



# INSTALLATION GUIDE

PAROC® HVAC LAMELLA MAT BLACKCOAT



**PAROC®**

# INSTALLATION INSTRUCTIONS FOR CIRCULAR AND RECTANGULAR VENTILATION WITH PAROC® HVAC LAMELLA MAT BLACKCOAT



## STEP 1

Cut the lamella mat with a knife (e. g. PAROC® Pro Knife) to the appropriate length equal to the external circumference of the insulated duct:

- for **circular ducts**:  
 $\pi \times [D + 2 \times \text{insulation thickness}]$
- for **rectangular ducts**:  
 $[2 \times \text{length side A}] + [2 \times \text{length side B}]$   
+ 8 x thickness insulation)  
plus add about 2-3 cm.

## STEP 2

Place the lamella mat on the **circular duct** with the BlackCoat aluminium foil on the outside so that its ends hang loosely.

## STEP 3

In case of tension or compression on the BlackCoat Aluminium foil and for insulation of ducts bigger than 200 mm diameter, it is needed to add wire (~3 times per running meter wire min 0,7mm) or tape or metal bands, taking care that they are not too tight and will not cut or damage the facing.

## STEP 4

For **rectangular ducts**, the insulation should touch the frames connecting the individual duct elements. The joints, insulated on both sides in this way, should be fixed along the perimeter with self-adhesive PAROC® BlackCoat Tape.

## STEP 5

Press both ends of the lamella mat to the surface of the duct and connect them with PAROC® BlackCoat Tape.

## STEP 6

If PAROC® Hvac Lamella Mat BlackCoat is used on large rectangular ducts, it should also be secured additionally with welding pins. Depending on the size of the duct and the thickness of the insulation, 8-10 welding pins per m<sup>2</sup> may be needed. Joint sealing must be applied over the welding pins.

## STEP 7

Add next lamella to the duct, following the instructions given in with points 1-4.

## STEP 8

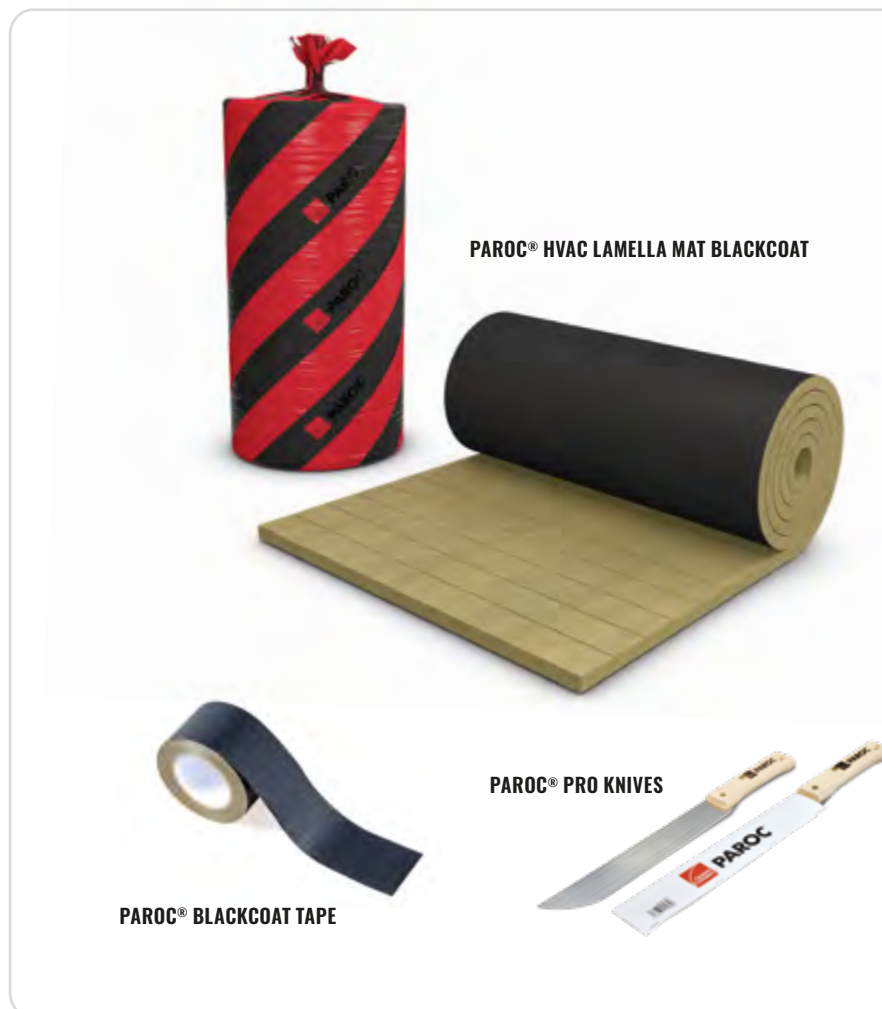
Connect the joints using PAROC® BlackCoat Tape.

## STEP 9

The ends of insulation should be covered by a cuff, adjusted to the thickness of the mat.

## STEP 10

Before installing the lamella, cut out holes for all kinds of elements on the duct, such as fittings, valves, tees, fasteners, etc.



PAROC® BLACKCOAT TAPE

PAROC® HVAC LAMELLA MAT BLACKCOAT

PAROC® PRO KNIVES



## Notes:

- The thickness of the insulation should be designed appropriately according to the operating parameters of the installation and the conditions in the room, otherwise the glued joints may be damaged. The surface temperature of the BlackCoat aluminium foil during operation at the maximum operating temperature should not exceed 80 °C.
- PAROC® Hvac Lamella Mat BlackCoat can be used for all types of indoor installations, provided that the maximum operating temperature does not exceed 250 °C.
- When high insulation thickness is required, PAROC® Hvac Lamella Mat BlackCoat can be installed in two layers, placing the joints of mat fragments away each other to prevent thermal bridges.
- Do not walk on the previously made insulation during the installation process, as this may cause damage to it.
- When insulating outdoor installations, additional protection is needed.
- Dry and clean the BlackCoat surfaces well before fixing them on the mat ends in order to obtain a good quality of the joints. The self-adhesive tape should be firmly pressed with the help of a spatula.
- BlackCoat facing may show some irregularities due to production process.
- Head Pins must be insulated.

## SELECT THE CORRECT INSULATION THICKNESS

Outer diameter	Thermal conductivity coefficient of the insulating material [W/(mK)]															
	0.035		0.036		0.037		0.038		0.039		0.040		0.041		0.042	
	I	O	I	O	I	O	I	O	I	O	I	O	I	O	I	O
<b>63</b>	40	80	42	84	43	88	45	93	47	97	49	102	51	107	53	112
<b>80</b>	40	80	42	84	43	88	45	92	47	96	48	100	50	105	52	109
<b>100</b>	40	80	42	84	43	87	45	91	46	95	48	99	50	103	51	107
<b>125</b>	40	80	41	83	43	87	44	90	46	94	48	98	49	102	51	106
<b>150</b>	40	80	41	83	43	87	44	90	46	93	47	97	49	101	50	104
<b>160</b>	40	80	41	83	43	86	44	90	46	93	47	97	49	100	50	104
<b>200</b>	40	80	41	83	43	86	44	89	46	93	47	96	49	99	50	102
<b>250</b>	40	80	41	83	43	86	44	89	45	92	47	95	48	98	50	101
<b>300</b>	40	80	41	83	43	86	44	89	45	92	47	94	48	97	49	101
<b>315</b>	40	80	41	83	43	86	44	89	45	91	47	94	48	97	49	100
<b>400</b>	40	80	41	83	43	85	44	88	45	91	46	94	48	97	49	99
<b>500</b>	40	80	41	83	42	85	44	88	45	91	46	93	47	96	49	99
<b>600</b>	40	80	41	83	42	85	44	88	45	90	46	93	47	96	49	98
<b>630</b>	40	80	41	83	42	85	44	88	45	90	46	93	47	96	49	98
<b>800</b>	40	80	41	83	42	85	44	88	45	90	46	93	47	95	49	98

I - air heating pipes (placed inside the thermal insulation of the building),  
O - air heating pipes (placed outside the thermal insulation of the building)



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