

TURKISH MACHINERY INDUSTRY

1-Overall

The machinery sector is one of the key growth factors of Türkiye's economy and the driving force of industrialization. Utilizing policies toward industrialization, Türkiye became the sixth-largest machine manufacturer in Europe, ranked 27th in the global machinery trade in 2020. In recent years, the growth rates of the Turkish machinery industry are much higher than the growth rates of Türkiye's overall economy. With its rapid development and the potential it has, the Turkish machinery industry is increasing its share in the Turkish exports and it is the second largest sector in Türkiye's total export. Moreover, approximately 60% of Turkish machinery export is directed to the EU and the USA.

The machinery sector is a strategic sector for Turkey with its positive contribution to productivity and economic growth. Advantages of "Turkish Machinery Industry" that support the growth of the sector in both production and exportation can be laid down as follows:

1. Developed engineering skills and quick adaptation to new technologies
2. Sufficient facilities (like industrial zones) and sufficient infrastructure
3. Advanced sub-industry
4. Rapid adaptation to international manufacturing standards
5. Quality awareness
6. Specialized, highly educated and skilled middle and senior managers
7. Young workforce
8. Domestic supply of raw materials
9. Flexible structure of SMEs (Most of the companies in the machine manufacturing industry in Türkiye are SMEs)
10. High level organization of the sector
11. Geographical proximity to some of the highest growth markets in machinery

The machinery industry, which has made a serious development in the last 20 years, has reached 19,997 manufacturers in 2021. When evaluated in terms of machinery industry turnover, despite the 7.24% turnover provided by the machinery industry in the total manufacturing industry in 2017, the turnover of the machinery industry was realized in 2018; 6.72% and in 2019; 6.98%,

due to the unfavorable economic conditions around the world. In 2020, the turnover of the machinery industry showed a high growth and its share in the total turnover of the manufacturing industry increased to 7.59% This rate is the highest rate reached by the machinery industry. In 2021, the similar rate is reached by 7.38%.

The Turkish machinery sector attaches great importance to R&D activities. Turkish Machinery facilitates digital transformation, with expertise in systems engineering. Therefore, R&D expenditures have an important place in this development of the industry. The 7.6-fold increase in R&D expenditures in the last 10 years has played a major role in the development of the machinery industry. Within the scope of the importance given to R&D, the number of R&D centers in the machinery industry, which was 117 in 2017, reached 174 as of July 2022.

The machinery industry has the ability to produce many kinds of machines at the point it has reached today. Production and exportation are carried out in a wide range ranging from many niche productions to machinery producing machines (machine tools). For instance; CNC machining; construction and mining machinery; agricultural and forest machinery; food processing machinery; plastic and rubber processing machinery; pumps and compressors; reactors and boilers; turbine, turbojet, turbopropeller, hydraulic cylinders and components; air conditioning machinery; rolling and casting machines; machines for paper production and printing; textile and apparel machinery; leather processing and manufacturing machines.

2- Exports

As machinery is a pioneering sector of development, the Turkish machinery has increased its share in Turkish exports consistently. In 2021, Türkiye's machinery exports reached 25.1 billion US Dollars, which corresponds to 10 per cent of Türkiye's total exports. Over the last 20 years, machinery export has increased 15-fold and the sector has exported to more than 200 countries, including free zones. Machinery products rank first in our exports to Germany, the USA and Russian Federation.

As observed from Table 1 below, Türkiye's machinery exports increased by around 30 per cent from 2019 to 2022.

2019	2020	2021	2022
19.351.479.363	18.397.460.922	22.816.069.468	25.139.649.151

Source: Turkish Istatistical Institute-TurkStat

Today, the Turkish machinery industry manufactures and exports miscellaneous kinds of machinery and tools/accessories. In Table 2, the top ten sub-sectors of Türkiye’s machinery export are laid down. In examining the machinery and accessories exports of Türkiye by sub-sectors, the product group of “cooling machines for domestic and industrial usage” ranks first in the total machinery exports in 2022.

HS Code		2020	2021	2022	Değişim %
8418	Cooling machines for domestic and industrial usage	1.911.575.960	2.519.089.647	2.615.168.834	3,81%
8409	Internal combustion engines and accessories	1.568.383.915	1.848.917.001	1.760.992.122	-4,76%
8422	Dishwashing machines; machinery for cleaning or drying bottles or other containers	887.706.491	1.154.989.851	1.187.904.835	2,85%
8450	Household or laundry-type washing machines, incl. machines which both wash and dry	961.270.942	1.065.767.948	1.002.368.343	-5,95%
8413	Pumps; for liquids, whether or not fitted with measuring device, liquid elevators	650.753.707	856.753.890	965.931.324	12,74%
8421	Centrifuges, including centrifugal dryers; filtering or purifying machinery and apparatus, for liquids or gases; parts thereof.	552.186.088	663.858.556	879.416.597	32,47%
8415	Air conditioning machines; comprising a motor driven fan and elements for changing the temperature and humidity, including those machines in which the humidity cannot be separately regulated	527.602.809	676.952.660	859.028.511	26,90%
8481	Taps, cocks, valves and similar appliances for pipes, boiler shells, tanks, vats or the like, including pressure-reducing valves and thermostatically controlled valves	602.719.487	779.177.490	845.796.034	8,55%
8483	Transmission shafts (including cam and crank) and cranks; bearing housings and plain shaft bearings; gears and gearing; ball or roller screws; gear boxes and other speed changers; flywheels and pulleys; clutches and shaft couplings	530.428.846	689.988.259	769.393.749	11,51%
8431	Machinery parts; used solely or principally with the machinery of heading no. 8425 to 8430	595.223.204	680.076.098	757.771.912	11,42%

Source: Turkish Istatistical Institute-TurkStat

According to Trade Map data, when compared with 2020, the world machinery exports raised by 16,38 % in 2021, whereas Türkiye’s increase rate in that sector was 27% in the same period.

In analyzing the main export destinations of Turkish machinery in 2022, Germany ranks first with its share of 11,7% in our total. The USA with 8.04%, Russian Federation with 6.3%, Italy

4.7%, the UK 4.6%, France 4.1%, Spain 3,1%, Iraq 2.6%, Poland 2,5% and Romania 2.3% follow Germany in Türkiye's total machinery exports.

In the distribution of sub-sectors of machinery in Türkiye's main export destinations, the picture reflects the overall distribution of sub-sectors in our total machinery exports. Moreover, the dependency of our main export markets on Turkish machinery reaches significant levels in some particular sub-groups of machinery.

For instance, chapter 84: "*Machinery, mechanical appliances, nuclear reactors, boilers; parts thereof*" ranks second in our total exports towards Germany for the year 2021.¹ The product group of 8409 "*Internal combustion engines and accessories*" covers the majority of our machinery exports to the country where this sub-group also constitutes a share of 13,9 % of Germany's total imports from the world in. The import share of Turkish machinery in the sub-group of 8450 "*Household or laundry-type washing machines, incl. machines which both wash and dry*" accounts 12,4 % of the total imports of Germany.

Similarly, chapter 84: "*Machinery, mechanical appliances, nuclear reactors, boilers; parts thereof*" ranks second in our total exports to the USA. The product group of 8475 "*Machines for assembling electric or electronic lamps, tubes or valves or flashbulbs, in glass or glassware*" in our exports accounts a share of 12,4 % of the USA's total imports.

Türkiye's exportation under the HS heading 8451 "*Machinery (not of heading no. 8450) for washing, cleaning, wringing, drying, ironing, pressing, bleaching, dyeing, dressing, finishing, coating or impregnating textile yarn, fabrics or made-up articles*" institutes a share of 43,5 % of the total imports of the UK in that specific product group. Likewise, for the HS heading 8450 "*Household or laundry-type washing machines, incl. machines which both wash and dry*" the Turkish machinery share is 22,3 %, and for the HS heading 8418 "*Cooling machines for domestic and industrial usage*" this ratio is 12,8 % in the total imports of the UK in those particular product groups.

Italy imports 22 % of its total imports from Türkiye. in the product group of "*Machinery (not of heading no. 8450) for washing, cleaning, wringing, drying, ironing, pressing, bleaching, dyeing, dressing, finishing, coating or impregnating textile yarn, fabrics or made up articles*" (HS Code 8451).

¹ According to Trade Map Data

France imports 17,8 % of its total imports from Türkiye under the HS heading 8451.

The product group of 8403 “*Central heating boilers*” imported by Russia from Turkey constitutes 15,4 % of the total imports of the country from the world in that specific product. And for Spain, the HS heading of 8450 “*Household or laundry-type washing machines, incl. machines which both wash and dry*” that has been imported by the country from Turkey accounts 17,8 % of its total imports in that product from the world.

3- Trade Fairs

The list of international fairs that the Turkish Machinery Industry is to participate in is as follows:

- 1- ACHEMA 22-26 August 2022, Frankfurt/Germany
- 2- Kazakhstan Machinery Fair (KMF) 21-23 September 2022 Astana/Kazakhstan
- 3- K 2022 19-26 October 2022 Düsseldorf/ Germany
- 4- Bauma 24-30 October 2022 Munich/Germany
- 5- EUROBLECH 25-28 October 2022 Hannover/Germany
- 6- 9-13 November 2022 Bologna/Italy
- 7- Interpack 4 - 10 May 2023 Düsseldorf/Germany
- 8- Ligna 15 -19 May 2023 Hannover/Germany
- 9- Agritechnica 12-18 November 2023 Hannover/Germany

4- Useful Links

- 1- General Secretariat of Central Anatolian Exporters Union: www.oaib.org.tr/en
- 2- Turkish Machinery Federation <http://www.makfed.org/>