

## COMPANY PROFILE

**AGR VALVES** is a prominent professional valve manufacturer whom strengthened by the design, manufacture and supply Ball valves, Gate, Plug & Axial flow Check valves with integrated capabilities of design, manufacturer, testing, supply.

**AGR VALVES** is located in Lonate Pozzolo, Italy, is aimed to satisfy the customer's most strict requirements in terms of design and manufacturing of valves for Oil & Gas, Chemical and Water Power Plant.

**AGR VALVES** was founded in 2016 by an Italian team of people coming from previous long experiences acquired in other valves companies internationally recognized. A professional and expert Project Team is capable of providing

on-demand studies in addition to a series of existing and updated reports on variety of topics. These include feasibility studies and specific market studies to determinate important variables and local market conditions among other topics, supporting clients in designing optimum solution and products.



The workshop is located in Casnigo (Bergamo) Italy, in cooperation with another Italian company for the production of Ball Valves according to API 6D with different type: Floating, Trunnion Side Entry, Top Entry and fully welded body with the range from ASME 150 to 2500 Lb. size from DN ½" to 48" made either forged or cast carbon steel material, and special alloy



material such as Stainless Steel, Duplex and Super-Duplex, Inconel 625. Gate Valves API 6A product are under development made by forged carbon steel and special alloy material suitable for high pressure applications, put AGR Valves in position to offer complete package of valves for up-stream to downstream applications.

**AGR VALVES** is able to provide Gate API 6D, Globe, Check and Butterfly Valves, in accordance with Customer's requirements, in order to complete the global market network. The valves are manufactured by qualified Italian companies, on the ground of former commercial agreements. Our valves with a different materials, size and pressure (pressure & temperature) in compliance with ASME B16.34, and API standard codes.

**AGR VALVES** philosophy puts HSE first and foremost in the minds of its employee. Company's commitment to health, safety, and the environment is always highlighted both internally and externally the organization.

**AGR VALVES** Corporate Policy has a comprehensive quality assurance plan in accordance with the requirements of API-Q1 and ISO-9001-2015 standards, which is the guideline of our management team. The most common materials used for the manufacturing of our products are: Carbon Steel, Duplex, Super Duplex, Titanium, Monel, Inconel, SMO and other special alloy material upon request.



## **PRODUCTION LINE AND CAPABILITIES**

### ***Floating, Trunnion & Twin Ball Valves in standard configuration:***

- Carbon or Sainless Steel body
- FB or RB
- RF / RTJ / BW Ends
- O-Ring Sealing
- Lever/Gear or Actuated

Plug Valves

### ***Trading:***

- Globe
- Gate
- Check
- Butterfly
- Globe Control Valves

### ***Floating, Trunnion & Twin Ball Valves in non-standard configuration:***

- Fully Welded
- Metal to Metal
- Top Entry
- Cryo & High Temperature
- Underground Service

### ***Under development by our R&D dept.***

Rising Stem Ball Valves

Choke Valves

## PRODUCTION LINE AND CAPABILITIES

### FLOATING BALL VALVES

- Size from 1/2" to 6" and pressure class from 150 to 1500
- Class 150 and 300 from 1/2" to 6" full and reduced bore
- Class 600 from 1/2" to 3" full and reduced bore
- Class 1500 from 1/2" to 2" full and reduced bore
- Bolted body, integral body with threaded ends
- Self relieving seat, stem with anti-static design
- Fire safe API 6FA - API 607 - ISO 14097
- Materials in accordance with NACE MR 01-75 / MR 01-03
- Designed, manufactured and tested in accordance with ISO 17292, ASME B 16.34, E.D. 2014/68/UE (PED)
- Available in all CS, SS, SDSS, Nickel Alloy, Alluminium Bronze materials



### WELDED BALL VALVES

- Size from 2" to 56" and pressure class from 150 to 2500
- Welded construction from forged/cast raw material
- Soft seat / metal seated
- Self relieving, double piston effect seat or dual seat
- Anti blow-out stem with anti static device
- Fire safe API 6FA - API 607 - ISO 14097
- Materials in accordance with NACE MR 01-75 / MR 01-03
- Designed, manufactured and tested in accordance with API 6D, ASME B 16.34, E.D. 2014/68/UE (PED)
- Available for underground services



### TRUNNION SIDE ENTRY BALL VALVES

- Size from 2" to 56" and pressure class from 150 to 2500
- Bolted construction from forged raw material
- Soft seat / metal seated  
Self relieving or double piston effect seat
- Anti blow-out stem with anti static device
- Fire safe API 6FA - API 607 - ISO 14097
- Materials in accordance with NACE MR 01-75 / MR 01-03
- Designed, manufactured and tested in accordance with API 6D, ASME B 16.34, E.D. 2014/68/UE (PED)



### TRUNNION MOUNTED TWIN BALL VALVES

- Trunnion DBB and floating DBB design
- Compact design available as well (dual ball in a single end to end dimension)
- Instrumentation floating DBB (injection and sampling) valves
- Anti blow-out stem with antistatic device
- Fire safe API 6FA - API 607 - ISO 14097
- Materials in accordance with NACE MR 01-75 / MR 01-03
- Designed, manufactured and tested in accordance with EEMUA 182 and ASME code, API 6D



## GLOBE CONTROL VALVES

**Size Range:**

DN 2" to 16".

**Pressure Class:**

ASME 150 to 1500.

**Material:**

Carbon Steel, Stainless Steel, Alloy Steel, Duplex-Superduplex.

**Application:**

Pneumatic Control Valve is a valve used to control fluid flow rate by varying the size of flow passage as directed by compressed air supply. The pneumatic control signal are traditionally based on a pressure range of 3-15 psi (0,2-1,0 bar) or commonly now, an electrical signal of 4-20 mA. Electric control often include a SMART communication signal superimposed on the 4-20 mA control current, such that the verification of the valve position can signalled back to the controller.



Generally pneumatic control valves are equipped by an electro-pneumatic positioner (converter) signal from 4-20 mA to 3-15 psi plus valve position and condition monitoring in an integral unit mounted on valve body. The most common and versatile types of control valves are straight-through or angle sliding-stem globe. Equal Percentage, Linear and Quick Opening Plug type. Rangeability 50:1.

**Leakage Rate:**

According to ASME FCI 70-2 Class IV (Metal Seat) Class VI (Soft Seat).

**Design Temperature:**

-45°C to 200°C Design ASME B16.34.

**Line Connections:**

ASME B16.5.

## PLUG VALVES

In order to extend its range of products and offer a complete lineup of valves generally demanded on world markets, **AGR Valves srl** has started the manufacturing development of Plug Valves for Oil and Gas applications.

**AGR Valves srl** Plug Valves are available in three different patterns: Short, Regular and Venturi, offered on flanged or welded end configurations.

**Material:**

Carbon Steel, Stainless Steel and Special Alloys.

Standard valves are designed and built for high and low temperature service and materials are chosen in compliance with NACE MR0175/ISO 15156. The production range of Plug Valves includes the following Sizes/Pressure Class.

**Size Range:**

DN 2" to DN 24".

**Pressure Class:**

ASME 150 to 1500.

**Leakage Rate:**

According to API 6D - API 598.

**Design Temperature:**

-46°C to 300°C - Design ASME - B16.34 - API 6D.

**End to End:**

ASME B16.10 - API 6D.



## ADDED VALUE

**DELIVERY TIMES**

- from 4 to 12 working weeks for standard valves
- Up to max. 16 weeks working weeks for special valves

**MACHINING CAPABILITIES**

- internal machining workshop for main components allows to speed up the machining and take all the process under control

**FLEXIBILITY AND CUSTOMER CARE**

- small and flexible group with high qualified personnel focused on customer's needs

**WORKSHOP:**

- the manufacturing area of both companies cover 8000 sqm with machining, measuring, lifting, assembling and testing equipment

**TECHNICAL CAPABILITIES**

- a team of experienced engineers designing with Solid Works and Inventory, able to carry out FEM analysis in order to offer lightest and reliable valves

## **MACHINING CAPABILITIES**



## **CAPABILITY TO MACHINE ANY METAL PIECE UP TO 42 INCHES (since 1967)**

<b>Machine Name</b>	<b>Serial Number</b>	<b>Machine Dimension (MM)</b>
Goodway GA 3000M	92A197	300 X 1000
Goodway GS 400	89A041	700 X 1200
Goodway GS 6600LM	96B006	990 X 2000
KDM KTM 12/16 [F]	KTM120100	1500 X 1200
Microcut Challenger HBM-4	094001207	2200 X 1600 X 1600
Litz LH800Bv	5W1180011	1300 X 1000 X 1000
NB1100A	VMF023	1100 X 600 X 600
First MCV 1500	70900145	1500 X 900 X 900
First MCV 1000	70800582	1000 X 560 X 560
Fortworth HB-110-2T	JM004	2200 X 1600 X 1600
Visual VL512	C8608	1800 X 1600
Goodway GS 6600L	98B016	990 X 2000

## OUR SHOP AND WAREHOUSE

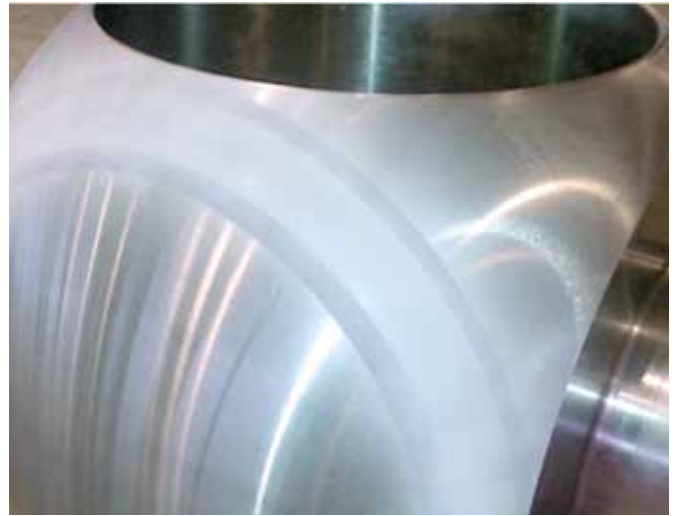


## TESTING AND ASSEMBLY FACILITY



- 2000 sqm for assembly and testing
- One horizontal test rig up to 24 inches; valves of other dimensions tested using blind flanges
- One horizontal test rig up to 12 inches; possibility to test 3 valves simultaneously

## NDE EXAMINATIONS



### **VOLUMETRIC EXAMINATIONS**

#### **RT**

- ON WELDS
- ON CASTING (CRITICAL AREAS)

#### **UT**

- ON RAW MATERIAL OR PRE-MACHINED COMPONENTS
- ON WELDS

### **SUPERFICIAL EXAMINATIONS**

#### **VT**

- APPLICABLE ON ALL MACHINED COMPONENTS AND WELDS

#### **PT**

- ON WELDS
- ON BEVEL ENDS

- ON FINISHED SURFACES
- APPLICABLE ON BOTH MAGNETIC AND NON

#### **MT**

- SAME AS PT BUT APPLICABLE ON MAGNETIC METAL PARTS ONLY

## PRESSURE TESTING



Pressure tests are carried out in accordance with customer's requirements. On/Off ball valves up to rating 2500# under go API 6D or API 598.



- 100% Ball valves are tested:
- Hydrostatic body/seat test
- Pneumatic body test
- Visual and dimensional test
- Functional and operability test
- LP & HP gas test

## SPECIAL PROCESS

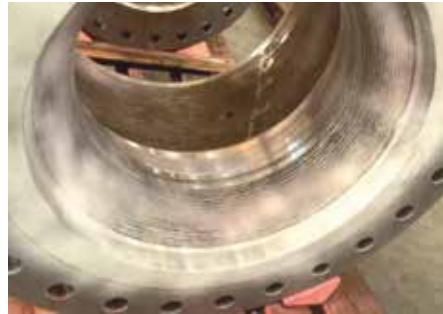
### ENP (Electroless Nickel Plating)

HARD FACING  
FRICTION REDUCTION  
CORROSION RESISTANT



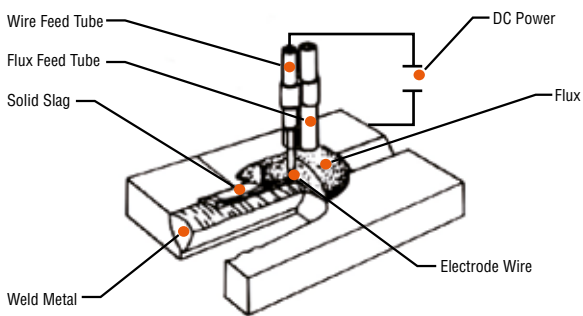
### WELD OVERLAY

STELLITE/INCONEL 625  
BALLS  
SEALING AREAS  
WET AREAS



### WELDING

#### SUMMERGED ARC WELDING



### TUNGSTEN CARBIDE COATING (-29°C + 350°C) CHROME CARBIDE COATING (-29°C +750°C)

TYPICAL THICKNESS 150-400 µm

**TCC** -29° C 0 +100° C +200° C +350° C

**CCC** -29° C 0 +100° C +200° C +400° C +750° C



METAL  
TO METAL  
SEALING



HVOF  
(HIGH VELOCITY  
OXYGEN FUEL)



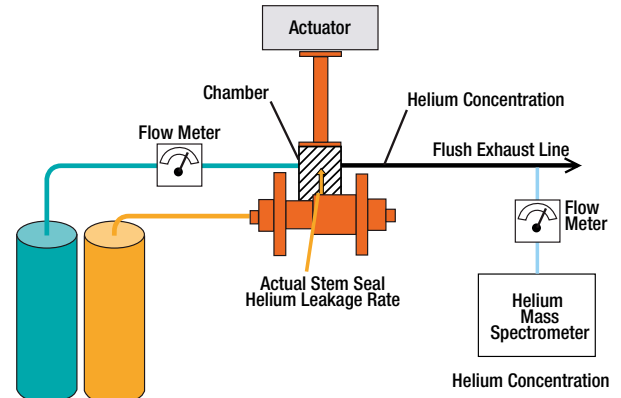
## OTHER QUALIFICATION TESTS

### FUGITIVE EMISSION TEST (ISO 15848-1, MESC77/312, TA-LUFT, ECC.)

HELIUM TESTS CARRIED OUT ON CYCLES BASE, WITH DIVERSIFIED PRESSURES/TEMPERATURE



#### ISO-15848 TEST METHOD



## PAINTING



#### STEPS:

- PROTECTION OF MACHINED PARTS
- GRINDING OF SHARP EDGES
- WASHING
- SANDBLASTING
- COATING

- ROUGHNESS TEST OF BLASTED SURFACE BY MEANS OF PRESS-O-FILM

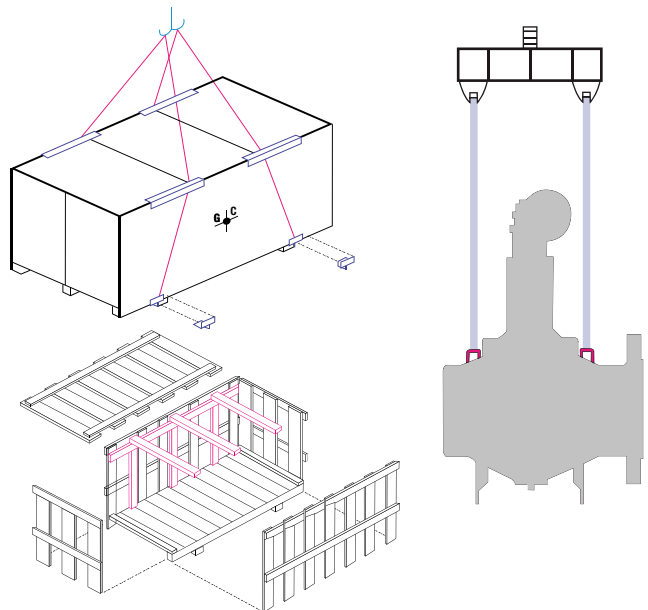
#### PADS

- CONTAMINANTS AND SOLUBLE SALTS
- WET FILM THICKNESS (W.F.T.)
- DRY FILM THICKNESS (D.F.T.)

#### CHECKS:

- THERMO-HYDROMETRIC CONDITIONS
- STEEL IMPERFECTIONS
- SURFACE PREPARATION
- CLEANLINESS (ISO 8502-3)

## PACKING



**FUMIGATED  
WOODEN BOXES**

## SHORT EXTRACT FROM OUR REFERENCE LIST

S/N	Project Name	Location	Valve Type	Year	Size	Rating	Material	Qty
1	MOSE	Italy	Ball Valve	2012	1/2~6"	150-800LB	BRONZE/316L/F53	188
2	Rhourde Nouss QH Processing Facilities	Algeria	Ball Valve	2012	2-12"	150-600#	LF2/F316	4
3	Barzan Onshore Project	Italia	Trunnion Ball Valves	2012	6"-8"	300~900	LF2/F51	4
4	Shah Gas Gathering Project	Austria	Choke Valves	2012	2"-4"	1500#	LF2/ENP	12
5	PNG LNG Associated Gas & Related Projects	Indonesia	Ball Valve	2013	≤4"	150~600LB	A105	31
6	Nael Energy		Ball Valve	2013	2~4"	300LB	F316L	67
7	Hanas Gas Project	China	Ball Valve	2013	2-10"	150~600#	LF2	12
8	GTS Expansion	Australia	Ball Valve	2013	2-12"	300~600#	A105N	10
9	Bab Habshan	Italia	DBB Valves	2013	6"-8"-10"-12" 16"-20"	150~300#	LF2/F51	80
10	Moho Nord	Italia	Floating Ball Valves	2013	2"-4"	150#	LF2/ENP	120
11	Thai Petroleum Pipe Line Co.,Ltd	Thailand	Ball Valve	2014	24"	900#	LF2/ENP	1
12	UGSP	Uzbekistan	Ball Valve	2014	2-4"	600~900#	LF2/ENP	12
13	Sumpal Expansion Project	Indonesia	Ball Valve	2014	2~12"	150~900LB	LF2/F51	2
14	Wasit Project	Austria	Choke Valves	2014	4"-6"	1500#	LF2/F51	6
15	Shah Gas Project	Austria	Choke Valves	2014	2"-4"-6"	1500#	LF2, F316L	7
16	Rabigh II Project	Italia	DBB and Trunnion Ball Valves	2014	8"-10"-12"	150~2500#	LF2/ENP	40
17	South Pars Phases 17&18	Iran	Cryogenic Ball Valve	2015	12"~ 16"	300~900	LF2, F316L	80
18	CNOOC 28/34 Project	China	Bare Stem Ball Valve	2015	2-10"	150~2500#	A105/SS316	10
19	AGFA Project	UK	Trunnion Ball Valves & DBB Valves	2015	12"-18"-24"	600#	LF2, F316L	24
20	—	UK	Floating Ball Valve	2015	2"	150#	LF2, F316L	2
21	—	Scozia	Trunnion Ball Valve	2015	10"-12"-16" 18"	150-900#	LF2/ENP	56
22	—	Austria	Choke Valves	2015	2"-4"	1500#	LF2/ENP	8
23	Missan Oil Field SDV Valve	Iraq	Pneumatic Actuator Valves	2016	1.5"~18"	150~300#	A105/LF2/F316	33
24	Tarim Oilfield Motor SDV	China	Bare Stem Ball Valves	2016	6"-10"	1500#	A 182 F51/F51	7
25	Belayim Petroleum	Egypt	Ball Valves	2016	12"-16"-24"	600#	A 105/	10
26	—	UK	Trunnion Ball Valves	2016	20"-24"	600#	A 182 F51/F51	23
27	—	UK	Floating Ball Valve	2016	2"	150#	A 182 F51/F51	10
28	—	UK	Trunnion Ball Valve	2016	24"	150#	LF2/ENP	1
29	—	France	Floating and Trunnion Ball Valve	2016	2"-6"	150#	LF2/F51	13
30	1305-OCTP Ghana	Ghana	DBB Ball Valves	2017	1"	600#	F316/F316	2
31	Refinery Revamping	Azerbaijan	Ball Valves+Actuator	2017	18"	150#	A105/F316	8