Left column (benefits)

- Average energy savings of **20%**
- Improved Temperature Stability
- Maintenance-Free install & forget
- 2 Hrs. to install
- Helping the environment
- CO_2
- Reduced water dripping & no icing up
- No upper size limit
- Certifications
  - RoHS
  - CE
  - FC
  - ETL LISTED c us — Intertek

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Right column

COOLNOMIX

AR-01

For **Refrigeration** / **Cold** Rooms
Suitable for temperature sensitive consumables

- For refrigerant based (**DX**) **refrigeration** / **cold room** operating **between 0°C** to **15°C** (32°F to 59°F).
- Improved temperature stability adhering to tighter food/beverage safety compliance standards.
- **Cuts** operating **costs** by an average **20%**.
- For **new** and **existing** systems.
- **ROI** generally within **12 months**.
- **Ensuring** companies deliver on **carbon footprint** and **ESG** commitments.

- For **commercial** / **industrial refrigerators** where temperature control is a critical requirement for :
  - Pharmaceutical, Medical
  - Perishables: Vegetables, Flowers, Meat, Fish, Poultry, Dairy products, Beverages, Wines etc.
- **Local Bluetooth connectivity** available using **CONNECT** mobile Android app (for commissioning, data access, downloading, maintenance, etc.)
- Delivers **remote real-time IoT monitoring** and **management** using **WIFI** and **AWS** through our **GEMS*** dashboard (additional charges apply).

* Global Energy Management Service

What is ✕ COOLNOMIX ?

- COOLNOMIX® internationally patented technologies for Air Conditioning and Refrigeration systems **reduces energy consumption** and cuts **carbon emissions** by a significant **30%.**, (20% for refrigeration) These reductions **cut your operating costs, improve margins** and help your company **meet ESG commitments** while reducing the environmental footprint.
- As member of **United Nations** Cool Coalition working group, we are privileged to contribute our insights and suggestions at a global level concerning energy-efficient and climate-friendly sustainable solutions for buildings.

> The COOLNOMIX® advantage is delivered through AI and two temperature sensors. This eliminates high heat load compressor over runs (a shortcoming in single sensor designs).

How does ✕ COOLNOMIX AR-01 work ?

- COOLNOMIX® **retrofit technologies** are easy to fit and installed on the indoor (evaporator) component of any refrigerant based **direct expansion** (**DX**) refrigeration unit.
- The energy saving magic is delivered using an AI based energy trading model and **two temperature sensors** which work together to optimise the performance of compressors, which are the main energy consuming components of refrigeration systems.
- The two **COOLNOMIX®** temperature sensors monitor the room temperature and cold supply air temperatures to decide when the indoor environment needs adjusting. In all cases maintaining required temperatures is the primary objective. Once required temperatures have been achieved **COOLNOMIX®** then works to prevent energy wastage.
- The overall result is **improved temperature control** (typically **+/- 0.5°C**) and a **20% reduction** in refrigeration **energy consumption**.
- This 20% refrigeration energy saving can result in an overall **reduction** in energy consumption by **15% or more** (noting that refrigeration can account for 80% of the total energy bill).
- Applicable to industrial refrigerators of at least: **240 ft²** (square feet) or **22 m²** (square meters).

≋ AR-01 Standard Configuration ≋	
Dimensions	7" x 4.4" x 1.5" (17.8cm x 11.2cm x 3.8cm) excluding temperature sensors
Unit Weight	11.7 oz (332 g)
Electrical Supply	110V - 250V AC50/60 auto-switching
Current	1 mA at 220 VAC or 2 mA at 110 VAC.
Operating Environment	0°C to 55°C, (32°F to 131°F) RH to 95%
Storage Environment	-25°C to 85°C , (-13°F to 185°F) RH 15% to 95%
Certifications	Intertek/ETL (UL 60730-2-9, UL 60730-1), CE, RoHS, FCC, MIC
Temperature Sensors	NTC type -50°C to 150°C (-58°F to 302°F)
Relay	Normally CLOSED - fail safe (relay closes on power failure)
	Voltage: 0 to 250V (AC or DC)
	Current: 10A continuous/16A peak

✕ COOLNOMIX FAQ :

- **Does COOLNOMIX® have an impact on the manufacturer's warranty ?** No, our preferred COOLNOMIX® installation approach ensures that the **manufacturer provided control system remains fully in control** of the start-up, shutdown and speed control of sometimes multiple compressors.
- **What about warranty aspects ?** All COOLNOMIX® units are **warranted for 3 years**, and have an expected **lifespan** of **+10 yrs**.
- **Does COOLNOMIX impact the life of the refrigeration unit ?** No, the manufacturer's control system continues to limit the frequency of compressor operations thereby preventing short-cycling. COOLNOMIX® additionally has its own in-built anti short-cycling features to protect compressor operations. In practice, the lifetime of a compressor is largely determined by the rate at which corrosion (rust) develops in the outside unit.