

Choke Valves  
Gate Valves  
WellHead Control Panels  
Control Systems  
Oil & Gas Upstream Equipment

CELEBRATING

15

years

2001-2016



## **Your best solution** for Oil & Gas Upstream Equipment

Quam is a CUSTOMER-ORIENTED company specialized in design and manufacturing of Special Valves & Control Systems for the Oil & Gas industry that builds its business with manufacture of SPECIAL VALVES and front-line CONTROL SYSTEMS for Oil and Gas Industry.

Quam consists on hard working staff guided by passion, high sense of responsibilities and high attitude. Our experience in this sector makes us efficient, precise and allows us to find custom made solutions easily, especially for most demanding clients.

QUAM guarantees high quality products for the entire range of products, thanks to meticulous selection of suppliers and to raw materials, 100% made in Italy.



## Quam Key points

- 01 High Quality Products
- 02 Heavy Duty Design
- 03 100% Made in Italy
- 04 Quick Deliveries
- 05 Reliable Service
- 06 Competitive Price
- 07 Effective Customer Support
- 08 Customized Design

### MANAGEMENT

Our Management is composed by skilled project design engineers, specialized in production, sales and quality solutions.

### ENGINEERING

All our products are 100% internally engineered. Our Engineers can work with the most advanced software applications, designing very functional and innovative products.

### TESTING

Our R&D group performs intense test activities to verify the design before the product is commercialized.

Every product is 100% Hydrostatically and Functionally tested according to EN 10204 3.1 and certified to PED, API-6D & API-6A Standards.

### SALES

Our skilled sales team is able to suggest the best combination of product design, material options and pricing with timely and accurate quotations.

### MANUFACTURING

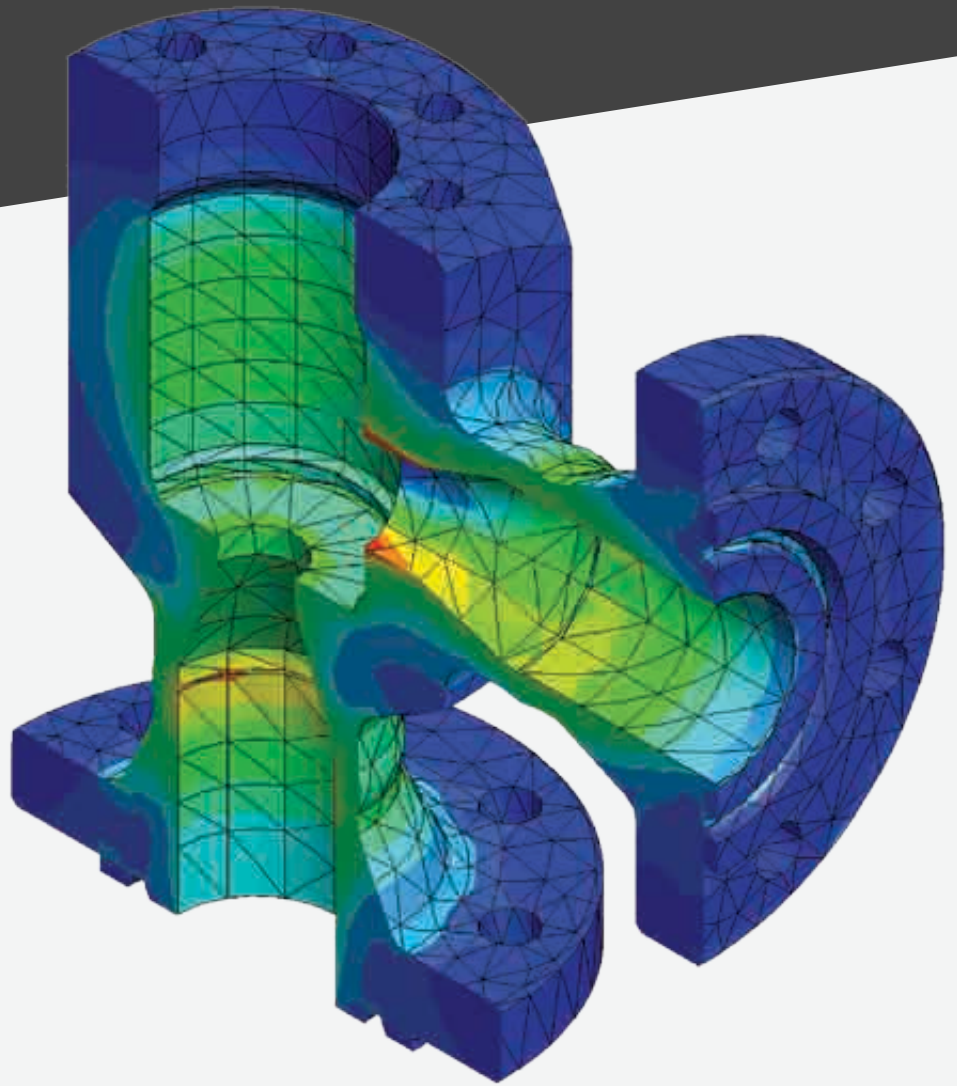
Our production department finds the best raw materials from Italian market. The complete manufacturing process Machining, Welding and Special processes are outsourced to reliable selected partners.

### SERVICE

After Sales Service supports our Customers for their Commissioning & Start Up, Maintenance, Testing and Upgrading needs.

We work close to our Clients and we are glad to discuss any improvement.





Quam technological instruments are constantly updated.

CAD and SolidWorks-based create high quality products, designed to meet the most specific needs of our customers.

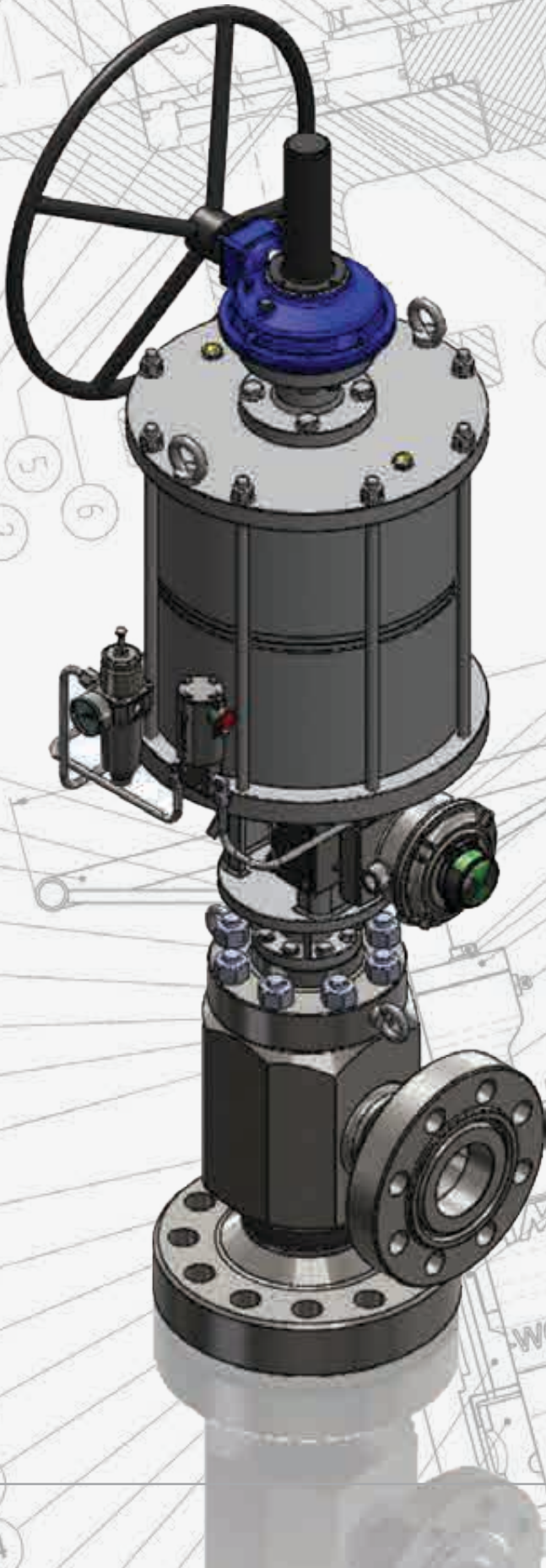
We dedicate particular attention to our products through intense research and development in order to study, design and test prototypes of new series.

We are determined to success in the heavy-design and in easy maintenance, we are certain to achieve reliability and long-life service requested by Oil & Gas Applications.



Our R&D technicians and engineering department utilizes software as Conval® 9.0 for valve sizing based on ISA S75.01 formulae and SolidWorks simulation for the verification of the valve components and its functioning.

# Choke Valves



## Applications

Wellheads, Production, Drilling, Heater bypass, Water injection, Gas lift, Blowdown  
Can be installed on Christmas trees, choke and kill manifolds, heaters for oil & gas production  
Can be used for gas pressure and flow rate control, for injection rates and for separators liquid discharge

## Features

API-6A design  
Available styles: positive, needle, disk & cage  
Wear resistant trim  
Extensive range of body/trim materials and options  
Customizable end to end dimension

## Benefits

Safe and reliable  
Short delivery times  
Easy maintenance

## Pressure ratings

From ANSI 150 through API 15000 PSI

## End connection sizes

Flanged from 1" through 10" ANSI/API  
Other ends connections available on request

## Actuation options

Manual override  
Pneumatic / Hydraulic - single acting  
Pneumatic / Hydraulic - double acting  
Pneumatic / Hydraulic - stepping  
Electro-hydraulic  
Electric

# QUAM Choke Valves Manual



ROTATING DISKS



EXTERNAL SLEEVE



NEEDLE & SEAT

## EXTERNAL SLEEVE

Flow directed to deviate at the center of flow cage away from the body, protecting valve from erosion  
Sealing surface is located on the outside on the cage, lowering the erosion potential

## NEEDLE AND SEAT

Tapered movable plug control orifice size precisely and adjusts to the required bean size. Considered most suitable when gradual halt in flow is required, and at other points where a small flow rate is desired  
Control over a range of production requirements and keeps the well flowing safely and economically

## POSITIVE CHOKE VALVE

Dissipation of well energy in the hardened replaceable beans to meet downstream pressure limitation  
Various sizes and materials are available

## PLUG AND CAGE

Guided plug inside the solid cage for high capacity and erosion control  
Noise and vibrations are under control and effects of flashing and high speed are reduced  
Trim is enclosed in a cartridge that allows maintenance and replacement of worn parts or trim change with maximum ease

## ROTATING DISKS

Two disks with multiple ported holes, top plate rotating to vary the size of the orifice and controlling the well fluid, resistant to sand and well debris  
Rotating disk produce near linear flow characteristics that is ideal for control application

# QUAM Choke Valves Actuated



STEPPING ACTUATED



ELECTRIC MOTOR DRIVING



DRILLING CHOKE

## PNEUMATIC ACTUATED

Choke valve with a single acting spring return or double acting pneumatic actuator directly installed on top of the valve, with fail safe power bank

Tailor made control system with positioners are required for a better and safe control

## ELECTRIC MOTOR DRIVEN

Electric motor drives choke valve with manual override handwheel and allows well flowing to adjust the orifice size

## STEPPING ACTUATED

Stepping actuator is driven pneumatically or hydraulically by two separate cylinders and two dedicated solenoids (one for open and one for close)

## HYDRAULIC ACTUATED

Hydraulic power linear actuators (single or double acting) are driven by hydraulic powered control system for precise control and fast action

## DRILLING CHOKE

Large orifice bore to avoid plugging during operations  
Double acting hydraulic actuator with position feedback



# Valves Actuation

Quam Manufactures a complete range of actuators to be installed on its valves  
These includes Hydraulic or Pneumatic Linear Piston and Rotary Stepping Actuators  
On request we can provide Electrical Actuators



## QUAM Choke Manifold

Quam choke manifolds are used on wells drilling or testing

These manifolds can control the well kick, adjust balance pressure, avoid pollution of oil layer, improve the speed of drilling and control blowout effectively

A customized production consisting in Choke Valves, Slab or Expanding Gate Valves, piping and fittings ideal for flow control and precise pressure

## KEY Features

All components are designed and manufactured according to API-6A specification

Special design, ideal to control and contain wellhead pressures

Valve sizes range from 2 1/16" to 5 1/8"

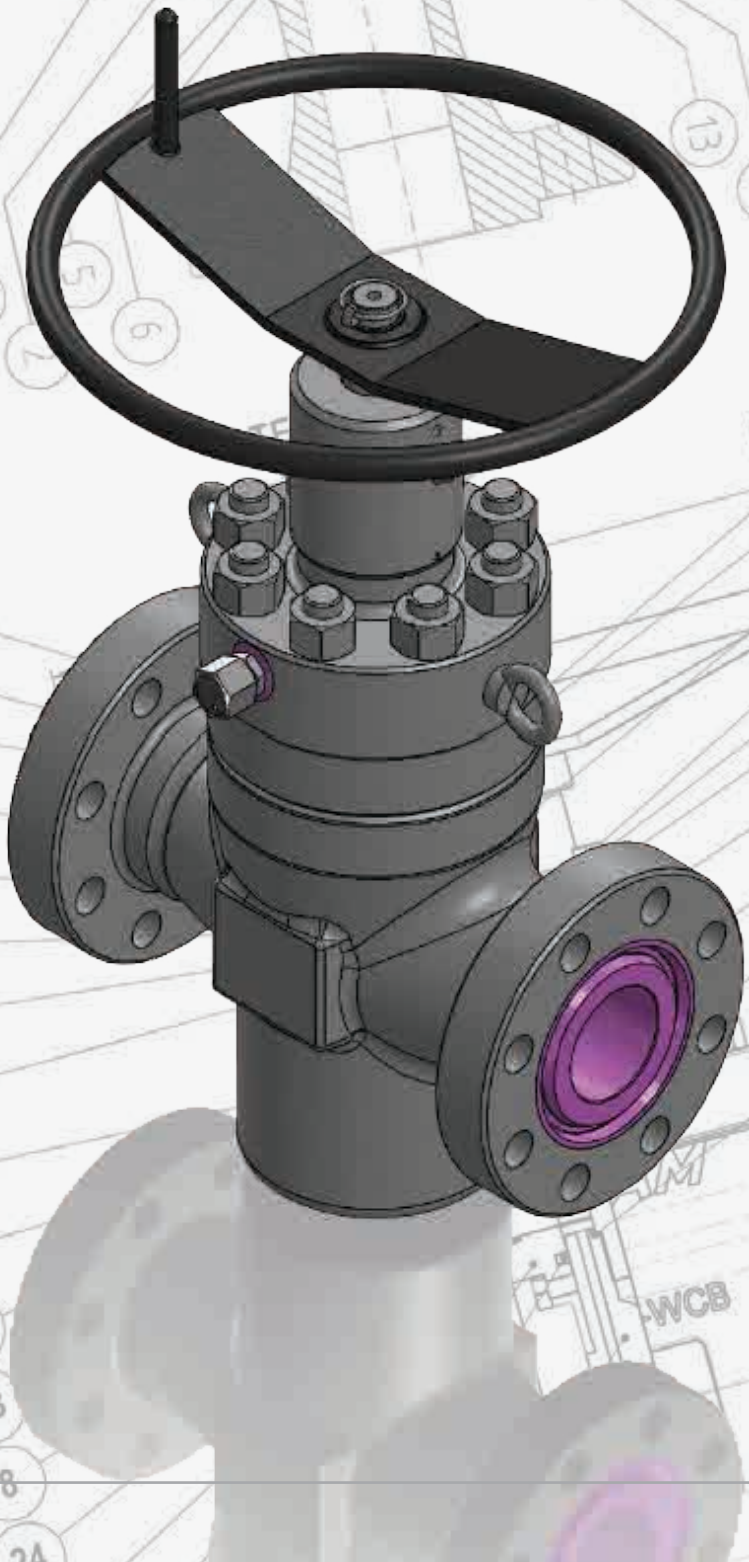
Pressure Ratings range from 2000 PSI to 15000 PSI

Available an extensive range of materials, connections and accessories





# Gate Valves



## Applications

Wellheads, Production, Drilling, Water injection, Gas lift, Blowdown  
Can be installed on Christmas trees, choke and kill manifolds

## Features

API-6A and API-6D design  
Slab or double expanding gate through conduit style  
Wear resistant trim  
Extensive range of body/trim materials and options

## Benefits

Short delivery times  
Long life service  
Easy maintenance  
Fully customizable in actuation & controls

## Pressure ratings

From ANSI 150 through API 15000 PSI

## End connection sizes

Flanged from 1 13/16" through 20"  
Other ends connections available on request

## Actuation options

Manual override  
Pneumatic / Hydraulic - single acting  
Pneumatic / Hydraulic - double acting  
Electro-hydraulic  
Electric  
SSV Surface Safety Valve

# QUAM Gate Valves

## Manual



SLAB RISING



EXPANDING NO RISING



CUSTOMIZED GATE VALVES

### SLAB RISING

API-6A or API-6D through conduit slab gate valve rising stem with a positive metal to metal sealing (gate-to-seat and seat-to-body)

Bidirectional design provides flow direction versatility

Manually operated or actuated (pneumatic, hydraulic or electric)

Available a complete range of materials and connections for all customers' requests

### SLAB NO RISING

API-6A through conduit slab gate valve no rising stem with a metal-to metal seal ideal for both low and high pressures sealing situations

Bidirectional flow & full bore for versatility

Compact dimensions suitable for wellhead applications

### EXPANDING RISING

API-6A or API-6D through conduit expanding gate valve rising stem with a metal-to-metal seal covering an extensive range of pressures

Bidirectional sealing & full bore for versatility

Manually operated or actuated operated (pneumatic, hydraulic, electric)

### EXPANDING NO RISING

API-6A through conduit double expanding non rising stem with a positive metal-to-metal sealing (gate-to-seat and seat-to-body)

Bidirectional flow & full bore for versatility

Compact dimension suitable for wellhead applications

### CUSTOMIZED GATE VALVES

The best design flexibility to support customers' projects and to solve specific field problems

# QUAM Gate Valves Actuated



SELF CONTAINED SSV



HYDRAULIC ACTUATED



LINE PRESSURE OPERATED SSV

## SELF-CONTAINED SURFACE SAFETY VALVE

API-6A surface safety gate valve made of a top quality reverse acting gate valve with hydraulic actuator  
The operating media is hydraulic fluid supplied by a self-contained control system with manual pump for SSV valve opening and PSHL pressure pilots for emergency safety closing

## HYDRAULIC ACTUATED

API-6A and API-6D through conduit slab gate valve with fail safe hydraulic actuator  
A wide range of actuator's sizes and materials are available with a complete range of accessories and control systems

## LINE PRESSURE OPERATED SURFACE SAFETY VALVE

API-6A line pressure operated surface safety gate valve made of a top quality reverse acting gate valve with hydraulic actuator  
The operating media is flow-line fluid supplied through a velocity check valve for SSV valve opening and PSHL pressure pilots for emergency safety closing

## PNEUMATIC ACTUATED

API-6A and API-6D through conduit slab gate valve with fail safe pneumatic actuator  
A wide range of actuators' sizes and materials  
Available a complete range of accessories and control system



# Wellhead Control Panels



## Wellhead Control Panels

The WHCP is an Hydraulic Control System that provides control of the topside Christmas Trees

Wellhead control panel automatically closes the well safety valves in response to alarm conditions requiring the shut-off. Valves can be closed either manually or automatically, at the panel or remotely

The WHCP is available with a wide selection of options for single or multi-well configuration

Quam WHCP are specifically designed using the very latest design technologies and components



### SINGLE-WELL CONTROL PANEL

It is designed to operate one subsurface safety valve and up to two hydraulic or pneumatic actuated surface safety valves for any type of well

### MULTI-WELL CONTROL PANEL

It is designed with the same features as per single-well but with the possibility to control the safety valves of a number of wells

Quam multi-well control panels can incorporate removable and interchangeable well control modules, each controlling a single well that can be easily isolated and removed

# LIQUID DISCHARGE Valves

## Applications

Gas separators: installed as on/off valve for liquid blow-down

## Features

ANSI design  
Available needle, gate & needle, gate & gate types  
Wear resistant trim  
Extensive range of body/trim materials and options

## End connection sizes

Flanged from 1" through 2" ANSI

## Benefits

Safe and reliable  
Short delivery times  
Easy maintenance



## Pressure ratings

From ANSI 150 through ANSI 2500

## Actuation options

Pneumatic / Hydraulic - single acting





# HPU

## Hydraulic Power Units

The HPU is an hydraulic power system that provides supply of hydraulic fluid to the valve actuator. Quam power units can be used to supply a single valve or a multi valve system or project

Hydraulic Power Units are taylor made and can be supplied strictly according Customer specification and can be supplied as a simple Power Supply Unit or complete with a Control System for an integrated Valve Control  
The HPU is available with a wide selection of options to ensure Single or Multi-Valve configuration

QUAM manufactures various type of HPU, Manual, Pneumo/Hydraulic and Electro/Hydraulic, for On/Off Valves or Control Valves service

Construction style could be skid mounted, free-standing or directly installed on Actuator



## Local Control Panels

The Local Panels are Pneumatic or Hydraulic types for the complete control of Valve System.

QUAM Local Panels can be used to supply a Single Valve or a Multi-Valve system.

Local Control Panel automatically stroke the Valves in response to alarm conditions requiring shut-off or Blow-Down. Valves can be close either manually or automatically, from panel or remotely.

The Local Panels are available with a wide selection of options.

Single-Valve Control Panel is designed to operate one Valve.

Multi-Valve Control Panel is designed with the same features as per Single-Valve but with the possibility to control simultaneously a certain number of Valves.



Every piece of equipment produced undergoes final inspection and certification according to standard or customized procedure



6A - 0982



6D - 1276



Azienda certificata secondo  
UNI EN ISO 9001



Our standards and design codes are

**API** – American Petroleum Institute

**ASME** – American Society of Mechanical Engineers

**ISO** – International Organization for Standardization

**DIN** – Deutsches Institute vor Normung

**ANSI** – American National Standard Institute

**ASTM** – American Society of Testing and Material

**NACE** – National Association of Corrosion Engineers

**BS** – British Standard Institution

## THE BEST CHOICE FOR OIL & GAS UPSTREAM EQUIPMENT



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