

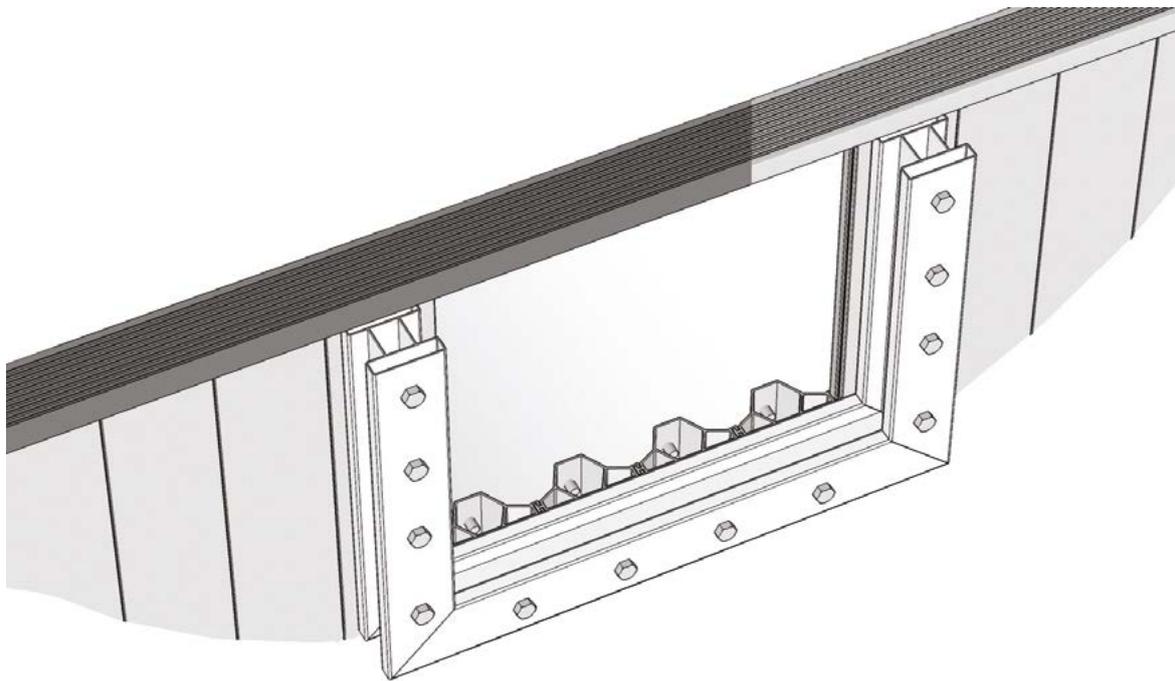


# Pietrucha

Established 1960

## The EcoLock small retention systems

Durable, light-weight and environmentally-friendly solution  
to improve the retention efficiency in forest ecosystems.



- **Unique solution developed by Polish engineers**
  - **Quality supported with 25 years' experience**
  - **Made in Poland**

## **Small retention systems - an important element of flood and draught management in forest ecosystems.**

The analyses conducted during past fifty years have clearly shown that more and more regions will suffer from periodical water scarcity. Due to global climate change, unfavourable trends in the existing water balance were diagnosed in many areas, i.e. lowering of the ground water level and the water surface level in reservoirs, disappearance forest lakes, drying out of the naturally damp forest ecosystems and the progressive degradation of peat soils.<sup>i</sup>

The water supply in Poland is no larger than the one in Egypt which is considered a desert country. The world average water supply per one person is 33m<sup>3</sup> a day while in Europe, the average reaches merely 11m<sup>3</sup>.<sup>ii</sup>

The vinyl small retention sluice gates offered by the Pietrucha Group are an advanced, durable and easy to maintain alternative to the traditional, wooden small retention systems. It is also environmentally-friendly solution due to the use of recycled PVC construction components, with the possibility of re-processing



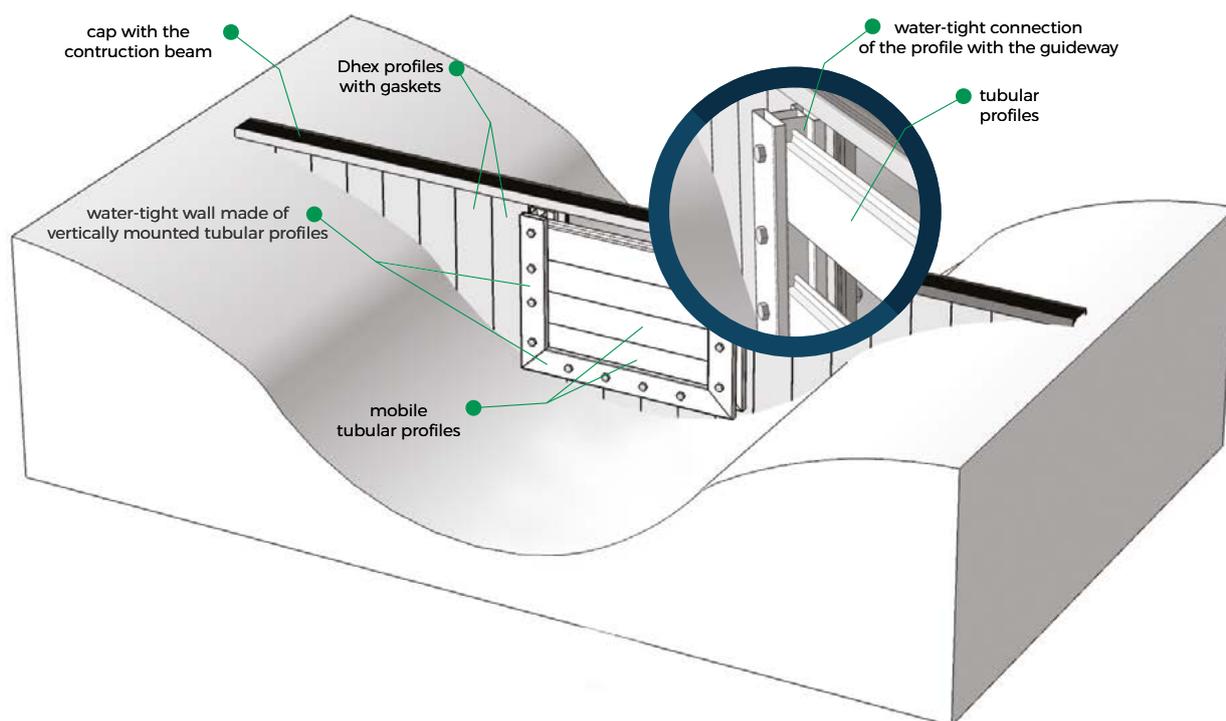
## **The Pietrucha quality: 25 years' experience, high precision and systematized manufacturing processes.**

The small retention sluice gates are made from tough polyvinyl chloride, modified with refining agents (e.g. toughness modifiers, UV and thermal stabilizers and mineral filling components). Thanks to the use of this closed-cycle recycling method, vinyl sheet piles are an environmentally friendly solution. Application of the ISO 9001:2008 standard has enabled us to provide and maintain high quality products.



## Five reasons to choose the small retention sluice gates manufactured by the Pietrucha Group

- Easy to handle and maintain with light-weight mobile system elements.
- Do not require impregnation and maintenance works.
- Fast assembly using light equipment.
- Natural look in harmony with the surroundings.
- Highly resistant to the impact of mechanical, atmospheric and biological factors.



The small retention sluice gate system is made of tubular profiles in the shape of a honeycomb – Dhex. This profile design guarantees high strength and at the same time lightweight transport and easy assembly in hard access spots. The profiles are connected with locks equipped with valves which guarantee 100% water-tightness of the construction. The walls smooth surface of the walls may be extruded in the form of a tree ring pattern to perfectly melt with the surrounding environment.

When the water level rises, the PVC tubular profiles assembled diagonally fill in with water. The weight of the water inside the profiles makes the locks fit tightly to create water-resistant sluice. The water retaining system based on Dhex profiles is part of vinyl mobile flood protection systems.

The small retention sluice gates constructed under the programme "Improvement of water retention capacities and drought and flood management in lowland forest ecosystems", financed by the Cohesion Fund must last for 5 years from the conclusion of the project.<sup>iii</sup>

i. International Food Policy Research Institute, 2002; Acteon Environment, Research and Consultancy, 2012; COPA European Farmers, 2013  
 ii. Brown, 2002; Chapagain i Hoekstra, 2004; UNESCO, 2006; Rijsberman, 2006; Cambridge University, 2012  
 iii. Coordination Centre for Environmental projects 2007: The concept for the project: "Improvement of water retention capacities and draught and flood maintenance in lowland forest ecosystems". Warsaw, typescript.

# The Pietrucha Group

## **PROUDLY POLISH, TRULY INTERNATIONAL**

The Pietrucha Group is a Polish family company specializing in the manufacturing and distribution of highest-quality and advanced building materials used broadly in the construction and civil-engineering sector.

We deliver our products to nearly 3500 customers in 34 countries on 5 continents. For over 55 years, the name Pietrucha has been associated with a reliable and honest family business managed by the third generation of entrepreneurs.

We are the global leader in the manufacturing and distribution of advanced PVC solutions broadly used in the civil engineering sector in land and water infrastructure investments. Our products are an environmentally friendly, light-weight and costs efficient alternative to the traditional materials such as steel, wood or concrete. PVC solutions are used in construction projects more and more broadly because of their excellent parameters and the possibility of lowering investment costs.



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