

FISH FARMING INDUSTRY

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In the past, in the 70s **Fish Farming** was an insignificant industry.

Nowadays Fish Farming has become almost more productive than the ocean-fishing sector.

The importance of fish farming will increase even more in the future heaving a clear advantage of fish protein over meat production and considering a strong population growth and urbanization over the world.

No other food production sector has grown as fast over the past 20 years.

Fish farming or called also Pisciculture involves raising fish commercially in tanks or enclosures such as fish pools, usually for food.

Worldwide, the most important fish species produced in fish farming are carp, tilapia, salmon, and catfish.





Merlett hoses can be employed for safe and comfortable transport of different types of fish species in Fish Farming Industry.

HOSES IN THIS MARKET ARE USED FOR:



- Fish transport between tanks;
- Fish transport from tanks to fish carrier boats;
- Air/oxygen for tanks;
- Water supply of fresh water from lakes, rivers, groundwater etc;
- Transport of wastewater, draining of tanks, fish feces, excess food;
- Cleaning of tanks between stock.
- Recovery of dead fish and unused feed

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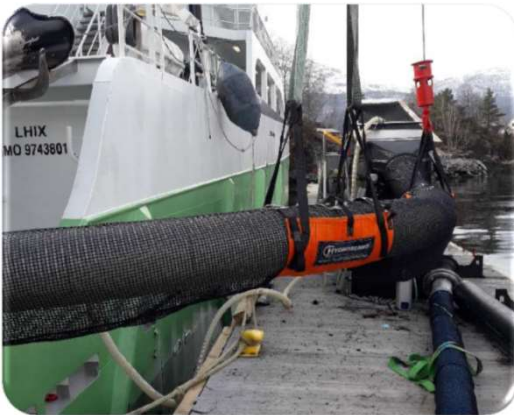
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LAND BASED FISH FARMING

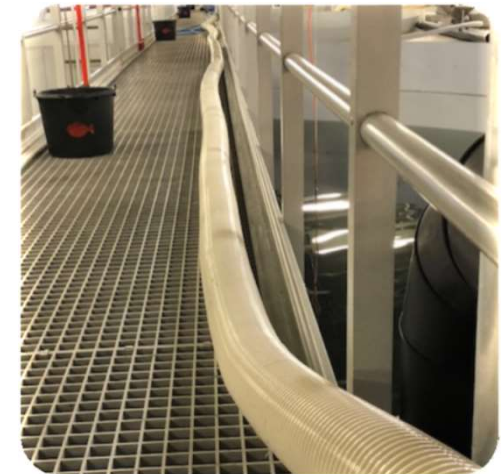
BREEDING

Breeding of fish in tanks on land before they are delivered to fish carrier boats and delivered to large fishing cages at sea.



TRANSPORTATION

Fish transport between tanks;



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WATER SUPPLY



Water is pumped in pipes from the ocean to tanks to be used for breeding.



Water tanks with sea water.
In addition to pipes, Arizona Arctic is used for flexible water delivery

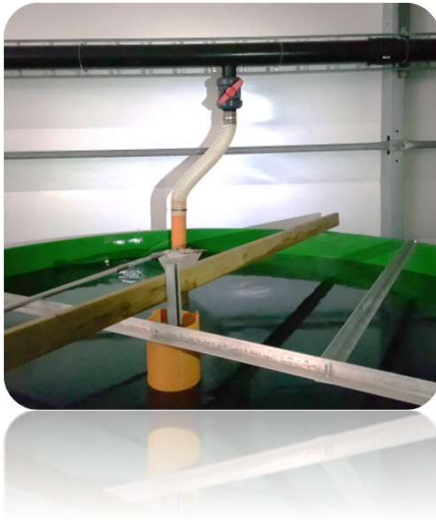


Both Arizona Arctic and Vacupress Cristal are used for water supply from pipes to tanks in flexible solutions

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Supply of water to tank by
Oregon PU



Arizona Arctic used for both
water supply and
draining/cleaning

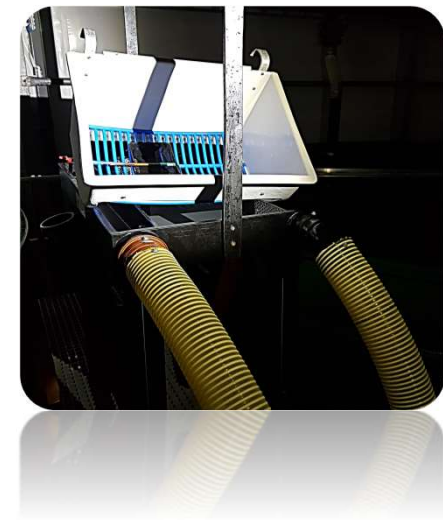


Table for vaccination and sorting of
fish by size.
Fish is transported back to the
tanks via **Luisiana Hoses**.



MAIN VOLUME IN THIS SECTOR ARE THE FISH TRANSPORT HOSES



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MOST IMPORTANT HOSES FOR FISH TRANSPORT IN LAND BASED FISH-FARMING



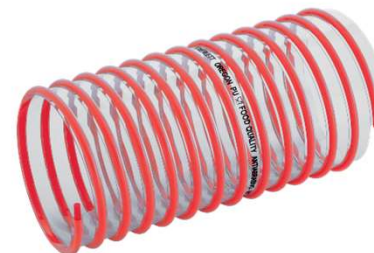
Oregon PU ET
911003



Luisiana SE transp.
911022



Oregon PU PS
911148



Oregon PU PS Extra
911308

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Shark Hose
911079



Superflex Pu Plus HMR ET.
912917



Flange Coupling for Shark Hose
928005



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FISH FARMS IN THE OCEAN

When the fish grows it will be transported out at sea until ready for harvesting.

Pumped in hoses from land to carrier-boats that transport them out in large cages at sea.

Main dimension is 8'' and sometimes 10''.

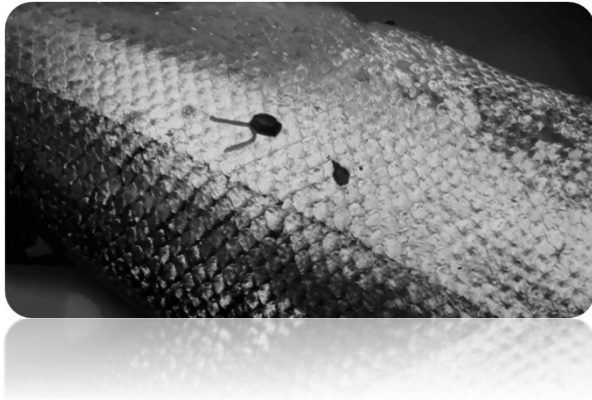
When large enough to be slaughtered, they are pumped back in carrier boats and delivered to fish processing plants.



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DE-LICING OF SALMON

Along with various diseases, this salmon parasite represents one of the biggest challenges to fish health in aquaculture industry. Every year fish farmers are required to undertake collective treatment to ensure that the level of lice is as low as possible. Fish attacked by lice are pumped from cages at sea, conveyed by Merlett hoses for cleaning and then flushed back in the cages.

Merlett hoses used for this purpose:

- Shark Hose (14" – 16") with flange couplings;
- Superflex PU Plus HMR (406mm – 508mm).



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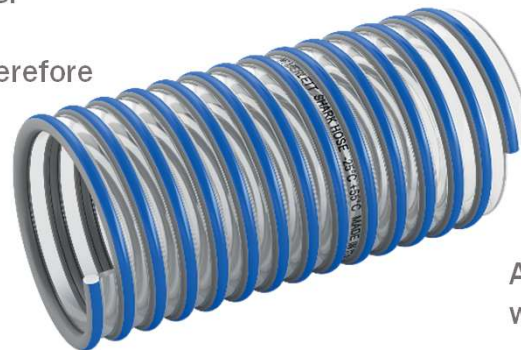


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Shark hose preferred for its transparency (process is camera supervised), light weight and favourable bending radius.

Machines differ in size depending of assignment and therefore also ID of hoses.



SUBSEA DREDGING



Also **Vacupress** is used on some machines for water jetting on soft soils.

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FISH VACUUM HOSES

Preferred product for fish pumping on fish carrier boats

ID from 12" to 20" (inquiries for even larger dimensions)

Rough treatment under normal use

Also used onshore when transported from holding pen/cage to processing plant
Large part of the fleet of the world's fish carrier boats are fully build and/or equipped in Europe.

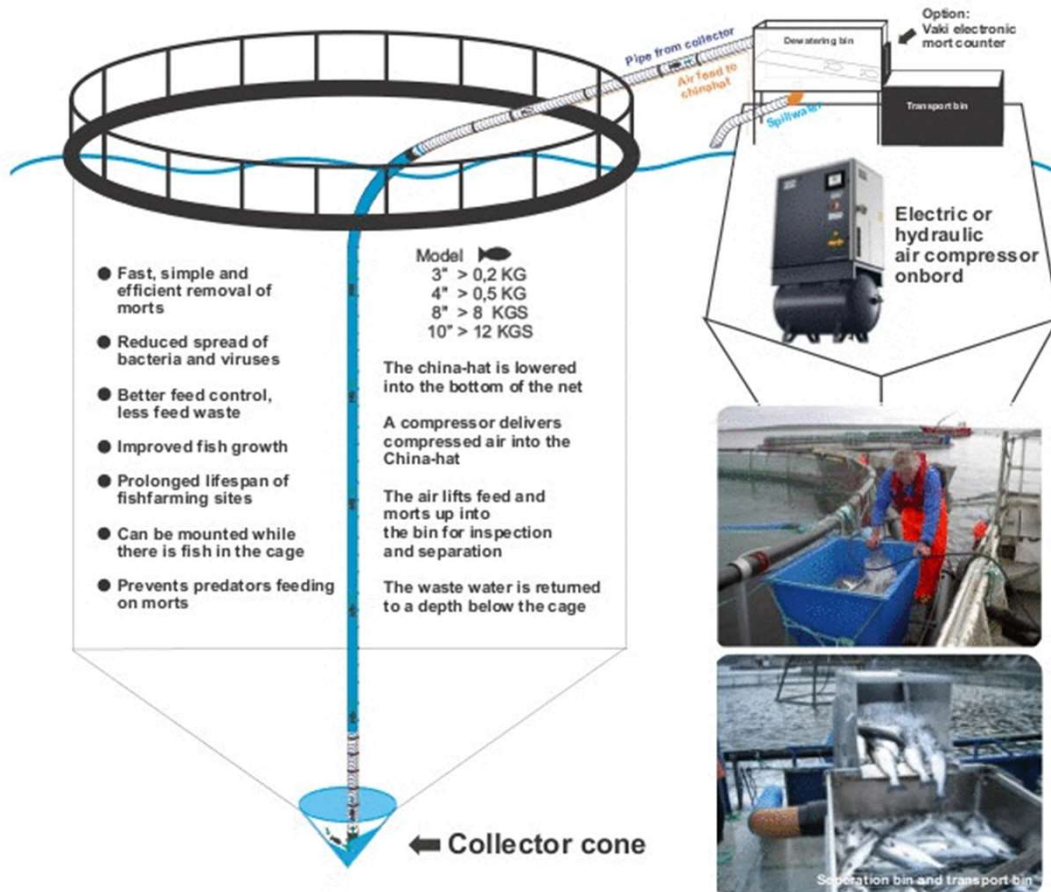


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Liftup for circle cages



<http://serviciosacuicolas.novatech.cl/productos/video/>

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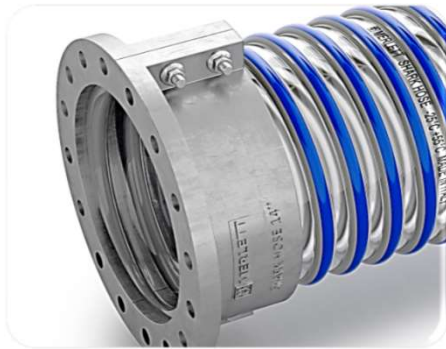


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ACCESSORIES USED FOR FISH FARMING INDUSTRY

FLANGE COUPLINGS



HOSE HANDLING SLING



HOSE PROTECTION NET

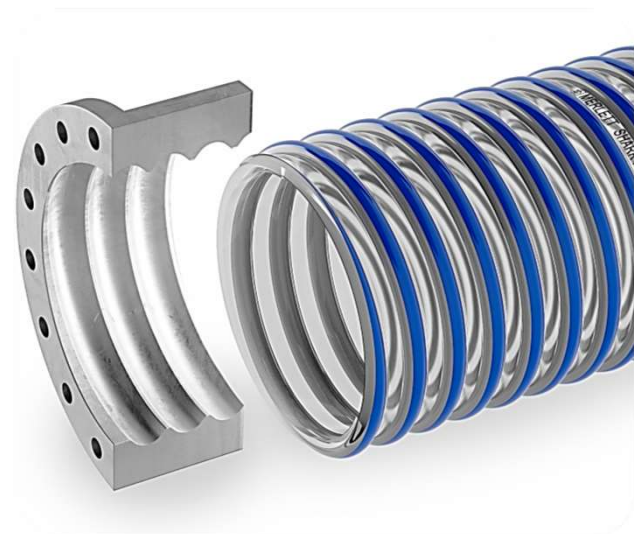
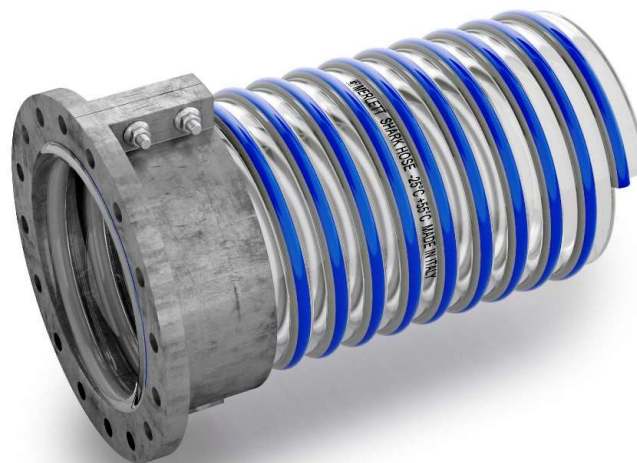


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FLANGE COUPLINGS FOR SHARK HOSE



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NEW STANDARDS – HOSES FOR FISH TRANSPORT HAVE TO BE CERTIFIED (ON LAND-BASED FISH FARMS)



Farmed fish have different gene material than the types found in the wilds.

It is very important that they do not breed with the wild fishes as the result is fish that can not live in the wild. To avoid the risk of fish escaping NS9416 was introduced. It states that pipes, hoses and tanks has to be certified on land based fish farms.

Merlett obtained the Land-based Fish Farming Certification.

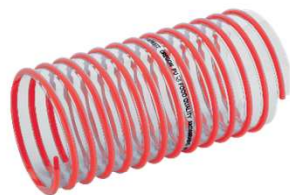
THE FOLLOWING MERLETT HOSES ARE CERTIFIED NOW:



Oregon PU PS



Oregon PU ET



Oregon PU PS Extra



Superflex HMR ET.



Luisiana SE TRSP.



Shark Hose



Arizona Arctic



Arizona SE



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FISKEOPPRETT

OREGON PU - 911003

Lett og fleksibel polyuretanslange med polieterbaseret PU og hardet PVC spiral. For transport av vann og fisk.



Fra Ø 25 mm til Ø 300 mm

GLATT OVERFLATE	****
FLERKJØRLETT	****
SLITESTYRKE	****
TEMPERATUR OMRADE	-25° C + 85° C
KJEMIKALIS BESTANDIGHET	PU tabell
KNEKK STYRKE	****
HYDROLYSE RESISTENS	Resistent mot hydrolyse i varmt vann 60° C
MIKROBIO BESTANDIGHET	****
ODOR BESTANDIGHET	****

OREGON PU PS SPIRALE MAGGIORATA - 911148

Polyuretan slange med polieterbaseret PU og hardet PVC spiral. For transport av fisk. Forsterket for tettere bruk. Mikrobestandig og med meget god UV-bestandighet. Også egnet for transport av slitende materialer.



Fra Ø 51 mm til Ø 304 mm

GLATT OVERFLATE	****
FLERKJØRLETT	****
SLITESTYRKE	****
TEMPERATUR OMRADE	-25° C + 85° C
KJEMIKALIS BESTANDIGHET	PU tabell
KNEKK STYRKE	****
HYDROLYSE RESISTENS	Resistent mot hydrolyse i varmt vann 60° C
MIKROBIO BESTANDIGHET	****
ODOR BESTANDIGHET	****

OREGON PU PS EXTRA - 911308

Polyuretan slange med polieterbaseret PU og hardet PVC spiral. Ekstra forsterket for tettere bruk. Mikrobestandig og med meget god UV-bestandighet. Også egnet for transport av slitende materialer.



Fra Ø 51 mm til Ø 304 mm

GLATT OVERFLATE	****
FLERKJØRLETT	****
SLITESTYRKE	****
TEMPERATUR OMRADE	-25° C + 85° C
KJEMIKALIS BESTANDIGHET	PU tabell
KNEKK STYRKE	****
HYDROLYSE RESISTENS	Resistent mot hydrolyse i varmt vann 60° C
MIKROBIO BESTANDIGHET	****
ODOR BESTANDIGHET	****

SUPERFLEX PU PLUS HMR ET - 912917

Polyuretan slange med kopperbelagt ståls spiral. For transport av fisk hvor man ønsker en lett og håndterbar slange.



Fra Ø 32 mm til Ø 500 mm

GLATT OVERFLATE	****
FLERKJØRLETT	****
SLITESTYRKE	****
TEMPERATUR OMRADE	-40° C + 90° C
KJEMIKALIS BESTANDIGHET	PU tabell
KNEKK STYRKE	****
ODOR BESTANDIGHET	****
GLATT TIL KONTAKT MED LEVENDE DØDDELS I	
REINIGING TIL BEHOLDNINGER MED FISKELØSLINGEN	
Prosedure for fiskeindustri 006, RDA 21 028 177 1060.	
MIKROBIO BESTANDIGHET	****
EASY DRUCK	****

SHARK HOSE - 911079

Transparent PVC slange med hardet og shock resistant PVC spiral for fiskeindustrien, havbruk, subsea dredging og annet bruk som krever en kraftig slange.



Fra Ø 102 mm til Ø 407 mm

GLATT OVERFLATE	****
FLERKJØRLETT	****
SLITESTYRKE	****
TEMPERATUR OMRADE	-25° C + 55° C
KJEMIKALIS BESTANDIGHET	PVC tabell
KNEKK STYRKE	****

LUISIANA SUPERELASTIC TRANSPARENT - 911022_EX

Superelastisk PVC-slange med PVC spiral. Supertrykkslange for transport av fisk, vann m.m.



Fra Ø 20 mm til Ø 204 mm

GLATT OVERFLATE	****
FLERKJØRLETT	****
SLITESTYRKE	****
TEMPERATUR OMRADE	-25° C + 55° C
KJEMIKALIS BESTANDIGHET	PVC tabell
KNEKK STYRKE	****

ARIZONA SUPERELASTIC - 911075

Kraftig PVC slange med hardet PVC spiral. Supertrykkslange for septik, entreprenert, landbruk, industri og havbruk.



Fra Ø 25 mm til Ø 304 mm

GLATT OVERFLATE	****
FLERKJØRLETT	Shore/hardhet 57 ****
SLITESTYRKE	****
TEMPERATUR OMRADE	-25° C + 55° C
KJEMIKALIS BESTANDIGHET	PVC tabell
KNEKK STYRKE	****

ARIZONA ARTIC - 911217

Myk PVC slange med PVC Spiral. Spesielt godt egnet for det skandinaviske klimaet. Supertrykkslange for flytende væsker. Oljebestandig



Fra Ø 51 mm til Ø 152 mm

GLATT OVERFLATE	****
FLERKJØRLETT	Shore/hardhet 48 ****
SLITESTYRKE	****
TEMPERATUR OMRADE	-40° C + 45° C
KJEMIKALIS BESTANDIGHET	PVC OIL tabell
KNEKK STYRKE	****

SUPER RAGNO N AQUA - 915165

PVC-slange med polyester armering. Spyle- og vaskeslange for næringsmiddelindustri, slakterier etc.



Ø 13 mm and Ø 19 mm

GLATT OVERFLATE	****
FLERKJØRLETT	****
SLITESTYRKE	****
TEMPERATUR OMRADE	-5° C + 60° C
KJEMIKALIS BESTANDIGHET	PVC tabell
KNEKK STYRKE	****
EGNET TIL KONTAKT MED LEVENDE DØDDELS I	
REINIGING TIL BEHOLDNINGER MED FISKELØSLINGEN	

RAGNO AIR 20 BAR - 915150

Myk PVC slange med dobbel polyester armering og mellomlag med PU-lim. Trykkluttslange.



Fra Ø 5 mm til Ø 25 mm

GLATT OVERFLATE	****
FLERKJØRLETT	****
SLITESTYRKE	****
TEMPERATUR OMRADE	-5° C + 60° C
KJEMIKALIS BESTANDIGHET	PVC tabell
KNEKK STYRKE	****
ODOR BESTANDIGHET	****

JAMAICA M BLUE - 915098

Flatslange i PVC for pumping av vann og meget godt egnet til død fisk systemer.



Fra Ø 20 mm til Ø 204 mm

GLATT OVERFLATE	****
FLERKJØRLETT	****
SLITESTYRKE	****
TEMPERATUR OMRADE	-5° C + 60° C
KJEMIKALIS BESTANDIGHET	PVC tabell
KNEKK STYRKE	****

SHARK SET FLANGE - 928005

Flerskikkelig i sjøbestandig aluminium. Spesialtilpasset Shark hose som sikrer god og skånsom innvendig flyt for vann og fisk.



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