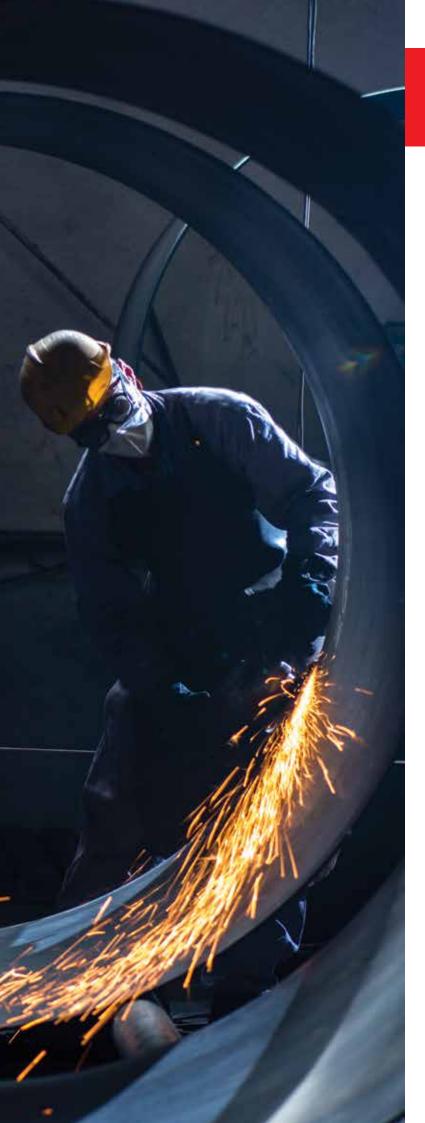




GERMANY GULF AFRICA INDIA ISTANBUL KAYSERI





Isisan is the core member of a group employing 1.000 people and active in pipe manufacturing, flour mill and animal feed production.

Isisan was established in 1968 in a small workshop producing hot water boilers and simple, non-pressurized tanks. Today we are working on a massive 46.000 m<sup>2</sup> area -over 25.000 m<sup>2</sup> is covered- located in industrial zone of Kayseri, Central Anatolia, Turkey.

Isisan focused to the pressure vessels business by 1980's and has grown up to be a major manufacturer, especially on transport and storage tanks for LPG, cryogenics,  $\mathrm{CO}_2$  and LNG. Isisan exports 50% of its products to more than 60 countries.

Isisan designs, manufactures and assembles all of its products in accordance with international standards and has certifications from a worldwide range of inspection authorities.

#### **Group Companies:**

Erbosan was established in 1974, as a joint stock company. Erbosan produces welded, steel, black and galvanized water and gas pipes, square and rectangular hollow sections, industrial tubes, low pressure boiler and steam pipes with latest production technology and according to international standards. Erbosan's quality and reliable products are globally known and more than 50% of production is exported to 5 continents and more than 70 countries.

Değirmencilik was established in 1932 in Kayseri as a flour mill with recent technology of those days. Değirmencilik is one of the first private companies of young Turkish Republic established by a group of enterpreneurs. Today having the most advanced production line in Turkey, the company produces flour for different purposes and animal feed. Değirmencilik is following its historic mission and is a well-known regional brand.

# We

### create value for our customers





#### **After Sales Service**

Our after sales service policy is to achieve maximum level of customer satisfaction. After sales services is important; because this can increase the life time of our products, eliminate the health, safety and environment risks which may arise from faulty operation or neglected maintenance. Our after sales service approach is to offer service in time, without compromising high quality standards and never leave our customers with unsolved problems. We always remember that the products are still carrying our brand. We make significant investments for the development of our after sales service team.

Our services include remote help, continuous technical support, providing commissioning, operating and maintenance instructions, announcing system upgrades and improvements on the products throughout its entire service life. We offer more comprehensive, location and product specific service packages upon agreement.

**Service Support:** Inspection, analyzing the current condition of the system, determining the level of service or maintenance, remote help, support for in-site repair or re-qualification.

**Maintenance:** Location and product specific services including periodic maintenance and regular preventive checks.

**Customer Training:** We offer training for operators, maintenance personnel and engineers, providing them the necessary knowledge and resources for adequately operating and maintaining an installation. We adapt our training programs to include the recent mechanical, electrical and software developments since we strive for continuous development.

**Engineering Support:** Our experienced engineering team offers to analyze your requirements and advice the best solution.

## Research & Development

Research & Development (R&D) has a very important role in today's dynamic business environment. Our R&D professionals follow the global developments and adapts to our designs and key processes. We benefit the advantages of high technology to create value for our customers. Isisan has a proactive, dynamic and progressive approach to keep its leader position and international reputation.

## know the importance of quality

































### **Quality Management**

When quality is the matter, Isisan can't compromise the best. Total quality is our primary concept while forming our production; covering all aspects from technology to human. Our company therefore has established a unit for Quality Management. Our Quality Management unit, under the guidance of ISO standards, has accomplished all employees to feel themselves as a part of our quality management system. Further, Quality Management unit conducts surveys and evaluation studies to determine the perception of our quality among our customers.

Inspection: Education, measurement, surveillance and observation are indispensable factors for providing quality. Quality Management provides information, methods and precise instruments and hardware for this purpose. Reliability of the hardware and instruments are guaranteed by regular inspection and calibration. These equipment have certifications from international accredited bodies.

#### Some of the inspection equipment that we use are: Non Destructive Test / NDT

X-Ray Devices Ultrasonic Thickness Measurement Ultrasonic Flaw Detector Magnetic Particle Test Device

#### Other Measuring and Control Methods

Industrial Endoscopy Leak Test with Helium Detector Pinhole Detector **DFT Measurement Devices** Surface Roughness Measurement Device Vacuum Measurement Hygrometry for Dew Point **UV** Lamp

**Approval:** Isisan has achieved the level of international quality standards and has been awarded international quality certificates.

- ISO 9001
- ASME STAMPS (U, U2, S)
- GOST TR
- GOST RTN
- UKR SEPRO
- 2010/35/EU (TPED)
- DIRECTIVE 2007/46/EC "Completed Motor Vehicle"
- EN ISO 3834-2

Standards: Isisan is capable to design and manufacture pressure vessels and submit certificates according to the following design codes and standards.

- AD 2000
- ASME Div.1, Div.2
- BS 5500
- CODAP
- ADR ADR Part 9 EN STANDARDS

# **SEMI-TRAILER TANKS**

- The lightest weight yet most durable semi-trailers; fuel saving and environment friendly.
- Certification according to 2007/46/EC.
- Design and manufacturing according to ADR, TPED, EN 12252. EN 12493.
- Upon customer's requirement, design and manufacturing can be done according to ASME, CODAP or other standards.
- LPG tanks are manufactured and tested under independent inspection, using fine grain, normalized pressure vessels steels. Metallurgical and mechanical properties of steels are verified.
- All welded joints are tested according to the manufacturing standard. A combination of X-ray, ultrasonic, dye penetrant and magnetic particle tests; hydrostatic pressure test, and pneumatic test of all connections, using nitrogen.
- Tank accessories and LPG equipment from most prestigious brands, which has worldwide certifications and proven performance.
- Different axle and suspension combinations to suit any type of road;
  - from single to four axles
  - single or tandem wheels
  - mechanical leaf or air suspension
- Excellent braking, load distribution and roll stability performance.
  - Drum or disk brake options.
  - ABS, EBS, RSP systems available on request.
- High performance coating with premium quality paints, to offer highest performance during the whole service life.

#### **Standard Configuration**

- Safety relief valves
- Loading and unloading connections
- Emergency stop
- Pneumatic internal valves
- Level gauges
- Equipment cabin made of metal, with long-life and ergonomic design
- Anti tow-away system
- Earthing rod
- Fire extinguisher
- Reflectors, safety marking and labeling
- Side protection bars

#### **Volumes**

45 m <sup>3</sup>	47 m <sup>3</sup>
48,5 m <sup>3</sup>	50 m <sup>3</sup>
55 m <sup>3</sup>	57 m <sup>3</sup>

62,2 m<sup>3</sup> 65 m<sup>3</sup>

#### **Optional Equipment**

- LPG pump
  - Hydraulic driven
  - Electric driven
- LPG hose reel; liquid phase, vapor phase or both (only with LPG pump)
  - Electric power rewind
  - Hydraulic power rewind
  - Pneumatic power rewind
- Selector (only with LPG pump)
- Remote emergency stop
- Light fixture (inside or outside of cabin)
- Earthing cable reel
- Dead man button
- Hydraulic operated internal valves
- Sunshield
- Logo





55 m<sup>3</sup> 3 Axles Air Suspension

8 pcs. Manufactured for ADNOC



45 m³ 3 Axles Air Suspension

Manufactured for SHELL GAS



65 m<sup>3</sup>
EN12493-TPED-ADR
Certification
4 Axles
Mechanical+Air
Suspension

100 pcs. Manufactured for ABU HUSSAIN



50 m³ EN12493-TPED-ADR Certification 3 Axles Air Suspension

80 pcs. Manufactured for GASCO, S. Arabia



48 m³ EN12493-TPED-ADR Certification 3 Axles Air Suspension

Manufactured for GASCO, Qatar



45 m³ 3 Axles Air Suspension

Manufactured for AYGAZ



# **BOBTAIL TANKS**

- The lightest weight yet most durable road tankers; fuel saving and environment friendly.
- Design and manufacturing according to ADR, TPED, EN 12252, EN 12493.
- Upon customer's requirement, design and manufacturing can be done according to ASME, CODAP, or other standards.
- LPG tanks are manufactured and tested under independent inspection, using fine grain, normalized pressure vessels steels. Metallurgical and mechanical properties of steels are verified.
- All welded joints are tested according to the manufacturing standard. A combination of X-ray, ultrasonic, dye penetrant and magnetic particle tests; hydrostatic pressure test, and pneumatic test of all connections, using nitrogen.
- Tank accessories and LPG equipment from most prestigious brands, which has worldwide certifications and proven performance.
- Optimum tank design and right configuration of equipment to suit the truck's specifications, the customer's requirements, and the local market conditions.
- Our vast experience and rigorous practices guarantee a safe and quality ride; excellent braking, load distribution and roll stability performance and will not pose a negative effect on truck's components.
- High performance coating with premium quality paints, to offer highest performance during the whole service life.

#### **Standard Configuration**

- Safety relief valves
- Loading and unloading connections
- Internal valves, pneumatic operated & with excess flow feature
- Level gauges
- Equipment cabin made of metal, with long-life and ergonomic design
- Anti tow-away system
- Earthing rod
- Fire extinguisher
- LPG pump
- Hydraulic drive
- Electric drive
- Shaft drive
- Reflectors, safety marking and labeling

#### **Optional Equipment**

- Hose reel; liquid, vapor or both
  - Electric power rewind
  - Hydraulic power rewind
  - Pneumatic power rewind
- Hose fixture, rust-free
- LPG meter and ticket printer
- Hydraulic operated internal valves
- Selector

#### **Volumes**

Tank capacities are determined by truck model and capacity; and standard sizes are as follows:

#### 2 axle trucks

#### 4x2 or 4x4

10 m<sup>3</sup>

14 m<sup>3</sup>

17 m<sup>3</sup>

#### 3 axle trucks

#### 6x2 or 6x4

17 m<sup>3</sup> 23 m<sup>3</sup>



#### 4 axle trucks

#### 8x2

32 m<sup>3</sup> 34 m<sup>3</sup>







34 m³ EN12493-TPED-ADR Certification with Pump (shaft driven) and Meter

10 pcs. Manufactured for STAR LPG



34 m³ EN12493-TPED-ADR Certification with Pump (shaft driven) and Meter

4 pcs. Manufactured for BIZIMGAZ



34 m³ EN12493-TPED-ADR Certification with Pump (shaft driven) and Meter

17 pcs. Manufactured for EXENGAZ



34 m³ EN12493-TPED-ADR Certification with Pump (shaft driven) and Meter

8 pcs. Manufactured for AKPETGAZ



23 m³ EN12493-TPED-ADR Certification with Pump (Hydraulic driven) and Meter

5 pcs. Manufactured for TOTALGAZ



23 m<sup>3</sup> EN 12493-TPED-ADR Certification with Pump (shaft driven) and Meter

Manufactured for GREEN FLAME LPG



# STORAGE TANKS

#### Design Temperature:

-20°C / +50°C

#### Design Pressure:

17,16 bar

#### Test Pressure:

24,54 bar

#### Head Type:

Ellipsoidal / Hemispherical

#### Material:

P355, EN 10028-3 Fine grain, normalized pressure vessel steel

#### Manufacturing Standard (\*):

EN 13445 / PED, with CE marking

- Manufacturing and testing under supervision of an independent inspection body.
- Metallurgical and mechanical properties of steels are tested and verified.
- All welded joints are tested according to the manufacturing standard. A combination of X-ray, ultrasonic, dye penetrant and magnetic particle tests are utilized.
- All tanks are subjected to hydrostatic pressure test; then all connections pass a pressure test, made by using nitrogen.
- Models for above ground and under ground installation.
- Tanks are sand blasted and coated with premium quality paints; offering highest performance during the whole service life of tank.
- (\*) Upon customer's requirements design and manufacturing can be done according to AD2000 Merkblatter, ASME, CODAP, BS 5500 or other standards; ASME U or U2 stamps can be provided.

#### **Industrial Tank Volumes**

17 m³	22 m³
30 m³	35 m <sup>3</sup>
45 m³	50 m <sup>3</sup>
60 m <sup>3</sup>	76 m <sup>3</sup>
93 m³	113 m³
118 m³	135 m³
164 m³	192 m³

#### **Domestic Tank Volumes**

500 lt	1.000 lt
1.750 lt	3.000 lt
5.000 lt	7.000 lt
10.000 lt	





115 m<sup>3</sup>

According to AD2000 and PED with CE Marking



120 m<sup>3</sup>

According to ASME Sec VIII Div I with U Stamp



Volume 70 m<sup>3</sup>

According to AD2000 and PED with CE Marking



280 m<sup>3</sup>

According to AD2000 and PED with CE Marking



3.900 liter

According to CODAP

1.500 pcs. Manufactured for NAFTAL, Algeria



500 liter

According to AD200 and PED with CE Marking



# **AUTOGAS TANKS**

#### **Design Temperature:**

-20°C / +50°C

#### **Design Pressure:**

17,16 bar

#### Test Pressure:

24,54 bar

#### Head Type:

Ellipsoidal

#### Material:

P355, EN 10028-3 Fine grain, normalized pressure vessel steel

#### Manufacturing Standard (\*): EN 12542, EN 13445 / PED, with

CE marking

- Manufacturing and testing under supervision of an independent inspection body.
- Metallurgical and mechanical properties of steels are tested and verified.
- All welded joints are tested according to the manufacturing standard. A combination of X-ray, ultrasonic, dye penetrant and magnetic particle tests are utilized.
- All tanks are subjected to hydrostatic pressure test; then all connections pass a pressure test, made by using nitrogen.
- Models for above ground and under ground installation.

- Special designs are available, e.g. double suction line, or submersible pump application.
- Tanks are sand blasted and coated with premium quality paints; offering highest performance during the whole service life of tank.
- (\*) Upon customer's requirements design and manufacturing can be done according to AD2000 Merkblatter, ASME, CODAP, BS 5500 or other standards; ASME U or U2 stamps can be provided.

#### **Standard Tank Volumes**

 $7 \text{ m}^3$   $10 \text{ m}^3$   $22 \text{ m}^3$ 



20 m<sup>3</sup>

Underground LPG Autogas Storage Tank with Pump System

According to CODAP

30 pcs. Manufactured for NAFTAL, Algeria



 $30 \, \text{m}^3$ 

Underground LPG Autogas Storage Tank with Pump System

According to CODAP

14 pcs. Manufactured for NAFTAL, Algeria



# **ENGINEERED SOLUTIONS**

#### **Flexfill**

Flexfill is a quick solution for a new starting LPG business. Including a LPG storage tank, pump, other machinery, piping, wiring and safety equipment; Flexfill is ready to use. Flexfill can be used for cylinder filling and autogas dispensing; may be used stand-alone or mounted on a vehicle. The dimensions of Flexfill are the same of a 20 feet container.

#### **Transformer**

Transformer is a complete LPG cylinder filling plant inside a 40 feet container. Including all the machinery, piping, wiring and safety equipment, it just needs an LPG supply then is ready to use. Transformer can be connected to any LPG storage tank. Transformer is ideal for new, developing companies or extending business into new areas. It is an effective solution during plant shut downs and maintenance periods. The unit can be disassembled and transported easily.

#### **Autogas Solution Packages**

Making the assembly and piping works at site takes more time and money, bearing quality risks from weather and other environmental factors and requires qualified workforce. Autogas solution packages have a modular design. The machinery and equipment are assembled at our factory; fitting, welding, electric wiring and test works are finished at factory and requires minimal work at site. Isisan offers solutions for both above ground or under ground installations. Our customers can trust on our field experience, or we can make alternative designs to suit customer's requirements.



20 m<sup>3</sup>

Aboveground LPG Autogas Storage Tank with Pump System

According to CODAP

90 pcs. Manufactured for NAFTAL, Algeria



22 m<sup>3</sup>

Aboveground LPG Autogas Storage Tank with Pump System

According to AD2000 and PED with CE Marking







### • Cryogenic

#### LIN/LOX/LAR

- Air Gas Storage Tanks
- Air Gas Transport Tanks

#### **LNG Tanks**

- Storage Tanks
- Transport Tanks

#### **Ambient Air Vaporizer**

#### **Engineered Solutions**

- LNG Solution Packages
- LCNG Solution Packages

# • CO<sub>2</sub> Tanks

#### **Foam Insulated Tanks**

- Storage Tanks
- Transport Tanks

#### **Vacuum Insulated Tanks**

• Storage Tanks

#### Other Tanks

#### **Pressurized Gas Tanks**

• Tanks for buffering or similar applications; for air, nitrogen, oxygen, hydrogen or other gases.

#### **Liquefied Gas Tanks**

• Tanks for storage, handling or similar applications; for ammonia, refrigerant gases, PUR industry chemicals, or other fluids.

#### Process Vessels

**Petroleum Separators** 

**Filtration Tanks** 

Sand & Water Filters

# **CRYOGENIC TANKS**









# PROCESS VESSELS









# CO<sub>2</sub> TANKS









# OTHER TANKS













### Some References

ABBARCI **ADNOC** AKPFT GAZ AL HOSNI

AL-MOFAZER GROUP

ARÇELİK ARROW GAS ASSAN PANEL AYGAZ

AYGAZ DOĞALGAZ

AZPETROL

**BALKIS CERAMIC INDUSTRIES** 

BALTIC PETROLEUM BARİT MADEN / BOZKAR

**BASI GAS** 

**BIZIMGAZ / SHV GROUP** 

**BP GAS BUZWAIR CENTRAL GAS CHEMI GAS** COCA COLA **DAEWOO** DHOFAR GAS **DUPONT** EFES PİLSEN

**ETCHEBASCO EXENGAZ** 

**EXXON MOBIL** 

**GAMA** 

**GASCO GEMIQAYA GLOBAL GAS** 

GLOBAL GYPSUM CO.

GREEN FLAME **GULF CRYO HABAŞ** 

HADAYA MOTORS

HAFFMANS - PENTAIR

HES KABLO

HİSAR DOĞALGAZ / ÜLKER

**INNOVATIVE INTER GAS** 

**IPRAGAZ / SHV GROUP** 

**ISTIKBAL** 

JERMUK GROUP

**JETGAZ** KARFI IYA KATAKIT LINDE GAS **LUKOIL MEGAS MESSER** MOGAZ

MUSCAT GASES CO. **MUSLEH SALEH** 

MUTAHER GENERAL TRADE

**NAFTAL** NATGAZ **NATIONAL GAS** 

MOPC

NATIONAL PETROLEUM

**NILE PETROLEUM NVTP** 

**ODE YALITIM OLYMPIA** 

OMV GAZ VE ENERJİ A.Ş.

ORYX GAS **PEPSI** PETROL OFISI **PROGAS RADFAN** SHELL GAS **SIDARCO** 

SOHAR GASES CO. LLC.

TAJ GAS **TOTAL OIL TPAO** 

TRINITY PETROLEUM

**UNIGAS UNIGAZ** 

UNITED INFRASTRUCTURE

**PROJECTS** ÜLKER **VESTEL** 

VIKING SODA AB

YCIC

YEMEN PETROLEUM

**COMPANY** 

## **Suppliers**

**FISCHER** 

ASPÖCK BLACKMER BPW **CORKEN** CRYOSTAR **ENDRESS HAUSER** 

**HEMPEL HEROSE** JOTUN KNORR-BREMSE **MECA-INOX REGO ROCHESTER** 

SAMSON SIHI SMITH WABCO WHESSOE



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