

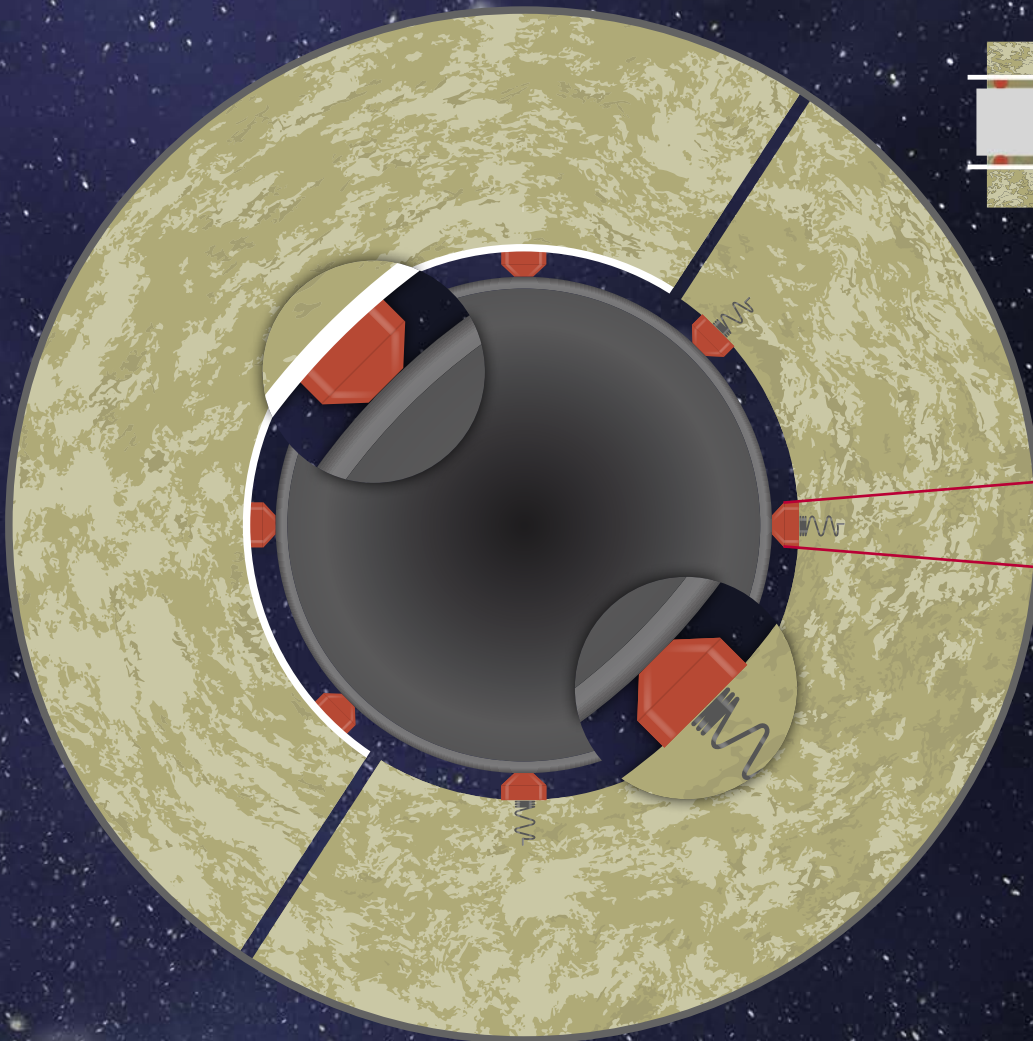
# KEEP A SAFE DISTANCE

NON-CONTACT INSULATION TO MINIMISE RISK OF CUI:

PAROC PRO SECTIONS

PAROC PRO CURVE (WR) **NEW!**

+ PAROC CUI SPACERS **NEW!**



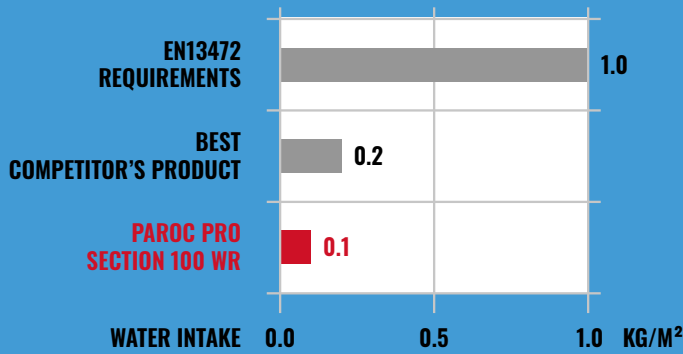
**PAROC**<sup>®</sup>

# MARKET-LEADING WATER ABSORPTION PROPERTIES FOR STONE WOOL INSULATION

**10x** BETTER THAN THE REQUIREMENTS

OF THE TOUGHEST STANDARD AVAILABLE (EN13472)\*

\* Claims based on independent third party comparison involving products from major mineral wool manufacturers, conducted by Eurofins Lab 19036 on 16th of August 2019.



## NON-CONTACT INSULATION TO MINIMISE THE RISK OF CUI: PAROC CUI SPACERS + PAROC PRO CURVE (WR) + PAROC PRO SECTIONS (WR)



Corrosion under insulation (CUI) dramatically reduces the lifetime of piping and equipment, and increases the risk of leakages, shutdowns and potential injury to personnel in the area. A study by the National Association of Corrosion Engineers titled "Corrosion Costs and Preventive Strategies in the United States", commissioned by the American Congress in 2001, reported the direct national cost of corrosion to be US\$ 276 billion per year, and that is without consideration of indirect costs such as energy loss<sup>1</sup>

In addition to the existing WR product portfolio consisting of pipe sections, mats and slabs with leading water-repellent features, Paroc is now launching PAROC CUI Spacers and PAROC Pro Curve (WR) to meet a wider reach of insulation needs.

Corrosion under insulation refers to any type of corrosion that occurs due to moisture present on the external surface of insulated pipes and equipment. CUI is an issue for both onshore and offshore operations, including petrochemical, refining and power sectors, among many others.

PAROC Pro Curve (WR) products are delivered in two halves enabling an installation that is much faster than standard products. Combined with PAROC CUI Spacers, they are an extremely energy-efficient system (avoiding openings and thermal bridges) and a consistent high-performing insulation for the whole pipeline - guaranteeing a reliable, long-lasting insulation solution!

PAROC Pro Curve is available in 100, 120 and 140 kg/m<sup>3</sup>:

- PAROC Pro Curve (WR) 100
- PAROC Pro Curve (WR) 120
- PAROC Pro Curve (WR) 140

### HOW TO KEEP WATER AWAY FROM THE PIPE SURFACE?

When it comes to CUI, elbows are often seen as a weak point in the insulation system. Fortunately there is a solution for this problem: **PAROC Pro Curve (WR)** and PAROC CUI Spacers form a strong alliance that reduces the risk of CUI by up to 200 °C and saves valuable installation time.

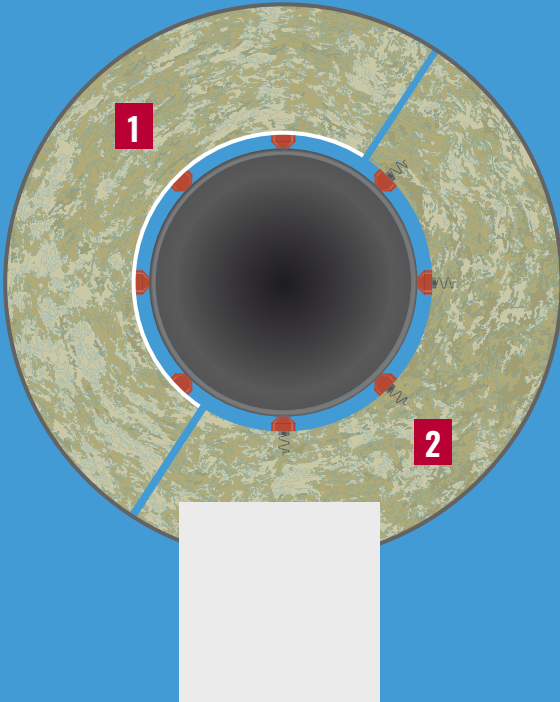
PAROC CUI Spacers is considered one of the best solutions maintaining the distance between pipe and stonewool pipe insulation. Compared to other solutions on the market they offer a range of advantages.

Thickness in mm	Available dimensions PAROC Pro Curve (WR)						
	114'	140'	168'	219'	273'	324'	356'
30	180	206	232	284	336	388	414
40	193	219	245	297	349	401	440
50	219	245	271	323	375	427	453
60		258	284	336	388	440	479
70		284	310	362	414	466	492
80			323	375	427	479	518
90			349	401	453	505	531
100			362	414	479	518	557
120			414				596

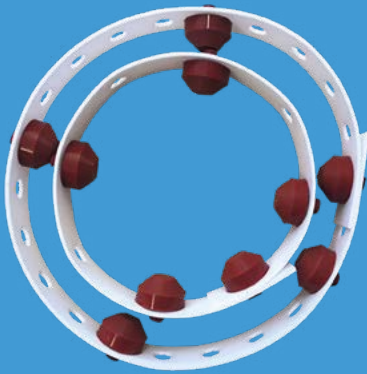


<sup>1</sup> <http://impact.nace.org/documents/ccsupp.pdf>

# INSTALLATION AND INSTRUCTIONS FOR PAROC CUI SPACERS



Installation Video



**Option 1: Mounted on a belt**  
Recommended for pipes >30 mm diameter

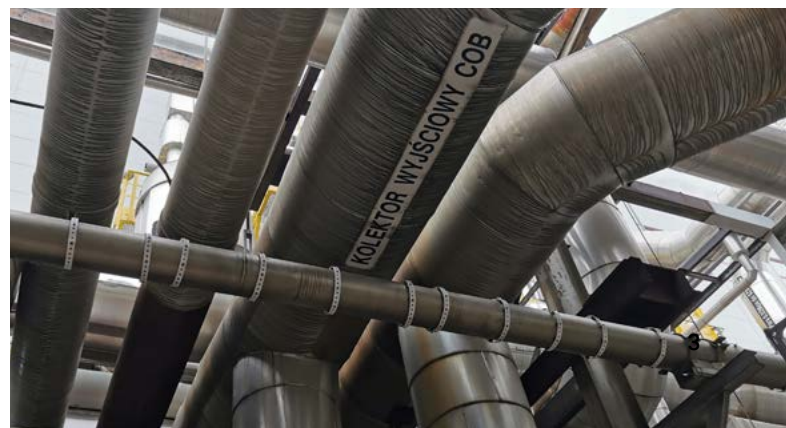


**Option 2: Single spacers with springs**  
recommended for pipes with  $\leq 30$  mm diameter and smaller areas of insulation (e. g. inspection hatches) as well as pipe elbows



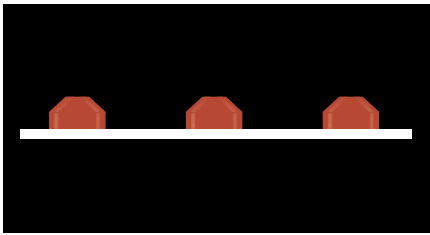
## ADVANTAGES OF PAROC CUI SPACERS:

- No tools required for installation
- One size fits all; only one size needs to be stocked
- Easy and fast installation
- Provides space for electrical tracing
- No sharp edges

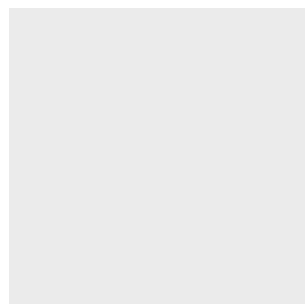
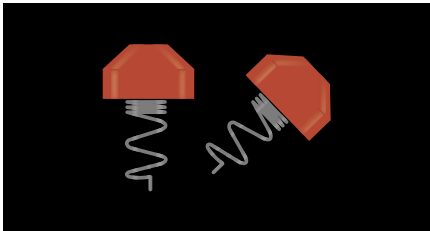


# INSTALLATION FOR PAROC CUI SPACERS

## 1. Spacers mounted on a belt



## 2. Single spacers with springs



Installation instructions

# BELT LENGTH/NEEDED NUMBER OF SPACERS (RECOMMENDATIONS)

Nominal pipe size inch		Pipe Section inner diameter without spacers	Nominal diameter	Pipe Section inner diameter with spacers	Belt length mm	Number of spacers	Number of spacers 5 every 5th hole	
A	B	C	D	E	F	G	H	
1/4	13.70	15	41	42	170	4	3	spacers with spring 26 mm high
3/8	17.10	18	44	48	180	4	3	
1/2	21.30	22	48	48	200	4	3	
3/4	26.70	28	54	54	220	4	3	
1	33.40	35	61	60	240	4	3	
1.25	42.20	42	68	70	260	4	3	
1.5	48.30	48	74	76	280	4	3	
		54	80	89	300	4	3	
		57	83	89	310	4	3	
2	60.30	60	86	102	320	4	3	spacers on the belt 42 mm high
		64	90	114	330	4	3	
		70	96	114	350	4	3	
		76	102	127	370	4	3	
3	88.90	89	115	133	410	4	3	
3.5	101.60	102	128	156	450	4	4	
		108	134	156	470	4	4	
4	114.30	114	140	156	490	4	4	
		121	147	168	510	5	4	
		127	153	168	530	5	4	
		133	159	194	550	5	4	
5	141.30	140	166	194	570	5	4	
		156	182	219	620	5	5	
		159	185	219	630	5	5	
6	168.30	168	194	219	660	5	5	
		194	220	240	740	6	6	
		208	234	259	780	6	6	
8	219.10	219	245	273	820	7	7	
		230	256	273	850	7	7	
		240	266	289	880	7	7	
		245	271	289	900	7	7	
		259	285	305	940	8	8	
10	273.10	273	299	324	980	8	8	
		289	315	356	1050	8	8	
		295	321	356	1050	8	8	
		305	331	356	1100	9	9	
12	323.80	324	350	406	1150	9	9	
14	355.60	356	382	406	1250	10	10	
		371	397	457	1300	10	10	
		377	403	457	1310	10	10	
16	406.40	406	432	457	1400	11	11	
		426	452	490	1470	12	12	
18	457.00	457	483	490	1570	13	13	
		479	505	533	1640	13	13	
		490	516	533	1670	13	13	
20	508.00	508	534	558	1730	14	14	
		533	559	612	1800	14	14	
		558	584	612	1890	15	15	
24	610.00	612	638	665	2060	16	16	
		630	656	762	2120	17	17	
28	711.00	714	740	762	2380	19	19	
30	762.00	762	788	813	2530	20	20	
32	813.00	813	839	914	2690	22	22	

Industrial Pipeworks		Tanks			Industrial Boilers			Recommended products	Nominal density kg/m <sup>3</sup>	Max service temperatur  (C and Fahrenheit)				
Process pipelines	High temperature pipelines	Super-heated steam pipelines	Pipe elbows	Tank roofs	Tank walls	Pressure vessels	Flue ducts				Boiler walls	Boiler penthouses	Equipment and filters	Industrial chimneys

### Pipe sections

															PAROC Pro Section (WR) 100 (AluCoat)	100	640°C 1184°F
															PAROC Pro Section 100 (AluCoat)	100	640°C 1184°F
															PAROC Pro Section (WR) 140 (AluCoat)	140	680°C 1256°F
															PAROC Pro Section 140 (AluCoat)	140	680°C 1256°F
															PAROC Pro Section (WR) DL 100 (AluCoat)	100	640°C 1184°F
															PAROC Pro Section DL 100 (AluCoat)	100	640°C 1184°F
															PAROC Pro Section (WR) DL 140 (AluCoat)	140	680°C 1256°F
															PAROC Pro Section DL 140 (AluCoat)	140	680°C 1256°F
															PAROC Pro Section 140 Clad T (AluCoat)	140	680°C 1256°F
															PAROC Pro Lock (WR) 100	100	640°C 1184°F
															PAROC Pro Lock 100	100	640°C 1184°F
															PAROC Pro Lock (WR) 140	140	680°C 1256°F
															PAROC Pro Lock 140	140	680°C 1256°F

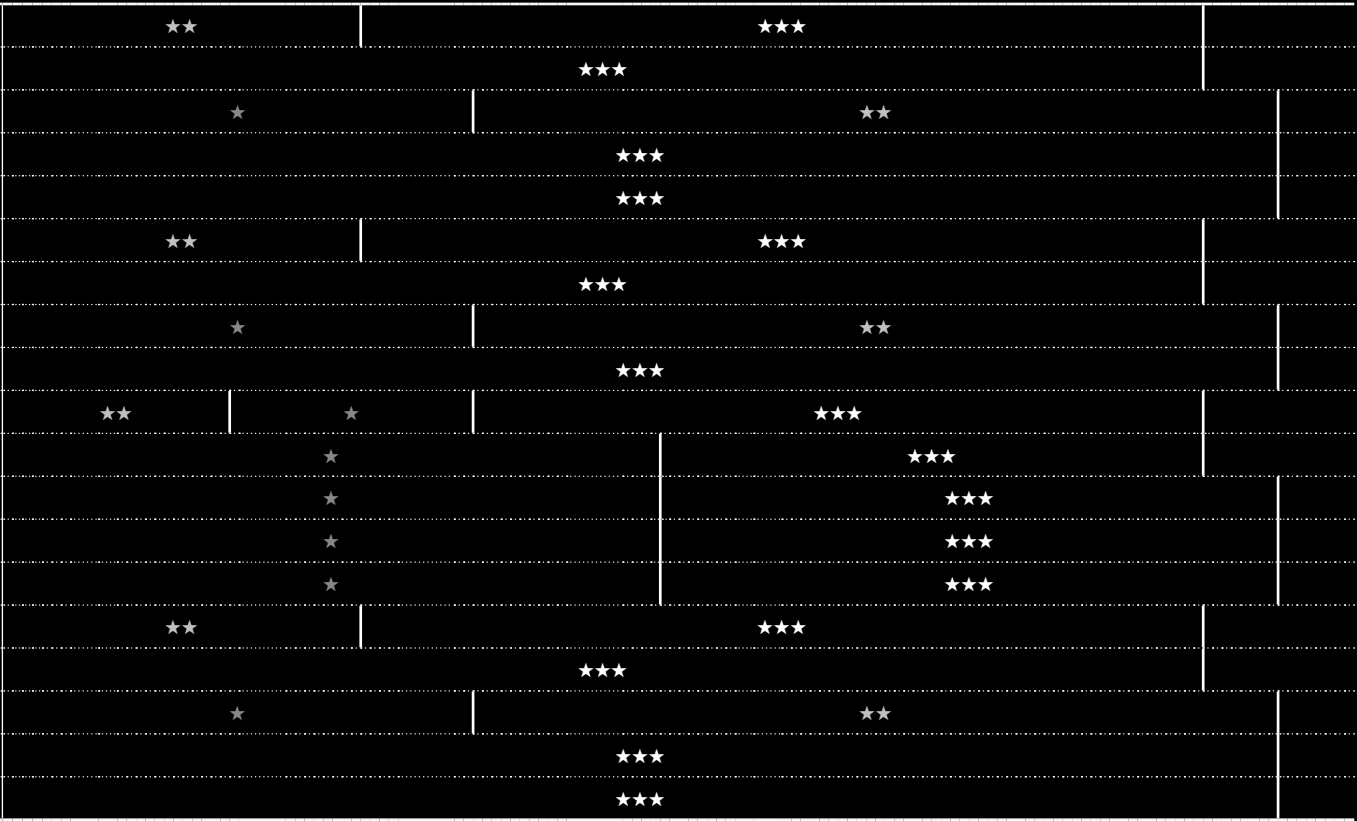
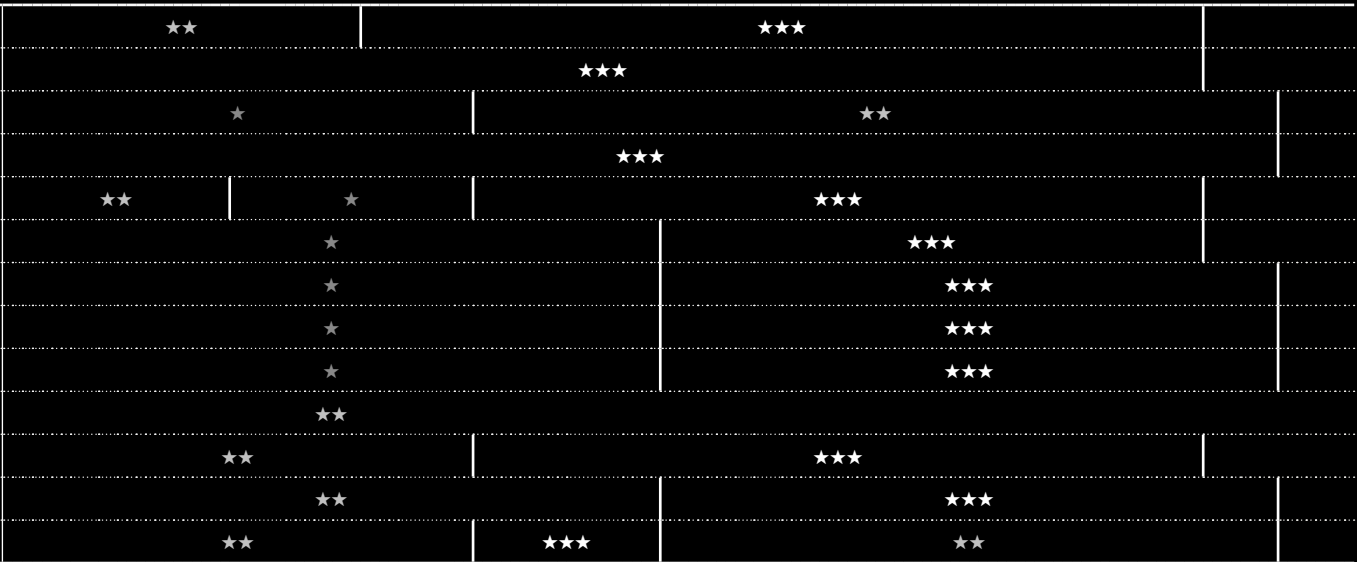
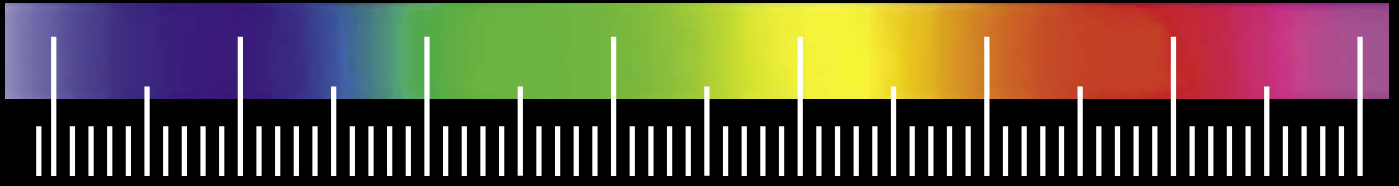
### Segments, Curves, Bends

															PAROC Pro Curve (WR) 100 (AluCoat)	100	640°C 1184°F
															PAROC Pro Curve 100 (AluCoat)	100	640°C 1184°F
															PAROC Pro Curve (WR) 140 (AluCoat)	140	680°C 1256°F
															PAROC Pro Curve 140 (AluCoat)	140	680°C 1256°F
															PAROC Pro Curve 140 Clad (WR) (AluCoat)	140	680°C 1256°F
															PAROC Pro Segment (WR) 100 (AluCoat)	100	640°C 1184°F
															PAROC Pro Segment 100 (AluCoat)	100	640°C 1184°F
															PAROC Pro Segment (WR) 140 (AluCoat)	140	680°C 1256°F
															PAROC Pro Segment 140 (AluCoat)	140	680°C 1256°F
															PAROC Pro Segment (WR) DL 100 (AluCoat)	100	640°C 1184°F
															PAROC Pro Segment DL 100 (AluCoat)	100	640°C 1184°F
															PAROC Pro Segment (WR) DL 140 (AluCoat)	140	680°C 1256°F
															PAROC Pro Segment DL 140 (AluCoat)	140	680°C 1256°F
															PAROC Pro Segment 140 Clad (AluCoat)	140	680°C 1256°F
															PAROC Pro Bend (WR) 100 (AluCoat)	100	640°C 1184°F
															PAROC Pro Bend 100 (AluCoat)	100	640°C 1184°F
															PAROC Pro Bend (WR) 140 (AluCoat)	140	680°C 1256°F
															PAROC Pro Bend 140 (AluCoat)	140	680°C 1256°F
															PAROC Pro Bend 140 Clad (AluCoat)	140	680°C 1256°F

WATER-REPELLENT  
STANDARD PRODUCTS  
AL1 FACING  
ALUMINIUM FACING  
ALUMINIUM FACING + WATER-REPELLENT



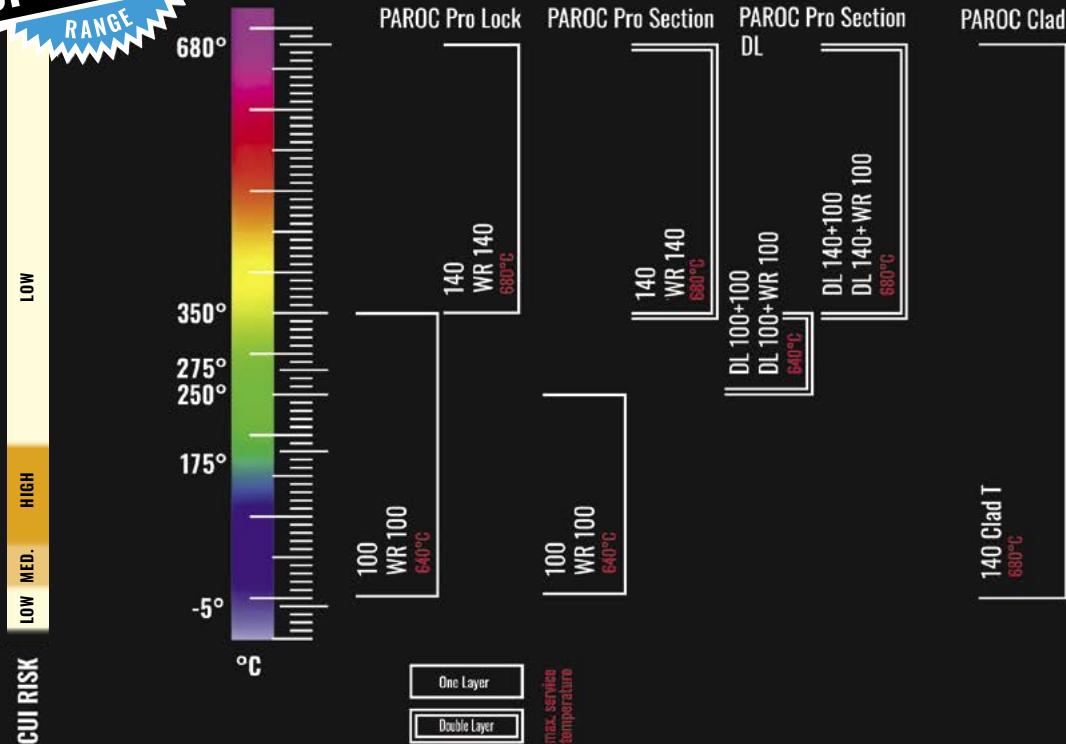
0° 100° 200° 300° 400° 500° 600° 700°



★ POSSIBLE  
 ★★ RECOMMENDED  
 ★★★ OPTIMAL

# RECOMMENDED PRODUCTS FOR INDUSTRIAL PIPEWORK INSULATION

PAROC WR PERFORMANCE  
ACCORDING TO  
STANDARD  
EN13742, 0.1KG/M<sup>3</sup>  
**UP TO 300°C**  
RANGE



## INSULATION FOR PIPE BELOWS

- >350 °C**  
PAROC Pro Segment (WR) 140 DL  
or  
PAROCPro Segment (WR) 140  
+ PAROC Pro Segment (WR) 100  
+ PAROC Pro Curve (WR) 140
- >250 °C**  
PAROC Pro Segment (WR) 100 DL  
or  
PAROCPro Segment (WR) 100  
+ PAROC Pro Segment (WR) 100  
+ PAROC Pro Curve (WR) 140
- ≤250 °C**  
PAROCPro Segment (WR) 100  
+ PAROC Pro Segment (WR) 100  
PAROC Pro Curve (WR) 100
- ≤250 °C**  
PAROC Pro Segment (WR) 100  
PAROCPro Bend (WR) 100  
+ PAROC Pro Curve (WR) 100

## BENEFITS OF PAROC INDUSTRIAL PIPEWORK INSULATION SOLUTIONS:

- Full product range for pipes and pipe elbows – rapid, easy design process
- Tight solutions without gaps in joints – minimum energy loss
- Solutions that do not require supporting structures – improved energy efficiency
- Controlled process temperature – process works more efficiently
- Environmentally effective solution – reduced CO<sub>2</sub> emissions
- Compatible pipe sections and elbow insulations – time and money saved on installation and minimum waste on-site
- Exact dimensioning – fits with pre-fabricated cladding
- Double-layer (DL) products are delivered nested, one inside the other – more effective logistics
- Very low water absorption and low chloride content – reducing and minimising the risk of corrosion
- Long-lasting solutions with low maintenance costs – investment for life
- Broadest range – fits all common pipe diameters



Watch video about saving energy and costs for industrial insulation!



## PAROC WR WATER-REPELLENT PIPE SECTIONS:

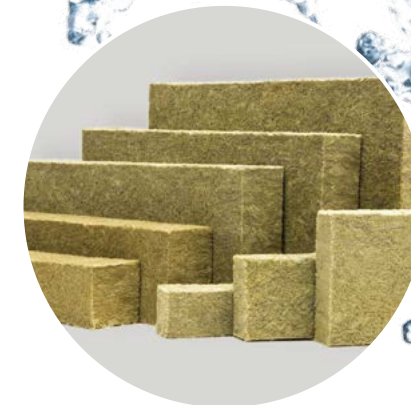
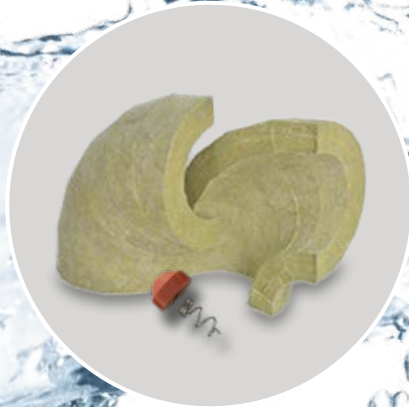
- 10 × less water absorption than the requirements of the toughest standard (EN13472/24h)
- 2 × less water absorption than best competitor according to EN13472/24h
- Highest temperature range <math><300^{\circ}\text{C}</math> / <math>572^{\circ}\text{F}</math>
- Safe to use during painting operations and certified according to the requirements of the coating compatibility standard VDMA 24364
- More than 20 years' experience with WR mineral wool products for industrial applications
- Broadest WR offering range on the market including pipe sections, wired mats, mats and slabs



Watch video about  
PAROC WR  
pipe sections



MARKET LEADING  
WATER REPELLENCY





# CONTACT US



Paroc Headquarter



Paroc Production / Branch



Paroc Sales Office



Paroc Sales Representative



## PAROC SALES OFFICES AND CONTACTS

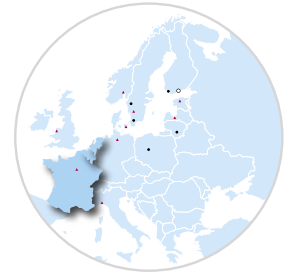
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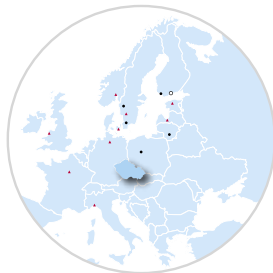
### Belgium / The Netherlands / France

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



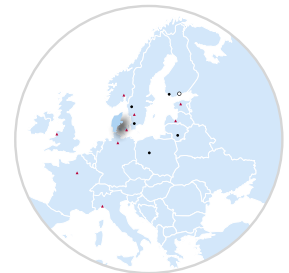
### Czech Republic

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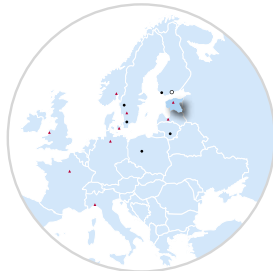
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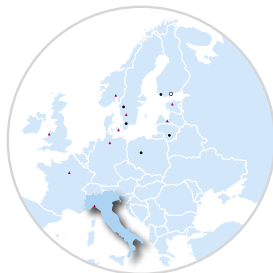
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**Rune Hagensen**

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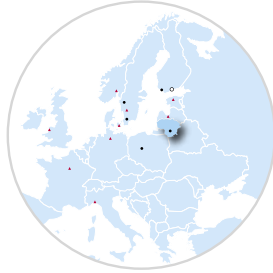
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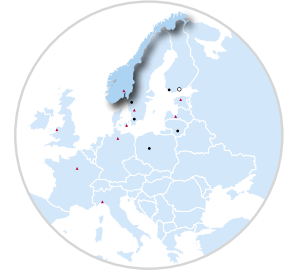
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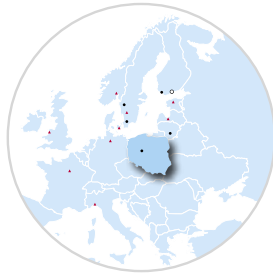
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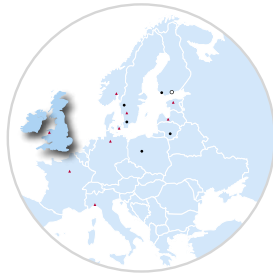
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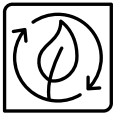
Paroc Ukraine  
Tel. +380 50 446 04 76  
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Marketing Manager Industry

**Claudia Beling**

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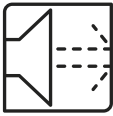
**DURABLE**

PAROC® stands for energy-efficient and fire safe insulation solutions of stone wool for new and renovated buildings, marine and offshore, acoustics and other industrial applications. Behind those products, there is an 80-year history of stone wool 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](http://www.paroc.com)



**FIRE PROOF**



**MOISTURE  
PROOF**



**SAFE**



**ENERGY  
EFFICIENT**

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