



**Gedik** Advanced Casting  
Technologies

# INVESTMENT CASTING



# SAND CASTING





*Since 1967...*

As a **Gedik Holding** subsidiary, **Gedik Advanced Casting Technologies** was founded in 1967 and has divisions namely, Sand Casting and Investment Casting. The Company headquartered in Istanbul, works as an integrated company and performs all processes of casting and valve production together with **Gedik Termo Valve** company in a closed area of 25.000 m<sup>2</sup> in Sakarya.

Sand casting plant, which manufactures grey iron, ductile iron, steel, stainless steel, duplex stainless steel and bronze materials by using both automatic and automotive moulding lines (Sinto FBO and FTL) for the automotive, machinery, energy, defense, shipbuilding, pump and valve industries.

Besides standard low and high alloy carbon steels, stainless steel and copper alloyed parts up to 60 kg/piece can be cast for various industrial sectors.

The casted parts can be delivered as-cast and /or machined conditions, as per customers request and specifications.

Gedik Advanced Casting Technologies performing in compliance with national and international standards such as **Turk Loydu Approval Certificate, IATF 16949:2016, ISO 9001:2015, ISO 14001:2015, Bureau Veritas Certificate and TUV AUSTRIA TURK LTD Certificate.**



Gedik Advanced Casting Technologies provides to its customers a wide range of reliable and cost efficient solutions in cast iron, bronze, stainless steel, duplex stainless, low alloy and carbon steel casting.

**Features of Cast Iron Section**

- 10.000 tonnes annual capacity
- Sinto FBO3 Molding Line (500 x 600 x 250/250mm) - 120 molds/hour capacity
- Sinto FBOX3 Molding Line (500 x 600 x 250/250mm) - 200 molds/hour capacity
- 2x 3 tonnes melting capacity induction furnace

**Features of Steel, Stainless Steel and Bronze Section**

- 3.000 tonnes annual capacity
- FTL Molding Line with 6 stations (1100 x 1100 x 450/450mm)
- 2x 2 tonnes melting capacity induction furnace
- 2x 1000 kg melting capacity induction furnace



**Casting Design & Analysis**

- Siemens UG/NX, Solidworks 3D Drawing Softwares
- Solidcast, NovaCast Casting Simulation Software
- Inhouse 3D FDM Printers for Wax and Prototypes Using MatterControl Software

**Inhouse Test Features**

- Optical Spectrometer
- Tensile Strength Test and Charpy V-Notch Tests
- Microstructural Analysis
- Hardness Test

**Inhouse NDT Features**

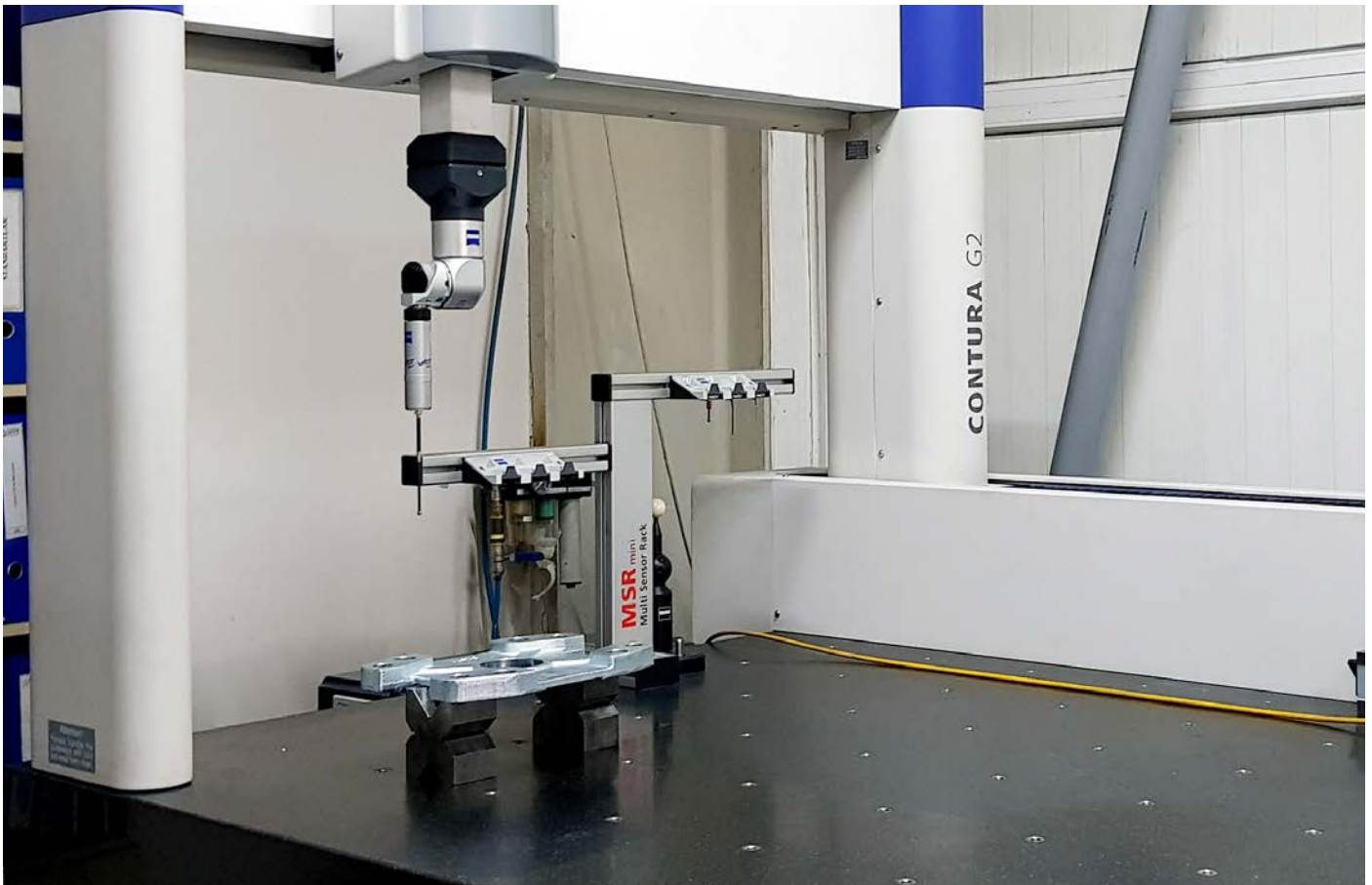
- Ultrasonic Testing
- Radioscopic Testing
- Radiographic Testing (X-Ray & Gamma Ray)
- Magnetic Particle Testing
- Liquid Penetrant Testing

**Other Activities**

- Heat Treatment
- Machining
- Coating
- Painting

**Inhouse Measurement Control Features**

- Carl Zeiss-Contura G2 type CMM
- Profile Projection
- Surface Roughness Measurement
- Coating Thickness Measurement



**EXAMPLES OF SAND CASTING PARTS**



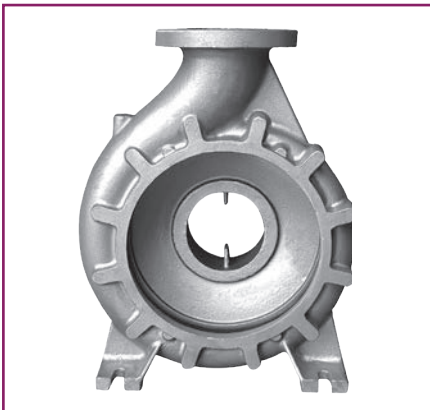
EN GJS400-18 / 15 kg



EN GJS400-15 / 11 kg



High-Cr



1.4462 / 280 kg



Duplex Stainless Steel Pump Cover / 1.4462 - 1200 kg



CuSn10 / 36 kg



CuSn10 / 14 kg



Al Bronze / 20 kg



CuSn10 / 125 kg



CuSn10 / 15-20 kg

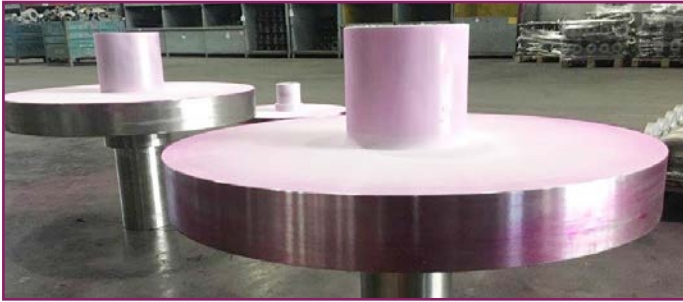


Gedik Advanced Casting Technologies has casted, DN 600 Angle Glob Valve Manufactured by the Gedik Termo Valve

DN 600



Globe Angle Valve Body - Bronze Rg10 / 800 kg



1.4462 / 550 kg Duplex



1.4470 / Duplex



1.4517 / 700 kg



GSC-25 / 400 kg



316L / 200 kg



1.0619 / 350 kg (Heat Treatment)



1.4470 / 1500 kg



Cu AL10Ni / 500 kg



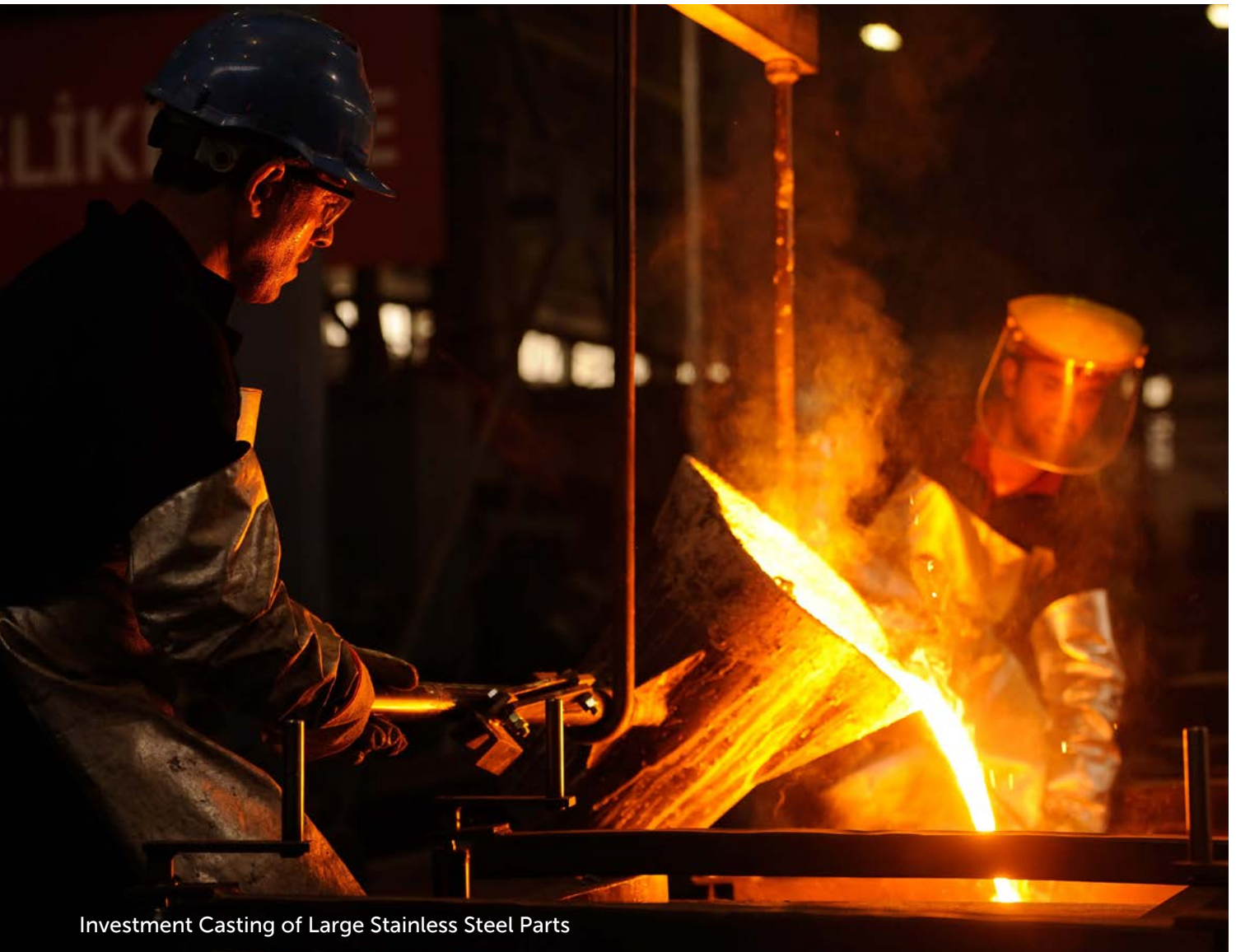
1.4470 / 400 kg



CuAL10Ni / 100 kg



Automatic Moulding Line – 1



Investment Casting of Large Stainless Steel Parts



Gedik Advanced Casting Technologies with highly qualified and experienced engineers serves its customers the aid of modern production and quality control equipments as well as using simulation tools.

### Features

- 1.000 tonnes annual capacity
- 2x 150 Kg melting capacity induction furnace
- 2x 250 Kg melting capacity induction furnace
- 1x 100 Kg melting capacity electrical melting furnace
- The weights of the parts from 10 gr to 50 kg

### Materials

- Low and High Alloy C-Steels
- Stainless Steels
- Super Alloys
- Cu-Alloys

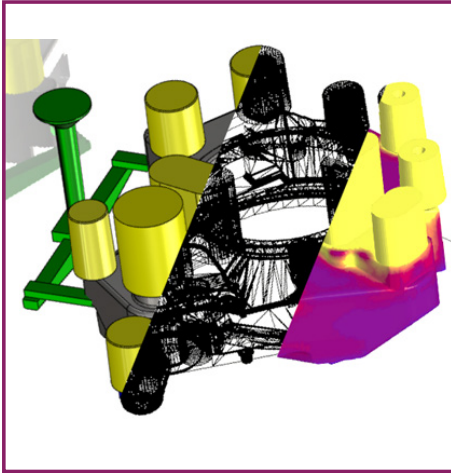
### Sectors

- Defence Industry
- Firearms Industry
- Automotive Industry
- Pump and Valve Industries
- Textile Industry
- Machine Industry
- Medical Industry
- Food Processing and Chemical Industry
- Electric Power Equipment
- Tools and Tool Holders

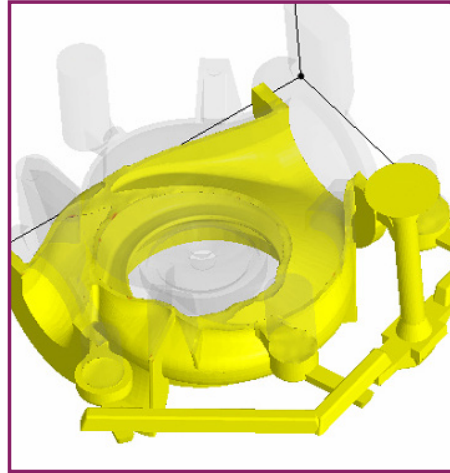


**Examples Of Investment Casting Parts**

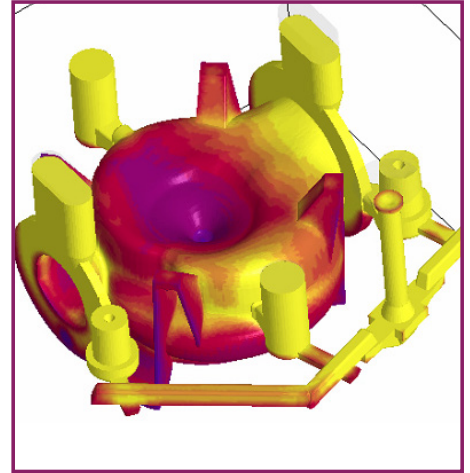
			
4130 / 0,388 kg	304 / 11,48 kg	1.4848 / 2,3 kg	316 / 1,195 kg
			
4140 / 0,234 kg	4340 / 0,574 kg	34CRMO4 / 0,68 kg	4140 / 0,15 kg
			
316 / 2,3 kg	316 / 23 kg	316L / 0,18 kg	316L / 5 kg
			
1040 / 29 kg	316L / 20 kg	4140 / 0,424 kg	4140 / 0,433 kg
			
ENGJS5007 / 0,730 kg	14408 / 65 kg	Duplex 1.45.17 / 2,08 kg	Ceramic Candle



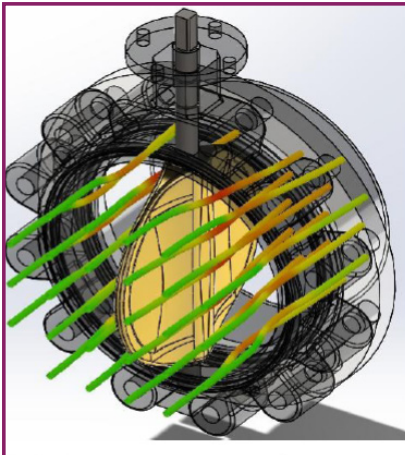
Design - Mesh - Simulation



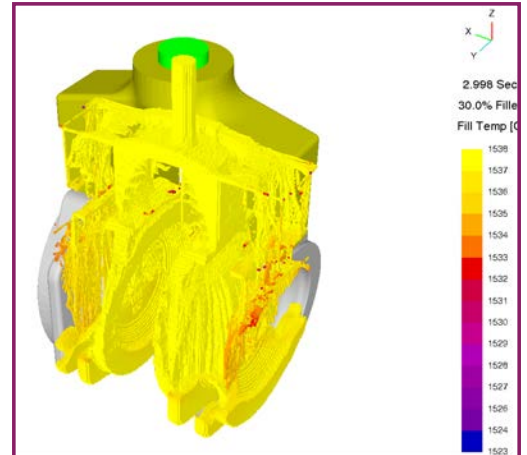
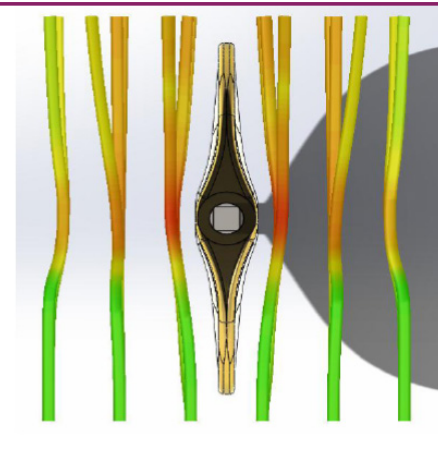
Flow Analysis for Sand Casting



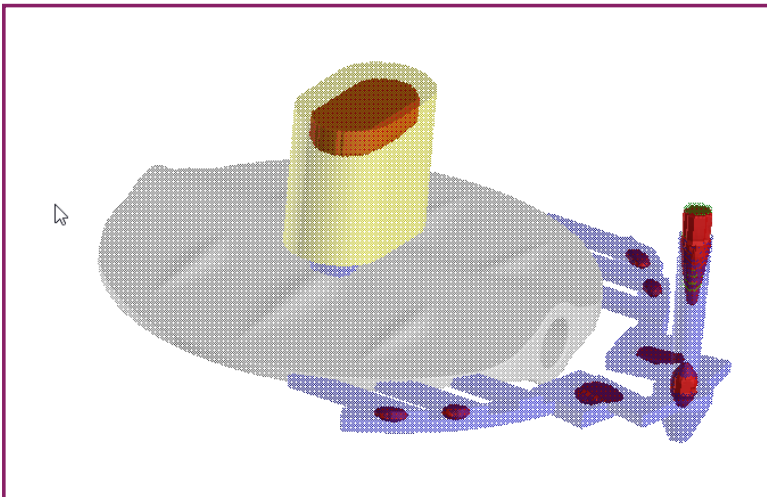
Solidification Gradient Analysis



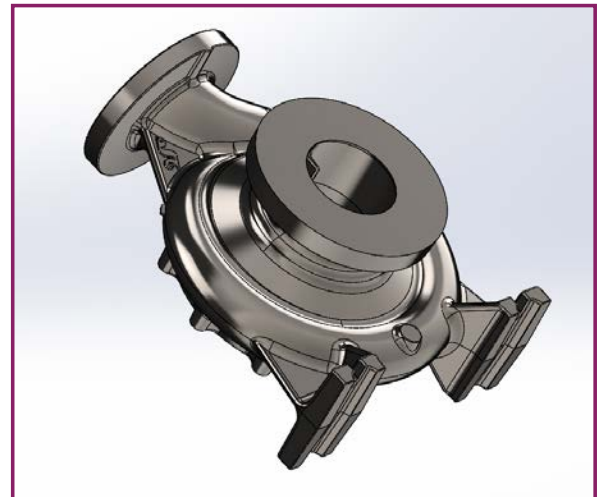
Butterfly Valve Flow Analysis



Flow Analysis for Investment Casting



Shrinkage Analysis



Solidworks



AD 2000 WO



Bureau Veritas



IATF 16949-2016



ISO 9001-2015



ISO 14001



Türk Loydu



TÜR Certificate



ISO 50001

# Experts' Choice Gedik Welding

**Gedik Welding** was established in 1963 and today is one of the largest manufacturers in Europe exporting welding consumables and welding machines to more than 90 countries around the world under its internationally registered trademarks GeKa, GeKaTec and GeKaMac. The company also generates robotic solutions and welding automation equipment under the brand name ROBOWELD.



# Certificate Your Global Expertise at Gedik Test Center

**Gedik Test Center**; was established in 2009 certification and industrial services for the education in the field of Non-Destructive-Tests (NDT). Serving a wide range of industrial sectors with its specialized technical and instructor staff, provides high quality of education with modern laboratories, training classes, modern devices and equipments. Gedik Test Center is accredited institution according to TS EN ISO 17024 Personnel Certification standard and also ASNT Corporate Partner providing Non-Destructive Testing Expertise courses according to TS EN ISO 25107 ve TS EN ISO 25108 standarts. Upon completion of the courses participants receive the "Qualification Certificate of Level 1+2 NDT Personnel" according to SNT-TC-1A and TS EN ISO 9712 standards. Gedik Test Center Laboratory that has been accredited by TURKAK according to TS EN ISO 17025 Test and Calibration Laboratories Standard also provides Destructive Testing Services to pipeline production, shipbuilding, steel construction, energy, automotive and defence industries with modern and advanced Mechanical Testing & Metallography Laboratories.



**Corporate  
Partner**





 **Gedik Welding**

Ankara Cad. No: 306 Şeyhli 34906  
İstanbul / Turkey  
T +90 216 378 50 00  
F +90 216 378 20 44  
[www.gedikwelding.com](http://www.gedikwelding.com)



 **Gedik** Advanced Casting Technologies

Ankara Caddesi No: 306 Şeyhli 34906  
İstanbul / Turkey  
T +90 216 307 12 62  
F +90 216 307 28 68-69

**Factory**  
Sakarya 2.OSB 11 No'lu Yol No: 6 54300  
Hendek Sakarya/ Türkiye  
T +90 264 290 12 00  
F +90 264 290 12 21  
[www.gedikcasting.com.tr](http://www.gedikcasting.com.tr)



 **Gedik Termo Valve**

Ankara Caddesi No: 306 Şeyhli 34906  
İstanbul / Turkey  
T +90 216 307 12 62  
F +90 216 307 28 68-69

**Factory**  
Sakarya 2.OSB 11 No'lu Yol No: 6 54300  
Hendek Sakarya/ Türkiye  
T +90 264 290 12 00  
F +90 264 290 12 21  
[www.gedikvalve.com.tr](http://www.gedikvalve.com.tr)



 **GEV**  
Gedik Educational Foundation

Ankara Caddesi No: 306  
C Blok Şeyhli 34906  
İstanbul / Turkey  
T +90 216 378 50 00  
F +90 216 378 20 44  
[www.gedikgeitimvakfi.org.tr](http://www.gedikgeitimvakfi.org.tr)



 **Gedik Test Center**

Ankara Cad. No: 306 Şeyhli 34906  
İstanbul / Turkey  
T +90 216 378 50 00  
F +90 216 378 20 44  
[www.gedikwelding.com](http://www.gedikwelding.com)



 **GEDİK University**

Cumhuriyet Mahallesi,  
İlkbahar Sk. No: 1-3-5  
34876 Yakacık / Kartal  
İstanbul/ Turkey  
T +90 216 452 45 85  
444 5 438  
F +90 216 452 87 17  
[www.gedik.edu.tr](http://www.gedik.edu.tr)



# **Gedik** Advanced Casting Technologies

## **Gedik Holding**

Ankara Caddesi No: 306 Şeyhli 34906 Pendik - İstanbul / Turkey

**P. +90 216 307 12 62 • F. +90 216 307 28 68 - 69**

## **Gedik Advanced Casting Technologies Manufacturing Plant**

Sakarya 2. OSB, 11 No'lu Yol, No: 6 54300 Hendek - Sakarya / Turkey

**P. +90 264 290 12 00 • F. +90 264 290 12 21**

[www.gedik.com.tr](http://www.gedik.com.tr)

[export@gedikcasting.com.tr](mailto:export@gedikcasting.com.tr)



## **Gedik Holding**