

# ENGINEERING RESEARCH RE-CREATION APPLICATION

### 2020 PRODUCT RANGE (LPG & GAS)

FILLING EQUIPMENT
CYLINDERS
VALVES
FITTINGS&FLANGES





Besides the Japanese translation of the word "maru" which means "round/circle", "Maru" is a collective of professionals who have teamed up, in order to form a perfect circle. We intend to engineer our clients' requirements by performing deep and intense research, followed by recreation of their dreams; and finalizing the process by applying these creations to their goods/facilities.

Located in Istanbul, The Maru team has access to the main industrial zones of Turkey. Having been employed in industrial markets for more then 20 years, our team is quite familiar with the requirements of LPG/GAS Professionals. During these 20+ years, a very important portfolio has been built; and the portfolio keeps growing day by day. We are aiming to introduce these professionals to high-tech solutions from all around the World.

info@marutr.com

www.marutr.com

## UNDER-GROUND\*\* STORAGE TANKS ABOVE-GROUND STORAGE TANKS



- Service and distribution stations for LPG AUto-Gas
- LPG Bottle/Cylinder-filling Plants
- Production and certification according to GOST, EN13445, AD 2000, EN 12542, ASME (U STAMP), Equipment Regulation 97/23/EC (PED),
- High performance coating applications according to EN 12944,
- Production flexibility for different storage capacities (5cbm 250cbm)
- NDT testing in accordance with standards, (Radiographic testing, penetrant testing, ultrasonic testing, magnetic particle testing, etc.)
- \*\*Local regulations of a country determines whether the tank is mounted above ground or below ground.







#### **SEMI TRAILER**



Designed and manufactured in the strength for cruising with a full load and road conditions. Trailers are manufactured in the form of a half frame, high-strength steel is used in frame.

**HEAT TREATMENT** 

RADIOGRAPHIC INSPECTION

PENETRANT OR MAGNETIC PARTICLE TESTING

HYDROSTATIC TEST

LEAK TEST

Body and dish; P355GH bands are used (passed laminating control according to EN 10160, minimum according to EN10204 3.1 Certified with levels; conforms to the EN10028-3 standard)









#### **DESULPHURIZATION TANKS**



In order to desulfurize the raw natural Maximum Operating Temperature: 60C gas... A very special and high efficient product. Besides removing the sulfur content from high-purity gas, provides corrosion and exhaust emissions below 6m / Nm3. Different options available, such as one tower, twin towers, serial or parallel.

Regeneration Temperature: ≤60C Operating Pressure: 0.3 ~ 1.6 MPA Capacity: ~ 3000 1000 (Nm3 / h)

H2S Content: 3000 ~ s6

Desulfurization: CT8-6B Special

Volume: 3.0 ~ 12.0 m3

Absorbed Cycle Renewal: 80 Days









### SKID SYSTEMS





Designed for low capacity fillings, ready-to-use & mobile systems.

Advantages of the skid on tpye filling station:

- Easy installation & easy-to-handle & safe
- Building, plot and construction works are not necessary. It is an economical system.
- Very suitable to use in rural areas.
- Low energy consumption
- Easy to carry. It can be montaged to any place easily.
- Tank capacity can be chosen (customer request).
- •In 10 m3 systems, there are 2 skids in one container. Thanks to this system, customer make a high logistic profit.
- Turnkey project







### FILLING EQUIPMENT

### MECHANIC FILLING SCALES









Used for domestic/industrial/camping, 2~50kg, all type lpg cylinders' filling.

Versions:

DOUBLE FILLING HEAD
PNEUMATIC FILLING HEAD
MULTI TYPE FILLING HEAD
ROTARY HEAD
MOVING ROTARY HEAD
PNEUMATIC FILLING GUN
PISTON FILLING HEAD

- Long lived and durable scales
- Easy set-up and utilization
- Adjustable (different cylinder diameters)
- Tested secure system
- Requires at minimum level maintenance and service
- Low air consumption
- Easy-to use scale



### FILLING EQUIPMENT

### **ELECTRONIC FILLING SCALES**



Used for domestic/industrial/camping 2~50kg, all type lpg cylinders' filling.

Versions:
DOUBLE FILLING HEAD
PNEUMATIC FILLING HEAD
MULTI TYPE FILLING HEAD
PNEUMATIC FILLING GUN

- Long lived and durable ex-proof loadcell (c3)
- Easy set-up and utilization

PISTON FILLING HEAD

- Adjustable (different cylinder diameters)
- Tested secure system
- Requires at minimum level maintenance and service
- Low energy and air consumption
- Easy-to use menu and readable blue led screen
- Synchronized with pc and data collection



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### FILLING EQUIPMENT

### **ACCESSORIES**





### LPG CYLINDERS

- LPG cylinders for domestic use in several capacities according to European Directives, Regulations, ADR or any other customer specifications.
- Module D certificate according to the directive 99/36/EC.
- Cylinders marked with "π"
- Wide range of products covering LPG cylinders from 4 L up to 112 L and, Cylindrical and Toroidal Automotive LPG Tanks from 32 Lt up to 90 Lt in water volumes within various diameters.

Camping Type Cylinders
Domestic Type Cylinders (22,1 - 30,6L)
Domestic Type Cylinders (30,6L - 59,5L)
Forklift Cylinders
Industrial Type Cylinders
Auto Tanks





### LPG CYLINDERS

Camping Type Cylinders Technical Properties

Diameter ØD (mm)	Volume (L)	Height (mn
Ø202	4,00	190
Ø235	4,95	230
Ø226	5,00	240
Ø202	6,00	305
Ø226	7,00	295
Ø226	7,10	295
Ø226	11,00	390
Ø229	12,30	405

#### Domestic Type Cylinders 22,1 - 30,6L Technical Properties

Diameter ØD (mm)	Volume (L)	Height (mm)
Ø300	22,1	475
Ø300	23,8	545
Ø300	24,0	540
Ø300	26,0	565
Ø300	26,2	590
Ø304	26,2	550
Ø320	26,2	515
Ø330	26,2	490
Ø360	26,2	465
Ø300	26,5	585
Ø315	26,5	535
Ø300	27,2	505
Ø300	27,2	505
Ø300	27,2	595
Ø300	30,6	650

#### Domestic Type Cylinders 30,6L - 59,5L Technical Properties

Diameter ØD (mm)	Volume (L)	Height (mm)
Ø300	30,6	650
Ø315	35,7	670
Ø374	44,0	610
Ø300	50,0	925
Ø360	52,0	730
Ø360	59,5	820
Ø360	59.5	815

#### Industrial Type Cylinders Technical Properties

Diameter ØD (mm)	Volume (L)	Height (mm)
Ø318	79,0	1120
Ø318	79,0	1205
Ø360	80,0	1020
Ø300	84,0	1425
Ø374	108,0	1235
Ø360	108,5	1320
Ø374	112,0	1265





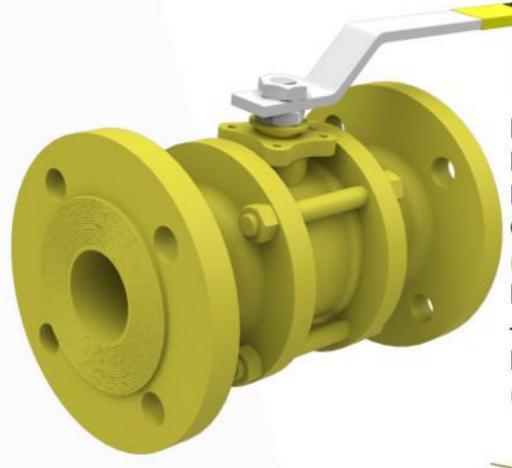


### VALVES



#### MONOBLOCK BALL VALVE

DN 15 – DN 150
DIN 2545 – 2635 (EN 1092-1)
PN 16/PN 40
CARBON STEEL BODY & ST.STEEL BALL
(FULL ST.STEEL AVAILABLE)
FULL BORE
FIRE-SAFE
-29 °C / +180 °C
HAND-LEVER OPERATED (ACTUATOR / GEAR-BOX AVAILABLE)



### FLANGED BALL VALVE

DN 15 – DN 250
DIN 2533 – 2545 (EN 1092-1&2)
PN 16/PN 40 FLANGED
CARBON STEEL BODY & ST.STEEL BALL
(FULL ST.STEEL AVAILABLE)
FULL BORE
-29 °C / +180 °C
HAND-LEVER OPERATED
(ACTUATOR / GEAR-BOX AVAILABLE)



#### THREADED BALL VALVE

DN 15 – DN 50 ( 1/2" - 2")
DIN 2999 ( 10226-1 )
PN 16/PN 40 THREADED
CARBON STEEL BODY & ST.STEEL BALL
(FULL ST.STEEL AVAILABLE)
FULL BORE
-29 °C / +180 °C
HAND-LEVER OPERATED
(ACTUATOR / GEAR-BOX AVAILABLE)



### VALVES

### ANSI CL150/300/600/900 BALL VALVES





DN 15 – DN 300 ( 1/2" - 12" )

ASME B 16.5

ANSI CLASS 150 / 300 / 600 / 900

FLANGED / THREADED / SOCKET WELDED / BUTT WELDED CONNECTIONS

CARBON STEEL BODY & ST.STEEL BALL

FLOATING / TRUNNION

FULL BORE

FIRE-SAFE

-30 °C / +250 °C

HAND-LEVER OPERATED (ACTUATOR / GEAR-BOX AVAILABLE)





### ACCESSORIES



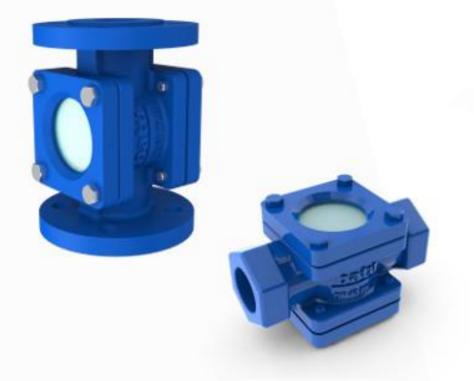
#### FLANGED STRAINER

DN 15 – DN 200 DIN 2533 – 2545 (EN 1092-1&2) PN 16/PN 40 CARBON STEEL BODY & ST.STEEL FILTER (CAST/DUCTILE IRON AVAILABLE) -40 °C / +400 °C



#### **CHECK VALVE**

DN 15 – DN 200 DIN 2533 – 2545 (EN 1092-1&2) PN 16/PN 40 FLANGED (THREADED AVAILABLE) CARBON STEEL BODY & ST.STEEL BALL+SPRING -29 °C / +180 °C



### SIGHT GLASS

DN 15 – DN 250
DIN 2533 - 2545 (EN 1092-1&2)
PN 16/PN 40 FLANGED
(THREADED AVAILABLE)
CARBON STEEL BODY
(FULL ST.STEEL AVAILABLE, CAST IRON AVAILABLE)
TEMPERED/BOROSILICATE GLASS
-30 °C / +250 °C



### FLANGES-FITINGS

### DIN 2605 ELBOW (90° - 180° - Angle)



- DIAMETER 20mm 812.8mm
- DIN 2605 3 D
- TS 2649/1
- TS EN 10253-1

### ANSI B16.9 ELBOW (90° - 180° - Angle)



- DIAMETER 3/4" 20"
- ASME/ASTM A234, ANSI B16.9
- SCH 40 & SCH 80
- LONG RADIUS

#### TEE - FITTING DIN 2615



- DIAMETER 21.3mm 323.9mm
- DIN 2615
- TS 2649/6

REDUCERS BUTT-WELDED, SOCKET
END-CAPS WELDED, THREADED...
A WIDE RANGE OF FITTINGS
IN DIN/ANSI NORMS
COUPLINGS AVAILABLE.



### FLANGES-FITINGS



#### DIN FLANGES

Flat Faced Flange Material: Steel

Sizes: DN10 - DN600

**PN40** 

Blind Flange Material: Steel Sizes: DN10 - DN600

**PN40** 





Butt-Welded Flange

Material: Steel

Sizes: DN15 - DN500

**PN40** 



Slip-on Flange Material: Steel Sizes: 1/2" - 24" 150,300,400,600,900 Lb





Blind Flange Material: Steel Sizes: 1/2" - 24"

150,300,400,600,900 Lb





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#### MARU Mühendislik Danışmanlık İthalat İhracat Ltd. Şti.

Address: Kurtköy Mah. Ankara Cad. 289-21 Yelken Plaza, Pendik,

Istanbul / TURKEY

Phone: +90 216 706 4660 / +90 541 319 7001

info@marutr.com

#### MARU LPG, Predrag MARKOVIC

Beograd, Belgrade | Serbia

Phone: +381 63 8432598 +381 60 0501174

predrag@marutr.com

www.marutr.com