

PAROC PRO SECTION (WR) 140 CLAD T PAROC PRO COMBI (WR) 140 CLAD T

INSTALLATION MANUAL

MINIMUM
INSTALLATION
TEMPERATURE:
10 °C



PAROC[®]

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(WR) = water-repellent version available without surcharge

TOOLS / ACCESORIES



- A marker



- Measuring tape or folding ruler

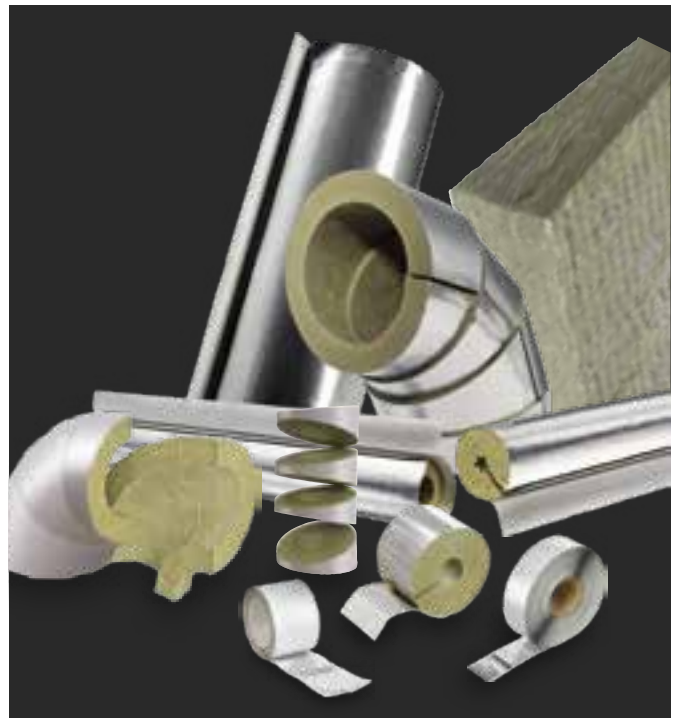


- **PAROC Clad Tape:**
To seal off joints.
Standard widths: 30, 50, 75 and 100 mm



- Insulation material knife, e.g., the **PAROC Pro Knife XTK003**

Quick access:
Click on the desired product or content page to immediately navigate to it. Clicking on 'Table of Contents' will direct you back to the index page. Hyperlinks will take you to relevant additional pages or research sources.



- Plastic spatula: for smoothing the tape to improve appearance, e.g., the **PAROC Spatula ZTI 001**



- Clamping strip (SIGNODE strips or an alternative weather-proof plastic strip) for circular ventilation ducts
- An application gun: to seal cut edges or connections in places that are hard to reach

- **PAROC Pallet Hoods**

INSTALLATION INSTRUCTIONS



1. Place the casings one by one on the pipe and use the self-adhesive tape on the pipe casing to affix the casings.



2. Mount pipe sections for bends in the same way.



3. In order to effect a durable mechanical fixation of the pipe casing as prescribed by DN100, use additional SIGNODE strips or an alternative **weatherproof plastic strip**.

Up to DN100, fixation can be by the TapeLock method, which involves overlapping PAROC cladding tape.



4. For permanent **waterproofing**, apply PAROC Clad Tape to all **connecting joints** and **lengthwise seams**.



5. All connecting parts (T-joints, forks, brackets etc.) must also be sealed with PAROC cladding tape. Air inclusions under the PAROC Clad Tape should be avoided.



6. You have two options for closing off the end sections of pipe casings:

- 6a. Classic metal end disc in combination with sealing with PAROC Clad Tape



- 6b. Finish with PAROC Clad Tape



Note: To ensure additional adhesion of the Clad Tape to the insulation (facing side), it is a good idea to spray a typical adhesive on the surface.

Important note: All information and technical data rely on results obtained under typical conditions of use.

The recipient of this information is, in his own interest, responsible for clarifying with Paroc whether the information and data are applicable to the areas of use foreseen.

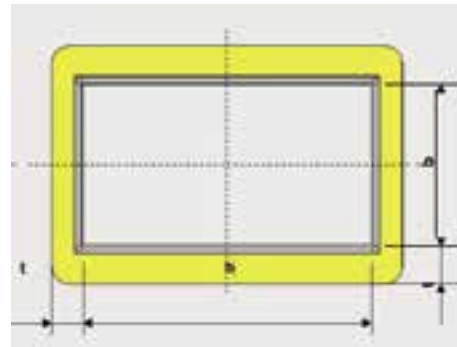
7



7. You have two options for implementing caps:

7a Closing using a standard metal cap – (recommended). As usual, finish the covers to DIN 4140 and spread insulation over them. Apply edge protection tape at intersections of the plate casing in order to prevent damage to the cladding surface of the pipe casing. Seal the cap in accordance with the standard. A permanently waterproof seal is recommended, or PAROC Pro Clad Tape.

7b Finishing with PAROC Pro Lamella Clad: For this, assess the extent of the cap and cut accordingly.



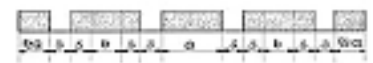
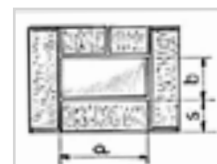
Use the following formula to calculate the material required:

$$U = 2 \times a + 2 \times b + 8 \times t$$

a - Height of cap

b - With of cap

t - Thickness of insulation



Then create joints in the width of the insulation, so that when mounting at 90 degrees, a clean edge is achieved.



Add suitable PAROC Pro Lamella Mat cladding covers to the caps to thus created. Using cladding tape (as described above) seal these at the end disc. For additional mechanical securing, the faces can be bound to the cover using PAROC Fire Springs.



Video
PAROC Clad-System



PAROC CLAD SYSTEM: INSULATION SOLUTION FOR EXTERNAL PIPEWORK AND DUCTWORK APPLICATIONS

UV-RESISTANT, IMPERMEABLE TO WATER, SALT WATER RESISTANT

In today's world, insulation systems that are economically sustainable, efficient through time saving installation across a wide range of applications, are in demand.

The Clad-System by PAROC effectively insulates pipework and ventilation systems quickly, safely, and sustainably with a special highly durable multiple layer composite film for external applications. It reliably protects PAROC stone wool against moisture, environmental impact, and chemical substances.

As a result of the high temperature resistance of our Pro (industrial) stone wool products which is the base insulation material for the Clad-System, it can be used on temperatures up to 680°C. Therefore, it protects against temperature losses on high temperature systems and steam lines for example.

COMPREHENSIVE TEST REPORTS AVAILABLE

In order to increase the range of applications the Clad-Film underwent specific tests. For example, testing included for safety of use in food industry applications (food contact applications according to EC 1935/2004, EU 10/2011, EC 2023/2006 as well as the German Food and essential Commodities and Animal Feed Code, or LFGB for short).

In addition, the Clad-Surface is smooth, easy to clean and due to its resistance to chemical substances - provides bacteria no ground on which to grow on, so it can be used in laboratories and clean rooms.

The Clad-System by PAROC can also be used in coastal applications, since its resistance to salt air and salt water has been proven along with successful puncture resistance testing in accordance with DIN EN 14 477 resulting in the Clad-System offering protection against "bird pecking" which is further supplemented by its sturdy base material.

Another major advantage of the Clad-Surface can be found when personal protection is of importance. Due to a higher emission ratio (ϵ 0.65) of the Clad-Film, insulation thicknesses can be reduced when compared to insulation in conjunction with metal cladding (low emissivity), resulting in a cost saving.

UNLOCKING FURTHER APPLICATION POSSIBILITIES

PAROC Clad-System offers further application possibilities due to its fully metal-free and non-corroding surface which reduces the weight of a construction and is maintenance friendly. In addition to the system being perfectly suited for all building services, due to its watertight installation it can be used in areas in danger of flooding. The system can also be used to insulate pipework or ventilation systems which require weather protection in areas where space is limited or tight, which make inflexible metal covering systems difficult to use.

Installation of the Clad-System is made easy by comprehensive instructions, specific accessories such as matching tape, Clad Dots (circular prefabricated tape for covering fastenings and cut-outs), along with documentation and test reports.



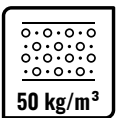
PAROC CLAD PRODUCTS



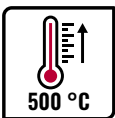
EXPLANATION OF SYMBOLS

TECHNICAL SPECIFICATIONS

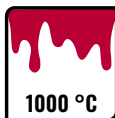
Nominal density



Maximum service temperature



Melting point

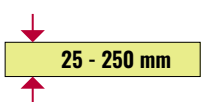


Non-combustible

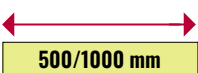


DIMENSIONS

Thickness



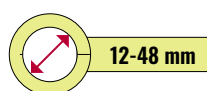
Width



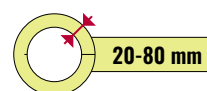
Length



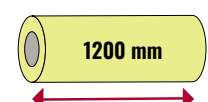
Inner diameter



Insulation thickness



Section length



ADDITIONAL INFORMATION

Data sheet

Accessories

Installation video

Packing details

Dimension Guide

Installation manual

Water-repellent version available without surcharge

(WR)

CLAD SYSTEM

PAROC PRO SECTION (WR) 140 CLAD T

Stonewool pipe section with a uv-resistant, fibre reinforced aluminium coating

Accessories
 PAROC Clad Tape
 PAROC Pro Knife XTK001/003
 PAROC Pallet Hoods
 PAROC Clad Alu Tape

ADDITIONAL SYSTEM PRODUCTS



PAROC PRO BEND (WR) CLAD



PAROC PRO SEGMENT (WR) CLAD



PAROC PRO COMBI (WR) 140 CLAD T

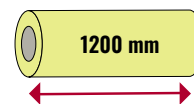
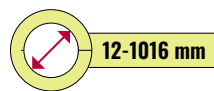
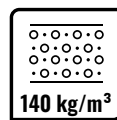
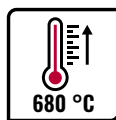
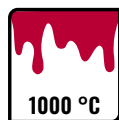


APPLICATION

- Thermal insulation of outdoor pipelines
- Due to a weather-resistant aluminum coating, outdoor installation without additional cladding systems; additionally the mineral wool is protected from mechanical loads, moisture as well as chemical substances

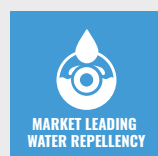
TECHNICAL SPECIFICATIONS

- Water-repellent according to EN 1609
- AS quality according to EN 13468 and AGI Q 132
- The surface temperature of the lamination must be limited to 80 °C
- CE designation Code: MW-EN 14303-T8/T9-ST(+)-680-WS1-MV2-CL10
- PAROC Pro WR products are tested according to LABS conformity standard VDMA 24364



Nominal value of the thermal conductivity λ according to DIN EN 12667

t	°C	50	100	150	200	250	300	400
$\lambda_{N,P}$	W/mK	0.041	0.047	0.054	0.063	0.073	0.085	0.110



Video PAROC Clad-System

CLAD SYSTEM

PAROC PRO LAMELLA MAT (WR) CLAD

Stonewool lamella mat with UV-resistant, fibre reinforced aluminium coating



Accessories

- PAROC Clad Tape
- PAROC Clad Dots
- PAROC Clad AluTape
- PAROC Head Pins Insulated
- PAROC Pro Knife XTK001/003
- PAROC Schweißgerät - ZTM 100
- PAROC Spatula
- PAROC Pallet Hoods
- PAROC Pro Roof Wedge (WR)

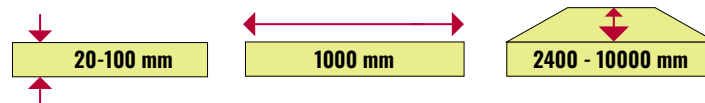
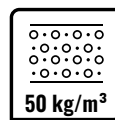
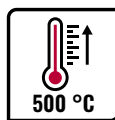
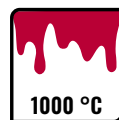


APPLICATION

- Outdoor insulation of ventilation ducts, pipelines and containers;
- The insulation system does not require any further cladding systems; additionally
- The mineral wool is protected from mechanical loads, moisture and chemical substances

TECHNICAL SPECIFICATIONS

- Water-repellent according to EN 1609
- AS quality according to EN 13468 and AGI Q 132
- Compressive strength > 10 kPa according to EN 826
- The surface temperature of the lamination must be limited to 80 °C
- CE designation Code: MW-EN 14303-T4-ST(+)-500-WS1-MV2-CL10
- PAROC Pro WR products are tested according to LABS conformity standard VDMA 24364



Nominal value of the thermal conductivity λ according to DIN EN 12667

t	°C	10	50	100	200	300
$\lambda_{N,P}$	W/mK	0.039	0.045	0.055	0.081	0.120



Video PAROC Clad-System

CLAD SYSTEM ACCESSORIES

PAROC CLAD DOTS

PAROC Clad Dots are the optimal solution when it comes to cover pins' heads



Ø mm	Piece / roll	Rolls per box
90	100	6

PAROC CLAD TAPE

Water resistant butyl rubber tape with very high tack and very high ageing resistance



Application

- Used amongst others for masking of Clad faced products. The Clad sealing tape can be used as moisture and diffusion barriers; ideal for sealing the joints when using PAROC Clad products.
- Permanently seal pipes and ventilation ducts facings in heating, ventilation and air conditioning engineering. The butyl sealing tapes are also used as moisture and diffusion barriers in underground construction. PAROC Clad Tape gives a great finish and safe installation

Length mm	Width mm	Rolls per box
10000	30	20
10000	50	12
10000	75	8
10000	100	6

PAROC CLAD ALU TAPE

Water resistant acryl tape with very high tack and very high ageing resistance for pipe elbows



Length m	Width mm	Rolls per box
10	50	12

PAROC PRO ROOF WEDGE (WR)

Stonewool wedge plate with a gradient of at least 3%. The length measure corresponds to the longitudinal direction of the duct.



Thickness mm	Length mm	Width mm
25/60	600/1200	1200/600
42/60	600	1200



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-  Paroc Production / Branch
-  Paroc Sales Office
-  Paroc Sales Representative



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INSTALLATION INSTRUCTIONS

CLAD PRODUCTS

CONTACT

PAROC SALES OFFICES AND CONTACTS

Headquarter / Finland

Paroc Group Oy / Paroc Oy Ab
P.O. Box 240
FI-00181 Helsinki, Finland
Energiakuja 3
Phone: +358 46 876 8000
Email: [Contact us in Finland](#)



Belgium / The Netherlands / France

Email: [Contact us in Belgium French](#)
Email: [Contact us in Belgium Dutch](#)
Email: [Contact us in Netherlands](#)
Email: [Contact us in France](#)



Denmark

Paroc Denmark, branch of Paroc AB
Kongevejen 47
DK-3480 Fredensborg, Denmark
Tel. +45 49 12 10 00
Email: [Contact us in Denmark](#)



Estonia

AS Paroc
Pärnu mnt 158
EE-11317 Tallinn, Estonia
Tel. +372 651 8100
Email: [Contact us in Estonia](#)



Germany / Switzerland / Austria

Paroc GmbH
Heidenkampsweg 51
D-20097 Hamburg, Germany
Tel. +49 40 33 49 60000
Email: [Contact us in DACH area](#)



Latvia

SIA Paroc
Vienības gatve 109
Rīga, LV-1058, Latvia
Tel. +371 7 339053
Email: [Contact us in Latvia](#)



INTERNATIONAL CONTACTS

Business Director Industry

Peter van Zandbergen

peter.van.zandbergen@owenscorning.com

Segment Manager Industry

Rune Hagensen

rune.hagensen@owenscorning.com

Technical Support

Craig Treanor

craig.treanor@owenscorning.com

Lithuania

UAB Paroc
Savanoriu 124
03153 Vilnius, Lithuania
Tel. +370 5 2740 000
Email: [Contact us in Lithuania](#)



Norway

Paroc AB Norge
Rosenholmveien 25
NO-1414 Trollåsen, Norway
Tel. +47 22 64 59 00 / 01
Email: [Contact us in Norway](#)



Poland

Paroc Polska sp. z o.o.
ul. Gnieźnieńska 4
62-240 Trzemeszno, Poland
Tel. +48 61 468 21 90
Email: [Contact us in Poland](#)



Sweden

Paroc AB
SE-541 86 Skövde, Sweden
Visiting address: Bruksgatan 2
Tel. +46 500 469 000
Email: [Contact us in Sweden](#)



The United Kingdom / Ireland

Paroc Ltd
Technical Insulation Division
70 Tradewind Square
Liberty Place East Village
Liverpool L1 5BG
The United Kingdom
Email: [Contact us in UK & Ireland](#)



Marketing Manager Industry

Claudia Beling

claudia.beling@owenscorning.com



DURABLE

PAROC® stands for energy-efficient and fire safe insulation solutions of stonewool for new and renovated buildings, marine and offshore, acoustics and other industrial applications. Behind those products, there is an 80-year history of stonewool production knowhow backed with technical insulation expertise and innovation.



REUSABLE

Building Insulation offering covers a wide range of products and solutions for all traditional building insulation. The building insulation products are mainly used for the thermal, fire and sound insulation of exterior walls, roofs, floors and basements, intermediate floors and partitions. Sound absorbing ceilings and wall panels for interior acoustic control, as well as industrial noise control products, are available in the range.



**SOUND
REDUCING**

Technical Insulation offering includes thermal, fire and sound insulation in HVAC systems, industrial processes and pipework, industrial equipment as well as shipbuilding and offshore industry.

For more information please visit www.paroc.com



FIRE PROOF



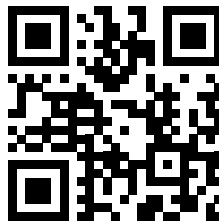
**MOISTURE
PROOF**



SAFE



**ENERGY
EFFICIENT**



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Applications: January 2023

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