

## Benefits for land processing

The product is kept in sub-zero temperature through the whole process.



**1** Fish stored in tub without ice



**2** Freshness after 7 days



**3** Perfect heading yield



**4** Filleting without damage

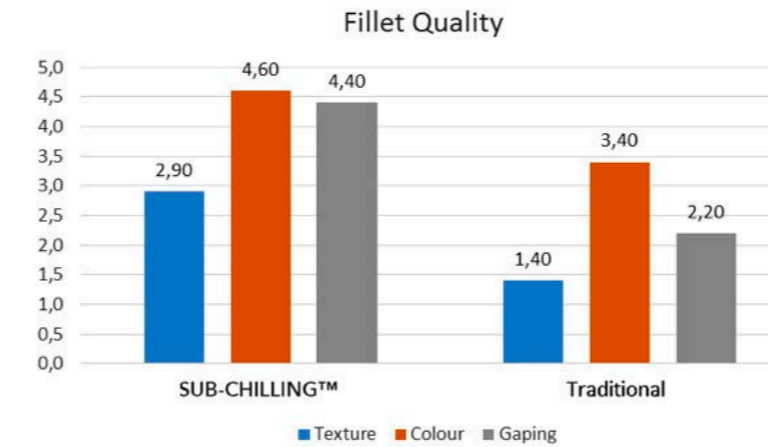


**5** After skinning prior to trimming



**6** Outstanding loin quality and yield

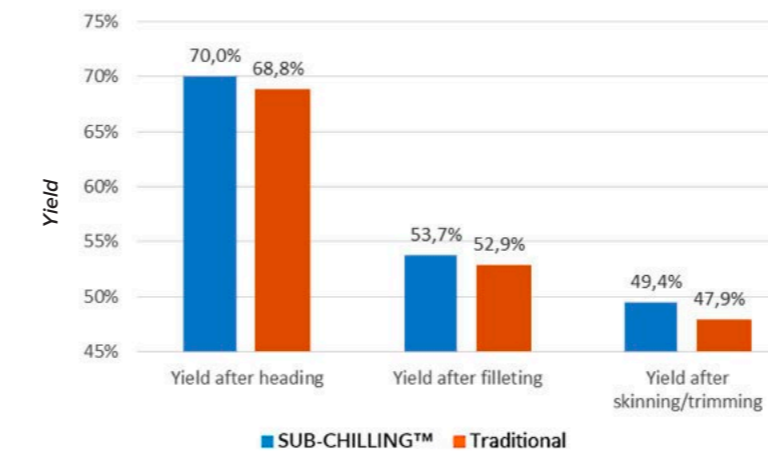
Quality of cod fillets was tested by Matis, right after a four days fishing trip, in April 2016. Sub-Chilled cod was compared with traditional by measuring colour, gaping and texture. Sub-Chilled cod is firmer and substantial less gaping was developed compared to traditional fish.



Best result for test is 5 and worst is 0

Production yield was tested by Matis, in April 2016, where Sub-Chilled cod was compared with traditional during processing.

Sub-Chilled cod is stronger/firmer and resists processing machinery better. The result is a better yield in all stages of processing. It also gives less machinery defects during heading, filleting and skinning. After trimming, fillets are firmer and better qualified to water jet cutting.



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This new revolutionary processing deck has increased the capacity and eliminated all heavy work for the crew. The Sub-Chilling system exceeds all my expectations. - Björn Jónasson, Captain of Málmei, Fisk Seafood

Málmei has already caught 8,000 tons of groundfish in 14 months without using ice. Quality of the Sub-Chilled fish is very good. - Gylfi Guðjónsson, Fleet Manager, Fisk Seafood

The Sub-Chilled fish is easy to process, the fillets have a firm and good appearance. Better quality of the raw material results in firm loins and less gaping. - Gunnlaugur Sighvatsson, Production Manager, Fisk Seafood

We have compared the Sub-Chilled fish with traditional fish throughout the process from the start. The quality, texture and strength of Sub-Chilled fillet is significantly better. - Hólmfríður Sveinsdóttir, Research Manager, Iceprotein

Sub-Chilling the fish pre-rigor dramatically slows down all bacterial growth and enzyme activity. This improves quality of the product and extends its shelf life by up to seven days. - Sigurjón Arason, Chief Engineer, Matis

Research shows that the texture strength of Sub-Chilled fish results in higher cooking yield, it tastes better and retains natural flavours. - Gunnar Þórðarson, Regional Manager, Matis

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- No ice - Up to 20% less transport weight.
- Extended shelf life up to 7 days.
- Better processing yield.
- Stronger fillets - Reduced gaping.
- Controlled flow (FIFO).
- High ROI - Low CO2.



**NO ICE  
REQUIRED DURING  
TRANSPORTATION**



# Benefits for the fishing vessels

The first fresh fish trawler using no ice

for  
Fisk Seafood



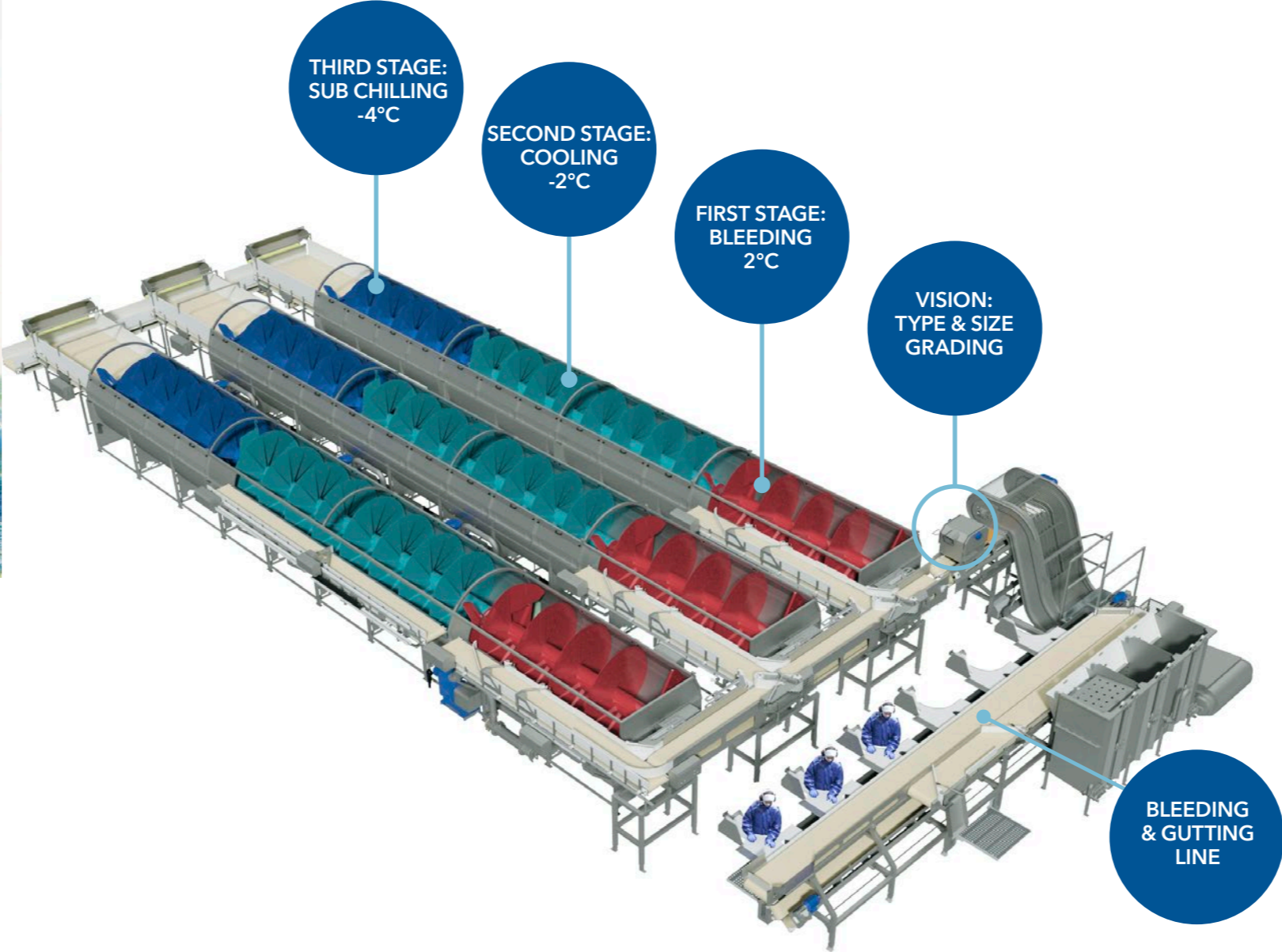
**CONTROLLING RIGOR EXTENDS FISHING TRIP FROM 3-4 DAYS UP TO 5-6 DAYS**

- Saves fuel and wages
- The quantity of fish delivered to land-based processing increases

**NO ICE REQUIRED**

- Eliminates heavy work on board - saves time and staff
- Reduces ship weight throughout the fishing trip by at least 50T\*

\*Typical fresh fish trawler ice load for a 4-5 days trip



**Patented Vision and Sub-Chilling system**

- Type and size grading
- 300 kg in each section
- Patented air/liquid circulation system
- Each chamber has a heat exchanger
- Fully automatic process

Processing deck and fully automated tub handling in fish hold

for  
HB Grandi

