WHY INVEST IN TURKISH MACHINERY INDUSTRY?
AGENDA

1. Executive Summary
2. Turkish Machinery Industry Outlook
3. Growth Drivers in Turkey
4. Opportunities in Turkish Machinery Industry
5. Success Stories
TURKEY HAS A GROWING MACHINERY INDUSTRY OFFERING OPPORTUNITIES IN MANY AREAS...

FAVORABLE INVESTMENT ENVIRONMENT
- Strong macroeconomic growth with increasing income per capita and a burgeoning middle class
- Favorable demographics with a dynamic, young and skilled labor force supporting the industry
- Cost-competitive labor and energy prices
- Strong government support through manufacturing and R&D incentives

STRONG INTERNATIONAL PRESENCE
- Global machinery companies have been present in Turkey with significant manufacturing activities, using Turkey as a hub to access regional markets
- Successful partnerships with local companies to grow in the region, capitalizing on locals’ experience and networks
- World-scale domestic demand and strong industrial base offer ample opportunities in agricultural machinery, construction & mining machinery, energy equipment such as electric motors & turbines, food processing & packaging machinery, HVAC, lifting & handling equipment, metalworking & machine tooling, pumps & compressors, textile machinery

LUCRATIVE OPPORTUNITIES IN SUB-SECTORS
- Turkish machinery industry has been robustly growing over the past decade with approx. 5% CAGR
- Customer industries, such as plastic & rubber, automotive, construction, textile and electrical machinery are robustly growing and therefore further supporting the growth of machinery sector
- Export opportunities due to Turkey’s proximity to regional markets

EXECUTIVE SUMMARY
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TURKISH MACHINERY SECTOR HAS MORE THAN QUADRUPLED ITS REVENUES TO USD 23 BILLION AND DOUBLED ITS WORKFORCE TO 244K OVER THE PAST DECADE

AN UNPRECEDENTED AVERAGE GROWTH OF 25% IN 5 YEARS

TURKEY SHOOK OFF GLOBAL CRISIS WHILE DOUBLING ITS REVENUE & REACHING VALUE-ADD RATIO OF 25%

DECREASE IN REVENUE MAINLY CAUSED BY THE 40% INCREASE IN CURRENCY

Source: Turkish Statistical Institute Industry & Services Statistics NACE Rev2 Division 28, Central Bank of Republic of Turkey
SUSTAINABILITY OF GROWTH IN CUSTOMER INDUSTRIES DRIVING TURKEY’S MACHINERY INDUSTRY...

<table>
<thead>
<tr>
<th>End-Use Industries</th>
<th>2006-2017 CAGR</th>
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</thead>
<tbody>
<tr>
<td>Chemicals</td>
<td>3.7%</td>
</tr>
<tr>
<td>Textile</td>
<td>3.0%</td>
</tr>
<tr>
<td>Energy</td>
<td>5.3%</td>
</tr>
<tr>
<td>Food &amp; Beverages</td>
<td>5.9%</td>
</tr>
<tr>
<td>Automotive</td>
<td>4.2%</td>
</tr>
<tr>
<td>Electrical Equipment</td>
<td>4.1%</td>
</tr>
<tr>
<td>Agriculture</td>
<td>9.4%</td>
</tr>
<tr>
<td>Construction</td>
<td>8.4%</td>
</tr>
</tbody>
</table>

- **CHEMICALS**: 3rd largest plastics producer after Germany in Europe, 6th largest clothing supplier in the world, 3rd largest clothing supplier to Europe, Largest sector in Turkey with a USD 70 billion production.

- **TEXTILE**: 6th largest plastics producer after Germany in Europe, 6th largest clothing supplier in the world, 3rd largest clothing supplier to Europe, Largest sector in Turkey with a USD 70 billion production.

- **ENERGY**: 5th largest electricity market in Europe – highest growth in Europe, Largest sector in Turkey with a USD 70 billion production.

- **FOOD & BEVERAGES**: 17th largest automotive manufacturer globally, producing over 1 million vehicles per year, Largest TV and white goods manufacturer in Europe.

- **AUTOMOTIVE**: 7th largest agricultural producer in the world, Largest TV and white goods manufacturer in Europe.

- **ELECTRICAL EQUIPMENT**: 750K+ dwelling units built per year.

Source: Ministry of Science, Industry and Technology, Investment Office Team Analysis.
When world exports doubled, Turkey’s exports increased five times...

Turkey’s exports have grown five times since 2003, making it one of the top performers in the world machinery trade.

...while diversifying its export markets:

- **60% to Europe** – mostly to Germany, UK, France, and Italy
- **22% to MENA** - mostly Iran, Iraq, Algeria, Israel
- **7% to Americas**

Source: Comtrade HS code 84, 8202, 8207, 8208, 8501, 8502, 8503, 8505, 8514, 8515, 8701, 8709, 8716, 9017, 9024, 9508, 9603, Team Analysis
Turkey is well connected with the region through Customs Union with the EU and Free Trade Agreements with 28 countries.

Source: UN Comtrade HS Code 84. Turkey has signed Free Trade Agreements (FTA) with Albania, Bosnia-Herzegovina, Chile, Egypt, Faroe Islands*, Georgia, Ghana*, Iceland, Israel, Jordan, Kosovo*, Lebanon*, Macedonia, Malaysia, Mauritis, Montenegro, Moldova*, Morocco, Norway, Palestine, Serbia, Singapore*, South Korea, Switzerland and Lichtenstein, Syria, Tunisia. (*to be ratified).

Turkey fully complies with the EU technical legislations since 2002, with all conformity assessments in line with EU regulations.

PROXIMITY TO KEY MARKETS

Turkey has geographical proximity to some of the highest growth markets in machinery and is conveniently positioned as a managing and manufacturing hub.

Import Numbers
(IN BILLION $)

1.8 X
435
2003
776
2018

5 X
54.8
2003
2018

3 X
39
2003
109
2018

11.7

Source: UN Comtrade HS Code 84, Turkey has signed Free Trade Agreements (FTA) with Albania, Bosnia-Herzegovina, Chile, Egypt, Faroe Islands*, Georgia, Ghana*, Iceland, Israel, Jordan, Kosovo*, Lebanon*, Macedonia, Malaysia, Mauritius, Montenegro, Moldova*, Morocco, Norway, Palestine, Serbia, Singapore*, South Korea, Switzerland and Lichtenstein, Syria, Tunisia. (*to be ratified).
TURKEY HAS ALMOST TRIPLED ITS IMPORTS TO USD 28 BILLION AND NOW IS THE 24TH LARGEST IMPORTER IN THE WORLD

TURKEY HAS INCREASED ITS EXPORT/IMPORT RATIO FROM 30% TO 60% SINCE 2003...

30% to 60% since 2003

Source: Comtrade HS code 84, 8202, 8208, 8501, 8502, 8503, 8505, 8514, 8515, 8701, 8709, 8716, 9017, 9024, 9508, 9603, Team Analysis

...WITH THE FOLLOWING BREAKDOWN BY COUNTRIES:

55% from Europe - mostly from Germany, Italy and UK

18% from China

7% from USA

8% from Korea & Japan

DISTRIBUTION OF IMPORTS
THERE ARE OVER 16K COMPANIES IN TURKISH MACHINERY SECTOR WHERE BOTH LOCAL AND INTERNATIONAL PLAYERS ARE ACTIVE

OVER 60% OF MACHINERY REVENUE IS MADE BY SMALL AND MEDIUM ENTERPRISES

Total Revenue in Machinery Sector in 2017

< 250 employees

61%

105 COMPANIES

> 250 employees

39%

75% of the companies have <10 employees.

Growth requires access to:
- Market
- Technology
- International finance

10 OF THE LARGEST 25 PLAYERS ARE INTERNATIONAL & EXPORT RATE IS 40% ON AVERAGE

40% export on average

Source: Turkish Statistical Institute Industry & Services Statistics NACE Rev2 Division 28, ISO 500
AGENDA

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ROBUST ECONOMY

13TH LARGEST ECONOMY IN THE WORLD

RANKING OF ECONOMIES BY GDP AT PPP

<table>
<thead>
<tr>
<th></th>
<th>2003</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>USA</td>
<td>CHINA</td>
</tr>
<tr>
<td>2.</td>
<td>CHINA</td>
<td>USA</td>
</tr>
<tr>
<td>3.</td>
<td>JAPAN</td>
<td>INDIA</td>
</tr>
<tr>
<td>4.</td>
<td>JAPAN</td>
<td>GERMANY</td>
</tr>
<tr>
<td>5.</td>
<td>JAPAN</td>
<td>RUSSIA</td>
</tr>
<tr>
<td>6.</td>
<td>RUSSIA</td>
<td>INDONESIA</td>
</tr>
<tr>
<td>7.</td>
<td>INDONESIA</td>
<td>BRAZIL</td>
</tr>
<tr>
<td>8.</td>
<td>UK</td>
<td>FRANCE</td>
</tr>
<tr>
<td>9.</td>
<td>FRANCE</td>
<td>UK</td>
</tr>
<tr>
<td>10.</td>
<td>MEXICO</td>
<td>ITALY</td>
</tr>
<tr>
<td>11.</td>
<td>ITALY</td>
<td>MEXICO</td>
</tr>
<tr>
<td>12.</td>
<td>MEXICO</td>
<td>ITALY</td>
</tr>
<tr>
<td>13.</td>
<td>TURKEY</td>
<td>TURKEY</td>
</tr>
<tr>
<td>14.</td>
<td>CANADA</td>
<td>S.KOREA</td>
</tr>
<tr>
<td>15.</td>
<td>S.KOREA</td>
<td>SPAIN</td>
</tr>
<tr>
<td>16.</td>
<td>S.Arabia</td>
<td>S.Arabia</td>
</tr>
<tr>
<td>17.</td>
<td>Iran</td>
<td>Canada</td>
</tr>
<tr>
<td>18.</td>
<td>Turkey</td>
<td>Iran</td>
</tr>
</tbody>
</table>

REAL GDP GROWTH (INDEX: 2002=100)

Source: TurkStat, OECD, World Bank, IMF; PPP: Purchasing Power Parity

TRACK RECORD GROWTH AND BRIGHT FUTURE WITH PROVEN RESILIENCE

AVERAGE ANNUAL GDP GROWTH (%), 2003-2018

Turkey 5.6
Poland 4.0
Romania 3.9
Czechia 2.8
Hungary 2.1

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TURKEY’S ECONOMIC GROWTH HAS PAVED THE WAY FOR EMERGENCE OF A SIZEABLE MIDDLE-CLASS…

Among countries with population over 50 million, only 9 countries have GDP per capita over USD 10,000.

Source: IMF, TurkStat, Euromonitor

TRIPLING INCOME PER CAPITA (GDP PER CAPITA, CURRENT PRICES)

GDP PER CAPITA IN COUNTRIES WITH POPULATION OVER 50 MILLION

2002 INCOME GROUPS 2016

Source: IMF, TurkStat, Euromonitor
FAVORABLE DEMOGRAPHICS

...HALF OF POPULATION UNDER AGE 30

Working Age Population (15-64) (Index: 2014=100)

Total Dependency Ratio (%; Age 0-14 & 64)/Age 15-64)

Source: Turkstat, Eurostat, UN, 2016
TURKEY’S EDUCATION SYSTEM UPGRADED TO SUPPORT A SKILLED LABOR POOL...

ANNUAL NUMBER OF UNIVERSITY GRADS IN MECHANICAL FIELDS (2018)

- Total: 35,709
- Electronics & Automation: 18,911
- Mechanics & Metal Trades: 11,685
- Manufacturing & Processing: 5,113

NUMBER OF GRADS FROM VOCATIONAL & TECHNICAL HIGH SCHOOLS (in thousands)

- 2002: University 10%, High School and below 90%
- 2018: University 24%, High School and below 77%

LABOR FORCE BY EDUCATION LEVEL

Source: Ministry of National Education, Council of Higher Education, Turkstat
SKILLED & COST-COMPETITIVE LABOR FORCE

AVAILABILITY OF QUALIFIED ENGINEERS, 2018
(10=Available; 0=Unavailable)

LABOR COST PER HOUR IN MANUFACTURING ($), 2018

Source: IMD World Competitiveness Yearbook Executive Opinion Survey based on an index from 0 to 10; Eurostat, OECD, BLS, Turkstat

REMUNERATION OF MANAGEMENT/ENGINEER
Total base salary plus bonuses and long-term incentives
$K, 2017
ELECTRICITY AND NATURAL GAS PRICES IN TURKEY HAVE BEEN COST COMPETITIVE IN COMPARISON WITH THE EU...

Electricity Prices for Household Consumers, H2 2018
(EUR per kWh)

Natural Gas Prices for Non-Household Consumers, H2 2018
(EUR per kWh)

Source: Eurostat, All taxes and levies included
MACHINERY SECTOR INVESTMENTS AND R&D ARE CONSIDERED AS PRIORITY INVESTMENTS AND CAN BENEFIT FROM VARIOUS LUCRATIVE INCENTIVES..

**MAIN INCENTIVE TOOLS**

**Tax Deduction:** Reduced tax rates for investor’s income (50-90 %) until the total deduction reaches a certain percentage of capex. (15-65 % of capex, in the case of project based incentives up to 200% of capex). For R&D investments, all R&D expenditures are deducted from tax base.

**VAT Exemption:** Investment machinery and equipment imported and/or locally provided within the scope of the incentive certificate will be VAT exempt.

**Customs Duty Exemption:** Investment machinery and equipment imported within the scope of the incentive certificate will be customs duty exempt.

**Interest Rate Support:** For investment loans, a certain portion of the interest share will be covered by government. (3-7 % points for TRY-denominated, 1-2% points for forex-denominated loans) (500K-900K TRY).

**Land Allocation:** Government land will be allocated for the investments, if no land is available in OIZs.

Income Tax Withholding Exemption will provide exemption from income tax withholding (only for Region 6).

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### INCENTIVES

<table>
<thead>
<tr>
<th><strong>Main Incentive Tools</strong></th>
<th><strong>Incentive Schemes</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporate Tax Reduction</td>
<td>![Icon] ![Icon] ![Icon] ![Icon] ![Icon] ![Icon]</td>
</tr>
<tr>
<td>VAT/Custom Duty Exemption</td>
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</tr>
<tr>
<td>Social Security Premium Support</td>
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</tr>
<tr>
<td>Income Tax Withholding Support*</td>
<td>![Icon] ![Icon] ![Icon] ![Icon] ![Icon] ![Icon]</td>
</tr>
<tr>
<td>Interest Support**</td>
<td>![Icon] ![Icon] ![Icon] ![Icon] ![Icon] ![Icon]</td>
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<tr>
<td>Land Allocation</td>
<td>![Icon] ![Icon] ![Icon] ![Icon] ![Icon] ![Icon]</td>
</tr>
<tr>
<td>Partnership (Equity Investment by Gov.)</td>
<td>![Icon]</td>
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<tr>
<td>Guarantee of Purchase by Gov.</td>
<td>![Icon]</td>
</tr>
<tr>
<td>Energy Cost Support</td>
<td>![Icon]</td>
</tr>
</tbody>
</table>

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*Provided that investments, except R&D, are made in Region 6.
**Provided that investment, except R&D, are made in Regions 3, 4, 5 or 6 within the frame of the Regional Incentive Scheme

Source: Ministry of Economy, MSTI
INCENTIVES THROUGH INNOVATION LIFECYCLE

START

Technostartup Incentives:
Cash support up to 500K TRY

PRODUCT / PROJECT DEVELOPMENT

Tubitak programs:
Cash support up to 60-80% of the project budget

COMMERCIALIZATION

Technoparks and R&D Centers:
Income Tax Exemption
Tax cuts up to 25-40% of the personnel cost

MANUFACTURING

Technoinvestment Incentives:
Cash support up to 10M TRY for SMEs, 2M TRY for large companies

GROWTH & COMPETITION

Patented sales:
Income Tax & VAT Exemption
AGENDA

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TURKEY OFFERS SOLID FUNDAMENTALS TO MAKE PROFITABLE INVESTMENTS IN THE MACHINERY SUB-SECTORS

Source: MAKFED analysis 2018 values

OPPORTUNITIES IN SUB-SECTORS

- Agricultural Machinery
- Construction & Mining Machinery
- Food Processing & Packaging Machinery
- HVAC Machinery
- Lifting & Handling Equipment
- Metalworking & Machine Tooling
- Motors & Turbines
- Pumps & Compressors
- Textile Machinery

Source: MAKFED analysis 2018 values
TURKEY’S AGRICULTURAL MACHINERY MARKET HAS REACHED TO USD 2.1 BILLION IN 2018 - 4TH IN EUROPE

**KEY FACTS**

- **Strong industrial base** – over 10% share in Europe’s production with **over 48K units** in 2018

- **Strong local market** – **largest** tractor sales in Europe, 5th in the world, 75% of the local market supplied by local players

- **Over 70%** of the imports are higher-value tractors and harvesting machinery – investment opportunity for production

- Tractor manufacturing ecosystem with local and international players with a total of **5K employees**

**TURKEY’S AGRICULTURAL MACHINERY EXPORTS ALMOST TRIPLIED IN 10 YEARS.**

```
<table>
<thead>
<tr>
<th>Year</th>
<th>Exports (Billion USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>0.3</td>
</tr>
<tr>
<td>2008</td>
<td>0.4</td>
</tr>
<tr>
<td>2009</td>
<td>0.3</td>
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<tr>
<td>2010</td>
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<td>2014</td>
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<td>0.6</td>
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<tr>
<td>2016</td>
<td>0.6</td>
</tr>
<tr>
<td>2017</td>
<td>0.7</td>
</tr>
<tr>
<td>2018</td>
<td>0.8</td>
</tr>
</tbody>
</table>
```

**..AND 2 OUT OF 3 TRACTORS GOES TO USA & ITALY**

**DEMAND DRIVEN BY TURKEY’S AGRICULTURAL ECONOMY AND FRAGMENTED STRUCTURE:**

- **Agricultural GDP**
  - USD 42.5 Billion

- **Agricultural land**
  - 25 Million ha

- **Arable land**
  - 5.1 Million ha

- **Average enterprise size**
  - 6 ha

Source: MAKFED analysis 2018 values, TAPMAKBIR, press excerpts, Comtrade HS 8432, 8433, 8436, 8478, 842481, 870110, 870190, 871620
**TURKEY’S CONSTRUCTION MACHINERY MARKET HAS REACHED USD 1.7 BILLION IN 2018 – 7TH IN EUROPE, 11TH IN THE WORLD**

**KEY FACTS**

- **Strong local market** - 3rd largest growth in the world after China and India for the last eight years
- Local and international companies exist - local market supplied by 35% local production and 65% import
- Europe’s 10th largest manufacturing base with strong players, USD 1.4 billion production and USD 1.2 billion of exports in 2018
- Strong & international supplier base - Construction machinery industry can benefit from the supplier base of automotive manufacturing industry in Turkey, which is a European manufacturing hub and has reached 1.7 million units
- Local demand driven by public infrastructure and urbanization projects - opportunity for smaller sized construction machinery
- Access to international markets enabled through Turkish construction companies – 46 contractors in ENR250 list

Source: MAKFED analysis 2018 values, IMDER, ISDER, press excerpts, Comtrade HS 8429, 8430, 8431, 8474
TURKEY INVESTED **USD 100 BILLION** TO INFRASTRUCTURE PROJECTS IN THE LAST 5 YEARS..

..ANOTHER **USD 325 BILLION** IS EXPECTED BY 2023

3rd Istanbul Airport

3rd Istanbul Bridge

Urban Transformation Projects

Public Hospital Project

..
5th largest electricity market in Europe; highest growth in Europe with 5.3%
Over USD 75 billion of energy investments made in the last 10 years
Electricity demand and supply to grow by 50% by 2030 – renewable and local energy resources are priorities
Opportunities in production of wind/hydro/steam turbines and generators
**KEY FACTS**

- **Strong industrial base** with a production value of USD 1 billion clustered in Istanbul, Konya, Ankara, Gaziantep and Izmir.

- Demand driven by the strong packaged food and beverages market in Turkey – **USD 11 billion export in 2018**.

- **USD 400 million** of import in 2018 – major imports are machinery for industrial preparation of food or drink, for treating material by heat change and machinery for filtering or purifying water.

- **Turkey is a manufacturing base** for international food giants like Unilever, Kraft, Nestle, Danone, Ferrero with over 15K employees.

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**TURKEY’S FOOD PROCESSING & PACKAGING MACHINERY MARKET HAS REACHED USD 800 MILLION IN 2018**

**TURKEY’S FOOD PROCESSING & PACKAGING MACHINERY EXPORTS TRIPLED IN 10 YEARS**

![Graph showing the growth of exports from 2007 to 2018.](image)

**WHERE 80% OF EXPORTS ARE MACHINERY FOR**

- Processing & milling of grains and cereals
- Industrial preparation of food or drink
- Milking machines and dairy machinery

**AND TOP5 EXPORT MARKETS ARE**

- Algeria
- Iraq
- Uzbekistan
- Sudan
- Kazakhstan

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Source: Invest in Turkey, MAKFED analysis 2018 values, press excerpts, Comtrade HS 8434, 8435, 8437, 8438, 841720, 841931, 841989, 842111, 842121, 842122, 847920
TURKEY’S HVAC MARKET HAS REACHED USD 2.6 BILLION IN 2018

KEY FACTS

• **Strong industrial base** – USD 3.2 billion in value - Europe’s manufacturing base for panel radiator, boiler and AHU’s

• **Strong local market** – Europe’s 3rd largest split AC market with 1M units and VRF market with 250K units

• **Strong local market** – Europe’s 4th largest with 1.3M boiler units

• Demand driven by construction in residential market; **efficiency regulations** and **development** in technology in non-residential market

• VRF market has grown 6 times with imports – opportunity for **high-tech production**

• **Access** to **international markets** through Turkish construction companies – **46 contractors in ENR250 list**
TURKEY’S HVAC EXPORTS MORE THAN DOUBLED IN 10 YEARS

…WHERE EUROPE HAS OVER 40% SHARE

Source: MAKFED analysis 2018 values, press excerpts, Comtrade HS 8415, 841810, 841850, 841861, 841869, 841891, 841899
LIFTING & HANDLING EQUIPMENT

TURKEY’S MARKET FOR LIFTING & HANDLING EQUIPMENT HAS REACHED USD 2.4 BILLION IN 2018

KEY FACTS

• **Strong industrial base** – USD 1.7 billion of production in 2018
• **Local** and **international players** mostly based in Istanbul, Kocaeli, Bursa, Ankara, Konya, Kayseri and Izmir
• **Strong supplier base** - expertise in automotive, machinery and electronics & control systems
• 3rd **largest** elevator market in the world with 30K new units - ThyssenKrupp, Otis, Kone, Schindler, Hyundai present with some level of assembly operations
• 2nd **largest** escalator and moving walk market in the world with 2K new units per year
• **Opportunity** for **assembly** and **manufacturing** of parts
• **Strong local market** – demand driven by the growth in the industry and infrastructure & construction projects

Source: MAKFED analysis 2018 values, AYSAD, ELA, press excerpts, Comtrade HS 8425, 8426, 8427, 8428
TURKEY’S PRODUCTION OF LIFTING & HANDLING EQUIPMENT HAS INCREASED BY 40% SINCE 2010..

AND EXPORTS HAVE REACHED USD 370 MILLION IN 2018 - AN IMPRESSIVE 60% GROWTH IN TWO YEARS

USD 1.1 BILLION IMPORT IN 2018 - ALMOST 70% FROM CHINA, GERMANY & ITALY

Source: MAKFED analysis 2018 values, press excerpts, Comtrade HS 8425, 8426, 8427, 8428

Production (Billion USD)

1.0 1.4 1.4 1.7 1.9 1.6 1.4 1.4 1.7
TURKEY’S METALWORKING & MACHINE TOOLING MARKET HAS REACHED TO USD 2.6 BILLION – 11TH LARGEST IN THE WORLD

KEY FACTS

- **Strong industrial base** – largest in Central and Eastern Europe with **USD 1.6 billion** of production in 2018
- Strong in laser machine tools, forging & punching machine tools (including presses) – **80% of the exports**
- Exports have reached USD 855 million in 2018 – 30% growth in the last two years – industry diversifying its export markets to USA, Canada, Mexico, Brazil and India
- Over 40% of the USD 1.8 billion import in 2018 is for machining centers, transfer machines and lathes - mostly from Germany & Italy
- **Investment opportunity for CNC tools** - supplier base for CNC tools exist

Source: TIAD, MAKFED analysis 2018 values, press excerpts, Comtrade HS 8456, 8457, 8458, 8459, 8460, 8461, 8462, 8463, 8464, 8465, 8466, 8467, 8468
PUMPS & COMPRESSORS

TURKEY’S MARKET FOR PUMPS & COMPRESSORS HAS EXCEEDED USD 2.2 BILLION IN 2018

KEY FACTS

- Industrial base - **USD 1.1 billion** of production in 2018; mostly based in Istanbul, Konya and Izmir
- Majority of the companies are small-sized - **over 9K employees** in **500 companies**
- Strong local market – demand driven by the growth in the industries, municipal infrastructure investments, construction and agriculture

Source: MAKFED analysis 2018 values, press excerpts, Comtrade HS 8413, 8414
TURKEY’S PRODUCTION OF PUMPS & COMPRESSORS HAS INCREASED BY 50% SINCE 2010

TURKEY HAS USD 2 BILLION OF IMPORTS WHERE EUROPE HAS AROUND 60% SHARE:

Source: MAKFED analysis 2018 values, press excerpts, Comtrade HS 8413, 8414
TURKEY’S TEXTILE MACHINERY MARKET HAS REACHED USD 2.2 BILLION IN 2018

TURKEY’S TEXTILE MACHINERY EXPORTS TRIPLED IN 10 YEARS – STILL LOW COMPARED TO $1.9 BILLION OF IMPORTS

Source: International Textile Manufacturers Federation, MAKFED analysis 2018 values, press excerpts, Comtrade HS 8444, 8445, 8446, 8447, 8448, 8449, 8451, 8452

3% OF WORLD EXPORTS

**KEY FACTS**

- **Strong industrial base** especially in knitting and dyeing & finishing machines
- Demand driven by textile industry – Turkey is the 7th largest textile exporter with USD 10.5 billion in 2018
- Due to high cost pressure from Asian countries, Turkey’s textile industry needs to specialize and increase its added-value while upgrading or renewing its USD 25 billion machinery park - technical textile is an example

**TURKEY’S COMPETITIVENESS IN TEXTILE MACHINERY CATEGORIES**

<table>
<thead>
<tr>
<th>SPINNING</th>
<th>WEAVING</th>
<th>KNITTING</th>
<th>DYEING &amp; FINISHING</th>
<th>SEWING</th>
<th>TECHNICAL TEXTILE</th>
</tr>
</thead>
<tbody>
<tr>
<td>70% of Turkey’s imports are from Switzerland, Germany &amp; Italy</td>
<td>80% of Turkey’s imports are from Belgium &amp; Italy</td>
<td></td>
<td>Turkish market dominated by China &amp; Vietnam</td>
<td></td>
<td>Developing in Turkey for non-woven applications: Carpets Automotive Apron dresses etc.</td>
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</table>
AGENDA

1. Executive Summary
2. Turkish Machinery Industry Outlook
3. Growth Drivers in Turkey
4. Opportunities in Turkish Machinery Industry
5. Success Stories
SUCCESS STORIES

MACHINERY GIANTS HAVE BEEN INVESTING IN TURKEY FOR DECADES

Mahindra Farm Equipment (M&M) - part of the USD 19 billion Mahindra Group based in India
- Had a revenue of USD 14 billion in 2017
- Manufacturing tractor cabins & industrial components, foundry, engines and transmission
- Operational with 865 employees in three facilities at Hisarlar, 355 employees in two facilities of Erkunt, and owns an R&D center
- Uses Turkey as a regional hub for Turkey, the Middle East, CIS and Europe
- Acquired 75% of Hisarlar Makina at USD 19 million in 2017

Putzmeister
- Established in Germany in 1958, its products include plant and equipment for concrete production, truck mixers, plastering machines, concrete injectors and concrete pumps
- Acquired by Chinese competitor Sany Heavy Industries for USD 402 million in 2012
- Manufacturing concrete pumps and mechanical and hydraulic distributors at its Cerkezkoy plant since 2008

IHI Corporation - Japanese corporation that produces ships, aircraft engines, turbochargers, industrial machines, power station boilers and suspension bridges
- Had a revenue of USD 14 billion in 2017 with 30K employees
- Completed projects in Turkey include Golden Horn Bridge, Fatih Sultan Mehmet Bridge, Osmanci Gazi Bridge and several reinforcement projects
- Formed a JV with Dalgakıran Makine with an investment of USD 14.4 million to produce turbo compressors in Turkey in 2018 (60 employees)
- Uses Turkey as a base for exports to Europe, the Middle East, and other growing markets

Candy
- Established in Italy, its products include washing appliances, built-in and small domestic appliances. Had a revenue of 1.1 Billion in 2017
- Manufacturing in Turkey since 2007 at its Eskisehir plant
- Invested EUR 15 Million for the launch of a new plant in Turkey with an employment of 300 people
- Uses Turkey plant as a base for oven and stove manufacturing, built-in appliances and dryers and exports over 90% of its production

Mitsubishi Electric
- Japanese multinational electronics and electrical equipment manufacturing company with a total revenue of USD 39 billion in 2017
- Operational in Turkey since 2012 especially in air conditioning, elevators and escalators, factory automation systems, visual information systems and transportation systems as well as electrification
- In 2018, opened its first air-conditioner manufacturing plant of Europe in Turkey with an investment of USD 80 million

Federal-Mogul Powertrain
- Established in the USA in 1899, its products include pistons, rings & liners, valve seats & guides, engine bearings and sealing
- Had a revenue of USD 7.3 billion in 2014
- Operational in Turkey since 1998, currently has two facilities with a total employment of 1600 people
- Has invested a total of EUR 400 million in Turkey by 2017
- 80% of the piston production is exported to Europe and USA as original equipment