

GREEN AIR SOLUTION

R290 technology



Wabtec Green Air Solution are HVAC units using R290 refrigerant. It is an ideal environmentally friendly alternative to synthetic refrigerant solutions.

For all climatic zones

For most types of railway vehicles

Available for new builds, as well as aftermarket applications

Efficient heat pump option available

Similar cooling performance as existing synthetic refrigerant-based solutions with same train power supply



Dramatically reduces the global warming impact vs standard synthetic solutions

DATA SHEET

High-energy efficient natural refrigerant solution

Cost efficient

Easy-to-switch technology (from other existing standard synthetic solution)

No obsolescence risk

Technology proven



TECHNICAL SPECIFICITIES

GWP and Obsolescense	Low GWP vs synthetic alternatives	Refrigerant	GWP		
		R22	1810		
		R134a	1430		
		R513a	631		
		R290	3		
Cost Efficiency	 + 10% weight savings (80kg/unit) measured vs CO₂ on regional train application + Lower filling charge (for R290 reduction of approx. 50 % expected vs. R134a) + R290 predictable sourcing price 				
Technology Switching Aspect	 Similar pressure level in cooling circuit vs synthetic solutions Similar train auxiliary power supply needed vs synthetic solutions For most applications identical mechanical interfaces work for R290 and synthetic with same capacity 				
Energy Efficiency	Coefficient of performance (COP) over ambient temperature for a theoretical unit: similar performance vs R134a and better than CO ₂ (R744) and Air-cycle (R729)	000		P_R134a P_R290 P_R729 P_R744 40 45 50	
Technology Proven	 Checked and tested by internal a Units running in daily passenger 			sche Bahn	

CONTACT

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