



NARVAN ARRA  
OIL & GAS



**arflu**  
INDUSTRIAL VALVES



# Introduction

## ■ ARFLU

We are pleased to present you our company which, since its foundation more than 40 years ago, is dedicated to the production of high-quality valves.

Up to 1988 we have been manufacturing all kind of industrial valves mainly for petrochemical, energy, gas and marine services and we are proud to manufacture our valves under our brand ARFLU.



We are equipped with the most modern installations and a highly-qualified human team, enabling us to offer the widest possible range of valves combining high standards in technology, quality and productivity, as well as tradition, experience and dependability, with an unrivalled reputation for quality and service.

All of ARFLU's quality guarantee system as well as all its processes and procedures, both technical ones regarding products and the organization of the company are certified according to the UNE-EN ISO 9001 standard. By this way ARFLU is certified according to module of 97/23/ CE of the UE.

The Company is structured into different division, Petrochemical & Energy, Gas division, Solar division, Water division and Marine services and we are proud to present them as follow in this brochure.



# Introduction

## ■ Narvan Arra

Established in 1997, Narvan Arra company has extensive experience in implementing major infrastructure projects in the fields of: Energy & Environment, Oil & Gas and Drive & Control.

We are committed to offering systems and solutions from the most reliable and reputable sources for a vast coverage of industry sectors; e.g. Hydro Power & Water, Oil & Gas, Petrochemical, Automotive, Steel, Marine & Offshore, to assist our clients achieve quality and long term profitability in their overall pursuits.

### Our Services:

- Marketing and Sales
- Contractual and Commercial
- Project Management and Coordination
- Technical Services
- Training and Transfer of Technology
- Systems Engineering
- Maintenance and after Sales Support

### Our Subsidiaries

**Kemya Enterprises: (United Arab Emirate)**  
Commercial and Banking Facilities

**Pars Narvan Arra Kish: (Kish Island-Iran)**  
Import & Export Facilities





## ■ Scope of Products

### ■ Gate valves

Gate valves are suitable in order to conduct different types of fluid. They allow flow port in full open position and they restrict in full closed position, with the possible minimum head losses. It is not recommended in intermediate positions.

### ■ Globe valves

Because of their configuration, globe valves are perfect to regulate or limit the fluid port. Depending on the needs of the system, design, or open position, they could generate different head losses in the line.

### ■ Check valves

Check valves are automatic operation valves, their own application is the safety measure in order to avoid the anti-return flow. When the pump is not working automatically, they maintain the pipe line full.



### ■ Ball valves

Ball valves are a quarter turn operating valves, usually for ON-OFF services. Main design parameters in Ball valves are the parallelism, and perpendicularity of the turning axe and the pipeline, and the spherical shape of the ball. Taking care of these two facts operating torque will be smooth and the valve will have a long tight life, as not foreseen stresses on the seat will be avoided.

### ■ Plug valves

Plug Valves are a quarter turn valves similar to Ball Valves. The valve closure system consists in a conical Plug, which seats against a soft material sleeve, or against the body of the valve. Plug valves are used as ON-OFF Valves.

### ■ Butterfly valves

Butterfly valves, like Ball and Plug Valves, are quarter turn valves. Mainly, they are used for low pressure, allowing the flow control and regulation. The bodies of these valves are very narrow, it generates low weight, and as a result, a low cost of manufacturing.



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## ■ Projects

List of the most important projects completed by Arflu / NarvanArra:



### **National Iranian South Oil Company (NISOC)**

Gachsaran Oil & Gas Operation Company

Range: Ball Valves 26" 1500#

Date of Completion: 2007

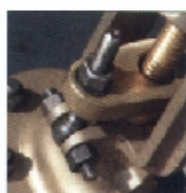


### **Kharg Petrochemical Company**

Expansion of Berthing Facilities on Kharg Island

Range: Ball, Gate, Check and Butterfly Valves 3/4" to 60" 150#

Date of Completion: 2006



### **Pars Oil & Gas Company**

20" Gas Pipe Line from Centralize Power Plant for Supplying Gas to Start up of Phases 15-16, 17-18

Range: Ball, Globe Plug Valves 1" to 20" 300# - 600#

Date of Completion: 2010



### **Mahabad Petrochemical Company**

300,000 t/y LLDPE/HDPE & 30,000 t/y Butene-1

Range: on/off Ball, Gate Valves 1/2" to 24" 150#-1500#

Date of Completion: 2010



### **National Iranian Gas Company**

Distribution Networks and Hot tap in Gas Transition Pipe Lines

Range: Ball Valves 8" to 30"

Date of Completion: 2008



### **Damavand Petrochemical Company**

Gas Distribution Plant

Range: Gate, Globe, Check and Ball Valves Manual / MOV 1/2" to 40" 150# - 900#

Date of Completion: 2012



### **National Iranian Oil Product Distribution Company**

Oroumieh Oil Product Storage Tank Farm

Range: Motor Operated Plug Valves 6" to 20" 150#

Date of Completion: 2009





## ■ Petrochemical Division

Considering the fact that petrochemical industry is playing a major role in today's industries, We proudly announce that arflu is one of the most experienced valve manufacturers in this industry and has been approved by the main petrochemical companies worldwide.

Arflu valves are manufactured according the main standards such as ASA, ANSI, ASTM, ASME, BS, API, DIN, MSS, and NACE. Our manufacturing range sizes are from 1/4" to 48".

### Manufacturing Program

**Gate valves-Bolted bonnet**  
150-300-600-900-1500

**Gate valves-Pressure seal**  
900-1500-2500

**Globe valves-Bolted bonnet**  
150-300-600-900-1500

**Globe valves-Pressure seal**  
900-1500

**Swing Check valves-Bolted bonnet**  
150-300-600-900-1500

**Swing Check valves-Pressure seal**  
900-1500

**Lift Check valves**  
150-300-600

**Wafer lift Check valves**  
Wafer Piston  
150-300-600

**Wafer duo Check valves**  
Double wafer clapped wafer  
150-300-600-900-1500

**Ball valves**  
150-300-600-900-1500  
All designs such as full or reduce bore,  
top entry or end entry.

**Plug valves**  
150-300-600-900

**Butterfly valves**  
150-300-600



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All kind of materials  
All kind of actuators

## ■ Gas Division

### Special designs for the gas industry

Arflu is always working for future investing in manufacturing for clean energies. We are giving priority in research and development to be leaders in the gas industry. Arflu valves are manufactured according the main standards such as ASA, ANSI, ASTM, ASME, BS, API, DIN, MSS, NACE, and FIRE SAFE.

We are specialist in metal to metal seals with exotic overlays. Our manufacturing range sizes are from 1/4" to 48".

## Manufacturing Program

### Ball Valves

- **Floating Ball** - Soft Seated  
150-300-600

- **Trunnion Ball** - Soft Seated and Metal to Metal  
150-300-600-900-1500

- **Top Entry Ball** - Soft Seated and Metal to Metal  
150-300-600-900-1500

- **Fully Welded** - Soft Seated and Metal to Metal  
150-300-600- 900-1500

### Plug Valves Lubricated Pressure Balance

150 - 300 - 600 - 900 -1500

**Butterfly Valves** metal to metal  
150-300



All kind of materials  
All kind of actuators



## ■ Solar Division

Our desire is to improve our present to preserve our future and the future is renewable. The world's population grows by around 300 million people every three years and the ongoing rapid increase in the atmosphere's carbon dioxide content is largely responsible for climate change and the growth rate over the last ten years being the highest in 50 years.

ARFLU Solar Division has been created under the global strategy of arflu to promote thermo solar plants as a sustainable and profitable solution for the global energy demand. We have developed and adapted our valves to the specific conditions of these plants.

ARFLU offers a complete package of valves, technical support, and services for parabolic trough & power tower plants (HTF, Molten Salts, and BOP & IP services). The main challenge for the piping materials in these plants is the high temperatures around 400°C-600°C. ARFLU valves are designed to stand these operating conditions.

## Manufacturing Program

Centered, Double and Triple  
Eccentric **Butterfly Valves**  
150-300-600

**Globe & Gate Bellow** (Double Wall Seal Valves)  
150-300-600  
All kinds of below material

**Trunnion Mounted & Floating Ball Valves**  
150-300-600  
Metal or Soft Seated, for Floating Valves 1 compensated seat

**Swing** (Bolted Bonnet and Pressure Seal & Wafer Check Valv  
150-300-600-900-1500

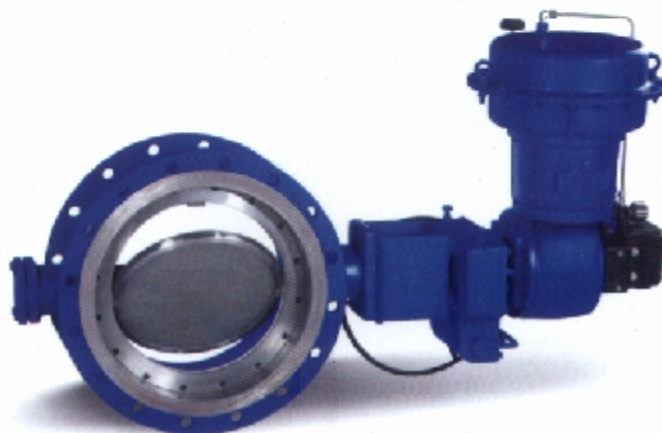
**Globe valves** Pressure Seal Extended Bonnet  
For high temperature.  
300-600-900



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All kind of materials  
All kind of actuators  
For BOP & IP we have our Standard manufacturing program available





## ■ Water Division

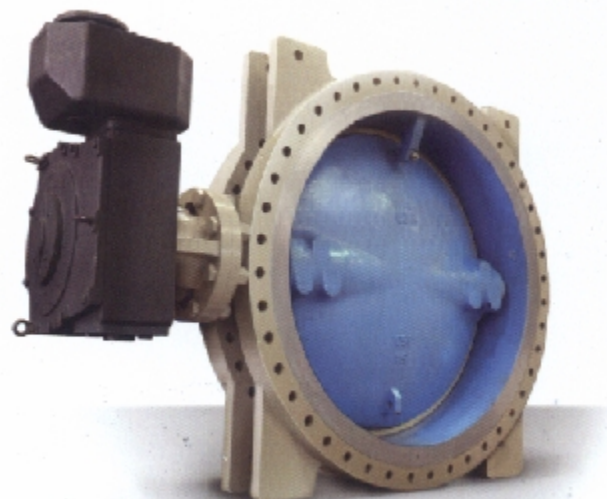
ARFLU's enterprise philosophy is based on the application of all its acknowledgement and technology in each individual sector in which it operates. Consequently, it has come to develop specific valves for this sector with utmost care in the application for water portabilization.

Arflu is involved in manufacturing valves for desalination, reverse osmosis, water handling, and water intakes for all industries and civil works.

We are specialist in materials for sea water from Stainless Steel to Bronze, Austenitic, Duplex, Super-Duplex, Monel and so on.

Arflu valves are manufactured according the main standards such as AWWA, AWWAC, ANSI, ASTM, ASME, BS, API, DIN, and MSS.

Our manufacturing range sizes are from 1/4" to 48".



All designs  
All kind of materials mainly Bronze and Duplex,  
Super Duplex specialized in sea water  
All kind of actuators

## Manufacturing Program

**Plug Valves** high pressure,  
Non Lubricated design

**Gate Valves**  
150-300  
For water and sea water

**Globe Valves**  
150-300

**Swing Check Valves**  
150-300

**Wafer Dual Check Valves**  
150-300

**Ball Valves**  
150-300

## ■ Marine Division

Leader in technology for the Navy

Arflu is the most experienced company in Europe manufacturing valves for the Navy. Valves manufactured in Bronze-Aluminum, Zinc free Bronze, Monel, 6MO, Titanium, Alloyco 20, Inconel, Hastelloy, Zirconium, Duplex Stainless Steel, Ferralium and others.

Arflu valves are manufactured according the main standards such as MILL, BU-SHIPS, DIN, CODAP, BS, AD...

Our manufacturing range sizes are from 1/4" to 24"



## Manufacturing Program

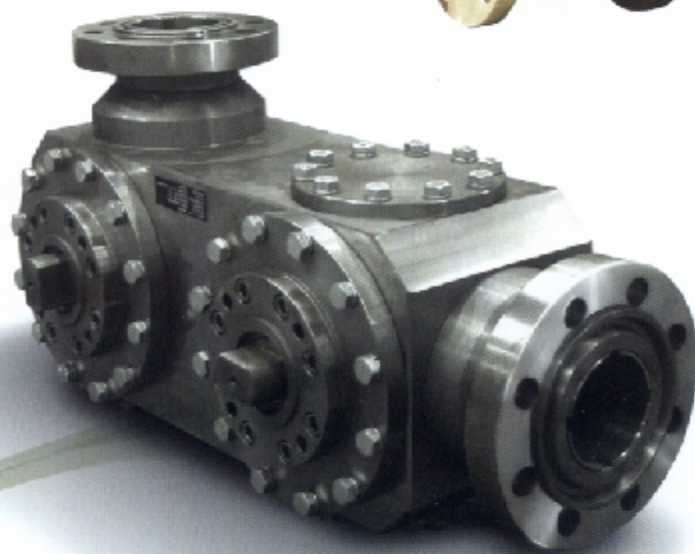
Gate Valves  
150-300-600

Globe Valves  
150-300-600

Swing Check Valves  
150-300-600

Wafer Dual Check Valves  
150-300-600

Ball Valves  
150-300-600



**NARVAN ARFLA**  
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All kind of materials mainly Bronze, Duplex, and Super Duplex specialized in sea water

All kind of actuators

Valves have passed high impact shock test in accordance with MIL-S-901 C & D Grade A Class 1 Type A

Design is according shipbuilders or Navy requirements



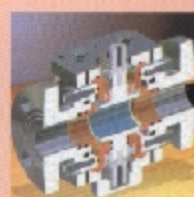


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NARVANARRA  
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## ARFLU

Head Office & Domestic Sales

CENTRALY VENTAS NACIONALES

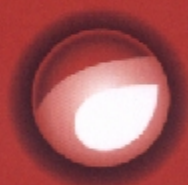
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**arflu**  
INDUSTRIAL VALVES

*Absolute Regulation of Fluids*

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**NARVAN ARRA**  
Committed to Environmental Issues