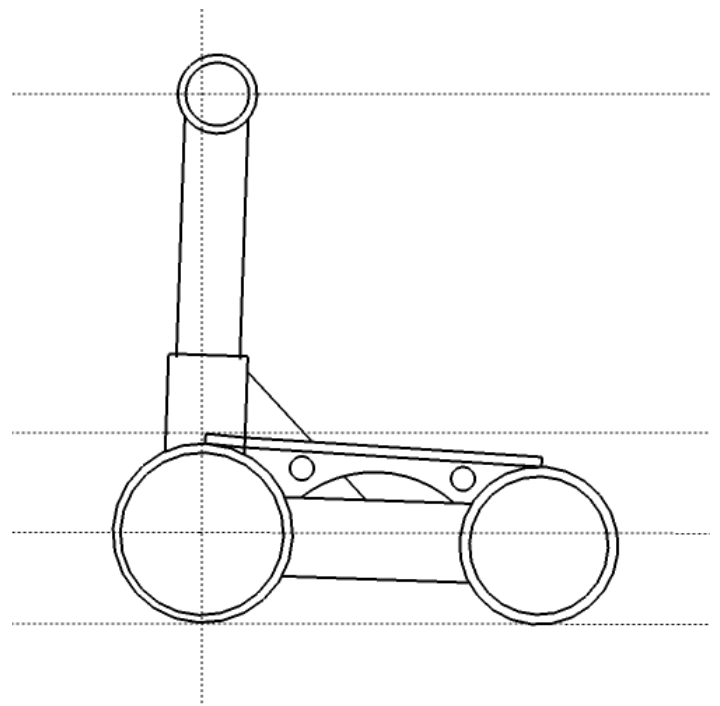
These two problems may seem like two separate structural issues, but in fact, they are caused by the inner floating pipe being pulled more below the surface than the outer floating pipe by the combine weights of the net, sinker-tubs and additional weights as the net soaks in water and fouls over usage. Because the outer floating pipe is not loaded with all these weight, it floats higher up than the inner floating pipe, leading to unlevelled walkways and platforms, making it unsafe and uneasy for the farmers to stand on and work safely. Additionally, because the whole cage is warped inwards, the fixed handrail uprights are now angled towards the center, making the handrail circle smaller. But since the length of the handrail pipe is fixed, the only way to adjust for the smaller circle is by bending which leads to handrail deformation.

Higher outer floating pipe as the result of heavy loading on inner floating pipe



The combine weight of the ropes, sinker tube, the net and all the fouling pulls inner floating pipe further below the water surface, which leads to uneven walkway and compressed handrail circle.

To address this issue, our specially designed balanced stanchion features a smaller outer collar for a smaller diameter – less buoyant - floating pipe and a larger inner collar for a larger diameter – more buoyant - floating pipe to ensure leveled platform for the farmers to stand securely thus work with ease under a safe environment, and to prevent handrail pipe deformation as the result of handrail circle





35m-diameter cage with balanced stanchions, 355 & 315mm floating pipes. Oita, Kyushu, Japan

CIRCULAR CAGES

- Available with our standard Double Collar Stanchions or our Balanced Stanchions
- Signature cool-to-touch orange handrail
- Manufactured only with HDPE100 material, SDR-11 or SDR-17 pipes
- Double-Wall Neck for extra strength and durability
- Standard styrofoam fillings in one or both floating pipes for unsinkable cage

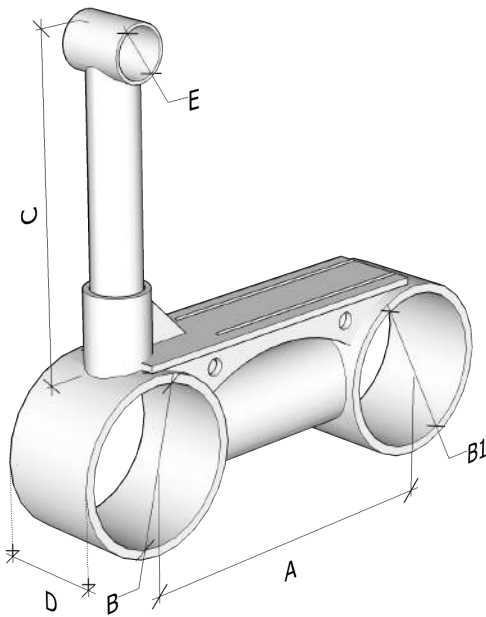
Circular Cage Specifications

Cage Models	250	315	355	400	450	500	560	630
Cage Circumferences	40-70m	70-90m	90-120m	110-140m	140-180m	160-210m	190-250m	230-315m
Cage Diameters	13-22m	20-30m	30-38m	35-45m	45-56m	50-66m	60-80m	70-100m
Standard Stanchions								
Inner & Outer Floating Pipe	Ø 250mm	Ø 315mm	Ø 355mm	Ø400mm	Ø 450mm	Ø 500mm	Ø 560mm	Ø 630mm
Balanced Stanchions								
Inner Floating Pipe	-	Ø 315mm	Ø 355mm	Ø 400mm	Ø 450mm	Ø 500mm	Ø 560mm	-
Outer Floating Pipe	-	Ø 250mm	Ø 315mm	Ø 355mm	Ø 400mm	Ø 450mm	Ø 500mm	-
Number of Stanchions	20-35	35-45	45-60	44-56	56-72	64-84	76-100	92-120
Stanchions Separation	2m	2m	2m	2.5m	2.5m	2.5m	2.5m	2.5m
Handrail Pipe	Ø 110mm	Ø 110mm	Ø 110mm	Ø 125mm	Ø 125mm	Ø 140mm	Ø 140mm	Ø 160mm
Handrail Upright	Ø 125mm	Ø 125mm	Ø 125mm	Ø 160mm	Ø 160mm	Ø 160mm	Ø 160mm	Ø 180mm
Handrail Upright Height	0.82m	0.82m	1m	1m	1m	1m	1m	1m
Mooring Brackets	8	12	12	12	16	16	20	20
Polystyrene Filling	△ 1 or 2	△ 1 or 2	△ 1 or 2	△ 1 or 2	△ 1 or 2	△ 1 or 2	△ 1 or 2	△ 1 or 2
Net Hooks	○	○	○	○	○	○	○	○
Walkway	○	○	○	○	○	○	○	○

△ Standard ○ Optional - Not Available

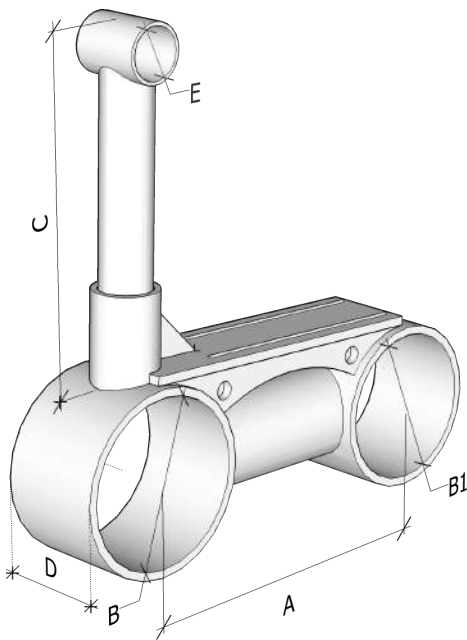


CAGES - DOUBLE COLLAR STANCHIONS



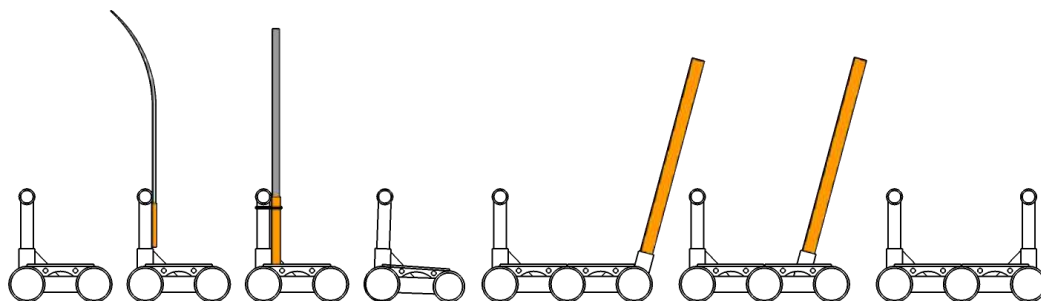
Standard Double Collar

	A	B (I.D.)	B1 (I.D.)	C	D	E
FY-200D	500mm	Ø 206mm	Ø 206mm	820mm	200mm	Ø 125mm
FY-225D	500mm	Ø 232mm	Ø 232mm	820mm	200mm	Ø 125mm
FY-250D	550mm	Ø 258mm	Ø 258mm	820mm	200mm	Ø 140mm
FY-315D	650mm	Ø 325mm	Ø 325mm	820mm	250mm	Ø 140mm
FY-355D	750mm	Ø 366mm	Ø 366mm	950mm	250mm	Ø 140mm
FY-400D	850mm	Ø 412mm	Ø 412mm	950mm	300mm	Ø 160mm
FY-450D	950mm	Ø 464mm	Ø 464mm	950mm	300mm	Ø 160mm
FY-500D	1100mm	Ø 515mm	Ø 515mm	950mm	300mm	Ø 180mm
FY-560D	1100mm	Ø 577mm	Ø 577mm	950mm	330mm	Ø 180mm



Balanced Stanchions

	A	B (I.D.)	B1 (I.D.)	C	D	E
FY-315/250D	620mm	Ø 325mm	Ø 258mm	820mm	250mm	Ø 140mm
FY-355/315D	720mm	Ø 366mm	Ø 325mm	820mm	250mm	Ø 140mm
FY-400/355D	820mm	Ø 412mm	Ø 366mm	950mm	300mm	Ø 160mm
FY-450/400D	920mm	Ø 464mm	Ø 412mm	950mm	300mm	Ø 160mm
FY-500/450D	970mm	Ø 515mm	Ø 464mm	950mm	300mm	Ø 180mm
FY-560/500D	1020mm	Ø 577mm	Ø 515mm	950mm	330mm	Ø 180mm



PREDATOR SERIES STANCHIONS

The predator series stanchions are developed to suit the special protection requirements of the farmers with different farming needs and in different geographical locations.

Factory Welded Pole Supports

Each of our Predator Series stanchions is manufactured with a pole support - made with durable HDPE100 pipe - securely welded onto the double-walled handrail upright for extra strength and durability.



An adult male elephant seal could weight as much as 2,000-5000kg, measuring 4.2-5.8m long. Some seals could jump as high as high as 1.5-2.5m

Anti-Flyer Stanchions are designed for the attachment of bird net poles for the suspension of nets without the need for any supporting structure inside the cage. This makes cages built using our Anti-Flyer Stanchions an ideal solution for fish that are sensitive to foreign objects inside the cage.

Whether it is using our light-weight carbon fiber Anti-Flyer Net Pole or with a common stainless steel rod, the bird net can be tighten

Virtually maintenance free

Additionally, unlike most pole extension solutions - poles tied loosely with ropes or wires to the uprights - seen at farm sites with cages built using moulded stanchions, our pole supports are virtually maintenance free. The farmers no longer need to look for loose poles and retie them one by one, thus freeing up more time for raising fish.

and stretched to its maximum tension without worrying that the poles would collapse.

Anti-Seal Stanchion are designed to keep the seals out and to sustain repeat collision with seals when they attempt to jump into the cage.

To handle the repeated abuse by seal, our Anti-Seal Stanchions are equip with a welded 110mm-HDPE100 pipe to the handrail upright for the attachment of a steel pipe that is 3in in diameter and 3m tall.

Pole support tied to handrail uprights with ropes.



Toford's bird net support without the pole



PREDATOR SERIES STANCHIONS

ANTI-FLYER STANCHIONS

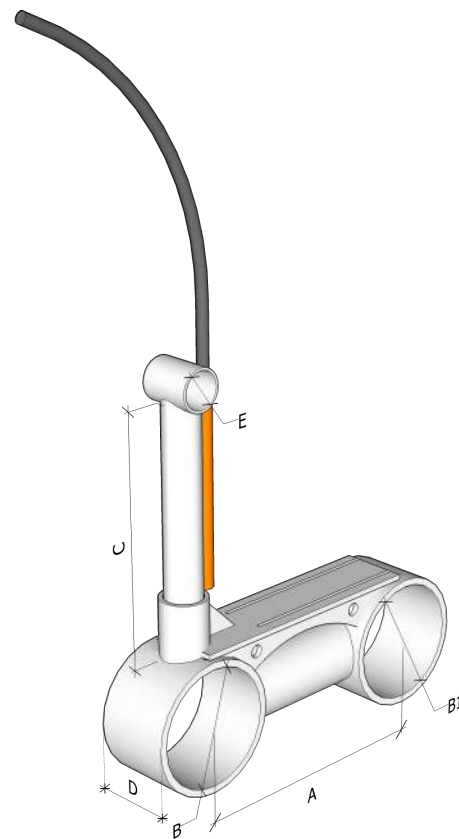
- Durable maintenance free welded pole supports
- Fast and easy installation
- No additional net support needed inside the cage

Anti-Flyer Stanchion Specifications

	A	B, B1 (I.D.)	C	D	E	F (I.D.)
FY-400D	850mm	Ø 412mm	Ø 1000mm	300mm	Ø 160mm	Ø 46mm
FY-450D	950mm	Ø 464mm	Ø 1000mm	300mm	Ø 160mm	Ø 46mm
FY-500D	1050mm	Ø 515mm	Ø 1000mm	300mm	Ø 180mm	Ø 46mm
FY-560D	1150mm	Ø 577mm	Ø 1000mm	330mm	Ø 180mm	Ø 46mm

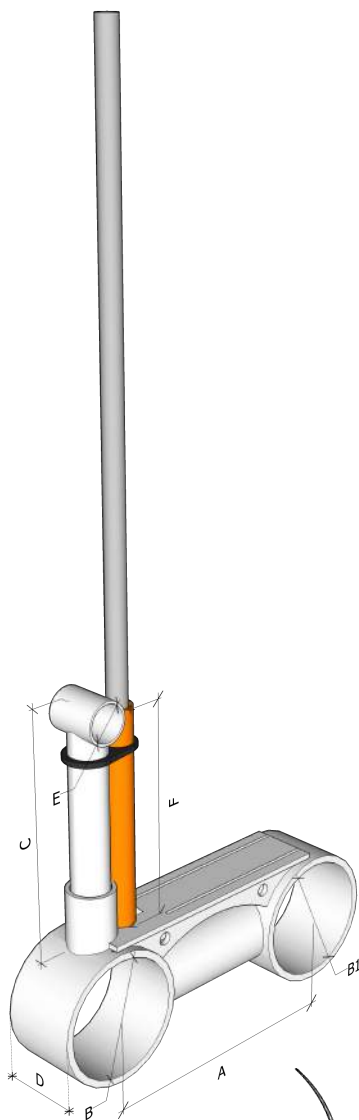
Carbon Fiber Anti-Flyer Net Poles

	O.D.	Length
RDM 200	Ø 43mm	2m
RDM 245	Ø 43mm	2.45m
RDM 400	Ø 43mm	4m
RDM 490	Ø 43mm	4.9m



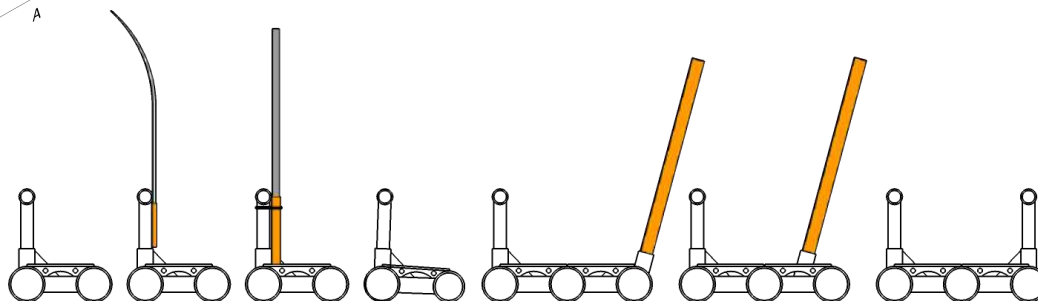
ANTI-SEAL STANCHIONS

- Extra strength seal net pole to handle the biggest seal
- Ø3"-3m tall stainless steel pole to keep seals from jumping in



Anti-Seal Stanchion Specifications

	Anti-Seal Stanchion Specifications						Steel Pole	
	A	B, B1 (I.D.)	C	D	E	F	O.D.	Length
FY-400D	850mm	Ø 412mm	Ø 1000mm	300mm	Ø 160mm	950mm	76.2mm	3m
FY-450D	950mm	Ø 464mm	Ø 1000mm	300mm	Ø 160mm	950mm	76.2mm	3m
FY-500D	1050mm	Ø 515mm	Ø 1000mm	300mm	Ø 180mm	950mm	76.2mm	3m
FY-560D	1150mm	Ø 577mm	Ø 1000mm	330mm	Ø 180mm	950mm	76.2mm	3m



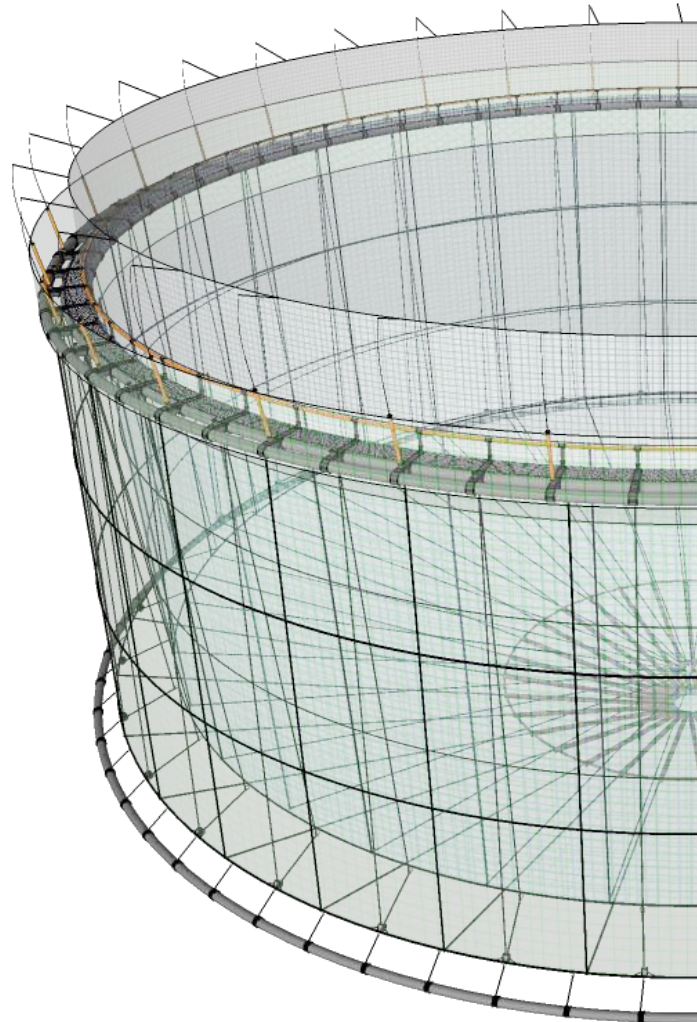
EXTRA-WIDE PREDATOR-PROOF CAGE

- Designed to protect valuable fish stocks against predators from above and below the water surface
- Fully enclosed walkways for extra protection of operators and temporary equipment
- Single durable HDPE pole for placement of anti-flyer bird net and predator net

This cage is developed specially for farms that are constantly under predator attacks from above and below the water surface. The cage is built using our triple-collar brackets that features 2m+ extra-wide separation for all around protection from above and below.

Above the water surface, each of the triple-collar brackets is equipped with a single 3m-tall HDPE pole for both the anti-jump fence around the outer perimeter to keep seals from jumping into the cage and for holding a carbon fiber pole for the anti-flyer net to prevent birds attacking from above.

Underneath the surface, an extra layer of protective net attached to the outermost floating pipe encloses the holding pen and acts as buffer zone that keeps predators from reaching to the holding net even when attacked by predators at full speed. This extra layer of protective net not only eliminates direct fish loss from attacks, it also reduces the indirect production losses from loss of appetite, thus stunned growth, as the result of shocks from attacks.

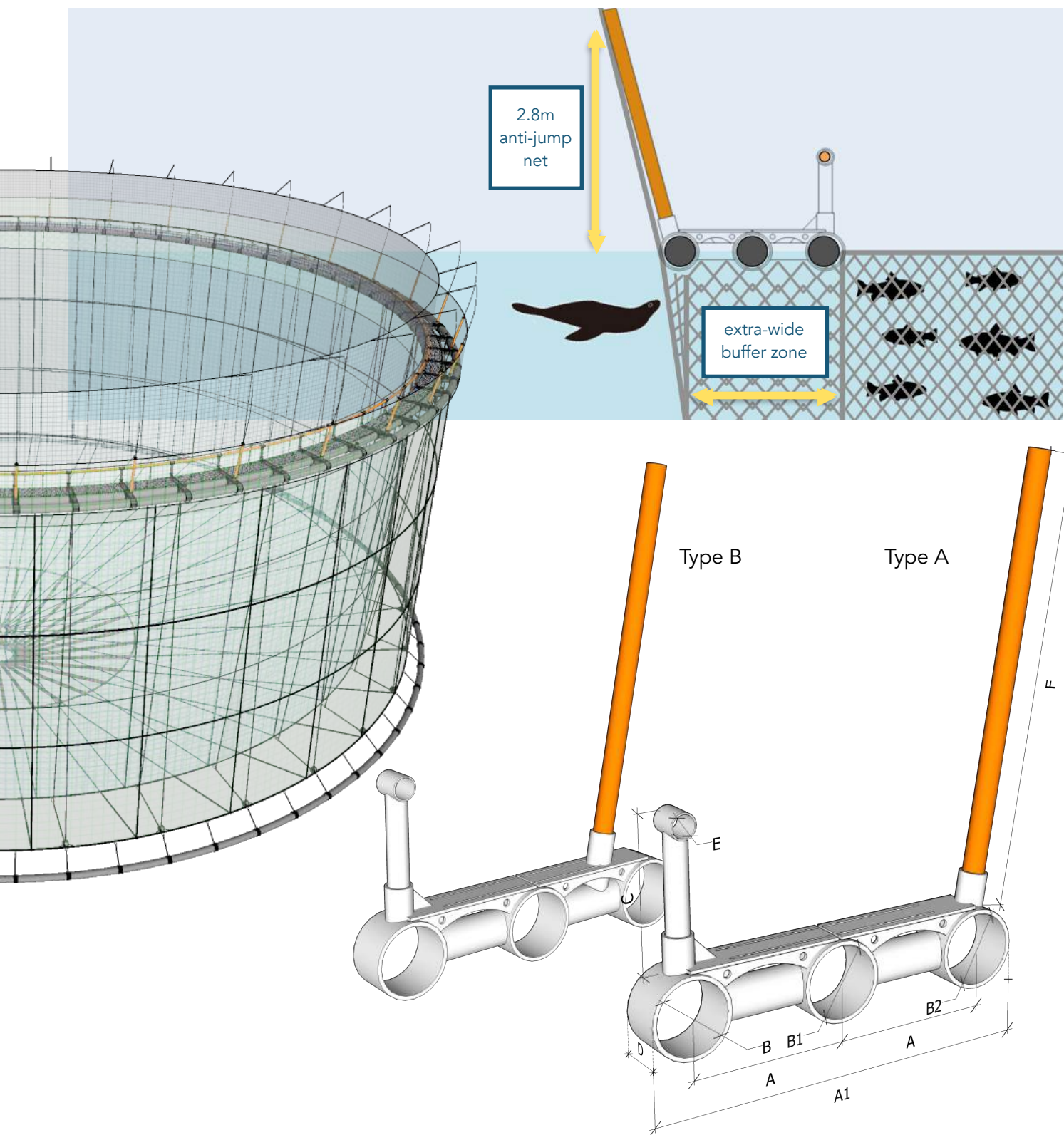


Extra-Wide Cage Specifications

Cage Models	400	450	500	560
Cage Circumferences	110-160m	150-190m	180-240m	230-310m
Cage Diameters	35-50m	45-60m	55-75m	75-100m
Floating Pipes	Ø 400mm	Ø 450mm	Ø 500mm	Ø 560mm
Number of Stanchions	48	68	80	112
Distance Between Brackets	2.5m	2.5m	2.5m	2.5m
Bracket Depth	2.16m	2.38m	2.64m	2.52m
Handrail Pipe	Ø 125mm	Ø 125mm	Ø 140mm	Ø 140mm
Handrail Upright	Ø 160mm	Ø 160mm	Ø 160mm	Ø 160mm
Handrail Upright Height	1m	1m	1m	1m
Mooring Brackets	12	16	16	20
Polystyrene Filling	△	△	△	△
Net Hooks	○	○	○	○
Walkway	○	○	○	○

△ Standard

○ Optional



Extra-Wide Stanchions

	A1	A	B, B1, B2 (I.D.)	C	D	E	F
FY-400T	2157m	850mm	Ø 412mm	1000mm	300mm	Ø 160mm	2.8m
FY-450T	2380m	950mm	Ø 464mm	1000mm	300mm	Ø 160mm	2.8m
FY-500T	2564m	1000mm	Ø 515mm	1000mm	300mm	Ø 180mm	2.8m
FY-560T	2730m	1050mm	Ø 577mm	1000mm	330mm	Ø 180mm	2.8m

SQUARE CAGES

Although square cages are usually for more moderate waters and sheltered sites, Toford's square cages are constructed to have the same quality, strength and durability as our Typhoon-Ready circular cages.

Square cages are ideal for use as nursery cage or harvest cage. The main advantage of square

cages is their ability to be configured as a group. They can be configured as individual cages or grouped together in 2x2, 2x3, 2x4, 2x5 or even 2x6 configuration for easy access from cage to cage to maximize operation efficiency.

Square Cage Specification

	FY-250SC7	FY-250SC9	FY-315SC11	FY-315SC13
Standard Cage Size	7x7m	9x9m	11x11m	13x13m
Floating Pipe	Ø 250mm	Ø 250mm	Ø 315mm	Ø 315mm
Number of Stanchions	12	16	20	24
Stanchions Separations	2m	2m	2m	2m
Handrail Pipe	Ø 110mm	Ø 110mm	Ø 110mm	Ø 110mm
Handrail Upright	Ø 125mm	Ø 125mm	Ø 125mm	Ø 125mm
Handrail Upright Height	0.82m	0.82m	0.82m	0.82m
Polystyrene Filling	△	△	△	△
Net Hooks	○	○	○	○
Walkway	○	○	○	○

△ Standard

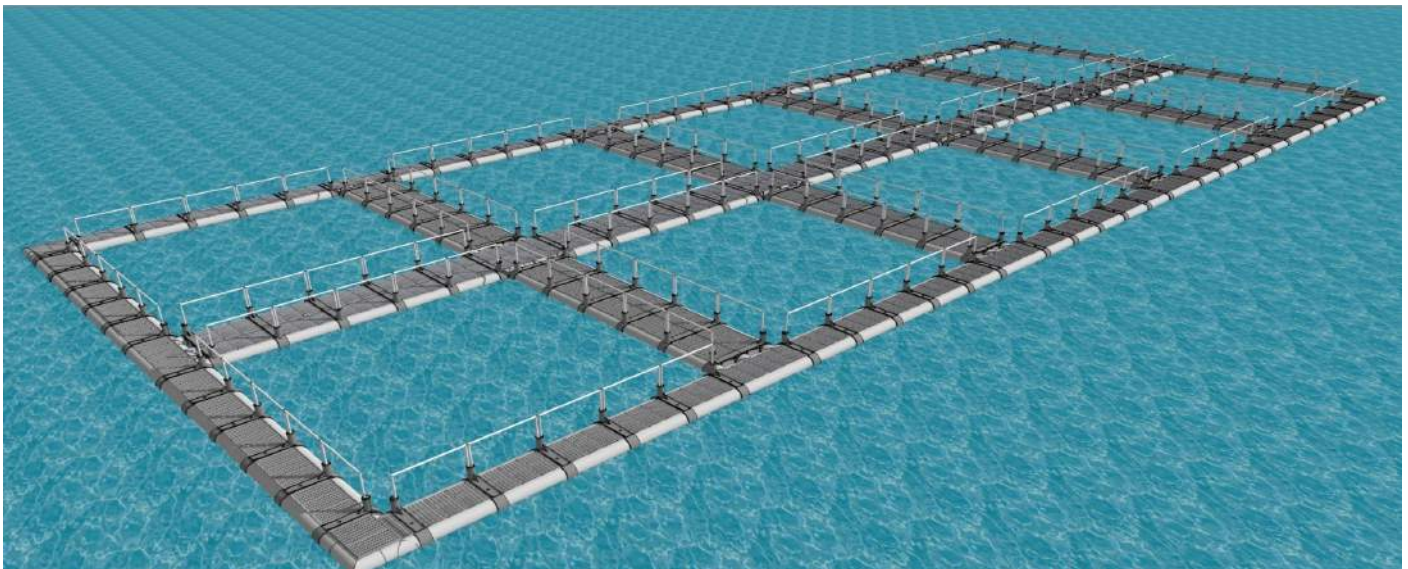
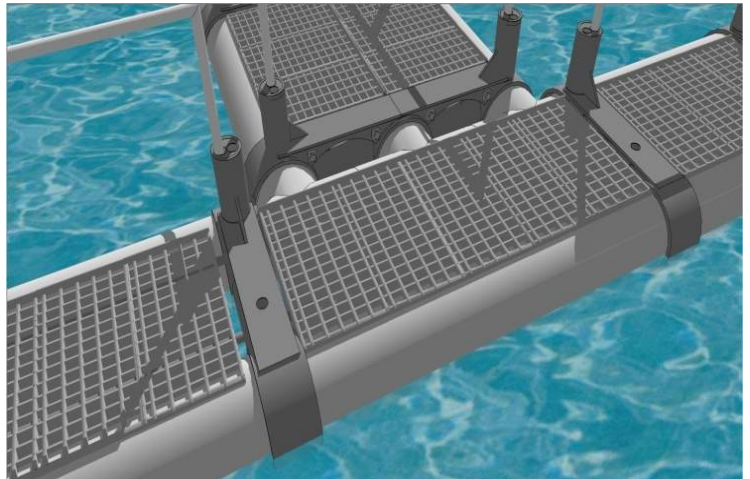
○ Optional



BLUE OCEAN PLATFORM

- Maximize operational efficiency
- Easy access from cage to cage
- Optional extra wide perimeter aisle

Our largest and most farmers friendly square cage system available. Composed by our triple and standard double collar stanchions, the Blue Ocean Platform features an extra wide center walkway and optional walkways around the perimeter for additional access and operational efficiency, allowing the farmers to easily move from cage to cage and inspect every corner with ease.



Blue Ocean Platform Specification

	FY-315BOS			FY-355BOS			FY-400BOS			FY-450BOS		FY-500BOS			
Floating Pipe	Ø 315mm			Ø 355mm			Ø 400mm			Ø 450mm		Ø 500mm			
Center Aisle Width	1.6m			1.6m			2.2m			2.2m		2.7m			
Center Aisle Stanchions	OOO			OOO			OOO			OOO		OOO			
Perimeter Aisle Width	1.0 / 1.6m			1.0 / 1.6m			1.3 / 2.2m			1.3 / 2.2m		1.6 / 2.7m			
Perimeter Stanchions	OO or OOO			OO or OOO			OO or OOO			OO or OOO		OO or OOO			
Stanchions Separations	2m			2m			2.5m			2.5m		2.5m			
Polystyrene Filling	△			△			△			△		△			
Walkway	△/O			△/O			△/O			△/O		△/O			
Configuration	5x5m	7x7m	9x9m	7x7m	9x9m	11x11m	9x9m	11x11m	13x13m	13x13m	15x15m	17x17m	17x17m	19x19m	21x21m
2x1	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
2x2	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
2x3	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
2x4	+	+		+	+		+	+		+					
2x5	+			+			+								
2x6	+			+											

△ Standard

O Optional

+ Available

OOO Triple Collar

OO Double Collar

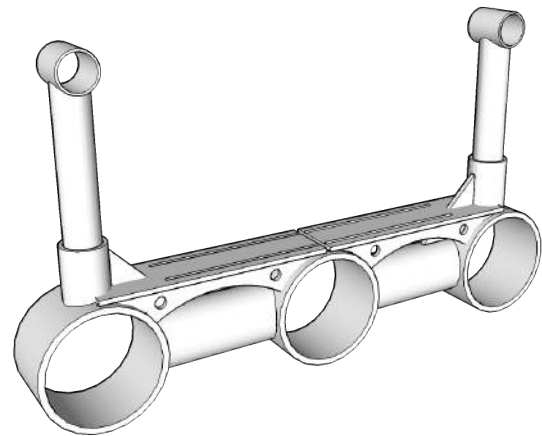
PONTOON WALKWAY

Designed with safety, stability and durability in mind, our triple collar pontoon walkway could be used as a simple bridge from point A to point B, or as an ideal addition to groups of cages for easy access from cage to cage for enhanced operational efficiency.

The walkways are assembled using the modified triple collar stanchion used in our

extra-wide cages, and are built to have the same sturdiness and strength as our typhoon ready cages.

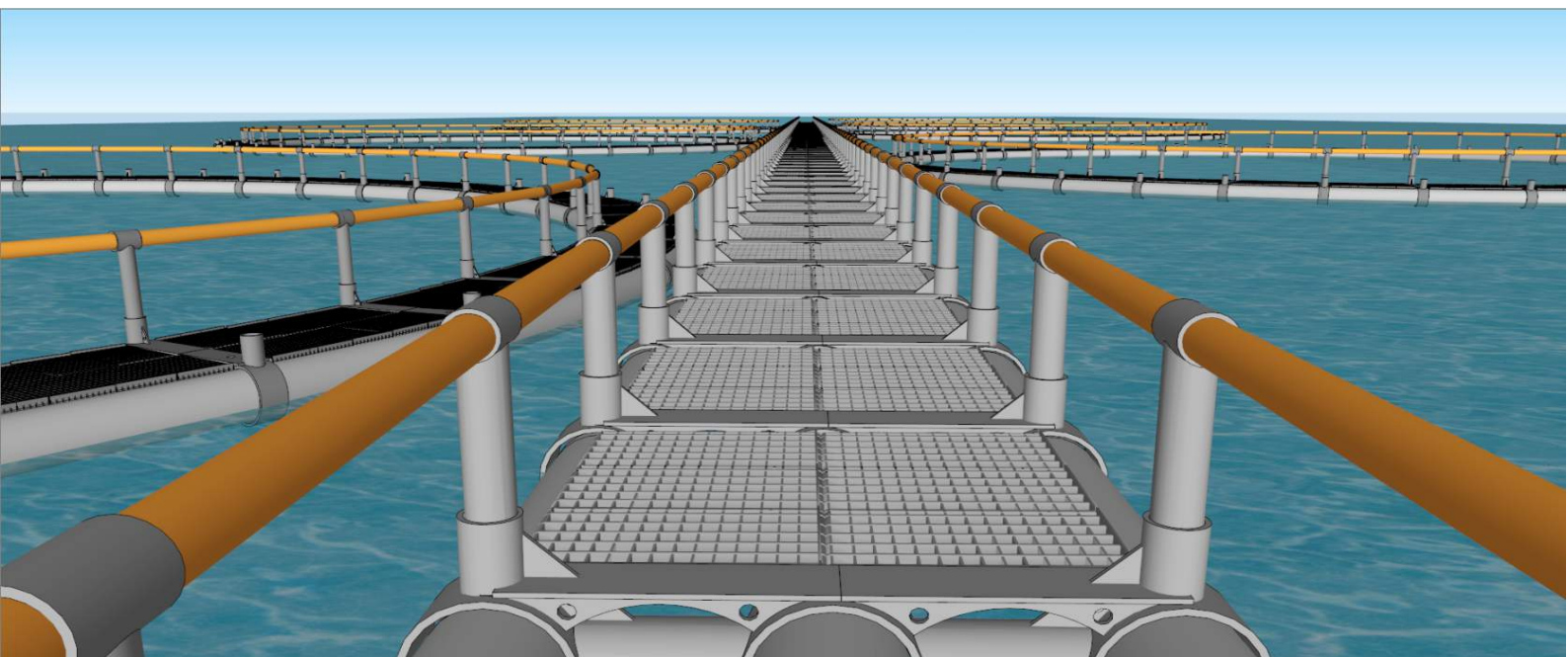
The walkways feature removable handrails for added convenience and come with injection moulded anti-slip walkway panels for added safety.



Pontoon Walkway

	WKS-315T	WKS-450T
Floating Pipe	Ø 315mm	Ø 450mm
Walkway Width	1.3m	1.9m
Stanchions Separations	2m	2.5m
Handrail Pipe	Ø 110mm	Ø 125mm
Handrail Upright	Ø 125mm	Ø 160mm
Handrail Height	0.82m	1.0m
Walkway Panel	△	△

△ Standard



SINGLE PIPE CAGES

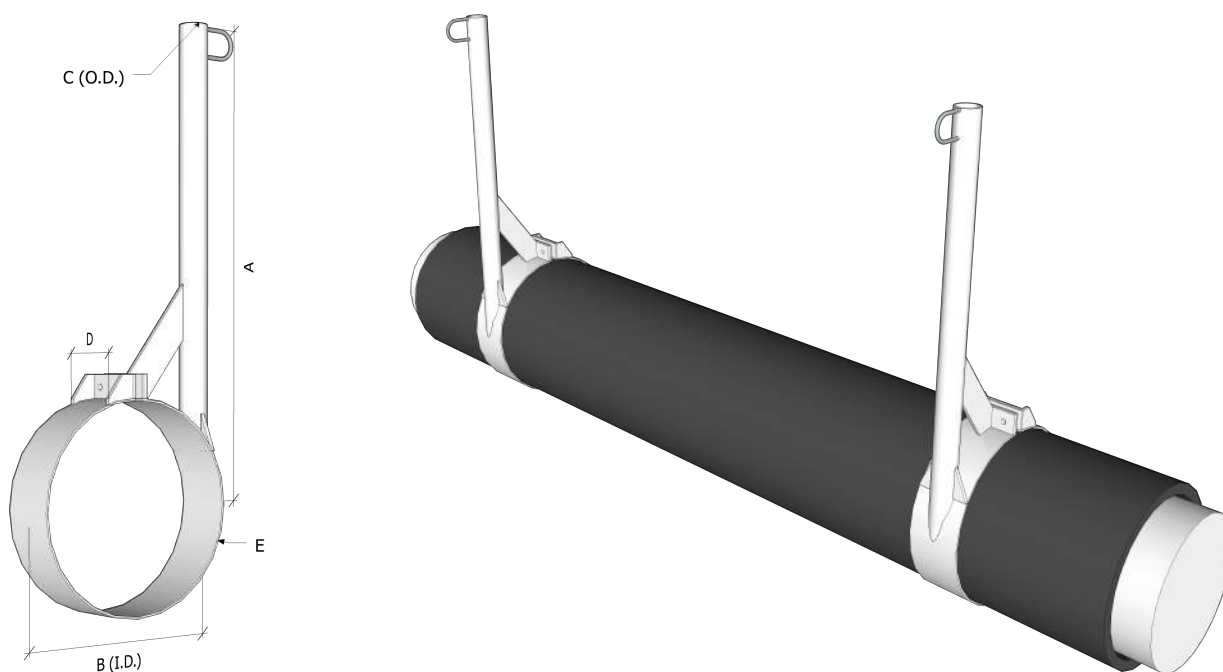
For low cost solution, single floating pipe cages are available with our single collar stainless steel stanchions. Like our welded plastic stanchions, our stainless steel stanchions allow maximum design flexibility and strength. Each stanchion is made with high quality stainless steel material and is finished with hot dip galvanization for corrosion protection.

- High strength & low cost
- Available with any design in small batches
- All stainless steel components are hot dip galvanized after manufactured

Single Collar Cage

Cage Models	400	450	500	560
Cage Circumferences	110-140m	140-180m	160-210m	190-250m
Cage Diameters	35-45m	45-56m	50-66m	60-80m
Floating Pipe	Ø400mm	Ø 450mm	Ø 500mm	Ø 560mm
Number of Steel Stanchions	44-56	56-72	64-84	76-100
Stanchions Separation	2.5m	2.5m	2.5m	2.5m
Polystyrene Filling	△	△	△	△

△ Standard ○ Optional



Single Collar Bracket

	A	B	C	D	E
FY-400SS	1160m	400mm	Ø 60.5mm	150mm	5mm
FY-450SS	1160m	450mm	Ø 60.5mm	150mm	5mm
FY-500SS	1160m	500mm	Ø 60.5mm	150mm	5mm
FY-560SS	1160m	560mm	Ø 60.5mm	150mm	5mm

RAFT BOAT

- Rugged HDPE100 pontoon for landing on virtually any beach surface and navigating in shallow waters
- Design to fit in standard 40ft shipping container for easy transport.
- Open flat deck designed for optimal cargo handling and operation

Toford's raft boat combines the simplicity of a proven traditional design with the modern ruggedness of the HDPE pipes for a quality built, user friendly and low maintenance craft.

Our raft boat features a durable flat pontoon hull made with HDPE100 pipes, allowing the boat to be used in shallow bodies of water and

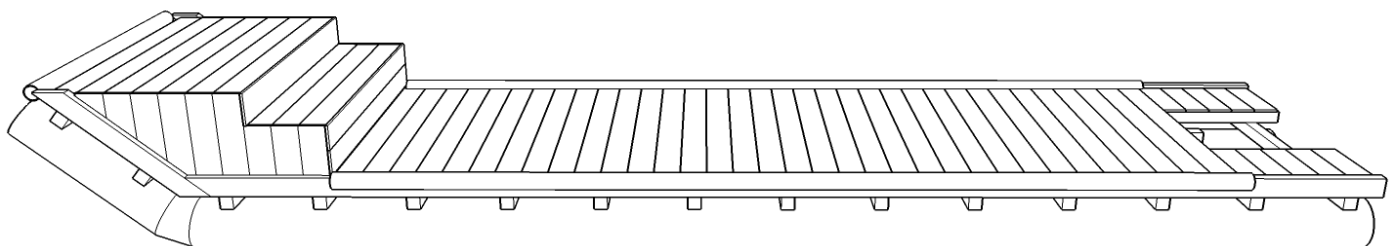
to land on virtually any beach surface. The open flat deck is designed for optimal operation and handling of cargos or fish nets. The edges of the deck are lined with round HDPE guards for smooth handling of fishing nets without the drags, making our raft boat an ideal vessel for small cargos, fishing, and as workboat.

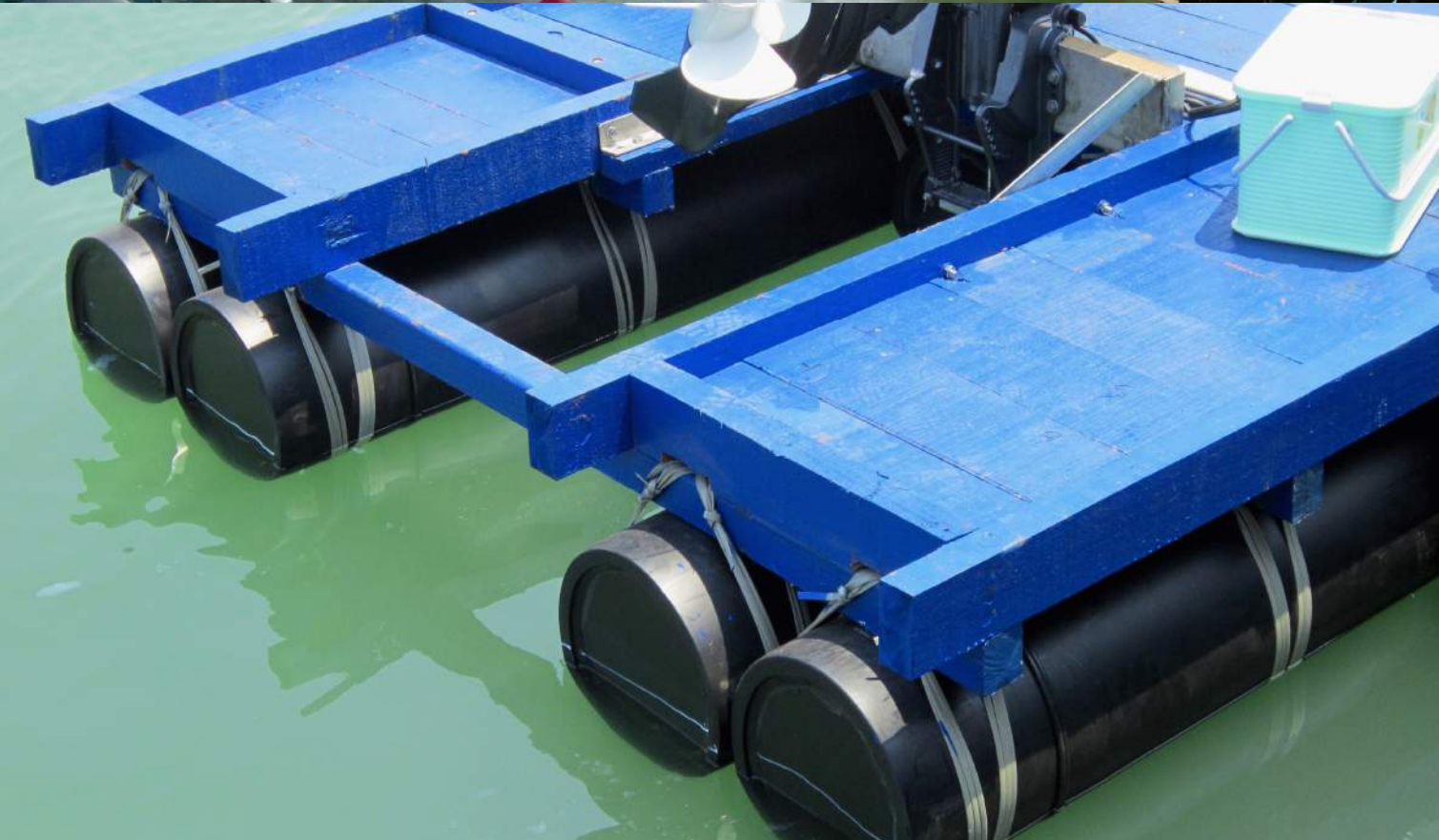
Raft Boat Specification

	RB-0950S	RB-0950D	RB-1150S	RB1150D
Length (LOA)	9.5m	9.5m	11.5m	11.5m
Beam (BOA)	2.25m	2.25m	2.45m	2.45m
Deck Size	2.25x7m	2.25x7m	2.45x9m	2.45x9m
Hull Pipe (HDPE100-SDR17)	Ø 355mm	Ø 355mm	Ø 400mm	Ø 400mm
Layers of Pipes	single	double	single	double
Weight	1970kg	2660kg	2740kg	3840kg
Maximum Horse Power	115hp	115hp	140hp	140hp
Recommended Horse Power	from 60hp	from 85hp	from 85hp	from 115hp
Maximum Load	1000kg	3000kg	2100kg	5600kg
Deck	wood	wood	wood	wood
Winch	○	○	○	○
Safety Rails	○	○	○	○

△ Standard

○ Optional







HDPE PIPES

We've been a manufacturer of high quality, HDPE pipes since 1990. For aquaculture use, here at Toford we insist on using top quality HDPE100 material for our stanchions, brackets and cages for its superior strength, durability, flexibility and UV resistance.

HDPE Pipes for Aquaculture Use

In recent years, HDPE pipes has become a commodity, in most cases, one can easily obtain a rough estimate of the price per meter based on the total weight of the pipe. However, sometimes the weight of the pipes can be deceiving.

To cut cost, some vendors might use cheaper recycled material or combine with other additive to increase the weight and by making the walls thicker. The pipes might look the same, or appear to be stronger because of thicker wall, but the added impurity reduces the durability of the pipes against repeated wear and tear by the sea and the intense expose of the sun.



HDPE100 Pipe Specifications

O.D.	Wall Thickness (mm)			Standard Colors	
	SDR-17	SDR-13.6	SDR-11	Black	Orange
32mm	2.4	2.4	2.9	+	+
40mm	2.4	2.9	3.6	+	+
50mm	2.9	3.7	4.5	+	+
63mm	3.7	4.6	5.7	+	+
75mm	4.4	5.5	6.8	+	+
90mm	5.3	6.6	8.2	+	+
110mm	6.5	8.1	8.2	+	+
125mm	7.4	9.2	10.0	+	+
140mm	8.2	10.3	12.7	+	+
160mm	9.4	11.8	14.5	+	+
180mm	10.6	13.2	16.4	+	+
200mm	11.8	14.7	18.2	+	
225mm	13.2	16.5	20.5	+	
250mm	14.7	18.4	22.7	+	
280mm	16.5	20.6	25.5	+	
315mm	18.5	23.2	28.6	+	
355mm	20.9	26.1	32.3	+	
400mm	23.5	29.4	36.4	+	
450mm	26.5	33.1	40.9	+	
500mm	29.4	36.8	45.5	+	
560mm	32.9	41.2	50.9	+	
630mm	37.1	46.3	57.3	+	

+ Available



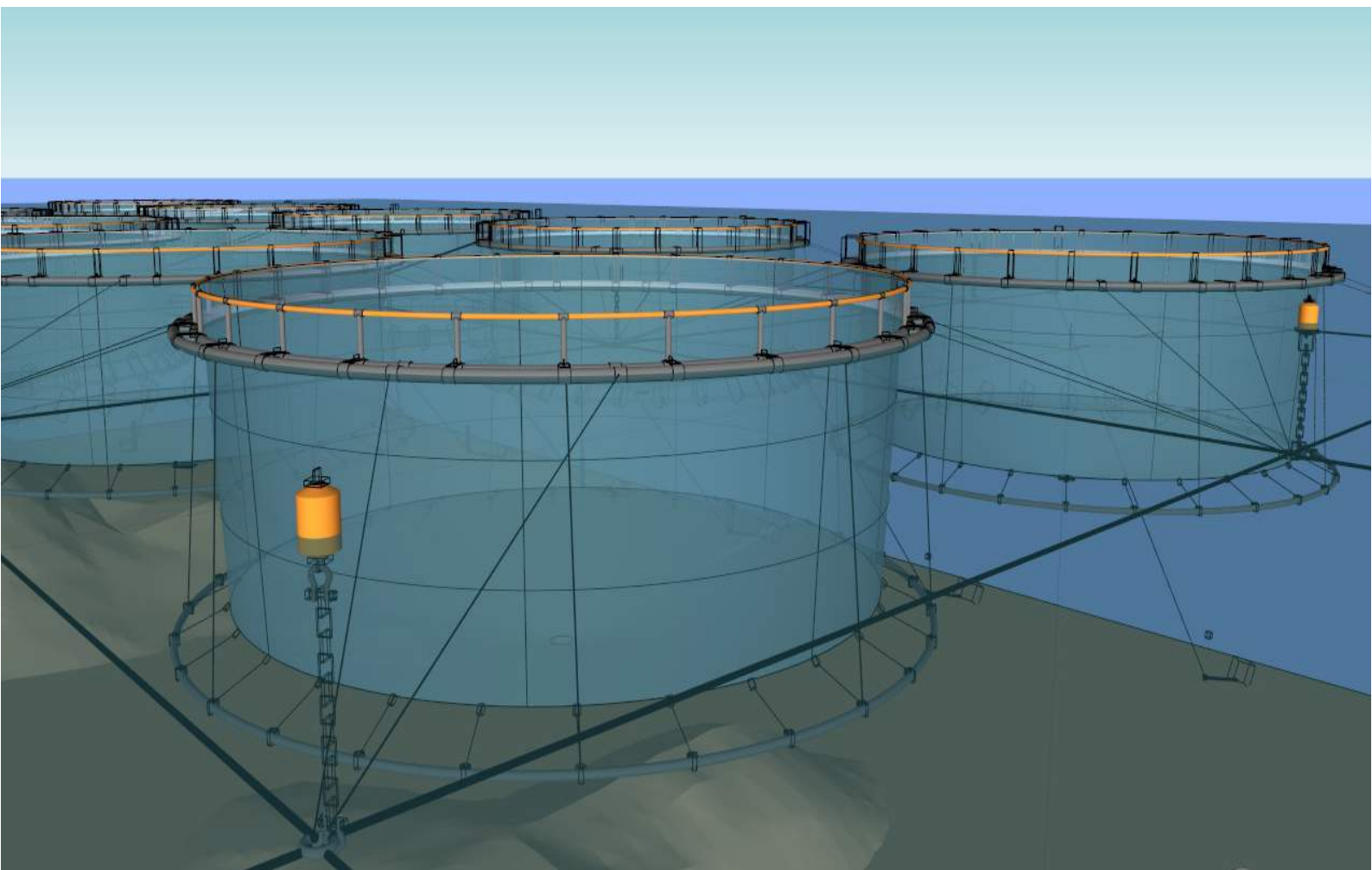
Toford's cage with KikkoNet

TURNKEY SOLUTION - CAGE + NET + MOORING

In addition to cage manufacturing and assembly service, turnkey solution is also available. For many years we have worked in direct cooperation with local fish farmers, our partner net manufacturers and with external engineers to deliver complete solutions to our customers.

We can work with you and provide a complete turnkey solution from the beginning to the very end or work with your preferred net supplier and mooring system provider.

OUR NET PARTNERS



REPAIR SERVICE

Accident happens and we are here to help no matter how the damage is done and what kind of plastic cage you have.

Because our cage production is not constrained by fixed moulds we can supply the stanchions and all the necessary parts to fit your existing cage specifications.



Cage damaged by cargo ship. Undamaged components are extracted to be reused.



Repaired cage with multi-colored handrail. The cage was made larger than the original.



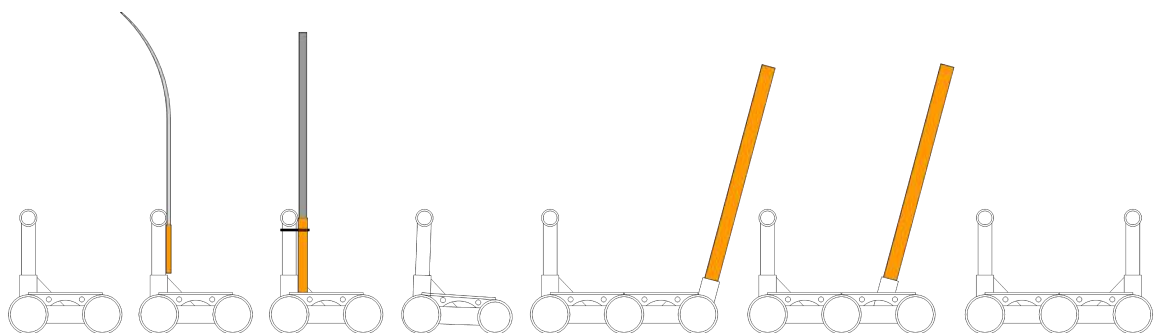






TOFORD AQUACULTURE

20 Yanhai Rd, Donggang Township
Pingtung County, Taiwan, 92849
tel +886.8.832.3135 fax +886.8.832.2726
www.cage-aquaculture.com
follow us on twitter @TofordAqua
google+ +TofordAquaculture
cage@toford.com



TOFORD Bevattningsteknik AB
Scandinavian.
(Design & Fabrication)
Contact: Patric Torle
torle@bevattningsteknik.se

Other Representatives :

Jörgen Larsen
Försäljningsansvarig
0703 333382
jorgen@bevattningsteknik.se

Tobias Persson
Teknisk ansvarig
0703 333355
tobias@bevattningsteknik.se