



**INNOVATION:** A recent innovation from Faroese company Vónin is the introduction of its patented "Flyer".

# How you can increase trawl headline lift

New trawl device, and new doors systems – the latest in trawl technology from Faroese Islands-based Vónin company.

Cormac Burke

The entire business of trawl technology was, in the past, mainly focused on the basic demand to simply catch more fish. But in the last decade that requirement has changed to not only the need to maximize catching potential but to do so in the best possible economic way to reduce drag forces and, thereby, decrease fuel consumption.

A recent innovation from Faroese company Vónin is the introduction of its patented "Flyer" – a single unit that is clipped to the headline of a trawl with two attachment points and, as soon as the gear starts to be pulled through the water, it self-generates lift.

The Flyer has its own integral buoyancy in the shape of two floats that form the ends of the unit, with three hydrodynamic foils running between them.

An added benefit of this system is that the floats keep the Flyer afloat if the towing speed drops to zero, keeping it clear of the trawl itself, while also serving to help it align itself as the gear is shot away and this, say Vónin's technical staff, is what gives the Flyer its own inbuilt stability,

and it aligns itself automatically, producing lift in proportion to the towing speed.

"This is suitable for standard trawls with a single headline and also for the shrimp trawls we supply with double headlines," Vónin's Bogi Nón said.

#### Better than traditional floats

"The unit as a whole takes up the same space on the headline of a trawl as four 11-inch floats that provide 30kg of buoyancy, but the Flyer produces much more lift," Bogi Nón said, adding that at 2.50 knots it generates 90kg of lift, rising to 120kg at 3 knots and 155kg at 3.50 knots. At 4 knots the lift generated is 185kg, and so on.

"This technology has performed well so far and we expect this to go into production in the second half of this year," Bogi Nón said.

"The Flyer itself is made from a very resilient material that has strength as well as flexibility, so it can be twisted and will go back to its original shape, which means we expect it to be able to cope with being spooled onto a net drum with the gear.

"It is also highly adaptable, as it can sit comfortably on the wings or even the wing ends, and it does not need to be rigged square to the flow of water to be effective. While the Flyer is envisaged primarily for demersal gear, it could also be useful for pelagic trawling, especially when fishing close to the surface for mackerel," he said.

#### Busy time for Vónin

As well as spending much time

and investment in its R&D department to come up with new innovations such as the Flyer, Vónin's other sectors are also working hard, as seen with a recent breakthrough on blue whiting trawls.

The Gerda María was a breakthrough for the Norwegian market, with a 2,016m trawl made from Capto for last year's blue whiting season, Jógvan S Jacobsen of Vónin's pelagic division explained.

"The Gerda María took its 7,500-ton quota in four trips, and Vónin had supplied a full package, including trawl doors and a 68-meter codend with a 700-ton capacity," he said.

Using Vónin's Capto rope has made a significant difference to the company's pelagic trawls, making them easier to handle than this kind of gear had been in the past, as well as easier to shoot and haul.

"The skippers really appreciate how light these trawls are to tow compared to older gears, while the strength and high abrasion resistance mean that trawls made in Capto have a much longer working lifetime than what they had been used to."

The success of the Vónin package on Gerda María soon resulted in another order – this time for the impressive new Kvanney delivered from the Karstensen Shipyard in Skagen.

This was for the same 2,016m trawl made from Capto, a pair of doors and 68 and 78m codends.

"These gears did well on the Porcupine Bank and off Rockall, with no problems at all and



**TRAWL DOORS:** As with the invention of the new Flyer system for headline

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## Vónin's Bogi Nón

Kvanney coped comfortably with the 2,016-meter trawl," Jógvan S Jacobsen said, further commenting that these successes continue to lead to further orders: "There have since been more orders from Norway, including a 2,304m trawl for Åkerøy; another 2,304m set of gear for Tronderbas; while Viking Bank and Cetus ordered smaller 1,728m gear, giving Vónin a secure foothold on the Norwegian market.

"All of the trawls are made in our Capto rope in the large meshes, which has proved to be

a very successful combination and the hand-made meshes in the forward sections of all these trawls decrease row by row down to the belly, providing a gradual reduction through the large mesh sections," Jacobsen said.

"We have also been busy with sorting grids for blue whiting and these have been effective in filtering out non-target species from catches. These are used when the fish move north into Faroese waters, resulting in us supplying a lot of gear to Norwegian, Icelandic and Faroese pelagic



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vessels," Jacobsen said.

#### Vónin's new trawl doors

As with the invention of the new Flyer system for headline lift, Vónin's development of pelagic trawl doors has taken a giant leap with the introduction of its new concept of patent-pending TORNADO trawl doors.

The Faroese vessel Christian í Grótinum (KG690) purchased the first pair of 12m<sup>2</sup> TORNADO doors, which replaced a set of 13.5m<sup>2</sup> doors, a significant drop in size.

However, even from the first time these new doors were shot away, the vessel's skipper and crew reported a significant difference in performance, saying these trawl doors were very stable, both when turning around and in strong side currents.

"Towing for blue whiting with a 2,304-meter trawl was suddenly an easy task for this vessel that usually uses almost maximum engine power for this purpose,"

the Christian í Grótinum skipper reported back to Vónin, adding that now they were getting an even greater door spread than before and the opening of the trawl was increased by 20 to 30 meters.

This feedback is, of course, good news for the Vónin door designers who had already claimed that not only do the TORNADO trawl doors have a good spreading force, they also have an extremely low drag coefficient, meaning that the resistance is decreased drastically.

#### A solid tradition in fishing

Vónin is a major developer and manufacturer of high quality fishing gear and aquaculture equipment. The company also supplies equipment to the offshore industry and land-based industry.

In a statement the company said that it has always put a great effort in product innovation and



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has a very close cooperation with its clients in the process of product development.

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The company's comprehensive range of fishing gear includes pelagic trawls, semi pelagic trawls, bottom trawls, shrimp

trawls, purse seine nets, pots, sorting grids, trawl doors, trawl cameras etc.

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