EU TRADE EXPLORER

Market evolution: Non-electric engines and motors (CN 8412) — 2015–2025

Introduction

This report examines the European Union's external trade in **Engines and motors (excl. steam turbines, internal combustion piston engine, hydraulic turbines, water wheels, gas turbines and electric motors); parts thereof** (customs code 8412) over the 2015–2025 period. The analysis covers annual data for exports to and imports from non-EU countries, tracking value, volume, unit prices, partner-country shifts, volatility and product-segment composition. The figures are drawn exclusively from the EU Trade Dashboard.

1. A Two-Speed Trade Expansion: Imports Surge While Exports Advance Steadily

The import side more than doubled in value, driven by massive volume growth

Between 2015 and 2025, EU imports of CN 8412 goods rose from **€1.72 billion to €4.26 billion** — an increase of **147.3 %** trade overview. Volume expanded even faster, climbing **187.8 %** (from about 136 thousand tonnes to 393 thousand tonnes). Because the average import unit price fell **14.1 %** (from €12 630 to €10 853 per tonne), the value growth was somewhat moderated but still exceptional.

Export growth, though substantial, was more measured

Exports grew from **€3.13 billion to €5.65 billion** (+80.6 %), supported by a **40.3 %** increase in quantity and a **28.7 %** rise in average unit price. The EU therefore sold fewer additional units than it bought, but at a higher and improving price point.

The trade surplus remained broadly stable in absolute terms

Despite the much faster import growth, the EU's trade balance slipped only marginally from **+€1.41 billion to +€1.39 billion** (-1.3 %). This stability reflects the fact that, in euro terms, both flows grew broadly in parallel after 2020, even though the composition of trade changed radically.

2. Shifting Partner Map: Asia's Rise and the Vanishing Russian Market

Asia – led by China, India and Türkiye – now dominates the EU's import bill

The three Asian suppliers have rewritten the import landscape.

Partner	2015 (€ m)	2025 (€ m)	Change (%)
China	325	1 527	+369.9
India	72	524	+631.7
Türkiye	126	427	+239.8

Meanwhile imports from Korea (-27.5 %) and Japan (-32.0 %) contracted, highlighting a shift toward lower-cost manufacturing bases. The United States and the United Kingdom, though still large, grew more moderately (+69.0 % and +98.9 %, respectively). Data from top partners.

The United States and United Kingdom remain core export destinations, but Russia has collapsed

On the export side, the United States solidified its position as the largest single market (from €776 m to €1 658 m, +113.7 %). The United Kingdom grew 47.1 % despite a sharp price shock in 2022 (see below). The most dramatic change was the near-total loss of the Russian market: exports plummeted from **€113 m in 2015 to just €22 thousand in 2025** (-100.0 %), the result of sanctions imposed after the 2022 invasion. A supply shock detected by the dashboard quantifies this as a -98.3 % quantity collapse centered in 2025, with unit prices soaring to unrepresentative levels supply shocks.

Import concentration intensified considerably, especially in volume terms

The Herfindahl-Hirschman Index (HHI) for imports rose from **1 526 to 2 038** for value (+33.5 %) and nearly doubled for volume, from **1 967 to 3 997** (+103.1 %). This signals that a handful of partners now ship a very large share of the EU's physical imports, increasing supply-chain dependency. Export concentration is lower and increased only moderately (HHI value 996 → 1 202) concentration.

3. Inside the Product: Dominance of Parts, Cylinders, and Diverging Price Trends

Parts (841290) and hydraulic/pneumatic cylinders (841221, 841231) form the backbone of trade

The subclass “Parts of non-electrical engines and motors” (841290) is by far the largest segment, accounting for more than half of both imports and exports in 2025. The next two biggest items are hydraulic linear-acting cylinders (841221) and other hydraulic engines and motors (841229).

Segment	Imports 2025 (€ m)	Exports 2025 (€ m)
Parts (841290)	2 311	1 985
Hydraulic linear cylinders (841221)	868	1 713
Other hydraulic engines (841229)	542	985
Pneumatic linear cylinders (841231)	210	427
Other pneumatic engines (841239)	131	260
Other engines (841280)	168	173

A detailed breakdown is available in the product-compare tools.

Import prices are falling while export prices rise – a widening quality or value-added gap

The overall import unit price declined by 14.1 % over the decade, whereas the export unit price climbed 28.7 %. Focusing on the dominant “parts” segment, the difference is even clearer: import parts prices fell from **€8 873/tonne to €7 670/tonne**, while export parts prices rose from **€16 193/tonne to €17 568/tonne**. This suggests that EU imports are increasingly composed of lower-cost, bulk components, while EU exports consist of higher-value, possibly more technologically advanced finished engines and specialised parts.

Supply chains face significant volatility, especially from India, Morocco and Russia

The coefficient of variation (CV) of import quantities highlights the most unstable sources:

- Morocco: CV 1.17
- Brazil: CV 0.79
- India: CV 0.69
- Russia: CV 0.69
- China: CV 0.48

On the export side, price shocks were detected for Australia (2021, +61.2 % price) and the United Kingdom (2022, +39.4 % price), the latter likely linked to post-Brexit trade friction and exchange-rate movements volatility. Such volatility, combined with the high concentration of imports, represents a strategic supply-chain risk.

Conclusion

The EU's external trade in non-electric engines and motors has been profoundly transformed over the 2015-2025 period. Imports more than doubled, overwhelmingly sourced from China, India and Türkiye, while exports continued to grow, albeit at a slower pace, with strong performance to the United States and, until the shock, the United Kingdom. The collapse of trade with Russia after 2022 illustrates how geopolitical events can abruptly rewrite trade patterns. At the product level, the market is dominated by parts and hydraulic cylinders, with a clear divergence in unit values: the EU exports more sophisticated, higher-priced goods and imports increasingly low-cost items. The rising concentration of imports and the high volatility of several key suppliers underscore the need for careful monitoring of supply-chain resilience in this sector.

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