

STERILIZATION CONTAINER
SYSTEMS



SURGICAL MOTOR



MEDICAL ILLUMINATION SYSTEMS



**DISPOSABLE**STERILE
PRODUCTS





## AYGUN® SURGICAL INSTRUMENTS CO., INC.

"Meeting point for surgery..."

### OUR HISTORY +

**AYGÜN**, one of the leading establishments of Turkey in the field of Medical Industry, was founded in 1988. It manufactures Container Systems for sterilization, Surgical Motor Systems, Medical Illumination Systems and Single Use Medical Systems in its facility at Samsun Central Organized Industrial Zone.

AYGÜN meets the needs of significant part of Turkey as a result of its continuous R&D works and the capacity increasing. It manufactures its products in international standards and put them to the world market with a high competitive power. Moreover with its integrated quality management system, it proves that it is a specialized establishment.

Besides being a manufacturer, AYGÜN is also a designer company and with its continuous product development works it increases number of its patents, on the other hand, is contributing career development of rising generation by acting as a school.





# GROWING UP + TOGETHER

Aygün has an actively growing position in the sector through using a high technology and innovative institutional structure.



# The vision of AYGÜN is to grow in health sector according to the developing technology and sectoral innovations and serve humanity by producing new project and products appropriate to these innovations. AYGÜN builds projects that can contribute to human health all over the world and integrates these projects to its production area and products in the light of technological developments. It constantly stays active with its innovative and explorer soul and remains taking part among the leader companies ruling the sector.





#### **PRODUCTION**

Sense of high-grade quality in each process from raw material supply to the shipment is combined with integrated quality management system according to the standards.

#### **QUALITY MANAGEMENT SYSTEM**

- ISO 9001:2015
- ISO 14001:2015 ISO 45001:2018
- ISO 13485:2016 93/42/EEC
- FDA 510 (K)

• 2017/745 (EU)

ISO 9001:2015 CERTIFIED ISO 13485:2016 CERTIFIED















#### TECHNICAL INFRASTRUCTURE

**CNC Machines** Hydraulic and Eccentric Presses Hot Presses **Conventional CNC Machines** Mold Design and Molding Technology 3D Modelling Technology Thermoforming **Cutting Machines** 

Electronic Design and Manufacturing Engineering Software Technology Fine Mechanic Techniques Hardening Laser Technology Silicone Extrusion Technology Clean Room - ISO 7

Chemical Coating and Anodizing Technology

#### **VALUES** AND PRINCIPLES

Aygün Surgical Instruments Co., Inc. which combines the latest equipments with qualified and expert workforce, keeps product standarts at the highest level with control mechanisms, and adopt quality as one of its priorities.

www.aygun.com





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## PRODUCTION +

A big stuff gathered under the same roof and adopted importance of teamwork carry all stages above the dreams and makes what is desired real.



# **VALUES** AND PRINCIPLES Aygün Surgical Instruments regards its customers as business partners, owing to its approach focused on success and customer satisfaction and maintains its services in mutual communication. With the awareness of the responsibilities it has, Aygün Surgical Instruments adopt business ethics, professionalism, respect and social responsibility as its principles. / www.aygun.com



## RESEARCH, DEVELOPMENT, QUALITY +

AYGÜN increases its power with its endless R&D works. It makes all needed investments so as to research and develop even the smallest part of the complicated products manufactured and carries out successful projects with its professional engineer team. It both develops the existing products with today's technology and performs serious works on new product designs.



#### AYGUN<sup>®</sup>

#### COMBINATION OF PRECIOUS HIGH TECHNOLOGY PRODUCTION MACHINES AND PERFECT CRAFTSMANSHIP,

New product development desire and need began in minds becomes sharable and interpretable with 3D printers and technical drawings. After setting the models and testing the prototypes, the production process starts for the approved designs. The production starts with combination of high technology production machines and perfect craftsmanship.







# STERILIZATION CONTAINER SYSTEMS

All Aygün sterilization container systems are designed for perfect steam penetration, traceability, safety and stability. The locking mechanisms secure excellent grip and ensure up and down movement of the lids under steam pressure during the sterilization.

## BEYOND STERILIZATION +

We service our bottoms and lids made of 2 mm high quality special alloy aluminum raw material to the whole world with 8 basic color options. Besides providing a greener alternative to wrapping method in sterilization, AYGÜN sterilization container systems also ensure a great return on investment.







## CONTAINER MODELS

Standard Plus Model

PPSU

- Standard Model
- Bio-Barrier Model
- PPSU Model
- Window Model
- B3 Model
- Plasma Model
- A1 Model
- Safe Model



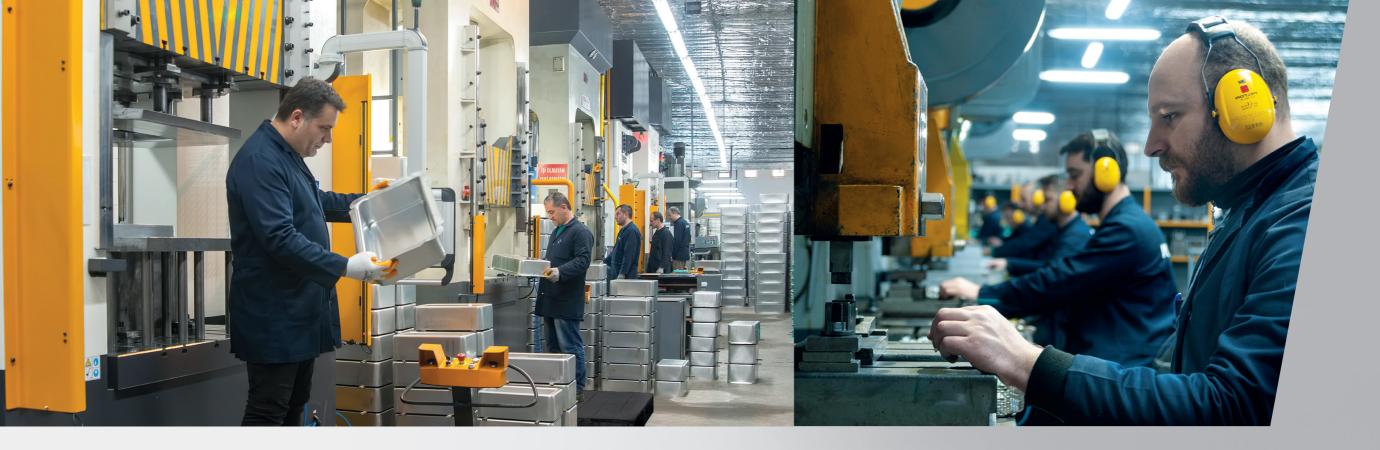
## WIDEST RANGE

Aygün sterilization container systems, with most general point of view, are separated into 5 different dimension groups as ½, ¾, 1/1, Extra Large and Extra Long models. Additionally we can supply smaller models like Dental and Mini Sterilization Containers with many options.









## MASSIVE DYNAMIC +

With a lot of machinery and expert stuff, Aygün uses most convenient production methods and combines that with best possible quality level reachable. The components are manufactured with molds according to the drawings and the deviation is kept at minimum tolerance levels in all thousands of pieces manufactured.





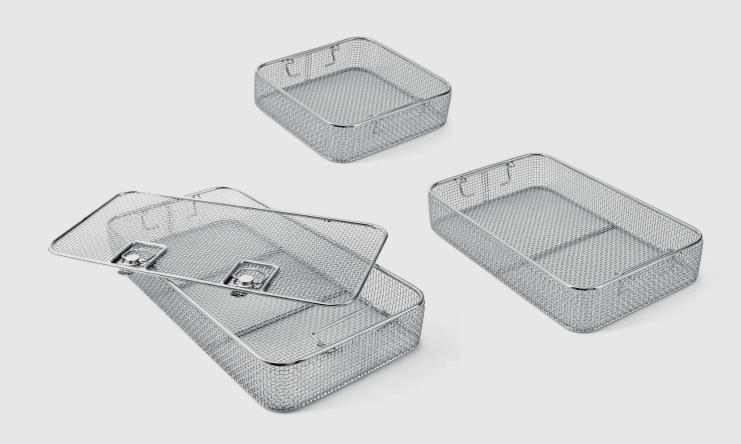




## BASKETS

Aygün manufactures 3 different basket models with many different sizes and able to provide solution to custom made demands. The baskets are used during cleaning, organization, sterilization and storage of the instruments inside the containers.





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## SURGICAL MOTOR SYSTEMS

The expertise of AYGÜN in surgical motor systems gathered up many designs and systems that have special structures servicing from neuro and spinal surgery to many fields like cardiovascular, orthopedic, plastic, hand & foot and maxillofacial surgery. The quality, power and ergonomic design of the new generation of high-tech battery powered surgical motor systems once again demonstrates AYGÜN's expertise in the medical field.









#### SURGICAL MOTOR SYSTEM MODELS

- Karınca 206
- Karınca 208
- Dermatome Bes
- Dermatome ST-5
- Skin Graft Mesher
- Praxis 3
- Praxis 3B
- Sternal Saw 3B

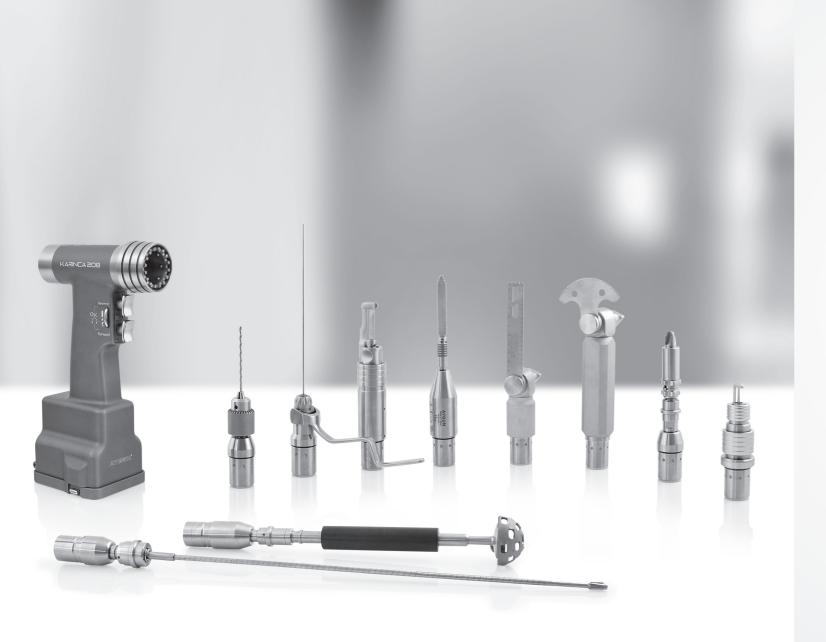
- HSM Micro System
- SCOREN Multiple Solution

• HSM 2 Neuro & Spine System

- Mini Bone 40.000 rpm
- Mini Bone Monoblock
- Arthroscopy Shave
- Rapto
- TPLO

- Mini Surgical Motor
- Mini Compa
- Neuro Air Power
- Standard Macro
- EPS Motor Syste
- Macro Compact
- Mobil Stator







## KARINCA 208 Surgical Motor Systems

Battery Operated

- Less Weight, High Power
- Next Generation Cutting Technology
- New Generation Surgical Motor Technology
- Li-ion Technology



## **POWER** IN YOUR HANDS

Karınca motor systems are designed in a way that all electronic components like electric circuits, brushless motor, battery cells, etc. are kept away from the sterilization. The system is divided into two parts as hand piece which is completely mechanical, goes into autoclave and power box which is completely electrical and not exposed to sterilization. This way while the service need of the system decreases, its life time increases.



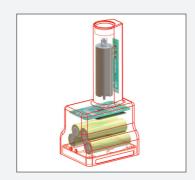


#### KARINCA 206

- Battery, motor and all electronical components are combined together and exempt from sterilization by aim of increasing life time of the device;
- Karınca 206 power box records all data about usage for technical service information;
- Karınca 206 provides users to observe battery level without removing the power box;
- Karınca 206 can also provide information about battery process cycles like how many times, minutes, seconds the battery is charged, half charged or fully charged.

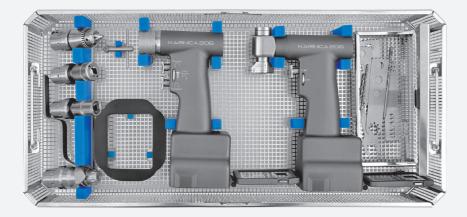






#### **Six Different** Sets

- Orthopedic Set
- Drill Set
- Sagittal Saw Set
- Reciprocating Saw Set
- Sternal Saw Set
- Cardio Vascular Set



#### KARINCA 205 Surgical Motor Systems

Battery Operated

- Light weight Karinca 206 provides efficient and reliable cutting performance with new generation powerful motor;
- One hand piece solution for reaming, high speed drilling, screw driving and tapping functions with high torque performance;
- Lithium-ion battery technology provides consistent power during the operation;
- Easy handling and ergonomic design of Karinca 206 ensures reliable and better controlled operation result;

#### **SURGICAL MOTOR** SYSTEMS

- Efficient torque for acetabular reaming;
- Karinca 206 is an innovative new generation power tool with high quality engineering materials;
- Providing efficiency with Engineering Solutions;
- Extended battery life;
- Comfortable ergonomic design;
- Easy attachment assembly;
- High speed drilling and oscillating;



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- Less Weight, High Power
- Next Generation Cutting Technology
- New Generation Surgical Motor Technology



#### **RAPTOR LARGE** BONE

- Smooth speed control, right-left rotation and oscillation;
- High and low speed options for sensitive cutting performance;
- One hand piece solution for reaming, high speed drilling, screw driving and tapping functions with high torque performance;
- Easy handling and ergonomic design of Raptor ensures reliable and better controlled operation results:
- Replacing attachments and blades using quick couplings:
- High performance long reliability.

## RAPTOR SPS 4

- Smooth speed control, right-left rotation and oscillation;
- High and low speed options for sensitive cutting performance;
- One hand piece solution for reaming, high speed drilling, screw driving and tapping functions with high torque performance;
- Easy handling and ergonomic design of Raptor ensures reliable and better controlled operation results;
- Replacing attachments and blades using quick couplings;
- High performance long reliability.

#### **RAPTOR MINI** BONE

- Ergonomic and light hand tools prevent fatigue even after long hours of surgery;
- Powerful, modular electrical cable operated Surgical power tool system for small bone and light duty trauma surgeries;
- One handpiece solution for different purposes;
- Special cutting tolls for small bone operations Micro drilling, oscillating, reciprocating and sagittal saw attachments;
- Attachments can easily be removed and attached.









**ECONST** 

Ceramic & SS Blades Skin Graft Mesher & Carrier





NT Micro Oscillating Saw Micro Sagittal Attachment

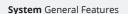
ARDIO



RTHO ix different trigger functions, Drilling, Reaming, Screwing, Tapping







- 10.1 inch large wide view colourful display with capacitive touch screen
- The ability to instantly display the Speed, Pedal and Torque values of the handpieces
- Special for each handpiece; Torque, Pedal, Oscillation, Irrigation setting menus
- Automatic activation/deactivation of menus based on handpieces properties
- Precise speed, torque and oscillation adjustment
- · Ability to change settings during operation
- Menu with LED status indicator and power button
- Ouick opening feature
- High performance operation, real-time response and fast switching between screens
- High user experience, visually enriched interface
- Possibility to use cables up to 5 m long
- Speed regulation function
- Advanced motor error management
- Control can be done with buttons and triggers on the handpieces
- A single console can be used in various operations, meeting different needs and providing ease of use to the operator.

#### Handpiece Speed and Direction Adjustment

- The motor can be adjusted at the desired speed
- Instant display of speed values
- Ability to adjust motor rotation direction via touch
- Ability to see the motor direction on the screen

#### **Torque** Properties

- Automatic torque adjustment according to the recognized handpiece
- Manual and precise torque adjustment
- Predefined torque settings; Cranial mode, Spinal mode, Metal cutter and Light mode

#### **Oscillation** Properties

- Automatic oscillation adjustment according to recognized handpiece
- Special oscillation setting for screwing and tapping operations
- Configuring the oscillation setting
- Light, Medium, Aggressive modes for Shaver handpiece

#### **Pedal** Properties

- 2 different pedal options
- Multiple handpiece control with single pedal
- Forward/reverse direction selection
- Adjustable pedal functions
- Irrigation on / off

#### **Irrigation** Properties

- 2 irrigation units that can work independently
- On/Off function
- Adjustment of irrigation flow as desired
- Manual flow mode
- Continuous flush flow mode

#### **Usage** Properties

- 3 motor and 3 pedal connector outputs
- Recognition of 9 different types of handpieces and auto-adjusting their features
- Ability to work independently of 3 handsets at full power at the same time
- · Recognition of 2 different types of pedals and auto-adjusting their properties

#### Menu Properties

- User-friendly and guiding help menu
- Adjustable volume
- · Automatic or manually adjustable display
- Multi-language option with visual and audio

#### **DERMATOME ST-5**

- Special designed hand pieces for different operation variations
- Small, medium and large head designs provides precise cutting results in different areas
- Light weight and cordless, battery operated ergonomic sytem offers mobility
- Quick, easy and safe blade replacement mechanism

- 10 level for cutting thickness adjustment with 5 main and 5 intermediate level for sensitive results
- High quality dermatome blades for precise and smooth consequences
- Provides 40 mm, 80 mm and 120 mm cutting width options for standard use (With the help of width reduction clamp, it allows cutting in special dimension)



#### **SKIN GRAFT MESHER**

- Single cutter cuts skin graft into geometrical shaped mesh & enlarges skin surface
- Graft expansion predetermined by graft carrying plates, eliminates the need to change the cutter during
- Continuous feed design prevents graft carrying plate from being loaded incorrectly and allows multiple plates to be used without interruption
- Graft thickness adjustment feature allows expansion on thin and thick grafts
- Easy availability of replacement parts





#### **HSM** MICRO SYSTEM / 40.000 RPM

- Graphical LCD on the power console shows adjusted motor speed, rotation direction, irrigation pump flow rate, pedal motor connection failure indicator
- Barled display shows speed demand
- Foot pedal for speed, direction and irrigation control
- Autoclavable swiss made powerful brushless DC motor
- Adjustable speed range up to 40.000 rpm!
- Under load motor start-up technology preventing the failures related to motor obstruction during operation!
- Low cost of consumable irrigation pump!

#### **Power** Console

- Operating Speed: 40.000 rpm (Adjustable Maximum Speed)
- Operating Voltage: 200-240 V
- Power: 260 W
- Irrigation Flow Rate: 100 ml/min (Adjustable Maximum Flow Rate)
- Frequency: 50-60 Hz
- Dimensions: 340 x 255 x 106 mm
- Weight: 5060 g



#### PRAXIS 3

BATTERY + ELECTRO SURGICAL MOTOR SYSTEM





#### PRAXIS SYSTEM WITH POWERFUL

#### **BRUSHLESS MOTOR**

- Battery charger and power supply unit, can charge batteries and supply power for corded operation at the same time.
- Graphic LCD display shows information about charging status
- Led battery charge status indicator shows instant percentage when the test button is pressed







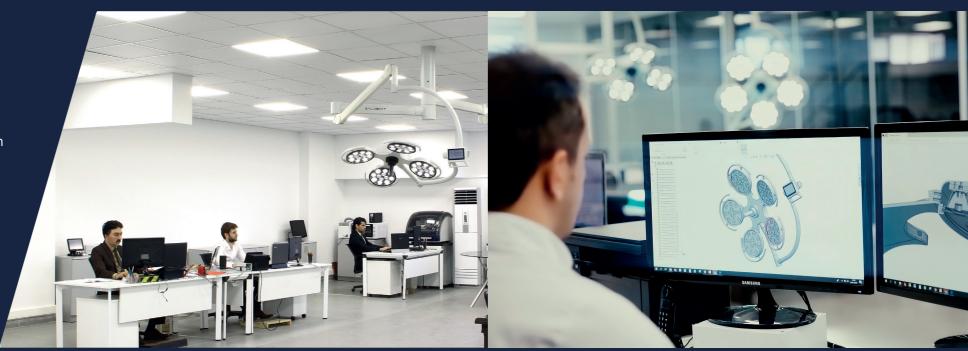


# SURGICAL ILLUMINATION SYSTEMS

Aygün is furthering a number of R&D projects simultaneously thanks to its advanced R&D infrastructure, team of engineers and technical personnel specialized in their field. Thus, the company holds tens of patents and models actively used in the medical sector.



Leds offer better shadow control when compared to conventional halogen bulbs. Halogen systems consist of a single bulb and multidirectional reflectors. Unfortunately, each direction requires a different setting and a different distance from the bulb. These differences may lead to unwanted "hot" and "cool" spots in the light pattern. A typical LED end-piece focuses LEDs at a single point. During this process it forms a block in order to avoid overlapping LEDs, therefore, LED points are round and consistent. There is no shadow cast on the patient during the surgery as the surgeons move in the lighted area. This can be tested with the surgeon moving their hands between the lamp and the operated area.







# SURGICAL ILLUMINATION SYSTEMS

#### **I-LIGHT LD SPECIFICATIONS**

- SUPERIOR OPTICAL PERFORMANCE
- LIGHT BEAMS CONFIGURATION TO PROVIDE SHADOWLESS ILLUMINATION
- ALMOST PERFECT COLOR RENDITION (TYP. 95)
- 5" TFT LCD TOUCH SCREEN PANEL
- ADJUSTABLE BEAM SIZES TO USER PREFERENCES

- SUITABLE FOR USE WITH LAMINAR FLOW FUNCTIONAL CEILINGS
- EASY TO CLEAN
- MINIMUM ENERGY CONSUMPTION
- 54.000 HOURS LED LIFE
- INDIRECT ENDO LIGHT FOR ENDOSCOPIC OPERATIONS





#### \* Multi Color

#### **SURGICAL** ILLUMINATION SYSTEMS

Adjustable color control



I-LIGHT LD Series provides adjustable color temperature to optimize visualization of red tissues. Color temperature is variable from 3500K – 5500K.

- Multiple Light Beam Configuration for Shadowless Illumination
- Improved Beam Technology
- No flicker effect
- Quality Light
- Super Optical Performance
- 5" TFT LCD Touch Screen Panel

- Memory function
- Easy to clean
- Endo Mode
- Ergonomic and practical design
- Laminar Air Flow
- Quick and comfortable usage
- Extra Protection





# **DISPOSABLE**STERILE PRODUCTS

With its ISO 7 clean room and by carrying its expertise on sterilization and operation solutions one step further, AYGÜN offers professional service to its valued customers in disposable medical items as well.



AYGÜN continues expanding its product range by adding other single use medical products to the completely silicone medical drainage systems needed by surgery.







- Spiral In Tubes
- Silicone Nutrition Tube
- Silicone Round Drain
- Silicone Flat-Soft Drain
- Silicone Flat Drain
- Intubation Tube
- PVC Laryngeal Mask
- Silicone Penrose Drain
- Silicone Thorax Drain
- Tracheostomy tube
- Intubation Tube
- Vac Silicone Drain
- Oxygen Mask







## FAIRS WE ATTEND

As Aygün Surgical Instruments Co, Inc. we are participate in many international fairs held every year in different regions of the world, organized in medical field; while presenting our products in a globalized competitive environment, also we are proud to represent our country. In this sense, we attend especially in Medica Düsseldorf which is considered as the biggest organization of the world in the field of medical technologies and also Arab Health in United Arab Emirates, FIME in United States, CMEFF in People's Republic of China, Hospitalar in Brazil and Expomed in Istanbul. Besides the fairs, we participate in many national and international congresses.



**MEDICA** DUSSELDORF



















Istanbul / Turkey



Beijing / China











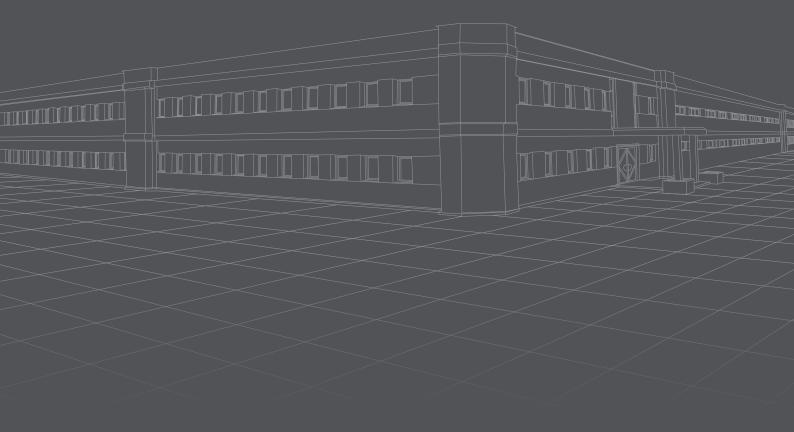








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#### **AYGUN**®

#### **FACTORY**

Organize Sanayi Bölgesi Yaşar Doğu Caddesi, No: 76 Kerimbey OSB, 55300, Tekkeköy SAMSUN, TÜRKİYE

T: +90 (362) 266 66 80 F: +90 (362) 266 93 30

www.aygun.com

aygun@aygun.com