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AKISOGLU CASTING INDUSTRY AND TRADE CO. LTD. started its production life as a small foundry in Konya in 1978 and today it has 4 factories located in Konya 3rd and 4th Organized Industrial Zones and one of the leading companies in its sector that manufactures elevator engines, heavy vehicle group brake components, elevator cable production and casting products for different sectors.

Our company is Turkey's most important breakthroughs and realizing large-scale infrastructure investments in the past four years to become one of the casting company to growing rapidly and has become one of the major actors in the sector. Our company focuses on R & D, P & D, production and sales in elevator motors with engine power from 2 hp to 50 hp, heavy vehicle group brake components, cables and cast products for different sectors and continues to work intensively to maintain its leadership.

In the beginning of 2014, the automotive industry started to produce heavy vehicle brake drums, discs and wheel hubs under the FRENBU brand. With the slogan "Technology turns into trust with AKIŞ", our company, which has the rightful pride of providing quality products to our country, has accelerated its market research and investments in this scope. With the investments realized in the our company, the production quantity of more than 1.000.000 pieces, brake disc, brake drum and wheel hubs has been reached.

The annual production capacity of our casting factories with two different production factory is 120.000 tons. The our first factory has 40.000 ton casting production capacity. The capacity of the 800x1000x600 mm automatic HWS - Sinto molding line is 120 mold / hour. We have the capacity of receiving 12 tons of liquid mines per hour in our 36 tons capacity induction furnaces. In this facility there is an autopour furnace ( FOMET) with a capacity of 4 tons for casting better quality casting products. In this system, continuous temperature controls and automatic inoculation can be performed.

The second plant, which we established by purchasing Mercedes' casting facilities in Stuttgart, Germany, has an annual production capacity of 80.000 tons. The capacity of the 1080x1120x500 (optional 70mm) mm automatic HWS - Sinto molding line is 200 mold / hour. Our 6 pcs foundry included 8 ton induction furnaces have an hourly melting capacity of 30 tons per hour.

We have sand process capacity 120 ton / hour at the first factory and 200 ton / hour at the second factory.

Our Company continues production of nodular iron (GGG 40 - 40.1 - 50 - 60 - 70) and gray iron (GG 18- 20 - 25 - 30 - 35) markets in its facilities with a capacity of production in a wide range of 0,3 kg to 250 kg for automotive, machinery, agricultural, construction and marine industries.

In addition, there are 8 model processing benches for model processing in our own model shop.

We have latest technology machine center that include CNC horizontal, CNC Vertical machining rooms, horizontal and vertical CNC. We have more than 150 CNC machining machines in our machine park, and we serve as a solution partner to our domestic and international customers with our experience in machining.

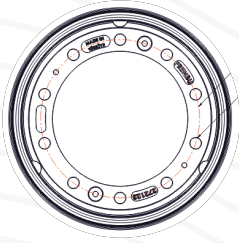






3 No.lu Bina  
6 No.lu Bina  
8 No.lu Bina

# 04 PRODUCTION



## 1. PRODUCT PLANNING (DESIGN & SIMULATION)

3-D design is made according to the characteristics of the part to be cast and data from R & D department. The parts are simulated with the help of CAD and CAA programs in order to prevent errors caused by the production method before starting the manufacturing process.

the mold design and casting parameters are determined to minimize the risks that may occur in the actual casting and to obtain the best quality product at the lowest cost with the simulations performed. The specified parameters are instructed and included in the production plan in order to ensure that the requested product is made by the production without error.



## 2. MODEL

Producing trouble-free and high quality casting parts requires a proper model making workshop and model making knowledge. We use state-of-the-art technology to model for the right size and tolerance.

The models are made perfectly in accordance with the molding and casting design obtained as a result of R & D studies and simulation to produce error-free casting parts. 3D data of the parts to be modeled is created with the SOLIDWORKS software used in our model shop department. In addition, we have 4 state-of-the-art CNC machines in our Modeling department.



## 3. MOLDING

Resin or grit sand method is applied according to the material, shape or production process of molding the part to be produced. molding with resin molding line and wet sand is done in our plant.

There is an automatic molding system with a capacity of 120 molds / hour and 1200x1800x500 mm dimensions in our foundry

- 1200x1800x500 mm automatic molding line
- 10 ton / hour resin molding mixer
- 20 tons / hour resin molding mixer
- 10 tons / hour reclamation plant
- 2500 \* 2500 mold breakage
- 10 ton / h sand cooling
- Pneumatic age sand molding equipment





# PRODUCTION 05

## 4. MELTING

We can pour parts weighing 8000 kg. Thanks to our continuous investment and improvement program; 2 pieces of induction furnace each with 4.5 tons melting capacity, net part weight max. We perform bronze casting with an additional 2 500 kg induction furnace.

We can pour parts with a maximum part weight of 8000 kg with 2 induction furnaces, each with a melting capacity of 4.5 tons, thanks to our continuous investment and improvement program. We perform bronze casting with an additional 2 500 kg induction furnace.

We ensure that each loading is calculated accurately and that the desired chemical composition is obtained before casting with the connection of our quarries to the electronic weighing system spectrometer. We can accurately determine the temperature by immersion in the molten metal with dip-pyrometer.



## 5. CASTING

Casting takes place in an automated casting line. All processes from preparation of molds to separation of molded parts from molds are carried out in computer controlled automatic casting line without touching.

De-oxidation and microstructure modification is carried out for each material by making ladle treatment to give the parts to be cast to provide maximum mechanical properties, minimum casting error and high workability.



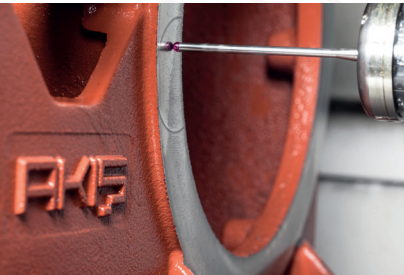
## 6. CLEANING

After casting, parts cleaned from sand and scales in sandblasting facilities within our structure are then cleaned by various grinding apparatus and prepared for the next process.

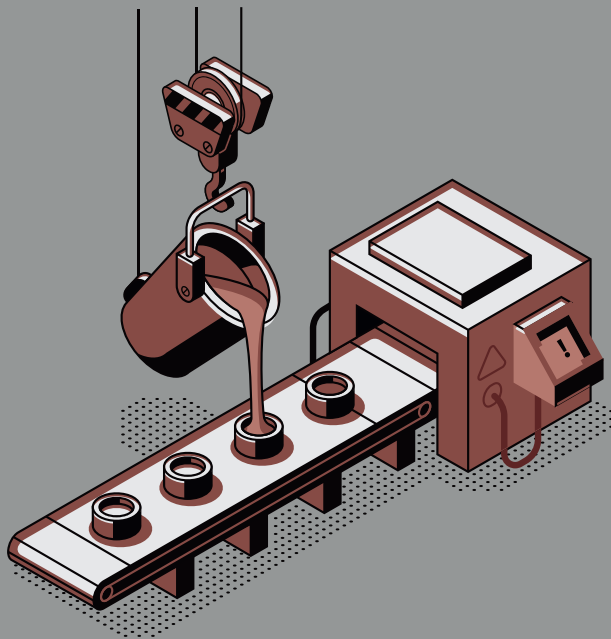
Shot Blasting Machine  
Hanger grinding  
Arc and Oxygen cutting  
Flex grinding and cutting  
Pulse runners and feeder crushing

## 7. PROCESSING

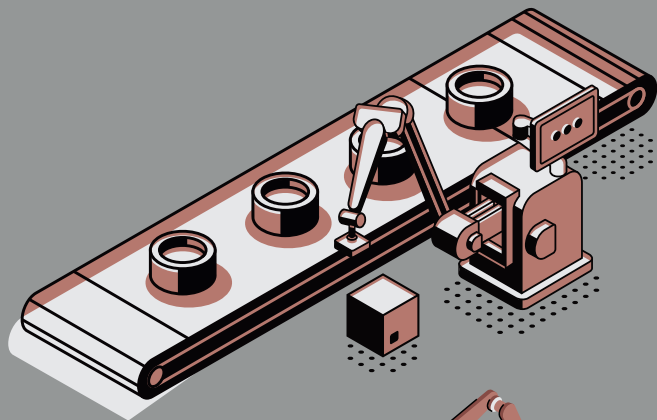
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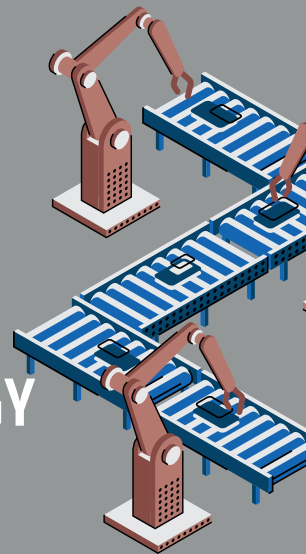


**120.000 TONS**  
ANNUAL CASTING CAPACITY



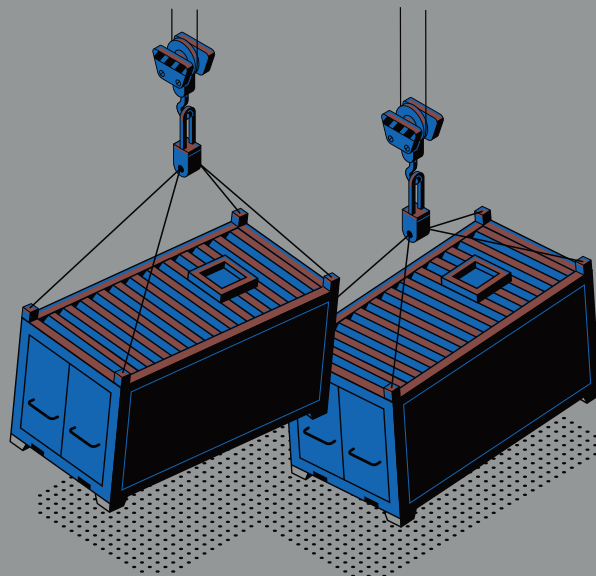
**30.000**  
TONNES OF LIQUID  
MINE CAPACITY AT 8  
STOVES PER HOUR

**LATEST TECHNOLOGY  
ROBOTIC SYSTEM**





**500 EMPLOYEES**

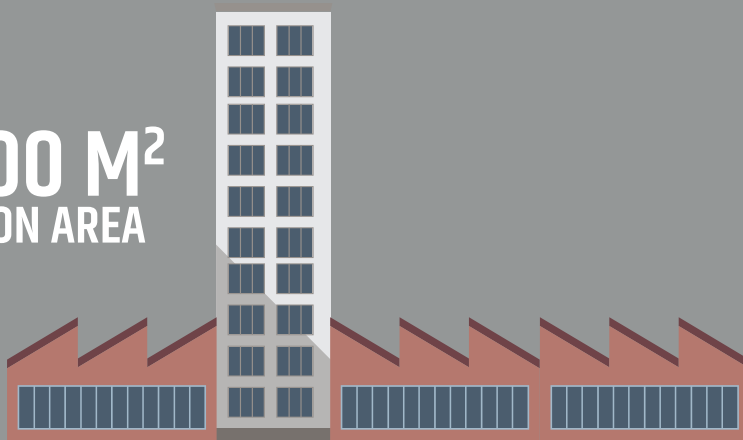


ANNUAL  
**1.000.000** PCS  
DISC/DRUM/WHEEL HUB  
PRODUCTION

**EXPORT TO  
5 CONTINENTS AND  
MORE THAN 20 COUNTRIES**



**106.000 M<sup>2</sup>**  
PRODUCTION AREA



# 08 SECTORS

## Agriculture

In order to contribute to the increasing development of agricultural machinery sector in the world, in line with the demands of the sector, it takes its place among the important suppliers of the sector with its high quality casting service.

## Automotive

Akışoğlu has an important share in the production of heavy vehicle brake parts, one of the dynamics of the automotive industry. As a manufacturer of the sector, it is able to meet all kinds of gray iron cast and ductile casting needs of other automotive companies.

## Energy

We serves the energy sector with its experienced and our expert staff for the production of casting parts needed by power plants.

## Defense

It serves the defense sector with its modern and technological infrastructure in order to meet the need of casting parts of the defense industry investments that have been increasing rapidly in recent years.

## Valve

We serves the companies related to casting of valves, body, cover and discs, separator parts in different sizes for different usage areas.

## Pump

The pumps used in the transfer and processing of water, sludge and mineral mixtures are manufactured as abrasion resistant. These products are used in domestic and foreign coal, mineral-mining, chemical and energy industries; can also be manufactured and supplied as raw cast or processed product.





# SECTORS09



## Machine

Akişoğlu Foundry alongside their own manufacturing, realizes design by demand of customers in the machinery sector. It accelerates the casting production by making the model designs that its customers want in a short time with its own model workshop.

## Ship - Maritime

It serves to the sector by casting of pier bollards, ring, wheel, rope pulley and various parts to be used in Ship and Maritime sector.

## Construction

Casting parts of vehicles and equipment used in the construction sector are casted according to their usage characteristics and determined quality standards and serve to the sector.

## Mining

It provide, its service to the mining industry by producing meticulously the assembly parts of the tools (bucket teeth, laying rooms of cone and jaw crushers, crusher bars, bucket liners and cooking grills etc.) and equipment used in mining.

## Furniture

Park and garden furniture, city lighting and casting parts of the furniture industry to the requested specifications and quality standards by serving the furniture industry.

## Other Industry

It provides services to all industry manufacturers using cast parts within the capabilities of their technical infrastructure and casting line.



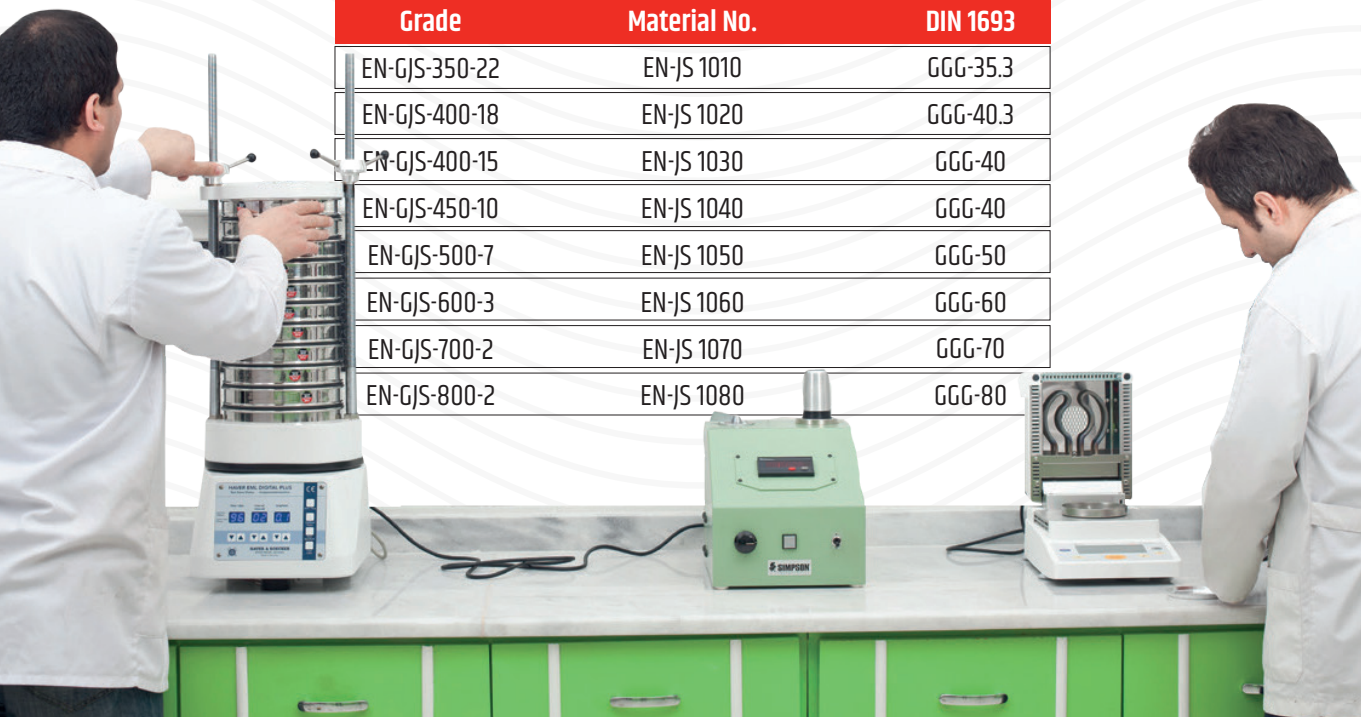
# 10 IRON CASTING STANDARTS

## Gray Cast Iron – DIN EN 1561

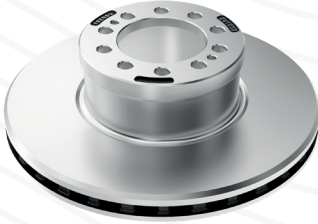
Grade	Material No.	DIN 1691
EN-GJL-150	EN-JL 1020	GG-15
EN-GJL-200	EN-JL 1030	GG-20
EN-GJL-250	EN-JL 1040	GG-25
EN-GJL-300	EN-JL 1050	GG-30
EN-GJL-350	EN-JL 1060	GG-35

## Spheroidal Graphite Cast Iron – DIN EN 1563

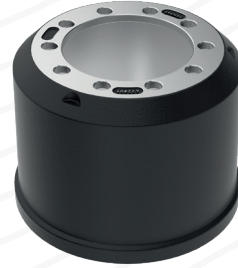
Grade	Material No.	DIN 1693
EN-GJS-350-22	EN-JS 1010	GGG-35.3
EN-GJS-400-18	EN-JS 1020	GGG-40.3
EN-GJS-400-15	EN-JS 1030	GGG-40
EN-GJS-450-10	EN-JS 1040	GGG-40
EN-GJS-500-7	EN-JS 1050	GGG-50
EN-GJS-600-3	EN-JS 1060	GGG-60
EN-GJS-700-2	EN-JS 1070	GGG-70
EN-GJS-800-2	EN-JS 1080	GGG-80



# PRODUCTS 11



**DISC**



**DRUM**



**SHAFT**



**WHEEL HUB**



**AGRICULTURE**



**ELEVATOR MACHINE ENGINE BODY**



**BRONZ GEAR**



**PULLEY**





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