# USER MANUAL

**Protective Covers REVISION 4** 

AKVAGROUR EGERSUND NET

## **SUMMARY**

A protective cover is an item of equipment that is used when a top net is being fitted to or removed from a floater. It is fitted as a cover on the water's surface within the floater. Protective covers can be manufactured in various sizes to fit different sizes of floater. The purpose of the protective cover is to ensure that no fish become caught in the top net.

Protective covers are manufactured in accordance with the requirements for extra equipment in Norwegian Standard 9415:2021 and the Nytek23 regulations.

When using protective covers, it is important to be aware of certain risks:

- If a diagonal rope with floats is fitted across the cover, the cover must be fitted to the floater with the floats on the underside, otherwise the top net may get caught on the protective cover.
- There must be no holes in the cover's netting, otherwise fish may get caught in the top net when it is removed, and the protective cover will therefore not work as intended.

Maintenance of protective covers is essential to ensure safe use and optimal service life.



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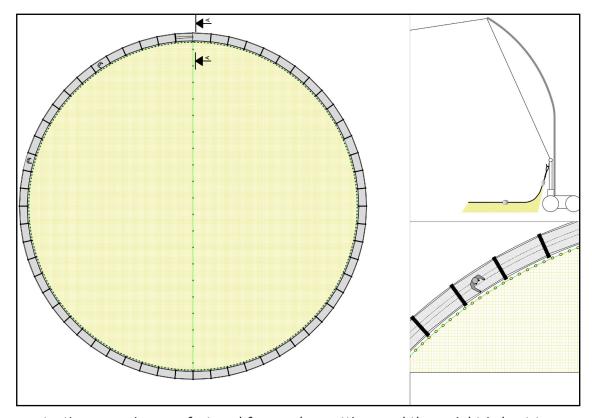
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# 1 THE PROTECTIVE COVER AND ITS COMPONENTS

### 1.1 Definitions

PROTECTIVE COVER	Equipment used to cover the water's surface inside a floater when installing or removing a top net, to prevent fish getting caught in the top net.
DIAGONAL ROPE	A rope fitted across the cover to aid installation and use/handling. Floats may be fitted along this rope, ensuring better buoyancy in the water.
FLOATS	Floating devices attached to the rope around the circumference of the protective cover. May also be fitted along the diagonal rope.
LOOPS	Loops attached at regular intervals around the cover to aid installation and handling.
NETTING	Low-density netting is used to make handling easier and to improve buoyancy.

#### 1.2 Components with specifications/construction



Our protective cover is manufactured from nylon netting, and the weight is kept to a minimum by using thin-gauge thread. This means it is easy to manage and ensures it floats well in the water. It is designed to be somewhat oversized for the floater. Ropes and floats are fitted around the circumference.

Diagonal ropes with floats may be fitted to improve buoyancy. These can be covered with netting to prevent them getting caught on the top net. Diagonal ropes have a plasticcoated loop at each end, which are used to pull the net along. In addition, loops are attached at regular intervals around the cover's circumferential rope to make handling as easy as possible.



### 1.3 Assumptions and limitations

Protective covers from AKVA Group Egersund Net are manufactured for use when a top net is to be installed or removed from a floater. They must not be used for other purposes. The cover must be adapted for its intended purpose. It is important to consider how the protective covers and other components in a complete system affect each other.

#### 1.4 Modification, renovation and enlargement

Any modification or renovation of protective covers must be carried out in consultation with AKVA Group Egersund Net.

AKVA Group Egersund Net should be contacted prior to any renovation or modification.

#### 1.5 Nonconformities and managing faults



Any faults or defects discovered in the cover must be reported immediately to our sales representative or to one of our service facilities. The type of fault or defect will determine what measures are to be taken:

- whether the fault or defect is to be rectified on site
- whether the protective cover must be returned to the nearest service facility

# 2 INTERACTION WITH OTHER COMPONENTS

### 2.1 Interaction with fish farming net



A protective cover must be adapted to the fish farming net with which it is to be used. It is important to inspect the cover before use to ensure it is not worn and that there are no sharp edges that could snag the netting of the fish farming net. It is also important to ensure that the cover is not so taut that contact between it and the fish farming net could cause wear to the netting.

#### 2.2 Interaction with floater

The protective cover is attached to the handrail support around the entire circumference of the floater. It is important that the cover is installed in a way that will not cause unnecessary strain on the floater handrail supports.

The protective cover must not be fitted to the floater for longer than necessary.



#### INSTALLATION AND USE OF 3 PROTECTIVE COVER



#### 3.1 Checking documentation and checkpoints before installation and use

Before using the protective cover, ensure that the user manual is available. Check the cover for any damage. Visible damage to the product is a sign that something has happened to the protective cover during transport or storage. In some cases, particularly close inspection of the cover will be required.

Applicable procedures must be reviewed before the start of the operation. The operations manager or personnel with the appropriate experience and competence must be responsible for the operation, and the various tasks must be assigned. The correct personal protective equipment must be worn, and the right type of lifting equipment must be used when using a crane. Extra equipment, such as cleaner-fish hides, must be removed or secured. Make sure that the protective cover is intact and undamaged. The operation must be monitored.

#### 3.2 Installation and use

- It helps if the cover is deployed in the direction of the current. This makes it easier to install and handle.
- Feed a rope around a handrail support on the floater, on the opposite side to the work boat. Then bring the rope back to the boat.
- Fix one end of the rope to the loops on the protective cover, located at each end of the diagonal rope.

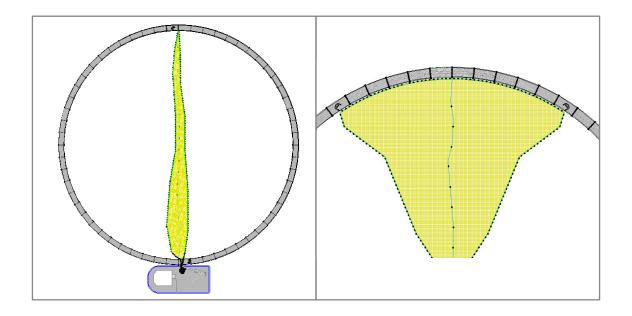


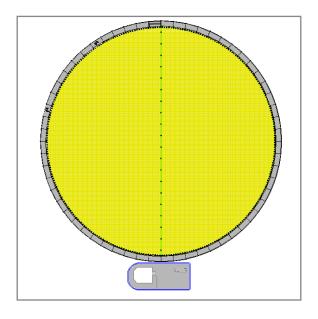
- If there are floats on the diagonal rope, make sure they are facing down into the sea, to prevent the top net getting caught on them. Alternatively, netting can be fitted over the floats, after which the cover can be fitted by two people working in opposite directions inside the floater.
- Pull the cover across to the opposite side of the floater using the rope fed around the handrail support on the other side. The cover is shaped like a sausage, to prevent fish from jumping into it.



Once the cover has reached the opposite side, two people working together should walk in opposite directions around the floater, hanging the cover up on the handrail. This must be done as quickly as possible to prevent fish from ending up on top of the cover during ponding.

- Once the protective cover has been installed on the floater, work operations may begin. The top net can be removed without the risk of fish becoming caught in it when it makes contact with the water. The cover, with the top net in it, can then be carefully removed from the floater.
- Once the operation has been completed, the cover can be returned to the boat for storage.





#### 3.3 Special environmental conditions

#### 3.3.1 Current conditions

You should carry out extra inspections of protective covers when there is a strong current. The interaction with the fish farming net must be carefully observed to ensure that the protective cover and net are not exposed to undue stresses.

#### 3.3.2 Extreme weather

If extreme weather is forecast, operations involving the use of a protective cover must be postponed.

# 3.4 Risk assessment – critical points

Protective covers must only be used for their intended purpose.

Nevertheless, there are some critical factors that could cause a protective cover to damage a fish farming net:

Damage to or sharp edges on the protective cover's components, such as floats or plastic covers on loops.



 Contact between the protective cover and the fish farming net, which could cause undue stresses – for example, if the cover is not removed once operations have been completed and gets caught on the netting.

In the event of any of the above, operations must be halted until the matter has been resolved and the risk has been averted.

Ensuring that personnel who handle protective covers and are responsible for daily inspections are aware of the above issues will often reduce the risk of accidents and escapes.

# 4 INSPECTION AND MAINTENANCE

#### 4.1 General

It is vital to maintain protective covers to ensure that operations can be carried out in the best way possible. Regular inspections also help to extend the cover's service life. Inspections will reveal any abnormal situations, and help prevent fish from escaping. If the protective cover is to be moved for use in different locations, it must be disinfected first. The person in charge of inspecting the protective cover must be familiar with such covers and have the requisite fish-farming experience to be able to identify any abnormal situations. All inspections and maintenance must be logged.

The product does not normally contain any user-replaceable parts. Please contact one of AKVA Group Egersund Net's service facilities if you are uncertain about what is permitted in terms of servicing and replacement of parts by the site operator.

#### 4.2 Inspection checklist

The purpose of inspections is to identify any damage and weaknesses as early as possible. You must incorporate these checks into your regular operating procedures.

If you suspect that the protective cover has become damaged, you must carefully examine it immediately.

Before using the protective cover, check it to ensure that it has no damage that might cause damage or holes in the net.



Check the following points before use:

	<u> </u>
Checklist item	What to inspect
Wear and tear	Check that the netting, loops and floats are not worn, otherwise
	components could get caught in the netting
Holes in the	Check that there are no holes in the netting in which fish could get
netting	caught

#### 4.3 Inspection of protective covers at service facilities

Protective covers can be returned to a certified service facility.

Here, the cover will be inspected and any necessary repairs made. Any damaged or clearly weakened components will be replaced. This includes netting, ropes, floats and loops.

#### 4.4 Log

All inspections and maintenance of a protective cover must be logged.

The log must describe the following as a minimum:

- The action taken (type of inspection, cleaning, maintenance or repair) with reference to a plan and procedure
- The result of the action taken
- The necessary follow-up as a conclusion to the action taken
- Date
- Person/facility performing the work
- Signature

#### 4.5 Disposal/recycling

If the protective cover is no longer to be used, it can be returned to any AKVA Group Egersund Net service facility, where it will be processed in accordance with our waste management procedures.

# 5 TRANSPORTATION AND STORAGE

#### 5.1 Receipt

AKVA Group Egersund Net recommends packing protective covers in a bag. When you receive a protective cover, you must check the packaging for any damage. Visible damage to the packaging is a sign that something has happened to the protective cover during transport. In such cases, you must inspect the cover before use and notify AKVA Group Egersund Net and the carrier.

Protective covers must always be checked before and after use. This requirement also applies even if they arrive directly from the supplier.



#### 5.2 Storage of protective covers

Protective covers must be stored in a way that prevents exposure to any external forces that could damage their components. Similarly, work involving strong heat, such as welding, must never be performed near the cover. When you receive a protective cover, it is your responsibility to ensure that it is stored properly.

Storage in a bag or box is considered the best way to store a protective cover. If a protective cover is packed in a bag fitted with loops, it is important to check the capacity of the loops before performing any lifting. Protective covers must not be dragged on the ground, as this can damage them.

# 6 MANUFACTURER AND PRODUCT IDENTIFICATION

#### 6.1 Contact

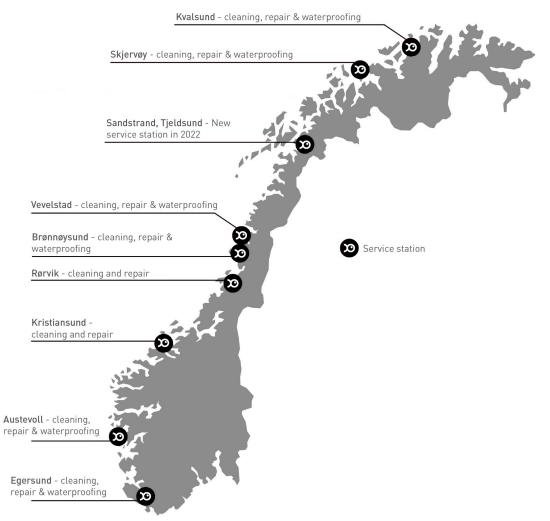
If you have any questions about protective covers, please contact our head office or your nearest service facility.

#### **HEAD OFFICE**

AKVA Group Egersund Net AS Svanavågveien 30, 4373 Egersund, Norway

Telephone: +47 51 46 29 00 Email: post@egersundgroup.no

www.akvagroup.com



#### 6.2 Identification of protective covers

Each protective cover has a unique production number. All production-related information and maintenance history is registered and stored with a reference to the production number. Identification marks and production numbers are attached to ropes fitted around the circumference of the protective cover.

#### 6.3 Net-Reg

The Net-Reg customer portal is a user-friendly equipment log permitting the maintenance of checklists and documentation of all your equipment, including protective covers. This tool gives you a complete overview of the locations and status of your equipment. It can be used to produce documentation for each piece of equipment for internal and external audits.

### 6.4 Explanation of symbols



REQUIREMENT: Placed beside text describing requirements.



NB: Placed beside text describing potential incidents and other aspects that you should be aware of.



TIP: Placed beside tips and advice relating to installing and handling a protective cover.



ESCAPE RISK: Placed next to text describing events and/or operations that may increase the risk of fish escaping.

# 7 REVISION HISTORY

# 7.1 Change log

The table below lists changes in the latest revision of the user manual.

Rev. no.	Date	Scope	Reference
4	1 November	User manual updated in accordance with	All
	2023	Norwegian Standard 9415:2021 and the Nytek23	
		regulations	
4	1 November	New risks included	Section 3.2
	2023		
4	1 November	New photos and illustrations	All
	2023		

# THANK YOU FOR CHOOSING AKVA GROUP EGERSUND NET

Our mission is to deliver solutions and services that optimise production and contribute to sustainable, cost-effective and safe fish farm operation. We place great emphasis on fish welfare, operational performance and profitability for our customers in everything we do.

A protective cover is used when installing or removing a top net on a floater to prevent fish from getting caught in the top net.

AKVA Group Egersund Net is committed to producing high-quality, easy-to-use protective covers, and in this user manual we describe how you should handle our covers.

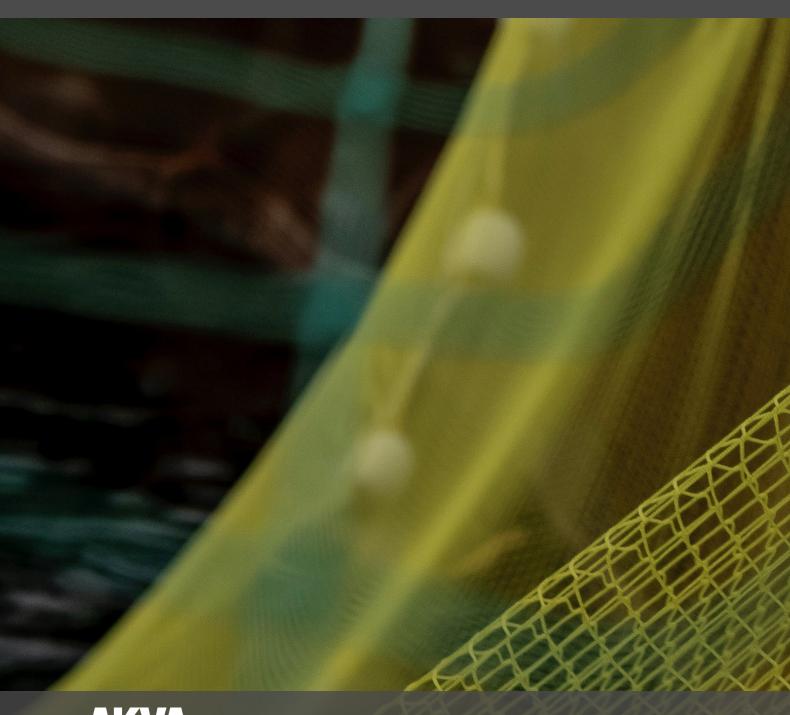
We keep our manuals as user-friendly as possible. To achieve this, we rely on your feedback and on our collaboration with you as a user of our products. We value every suggestion we receive very highly, as these help us deliver more effective and safer equipment. You are most welcome to contact us if you have any comments or suggestions for improvement.

This User Manual for Protective Covers is available on our website, www.akvagroup.com, and on our online equipment log, Net-Reg, at www.net-reg.no.

Together, we can help ensure that fish farming is an eco-friendly, sustainable and growing industry that produces safe and healthy seafood for the global market.

This user manual is designed to meet the requirements of Norwegian Standard 9415:2021 and the Nytek23 regulations. AKVA Group Egersund Net reserves all rights to this user manual and its contents. Reproduction and distribution to third parties without our clearly expressed prior approval are not permitted. We reserve the right to correct any errors in the text or illustrations.

Best regards AKVA Group Egersund Net



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