



**TURKISH PLASTICS PROCESSING MACHINERY  
INDUSTRY FOLLOW-UP REPORT**

**2022**

## **PREFACE**

The plastic industry is one of the most important actors of the Turkish economy. Today, the contribution of the plastics industry to the country's economy is gradually increasing with the total production exceeding 10 million tons, and 45 billion dollars' worth of turnover, the approaching direct exports of 7 billion dollars.

Our industry, with its production capacity, has reached the second place in Europe and the sixth place in the world. As PAGEV, we continue to lead the industry successfully in the framework of the "Unifying Power" mission of the Turkish Plastics Industry.

We also know that having the right and reliable data and information is the most important part of the solution when we sign the indispensability of Plastics in our lives and sign our work to tackle our industrial problems with concrete steps based on scientific evidence. In this direction we constantly investigate, collect new data, compile, and report them. We present our reports that we believe are important for the development of our industry and our booklets containing important information to the plastics industry representatives, stakeholders, and public institutions.

As PAGEV, we prepared a report set that will contribute to the industry in a meaningful way in the face of our long and dedicated research. With our reports, we made booklets with the comments of our expert reporters about the point where the Turkish Plastics Industry is in the right and reliable light, common problems and what should be the search for concrete solutions. We believe that our reports and information set will benefit all our stakeholders, especially our members, and will guide the plastics world. At the same time, we are pleased that our public institutions have reached the most up-to-date and accurate information about the plastics industry.

On the other hand, with our sector reports in English, we think that our colleagues will be able to share the potential of our country's plastics industry with the most up-to-date business partners in the global marketplace.

Hereby, presenting our current reports and information files relating with our industry, we would like to thank all our colleagues who have contributed to this day's achievement of our industry, who has taken a position as a locomotive mission in the development of our country.

**Best regards,  
Yavuz EROĞLU  
PAGEV President**

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## **EXECUTIVE SUMMARY**

In the last 5 years covering the years 2018-2022, the plastics sector has invested an average of 988 million dollars in machinery and equipment per year, and 39% of the total investment consists of presses and other machines, 20% injection, 18% extrusion, 4% thermoforming, 3% blowing and 16% parts and parts.

Capacity utilization in the overall machinery sector was 75.1% in 2022.

In 2022, 797 million dollars of production, 728 million dollars of imports, 307 million dollars of exports and 1 billion 218 million dollars of domestic market sales (machinery and equipment investment of the plastic sector) were realized in the plastic processing machines and parts sector.

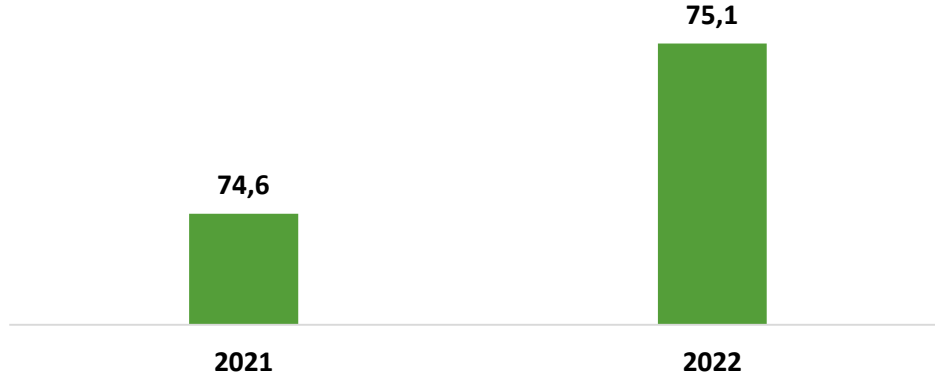
In 2022, the sector had a foreign trade deficit of 421 million dollars, 60% of domestic sales (machinery and equipment investment of the sector) were met by imports and the ratio of exports to imports was 42%.

## **1. CAPACITY UTILIZATION**

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Capacity utilization in the general machinery industry averaged 75.1% in 2022, 0.5 percentage points above the 2021 average.



**Chart 1: Average Capacity Utilization Comparison in the General Machinery Industry**

Source: CBRT

## 2. PRODUCTION

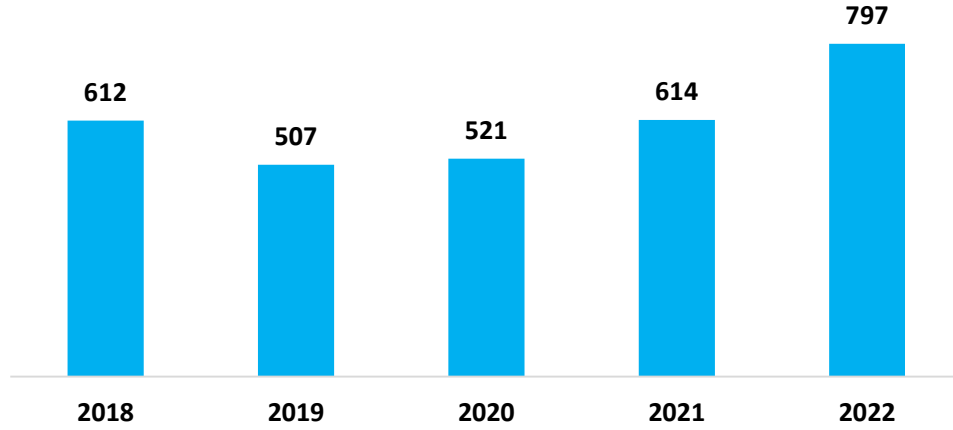
The production of plastic processing machinery increased by 30% compared to 2021 and amounted to \$ 797 million in 2022.

	2021	2022	% Increase 2022/2021	CAGR % 2018-2022
<b>Production</b>	614	797	30	6,8

**Table 1: Plastic Processing Machinery Production ( Million \$ )**

Source: TURK STAT and ITC Trade Statistics

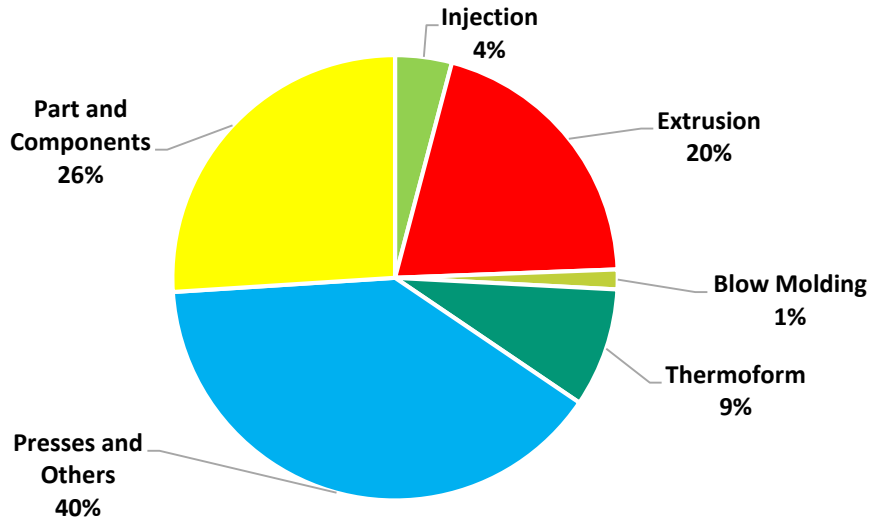
Production, which increased by an average of 6.8% per year between 2018 and 2022, reached an historical record level in 2022, exceeding the level of 2018.



**Chart 2: Plastic Processing Machinery Production (Million \$)**

Source: TURK STAT and ITC Trade Statistics

In 2022, 40% of the total production of 797 million dollars consisted of presses and other machines, 26% of parts and components, 20% of extrusion and 9% of thermoforming machines. In the total production, injection machines took 4% share and blow molding machines 1% share.



**Chart 3: Distribution of Plastic Processing Machinery Production (2022)**

Source: TURK STAT and ITC Trade Statistics

### 3. FOREIGN TRADE

#### 3.1. IMPORTS

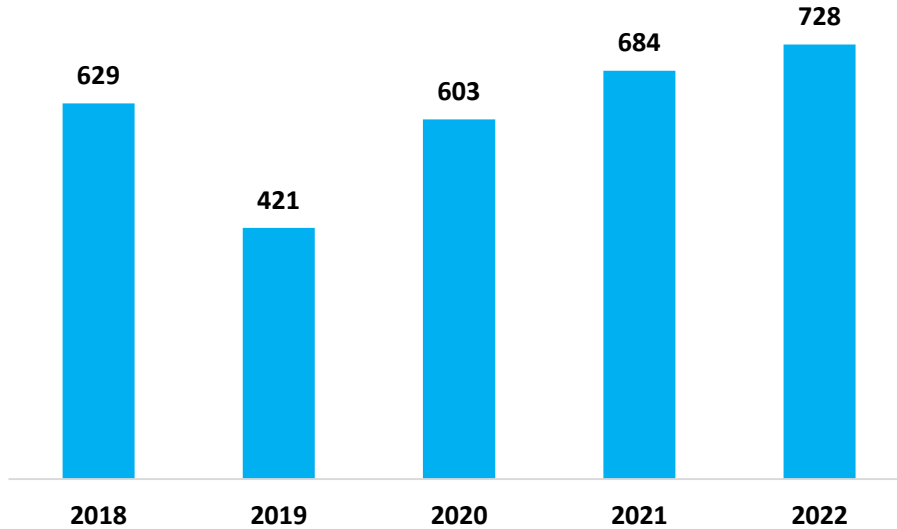
Imports of plastic processing machinery increased by 6% in 2022 compared to 2021 and amounted to \$ 728 million.

	2021	2022	% Increase 2022/2021	CAGR % 2018-2022
<b>Imports</b>	684	728	6	3,7

**Table 2: Imports of Plastic Processing Machinery ( Million \$ )**

Source: TURK STAT and ITC Trade Statistics

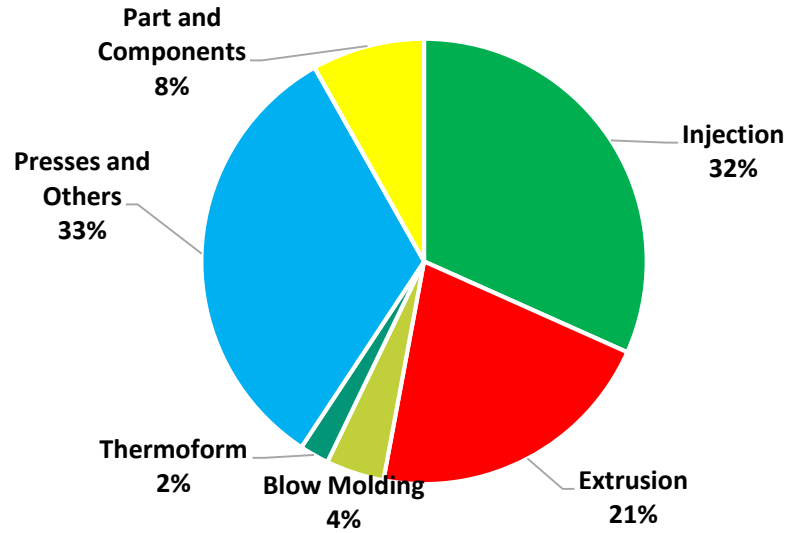
Imports, which increased by an average of 3.7% per year between 2018 and 2022, reached an historical record level in 2022, exceeding the level of 2018.



**Chart 4: Plastic Processing Machinery Imports (Million \$)**

Source: TURK STAT and ITC Trade Statistics

In 2022, injection molding machines accounted for 32%, extrusion machines 21%, blow molding machines 4%, thermoforming machines 2%, presses and other machines 33% and parts and parts 8% in the total imports of plastic processing machines.



**Chart 5: Distribution of Plastic Processing Machinery Imports (2022)**

Source: TURK STAT and ITC Trade Statistics

### 3.2. EXPORTS

Exports of plastic processing machinery increased by 32% in 2022 compared to 2021 and amounted to 307 million dollars.

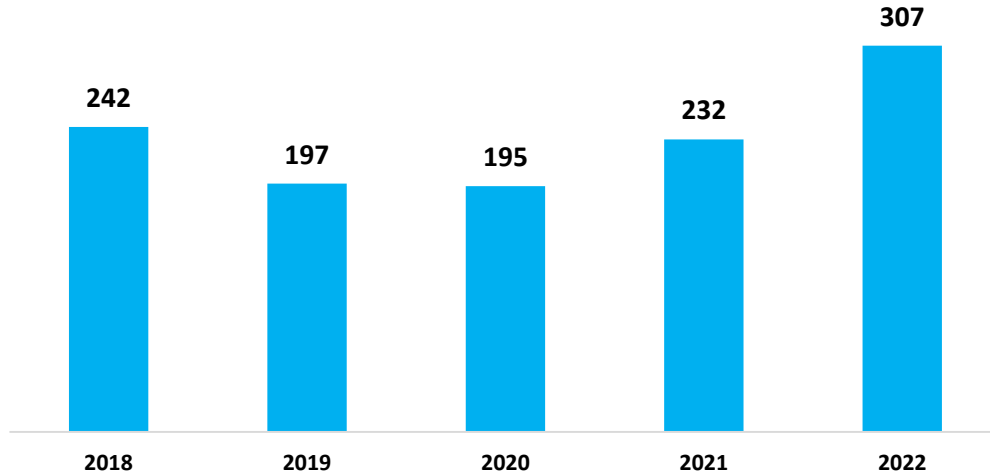
	2021	2022	% Increase 2022/2021	CAGR % 2018-2022
<b>Export</b>	<b>232</b>	<b>307</b>	<b>32</b>	<b>6,1</b>

**Table 3: Plastic Processing Machinery Exports ( Million \$ )**

Source: TURK STAT and ITC Trade Statistics

Exports, which increased by an average of 6.1% per year between 2018 and 2022, reached an historical record level in 2022, exceeding the level of 2018.

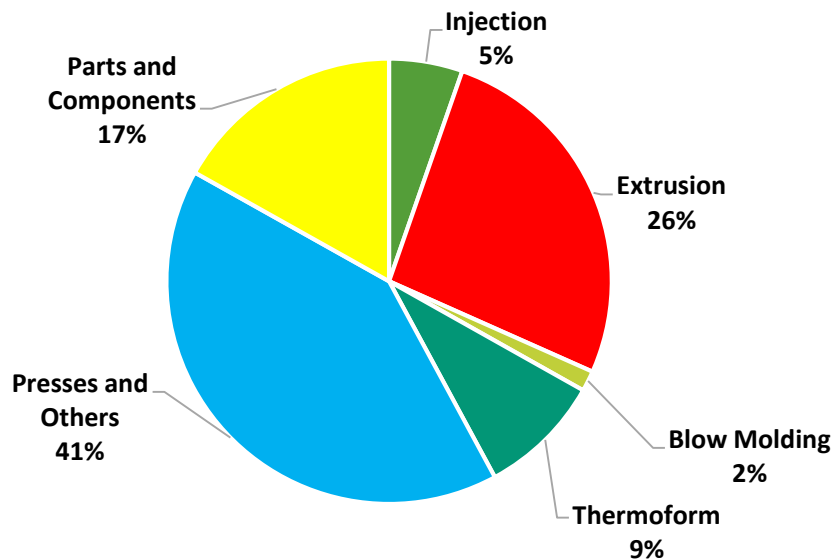




**Chart 6: Plastic Processing Machinery Exports (Million \$)**

Source: TURK STAT and ITC Trade Statistics

In 2022, injection molding machines accounted for 5%, extrusion machines 26%, blow molding machines 2%, thermoforming machines 9%, presses and other machines 41% and parts and parts 17% in total plastic processing machinery exports.



**Chart 7: Distribution of Plastic Processing Machinery Exports (2022)**

Source: TURK STAT and ITC Trade Statistics

### 3.3. MAIN IMPORT AND EXPORT COUNTRIES

In 2022, plastic processing machines and components imports from 10 countries accounted for 93% of total imports. In this period, China, Germany, and Italy took the first 3 places in the import of plastic processing machines. The share of these 3 countries in total imports is about 74%.

On the other hand, exports of plastic processing machines and components to 10 countries in 2022 accounted for 49% of total exports. In 2022, the top 3 in total plastic processing machinery exports were taken by Russian Fed, Serbia and Uzbekistan. The share of these 3 countries in total exports is 24%.

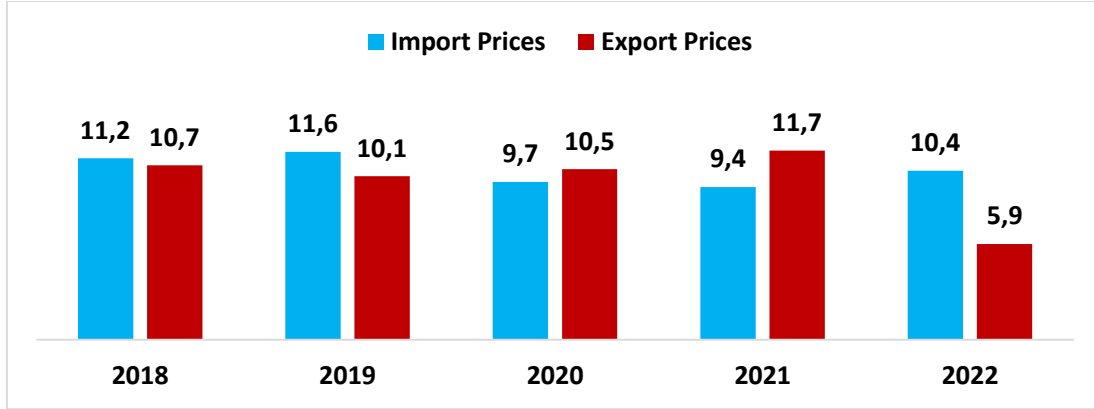
Imports			Exports		
Countries	Million \$	% -Share	Countries	Million \$	% -Share
China	316	43	Russian Fed.	30	10
Germany	164	23	Serbia	24	8
Italy	60	8	Uzbekistan	19	6
Austria	57	8	USA	16	5
Taiwan	27	4	Germany	15	5
Japan	17	2	Bulgaria	12	4
Switzerland	13	2	Algeria	11	3
S.Korea	10	1	Romania	9	3
India	8	1	Iran	8	3
France	7	1	Israel	8	3
<b>10 Countries Total</b>	<b>679</b>	<b>93</b>	<b>10 Countries Total</b>	<b>151</b>	<b>49</b>
<b>Others Total</b>	<b>49</b>	<b>7</b>	<b>Others Total</b>	<b>156</b>	<b>51</b>
<b>Total</b>	<b>728</b>	<b>100</b>	<b>Total</b>	<b>307</b>	<b>100</b>

**Table 4: Top 10 Countries in Foreign Trade of Plastic Processing Machinery and Components (2022)**

Source: TURK STAT and ITC Trade Statistics

### 3.4. UNIT FOREIGN TRADE PRICES

The average unit import price of plastic processing machines and their parts and components which was 10.4 \$ / Kg in 2022, increased by 11% compared to 2021.



**Chart 8: Plastic Processing Machinery Unit Foreign Trade Prices (\$/Kg)**

Source: TURK STAT and ITC Trade Statistics

The average unit export price of plastic processing machines and parts and components was 5.9 \$ / Kg in 2022 and decreased by 50% compared to 2022. In this period, it is seen that the average export unit prices realized by 57% below the average import prices.

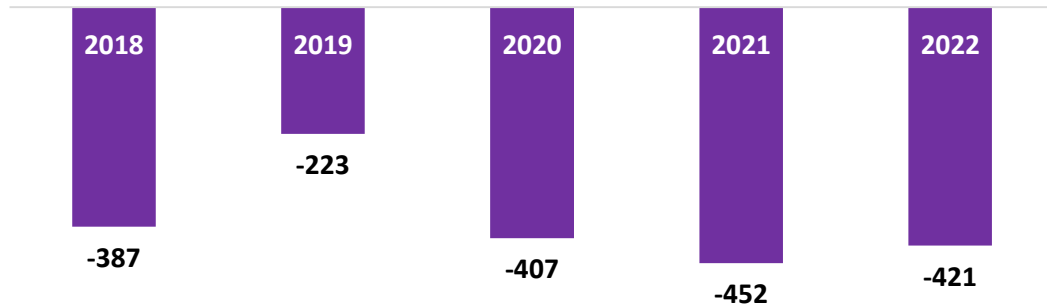
### 3.5. FOREIGN TRADE DEFICIT

The foreign trade deficit of plastic processing machinery decreased by 7% in 2022 compared to 2021 and amounted to 421 million dollars.

	2021	2022	% Increase
<b>Foreign Trade Deficit</b>	-452	-421	-7

**Table 5: Foreign Trade Deficit of Plastic Processing Machinery ( Million \$ )**

Source: TURK STAT and ITC Trade Statistics



**Chart 9: Plastic Processing Machinery Foreign Trade Deficit (Million \$)**

Source: TURK STAT and ITC Trade Statistics

#### 4. DOMESTIC MARKET SALES (MACHINERY AND EQUIPMENT INVESTMENT OF THE PLASTIC INDUSTRY)

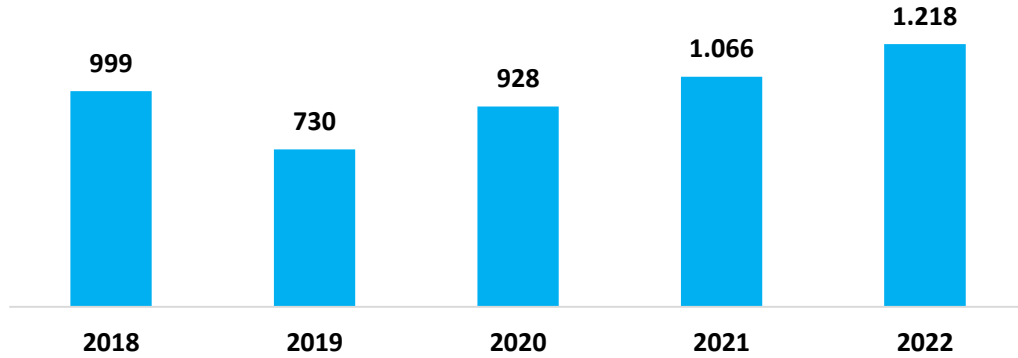
It is seen that the domestic market sales of plastic processing machines increased by 14% in 2022 compared to 2021 and increased to 1 billion 218 million dollars.

	2021	2022	% Increase 2022/2021	CAGR % 2018-2022
<b>Domestic Market Sales</b>	<b>1.066</b>	<b>1.218</b>	<b>14</b>	<b>5,1</b>

**Table-6: Plastic Processing Machinery Domestic Market Sales ( Million \$ )**

Source: TURK STAT and ITC Trade Statistics

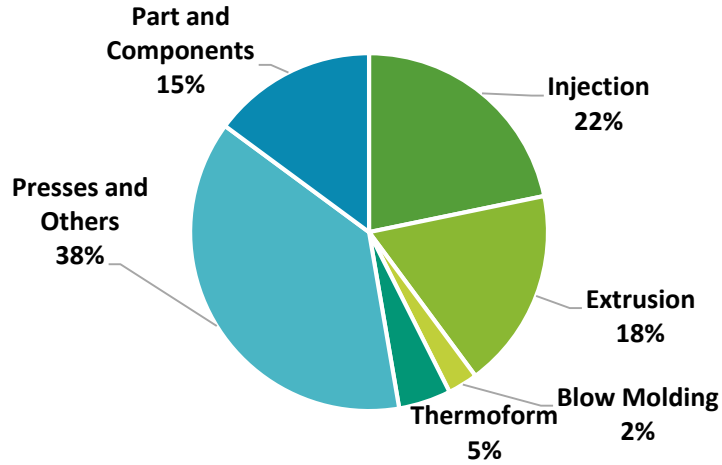
It is seen that domestic sales (machinery and equipment investment of the plastics sector), which increased by an average of 5.1% per year between 2018 and 2022, exceeded the level of 2021 in 2022 and reached an historical record level.



**Chart 10: Plastic Processing Machinery Domestic Sales (\$Million)**

Source: TURK STAT and ITC Trade Statistics

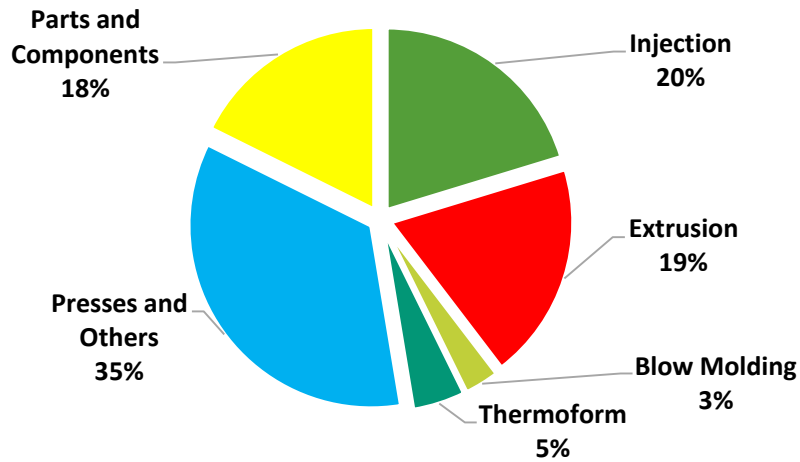
In the last 5 years covering the years of 2018-2022, the plastics sector has invested an average of 988 million dollars in machinery and equipment per year, and 39% of the total investment consists of presses and other machines, 20% injection, 18% extrusion, 4% thermoforming, 3% blowing and 16% parts and parts.



**Chart 11: Distribution of the Sector's Machinery Investment in the Last 5 Years(%)**

Source: TURK STAT and ITC Trade Statistics

In 2022, in the total machinery investments of the plastics sector, injection molding machines accounted for 20%, extrusion machines accounted for 19%, blow molding machines 3%, thermoforming machines for 5%, presses and other machinery by 35% and parts and parts by 18%.

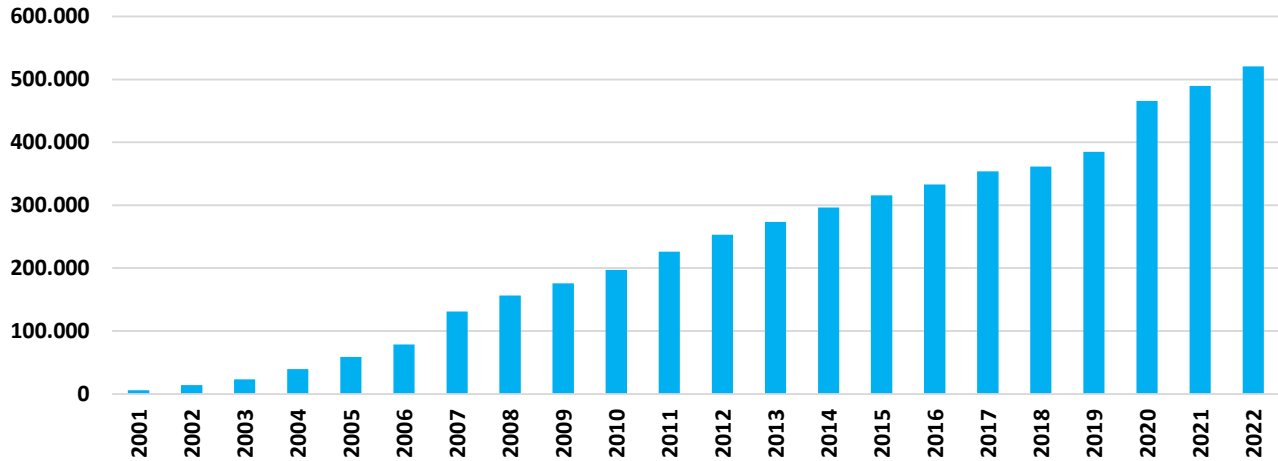


**Chart 12: Distribution of Machinery Investment in Plastics Industry (2022)**

Source: TURK STAT and ITC Trade Statistics

## 5. MACHINERY PARK OF PLASTIC INDUSTRY

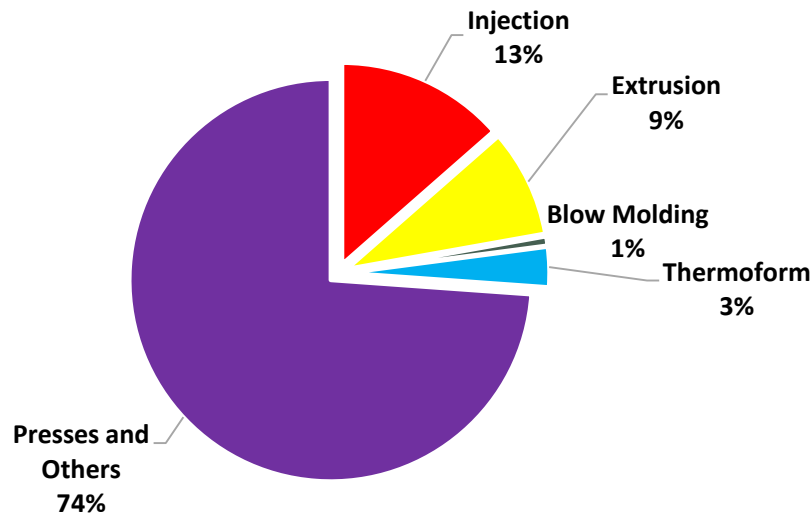
It is seen that the machinery park of the plastics industry in Turkey has reached 908 thousand units in 2022.



**Chart 13: Plastics Industry Machinery Park Development**

Source: TURK STAT and ITC Trade Statistics

As of 2022, 13% of the plastic processing machinery park in the Turkish plastic sector consists of injection, 9% extrusion, 1% blow molding, 3% thermoforming and 74% presses and other machines.



**Chart 14: Distribution of Plastic Sector Machine Park by Machine Types (Pieces)**

Source: TURK STAT and ITC Trade Statistics

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As of 2022, 68% of the total machinery park in Turkey's plastic sector is sold from domestic production and 32% is imported machines.

	Units			% Share	
	Local Production	Imports	Total	Production	Imports
<b>Injection</b>	49.100	73.853	122.953	40	60
<b>Extrusion</b>	44.848	33.755	78.603	57	43
<b>Blow Molding</b>	2.592	4.028	6.620	39	61
<b>Thermoform</b>	18.364	10.830	29.194	63	37
<b>Presses and Others</b>	505.516	165.442	670.958	75	25
<b>Total</b>	<b>620.420</b>	<b>287.908</b>	<b>908.328</b>	<b>68</b>	<b>32</b>

**Table 7: Machinery Park of Plastic Industry ( Units )**

Source: TÜİK and ITC Trade Statistics

As of 2022, 68% of the total machinery park in Turkey's plastic industry is sold from domestic production and 32% from imported machines.

The share of imported machines in total machines park based on units; 60% in injection machines, 43% in extrusion machines, 61% in blow molding machines, 37% in thermoforming machines, 25% in presses and other machines.

In other words, the share of domestic machines in the total park based on units; 40% in injection machines, 57% in extrusion machines, 39% in blow molding machines, 63% in thermoforming machines and 75% in presses and other machines.

Based on units, 96.5% of the imported injection molding machines park consists of machines imported from 10 countries. 43.7% of the park consists of machines originating from China, 18.1% from Germany, 9.6% from Italy, 8.9% from Taiwan and 6.2% from Austria.

Injection		Extrusion		Blow Molding		Thermoform	
Countries	% Share	Countries	% Share	Countries	% Share	Countries	% Share
China	43,7	China	63,3	Italy	30,5	Germany	21,0
Germany	18,1	Germany	13,8	Germany	21,5	China	18,8
Italy	9,6	Italy	7,3	China	9,4	Italy	14,9
Taiwan	8,9	Taiwan	4,3	France	8,4	Taiwan	10,0
Austria	6,2	Austria	3,9	Japan	7,2	France	5,7
Switzerland	2,8	S.Korea	1,6	Taiwan	4,5	Israel	5,1
France	2,7	India	1,1	UK	4,0	Switzerland	4,5
Japan	2,4	Japan	0,8	Switzerland	3,5	USA	4,2
S.Korea	1,2	USA	0,8	Austria	3,0	S.Korea	3,4

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India	0,9	UK	0,7	Belgium	2,8	Austria	2,8
<b>10 Countries Total</b>	<b>96,5</b>	<b>10 Countries Total</b>	<b>97,5</b>	<b>10 Countries Total</b>	<b>94,9</b>	<b>10 Countries Total</b>	<b>90,4</b>
Others	3,5	Others	2,5	Others	5,1	Others	9,6

**Table 8: Distribution of Imported Plastic Processing Machinery Park by Countries (Units)**

Source: TURK STAT and ITC Trade Statistics

Based on units, 97.5% of the imported extrusion machinery park consists of machines imported from 10 countries. 63.3% of the park consists of machines originating from China, 13.8% from Germany, 7.3% from Italy, 4.3% from Taiwan and 3.9% from Austria.

Based on units, 94.9% of the imported blow molding machines park consists of machines imported from 10 countries. 30.5% of the park consists of machines originating from Italy, 21.5% from Germany, 9.4% from China, 8.4% from France and 7.2% from Japan.

Based on units, 90.4% of the imported thermoforming machines park consists of machines imported from 10 countries. 21% of the park consists of machines originating from Germany, 18.8% from China, 14.9% from Italy, 10% from Taiwan and 5.7% from France.

## 6. SUPPLY – DEMAND EQUILIBRIUMS

### 6.1. TOTAL SECTOR

In 2022, 797 million dollars of production, 728 million dollars of imports, 307 million dollars of exports and 1 billion 218 million dollars of domestic market sales (machinery and equipment investment of the plastic sector) were realized in the plastic processing machines and components industry.

	2021	2022	% Increase 2022/2021	CAGR % 2018-2022
<b>Production</b>	614	797	30	6,8
<b>Imports</b>	684	728	6	3,7
<b>Exports</b>	232	307	32	6,1
<b>Domestic Sales</b>	1.066	1.218	14	5,1
<b>Foreign Trade Deficit</b>	-452	-421	-7	2,1
<b>Imports / Domestic Sales ( % )</b>	64	60		
<b>Exports / Imports ( % )</b>	34	42		

**Table 9: Supply-Demand Equilibrium in Plastic Processing Machines Industry (Million \$)**

Source: TURK STAT and ITC Trade Statistics

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In 2022, the industry had a foreign trade deficit of 421 million dollars, 60% of domestic sales (machinery and equipment investment of the sector) were met by imports and the ratio of exports to imports was 42%.

## 6.2. PLASTIC INJECTION MACHINES

In 2022, 33 million dollars of production, 231 million dollars of imports, 16 million dollars of exports and 247 million dollars of domestic market sales (injection machine investment of the plastic sector) were realized in the plastic injection machines industry.

In 2022, the injection machines industry had a foreign trade deficit of 214 million dollars, 93% of domestic sales (injection machinery investment of the industry) were met by imports and the ratio of exports to imports was realized as 7%.

	2021	2022	% Increase 2022/2021	CAGR % 2018-2022
<b>Production</b>	27,5	32,8	19	0,0
<b>Imports</b>	236,0	230,7	-2	9,1
<b>Exports</b>	13,8	16,4	19	0,0
<b>Domestic Sales</b>	249,7	247,0	-1	8,3
<b>Foreign Trade Deficit</b>	-222,2	-214,3	-4	10,0
<b>Imports / Domestic Sales ( % )</b>	94	93		
<b>Exports / Imports ( % )</b>	6	7		

**Table 10: Supply-Demand Equilibrium of Injection Molding Machines (Million \$)**

Source: TURK STAT and ITC Trade Statistics

In 2022, imports of plastic injection molding machines from 10 countries accounted for 99% of total imports. In this period, China, Germany, and Austria took the first 3 places in the import of injection machines. The share of these 3 countries in total imports is about 86%.

On the other hand, the export of injection molding machines to 10 countries in 2022 accounted for 63% of total exports. In 2022, the share of Russian Federation, Iran and Iraq in total exports is at the level of 29%.

Imports			Exports		
Countries	1000 \$	% -Share	Countries	1000 \$	% -Share
China	144.550	63	Russian Fed.	1.916	12
Germany	28.678	12	Iran	1.475	9
Austria	24.758	11	Iraq	1.387	8
Japan	9.518	4	Algeria	1.286	8
Taiwan	7.864	3	Kuwait	864	5
Italy	4.689	2	Uzbekistan	839	5

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Switzerland	3.818	2	Bulgaria	790	5
S.Korea	3.412	1	Azerbaijan	708	4
Canada	814	0	Romania	526	3
India	793	0	Kosovo	500	3
<b>10 Countries Total</b>	<b>228.894</b>	<b>99</b>	<b>10 Countries Total</b>	<b>10.292</b>	<b>63</b>
<b>Others Total</b>	<b>1.764</b>	<b>1</b>	<b>Others Total</b>	<b>6.092</b>	<b>37</b>
<b>Total</b>	<b>230.659</b>	<b>100</b>	<b>Total</b>	<b>16.384</b>	<b>100</b>

**Table 11: Plastic Injection Machines Imports and Exports By Countries (2022)**

Source: TÜİK and ITC Trade Statistics

### 6.3. PLASTIC EXTRUSION MACHINES

In 2022, 162 million dollars of production, 155 million dollars of imports, 81 million dollars of exports and 235 million dollars of domestic market sales (extrusion machinery investment of the plastic sector) were realized in the plastic extrusion machinery industry.

In 2022, the extrusion machinery industry had a foreign trade deficit of 74 million dollars, 66% of domestic sales (extrusion machinery investment of the industry) were met by imports and the ratio of exports to imports was realized as 52%.

	2021	2022	% Increase 2022/2021	CAGR % 2018-2022
<b>Production</b>	85	162	90	12,9
<b>Imports</b>	151	155	2	5,0
<b>Exports</b>	42	81	90	12,9
<b>Domestic Sales</b>	194	235	21	7,4
<b>Foreign Trade Deficit</b>	-109	-74	-32	-1,1
<b>Imports / Domestic Sales ( % )</b>	78	66		
<b>Exports / Imports ( % )</b>	28	52		

**Table 12: Extrusion Machines General Supply-Demand Equilibrium (Million \$)**

Source: TURK STAT and ITC Trade Statistics

In 2022, imports of plastic extrusion machines from 10 countries accounted for 95% of total imports. In this period, China, Germany, China, and Austria took the first 3 places in the import of extrusion machines. The share of these 3 countries in total imports is about 76%.

On the other hand, exports of extrusion machines to 10 countries in 2022 accounted for 59% of total exports. In 2022, the top 3 positions in the export of extrusion machines were taken by Uzbekistan, Russia Federation, the USA. The share of these 3 countries in total exports is at the level of 30%.

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Imports			Exports		
Countries	1000 \$	% -Share	Countries	1000 \$	% -Share
China	52.735	34	Uzbekistan	11.407	14
Germany	52.095	34	Russian Fed.	6.618	8
Austria	13.730	9	USA	6.488	8
Italy	12.238	8	Bulgaria	4.299	5
Taiwan	4.830	3	Azerbaijan	3.697	5
Switzerland	3.019	2	Algeria	3.513	4
Netherlands	2.867	2	Mexico	3.063	4
India	2.622	2	UAE	2.957	4
Bulgaria	1.589	1	Iran	2.944	4
UK	1.333	1	Spain	2.312	3
<b>10 Countries Total</b>	<b>147.058</b>	<b>95</b>	<b>10 Countries Total</b>	<b>47.299</b>	<b>59</b>
<b>Others</b>	<b>7.538</b>	<b>5</b>	<b>Others</b>	<b>33.510</b>	<b>41</b>
<b>Total</b>	<b>154.597</b>	<b>100</b>	<b>Total</b>	<b>80.808</b>	<b>100</b>

**Table 13: Plastic Extrusion Machines Imports and Exports by Countries (2022)**

Source: TURK STAT and ITC Trade Statistics

#### 6.4. BLOW MOLFDING MACHINES

In 2022, 11 million dollars of production, 31 million dollars of imports, 5 million dollars of exports and 38 million dollars of domestic market sales (blow molding machine investment of the plastic industry) were realized in the plastic blow molding machinery industry.

In 2022, the blow molding machinery industry had a foreign trade deficit of 26 million dollars, 82% of domestic sales (the sector's blow molding machinery investment) was met by imports and the ratio of exports to imports was 15%.

	2021	2022	% Increase 2022/2021	CAGR % 2018-2022
<b>Production</b>	8	11	38	36,3
<b>Imports</b>	25	31	23	14,6
<b>Exports</b>	3	5	38	36,3
<b>Domestic Sales</b>	30	38	26	17,3
<b>Foreign Trade Deficit</b>	-22	-26	21	12,2
<b>Imports / Domestic Sales (%)</b>	83	82		
<b>Exports / Imports (%)</b>	13	15		

**Table 14: Blow Molding Machines Supply-Demand Equilibrium (Million \$)**

Source: TURK STAT and ITC Trade Statistics

In 2022, 100% of the total imports of blow molding machines were made from 10 countries. In this period, Germany, China, and Italy were the countries that shared 65% of total imports.

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On the other hand, exports of blow molding machines to 10 countries in 2022 accounted for 86% of total exports. In 2022, Israel, the Russian Federation and Libya took the first 3 places in the export of blow molding machines. The share of these 3 countries in total exports is 49%.

Imports			Exports		
Countries	1000 \$	% -Share	Countries	1000 \$	% -Share
Germany	13.362	43	Israel	972	21
China	3.784	12	Russian Fed.	807	18
Italy	3.226	10	Libya	439	10
Taiwan	2.484	8	Cibuti	405	9
Switzerland	2.222	7	Nigeria	384	8
France	1.740	6	Bulgaria	283	6
Japan	1.661	5	Iran	220	5
India	1.596	5	Guinea	144	3
Poland	507	2	Azerbaijan	137	3
Mexico	92	0	Iraq	130	3
<b>10 Countries Total</b>	<b>30.673</b>	<b>100</b>	<b>10 Countries Total</b>	<b>3.920</b>	<b>86</b>
<b>Others</b>	<b>87</b>	<b>0</b>	<b>Others</b>	<b>656</b>	<b>14</b>
<b>Total</b>	<b>30.760</b>	<b>100</b>	<b>Total</b>	<b>4.576</b>	<b>100</b>

**Table 15: Distribution of Plastic Blow Molding Machinery Import and Export by Country (2022)**

Source: TURK STAT and ITC Trade Statistics

## 6.5. THERMOFORMING MACHINES

In 2022, 69 million dollars of production, 16 million dollars of imports, 28 million dollars of exports and 57 million dollars of domestic market sales (thermoforming machine investment of the plastic industry) were realized in the plastic thermoforming machines industry.

In 2022, the thermoforming machinery industry had a foreign trade surplus of 11 million dollars, and 27% of the domestic sales (thermoforming machinery investment of the industry) were met by imports.

	2021	2022	% Increase 2022/2021	CAGR % 2018-2022
<b>Production</b>	57	69	20	0,5
<b>Imports</b>	9	16	79	2,5
<b>Exports</b>	23	28	20	0,5
<b>Domestic Sales</b>	43	57	32	1,1
<b>Foreign Trade Deficit</b>	14	12	-15	-1,7
<b>Imports / Domestic Sales ( % )</b>	20	27		

**Table 16: Supply-Demand Equilibrium of Thermoforming Machines (Million \$)**

Source: TURK STAT and ITC Trade Statistics

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In 2022, imports of thermoforming machines from 10 countries accounted for 99% of total imports. In this period, China, Italy, and Taiwan took the first 3 places in the import of thermoforming machines. The share of these 3 countries in total imports is about 85%.

On the other hand , thermoforming machinery exports to 10 countries in 2022 accounted for 62% of total exports. In 2022, Canada, Israel and the Russian Federation took the first 3 places in thermoforming machinery exports. The share of these 3 countries in total exports is 33%.

Imports			Exports		
Countries	1000 \$	% -Share	Countries	1000 \$	% -Share
China	5.745	37	Canada	4.061	15
Italy	4.984	32	Israel	3.043	11
Taiwan	2.429	16	Russian Fed.	1.865	7
Canada	624	4	Egypt	1.745	6
Hungary	512	3	Bulgaria	1.688	6
S.Korea	417	3	Jordan	1.170	4
Germany	354	2	Poland	900	3
Romania	136	1	Spain	883	3
France	128	1	Algeria	822	3
Czech Rep.	74	0	S. Africa Rep.	767	3
<b>10 Countries Total</b>	<b>15.404</b>	<b>99</b>	<b>10 Countries Total</b>	<b>16.945</b>	<b>62</b>
<b>Others</b>	<b>140</b>	<b>1</b>	<b>Others</b>	<b>10.591</b>	<b>38</b>
<b>Total</b>	<b>15.545</b>	<b>100</b>	<b>Total</b>	<b>27.535</b>	<b>100</b>

**Table 17: Imports and Exports of Thermoforming Machines by Countries (2022)**

Source: TURK STAT and ITC Trade Statistics

## 6.6. PRESSES AND OTHER MACHINES

In 2022, 315 million dollars of production, 237 million dollars of imports, 126 million dollars of exports and 426 million dollars of domestic market sales (plastics sector's investments in presses and other machines) were realized in the presses and other machinery industry.

In 2022, the presses and other machinery sector had a foreign trade deficit of 111 million dollars, 56% of domestic sales (the sector's investment in presses and other machinery) was met by imports and the ratio of exports to imports was 53%.

	2021	2022	% Increase 2022/2021	CAGR % 2018-2022
<b>Production</b>	273	315	15	0,9
<b>Imports</b>	207	237	15	-2,8
<b>Exports</b>	109	126	15	0,9
<b>Domestic Sales</b>	371	426	15	-1,3
<b>Foreign Trade Deficit</b>	-98	-111	14	-6,2
<b>Imports / Domestic Sales ( % )</b>	56	56		
<b>Exports / Imports ( % )</b>	53	53		

**Table 18: Supply-Demand Equilibrium for Presses and Other Machines (Million \$)**

Source: TURK STAT and ITC Trade Statistics

In 2022, imports of presses and other machines from 10 countries accounted for 92% of total imports. In this period, China, Germany, and Italy took the first 3 places in the import of presses and other machines. The share of these 3 countries in total imports is about 73%.

On the other hand, exports of presses and other machines to 10 countries in 2022 accounted for 53% of total exports. In 2022, Serbia, the Russian Federation and the USA took the first 3 places in the export of presses and other machines. The share of these 3 countries in total exports is at the level of 29%.

Imports			Exports		
Countries	1000 \$	% -Share	Countries	1000 \$	% -Share
China	90.803	38	Serbia	14.858	12
Germany	53.922	23	Russian Fed.	14.839	12
Italy	27.903	12	USA	6.770	5
Austria	14.957	6	Morocco	5.785	5
Taiwan	8.836	4	Germany	5.036	4
S.Korea	5.453	2	Romania	4.577	4
Japan	5.101	2	Algeria	4.536	4
UK	3.629	2	Bulgaria	4.191	3
USA	3.219	1	Egypt	3.031	2
Slovakia	3.091	1	Italy	2.999	2
<b>10 Countries Total</b>	<b>216.913</b>	<b>92</b>	<b>10 Countries Total</b>	<b>66.622</b>	<b>53</b>
<b>Others</b>	<b>19.864</b>	<b>8</b>	<b>Others</b>	<b>59.273</b>	<b>47</b>
<b>Total</b>	<b>236.777</b>	<b>100</b>	<b>Total</b>	<b>125.895</b>	<b>100</b>

**Table 19: Imports and Exports of Presses and Other Machines by Countries (2022)**

Source: TURK STAT and ITC Trade Statistics

## 6.7. PARTS AND COMPONENTS

In 2022, 207 million dollars of production, 60 million dollars of imports, 52 million dollars of exports and 215 million dollars of domestic market sales (plastic sector parts and parts investment) were realized in the parts and parts industry.

In 2022, the parts and components industry had a foreign trade deficit of \$ 8 million, 28% of domestic sales (the sector's investment in parts and components) was met by imports and the ratio of exports to imports was 87%.

	2021	2022	% Increase 2022/2021	CAGR % 2018-2022
<b>Production</b>	163	207	27	18,5
<b>Imports</b>	56	60	6	8,8
<b>Exports</b>	41	52	27	18,5
<b>Domestic Sales</b>	179	215	20	15,3
<b>Foreign Trade Deficit</b>	-16	-8	-50	-16,8
<b>Imports / Domestic Sales ( % )</b>	32	28		
<b>Exports / Imports ( % )</b>	72	87		

**Table 20: Supply-Demand Equilibrium in Parts and Components (Million \$)**

Source: TURK STAT and ITC Trade Statistics

In 2022, imports of parts and components from 10 countries accounted for 91% of total imports. In this period, China, Germany, and Italy took the first 3 places in the import of parts and parts. The share of these 3 countries in total imports is about 67%.

On the other hand, in 2022, the exports of parts and components to 10 countries accounted for 66% of the total exports. In 2022, Germany, Serbia and the Russian Federation took the first 3 places in the export of parts and components. The share of these 3 countries in total exports is 35%.

Imports			Exports		
Countries	1000 \$	% -Share	Countries	1000 \$	% -Share
China	17.991	30	Germany	8.345	16
Germany	15.746	26	Serbia	6.644	13
Italy	6.556	11	Russian Fed.	3.729	7
Austria	3.620	6	Uzbekistan	3.725	7
France	2.294	4	Switzerland	2.380	5
Switzerland	2.224	4	Sweden	2.199	4
Luxembourg	1.853	3	Austria	2.064	4
USA	1.653	3	USA	1.945	4
India	1.076	2	Poland	1.652	3

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Japan	1.030	2	Romania	1.511	3
<b>10 Countries Total</b>	<b>54.042</b>	<b>91</b>	<b>10 Countries Total</b>	<b>34.195</b>	<b>66</b>
<b>Others Total</b>	<b>5.531</b>	<b>9</b>	<b>Others Total</b>	<b>17.619</b>	<b>34</b>
<b>Total</b>	<b>59.573</b>	<b>100</b>	<b>Total</b>	<b>51.813</b>	<b>100</b>

**Table 21: Parts and Components Imports and Exports By Countries (2022)**

Source: TÜİK and ITC Trade Statistics

## 7. MAIN PROBLEMS OF THE INDUSTRY

The general problems in the machine manufacturing industry also apply to plastic processing machines. In addition to these general troubles, the main problems that can be summarized are.

- Turkey has a plastic sector that invests very seriously in plastic processing machines. Therefore, Turkey is one of the most important markets in the world in this field. About 70 percent of this market is dominated by imported machinery. However, domestic machine manufacturers are not adequately protected.
- The lack of a government strategy for the plastic processing machinery sector and the fact that plastic product manufacturers prefer to import cheap and second-hand machinery to gain a competitive advantage prevent the production in the plastic processing machinery sector in Turkey from increasing sufficiently.
- There is a serious place problem in the sector. Machine and component manufacturers continue their activities in physically small and inadequate spaces. When they want to move to bigger places, they must bury their already limited working capital in high-rent soil. The need for organized and rent-free industrial land is at an extreme level in the sector.
- Studies on R&D, P&D, industrial design, and product development are inadequate in the sector.
- Patent, registered trademark investments are not made or sufficient in the sector.
- The sector's compliance with international technical legislation is insufficient.
- The equity and working capital of the companies in the sector are insufficient.
- Energy costs are high.
- The sector needs development in marketing and customer relationship management.

## 8. SUGGESTIONS

The PAGEV Value Chain relationship, which is supported by a strategic decision with the added value, employment and multiplier effect created by the domestic production, is especially important for our machinery / equipment and mold industry. Without these, net foreign currency inflows could not be provided to the country, and technology security and business sustainability

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would be a problem. With a strategic decision, domestic production should be supported by the added value, employment, and multiplier effect it creates.

Although there are support mechanisms such as R&D Centers of the Public, Technological Product Experience Certificate, Technology Development Zones, Technological Product Investment Support Program, Design Center Support Program, Technology, and Innovation Support Program, more are needed.

The purchase of locally produced machines in public should not be left with only 15%. If necessary, it must be made compulsory. Tax supports should also be brought to companies that purchase domestic goods.

Preventing unfair competition and protecting domestic production, poor quality / unhealthy machine entries and market surveillance should be done. These audit institutions should be established within our body. It is possible to list the things to be done as follows.

**i. Review of Product Standards**

To increase the quality of the domestic market and to expand the target markets in exports, it is necessary to comply with the Machinery Directives of the European Union and make necessary arrangements.

**ii. Cooperation in Market Audit and Surveillance Activities**

To get expert opinion about the industry and to follow up-to-date trends, it will be beneficial to participate in industrial collaborations that can provide neutral opinion to the market audit and surveillance organization.

**iii. Establishing Control Points at Customs**

The import of products that do not comply with the directives / standards from third countries reduces domestic production quality and endangers user safety. For this reason, as in the European Union countries, inspection should start from customs. Standards that should be prevented at customs should be determined and products that do not comply with the standards should not be allowed to enter the country. Declarations stating the technical suitability of the products should be inspected in customs procedures.

**iv. Creating a Banned Company Database**

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As applied in the European Union, all customs points must have access to this database. Providing the list of currently banned companies owned by the European Union and adding it to the database will also contribute positively to customs inspections.

**v. Establishing a Product and Performance Oriented Incentive Mechanism**

The product-oriented incentive application in the industry should continue in detail. In addition, the incentive should be performance oriented. (For example, the opportunity to exchange foreign currency more specifically for the exporter, the increase of R&D incentives)

**vi. The Industry Land Need of the Industry Should Be Solved**

Firms that produce added value with R&D should be provided with 49 years of lease-free allocation, owned by the state, in areas where they can employ quality and near to the cities. Machinery and parts manufacturers operate in physically small and inadequate spaces. When they want to move to larger places, they must bury their already limited working capital in the land with high rent. The industry urgently needs an industrial land that is organized and away from rent.

**vii. Firm's Financial Needs Should Be Solved**

Firms' financing needs should be supported by an increasing Exim bank activity abroad and an incentive financing model at home. (R&D and capacity to create added value may be performance criteria). On the other hand, industrial banking and project finance should be developed domestically.

**viii. Improving Vocational Education**

To improve Vocational Education, quality oriented, applied education should be targeted. Supporting technicians from abroad, facilitating access to information and building a Center of Excellence.

**ix. Establishment of Common Service Providers in Overseas Export Markets**

In countries where the machinery is exported, cooperation should be made where Turkish SMEs will provide common technical services to their customers. Exporter Union resources should be mobilized for the necessary financing.

**x. Prevention of Unfair Competition**

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To prevent unfair competition, cooperation should be established with non-governmental organizations such as PAGEV, and standards and supervision mechanisms for entry into the industry should be established.

**xi. Creation of Workplace and Machine Database**

Registration of workplace (product number of employees etc.) and machine features (age, brand, country of purchase, etc.) in the machine manufacturing industry, by tightening the workplace and product inspections, will reduce the number of companies operating in the industry.



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**BİLİNÇLİ BİR TOPLUM  
AYDINLIK BİR GELECEK  
GÜZEL BİR ÜLKE VE  
DAHA YAŞANILABİLİR  
BİR DÜNYA İÇİN  
AMBALAJ ATIKLARINI  
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