Market evolution: Refrigeration equipment (CN 8418) — 2015–2025

Introduction

Customs code 8418 covers a broad range of cooling and freezing products, from household refrigerators and freezers to commercial display furniture and heat pumps, as well as their parts. This report traces the evolution of the European Union's external trade in these goods over the eleven-year period 2015–2025. The data reveal three interlocking dynamics: a sharp erosion of the EU's traditional trade surplus, a substantial geographical realignment of supply and demand, and a structural shift in the product mix toward higher-value and green-technology segments.

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1. The Vanishing Surplus: Import Growth Outstrips Export Expansion

1.1. The EU's trade surplus in refrigeration equipment shrank from €1.32 billion in 2015 to barely €34 million in 2025.

Exports grew by 40.3 %, from €4.45 billion to €6.24 billion, while imports jumped by 98.5 %, from €3.13 billion to €6.21 billion. As a result, the surplus collapsed by 97.4 % (EU trade overview).

Year	Exports (€ bn)	Imports (€ bn)	Balance (€ bn)
2015	4.45	3.13	+1.32
2025	6.24	6.21	+0.03

1.2. Export prices surged by 52 %, while import prices rose only 19 %, pointing to diverging product profiles.

The average export unit value climbed from €8 826/tonne to €13 415/tonne, whereas the average import unit value moved from €4 293/tonne to €5 122/tonne (EU trade overview). This widening gap suggests that the EU is increasingly importing lower-priced mass-market goods while exporting higher-value equipment.

1.3. Net import reliance rose from –16.8 % to –1.0 % and trade intensity jumped from 37 % to 56 %.

The net import reliance indicator moved from a clear net-export position to near balance (net import reliance). Over the same period, trade intensity (exports + imports over production value) rose from 37.3 % to 56.0 % (trade intensity). The EU economy became significantly more dependent on external trade for refrigeration equipment, both as a source of supply and as an outlet for its products.

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2. A New Geography of Trade: Concentration and Geopolitical Realignment

2.1. China consolidated its position as the dominant import supplier, pushing import concentration sharply higher.

Chinese deliveries to the EU grew by 185.9 %, from €1.36 billion to €3.88 billion. The Herfindahl-Hirschman Index (HHI) for imports climbed from 2 610 to 4 235, a rise of 62.3 % (import concentration). No other supplier matched this scale, although Türkiye and Serbia also registered solid growth.

Top EU import partners, CN 8418 (value, € million)

Partner	2015	2025	Change (%)
China	1 358	3 884	+185.9
Türkiye	762	1 046	+37.3
Serbia	118	162	+37.8
United Kingdom	207	181	–12.4
Thailand	70	106	+51.8
Korea, Rep. of	186	99	–46.5
United States	157	159	+0.7

Data: top extra-EU import partners.

2.2. Exports to Russia collapsed after 2021, while the United States became a much more important market.

Shipments to the Russian Federation fell by 75.1 %, from €295 million to €73 million (top export partners). In contrast, exports to the United States soared by 113.1 %, reaching €677 million in 2025.

Selected EU export destinations, CN 8418 (value, € million)

Partner	2015	2025	Change (%)
Russian Federation	295	73	–75.1
United States	318	677	+113.1

2.3. Traditional European partners remained the largest customers, while Ukraine and the UAE gained importance.

The United Kingdom stayed the top destination with exports rising from €756 million to €1 123 million (+48.6 %). Switzerland grew by 72.9 % to €714 million. Ukraine, despite the war, saw EU deliveries double to €133 million (+104.4 %), and the United Arab Emirates recorded a 73 % increase (top export partners). Export concentration remained low and relatively stable; the export HHI moved only from 606 to 711 over the decade.

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3. Structural Transformation: The Rise of Heat Pumps and High-Value Segments

3.1. Heat pumps (841861) turned into a strategic import category, increasing four-fold in value.

Imports of heat pumps jumped from €178 million to €747 million between 2015 and 2025 (product segment breakdown). This surge is consistent with EU policies aimed at decarbonising heating.

Imports of selected sub-headings, CN 8418 (value, € million)

Sub-heading	Description	2015	2025	Change (%)
841810	Combined fridge-freezers	972	2 053	+111.2
841821	Household compression fridges	468	555	+18.6
841850	Commercial refrigeration furniture	348	781	+124.3
841899	Parts (n.e.s.)	437	663	+51.8
841861	Heat pumps	178	747	+320.2

Data: product segment compare.

3.2. Commercial and industrial refrigeration equipment remained the backbone of EU exports.

Exports of “other refrigerating or freezing equipment” (841869) grew from €1.12 billion to €2.26 billion, while commercial display furniture (841850) reached €1.04 billion. Together these two headings accounted for over half of all EU exports in 2025 (product segment compare). This pattern underlines the EU's competitive strength in professional and industrial cooling solutions.

3.3. EU production value soared by 126 % even as output volume collapsed, signalling a powerful upgrading of the product mix.

Between 2003 (first available data) and 2024, production value in current prices rose from €6.26 billion to €14.12 billion (+125.5 %), whereas production quantity fell from 418 million to 22.4 million units (–94.7 %) (production volumes). This extreme divergence reflects a shift towards high-value items such as heat pumps, industrial chillers and complex parts, as well as possible changes in unit definitions. The average unit value of production consequently multiplied by a factor of more than forty over two decades.

Conclusion

The EU's external trade in refrigeration equipment between 2015 and 2025 is the story of a traditional industrial advantage being reshaped by global competition and technological change. A once-sizeable trade surplus has all but disappeared, driven by surging imports from China and a structural repositioning towards high-value segments. At the same time, the EU's export engine remains robust in commercial and industrial refrigeration, while the meteoric rise of heat pump imports reflects the bloc's energy-transition ambitions. Geopolitical shocks – notably the collapse of the Russian market – have been offset by stronger ties with the United States and other partners. The data point to an industry that is more open, more concentrated on the import side, and increasingly focused on higher-value and greener products.

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