

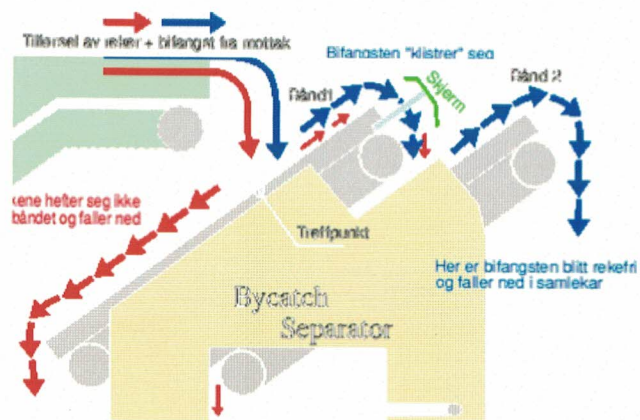
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## Introduction

**The machine separates small fish and shrimp on board shrimp trawlers in a simple and effective manner, based on the principle that the species of animals coming up with the shrimp trawl possess different abilities to attach themselves to the conveyor belt.**

The machine separates small fish and shrimp on board shrimp trawlers in a simple and effective manner, based on the principle that the species of animals coming up with the shrimp trawl possess different abilities to attach themselves to the conveyor belt. The conveyor belts within the separator travel at much higher speeds than regular conveyor belts on board a shrimp trawler. The speed is adjustable, and different speeds are used depending on the species of fish mixed in with the shrimp catch. Usually, Conveyor 1 is made to go faster than Conveyor 2. The incline is also adjustable. By using different inclines and different speeds for the conveyors, the different species are separated; while the ones which easily attach themselves (small fish) are conveyed up and then fall down into a collecting vessel, the ones offering less friction (shrimp) slide back down the conveyor belt.



### Supply of raw materials

The sketch shows the course of the separation. A mixture of shrimp and bycatch, i.e. capelin and other small fish, is transported to the machine and feeds it. It is important to adjust the speed of the feeding of the supplying conveyor belt to regulate the quantity supplied to the machine. The shrimp/fish ratio, as well as what species are involved, determines the effectiveness of the machine. The speed should be adjusted so that Conveyor 1 can keep up with the separation. "Difficult" mixtures must be fed at a slower pace into the separator.

The purpose of the screen is to prevent the mixture coming from Conveyor 1 from rising to high on Conveyor 2, giving the mixture more time to separate on its way upwards on Conveyor 2. It is important to be aware of the fact that as the conveyor belts become worn, the friction increases, making it necessary to adjust them, i.e. make them more steep.

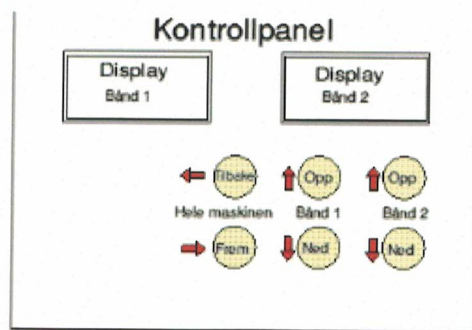
### Point of impact

The machine itself can be moved forward and back on its supports. This is to enable the "point of impact" to be moved, i.e. the point where the shrimp mixture hits the conveyor. If the bycatch consists of fish that is not sticky, the point of impact should be moved to the left, making it fall from a greater height and thereby impacting more heavily with the conveyor and giving it a greater possibility of attaching itself to the conveyor. If the bycatch is small, i.e. compared with shrimp, the point of impact should be moved to the right.

### Conveyor 1 and Conveyor 2

Conveyor 1 is intended for rough sorting and Conveyor 2 for careful sorting. The incline is intended for adjusting the balance between the catch which is conveyed upwards (the fish) and the catch that falls back (the shrimp).

Conveyor 1, the first conveyor, should in all instances be more flat (less steep) than Conveyor 2, to prevent the shrimp coming from Conveyor 1 from being conveyed to the collecting vessel along with the fish. There is a screen installed on Conveyor 1.



### Control panel

Please refer to the sketch. Uppermost are the two displays that show the speed of the conveyors. Speed is indicated in metres per minute. The speed is regulated by adjusting the hydraulic motors operating the conveyors. The incline is adjusted with the buttons shown in the sketch.