EU TRADE EXPLORER

Market evolution: Filtration and centrifuging machinery (CN 8421) — 2015–2025

Introduction

EU external trade in centrifuges, filtering and purifying machinery (CN 8421) has undergone a profound transformation between 2015 and 2025. The data window captures an industry that sharply increased its value creation, reoriented its partner geography and scaled up domestic production. Total extra-EU exports rose from €11.4 billion to €17.6 billion (+54.7 %), while imports grew from €5.6 billion to €8.4 billion (+50.0 %). The trade surplus consequently widened by 59.1 %, reaching €9.2 billion. This report distils the three most important dynamics behind those headline figures.

Aggregate indicator	2015	2025	Change
Exports (billion EUR)	11.40	17.63	+54.7 %
Exports volume (thousand tonnes)	500.7	507.9	+1.4 %
Export unit value (EUR/tonne)	22 766	34 709	+52.5 %
Imports (billion EUR)	5.60	8.40	+50.0 %
Imports volume (thousand tonnes)	282.9	387.7	+37.0 %
Import unit value (EUR/tonne)	19 782	21 655	+9.5 %
Trade balance (billion EUR)	5.80	9.23	+59.1 %

Source: General Overview trade dashboard

From volume to value: The premiumisation of EU exports

Export earnings soared while volumes barely moved, driven by a steep rise in unit values

Between 2015 and 2025, the EU's extra-EU export value climbed from €11.4 billion to €17.6 billion, yet the shipped quantity increased by only 1.4 % (500.7 k tonnes to 507.9 k tonnes). The entire value growth was therefore carried by a 52.5 % jump in average export unit prices, from €22 766 to €34 709 per tonne. Import price growth over the same period was a far more modest 9.5 %, highlighting a clear divergence in pricing power.

The composition of exported goods shifted toward higher-value segments

The product breakdown shows that the highest unit-value segments recorded the strongest price increases. Among the top export sub-categories, machinery for filtering or purifying gases (842139) saw its average price rise from €22 621 to €33 093 per tonne, parts (842199) from €22 832 to €40 738, and specialised liquid filters (842129) from €35 220 to €53 975. The average price of centrifuges (842119) also climbed from €41 088 to €53 242. In contrast, lower-value segments such as oil/petrol filters and intake air filters delivered smaller price gains, reinforcing the picture of a market that moved up the quality ladder.

Source for product-level prices: Product segment breakdown

Tectonic shifts among trade partners

The Russian market vanished, while China became the dominant import supplier

The most dramatic single change in the partner landscape is the collapse of exports to Russia. The value fell from €0.75 billion in 2015 to €0.08 billion in 2025 (−89.3 %), almost entirely after 2022. On the import side, China strengthened its position far beyond any other partner: extra-EU imports from China surged from €0.61 billion to €1.70 billion (+178.6 %), making it the second-largest supplier after the United States. Traditional sources such as South Africa lost ground (−31.0 %), while India (+136.9 %) and Türkiye (+95.9 %) emerged as fast-growing alternative origins.

Top export and import partners, 2015 vs. 2025

Exports

Partner	2015 (billion EUR)	2025 (billion EUR)	Change
United States	1.77	3.17	+78.7 %
United Kingdom	1.09	1.91	+75.2 %
China	1.26	1.66	+32.2 %
Russian Federation	0.75	0.08	−89.3 %
Türkiye	0.60	1.05	+75.6 %
Switzerland	0.42	0.89	+113.5 %
Brazil	0.22	0.48	+114.6 %

Imports

Partner	2015 (billion EUR)	2025 (billion EUR)	Change
China	0.61	1.70	+178.6 %
United States	1.08	1.93	+79.3 %
United Kingdom	1.12	1.16	+4.1 %
South Africa	0.89	0.61	−31.0 %
Türkiye	0.16	0.32	+95.9 %
Korea, Republic of	0.15	0.21	+39.8 %
India	0.11	0.25	+136.9 %

Source: Top partners by value

Price shocks added short-term turbulence

The volatility data reveal that import unit prices from India jumped by 32.5 % in 2023, a shock that persisted through 2025 and raised the average import price for that partner. On the export side, an isolated price spike of 56.4 % occurred on the Australian market in 2019, before quickly returning to trend. These events, while not altering the overall direction, underline the sector's exposure to sudden cost shifts in specific bilateral relationships.

Source: Shock events

Scaling up: Record production and deepening export orientation

Domestic output more than doubled, cementing the EU's role as a global supplier

EU production value for CN 8421 goods rose from €5.8 billion in 2015 to €14.4 billion in 2024 (+146.8 %), driven primarily by a volume expansion of 177.6 %. This massive scale-up enabled the bloc to satisfy strong external demand while also accommodating higher domestic consumption. Unit values in production even declined slightly over the period, suggesting that the export premiumisation observed was not mirrored in average output prices, possibly due to a different mix between domestic and exported products.

Source: Production value and quantity

Export propensity surged, making the sector overwhelmingly outward-oriented

The share of production that is exported to non-EU countries jumped from 35.5 % in 2015 to 79.2 % in 2024, while net import reliance (the share of apparent consumption covered by net exports) swung from −24.7 % to −76.0 %. In other words, the EU now exports far more than it needs to satisfy its own demand, transforming the sector into a powerful net foreign exchange earner.

Source: Export propensity and Net import reliance

Germany leads, but central and eastern European exporters gained ground

Germany remained the largest extra-EU exporter, increasing its sales from €5.62 billion to €8.14 billion (+44.9 %). However, several smaller Member States posted spectacular growth, most notably Belgium (+176.8 %), the Netherlands (+88.4 %) and Poland (+108.6 %). The specialisation patterns for 2025 show the highest revealed symmetric comparative advantage (RSCA) in Portugal (0.27), Czechia (0.26), Germany (0.21), Poland (0.16) and Romania (0.08), indicating that central European production hubs have become deeply integrated into the global supply chain for filtration and centrifuge equipment.

Key EU exporters (extra-EU) 2015–2025

Member State	2015 (billion EUR)	2025 (billion EUR)	Change
Germany	5.62	8.14	+44.9 %
Belgium	0.64	1.77	+176.8 %
Italy	1.11	1.51	+36.2 %
France	1.07	1.34	+24.7 %
Netherlands	0.58	1.09	+88.4 %
Poland	0.22	0.47	+108.6 %

Sources: Top reporters by value and Most specialised reporters

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Conclusion

Over the 2015–2025 period, the EU’s external trade in centrifuges, filters and purifiers evolved from a solid but relatively balanced sector into a high-value, export-intensive powerhouse. Three forces drove the change: a marked premiumisation of exports that lifted unit values by more than half, a geopolitical reordering of trade flows marked by the disappearance of the Russian market and the rise of China as a critical import source, and a domestic production boom that more than doubled output and pushed export propensity to nearly 80 %. The result is a sharply increased trade surplus and a highly specialised export base centred on Germany, Belgium, the Netherlands and Poland. Looking ahead, the sector’s dependence on Chinese imports for certain components and the occasional price shocks on both the import and export sides call for continued monitoring, but the underlying trend points to a structurally strengthened competitive position.

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If you need advice on European trade policy, or representation for your interests in Brussels, feel free to contact me at support@tradedashboard.eu. You can find my CV at this address.