Cool Up

Key Facts of the Cooling Sector Status in 2023

Türkiye

The Turkish cooling sector has substantial production capacity (especially for split AC and air handling units), considerable product diversification and specialisation, a highly qualified workforce, and an efficient supply chain and qualified logistics infrastructure. In the commercial refrigeration sector the domestic market is dominated by local manufacturing and boasts a strong export market.

The snapshot focuses on the following three cooling sectors, air conditioning, commercial refrigeration, and refrigerants.

Air Conditioning | Commercial Refrigeration | Refrigerants

Air conditioning

Market drivers

- Economic growth
- Extreme weather conditions
- Urbanisation and population growth
- New construction activities

High market potential for cooling equipment sales is floor area in existing buildings that is not air conditioned yet.

10 000 000 existing AC systems in 2020

1 000 000 sales of AC systems in 2020

Residential sector

The AC market is strongly dominated by single split systems: 90% are single split systems (share of number of sold units) and are mainly sold to residential sector and small non-residential buildings.

87.5% of the floor area in residential buildings is not air conditioned

New buildings installing AC systems

35% Apartment buildings

Non-residential sector

Central systems, including chillers are typically sold to large non-residential buildings, such as large hotels, shopping malls, and hospitals.

10–85% of the floor area in non-residential buildings is not air conditioned, depending on the sector

New buildings installing AC systems

Retail	86%
Hotels, offices, healthcare buildings	81%–100%

Energy efficiency

Energy Efficiency Ratio (EER)

2.7–3.2 Average EER rating of installed AC systems → **Large potential for energy savings**

Commercial refrigeration

Market drivers

- Population growth
- Introduction of new technologies
- Economic growth
- COVID-19 pandemic
- New construction activities

The commercial refrigeration market is dominated by **local manufacturing**

1 400 000 existing systems in 2020

75 000 sales of systems in 2020

Predominant technologies

Market Share by Technology (share of units sold)

Standalone systems	45%
Centralised systems	10%
Condensing units	45%

Refrigerant leakage

20—40% per year

Annual leakage rates are estimated to be in the range from **20%—40% in condensing units and centralised systems.**

Up to **100%** potential release

End-of-life management of refrigerants can be strengthened, as the absence of it can result in higher rates of release of the refrigerant into the atmosphere during disposal.

Refrigerants

100% of refrigerants **imported**

Air Conditioning

The main refrigerant used in existing installed AC systems is **R410A** followed by R134a and R32.

For new systems, the focus is shifting towards lower GWP refrigerants, R32 became the most sold refrigerant in 2020 followed by R410A.

Commercial Refrigeration

In **commercial refrigeration** systems, the main refrigerant used in existing standalone, condensing, and central systems is **R404**, followed by R507A and R407A.

As of 2020, new commercial refrigeration systems have shifted from the traditional high GWP refrigerants to lower GWP refrigerants, mainly R449A.

R134a R410A R407A R404 R449A

More information

Main report

This snapshot is based on the report:

Cooling Sector Status Report Türkiye:
Analysis of the current market structure, trends, and insights on the refrigeration and air conditioning sector
December 2022

To download the full report, click on the following link:
bit.ly/CU-CoolSecStat-T