

# **CUSTOMIZED HEATING SOLUTIONS FOR RAILWAY INDUSTRY**



#### **HEATING AND ANTI-ICING SOLUTIONS**

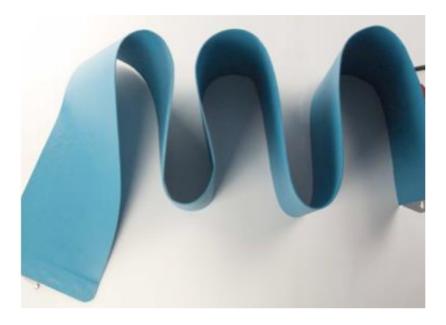
Providing the Railway Industry with innovative heating solutions is as important as helping train manufacturers reduce not only the weight and dimensions of many components, but the power needed to heat. Our heating mats are available in a wide variety of shapes. Using the most innovative technology in flexible electric heating, ATAG offers the perfect solution for any application and need.





## ATAG HEATING SOLUTIONS

## **High Flexibility**



ATAG heating mats are so extremely flexible to adapt even to the most complex shapes.

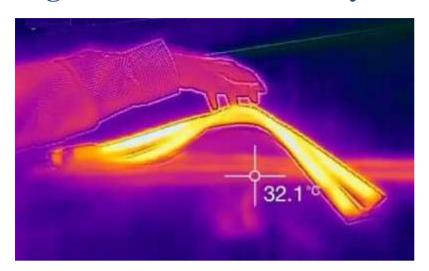
## **Custom Designed**







## **High Thermal Conductivity**



thermally We conductive use materials along with our special silicone compounds to guarantee a fast and uniform heat dissipation where needed.



We listen to our customers in order to create the most suitable product for their needs. Our aim is to solve their problems providing a reliable and lasting solution.



ATAG's experience in the Aeronautical Industry enables us to guarantee the highest standards of quality and design in Railway Industry too.





- EN 45545-2 HL3 Maximum classification for fire and smoke
- "UL-V1" results for fire and smoke & "UL-V0" pending
- Rolling Stocks Standards: EN50264 and EN50306



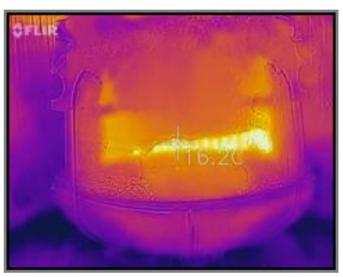


## **NEW ANTI-ICING TECHNOLOGY**

We are at the forefront of a new anti-icing technology for the Railway Industry. Our most flexible heating mats can be integrated between the glass fiber layers to allow machinery work even when buried under ice.



Extremely adjustable and reliable heating mats



Embedded in glass fiber layers



100% custom designed. We adapt our products to your needs.





## **APPLICATIONS**

Thanks to their low weight and extreme flexibility, our mats are highly valued in the Railway Industry, a sector where these features are extremely important. Low weight and flexibility are actually key factors in the development process and in the customers' choices.

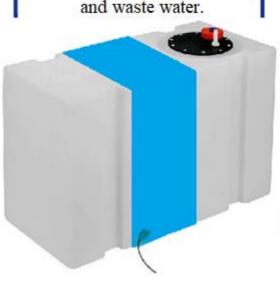


Anti-icing for automatic steps, mobile ramps and sliding steps



#### WATER TANKS

To heat up clean and waste water.



# WINDOWS

Demister solutions for Windows and rear-view mirrors.



### SMALL PIPES

When high power and the best thermal transmission is required







## CHANNELLING

MECHANISMS
Silicone heating elements for channelling mechanism



### FLOOR AND SEATS HEATING

We have developed a low weight and high performance solution to improve the customary additional trains heating



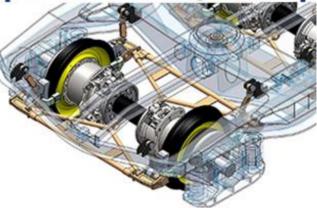
#### HITCHES

To prevent accumulation of snow and ice on the head of train hitches



#### BOOGIES -

Heat and maintain the temperature of electro-mechanical systems using our most flexible heating elements.



### All our products are guaranteed for external use





