EU TRADE EXPLORER

Market evolution: Industrial machinery and parts (CN 84) — 2015–2025

Introduction

This report analyses the European Union's extra-EU trade in Chapter 84 goods — "Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof" — from 2015 to 2025. The chapter covers a vast range of industrial equipment, from engines and pumps to construction machinery, refrigeration, printing machines and transmission components. Data are drawn from the EU Trade Dashboard and expressed in euros and tonnes. Over the decade, EU machinery trade expanded strongly in value terms, yet a closer look reveals a story of rising unit prices, a drastic geographical reorientation, and fast-changing roles among member states and product segments.

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1. Price-fuelled growth masks volume contraction

The headline figures show a vigorous increase in both exports and imports, but the underlying quantity and price trajectories diverge sharply.

Export values rose while shipped volumes shrank considerably

Indicator	2015	2025	Change
Exports (billion €)	306.1	421.5	+37.7 %
Export quantity (million tonnes)	19.8	14.6	–26.5 %
Import value (billion €)	184.7	308.0	+66.8 %
Import quantity (million tonnes)	13.2	16.3	+23.8 %

Export volumes fell every year after 2015 except for a brief rebound in 2021, ending more than a quarter below their starting level. Imports, in contrast, added volume, especially after the pandemic trough of 2020. The trade surplus therefore narrowed from €121.5 bn to €113.5 bn, having dipped to a low of €88.5 bn in 2022 (see the full trade balance series).

Unit values soared — much faster for exports than for imports

- The average unit value of EU machinery exports leapt from €15 426 per tonne to €28 900 per tonne (+87.3 %).

• Import unit values rose from €14 004 to €18 866 per tonne (+34.7 %).

This suggests that EU exporters specialise increasingly in high-value, technologically advanced machinery, while import price growth has been more moderate, partly held back by the large weight of mass-produced goods from Asia. The sharp export unit-value increase also reflects inflationary pressures on energy, metals and components, as well as a product mix shift toward more expensive capital goods.

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2. Partner realignment: the collapse of Russia and the rise of diversified markets

The maps of both exports and imports have been redrawn, driven by sanctions, supply-chain reconfiguration and the growing weight of the United States and emerging economies.

Exports: Russia disappears; the US, Mexico and China fill the gap

Top export partners

Partner	2015 (billion €)	2025 (billion €)	Change
United States	55.7	90.7	+62.7 %
United Kingdom	36.4	44.9	+23.3 %
China	30.8	45.2	+46.9 %
Türkiye	13.7	18.8	+37.8 %
Russia	16.2	2.3	–86.1 %
Switzerland	12.6	17.4	+38.0 %
Mexico	7.6	13.1	+71.8 %

Exports to Russia collapsed after 2021 owing to EU sanctions, erasing a market that had been the fifth-largest destination. The United States consolidated its position as the top buyer, while Mexico nearly doubled its imports from the EU. China remained a critical outlet despite trade tensions.

Imports: China's grip tightens, the US and India surge

Top import partners

Partner	2015 (billion €)	2025 (billion €)	Change
China	60.6	106.7	+76.1 %
United States	33.4	57.2	+71.4 %
United Kingdom	21.1	22.7	+7.3 %
Japan	13.9	13.6	–2.2 %
Türkiye	5.8	10.9	+87.5 %
Korea, Rep.	5.1	9.8	+92.1 %
India	2.2	5.6	+158.7 %

China alone accounted for much of the import growth, peaking at €115.2 bn in 2022 before easing slightly. India and Türkiye recorded the fastest relative gains, signalling a gradual widening of EU supply sources. The import HHI (Herfindahl-Hirschman Index) edged up from 1 669 to 1 734, while the export HHI rose from 714 to 823, indicating a mildly more concentrated trade pattern on both sides (see concentration trends).

Import price shocks hit Asian supply chains in 2022

Price shock events were detected for imports from China and Japan in 2022. The unit value of Chinese machinery jumped 33 % above baseline while volumes dipped only 4.5 %, reflecting a supply-driven price spike. Japan saw an even sharper price surge (+45.7 %) alongside an 11 % drop in quantity. These shocks contributed to the 2022 peak in import values and underline the EU's exposure to Asian supply bottlenecks.

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3. Internal restructuring: Eastern dynamism, stable core and a changing product mix

The EU's machinery trade is increasingly shaped by the rapid rise of several Central and Eastern European member states, and by a product composition that is tilting towards construction, cooling and transmission equipment while traditional printing machinery recedes.

Poland and the Netherlands reshape the EU trade map

Member state trade data reveal double-digit growth rates for the traditional heavyweights, but explosive expansion among a smaller group.

Extra-EU exports by member state

Member state	2015 (billion €)	2025 (billion €)	Change
Germany	111.5	128.9	+15.6 %
Netherlands	29.5	61.4	+108.5 %
Italy	49.3	59.4	+20.5 %
France	28.0	40.7	+45.4 %
Poland	7.8	16.8	+115.4 %

Extra-EU imports by member state

Member state	2015 (billion €)	2025 (billion €)	Change
Netherlands	38.0	68.1	+79.0 %
Germany	50.1	65.1	+29.9 %
Poland	6.9	19.5	+182.5 %
France	21.1	38.7	+83.5 %

Poland’s trade more than doubled, turning it into a significant hub for machinery flows. The Netherlands’ extraordinary growth in both exports and imports reflects its role as a logistics and re-export gateway. The specialisation index for 2025 confirms that Czechia, Hungary, Germany and Italy retain a strong comparative advantage in machinery, while southern and peripheral economies remain much less specialised.

Product segments: construction and cooling equipment expand; printing declines

The product-level breakdown highlights a clear shift in what the EU buys and sells.

Top import segments (by 2025 value)

Code	Description	2015 (billion €)	2025 (billion €)	Change
8443	Printing machinery, copiers, etc.	12.4	9.7	–21.8 %
8414	Air/vacuum pumps, compressors, fans	5.8	8.4	+45.0 %
8483	Transmission shafts, gears, bearings	4.6	7.9	+72.3 %
8415	Air conditioning machines	2.8	7.6	+174 %
8429	Self-propelled construction machinery	3.0	6.7	+124 %
8418	Refrigerators, freezers, heat pumps	3.1	6.2	+98.4 %

Top export segments (by 2025 value)

Code	Description	2015 (billion €)	2025 (billion €)	Change
8479	Special-purpose machinery, n.e.s.	15.7	21.4	+36.0 %
8414	Air/vacuum pumps, compressors, fans	11.7	14.7	+25.5 %
8483	Transmission shafts, gears, bearings	9.9	14.2	+43.7 %
8409	Parts for internal combustion engines	10.4	12.4	+18.7 %
8428	Lifting/handling machinery	6.7	8.5	+26.0 %
8431	Parts for lifting/construction machinery	10.0	10.1	+1.8 %

The contraction of printing machinery imports mirrors the digital transition. The rapid growth in air conditioning, refrigeration and heat-pump equipment points to climate-adaptation spending and construction booms. Construction machinery (self-propelled and parts) has also seen sustained demand. On the export side, special-purpose machines (a very diverse category) remain the EU's flagship, while transmission components and pumps also expanded solidly. Overall, unit values rose across almost all product groups, confirming the price-driven character of the trade expansion.

Conclusion

The EU's extra-EU machinery trade over the past decade has been a story of robust nominal growth underpinned by surging unit values, not by higher volumes. Export quantities actually fell, a trend masked by the near-doubling of export prices. On the import side, larger volumes and higher prices combined to push the import bill up by two-thirds, eroding the traditional surplus. Geopolitically, the complete collapse of the Russian market redistributed export flows towards the Americas, China and Türkiye, while imports became even more centred on China, despite emerging diversification towards India and Türkiye. Within the EU, the rise of Poland and the Netherlands as trade hubs has reshaped the internal geography, complementing the still-dominant but slower-growing German and Italian core. Product-wise, the shift away from traditional printing machinery and towards construction, cooling and transmission equipment mirrors broader economic and technological transformations. Looking ahead, the EU's machinery sector faces the dual challenge of maintaining its high-value specialisation while managing price volatility and the concentration risk of critical import sources.

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