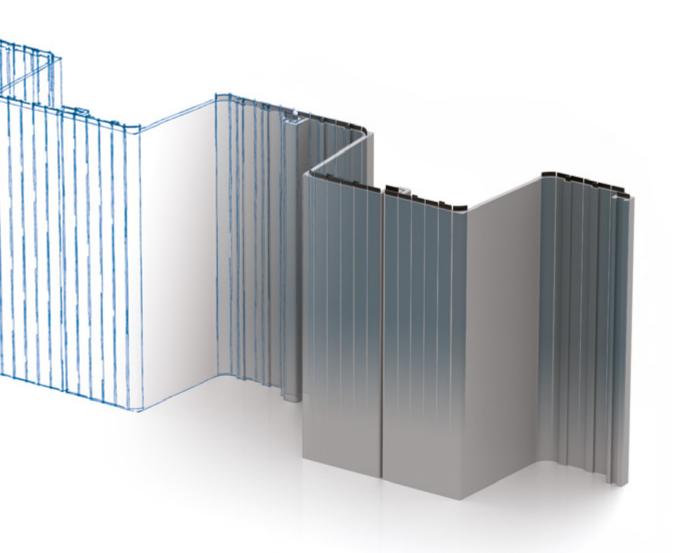


## SuperLock

The new generation of composite sheet piling.

All advantages of PVC with
reinforced stiffness and strength.



## **The Pietrucha Group**

**Proudly Polish, Truly International** 

**The Pietrucha Group** is an efficiently managed, competitive and innovative group of companies with 55 years track-record, which specializes in the manufacturing and distribution of top-class geosynthetic products as well as providing a comprehensive range of geotechnical services broadly used in civil engineering.

The products manufactured by the Pietrucha Group are delivered to nearly 3500 customers in 34 countries on 5 continents, especially in regions sensitive to the impact of climate change. Despite the scope and global reach of our operations, the Pietrucha Group has remained a family business, managed by a third generation of entrepreneurs.



Composite sheet piling used to reinforce retaining walls.

# SuperLock: the new generation of composite sheet piling

The Pietrucha Group is the global leader in the manufacturing and distribution of high quality vinyl sheet piling broadly used in the civil engineering sector in land and water infrastructure investments. Viny sheet piles are a friendly, lightweight, durable and costs efficient alternative to the traditional materials such as steel, concrete or wood.

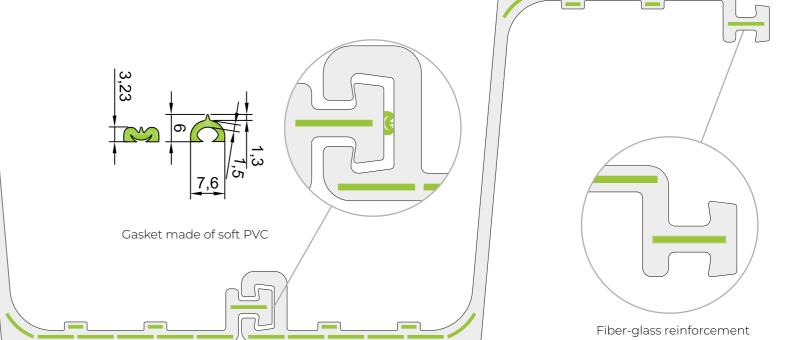
Our offer includes the SuperLock system, the new generation of composite sheet piling made of PVC reinforced with fiber glass. SuperLock retains all the advantages of vinyl sheet piling combined with reinforced strength and stiffness allowing for a broader scope of application which had traditionally been reserved to steel sheet piling.

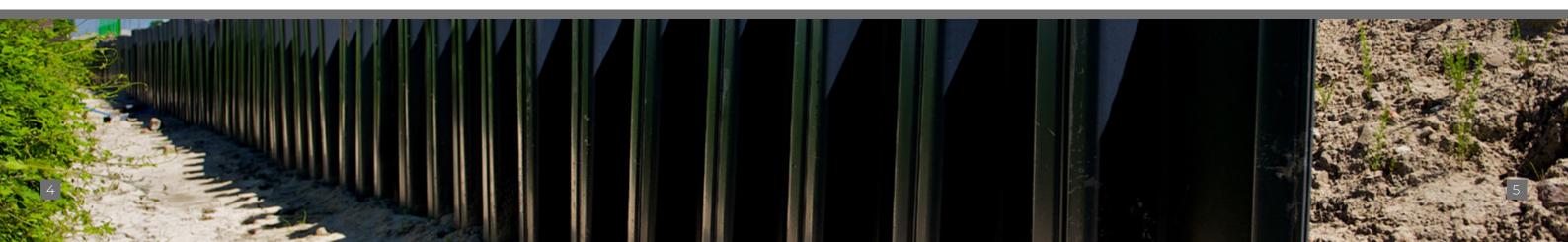
#### The new, patented technology to save investments costs

- An innovative composition of PVC and fiber-glass sealed together with a thermo-pla stic matrix.
- Composite material with significantly higher technical parameters than PVC and much broader scope of application.
- Strength and stiffness parameters comparable with light steel piling with all the advantages of PVC sheet piling.

| Parameter         | Unit               | PVC   | SuperLock Difference |          |
|-------------------|--------------------|-------|----------------------|----------|
| Weight of sqm     | kg/m²              | 30    | 30                   | the same |
| Section modulus   | cm³/m              | 1462  | 1685                 | x 1,15   |
| Moment of inertia | cm <sup>4</sup> /m | 18739 | 21203                | x 1,13   |
| Young' modulus    | GPa                | 2,6   | 4,3                  | x 1,65   |
| Max. stiffness    | kNm²/m             | 244   | 913                  | x 3,74   |

 $<sup>^{*}</sup>$  Parameters based on numerical research of theoretical model. For design purposes, please, use parameters included in the current technical specification.





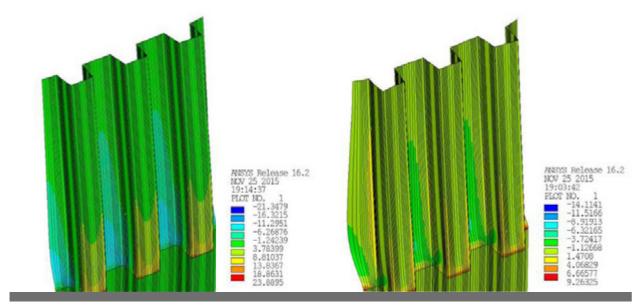
The SuperLock composite sheet piling www.pietrucha.pl

#### The new SuperLock composite sheet piling: the best value for money

| Steel                 | Pultruded  | PVC  | SuperLock  |  |
|-----------------------|--|--|--|--|
| 3 to 10               | 5 to 11  | 5 to 12  | 9  |  |
| 90 to 400 & more      | 140 to 400   | 30 to 250  | 250  |  |
| 30 to 100 & more      | 10 to 40   | 5 to 40  | 30   |  |
| \$\$ - \$\$\$\$       | \$\$\$- \$\$\$\$\$   | \$ - \$\$  | \$\$   |  |
| 1000 to 100000 & more | 250 to 7500  | 1 to 350   | 913  |  |
|                       | 3 to 10<br>90 to 400 & more<br>30 to 100 & more<br>\$\$ - \$\$\$\$ | 3 to 10 5 to 11  90 to 400 & more 140 to 400  30 to 100 & more 10 to 40  \$\$\$ - \$\$\$\$\$\$ | 3 to 10 5 to 11 5 to 12  90 to 400 & more 140 to 400 30 to 250  30 to 100 & more 10 to 40 5 to 40  \$\$\$ - \$ |  |

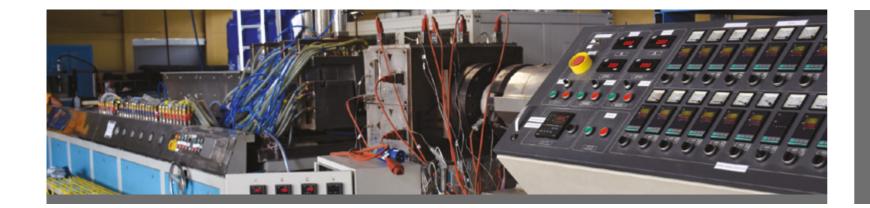
<sup>\*</sup> Parameters based on numerical research of theoretical model. For design purposes, please, use parameters included in the current technical specification.

## Results of numerical analysis of a GW 580 vinyl sheet pile with and without fiberglass rein forcement - vertical axial stress [MPa]



Without reinforcement

Reinforced with fiber-glass



### All the qualities of the vinyl sheet piling with higher stiffness and strength

SuperLock composite sheet piling is made of PVC reinforced with continuous and consolidated fiber glass inserts using the coextrusion technology. Application of this innovative solution increases both the durability and strength of the profile.



The strength and durability parameters of the SuperLock composite sheet piling are comparable to those of the light steel piling but with the weight and price of the PVC piling.

## The Pietrucha quality: 25 years' experience, utmost care and consistent manufac turing processes

An advanced machine park, continuous monitoring of the manufacturing procedures, coupled with over 25 years' experience in plastics processing, guarantee the highest and consistent quality of our products. The physical and mechanical parameters of our sheet piles are systematically validated by accredited laboratories, institutes and technical universities.

Application of the **ISO 9001:2008** standard has enabled us to provide and maintain high quality products, while introduction of specially designed procedures has systematized our operations in the company, which are now an integral part of it.

The SuperLock technology is subject to patent no. P-412127.



6 7



#### **Contact**