

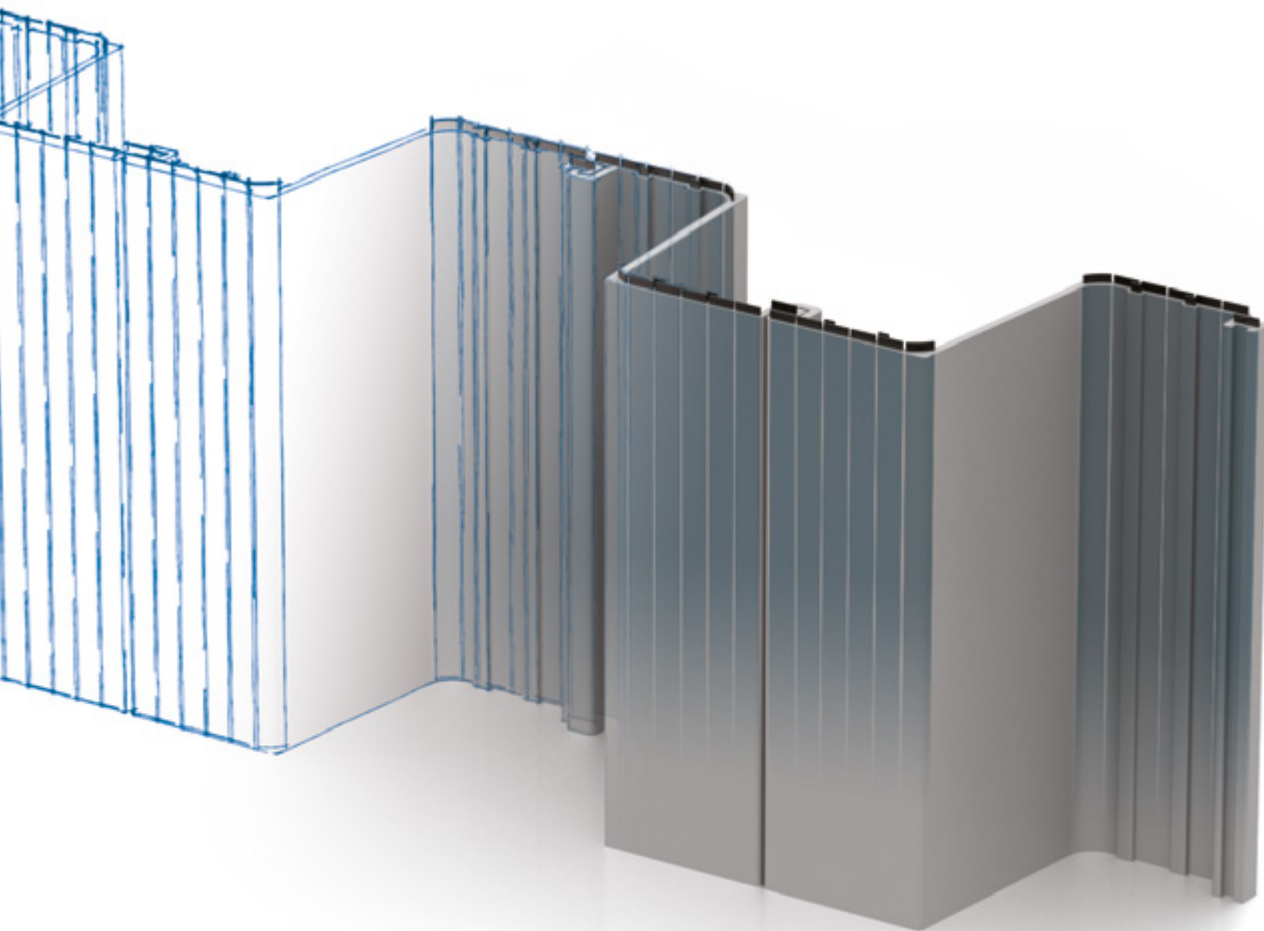


Pietrucha
Established 1960

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. Vinyl sheet piles are a friendly, lightweight, durable and costs efficient alternative to the traditional materials such as steel, concrete or wood.

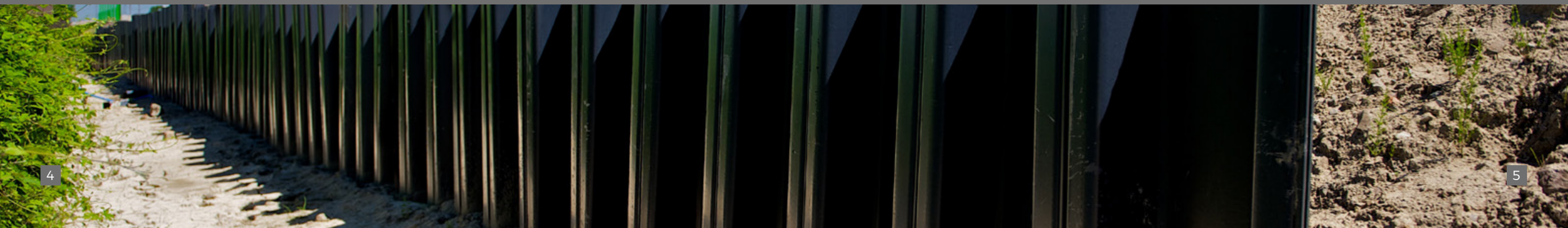
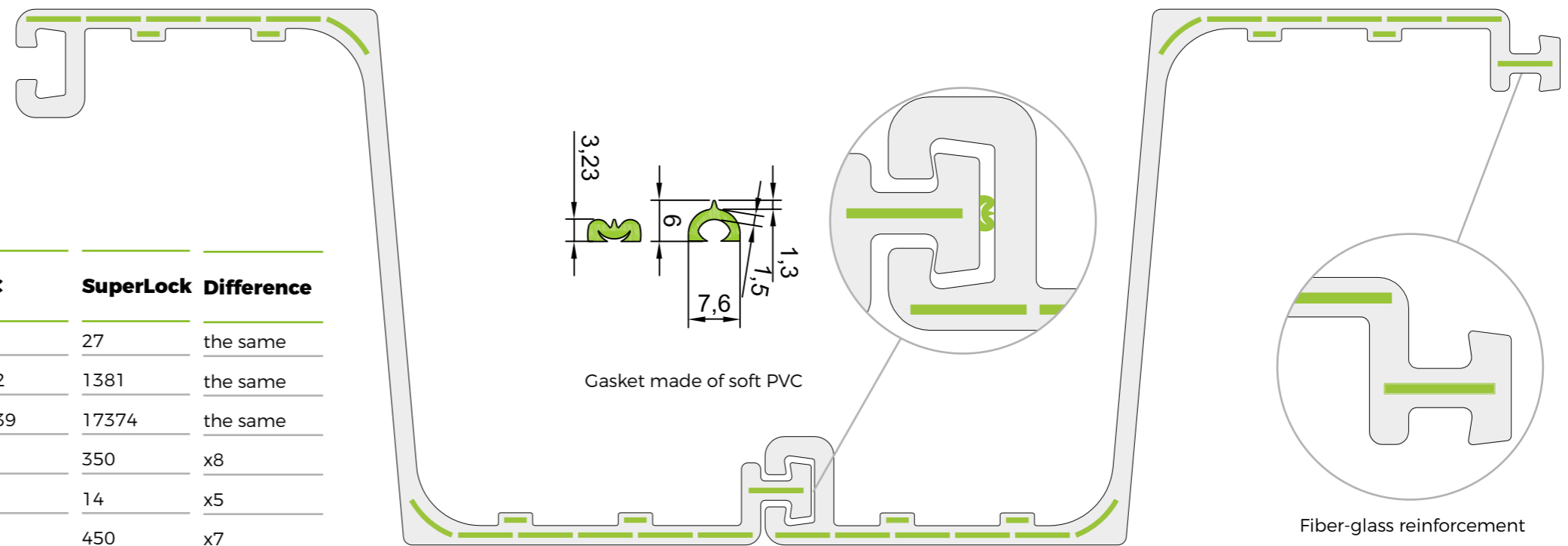
Our offer includes the SuperLock system, the new generation of composite sheet piling made of PVC reinforced with fiber glass. SuperLock retains all the advantages of vinyl sheet piling combined with reinforced strength and stiffness allowing for a broader scope of application which had traditionally 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-plastic 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/m ²	30	27	the same
Section modulus	cm ³ /m	1462	1381	the same
Moment of inertia	cm ⁴ /m	18739	17374	the same
Tensile strenght	MPa	44	350	x8
Young' modulus	GPa	2,6	14	x5
Ultimate bending moment	kNm/m	64	450	x7
Allowable stiffness	kNm ² /m	244	1206	x5

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

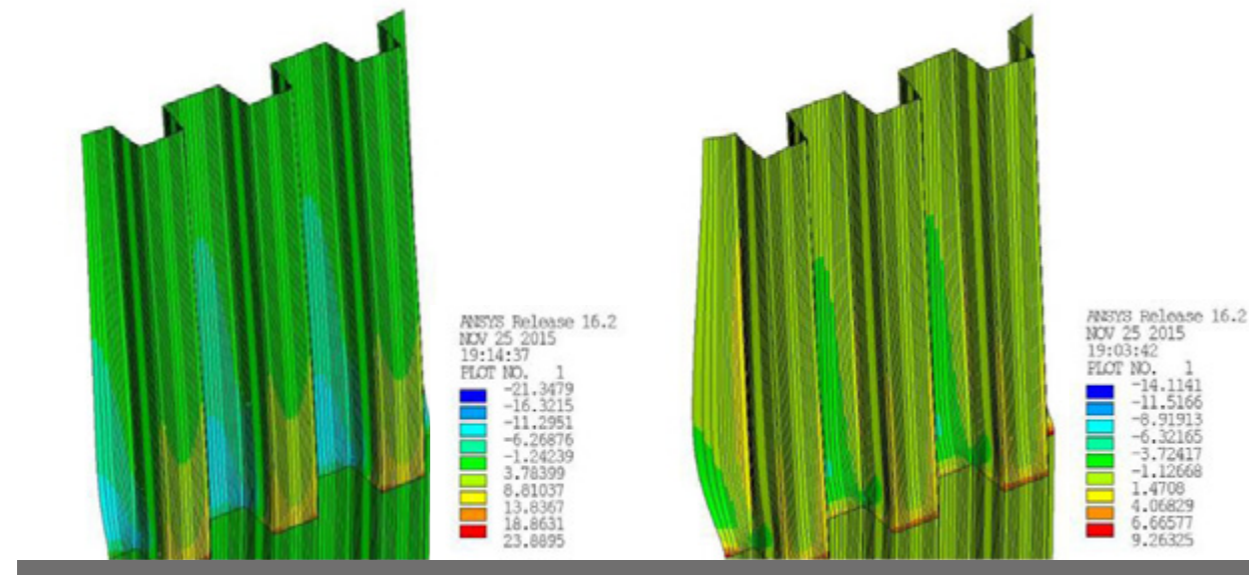


The new SuperLock composite sheet piling: the best value for money

Sheet pile type	Steel	Pultruded	PVC	SuperLock
Thickness [mm]	3 to 10	5 to 11	5 to 12	9
Section depth [mm]	90 to 400 & more	140 to 400	30 to 250	250
Weight of sqm [kg/m ²]	30 to 100 & more	10 to 40	5 to 40	30
Price for sqm [PLN/m ²]	\$\$\$ - \$\$\$\$\$	\$\$\$\$ - \$\$\$\$\$\$	\$ - \$\$	\$\$
Stiffness [kNm ² /m]	1000 to 100000 & more	250 to 7500	1 to 350	1700
Ultimate bending moment [kNm/m]	30 to 500 & more	90 to 600	1 to 100	450

* 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 reinforcement - vertical axial stress [MPa]

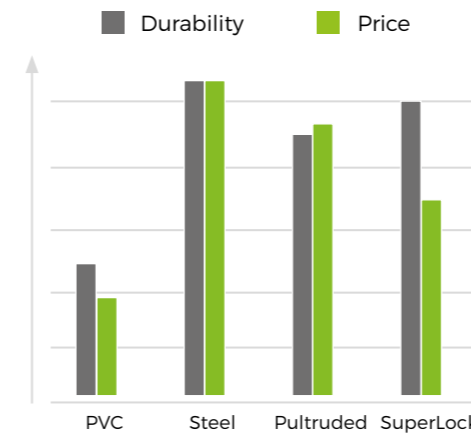


Without reinforcement

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.

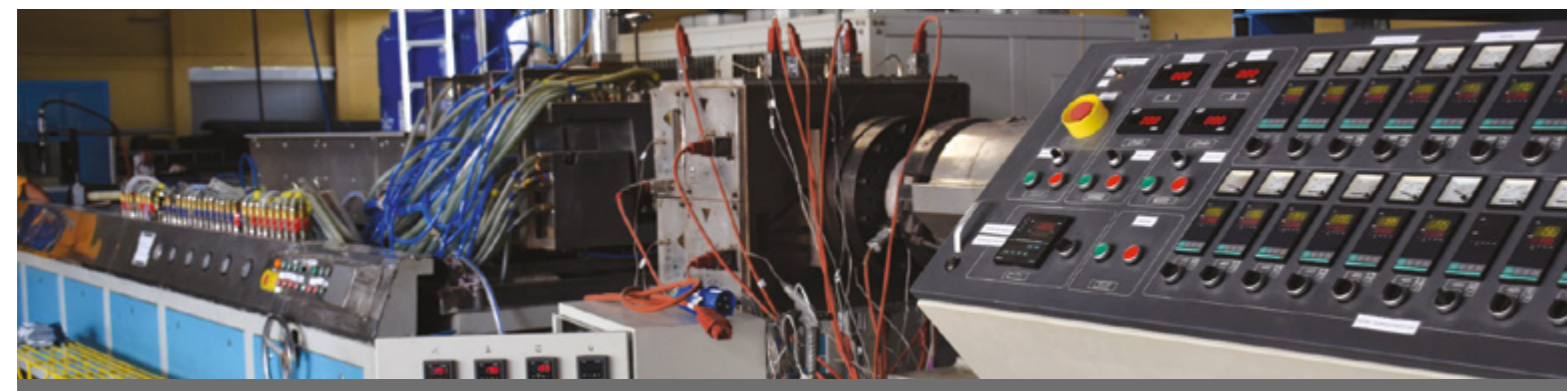


The strength and durability parameters of the SuperLock composite sheet piling are comparable to those of the light steel piling but with the weight and price of the PVC piling.

The Pietrucha quality: 25 years' experience, utmost care and consistent manufacturing 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.





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