



# TARNOS

Traveling water screens  
Trash rakes  
Stop logs



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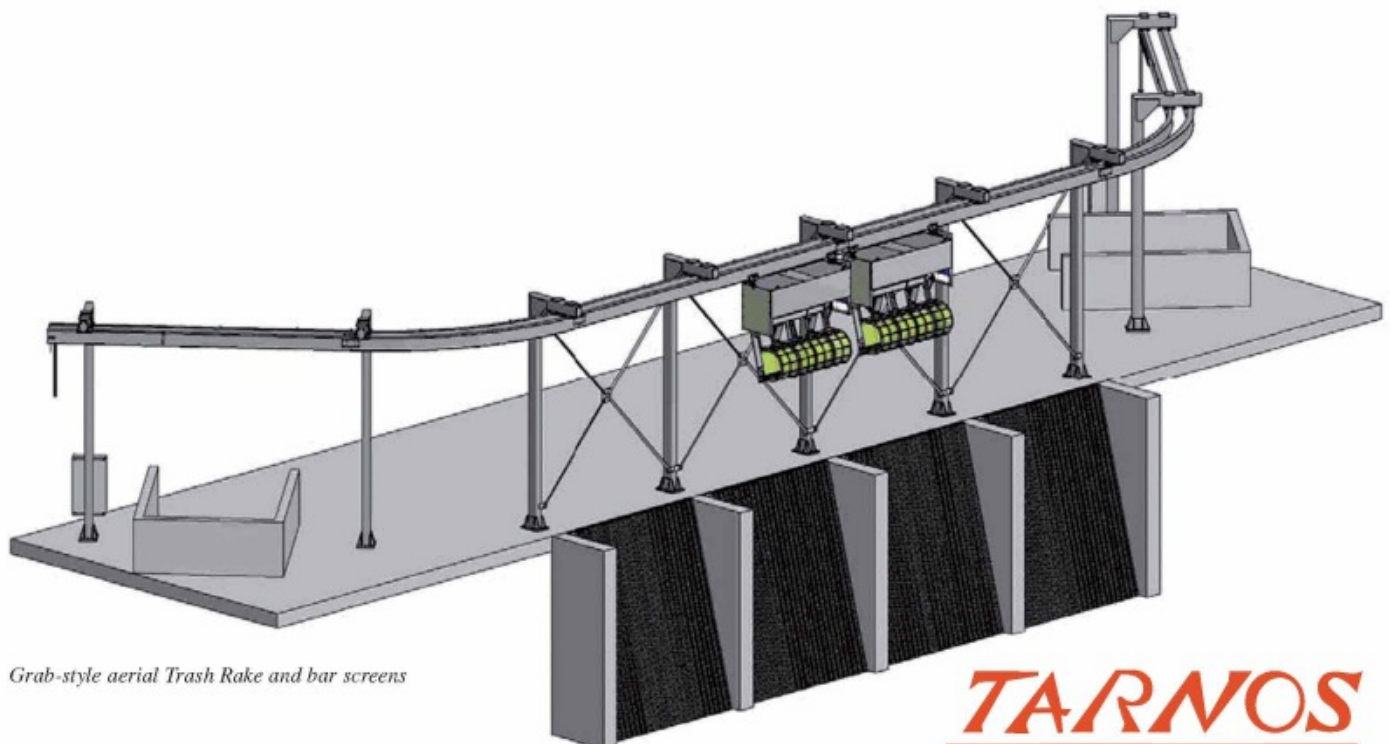
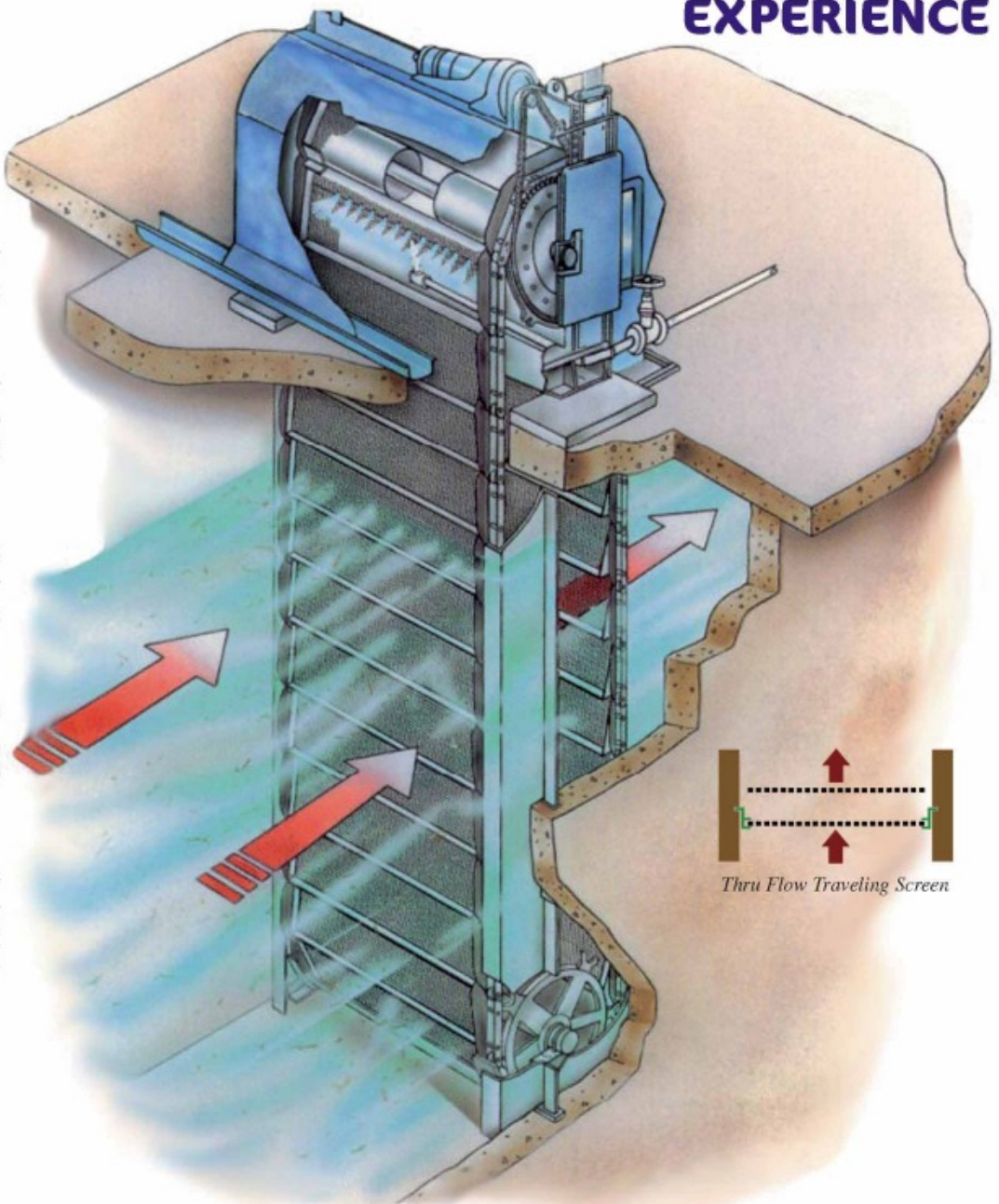
Tarnos S.A. is a leading producer of water filtration and vibration systems, founded in 1955.

Our main products for water intake systems include traveling water screens, bar screens, trash rakes and stop logs (gates).

Our systems have been working non-stop for many years in power stations in South America, Asia, Africa and Europe.

Tarnos' offices and factory are located near Madrid airport, where we design, manufacture and test our equipments.

Quality controls are the highest during all the processes, following our ISO 9001:2008 certificate, and including nuclear quality requirements.



*Grab-style aerial Trash Rake and bar screens*

# TARNOS



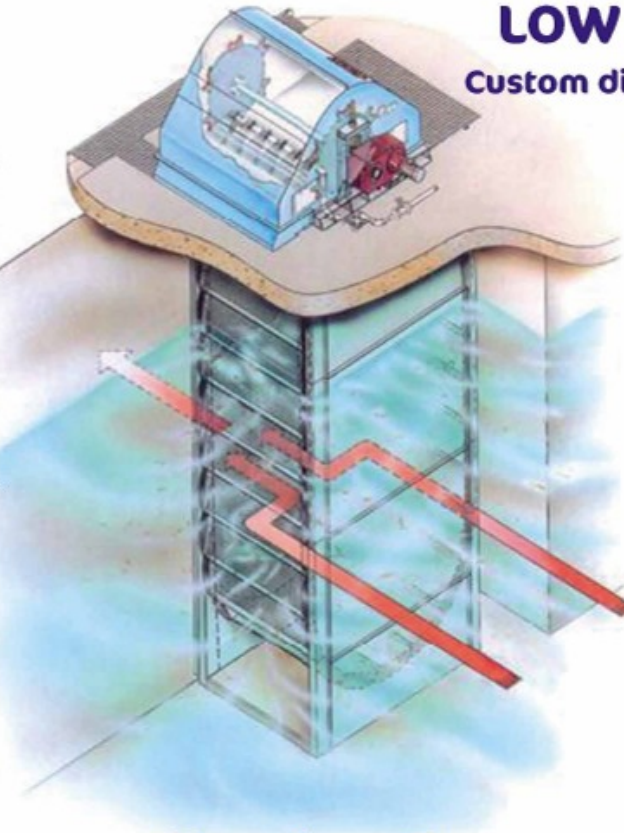
# **HIGH PERFORMANCE HEAVY DUTY LOW MAINTENANCE** **Custom dimensions and materials**

Tarnos' traveling water screens are high performance, heavy-duty and low maintenance equipment, designed to remove debris at large water intakes (Power Plants and other industries).

Components are designed for minimum maintenance, with motor-reducers with oil for life, non – lubricated chains and hardened materials, all to ensure long lasting, low wear and minimum care of the equipments.

The design and manufacturing are individually treated for every project, to ensure the perfect adaptability to each plant needs.

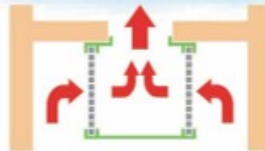
Materials are selected according to the project requirements and water quality. From carbon steel to super-duplex, including 304Lss, 316Lss, duplex or fiberglass.



Tarnos can provide several types of traveling water screens to capture fine debris in any site conditions or specifications.

**Through-Flow Traveling Water Screens** (previous page) have the screen panels perpendicular to the water flow.

The stainless steel screen mesh collect the debris and carry them up to the head section, where they are flushed away with high pressure water sprays. Screen widths vary from 2 to 14 feet (0,6 to 4,3 meters) wide. Heights from 8 to 100+ feet (2,44 to 30 meters). Screen opening size according to customer and site conditions.

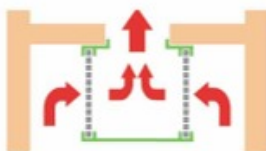
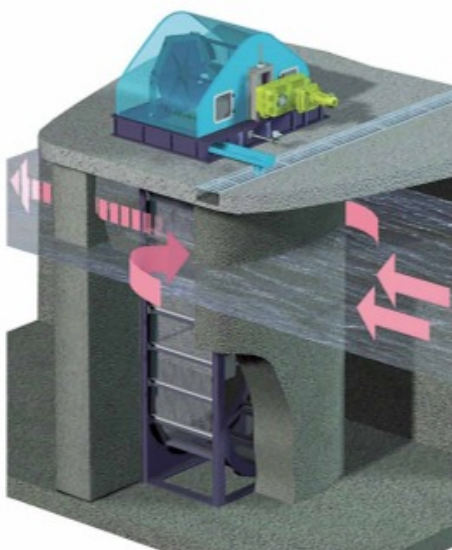


*Dual Flow Traveling Screens*

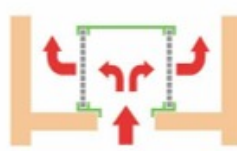
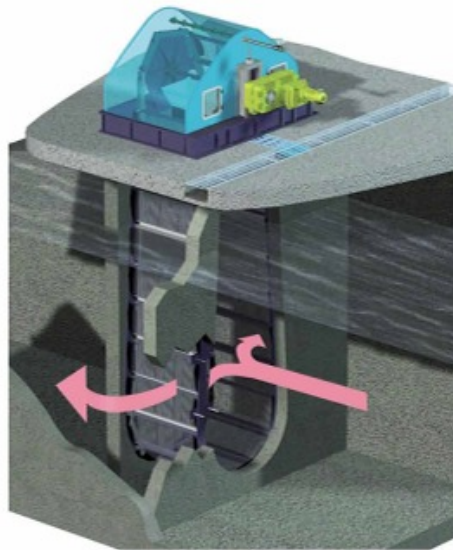
**Dual Flow Traveling Water Screens** (bottom left) are essentially trough flow rotated 90°, putting the screen panels parallel to the intake flow. This doubles the effective screening surface and reduces the possibility of debris carryover.

It also allows to install shorter panels or use thinner meshes without increasing flow velocity.

**Center flow** is similar to dual flow, but water coming from inside to outside.



*Dual Flow Traveling Screens  
with concrete wall*



*Center Flow Traveling Screens*

**TARNOS**



# BAR SCREENS TRASH RAKES STOP LOGS



*Bar screen and trash rake*

Before the fine filtration of the traveling water screens, it is commonly required a pre-filtration of big debris.

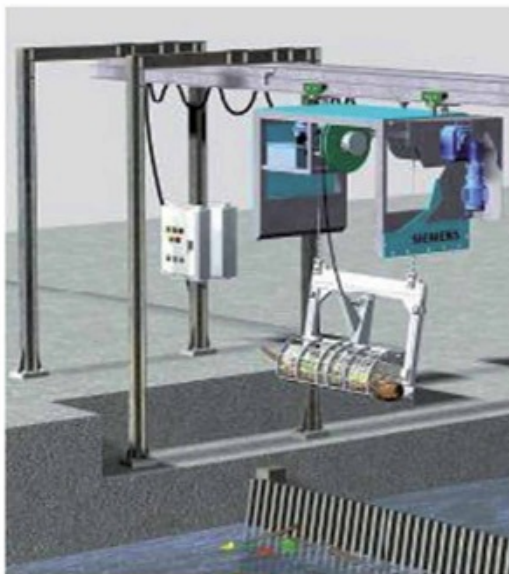
**Tarnos Bar Screens** are designed with robust shapes and adequate materials, to retain big and heavy debris like branches, trees, fauna or plastics. Our bar screens resist to impacts and high water pressure due to head loss.

**Tarnos trash rakes** remove the big debris from the bar screens, taking them out of the channel in automatic or manual mode. Strong rake between every bar and lift up to 1000 kg. Different designs include static rakes, traversing rakes on rails or overhead grabstyle trash rakes.

For maintenance purposes, Tarnos supplies **stop logs and gates** of any dimension and material, capable of standing the highest water pressures.



*Stop logs*



*Overhead grab-style trash rake*



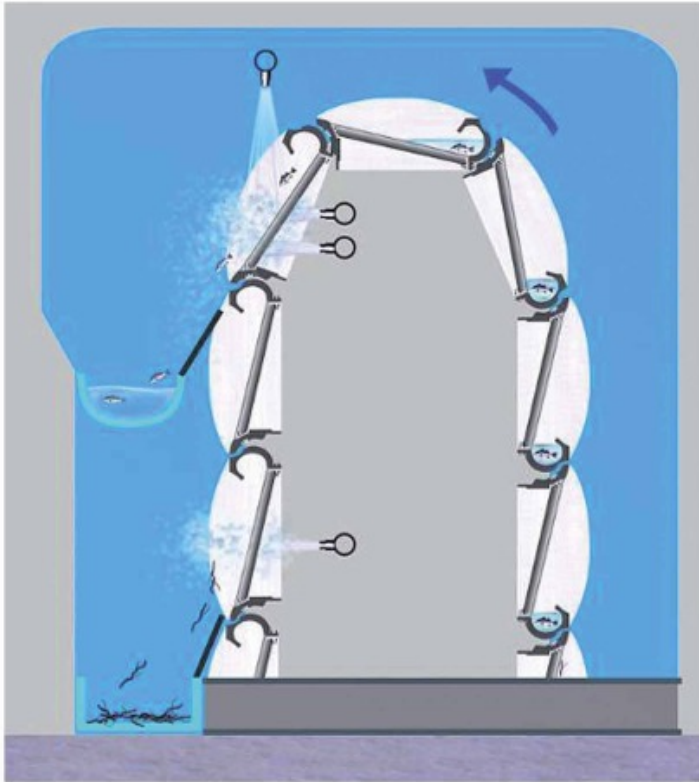
*Traversing trash rake*

## TARNOS



# FISH PROTECTION LATEST TECHNOLOGY

## Washing system and control cabinets



Current regulations in many countries require fish protection systems to reduce the impact on the river and ocean fauna.

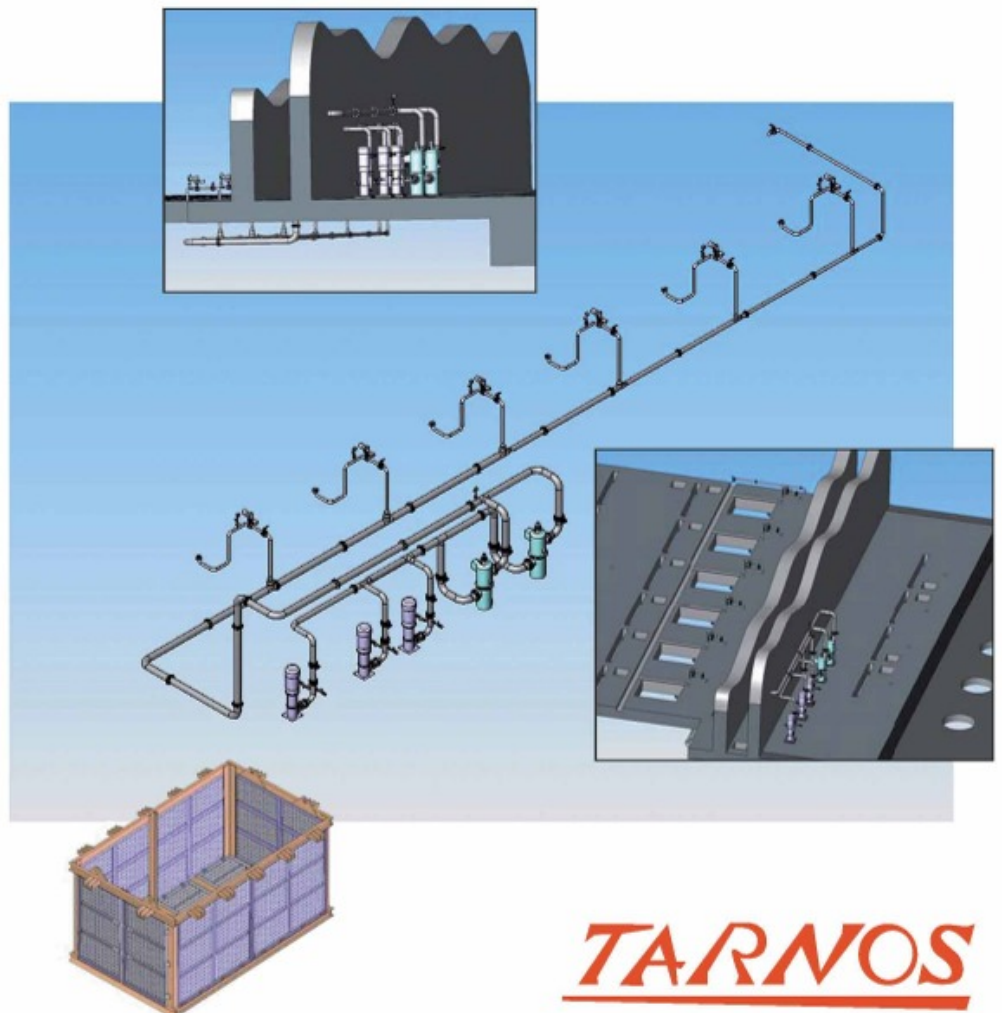
Tarnos has a special design of panels with a shape of bucket that gently elevates the fish to the head section. There, assisted by a low pressure water spray, the fish are smoothly discharged into a specific trough, independent of the debris trough.

The high pressure spray that cleans the debris is applied after the fish are evacuated.

Tarnos supply include the design, calculations and fabrication of all the required components and accessories needed to a complete autonomy.

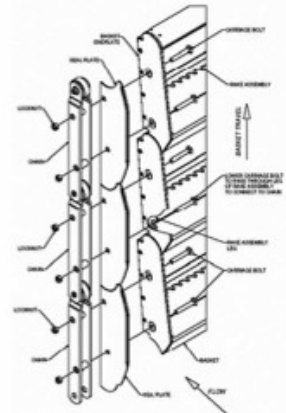
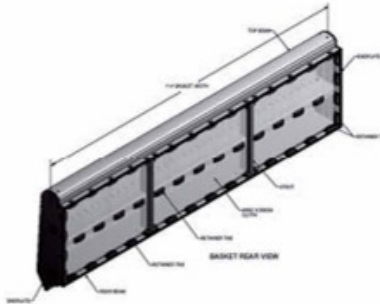
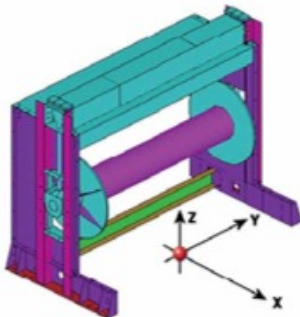
The pumps for the high pressure backwash together with the pipes, valves, pressure switches, manometers and strainers are part of our standard supply. Our electrical department develops and manufactures the Power and Control Cabinets, loaded with the latest technology in PLC, touch screens, ultrasonic water level transmitters and DCS communication.

Our site supervisors guide our customers during the installation and commissioning.



# TARNOS





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