# Market evolution: X-ray apparatus (CN 9022) — 2015–2025

## Introduction

The EU's trade in apparatus based on X-rays and other ionising radiation (customs code 9022) covers a wide range of high-tech medical and industrial equipment, from CT scanners and dental X-ray units to radiation therapy devices, tubes, generators, and parts. Between 2015 and 2025 the EU reaffirmed its position as a globally competitive supplier of these goods, running a large and growing trade surplus with non-EU countries. At the same time, import sources became more diversified, Asian suppliers gained market share, and the product-level composition of trade shifted in ways that reveal both industrial strength and new dependencies. This report explains the main observable dynamics using the detailed data provided.

## Export strength and a deepening trade surplus

### Extra-EU exports of X-ray apparatus expanded by 40 %, driven by both volume and price growth

Over the 2015-2025 window, the value of EU exports of CN 9022 products rose from €5 790 million to €8 121 million (+40.3 %), while the quantity shipped increased from 43 395 units to 53 085 (+22.3 %). The average unit price consequently climbed from €133 413 to €152 975 (+14.7 %). These broad-based advances signal sustained demand for high-value European medical and industrial imaging equipment.

General overview

### The EU's trade surplus in these devices widened by almost one-third, reinforcing its net-exporter status

Imports also rose, from €1 994 million to €3 078 million (+54.3 %), but the larger export base produced a surplus that grew from €3 795 million to €5 043 million (+32.9 %). Net-import reliance, already deeply negative, moved from –77 % to –150 %, underlining that the EU's production far exceeds its own consumption of these apparatuses. The trade balance hit a peak of €5 090 million in 2023 before easing slightly in 2024-2025.

Trade and balance · Net-import reliance

### Export propensity rose to nearly 100 %, showing EU producers are increasingly geared towards foreign markets

The share of production sold outside the EU (export propensity) climbed from 72 % in 2015 to 97 % in 2024, while production value itself increased from €6 409 million (2015) to €8 291 million (2024). EU manufacturers not only expanded output but also directed almost all of the extra volume abroad, cementing the sector’s international orientation.

Export propensity · Production volumes

## Diversifying import sources and the rise of Asian suppliers

### The United States remains the largest destination for EU exports, but China and India recorded the fastest growth

EU exports to the United States, the top partner, rose from €1 905 million to €2 612 million (+37.1 %). Shipments to China grew even more, from €780 million to €1 331 million (+70.5 %), and exports to India more than doubled, from €162 million to €338 million (+108.6 %). Meanwhile, Japan lost weight (–21.7 %) and Russia, despite a large mid-period bulge, ended only 9.6 % above its 2015 level.

| Export partner (value) | 2015 (€ mn) | 2025 (€ mn) | Change (%) |
|---|---|---|---|
| United States | 1 905 | 2 612 | +37.1 |
| China | 780 | 1 331 | +70.5 |
| India | 162 | 338 | +108.6 |
| United Kingdom | 383 | 418 | +9.1 |
| Japan | 365 | 286 | –21.7 |
| Russia | 170 | 186 | +9.6 |
| Türkiye | 97 | 168 | +73.6 |

Top trading partners

### On the import side, China’s share soared by over 250 %, while the US stagnated, leading to far more diversified sourcing

EU imports from China jumped from €214 million to €756 million (+253.5 %) and those from India from €26 million to €75 million (+190 %). Imports from Korea more than doubled (+128.5 %) and from Malaysia rose by 141.3 %. Meanwhile, imports from the United States were almost flat (+0.8 %). The Herfindahl-Hirschman index for import concentration fell from 2 670 to 1 909 (–28.5 %), confirming a meaningful diversification away from a handful of traditional suppliers.

| Import partner (value) | 2015 (€ mn) | 2025 (€ mn) | Change (%) |
|---|---|---|---|
| United States | 935 | 943 | +0.8 |
| China | 214 | 756 | +253.5 |
| United Kingdom | 224 | 362 | +61.5 |
| Japan | 258 | 243 | –5.8 |
| Korea, Republic of | 77 | 176 | +128.5 |
| India | 26 | 75 | +190.0 |
| Malaysia | 19 | 46 | +141.3 |

Top trading partners · Concentration HHI

### The United Kingdom’s post-Brexit role evolved into a higher-value, more volatile import partner with notable price shocks

Imports from the UK grew from €224 million to €362 million (+61.5 %), but the quantity-based coefficient of variation reached 0.99, the highest among major partners. A pronounced price shock occurred in 2018, when average unit values jumped to €112 424 (up 131.2 % against a 2016-2017 baseline) while volumes halved, reflecting the temporary disruption of high-value apparatus flows as trading arrangements adjusted.

Volatility bars · Price shocks

## Medical imaging and components drive trade, with stark shifts in tube imports

### Exports are dominated by medical X-ray equipment and CT scanners, which together account for the bulk of the surplus

Three product segments — “apparatus for medical, surgical or veterinary uses” (9022.14), “computer tomography apparatus” (9022.12), and “parts and accessories” (9022.90) — made up the lion’s share of exports. In value terms, exports of 9022.14 reached €2 618 million (+27.6 %) by 2025, CT scanners soared to €1 800 million (+105.4 %), and parts rose to €1 775 million (+13.3 %). These three lines alone generated a surplus of about €3 800 million in 2025, confirming the EU’s technological leadership in diagnostic imaging.

| Export segment (€ mn) | 2015 | 2025 | Change (%) |
|---|---|---|---|
| Medical X-ray (9022.14) | 2 050 | 2 618 | +27.6 |
| CT apparatus (9022.12) | 876 | 1 800 | +105.4 |
| Parts & accessories (9022.90) | 1 567 | 1 775 | +13.3 |
| Non-medical X-ray (9022.19) | 533 | 854 | +60.2 |
| X-ray tubes (9022.30) | 293 | 683 | +132.8 |

Product segment comparison

### X-ray tube imports surged, especially from Asia, while domestic tube production also expanded, reflecting a strategic component build-up

X-ray tube imports (9022.30) grew from €149 million to €370 million (+148 %), driven largely by Asian suppliers such as China, Korea, and Japan. At the same time, the EU's own tube exports rose from €293 million to €683 million, and production figures (within the broader code) indicate robust domestic activity. This simultaneous expansion of imports and exports points to deep intra-industry specialisation, with the EU importing certain tube types while exporting others, possibly higher-end models.

Product segment comparison

### Prices for imported medical X-ray devices saw extreme volatility, plunging during the pandemic's supply disruptions before rebounding sharply

The average unit value of imported 9022.14 apparatus plummeted from €69 832 in 2018 to just €14 695 in 2022, as pandemic-related supply constraints and logistical bottlenecks led to a compositional shift towards lower-value units or a temporary collapse in unit prices. By 2025 the import price had rebounded to €99 963, well above pre-pandemic levels, indicating a restored and possibly remodelled high-value product flow. This price swing is the most dramatic single-segment event in the data window and underlines the segment's exposure to global shocks.

Product segment comparison · Price shocks

## Conclusion

Between 2015 and 2025, the EU not only preserved but significantly strengthened its role as a global hub for X-ray and radiation apparatus. Exports grew vigorously, the trade surplus widened, and export propensity rose close to unity, underscoring the sector's integration into world markets. The partner structure evolved in two directions: export growth diversified towards fast-growing Asian economies while import sources became markedly less concentrated, with China's meteoric rise the most visible change. At the product level, medical imaging equipment and components remain the core of EU export strength, yet the surge in X-ray tube imports — alongside continued domestic tube production — points to a complex, interdependent supply chain. The extreme volatility observed in import prices for certain devices, especially during the pandemic, serves as a reminder

that even a net-exporting industry must monitor the resilience of its component supply lines.

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