

GESCO VALVES

Perfect Solution for Environment & Technology Proven Reliability & Performance

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COMPANY PROFILE:

- **ESCO**, one of the premium, all resilient butterfly valves in oilfield industry, excels in wide range of applications.
- GESCO, specialized in Design, Manufacture of industrial valves, whose main product is all resilient butterfly valves. Our brand creating a reputation of quality and economical products in global market.

PRODUCTS:

- GESCO conducts Scientific research, Development, Production, Distribution and After sales service, has its distribution division with ready to deliver inventory that supplies following:
 - Butterfly valves
 - Ball Valves
 - ➤ Gate/Globe valves
 - Breather valves
 - Non- Return Valves

- Pressure & Vacuum Relief Valves
- ➤ Level Indicators
- > Flow meters
- Unions, Pup joints, Hose loops etc...

APPLICATIONS:

- ▶ GESCO products are commonly used for a variety of applications covering wide range of industries:
 - Oil and Gas (Drilling & Operation)
 - Petrochemical Industries
 - Chemical & Paint Industries
- Water and Sewage Industries
- Marine Industries
- Dry bulk handling

CAPABILITY:

MANUFACTURING:

- ☐ GESCO is specialized in developing and manufacturing low and middle pressure Butterfly valves, Ball valves, Gate valves and check valve.
- ☐ The factory emphasizes in manufacturing and supply of butterfly valves for hazardous as well non-hazardous applications.
- ☐ This modern facility is supported by a specialized team of highly-skilled technicians who ensure that the valves consistently deliver high performance and adherence to international standards

AFTER SALES SERVICE:

- ☐ GESCO has a service team of highly qualified and motivated employees to assist all clients with any issues regarding our products and systems.
- ☐ We refurbish all kind of valves, Integrate actuators, Hydro testing of valves (can issue third party certificate on request), Machining & Painting.
- □ Also, we maintain a comprehensive product and spare parts inventory that help us to equip our customers with enhanced availability at any time of requirement.

OUR ACCREDITATION:

□ GESCO is accredited and certified to globally recognized standards. All our products and services are delivered in conjunction with stringent quality and HSE practices, thereby providing our customers with the highest levels of assurance for Quality and Suitability to desired applications.











BUTTERFLY VALVES



A. BUTTERFLY VALVES-GESCO DESIGN

GESCO butterfly valve Complies with the requirements of content like Cement Slurry, Crude oil, Hot water, Petrol, Diesel etc.. and the Corrosive/Hazardous chemical content requirements like HCL (Up to 36%), H2S, Brine, etc..

Key features for GESCO butterfly valves:

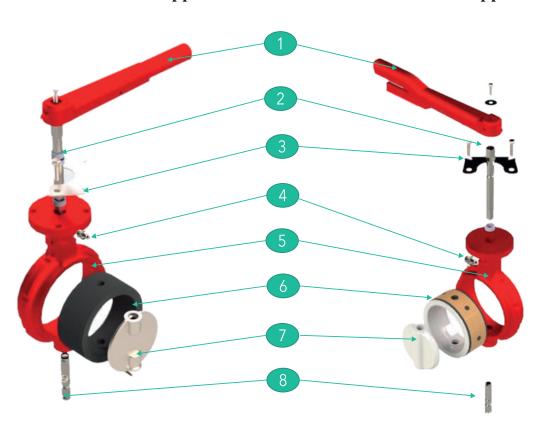
- These valves are manufactured with Applicable Design Standard: API 609.
- Flange connection conforms to EN/ISO standard.
- A one-piece body/disc with centric bearing is safe against expulsion.
- Sealing surface between disc and body is machined, to ensure long trouble-free operation and no leaks.
- Attention given to the sealing area Specify at least double sealing.
- Sealing surface is ensured with the thickness on the seat as at least 3mm and the wide chambered sealing serves as a double-sided sealing of the flanges.
- ➤ The liner and the body are profile matched to prevent the liner being moved

TECHNICAL SPECIFICATION						
Description	Butterfly Valves – Non-Hazardous Application	Butterfly Valves – Hazardous Application				
Application	Cement Slurry, Water, Crude Oil, Mud, Diesel, Petrol, etc.	HCL (up to 36%), H2S, Brine solution, Highly corrosive media, Toxic Chemicals etc.				
Size	2" to 36"	2" to 36"				
Working Pressure	Maximum 10 Bar	Maximum 10 Bar				
Working Temperature	-40C to 150C	-40C to 150C				
Applicable Design Standard	API 609 or DIN EN1092 or JIS B2032	API 609 or DIN EN1092 or JIS B2032				
Flange Ends	ASME B16.5 or DIN 2532 or JIS B2212	ASME B16.5 or DIN 2532 or JIS B2212				
Water & Air Test	API 598 or DIN 3230 or JIS B2003	API 598 or DIN 3230 or JIS B2003				
Applicable Operator	Lever, Worm Gear, or Pneumatic Actuator	Lever, Worm Gear, or Pneumatic Actuator				
Mounting Pad	ISO 5211 Mounting pad for easy & quick positioning	ISO 5211 Mounting pad for easy & quick positioning				
Spark Test	Not Applicable	14 KV				



Non-Hazardous Application

Hazardous Application



SPARE PART LIST Item No. Description Non-Hazardous Application **Hazardous Application** Handle Forged Steel Forged Steel SS-304 SS-304 Top Stem Lock Plate SS-304 SS-304 Grease Nipple SS-304 SS-304 Body Ductile Iron (DI) Ductile Iron (DI) NBR / BUNA / Nitrile / Viton PTFE Seat Disc DI / SS / Alloy Steel SS + PTFE Lined Bottom Stem SS-304 SS-304





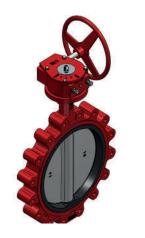


B. BUTTERFLY VALVES - FLANGED TYPE

Complies with the requirements of content like Cement Slurry, Crude oil, Hot water, Petrol, Diesel etc.. and the Corrosive/Hazardous chemical content requirements like HCL (Up to 36%), H2S, Brine, etc..

Key features:

- ➤ Standard SORF flanges on both sides of the valve 2" to 36"
- > Split body or single rigid body
- > Pressure rating = 10 Bar
- > Structure Centerline shaft without pin
- ➤ Body Ductile Iron
- Seat Depend on application NBR / BUNA / Nitrile / Viton / PTFE
- ➤ Disc Depend on application SS / D.I. / D.I. + PTFE lined
- ➤ Shaft SS 304
- > Operation Hand lever or Worm Gear or Pneumatic Actuator





C. BUTTERFLY VALVES - LUG TYPE

Complies with the requirements of content like Cement Slurry, Crude oil, Hot water, Petrol, Diesel etc.. and the Corrosive/Hazardous chemical content requirements like HCL (Up to 36%), H2S, Brine, etc..

Key features:

- Composed of metal such as Ductile Iron / SS / WCB / Cast Iron
- ➤ Size 2" to 36"
- > Threaded tapped lugs positioned on the valve flanges
- > Suitable for end-of-line service
- Pressure rating = 10 Bar
- Seat Depend on application NBR / BUNA / Nitrile / Viton / PTFE
- ➤ Disc Depend on application SS / D.I. / D.I. + PTFE lined
- ➤ Shaft SS 304
- Operation Hand lever or Worm Gear or Pneumatic Actuator



GATE VALVES

A. GESCO DM Style Mud Gate Valve

GESCO Mud Gate Valve is used for mud, cement, fracturing and Drilling fluid control for mud system.

Application: Water, Cement, Mud, Fuel, Hazardous/Non Hazardous Chemicals etc...

Size: DIN 25 to DIN 400

Applicable Design: API-600/602/603

Type: Mud Gate Valve, Solid/Split/Flexible Wedge, Knife Gate, Parallel Disk, PVC..

Working Pressure: PN 10 to PN 250 Temperature: -45C to 150C

Flange: ASME B16.5/DIN 3230/JIS B2212 Operation: Hand Wheel/Lever, Gear Operation









GESCO Mud Gate Valve is equivalent to OM series, which is mainly used for mud, cement, fracturing and water service and are easy to operate and simple to maintain. This series of mud gate valve is rising stem, solid gate with resilient seals with superior design and precision workmanship to meet the working request. GESCO DM mud gate valves are identically to DM series in size and fully interchangeable spare parts can be provided.

Specifications:

- Designed specifically for abrasive and erosive condition
- Gates available: Nickel-plated carbon steel, Monel, Aluminum Bronze or Stainless Steel
- > Stainless or Carbon Steel Inserts with Nitrile or HNBR Elastomer
- Connection: Flange/Thread/Butt weld/Hammer Union
- ▶ Pressure ratings up to 5,000 psi in 2", 3", 4", 5" x 4" and 6" x 4" Valve Sizes
- \triangleright Working Temperature: -46°C \sim + 121°C
- ➤ Sour Service Models to NACE MR-01-75
- ➤ Specification Level: PSL1 ~ PSL3
- ➤ Performance Requirement: PR1 ~ PR2
- Factory Pressure Tested in Accordance with API.6A

Application:

Mud pump line, standpipe manifolds, oil and gas pipelines, abrasive drilling mud system, corrosive water flood lines, cementing services, wellheads, well treating chemicals.

Full Port 2000psi, 3000psi & 5000 psi WP



2"x 5000 (2000, 3000) Psi Flaged End



2"x6000 (2000, 3000) Psi Butt Weld End



2"x5000 (2000, 3000) Psi Threaded End



B. Model 72 style Mud Gate Valve

GESCO Mud Gate Valve is equivalent to model 72 series, easy operation, tight shut offs, long service life before overhaul. This assures simple, fast, low cost renewal in the field

Specifications:

- > Size: 2", 3", 4", 4" x 5"
- ➤ Working Pressure: 2000psi, 3000psi, 5000psi
- \triangleright Working Temperature: -46°C \sim +240°C
- > Connections: LP Threaded, Butt-weld, Flanged, Union Available
- > Working Medium: Sour Gas, Water Flood
- ➤ Valve body protected by oil and abrasion resistant long life rubber seals
- > Full rising, one piece forged gate & stem, shows at a glance if valve is open, partly open or closed.

Application:

Mud pump line, standpipe manifolds, oil and gas pipelines, abrasive drilling mud system, corrosive water flood lines, cementing services, wellheads, and well treating chemicals







LP Threaded End Connection

Butt Welded End Connection

Flanged End Connection

C. Z23Y style Metal Seal Mud Gate VALVE

Z23Y / Z43Y series of mud gate valves are designed by parallel-type Metal to Metal Sealing, mainly used for Oil and Gas lines, Wellheads, Manifolds and Pipelines, Crude Oil and Sour Gas, Well Treating Chemicals. It is convenient to open, the two ends of the valve and pipes are joined and staled with spherical movement,







Specifications:

MODEL	Z23Y-35- DN50	Z23Y-35- DN65	Z23Y-35- DN80	Z23Y-35- DN100	Z23Y-70- DN50	Z23Y-70- DN65	Z23Y-70- DN80	Z23Y-70- DN100
W.P.	5000 PSI				10000 PSI			
SIZE	50 (21/16'')	65 (29/16'')	80 (31/8'')	100 (41/16")	50 (21/16")	65 (29/16")	80 (31/8'')	100 (41/16")
MEDIUM	MUD							
CONNECTION	UNION, THREADED, BUTT WELDED			FLANGE				
CONNECTION SIZE	Tr120x6 (Tr100x12)	Tr130x6 (Tr120x12)	Tr150x6	Tr180x6	BX152	BX153	BX154	BX155
STRUCTURE LENGTH	230	235	270	330	356	380	430	520



D. FC/FL style Slab Gate Valve

GESCO Slab Gate Valve is equivalent to model FC & FL series, whose feature is a non-rising stem with a slab gate, full-bore thru-conduit design, floating slab gate and seats, floating seat ring body bushing designto provide safe dependable service. This series of gate valves are made by integral die forging, the body and flanges are integral (non-welding). Shot Blasting for every parts of valve. Phosphate toimprove corrosion resistance

Specifications:

- Manufactured and tested in accordance with API Spec 6A
- > Forged Steel Body and Bonnet
- ➤ A True Bi-Directional Valve
- Low Operating Torque
- ➤ API Spec 6A PSL, 1, 2, 3
- Material Classes DD, EE, FF, to NACE MR-0175
- Connections: Threaded, Butt-weld, Flanged, Union
- ➤ Medium available: Oil, Gas, and Water
- ➤ Specification Level: PSL1 ~ PSL4
- ➤ Performance Requirement: PR1 ~ PR2
- ➤ Size from 1 13/16"- 7 1/16"
- ➤ Working pressures: 5000-20000 PSI

Application:

Well Control system, Drilling Manifolds, X-mas trees

Slab Gate Valve divided into Non-Rising stem and Rising stem type, also into Manual and Hydraulic type

E. Manual Slab Gate Valve (Non-Rising Stem)

Feature:

- > Simple structure and renewable gate and seat assembly
- ➤ One-piece and double-acting gate with long service life
- ➤ Both thrust bearings with large load capacity and composite rubber-plastic stem lip packing minimize operational torque
- ➤ Bearing cap is provided with a grease cup to make it easy to inject lubricating grease in the field
- ➤ Threaded packing gland allows removal of bearings and stem packing under line pressure
- ➤ Both the bolted bonnet and modern bonnet seal ring provide simple structure and reliable sealing
- > The scaling surfaces of the gate and seat are hard faced for wear and corrosion resistance
- > Wave springs are installed between the body, seat and between the gate and seat. The gate and seat still maintain a positive metal to metal seal under low pressure;
- > Floating gate design requests the hand wheel to be backed off 1/4 turn after its rotation can go no further.









F. HYDRAULIC SLAB GATE VALVE

Hydraulic slab gate valves adapt hydraulic control, Used extensively in the automatic control system and remote control, Work steadily and use freely.

Specifications:

Nominal pressure: 2000psi - 15000psi

Nominal size: 1-13/16" - 4-1/16"

➤ Working temperature: P U

➤ PR: 1-2

➤ PSL: 1-4

➤ MC: AA-FF

➤ OP: 100~1500psi



G. ULT Plug Valve Low Torque

GESCO provides API 6A standard ULT style Plug Valves with standard union connections, and a standard service rating up to 15000psi NSCWP, size from 1" to 3". ULT Plug valve provides flow control for oil field applications such as cementing, fracturing aciding, coiled tubing, sand control, and manifold, trailers. Manual, Air and Hydraulic operation available for standard sour gas and low temperature application.



GESCO ULT Plug Valves has the features of superior seal ability, low operating torque, and longer service life, dual seal design, which consists of high alloy steel valve body, plug and rubber seals. The cylinder body inner wall and side segments work together with the rubber seal segment to provide sealing. The metal-to-metal sealing is available between the side segment and cylinder plug, and it can be easily open or closed even the working pressure above 10000 psi.













Diameter: DN40-600

Pressure Rating = 10 Bar

Pressure test: BS5163/ISO5208

➤ Valve design: DIN3352-F4

> Temperature: 0-80 °C

> Application Medium: Water, Crude Oil, Gas etc.



I. STAINLESS STEEL FLANGE GATE VALVE

> Size:1.5"to 48"

Pressure Rating: PN10-PN64

Material: SS304, SS316

Design Standard: API600, BS5153, GB/T122234, JIS B2073

➤ Inspection Standard: API 598, JB/T9092, JIS B2003

Application Medium: Oil, Gas, Water, Crude oil, Steam etc...

Application Temperature: 29-425°C



J. API SLAB GATE VALVE

➤ Product scope: NPS 2" to NPS 60" - CL150 to CL1500

Design standard: API 6D

Flange connecting end: ASME B16.5, ASME B16.47

➤ Inspection and test: API 6D

➤ Main body material: WCB, LCB, CF8,CF8M, etc....

> Drive device: Handle, Bevel gear, Electric & Pneumatic



K. PNEUMATIC GATE VALVE

> Size: DN40-600

Pressure Rating: 0.3-10 MPa

Material: Alloy steel, Stainless steel

> Design Standard: API 6D, ASME B16.34

Inspection Standard: API598

Application medium: Oil, Gas, Liquid

Application Temperature: 196-500°C



BALL VALVES



GESCO COVERS FLOLLOWING TYPES OF BALL VALVES:

- > Trunnion Mounted Ball Valve
- Floating Ball Valve
- > Top Entry Ball Valve
- Three Way & Four Way Ball Valve
- > Two Piece & Three-Piece Butt Ball Valve

Features:

- Design and Manufacture: API 6D, API 608, ISO 17292,
- ➤ Size Range: From ½" to 48"
- Pressure Ratings: Up to 150LB (PN1.6-PN4.0MPa)
- ➤ Temperature Range: -29°C to 350°C
- ➤ End Connections: ASME B16.5, JB/T79, EN1092
- Face to Face Dimension: Manufacturer standard
- Inspection and Testing: API 6D, API 598

CHECK VALVES









GESCO COVERS FLOLLOWING TYPES OF CHECK VALVES:

- Dual Plate Check Valve
- Swing Check Valve
- Rubber Flap Check Valve
- ➤ CF8 Butterfly Check Valve

Features:

- ➤ Body Construction: Lift check valve, Swing check valve, Ball check valve, etc...
- ➤ Bonnet Design: Bolted bonnet, Welded bonnet, Pressure sealed bonnet etc...
- > Design and Manufacture: API 602, BS 5352, ASME B16.34
- ➤ Size Range: 1/2" to 4"
- > Pressure Ratings: 150LB to 2500LB
- ➤ Temperature Range: 196°C to 500°C
- ➤ End Connections: Threaded, Socket-Welded, Butt-Welded, Flange type etc...
- Face to Face Dimension: ASME B16.10 and other standard
- ➤ Inspection and Testing: API 598 and other standard.



FLOAT VALVE

GESCO provides Float Valves, Repair Kits, Baffle Plates and Puller Assembly Tools, including H2S and high temperature service condition. These Drill Pipe Float Valve provides added blowout protection at the bottom of the drillstring, prevent flowback when joints are added, and keep cuttings out of drill pipes to prevent bit plugging while making connections.

Features:

- > All GESCO Float Valves are manufactured with alloy steel integral
- ➤ All Flappers are investment cast and then case hardened for wear resistance.
- Elastomers available Buna-N/NBR (Standard), Viton/FKM (Hi-Temp), HNBR (H2S) for optional
- ➤ All GESCO Float Valves, baffle plates, and valve pullers are interchangeable with Style Model F /FA, and BakerŽ Style Model G/GA Float Valves
- ➤ Heat Treatment: Carburize at 1500-1550°F to .005/.010 depth with hardness 58 HRC Min.
- Surface treatment: Xylan fluoropolymer coating with depth 0.25-0.30mm or Nicked Plated.
- Color Blue or Black, or customize

A. MODEL F PLUNGER TYPE FLOAT VALVE

Model F DPFV provides positive and instantaneous shut off against high and low pressure, assuring continuous control of fluid during drilling, including H2S application. For normal drilling operations, the durable Model F is the most economical choice and is available in all sizes.

GESCO Model F Drill Pipe Float Valve is made of alloy steel body and dimensionally identical to the standard Float Valve, interch- angeable trim, recommended for use with downhole mud motors.

B. MODEL FA DRILL PIPE FLOAT VALVE

Model FA DPFV offers all the standard feature of Model F with the added feature of a port which allow a fluid path through the valve's center. It is recommend to use for monitoring the bit head when differential pressure required. Available in all sizes.

C. MODEL G FLAPPER TYPE FULL OPEN VALVE

It is good for use with highly abrasive fluids, with flapper design to open quickly and fully to provide a completely unrestricted bore through the valve. When circulation stops, the flapper closes instantly to prevent cuttings from entering the drill string and plugging the bit; and open when the first joint is raised out of the hole assuring the first joints drain and are not pulled wet.



All flappers for Model G are made of low alloy steel 8620 with QPQ treatment to resist wear and erosion. The flapper valve opens fully during circulation providing an unrestricted flow drilling fluid.



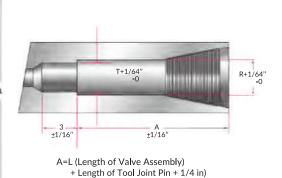


D. MODEL GA DIFFERENTIAL PRESSURE MONITORING VALVE

It is idential to Model G except of a hardened 1/4" diameter carbide orifice bean insert in the flapper to provide automatic partial filling of the drill pipe during running in, which is used to monitor the bit head when differential pressure required

Dimensional Information For All Styles Of Model FAnd G Drill Pipe Float Valve:







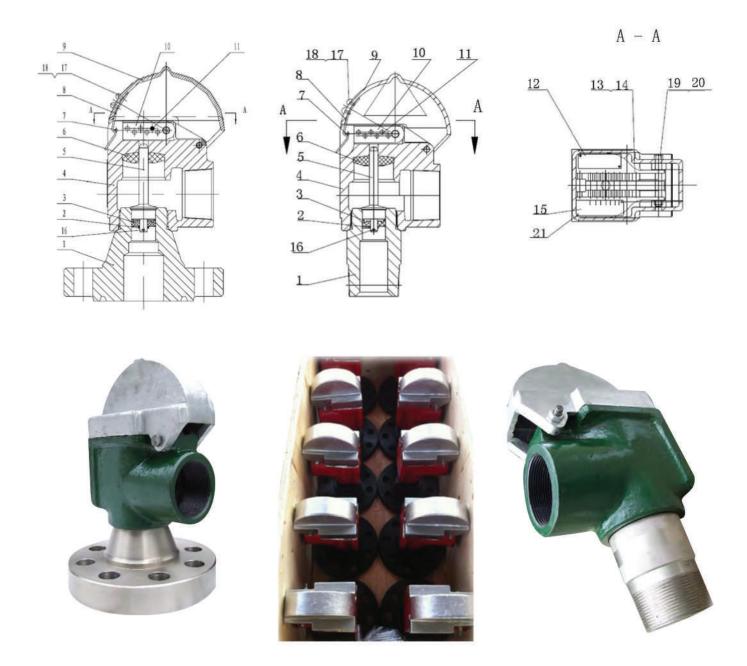
	D	R(D+1/32)	L	Т	ID of Valve		
Valve Size	Diameter of Valve	Diameter of Recess for Valve	Length of Valve	Diameter of Recess for Baffle Plate	Model F	Model G	
1R	1 21/32"	1 11/16"	5 7/8"	1 5/16"	1"	N/A	
1F-2R	1 29/32"	1 15/16"	6 1/4"	1 1/2"	1 1/4"	1"	
2F-3R	2 13/32"	2 7/16"	6 1/2"	1 29/32"	1 9/16"	1 1/4"	
3F	2 13/16"	2 27/32"	10	2 7/16"	1 7/8"	1 5/8"	
3 1/2 1F	3 1/8"	3 5/32"	10	2 11/16"	1 7/8"	1 5/8"	
4R	3 15/32"	3 1/2"	8 5/16	2 15/16"	2 5/16"	1 31/32"	
4F	3 21/32"	3 11/16"	12	3 1/4"	2 1/2"	2 3/16"	
5R	3 7/8"	3 29/32"	9 3/4"	3 3/8"	2 3/4"	2 1/4"	
5F-5R	4 25/32"	4 13/16"	11 3/4"	4 9/32"	3 1/4"	2 7/8"	
6F	5 11/16"	5 23/32"	14 5/8"	5 3/16"	4 1/8"	N/A	

Model F and G Drill Pipe Float Valve are identical in outside dimension and use the same float sub or bored-out drill collar. Float subs are made in lengths from 14"to30" depending on size and type, and designed for two recuts, two on either end or one on each end



SHEAR RELIEF VALVE

GESCO supply style JA-3 Shear Relief Valve 3"-S000psi, which is popular used in BOMCO Mud Pump F1300/1600, HHF1300/1600 and 3NB1300/1600. There is Threaded and Flanged connection, union is available upon request.



We also have YYFJ-L2 Overflow Valve, JZR3-L8Angle Stop Valves, PJC1-L8 Air Release Valve used for Mud Pump Pulsation Dampener



GESCO-OTHER SPECIALIZED OILFIELD ACCESSORIES

Other than Valves, GESCO also has its distribution division with ready to deliver inventory that supplies:

- ➤ Customized fabricated pipe spools with unions including internal coating suitable for non-hazardous contents
- > Flow meters
- ➤ Level indicators
- > Aero unions
- > Hammering unions
- > Swivel joints
- ➤ ASME Manways
- ➤ Rigid couplings
- Mud pressure gauge
- > Rubber & Metal expansion Joints etc...



















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