



greiner

PURTEC



Symbio[®]

The flexible nonwoven insulation



Greiner PURTEC

Greiner PURTEC sets and raises the standards of insulation for warm water tanks. We focus on the requirements of the customers. We still set great store by emphasizing Research and Development activities, testing and patenting new products with better insulation properties. In an era of high energy costs and worldwide issues such as global warming, insulation is becoming more and more important. In order to contribute, we always focus on our customer's needs and new innovative technologies.

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Symbio®

Polyester nonwoven insulation of Greiner PURtec are combined under the Symbio® brand. These are characterized by easy installation and adequate efficiency. Nonwoven insulation are available in the Symbio® II and Symbio® L variants.

Both types of insulation are adapted to special applications and can also be easily distinguished by the color - the black Symbio® II as an efficiency solution, the white Symbio® L as the basic version.



Why Symbio®

- 1 Individual solutions.
Every product is aligned to a specific tank.
- 2 We love our planet, so we set an example.
Low weight, no harmful substances.
- 3 Top quality.
Stable in visual appearance, endurance and insulation.
- 4 Easy to manipulate & install.
Very light, closing slat or classic zip fastening. It can't be easier.

Energy efficiency classes

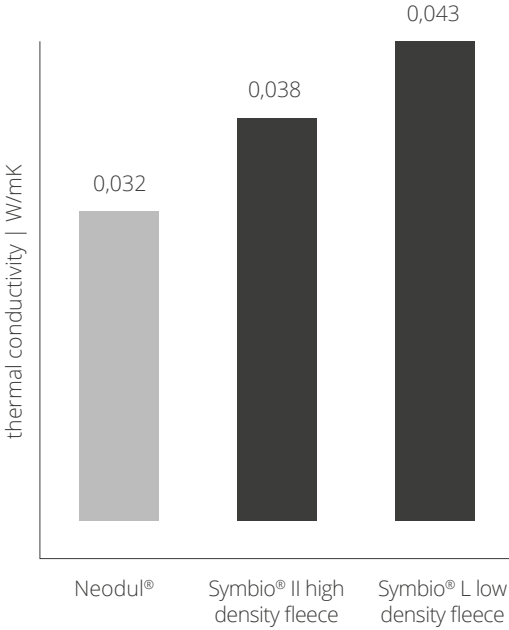
Symbio® insulation can help you to achieve energy efficiency class C (Symbio® II / black) or class D (Symbio® L / white), for tank volumes up to 2000 litres.



GRAPH: Energy efficiency classes comparison

Thermal insulation properties

Thermal conductivity of polyester fibre fleece is 0,038 W/mK for Symbio® II and 0,043 W/mK for of Symbio® L. This insulation properties, combined with very low weight, turn the Symbio® family into a very good economical solution.

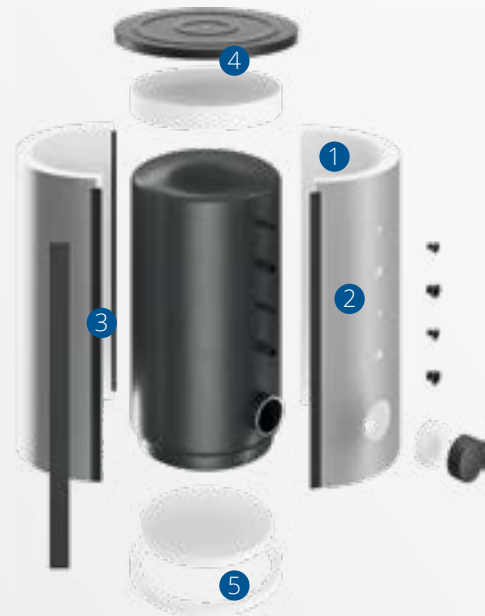


GRAPH: Insulation properties comparison

Symbio® products in comparison with our Neodul® solution.

Description

- 1 The Symbio® thermal insulation core material is polyester nonwoven. The insulation is shaped as flat panels for easy transportation and storing. Rounded shapes can be formed during installation thanks to the flexibility of the material.
- 2 They can be supplied with a soft PVC cover or rigid PS surface.
- 3 Insulation panels are secured by closing slat or classic zip.
- 4 Top insulation and its plastic cover are included.
- 5 A bottom insulation can be provided upon request.



Sustainability, ecology

During the production of our products we focus on quality and sustainability. Our production is managed by quality standards of ISO 9001 (Quality Management) and ISO 14001 (Environmental management). During utilization phase our products maintain their properties throughout the whole life cycle, especially concerning thermal conductivity, unlike other insulation materials like polyurethane rigid foam.

At Greiner PURtec, sustainability, environmental friendliness and the highest quality go hand in hand.

Being responsible deserves respect

Environmentally responsible companies enjoy higher respect of clients, governments and other companies. The Symbio® transportation leads to significantly lower CO2 emissions compared to other insulation concepts, thanks to the low weight and the dimensions. It is easy to be responsible by using our solutions.

Unique approach from the start

FCKW	free
HFCKW	free
HFKW	free
other halogen gases	free
HBCD	free
unwanted fire inhibitors	free
Silicon and Silicates	free
environment protection	REACH-Konform
water stress	harmless
pH	no influence
health influence	none
recyclability	100 %

Symbio® II professional

Symbio® II is based on an optimized polyester nonwoven, which makes it possible to achieve energy efficiency class C despite its low weight. Here with impact-resistant PS surface.



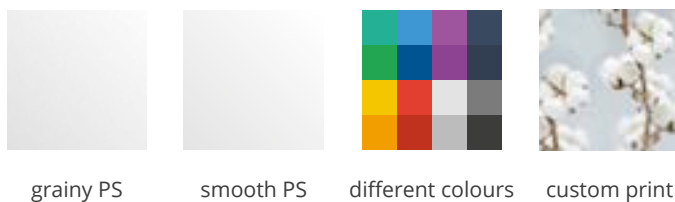
- ① black polyester nonwoven
- ② PS surface
- ③ closing slat

Specifications

The important facts

surface	solid PS
fastening	closing slat or classic zip
workers for installation	2
special aids or tools	no need
custom adjustments	yes

Surface finishes

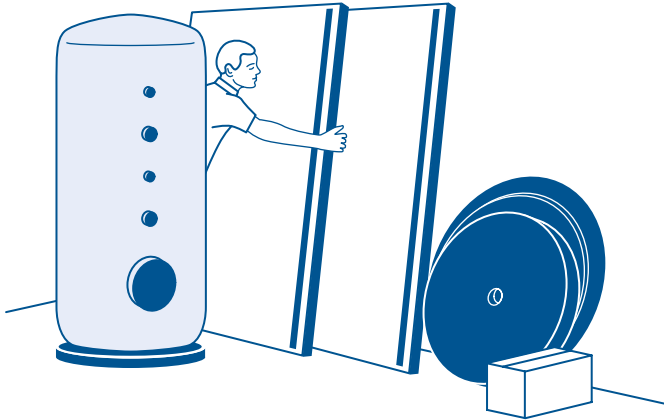


4 easy steps

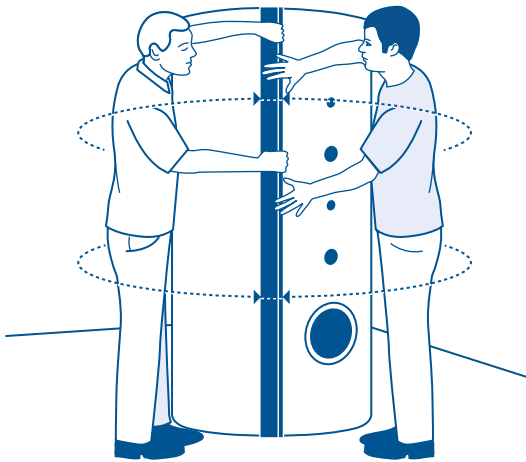
With this 4 easy steps, 2 workers can install the insulation in just a few minutes:

- 1 Prepare all parts, isolate the bottom
- 2 Insulate the top
- 3 Install & secure the main panels
- 4 Tight the main isolation connection, finish all the details

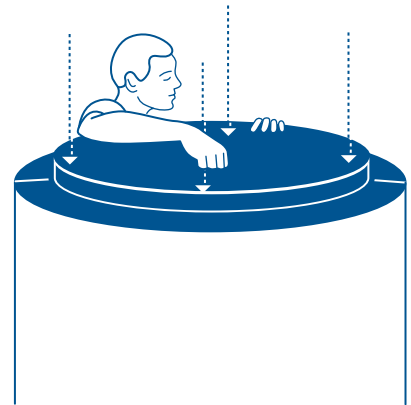
NOTE: Detailed manual is part of the delivery.



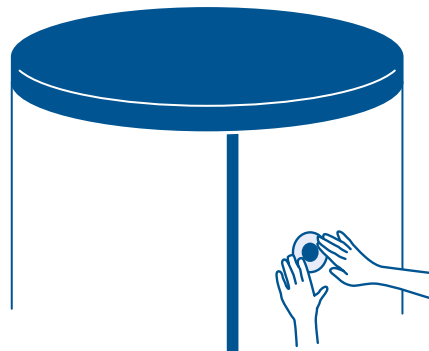
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Symbio® II flexible

The Symbio® II flexible has the same insulating properties as the Symbio® II professional. It distinguishes by its flexible PVC cover and by the closing, which is done only by classic ZIP.



- 1 black polyester nonwoven
- 2 PVC surface
- 3 classic zip

Specifications

The important facts

surface	flexible PVC
fastening	classic ZIP
workers for installation	2
special aids or tools	no need
custom adjustments	yes

Surface finishes



grainy PVC



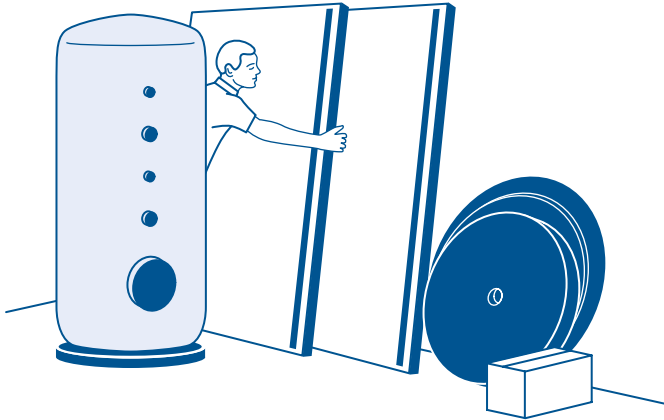
different colours

4 easy steps

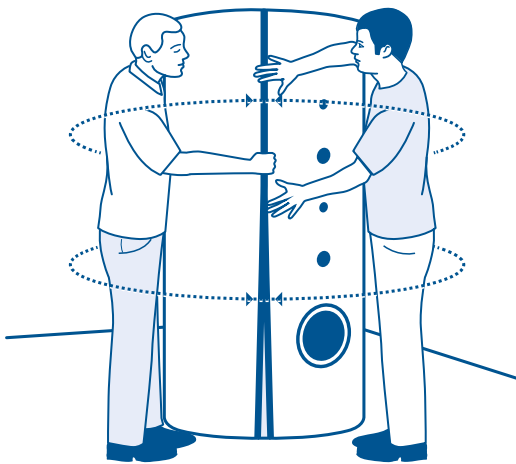
With this 4 easy steps, 2 workers can install the isolation in just a few minutes:

- 1 Prepare all parts, isolate the bottom
- 2 Insulate the top
- 3 Tight the main isolation panels
- 4 Finish all the details & connections

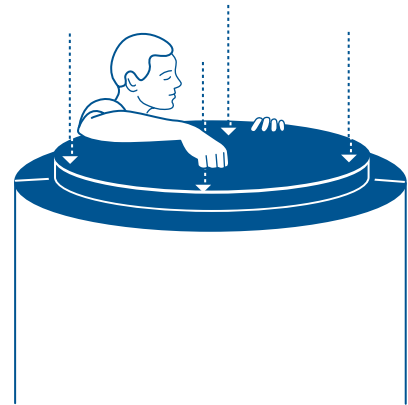
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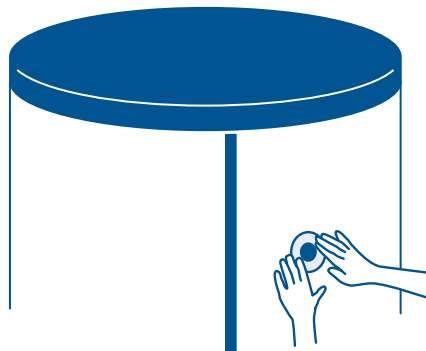
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Symbio[®] L professional

A lightweight nonwoven insulation, but with a higher compression hardness, which makes it ideal for higher insulation thickness and very large tank volumes, because it is easy to handle despite these larger dimensions. Here with impact-resistant PS surface.



- ① white polyester nonwoven
- ② PS surface
- ③ closing slat

Specifications

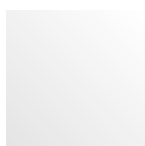
The important facts

surface	solid PS
fastening	closing slat
workers for installation	2
special aids or tools	no need
custom adjustments	yes

Surface finishes



grainy PS



smooth PS



different colours



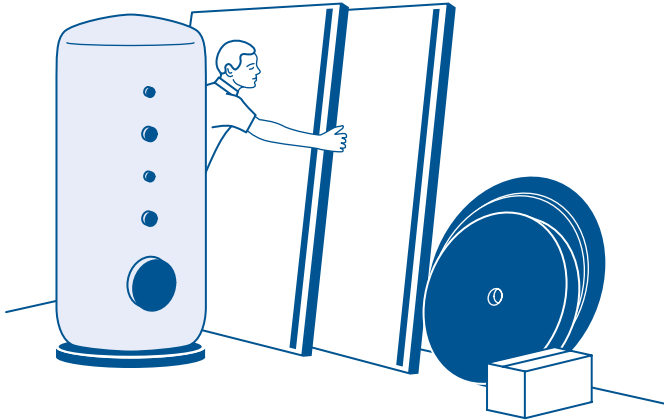
custom print

4 easy steps

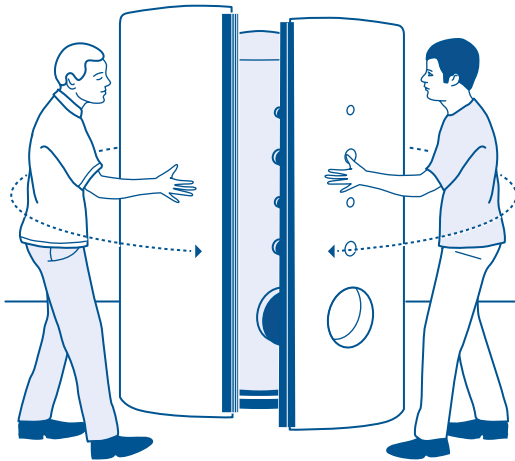
With this 4 easy steps, 2 workers can install the isolation in just a few minutes:

- 1 Prepare all parts, isolate the bottom
- 2 Insulate the top
- 3 Install & secure the main blocks
- 4 Tight the main isolation connection, finish alle the details

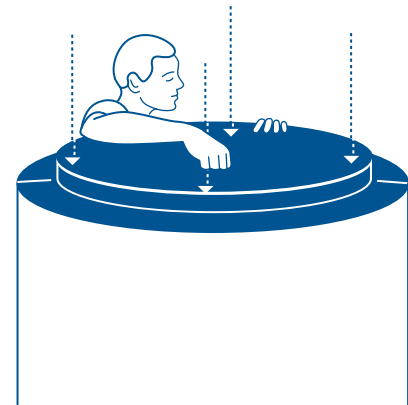
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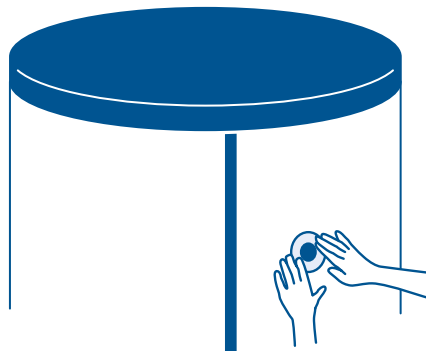
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Symbio® L flexible

The Symbio® L flexible has the same insulating properties as the Symbio® L professional. It distinguishes by its flexible PVC cover and by the closing, which is done only by classic ZIP.



- ① white polyester nonwoven
- ② PVC surface
- ③ classic zip

Specifications

The important facts

surface	flexible PVC
fastening	classic ZIP
workers for installation	2
special aids or tools	no need
custom adjustments	yes

Surface finishes



grainy PVC



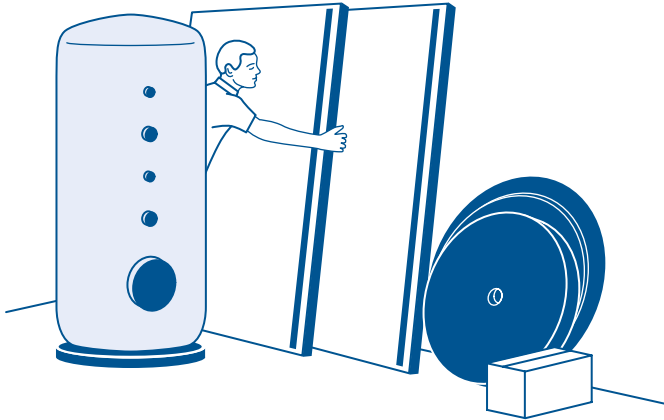
different colours

4 easy steps

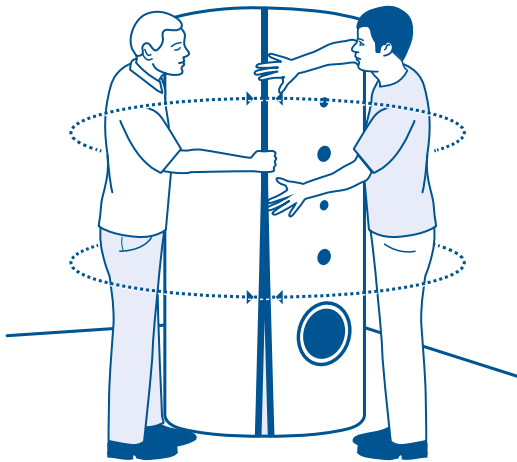
With this 4 easy steps, 2 workers can install the isolation in just a few minutes:

- 1 Prepare all parts, isolate the bottom
- 2 Insulate the top
- 3 Tight the main isolation connection
- 4 Finish all the details & connections

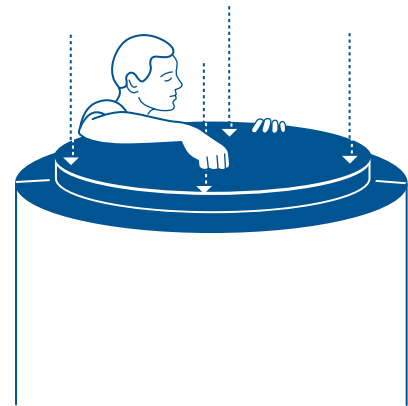
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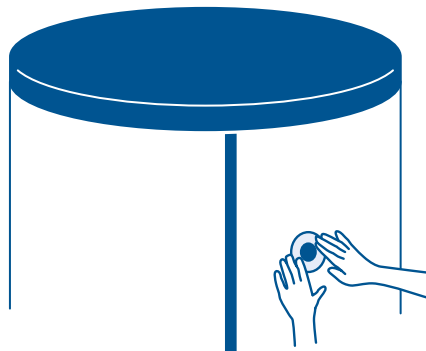
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Our services & how we work

Every solution is developed together. Your needs and expectations combined with our unique materials and experience create ideal product. The maximum benefit for the customer is always the number one criterion for us.

1 Your real needs

Once you contact us, we will identify your needs. They are crucial for us. We will prepare feasible solution alternatives based on your requirements, wishes and technical drawings.

2 Will help to get optimum price/performance ratio

In cooperation with your experts, we will actively search for opportunities for cutting the costs and maximising the price to performance ratio.

3 Fast sample delivery

We will send samples within 14 days. This way, you will be able to test the insulation efficiency quickly and comfortably.

4 Your products always on time

Being the largest producer in the region, we can guarantee timely and smooth supplies, tailor-made to your needs.

5 You can count on our quality and innovations

We work diligently to make sure that our products are of the highest quality. To achieve this, we extensively test all products during both development and production.

Notes

A large grid of small dots for taking notes, consisting of 20 columns and 30 rows.