



Industry Insulation



Efficient solutions for big pipes

U TECH Pipe Section Mat MT 7.0 G1



ISOVER
SAINT-GOBAIN



For efficient and fast insulation of big-diameter industry pipes

U TECH Pipe Section Mat MT 7.0 G1 – a double advantage

ISOVER V-grooved precut slab U TECH Pipe Section Mat MT 7.0 G1 is the optimal solution for an efficient insulation of pipes with a diameter greater than 324 mm. The thermal performance especially in temperatures above 250 °C are outstanding.

With its light weight and precut exact dimensions U TECH PSM enables an efficient and easy installation in comparison to traditional heavy-dense pipe sections or wired mats.

Moreover, thanks to its mechanical properties, its installation doesn't require any supportive structure. In only 4 steps the U TECH PSM is mounted and fixed around the pipe perfectly and precisely at the right circumference of the pipe.

U TECH PSM is delivered flat on pallets to save transport space. Thus, ISOVER U TECH Pipe Section Mat MT 7.0 G1 combines in one single product the advantages of traditional insulation with pipe sections and lamella/wired mats in an even more efficient way:

- Outstanding thermal insulation properties
- High resistance to compression
- Space saving in transportation
- Easy and fast installation
- Easy handling
- Light weight



Excellent thermal insulation

- High energy efficiency, especially in high temperatures (Efficiency class 7 „extra“)
- Concentric fibers orientation and ULTIMATE quality
- Maximum Service Temperature 620 °C



Easy installation

- With its width of 625 mm, its robust woven fabric facing, and weight of max 18 kg per piece, it can be easily installed by only 1 person



Fast installation

- No supporting structure/spacers needed according to FESI Code of Practice, DIN 4140



Excellent fire protection

- Non combustible, Euroclass A1

Easy to handle – quickly installed!

Insulation of bigger pipe diameters has never been easier and faster.

- Delivered flat-packed on pallets
- Precut to perfectly fit the circumference of the pipe
- Quickly installed in just 4 steps by one person due to the light weight and 625 width.

The glass fabric facing helps to avoid damages during the installation but also acts as a mechanical protection afterwards.



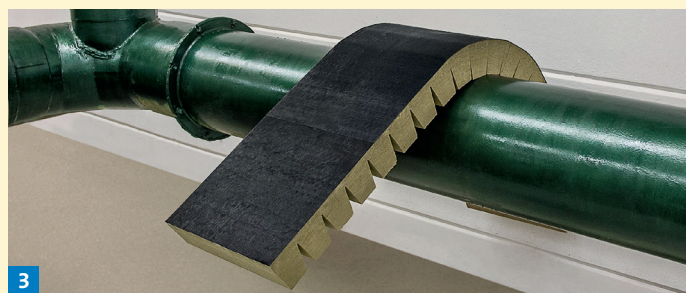
4 quick steps to get a perfect installation result:



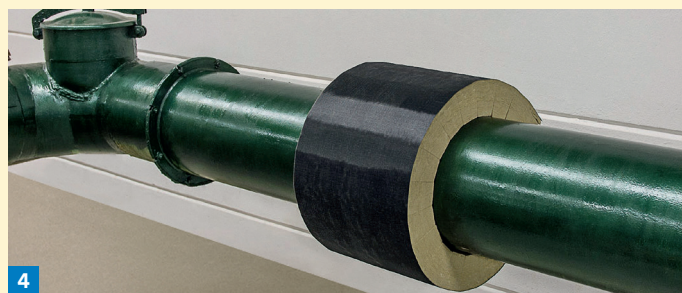
1 Place U TECH Pipe Section Mat MT 7.0 G1 on the pipe or on a straight support



2 ... and expand it lengthwise on the pipeline.



3 Then turn it and center around the pipe.



4 Finally, wrap and join U TECH PSM MT 7.0 G1.

Fixation should be done according to the relevant industry standard, for example with metal bands. Joints can be optionally closed using tapes e.g. ISOVER Protect Black Tape.

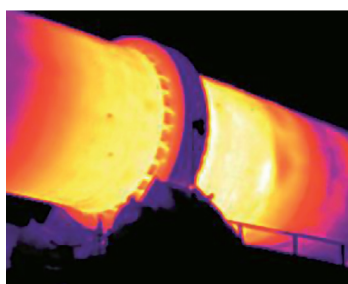


Best in class – thermal performance by U TECH PSM MT 7.0 G1



Year by year massive amounts of energy are lost due to heat loss in the process industry as studies like the Ecofys report „Climate protection with rapid payback“ have demonstrated.

A big share of these losses are coming from uninsulated, damaged or badly insulated pipelines. As a rule of thumb: the bigger the diameter and the higher the process temperatures the bigger is the potential of energy and related operational cost saving.



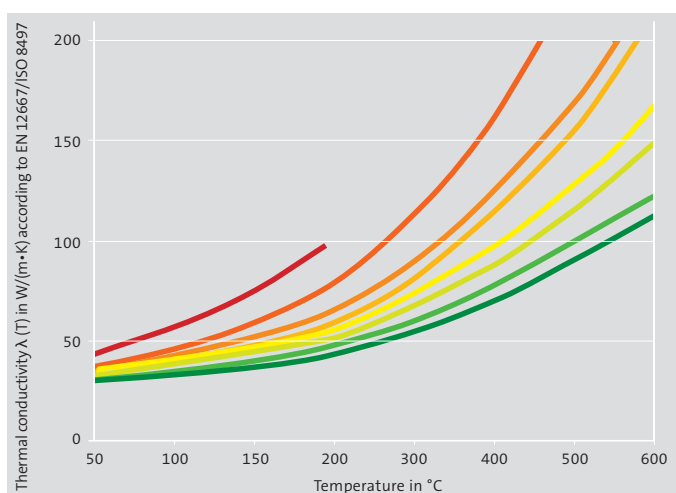
But space for improved pipe insulation is often restricted. U TECH PSM MT 7.0 G1 provides therefore the perfect answer to both demands: The solution for efficient and space saving insulation!

U TECH PSM reaches the ISOVER energy efficiency class 7 "extra" – with outstanding thermal conductivity values especially for higher temperatures and pipe outer diameters ≥ 500 mm.

They can be installed without spacers or support structures – therefore also without additional thermal bridges. Insulation constructions using the U TECH PSM solution can combine better thermal efficiency with thinner insulation design - extremely important in defined close spaces e.g. at pipe bridges.

Efficiency classes of ISOVER TECH products

8. extra plus	Optimal for process temperatures up to 700 °C
7. extra	
6. premium plus	Optimal for process temperatures up to 600 °C
5. premium	
4. standard plus	Optimal for process temperatures up to 400 °C
3. standard	
2. classic plus	Optimal for process temperatures up to 250 °C
1. classic	



Thermal conductivities λ_d [W/(m·K)] of U TECH PSM MT 7.0 G1

Mean Temperature (°C)	10	50	100	150	200	300	400	500	Test standard
Pipe Diameter (mm)									
$\phi \geq 500$	0,031	0,035	0,040	0,046	0,054	0,070	0,091	0,116	EN 12667
$\phi < 500$	–	0,038	0,045	0,054	0,065	0,092	–	–	ISO 8497

U TECH PSM MT 7.0 G1 advantages in a nutshell



For installers and contractors



- Supply in pallets for an easy handling on site
- No support construction needed, for fast installation
- Reduced weight – can be easily and efficiently mounted by one installer only
- Exact fit to diameter: No waste, no cutting at jobsite
- Robust surface with high mechanical strength facing

For planners and plant operators



- An easy solution for high insulation demands: Efficient thermal, acoustic insulation and fire protection solution for pipelines with service temperatures up to 620°C.
- More freedom in the planning of new projects thanks to light, thin and efficient constructions
- Sustainable solution combining economic and ecologic aspects

For distribution



- Reduced transportation and storage costs in comparison to traditional pipe sections as flat-packed and delivered on pallets
- Advantages of wired/lamella mats and pipe sections combined in one unique value-added product
- Flexible delivery with MOQ of only 1 pallet per SKU



Case studies

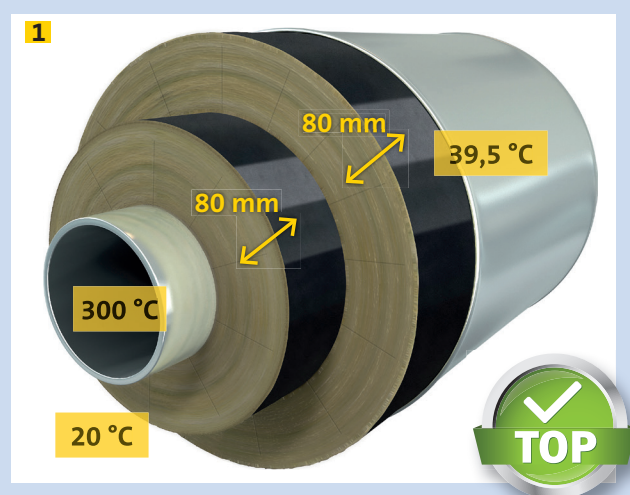
1. High energy efficiency for optimal cost-savings



a) Process pipe line working at 300°C

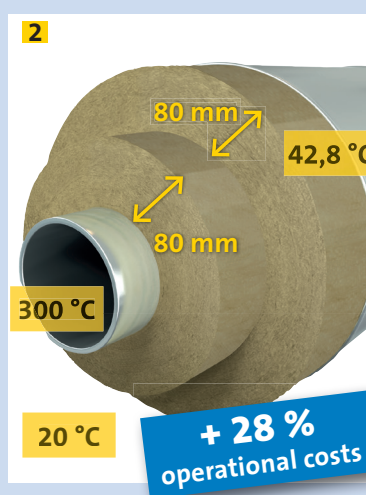
1 U TECH Pipe Section Mat MT 7.0 G1

Heatloss: 203 W/lm
Operational costs: 74 €/ lm p.a



2 Stonewool Pipe Section*

Heatloss: 250 W/lm
Operational costs: 95 €/ lm p.a



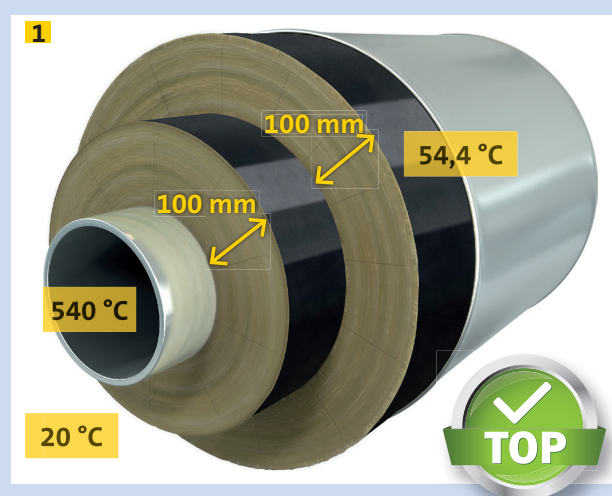
3 Stonewool Wired Mat*

Heatloss: 298 W/lm
Operational costs: 113 €/ lm p.a

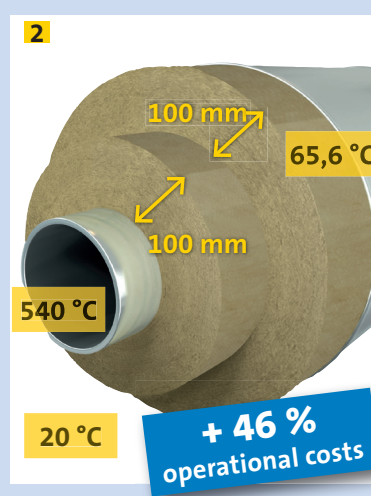


b) Steam pipe line working at 540°C

Heatloss: 466 W/lm
Operational costs: 177 €/ lm p.a



Heatloss: 678 W/lm
Operational costs: 258 €/ lm p.a



Heatloss: 697 W/lm
Operational costs: 265 €/ lm p.a

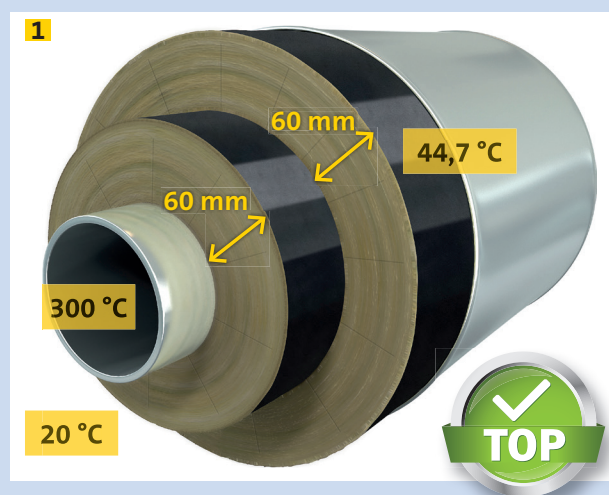


2. Space saving solution

a) Process pipe line working at 300°C

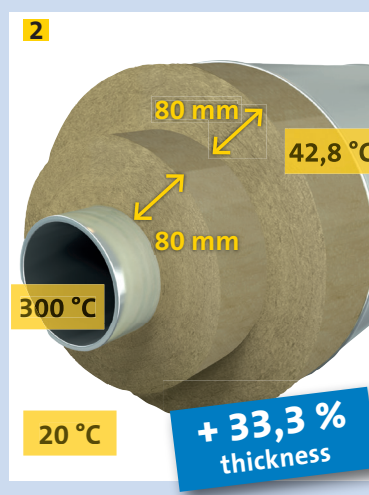
1 U TECH Pipe Section Mat MT 7.0 G1

Heatloss: 254 W/lm
Operational costs: 97 €/lm p.a



2 Stonewool Pipe Section*

Heatloss: 250 W/lm
Operational costs: 95 €/lm p.a



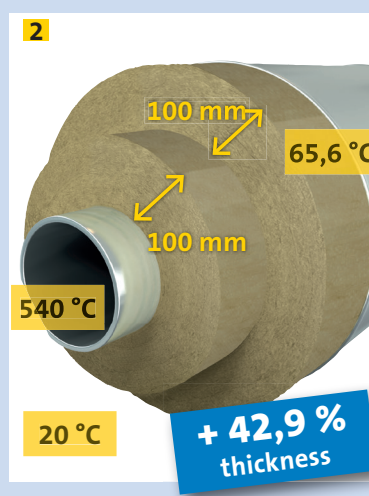
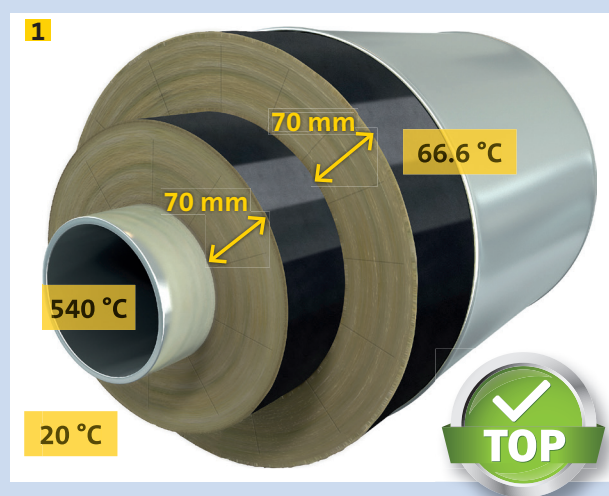
3 Stonewool Wired Mat*

Heatloss: 298 W/lm
Operational costs: 113 €/lm p.a



b) Steam pipe line working at 540°C

Heatloss: 615 W/lm
Operational costs: 234 €/lm p.a.



Calculation hypothesis:

Pipe: Steel, DN 600
Medium: Steam, T=300°C or 540°C
Ambient temperature: 20°C
Plant: 7.600 h/a

Cladding: Aluminium, bright rolled
Energy cost: 0,05 €/kWh
Software: ISOVER TechCalc 2.0

*This calculation consider thermal bridges according to ISO 23993.
* Lambda limit curve 2 according to AGI-Q-132*

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