Uniflow®

UNIFLOW VALVES & STRAINERS

Comeval®
A COMPANY OF THE ARMATUREN GROUP

www.comeval.es

Uniflow® Valves & Strainers
Index

UNIFLOW Valves & Strainers: designed & produced to meet with our high quality standards.

COMEVAL offers a high level of service, flexibility and adaptability to the needs of customers, with a wide range of products for all markets, being one of the leading European companies in its line of Industrial Valves.

The company is fully committed to Quality in all areas of design, manufacturing and service, always involved in continuous process of improvement and certification. UNIFLOW® product range is PED 2014/68/EU Module H audited by Lloyd's Register. The company is as well ISO 9001 certified.

COMEVAL team combines the experience gained from being a company with over 40 years of background in the industry, with a young, dynamic team in all Departments.

COMEVAL belongs to ARI ARMATUREN and benefits from the synergies of the group, participating in a large number of projects handled by the most important Engineering Companies, used to successfully handle high demanding contracts with a devoted Projects Department to ensure compliance with most demanding requirements, and counts on a network of reliable partners that provide closer support to our end customers. Most of the products manufactured by COMEVAL are exported worldwide.

Our castings and forgings are sourced from quality suppliers specialized in the manufacture of high integrity pressure containing components, being independently and periodically audited directly by COMEVAL specialists.

All castings are visually inspected to meet the requirements of MSS SP-55 and rest of relevant standards. Materials are randomly subject to PMI (Positive Material Identification), LPT (Liquid Penetrant Test) and through test bars sent to independent laboratories to countercheck mechanical and chemical properties.

Further non-destructive testing such us Radiographic Examination, Ultrasonic Examination or Magnetic Particle Examination acc. to ASME B16.34 Section 8 and Appendices are performed when required by applicable standards, customer specifications and internal quality criteria.

Our Engineering Department is specialist in sizing and assembling any kind of actuators and accessories for our valves, as well as customizing special solutions for our customers.

Final product is subject to strict quality control, with visual and functional inspection and pressure testing. Our computerized testing facilities allow testing equipment with pressures higher than 500 bar.

Additionally, further testing on valves such as Fugitive Emission, Cryogenic, Fire, Nace, Drinking Water, etc. can also be carried out by our specialized subcontractors.

After final inspection & testing, our Quality Department issues a Material and Test Certificate according to EN 10204 3.1. We are also used to handle Third Party Inspections in our facilities. Valves are properly cleaned, protected and packed, ready for dispatch to our customers.

UNIFLOW Valves & Strainers: Certifications

COMEVAL is ISO 90001 certified for the whole cycle of valves & strainers life. Our certified Quality Management System covers design, manufacture, sales, after-sale service and repair.
UNIFLOW range is PED 2014/68/EU Module H, that covers all the production range up to category III.
UNIFLOW range is also certified for Russian market, with EAC approval.
We are also able to offer Fire Safe design and fire test qualification certificates for Ball Valves.
Further certificates such us API 6D are under appliance and will be obtained shortly!

Lloyd's Register LRQA

CERTIFICATE OF APPROVAL

This is to certify that the Quality Management System of:

COMEVAL VALVE SYSTEMS, S.L. y CIA., SOCIEDAD COMANDITARIA
Les Rotes, 15
46540 El Puig, Valencia
Spain

has been approved by Lloyd's Register Quality Assurance to the following Quality Management System Standard:

ISO 9001:2008

The Quality Management System is applicable to:

The design, manufacture, adjustment, test, distribution, after-sale service and overhauling of valves, fluid control equipment and heat exchangers.

Approval Certificate No: SGI 6028441

Original Approval: 28 September 2015
Current Certificate: 16 October 2015
Certificate Expiry: 14 September 2018

Issued by: LRQA España, S.L.
For and on behalf of: Lloyd's Register Quality Assurance Limited

Lloyd's Register

EC Certificate of Conformity

In accordance with the requirements of the Pressure Equipment Directive 97/23/EC

This is to certify that the Quality Management System of:

COMEVAL VALVE SYSTEMS, S.L. y CIA, Soc. Comandataria
Les Rotes, 15 P.I. EL PUIG
46540 EL PUIG (Valencia) SPAIN

has been assessed against the requirements of Annex III, Module H of the Pressure Equipment Directive 97/23/EC, and conforms to the requirements for the products shown below:

Design and Manufacture of Gate Valves, Globe Valves, Check Valves, Ball Valves and Strainers
(see attached schedule)

Approval is subject to the continued maintenance of the quality system in accordance with the requirements of the above Directive.

Authorisation is hereby given to use the LRV Notified Body Identification Number in accordance with the requirements of the specified Directive and Regulations in relation to the products as identified above.

Certificate No: 0038/PED/MAD/0146
Original Approval: 23 February 2015
Current Certificate: 23 February 2015
Certificate Expiry: 22 February 2018
LRV Notified Body Number 0038

José Rivero on behalf of Lloyd's Register Verification

Comeval®

DECLARATION OF CONFORMITY / *DECLARACIÓN DE CONFORMIDAD*
as defined by / *de acuerdo a*
Pressure Equipment Directive 97/23/EC / *Directiva de Equipos a Presión 97/23/CE*

For the following Pressure Equipment / *Para los siguientes Equipos a Presión:*

Product / *Producto:*
GATE VALVES / *VÁLVULAS DE COMPUERTA*

Brand / *Marca:* (COMEVAL®)
Series: UNIFLOW 9_, 33_
Applicable Standards / *Normas aplicables:*
API 600, API 6D, ASME B16.34, API 602

Responsible for making this declaration / *Responsable de esta declaración:*
Authorized representative established within the EU / *Representante autorizado en la UE*
Company name / *Nombre de Empresa:*
COMEVAL VALVE SYSTEMS, S.L. y CIA. Soc. Comandataria
Company address / *Dirección de Empresa:* Les Rotes, 15 46540 EL PUIG (Valencia) SPAIN

We confirm by this declaration that the range of Gate Valves defined to the above series are products classified up to Category III, in conformance with the prescriptions of the Annex III Module H of the European Directive PED 97/23/EC.
Certificate of Conformity issued by Lloyd's Register Verification Limited, 71 Frenchurch Street London EC3M4BS UK, no. 0038, Certificate no.: 0034/PED/MAD/0146.
Declaramos que el rango de Válvulas de Compuerta incluido en las series anteriormente definidas son productos clasificados hasta Categoría III, Anexo II conforme a las prescripciones del Anexo III Módulo H de la Directiva Europea PED 97/23/CE.
Certificado de Conformidad emitido por Lloyd's Register Verification Limited, 71 Frenchurch Street London EC3M4BS UK, nº 0038, Certificado nº: 0034/PED/MAD/0146.

This Declaration is signed in EL PUIG, on November 12, 2015.
Esta Declaración se firma en EL PUIG, a 12 de Noviembre de 2015.

COMEVAL VALVE SYSTEMS, S.L. y CIA Soc. Comandataria

Enrique Bort
Managing Director
Director General

ITIS B.V.
NL-4451 HP Heinkenszand
T + 31 113 568515
info@itis-nl.com
www.itis-nl.com

TÜV SÜD Industrie Service

API6FA FIRE TEST QUALIFICATION CERTIFICATE

This certificate is to certify that the valve below has been tested in accordance with, and meets all requirements stated in API standard 6FA 3rd edition, April 1999, Reaffirmed: July 2006 Specification for Fire Test for Valves.

Test valve details

Manufacturer	Comeval Valve Systems, S.L. y CIA.
Address	Les Rotes, 15, 46540 El Puig, Valencia, Spain
Brand	UNIFLOW
Nominal size	8inch
Pressure rating	150lbs
Flow direction	Bi-directional
Type	Trunnion mounted ball valve
Weight	255kg
Bore	Full bore
Body material	A105
Bonnet material	A105
Bonnet/body gasket	Stainless steel 304 + Graphite
Ball material	A105 + ENP
Seat material	PTFE
Stem material	A182 F6a
Markings on valve	Body material, heat no. and Serial number on valve body
Gearbox	Yes

Scope of other valve sizes and pressure ratings qualified by this test.

Tested valve	Scope of Size	Scope of pressure rating
8inch API 6D, DN200 150 API 6D, PN20	8, 10, 12, 14, 16inch API 6D DN200, DN250, DN300, DN350, DN400 9inch, 11inch API 6A	150; 300 API 6D PN20, PN50

This certificate is only valid in conjunction with the full ITIS BV test report number

Name (ITIS)		Name authority (TÜV SÜD)
J. Meijer 02-09-2015		02-09-2015

ТАМОЖЕННЫЙ СОЮЗ
ДЕКЛАРАЦИЯ О СООТВЕТСТВИИ

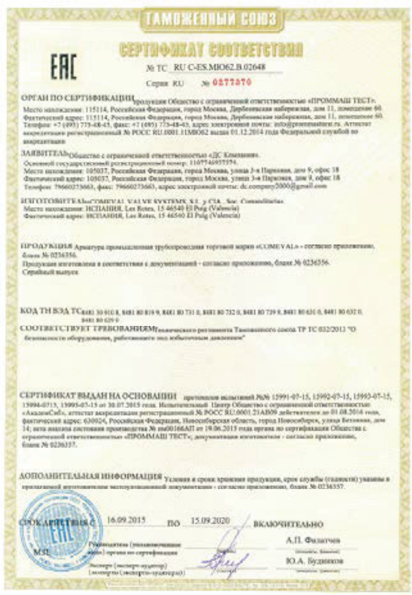
Место нахождения: ИСПАНИЯ, Les Rotes, 15 46540 El Puig (Valencia)
Фактический адрес: ИСПАНИЯ, Les Rotes, 15 46540 El Puig (Valencia)

Декларация о соответствии принята на основании

Дополнительная информация

Декларация о соответствии действительна с даты регистрации по 01.09.2020 включительно.

Сведения о регистрации декларации о соответствии:
Дата регистрации декларации о соответствии 04.09.2015



ТАМОЖЕННЫЙ СОЮЗ
СЕРТИФИКАТ СООТВЕТСТВИЯ
№ ТС RU C-ES.MЮ62.B.02648
Серия RU № 0277370

ОРГАН ПО СЕРТИФИКАЦИИ

ЗАЯВИТЕЛЬ

ИЗГОТОВИТЕЛЬ «COMEVAL VALVE SYSTEMS, S.L. y CIA., Soc. Comanditaria»
Место нахождения: ИСПАНИЯ, Les Rotes, 15 46540 El Puig (Valencia)
Фактический адрес: ИСПАНИЯ, Les Rotes, 15 46540 El Puig (Valencia)

ПРОДУКЦИЯ

КОД ТН ВЭД ТС

СООТВЕТСТВУЕТ ТРЕБОВАНИЯМ

СЕРТИФИКАТ ВЫДАН НА ОСНОВАНИИ

ДОПОЛНИТЕЛЬНАЯ ИНФОРМАЦИЯ

СРОК ДЕЙСТВИЯ С 16.09.2015 ПО 15.09.2020 ВКЛЮЧИТЕЛЬНО

А.П. Филатчев
Ю.А. Будников

CAST PRODUCTS

GLOBE VALVES

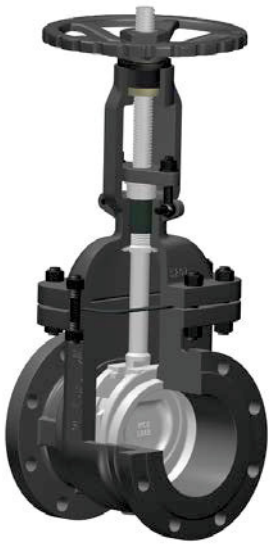
Series 80, 81, 82, 83, 84, 85, 86

2" - 24"
DN50 - DN600
Class 150-2500
PN16-420
Connections RF, RTJ, BW
BS 1873 / ASME B16.34 /
ASME B16.10 / EN 558 /
ASME B16.5 / EN 1092-1 /
ASME B16.25 / EN 12627 /
API 598 / EN 12266-1

Features/Options:
- Metal seated, unidirectional
- OS&Y, pressure seal design for high ratings
- Rising stem and handwheel
- Back seating design
- Parabolic plug for throttling/regulating function
- Threaded, welded or integral seat
- Operation by handwheel or gear
- Top arrangement for actuator assembly
- Pneumatic, electric or hydraulic actuation
- Lock device, chainwheel
- Position indicator, limit switches
- Packing with lantern ring
- Live load packing
- Bypass line, drain device available
- Jacketed body
- Extended bonnet and stem for cryogenic application
- Vacuum service design
- Manufacturing to NACE MR0175
- Special execution for outdoors/corrosive atmosphere, high temperature service, etc.

GATE VALVES

Series 90, 91, 92, 94, 33



2" - 48"
DN50 - DN1200
Class 150-2500
PN16-420
Connections RF, RTJ, BW
API 600 / API 6D / ASME B16.34 /
ASME B16.10 / EN 558 /
ASME B16.5 / ASME B16.47 /
EN 1092-1 / ASME B16.25 /
EN 12627 / API 598 / EN 12266-1

Features/Options:
- Metal seated, bidirectional
- OS&Y, pressure seal design for high ratings
- Rising or non-rising stem
- Back seating design
- Flexible or solid wedge
- Threaded, welded or integral seat
- Operation by handwheel or gear
- Top arrangement for actuator assembly
- Pneumatic, electric or hydraulic actuation
- Lock device, chainwheel
- Position indicator, limit switches
- Packing with lantern ring
- Live load packing
- Bypass line, drain device available
- Extended bonnet and stem for cryogenic application
- Jacketed body
- Vacuum service design
- Manufacturing to NACE MR0175
- Special execution for outdoors/corrosive atmosphere, high temperature service, etc.

Materials: Carbon steel, Low Carbon Steel, Alloy Steel, St. Steel & Exotic Materials, with wide variety of trims

Applications: Power, Oil&Gas, Process, Mining, Pharmaceutical, Chemical, Pulp and paper, Water and waste management

CAST PRODUCTS

SWING CHECK VALVES

2" - 36"
DN50 - DN900
Class 150-2500
PN16-420
Connections RF, RTJ, BW
API 6D / ASME B16.34 /
ASME B16.10 / EN 558 /
ASME B16.5 / ASME B16.47 /
EN 1092-1 / ASME B16.25 /
EN 12627 / API 598 /
EN 12266-1

Series 3S, 31

Features/Options:
- Metal seated
- Pressure seal design for high ratings
- Full bore design
- Counterweight and hydraulic
- Tilting design
- Jacketed body
- Special execution for outdoors/corrosive atmosphere, high temperature service, etc.

LIFT DISC (PISTON) CHECK VALVES

2" - 24"
DN50 - DN600
Class 150-2500
PN16-420
Connections RF, RTJ, BW
API 6D / ASME B16.34 /
ASME B16.10 / EN 558 /
ASME B16.5 / EN 1092-1 /
ASME B16.25 / EN 12627 /
API 598 / EN 12266-1

Series 3P, 32

Features/Options:
- Metal seated
- Pressure seal design for high ratings
- Full bore design
- Spring return for piston type
- Jacketed body
- Special execution for outdoors/corrosive atmosphere, high temperature service, etc.

Y-STRAINERS

2" - 24"
DN50 - DN600
Class 150-600
PN16-100
Connections RF, RTJ, BW
API 6D / ASME B16.34 /
ASME B16.10 / EN 558 /
ASME B16.5 / EN 1092-1 /
ASME B16.25 / EN 12627 /
API 598 / EN 12266-1

Series F0

Features/Options:
- Replaceable screen
- Screen made of wire mesh or perforated basket, with full range of available commercial widths/perforations
- Bolted cover or pressure seal cover for high sizes/ratings
- Special execution for outdoors/corrosive atmosphere, high temperature service, etc.

Materials: Carbon steel, Low Carbon Steel, Alloy Steel, St. Steel & Exotic Materials, with wide variety of trims

Applications: Power, Oil&Gas, Process, Mining, Pharmaceutical, Chemical, Pulp and paper, Water and waste management

FORGED PRODUCTS

GLOBE VALVES

Series 89, 88, 87

3/8" - 2"
Class 800-2500
Connections:
SW, NPT, BSPT, BSPP, RF
API 602 / ASME B16.34 /
ASME B16.11 / EN 12760 /
ASME B1.20.1 / EN 10226-1 /
API 598 / EN 12266-1

Features/Options:
- Metal seated, unidirectional
- OS&Y, pressure seal design for high ratings
- Rising stem and handwheel
- Back seating design
- Parabolic plug for throttling/regulating function
- Threaded, welded or integral seat
- Operation by Handwheel or Gear
- Top arrangement for actuator assembly
- Pneumatic, electric or hydraulic actuation
- Lock device, chainwheel
- Position indicator, limit switches
- Packing with lantern ring
- Live load packing
- Bypass line, drain device available
- Jacketed body
- Extended bonnet and stem for cryogenic application
- Vacuum service design
- Manufacturing to NACE MR0175
- Special execution for outdoors/corrosive atmosphere, high temperature service, etc.

GATE VALVES

Series 99, 98, 97, 96

3/8" - 2"
Class 800-2500
Connections:
SW, NPT, BSPT, BSPP, RF
API 602 / ASME B16.34 /
ASME B16.11 / EN 12760 /
ASME B1.20.1 / EN 10226-1 /
API 598 / EN 12266-1

Features/Options:
- Metal seated, bidirectional
- OS&Y, pressure seal design for high ratings
- Rising or non-rising stem
- Back seating design
- Flexible or solid wedge
- Threaded, welded or integral seat
- Operation by Handwheel or Gear
- Top arrangement for actuator assembly
- Pneumatic, electric or hydraulic actuation
- Lock device, chainwheel
- Position indicator, limit switches
- Packing with lantern ring
- Live load packing
- Bypass line, drain device available
- Extended bonnet and stem for cryogenic application
- Jacketed body
- Vacuum service design
- Manufacturing to NACE MR0175
- Special execution for outdoors/corrosive atmosphere, high temperature service, etc.

Materials: Carbon steel, Alloy Steel, St. Steel & Exotic Materials, with wide variety of trims

Applications: Power, Oil&Gas, Process, Mining, Pharmaceutical, Chemical, Pulp and paper, Water and waste management

FORGED PRODUCTS

SWING CHECK VALVES

3/8" - 2"
Class 800-2500
Connections:
SW, NPT, BSPT, BSPP, RF
API 602 / ASME B16.34 /
ASME B16.11 / EN 12760 /
ASME B1.20.1 / EN 10226-1 /
API 598 / EN 12266-1

Series 39, 38, 37

Features/Options:
- Metal seated
- Pressure seal design for high ratings
- Regular port design
- Counterweight and hydraulic
- Tilting design
- Jacketed body
- Special execution for outdoors/corrosive atmosphere, high temperature service, etc.

LIFT DISC (PISTON) CHECK VALVES

3/8" - 2"
Class 800-2500
Connections:
SW, NPT, BSPT, BSPP, RF
API 602 / ASME B16.34 /
ASME B16.11 / EN 12760 /
ASME B1.20.1 / EN 10226-1 /
API 598 / EN 12266-1

Series 35, 34, 36

Features/Options:
- Metal seated
- Pressure seal design for high ratings
- Regular port design
- Spring return
- Jacketed body
- Special execution for outdoors/corrosive atmosphere, high temperature service, etc.

Y-STRAINERS

3/8" - 2"
Class 800-2500
Connections:
SW, NPT, BSPT, BSPP, RF
BS 5352 / ASME B16.34 /
ASME B16.11 / EN 12760 /
ASME B1.20.1 / EN 10226-1 /
API 598 / EN 12266-1

Series F9

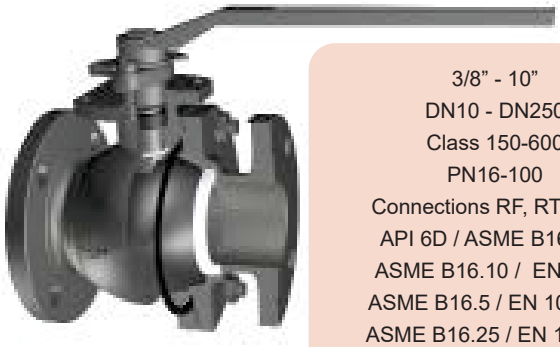
Features/Options:
- Replaceable screen
- Screen made of wire mesh or perforated basket, with full range of available commercial widths/perforations
- Bolted cover or pressure seal cover for high sizes/ratings
- Special execution for outdoors/corrosive atmosphere, high temperature service, etc.

Materials: Carbon steel, Alloy Steel, St. Steel & Exotic Materials, with wide variety of trims

Applications: Power, Oil&Gas, Process, Mining, Pharmaceutical, Chemical, Pulp and paper, Water and waste management

BALL VALVES

FLOATING BALL VALVES



3/8" - 10"
DN10 - DN250
Class 150-600
PN16-100
Connections RF, RTJ, BW
API 6D / ASME B16.34 /
ASME B16.10 / EN 558 /
ASME B16.5 / EN 1092-1 /
ASME B16.25 / EN 12627 /
API 598 / EN 12266-1

Series BV BF/B8

Features/Options:
- Metal or soft seated, bidirectional
- 2 pieces or 3 pieces body
- Full bore or reduced bore
- Solid or light ball
- Blow-out proof stem
- Anti-static design
- Body cavity pressure relief
- Drain and vent connections
- Injection sealing
- Operation by Lever or Worm Gear
- Top arrangement to ISO 5211 for actuator assembly
- Lock device, chainwheel
- Position indicator, limit switches
- Live load packing
- Fully welded construction
- Bypass line
- Jacketed body
- Undergorund application structure available
- Cryogenic design, vacuum service design
- NACE MR0175 design
- Fire safe design to API 6FA
- Special execution for outdoors/corrosive atmosphere, high temperature service, etc.

TRUNNION BALL VALVES

2" - 36"
DN50 - DN900
Class 150-2500
PN16-420
Connections RF, RTJ, BW
API 6D / ASME B16.34 /
ASME B16.10 / EN 558 /
ASME B16.5 / ASME B16.47 /
EN 1092-1 / ASME B16.25 /
EN 12627 / API 598 / EN 12266-1

Series BV BT/B9

Features/Options:
- Metal or soft seated, bidirectional
- 2 pieces or 3 pieces body
- Full bore or reduced bore
- Straight, 3 or 4 way valves
- Solid or light ball
- Blow-out proof stem
- Anti-static design
- Body cavity pressure relief
- Top or side entry
- Double block and bleed feature (DBB)
- Double piston effect function (DPE)
- Drain and vent connections
- Injection sealing
- Operation by Lever or Worm Gear
- Top arrangement to ISO 5211 for actuator assembly
- Lifting lugs and supporting feet
- Lock device, chainwheel
- Position indicator, limit switches
- Live load packing
- Fully welded construction
- Bypass line
- Jacketed body
- Undergorund application structure
- Cryogenic design, vacuum service design
- NACE MR0175 design
- Fire safe design to API 6FA
- Special execution for outdoors/corrosive atmosphere, high temperature service, etc.

Materials: Carbon steel, Low Carbon Steel, Alloy Steel, St. Steel & Exotic Materials, with wide variety of trims

Applications: Power, Oil&Gas, Process, Mining, Pharmaceutical, Chemical, Pulp and paper, Water and waste management

Manufacturers Standardization Society of Valve and Fittings Industry (MSS):

- MSS SP-25 Standard Marking Systems for Valves, Fittings,Flanges, and Unions
- MSS SP-42 Class 150 Corrosion Resistant Gate, Globe, Angle and Check Valves with Flanged and Butt Weld Ends
- MSS SP-45 Bypass and Drain Connections
- MSS SP-55 Quality Standard for Steel Castings for Valves, Flanges, Fittings, and Other Piping Components - Visual Method for Evaluation of Surface Irregularities
- MSS SP-61 Pressure Testing of Steel Valves
- MSS SP-67 Butterfly Valves
- MSS SP-68 High Pressure Offset Seat Butterfly Valves
- MSS SP-70 Cast Iron Gate Valves, Flanged and ThreadedEnds
- MSS SP-71 Cast Iron Swing Valves, Flanged and ThreadedEnds
- MSS SP-72 Ball Valves with Flanged or Butt-Weling Ends forGeneral Service
- MSS SP-78 Cast Iron Plug Valves, Flanged and ThreadedEnds
- MSS SP-80 Bronze Gate, Globe, Angle, and Check Valves
- MSS SP-81 Stainless Steel, Bonnetless, Flanged, Knife Gate Valves
- MSS SP-82 Valve Pressure Testing Methods
- MSS SP-84 Valves - Socked Welding and Threaded Ends
- MSS SP-85 Cast Iron Globe and Angle Valves, Flanged andThreaded Ends
- MSS SP-88 Diaphragm Type Valves
- MSS SP-91 Guidelines for Manual Operation of Valves
- MSS SP-92 MSS Valve User Guide
- MSS SP-99 Instrument Valves
- MSS SP-101 Part-Turn Valve Actuator Attachment
- MSS SP-102 Multi-Turn Valve Actuator Attachment
- MSS SP-110 Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends

National Association of Corrosion Engineers (NACE):

- MR0175 Sulfide Stress Cracking Resistant Metallic Materials for Oil Field Equipment

American Society of Mechanical Engineers (ASME):

- ASME B1.20.1 Pipe Threads, General Purpose
- ASME B16.10 Face-to-Face and End-to-End Dimensions of Valves
- ASME B16.11 Forged Fittings, Socket-Welding and Threaded
- ASME B16.20 Metallic Gaskets for Pipe Flanges: Ring-Joint, Spiral-Wound, and Jacketed
- ASME B16.21 Nonmetallic Flat Gaskets for Pipe Flanges
- ASME B16.25 Buttwelding Ends
- ASME B16.34 Valves –Flanged, Threaded, and Welding Ends
- ASME B16.5 Pipe Flanges and Flanged Fittings: NPS 1/2 through NPS 24
- ASME B16.47 Large Diameter Steel Flanges: NPS 26 through NPS 60
- Boiler and Pressure Vessel Code:
  - Section I - Power Boilers
  - Section II - Materials
  - Section IV - Heating Boilers
  - Section VIII, Division 1 - Pressure Vessels

American Petroleum Institute (API):

- API 594 Wafer and Wafer-Lug Check Valves
- API 598 Valve Inspection and Test
- API 599 Steel and Ductile Iron Plug Valves
- API 600 Steel Gate Valves, Flanged or Butt Welding Ends
- API 602 Compact Steel Gate Valves—Flanged, Threaded,Welding, and Extended Body Ends
- API 603 Class 150, Cast, Corrosion-Resistant, Flanged End Gate Valves
- API 6D Specification for Pipeline and Piping Valves
- API SPEC 6FA Fire Test for Valves

British Standards Institution (BS)

- BS 1873 Specification for steel globe and globe stop and check valves (flanged and butt-welding ends) for the petroleum, petrochemical and allied industries
- BS 5352 Specification for steel wedge gate, globe and check valves 50 mm and smaller for the petroleum, petrochemical and allied industries

European Standards:

• EN 558 Industrial valves — Face-to-face and centre-to-face dimensions of metal valves for use in flanged pipe systems — PN and Class designated valves

• EN 1092-1 Flanges and their joints - Circular flanges for pipes, valves, fittings and accessories, PN designated - Part 1: Steel flanges

• EN 10226-1 Pipe threads where pressure tight joints are made on the threads. Part 1: Taper external threads and parellel internal threads. Dimensions, tolerances and designation

• EN 12266-1 Industrial valves. Testing of valves. Part 1: Pressure tests, test procedures and acceptance criteria. Mandatory requirements

• EN 12627 Industrial valves. Butt welding ends for steel valves

• EN 12760 Valves. Socket welding ends for steel valves

1	2	3	4	5	6	7	8	9	10	11	12	13	14

1-2 VALVE TYPE

GLOBE VALVES	80	GLOBE CAST STEEL BOLTED BONNET WITH PACKING (OS&Y)
	81	GLOBE CAST STEEL PRESSURE SEAL WITH PACKING
	84	GLOBE CAST STEEL BELLOWS SEAL
	89	GLOBE FORGED STEEL BOLTED BONNET WITH PACKING (OS&Y)
	88	GLOBE FORGED STEEL BELLOWS SEAL
	82	GLOBE CAST STEEL BOLTED BONNET ANGLE PATTERN
	83	GLOBE CAST STEEL BOLTED BONNET Y-PATTERN
	85	GLOBE CAST STEEL BELLOWS SEAL ANGLE PATTEN
	86	GLOBE CAST STEEL BELLOWS SEAL Y-PATTERN
	87	GLOBE FORGED STEEL PRESSURE SEAL
GATE VALVES	90	GATE CAST STEEL BOLTED BONNET WITH PACKING (OS&Y)
	91	GATE CAST STEEL PRESSURE SEAL WITH PACKING (STD FROM1500#)
	92	GATE CAST STEEL WELDED BONNET WITH PACKING (OS&Y)
	94	GATE CAST STEEL BELLOWS SEAL
	99	GATE FORGED STEEL BOLTED BONNET WITH PACKING (OS&Y)
	98	GATE FORGED STEEL BELLOWS SEAL
	97	GATE FORGED STEEL WELDED BONNET WITH PACKING (OS&Y)
	96	GATE FORGED STEEL PRESSURE SEAL WITH PACKING (OS&Y)
BALL VALVES	BT	CAST STEEL BALL VALVE TRUNNION SPLIT BOLTED BODY
	BF	CAST STEEL BALL VALVE FLOATING SPLIT BOLTED BODY
	B9	FORGED STEEL BALL VALVE TRUNNION SPLIT BOLTED BODY
	B8	FORGED STEEL BALL VALVE FLOATING SPLIT BOLTED BODY
CHECK VALVES	3S	FLANGED OR BW CAST STEEL SWING CHECK VALVE
	31	FLANGED OR BW CAST STEEL SWING CHECK VALVE PRESSURE SEAL
	3P	FLANGED OR BW CAST STEEL LIFT DISC CHECK VALVE
	32	FLANGED OR BW CAST STEEL LIFT DISC CHECK VALVE PRESSURE SEAL
	DP	WAFER DUAL PLATE CHECK VALVE
	DL	LUG DUAL PLATE CHECK VALVE
	DF	FLANGED DUAL PLATE CHECK VALVE
	DC	WAFER DISC CHECK VALVE
	39	SWING CHECK FORGED VALVE BOLTED BONNET
	38	SWING CHECK FORGED VALVE PRESSURE SEAL
	37	SWING CHECK FORGED VALVE BOLTED BONNET Y-PATTERN
	36	LIFT DISC CHECK FORGED VALVE BOLTED BONNET Y-PATTERN
	35	LIFT DISC CHECK FORGED VALVE BOLTED BONNET
	34	LIFT DISC CHECK FORGED VALVE PRESSURE SEAL

3-4 BODY MATERIAL

	CAST	FORGED		CAST	FORGED		CAST	FORGED
H0	A126 Class B		I1	A351 CF3	-			B462 N08020
H1			I2	A351 CF8	A182 F304			B160 N02200
F0			I3	-	-			B160 N02201
F1	A536 80-55-06		I4	-	A182 F316H			B564 N04400
F2	A536 65-45-12		I5	A351 CF3A	-			B164 N04405
A0	A216WCB	A105	I6	A351 CF8A	-			B564 N06600
A1	-	A350 LF2	I7	A351 CF3M	-			B564 N08800
A2	-	A350 LF6 cl.1	I0	A351 CF8M	A182 F316			B335 N10665
A3	A352 LC2	-	I8	A351 CG8M	-			B564 N10276
A4	A352 LC3	A350 LF3	I9	-	A182 F304L			B564 N06625
A5	A216 WCC	-	IA	1.4581				B335 N10001
A6	A352 LCC	-	J1	-	A182 F316L			B573 N10003
A7	-	A350 LF6 cl.2	J2	-	A182 F321		(904L)	B574 N06455
A8	A352 LCB	-	J3	-	A182 F321H			B425 N08825
A9		A350 LF1	J4	A351 CF8C	A182 F347			B572 N06002
B1	A217 WC1	A182 F1	J5	-	A182 F347H			B672 N08700
B2	A352 LC1	-	J6	-	A182 F348			B649 N08904
B3	-	A182 F2	J7	-	A182 F348H			B621 N08320
B4	A217 WC4	-	J8	A351 CH8	-			B581 N06985
B5	A217 WC5	-	J9	A351 CH20	-			B581 N06975
B6	-	A182 F12 cl.2	K1	A351 CK20	A182 F310H			B564 N08031
B7	-	A182 F11cl.2	K2	A351 CK3MCuN	A182 F44			B581 N06007
B8	A217 WC6	-	K3	A995 4a	A182 F51			B564 N08810
B9	A217 WC9	A182 F22 cl.3	K4	A995 5a	A182 F53		A494 N-12MV	-
C1	-	A182 F21	K5	A351 Gr. CE8MN	-		A494 CW-12MW	-
C2	A217 C5	A182 F5a	K6	A351 Gr. CD4MCu	-		-	B511 N08330
C3	-	A182 F5	K7	A351 Gr. CD3MWCuN	-		A351 CN-7M	-
C4	A217 C12	A182 F9	K8	-	A182 Gr. F55			
C5	A217 C12A	A182 F91						

1	2	3	4	5	6	7	8	9	10	11	12	13	14

5 TRIM FOR GLOBE/GATE/CHECK VALVES*

0	Standard for valve configuration
1	Trim 1
2	Trim 2
3	Trim 3
4	Trim 4
5	Trim 5
6	Trim 6
7	Trim 7
8	Trim 8
9	Trim 9
D	Trim 10
F	Trim 11
G	Trim 12
H	Trim 13
J	Trim 14
K	Trim 15
L	Trim 16
M	Trim 17
X	Special Trim
P	trim 1 w/soft seal PTFE
E	trim 1 w/soft seal EPDM
N	trim 1 w/soft seal NBR

*Trim for ball valves, please consult us

6 ENDS CONNECTIONS

0	RF
J	RTJ
F	FF
B	BW ANSI
V	BW DIN
S	SW ANSI
Z	SW DIN
P	BSPP
T	BSPT
N	NPT
W	WAFER
L	LUG
C	CLAMP
X	SPECIAL

7 TOP WORKS/OPERATION

0	HANDWHEEL OR WRENCH (LEVER) C CHAINWHEEL
G	GEAR WITH HANDWHEEL
F	ISO TOP FLANGE FOR ACTUATOR

(top flange description apart from article description)

8 MAIN FEATURES

S	SOLID WEDGE FOR CAST STEEL GATE VALVES
T	TWO-PIECE SPLIT WEDGE
0	FULL BORE / CONVENTIONAL PORT (FORGED GATE/CHECK VALVES) / FLEXIBLE WEDGE / FLAT PLUG
R	REDUCED BORE
C	REGULATING PLUG
M	MARGINAL SEAT
B	BALL TYPE (FOR LIFT DISC CHECK VALVE)

9-10 RATING

06	PN6
10	PN10
16	PN16
A1	ANSI150 (PN20)
25	PN25
A3	ANSI300 (PN50)
40	PN40
A4	ANSI400 (PN64)
64	PN64
A6	ANSI600 (PN100)
P0	PN100
A8	ANSI800
A9	ANSI900 (PN150)
P1	PN160
P2	PN250
AA	ANSI1500 (PN250)
AB	ANSI2500 (PN420)
AC	ANSI4500
P4	PN400
P6	PN630

11 SPECIAL FEATURES / FTF (END TO END)

0	Non Special features
S	Short pattern
L	Long pattern
X	Other Special instructions
N	Accordance to NACE MR 0175
B	Special locking device (open and/or close)

12-14 SIZE

050	2" - DN50
200	8" - DN200
912	48" - DN1200

1	2	3	4	5	6	7	8	9	10	11	12	13	14

1-2 STRAINER TYPE

F0	Y-STRAINER
F9	FORGED Y-STRAINER

3-4 BODY MATERIAL

	CAST	FORGED
H0	A126 Class B	
H1		
F0		
F1	A536 80-55-06	
F2	A536 65-45-12	
A0	A216WCB	A105
A1	-	A350 LF2
A2	-	A350 LF6 cl.1
A3	A352 LC2	-
A4	A352 LC3	A350 LF3
A5	A216 WCC	-
A6	A352 LCC	-
A7	-	A350 LF6 cl.2
A8	A352 LCB	-
A9		A350 LF1
B1	A217 WC1	A182 F1
B2	A352 LC1	-
B3	-	A182 F2
B4	A217 WC4	-
B5	A217 WC5	-
B6	-	A182 F12 cl.2
B7	-	A182 F11cl.2
B8	A217 WC6	-
B9	A217 WC9	A182 F22 cl.3
C1	-	A182 F21
C2	A217 C5	A182 F5a
C3	-	A182 F5
C4	A217 C12	A182 F9
C5	A217 C12A	A182 F91

	CAST	FORGED
I1	A351 CF3	-
I2	A351 CF8	A182 F304
I3	-	-
I4	-	A182 F316H
I5	A351 CF3A	-
I6	A351 CF8A	-
I7	A351 CF3M	-
I0	A351 CF8M	A182 F316
I8	A351 CG8M	-
I9	-	A182 F304L
IA	1.4581	
J1	-	A182 F316L
J2	-	A182 F321
J3	-	A182 F321H
J4	A351 CF8C	A182 F347
J5	-	A182 F347H
J6	-	A182 F348
J7	-	A182 F348H
J8	A351 CH8	-
J9	A351 CH20	-
K1	A351 CK20	A182 F310H
K2	A351 CK3MCuN	A182 F44
K3	A995 4a	A182 F51
K4	A995 5a	A182 F53
K5	A351 Gr. CE8MN	-
K6	A351 Gr. CD4MCu	-
K7	A351 Gr. CD3MWCuN	-
K8	-	A182 Gr. F55

CAST	FORGED
	B462 N08020
	B160 N02200
	B160 N02201
	B564 N04400
	B164 N04405
	B564 N06600
	B564 N08800
	B335 N10665
	B564 N10276
	B564 N06625
	B335 N10001
	B573 N10003
(904L)	B574 N06455
	B425 N08825
	B572 N06002
	B672 N08700
	B649 N08904
	B621 N08320
	B581 N06985
	B581 N06975
	B564 N08031
	B581 N06007
	B564 N08810
A494 N-12MV	-
A494 CW-12MW	-
-	B511 N08330
A351 CN-7M	-

5 SCREEN MATERIAL

0	S. STEEL 316
1	S. STEEL 304
2	S. STEEL 316L

6 ENDS CONNECTIONS

0	RF	P	BSPP
J	RTJ	T	BSPT
F	FF	N	NPT
B	BW ANSI	W	WAFER
V	BW DIN	L	LUG
S	SW ANSI	C	CLAMP
Z	SW DIN	X	SPECIAL

7 SCREEN TYPE

P	PERFORATED SCREN
W	WIRE MESH

8-9 MESH WIDTH / SCREEN PERFORATION

FOR PERFORATED SCREEN	10	1 mm
	11	1,1 mm
	15	1,5 mm
	30	3 mm
	C5	0,25 mm
	A5	0,05 mm
	F0	0,5 mm
FOR WIRE MESH	M1	45/cm²
	M2	28/cm²
	M3	15/cm²
	M4	100/cm²
	M5	204/cm²
	M6	280/cm²
	M7	370/cm²
	M8	625/cm²

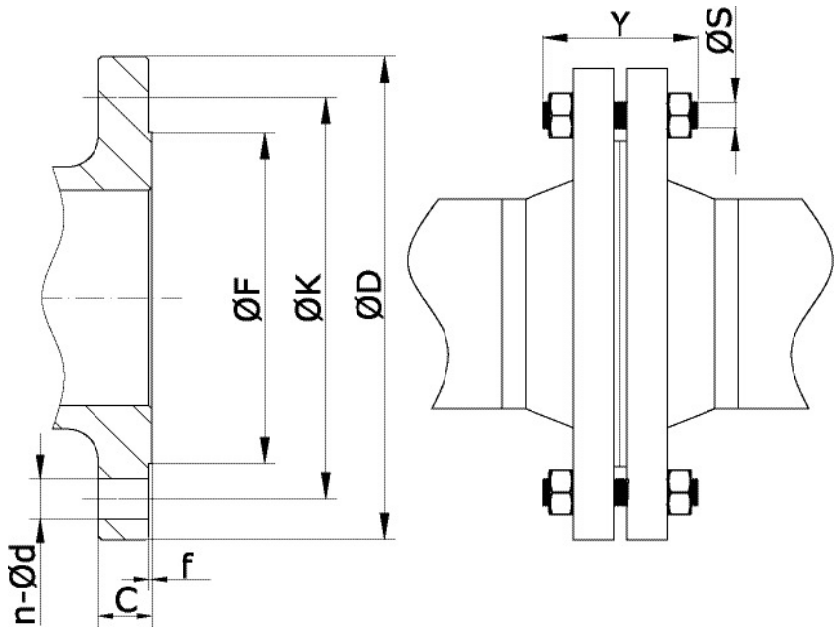
10-11 RATING

06	PN6	P0	PN100
10	PN10	A8	ANSI800
16	PN16	A9	ANSI900 (PN150)
A1	ANSI150 (PN20)	P1	PN160
25	PN25	P2	PN250
A3	ANSI300 (PN50)	AA	ANSI1500 (PN250)
40	PN40	AB	ANSI2500 (PN420)
A4	ANSI400 (PN64)	AC	ANSI4500
64	PN64	P4	PN400
A6	ANSI600 (PN100)	P6	PN630

12-14 SIZE

050	2" - DN50
200	8" - DN200
912	48" - DN1200

Flanged ends acc. to ASME B16.5 / B16.47 Raised Face (RF) Type



Class 150

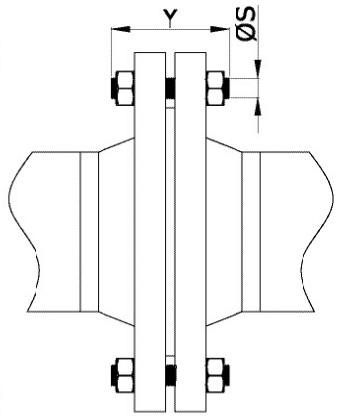
Size	ØD	ØK	ØF	C	f	n-Ød	ØS	Y
1/2"	90	60,3	34,9	13,2	2	4 - 5/8	1/2	55
3/4"	100	69,9	42,9	14,7	2	4 - 5/8	1/2	65
1"	110	79,4	50,8	16,3	2	4 - 5/8	1/2	65
1-1/2"	125	98,4	73	19,5	2	4 - 5/8	1/2	70
2"	150	120,7	91,9	21,1	2	4 - 3/4	5/8	85
3"	190	152,4	127	25,9	2	4 - 3/4	5/8	90
4"	230	190,5	157,2	25,9	2	8 - 3/4	5/8	90
6"	280	241,3	215,9	27,4	2	8 - 7/8	3/4	100
8"	345	298,5	269,7	30,4	2	8 - 7/8	3/4	110
10"	405	362	323,9	32,2	2	12 - 1	7/8	115
12"	485	431,8	381	33,8	2	12 - 1	7/8	120
14"	535	476,3	412,8	37,1	2	12- 1 1/8	1	135
16"	595	539,8	469,9	38,6	2	16- 1 1/8	1	135
18"	635	577,9	533,4	41,6	2	16- 1 1/4	1 1/8	145
20"	700	635	584,2	44,9	2	20- 1 1/4	1 1/8	160
24"	815	749,3	692,2	49,8	2	20- 1 3/8	1 1/4	170
26"	870	806,4	749	68,7	2	24- 1 3/8	1 1/4	-
28"	925	863,6	800	71,9	2	28- 1 3/8	1 1/4	-
30"	985	914,4	857	75,1	2	28- 1 3/8	1 1/4	-
32"	1060	977,9	914	81,4	2	28- 1 5/8	1 1/2	-
36"	1170	1085,8	1022	90,9	2	32- 1 5/8	1 1/2	-
40"	1290	1200,2	1124	90,9	2	36- 1 5/8	1 1/2	-
42"	1345	1257,3	1194	97,3	2	36- 1 5/8	1 1/2	-
48"	1510	1422,4	1359	108,4	2	44- 1 5/8	1 1/2	-

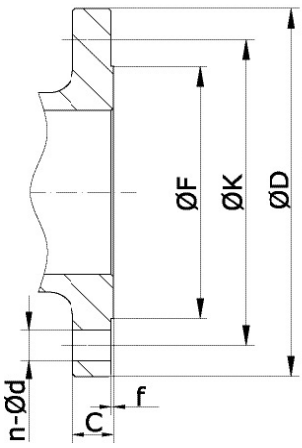
Class 300

ØD	ØK	ØF	C	f	n-Ød	ØS	Y
95	66,7	34,9	16,3	2	4 - 5/8	1/2	65
115	82,6	42,9	17,9	2	4 - 3/4	5/8	75
125	88,9	50,8	19,5	2	4 - 3/4	5/8	75
155	114,3	73	22,7	2	4 - 7/8	3/4	90
165	127	91,9	24,3	2	8 - 3/4	5/8	90
210	168,3	127	30,6	2	8 - 7/8	3/4	110
255	200	157,2	33,8	2	8 - 7/8	3/4	115
320	269,9	215,9	38,6	2	12 - 7/8	3/4	120
380	330,2	269,7	43,3	2	12 - 1	7/8	140
445	387,4	323,9	49,7	2	16- 1 1/8	1	160
520	450,8	381	52,8	2	16- 1 1/4	1 1/8	170
585	514,4	412,8	56	2	20- 1 1/4	1 1/8	180
650	571,5	469,9	59,2	2	20- 1 3/8	1 1/4	190
710	628,6	533,4	62,4	2	24- 1 3/8	1 1/4	195
775	685,8	584,2	65,5	2	24- 1 3/8	1 1/4	205
915	812,8	692,2	71,9	2	24- 1 5/8	1 1/2	230
970	876,3	749	79,8	2	28- 1 3/4	1 5/8	-
1035	939,8	800	86,2	2	28- 1 3/4	1 5/8	-
1090	997	857	92,5	2	28- 1 7/8	1 3/4	-
1150	1054,1	914	98,9	2	28 - 2	1 7/8	-
1270	1168,4	1022	105,2	2	32- 2 1/8	2	-
1240	1155,7	1086	114,8	2	32- 1 3/4	1 5/8	-
1290	1206,5	1137	119,5	2	32- 1 3/4	1 5/8	-

Dimensions in mm, except for diameters of bolts holes, which are in inch units

Flanged ends acc. to ASME B16.5 / B16.47 Raised Face (RF) Type





Cla 900

Size	ØD	ØK	ØF	C	f	n-Ød	ØS	Y	ØD	ØK	ØF	C	f	n-Ød	ØS	Y
1/2"	95	66,7	34,9	21,3	7	4 - 5/8	1/2	75	-	-	-	-	-	-	-	-
3/4"	115	82,6	42,9	22,9	7	4 - 3/4	5/8	90	-	-	-	-	-	-	-	-
1"	125	88,9	50,8	24,5	7	4 - 3/4	5/8	90	-	-	-	-	-	-	-	-
1 1/2"	155	114,3	73	29,3	7	4 - 7/8	3/4	110	-	-	-	-	-	-	-	-
2"	165	127	91,9	32,4	7	8 - 3/4	5/8	110	215	165,1	91,9	45,1	7	8 - 1	7/8	145
3"	210	168,3	127	38,8	7	8 - 7/8	3/4	125	240	190,5	127	45,1	7	8 - 1	7/8	145
4"	275	215,9	157,2	45,1	7	8 - 1	7/8	145	290	235	157,2	51,5	7	8- 1 1/4	1 1/8	170
6"	355	292,1	215,9	54,7	7	12- 1 1/8	1	170	380	317,5	215,9	62,6	7	12- 1 1/4	1 1/8	190
8"	420	349,2	269,7	62,6	7	12- 1 1/4	1 1/8	190	470	393,7	269,7	70,5	7	12- 1 1/2	1 3/8	220
10"	510	431,8	323,9	70,5	7	16- 1 3/8	1 1/4	210	545	469,9	323,9	76,9	7	16- 1 1/2	1 3/8	235
12"	560	489	381	73,7	7	20- 1 3/8	1 1/4	220	610	533,4	381	86,4	7	20- 1 1/2	1 3/8	255
14"	605	527	412,8	76,9	7	20- 1 1/2	1 3/8	235	640	558,8	412,8	92,8	7	20- 1 5/8	1 1/2	275
16"	685	603,2	469,9	83,2	7	20- 1 5/8	1 1/2	255	705	616	469,9	95,9	7	20- 1 3/4	1 5/8	285
18"	745	654	533,4	89,6	7	20- 1 3/4	1 5/8	275	785	685,8	533,4	108,6	7	20 - 2	1 7/8	325
20"	815	723,9	584,2	95,9	7	24- 1 3/4	1 5/8	285	855	749,3	584,2	115	7	20- 2 1/8	2	350
24"	940	838,2	692,2	108,6	7	24 - 2	1 7/8	330	1040	901,7	692,2	146,7	7	20- 2 5/8	2 1/2	440
26"	1015	914,4	749	115	7	28 - 2	1 7/8	-	1085	952,5	749	146,7	7	20- 2 7/8	2 3/4	-
28"	1075	965,2	800	118,2	7	28- 2 1/8	2	-	1170	1022,4	800	149,9	7	20- 3 1/8	3	-
30"	1130	1022,4	857	121,3	7	28- 2 1/8	2	-	1230	1085,8	857	156,3	7	20- 3 1/8	3	-
32"	1195	1079,5	914	124,5	7	28- 2 3/8	2 1/4	-	1315	1155,7	914	165,8	7	20- 3 3/8	3 1/4	-
36"	1315	1193,8	1022	130,9	7	28- 2 5/8	2 1/2	-	1460	1289	1022	178,5	7	20- 3 5/8	3 1/2	-
40"	1320	1212,8	1111	165,8	7	28- 2 3/8	2 1/4	-								
42"	1405	1282,7	1168	175,3	7	28- 2 5/8	2 1/2	-								

Class 1500

Size	ØD	ØK	ØF	C	f	n-Ød	ØS	Y
2"	215	165,1	91,9	45,1	7	8 - 1	7/8	145
3"	265	203,2	127	54,7	7	8- 1 1/4	1 1/8	180
4"	310	241,3	157,2	61	7	8- 1 3/8	1 1/4	195
6"	395	317,5	215,9	89,6	7	12- 1 1/2	1 3/8	260
8"	485	393,7	269,7	99,1	7	12- 1 3/4	1 5/8	290
10"	585	482,6	323,9	115	7	12 - 2	1 7/8	335
12"	675	571,5	381	130,9	7	16- 2 1/8	2	375
14"	750	635	412,8	140,4	7	16- 2 3/8	2 1/4	405
16"	825	704,8	469,9	153,1	7	16- 2 5/8	2 1/2	445
18"	915	774,7	533,4	169	7	16- 2 7/8	2 3/4	495
20"	985	831,8	584,2	184,8	7	16- 3 1/8	3	540
24"	1170	990,6	692,2	210,2	7	16- 3 5/8	3 1/2	615

Class 2500

ØD	ØK	ØF	C	f	n-Ød	ØS	Y
235	171,4	91,9	57,9	7	8- 1 1/8	1	180
305	228,6	127	73,7	7	8- 1 3/8	1 1/4	220
355	273	157,2	83,2	7	8- 1 5/8	1 1/2	255
485	368,3	215,9	115	7	8- 2 1/8	2	345
550	438,2	269,7	134	7	12- 2 1/8	2	380
675	539,8	323,9	172,1	7	12- 2 5/8	2 1/2	490
760	619,1	381	191,2	7	12- 2 7/8	2 3/4	540

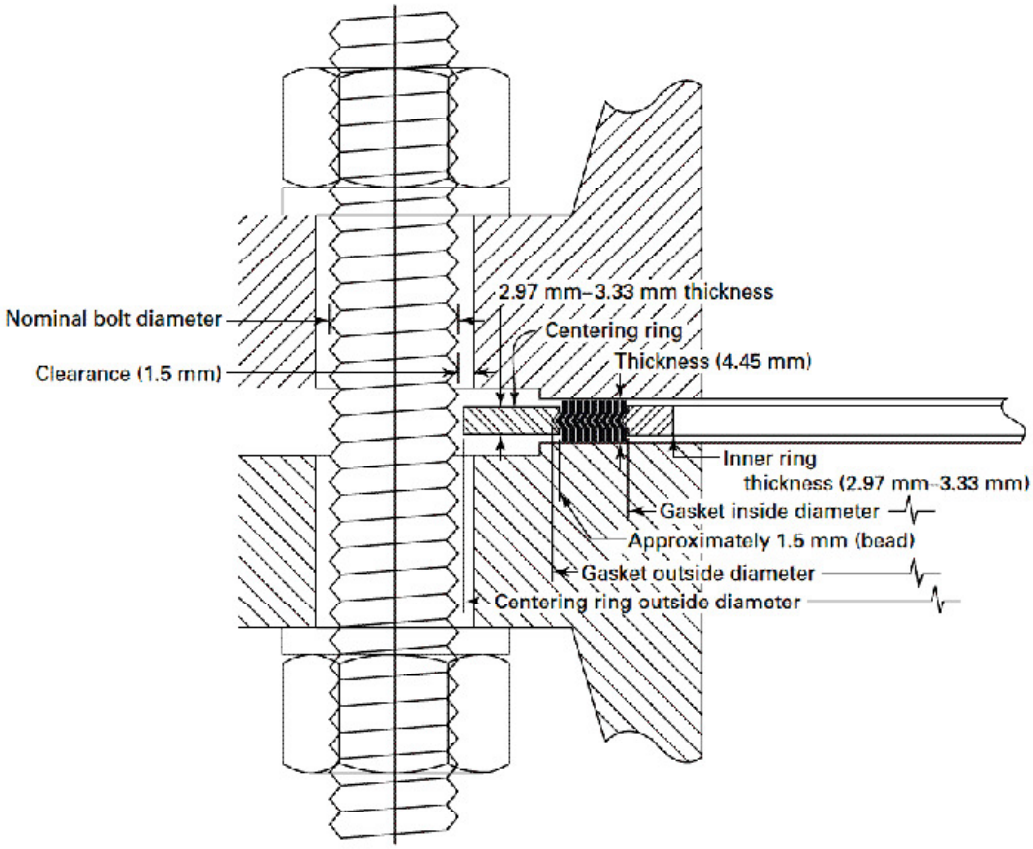
Dimensions in mm, except for diameters of bolts holes, which are in inch units

Flat Gaskets acc. to ANSI B16.21

Rating nominal size	Gasket I.D.	Gasket O.D. by Class		
		150Lb	300Lb	600Lb
1/2"	21	48	54	54
3/4"	27	57	67	67
1"	33	67	73	73
1 1/4"	42	76	82	82
1 1/2"	48	86	95	95
2"	60	105	111	111
2 1/2"	73	124	130	130
3"	89	136	149	149
4"	114	174	181	194
5"	141	196	210	241
6"	168	222	250	266
8"	219	279	308	320
10"	273	340	362	400
12"	324	410	422	457
14"	356	451	486	492
16"	406	514	540	565
18"	457	549	597	613
20"	508	606	654	682
24"	610	717	774	790

Dimensions in mm

Spiral-Wound Gaskets acc. to ASME B16.20



Spiral-Wound Gaskets acc. to ASME B16.20

Dimensions for Spiral-Wound Gaskets Used With ASME B16.5 Flanges

Flange Size (NPS)	Gasket O. D. Classes 150, 300, 600	Gasket O. D. Classes 900, 1500, 2500	Gasket I. D. by Class 150	300	600	900	1500	2500	Centering Ring O. D. by Class 150	300	600	900	1500	2500
1/2	31,8	31,8	19,1	19,1	19,1	-	19,1	19,1	47,8	54,1	54,1	-	63,5	69,9
3/4	39,6	39,6	25,4	25,4	25,4	-	25,4	25,4	57,2	66,8	66,8	-	69,9	76,2
1	47,8	47,8	31,8	31,8	31,8	-	31,8	31,8	66,8	73,2	73,2	-	79,5	85,9
1 1/4	60,5	60,5	47,8	47,8	47,8	-	39,6	39,6	76,2	82,6	82,6	-	88,9	104,9
1 1/2	69,9	69,9	54,1	54,1	54,1	-	47,8	47,8	85,9	95,3	95,3	-	98,6	117,6
2	85,9	85,9	69,9	69,9	69,9	-	58,7	58,7	104,9	111,3	111,3	-	143	146,1
2 1/2	98,6	98,6	82,6	82,6	82,6	-	69,9	69,9	124	130,3	130,3	-	165,1	168,4
3	120,7	120,7	101,6	101,6	101,6	95,3	92,2	92,2	136,7	149,4	149,4	168,4	174,8	196,9
4	149,4	149,4	127	127	120,7	120,7	117,6	117,6	174,8	181,1	193,8	206,5	209,6	235
5	177,8	177,8	155,7	155,7	147,6	147,6	143	143	196,9	215,9	241,3	247,7	254	279,4
6	209,6	209,6	182,6	182,6	174,8	174,8	171,5	171,5	222,3	251	266,7	289,1	282,7	317,5
8	263,7	257,3	233,4	233,4	225,6	222,3	215,9	215,9	279,4	308,1	320,8	358,9	352,6	387,4
10	317,5	311,2	287,3	287,3	274,6	276,4	266,7	270	339,9	362	400,1	435,1	435,1	476,3
12	374,7	368,3	339,9	339,9	327,2	323,9	323,9	317,5	409,7	422,4	457,2	498,6	520,7	549,4
14	406,4	400,1	371,6	371,6	362	355,6	362	-	450,9	485,9	492,3	520,7	577,9	-
16	463,6	457,2	422,4	422,4	412,8	412,8	406,4	-	514,4	539,8	565,2	574,8	641,4	-
18	527,1	520,7	474,7	474,7	469,9	463,6	463,6	-	549,4	596,9	612,9	638,3	704,9	-
20	577,9	571,5	525,5	525,5	520,7	520,7	514,4	-	606,6	654,1	682,8	698,5	755,7	-
24	685,8	679,5	628,7	628,7	628,7	628,7	616	-	717,6	774,7	790,7	838,2	901,7	-

Dimensions for Spiral-Wound Gaskets Used With ASME B16.47 A Series Flanges

Flange Size (NPS)	Class 150 Inside Diam.	Class 150 Outside Diam.	Class 150 Centering Ring Outside Diam.	Class 300 Inside Diam.	Class 300 Outside Diam.	Class 300 Centering Ring Outside Diam.	Class 600 Inside Diam.	Class 600 Outside Diam.	Class 600 Centering Ring Outside Diam.	Class 900 Inside Diam.	Class 900 Outside Diam.	Class 900 Centering Ring Outside Diam.
26	673,1	704,9	774,7	685,8	736,6	835,2	685,8	736,6	866,9	685,8	736,6	882,7
28	723,9	755,7	831,9	736,6	787,4	898,7	736,6	787,4	914,4	736,6	787,4	946,2
30	774,7	806,5	882,7	793,8	844,6	952,5	793,8	844,6	971,6	793,8	844,6	1009,7
32	825,5	860,6	939,8	850,9	901,7	1006,6	850,9	901,7	1022,4	850,9	901,7	1073,2
34	876,3	911,4	990,6	901,7	952,5	1057,4	901,7	952,5	1073,2	901,7	952,5	1136,7
36	927,1	968,5	1047,8	955,8	1006,6	1117,6	955,8	1006,6	1130,3	958,9	1009,7	1200,2
38	977,9	1019,3	1111,3	977,9	1016	1054,1	990,6	1041,4	1104,9	1035,1	1085,9	1200,2
40	1028,7	1070,1	1162,1	1022,4	1070,1	1114,6	1047,8	1098,6	1155,7	198,6	1149,4	1251
42	1079,5	1124	1219,2	1073,2	1120,9	1165,4	1104,9	1155,7	1219,2	1149,4	1200,2	1301,8
44	1130,3	1178,1	1276,4	1130,3	1181,1	1219,2	1162,1	1212,9	1270	2106,5	1257,3	1368,6
46	1181,1	1228,9	1327,2	1178,1	1228,9	1273,3	1212,9	1263,7	1327,2	2170	1320,8	1435,1
48	1231,9	1279,7	1384,3	1235,2	1286	1324,1	1270	1320,8	1390,7	3120,8	1371,6	1485,9
50	1282,7	1333,5	1435,1	1295,4	1346,2	1378	1320,8	1371,6	1447,8	-	-	-
52	1333,5	1384,3	1492,3	1346,2	1397	1428,8	1371,6	1422,4	1498,6	-	-	-
54	1384,3	1435,1	1549,4	1403,4	1454,2	1492,3	1428,8	1479,6	1555,8	-	-	-
56	1435,1	1485,9	1606,6	1454,2	1505	1543,1	1479,6	1530,4	1612,9	-	-	-
58	1485,9	1536,7	1663,7	1511,3	1562,1	1593,9	1536,7	1587,5	1663,7	-	-	-
60	1536,7	1587,5	1714,5	1562,1	1612,9	1644,7	1593,9	1644,7	1733,6	-	-	-

Dimensions in mm

Spiral-Wound Gaskets acc. to ASME B16.20

Dimensions for Spiral-Wound Gaskets Used With ASME B16.47 B Series Flanges

Flange Size (NPS)	Class 150			Class 300			Class 600			Class 900		
	Inside Diam.	Outside Diam.	Centering Ring Outside Diam.	Inside Diam.	Outside Diam.	Centering Ring Outside Diam.	Inside Diam.	Outside Diam.	Centering Ring Outside Diam.	Inside Diam.	Outside Diam.	Centering Ring Outside Diam.
26	673,1	698,5	725,4	673,1	711,2	771,7	663,7	714,5	765,3	692,2	749,3	838,2
28	723,9	749,3	776,2	723,9	762	825,5	704,9	755,7	819,2	743	800,1	901,7
30	774,7	800,1	827	774,7	812,8	886	778	828,8	879,6	806,5	857,3	958,9
32	825,5	850,9	881,1	825,5	863,6	939,8	831,9	882,7	933,5	863,6	914,4	1016
34	876,3	908,1	935	876,3	914,4	993,9	889	939,8	997	920,8	971,6	1073,2
36	927,1	958,9	987,6	927,1	965,2	1047,8	939,8	990,6	1047,8	946,2	997	1124
38	974,9	1009,7	1044,7	1009,7	1047,8	1098,6	990,6	1041,4	1104,9	1035,1	1085,9	1200,2
40	1022,4	1063,8	1095,5	1060,5	1098,6	1149,4	1047,8	1098,6	1155,7	1098,6	1149,4	1251
42	1079,5	1114,6	1146,3	1111,3	1149,4	1200,2	1104,9	1155,7	1219,2	1149,4	1200,2	1301,8
44	1124	1165,4	1197,1	1162,1	1200,2	1251	1162,1	1212,9	1270	1206,5	1257,3	1368,6
46	1181,1	1224	1255,8	1216,2	1254,3	1317,8	1212,9	1263,7	1327,2	1270	1320,8	1435,1
48	1231,9	1270	1306,6	1263,7	1311,4	1368,6	1270	1320,8	1390,7	1320,8	1371,6	1485,9
50	1282,7	1325,6	1357,4	1317,8	1355,9	1419,4	1320,8	1371,6	447,8	-	-	-
52	1333,5	1376,4	1408,2	1368,6	1406,7	1470,2	1371,6	1422,4	498,6	-	-	-
54	1384,3	1422,4	1463,8	1403,4	1454,2	1530,4	1428,8	1479,6	555,8	-	-	-
56	1444,8	1478	1514,6	1479,6	1524	1593,9	1479,6	1530,4	612,9	-	-	-
58	1500,1	1528,8	1579,6	1535,2	1573,3	1655,8	1536,7	1587,5	663,7	-	-	-
60	1557,3	1586	1630,4	1589	1630,4	1706,6	1593,9	1644,7	733,6	-	-	-

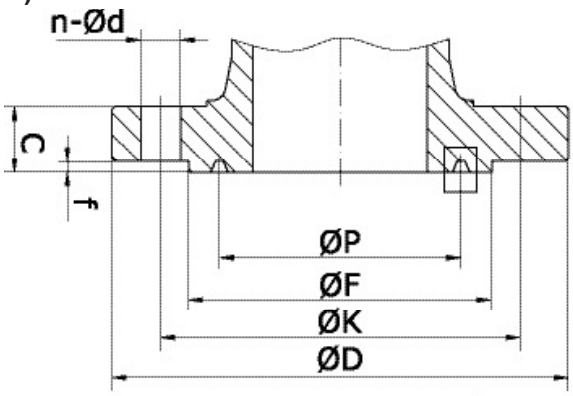
Inner-Ring Inside Diameters for Spiral-Wound Gaskets for Use With ASME B16.5 & B16.47Flanges

Flange Size (NPS)	Pressure Class					
	150	300	600	900	1500	2500
1/2	14,2	14,2	14,2	-	14,2	14,2
3/4	20,6	20,6	20,6	-	20,6	20,6
1	26,9	26,9	26,9	-	26,9	26,9
1 1/4	38,1	38,1	38,1	-	33,3	33,3
1 1/2	44,5	44,5	44,5	-	41,4	41,4
2	55,6	55,6	55,6	-	52,3	52,3
2 1/2	66,5	66,5	66,5	-	63,5	63,5
3	81	81	81	78,7	78,7	78,7
4	106,4	106,4	102,6	102,6	97,8	97,8
5	131,8	131,8	128,3	128,3	124,5	124,5
6	157,2	157,2	154,9	154,9	147,3	147,3
8	215,9	215,9	205,7	196,9	196,9	196,9
10	268,2	268,2	255,3	246,1	246,1	246,1
12	317,5	317,5	307,3	292,1	292,1	292,1
14	349,3	349,3	342,9	320,8	320,8	-
16	400,1	400,1	389,9	374,7	368,3	-
18	449,3	449,3	438,2	425,5	425,5	-
20	500,1	500,1	489	482,6	476,3	-
24	603,3	603,3	590,6	590,6	577,9	-

Flange Size (NPS)	A Series Flanges Pressure Class				B Series Flanges Pressure Class			
	150	300	600	900	150	300	600	900
26	654,1	654,1	647,7	660,4	654,1	654,1	644,7	666,8
28	704,9	704,9	698,5	711,2	704,9	704,9	685,8	717,6
30	755,7	755,7	755,7	768,4	755,7	755,7	752,6	781,1
32	806,5	806,5	812,8	812,8	806,5	806,5	793,8	838,2
34	857,3	857,3	863,6	863,6	857,3	857,3	850,9	895,4
36	908,1	908,1	917,7	920,8	908,1	908,1	901,7	920,8
38	958,9	952,5	952,5	1009,7	958,9	971,6	952,5	1009,7
40	1009,7	1003,3	1009,7	1060,5	1009,7	1022,4	1009,7	1060,5
42	1060,5	1054,1	1066,8	1111,3	1060,5	1085,9	1066,8	1111,3
44	1111,3	1104,9	1111,3	1155,7	1111,3	1124	1111,3	1155,7
46	1162,1	1152,7	1162,1	1219,2	1162,1	1178,1	1162,1	1219,2
48	1212,9	1209,8	1219,2	1270	1212,9	1231,9	1219,2	1270
50	1263,7	1244,6	1270	-	1263,7	1267	1270	-
52	1314,5	1320,8	1320,8	-	1314,5	1317,8	1320,8	-
54	1358,9	1352,6	1378	-	1365,3	1365,3	1378	-
56	1409,7	1403,4	1428,8	-	1422,4	1428,8	1428,8	-
58	1460,5	1447,8	1473,2	-	1478	1484,4	1473,2	-
60	1511,3	1524	1530,4	-	1535,2	1557,3	1530,4	-

Dimensions in mm

Ring Joint Flanged Ends (RTJ) acc. to ASME B16.5 / B16.47



Class 150

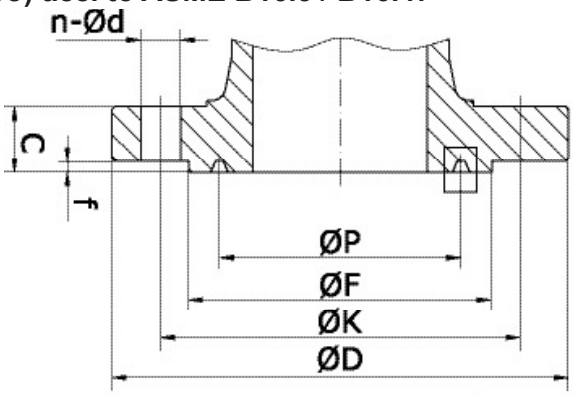
Dimensions in mm, except for diameters of bolts holes, which are in inch units

Size	ØD	ØK	ØF	ØP	C	f	n-Ød	A	B	R	ØS	Y
1"	110	79,4	63,5	47,63	16,3	2	4 - 5/8	8,74	6,35	0,8	1/2	75
1 1/2"	125	98,4	82,5	65,07	19,5	2	4 - 5/8	8,74	6,35	0,8	1/2	85
2"	150	120,7	102	82,55	21,1	2	4 - 3/4	8,74	6,35	0,8	5/8	95
3"	190	152,4	133	114,3	25,9	2	4 - 3/4	8,74	6,35	0,8	5/8	100
4"	230	190,5	171	149,23	25,9	2	8 - 3/4	8,74	6,35	0,8	5/8	100
6"	280	241,3	219	193,68	27,4	2	8 - 7/8	8,74	6,35	0,8	3/4	115
8"	345	298,5	273	247,65	30,4	2	8 - 7/8	8,74	6,35	0,8	3/4	120
10"	405	362	330	304,8	32,2	2	12 - 1	8,74	6,35	0,8	7/8	125
12"	485	431,8	406	381	33,8	2	12 - 1	8,74	6,35	0,8	7/8	135
14"	535	476,3	425	396,88	37,1	2	12- 1 1/8	8,74	6,35	0,8	1	145
16"	595	539,8	483	454,03	38,6	2	16- 1 1/8	8,74	6,35	0,8	1	145
18"	635	577,9	546	517,53	41,6	2	16- 1 1/4	8,74	6,35	0,8	1 1/8	160
20"	700	635	597	558,8	44,9	2	20- 1 1/4	8,74	6,35	0,8	1 1/8	170
24"	815	749,3	711	673,1	49,8	2	20- 1 3/8	8,74	6,35	0,8	1 1/4	185
26"	870	806,4	810	749,3	68,7	2	24- 1 3/8	19,84	12,7	1,5	1 1/4	-
28"	925	863,6	861	800,1	71,9	2	28- 1 3/8	19,84	12,7	1,5	1 1/4	-
30"	985	914,4	917	857,25	75,1	2	28- 1 3/8	19,84	12,7	1,5	1 1/4	-
32"	1060	977,9	984	914,4	81,4	2	28- 1 5/8	23,01	14,27	1,5	1 1/2	-
36"	1170	1085,8	1092	1022,35	90,9	2	32- 1 5/8	23,01	14,27	1,5	1 1/2	-

Class 300

Size	ØD	ØK	ØF	ØP	C	f	n-Ød	A	B	R	ØS	Y
1/2"	95	66,7	51	34,14	16,3	2	4 - 5/8	7,14	5,54	0,8	1/2	75
3/4"	115	82,6	63,5	42,88	17,9	2	4 - 3/4	8,74	6,35	0,8	5/8	90
1"	125	88,9	70	50,8	19,5	2	4 - 3/4	8,74	6,35	0,8	5/8	90
1 1/2"	155	114,3	90,5	68,27	22,7	2	4 - 7/8	8,74	6,35	0,8	3/4	100
2"	165	127	108	82,55	24,3	2	8 - 3/4	11,91	7,92	0,8	5/8	100
3"	210	168,3	146	123,83	30,6	2	8 - 7/8	11,91	7,92	0,8	3/4	120
4"	255	200	175	149,23	33,8	2	8 - 7/8	11,91	7,92	0,8	3/4	125
6"	320	269,9	241	211,12	38,6	2	12 - 7/8	11,91	7,92	0,8	3/4	140
8"	380	330,2	302	269,88	43,3	2	12 - 1	11,91	7,92	0,8	7/8	150
10"	445	387,4	356	323,85	49,7	2	16- 1 1/8	11,91	7,92	0,8	1	170
12"	520	450,8	413	981	52,8	2	16- 1 1/4	11,91	7,92	0,8	1 1/8	185
14"	585	514,4	457	419,1	56	2	20- 1 1/4	11,91	7,92	0,8	1 1/8	190
16"	650	571,5	508	469,9	59,2	2	20- 1 3/8	11,91	7,92	0,8	1 1/4	205
18"	710	628,6	575	533,4	62,4	2	24- 1 3/8	11,91	7,92	0,8	1 1/4	210
20"	775	685,8	635	584,2	65,5	2	24- 1 3/8	13,49	9,53	1,5	1 1/4	220
24"	915	812,8	749	692,15	71,9	2	24- 1 5/8	16,66	11,13	1,5	1 1/2	255
26"	970	876,3	810	749,3	79,8	2	28- 1 3/4	19,84	12,7	1,5	1 5/8	-
28"	1035	939,8	861	800,1	86,2	2	28- 1 3/4	19,84	12,7	1,5	1 5/8	-
30"	1090	997	917	857,25	92,5	2	28- 1 7/8	19,84	12,7	1,5	1 3/4	-
32"	1150	1054,1	984	914,4	98,9	2	28 - 2	23,01	14,27	1,5	1 7/8	-
36"	1270	1168,4	1092	1022,35	105,2	2	32- 2 1/8	23,01	14,27	1,5	2	-

Ring Joint Flanged Ends (RTJ) acc. to ASME B16.5 / B16.47



Dimensions in mm, except for diameters of bolts holes, which are in inch units

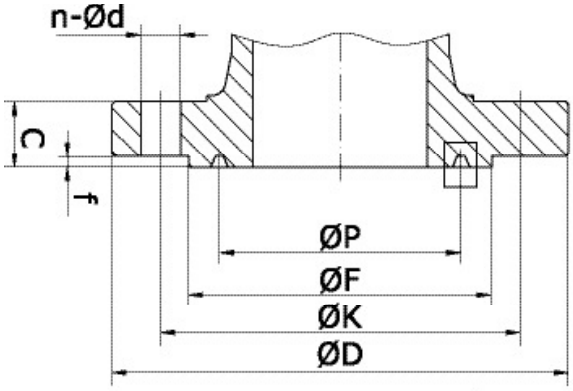
Class 600

Size	ØD	ØK	ØF	ØP	C	f	n-Ød	A	B	R	ØS	Y
1/2"	95	66,7	51	34,14	21,3	7	4 - 5/8	7,14	5,54	0,8	1/2	75
3/4"	115	82,6	63,5	42,88	22,9	7	4 - 3/4	8,74	6,35	0,8	5/8	90
1"	125	88,9	70	50,8	24,5	7	4 - 3/4	8,74	6,35	0,8	5/8	90
1 1/2"	155	114,3	90,5	68,27	29,3	7	4 - 7/8	8,74	6,35	0,8	3/4	110
2"	165	127	108	82,55	32,4	7	8 - 3/4	11,91	7,92	0,8	5/8	110
3"	210	168,3	146	123,83	38,8	7	8 - 7/8	11,91	7,92	0,8	3/4	125
4"	275	215,9	175	149,23	45,1	7	8 - 1	11,91	7,92	0,8	7/8	145
6"	355	292,1	241	211,12	54,7	7	12- 1 1/8	11,91	7,92	0,8	1	170
8"	420	349,2	302	269,88	62,6	7	12- 1 1/4	11,91	7,92	0,8	1 1/8	195
10"	510	431,8	356	323,85	70,5	7	16- 1 3/8	11,91	7,92	0,8	1 1/4	215
12"	560	489	413	981	73,7	7	20- 1 3/8	11,91	7,92	0,8	1 1/4	220
14"	605	527	457	419,1	76,9	7	20- 1 1/2	11,91	7,92	0,8	1 3/8	235
16"	685	603,2	508	469,9	83,2	7	20- 1 5/8	11,91	7,92	0,8	1 1/2	255
18"	745	654	575	533,4	89,6	7	20- 1 3/4	11,91	7,92	0,8	1 5/8	275
20"	815	723,9	635	584,2	95,9	7	24- 1 3/4	13,49	9,53	1,5	1 5/8	290
24"	940	838,2	749	692,15	108,6	7	24 - 2	16,66	11,13	1,5	1 7/8	335
26"	1015	914,4	810	749,3	115	7	28 - 2	19,84	12,7	1,5	1 7/8	-
28"	1075	965,2	861	800,1	118,2	7	28- 2 1/8	19,84	12,7	1,5	2	-
30"	1130	1022,4	917	857,25	121,3	7	28- 2 1/8	19,84	12,7	1,5	2	-
32"	1195	1079,5	984	914,4	124,5	7	28- 2 3/8	23,01	14,27	1,5	2 1/4	-
36"	1315	1193,8	1092	1022,35	130,9	7	28- 2 5/8	23,01	14,27	1,5	2 1/2	-

Class 900

Size	ØD	ØK	ØF	ØP	C	f	n-Ød	A	B	R	ØS	Y
2"	215	165,1	124	95,25	45,1	7	8 - 1	11,91	7,92	0,8	7/8	145
3"	240	190,5	156	123,83	45,1	7	8 - 1	11,91	7,92	0,8	7/8	145
4"	290	235	181	149,23	51,5	7	8- 1 1/4	11,91	7,92	0,8	1 1/8	170
6"	380	317,5	241	211,12	62,6	7	12- 1 1/4	11,91	7,92	0,8	1 1/8	195
8"	470	393,7	308	269,88	70,5	7	12- 1 1/2	11,91	7,92	0,8	1 3/8	220
10"	545	469,9	362	323,85	76,9	7	16- 1 1/2	11,91	7,92	0,8	1 3/8	235
12"	610	533,4	419	381	86,4	7	20- 1 1/2	11,91	7,92	0,8	1 3/8	255
14"	640	558,8	467	419,1	92,8	7	20- 1 5/8	16,66	11,13	1,5	1 1/2	280
16"	705	616	524	469,9	95,9	7	20- 1 3/4	16,66	11,13	1,5	1 5/8	290
18"	785	685,8	594	533,4	108,6	7	20 - 2	19,84	12,7	1,5	1 7/8	335
20"	855	749,3	648	584,2	115	7	20- 2 1/8	19,84	12,7	1,5	2	360
24"	1040	901,7	772	692,15	146,7	7	20- 2 5/8	26,97	15,88	2,4	2 1/2	455
26"	1085	952,5	832	749,3	146,7	7	20- 2 7/8	30,18	17,48	2,3	2 3/4	-
28"	1170	1022,4	889	800,1	149,9	7	20- 3 1/8	33,32	17,48	2,3	3	-
30"	1230	1085,8	946	857,25	156,3	7	20- 3 1/8	33,32	17,48	2,3	3	-
32"	1315	1155,7	1003	914,4	165,8	7	20- 3 3/8	33,32	17,48	2,3	3 1/4	-
36"	1460	1289	1124	1022,35	178,5	7	20- 3 5/8	36,53	20,62	2,3	3 1/2	-

Ring Joint Flanged Ends (RTJ) acc. to ASME B16.5



Class 1500

Dimensions in mm, except for diameters of bolts holes, which are in inch units

Size	ØD	ØK	ØF	ØP	C	f	n-Ød	A	B	R	ØS	Y
2”	215	165,1	124	95,25	45,1	7	8 - 1	11,91	7,92	0,8	7/8	145
3”	265	203,2	168	136,53	54,7	7	8- 1 1/4	11,91	7,92	0,8	1 1/8	180
4”	310	241,3	194	161,93	61	7	8- 1 3/8	11,91	7,92	0,8	1 1/4	195
6”	395	317,5	248	211,14	89,6	7	12- 1 1/2	13,49	9,53	1,5	1 3/8	265
8”	485	393,7	318	269,88	99,1	7	12- 1 3/4	16,66	11,13	1,5	1 5/8	300
10”	585	482,6	371	323,85	115	7	12 - 2	16,66	11,13	1,5	1 7/8	345
12”	675	571,5	438	381	130,9	7	16- 2 1/8	23,01	14,27	1,5	2	385
14”	750	635	489	419,1	140,4	7	16- 2 3/8	26,97	15,88	2,4	2 1/4	425
16”	825	704,8	546	469,9	153,1	7	16- 2 5/8	30,18	17,48	2,4	2 1/2	470
18”	915	774,7	613	533,4	169	7	16- 2 7/8	30,18	17,48	2,4	2 3/4	525
20”	985	831,8	673	584,2	184,8	7	16- 3 1/8	33,32	17,48	2,4	3	565
24”	1170	990,6	794	692,15	210,2	7	16- 3 5/8	36,53	20,62	2,4	3 1/2	650

Class 2500

Size	ØD	ØK	ØF	ØP	C	f	n-Ød	A	B	R	ØS	Y
2”	235	171,4	133	101,6	57,9	7	8- 1 1/8	11,91	7,92	0,8	1	180
3”	305	228,6	168	127	73,7	7	8- 1 3/8	13,49	9,53	1,5	1 1/4	230
4”	355	273	203	157,18	83,2	7	8- 1 5/8	16,66	11,13	1,5	1 1/2	260
6”	485	368,3	279	228,6	115	7	8- 2 1/8	19,84	12,7	1,5	2	355
8”	550	438,2	340	279,4	134	7	12- 2 1/8	23,01	14,27	1,5	2	395
10”	675	539,8	425	342,9	172,1	7	12- 2 5/8	30,18	17,48	2,4	2 1/2	510
12”	760	619,1	495	406,4	191,2	7	12- 2 7/8	33,32	17,48	2,4	2 3/4	560

Ring-Joint Gaskets type R acc. to ASME B16.20

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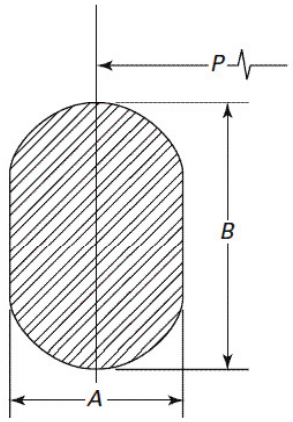

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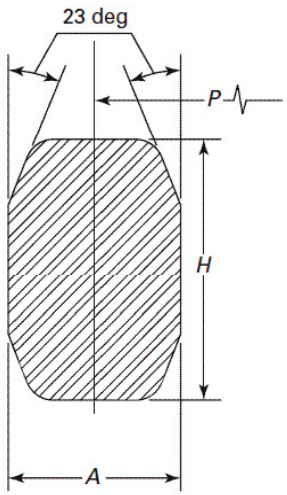

Diam.	Class	Ring No.	P	A	B	H
1/2”	300, 600	R11	34,13	6,35	11,11	9,52
1/2”	1500	R12	39,68	7,93	14,26	12,7
1/2”	2500	R13	42,86	7,93	14,28	12,7
3/4”	300, 600	R13	42,86	7,93	14,28	12,7
3/4”	1500	R14	44,45	7,93	14,28	12,7
1”	150	R15	47,62	7,93	14,28	12,7
3/4”	2500	R16	50,8	7,93	14,28	12,7
1”	300, 600, 1500	R16	50,8	7,93	14,28	12,7
1 1/4”	150	R17	57,15	7,93	14,28	12,7
1”	2500	R18	60,32	7,93	14,28	12,7
1 1/4”	300, 600, 1500	R18	60,32	7,93	14,28	12,7
1 1/2”	150	R19	65,08	7,93	14,28	12,7
1 1/2”	300, 600, 1500	*R20	68,26	7,93	14,28	12,7
1 1/4”	2500	R21	72,23	11,11	17,46	15,87
2”	150	R22	82,55	7,93	14,28	12,7
1 1/2”	2500	*R23	82,55	11,11	17,46	15,87
2”	300, 600	*R23	82,55	11,11	17,46	15,87
2”	1500	*R24	95,25	11,11	17,46	15,87
2 1/2”	150	R25	101,6	7,93	14,28	12,7
2”	2500	*R26	101,6	11,11	17,46	15,87
2 1/2”	300, 600	*R26	101,6	11,11	17,46	15,87
2 1/2”	1500	*R27	107,95	11,11	17,46	15,87
2 1/2”	2500	R28	111,12	12,7	19,05	17,46
3”	150	R29	114,3	7,93	14,28	12,7
-	-	R30	117,47	11,11	17,46	15,87
3”	300, 600, 900	R31	123,82	11,11	17,46	15,87
3”	2500	R32	127	12,7	19,05	17,46
3 1/2”	150	R33	131,76	7,93	14,28	12,7
3 1/2”	300, 600	R34	131,76	11,11	17,46	15,87
3”	1500	*R35	136,52	11,11	17,46	15,87
4”	150	R36	149,22	7,93	14,28	12,7
4”	300, 600, 900	R37	149,22	11,11	17,46	15,87
4”	2500	R38	157,6	15,87	22,22	20,64
4”	1500	*R39	161,92	11,11	17,46	15,87
5”	150	R40	171,45	7,93	14,28	12,7
5”	300, 600, 900	*R41	180,97	11,11	17,46	15,87
5”	2500	R42	190,5	19,05	25,4	23,81
6”	150	R43	193,67	7,93	14,28	12,7
5”	1500	*R44	193,67	11,11	17,46	15,87
6”	300, 600, 900	*R45	211,13	11,11	17,46	15,87
6”	1500	*R46	211,13	12,7	19,05	17,46
6”	2500	*R47	228,6	19,05	25,4	23,81
8”	150	R48	247,65	7,93	14,28	12,7
8”	300, 600, 900	*R49	269,87	11,11	17,46	15,87
8”	1500	*R50	269,87	15,87	22,22	20,64
8”	2500	R51	279,4	22,22	28,57	26,99
10”	150	R52	304,8	7,93	14,28	12,7
10”	300, 600, 900	*R53	323,85	11,11	17,46	15,87
10”	1500	*R54	323,85	15,87	22,22	20,64
10”	2500	R55	342,9	28,57	36,51	34,92

Dimensions are in millimeters.
(*) Indicate ring number acc. to API, STD, 6A

Ring-Joint Gaskets type R acc. to ASME B16.20

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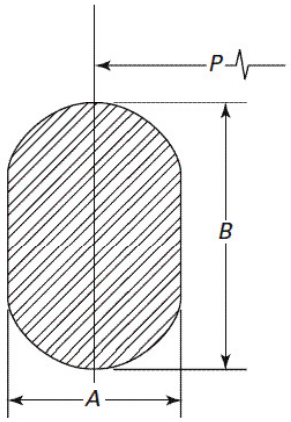

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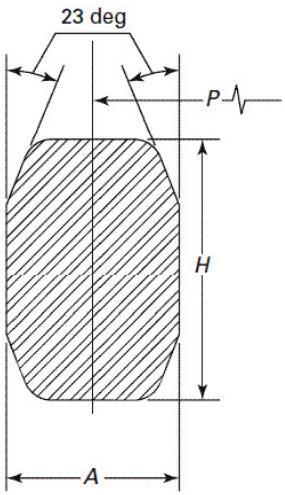
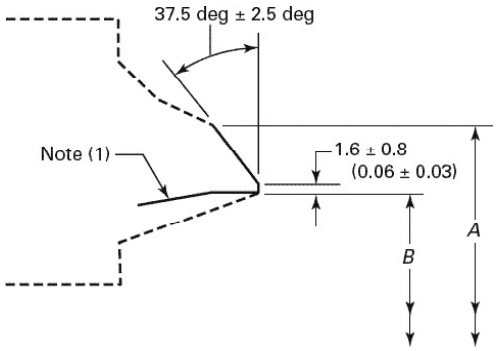
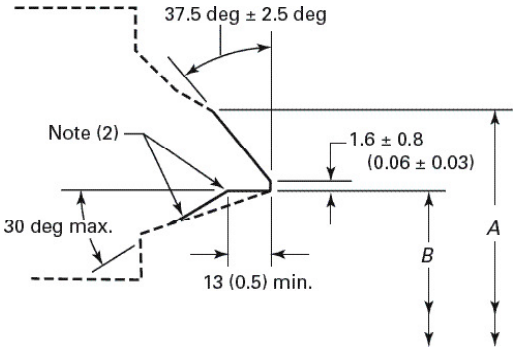
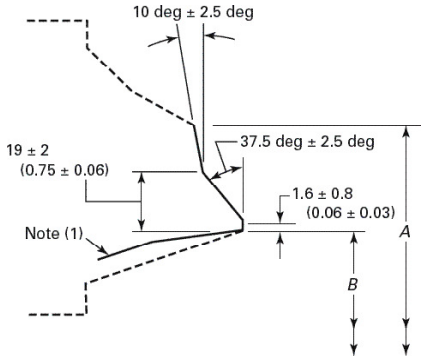
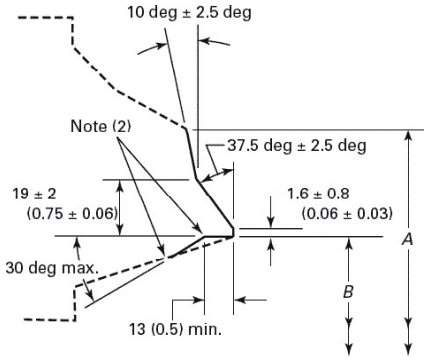


Diam.	Class	Ring No.	P	A	B	H
12”	150	R56	381	7,93	14,28	12,7
12”	300, 600, 900	*R57	381	11,11	17,46	15,87
12”	1500	R58	381	22,22	28,57	26,99
14”	150	R59	396,87	7,93	14,28	12,7
12”	2500	R60	406,4	31,75	69,68	38,1
14”	300, 600	R61	419,1	11,11	17,46	15,87
14”	900	R62	419,1	15,87	22,22	20,64
14”	1500	*R63	419,1	25,4	33,33	31,75
16”	150	R64	454,03	7,93	14,28	12,7
16”	300, 600	*R65	469,9	11,11	17,46	15,87
16”	900	*R66	469,9	15,87	22,22	20,64
18”	1500	R71	533,4	28,57	35,51	34,92
18”	150	R68	517,52	7,93	14,28	12,7
18”	300, 600	*R69	533,4	11,11	17,46	15,87
18”	900	*R70	533,4	19,05	25,4	23,81
18”	1500	R71	533,4	28,57	35,51	34,92
20”	150	R72	558,8	7,93	14,28	12,7
20”	300, 600	*R73	584,2	12,7	19,05	17,46
20”	900	*R74	584,2	19,05	25,4	23,81
20”	1500	R75	584,2	31,75	69,68	38,1
24”	150	R76	673,1	7,93	14,28	12,7
24”	300, 600	R77	692,15	15,87	22,22	20,64
24”	900	R78	692,15	25,4	33,33	31,75
24”	1500	R79	692,15	34,92	44,45	41,27
22”	150	R80	615,95	7,93		12,7
22”	300, 600	R81	635	14,28		19,05
26”	300, 600	R93	749,3	19,05		23,81
30”	300, 600	R95	857,25	19,05		23,81
34”	300, 600	R97	965,2	22,22		26,99
36”	300, 600	R98	1022,35	22,22		26,99
		*R82	57,15	11,11		15,87
		*R84	63,5	11,11		15,87
		*R85	79,37	12,7		17,46
		*R86	90,49	15,87		20,64
		*R87	100,01	15,87		20,64
		*R88	123,83	19,05		23,81
		*R89	114,3	19,05		23,81
		*R90	155,58	22,22		26,99
		*R91	260,35	31,75		38,1
		*R92	228,6	11,11	17,46	15,87
28”	300, 600	R94	800,1	19,05		23,81
32”	300, 600	R95	914,4	22,22		26,99
		R99	234,95	11,11		15,87
26”	900	R100	749,3	28,57		34,92
28”	900	R101	800,1	31,75		38,1
30”	900	R102	857,25	31,75		38,1
32”	900	R103	914,4	31,75		38,1
34”	900	R104	965,2	34,92		41,27
16”	900	R105	1022,35	34,92		41,27

Dimensions are in millimeters.
(*) Indicate ring number acc. to API, STD, 6A

Dimensions of Buttwelding Ends (BW) acc. to ASME B16.25

Nominal wall thickness	Welding End Detail for Joint Without Backing Ring	Welding End Detail for Joint Using Split Rectangular Backing Ring
≤ 0,88 in (22 mm)		
≥ 0,88 in (22 mm)		

(1) Internal surface may be as-formed or machined for dimension B at root face. Contour within the envelope shall be in accordance with section 2.
(2) Intersections should be slightly rounded.

Nominal Pipe Size NPS	Schedule No.	O.D. at Welding Ends		B	C	t
		Wrought or fabricated components, A	Cast Components, A			
21/2	30	73	75	63,5	63,6	4,78
	40	73	75	62,5	62,93	5,16
	80	73	75	59	59,69	7,01
	160	73	75	54	55,28	9,53
	XXS	73	75	45	47,43	14,02
3	30	88,9	91	79,5	79,5	4,78
	40	88,9	91	78	78,25	5,49
	80	88,9	91	73,5	74,53	7,62
	160	88,9	91	66,5	68,38	11,13
	XXS	88,9	91	58,5	61,19	15,24
31/2	30	101,6	105	92	92,2	4,78
	40	101,6	105	90	90,52	5,74
	80	101,6	105	85,5	86,42	8,08
4	30	114,3	117	104,5	104,9	4,78
	40	114,3	117	102	102,73	6,02
	80	114,3	117	97	98,28	8,56
	120	114,3	117	92	93,78	11,13
	160	114,3	117	87,5	89,65	13,49
	XXS	114,3	117	80	83,3	17,12

Dimensions in mm
STD = standard wall thickness
XS = extra strong wall thickness
XXS = double, extra strong wall thickness

Dimensions of Buttwelding Ends (BW) acc. to ASME B16.25

Nominal Pipe Size	Schedule No.	O.D. at Welding Ends		B	C	t
		Wrought or fabricated components,	Cast Components,			
NPS		A	A			
5	40	141,3	144	128	128,8	6,55
	80	141,3	144	122	123,58	9,53
	120	141,3	144	116	118,04	12,7
	160	141,3	144	109,5	112,47	15,88
	XXS	141,3	144	103	106,92	19,05
6	40	168,3	172	154	154,82	7,11
	80	168,3	172	146,5	148,06	10,97
	120	168,3	172	140	142,29	14,27
	160	168,3	172	132	135,31	18,26
	XXS	168,3	172	124,5	128,85	21,95
8	20	219,1	223	206,5	206,95	6,35
	30	219,1	223	205	205,74	7,04
	40	219,1	223	203	203,75	8,18
	60	219,1	223	198,5	200,02	10,31
	80	219,1	223	193,5	195,84	12,7
	100	219,1	223	189	191,65	15,09
	120	219,1	223	182,5	186,11	18,26
	140	219,1	223	178	181,98	20,62
	XXS	219,1	223	174,5	179,16	22,23
	160	219,1	223	173	177,79	23,01
10	20	273	278	260,5	260,85	6,35
	30	273	278	257,5	258,31	7,8
	40	273	278	254,5	255,74	9,27
	60	273	278	247,5	249,74	12,7
	80	273	278	243	245,55	15,09
	100	273	278	236,5	240,01	18,26
	120	273	278	230	234,44	21,44
	140	273	278	222	227,51	25,4
	160	273	278	216	221,95	28,58
12	20	323,8	329	311	311,65	6,35
	30	323,8	329	307	308,1	8,38
	STD	323,8	329	305	306,08	9,53
	40	323,8	329	303	304,72	10,31
	XS	323,8	329	298,5	300,54	12,7
	60	323,8	329	295	297,79	14,27
	80	323,8	329	289	292,17	17,48
	100	323,8	329	281	285,24	21,44
	120	323,8	329	273	278,31	25,4
	140	323,8	329	266,5	272,75	28,58
	160	323,8	329	257	264,45	33,32
14	20	355,6	362	340	340,7	7,92
	STD	355,6	362	336,5	337,88	9,53
	40	355,6	362	333,5	335,08	11,13
	XS	355,6	362	330	332,34	12,7
	60	355,6	362	325,5	328,15	15,09

Dimensions in mm
STD = standard wall thickness
XS = extra strong wall thickness
XXS = double, extra strong wall thickness

Dimensions of Buttwelding Ends (BW) acc. to ASME B16.25

Nominal Pipe Size	Schedule No.	O.D. at Welding Ends		B	C	t
		Wrought or fabricated components,	Cast Components,			
NPS		A	A			
14 (Cont'd)	80	355,6	362	317,5	321,22	19,05
	100	355,6	362	308	312,86	23,83
	120	355,6	362	300	305,93	27,79
	140	355,6	362	292	299	31,75
	160	355,6	362	284	292,07	35,71
16	20	406,4	413	390,5	391,5	7,92
	STD	406,4	413	387,5	388,68	9,53
	40	406,4	413	381	383,14	12,7
	60	406,4	413	373	376,21	16,66
	80	406,4	413	363,5	367,84	21,44
	100	406,4	413	354	359,53	26,19
	120	406,4	413	344,5	351,18	30,96
	140	406,4	413	333,5	341,43	36,53
	160	406,4	413	325,5	334,5	40,49
18	20	457,2	464	441,5	442,3	7,92
	30	457,2	464	435	436,68	11,13
	STD	457,2	464	438	439,48	9,53
	XS	457,2	464	432	433,94	12,7
	40	457,2	464	428,5	431,19	14,27
	60	457,2	464	419	422,82	19,05
	80	457,2	464	409,5	414,46	23,83
	100	457,2	464	398,5	404,78	29,36
	120	457,2	464	387,5	395,03	34,93
	140	457,2	464	378	386,77	39,67
	160	457,2	464	366,5	376,99	45,24
20	STD	508	516	489	490,28	9,53
	XS	508	516	482,5	484,74	12,7
	40	508	516	478	480,55	15,09
	60	508	516	467	470,88	20,62
	80	508	516	455,5	461,13	26,19
	100	508	516	443	450,02	32,54
	120	508	516	432	440,29	38,1
	140	508	516	419	429,17	44,45
	160	508	516	408	419,44	50,01
22	STD	558,8	567	539	541,08	9,53
	XS	558,8	567	533	535,54	12,7
	60	558,8	567	514	518,86	22,23
	80	558,8	567	501	507,75	28,58
	100	558,8	567	488,5	496,63	34,93
	120	558,8	567	476	485,52	41,28
	140	558,8	567	463	474,41	47,63
	160	558,8	567	450,5	463,3	53,98
24	STD	609,6	619	590,5	591,88	9,53
	XS	609,6	619	584	586,34	12,7

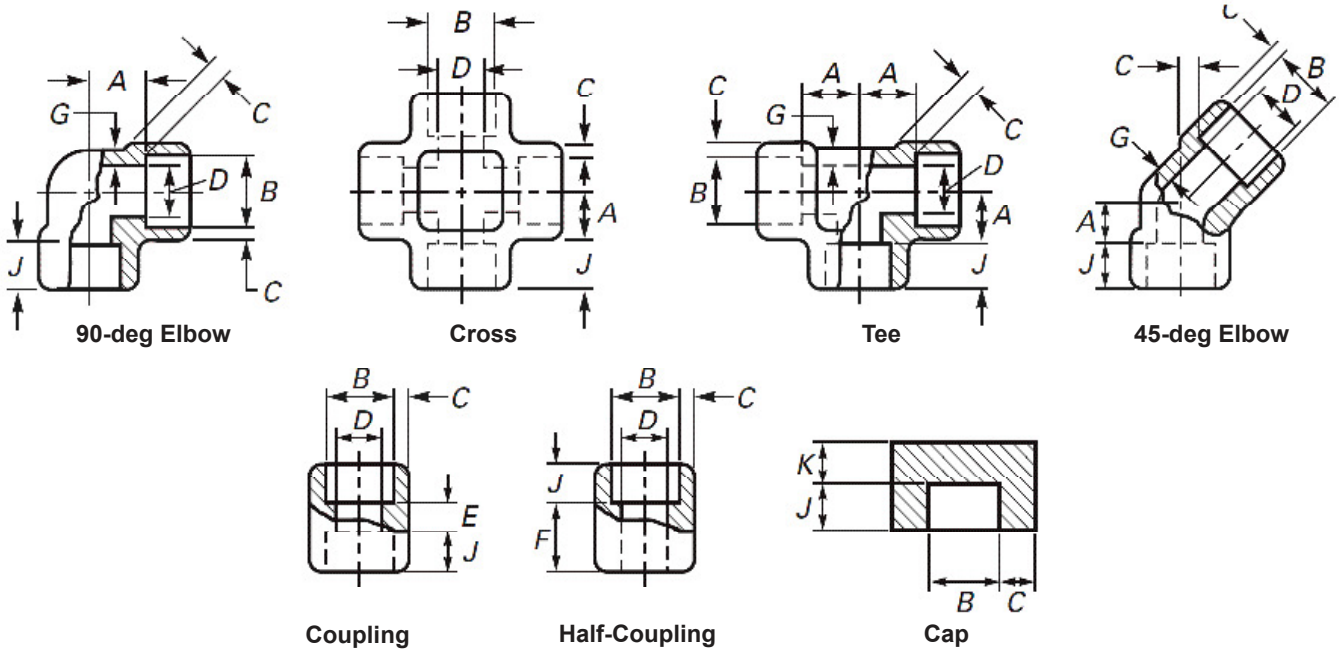
Dimensions in mm
STD = standard wall thickness
XS = extra strong wall thickness
XXS = double, extra strong wall thickness

Dimensions of Buttwelding Ends (BW) acc. to ASME B16.25

Nominal Pipe Size NPS	Schedule No.	O.D. at Welding Ends		B	C	t
		Wrought or fabricated components, A	Cast Components, A			
24 (Cont'd)	30	609,6	619	581	583,59	14,27
	40	609,6	619	574,5	577,97	17,48
	60	609,6	619	560,5	565,49	24,61
	80	609,6	619	547,5	554,38	30,96
	100	609,6	619	532	540,49	38,89
	120	609,6	619	517,5	528,03	46,02
	140	609,6	619	505	516,91	52,37
	160	609,6	619	490,5	504,37	59,54
26	10	660,4	670	645,5	645,5	7,92
	STD	660,4	670	641,34	642,68	9,53
	20	660,4	670	635	637,14	12,7
28	10	711,2	721	695,5	696,3	7,92
	STD	711,2	721	692,14	693,48	9,53
	20	711,2	721	686	687,94	12,7
	30	711,2	721	679,5	682,37	15,88
30	10	762	772	746	747,1	7,92
	STD	762	772	742,94	744,28	9,53
	20	762	772	736,5	738,74	12,7
	30	762	772	730	733,17	15,88
32	10	812,8	825	797	797,9	7,92
	STD	812,8	825	793,74	795,08	9,53
	20	812,8	825	787,5	789,54	12,7
	30	812,8	825	781	783,97	15,88
	40	812,8	825	778	781,17	17,48
34	10	863,6	876	848	848,7	7,92
	STD	863,6	876	844,54	845,88	9,53
	20	863,6	876	838	840,34	12,7
	30	863,6	876	832	834,77	15,88
	40	863,6	876	828,5	831,97	17,48
36	10	914,4	927	898,5	899,5	7,92
	XS	965,2	978	940	941,94	12,7
40	STD	1016	1029	997	998,28	9,53
	XS	1016	1029	990,5	992,74	12,7
42	STD	1066,8	1079	1047,5	1049,08	9,53
	XS	1066,8	1079	1041,5	1043,54	12,7
44	STD	1117,6	1130	1098,5	1099,88	9,53
	XS	1117,6	1130	1092	1094,34	12,7
46	STD	1168,4	1181	1149,5	1150,68	9,53
	XS	1168,4	1181	1143	1145,14	12,7
48	STD	1219,2	1232	1200	1201,48	9,53
	XS	1219,2	1232	1194	1195,94	12,7

Dimensions in mm
STD = standard wall thickness
XS = extra strong wall thickness
XXS = double, extra strong wall thickness

Dimensions of Socket-Welding Fittings (SW), acc. to ASME B16.11



Class 3000

Nom. Pipe Size	Socket Bore Diameter, B *(1)*	Bore Diameter of Fittings, D *(1)*	Socket Wall Thickness, C *(2)*		Body Wall, G	Min. Depth of Socket, J	Center-to-Bottom of Socket, A		Laying Lengths		Tolerances, ±			End Wall Thickness, K_{min}
			Avg.	Min.	Min.		90-deg Elbows, Tees, and Crosses	45-deg Elbows	Couplings, E	Half Couplings, F	A	E	F	
1/4"	14,6 14,2	10 8,5	3,78	3,30	3,02	9,5	11,0	8,0	6,5	16,0	1,0	1,5	1,0	4,8
3/8"	18 17,6	13,3 11,8	4,01	3,50	3,20	9,5	13,5	8,0	6,5	17,5	1,5	3,0	1,5	4,8
1/2"	22,2 21,8	16,6 15	4,67	4,09	3,73	9,5	15,5	11,0	9,5	22,5	1,5	3,0	1,5	6,4
3/4"	27,6 27,2	21,7 20,2	4,90	4,27	3,91	12,5	19,0	13,0	9,5	24,0	1,5	3,0	1,5	6,4
1"	34,3 33,9	27,4 25,9	5,69	4,98	4,55	12,5	22,5	14,0	12,5	28,5	2,0	4,0	2,0	9,6
1 1/4"	43,1 42,7	35,8 34,3	6,07	5,28	4,85	12,5	27,0	17,5	12,5	30,0	2,0	4,0	2,0	9,6
1 1/2"	49,2 48,8	41,6 40,1	6,35	5,54	5,08	12,5	32,0	20,5	12,5	32,0	2,0	4,0	2,0	11,2
2"	61,7 61,2	53,3 51,7	6,93	6,04	5,54	16,0	38,0	25,5	19,0	41,0	2,0	4,0	2,0	12,7
2 1/2"	74,4 73,9	64,2 61,2	8,76	7,67	7,01	16,0	41,0	28,5	19,0	43,0	2,5	5,0	2,5	15,7
3"	90,3 89,8	79,4 76,4	9,52	8,30	7,62	16,0	57,0	32,0	19,0	44,5	2,5	5,0	2,5	19,0
4"	115,7 115,2	103,8 100,7	10,69	9,35	8,56	19,0	66,5	41,0	19,0	48,0	2,5	5,0	2,5	22,4

Dimensions in mm

(1) Upper and lower values for each size are the respective maximum and minimum dimensions.

(2) Average of socket wall thickness around periphery shall not be less than listed values. The minimum values are permitted in localized areas.

Dimensions of Socket-Welding Fittings (SW), acc. to ASME B16.11

Class 6000

Nom. Pipe Size	Socket Bore Diameter, B *(1)*	Bore Diameter of Fittings, D *(1)*	Socket Wall Thickness, C *(2)*		Body Wall, G	Min. Depth of Socket, J	Center-to-Bottom of Socket, A		Laying Lengths		Tolerances, ±			End Wall Thickness, K_{min}
			Avg.	Min.	Min.		90-deg Elbows, Tees, and Crosses	45-deg Elbows	Couplings, E	Half Couplings, F	A	E	F	
1/4"	14,6 14,2	7,1 5,6	4,60	4,01	3,68	9,5	13,5	8,0	6,5	16,0	1,0	1,5	1,0	6,4
3/8"	18 17,6	9,9 8,4	5,03	4,37	4,01	9,5	15,5	11,0	6,5	17,5	1,5	3,0	1,5	6,4
1/2"	22,2 21,8	12,5 11	5,97	5,18	4,78	9,5	19,0	12,5	9,5	22,5	1,5	3,0	1,5	7,9
3/4"	27,6 27,2	16,3 14,8	6,96	6,04	5,56	12,5	22,5	14,0	9,5	24,0	1,5	3,0	1,5	7,9
1"	34,3 33,9	21,5 19,9	7,92	6,93	6,35	12,5	27,0	17,5	12,5	28,5	2,0	4,0	2,0	11,2
1 1/4"	43,1 42,7	30,2 28,7	7,92	6,93	6,35	12,5	32,0	20,5	12,5	30,0	2,0	4,0	2,0	11,2
1 1/2"	49,2 48,8	34,7 33,2	8,92	7,80	7,14	12,5	38,0	25,5	12,5	32,0	2,0	4,0	2,0	12,7
2"	61,7 61,2	43,6 42,1	10,92	9,50	8,74	16,0	41,0	28,5	19,0	41,0	2,0	4,0	2,0	15,7
2 1/2"	74,4 73,9	. . .	. . .	. . .	. . .	16,0	. . .	. . .	19,0	43,0	2,5	5,0	2,5	19,0
3"	90,3 89,8	. . .	. . .	. . .	. . .	16,0	. . .	. . .	19,0	44,5	2,5	5,0	2,5	22,4
4"	115,7 115,2	. . .	. . .	. . .	. . .	19,0	. . .	. . .	19,0	48,0	2,5	5,0	2,5	28,4

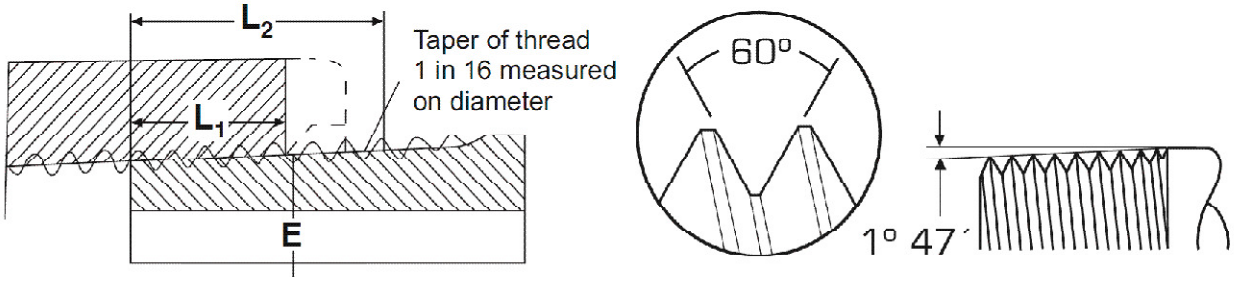
Dimensions in mm
(1) Upper and lower values for each size are the respective maximum and minimum dimensions.
(2) Average of socket wall thickness around periphery shall not be less than listed values. The minimum values are permitted in localized areas.

Class 9000

Nom. Pipe Size	Socket Bore Diameter, B *(1)*	Bore Diameter of Fittings, D *(1)*	Socket Wall Thickness, C *(2)*		Body Wall, G	Min. Depth of Socket, J	Center-to-Bottom of Socket, A		Laying Lengths		Tolerances, ±			End Wall Thickness, K_{min}
			Avg.	Min.	Min.		90-deg Elbows, Tees, and Crosses	45-deg Elbows	Couplings, E	Half Couplings, F	A	E	F	
1/2"	22,2 21,8	7,2 5,6	9,35	8,18	7,47	9,5	25,5	15,5	9,5	22,5	1,5	3,0	1,5	11,2
3/4"	27,6 27,2	11,8 10,3	9,78	8,56	7,82	12,5	28,5	19,0	9,5	24,0	1,5	3,0	1,5	12,7
1"	34,3 33,9	16 14,4	11,38	9,96	9,09	12,5	32,0	20,5	12,5	28,5	2,0	4,0	2,0	14,2
1 1/4"	43,1 42,7	23,5 22	12,14	10,62	9,70	12,5	35,0	22,5	12,5	30,0	2,0	4,0	2,0	14,2
1 1/2"	49,2 48,8	28,7 27,2	12,70	11,12	10,15	12,5	38,0	25,5	12,5	32,0	2,0	4,0	2,0	15,7
2"	61,7 61,2	38,9 37,4	13,84	12,12	11,07	16,0	54,0	28,5	19,0	41,0	2,0	4,0	2,0	19,0

Dimensions in mm
(1) Upper and lower values for each size are the respective maximum and minimum dimensions.
(2) Average of socket wall thickness around periphery shall not be less than listed values. The minimum values are permitted in localized areas.

NPT Threaded Ends (NPT) acc. to ASME B1.20.1



E = Pitch diameter at hand-tight plane. This is also the pitch diameter at the gauge plane.
L_1 = Length of normal hand-tight engagement. This is also the L1 gauge length. (Longer thread engagement may be used in special applications, such as flanges for high pressure use. In such cases the pitch diameter, E, remains as specified and the diameter at the end of the pipe is proportionally smaller).
L_2 = Effective length of thread.
l = Truncation from point of thread triangle to flat (not shown in diagram). Minimum = 0.033P for all pitches. See table for maximum.

Nom. Pipe Size	No. of threads per inch	Pitch of thread P		Depth of thread h		Truncation, max. l		Pitch diameter at plane of hand-tight engagement E		Length from end of pipe to plane of hand-tight engagement L_1		Length of useful thread L_2		Length of vanish (or washout) thread L_2	
		in	mm	in	mm	in	mm	in	mm	in	Threads	in	Threads	in	Threads
1/4"	18	0,05556	1,411224	0,04444	1,128776	0,0049	0,12446	0,49163	12,487	0,228	4,1	0,4018	7,23	0,1928	3,47
3/8"	18	0,05556	1,411224	0,04444	1,128776	0,0049	0,12446	0,62701	15,926	0,24	4,32	0,0478	7,34	0,1928	3,47
1/2"	14	0,07143	1,814322	0,05714	1,451356	0,0056	0,14224	0,77843	19,772	0,32	4,48	0,5337	7,47	0,2478	3,47
3/4"	14	0,07143	1,814322	0,05714	1,451356	0,0056	0,14224	0,98887	25,117	0,339	4,75	0,5457	7,64	0,2478	3,47
1"	11.5	0,08696	2,208784	0,06957	1,767078	0,0063	0,16002	1,23863	31,461	0,4	4,6	0,6828	7,85	0,3017	3,47
1 1/4"	11.5	0,08696	2,208784	0,06957	1,767078	0,0063	0,16002	1,58338	40,218	0,42	4,83	0,7068	8,13	0,3017	3,47
1 1/2"	11.5	0,08696	2,208784	0,06957	1,767078	0,0063	0,16002	1,82234	46,287	0,402	4,83	0,7235	8,32	0,3017	3,47
2"	11.5	0,08696	2,208784	0,06957	1,767078	0,0063	0,16002	2,29627	58,325	0,436	5,01	0,7565	8,7	0,3017	3,47
2 1/2"	8	0,125	3,175	0,1	2,540	0,0078	0,19812	2,76215	70,159	0,682	5,46	1,1375	9,1	0,4337	3,47
3"	8	0,125	3,175	0,1	2,540	0,0078	0,19812	3,3885	86,068	0,766	6,13	1,2	9,6	0,4337	3,47
3 1/2"	8	0,125	3,175	0,1	2,540	0,0078	0,19812	3,88881	98,776	0,821	6,57	1,25	10	0,4337	3,47
4"	8	0,125	3,175	0,1	2,540	0,0078	0,19812	4,38712	111,433	0,844	6,75	1,3	10,4	0,4337	3,47

Basic dimensions are given to four or five decimal places to eliminate errors when calculating gauge dimensions, they do not imply a greater degree of precisions than is normally obtainable.
Tolerances: When using L1 gauges to check threads, the thread is within permissible tolerance if the ring gauge face, or plug gauge notch, is +/- 1 turn from being flush with the end of the thread.
Metric dimensions, where shown, are calculated from the inch values and rounded.

Limits of use acc. to ASME B16.34-2013 and ASME B&PV Code / Pressure tests acc. to API 598

GLOBE / GATE / CHECK VALVES & Y-STRAINERS

ASTM Designation	Material	Service Applications
ASTM A105	Carbon steel forgings	Non-corrosive applications including water, oil and gases for temperatures above -29ºC to 455ºC
ASTM A182 F11 CL2	Low alloy steel	Applications for high temperatures above -29ºC to 538ºC
ASTM A182 F22 CL3	Low alloy steel	Applications for high temperatures above -29ºC to 538ºC
ASTM A182 F304	Low temperature Austenitic St. Steel	Applications for corrosive or non-corrosive extreme temperatures above -196ºC to 538ºC
ASTM A182 F304L	Low temperature Austenitic St. Steel	Applications for corrosive or non-corrosive services for low temperatures above -196ºC to 538ºC
ASTM A182 F316	Low temperature Austenitic St. Steel	Applications for corrosive or non-corrosive extreme temperatures above -196ºC to 538ºC
ASTM A182 F316L	Low temperature Austenitic St. Steel	Applications for corrosive or non-corrosive extreme temperatures above -196ºC to 538ºC
ASTM A216 WCB	Carbon steel	Non-corrosive applications including water, oil and gases for temperatures above -29ºC to 425ºC
ASTM A217 WC6	1¼% Cr, ½% Mo Alloy Steel	Non-corrosive applications including water, oil and gases for high temperatures above -29ºC to 538ºC
ASTM A217 WC9	2 ¼ % Cr, 1% Mo Alloy Steel	Non-corrosive applications including water, oil and gases for high temperatures above -29ºC to 538ºC
ASTM A350 LF2	Low temperature carbon steel forgings	Applications for low temperatures above -46ºC to 343ºC
ASTM A350 LF3	Low temperature carbon steel forgings	Applications for low temperatures above -101ºC to 345ºC
ASTM A351 CF3	304L SS	Applications for corrosive or non-corrosive services for low temperatures above -196ºC to 425ºC
ASTM A351 CF3M	316L SS	Applications for corrosive or non-corrosive services for low temperatures above -196ºC to 455ºC
ASTM A351 CF8	304 SS	Applications for corrosive or non-corrosive extreme temperatures above -196ºC to 538ºC
ASTM A351 CF8M	316 SS	Applications for corrosive or non-corrosive extreme temperatures above -196ºC to 538ºC
ASTM A352 LC3	3½% Ni steel	Applications for low temperatures above -101ºC to 345ºC
ASTM A352 LCB	Low temperature carbon steel	Applications for low temperatures above -46ºC to 343ºC

Limits of use acc. to ASME B16.34-2013 and ASME B&PV Code / Pressure tests acc. to API 598

GLOBE / GATE / CHECK VALVES & Y-STRAINERS

Class 150	Material					
	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5 *(*)*
PSmax	19,6 bar-g/ 285 psig	18,4 bar-g/ 265 psig	18,4 bar-g/ 265 psig	19,8 bar-g/ 290 psig	19,8 bar-g/ 290 psig	20 bar-g/ 290 psig
TS	38°C/-29°C 100°F/-20°F	38°C/-46°C 100°F/-50°F	38°C/-29°C 100°F/-20°F	38°C/-29°C 100°F/-20°F	38°C/-29°C 100°F/-20°F	38°C/-29°C 100°F/-20°F
PS	5,5 bar-g/ 80 psig	8,4 bar-g/ 125 psig	4 bar-g/ 57,5 psig	1,4 bar-g/ 20 psig	1,4 bar-g/ 20 psig	0,9 bar-g/ 15 psig
TSmax/min	425°C/ -29°C 800°F/-20°F	343°C/ -46°C 650°F/-50°F	468°C/ -29°C 875°F/-20°F	538°C/ -29°C 1000°F/-20°F	538°C/ -29°C 1000°F/-20°F	650°C/ -29°C 1200°F/-20°F
Shell test pressure	3 MPa	3 MPa	3 MPa	3 MPa	3 MPa	3 MPa
High pressure seal test	2,2 MPa	2,2 MPa	2,2 MPa	2,2 MPa	2,2 MPa	2,2 MPa
Backseat test pressure	2,2 MPa	2,2 MPa	2,2 MPa	2,2 MPa	2,2 MPa	2,2 MPa
Air test pressure	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa

Class 150	Material				
	A217 C12 *(*)*	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
PSmax	20 bar-g/ 290 psig	19 bar-g/ 275 psig	19 bar-g/ 275 psig	19 bar-g/ 275 psig	19 bar-g/ 275 psig
TS	38°C/-29°C 100°F/-20°F	38°C/-46°C 100°F/-50°F	38°C/-46°C 100°F/-50°F	38°C/-46°C 100°F/-50°F	38°C/-46°C 100°F/-50°F
PS	1,4 bar-g/ 20 psig	1,4 bar-g/ 20 psig	1,4 bar-g/ 20 psig	5,5 bar-g/ 80 psig	4,4 bar-g/ 65 psig
TSmax/min	650°C/ -29°C 1200°F/-20°F	538°C/ -46°C 1000°F/-50°F	538°C/ -46°C 1000°F/-50°F	425°C/ -46°C 800°F/-50°F	455°C/ -46°C 850°F/-50°F
Shell test pressure	3 MPa	3 MPa	3 MPa	3 MPa	3 MPa
High pressure seal test	2,2 MPa	2,2 MPa	2,2 MPa	2,2 MPa	2,2 MPa
Backseat test pressure	2,2 MPa	2,2 MPa	2,2 MPa	2,2 MPa	2,2 MPa
Air test pressure	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa

Class 150	Material				
	A105	A182 F11 CL2 *(*)*	A182 F22 CL3 *(*)*	A182 F304	A182 F304L
PSmax	19,6 bar-g/ 285 psig	19,8 bar-g/ 290 psig	19,8 bar-g/ 290 psig	19 bar-g/ 275 psig	15,9 bar-g/ 230 psig
TS	38°C/-29°C 100°F/-20°F	38°C/-29°C 100°F/-20°F	38°C/-29°C 100°F/-20°F	38°C/-196°C 100°F/-20°F	38°C/-196°C 100°F/-320°F
PS	5,5 bar-g/ 80 psig	1,4 bar-g/ 20 psig	1,4 bar-g/ 20 psig	1,4 bar-g/ 20 psig	5,5 bar-g/ 80 psig
TSmax/min	425°C/ -29°C 800°F/-20°F	595°C/ -29°C 1100°F/-20°F	595°C/ -29°C 1100°F/-20°F	538°C/ -196°C 1000°F/-320°F	425°C/ -196°C 800°F/-320°F
Shell test pressure	3 MPa	3 MPa	3 MPa	2,9 MPa	2,4 MPa
High pressure seal test	2,2 MPa	2,2 MPa	2,2 MPa	2,1 MPa	1,7 MPa
Backseat test pressure	2,2 MPa	2,2 MPa	2,2 MPa	2,1 MPa	1,7 MPa
Air test pressure	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa

Class 150	Material				
	A182 F316	A182 F316L	A350 LF2	A350 LF3	A352 LC3
PSmax	19 bar-g/ 275 psig	15,9 bar-g/ 230 psig	19,6 bar-g/ 285 psig	19,6 bar-g/ 285 psig	20 bar-g/ 290 psig
TS	38°C/-196°C 100°F/-320°F	38°C/-196°C 100°F/-320°F	38°C/-46°C 100°F/-51°F	38°C/-101°C 100°F/-150°F	38°C/-101°C 100°F/-150°F
PS	1,4 bar-g/ 20 psig	4,6 bar-g/ 65 psig	5,5 bar-g/ 80 psig	8,6 bar-g/ 125 psig	5,5 bar-g/ 80 psig
TSmax/min	538°C/ -196°C 1000°F/-320°F	450°C/ -196°C 850°F/-320°F	425°C/ -46°C 800°F/-51°F	345°C/ -101°C 650°F/-150°F	345°C/ -101°C 650°F/-150°F
Shell test pressure	2,9 MPa	2,4 MPa	3 MPa	3 MPa	3 MPa
High pressure seal test	2,1 MPa	1,7 MPa	2,2 MPa	2,2 MPa	2,2 MPa
Backseat test pressure	2,1 MPa	1,7 MPa	2,2 MPa	2,2 MPa	2,2 MPa
Air test pressure	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa

(*) Flanged-end valve ratings terminate at 538°C (1000ºF) / PS=1,4 bar-g (20 psig)

Information / restriction of technical rules need to be observed!
Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Limits of use acc. to ASME B16.34-2013 and ASME B&PV Code / Pressure tests acc. to API 598

GLOBE / GATE / CHECK VALVES & Y-STRAINERS

Class 300	Material					
	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5
PSmax	51,1 bar-g/ 740 psig	48 bar-g/ 695 psig	48 bar-g/ 695 psig	51,7 bar-g/ 750 psig	51,7 bar-g/ 750 psig	51,7 bar-g/ 750 psig
TS	38°C/-29°C 100°F/-20°F	38°C/-46°C 100°F/-50°F	38°C/-29°C 100°F/-20°F	38°C/-29°C 100°F/-20°F	38°C/-29°C 100°F/-20°F	38°C/-29°C 100°F/-20°F
PS	28,8 bar-g/ 410 psig	36,4 bar-g/ 535 psig	17,4 bar-g/ 250 psig	14,9 bar-g/ 215 psig	18,4 bar-g/ 265 psig	2,4 bar-g/ 35 psig
TSmax/min	425°C/ -29°C 800°F/-20°F	343°C/ -46°C 650°F/-50°F	468°C/ -29°C 875°F/-20°F	538°C/ -29°C 1000°F/-20°F	538°C/ -29°C 1000°F/-20°F	650°C/ -29°C 1200°F/-20°F
Shell test pressure	7,5 MPa	7,5 MPa	7,5 MPa	7,5 MPa	7,5 MPa	7,5 MPa
High pressure seal test	5,5 MPa	5,5 MPa	5,5 MPa	5,5 MPa	5,5 MPa	5,5 MPa
Backseat test pressure	5,5 MPa	5,5 MPa	5,5 MPa	5,5 MPa	5,5 MPa	5,5 MPa
Air test pressure	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa

Class 300	Material				
	A217 C12	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
PSmax	51,7 bar-g/ 750 psig	49,6 bar-g/ 720 psig	49,6 bar-g/ 720 psig	49,6 bar-g/ 720 psig	49,6 bar-g/ 720 psig
TS	38°C/-29°C 100°F/-20°F	38°C/-46°C 100°F/-50°F	38°C/-46°C 100°F/-50°F	38°C/-46°C 100°F/-50°F	38°C/-46°C 100°F/-50°F
PS	3,5 bar-g/ 50 psig	24,4 bar-g/ 355 psig	25,2 bar-g/ 365 psig	28 bar-g/ 405 psig	28,8 bar-g/ 420 psig
TSmax/min	650°C/ -29°C 1200°F/-20°F	538°C/ -46°C 1000°F/-50°F	538°C/ -46°C 1000°F/-50°F	425°C/ -46°C 800°F/-50°F	455°C/ -46°C 850°F/-50°F
Shell test pressure	7,5 MPa	7,5 MPa	7,5 MPa	7,5 MPa	7,5 MPa
High pressure seal test	5,5 MPa	5,5 MPa	5,5 MPa	5,5 MPa	5,5 MPa
Backseat test pressure	5,5 MPa	5,5 MPa	5,5 MPa	5,5 MPa	5,5 MPa
Air test pressure	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa

Class 300	Material				
	A105	A182 F11 CL2	A182 F22 CL3	A182 F304	A182 F304L
PSmax	51,1 bar-g/ 740 psig	51,7 bar-g/ 750 psig	51,7 bar-g/ 750 psig	49,6 bar-g/ 720 psig	41,4 bar-g/ 600 psig
TS	38°C/-29°C 100°F/-20°F	38°C/-29°C 100°F/-20°F	38°C/-29°C 100°F/-20°F	38°C/-196°C 100°F/-20°F	38°C/-196°C 100°F/-320°F
PS	28,8 bar-g/ 410 psig	6,6 bar-g/ 95 psig	7,6 bar-g/ 110 psig	24,5 bar-g/ 355 psig	23,9 bar-g/ 345 psig
TSmax/min	425°C/ -29°C 800°F/-20°F	595°C/ -29°C 1100°F/-20°F	595°C/ -29°C 1100°F/-20°F	538°C/ -196°C 1000°F/-320°F	425°C/ -196°C 800°F/-320°F
Shell test pressure	7,7 MPa	7,8 MPa	7,8 MPa	7,5 MPa	6,3 MPa
High pressure seal test	5,6 MPa	5,7 MPa	5,7 MPa	5,5 MPa	4,6 MPa
Backseat test pressure	5,6 MPa	5,7 MPa	5,7 MPa	5,5 MPa	4,6 MPa
Air test pressure	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa

Class 300	Material				
	A182 F316	A182 F316L	A350 LF2	A350 LF3	A352 LC3
PSmax	49,6 bar-g/ 720 psig	41,4 bar-g/ 600 psig	51,1 bar-g/ 740 psig	51,1 bar-g/ 740 psig	51,7 bar-g/ 750 psig
TS	38°C/-196°C 100°F/-320°F	38°C/-196°C 100°F/-320°F	38°C/-46°C 100°F/-51°F	38°C/-101°C 100°F/-150°F	38°C/-101°C 100°F/-150°F
PS	25,2 bar-g/ 365 psig	23,4 bar-g/ 340 psig	28,8 bar-g/ 410 psig	37,9 bar-g/ 550 psig	28,3 bar-g/ 410 psig
TSmax/min	538°C/ -196°C 1000°F/-320°F	450°C/ -196°C 850°F/-320°F	425°C/ -46°C 800°F/-51°F	345°C/ -101°C 650°F/-150°F	345°C/ -101°C 650°F/-150°F
Shell test pressure	7,5 MPa	6,3 MPa	7,7 MPa	7,7 MPa	7,8 MPa
High pressure seal test	5,5 MPa	4,6 MPa	5,6 MPa	5,6 MPa	5,7 MPa
Backseat test pressure	5,5 MPa	4,6 MPa	5,6 MPa	5,6 MPa	5,7 MPa
Air test pressure	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa

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GLOBE / GATE / CHECK VALVES & Y-STRAINERS

Class 600	Material					
	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5
PSmax	102,1 bar-g/ 1480 psig	96 bar-g/ 1395 psig	96 bar-g/ 1395 psig	103,4 bar-g/ 1500 psig	103,4 bar-g/ 1500 psig	103,4 bar-g/ 1500 psig
TS	38°C/-29°C 100°F/-20°F	38°C/-46°C 100°F/-50°F	38°C/-29°C 100°F/-20°F	38°C/-29°C 100°F/-20°F	38°C/-29°C 100°F/-20°F	38°C/-29°C 100°F/-20°F
PS	57,5 bar-g/ 825 psig	72,8 bar-g/ 1065 psig	34,6 bar-g/ 500 psig	29,8 bar-g/ 430 psig	36,9 bar-g/ 535 psig	4,7 bar-g/ 70 psig
TSmax/min	425°C/ -29°C 800°F/-20°F	343°C/ -46°C 650°F/-50°F	468°C/ -29°C 875°F/-20°F	538°C/ -29°C 1000°F/-20°F	538°C/ -29°C 1000°F/-20°F	650°C/ -29°C 1200°F/-20°F
Shell test pressure	15 MPa	15 MPa	15 MPa	15 MPa	15 MPa	15 MPa
High pressure seal test	11 MPa	11 MPa	11 MPa	11 MPa	11 MPa	11 MPa
Backseat test pressure	11 MPa	11 MPa	11 MPa	11 MPa	11 MPa	11 MPa
Air test pressure	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa

Class 600	Material				
	A217 C12	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
PSmax	103,4bar-g/ 1500psig	99,3 bar-g/ 1440 psig	99,3 bar-g/ 1440 psig	99,3 bar-g/ 1440 psig	99,3 bar-g/ 1440 psig
TS	38°C/-29°C 100°F/-20°F	38°C/-46°C 100°F/-50°F	38°C/-46°C 100°F/-50°F	38°C/-46°C 100°F/-50°F	38°C/-46°C 100°F/-50°F
PS	7,1 bar-g/ 105 psig	48,9 bar-g/ 710 psig	50 bar-g/ 725 psig	56 bar-g/ 810 psig	57,6 bar-g/ 835 psig
TSmax/min	650°C/ -29°C 1200°F/-20°F	538°C/ -46°C 1000°F/-50°F	538°C/ -46°C 1000°F/-50°F	425°C/ -46°C 800°F/-50°F	455°C/ -46°C 850°F/-50°F
Shell test pressure	15 MPa	15 MPa	15 MPa	15 MPa	15 MPa
High pressure seal test	11 MPa	11 MPa	11 MPa	11 MPa	11 MPa
Backseat test pressure	11 MPa	11 MPa	11 MPa	11 MPa	11 MPa
Air test pressure	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa

Class 600	Material				
	A105	A182 F11 CL2	A182 F22 CL3	A182 F304	A182 F304L
PSmax	102,1 bar-g/ 1480 psig	103,4 bar-g/ 1500 psig	103,4 bar-g/ 1500 psig	99,3 bar-g/ 1440 psig	82,7 bar-g/ 1200 psig
TS	38°C/-29°C 100°F/-20°F	38°C/-29°C 100°F/-20°F	38°C/-29°C 100°F/-20°F	38°C/-196°C 100°F/-20°F	38°C/-196°C 100°F/-320°F
PS	57,5 bar-g/ 825 psig	13,1 bar-g/ 190 psig	15,2 bar-g/ 220 psig	49,0 bar-g/ 710 psig	47,7 bar-g/ 690 psig
TSmax/min	425°C/ -29°C 800°F/-20°F	595°C/ -29°C 1100°F/-20°F	595°C/ -29°C 1100°F/-20°F	538°C/ -196°C 1000°F/-320°F	425°C/ -196°C 800°F/-320°F
Shell test pressure	15,4 MPa	15,6 MPa	15,6 MPa	14,9 MPa	12,5 MPa
High pressure seal test	11,2 MPa	11,4 MPa	11,4 MPa	10,9 MPa	9,1 MPa
Backseat test pressure	11,2 MPa	11,4 MPa	11,4 MPa	10,9 MPa	9,1 MPa
Air test pressure	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa

Class 600	Material				
	A182 F316	A182 F316L	A350 LF2	A350 LF3	A352 LC3
PSmax	99,3 bar-g/ 1440 psig	82,7 bar-g/ 1200 psig	102,1 bar-g/ 1480 psig	102,1 bar-g/ 1480 psig	103,4 bar-g/ 1500 psig
TS	38°C/-196°C 100°F/-320°F	38°C/-196°C 100°F/-320°F	38°C/-46°C 100°F/-51°F	38°C/-101°C 100°F/-150°F	38°C/-101°C 100°F/-150°F
PS	50,0 bar-g/ 725 psig	46,8 bar-g/ 675 psig	57,5 bar-g/ 825 psig	75,8 bar-g/ 1100 psig	56,9 bar-g/ 825 psig
TSmax/min	538°C/ -196°C 1000°F/-320°F	450°C/ -196°C 850°F/-320°F	425°C/ -46°C 800°F/-51°F	345°C/ -101°C 650°F/-150°F	345°C/ -101°C 650°F/-150°F
Shell test pressure	14,9 MPa	12,5 MPa	15,4 MPa	15,4 MPa	15,6 MPa
High pressure seal test	10,9 MPa	9,1 MPa	11,2 MPa	11,2 MPa	11,4 MPa
Backseat test pressure	10,9 MPa	9,1 MPa	11,2 MPa	11,2 MPa	11,4 MPa
Air test pressure	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa

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GLOBE / GATE / CHECK VALVES & Y-STRAINERS

Class 900	Material					
	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5
PSmax	153,2 bar-g/ 2220 psig	144,1 bar-g/ 2090 psig	144,1 bar-g/ 2090 psig	155,1 bar-g/ 2250 psig	155,1 bar-g/ 2250 psig	155,1 bar-g/ 2250 psig
TS	38°C/-29°C 100°F/-20°F	38°C/-46°C 100°F/-50°F	38°C/-29°C 100°F/-20°F	38°C/-29°C 100°F/-20°F	38°C/-29°C 100°F/-20°F	38°C/-29°C 100°F/-20°F
PS	86,3 bar-g/ 1235 psig	109,2 bar-g/ 1600 psig	52 bar-g/ 750 psig	44,7 bar-g/ 650 psig	55,3 bar-g/ 800 psig	7,1 bar-g/ 105 psig
TSmax/min	425°C/ -29°C 800°F/-20°F	343°C/ -46°C 650°F/-50°F	468°C/ -29°C 875°F/-20°F	538°C/ -29°C 1000°F/-20°F	538°C/ -29°C 1000°F/-20°F	650°C/ -29°C 1200°F/-20°F
Shell test pressure	22,5 MPa	22,5 MPa	22,5 MPa	22,5 MPa	22,5 MPa	22,5 MPa
High pressure seal test	16,5 MPa	16,5 MPa	16,5 MPa	16,5 MPa	16,5 MPa	16,5 MPa
Backseat test pressure	16,5 MPa	16,5 MPa	16,5 MPa	16,5 MPa	16,5 MPa	16,5 MPa
Air test pressure	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa

Class 900	Material				
	A217 C12	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
PSmax	155,1 bar-g/ 2250 psig	148,9 bar-g/ 2160 psig	148,9 bar-g/ 2160 psig	148,9 bar-g/ 2160 psig	148,9 bar-g/ 2160 psig
TS	38°C/-29°C 100°F/-20°F	38°C/-46°C 100°F/-50°F	38°C/-46°C 100°F/-50°F	38°C/-46°C 100°F/-50°F	38°C/-46°C 100°F/-50°F
PS	10,6 bar-g/ 155 psig	73,3 bar-g/ 1065 psig	75,2 bar-g/ 1090 psig	84 bar-g/ 1215 psig	86,4 bar-g/ 1255 psig
TSmax/min	650°C/ -29°C 1200°F/-20°F	538°C/ -46°C 1000°F/-50°F	538°C/ -46°C 1000°F/-50°F	425°C/ -46°C 800°F/-50°F	455°C/ -46°C 850°F/-50°F
Shell test pressure	22,5 MPa	22,5 MPa	22,5 MPa	22,5 MPa	22,5 MPa
High pressure seal test	16,5 MPa	16,5 MPa	16,5 MPa	16,5 MPa	16,5 MPa
Backseat test pressure	16,5 MPa	16,5 MPa	16,5 MPa	16,5 MPa	16,5 MPa
Air test pressure	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa

Class 900	Material				
	A105	A182 F11 CL2	A182 F22 CL3	A182 F304	A182 F304L
PSmax	153,2 bar-g/ 2220 psig	155,1 bar-g/ 2250 psig	155,1 bar-g/ 2250 psig	148,9 bar-g/ 2160 psig	124,1 bar-g/ 1800 psig
TS	38°C/-29°C 100°F/-20°F	38°C/-29°C 100°F/-20°F	38°C/-29°C 100°F/-20°F	38°C/-196°C 100°F/-20°F	38°C/-196°C 100°F/-320°F
PS	86,3 bar-g/ 1235 psig	20,0 bar-g/ 290 psig	22,8 bar-g/ 330 psig	73,4 bar-g/ 1065 psig	71,6 bar-g/ 1035 psig
TSmax/min	425°C/ -29°C 800°F/-20°F	595°C/ -29°C 1100°F/-20°F	595°C/ -29°C 1100°F/-20°F	538°C/ -196°C 1000°F/-320°F	425°C/ -196°C 800°F/-320°F
Shell test pressure	23 MPa	23,3 MPa	23,3 MPa	22,4 MPa	18,7 MPa
High pressure seal test	16,9 MPa	17,1 MPa	17,1 MPa	16,4 MPa	13,7 MPa
Backseat test pressure	16,9 MPa	17,1 MPa	17,1 MPa	16,4 MPa	13,7 MPa
Air test pressure	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa

Class 900	Material				
	A182 F316	A182 F316L	A350 LF2	A350 LF3	A352 LC3
PSmax	148,9 bar-g/ 2160 psig	124,1 bar-g/ 1800 psig	153,2 bar-g/ 2220 psig	153,2 bar-g/ 2220 psig	155,1 bar-g/ 2250 psig
TS	38°C/-196°C 100°F/-320°F	38°C/-196°C 100°F/-320°F	38°C/-46°C 100°F/-51°F	38°C/-101°C 100°F/-150°F	38°C/-101°C 100°F/-150°F
PS	75,2 bar-g/ 1090 psig	70,2 bar-g/ 1015 psig	86,3 bar-g/ 1235 psig	113,8 bar-g/ 1650 psig	85,2 bar-g/ 1235 psig
TSmax/min	538°C/ -196°C 1000°F/-320°F	450°C/ -196°C 850°F/-320°F	425°C/ -46°C 800°F/-51°F	345°C/ -101°C 650°F/-150°F	345°C/ -101°C 650°F/-150°F
Shell test pressure	22,4 MPa	18,7 MPa	23 MPa	23 MPa	23,3 MPa
High pressure seal test	16,4 MPa	13,7 MPa	16,9 MPa	16,9 MPa	17,1 MPa
Backseat test pressure	16,4 MPa	13,7 MPa	16,9 MPa	16,9 MPa	17,1 MPa
Air test pressure	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa

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GLOBE / GATE / CHECK VALVES & Y-STRAINERS

Class 1500	Material					
	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5
PSmax	255,3 bar-g/ 3705 psig	240,1 bar-g/ 3480 psig	240,1 bar-g/ 3480 psig	258,6 bar-g/ 3750 psig	258,6 bar-g/ 3750 psig	258,6 bar-g/ 3750 psig
TS	38°C/-29°C 100°F/-20°F	38°C/-46°C 100°F/-50°F	38°C/-29°C 100°F/-20°F	38°C/-29°C 100°F/-20°F	38°C/-29°C 100°F/-20°F	38°C/-29°C 100°F/-20°F
PS	143,8bar-g/ 2055psig	182 bar-g/ 2665 psig	86,6 bar-g/ 1250 psig	74,5 bar-g/ 1080 psig	92,2 bar-g/ 1335 psig	11,8 bar-g/ 170 psig
TSmax/min	425°C/ -29°C 800°F/-20°F	343°C/ -46°C 650°F/-50°F	468°C/ -29°C 875°F/-20°F	538°C/ -29°C 1000°F/-20°F	538°C/ -29°C 1000°F/-20°F	650°C/ -29°C 1200°F/-20°F
Shell test pressure	37,5 MPa	37,5 MPa	37,5 MPa	37,5 MPa	37,5 MPa	37,5 MPa
High pressure seal test	27,5 MPa	27,5 MPa	27,5 MPa	27,5 MPa	27,5 MPa	27,5 MPa
Backseat test pressure	27,5 MPa	27,5 MPa	27,5 MPa	27,5 MPa	27,5 MPa	27,5 MPa
Air test pressure	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa

Class 1500	Material				
	A217 C12	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
PSmax	258,6 bar-g/ 3750 psig	248,2 bar-g/ 3600 psig	248,2 bar-g/ 3600 psig	248,2 bar-g/ 3600 psig	248,2 bar-g/ 3600 psig
TS	38°C/-29°C 100°F/-20°F	38°C/-46°C 100°F/-50°F	38°C/-46°C 100°F/-50°F	38°C/-46°C 100°F/-50°F	38°C/-46°C 100°F/-50°F
PS	17,7 bar-g/ 255 psig	122,1 bar-g/ 1770 psig	122,5 bar-g/ 1820 psig	140 bar-g/ 2030 psig	144 bar-g/ 2090 psig
TSmax/min	650°C/ -29°C 1200°F/-20°F	538°C/ -46°C 1000°F/-50°F	538°C/ -46°C 1000°F/-50°F	425°C/ -46°C 800°F/-50°F	455°C/ -46°C 850°F/-50°F
Shell test pressure	37,5 MPa	37,5 MPa	37,5 MPa	37,5 MPa	37,5 MPa
High pressure seal test	27,5 MPa	27,5 MPa	27,5 MPa	27,5 MPa	27,5 MPa
Backseat test pressure	27,5 MPa	27,5 MPa	27,5 MPa	27,5 MPa	27,5 MPa
Air test pressure	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa

Class 1500	Material				
	A105	A182 F11 CL2	A182 F22 CL3	A182 F304	A182 F304L
PSmax	255,3 bar-g/ 3705 psig	258,6 bar-g/ 3750 psig	258,6 bar-g/ 3750 psig	248,2 bar-g/ 3600 psig	206,8 bar-g/ 3000 psig
TS	38°C/-29°C 100°F/-20°F	38°C/-29°C 100°F/-20°F	38°C/-29°C 100°F/-20°F	38°C/-196°C 100°F/-20°F	38°C/-196°C 100°F/-320°F
PS	143,8 bar-g/ 2055 psig	33,1 bar-g/ 480 psig	37,9 bar-g/ 550 psig	122,0 bar-g/ 1770 psig	119,3 bar-g/ 1730 psig
TSmax/min	425°C/ -29°C 800°F/-20°F	595°C/ -29°C 1100°F/-20°F	595°C/ -29°C 1100°F/-20°F	538°C/ -196°C 1000°F/-320°F	425°C/ -196°C 800°F/-320°F
Shell test pressure	38,3 MPa	38,8 MPa	38,8 MPa	37,3 MPa	31,1 MPa
High pressure seal test	28,1 MPa	28,4 MPa	28,4 MPa	27,3 MPa	22,7 MPa
Backseat test pressure	28,1 MPa	28,4 MPa	28,4 MPa	27,3 MPa	22,7 MPa
Air test pressure	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa

Class 1500	Material				
	A182 F316	A182 F316L	A350 LF2	A350 LF3	A352 LC3
PSmax	248,2 bar-g/ 3600 psig	206,8 bar-g/ 3000 psig	255,3 bar-g/ 3705 psig	255,3 bar-g/ 3705 psig	258,6 bar-g/ 3750 psig
TS	38°C/-196°C 100°F/-320°F	38°C/-196°C 100°F/-320°F	38°C/-46°C 100°F/-51°F	38°C/-101°C 100°F/-150°F	38°C/-101°C 100°F/-150°F
PS	125,5 bar-g/ 1820 psig	117,1 bar-g/ 1690 psig	143,8 bar-g/ 2055 psig	189,3 bar-g/ 2745 psig	141,7 bar-g/ 2055 psig
TSmax/min	538°C/ -196°C 1000°F/-320°F	450°C/ -196°C 850°F/-320°F	425°C/ -46°C 800°F/-51°F	345°C/ -101°C 650°F/-150°F	345°C/ -101°C 650°F/-150°F
Shell test pressure	37,3 MPa	31,1 MPa	38,3 MPa	38,3 MPa	38,8 MPa
High pressure seal test	27,3 MPa	22,7 MPa	28,1 MPa	28,1 MPa	28,4 MPa
Backseat test pressure	27,3 MPa	22,7 MPa	28,1 MPa	28,1 MPa	28,4 MPa
Air test pressure	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa

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GLOBE / GATE / CHECK VALVES & Y-STRAINERS

Class 2500	Material					
	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5
PSmax	425,5 bar-g/ 6170 psig	400,1 bar-g/ 5805 psig	400,1 bar-g/ 5805 psig	430,9 bar-g/ 6250 psig	430,9 bar-g/ 6250 psig	430,9 bar-g/ 6250 psig
TS	38°C/-29°C 100°F/-20°F	38°C/-46°C 100°F/-50°F	38°C/-29°C 100°F/-20°F	38°C/-29°C 100°F/-20°F	38°C/-29°C 100°F/-20°F	38°C/-29°C 100°F/-20°F
PS	239,7 bar-g/ 3430 psig	303,3 bar-g/ 4440 psig	144,4 bar-g/ 2085 psig	124,1bar-g/ 1800psig	153,7 bar-g/ 2230 psig	19,7 bar-g/ 285 psig
TSmax/min	425°C/ -29°C 800°F/-20°F	343°C/ -46°C 650°F/-50°F	468°C/ -29°C 875°F/-20°F	538°C/ -29°C 1000°F/-20°F	538°C/ -29°C 1000°F/-20°F	650°C/ -29°C 1200°F/-20°F
Shell test pressure	63 MPa	63 MPa	63 MPa	63 MPa	63 MPa	63 MPa
High pressure seal test	46,2 MPa	46,2 MPa	46,2 MPa	46,2 MPa	46,2 MPa	46,2 MPa
Backseat test pressure	46,2 MPa	46,2 MPa	46,2 MPa	46,2 MPa	46,2 MPa	46,2 MPa
Air test pressure	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa

Class 2500	Material				
	A217 C12	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
PSmax	430,9 bar-g/ 6250psig	413,7 bar-g/ 6000 psig	413,7 bar-g/ 6000 psig	413,7 bar-g/ 6000 psig	413,7 bar-g/ 6000 psig
TS	38°C/-29°C 100°F/-20°F	38°C/-46°C 100°F/-50°F	38°C/-46°C 100°F/-50°F	38°C/-46°C 100°F/-50°F	38°C/-46°C 100°F/-50°F
PS	29,5 bar-g/ 430 psig	203,6 bar-g/ 2950 psig	208,9 bar-g/ 3030 psig	233,3 bar-g/ 3380 psig	240,1 bar-g/ 3480 psig
TSmax/min	650°C/ -29°C 1200°F/-20°F	538°C/ -46°C 1000°F/-50°F	538°C/ -46°C 1000°F/-50°F	425°C/ -46°C 800°F/-50°F	455°C/ -46°C 850°F/-50°F
Shell test pressure	63 MPa	63 MPa	63 MPa	63 MPa	63 MPa
High pressure seal test	46,2 MPa	46,2 MPa	46,2 MPa	46,2 MPa	46,2 MPa
Backseat test pressure	46,2 MPa	46,2 MPa	46,2 MPa	46,2 MPa	46,2 MPa
Air test pressure	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa

Class 2500	Material				
	A105	A182 F11 CL2	A182 F22 CL3	A182 F304	A182 F304L
PSmax	425,5 bar-g/ 6170 psig	430,9 bar-g/ 6250 psig	430,9 bar-g/ 6250 psig	413,7 bar-g/ 6000 psig	344,7 bar-g/ 5000 psig
TS	38°C/-29°C 100°F/-20°F	38°C/-29°C 100°F/-20°F	38°C/-29°C 100°F/-20°F	38°C/-196°C 100°F/-20°F	38°C/-196°C 100°F/-320°F
PS	239,7 bar-g/ 3430 psig	55,2 bar-g/ 800 psig	63,1 bar-g/ 915 psig	203,4 bar-g/ 2950 psig	198,8 bar-g/ 2880 psig
TSmax/min	425°C/ -29°C 800°F/-20°F	595°C/ -29°C 1100°F/-20°F	595°C/ -29°C 1100°F/-20°F	538°C/ -196°C 1000°F/-320°F	425°C/ -196°C 800°F/-320°F
Shell test pressure	63,9 MPa	64,7 MPa	64,7 MPa	62,1 MPa	51,8 MPa
High pressure seal test	46,8 MPa	47,4 MPa	47,4 MPa	45,5 MPa	37,9 MPa
Backseat test pressure	46,8 MPa	47,4 MPa	47,4 MPa	45,5 MPa	37,9 MPa
Air test pressure	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa

Class 2500	Material				
	A182 F316	A182 F316L	A350 LF2	A350 LF3	A352 LC3
PSmax	413,7 bar-g/ 6000 psig	344,7 bar-g/ 5000 psig	425,5 bar-g/ 6170 psig	425,5 bar-g/ 6170 psig	430,9 bar-g/ 6250 psig
TS	38°C/-196°C 100°F/-320°F	38°C/-196°C 100°F/-320°F	38°C/-46°C 100°F/-51°F	38°C/-101°C 100°F/-150°F	38°C/-101°C 100°F/-150°F
PS	208,9 bar-g/ 3030 psig	195,1 bar-g/ 2820 psig	239,7 bar-g/ 3430 psig	315,4 bar-g/ 4575 psig	236,5 bar-g/ 3430 psig
TSmax/min	538°C/ -196°C 1000°F/-320°F	450°C/ -196°C 850°F/-320°F	425°C/ -46°C 800°F/-51°F	345°C/ -101°C 650°F/-150°F	345°C/ -101°C 650°F/-150°F
Shell test pressure	62,1 MPa	51,8 MPa	63,9 MPa	63,9 MPa	64,7 MPa
High pressure seal test	45,5 MPa	37,9 MPa	46,8 MPa	46,8 MPa	47,4 MPa
Backseat test pressure	45,5 MPa	37,9 MPa	46,8 MPa	46,8 MPa	47,4 MPa
Air test pressure	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa	0,6 MPa

Information / restriction of technical rules need to be observed!
Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Limits of use / Main duties

BALL VALVES

Ball Valve Seat and Seal Material

Virgin PTFE
Virgin PTFE are basically used as ball valve seat material,with chemical compatibility to fill the widest possible range of service applications.

Color	Density (g/cm³)	Elongation (%)	Tensile Strength (MPa)	Continuous Working Temp. (ºC)
White	2,17	390	54	150

Reinforced PTFE
Reinforced PTFE,15% glass reinforced PTFE,chemical resistance is compatible to virgin PTFE but with better cycle life and greater P-T rating,recommended to used in Class150 and Class300 ball valve,limited use in Class600 ball valves with below NPS12.

Color	Density (g/cm³)	Hardness (Shore D)	Compressive Strength (MPa)	Continuous Working Temp. (ºC)
Off-white	2,1	76	68	180

Carbon Fiber Filled PTFE
Carbon Fiber Filled PTFE,25% Carbon Graphite with 75% TFE,retain virtually all the chemical compatibility properties of virgin PTFE but with better cycle life than PTFE, typically used for Class600&below trunnion mounted ball valve.

Color	Density (g/cm³)	Hardness (Shore D)	Compressive Strength (MPa)	Continuous Working Temp. (ºC)
Black	2,23	68	60	200

Nylon
Nylon primarily used in high pressure ball valves upto Class2500,it can be used in high pressure oil,air and other gas systems except oxygen,it is not recommended for water.

Color	Density (g/cm³)	Hardness (Shore D)	Water Absorption (%)	Compressive Strength (MPa)	Continuous Working Temp. (ºC)
White	1,2	65	3,5	100	90

Devlon
Devlon is improved version of Nylon,inherit basic properities of Nylon however with higher temperature limit,ideal seat material for high pressure ball valves.

Color	Density (g/cm³)	Hardness (Shore D)	Water Absorption (%)	Compressive Strength (MPa)	Continuous Working Temp. (ºC)
Bright Yellow	1,14	79	3	140	125

Values given just for reference. Please consult us for each particular applicaction

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Product suitability must be verified, contact manufacturer for information

Limits of use / Main duties

BALL VALVES

Ball Valve Seat and Seal Material

PEEK
Polyetheretherketone, excellently suitable for high pressure and temperature service, meanwhile offer very good corrosion resistance, with stable sealing in COMEVAL made Class2500 ball valves.

Color	Density (g/cm³)	Hardness (Shore D)	Compressive Strength (MPa)	Continuous Working Temp. (ºC)
Sallow	1,29	85	118	260

PPL
Polyphenyene,recommended for use in medium high pressure and temperature floating ball valves, similar properities to PTFE, good abrasive resistance and higher deformation rating and density than PTFE.

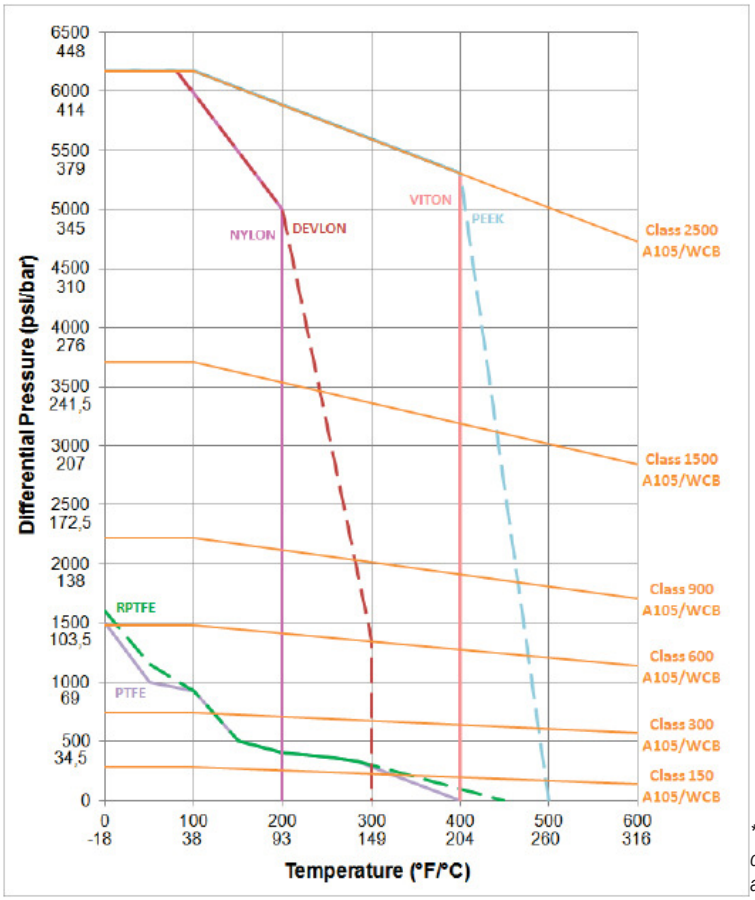
Color	Density (g/cm³)	Hardness (Shore D)	Compressive Strength (MPa)	Continuous Working Temp. (ºC)
Chocolate Brown	2,4	65	40	200

Values given just for reference. Please consult us for each particular applicaction

Besides the soft seat ball valves, COMEVAL VALVE SYSTEMS accumulated pretty rich experiences in metal seat ball valves,all our metal seat ball valves with basic acceptance criteria of zero-leakage, successfully applied in very strict working conditions and known well for it's excellent performance stability.
Typical Metal Sealings:

- TCC-Tungsten Carbide Coating
- Nickle Base Alloy Spraying Welding like Inconel,Hastelloy,Monel,etc
- Cobalt Base Alloy Spraying Welding-Stellite

Pressure / Temperature Chart *



**Only for reference. Please consult us for each particular applicaction*

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The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Pressure / Temperature Chart according to *ASME B16.34* & *ASME B&PV Code*

CAST PRODUCTS

The following graphs represent the Temperature / Pressure relation for all metal seated valves, strainers and other flow control products made out in the following pressure retaining shell materials:

- Carbon Steel A216 WCB
- Low Carbon Steel A352 LCB
- Alloy Steel A217 WC1, A217 WC6, A217 WC9, A217 C5, A217 C12
- Stainless Steel A351 CF8, A351 CF8M, A351 CF3, A351 CF3M
- And for Design Pressures up to 2500 Lbs.

All products with resilient seat or other components are subject to temperature restrictions governed by these resilient materials.

** See page 47 for notes*

Class 150

Temp.	Working pressure (bar)										
(ºC)	**A216** WCB Note (9)	**A352** LCB Note (1)	**A217** WC1 Notes (10),(6)	**A217** WC6 Notes (5),(4),(6)	**A217** WC9 Notes (5),(6)	**A217** C5 Notes (5),(6)	**A217** C12 Notes (5),(6)	**A351** CF8 Note (7)	**A351** CF8M Note (7)	**A351** CF3 Note (2)	**A351** CF3M Note (3)
-48	....	18.4	....	....	....	....	....	19	19	19	19
-29	19.6		18.4	19.8	19.8	20	20				
38											
50	19.2	18.2	18.2	19.5	19.5	19.5	19.5	18.3	18.4	18.3	18.4
100	17.7	17.4	17.4	17.7	17.7	17.7	17.7	15.7	16.2	15.7	16.2
150	15.8	15.8	15.8	15.8	15.8	15.8	15.8	14.2	14.8	14.2	14.8
200	13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.2	13.7	13.2	13.7
250	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1
300	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2
325	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3
350	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4
375	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4
400	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
425	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
450	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
475	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
500	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
538	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4

Class 300

Temp.	Working pressure (bar)										
(ºC)	**A216** WCB Note (9)	**A352** LCB Note (1)	**A217** WC1 Notes (10),(6)	**A217** WC6 Notes (5),(4),(6)	**A217** WC9 Notes (5),(6)	**A217** C5 Notes (5),(6)	**A217** C12 Notes (5),(6)	**A351** CF8 Note (7)	**A351** CF8M Note (7)	**A351** CF3 Note (2)	**A351** CF3M Note (3)
-48	....	48.0	....	....	....	....	....	49.6	49.6	49.6	49.6
-29	51.1		48	51.7	51.7	51.7	51.7				
38											
50	50.1	47.5	47.5	51.7	51.7	51.7	51.7	47.8	48.1	47.8	48.1
100	46.6	45.3	45.3	51.5	51.5	51.5	51.5	40.9	42.2	40.9	42.2
150	45.1	43.9	43.9	49.7	50.3	50.3	50.3	37.0	38.5	37.0	38.5
200	43.8	42.5	42.5	48.0	48.6	48.6	48.6	34.5	35.7	34.5	35.7
250	41.9	40.8	40.8	46.3	46.3	46.3	46.3	32.5	33.4	32.5	33.4
300	39.8	38.7	38.7	42.9	42.9	42.9	42.9	30.9	31.6	30.9	31.6
325	38.7	37.6	37.6	41.4	41.4	41.4	41.4	30.2	30.9	30.2	30.9
350	37.6	36.4	36.4	40.3	40.3	40.3	40.3	29.6	30.3	29.6	30.3
375	36.4	35.0	35.0	38.9	38.9	38.9	38.9	29.0	29.9	29.0	29.9
400	34.7	32.6	32.6	36.5	36.5	36.5	36.5	28.4	29.4	28.4	29.4
425	28.8	27.3	27.3	35.2	35.2	35.2	35.2	28.0	29.1	28.0	29.1
450	23.0	21.6	21.6	33.7	33.7	33.7	33.7	27.4	28.8	27.4	28.8
475	17.4	15.7	15.7	31.7	31.7	27.9	31.7	26.9	28.7	26.9	28.7
500	11.8	11.1	11.1	25.7	28.2	21.4	28.2	26.5	28.2	26.5	28.2
538	5.9	5.9	5.9	14.9	18.4	13.7	17.5	24.4	25.2	24.4	25.2

Pressure / Temperature Chart according to *ASME B16.34* & *ASME B&PV Code*

CAST PRODUCTS

The following graphs represent the Temperature / Pressure relation for all metal seated valves, strainers and other flow control products made out in the following pressure retaining shell materials:

- Carbon Steel A216 WCB
- Low Carbon Steel A352 LCB
- Alloy Steel A217 WC1, A217 WC6, A217 WC9, A217 C5, A217 C12
- Stainless Steel A351 CF8, A351 CF8M, A351 CF3, A351 CF3M
- And for Design Pressures up to 2500 Lbs.

All products with resilient seat or other components are subject to temperature restrictions governed by these resilient materials.

Class 600

Temp.	Working pressure (bar)										
(ºC)	A216 WCB Note (9)	A352 LCB Note (1)	A217 WC1 Notes (10),(6)	A217 WC6 Notes (5),(4),(6)	A217 WC9 Notes (5),(6)	A217 C5 Notes (5),(6)	A217 C12 Notes (5),(6)	A351 CF8 Note (7)	A351 CF8M Note (7)	A351 CF3 Note (2)	A351 CF3M Note (3)
-48	....	96.0	....	....	....	....	....	99.3	99.3	99.3	99.3
-29	102.1		96.0	103.4	103.4	103.4	103.4				
38											
50	100.2	94.9	94.9	103.4	103.4	103.4	103.4	95.6	96.2	95.6	96.2
100	93.2	90.7	90.7	103.0	103.0	103.0	103.0	81.7	84.4	81.7	84.4
150	90.2	87.9	87.9	99.5	100.3	100.3	100.3	74.0	77.0	74.0	77.0
200	87.6	85.1	85.1	95.9	97.2	97.2	97.2	69.0	71.3	69.0	71.3
250	83.9	81.6	81.6	92.7	92.7	92.7	92.7	65.0	66.8	65.0	66.8
300	79.6	77.4	77.4	85.7	85.7	85.7	85.7	61.8	63.2	61.8	63.2
325	77.4	75.2	75.2	82.6	82.6	82.6	82.6	60.4	61.8	60.4	61.8
350	75.1	72.8	72.8	80.4	80.4	80.4	80.4	59.3	60.7	59.3	60.7
375	72.7	69.9	69.9	77.6	77.6	77.6	77.6	58.1	59.8	58.1	59.8
400	69.4	65.2	65.2	73.3	73.3	73.3	73.3	56.9	58.9	56.9	58.9
425	57.5	54.6	54.6	70.0	70.0	70.0	70.0	56.0	58.3	56.0	58.3
450	46.0	43.2	43.2	67.7	67.7	67.7	67.7	54.8	57.7	54.8	57.7
475	34.9	31.3	31.3	63.4	63.4	55.7	63.4	53.9	57.3	53.9	57.3
500	23.5	22.1	22.1	51.5	56.5	42.8	56.5	53.0	56.5	53.0	56.5
538	11.8	11.8	11.8	29.8	36.9	27.4	35.0	48.9	50.0	48.9	50.0

Class 900

Temp.	Working pressure (bar)										
(ºC)	A216 WCB Note (9)	A352 LCB Note (1)	A217 WC1 Notes (10),(6)	A217 WC6 Notes (5),(4),(6)	A217 WC9 Notes (5),(6)	A217 C5 Notes (5),(6)	A217 C12 Notes (5),(6)	A351 CF8 Note (7)	A351 CF8M Note (7)	A351 CF3 Note (2)	A351 CF3M Note (3)
-48	....	144.1	....	....	....	....	....	148.9	148.9	148.9	148.9
-29	153.2		144.1	155.1	155.1	155.1	155.1				
38											
50	150.4	142.4	142.4	155.1	155.1	155.1	155.1	143.5	144.3	143.5	144.3
100	139.8	136.0	136.0	154.4	154.6	154.6	154.6	122.6	126.6	122.6	126.6
150	135.2	131.8	131.8	149.2	150.6	150.6	150.6	111.0	115.5	111.0	115.5
200	131.4	127.6	127.6	143.9	145.8	145.8	145.8	103.4	107.0	103.4	107.0
250	125.8	122.3	122.3	139.0	139.0	139.0	139.0	97.5	100.1	97.5	100.1
300	119.5	116.1	116.1	128.6	128.6	128.6	128.6	92.7	94.9	92.7	94.9
325	116.1	112.7	112.7	124.0	124.0	124.0	124.0	90.7	92.7	90.7	92.7
350	112.7	109.2	109.2	120.7	120.7	120.7	120.7	88.9	91.0	88.9	91.0
375	109.1	104.9	104.9	116.5	116.5	116.5	116.5	87.1	89.6	87.1	89.6
400	104.2	97.9	97.9	109.8	109.8	109.8	109.8	85.3	88.3	85.3	88.3
425	86.3	81.9	81.9	105.1	105.1	105.1	105.1	84.0	87.4	84.0	87.4
450	69.0	64.8	64.8	101.4	101.4	101.4	101.4	82.2	86.5	82.2	86.5
475	52.3	47.0	47.0	95.1	95.1	83.6	95.1	80.8	86.0	80.8	86.0
500	35.3	33.2	33.2	77.2	84.7	64.1	84.7	79.5	84.7	79.5	84.7
538	17.7	17.7	17.7	44.7	55.3	41.1	52.5	73.3	75.2	73.3	75.2

Pressure / Temperature Chart according to *ASME B16.34* & *ASME B&PV Code*

CAST PRODUCTS

The following graphs represent the Temperature / Pressure relation for all metal seated valves, strainers and other flow control products made out in the following pressure retaining shell materials:

- Carbon Steel A216 WCB
- Low Carbon Steel A352 LCB
- Alloy Steel A217 WC1, A217 WC6, A217 WC9, A217 C5, A217 C12
- Stainless Steel A351 CF8, A351 CF8M, A351 CF3, A351 CF3M
- And for Design Pressures up to 2500 Lbs.

All products with resilient seat or other components are subject to temperature restrictions governed by these resilient materials.

Class 1500

Temp.	Working pressure (bar)										
(ºC)	A216 WCB Note (9)	A352 LCB Note (1)	A217 WC1 Notes (10),(6)	A217 WC6 Notes (5),(4),(6)	A217 WC9 Notes (5),(6)	A217 C5 Notes (5),(6)	A217 C12 Notes (5),(6)	A351 CF8 Note (7)	A351 CF8M Note (7)	A351 CF3 Note (2)	A351 CF3M Note (3)
-48	....	240.1	....	....	....	....	....	248.2	248.2	248.2	248.2
-29	255.3		240.1	258.6	258.6	258.6	258.6				
38											
50	250.6	237.3	237.3	258.6	258.6	258.6	258.6	239.1	240.6	239.1	240.6
100	233.0	226.7	226.7	257.4	257.6	257.6	257.6	204.3	211.0	204.3	211.0
150	225.4	219.7	219.7	248.7	250.8	250.8	250.8	185.0	192.5	185.0	192.5
200	219.0	212.7	212.7	239.8	243.4	243.4	243.4	172.4	178.3	172.4	178.3
250	209.7	203.9	203.9	231.8	231.8	231.8	231.8	162.4	166.9	162.4	166.9
300	199.1	193.4	193.4	214.4	214.4	214.4	214.4	154.6	158.1	154.6	158.1
325	193.6	187.9	187.9	206.6	206.6	206.6	206.6	151.1	154.4	151.1	154.4
350	187.8	182.0	182.0	201.1	201.1	201.1	201.1	148.1	151.6	148.1	151.6
375	181.8	174.9	174.9	194.1	194.1	194.1	194.1	145.2	149.4	145.2	149.4
400	173.6	163.1	163.1	183.1	183.1	183.1	183.1	142.2	147.2	142.2	147.2
425	143.8	136.5	136.5	175.1	175.1	175.1	175.1	140.0	145.7	140.0	145.7
450	115.0	107.9	107.9	169.0	169.0	169.0	169.0	137.0	144.2	137.0	144.2
475	87.2	78.3	78.3	158.2	158.2	139.3	158.2	134.7	143.4	134.7	143.4
500	58.8	55.4	55.4	128.6	140.9	106.9	140.9	132.4	140.9	132.4	140.9
538	29.5	29.5	29.5	74.5	92.2	68.6	87.5	122.1	125.5	122.1	125.5

Class 2500

Temp.	Working pressure (bar)										
(ºC)	A216 WCB Note (9)	A352 LCB Note (1)	A217 WC1 Notes (10),(6)	A217 WC6 Notes (5),(4),(6)	A217 WC9 Notes (5),(6)	A217 C5 Notes (5),(6)	A217 C12 Notes (5),(6)	A351 CF8 Note (7)	A351 CF8M Note (7)	A351 CF3 Note (2)	A351 CF3M Note (3)
-48	....	400.1	....	....	....	....	....	413.7	413.7	413.7	413.7
-29	425.5		400.1	430.9	430.9	430.9	430.9				
38											
50	417.7	395.6	395.6	430.9	430.9	430.9	430.9	398.5	400.9	398.5	400.9
100	388.3	377.8	377.8	429.0	429.4	429.4	429.4	340.4	351.6	340.4	351.6
150	375.6	366.1	366.1	414.5	418.2	418.2	418.2	308.4	320.8	308.4	320.8
200	365.0	354.4	354.4	399.6	405.4	405.4	405.4	287.3	297.2	287.3	297.2
250	349.5	339.8	339.8	386.2	386.2	386.2	386.2	270.7	278.1	270.7	278.1
300	331.8	322.4	322.4	357.1	357.1	357.1	357.1	257.6	263.5	257.6	263.5
325	322.6	313.1	313.1	344.3	344.3	344.3	344.3	251.9	257.4	251.9	257.4
350	313.0	303.3	303.3	335.3	335.3	335.3	335.3	246.9	252.7	246.9	252.7
375	303.1	291.4	291.4	323.2	323.2	323.2	323.2	241.9	249.0	241.9	249.0
400	289.3	271.9	271.9	304.9	304.9	304.9	304.9	237.0	245.3	237.0	245.3
425	239.7	227.5	227.5	291.6	291.6	291.6	291.6	233.3	242.9	233.3	242.9
450	191.7	179.9	179.9	281.8	281.8	281.8	281.8	228.4	240.4	228.4	240.4
475	145.3	130.6	130.6	263.9	263.9	232.1	263.9	224.5	238.9	224.5	238.9
500	97.9	92.3	92.3	214.4	235.0	178.2	235.0	220.7	235.0	220.7	235.0
538	49.2	49.2	49.2	124.1	153.7	114.3	145.8	203.6	208.9	203.6	208.9

Pressure / Temperature Chart according to *ASME B16.34* & *ASME B&PV Code*

FORGED PRODUCTS

The following graphs represent the Temperature / Pressure relation for all metal seated valves, strainers and other flow control products made out in the following pressure retaining shell materials:

- Carbon Steel A105, A350 LF2
- Low Carbon Steel A350 LF2
- Alloy Steel A182 F11 Cl. 2, A182 F22 Cl.
- Stainless Steel A182 F304, A182 F304L, A182 F316, A182 F316L
- And for Design Pressures up to 2500 Lbs.

All products with resilient seat or other components are subject to temperature restrictions governed by these resilient materials.

Class 800

Temp.	Working pressure (bar)							
(ºC)	A105 Notes (9),(11)	A350 LF2 Note (9)	A182 F11 Cl.2 Notes (6),(8)	A182 F22 Cl.3 Note (8)	A182 F304 Note (7)	A182 F304L Note (2)	A182 F316 Note (7)	A182 F316L
-48	....	136.2	....	....	132.4	110.3	132.4	110.3
-29	136.2		137.9	137.9				
38								
50	133.7	133.7	137.9	137.9	127.5	106.7	128.3	106.7
100	124.3	124.3	137.3	137.4	109.0	92.8	112.5	92.8
150	120.2	120.2	132.6	133.8	98.7	83.7	102.7	83.7
200	116.8	116.8	127.9	129.6	91.9	77.8	95.1	77.8
250	111.8	111.8	123.6	123.6	86.7	73.2	89.0	73.2
300	106.2	106.2	114.3	114.3	82.4	69.5	84.3	69.5
325	103.2	103.2	110.2	110.2	80.6	67.9	82.4	67.9
350	100.2	100.2	107.3	107.3	79.0	66.8	80.9	66.8
375	97.0	97.0	103.5	103.5	77.4	66.0	79.7	66.0
400	92.6	92.6	97.6	97.6	75.8	64.8	78.5	64.8
425	76.7	76.7	93.4	93.4	74.7	63.6	77.7	63.6
450	61.3	61.3	90.2	90.2	73.1	62.4	76.9	62.4
475	46.5	46.5	84.5	84.5	71.8	....	76.4	....
500	31.4	31.4	68.6	75.3	70.7	....	75.3	....
538	15.7	15.7	39.7	49.2	65.2	....	66.8	....

Class 1500

Temp.	Working pressure (bar)							
(ºC)	A105 Notes (9),(11)	A350 LF2 Note (9)	A182 F11 Cl.2 Notes (6),(8)	A182 F22 Cl.3 Note (8)	A182 F304 Note (7)	A182 F304L Note (2)	A182 F316 Note (7)	A182 F316L
-48	....	255.3	....	....	248.2	206.8	248.2	206.8
-29	255.3		258.6	258.6				
38								
50	250.6	250.6	258.6	258.6	239.1	200.1	240.6	200.1
100	233.0	233.0	257.4	257.6	204.3	173.9	211.0	173.9
150	225.4	225.4	248.7	250.8	185.0	157.0	192.5	157.0
200	219.0	219.0	239.8	243.4	172.4	145.8	178.3	145.8
250	209.7	209.7	231.8	231.8	162.4	137.3	166.9	137.3
300	199.1	199.1	214.4	214.4	154.6	130.3	158.1	130.3
325	193.6	193.6	206.6	206.6	151.1	127.4	154.4	127.4
350	187.8	187.8	201.1	201.1	148.1	125.4	151.6	125.4
375	181.8	181.8	194.1	194.1	145.2	123.8	149.4	123.8
400	173.6	173.6	183.1	183.1	142.2	121.5	147.2	121.5
425	143.8	143.8	175.1	175.1	140.0	119.3	145.7	119.3
450	115.0	115.0	169.0	169.0	137.0	....	144.2	117.1
475	87.2	87.2	158.2	158.2	134.7	....	143.4	....
500	58.8	58.8	128.6	140.9	132.4	....	140.9	....
538	29.5	29.5	74.5	92.2	122.1	....	125.5	....

Pressure / Temperature Chart according to *ASME B16.34* & *ASME B&PV Code*
FORGED PRODUCTS

The following graphs represent the Temperature / Pressure relation for all metal seated valves, strainers and other flow control products made out in the following pressure retaining shell materials:
- Carbon Steel A105, A350 LF2
- Low Carbon Steel A350 LF2
- Alloy Steel A182 F11 Cl. 2, A182 F22 Cl.
- Stainless Steel A182 F304, A182 F304L, A182 F316, A182 F316L
- And for Design Pressures up to 2500 Lbs.

All products with resilient seat or other components are subject to temperature restrictions governed by these resilient materials.

Class 2500

Temp.	Working pressure (bar)							
(ºC)	A105 Notes (9),(11)	A350 LF2 Note (9)	A182 F11 Cl.2 Notes (6),(8)	A182 F22 Cl.3 Note (8)	A182 F304 Note (7)	A182 F304L Note (2)	A182 F316 Note (7)	A182 F316L
-48	....	425.5	....	....	413.7	344.7	413.7	344.7
-29	425.5		430.9	430.9				
38								
50	417.7	417.7	430.9	430.9	398.5	333.5	400.9	333.5
100	388.3	388.3	429.0	429.4	340.4	289.9	351.6	289.9
150	375.6	375.6	414.5	418.2	308.4	261.6	320.8	261.6
200	365.0	365.0	399.6	405.4	287.3	243.0	297.2	243.0
250	349.5	349.5	386.2	386.2	270.7	228.9	278.1	228.9
300	331.8	331.8	357.1	357.1	257.6	217.2	263.5	217.2
325	322.6	322.6	344.3	344.3	251.9	212.3	257.4	212.3
350	313.0	313.0	335.3	335.3	246.9	208.9	252.7	208.9
375	303.1	303.1	323.2	323.2	241.9	206.3	249.0	206.3
400	289.3	289.3	304.9	304.9	237.0	202.5	245.3	202.5
425	239.7	239.7	291.6	291.6	233.3	198.8	242.9	198.8
450	191.7	191.7	281.8	281.8	228.4	....	240.4	195.1
475	145.3	145.3	263.9	263.9	224.5	....	238.9	....
500	97.9	97.9	214.4	235.0	220.7	....	235.0	....
538	49.2	49.2	124.1	153.7	203.6	....	208.9	....

(1) Not to be used over 345ºC.
(2) Not to be used over 425ºC.
(3) Not to be used over 455ºC.
(4) Not to be used over 595ºC.
(5) Use normalized and tempered material only.
(6) The deliberate addition of any alement not listed in ASTM A217, Table 1 is prohibited, except that calcium (Ca) and manganese (Mn) may be added for deoxidation.
(7) At temperatures above 538ºC, use only when the carbon content is 0,04% or higher.
(8) Permissible, but not recommended for prolonged use above 595ºC.
(9) Upon prolonged exposure to temperatures above 425ºC, the carbide phase of steel may be converted to graphite. Permissible, but not recommended for prolonged usage above 425ºC.
(10) Upon prolonged exposure to temperatures above 470ºC, the carbide phase of steel may be converted to graphite. Permissible, but not recommended for prolonged usage above 470ºC.
(11) Only killed steel shall be used above 455ºC.

SERIES 80/81 ANSI RANGE

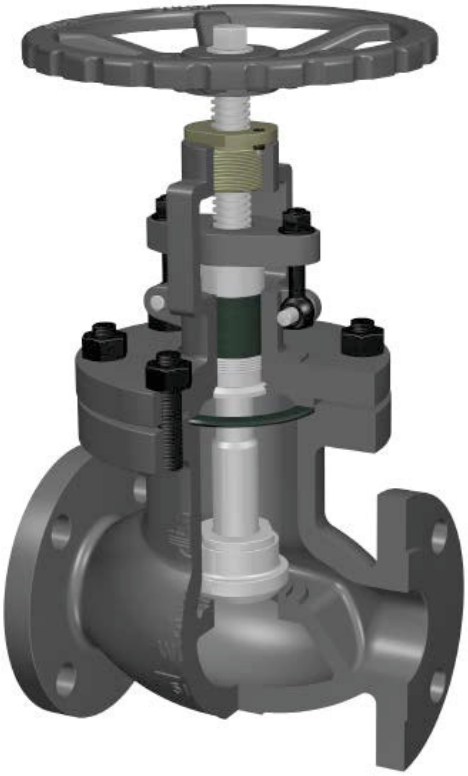
Series 80 Globe Valves are linear motion valves devised for stopping the flow of the service fluid when necessary. They are bolted bonnet, outside screw and yoke, rising handwheel, being the closure element a disc seating against a precisely machined seat thus achieving the positive closure. The atmospheric sealing is achieved by flexible graphite rings. The flow comes upwards underneath the seat, being an unidirectional valve. Weir body leads to higher pressure drop compared to gate valves but operation is quicker and this feature allows to use the valve as regulating valve when arranged with throttling plug. Valves are of easy and safe operation being widely used in power, chemical and oil industry. The range is also comprehensive o a wide offer of different versions and options. The standard operation is achieved by handwheel or gear, depending on valve size and working pressure. Valves can also be arranged for automation with different kinds of actuators.

Outside screw and yoke

Precise machining of components for optimal performance

Back Seat feature

Seat surface can be hardened to increase wear resistance



Ergonomic rising handwheel

Marking for identification and full traceability purpose

Great versatility in end connections, materials and configurations

Main Features / Reference Standards

Design: BS 1873 / ASME B16.34
Pressure Rating: 150/300/600/900/1500/2500#
Face to face length: ASME B16.10
Valve end connections: Flanged RF or RTJ to ASME B16.5
Welded BW to ASME B16.25
Marking: MSS SP-25
Inspections & Tests: API 598
Unidirectional design. See the arrow on the body for normal flow direction
Primer painted grey color similar to RAL 7037 for protection during storage and transport (carbon steel body/bonnet)
Product compliant with Directive 2014/68/EU on Pressure Equipment (PED) and Machinery Directive 2006/42/EC for European Union territory

Main Duties / Limits of use

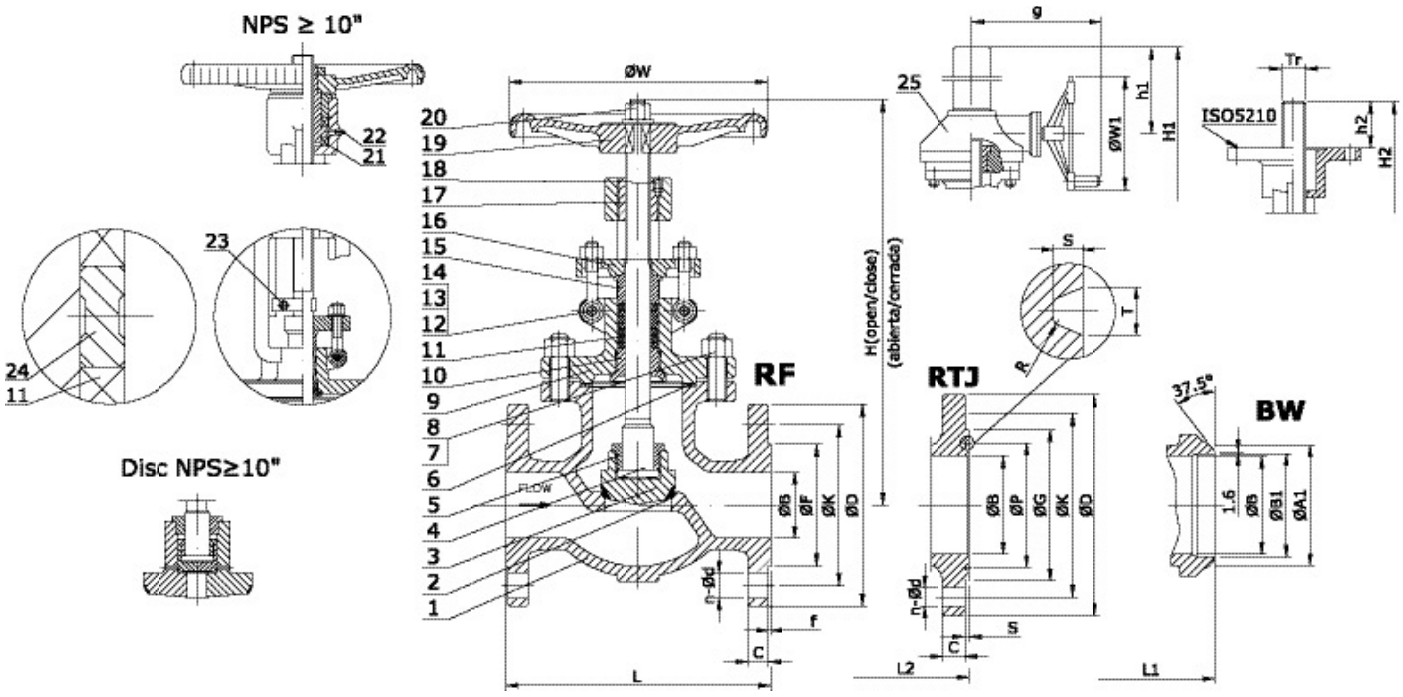
Fluids compatible with materials of construction. Questions referring to chemical resistance, please consult us
Pressure / Temperature Rating to ASME B16.34. See section “Engineering & Performance Data”
For products compliant with Directive 2014/68/EU, observe also limits acc. to Annex II tables 6 & 8 (gases & liquids group 1*) and tables 7 & 9 (gases & liquids group 2*) up to category III
**Classification of fluids (group 1 or 2) acc. to Directive 2014/68/EU, Article 13*

Options

Different body materials and trim combinations, different valve connections, angle pattern, Y-pattern, regulating plug, compliance with NACE MR0175, extended bonnet, bellow seal, pressure seal, welded bonnet, lantern ring with double packing, live loaded packing, chained hand wheel, manual gear, pneumatic, electric or hydraulic actuation, limit switches, execution for aggressive atmosphere, etc. Please consult us

Main Parts and Materials

SERIES 80 ANSI RANGE
Class 150



From 2" to 8", the flow direction is acc. to the flow arrow shown in the drawing
From 10" onwards, the flow direction is opposite to the flow arrow shown in the drawing

Nº	Part name	A216 WCB (80A0_)	A352 LCB		A217 WC1 (80B1_)	A217 WC6 (80B8_)	A217 WC9 (80B9_)
			Trim 2 (80A82_)	Trim 12 (80A8G_)			
1	Body	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9
2	Seat	A216 WCB	Integral+SS304	Integral+HF		HF Overlay	
3	Disc	A105	A182 F304	A182 F316	A182 F1+HF	A182 F11+HF	A182 F22+HF
4	Stem	A182 F6a	A182 F304	A182 F316		A182 F6a	
5	Disc Nut	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9
6	Gasket	SS304+Graphite	A182 F304	A182 F316		SS304	
7	Bonnet Bolt (1)	A193 B7	A320 L7			A193 B16	
8	Bonnet Nut (1)	A194 2H	A194 4			A194 4	
9	Bonnet	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9
10	Backseat Bushing	A182 F6a	A182 F304	A182 F316		A182 F6a	
11	Packing	Graphite	Graphite			Graphite	
12	Eyebolt Pin	AISI 1025	AISI 1025			A276 410	
13	Gland Eyebolt (1)	A193 B7	A320 L7			A193 B16	
14	Gland Nut (1)	A194 2H	A194 4			A194 4	
15	Packing Gland	A182 F6a	A182 F304			A182 F6a	
16	Gland Flange	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9
17	Stem Nut	A439 D2	A439 D2			A439 D2	
18	Retaining Screw	Carbon Steel	Carbon Steel			Carbon Steel	
19	Handwheel	Steel	Steel			Steel	
20	Handwheel Nut	Carbon Steel	Carbon Steel			Carbon Steel	
21	Bearings (2)	Alloy Steel	Alloy Steel			Alloy Steel	
22	Grease Nipple	Carbon Steel	Carbon Steel			Alloy Steel	
23	Splint (2)	Carbon Steel	Carbon Steel			Alloy Steel	
24	Lantern Ring (3)	A276 410	A276 304	A276 316		A276 410	
25	Gear	Assembly	Assembly			Assembly	

(1) Bolting material for NACE MR0175 compliance available (i.e. B7M / 2HM for WCB bodies)
(2) 10" and above
(3) On request

Fig. 80A0_	Seat Surface	Disc Surface	Stem
TRIM #1 (80A01)	A216 WCB+13Cr	A105+13Cr	A182 F6a
TRIM #5 (80A05)	A216 WCB+HF	A105+HF	A182 F6a
TRIM #8 (80A08)	A216 WCB+HF	A105+13Cr	A182 F6a

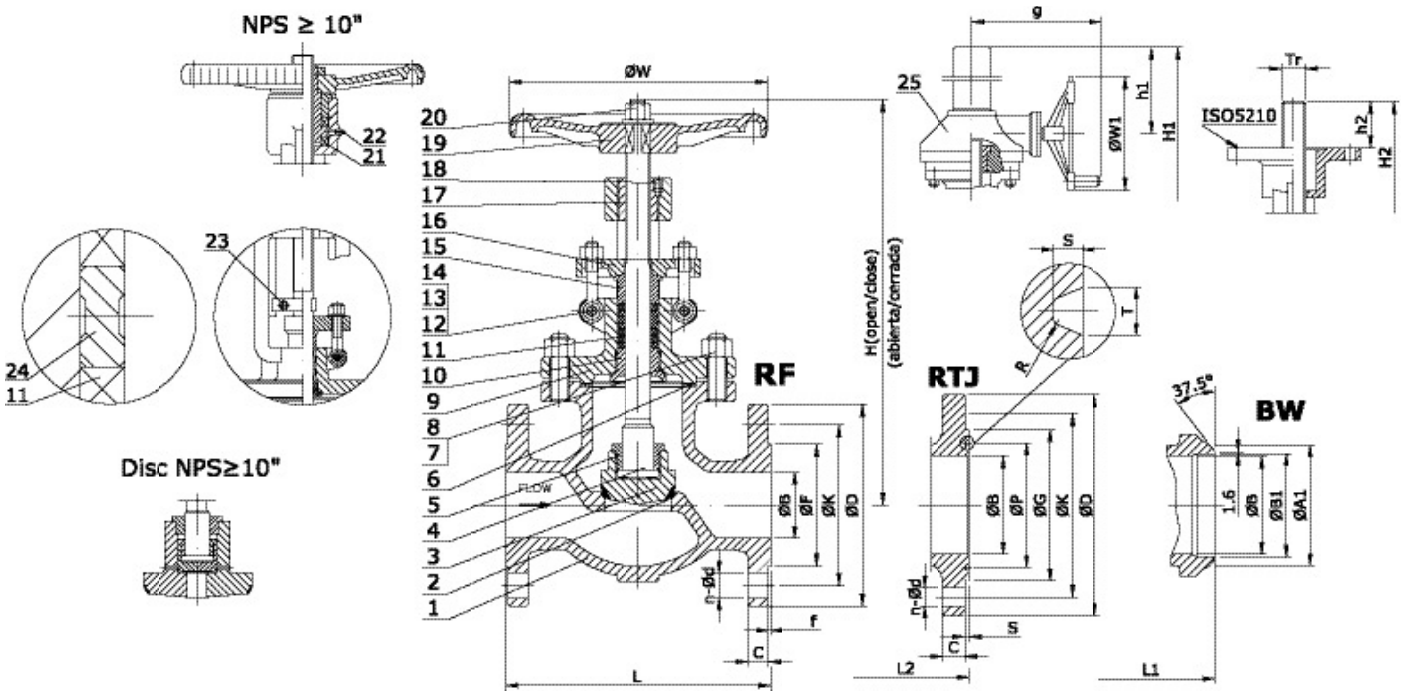
HF = Hard faced

Information / restriction of technical rules need to be observed!
Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Main Parts and Materials

SERIES 80 ANSI RANGE
Class 150



From 2" to 8", the flow direction is acc. to the flow arrow shown in the drawing
From 10" onwards, the flow direction is opposite to the flow arrow shown in the drawing

Nº	Part name	A217 C5 (80C2_)	A217 C12 (80C4_)	CF8 (80I2_)	CF8M (80I0_)	CF3 (80I1_)	CF3M (80I7_)
1	Body	A217 C5	A217 C12	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2	Seat	HF Overlay		Integral SS304	Integral SS316	Integral SS304L	Integral SS316L
3	Disc	A182 F5+HF	A182 F9+HF	A182 F304	A182 F316	A182 F304L	A182 F316L
4	Stem	A182 F6a		A182 F304	A182 F316	A182 F304L	A182 F316L
5	Disc Nut	A217 C5	A217 C12	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
6	Gasket	SS304		SS304	SS316	SS304L	SS316L
7	Bonnet Bolt	A193 B16		A193 B8	A193 B8M	A193 B8M	
8	Bonnet Nut	A194 4		A194 8	A194 8M	A194 8M	
9	Bonnet	A217 C5	A217 C12	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
10	Backseat Bushing	A182 F6a		SS304	SS316	SS304L	SS316L
11	Packing	Graphite		Graphite		Graphite	
12	Eyebolt Pin	A276 410		A276 304	A276 316	A276 316	
13	Gland Eyebolt	A193 B16		A193 B8	A193 B8M	A193 B8M	
14	Gland Nut	A194 4		A194 8	A194 8M	A194 8M	
15	Packing Gland	A182 F6a		A182 F304	A182 F316	A182 F304L	A182 F316L
16	Gland Flange	A217 C5	A217 C12	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
17	Stem Nut	A439 D2		A439 D2		A439 D2	
18	Retaining Screw	Carbon Steel		St. Steel		St. Steel	
19	Handwheel	Steel		Steel		Steel	
20	Handwheel Nut	Carbon Steel		St. Steel		St. Steel	
21	Bearings (1)	Alloy Steel		Alloy Steel		Alloy Steel	
22	Grease Nipple	Alloy Steel		St. Steel		St. Steel	
23	Splint (1)	Alloy Steel		St. Steel		St. Steel	
24	Lantern Ring (2)	A276 410		A276 304	A276 316	A276 316	A276 316L
25	Gear	Assembly		Assembly		Assembly	

(1) 10" and above
(2) On request

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The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 150

SERIES 80 ANSI RANGE

Nominal Size		inch	2”	2-1/2”	3”	4”	5”	6”	8”
		DN	50	65	80	100	125	150	200
End connection	RF	L	203	216	241	292	356	406	495
		ØB	51	65	76	102	128	152	203
		ØD	150	180	190	230	255	280	345
		ØK	120,7	139,7	152,4	190,5	215,9	241,3	298,5
		ØF	92,1	104,8	127	157,2	185,7	215,9	269,9
		C	14,3	15,9	17,5	22,3	22,3	23,9	27
		f	2	2	2	2	2	2	2
		n-Ød	4 - 3/4	4 - 3/4	4 - 3/4	8 - 3/4	8 - 7/8	8 - 7/8	8 - 7/8
	BW	L1	203	216	241	292	356	406	495
		Schedule No.*(1)*	40	-	40	40	-	40	40
		ØB	51	65	76	102	128	152	203
		ØA1	60,3	-	91	117	-	172	223
		ØB1	52,48	-	78	102	-	154	203
	RTJ	L2	216	229	254	305	369	419	508
		ØB	51	65	76	102	128	152	203
		ØD	150	180	190	230	255	280	345
		ØK	120,7	139,7	152,4	190,5	215,9	241,3	298,5
		ØG	102	121	133	171	194	219	273
		ØP	82,55	101,6	114,3	149,23	171,45	193,68	247,65
		C	17,5	20,7	22,3	22,3	22,3	23,9	27
		n-Ød	4 - 3/4	4 - 3/4	4 - 3/4	8 - 3/4	8 - 7/8	8 - 7/8	8 - 7/8
		T	8,74	8,74	8,74	8,74	8,74	8,74	8,74
		S	6,35	6,35	6,35	6,35	6,35	6,35	6,35
		R	0,8	0,8	0,8	0,8	0,8	0,8	0,8
Top works/Operation	Hand-wheel	H (open)	302	332	355	437	483	517	606
		H (close)	286	316	338	399	441	472	536
		ØW	200	250	250	300	250	400	450
	Gear with handwheel	H1	-	-	-	-	-	-	-
		h1	-	-	-	-	-	-	-
		g	-	-	-	-	-	-	-
		ØW1	-	-	-	-	-	-	-
	With ISO 5210 mounting pad	H2 (open)	327	357	380	442	485	517	600
		H2 (close)	311	335	353	404	443	472	530
		h2	80	80	80	80	80	80	80
		ISO	F07	F07	F07	F10	F12	F12	F14
		Tr	Tr20×4LH	Tr26×5LH	Tr26×5LH	Tr28×5LH	Tr32×6LH	Tr32×6LH	Tr36×6LH
		Stroke	16	22	27	38	42	45	70
		No. of turns	4	4	5	8	7	8	12
		Torque (Nm) *(2)*	25	44	58	88	141	180	320
Kvs-value			33	63	85	158	283	376	692
Approx. Weight RF *(3)*			15	22	28	47	56	63	115
Approx. Weight BW			12	18	23	39	45	50	93

(1) Other schedule nos. on request
(2) Torque includes 30% of safety factor
(3) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Torques in Nm / Weights in kg
For more information about flanged and welded ends refer to page 16

Information / restriction of technical rules need to be observed!
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The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 150

SERIES 80 ANSI RANGE

Nominal Size		inch	10"	12"	14"	16"	18"	20"	24"
		DN	250	300	350	400	450	500	600
End connection	RF	L	622	698	787	914	978	978	1295
		ØB	254	305	337	387	438	489	591
		ØD	405	485	535	595	635	700	815
		ØK	362	431,8	476,3	539,8	577,9	635	749,3
		ØF	323,8	381	412,8	469,9	533,4	584,2	692,2
		C	28,6	30,2	33,4	35	38,1	41,3	46,1
		f	2	2	2	2	2	2	2
		n-Ød	12 - 1	12 - 1	12 - 1 1/8	16 - 1 1/8	16 - 1 1/4	20 - 1 1/4	20 - 1 3/8
	BW	L1	622	698	787	914	978	978	1295
		Schedule No.*(1)*	40	STD	STD	STD	STD	STD	STD
		ØB	254	305	337	387	438	489	591
		ØA1	278	329	362	413	464	516	619
		ØB1	254,5	305	336,5	387,5	438	489	590,5
	RTJ	L2	635	711	800	*927*	*991*	*991*	*1308*
		ØB	254	305	337	387	438	489	591
		ØD	405	485	535	595	635	700	815
		ØK	362	431,8	476,3	539,8	577,9	635	749,3
		ØG	330	406	425	483	546	597	711
		ØP	304,8	381	396,88	454,03	517,53	558,8	673,1
		C	28,6	30,2	33,4	35	38,1	41,3	46,1
		n-Ød	12 - 1	12 - 1	12 - 1 1/8	16 - 1 1/8	16 - 1 1/4	20 - 1 1/4	20 - 1 3/8
		T	8,74	8,74	8,74	8,74	8,74	8,74	8,74
		S	6,35	6,35	6,35	6,35	6,35	6,35	6,35
		R	0,8	0,8	0,8	0,8	0,8	0,8	0,8
Top works/Operation	Hand-wheel	H (open)	710	882	990	-	-	-	-
		H (close)	638	794	889	-	-	-	-
		ØW	450	500	550	-	-	-	-
	Gear with handwheel	H1	-	-	-	977	1066	1117	1295
		h1	-	-	178	202	235	275	324
		g	-	-	440	440	440	513	513
		ØW1	-	-	460	460	460	530	600
	With ISO 5210 mounting pad	H2 (open)	705	1050	940	1064	-	-	-
		H2 (close)	630	756	846	950	-	-	-
		h2	100	120	140	140	-	-	-
		ISO	F14	F25	F30	F30	-	-	-
		Tr	Tr38×6LH	Tr42×6LH	Tr46×8LH	Tr48×8LH	-	-	-
		Stroke	75	294	94	114	-	-	-
		No. of turns	13	16	12	14	-	-	-
		Torque (Nm) *(2)*	465	780	1606	2219	-	-	-
Kvs-value			1077	1615	2086	2764	3682	4585	6688
Approx. Weight RF *(3)*			248	365	680	880	1150	1350	1700
Approx. Weight BW			219	321	624	810	1073	1258	1558

(1) Other schedule nos. on request
(2) Torque includes 30% of safety factor
(3) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Torques in Nm / Weights in kg
For more information about flanged and welded ends refer to page 16

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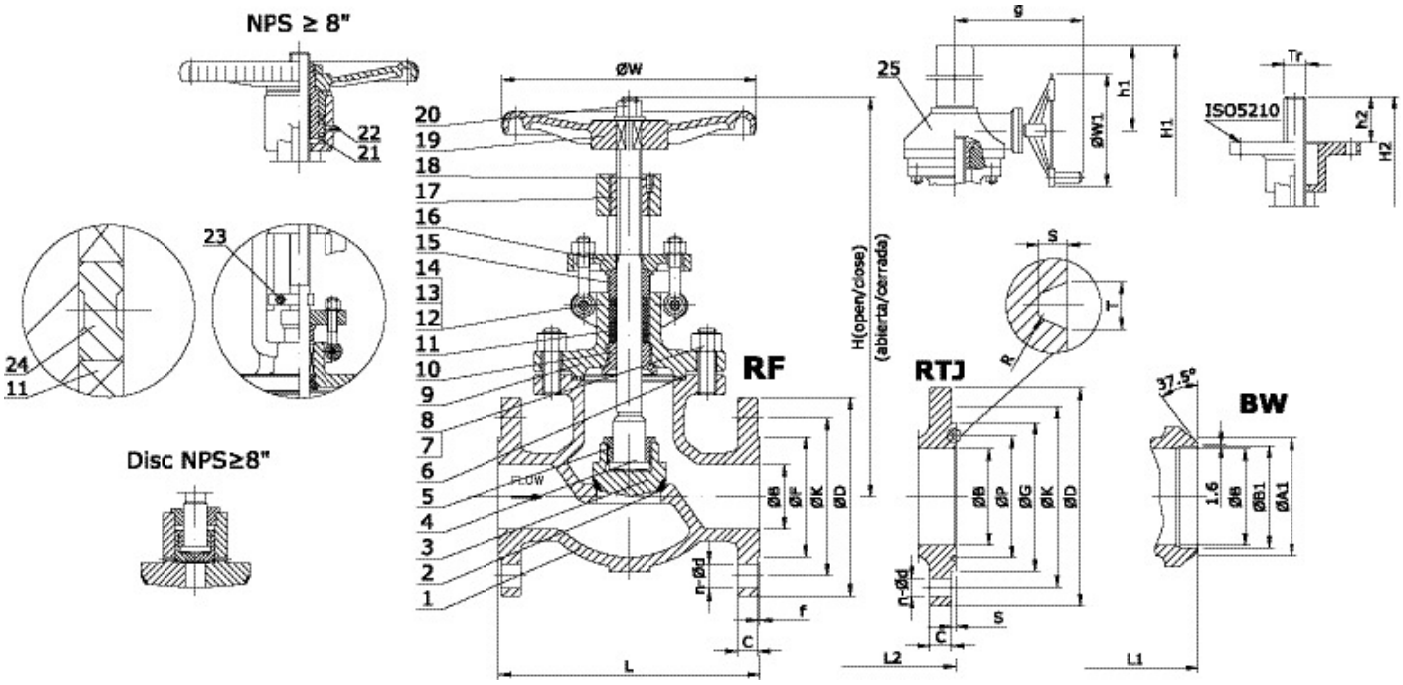
Main Parts and Materials

SERIES 80 ANSI RANGE
Class 300



From 2" to 6", the flow direction is acc. to the flow arrow shown in the drawing
From 8" onwards, the flow direction is opposite to the flow arrow shown in the drawing

Nº	Part name	A216 WCB (80A0_)	A352 LCB		A217 WC1 (80B1_)	A217 WC6 (80B8_)	A217 WC9 (80B9_)
			Trim 2 (80A82_)	Trim 12 (80A8G_)			
1	Body	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9
2	Seat	A105	Integral+SS304	Integral+HF		HF Overlay	
3	Disc	A105	A182 F304	A182 F316	A182 F1+HF	A182 F11+HF	A182 F22+HF
4	Stem	A182 F6a	A182 F304	A182 F316		A182 F6a	
5	Disc Nut	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9
6	Gasket	SS304+Graphite	A182 F304	A182 F316		SS304	
7	Bonnet Bolt (1)	A193 B7	A320 L7			A193 B16	
8	Bonnet Nut (1)	A194 2H	A194 4			A194 4	
9	Bonnet	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9
10	Backseat Bushing	A182 F6a	A182 F304	A182 F316		A182 F6a	
11	Packing	Graphite	Graphite			Graphite	
12	Eyebolt Pin	AISI 1025	AISI 1025			A276 410	
13	Gland Eyebolt (1)	A193 B7	A320 L7			A193 B16	
14	Gland Nut (1)	A194 2H	A194 4			A194 4	
15	Packing Gland	A182 F6a	A182 F304			A182 F6a	
16	Gland Flange	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9
17	Stem Nut	A439 D2	A439 D2			A439 D2	
18	Retaining Screw	Carbon Steel	Carbon Steel			Carbon Steel	
19	Handwheel	Steel	Steel			Steel	
20	Handwheel Nut	Carbon Steel	Carbon Steel			Carbon Steel	
21	Bearings (2)	Alloy Steel	Alloy Steel			Alloy Steel	
22	Grease Nipple	Carbon Steel	Carbon Steel			Alloy Steel	
23	Splint (2)	Carbon Steel	Carbon Steel			Alloy Steel	
24	Lantern Ring (3)	A276 410	A276 304	A276 316		A276 410	
25	Gear	Assembly	Assembly			Assembly	

(1) Bolting material for NACE MR0175 compliance available (i.e. B7M / 2HM for WCB bodies)
(2) 8" and above
(3) On request

Fig. 80A0_	Seat Surface	Disc Surface	Stem
TRIM #1 (80A01)	A105+13Cr	A216 WCB+13Cr	A182 F6a
TRIM #5 (80A05)	A105+HF	A216 WCB+HF	A182 F6a
TRIM #8 (80A08)	A105+HF	A216 WCB+13Cr	A182 F6a

HF = Hard faced

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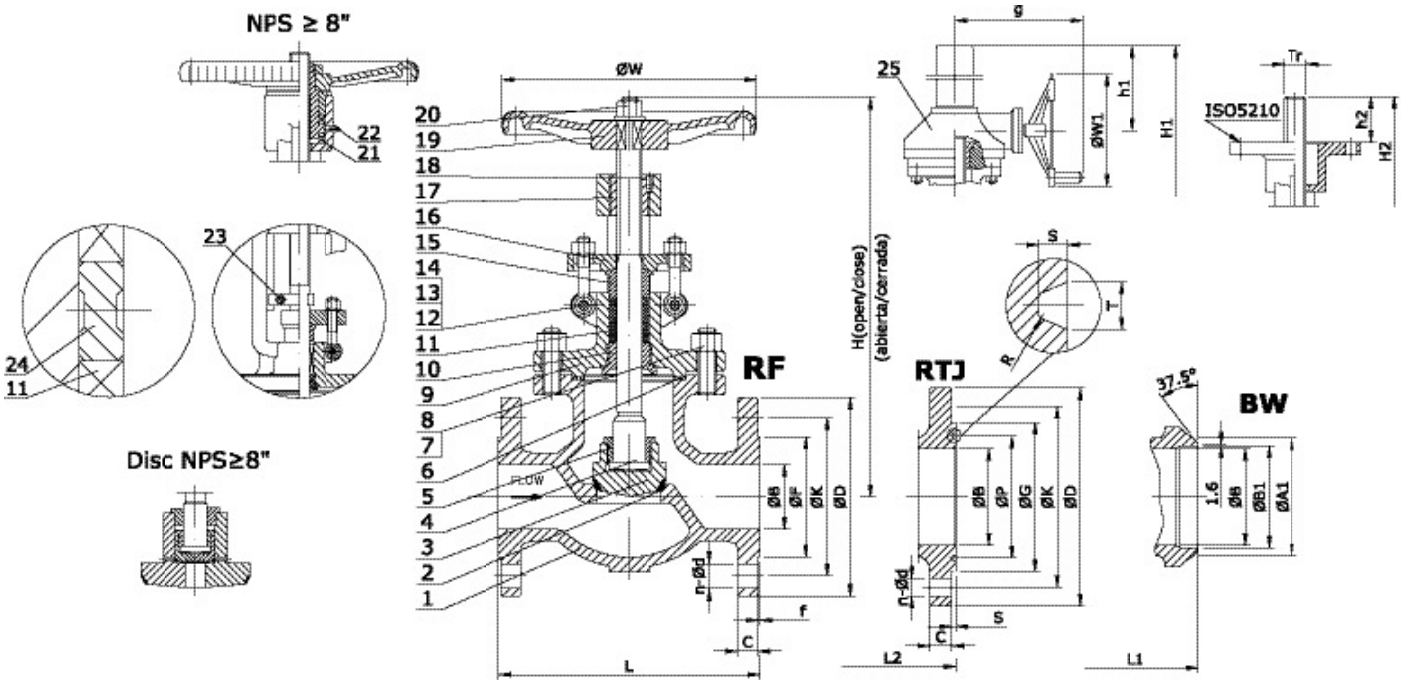
Main Parts and Materials

SERIES 80 ANSI RANGE
Class 300



From 2" to 6", the flow direction is acc. to the flow arrow shown in the drawing
From 8" onwards, the flow direction is opposite to the flow arrow shown in the drawing

Nº	Part name	A217 C5 (80C2_)	A217 C12 (80C4_)	CF8 (80I2_)	CF8M (80I0_)	CF3 (80I1_)	CF3M (80I7_)
1	Body	A217 C5	A217 C12	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2	Seat	HF Overlay		Integral SS304	Integral SS316	Integral SS304L	Integral SS316L
3	Disc	A182 F5+HF	A182 F9+HF	A182 F304	A182 F316	A182 F304L	A182 F316L
4	Stem	A182 F6a		A182 F304	A182 F316	A182 F304L	A182 F316L
5	Disc Nut	A217 C5	A217 C12	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
6	Gasket	SS304		SS304	SS316	SS304L	SS316L
7	Bonnet Bolt	A193 B16		A193 B8	A193 B8M	A193 B8M	
8	Bonnet Nut	A194 4		A194 8	A194 8M	A194 8M	
9	Bonnet	A217 C5	A217 C12	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
10	Backseat Bushing	A182 F6a		SS304	SS316	SS304L	SS316L
11	Packing	Graphite		Graphite		Graphite	
12	Eyebolt Pin	A276 410		A276 304	A276 316	A276 316	
13	Gland Eyebolt	A193 B16		A193 B8	A193 B8M	A193 B8M	
14	Gland Nut	A194 4		A194 8	A194 8M	A194 8M	
15	Packing Gland	A182 F6a		A182 F304	A182 F316	A182 F304L	A182 F316L
16	Gland Flange	A217 C5	A217 C12	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
17	Stem Nut	A439 D2		A439 D2		A439 D2	
18	Retaining Screw	Carbon Steel		St. Steel		St. Steel	
19	Handwheel	Steel		Steel		Steel	
20	Handwheel Nut	Carbon Steel		St. Steel		St. Steel	
21	Bearings (1)	Alloy Steel		Alloy Steel		Alloy Steel	
22	Grease Nipple	Alloy Steel		St. Steel		St. Steel	
23	Splint (1)	Alloy Steel		St. Steel		St. Steel	
24	Lantern Ring (2)	A276 410		A276 304	A276 316	A276 316	A276 316L
25	Gear	Assembly		Assembly		Assembly	

(1) 8" and above
(2) On request

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Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 300

SERIES 80 ANSI RANGE

Nominal Size		inch	2"	2-1/2"	3"	4"	5"	6"	8"
		DN	50	65	80	100	125	150	200
End connection	RF	L	267	292	318	356	400	444	559
		ØB	51	65	76	102	128	152	203
		ØD	165	190	210	255	280	320	380
		ØK	127	149,2	168,3	200	235	269,9	330,2
		ØF	92,1	104,8	127	157,2	185,7	215,9	269,9
		C	20,7	23,9	27	30,2	33,4	35	39,7
		f	2	2	2	2	2	2	2
		n-Ød	8 - 3/4	8 - 7/8	8 - 7/8	8 - 7/8	8 - 7/8	12 - 7/8	12 - 1
	BW	L1	267	292	318	356	400	444	559
		Schedule No.*(1)*	40	-	40	40	-	40	40
		ØB	51	65	76	102	128	152	203
		ØA1	60,3	-	91	117	-	172	223
		ØB1	52,48	-	78	102	-	154	203
	RTJ	L2	283	308	334	372	416	460	575
		ØB	51	65	76	102	128	152	203
		ØD	165	190	210	255	280	320	380
		ØK	127	149,2	168,3	200	235	269,9	330,2
		ØG	108	127	146	175	210	241	302
		ØP	82,55	101,6	123,83	149,23	180,98	211,12	269,88
		C	20,7	23,9	27	30,2	33,4	35	39,7
		n-Ød	8 - 3/4	8 - 7/8	8 - 7/8	8 - 7/8	8 - 7/8	12 - 7/8	12 - 1
		T	11,91	11,91	11,91	11,91	11,91	11,91	11,91
		S	7,92	7,92	7,92	7,92	7,92	7,92	7,92
		R	0,8	0,8	0,8	0,8	0,8	0,8	0,8
Top works/Operation	Hand-wheel	H (open)	317	356	384	450	501	538	734
		H (close)	300	332	356	412	459	493	685
		ØW	220	250	300	350	250	450	500
	Gear with handwheel	H1	-	-	-	-	-	-	799
		h1	-	-	-	-	-	-	119
		g	-	-	-	-	-	-	440
		ØW1	-	-	-	-	-	-	460
	With ISO 5210 mounting pad	H2 (open)	337	341	344	459	507	543	719
		H2 (close)	320	318	316	421	465	498	670
		h2	80	80	80	80	80	80	100
		ISO	F07	F12	F12	F12	F14	F14	F16
		Tr	Tr22×5LH	Tr26×5LH	Tr26×5LH	Tr30×5LH	Tr36×6LH	Tr36×6LH	Tr42×8LH
		Stroke	17	23	28	38	42	45	49
		No. of turns	3	5	6	8	7	8	6
		Torque (Nm) *(2)*	40	77	105	175	293	380	700
Kvs-value			33	63	85	158	283	376	692
Approx. Weight RF *(3)*			25	35	42	70	99	120	230
Approx. Weight BW			20	28	34	57	80	97	194

(1) Other schedule nos. on request
(2) Torque includes 30% of safety factor
(3) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Torques in Nm / Weights in kg
For more information about flanged and welded ends refer to page 16

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Main Valve Parameters - Class 300

SERIES 80 ANSI RANGE

Nominal Size		inch	10”	12”	14”	16”	18”	20”	24”
		DN	250	300	350	400	450	500	600
End connection	RF	L	622	711	838	863	977	1016	1346
		ØB	254	305	337	387	432	483	584
		ØD	445	520	585	650	710	775	915
		ØK	387,4	450,8	514,4	571,5	628,6	685,8	812,8
		ØF	323,8	381	412,8	469,9	533,4	584,2	692,2
		C	46,1	49,3	52,4	55,6	58,8	62	68,3
		f	2	2	2	2	2	2	2
		n-Ød	16 - 1 1/8	16 - 1 1/4	20 - 1 1/4	20 - 1 3/8	24 - 1 3/8	24 - 1 3/8	24 - 1 5/8
	BW	L1	622	711	838	863	977	1016	1346
		Schedule No.*(1)*	40	STD	STD	STD	STD	STD	STD
		ØB	254	305	337	387	432	483	584
		ØA1	278	329	362	413	464	516	619
		ØB1	254,5	305	336,5	387,5	438	489	590,5
	RTJ	L2	638	727	854	*879*	*993*	*1035*	*1368*
		ØB	254	305	337	387	432	483	584
		ØD	445	520	585	650	710	775	915
		ØK	387,4	450,8	514,4	571,5	628,6	685,8	812,8
		ØG	356	413	457	508	575	635	749
		ØP	323,85	981	419,1	469,9	533,4	584,2	692,15
		C	46,1	49,3	52,4	55,6	58,8	62	68,3
		n-Ød	16 - 1 1/8	16 - 1 1/4	20 - 1 1/4	20 - 1 3/8	24 - 1 3/8	24 - 1 3/8	24 - 1 5/8
		T	11,91	11,91	11,91	11,91	11,91	13,49	16,66
		S	7,92	7,92	7,92	7,92	7,92	9,53	11,13
		R	0,8	0,8	0,8	0,8	0,8	1,5	1,5
Top works/Operation	Hand-wheel	H (open)	875	-	-	-	-	-	-
		H (close)	800	-	-	-	-	-	-
		ØW	550	-	-	-	-	-	-
	Gear with handwheel	H1	805	1025	1192	1371	1473	1574	1803
		h1	156	186	204	235	299	355	406
		g	440	440	440	440	513	513	588
		ØW1	460	460	460	460	530	600	600
	With ISO 5210 mounting pad	H2 (open)	877	1053	1124	1352	1480	1602	-
		H2 (close)	802	945	1025	1236	1353	1460	-
		h2	120	140	140	140	160	160	-
		ISO	F25	F30	F30	F30	F35	F35	-
		Tr	Tr42×6LH	Tr46×8LH	Tr48×8LH	Tr52×8LH	Tr55×8LH	Tr60×8LH	-
		Stroke	75	108	99	116	127	142	-
		No. of turns	13	14	12	15	16	18	-
		Torque (Nm) *(2)*	1125	1800	2100	2500	2800	3300	-
Kvs-value			1077	1615	2086	2764	3575	4467	6544
Approx. Weight RF *(3)*			389	580	1080	1200	1550	1950	-
Approx. Weight BW			340	506	979	1067	1384	1745	-

(1) Other schedule nos. on request
(2) Torque includes 30% of safety factor
(3) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Torques in Nm / Weights in kg
For more information about flanged and welded ends refer to page 16

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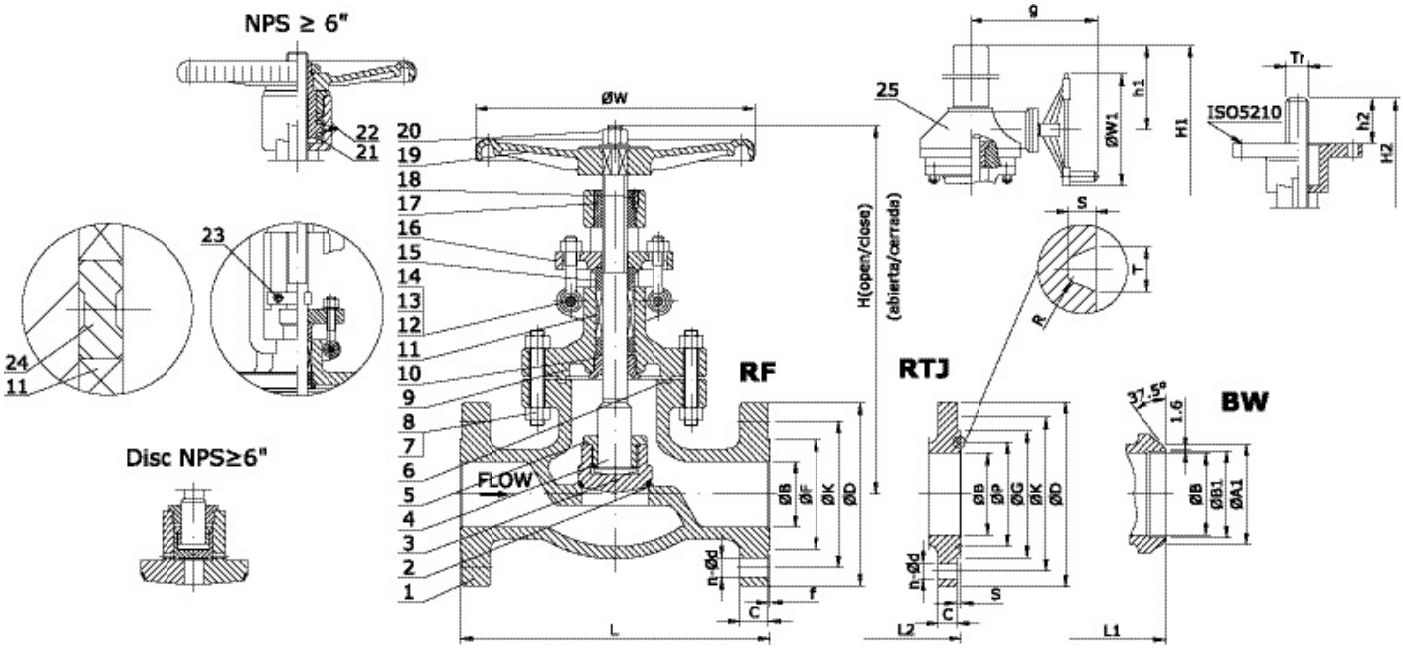
Main Parts and Materials

SERIES 80 ANSI RANGE
Class 600



From 2" to 4", the flow direction is acc. to the flow arrow shown in the drawing
From 6" onwards, the flow direction is opposite to the flow arrow shown in the drawing

Nº	Part name	A216 WCB (80A0_)	A352 LCB		A217 WC1 (80B1_)	A217 WC6 (80B8_)	A217 WC9 (80B9_)
			Trim 2 (80A82_)	Trim 12 (80A8G_)			
1	Body	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9
2	Seat	A105	Integral+SS304	Integral+HF	HF Overlay		
3	Disc	A105	A182 F304	A182 F316	A182 F1+HF	A182 F11+HF	A182 F22+HF
4	Stem	A182 F6a	A182 F304	A182 F316	A182 F6a		
5	Disc Nut	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9
6	Gasket	SS304+Graphite	A182 F304	A182 F316	SS304		
7	Bonnet Bolt (1)	A193 B7	A320 L7		A193 B16		
8	Bonnet Nut (1)	A194 2H	A194 4		A194 4		
9	Bonnet	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9
10	Backseat Bushing	A182 F6a	A182 F304	A182 F316	A182 F6a		
11	Packing	Graphite	Graphite		Graphite		
12	Eyebolt Pin	AISI 1025	AISI 1025		A276 410		
13	Gland Eyebolt (1)	A193 B7	A320 L7		A193 B16		
14	Gland Nut (1)	A194 2H	A194 4		A194 4		
15	Packing Gland	A182 F6a	A182 F304		A182 F6a		
16	Gland Flange	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9
17	Stem Nut	A439 D2	A439 D2		A439 D2		
18	Retaining Screw	Carbon Steel	Carbon Steel		Carbon Steel		
19	Handwheel	Steel	Steel		Steel		
20	Handwheel Nut	Carbon Steel	Carbon Steel		Carbon Steel		
21	Bearings (2)	Alloy Steel	Alloy Steel		Alloy Steel		
22	Grease Nipple	Carbon Steel	Carbon Steel		Alloy Steel		
23	Splint (2)	Carbon Steel	Carbon Steel		Alloy Steel		
24	Lantern Ring (3)	A276 410	A276 304	A276 316	A276 410		
25	Gear	Assembly	Assembly		Assembly		

(1) Bolting material for NACE MR0175 compliance available (i.e. B7M / 2HM for WCB bodies)
(2) 6" and above
(3) On request

Fig. 80A0_	Seat Surface	Disc Surface	Stem
TRIM #1 (80A01)	A105+13Cr	A216 WCB+13Cr	A182 F6a
TRIM #5 (80A05)	A105+HF	A216 WCB+HF	A182 F6a
TRIM #8 (80A08)	A105+HF	A216 WCB+13Cr	A182 F6a

HF = Hard faced

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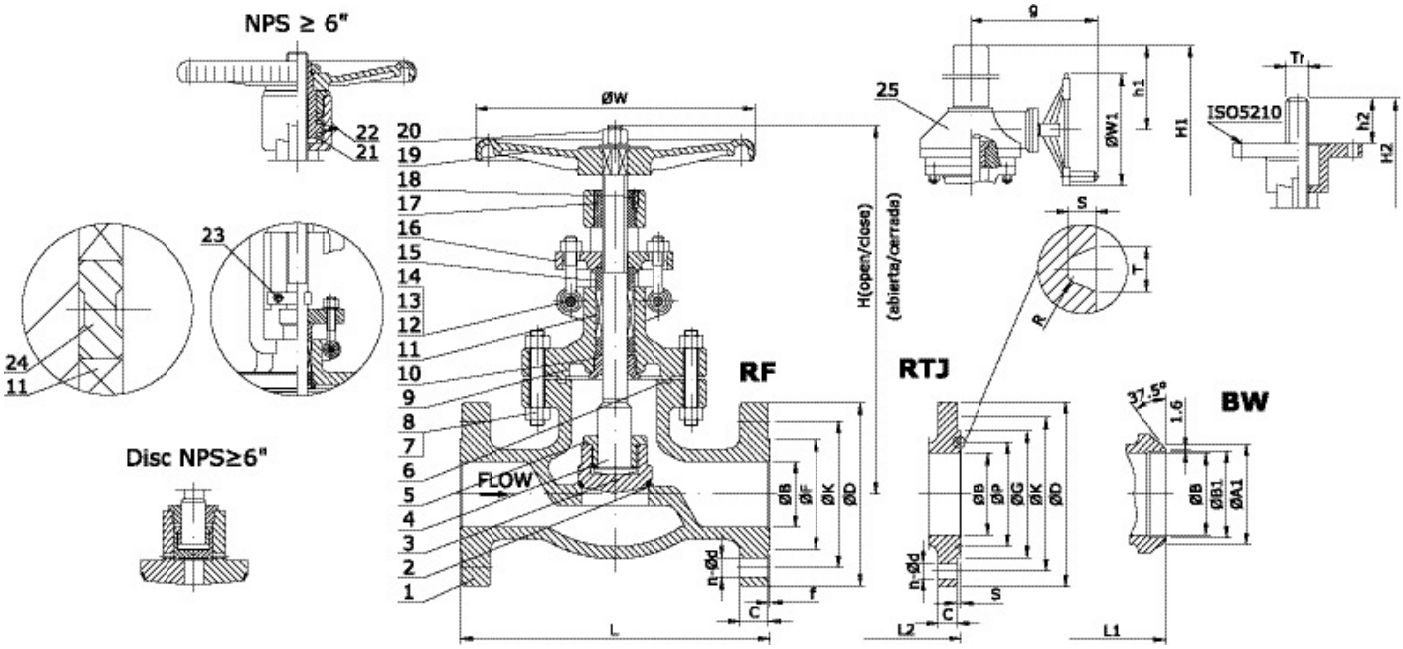
Main Parts and Materials

SERIES 80 ANSI RANGE
Class 600



From 2" to 4", the flow direction is acc. to the flow arrow shown in the drawing
From 6" onwards, the flow direction is opposite to the flow arrow shown in the drawing

Nº	Part name	A217 C5 (80C2_)	A217 C12 (80C4_)	CF8 (80I2_)	CF8M (80I0_)	CF3 (80I1_)	CF3M (80I7_)
1	Body	A217 C5	A217 C12	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2	Seat	HF Overlay		Integral SS304	Integral SS316	Integral SS304L	Integral SS316L
3	Disc	A182 F5+HF	A182 F9+HF	A182 F304	A182 F316	A182 F304L	A182 F316L
4	Stem	A182 F6a		A182 F304	A182 F316	A182 F304L	A182 F316L
5	Disc Nut	A217 C5	A217 C12	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
6	Gasket	SS304		SS304	SS316	SS304L	SS316L
7	Bonnet Bolt	A193 B16		A193 B8	A193 B8M	A193 B8M	
8	Bonnet Nut	A194 4		A194 8	A194 8M	A194 8M	
9	Bonnet	A217 C5	A217 C12	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
10	Backseat Bushing	A182 F6a		SS304	SS316	SS304L	SS316L
11	Packing	Graphite		Graphite		Graphite	
12	Eyebolt Pin	A276 410		A276 304	A276 316	A276 316	
13	Gland Eyebolt	A193 B16		A193 B8	A193 B8M	A193 B8M	
14	Gland Nut	A194 4		A194 8	A194 8M	A194 8M	
15	Packing Gland	A182 F6a		A182 F304	A182 F316	A182 F304L	A182 F316L
16	Gland Flange	A217 C5	A217 C12	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
17	Stem Nut	A439 D2		A439 D2		A439 D2	
18	Retaining Screw	Carbon Steel		St. Steel		St. Steel	
19	Handwheel	Steel		Steel		Steel	
20	Handwheel Nut	Carbon Steel		St. Steel		St. Steel	
21	Bearings (1)	Alloy Steel		Alloy Steel		Alloy Steel	
22	Grease Nipple	Alloy Steel		St. Steel		St. Steel	
23	Splint (1)	Alloy Steel		St. Steel		St. Steel	
24	Lantern Ring (2)	A276 410		A276 304	A276 316	A276 316	A276 316L
25	Gear	Assembly		Assembly		Assembly	

(1) 6" and above
(2) On request

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Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 600

SERIES 80 ANSI RANGE

Nominal Size		inch	2"	2-1/2"	3"	4"	5"	6"	8"
		DN	50	65	80	100	125	150	200
End connection	RF	L	292	330	356	432	508	559	660
		ØB	51	65	76	102	128	152	200
		ØD	165	190	210	275	330	355	420
		ØK	127	149,2	168,3	215,9	266,7	292,1	349,2
		ØF	92,1	104,8	127	157,2	185,7	215,9	269,9
		C	25,4	28,6	31,8	38,1	44,5	47,7	55,6
		f	7	7	7	7	7	7	7
		n-Ød	8 - 3/4	8 - 7/8	8 - 7/8	8 - 1	8 - 1 1/8	12 - 1 1/8	12 - 1/4
	BW	L1	292	330	356	432	508	559	660
		Schedule No.*(1)*	80	-	80	80	-	80	80
		ØB	51	65	76	102	128	152	200
		ØA1	60,3	-	91	117	-	172	223
		ØB1	49,22	-	73,5	97	-	146,5	193,5
	RTJ	L2	295	333	359	435	511	562	663
		ØB	51	65	76	102	128	152	200
		ØD	165	190	210	275	330	355	420
		ØK	127	149,2	168,3	215,9	266,7	292,1	349,2
		ØG	108	127	146	175	210	241	302
		ØP	82,55	101,6	123,83	149,23	180,98	211,12	269,88
		C	25,4	28,6	31,8	38,1	44,5	47,7	55,6
		n-Ød	8 - 3/4	8 - 7/8	8 - 7/8	8 - 1	8 - 1 1/8	12 - 1 1/8	12 - 1/4
		T	11,91	11,91	11,91	11,91	11,91	11,91	11,91
		S	7,92	7,92	7,92	7,92	7,92	7,92	7,92
		R	0,8	0,8	0,8	0,8	0,8	0,8	0,8
Top works/Operation	Hand-wheel	H (open)	360	409	446	536	678	783	937
		H (close)	333	377	410	498	632	731	866
		ØW	220	250	350	400	250	500	550
	Gear with handwheel	H1	-	-	-	-	-	867	1006
		h1	-	-	-	-	-	130	149
		g	-	-	-	-	-	440	440
		ØW1	-	-	-	-	-	460	460
	With ISO 5210 mounting pad	H2 (open)	380	424	456	540	682	787	926
		H2 (close)	353	392	420	502	636	735	855
		h2	80	80	80	80	103	120	140
		ISO	F12	F14	F14	F14	F25	F25	F30
		Tr	Tr22×5LH	Tr30×5LH	Tr30×5LH	Tr32×6LH	Tr42×8LH	Tr42×8LH	Tr46×8LH
		Stroke	27	32	36	38	46	52	71
		No. of turns	5	6	7	6	6	7	9
		Torque (Nm) *(2)*	160	289	385	365	615	800	1658
Kvs-value			33	63	85	158	283	376	667
Approx. Weight RF *(3)*			30	44	55	100	178	235	410
Approx. Weight BW			23	34	42	77	142	191	346

(1) Other schedule nos. on request
(2) Torque includes 30% of safety factor
(3) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Torques in Nm / Weights in kg
For more information about flanged and welded ends refer to page 16

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Main Valve Parameters - Class 600

SERIES 80 ANSI RANGE

Nominal Size		inch	10”	12”	14”	16”	18”	20”	24”
		DN	250	300	350	400	450	500	600
End connection	RF	L	787	838	889	991	1092	1194	1397
		ØB	248	299	327	375	419	464	559
		ØD	510	560	605	685	745	815	940
		ØK	431,8	489	527	603,2	654	723,9	838,2
		ØF	323,8	381	412,8	469,9	533,4	584,2	692,2
		C	63,5	66,7	69,9	76,2	82,6	88,9	101,6
		f	7	7	7	7	7	7	7
		n-Ød	16 - 1 3/8	20 - 1 3/8	20 - 1 1/2	20 - 1 5/8	20 - 1 3/4	24 - 1 3/4	24 -2
	BW	L1	787	838	889	991	1092	1194	1397
		Schedule No.*(1)*	80	80	80	80	80	80	80
		ØB	248	299	327	375	419	464	559
		ØA1	278	329	362	413	464	516	619
		ØB1	243	289	317,5	363,5	409,5	455,5	547,5
	RTJ	L2	790	841	892	*994*	*1095*	*1200*	*1407*
		ØB	248	299	327	375	419	464	559
		ØD	510	560	605	685	745	815	940
		ØK	431,8	489	527	603,2	654	723,9	838,2
		ØG	356	413	457	508	575	635	749
		ØP	323,85	981	419,1	469,9	533,4	584,2	692,15
		C	63,5	66,7	69,9	76,2	82,6	88,9	101,6
		n-Ød	16 - 1 3/8	20 - 1 3/8	20 - 1 1/2	20 - 1 5/8	20 - 1 3/4	24 - 1 3/4	24 -2
		T	11,91	11,91	11,91	11,91	11,91	13,49	16,66
		S	7,92	7,92	7,92	7,92	7,92	9,53	11,13
		R	0,8	0,8	0,8	0,8	0,8	1,5	1,5
Top works/Operation	Hand-wheel	H (open)	941	-	-	-	-	-	-
		H (close)	856	-	-	-	-	-	-
		ØW	600	-	-	-	-	-	-
	Gear with handwheel	H1	1061	1215	1294	1431	1568	1705	2003
		h1	180	223	265	302	355	412	471
		g	513	513	513	588	588	698	613
		ØW1	530	530	600	600	600	800	800
	With ISO 5210 mounting pad	H2 (open)	916	1100	-	-	-	-	-
		H2 (close)	839	1010	-	-	-	-	-
		h2	140	140	-	-	-	-	-
		ISO	F30	F35	-	-	-	-	-
		Tr	Tr52×8LH	Tr55×8LH	-	-	-	-	-
		Stroke	77	90	-	-	-	-	-
		No. of turns	10	11	-	-	-	-	-
		Torque (Nm) *(2)*	2355	3100	-	-	-	-	-
Kvs-value			1026	1547	2014	2644	3444	4214	6123
Approx. Weight RF *(3)*			585	1050	1280	1600	2800	3500	4600
Approx. Weight BW			482	928	1100	1372	2512	3146	4162

(1) Other schedule nos. on request
(2) Torque includes 30% of safety factor
(3) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Torques in Nm / Weights in kg
For more information about flanged and welded ends refer to page 16

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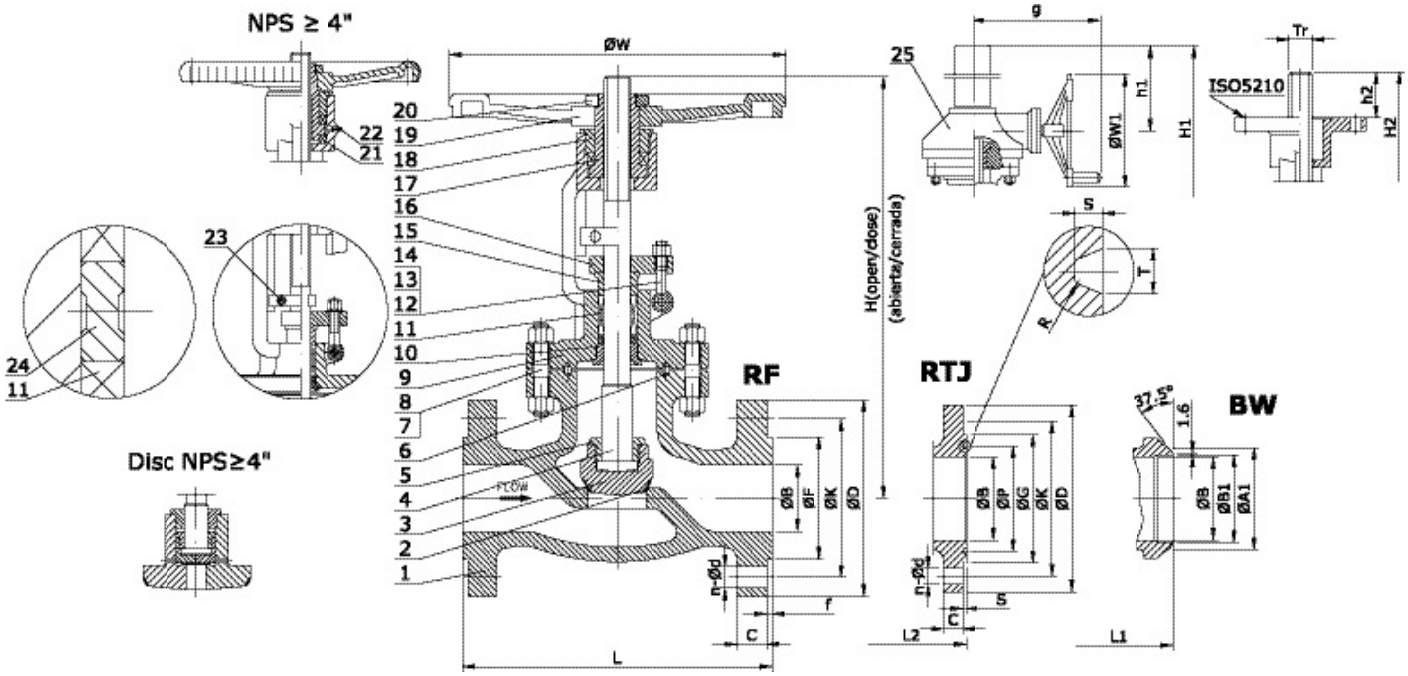
Main Parts and Materials

SERIES 80 ANSI RANGE
Class 900



Flow direction is opposite to the flow arrow shown in the drawing to make advantage of medium pressure itself to close the disc

Nº	Part name	A216 WCB (80A0_)	A352 LCB		A217 WC1 (80B1_)	A217 WC6 (80B8_)	A217 WC9 (80B9_)
			Trim 15 (80A8K_)	Trim 16 (80A8L_)			
1	Body	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9
2	Seat	A105	Integral+HF	Integral+HF		HF Overlay	
3	Disc	A105	A182 F304+HF	A182 F316+HF	A182 F1+HF	A182 F11+HF	A182 F22+HF
4	Stem	A182 F6a	A182 F304	Nitronic 50		A182 F6a	
5	Disc Nut	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9
6	Gasket	SS304+Graphite	SS304	SS316		SS304	
7	Bonnet Bolt (1)	A193 B7	A320 L7			A193 B16	
8	Bonnet Nut (1)	A194 2H	A194 4			A194 4	
9	Bonnet	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9
10	Backseat Bushing	A182 F6a	A182 F304	A182 F316		A182 F6a	
11	Packing	Graphite	Graphite			Graphite	
12	Eyebolt Pin	AISI 1025	AISI 1025			A276 410	
13	Gland Eyebolt (1)	A193 B7	A320 L7			A193 B16	
14	Gland Nut (1)	A194 2H	A194 4			A194 4	
15	Packing Gland	A182 F6a	A182 F304	A182 F316		A182 F6a	
16	Gland Flange	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9
17	Stem Nut	A439 D2	A439 D2			A439 D2	
18	Retaining Screw	Carbon Steel	Carbon Steel			Carbon Steel	
19	Handwheel	Steel	Steel/ Acero			Steel	
20	Handwheel Nut	Carbon Steel	Carbon Steel			Carbon Steel	
21	Bearings (2)	Alloy Steel	Alloy Steel			Alloy Steel	
22	Grease Nipple	Carbon Steel	Carbon Steel			Alloy Steel	
23	Splint (2)	Carbon Steel	Carbon Steel			Alloy Steel	
24	Lantern Ring (3)	A276 410	A276 304	A276 316		A276 410	
25	Gear	Assembly	Assembly			Assembly	

(1) Bolting material for NACE MR0175 compliance available (i.e. B7M / 2HM for WCB bodies)
(2) 4" and above
(3) On request

Fig. 80A0_	Seat Surface	Disc Surface	Stem
TRIM #1 (80A01)	A105+13Cr	A216 WCB+13Cr	A182 F6a
TRIM #5 (80A05)	A105+HF	A216 WCB+HF	A182 F6a
TRIM #8 (80A08)	A105+HF	A216 WCB+13Cr	A182 F6a

HF = Hard faced

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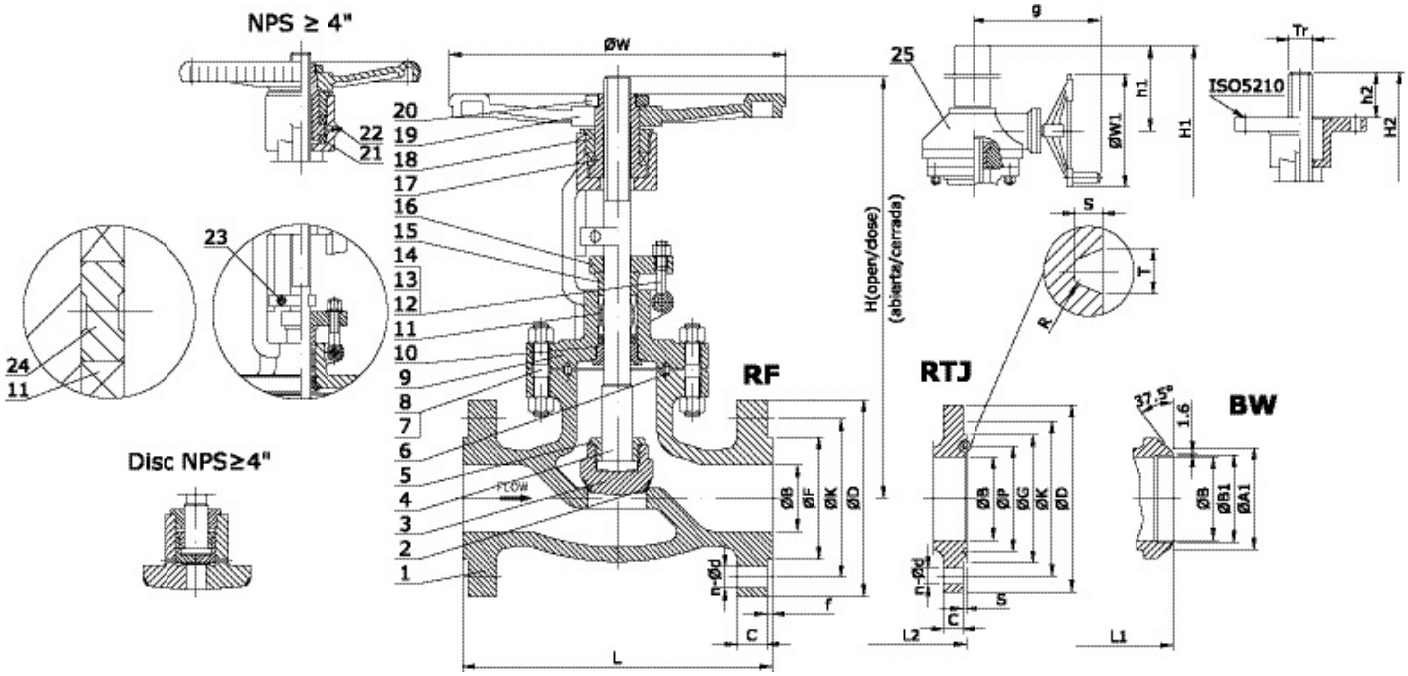
Main Parts and Materials

SERIES 80 ANSI RANGE
Class 900



Flow direction is opposite to the flow arrow shown in the drawing to make advantage of medium pressure itself to close the disc

Nº	Part name	A217 C5 (80C2_)	A217 C12 (80C4_)	CF8 (80I2_)	CF8M (80I0_)	CF3 (80I1_)	CF3M (80I7_)
1	Body	A217 C5	A217 C12	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2	Seat	HF Overlay		Integral+HF		Integral+HF	
3	Disc	A182 F5+HF	A182 F9+HF	A182 F304+HF	A182 F316+HF	A182 F304L+HF	A182 F316L+HF
4	Stem	A182 F6a		A182 F304	Nitronic 50	A182 F304L	Nitronic 50
5	Disc Nut	A217 C5	A217 C12	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
6	Gasket	SS304		SS304	SS316	SS304L	SS316L
7	Bonnet Bolt	A193 B16		A193 B8	A193 B8M	A193 B8M	
8	Bonnet Nut	A194 4		A194 8	A194 8M	A194 8M	
9	Bonnet	A217 C5	A217 C12	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
10	Backseat Bushing	A182 F6a		SS304	SS316	SS304L	SS316L
11	Packing	Graphite		Graphite		Graphite	
12	Eyebolt Pin	A276 410		A276 304	A276 316	A276 316	
13	Gland Eyebolt	A193 B16		A193 B8	A193 B8M	A193 B8M	
14	Gland Nut	A194 4		A194 8	A194 8M	A194 8M	
15	Packing Gland	A182 F6a		A182 F304	A182 F316	A182 F304L	A182 F316L
16	Gland Flange	A217 C5	A217 C12	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
17	Stem Nut	A439 D2		A439 D2		A439 D2	
18	Retaining Screw	Carbon Steel		St. Steel		St. Steel	
19	Handwheel	Steel		Steel		Steel	
20	Handwheel Nut	Carbon Steel		St. Steel		St. Steel	
21	Bearings (1)	Alloy Steel		Alloy Steel		Alloy Steel	
22	Grease Nipple	Alloy Steel		St. Steel		St. Steel	
23	Splint (1)	Alloy Steel		St. Steel		St. Steel	
24	Lantern Ring (2)	A276 410		A276 304	A276 316	A276 316	A276 316L
25	Gear	Assembly		Assembly		Assembly	

(1) 4" and above
(2) On request

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Torques in Nm / Weights in kg
For more information about flanged and welded ends refer to page 16

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Main Valve Parameters - Class 900

SERIES 80 ANSI RANGE

Nominal Size		inch	2"	2-1/2"	3"	4"	5"	6"	8"
		DN	50	65	80	100	125	150	200
End connection	RF	L	368	419	381	457	559	610	737
		ØB	48	62	73	98	123	146	191
		ØD	215	245	240	290	350	380	470
		ØK	165,1	190,5	190,5	235	279,4	317,5	393,7
		ØF	92,1	104,8	127	157,2	185,7	215,9	269,9
		C	38,1	41,3	38,1	44,5	50,8	55,6	63,5
		f	7	7	7	7	7	7	7
		n-Ød	8 - 7/8	8 -1	8 - 7/8	8 - 1 1/8	8 - 1 1/4	12 - 1 1/8	12 - 1 3/8
	BW	L1	368	419	381	457	559	610	737
		Schedule No.*(1)*	160	-	160	120	-	120	100
		ØB	48	62	73	98	123	146	191
		ØA1	60,3	-	91	117	-	172	223
		ØB1	38,16	-	66,5	92	-	140	189
	RTJ	L2	371	422	384	460	562	613	740
		ØB	48	62	73	98	123	146	191
		ØD	215	245	240	290	350	380	470
		ØK	165,1	190,5	190,5	235	279,4	317,5	393,7
		ØG	124	137	156	181	216	241	308
		ØP	95,25	107,95	123,83	149,23	180,98	211,12	269,88
		C	38,1	41,3	38,1	44,5	50,8	55,6	63,5
		n-Ød	8 - 7/8	8 -1	8 - 7/8	8 - 1 1/8	8 - 1 1/4	12 - 1 1/8	12 - 1 3/8
		T	11,91	11,91	11,91	11,91	11,91	11,91	11,91
		S	7,92	7,92	7,92	7,92	7,92	7,92	7,92
		R	0,8	0,8	0,8	0,8	0,8	0,8	0,8
Top works/Operation	Hand-wheel	H (open)	558	618	662	748	802	842	-
		H (close)	521	587	635	717	762	795	-
		ØW	280	250	300	400	250	600	-
	Gear with handwheel	H1	-	-	-	-	-	932	1117
		h1	-	-	-	-	-	125	157
		g	-	-	-	-	-	440	513
		ØW1	-	-	-	-	-	460	460
	With ISO 5210 mounting pad	H2 (open)	570	626	667	756	811	852	1037
		H2 (close)	520	589	640	725	771	805	958
		h2	80	80	80	80	115	140	140
		ISO	F12	F14	F14	F14	F30	F30	F30
		Tr	Tr26×5LH	Tr32×6LH	Tr32×6LH	Tr36×6LH	Tr48×8LH	Tr48×8LH	Tr52×8LH
		Stroke	50	37	27	31	40	47	79
		No. of turns	10	6	5	5	5	6	10
		Torque (Nm) *(2)*	105	178	232	460	772	1002	1905
Kvs-value			21	53	77	145	258	342	607
Approx. Weight RF *(3)*			85	97	105	160	298	400	715
Approx. Weight BW			71	81	88	132	252	340	613

(1) Other schedule nos. on request
(2) Torque includes 30% of safety factor
(3) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Torques in Nm / Weights in kg
For more information about flanged and welded ends refer to page 16

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Main Valve Parameters - Class 900

SERIES 80 ANSI RANGE

Nominal Size		inch	10”	12”	14”	16”	18”	20”	24”
		DN	250	300	350	400	450	500	600
End connection	RF	L	838	965	1029	1130	1219	1321	1549
		ØB	238	282	311	356	400	445	533
		ØD	545	610	640	705	785	855	1040
		ØK	469,9	533,4	558,8	616	685,8	749,3	901,7
		ØF	323,8	381	412,8	469,9	533,4	584,2	692,2
		C	69,9	79,4	85,8	88,9	101,6	108	139,7
		f	7	7	7	7	7	7	7
		n-Ød	16 - 1 3/8	20 - 1 3/8	20 - 1 1/2	20 - 1 5/8	20 - 1 7/8	20 - 2	20 - 2 1/2
	BW	L1	838	965	1029	1130	1219	1321	1549
		Schedule No.*(1)*	100	100	100	100	100	100	100
		ØB	238	282	311	356	400	445	533
		ØA1	278	329	362	413	464	516	619
		ØB1	236,5	281	308	354	398,5	443	532
	RTJ	L2	841	968	1039	*1140*	*1232*	*1334*	*1568*
		ØB	238	282	311	356	400	445	533
		ØD	545	610	640	705	785	855	1040
		ØK	469,9	533,4	558,8	616	685,8	749,3	901,7
		ØG	362	419	467	524	594	648	772
		ØP	323,85	381	419,1	469,9	533,4	584,2	692,15
		C	69,9	79,4	85,8	88,9	101,6	108	139,7
		n-Ød	16 - 1 3/8	20 - 1 3/8	20 - 1 1/2	20 - 1 5/8	20 - 1 7/8	20 - 2	20 - 2 1/2
		T	11,91	11,91	16,66	16,66	19,84	19,84	26,97
		S	7,92	7,92	11,13	11,13	12,7	12,7	15,88
		R	0,8	0,8	1,5	1,5	1,5	1,5	2,4
Top works/Operation	Hand-wheel	H (open)	-	-	-	-	-	-	-
		H (close)	-	-	-	-	-	-	-
		ØW	-	-	-	-	-	-	-
	Gear with handwheel	H1	1237	1450	1596	1750	1889	2028	2306
		h1	208	245	301	344	400	442	544
		g	513	513	588	588	613	613	698
		ØW1	530	530	600	600	600	800	800
	With ISO 5210 mounting pad	H2 (open)	1127	1320	-	-	-	-	-
		H2 (close)	1022	1230	-	-	-	-	-
		h2	160	160	-	-	-	-	-
		ISO	F35	F35	-	-	-	-	-
		Tr	Tr62×8LH	Tr65×10LH	-	-	-	-	-
		Stroke	105	90	-	-	-	-	-
		No. of turns	13	9	-	-	-	-	-
		Torque (Nm) *(2)*	2877	3850	-	-	-	-	-
Kvs-value			940	1503	1824	2382	3138	3874	5579
Approx. Weight RF *(3)*			900	1450	3250	4200	-	-	-
Approx. Weight BW			758	1254	3027	3931	-	-	-

(1) Other schedule nos. on request
(2) Torque includes 30% of safety factor
(3) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Torques in Nm / Weights in kg
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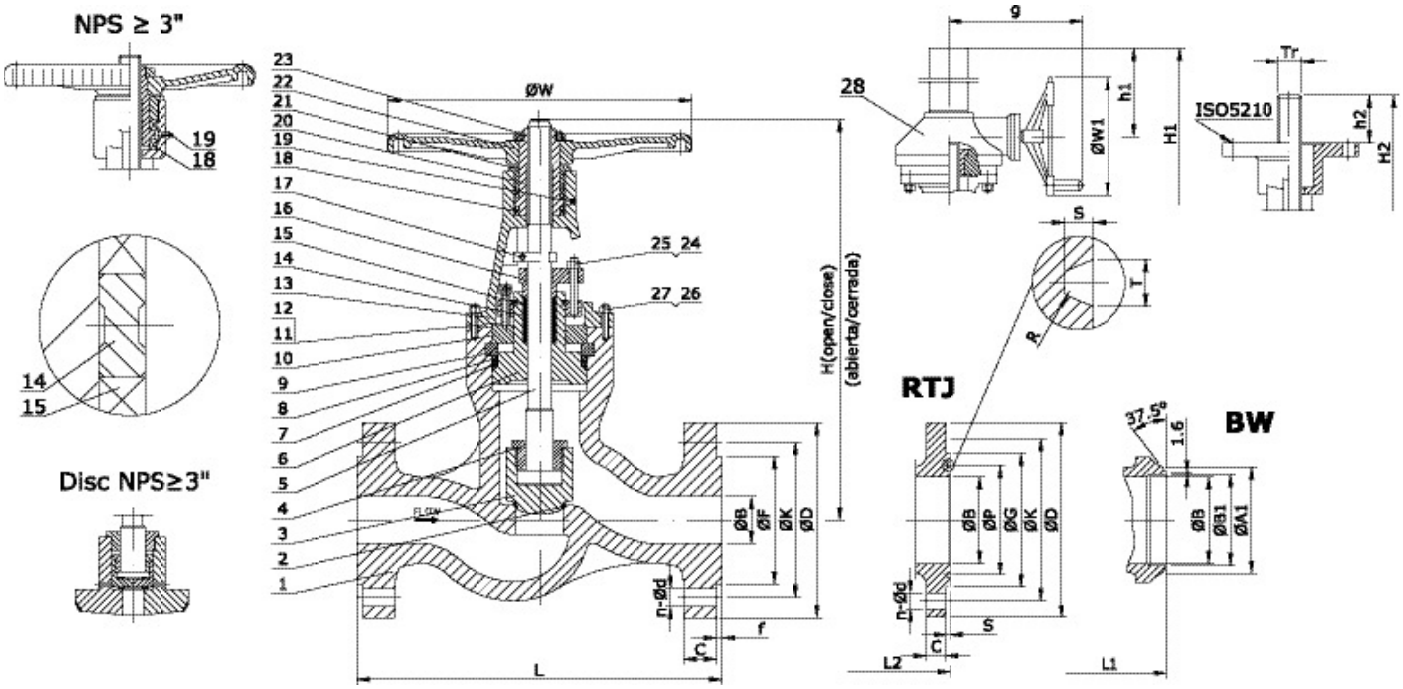
Main Parts and Materials

SERIES 81 ANSI RANGE
Class 1500&2500



Flow direction is opposite to the flow arrow shown in the drawing to make advantage of medium pressure itself to close the disc

Nº	Part name	A216 WCB (81A0_)	A352 LCB		A217 WC1 (81B1_)	A217 WC6 (81B8_)	A217 WC9 (81B9_)
			Trim 15 (81A8K_)	Trim 16 (81A8L_)			
1	Body	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9
2	Seat	A105	Integral+HF	Integral+HF		HF Overlay	
3	Disc	A105	A182 F304+HF	A182 F316+HF	A182 F1+HF	A182 F11+HF	A182 F22+HF
4	Disc Nut	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9
5	Stem	A182 F6a	A182 F304	Nitronic 50		A182 F6a	
6	Bonnet	A105	A350 LF2		A182 F1	A182 F11	A182 F22
7	Gasket	SS304+Graphite	SS304+Graphite	SS316+Graphite		SS304+Graphite	
8	Gasket Washer	A182 F6a	A182 F304	A182 F316		A182 F6a	
9	Split Ring	A105	A350 LF2		A182 F1	A182 F11	A182 F22
10	Retainer Ring	A105	A350 LF2		A182 F1	A182 F11	A182 F22
11	Screw (1)	A193 B7	A320 L7			A193 B16	
12	Nut (1)	A194 2H	A194 4			A194 4	
13	Yoke	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9
14	Lantern Ring (2)	A276 410	A276 304	A276 316		A276 410	
15	Packing	Graphite	Graphite			Graphite	
16	Gland Flange	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9
17	Splint	Carbon Steel	Carbon Steel			Alloy Steel	
18	Bearings (3)	Alloy Steel	Alloy Steel			Alloy Steel	
19	Grease Nipple	Carbon Steel	Carbon Steel			Alloy Steel	
20	Stem Nut	A439 D2	A439 D2			A439 D2	
21	Stem Nut	Carbon Steel	Carbon Steel			Carbon Steel	
22	Handwheel	Steel	Steel			Steel/ Acero	
23	Handwheel Nut	Carbon Steel	Carbon Steel			Carbon Steel	
24	Bolt (1)	A193 B7	A320 L7			A193 B16	
25	Nut (1)	A194 2H	A194 4			A194 4	
26	Bolt (1)	A193 B7	A320 L7			A193 B16	
27	Nut (1)	A194 2H	A194 4			A194 4	
28	Gear	Assembly	Assembly			Assembly	

(1) Bolting material for NACE MR0175 compliance available (i.e. B7M / 2HM for WCB bodies)
(2) On request
(3) 3" and above

Fig. 81A0_	Seat Surface	Disc Surface	Stem
TRIM #1 (81A01)	A105+13Cr	A216 WCB+13Cr	A182 F6a
TRIM #5 (81A05)	A105+HF	A216 WCB+HF	A182 F6a
TRIM #8 (81A08)	A105+HF	A216 WCB+13Cr	A182 F6a

HF = Hard faced

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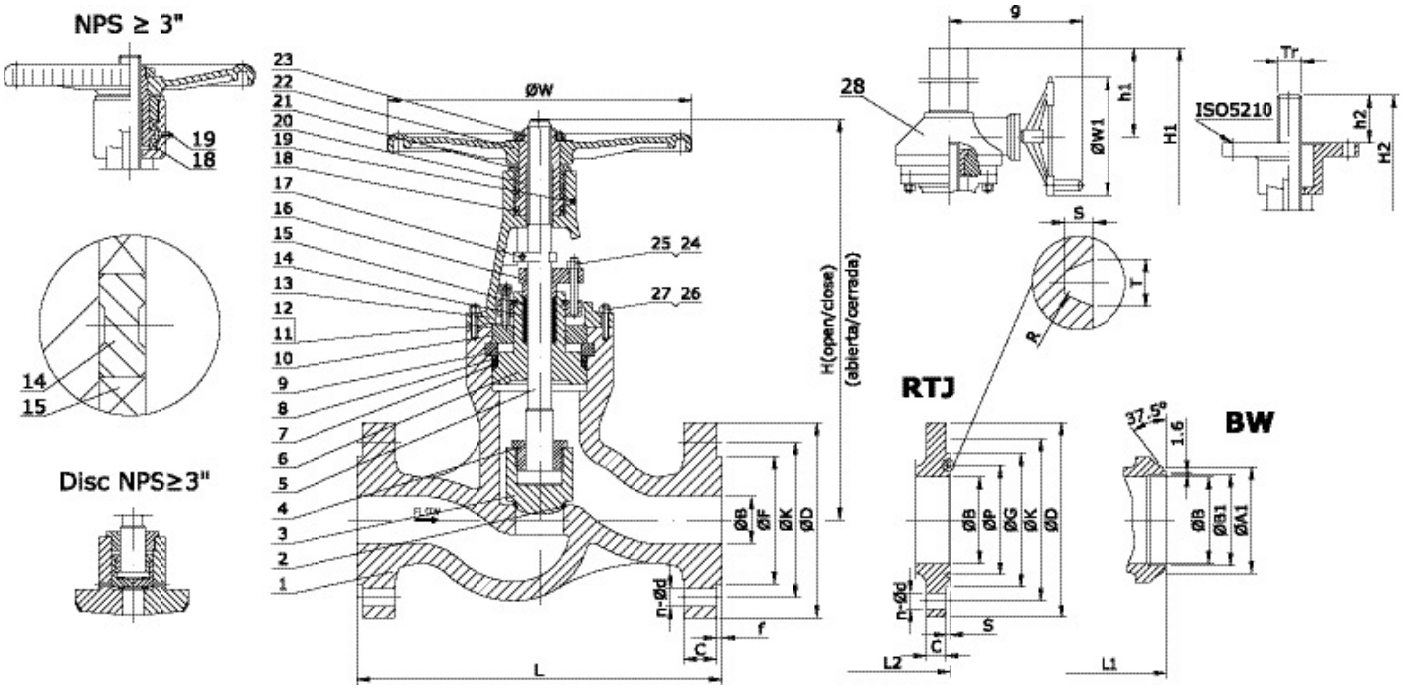
Product suitability must be verified, contact manufacturer for information

Main Parts and Materials

SERIES 81 ANSI RANGE
Class 1500&2500



Flow direction is opposite to the flow arrow shown in the drawing to make advantage of medium pressure itself to close the disc

Nº	Part name	A217 C5 (81C2_)	A217 C12 (81C4_)	CF8 (81I2_)	CF8M (81I0_)	CF3 (81I1_)	CF3M (81I7_)
1	Body	A217 C5	A217 C12	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2	Seat	HF Overlay		Integral+HF		Integral+HF	
3	Disc	A182 F5+HF	A182 F9+HF	A182 F304+HF	A182 F316+HF	A182 F304L+HF	A182 F316L+HF
4	Disc Nut	A217 C5	A217 C12	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
5	Stem	A182 F6a		A182 F304	Nitronic 50	A182 F304L	Nitronic 50
6	Bonnet	A182 F5	A182 F9	A182 F304	A182 F316	A182 F304L	A182 F316L
7	Gasket	SS304+Graphite		SS304+Graphite	SS316+Graphite	SS316+Graphite	SS316L+Graphite
8	Gasket Washer	A182 F6a		A182 F304	A182 F316	A182 F304L	A182 F316L
9	Split Ring	A182 F5	A182 F9	A182 F304	A182 F316	A182 F304L	A182 F316L
10	Retainer Ring	A182 F5	A182 F9	A182 F304	A182 F316	A182 F304L	A182 F316L
11	Screw	A193 B16		A193 B8	A193 B8M	A193 B8M	
12	Nut	A194 4		A194 8	A194 8M	A194 8M	
13	Yoke	A217 C5	A217 C12	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
14	Lantern Ring (1)	A276 410		A276 304	A276 316	A276 316	A276 316L
15	Packing	Graphite		Graphite		Graphite	
16	Gland Flange	A217 C5	A217 C12	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
17	Splint	Alloy Steel		St. Steel		St. Steel	
18	Bearings (2)	Alloy Steel		Alloy Steel		Alloy Steel	
19	Grease Nipple	Alloy Steel		St. Steel		St. Steel	
20	Stem Nut	A439 D2		A439 D2		A439 D2	
21	Stem Nut	Carbon Steel		St. Steel		St. Steel	
22	Handwheel	Steel		Steel		Steel	
23	Handwheel Nut	Carbon Steel		St. Steel		St. Steel	
24	Bolt	A193 B16		A193 B8	A193 B8M	A193 B8M	
25	Nut	A194 4		A194 8	A194 8M	A194 8M	
26	Bolt	A193 B16		A193 B8	A193 B8M	A193 B8M	
27	Nut	A194 4		A194 8	A194 8M	A194 8M	
28	Gear	Assembly		Assembly		Assembly	

(1) On request
(2) 3" and above

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Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 1500

SERIES 81 ANSI RANGE

Nominal Size		inch	2”	2-1/2”	3”	4”	5”	6”	8”	10”	12”	14”
		DN	50	65	80	100	125	150	200	250	300	350
End connection	RF	L	368	419	470	546	673	705	832	991	1130	1257
		ØB	48	61	70	92	115	136	178	222	263	289
		ØD	215	245	265	310	375	395	485	585	675	750
		ØK	165,1	190,5	203,2	241,3	292,1	317,5	393,7	482,6	571,5	635
		ØF	92,1	104,8	127	157,2	185,7	215,9	269,9	323,8	381	412,8
		C	38,1	41,3	47,7	54	73,1	82,6	92,1	108	123,9	133,4
		f	7	7	7	7	7	7	7	7	7	7
		n-Ød	8 - 7/8	8 -1	8 - 1 1/4	8 - 1 3/8	8 - 1 5/8	12 - 1 1/2	12 - 1 3/4	12 - 2	16 - 2 1/8	16 - 2 3/8
	BW	L1	368	419	470	546	673	705	832	991	1130	1257
		Schedule No.*(1)*	160	-	160	120	-	120	120	120	120	120
		ØB	48	61	70	92	115	136	178	222	263	289
		ØA1	60,3	-	91	117	-	172	223	278	329	362
		ØB1	38,16	-	66,5	92	-	140	182,5	230	273	300
	RTJ	L2	371	422	473	549	676	711	842	1001	1146	1276
		ØB	48	61	70	92	115	136	178	222	263	289
		ØD	215	245	265	310	375	395	485	585	675	750
		ØK	165,1	190,5	203,2	241,3	292,1	317,5	393,7	482,6	571,5	635
		ØG	124	137	168	194	229	248	318	371	438	489
		ØP	95,25	107,95	136,53	161,93	193,68	211,14	269,88	323,85	381	419,1
		C	38,1	41,3	47,7	54	73,1	82,6	92,1	108	123,9	133,4
		n-Ød	8 - 7/8	8 -1	8 - 1 1/4	8 - 1 3/8	8 - 1 5/8	12 - 1 1/2	12 - 1 3/4	12 - 2	16 - 2 1/8	16 - 2 3/8
		T	11,91	11,91	11,91	11,91	11,91	13,49	16,66	16,66	23,01	26,97
		S	7,92	7,92	7,92	7,92	7,92	9,53	11,13	11,13	14,27	15,88
		R	0,8	0,8	0,8	0,8	0,8	1,5	1,5	1,5	1,5	2,4
Top works/Operation	Hand-wheel	H (open)	632	681	718	848	969	1059	-	-	-	-
		H (close)	592	649	691	805	925	1014	-	-	-	-
		ØW	300	250	350	500	250	600	-	-	-	-
	Gear with handwheel	H1	-	-	-	-	-	1105	1245	1449	1760	1990
		h1	-	-	-	-	-	128	180	229	280	325
		g	-	-	-	-	-	513	513	513	588	588
		ØW1	-	-	-	-	-	460	530	530	600	600
	With ISO 5210 mounting pad	H2 (open)	635	682	717	949	1019	1071	1188	1440	-	-
		H2 (close)	595	650	690	915	979	1026	1105	1356	-	-
		h2	80	80	80	140	140	140	140	180	-	-
		ISO	F14	F14	F14	F30	F30	F30	F30	F35	-	-
		Tr	Tr30×5LH	Tr36×6LH	Tr36×6LH	Tr42×8LH	Tr52×8LH	Tr52×8LH	Tr58×8LH	Tr70×10LH	-	-
		Stroke	40	33	27	34	40	45	83	84	-	-
		No. of turns	3	5	6	8	7	8	6	13	-	-
		Torque (Nm) *(2)*	220	309	375	1106	1557	1890	2785	4445	-	-
Kvs-value			21	55	81	145	256	338	594	594	1307	1571
Approx. Weight RF *(3)*			85	131	165	280	453	580	900	1350	3400	4300
Approx. Weight BW			71	110	139	244	389	496	757	1105	3036	3789

(1) Other schedule nos. on request
(2) Torque includes 30% of safety factor
(3) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Torques in Nm / Weights in kg
For more information about flanged and welded ends refer to page 16

Information / restriction of technical rules need to be observed!
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The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 2500

SERIES 81 ANSI RANGE

Nominal Size		inch	2"	2-1/2"	3"	4"	5"	6"	8"	10"	12"
		DN	50	65	80	100	125	150	200	250	300
End connection	RF	L	451	508	578	673	794	914	1022	1270	1422
		ØB	38	49	57	73	93	111	146	184	219
		ØD	235	265	305	355	420	485	550	675	760
		ØK	171,4	196,8	228,6	273	323,8	368,3	438,2	539,8	619,1
		ØF	92,1	104,8	127	157,2	185,7	215,9	269,9	323,8	381
		C	50,9	57,2	66,7	76,2	92,1	108	127	165,1	184,2
		f	7	7	7	7	7	7	7	7	7
		n-Ød	8 - 1 1/8	8 - 1 1/4	8 - 1 3/8	8 - 1 5/8	8 - 1 7/8	8 - 2 1/8	12 - 2 1/8	12 - 2 5/8	12 - 2 7/8
	BW	L1	451	508	578	673	794	914	1022	1270	1422
		Schedule No.*(1)*	160	-	160	160	-	160	160	160	160
		ØB	38	49	57	73	93	111	146	184	219
		ØA1	60,3	-	91	117	-	172	223	278	329
		ØB1	42,82	-	66,5	87,5	-	132	173	216	257
	RTJ	L2	454	514	584	683	807	927	1038	1292	1444
		ØB	38	49	57	73	93	111	146	184	219
		ØD	235	265	305	355	420	485	550	675	760
		ØK	171,4	196,8	228,6	273	323,8	368,3	438,2	539,8	619,1
		ØG	133	149	168	203	241	279	340	425	495
		ØP	101,6	111,13	127	157,18	190,5	228,6	279,4	342,9	406,4
		C	50,9	57,2	66,7	76,2	92,1	108	127	165,1	184,2
		n-Ød	8 - 1 1/8	8 - 1 1/4	8 - 1 3/8	8 - 1 5/8	8 - 1 7/8	8 - 2 1/8	12 - 2 1/8	12 - 2 5/8	12 - 2 7/8
		T	11,91	13,49	13,49	16,66	19,84	19,84	23,01	30,18	33,32
		S	7,92	9,53	9,53	11,13	12,7	12,7	14,27	17,48	17,48
		R	0,8	1,5	1,5	1,5	1,5	1,5	1,5	2,4	2,4
Top works/Operation	Hand-wheel	H (open)	632	727	798	887	-	-	-	-	-
		H (close)	602	687	750	845	-	-	-	-	-
		ØW	450	250	500	600	250	-	-	-	-
	Gear with handwheel	H1	-	-	-	917	-	1105	1376	1595	1821
		h1	-	-	-	120	-	175	222	276	328
		g	-	-	-	513	-	513	588	613	613
		ØW1	-	-	-	460	-	530	600	600	600
	With ISO 5210 mounting pad	H2 (open)	632	796	918	901	952	990	1250	-	-
		H2 (close)	602	693	760	859	908	945	1190	-	-
		h2	80	115	140	140	152	160	160	-	-
		ISO	F14	F30	F30	F30	F35	F35	F40	-	-
		Tr	Tr36×6LH	Tr42×8LH	Tr42×8LH	Tr52×8LH	Tr65×10LH	Tr65×10LH	Tr80×10LH	-	-
		Stroke	30	104	158	42	44	45	60	-	-
		No. of turns	5	6	7	6	6	7	9	-	-
		Torque (Nm) *(2)*	475	832	1095	1560	3021	4100	5600	-	-
Kvs-value			14	36	52	87	161	216	387	615	903
Approx. Weight RF *(3)*			100	163	210	500	931	1250	2400	3300	4200
Approx. Weight BW			77	124	158	421	779	1044	2369	2718	3370

(1) Other schedule nos. on request
(2) Torque includes 30% of safety factor
(3) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Torques in Nm / Weights in kg
For more information about flanged and welded ends refer to page 16

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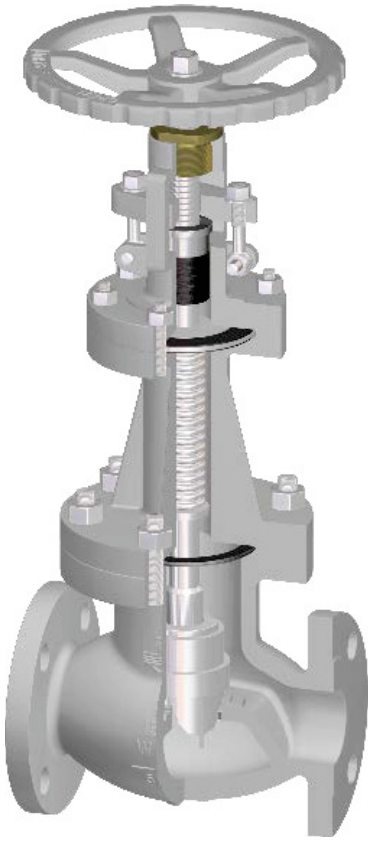
SERIES 84 ANSI RANGE

Series 84 Globe Valves are linear motion valves devised for stopping the flow of the service fluid when necessary. They are bolted bonnet, outside screw and yoke, rising handwheel, being the closure element a disc seating against a precisely machined seat thus achieving the positive closure. The atmospheric sealing is achieved by flexible graphite rings. The flow comes upwards underneath the seat, being an unidirectional valve. Weir body leads to higher pressure drop compared to gate valves but operation is quicker and this feature allows to use the valve as regulating valve when arranged with throttling plug. Valves are of easy and safe operation being widely used in power, chemical and oil industry. The range is also comprehensive o a wide offer of different versions and options. The standard operation is achieved by handwheel or gear, depending on valve size and working pressure. Valves can also be arranged for automation with different kinds of actuators.

- Outside screw and yoke
- Precise machining of components for optimal performance
- Seat surface can be hardened to increase wear resistance
- Valve disc guide feature



- Ergonomic rising handwheel
- Marking for identification and full traceability purpose
- Great versatility in end connections, materials and configurations

Main Features / Reference Standards

Design: BS 1873 / ASME B16.34
Pressure Rating: 150/300/600#
Face to face length: ASME B16.10
Valve end connections: Flanged RF or RTJ to ASME B16.5
Welded BW to ASME B16.25
Marking: MSS SP-25
Inspections & Tests: API 598
Unidirectional design. See the arrow on the body for normal flow direction
Primer painted grey color similar to RAL 7037 for protection during storage and transport (carbon steel body/bonnet)
Product compliant with Directive 2014/68/EU on Pressure Equipment (PED) and Machinery Directive 2006/42/EC for European Union territory

Main Duties / Limits of use

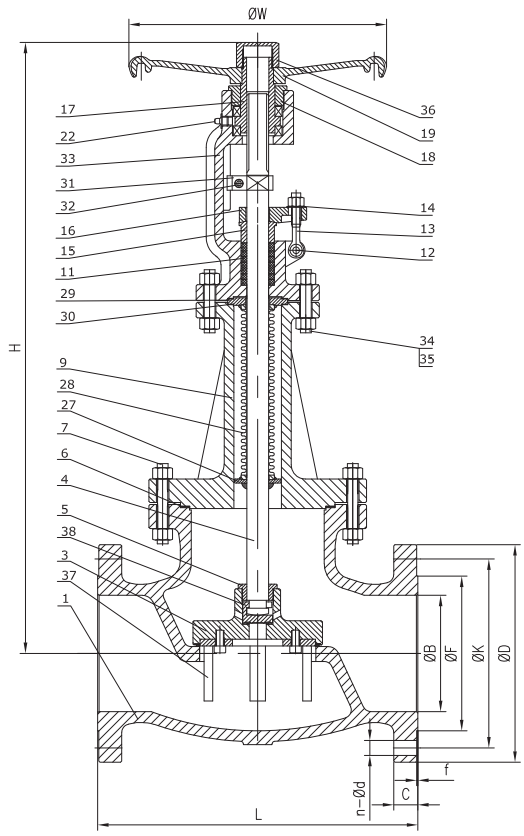
Fluids compatible with materials of construction. Questions referring to chemical resistance, please consult us
Pressure / Temperature Rating to ASME B16.34. See section “Engineering & Performance Data”
For products compliant with Directive 2014/68/EU, observe also limits acc. to Annex II tables 6 & 8 (gases & liquids group 1*) and tables 7 & 9 (gases & liquids group 2*) up to category III
**Classification of fluids (group 1 or 2) acc. to Directive 2014/68/EU, Article 13*

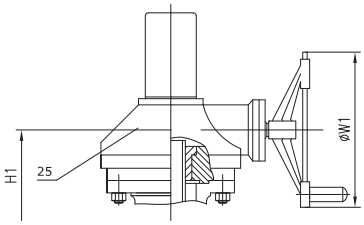
Options

Different body materials and trim combinations, different valve connections, angle pattern, Y-pattern, regulating plug, compliance with NACE MR0175, extended bonnet, bellow seal, pressure seal, welded bonnet, lantern ring with double packing, live loaded packing, chained hand wheel, manual gear, pneumatic, electric or hydraulic actuation, limit switches, execution for aggressive atmosphere, etc. Please consult us

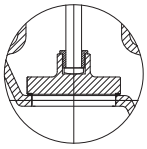
Main Parts and Materials

SERIES 84 ANSI RANGE





ANSI 150&300 SIZE: 10"-16"
ANSI 600 SIZE: 8"



ANSI 150&300 SIZE: 2"-4"
ANSI 600 SIZE:2"-3"

Main Parts and Materials

No.	Part name	A216 WCB Trim 1 (84A01)	A216 WCB Trim 5 (84A05)	A216 WCB Trim 8 (84A08)
1	Body	ASTM A216 WCB+13Cr	ASTM A216 WCB+HF	ASTM A216 WCB+HF
3	Disc	ASTM A105+13Cr	ASTM A105+HF	ASTM A105+13Cr
4	Stem		ASTM A182 F6a	
5	Disc Nut		ASTM A105	
6	Gasket		SS304+Graphite	
7	Bonnet Bolt (1)		ASTM A193 B7	
8	Bonnet Nut (1)		ASTM A194 2H	
9	Bonnet		ASTM A216 WCB	
11	Packing		Flexible Graphite(Ta-Luft certified available)	
12	Eyebolt Pin		AISI 1025	
13	Gland Eyebolt (1)		ASTM A193 B7	
14	Gland Nut (1)		ASTM A194 2H	
15	Packing Gland		ASTM A182 F6a	
16	Gland Flange		ASTM A216 WCB	
17	Stem Nut		ASTM A439 D2	
18	Retaining Nut		Carbon Steel/ Acero Carbono	
19	Handwheel		Carbon Steel/ Acero Carbono	
22	Grease Fitting		Brass	
25	Gear		Assembly	
27	Bellows Plate		A276 304	
28	Bellows		SS316L(SS316Ti/Inconel/Incoloy/Hastelloy available)	
29	Bellows Plate		ASTM A276 304	
30	Gasket		SS304+Graphite	
31	Positioner		Carbon Steel/ Acero Carbono	
32	Positioner Pin		AISI 1025	
33	Yoke		ASTM A216 WCB	
34	Yoke Nut (1)		ASTM A194 2H	
35	Yoke Bolt (1)		ASTM A193 B7	
36	Cap		Carbon Steel/ Acero Carbono	
37	Disc Guide		Carbon Steel/ Acero Carbono	
38	Pilot plug	ASTM A105+13Cr	ASTM A105+HF	ASTM A105+13Cr

(1) Bolting material for NACE MR0175 compliance available (i.e. B7M / 2HM for WCB bodies)

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Product suitability must be verified, contact manufacturer for information

Main Parts and Materials

No.	Part name	A352 LCB		A217 WC6 (84B8_)	A217 WC9 (84B9_)
		Trim 2 (84A82)	Trim 10 (84A8D)		
1	Body	ASTM A352 LCB+SS304	ASTM A352 LCB+SS316	ASTM A217 WC6+HF	ASTM A217 WC9+HF
3	Disc	ASTM A182 F304	ASTM A182 F316	ASTM A182 F11+HF	ASTM A182 F22+HF
4	Stem	ASTM A182 F304	ASTM A182 F316	A182 F6a	
5	Disc Nut	ASTM A350 LF2		ASTM A182 F11	ASTM A182 F22
6	Gasket	SS304+Graphite	SS316+Graphite	SS304+Graphite	
7	Bonnet Bolt	ASTM A320 L7		ASTM A193 B16	
8	Bonnet Nut	ASTM A194 7		ASTM A194 4	
9	Bonnet	ASTM A352 LCB		ASTM A217 WC6	ASTM A217 WC9
11	Packing	Flexible Graphite(Ta-Luft certified available)		Flexible Graphite(Ta-Luft certified available)	
12	Eyebolt Pin	AISI 1025		AISI 1025	
13	Gland Eyebolt	ASTM A320 L7		ASTM A193 B16	
14	Gland Nut	ASTM A194 7		ASTM A194 4	
15	Packing Gland	ASTM A182 F304	ASTM A182 F316	ASTM A182 F6a	
16	Gland Flange	ASTM A352 LCB		ASTM A217 WC6	ASTM A217 WC9
17	Stem Nut	ASTM A439 D2		ASTM A439 D2	
18	Retaining Nut	Carbon Steel/ Acero Carbono		Carbon Steel/ Acero Carbono	
19	Handwheel	Carbon Steel/ Acero Carbono		Carbon Steel/ Acero Carbono	
22	Grease Fitting	Brass		Brass	
25	Gear	Assembly		Assembly	
27	Bellows Plate	ASTM A276 304	ASTM A276 316	A276 304	
28	Bellows	SS316L(SS316Ti/Inconel/Incoloy/Hastelloy available)		SS316L(SS316Ti/Inconel/Incoloy/Hastelloy available)	
29	Bellows Plate	ASTM A276 304	ASTM A276 316	A276 304	
30	Gasket	SS304+Graphite	SS316+Graphite	SS304+Graphite	
31	Positioner	Carbon Steel/ Acero Carbono		Carbon Steel/ Acero Carbono	
32	Positioner Pin	AISI 1025		AISI 1025	
33	Yoke	ASTM A352 LCB		ASTM A217 WC6	ASTM A217 WC9
34	Yoke Nut	ASTM A194 7		ASTM A194 4	
35	Yoke Bolt	ASTM A320 L7		ASTM A193 B16	
36	Cap	Carbon Steel/ Acero Carbono		Carbon Steel/ Acero Carbono	
37	Disc Guide	St.Steel 304	St.Steel 316	St.Steel 304	
38	Pilot plug	ASTM A182 F304	ASTM A182 F316	ASTM A182 F11+HF	ASTM A182 F22+HF

No.	Part name	A217 C5 (84C2_)	CF8 (84I2_)	CF8M (84I0_)
1	Body	ASTM A217 C5+HF	ASTM A351 CF8	ASTM A351 CF8M
3	Disc	ASTM A182 F9+HF	ASTM A182 F304	ASTM A182 F316
4	Stem		ASTM A182 F304	ASTM A182 F316
5	Disc Nut	ASTM A182 F9	ASTM A182 F304	ASTM A182 F316
6	Gasket		SS304+Graphite	SS316+Graphite
7	Bonnet Bolt		ASTM A193 B8	ASTM A193 B8M
8	Bonnet Nut		ASTM A194 8	ASTM A194 8M
9	Bonnet	ASTM A217 C5	ASTM A351 CF8	ASTM A351 CF8M
11	Packing		Flexible Graphite(Ta-Luft certified available)	
12	Eyebolt Pin		AISI 304	
13	Gland Eyebolt		ASTM A193 B8	ASTM A193 B8M
14	Gland Nut		ASTM A194 8	ASTM A194 8M
15	Packing Gland		ASTM A182 F304	ASTM A182 F316
16	Gland Flange	ASTM A217 C5	ASTM A351 CF8	ASTM A351 CF8M
17	Stem Nut		ASTM A439 D2	
18	Retaining Nut		Carbon Steel/ Acero Carbono	
19	Handwheel		Carbon Steel/ Acero Carbono	
22	Grease Fitting		Brass	
25	Gear		Assembly	
27	Bellows Plate		ASTM A276 304	ASTM A276 316
28	Bellows		SS316L(SS316Ti/Inconel/Incoloy/Hastelloy available)	
29	Bellows Plate		ASTM A276 304	ASTM A276 316
30	Gasket		SS304+Graphite	SS316+Graphite
31	Positioner		Carbon Steel/ Acero Carbono	
32	Positioner Pin		AISI 1025	
33	Yoke	ASTM A217 C5	ASTM A351 CF8	ASTM A351 CF8M
34	Yoke Nut		ASTM A194 8	ASTM A194 8M
35	Yoke Bolt		ASTM A193 B8	ASTM A193 B8M
36	Cap		Carbon Steel/ Acero Carbono	
37	Disc Guide		St.Steel 304	St.Steel 316
38	Pilot plug	ASTM A182 F9+HF	ASTM A182 F304	ASTM A182 F316

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Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 150

SERIES 84 ANSI RANGE

Nominal Size		inch	2"	2-1/2"	3"	4"	5"	6"	8"
		DN	50	65	80	100	125	150	200
End connection	RF	L	203	216	241	292	356	406	495
		ØB	51	65	76	102	128	152	203
		ØD	150	180	190	230	255	280	345
		ØK	120,7	139,7	152,4	190,5	215,9	241,3	298,5
		ØF	92,1	104,8	127	157,2	185,7	215,9	269,9
		C	14,3	15,9	17,5	22,3	22,3	23,9	27
		f	2	2	2	2	2	2	2
		n-Ød	4 - 3/4	4 - 3/4	4 - 3/4	8 - 3/4	8 - 7/8	8 - 7/8	8 - 7/8
	BW	L1	203	216	241	292	356	406	495
		Schedule No.*(1)*	40	-	40	40	-	40	40
		ØB	51	65	76	102	128	152	203
		ØA1	60,3	-	91	117	-	172	223
		ØB1	52,48	-	78	102	-	154	203
	RTJ	L2	216	229	254	305	369	419	508
		ØB	51	65	76	102	128	152	203
		ØD	150	180	190	230	255	280	345
		ØK	120,7	139,7	152,4	190,5	215,9	241,3	298,5
		ØG	102	121	133	171	194	219	273
		ØP	82,55	101,6	114,3	149,23	171,45	193,68	247,65
		C	17,5	20,7	22,3	22,3	22,3	23,9	27
		n-Ød	4 - 3/4	4 - 3/4	4 - 3/4	8 - 3/4	8 - 7/8	8 - 7/8	8 - 7/8
		T	8,74	8,74	8,74	8,74	8,74	8,74	8,74
		S	6,35	6,35	6,35	6,35	6,35	6,35	6,35
		R	0,8	0,8	0,8	0,8	0,8	0,8	0,8
Top works/Operation	Hand-wheel	H (open)	391	459	500	593	-	682	779
		H (close)	376	439	475	563	-	642	724
		ØW	200	200	250	300	-	400	450
	Gear with handwheel	H1	-	-	-	-	-	-	-
		h1	-	-	-	-	-	-	-
		g	-	-	-	-	-	-	-
		ØW1	-	-	-	-	-	-	-
	With ISO 5210 mounting pad	h2	80	80	80	80	80	80	80
		ISO	F07	F07	F10	F10	F12	F12	F14
		Torque	25	44	58	88	141	180	320
Approx. Weight RF *(3)*			23	31	45	63	-	115	204

(1) Other schedule nos. on request
(2) Torque includes 30% of safety factor
(3) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Torques in Nm / Weights in kg
For more information about flanged and welded ends refer to page 16

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Main Valve Parameters - Class 150

SERIES 84 ANSI RANGE

Nominal Size		inch	10”	12”	14”	16”
		DN	250	300	350	400
End connection	RF	L	622	698	787	914
		ØB	254	305	337	387
		ØD	405	485	535	595
		ØK	362	431,8	476,3	539,8
		ØF	323,8	381	412,8	469,9
		C	28,6	30,2	33,4	35
		f	2	2	2	2
		n-Ød	12 - 1	12 - 1	12 - 1 1/8	16 - 1 1/8
	BW	L1	622	698	787	914
		Schedule No.*(1)*	40	STD	STD	STD
		ØB	254	305	337	387
		ØA1	278	329	362	413
		ØB1	254,5	305	336,5	387,5
	RTJ	L2	635	711	800	927
		ØB	254	305	337	387
		ØD	405	485	535	595
		ØK	362	431,8	476,3	539,8
		ØG	330	406	425	483
		ØP	304,8	381	396,88	454,03
		C	28,6	30,2	33,4	35
		n-Ød	12 - 1	12 - 1	12 - 1 1/8	16 - 1 1/8
		T	8,74	8,74	8,74	8,74
		S	6,35	6,35	6,35	6,35
		R	0,8	0,8	0,8	0,8
Top works/Operation	Hand-wheel	H (open)	-	-	-	-
		H (close)	-	-	-	-
		ØW	-	-	-	-
	Gear with handwheel	H1	956	1159	1390	1689
		h1	-	-	-	-
		g	-	-	-	-
		ØW1	460	540	540	540
	With ISO 5210 mounting pad	h2	100	100	100	120
		ISO	F16	F25	F25	F30
		Torque (Nm) *(2)*	465	780	1606	2219
Approx. Weight RF *(3)*			351	534	740	912

(1) Other schedule nos. on request
(2) Torque includes 30% of safety factor
(3) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Torques in Nm / Weights in kg
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Main Valve Parameters - Class 300

SERIES 84 ANSI RANGE

Nominal Size		inch	2"	2-1/2"	3"	4"	5"	6"	8"
		DN	50	65	80	100	125	150	200
End connection	RF	L	267	292	318	356	400	444	559
		ØB	51	65	76	102	128	152	203
		ØD	165	190	210	255	280	320	380
		ØK	127	149,2	168,3	200	235	269,9	330,2
		ØF	92,1	104,8	127	157,2	185,7	215,9	269,9
		C	20,7	23,9	27	30,2	33,4	35	39,7
		f	2	2	2	2	2	2	2
		n-Ød	8 - 3/4	8 - 7/8	8 - 7/8	8 - 7/8	8 - 7/8	12 - 7/8	12 - 1
	BW	L1	267	292	318	356	400	444	559
		Schedule No.*(1)*	40	-	40	40	-	40	40
		ØB	51	65	76	102	128	152	203
		ØA1	60,3	-	91	117	-	172	223
		ØB1	52,48	-	78	102	-	154	203
	RTJ	L2	283	308	334	372	416	460	575
		ØB	51	65	76	102	128	152	203
		ØD	165	190	210	255	280	320	380
		ØK	127	149,2	168,3	200	235	269,9	330,2
		ØG	108	127	146	175	210	241	302
		ØP	82,55	101,6	123,83	149,23	180,98	211,12	269,88
		C	20,7	23,9	27	30,2	33,4	35	39,7
		n-Ød	8 - 3/4	8 - 7/8	8 - 7/8	8 - 7/8	8 - 7/8	12 - 7/8	12 - 1
		T	11,91	11,91	11,91	11,91	11,91	11,91	11,91
		S	7,92	7,92	7,92	7,92	7,92	7,92	7,92
		R	0,8	0,8	0,8	0,8	0,8	0,8	0,8
Top works/Operation	Hand-wheel	H (open)	409	481	529	621	-	808	976
		H (close)	394	461	504	591	-	768	721
		ØW	250	250	250	300	-	400	450
	Gear with handwheel	H1	-	-	-	-	-	-	-
		h1	-	-	-	-	-	-	-
		g	-	-	-	-	-	-	-
		ØW1	-	-	-	-	-	-	-
	With ISO 5210 mounting pad	h2	80	80	80	80	80	80	80
		ISO	F07	F10	F12	F12	F12	F14	F16
		Torque (Nm) *(2)*	40	77	105	175	293	380	700
Approx. Weight RF *(3)*			31	44	62	84	99	182	300

(1) Other schedule nos. on request
(2) Torque includes 30% of safety factor
(3) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Torques in Nm / Weights in kg
For more information about flanged and welded ends refer to page 16

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Main Valve Parameters - Class 300

SERIES 84 ANSI RANGE

Nominal Size		inch	10”	12”	14”	16”
		DN	250	300	350	400
End connection	RF	L	622	711	838	863
		ØB	254	305	337	387
		ØD	445	520	585	650
		ØK	387,4	450,8	514,4	571,5
		ØF	323,8	381	412,8	469,9
		C	46,1	49,3	52,4	55,6
		f	2	2	2	2
		n-Ød	16 - 1 1/8	16 - 1 1/4	20 - 1 1/4	20 - 1 3/8
	BW	L1	622	711	838	863
		Schedule No.*(1)*	40	STD	STD	STD
		ØB	254	305	337	387
		ØA1	278	329	362	413
		ØB1	254,5	305	336,5	387,5
	RTJ	L2	638	727	854	*879*
		ØB	254	305	337	387
		ØD	445	520	585	650
		ØK	387,4	450,8	514,4	571,5
		ØG	356	413	457	508
		ØP	323,85	981	419,1	469,9
		C	46,1	49,3	52,4	55,6
		n-Ød	16 - 1 1/8	16 - 1 1/4	20 - 1 1/4	20 - 1 3/8
		T	11,91	11,91	11,91	11,91
		S	7,92	7,92	7,92	7,92
		R	0,8	0,8	0,8	0,8
Top works/Operation	Hand-wheel	H (open)	-	-	-	-
		H (close)	-	-	-	-
		ØW	-	-	-	-
	Gear with handwheel	H1	1118	1287	1450	1760
		h1	-	-	-	-
		g	-	-	-	-
		ØW1	610	610	610	610
	With ISO 5210 mounting pad	h2	100	100	100	120
		ISO	F25	F30	F30	F30
		Torque (Nm) *(2)*	1125	1800	2100	2500
Approx. Weight RF *(3)*			541	725	830	1055

(1) Other schedule nos. on request
(2) Torque includes 30% of safety factor
(3) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Torques in Nm / Weights in kg
For more information about flanged and welded ends refer to page 16

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Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 600

SERIES 84 ANSI RANGE

Nominal Size		inch	2”	2-1/2”	3”	4”	5”	6”	8”	10”	12”
		DN	50	65	80	100	125	150	200	250	300
End connection	RF	L	292	330	356	432	508	559	660	787	838
		ØB	51	65	76	102	128	152	200	248	299
		ØD	165	190	210	275	330	355	420	510	560
		ØK	127	149,2	168,3	215,9	266,7	292,1	349,2	431,8	489
		ØF	92,1	104,8	127	157,2	185,7	215,9	269,9	323,8	381
		C	25,4	28,6	31,8	38,1	44,5	47,7	55,6	63,5	66,7
		f	7	7	7	7	7	7	7	7	7
		n-Ød	8 - 3/4	8 - 7/8	8 - 7/8	8 - 1	8 - 1 1/8	12 - 1 1/8	12 - 1/4	16 - 1 3/8	20 - 1 3/8
	BW	L1	292	330	356	432	508	559	660	787	838
		Schedule No.*(1)*	80	-	80	80	-	80	80	80	80
		ØB	51	65	76	102	128	152	200	248	299
		ØA1	60,3	-	91	117	-	172	223	278	329
		ØB1	49,22	-	73,5	97	-	146,5	193,5	243	289
	RTJ	L2	295	333	359	435	511	562	663	790	841
		ØB	51	65	76	102	128	152	200	248	299
		ØD	165	190	210	275	330	355	420	510	560
		ØK	127	149,2	168,3	215,9	266,7	292,1	349,2	431,8	489
		ØG	108	127	146	175	210	241	302	356	413
		ØP	82,55	101,6	123,83	149,23	180,98	211,12	269,88	323,85	981
		C	25,4	28,6	31,8	38,1	44,5	47,7	55,6	63,5	66,7
		n-Ød	8 - 3/4	8 - 7/8	8 - 7/8	8 - 1	8 - 1 1/8	12 - 1 1/8	12 - 1/4	16 - 1 3/8	20 - 1 3/8
		T	11,91	11,91	11,91	11,91	11,91	11,91	11,91	11,91	11,91
		S	7,92	7,92	7,92	7,92	7,92	7,92	7,92	7,92	7,92
		R	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8
Top works/Operation	Hand-wheel	H (open)	474	549	608	724	-	1016	1271	-	-
		H (close)	449	529	583	694	-	976	1216	-	-
		ØW	250	250	350	400	-	500	610	-	-
	Gear with handwheel	H1	-	-	-	-	-	-	-	1390	1390
		h1	-	-	-	-	-	-	-	-	-
		g	-	-	-	-	-	-	-	-	-
		ØW1	-	-	-	-	-	-	-	610	610
	With ISO 5210 mounting pad	h2	80	80	80	80	103	120	140	140	140
		ISO	F12	F14	F14	F14	F25	F25	F30	F30	F35
		Torque (Nm) *(2)*	160	289	385	365	615	800	1658	2355	3100
Approx. Weight RF *(3)*			49	65	80	134	-	333	620	901	901

(1) Other schedule nos. on request
(2) Torque includes 30% of safety factor
(3) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Torques in Nm / Weights in kg
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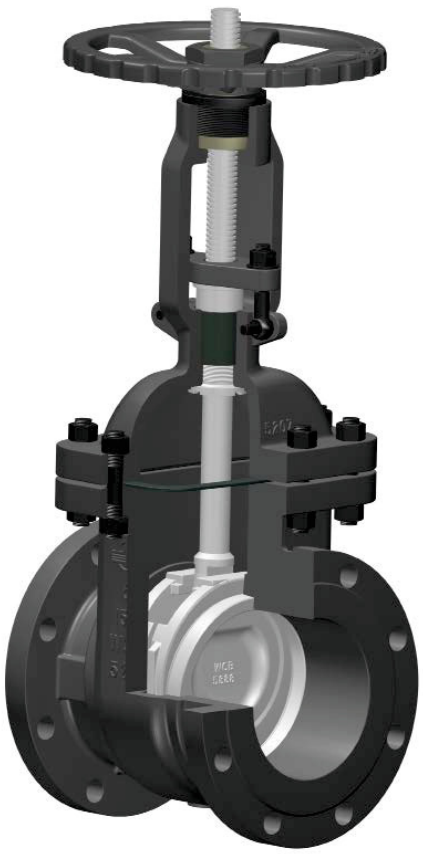
SERIES 90/91 ANSI RANGE

Series 90 Gate Valves are linear motion valves devised for stopping the flow of the service fluid when necessary, not being suitable for regulating purpose. They are bolted bonnet, outside screw and yoke, rising stem, bidirectional, with metal sealing and full bore. The atmospheric sealing is achieved by flexible graphite rings. The two slightly sloped seats favor a tight shut off, being largely used in the power, chemical and oil industry sectors. The range is also comprehensive of a wide offer of different versions and options. The standard operation is achieved by handwheel or gear, depending on valve size and working pressure. Valves can also be arranged for automation with different kinds of actuators.

- Precise machining of components for optimal performance
- Outside screw and yoke, rising stem
- Back Seat feature
- Seat surface can be hardened to increase wear resistance
- Flexible Wedge, favours the closure even at low pressures



- Ergonomic non-rising handwheel
- Marking for identification and full traceability purpose
- Great versatility in end connections, materials and configurations
- Sloped valve seats, vertical shut off, flow assists closure
- Full bore, mínimum pressure drop

Main Features / Reference Standards

Design: API 600 or API 6D
Pressure Rating: 150/300/600/900/1500/2500#
Face to face length: ASME B16.10
Valve end connections: Flanged RF or RTJ to ASME B16.5 (*size ≤ 24"*) / ASME B16.47 (*size > 24"*)
Welded BW to ASME B16.25
Marking: MSS SP-25
Inspections & Tests: API 598
Bidirectional design
Primer painted grey color similar to RAL 7037 for protection during storage and transport (carbon steel body/bonnet)
Product compliant with Directive 2014/68/EU on Pressure Equipment (PED) and Machinery Directive 2006/42/EC for European Union territory

Main Duties / Limits of use

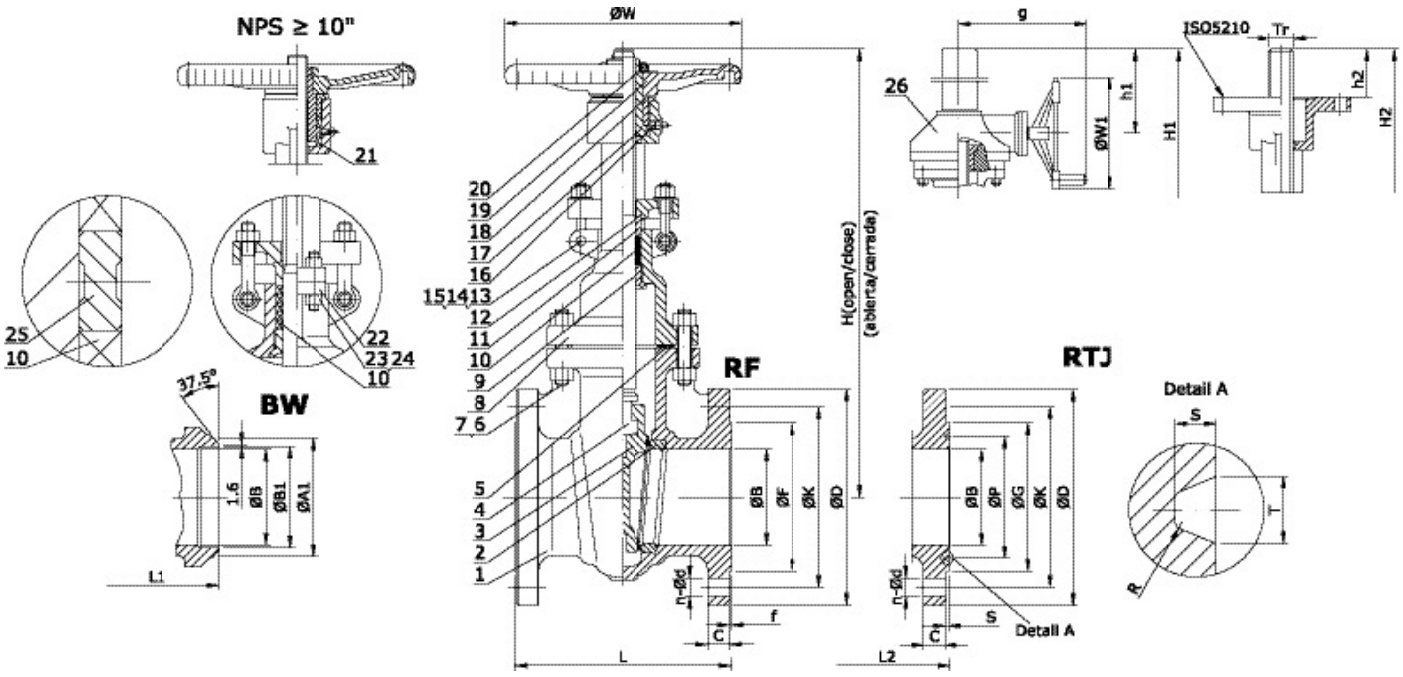
Fluids compatible with materials of construction. Questions referring to chemical resistance, please consult us
Pressure / Temperature Rating to ASME B16.34. See section "Engineering & Performance Data"
For products compliant with Directive 2014/68/EU, observe also limits acc. to Annex II tables 6 & 8 (gases & liquids group 1*) and tables 7 & 9 (gases & liquids group 2*) up to category III
**Classification of fluids (group 1 or 2) acc. to Directive 2014/68/EU, Article 13*

Options

Different body materials and trim combinations, different valve connections, compliance with NACE MR0175, extended bonnet, bellow seal, pressure seal, welded bonnet, lantern ring with double packing, live loaded packing, chained hand wheel, manual gear, pneumatic, electric or hydraulic actuation, limit switches, execution for aggressive atmosphere, etc. Please consult us
Design acc. to API 603 fo st. steel gate valves on request.

Main Parts and Materials

SERIES 90 ANSI RANGE
Class 150



Nº	Part name	A216 WCB (90A0_)	A352 LCB		A217 WC1 (90B1_)	A217 WC6 (90B8_)	A217 WC9 (90B9_)	A217 C5 (90C2_)	A217 C12 (90C4_)
			Trim 2 (90A82_)	Trim 12 (90A8G_)					
1	Body	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9	A217 C5	A217 C12
2	Seat Ring	A105	A182 F304	A182 F316+HF	A182 F1+HF	A182 F11+HF	A182 F22+HF	A182 F5+HF	A182 F9+HF
3	Wedge	A216 WCB	A351 CF8	A351 CF8M	A217 WC1+HF	A217 WC6+HF	A217 WC9+HF	A217 C5+HF	A217 C12+HF
4	Stem	A182 F6a	A182 F304	A182 F316	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a
5	Gasket	SS304 +Graphite	SS304 +Graphite		SS304 +Graphite			SS304+Graphite	
6	Bonnet Bolt (1)	A193 B7	A320 L7		A193 B16			A193 B16	
7	Bonnet Nut (1)	A194 2H	A194 4		A194 4			A194 4	
8	Bonnet	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9	A217 C5	A217 C12
9	Backseat Bushing	A182 F6a	A182 F304	A182 F316	A182 F6a			A182 F6a	A182 F6a
10	Packing	Graphite	Graphite		Graphite			Graphite	
11	Packing Gland	A182 F6a	A182 F304		A182 F6a			A182 F6a	
12	Gland Flange	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9	A217 C5	A217 C12
13	Eyebolt Pin	AISI 1025	AISI 1025		A276 410			A276 410	
14	Gland Eyebolt (1)	A193 B7	A320 L7		A193 B16			A193 B16	
15	Gland Nut (1)	A194 2H	A194 4		A194 4			A194 4	
16	Grease Nipple	Carbon Steel	Carbon Steel		Alloy Steel			Alloy Steel	
17	Stem Nut	A439 D2	A439 D2		A439 D2			A439 D2	
18	Retaining Nut	Carbon Steel	Carbon Steel		Carbon Steel			Carbon Steel	
19	Handwheel	Steel	Steel		Steel			Steel	
20	Handwheel Nut	Carbon Steel	Carbon Steel		Carbon Steel			Carbon Steel	
21	Bearings (2)	Alloy Steel	Alloy Steel		Alloy Steel			Alloy Steel	
22	Yoke (2)	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9	A217 C5	A217 C12
23	Yoke Bolt (1) (2)	A193 B7	A320 L7		A193 B16			A193 B16	
24	Yoke Nut (1) (2)	A194 2H	A194 4		A194 4			A194 4	
25	Lantern Ring (3)	A276 410	A276 304		A276 410			A276 410	
26	Gear	Assembly	Assembly		Assembly			Assembly	

(1) Bolting material for NACE MR0175 compliance available (i.e. B7M / 2HM for WCB bodies)
(2) 10" and above
(3) On request

Fig. 90A0_	Seat Surface	Wedge Surface	Stem
TRIM #1 (90A01)	A105+13Cr	A216 WCB+13Cr	A182 F6a
TRIM #5 (90A05)	A105+HF	A216 WCB+HF	A182 F6a
TRIM #8 (90A08)	A105+HF	A216 WCB+13Cr	A182 F6a

HF = Hard faced

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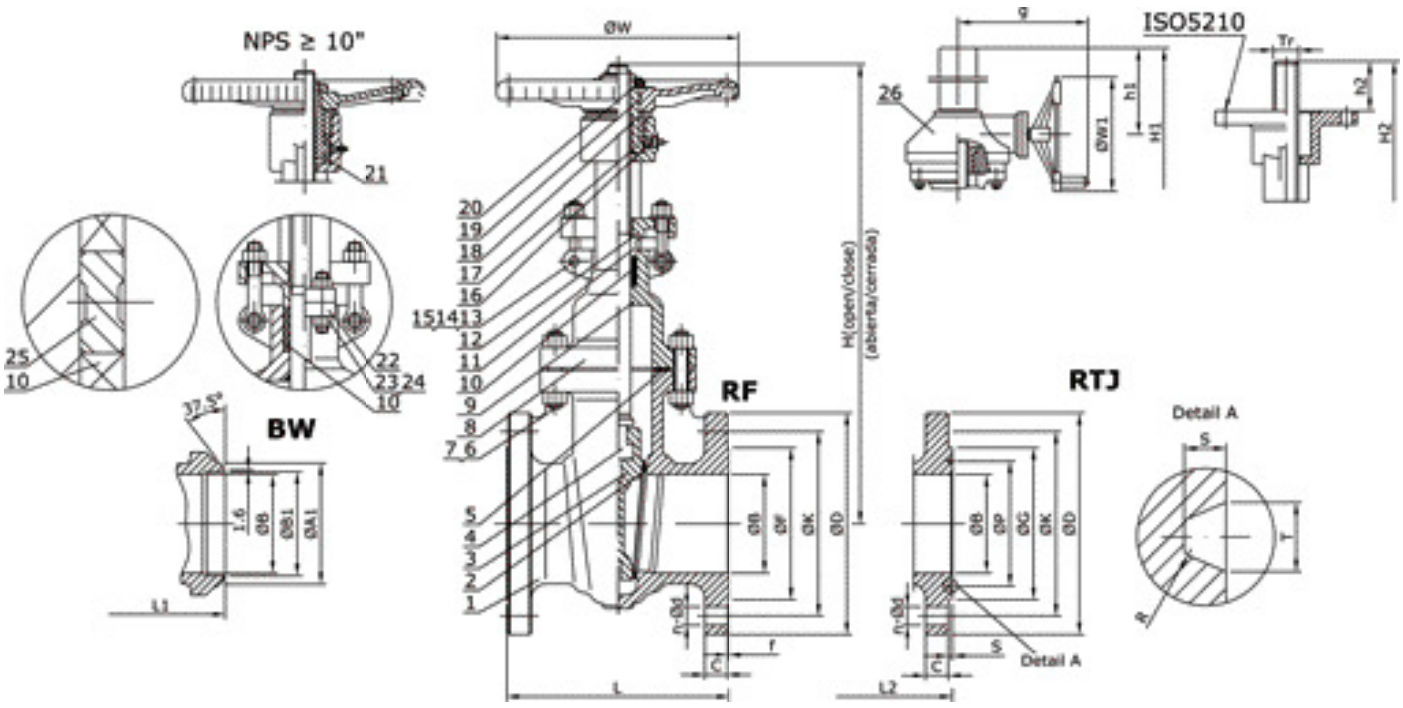
Product suitability must be verified, contact manufacturer for information

Main Parts and Materials

SERIES 90 ANSI RANGE
Class 150



Nº	Part name	CF8 (90I2_)	CF8M (90I0_)	CF3 (90I1_)	CF3M (90I7_)
1	Body	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2	Seat Ring	Integral SS304	Integral+HF	Integral SS304L	Integral SS316L
3	Wedge	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
4	Stem	A182 F304	A182 F316	A182 F304L	A182 F316L
5	Gasket	SS304+Graphite	SS316+Graphite	SS316+Graphite	SS316L+Graphite
6	Bonnet Bolt	A193 B8	A193 B8M	A193 B8M	
7	Bonnet Nut	A194 8	A194 8M	A194 8M	
8	Bonnet	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
9	Backseat Bushing	SS304	SS316	SS304L	SS316L
10	Packing	Graphite		Graphite	
11	Packing Gland	A182 F304	A182 F316	A182 F304L	A182 F316L
12	Gland Flange	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
13	Eyebolt Pin	A276 304	A276 316	A276 316	
14	Gland Eyebolt	A193 B8	A193 B8M	A193 B8M	
15	Gland Nut	A194 8	A194 8M	A194 8M	
16	Grease Nipple	St. Steel		St. Steel	
17	Stem Nut	A439 D2		A439 D2	
18	Retaining Nut	St. Steel		St. Steel	
19	Handwheel	Steel		Steel	
20	Handwheel Nut	St. Steel		St. Steel	
21	Bearings (1)	Alloy Steel		Alloy Steel	
22	Yoke (1)	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
23	Yoke Bolt (1)	A193 B8	A193 B8M	A193 B8M	
24	Yoke Nut (1)	A194 8	A194 8M	A194 8M	
25	Lantern Ring (2)	A276 304	A276 316	A276 316	A276 316L
26	Gear	Assembly		Assembly	

(1) 10" and above
(2) On request

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Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 150

SERIES 90 ANSI RANGE

Nominal Size		inch	2"	2-1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"
		DN	50	65	80	100	125	150	200	250	300	350	400
End connection	RF	L	178	190	203	229	254	267	292	330	356	381	406
		ØB	51	65,375	76	102	128,25	152	203	254	305	337	387
		ØD	150	180	190	230	255	280	345	405	485	535	595
		ØK	120,7	139,7	152,4	190,5	215,9	241,3	298,5	362	431,8	476,3	539,8
		ØF	92,1	104,8	127	157,2	185,7	215,9	269,9	323,8	381	412,8	469,9
		C	14,3	15,9	17,5	22,3	22,3	23,9	27	28,6	30,2	33,4	35
		f	2	2	2	2	2	2	2	2	2	2	2
		n-Ød	4 - 3/4	4 - 3/4	4 - 3/4	8 - 3/4	8 - 7/8	8 - 7/8	8 - 7/8	12 - 1	12 - 1	12 - 1 1/8	16 - 1 1/8
	BW	L1	216	241	282	305	381	403	419	457	502	572	610
		Schedule No.*(1)*	40	-	40	40	-	40	40	40	STD	STD	STD
		ØB	51	65,375	76	102	128,25	152	203	254	305	337	387
		ØA1	60,3	-	91	117	-	172	223	278	329	362	413
		ØB1	52,48	-	78	102	-	154	203	254,5	305	336,5	387,5
	RTJ	L2	191	203	216	242	267	280	305	343	369	394	419
		ØB	51	65,375	76	102	128,25	152	203	254	305	337	387
		ØD	150	180	190	230	255	280	345	405	485	535	595
		ØK	120,7	139,7	152,4	190,5	215,9	241,3	298,5	362	431,8	476,3	539,8
		ØG	102	121	133	171	194	219	273	330	406	425	483
		ØP	82,55	101,6	114,3	149,23	171,45	193,68	247,65	304,8	381	396,88	454,03
		C	17,5	20,7	22,3	22,3	22,3	23,9	27	28,6	30,2	33,4	35
		n-Ød	4 - 3/4	4 - 3/4	4 - 3/4	8 - 3/4	8 - 7/8	8 - 7/8	8 - 7/8	12 - 1	12 - 1	12 - 1 1/8	16 - 1 1/8
		T	8,74	8,74	8,74	8,74	8,74	8,74	8,74	8,74	8,74	8,74	8,74
		S	6,35	6,35	6,35	6,35	6,35	6,35	6,35	6,35	6,35	6,35	6,35
		R	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8
Top works/Operation	Hand-wheel	H (open)	396	452	493	595	684	766	952	1151	1376	1521	1735
		H (close)	336	376	406	473	543	595	738	879	1061	1167	1330
		ØW	200	250	250	280	300	300	350	400	450	500	550
	Gear with handwheel	H1	-	-	-	-	-	-	986	1205	1430	1585	1780
		h1	-	-	-	-	-	-	245	320	370	415	465
		g	-	-	-	-	-	-	325	362	440	440	440
		ØW1	-	-	-	-	-	-	310	310	310	460	460
	With ISO 5210 mounting pad	H2 (open)	386	449	495	586	692	786	956	1155	1376	1525	1730
		H2 (close)	326	373	408	473	555	615	742	883	1061	1171	1325
		h2	45	54	60	60	72	80	80	80	80	100	100
		ISO	F07	F10	F10	F10	F14	F14	F14	F14	F14	F16	F16
		Tr	Tr20×4LH	Tr24×5LH	Tr24×5LH	Tr26×5LH	Tr30×6LH	Tr30×6LH	Tr32×6LH	Tr36×6LH	Tr38×6LH	Tr42×8LH	Tr46×8LH
		Stroke	60	76	87	113	137	171	214	272	315	354	405
		No. of turns	15	15	17	23	23	28,5	36	45	53	44	51
		Torque (Nm) *(2)*	36	42	47	85	102	115	202	267	350	480	686
Kvs-value			171	422	607	1111	1996	2650	4889	7641	11410	13910	18427
Approx. Weight RF *(3)*			15	22	27	43	59	70	105	163	249	358	450
Approx. Weight BW			12	17	22	35	48	57	83	134	205	302	380

(1) Other schedule nos. on request
(2) Torque includes 30% of safety factor
(3) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Torques in Nm / Weights in kg
For more information about flanged and welded ends refer to page 16

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Main Valve Parameters - Class 150

SERIES 90 ANSI RANGE

Nominal Size		inch	18"	20"	24"	26"	28"	30"	32"	36"	40"	42"	48"
		DN	450	500	600	650	700	750	800	900	1000	1050	1200
End connection	RF	L	432	457	508	559	610	610	610	711	812	812	1066
		ØB	438	489	591	633	684	735	779	874	976	1020	1166
		ØD	635	700	815	870	925	985	1060	1170	1290	1345	1510
		ØK	577,9	635	749,3	806,4	863,6	914,4	977,9	1085,8	1200,2	1257,3	1422,4
		ØF	533,4	584,2	692,2	749	800	857	914	1022	1124	1194	1359
		C	38,1	41,3	46,1	66,7	69,9	73,1	79,4	88,9	88,9	95,3	106,4
		f	2	2	2	2	2	2	2	2	2	2	2
		n-Ød	16 - 1 1/4	20 - 1 1/4	20 - 1 3/8	24 - 1 3/8	28 - 1 3/8	28 - 1 3/8	28 - 1 5/8	32 - 1 5/8	36 - 1 5/8	36 - 1 5/8	44 - 1 5/8
	BW	L1	660	711	813	864	914	914	965	1016	1066	1143	1371
		Schedule No.*(1)*	STD	STD	STD	20	20	20	20	20	XS	XS	XS
		ØB	438	489	591	633	684	735	779	874	976	1020	1166
		ØA1	464	516	619	670	721	772	825	927	1029	1079	1232
		ØB1	438	489	590,5	635	686	736,5	787,5	889	990,5	1041,5	1194
	RTJ	L2	445	470	521	-	-	-	-	-	-	-	-
		ØB	438	489	591	633	684	735	779	874	-	-	-
		ØD	635	700	815	870	925	985	1060	1170	-	-	-
		ØK	577,9	635	749,3	806,4	863,6	914,4	977,9	1085,8	-	-	-
		ØG	546	597	711	810	861	917	984	1092	-	-	-
		ØP	517,53	558,8	673,1	749,3	800,1	857,25	914,4	1022,35	-	-	-
		C	38,1	41,3	46,1	66,7	69,9	73,1	79,4	88,9	-	-	-
		n-Ød	16 - 1 1/4	20 - 1 1/4	20 - 1 3/8	24 - 1 3/8	28 - 1 3/8	28 - 1 3/8	28 - 1 5/8	32 - 1 5/8	-	-	-
		T	8,74	8,74	8,74	19,84	19,84	19,84	23,01	23,01	-	-	-
		S	6,35	6,35	6,35	12,7	12,7	12,7	14,27	14,27	-	-	-
		R	0,8	0,8	0,8	1,5	1,5	1,5	1,5	1,5	-	-	-
Top works/Operation	Hand-wheel	H (open)	1944	-	-	-	-	-	-	-	-	-	-
		H (close)	1485	-	-	-	-	-	-	-	-	-	-
		ØW	600	-	-	-	-	-	-	-	-	-	-
	Gear with handwheel	H1	1984	2219	2595	2857	3019	3220	3380	3789	4254	4719	5374
		h1	516	592	693	775	837	890	952	1100	1248	1395	1565
		g	440	513	513	513	513	588	588	588	588	613	613
		ØW1	460	530	530	600	600	600	600	800	800	800	1000
	With ISO 5210 mounting pad	H2 (open)	1949	2118	2509	2718	2922	3107	3368	3758	4151	4315	5719
		H2 (close)	1490	1607	1900	2073	2201	2332	2628	2930	3231	3360	4519
		h2	120	120	140	160	160	160	160	200	200	200	250
		ISO	F25	F25	F30	F35	F35	F35	F35	F40	F40	F48	F48
		Tr	Tr48×8LH	Tr52×8LH	Tr60×10LH	Tr62×8LH	Tr65×10LH	Tr65×10LH	Tr70×10LH	Tr76×10LH	Tr85×12LH	Tr90×12LH	Tr100×12LH
		Stroke	459	511	609	645	721	775	740	828	920	955	1200
		No. of turns	57	64	61	81	72	77,5	74	83	77	80	100
		Torque (Nm) *(2)*	903	1081	1910	2550	3560	3950	4320	4690	4850	5023	5675
Kvs-value			24547	30564	44585	54274	63932	73705	88034	110684	150308	190855	286752
Approx. Weight RF *(3)*			604	800	1168	1680	1900	2250	2400	3500	4120	5420	7200
Approx. Weight BW			527	708	1026	1508	1678	2011	2094	3060	2974	4130	5292

(1) Other schedule nos. on request
(2) Torque includes 30% of safety factor
(3) RTJ weight increases approx. by 10%
(4) To be determined

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Torques in Nm / Weights in kg
For more information about flanged and welded ends refer to page 16

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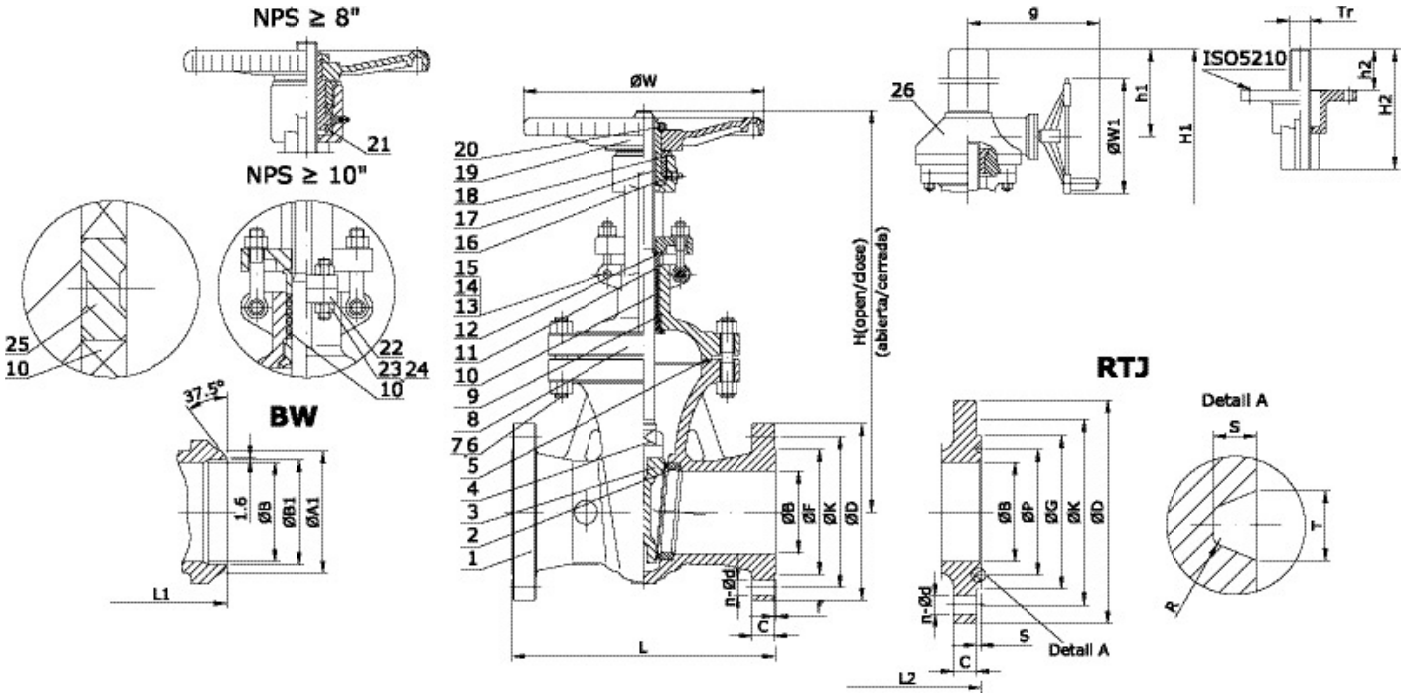
Main Parts and Materials

SERIES 90 ANSI RANGE
Class 300



Nº	Part name	A216 WCB (90A0_)	A352 LCB		A217 WC1 (90B1_)	A217 WC6 (90B8_)	A217 WC9 (90B9_)	A217 C5 (90C2_)	A217 C12 (90C4_)
			Trim 2 (90A82_)	Trim 12 (90A8G_)					
1	Body	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9	A217 C5	A217 C12
2	Seat Ring	A105	A182 F304	A182 F316+HF	A182 F1+HF	A182 F11+HF	A182 F22+HF	A182 F5+HF	A182 F9+HF
3	Wedge	A216 WCB	A351 CF8	A351 CF8M	A217 WC1+HF	A217 WC6+HF	A217 WC9+HF	A217 C5+HF	A217 C12+HF
4	Stem	A182 F6a	A182 F304	A182 F316	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a
5	Gasket	SS304 +Graphite	SS304 +Graphite		SS304 +Graphite			SS304+Graphite	
6	Bonnet Bolt (1)	A193 B7	A320 L7		A193 B16			A193 B16	
7	Bonnet Nut (1)	A194 2H	A194 4		A194 4			A194 4	
8	Bonnet	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9	A217 C5	A217 C12
9	Backseat Bushing	A182 F6a	A182 F304	A182 F316	A182 F6a			A182 F6a	A182 F6a
10	Packing	Graphite	Graphite		Graphite			Graphite	
11	Packing Gland	A182 F6a	A182 F304		A182 F6a			A182 F6a	
12	Gland Flange	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9	A217 C5	A217 C12
13	Eyebolt Pin	AISI 1025	AISI 1025		A276 410			A276 410	
14	Gland Eyebolt (1)	A193 B7	A320 L7		A193 B16			A193 B16	
15	Gland Nut (1)	A194 2H	A194 4		A194 4			A194 4	
16	Grease Nipple	Carbon Steel	Carbon Steel		Alloy Steel			Alloy Steel	
17	Stem Nut	A439 D2	A439 D2		A439 D2			A439 D2	
18	Retaining Nut	Carbon Steel	Carbon Steel		Carbon Steel			Carbon Steel	
19	Handwheel	Steel	Steel		Steel			Steel	
20	Handwheel Nut	Carbon Steel	Carbon Steel		Carbon Steel			Carbon Steel	
21	Bearings (2)	Alloy Steel	Alloy Steel		Alloy Steel			Alloy Steel	
22	Yoke (3)	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9	A217 C5	A217 C12
23	Yoke Bolt (1) (3)	A193 B7	A320 L7		A193 B16			A193 B16	
24	Yoke Nut (1) (3)	A194 2H	A194 4		A194 4			A194 4	
25	Lantern Ring (4)	A276 410	A276 304		A276 410			A276 410	
26	Gear	Assembly	Assembly		Assembly			Assembly	

(1) Bolting material for NACE MR0175 compliance available (i.e. B7M / 2HM for WCB bodies)
(2) 8" and above
(3) 10" and above
(4) On request

Fig. 90A0_	Seat Surface	Wedge Surface	Stem
TRIM #1 (90A01)	A105+13Cr	A216 WCB+13Cr	A182 F6a
TRIM #5 (90A05)	A105+HF	A216 WCB+HF	A182 F6a
TRIM #8 (90A08)	A105+HF	A216 WCB+13Cr	A182 F6a

HF = Hard faced

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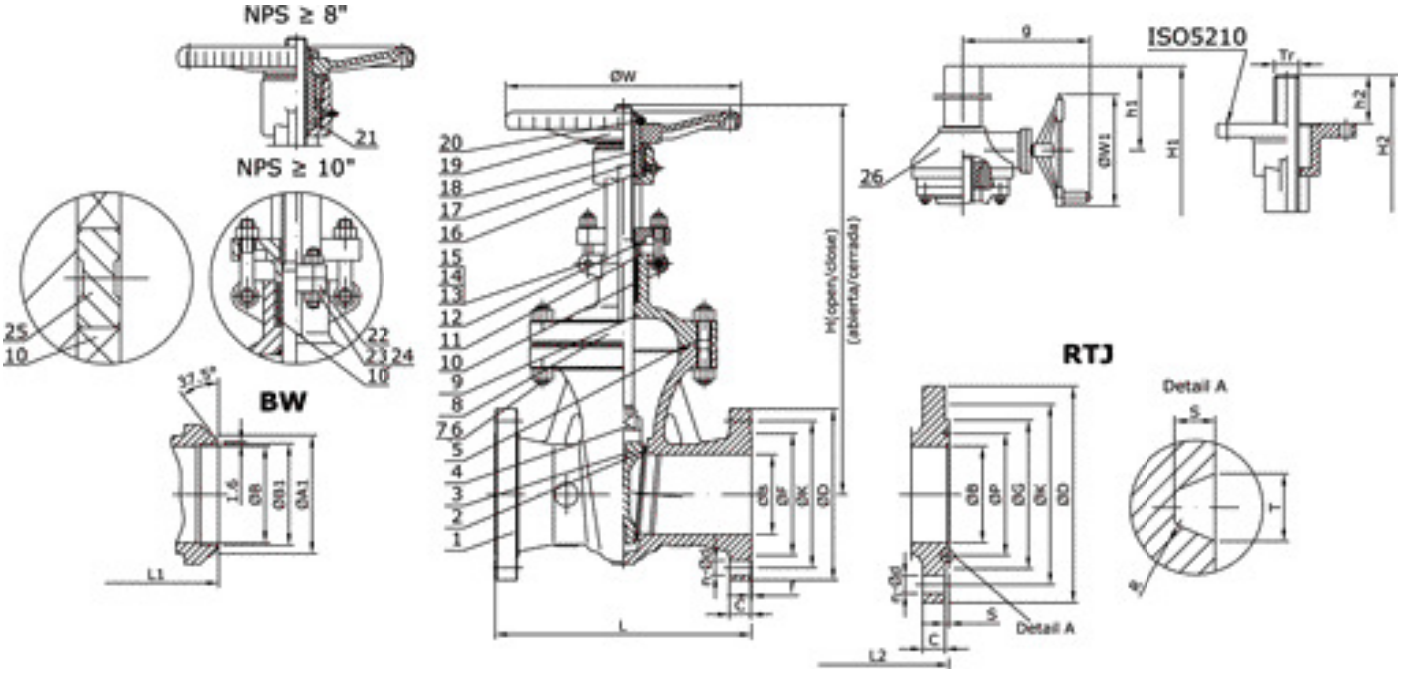
Product suitability must be verified, contact manufacturer for information

Main Parts and Materials

SERIES 90 ANSI RANGE
Class 300



Nº	Part name	CF8 (90I2_)	CF8M (90I0_)	CF3 (90I1_)	CF3M (90I7_)
1	Body	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2	Seat Ring	Integral SS304	Integral+HF	Integral SS304L	Integral SS316L
3	Wedge	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
4	Stem	A182 F304	A182 F316	A182 F304L	A182 F316L
5	Gasket	SS304+Graphite	SS316+Graphite	SS316+Graphite	SS316L+Graphite
6	Bonnet Bolt	A193 B8	A193 B8M	A193 B8M	
7	Bonnet Nut	A194 8	A194 8M	A194 8M	
8	Bonnet	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
9	Backseat Bushing	SS304	SS316	SS304L	SS316L
10	Packing	Graphite		Graphite	
11	Packing Gland	A182 F304	A182 F316	A182 F304L	A182 F316L
12	Gland Flange	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
13	Eyebolt Pin	A276 304	A276 316	A276 316	
14	Gland Eyebolt	A193 B8	A193 B8M	A193 B8M	
15	Gland Nut	A194 8	A194 8M	A194 8M	
16	Grease Nipple	St. Steel		St. Steel	
17	Stem Nut	A439 D2		A439 D2	
18	Retaining Nut	St. Steel		St. Steel	
19	Handwheel	Steel		Steel	
20	Handwheel Nut	St. Steel		St. Steel	
21	Bearings (1)	Alloy Steel		Alloy Steel	
22	Yoke (2)	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
23	Yoke Bolt (2)	A193 B8	A193 B8M	A193 B8M	
24	Yoke Nut (2)	A194 8	A194 8M	A194 8M	
25	Lantern Ring (3)	A276 304	A276 316	A276 316	A276 316L
26	Gear	Assembly		Assembly	

(1) 8" and above; (2) 10" and above; (3) On request

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Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 300

SERIES 90 ANSI RANGE

Nominal Size		inch	2"	2-1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"
		DN	50	65	80	100	125	150	200	250	300	350	400
End connection	RF	L	216	241	282	305	-	403	419	457	502	762	838
		ØB	51	65,375	76	102	128,25	152	203	254	305	337	387
		ØD	165	190	210	255	280	320	380	445	520	585	650
		ØK	127	149,2	168,3	200	235	269,9	330,2	387,4	450,8	514,4	571,5
		ØF	92,1	104,8	127	157,2	185,7	215,9	269,9	323,8	381	412,8	469,9
		C	20,7	23,9	27	30,2	33,4	35	39,7	46,1	49,3	52,4	55,6
		f	2	2	2	2	2	2	2	2	2	2	2
		n-Ød	8 - 3/4	8 - 7/8	8 - 7/8	8 - 7/8	8 - 7/8	12 - 7/8	12 - 1	16 - 1 1/8	16 - 1 1/4	20 - 1 1/4	20 - 1 3/8
	BW	L1	216	241	282	305	-	403	419	457	502	762	838
		Schedule No.*(1)*	40	-	40	40	-	40	40	40	STD	STD	STD
		ØB	51	65,375	76	102	128,25	152	203	254	305	337	387
		ØA1	60,3	-	91	117	-	172	223	278	329	362	413
		ØB1	52,48	-	78	102	-	154	203	254,5	305	336,5	387,5
	RTJ	L2	232	257	298	321	-	419	435	473	518	778	854
		ØB	51	65,375	76	102	128,25	152	203	254	305	337	387
		ØD	165	190	210	255	280	320	380	445	520	585	650
		ØK	127	149,2	168,3	200	235	269,9	330,2	387,4	450,8	514,4	571,5
		ØG	108	127	146	175	210	241	302	356	413	457	508
		ØP	82,55	101,6	123,83	149,23	180,98	211,12	269,88	323,85	981	419,1	469,9
		C	20,7	23,9	27	30,2	33,4	35	39,7	46,1	49,3	52,4	55,6
		n-Ød	8 - 3/4	8 - 7/8	8 - 7/8	8 - 7/8	8 - 7/8	12 - 7/8	12 - 1	16 - 1 1/8	16 - 1 1/4	20 - 1 1/4	20 - 1 3/8
		T	11,91	11,91	11,91	11,91	11,91	11,91	11,91	11,91	11,91	11,91	11,91
		S	7,92	7,92	7,92	7,92	7,92	7,92	7,92	7,92	7,92	7,92	7,92
		R	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8
Top works/Operation	Hand-wheel	H (open)	419	480	525	618	720	796	1033	1230	1403	1607	1865
		H (close)	359	408	445	503	581	639	817	963	1085	1245	1460
		ØW	200	229	250	280	320	350	400	450	500	550	600
	Gear with handwheel	H1	-	-	-	-	-	-	1091	1274	1459	1644	1806
		h1	-	-	-	-	-	-	270	320	378	415	464
		g	-	-	-	-	-	-	362	440	440	440	440
		ØW1	-	-	-	-	-	-	310	310	460	460	460
	With ISO 5210 mounting pad	H2 (open)	426	488	533	633	729	800	1033	1237	1423	1627	1885
		H2 (close)	366	416	453	518	590	643	817	970	1105	1265	1480
		h2	60	60	60	80	80	80	80	100	120	140	140
		ISO	F10	F10	F10	F14	F14	F14	F14	F16	F25	F30	F30
		Tr	Tr20×4LH	Tr24×5LH	Tr24×5LH	Tr26×5LH	Tr32×6LH	Tr32×6LH	Tr36×6LH	Tr38×6LH	Tr42×8LH	Tr46×8LH	Tr48×8LH
		Stroke	60	72	80	115	139	157	216	267	318	362	405
		No. of turns	15	14	16	23	23	26	36	45	40	45	51
		Torque (Nm) *(2)*	52	61	68	134	196	241	394	681	918	1340	1703
Kvs-value			171	422	607	1111	1996	2650	4889	7641	11410	13910	18427
Approx. Weight RF *(3)*			23	35	43	67	96	118	194	300	418	671	900
Approx. Weight BW			18	28	35	54	78	95	158	251	344	570	767

(1) Other schedule nos. on request
(2) Torque includes 30% of safety factor
(3) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Torques in Nm / Weights in kg
For more information about flanged and welded ends refer to page 16

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Main Valve Parameters - Class 300

SERIES 90 ANSI RANGE

Nominal Size		inch	18"	20"	24"	26"	28"	30"	32"	36"	40"	42"
		DN	450	500	600	650	700	750	800	900	1000	1050
End connection	RF	L	914	991	1143	1245	1346	1397	1524	1727	1955	2032
		ØB	432	483	584	633	684	735	779	874	976	1020
		ØD	710	775	915	970	1035	1090	1150	1270	1240	1290
		ØK	628,6	685,8	812,8	876,3	939,8	997	1054,1	1168,4	1155,7	1206,5
		ØF	533,4	584,2	692,2	749	800	857	914	1022	1086	1137
		C	58,8	62	68,3	77,8	84,2	90,5	96,9	103,2	112,8	117,5
		f	2	2	2	2	2	2	2	2	2	2
		n-Ød	24 - 1 3/8	24 - 1 3/8	24 - 1 5/8	28 - 1 3/4	28 - 1 3/4	28 - 1 7/8	28 - 2	32 - 2 1/8	32 - 1 3/4	32 - 1 3/4
	BW	L1	914	991	1143	1245	1346	1397	1524	1727	1955	2032
		Schedule No.*(1)*	STD	STD	STD	20	20	20	20	20	XS	XS
		ØB	432	483	584	633	684	735	779	874	976	1020
		ØA1	464	516	619	670	721	772	825	927	1029	1079
		ØB1	438	489	590,5	635	686	736,5	787,5	889	990,5	1041,5
	RTJ	L2	930	1010	1165	*1273*	*1371*	*1422*	*1552*	*1755*	-	-
		ØB	432	483	584	633	684	735	779	874	-	-
		ØD	710	775	915	970	1035	1090	1150	1270	-	-
		ØK	628,6	685,8	812,8	876,3	939,8	997	1054,1	1168,4	-	-
		ØG	575	635	749	810	861	917	984	1092	-	-
		ØP	533,4	584,2	692,15	749,3	800,1	857,25	914,4	1022,35	-	-
		C	58,8	62	68,3	77,8	84,2	90,5	96,9	103,2	-	-
		n-Ød	24 - 1 3/8	24 - 1 3/8	24 - 1 5/8	28 - 1 3/4	28 - 1 3/4	28 - 1 7/8	28 - 2	32 - 2 1/8	-	-
		T	11,91	13,49	16,66	19,84	19,84	19,84	23,01	23,01	-	-
		S	7,92	9,53	11,13	12,7	12,7	12,7	14,27	14,27	-	-
		R	0,8	1,5	1,5	1,5	1,5	1,5	1,5	1,5	-	-
Top works/Operation	Hand-wheel	H (open)	1964	-	-	-	-	-	-	-	-	-
		H (close)	1516	-	-	-	-	-	-	-	-	-
		ØW	600	-	-	-	-	-	-	-	-	-
	Gear with handwheel	H1	1941	2430	2605	2880	3124	3279	3484	3888	4417	4640
		h1	535	603	730	865	1015	1175	1353	1576	1829	2136
		g	513	513	513	588	588	588	588	613	613	613
		ØW1	530	530	600	600	600	600	600	800	800	1000
	With ISO 5210 mounting pad	H2 (open)	1981	2490	2673	2808	2958	3123	3289	3615	-	-
		H2 (close)	1533	1990	2055	2158	2260	2372	2490	2715	-	-
		h2	140	160	160	200	200	200	250	250	-	-
		ISO	F30	F35	F35	F40	F40	F40	F48	F48	-	-
		Tr	Tr52×8LH	Tr55×8LH	Tr65×10LH	Tr70×10LH	Tr76×10LH	Tr85×10LH	Tr90×12LH	Tr100×12LH	-	-
		Stroke	448	500	618	650	698	751	799	900	-	-
		No. of turns	56	63	62	65	70	75	67	75	-	-
		Torque (Nm) *(2)*	2059	2900	3500	4012	4500	4923	5230	5785	-	-
Kvs-value			24607	29778	43632	53001	62432	72449	85966	107543	146786	185470
Approx. Weight RF *(3)*			1194	1670	2300	2800	3200	4050	5200	7500	9000	9750
Approx. Weight BW			1028	1465	2004	2454	2792	3563	4638	6773	8521	9217

(1) Other schedule nos. on request
(2) Torque includes 30% of safety factor
(3) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Torques in Nm / Weights in kg
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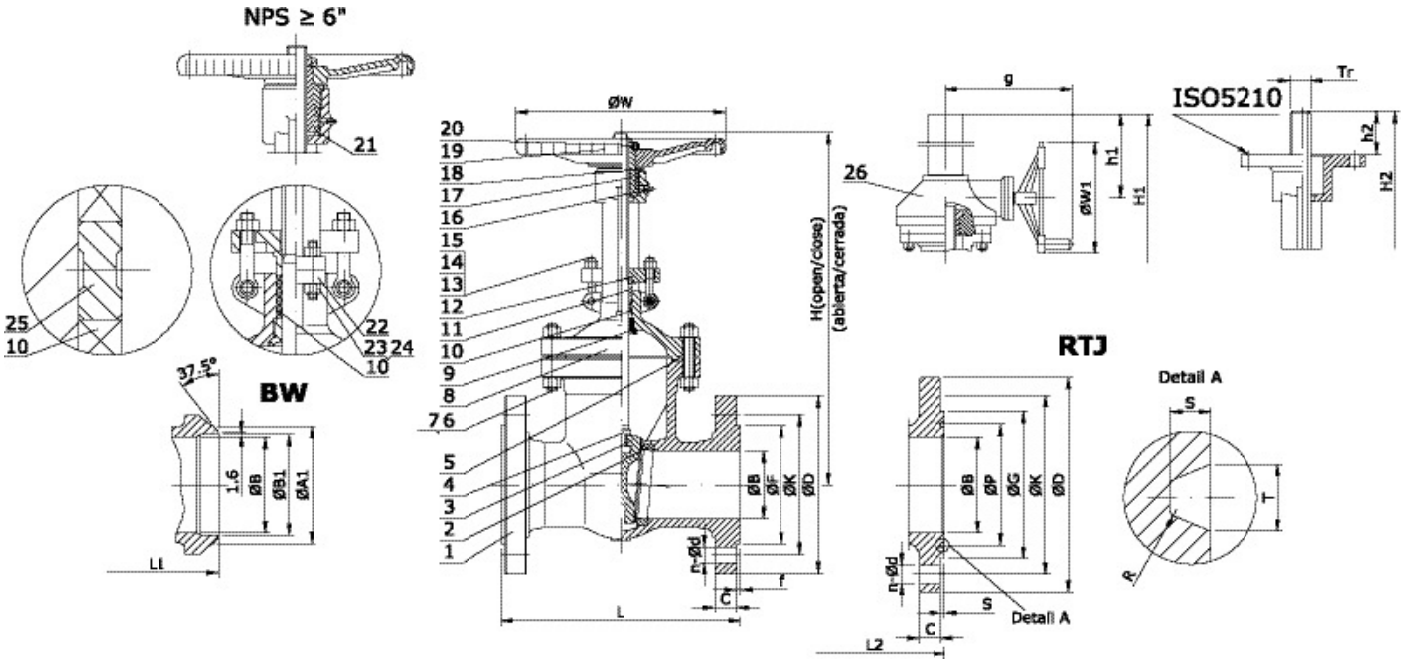
Main Parts and Materials

SERIES 90 ANSI RANGE
Class 600



Nº	Part name	A216 WCB (90A0_)	A352 LCB		A217 WC1 (90B1_)	A217 WC6 (90B8_)	A217 WC9 (90B9_)	A217 C5 (90C2_)	A217 C12 (90C4_)
			Trim 2 (90A82_)	Trim 12 (90A8G_)					
1	Body	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9	A217 C5	A217 C12
2	Seat Ring	A105	A182 F304	A182 F316+HF	A182 F1+HF	A182 F11+HF	A182 F22+HF	A182 F5+HF	A182 F9+HF
3	Wedge	A216 WCB	A351 CF8	A351 CF8M	A217 WC1+HF	A217 WC6+HF	A217 WC9+HF	A217 C5+HF	A217 C12+HF
4	Stem	A182 F6a	A182 F304	A182 F316	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a
5	Gasket	SS304 +Graphite	SS304 +Graphite		SS304 +Graphite			SS304+Graphite	
6	Bonnet Bolt (1)	A193 B7	A320 L7		A193 B16			A193 B16	
7	Bonnet Nut (1)	A194 2H	A194 4		A194 4			A194 4	
8	Bonnet	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9	A217 C5	A217 C12
9	Backseat Bushing	A182 F6a	A182 F304	A182 F316	A182 F6a			A182 F6a	A182 F6a
10	Packing	Graphite	Graphite		Graphite			Graphite	
11	Packing Gland	A182 F6a	A182 F304		A182 F6a			A182 F6a	
12	Gland Flange	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9	A217 C5	A217 C12
13	Eyebolt Pin	AISI 1025	AISI 1025		A276 410			A276 410	
14	Gland Eyebolt (1)	A193 B7	A320 L7		A193 B16			A193 B16	
15	Gland Nut (1)	A194 2H	A194 4		A194 4			A194 4	
16	Grease Nipple	Carbon Steel	Carbon Steel		Alloy Steel			Alloy Steel	
17	Stem Nut	A439 D2	A439 D2		A439 D2			A439 D2	
18	Retaining Nut	Carbon Steel	Carbon Steel		Carbon Steel			Carbon Steel	
19	Handwheel	Steel	Steel		Steel			Steel	
20	Handwheel Nut	Carbon Steel	Carbon Steel		Carbon Steel			Carbon Steel	
21	Bearings (2)	Alloy Steel	Alloy Steel		Alloy Steel			Alloy Steel	
22	Yoke (2)	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9	A217 C5	A217 C12
23	Yoke Bolt (1) (2)	A193 B7	A320 L7		A193 B16			A193 B16	
24	Yoke Nut (1) (2)	A194 2H	A194 4		A194 4			A194 4	
25	Lantern Ring (3)	A276 410	A276 304		A276 410			A276 410	
26	Gear	Assembly	Assembly		Assembly			Assembly	

(1) Bolting material for NACE MR0175 compliance available (i.e. B7M / 2HM for WCB bodies)
(2) 6" and above
(3) On request

Fig. 90A0_	Seat Surface	Wedge Surface	Stem
TRIM #1 (90A01)	A105+13Cr	A216 WCB+13Cr	A182 F6a
TRIM #5 (90A05)	A105+HF	A216 WCB+HF	A182 F6a
TRIM #8 (90A08)	A105+HF	A216 WCB+13Cr	A182 F6a

HF = Hard faced

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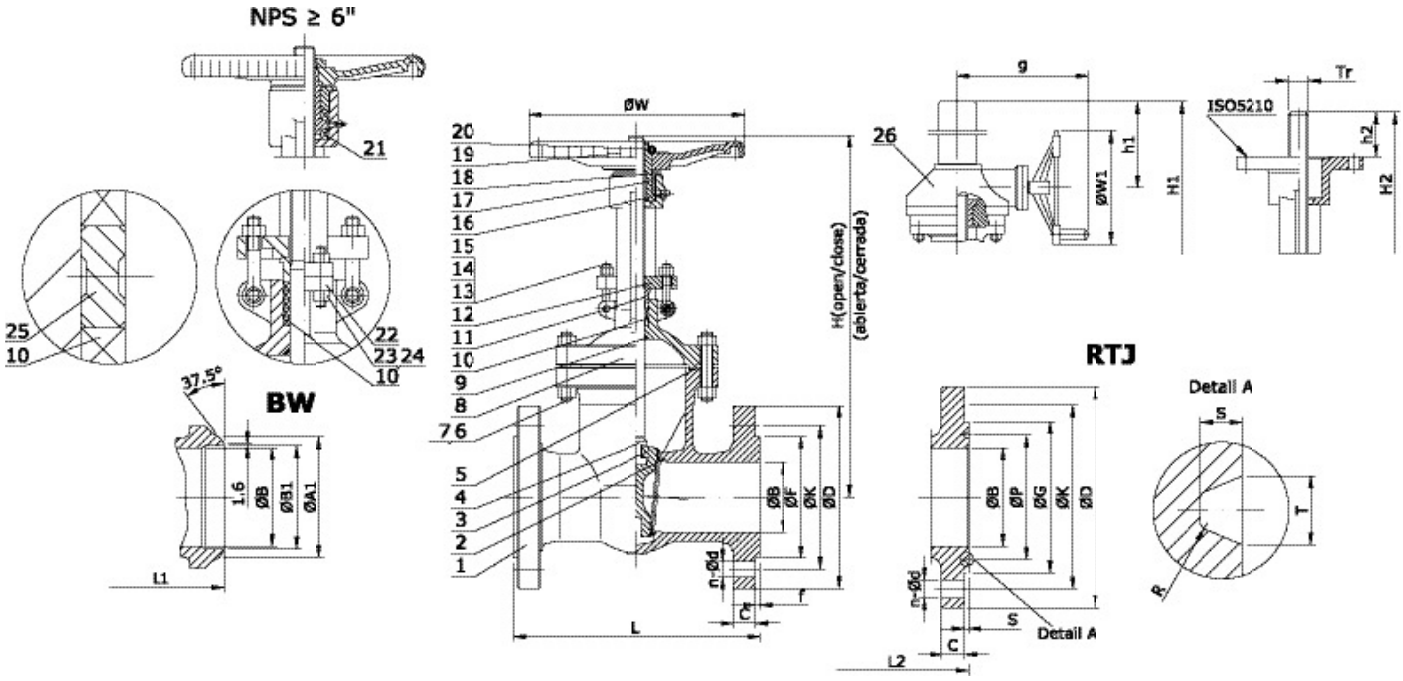
Main Parts and Materials

SERIES 90 ANSI RANGE
Class 600



Nº	Part name	CF8 (90I2_)	CF8M (90I0_)	CF3 (90I1_)	CF3M (90I7_)
1	Body	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2	Seat Ring	Integral SS304	Integral+HF	Integral SS304L	Integral SS316L
3	Wedge	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
4	Stem	A182 F304	A182 F316	A182 F304L	A182 F316L
5	Gasket	SS304+Graphite	SS316+Graphite	SS316+Graphite	SS316L+Graphite
6	Bonnet Bolt	A193 B8	A193 B8M	A193 B8M	
7	Bonnet Nut	A194 8	A194 8M	A194 8M	
8	Bonnet	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
9	Backseat Bushing	SS304	SS316	SS304L	SS316L
10	Packing	Graphite		Graphite	
11	Packing Gland	A182 F304	A182 F316	A182 F304L	A182 F316L
12	Gland Flange	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
13	Eyebolt Pin	A276 304	A276 316	A276 316	
14	Gland Eyebolt	A193 B8	A193 B8M	A193 B8M	
15	Gland Nut	A194 8	A194 8M	A194 8M	
16	Grease Nipple	St. Steel		St. Steel	
17	Stem Nut	A439 D2		A439 D2	
18	Retaining Nut	St. Steel		St. Steel	
19	Handwheel	Steel		Steel	
20	Handwheel Nut	St. Steel		St. Steel	
21	Bearings (1)	Alloy Steel		Alloy Steel	
22	Yoke (1)	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
23	Yoke Bolt (1)	A193 B8	A193 B8M	A193 B8M	
24	Yoke Nut (1)	A194 8	A194 8M	A194 8M	
25	Lantern Ring (2)	A276 304	A276 316	A276 316	A276 316L
26	Gear	Assembly		Assembly	

(1) 6" and above
(2) On request

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Main Valve Parameters - Class 600

SERIES 90 ANSI RANGE

Nominal Size		inch	2"	2-1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"
		DN	50	65	80	100	125	150	200	250	300	350	400
End connection	RF	L	292	330	356	432	508	559	660	787	838	889	991
		ØB	51	65,375	76	102	128,25	152	200	248	299	327	375
		ØD	165	190	210	275	330	355	420	510	560	605	685
		ØK	127	149,2	168,3	215,9	266,7	292,1	349,2	431,8	489	527	603,2
		ØF	92,1	104,8	127	157,2	185,7	215,9	269,9	323,8	381	412,8	469,9
		C	25,4	28,6	31,8	38,1	44,5	47,7	55,6	63,5	66,7	69,9	76,2
		f	7	7	7	7	7	7	7	7	7	7	7
		n-Ød	8 - 3/4	8 - 7/8	8 - 7/8	8 - 1	8 - 1 1/8	12 - 1 1/8	12 - 1/4	16 - 1 3/8	20 - 1 3/8	20 - 1 1/2	20 - 1 5/8
	BW	L1	292	330	356	432	508	559	660	787	838	889	991
		Schedule No.*(1)*	80	-	80	80	-	80	80	80	80	80	80
		ØB	51	65,375	76	102	128,25	152	200	248	299	327	375
		ØA1	60,3	-	91	117	-	172	223	278	329	362	413
		ØB1	49,22	-	73,5	97	-	146,5	193,5	243	289	317,5	363,5
	RTJ	L2	295	333	359	435	511	562	663	790	841	892	994
		ØB	51	65,375	76	102	128,25	152	200	248	299	327	375
		ØD	165	190	210	275	330	355	420	510	560	605	685
		ØK	127	149,2	168,3	215,9	266,7	292,1	349,2	431,8	489	527	603,2
		ØG	108	127	146	175	210	241	302	356	413	457	508
		ØP	82,55	101,6	123,83	149,23	180,98	211,12	269,88	323,85	981	419,1	469,9
		C	25,4	28,6	31,8	38,1	44,5	47,7	55,6	63,5	66,7	69,9	76,2
		n-Ød	8 - 3/4	8 - 7/8	8 - 7/8	8 - 1	8 - 1 1/8	12 - 1 1/8	12 - 1/4	16 - 1 3/8	20 - 1 3/8	20 - 1 1/2	20 - 1 5/8
		T	11,91	11,91	11,91	11,91	11,91	11,91	11,91	11,91	11,91	11,91	11,91
		S	7,92	7,92	7,92	7,92	7,92	7,92	7,92	7,92	7,92	7,92	7,92
		R	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8
Top works/Operation	Hand-wheel	H (open)	428	491	537	641	773	871	1046	1289	-	-	-
		H (close)	367	414	449	528	629	704	830	1019	-	-	-
		ØW	220	255	280	300	329	350	450	600	-	-	-
	Gear with handwheel	H1	-	-	-	-	-	913	1109	1325	1520	1730	1840
		h1	-	-	-	-	-	222	278	326	378	453	505
		g	-	-	-	-	-	440	440	440	513	513	513
		ØW1	-	-	-	-	-	310	460	460	460	530	530
	With ISO 5210 mounting pad	H2 (open)	429	491	537	649	769	857	1046	1294	1520	1730	1830
		H2 (close)	368	415	449	536	625	690	830	1024	1220	1380	1435
		h2	60	60	60	80	80	80	100	120	140	140	160
		ISO	F10	F10	F10	F14	F14	F14	F16	F25	F30	F30	F35
		Tr	Tr22×5LH	Tr26×5LH	Tr26×5LH	Tr30×6LH	Tr38×6LH	Tr38×6LH	Tr42×8LH	Tr48×8LH	Tr52×8LH	Tr58×8LH	Tr62×8LH
		Stroke	61	76,525	88	113	144,05	167	216	270	300	350	395
		No. of turns	12	15	18	19	24	28	27	34	38	44	49
		Torque (Nm) *(2)*	60	78	91	158	291	389	639	1019	1492	1923	2256
Kvs-value			171	422	607	1111	1996	2650	4701	7252	10983	13137	17239
Approx. Weight RF *(3)*			30	44	55	98	156	198	345	630	956	1150	1530
Approx. Weight BW			23	34	42	75	120	154	281	527	834	970	1302

(1) Other schedule nos. on request
(2) Torque includes 30% of safety factor
(3) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Torques in Nm / Weights in kg
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Main Valve Parameters - Class 600

SERIES 90 ANSI RANGE

Nominal Size		inch	18"	20"	24"	26"	28"	30"	32"	36"	40"	42"
		DN	450	500	600	650	700	750	800	900	1000	1050
End connection	RF	L	1092	1194	1397	1448	1549	1651	1778	2083	2149	2260
		ØB	419	464	559	603	648	695	779	874	976	1020
		ØD	745	815	940	1015	1075	1130	1195	1315	1320	1405
		ØK	654	723,9	838,2	914,4	965,2	1022,4	1079,5	1193,8	1212,8	1282,7
		ØF	533,4	584,2	692,2	749	800	857	914	1022	1111	1168
		C	82,6	88,9	101,6	108	111,2	114,3	117,5	123,9	158,8	168,3
		f	7	7	7	7	7	7	7	7	7	7
		n-Ød	20 - 1 3/4	24 - 1 3/4	24 -2	28 -2	28 - 2 1/8	28 - 2 1/8	28 - 2 3/8	28 - 2 5/8	32 - 2 3/8	28 - 2 5/8
	BW	L1	1092	1193	1397	1448	1549	1651	1778	2083	2149	2260
		Schedule No.*(1)*	80	80	80	-	-	-	-	-	-	-
		ØB	419	464	559	603	648	695	779	874	976	1020
		ØA1	464	516	619	-	-	-	-	-	-	-
		ØB1	409,5	455,5	547,5	-	-	-	-	-	-	-
	RTJ	L2	1095	1200	1407	*1461*	*1562*	*1664*	*1794*	*2099*	-	-
		ØB	419	464	559	603	648	695	779	874	-	-
		ØD	745	815	940	1015	1075	1130	1195	1315	-	-
		ØK	654	723,9	838,2	914,4	965,2	1022,4	1079,5	1193,8	-	-
		ØG	575	635	749	810	861	917	984	1092	-	-
		ØP	533,4	584,2	692,15	749,3	800,1	857,25	914,4	1022,35	-	-
		C	82,6	88,9	101,6	108	111,2	114,3	117,5	123,9	-	-
		n-Ød	20 - 1 3/4	24 - 1 3/4	24 -2	28 -2	28 - 2 1/8	28 - 2 1/8	28 - 2 3/8	28 - 2 5/8	-	-
		T	11,91	13,49	16,66	19,84	19,84	19,84	23,01	23,01	-	-
		S	7,92	9,53	11,13	12,7	12,7	12,7	14,27	14,27	-	-
		R	0,8	1,5	1,5	1,5	1,5	1,5	1,5	1,5	-	-
Top works/Operation	Hand-wheel	H (open)	-	-	-	-	-	-	-	-	-	-
		H (close)	-	-	-	-	-	-	-	-	-	-
		ØW	-	-	-	-	-	-	-	-	-	-
	Gear with handwheel	H1	2370	2600	3160	3358	3449	3650	3789	4175	4386	4496
		h1	553	601	653	735	860	923	1015	1206	1459	1565
		g	513	588	588	613	613	613	698	698	698	698
		ØW1	530	600	600	800	800	800	800	800	1000	1000
	With ISO 5210 mounting pad	H2 (open)	2355	2580	2685	2949	3115	3260	-	-	-	-
		H2 (close)	1915	2095	2155	2299	2403	2508	-	-	-	-
		h2	160	160	200	200	250	250	-	-	-	-
		ISO	F35	F35	F40	F40	F48	F48	-	-	-	-
		Tr	Tr65×10LH	Tr70×10LH	Tr76×10LH	Tr85×10LH	Tr90×12LH	Tr100×12LH	-	-	-	-
		Stroke	440	485	530	650	712	752	-	-	-	-
		No. of turns	44	49	53	65	59	63	-	-	-	-
		Torque (Nm) *(2)*	3082	3833	4652	5885	6300	6952	-	-	-	-
Kvs-value			22393	27436	39957	48120	56325	64547	72803	97650	133442	168609
Approx. Weight RF *(3)*			2110	2500	3900	4600	5200	7000	9800	11200	14300	17200
Approx. Weight BW			1822	2146	3462	4025	4554	6270	8973	10158	13326	16000

(1) Other schedule nos. on request
(2) Torque includes 30% of safety factor
(3) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Torques in Nm / Weights in kg
For more information about flanged and welded ends refer to page 16

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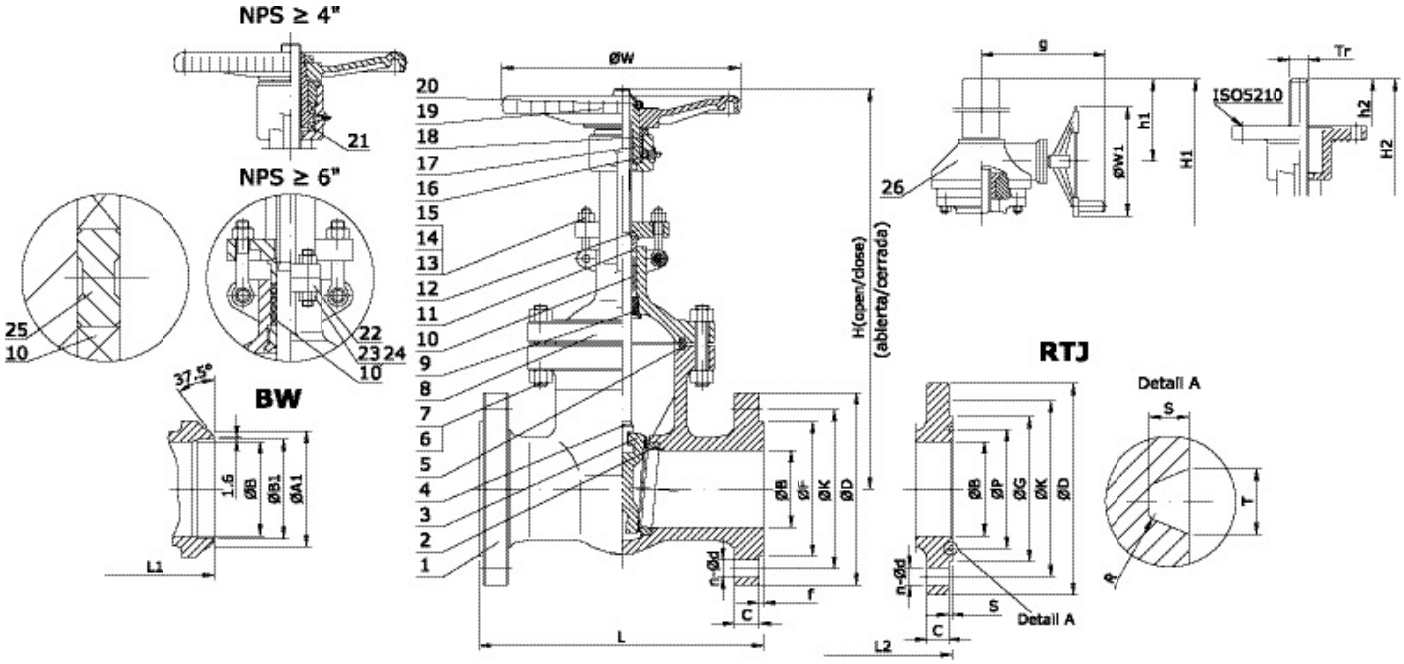
Main Parts and Materials

SERIES 90 ANSI RANGE
Class 900



Nº	Part name	A216 WCB (90A0_)	A352 LCB		A217 WC1 (90B1_)	A217 WC6 (90B8_)	A217 WC9 (90B9_)	A217 C5 (90C2_)	A217 C12 (90C4_)
			Trim 15 (90A8K_)	Trim 16 (90A8L_)					
1	Body	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9	A217 C5	A217 C12
2	Seat Ring	A105	A182 F304+HF	A182 F316+HF	A182 F1+HF	A182 F11+HF	A182 F22+HF	A182 F5+HF	A182 F9+HF
3	Wedge	A216 WCB	A351 CF8+HF	A351 CF8M+HF	A217 WC1+HF	A217 WC6+HF	A217 WC9+HF	A217 C5+HF	A217 C12+HF
4	Stem	A182 F6a	A182 F304	Nitronic 50	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a
5	Gasket	SS304	SS304		SS304			SS304+Graphite	
6	Bonnet Bolt (1)	A193 B7	A320 L7		A193 B16			A193 B16	
7	Bonnet Nut (1)	A194 2H	A194 4		A194 4			A194 4	
8	Bonnet	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9	A217 C5	A217 C12
9	Backseat Bushing	A182 F6a	A182 F304	A182 F316	A182 F6a			A182 F6a	A182 F6a
10	Packing	Graphite	Graphite		Graphite			Graphite	
11	Packing Gland	A182 F6a	A182 F304		A182 F6a			A182 F6a	
12	Gland Flange	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9	A217 C5	A217 C12
13	Eyebolt Pin	AISI 1025	AISI 1025		A276 410			A276 410	
14	Gland Eyebolt (1)	A193 B7	A320 L7		A193 B16			A193 B16	
15	Gland Nut (1)	A194 2H	A194 4		A194 4			A194 4	
16	Grease Nipple	Carbon Steel	Carbon Steel		Alloy Steel			Alloy Steel	
17	Stem Nut	A439 D2	A439 D2		A439 D2			A439 D2	
18	Retaining Nut	Carbon Steel	Carbon Steel		Carbon Steel			Carbon Steel	
19	Handwheel	Steel	Steel		Steel			Steel	
20	Handwheel Nut	Carbon Steel	Carbon Steel		Carbon Steel			Carbon Steel	
21	Bearings (2)	Alloy Steel	Alloy Steel		Alloy Steel			Alloy Steel	
22	Yoke (3)	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9	A217 C5	A217 C12
23	Yoke Bolt (1) (3)	A193 B7	A320 L7		A193 B16			A193 B16	
24	Yoke Nut (1) (3)	A194 2H	A194 4		A194 4			A194 4	
25	Lantern Ring (4)	A276 410	A276 304		A276 410			A276 410	
26	Gear	Assembly	Assembly		Assembly			Assembly	

(1) Bolting material for NACE MR0175 compliance available (i.e. B7M / 2HM for WCB bodies)
(2) Class 900: 4" and above
(3) Class 900: 6" and above
(4) On request

Fig. 90A0_	Seat Surface	Wedge Surface	Stem
TRIM #1 (90A01)	A105+13Cr	A216 WCB+13Cr	A182 F6a
TRIM #5 (90A05)	A105+HF	A216 WCB+HF	A182 F6a
TRIM #8 (90A08)	A105+HF	A216 WCB+13Cr	A182 F6a

HF = Hard faced

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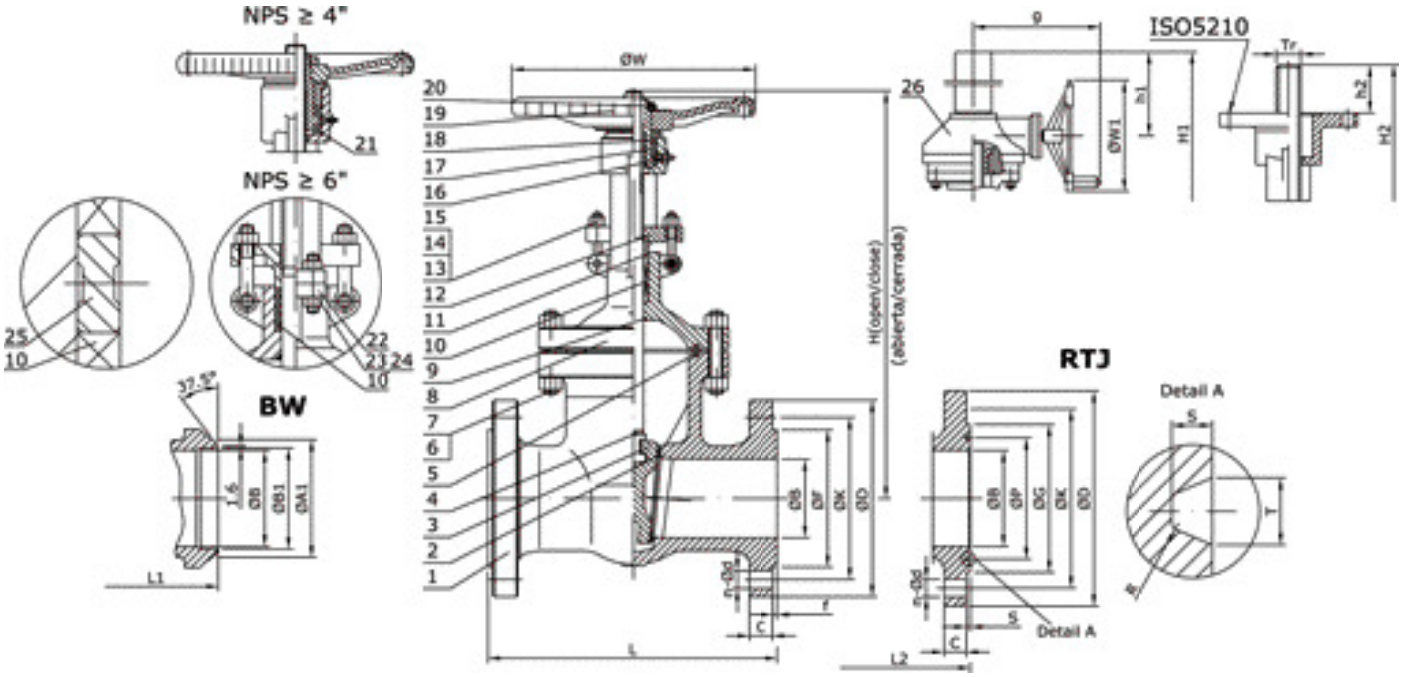
Main Parts and Materials

SERIES 90 ANSI RANGE
Class 900



Nº	Part name	CF8 (90I2_)	CF8M (90I0_)	CF3 (90I1_)	CF3M (90I7_)
1	Body	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2	Seat Ring	Integral+HF	Integral+HF	Integral+HF	Integral+HF
3	Wedge	A351 CF8+HF	A351 CF8M+HF	A351 CF3+HF	A351 CF3M+HF
4	Stem	A182 F304	Nitronic 50	A182 F304L	Nitronic 50
5	Gasket	SS304	SS316	SS316	SS316L
6	Bonnet Bolt	A193 B8	A193 B8M	A193 B8M	
7	Bonnet Nut	A194 8	A194 8M	A194 8M	
8	Bonnet	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
9	Backseat Bushing	SS304	SS316	SS304L	SS316L
10	Packing	Graphite		Graphite	
11	Packing Gland	A182 F304	A182 F316	A182 F304L	A182 F316L
12	Gland Flange	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
13	Eyebolt Pin	A276 304	A276 316	A276 316	
14	Gland Eyebolt	A193 B8	A193 B8M	A193 B8M	
15	Gland Nut	A194 8	A194 8M	A194 8M	
16	Grease Nipple	St. Steel		St. Steel	
17	Stem Nut	A439 D2		A439 D2	
18	Retaining Nut	St. Steel		St. Steel	
19	Handwheel	Steel		Steel	
20	Handwheel Nut	St. Steel		St. Steel	
21	Bearings (1)	Alloy Steel		Alloy Steel	
22	Yoke (2)	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
23	Yoke Bolt (2)	A193 B8	A193 B8M	A193 B8M	
24	Yoke Nut (2)	A194 8	A194 8M	A194 8M	
25	Lantern Ring (3)	A276 304	A276 316	A276 316	A276 316L
26	Gear	Assembly		Assembly	

(1) Class 900: 4" and above; (2) Class 900: 6" and above; (3) On request

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Main Valve Parameters - Class 900

SERIES 90 ANSI RANGE

Nominal Size		inch	2"	2-1/2"	3"	4"	5"	6"	8"	10"	12"
		DN	50	65	80	100	125	150	200	250	300
End connection	RF	L	368	419	381	457	559	610	737	838	965
		ØB	48	62,375	73	98	123,2	146	191	238	282
		ØD	215	245	240	290	350	380	470	545	610
		ØK	165,1	190,5	190,5	235	279,4	317,5	393,7	469,9	533,4
		ØF	92,1	104,8	127	157,2	185,7	215,9	269,9	323,8	381
		C	38,1	41,3	38,1	44,5	50,8	55,6	63,5	69,9	79,4
		f	7	7	7	7	7	7	7	7	7
		n-Ød	8 - 7/8	8 -1	8 - 7/8	8 - 1 1/8	8 - 1 1/4	12 - 1 1/8	12 - 1 3/8	16 - 1 3/8	20 - 1 3/8
	BW	L1	368		381	457		610	737	838	965
		Schedule No.*(1)*	160	-	160	120	-	120	100	100	100
		ØB	48	62,375	73	98	123,2	146	191	238	282
		ØA1	60,3	-	91	117	-	172	223	278	329
		ØB1	38,16	-	66,5	92	-	140	189	236,5	281
	RTJ	L2	371	422	384	460	562	613	740	841	968
		ØB	48	62,375	73	98	123,2	146	191	238	282
		ØD	215	245	240	290	350	380	470	545	610
		ØK	165,1	190,5	190,5	235	279,4	317,5	393,7	469,9	533,4
		ØG	124	137	156	181	216	241	308	362	419
		ØP	95,25	107,95	123,83	149,23	180,98	211,12	269,88	323,85	381
		C	38,1	41,3	38,1	44,5	50,8	55,6	63,5	69,9	79,4
		n-Ød	8 - 7/8	8 -1	8 - 7/8	8 - 1 1/8	8 - 1 1/4	12 - 1 1/8	12 - 1 3/8	16 - 1 3/8	20 - 1 3/8
		T	11,91	11,91	11,91	11,91	11,91	11,91	11,91	11,91	11,91
		S	7,92	7,92	7,92	7,92	7,92	7,92	7,92	7,92	7,92
		R	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8
Top works/Operation	Hand-wheel	H (open)	516	601	663	770	-	-	-	-	-
		H (close)	471	539	590	673	-	-	-	-	-
		ØW	250	279	300	350	-	-	-	-	-
	Gear with handwheel	H1	-	-	-	-	-	1035	1195	1354	1562
		h1	-	-	-	-	-	228	278	341	385
		g	-	-	-	-	-	440	440	513	513
		ØW1	-	-	-	-	-	460	460	530	530
	With ISO 5210 mounting pad	H2 (open)	510	611	686	770	825	865	965	1280	1482
		H2 (close)	466	551	613	673	697	715	768	1042	1175
		h2	60	72	80	80	103	120	120	140	140
		ISO	F10	F14	F14	F14	F25	F25	F25	F30	F30
		Tr	Tr26×5LH	Tr30×6LH	Tr30×6LH	Tr32×6LH	Tr42×8LH	Tr42×8LH	Tr48×8LH	Tr55×8LH	Tr58×8LH
		Stroke	44	61	73	97	127	150	197	238	307
		No. of turns	9	10	12	16	16	19	25	30	38
		Torque (Nm) *(2)*	105	128	145	240	565	805	1162	1485	1806
Kvs-value			132	376	556	1026	1837	2436	4295	6709	9829
Approx. Weight RF *(3)*			100	114	125	170	311	415	620	880	1400
Approx. Weight BW			86	99	108	142	265	355	518	738	1204

(1) Other schedule nos. on request
(2) Torque includes 30% of safety factor
(3) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Torques in Nm / Weights in kg
For more information about flanged and welded ends refer to page 16

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Main Valve Parameters - Class 900

SERIES 90 ANSI RANGE

Nominal Size		inch	14"	16"	18"	20"	24"	26"	28"	30"
		DN	350	400	450	500	600	650	700	750
End connection	RF	L	1029	1130	1219	1321	1549	1574	1663	1778
		ØB	311	356	400	445	533	578	622	667
		ØD	640	705	785	855	1040	1085	1170	1230
		ØK	558,8	616	685,8	749,3	901,7	952,5	1022,4	1085,8
		ØF	412,8	469,9	533,4	584,2	692,2	749	800	857
		C	85,8	88,9	101,6	108	139,7	139,7	142,9	149,3
		f	7	7	7	7	7	7	7	7
		n-Ød	20 - 1 1/2	20 - 1 5/8	20 - 1 7/8	20 - 2	20 - 2 1/2	20 - 2 7/8	20 - 3 1/8	20 - 3 1/8
	BW	L1	1029	1130	1219	1321	1549	1574	1663	1778
		Schedule No.*(1)*	100	100	100	100	100	-	-	-
		ØB	311	356	400	445	533	578	622	667
		ØA1	362	413	464	516	619	-	-	-
		ØB1	308	354	398,5	443	532	-	-	-
	RTJ	L2	1039	1140	1232	1334	*1568*	-	-	-
		ØB	311	356	400	445	533	578	622	667
		ØD	640	705	785	855	1040	1085	1170	1230
		ØK	558,8	616	685,8	749,3	901,7	952,5	1022,4	1085,8
		ØG	467	524	594	648	772	832	889	946
		ØP	419,1	469,9	533,4	584,2	692,15	749,3	800,1	857,25
		C	85,8	88,9	101,6	108	139,7	139,7	142,9	149,3
		n-Ød	20 - 1 1/2	20 - 1 5/8	20 - 1 7/8	20 - 2	20 - 2 1/2	20 - 2 7/8	20 - 3 1/8	20 - 3 1/8
		T	16,66	16,66	19,84	19,84	26,97	30,18	33,32	33,32
		S	11,13	11,13	12,7	12,7	15,88	17,48	17,48	17,48
		R	1,5	1,5	1,5	1,5	2,4	2,3	2,3	2,3
Top works/Operation	Hand-wheel	H (open)	-	-	-	-	-	-	-	-
		H (close)	-	-	-	-	-	-	-	-
		ØW	-	-	-	-	-	-	-	-
	Gear with handwheel	H1	1804	2062	2232	2334	2489	2946	3251	3454
		h1	458	503	615	723	916	1015	1150	1235
		g	513	513	588	588	613	613	698	698
		ØW1	600	600	600	600	800	800	800	1000
	With ISO 5210 mounting pad	H2 (open)	1654	1917	2348	2452	2536	-	-	-
		H2 (close)	1343	1737	1997	2056	2142	-	-	-
		h2	160	160	160	200	200	-	-	-
		ISO	F35	F35	F35	F40	F40	-	-	-
		Tr	Tr62×8LH	Tr65×10LH	Tr70×10LH	Tr76×10LH	Tr85×10LH	-	-	-
		Stroke	311	180	351	396	394	-	-	-
		No. of turns	39	18	35	40	39	-	-	-
		Torque (Nm) *(2)*	2235	2980	3675	4555	5760	-	-	-
Kvs-value			11880	15513	20436	25256	36385	44587	51709	59361
Approx. Weight RF *(3)*			1620	2300	3800	5200	6300	7000	9800	14500
Approx. Weight BW			1397	2031	3440	4752	5484	6087	8716	13264

(1) Other schedule nos. on request
(2) Torque includes 30% of safety factor
(3) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Torques in Nm / Weights in kg
For more information about flanged and welded ends refer to page 16

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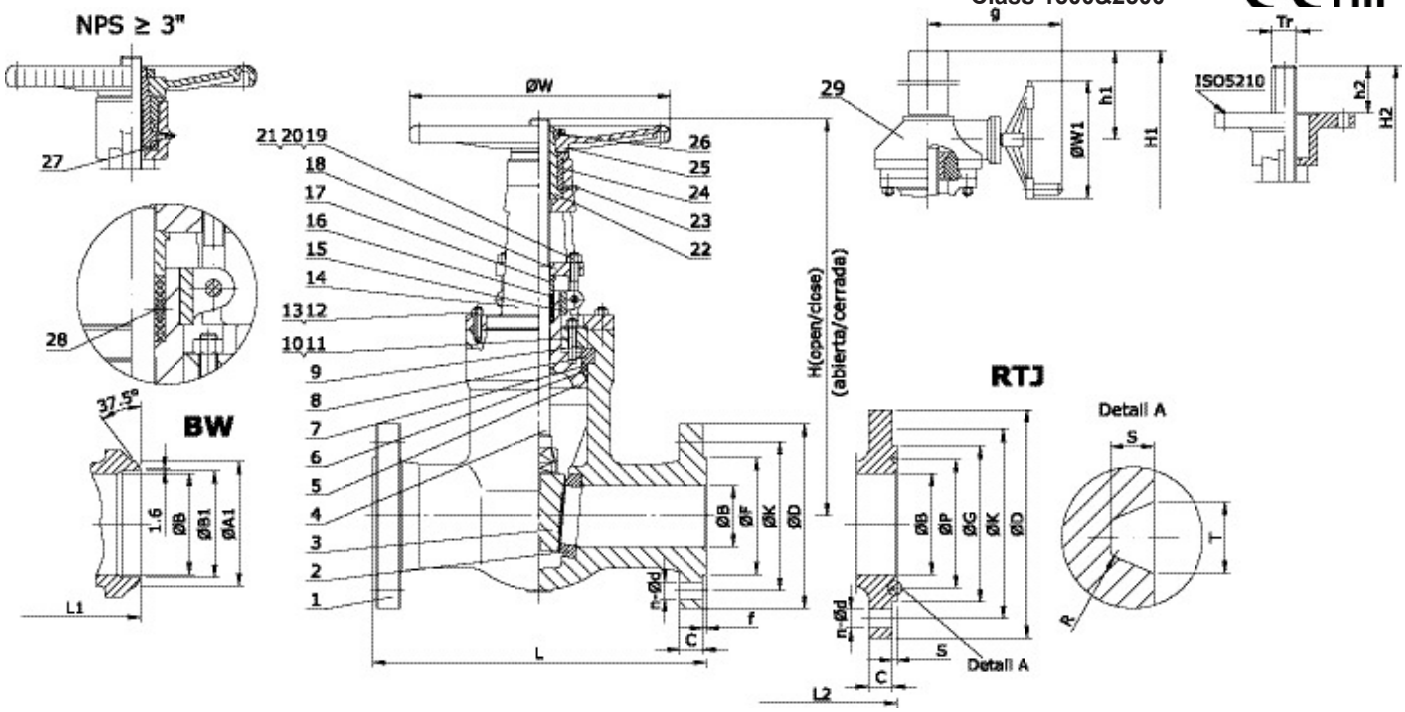
Main Parts and Materials

SERIES 91 ANSI RANGE
Class 1500&2500



Nº	Part name	A216 WCB (90A0_)	A352 LCB		A217 WC1 (90B1_)	A217 WC6 (90B8_)	A217 WC9 (90B9_)	A217 C5 (90C2_)	A217 C12 (90C4_)
			Trim 15 (90A8K_)	Trim 16 (90A8L_)					
1	Body	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9	A217 C5	A217 C12
2	Seat Ring	A105	A182 F304+HF	A182 F316+HF	A182 F1+HF	A182 F11+HF	A182 F22+HF	A182 F5+HF	A182 F9+HF
3	Wedge	A216 WCB	A351 CF8+HF	A351 CF8M+HF	A217 WC1+HF	A217 WC6+HF	A217 WC9+HF	A217 C5+HF	A217 C12+HF
4	Stem	A182 F6a	A182 F304	Nitronic 50	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a
5	Bonnet	A105	A350 LF2		A182 F1	A182 F11	A182 F22	A217 C5	
6	Gasket	SS304 +Graphite	SS304 +Graphite			SS304 +Graphite		A182 F5+HF	
7	Gasket Washer	A182 F6a	A182 F304			A182 F6a		A217 C5+HF	
8	Split Ring	A105	A350 LF2		A182 F1	A182 F11	A182 F22	A182 F6a	A182 F6a
9	Retainer Ring	A105	A350 LF2		A182 F1	A182 F11	A182 F22	A182 F5	A182 F9
10	Screw (1)	A193 B7	A320 L7			A193 B16		SS304+Graphite	
11	Nut (1)	A194 2H	A194 4			A194 4		A182 F6a	
12	Bolt (1)	A193 B7	A320 L7			A193 B16		A182 F5	
13	Nut (1)	A194 2H	A194 4			A194 4		A182 F5	
14	Yoke	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9	A193 B16	
15	Ear Seat	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9	A194 4	
16	Packing	Graphite	Graphite			Graphite		Graphite	
17	Packing Gland	A182 F6a	A182 F304			A182 F6a		A182 F6a	
18	Gland Flange	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9	A217 C5	
19	Eyebolt Pin	AISI 1025	AISI 1025			A276 410		A276 410	
20	Gland Eyebolt (1)	A193 B7	A320 L7			A193 B16		A193 B16	
21	Gland Nut (1)	A194 2H	A194 4			A194 4		A194 4	
22	Stem Nut	A439 D2	A439 D2			A439 D2		A439 D2	
23	Grease Nipple	Carbon Steel	Carbon Steel			Alloy Steel		Alloy Steel	
24	Retaining Nut	Carbon Steel	Carbon Steel			Carbon Steel		Carbon Steel	
25	Handwheel	Steel	Steel			Steel		Steel	
26	Handwheel Nut	Carbon Steel	Carbon Steel			Carbon Steel		Carbon Steel	
27	Bearings (2)	Alloy Steel	Alloy Steel			Alloy Steel		Alloy Steel	
28	Lantern Ring (3)	A276 410	A276 304			A276 410		A276 410	
29	Gear	Assembly	Assembly			Assembly		Assembly	

(1) Bolting material for NACE MR0175 compliance available (i.e. B7M / 2HM for WCB bodies)
(2) 3" and above
(3) On request

Fig. 91A0_	Seat Surface	Wedge Surface	Stem
TRIM #1 (91A01)	A105+13Cr	A216 WCB+13Cr	A182 F6a
TRIM #5 (91A05)	A105+HF	A216 WCB+HF	A182 F6a
TRIM #8 (91A08)	A105+HF	A216 WCB+13Cr	A182 F6a

HF = Hard faced

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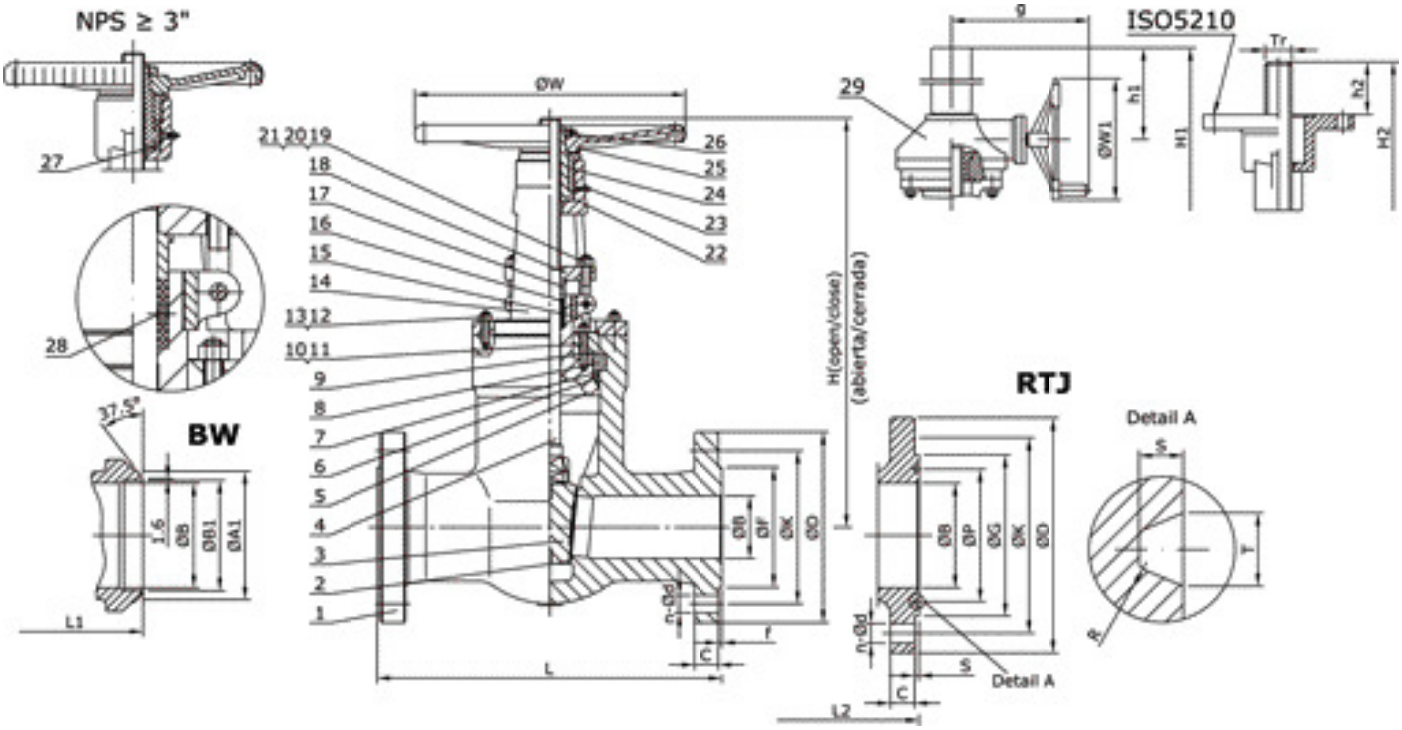
Main Parts and Materials

SERIES 91 ANSI RANGE
Class 1500&2500



Nº	Part name	CF8 (91I2_)	CF8M (91I0_)	CF3 (91I1_)	CF3M (91I7_)
1	Body	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2	Seat Ring	Integral+HF	Integral SS316	Integral+HF	
3	Wedge	A351 CF8+HF	A351 CF8M	A351 CF3+HF	A351 CF3M+HF
4	Stem	A182 F304	A182 F316	A182 F304L	Nitronic 50
5	Bonnet	A182 F304	A182 F316	A182 F304L	A182 F316L
6	Gasket	SS304+Graphite	SS316+Graphite	SS316+Graphite	SS316L+Graphite
7	Gasket Washer	A182 F304	A182 F316	A182 F304L	A182 F316L
8	Split Ring	A182 F304	A182 F316	A182 F304L	A182 F316L
9	Retainer Ring	A182 F304	A182 F316	A182 F304L	A182 F316L
10	Screw	A193 B8		A193 B8M	
11	Nut	A194 8	A194 8M	A194 8M	
12	Bolt	A193 B8	A193 B8M	A193 B8M	
13	Nut	A194 8	A194 8M	A194 8M	
14	Yoke	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
15	Ear Seat	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
16	Packing	Graphite		Graphite	
17	Packing Gland	A182 F304		A182 F304L	A182 F316L
18	Gland Flange	A351 CF8		A351 CF3	A351 CF3M
19	Eyebolt Pin	A276 304		A276 316	
20	Gland Eyebolt	A193 B8		A193 B8M	
21	Gland Nut	A194 8		A194 8M	
22	Stem Nut	A439 D2		A439 D2	
23	Grease Nipple	St. Steel		St. Steel	
24	Retaining Nut	St. Steel		St. Steel	
25	Handwheel	Steel		Steel	
26	Handwheel Nut	St. Steel		St. Steel	
27	Bearings (1)	Alloy Steel		Alloy Steel	
28	Lantern Ring (2)	A276 304		A276 316	A276 316L
29	Gear	Assembly		Assembly	

(1) 3" and above
(2) On request

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The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 1500

SERIES 91 ANSI RANGE

Nominal Size		inch	2"	2-1/2"	3"	4"	5"	6"	8"	10"
		DN	50	65	80	100	125	150	200	250
End connection	RF	L	368	419	470	546	673	705	832	991
		ØB	48	60,65	70	92	115,1	136	178	222
		ØD	215	245	265	310	375	395	485	585
		ØK	165,1	190,5	203,2	241,3	292,1	317,5	393,7	482,6
		ØF	92,1	104,8	127	157,2	185,7	215,9	269,9	323,8
		C	38,1	41,3	47,7	54	73,1	82,6	92,1	108
		f	7	7	7	7	7	7	7	7
		n-Ød	8 - 7/8	8 -1	8 - 1 1/4	8 - 1 3/8	8 - 1 5/8	12 - 1 1/2	12 - 1 3/4	12 - 2
	BW	L1	368	419	470	546	673	705	832	991
		Schedule No.*(1)*	160	-	160	120	-	120	120	120
		ØB	48	60,65	70	92	115,1	136	178	222
		ØA1	60,3	-	91	117	-	172	223	278
		ØB1	38,16	-	66,5	92	-	140	182,5	230
	RTJ	L2	371	422	473	549	676	711	842	1001
		ØB	48	60,65	70	92	115,1	136	178	222
		ØD	215	245	265	310	375	395	485	585
		ØK	165,1	190,5	203,2	241,3	292,1	317,5	393,7	482,6
		ØG	124	137	168	194	229	248	318	371
		ØP	95,25	107,95	136,53	161,93	193,68	211,14	269,88	323,85
		C	38,1	41,3	47,7	54	73,1	82,6	92,1	108
		n-Ød	8 - 7/8	8 -1	8 - 1 1/4	8 - 1 3/8	8 - 1 5/8	12 - 1 1/2	12 - 1 3/4	12 - 2
		T	11,91	11,91	11,91	11,91	11,91	13,49	16,66	16,66
		S	7,92	7,92	7,92	7,92	7,92	9,53	11,13	11,13
		R	0,8	0,8	0,8	0,8	0,8	1,5	1,5	1,5
Top works/Operation	Hand-wheel	H (open)	516	629	713	853	-	-	-	-
		H (close)	471	549	607	756	-	-	-	-
		ØW	250	336	400	450	-	-	-	-
	Gear with handwheel	H1	-	-	-	802	941	1043	1179	1419
		h1	-	-	-	162	192	214	281	367
		g	-	-	-	440	440	440	513	513
		ØW1	-	-	-	310	396	460	530	600
	With ISO 5210 mounting pad	H2 (open)	518	632	716	863	949	1012	1444	1635
		H2 (close)	476	553	610	766	851	914	1244	1385
		h2	60	72	80	80	103	120	140	180
		ISO	F10	F14	F14	F14	F25	F25	F30	F35
		Tr	Tr26×5LH	Tr32×6LH	Tr32×6LH	Tr36×6LH	Tr46×8LH	Tr46×8LH	Tr55×8LH	Tr65×10LH
		Stroke	42	79	106	97	98	98	200	250
		No. of turns	8	13	18	16	12	12	25	25
		Torque (Nm) *(2)*	189	241	279	555	748	890	1333	2851
Kvs-value			171	368	513	915	1617	2137	3735	5855
Approx. Weight RF *(3)*			100	140	170	240	438	585	830	1650
Approx. Weight BW			86	119	144	204	375	501	687	1405

(1) Other schedule nos. on request
(2) Torque includes 30% of safety factor
(3) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Torques in Nm / Weights in kg
For more information about flanged and welded ends refer to page 16

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Main Valve Parameters - Class 1500

SERIES 91 ANSI RANGE

Nominal Size		inch	12"	14"	16"	18"	20"	24"	26"	28"
		DN	300	350	400	450	500	600	650	700
End connection	RF	L	1130	1257	1384	1537	1664	1943	*(4)*	*(4)*
		ØB	263	289	330	371	416	498	540	584
		ØD	675	750	825	915	985	1170	*(4)*	*(4)*
		ØK	571,5	635	704,8	774,7	831,8	990,6	*(4)*	*(4)*
		ØF	381	412,8	469,9	533,4	584,2	692,2	749	800
		C	123,9	133,4	146,1	162	177,8	203,2	*(4)*	*(4)*
		f	7	7	7	7	7	7	7	7
		n-Ød	16 - 2 1/8	16 - 2 3/8	16 - 2 5/8	16 - 2 7/8	16 - 3 1/8	16 - 3 5/8	*(4)*	*(4)*
	BW	L1	1130	1257	1384	1537	1664	1943	*(4)*	*(4)*
		Schedule No.*(1)*	120	120	120	120	120	120	-	-
		ØB	263	289	330	371	416	498	540	584
		ØA1	329	362	413	464	516	619	-	-
		ØB1	273	300	344,5	387,5	432	517,5	-	-
	RTJ	L2	1146	1276	*1406*	*1559*	*1686*	*1971*	-	-
		ØB	263	289	330	371	416	498	-	-
		ØD	675	750	825	915	985	1170	-	-
		ØK	571,5	635	704,8	774,7	831,8	990,6	-	-
		ØG	438	489	546	613	673	794	-	-
		ØP	381	419,1	469,9	533,4	584,2	692,15	-	-
		C	123,9	133,4	146,1	162	177,8	203,2	-	-
		n-Ød	16 - 2 1/8	16 - 2 3/8	16 - 2 5/8	16 - 2 7/8	16 - 3 1/8	16 - 3 5/8	-	-
		T	23,01	26,97	30,18	30,18	33,32	36,53	-	-
		S	14,27	15,88	17,48	17,48	17,48	20,62	-	-
		R	1,5	2,4	2,4	2,4	2,4	2,4	-	-
Top works/Operation	Hand-wheel	H (open)	-	-	-	-	-	-	-	-
		H (close)	-	-	-	-	-	-	-	-
		ØW	-	-	-	-	-	-	-	-
	Gear with handwheel	H1	1910	1980	2035	2107	2209	2387	2794	2850
		h1	408	436	477	518	625	736	888	1002
		g	588	588	588	613	613	698	698	698
		ØW1	600	600	600	600	800	800	1000	1000
	With ISO 5210 mounting pad	H2 (open)	1806	2081	2342	2619	-	-	-	-
		H2 (close)	1506	1789	1981	2209	-	-	-	-
		h2	180	220	220	220	-	-	-	-
		ISO	F35	F40	F40	F40	-	-	-	-
		Tr	Tr70×10LH	Tr76×10LH	Tr76×10LH	Tr85×12LH	-	-	-	-
		Stroke	300	292	361	410	-	-	-	-
		No. of turns	30	29	36	34	-	-	-	-
		Torque (Nm) *(2)*	3505	4322	4650	6500	-	-	-	-
Kvs-value			8530	10256	13397	17641	22120	26645	38901	45573
Approx. Weight RF *(3)*			2100	2800	3850	5225	6310	9050	-	-
Approx. Weight BW			1736	2289	3170	4341	5194	7238	-	-

(1) Other schedule nos. on request
(2) Torque includes 30% of safety factor
(3) RTJ weight increases approx. by 10%
(4) NPS26 & NPS28 acc.to the agreed between the customer and the supplier

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Torques in Nm / Weights in kg
For more information about flanged and welded ends refer to page 16

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The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 2500

SERIES 91 ANSI RANGE

Nominal Size		inch	2"	2-1/2"	3"	4"	5"	6"	8"	10"	12"
		DN	50	65	80	100	125	150	200	250	300
End connection	RF	L	451	508	578	673	794	914	1022	1270	1422
		ØB	38	48,925	57	73	92,95	111	146	184	219
		ØD	235	265	305	355	420	485	550	675	760
		ØK	171,4	196,8	228,6	273	323,8	368,3	438,2	539,8	619,1
		ØF	92,1	104,8	127	157,2	185,7	215,9	269,9	323,8	381
		C	50,9	57,2	66,7	76,2	92,1	108	127	165,1	184,2
		f	7	7	7	7	7	7	7	7	7
		n-Ød	8 - 1 1/8	8 - 1 1/4	8 - 1 3/8	8 - 1 5/8	8 - 1 7/8	8 - 2 1/8	12 - 2 1/8	12 - 2 5/8	12 - 2 7/8
	BW	L1	451	508	578	673	794	914	1022	1270	1422
		Schedule No.*(1)*	160	-	160	160	-	160	160	160	160
		ØB	38	48,925	57	73	92,95	111	146	184	219
		ØA1	60,3	-	91	117	-	172	223	278	329
		ØB1	42,82	-	66,5	87,5	-	132	173	216	257
	RTJ	L2	454	514	584	683	807	927	1038	1292	1444
		ØB	38	48,925	57	73	92,95	111	146	184	219
		ØD	235	265	305	355	420	485	550	675	760
		ØK	171,4	196,8	228,6	273	323,8	368,3	438,2	539,8	619,1
		ØG	133	149	168	203	241	279	340	425	495
		ØP	101,6	111,13	127	157,18	190,5	228,6	279,4	342,9	406,4
		C	50,9	57,2	66,7	76,2	92,1	108	127	165,1	184,2
		n-Ød	8 - 1 1/8	8 - 1 1/4	8 - 1 3/8	8 - 1 5/8	8 - 1 7/8	8 - 2 1/8	12 - 2 1/8	12 - 2 5/8	12 - 2 7/8
		T	11,91	13,49	13,49	16,66	19,84	19,84	23,01	30,18	33,32
		S	7,92	9,53	9,53	11,13	12,7	12,7	14,27	17,48	17,48
		R	0,8	1,5	1,5	1,5	1,5	1,5	1,5	2,4	2,4
Top works/Operation	Hand-wheel	H (open)	630	722	790	900	-	-	-	-	-
		H (close)	590	661	713	806	-	-	-	-	-
		ØW	400	458	500	600	-	-	-	-	-
	Gear with handwheel	H1	590	701	783	915	1110	1254	1374	1685	1890
		h1	185	194	200	306	349	381	435	467	512
		g	325	346	362	362	407	440	513	588	613
		ØW1	310	310	310	460	460	460	530	530	600
	With ISO 5210 mounting pad	H2 (open)	630	723	792	947	1046	1120	1202	1373	1542
		H2 (close)	590	662	715	853	921	971	1003	1125	1242
		h2	60	72	80	80	103	120	180	250	250
		ISO	F10	F14	F14	F14	F25	F25	F35	F40	F40
		Tr	Tr26×5LH	Tr30×6LH	Tr32×6LH	Tr36×6LH	Tr48×8LH	Tr48×8LH	Tr62×8LH	Tr76×10LH	Tr85×12LH
		Stroke	40	61	77	94	126	149	199	248	300
		No. of turns	8	10	13	16	16	19	25	25	25
		Torque (Nm) *(2)*	170	217	251	583	943	1209	2445	4212	6205
Kvs-value			140	195	235	393	708	940	1684	2675	3876
Approx. Weight RF *(3)*			121	164	195	230	512	720	1295	2250	4200
Approx. Weight BW			98	124	143	151	359	514	1264	1668	3370

(1) Other schedule nos. on request
(2) Torque includes 30% of safety factor
(3) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Torques in Nm / Weights in kg
For more information about flanged and welded ends refer to page 16

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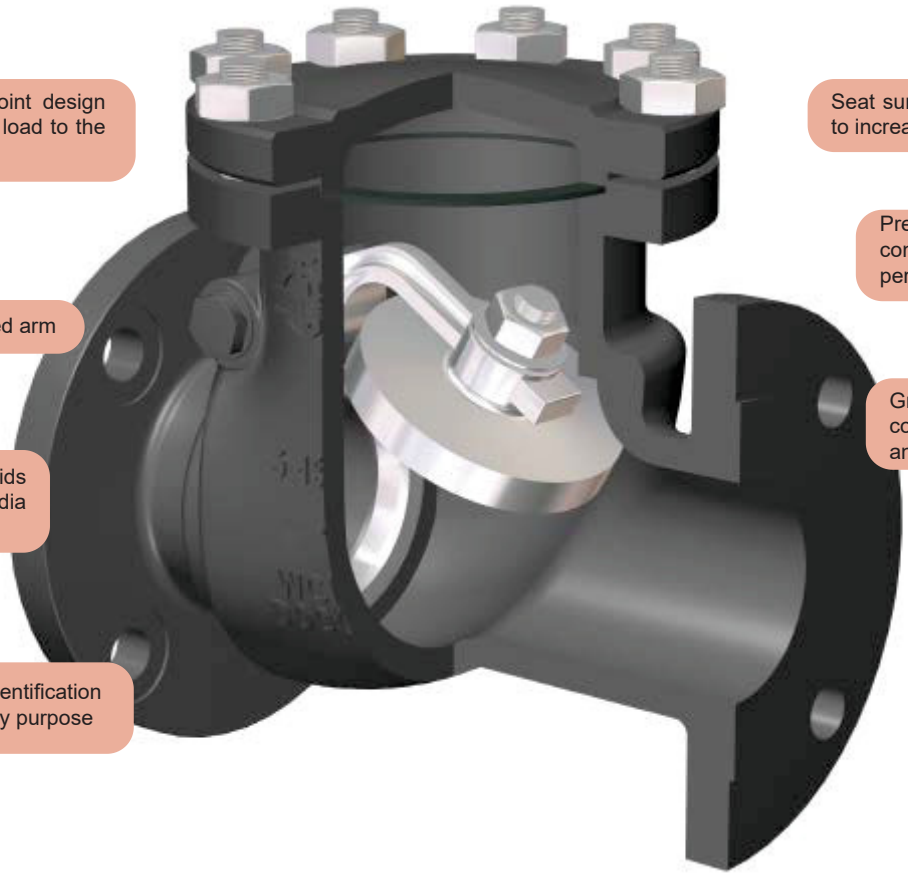
Product suitability must be verified, contact manufacturer for information

Gate Valve with AUMA Actuator

SERIES 3S/31 ANSI RANGE

Check Valves are self-acting valves used for preventing the reverse of flow in a piping system. Series 3S are Swing Check Valves that operate by means of its articulated disc. They are featured by its rugged and simple design and easy maintenance.



- Body to cover joint design to apply uniform load to the gasket
- Seat surface can be hardened to increase wear resistance
- Precise machining of components for optimal performance
- Disc hold by bolted arm
- Great versatility in end connections, materials and configurations
- Vertical seat, avoids trapping of media particles
- Marking for identification and full traceability purpose

Main Features / Reference Standards

Design: API 6D / BS 1868
Pressure Rating: 150/300/600/900/1500/2500#
Face to face length: ASME B16.10
Valve end connections: Flanged RF or RTJ to ASME B16.5 (*size ≤ 24"*) / ASME B16.47 (*size > 24"*)
Welded BW to ASME B16.25
Marking: MSS SP-25
Inspections & Tests: API 598
Primer painted grey color similar to RAL 7037 for protection during storage and transport (carbon steel body/bonnet)
Product compliant with Directive 2014/68/EU on Pressure Equipment (PED)
for European Union territory

Main Duties / Limits of use

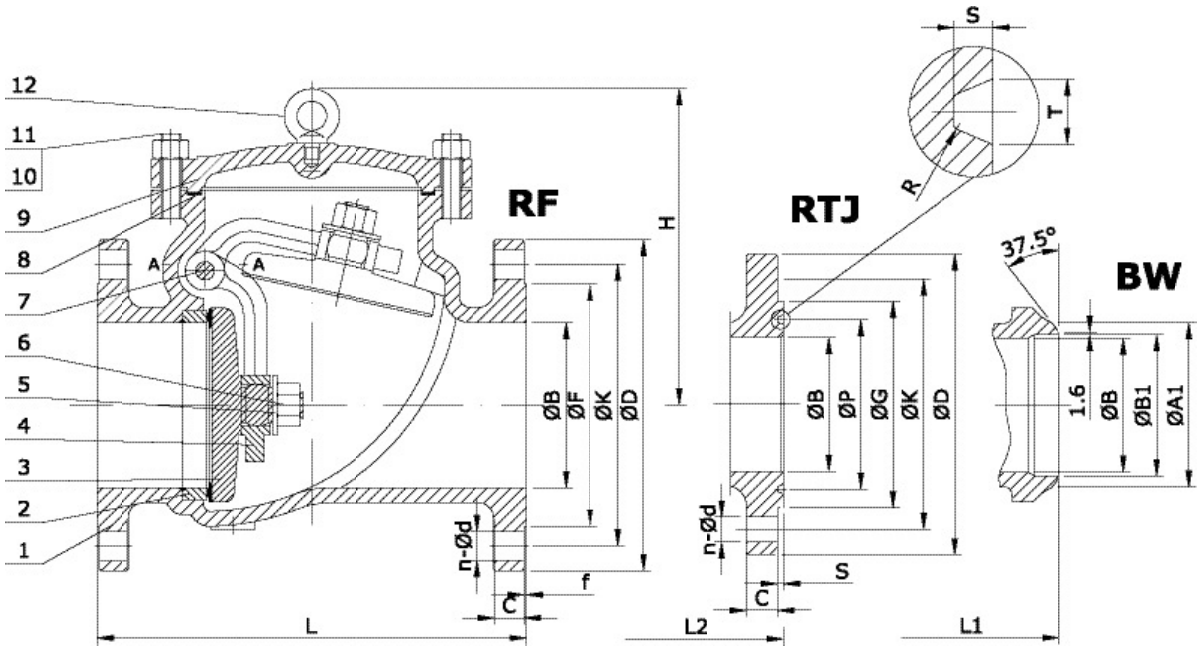
Fluids compatible with materials of construction. Questions referring to chemical resistance, please consult us
Pressure / Temperature Rating to ASME B16.34. See section "Engineering & Performance Data"
For products compliant with Directive 2014/68/EU, observe also limits acc. to Annex II tables 6 & 8 (gases & liquids group 1*) and tables 7 & 9 (gases & liquids group 2*) up to category III
**Classification of fluids (group 1 or 2) acc. to Directive 2014/68/EU, Article 13*

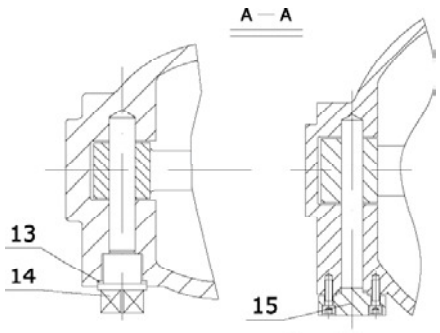
Options

Diverse materials of construction and trim combinations, special designs, execution for aggressive atmosphere, compliance with NACE MR0175, etc.Please consult us

Main Parts and Materials

SERIES 3S ANSI RANGE
Class 150&300





Gland/Prensa
NPS≥16"

No.15 recommended:
Class150 - For size ≥ 16"
Class300 - For size ≥ 14"

Nº	Part name	A216 WCB (3SA0_)	A352 LCB		A217 WC1 (3SB1_)	A217 WC6 (3SB8_)	A217 WC9 (3SB9_)	A217 C5 (3SC2_)	A217 C12 (3SC4_)
			Trim 2 (3SA82_)	Trim 12 (3SA8G_)					
1	Body	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9	A217 C5	A217 C12
2	Seat Ring	A105	A182 F304	A182 F316+HF	A182 F1+HF	A182 F11+HF	A182 F22+HF	A182 F5+HF	A182 F9+HF
3	Disc	A216 WCB	A351 CF8	A351 CF8M	A217 WC1+HF	A217 WC6+HF	A217 WC9+HF	A217 C5+HF	A217 C12+HF
4	Hinge	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9	A217 C5	A217 C12
5	Washer	SS304	SS304	SS316	SS304			SS304	
6	Disc Nut (1)	A194 2H	A194 4		A194 4			A194 4	
7	Hinge Pin	A182 F6a	A182 F304	A182 F316	A182 F6a			A182 F6a	
8	Gasket	SS304 +Graphite	SS304 +Graphite	SS316 +Graphite	SS304 +Graphite			SS304 +Graphite	
9	Cover	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9	A217 C5	A217 C12
10	Cover Bolt (1)	A193 B7	A320 L7		A193 B16			A193 B16	
11	Cover Nut (1)	A194 2H	A194 4		A194 4			A194 4	
12	Eye Bolt	Carbon Steel	Carbon Steel		Carbon Steel			Carbon Steel	
13	Gasket	SS304	SS304	SS316	SS304			SS304	
14	Plug	A105	A350 LF2		A182 F1	A182 F11	A182 F22	A182 F5	A182 F9
15	Gland	A105	A350 LF2		A182 F1	A182 F11	A182 F22	A182 F5	A182 F9

(1) Bolting material for NACE MR0175 compliance available (i.e. B7M / 2HM for WCB bodies)

Fig. 3SA0_	Seat Surface	Disc Surface
TRIM #1 (3SA01)	A105+13Cr	A216 WCB+13Cr
TRIM #5 (3SA05)	A105+HF	A216 WCB+HF
TRIM #8 (3SA08)	A105+HF	A216 WCB+13Cr

HF = Hard faced

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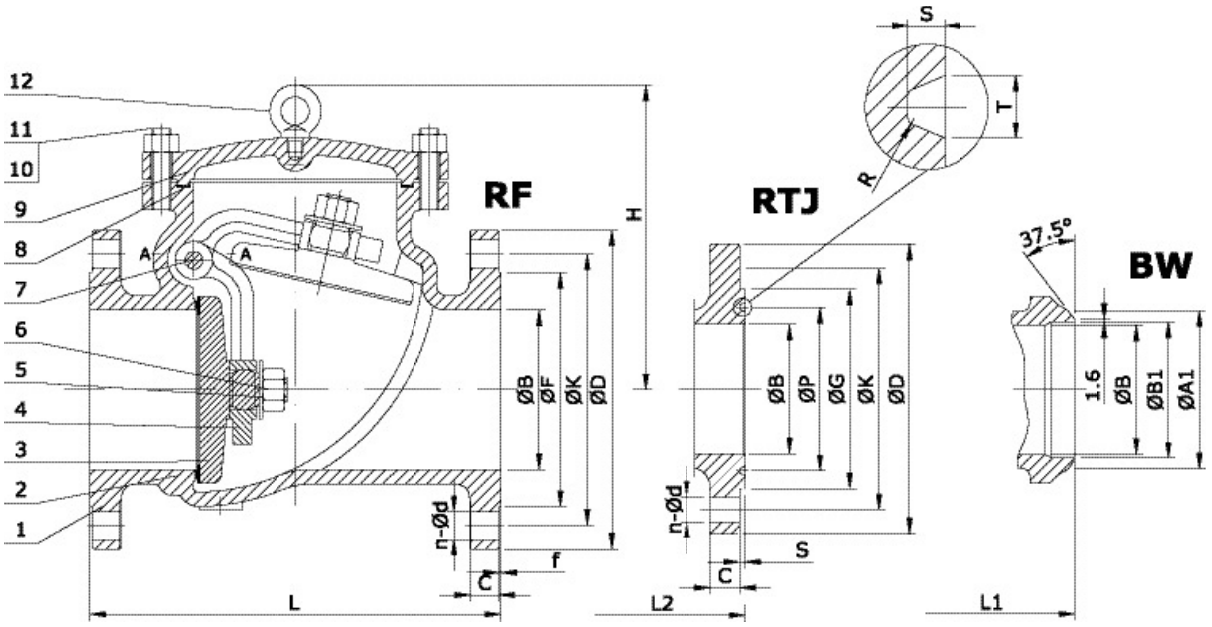
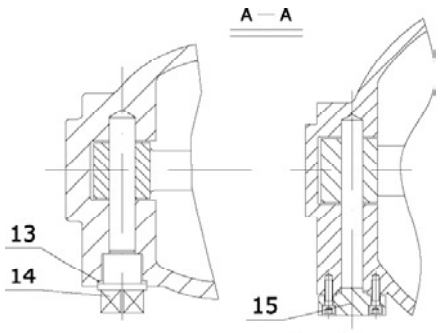
Main Parts and Materials

SERIES 3S ANSI RANGE
Class 150&300





Gland/Prensa
NPS≥16"

No.15 recommended:
Class150 - For size ≥ 16"
Class300 - For size ≥ 14"

Nº	Part name	CF8 (3SI2_)	CF8M (3SI0_)	CF3 (3SI1_)	CF3M (3SI7_)
1	Body	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2	Seat Ring	Integral SS304	Integral+HF	Integral SS304L	Integral+HF
3	Disc	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
4	Hinge	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
5	Washer	SS304	SS316	SS304L	SS316L
6	Disc Nut	A194 8	A194 8M	A194 8M	
7	Hinge Pin	A182 F304	A182 F316	A182 F304L	A182 F316L
8	Gasket	SS304+Graphite	SS316+Graphite	SS316+Graphite	SS316L+Graphite
9	Cover	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
10	Cover Bolt	A193 B8	A193 B8M	A193 B8M	
11	Cover Nut	A194 8	A194 8M	A194 8M	
12	Eye Bolt	Carbon Steel		Carbon Steel	
13	Gasket	SS304	SS316	SS304L	SS316L
14	Plug	A182 F304	A182 F316	A182 F304L	A182 F316L
15	Gland	A182 F304	A182 F316	A182 F304L	A182 F316L

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Main Valve Parameters - Class 150

SERIES 3S ANSI RANGE

Nominal Size		inch	2"	2-1/2"	3"	4"	5"	6"	8"	10"	12"	14"
		DN	50	65	80	100	125	150	200	250	300	350
End connection	RF	L	203	216	241	292	330	356	495	622	698	787
		ØB	51	65,375	76	102	128,25	152	203	254	305	337
		ØD	150	180	190	230	255	280	345	405	485	535
		ØK	120,7	139,7	152,4	190,5	215,9	241,3	298,5	362	431,8	476,3
		ØF	92,1	104,8	127	157,2	185,7	215,9	269,9	323,8	381	412,8
		C	14,3	15,9	17,5	22,3	22,3	23,9	27	28,6	30,2	33,4
		f	2	2	2	2	2	2	2	2	2	2
		n-Ød	4 - 3/4	4 - 3/4	4 - 3/4	8 - 3/4	8 - 7/8	8 - 7/8	8 - 7/8	12 - 1	12 - 1	12 - 1 1/8
	BW	L1	203	216	241	292	330	356	495	622	698	787
		Schedule No.*(1)*	40	-	40	40	-	40	40	40	STD	STD
		ØB	51	65,375	76	102	128,25	152	203	254	305	337
		ØA1	60,3	-	91	117	-	172	223	278	329	362
		ØB1	52,48	-	78	102	-	154	203	254,5	305	336,5
	RTJ	L2	216	229	254	305	343	369	508	635	711	800
		ØB	51	65,375	76	102	128,25	152	203	254	305	337
		ØD	150	180	190	230	255	280	345	405	485	535
		ØK	120,7	139,7	152,4	190,5	215,9	241,3	298,5	362	431,8	476,3
		ØG	102	121	133	171	194	219	273	330	406	425
		ØP	82,55	101,6	114,3	149,23	171,45	193,68	247,65	304,8	381	396,88
		C	17,5	20,7	22,3	22,3	22,3	23,9	27	28,6	30,2	33,4
		n-Ød	4 - 3/4	4 - 3/4	4 - 3/4	8 - 3/4	8 - 7/8	8 - 7/8	8 - 7/8	12 - 1	12 - 1	12 - 1 1/8
		T	8,74	8,74	8,74	8,74	8,74	8,74	8,74	8,74	8,74	8,74
		S	6,35	6,35	6,35	6,35	6,35	6,35	6,35	6,35	6,35	6,35
		R	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8
H			127	144	156	177	210	235	340	410	456	475
Kvs-value			86	177	244	444	801	1064	1949	3051	4530	5556
Approx. Weight RF *(2)*			13	19	23	36	51	62	115	180	275	351
Approx. Weight BW			10	14	18	28	40	49	93	151	231	295

(1) Other schedule nos. on request
(2) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Weights in kg
For more information about flanged and welded ends refer to page 16

Information / restriction of technical rules need to be observed!
Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 150

SERIES 3S ANSI RANGE

Nominal Size		inch	16"	18"	20"	24"	26"	28"	30"	32"	36"
		DN	400	450	500	600	650	700	750	800	900
End connection	RF	L	864	978	978	1295	1295	1448	1524	*1727 (3)*	1956
		ØB	387	438	489	591	633	684	735	779	874
		ØD	595	635	700	815	870	925	985	1060	1170
		ØK	539,8	577,9	635	749,3	806,4	863,6	914,4	977,9	1085,8
		ØF	469,9	533,4	584,2	692,2	749	800	857	914	1022
		C	35	38,1	41,3	46,1	66,7	69,9	73,1	79,4	88,9
		f	2	2	2	2	2	2	2	2	2
		n-Ød	16 - 1 1/8	16 - 1 1/4	20 - 1 1/4	20 - 1 3/8	24 - 1 3/8	28 - 1 3/8	28 - 1 3/8	28 - 1 5/8	32 - 1 5/8
	BW	L1	864	978	978	1295	1295	1448	1524	*1727 (3)*	1956
		Schedule No.*(1)*	STD	STD	STD	STD	20	20	20	20	20
		ØB	387	438	489	591	633	684	735	779	874
		ØA1	413	464	516	619	670	721	772	825	927
		ØB1	387,5	438	489	590,5	635	686	736,5	787,5	889
	RTJ	L2	877	991	991	1308	-	-	-	-	-
		ØB	387	438	489	591	633	684	735	779	874
		ØD	595	635	700	815	870	925	985	1060	1170
		ØK	539,8	577,9	635	749,3	806,4	863,6	914,4	977,9	1085,8
		ØG	483	546	597	711	810	861	917	984	1092
		ØP	454,03	517,53	558,8	673,1	749,3	800,1	857,25	914,4	1022,35
		C	35	38,1	41,3	46,1	66,7	69,9	73,1	79,4	88,9
		n-Ød	16 - 1 1/8	16 - 1 1/4	20 - 1 1/4	20 - 1 3/8	24 - 1 3/8	28 - 1 3/8	28 - 1 3/8	28 - 1 5/8	32 - 1 5/8
		T	8,74	8,74	8,74	8,74	19,84	19,84	19,84	23,01	23,01
		S	6,35	6,35	6,35	6,35	12,7	12,7	12,7	14,27	14,27
		R	0,8	0,8	0,8	0,8	1,5	1,5	1,5	1,5	1,5
H			552	572	660	740	785	838	889	1012	1090
Kvs-value			7363	9829	12222	17833	21509	25225	28983	36863	52624
Approx. Weight RF *(2)*			460	575	740	1350	1800	2350	2650	3000	3690
Approx. Weight BW			390	498	648	1208	1628	2128	2411	2694	3250

(1) Other schedule nos. on request
(2) RTJ weight increases approx. by 10%
(3) Acc. to manufacturer standard

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Weights in kg
For more information about flanged and welded ends refer to page 16

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The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 300

SERIES 3S ANSI RANGE

Nominal Size		inch	2”	2-1/2”	3”	4”	5”	6”	8”	10”	12”
		DN	50	65	80	100	125	150	200	250	300
End connection	RF	L	267	292	318	356	400	444	533	622	711
		ØB	51	65,375	76	102	128,25	152	203	254	305
		ØD	165	190	210	255	280	320	380	445	520
		ØK	127	149,2	168,3	200	235	269,9	330,2	387,4	450,8
		ØF	92,1	104,8	127	157,2	185,7	215,9	269,9	323,8	381
		C	20,7	23,9	27	30,2	33,4	35	39,7	46,1	49,3
		f	2	2	2	2	2	2	2	2	2
		n-Ød	8 - 3/4	8 - 7/8	8 - 7/8	8 - 7/8	8 - 7/8	12 - 7/8	12 - 1	16 - 1 1/8	16 - 1 1/4
	BW	L1	267	292	318	356	400	444	533	622	711
		Schedule No.*(1)*	40	-	40	40	-	40	40	40	STD
		ØB	51	65,375	76	102	128,25	152	203	254	305
		ØA1	60,3	-	91	117	-	172	223	278	329
		ØB1	52,48	-	78	102	-	154	203	254,5	305
	RTJ	L2	283	308	334	372	416	460	549	638	727
		ØB	51	65,375	76	102	128,25	152	203	254	305
		ØD	165	190	210	255	280	320	380	445	520
		ØK	127	149,2	168,3	200	235	269,9	330,2	387,4	450,8
		ØG	108	127	146	175	210	241	302	356	413
		ØP	82,55	101,6	123,83	149,23	180,98	211,12	269,88	323,85	981
		C	20,7	23,9	27	30,2	33,4	35	39,7	46,1	49,3
		n-Ød	8 - 3/4	8 - 7/8	8 - 7/8	8 - 7/8	8 - 7/8	12 - 7/8	12 - 1	16 - 1 1/8	16 - 1 1/4
		T	11,91	11,91	11,91	11,91	11,91	11,91	11,91	11,91	11,91
		S	7,92	7,92	7,92	7,92	7,92	7,92	7,92	7,92	7,92
		R	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8
H			137	162	180	205	268	315	370	430	465
Kvs-value			86	177	244	440	799	1064	1953	3056	4568
Approx. Weight RF *(2)*			17	27	34	55	83	104	176	258	420
Approx. Weight BW			12	20	26	42	64	81	140	209	346

(1) Other schedule nos. on request
(2) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Weights in kg
For more information about flanged and welded ends refer to page 16

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The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 300

SERIES 3S ANSI RANGE

Nominal Size		inch	14"	16"	18"	20"	24"	26"	28"	30"	32"
		DN	**350**	**400**	**450**	**500**	**600**	**650**	**700**	**750**	**800**
End connection	RF	**L**	838	864	978	1016	1346	1346	1499	*1594*	*1727 (3)*
		ØB	337	387	432	483	584	633	684	735	779
		ØD	585	650	710	775	915	970	1035	1090	1150
		ØK	514,4	571,5	628,6	685,8	812,8	876,3	939,8	997	1054,1
		ØF	412,8	469,9	533,4	584,2	692,2	749	800	857	914
		C	52,4	55,6	58,8	62	68,3	77,8	84,2	90,5	96,9
		f	2	2	2	2	2	2	2	2	2
		n-Ød	20 - 1 1/4	20 - 1 3/8	24 - 1 3/8	24 - 1 3/8	24 - 1 5/8	28 - 1 3/4	28 - 1 3/4	28 - 1 7/8	28 - 2
	BW	**L1**	838	864	978	1016	1346	1346	1499	*1594*	*1727 (3)*
		Schedule No.*(1)*	STD	STD	STD	STD	STD	20	20	20	20
		ØB	337	387	432	483	584	633	684	735	779
		ØA1	362	413	464	516	619	670	721	772	825
		ØB1	336,5	387,5	438	489	590,5	635	686	736,5	787,5
	RTJ	**L2**	854	880	994	1035	1368	1374	1524	1619	1755
		ØB	337	387	432	483	584	633	684	735	779
		ØD	585	650	710	775	915	970	1035	1090	1150
		ØK	514,4	571,5	628,6	685,8	812,8	876,3	939,8	997	1054,1
		ØG	457	508	575	635	749	810	861	917	984
		ØP	419,1	469,9	533,4	584,2	692,15	749,3	800,1	857,25	914,4
		C	52,4	55,6	58,8	62	68,3	77,8	84,2	90,5	96,9
		n-Ød	20 - 1 1/4	20 - 1 3/8	24 - 1 3/8	24 - 1 3/8	24 - 1 5/8	28 - 1 3/4	28 - 1 3/4	28 - 1 7/8	28 - 2
		T	11,91	11,91	11,91	13,49	16,66	19,84	19,84	19,84	23,01
		S	7,92	7,92	7,92	9,53	11,13	12,7	12,7	12,7	14,27
		R	0,8	0,8	0,8	1,5	1,5	1,5	1,5	1,5	1,5
H			505	554	620	680	770	770	889	977	1016
Kvs-value			5564	7368	9534	11910	17453	21368	24573	28983	36094
Approx. Weight RF *(2)*			516	780	1150	1350	2100	2600	2900	3200	4900
Approx. Weight BW			415	647	984	1145	1804	2254	2492	2713	4338

(1) Other schedule nos. on request
(2) RTJ weight increases approx. by 10%
(3) Acc. to manufacturer standard

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Weights in kg
For more information about flanged and welded ends refer to page 16

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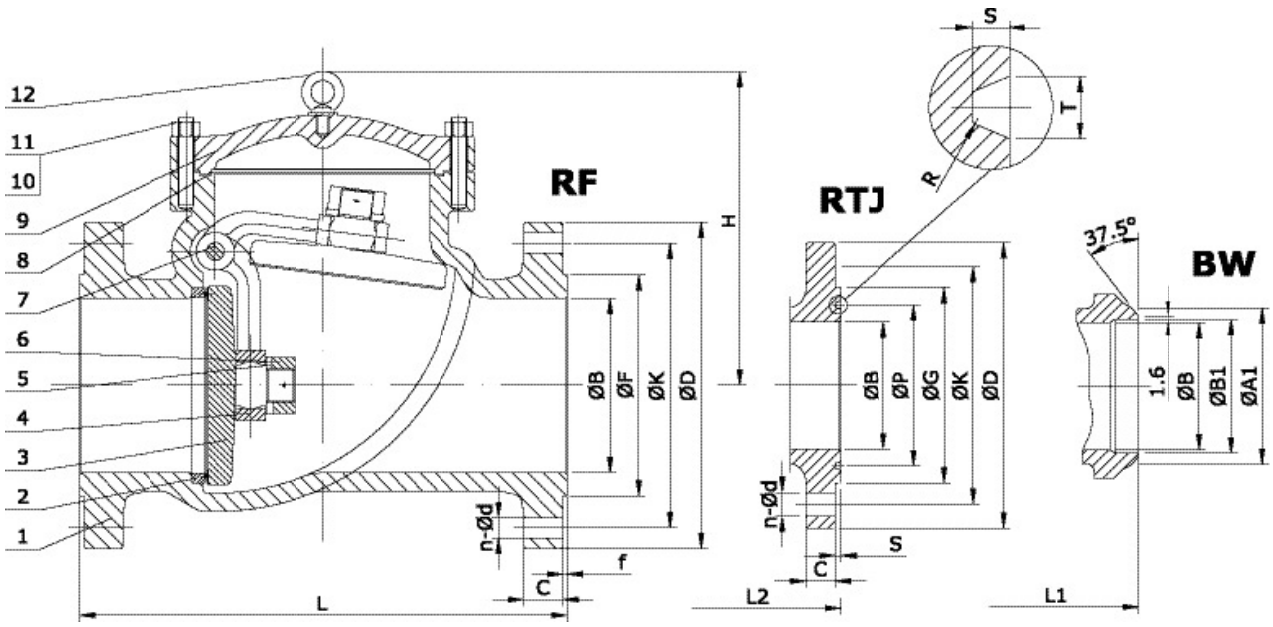
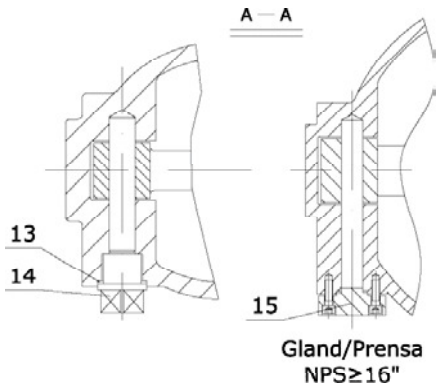
Product suitability must be verified, contact manufacturer for information

Main Parts and Materials

SERIES 3S ANSI RANGE
Class 600





Gland/Prensa
NPS≥16"

No.15 recommended:
Class600 - For size ≥ 12"

Nº	Part name	A216 WCB (3SA0_)	A352 LCB		A217 WC1 (3SB1_)	A217 WC6 (3SB8_)	A217 WC9 (3SB9_)	A217 C5 (3SC2_)	A217 C12 (3SC4_)
			Trim 2 (3SA82_)	Trim 12 (3SA8G_)					
1	Body	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9	A217 C5	A217 C12
2	Seat Ring	A105	A182 F304	A182 F316+HF	A182 F1+HF	A182 F11+HF	A182 F22+HF	A182 F5+HF	A182 F9+HF
3	Disc	A216 WCB	A351 CF8	A351 CF8M	A217 WC1+HF	A217 WC6+HF	A217 WC9+HF	A217 C5+HF	A217 C12+HF
4	Hinge	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9	A217 C5	A217 C12
5	Washer	SS304	SS304	SS316	SS304			SS304	
6	Disc Nut (1)	A194 2H	A194 4		A194 4			A194 4	
7	Hinge Pin	A182 F6a	A182 F304	A182 F316	A182 F6a			A182 F6a	
8	Gasket	SS304 +Graphite	SS304 +Graphite	SS316 +Graphite	SS304 +Graphite			SS304 +Graphite	
9	Cover	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9	A217 C5	A217 C12
10	Cover Bolt (1)	A193 B7	A320 L7		A193 B16			A193 B16	
11	Cover Nut (1)	A194 2H	A194 4		A194 4			A194 4	
12	Eye Bolt	Carbon Steel	Carbon Steel		Carbon Steel			Carbon Steel	
13	Gasket	SS304	SS304	SS316	SS304			SS304	
14	Plug	A105	A350 LF2		A182 F1	A182 F11	A182 F22	A182 F5	A182 F9
15	Gland	A105	A350 LF2		A182 F1	A182 F11	A182 F22	A182 F5	A182 F9

(1) Bolting material for NACE MR0175 compliance available (i.e. B7M / 2HM for WCB bodies)

Fig. 3SA0_	Seat Surface	Disc Surface
TRIM #1 (3SA01)	A105+13Cr	A216 WCB+13Cr
TRIM #5 (3SA05)	A105+HF	A216 WCB+HF
TRIM #8 (3SA08)	A105+HF	A216 WCB+13Cr

HF = Hard faced

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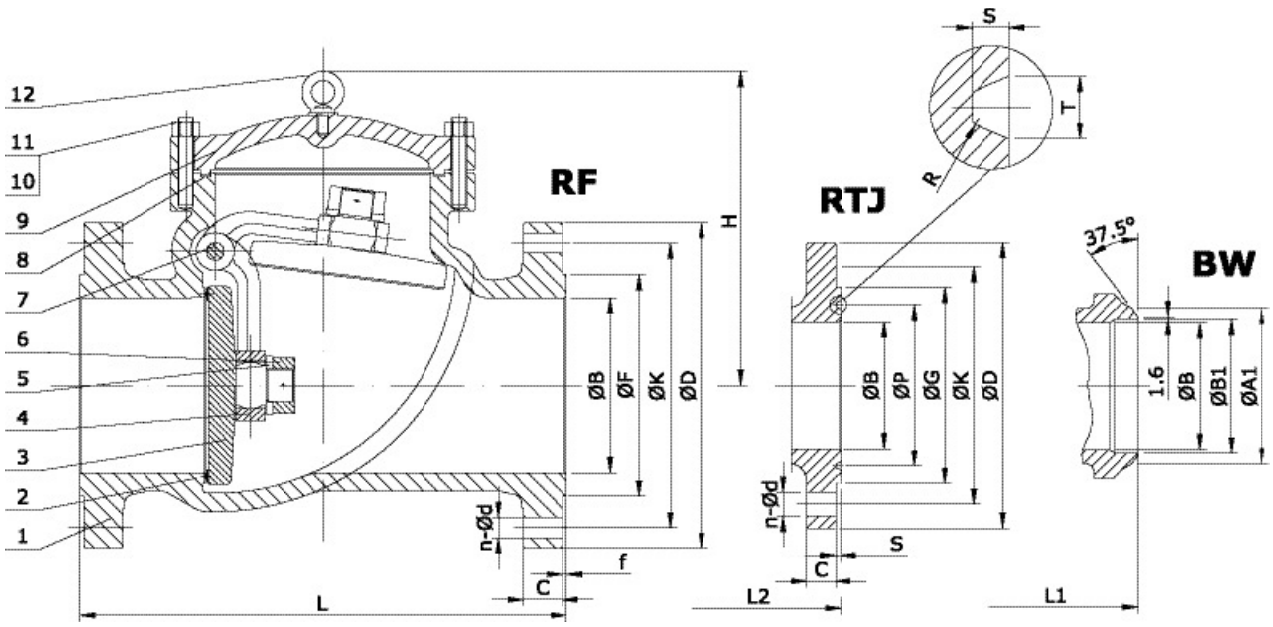
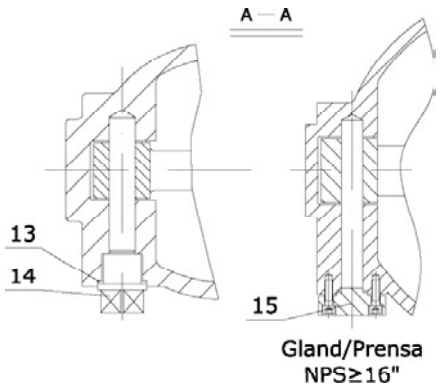
Product suitability must be verified, contact manufacturer for information

Main Parts and Materials

SERIES 3S ANSI RANGE
Class 600





Gland/Prensa
NPS≥16"

No.15 recommended:
Class600 - For size ≥ 12"

Nº	Part name	CF8 (3SI2_)	CF8M (3SI0_)	CF3 (3SI1_)	CF3M (3SI7_)
1	Body	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2	Seat Ring	Integral SS304	Integral+HF	Integral SS304L	Integral+HF
3	Disc	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
4	Hinge	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
5	Washer	SS304	SS316	SS304L	SS316L
6	Disc Nut	A194 8	A194 8M	A194 8M	
7	Hinge Pin	A182 F304	A182 F316	A182 F304L	A182 F316L
8	Gasket	SS304+Graphite	SS316+Graphite	SS316+Graphite	SS316L+Graphite
9	Cover	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
10	Cover Bolt	A193 B8	A193 B8M	A193 B8M	
11	Cover Nut	A194 8	A194 8M	A194 8M	
12	Eye Bolt	Carbon Steel		Carbon Steel	
13	Gasket	SS304	SS316	SS304L	SS316L
14	Plug	A182 F304	A182 F316	A182 F304L	A182 F316L
15	Gland	A182 F304	A182 F316	A182 F304L	A182 F316L

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Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 600

SERIES 3S ANSI RANGE

Nominal Size		inch	2"	2-1/2"	3"	4"	5"	6"	8"	10"
		DN	50	65	80	100	125	150	200	250
End connection	RF	L	292	330	356	432	508	559	660	787
		ØB	51	65,375	76	102	128,25	152	200	248
		ØD	165	190	210	275	330	355	420	510
		ØK	127	149,2	168,3	215,9	266,7	292,1	349,2	431,8
		ØF	92,1	104,8	127	157,2	185,7	215,9	269,9	323,8
		C	25,4	28,6	31,8	38,1	44,5	47,7	55,6	63,5
		f	7	7	7	7	7	7	7	7
		n-Ød	8 - 3/4	8 - 7/8	8 - 7/8	8 - 1	8 - 1 1/8	12 - 1 1/8	12 - 1/4	16 - 1 3/8
	BW	L1	292	330	356	432	508	559	660	787
		Schedule No.*(1)*	80	-	80	80	-	80	80	80
		ØB	51	65,375	76	102	128,25	152	200	248
		ØA1	60,3	-	91	117	-	172	223	278
		ØB1	49,22	-	73,5	97	-	146,5	193,5	243
	RTJ	L2	295	346	372	448	524	562	663	790
		ØB	51	65,375	76	102	128,25	152	200	248
		ØD	165	190	210	275	330	355	420	510
		ØK	127	149,2	168,3	215,9	266,7	292,1	349,2	431,8
		ØG	108	127	146	175	210	241	302	356
		ØP	82,55	101,6	123,83	149,23	180,98	211,12	269,88	323,85
		C	25,4	28,6	31,8	38,1	44,5	47,7	55,6	63,5
		n-Ød	8 - 3/4	8 - 7/8	8 - 7/8	8 - 1	8 - 1 1/8	12 - 1 1/8	12 - 1/4	16 - 1 3/8
		T	11,91	11,91	11,91	11,91	11,91	11,91	11,91	11,91
		S	7,92	7,92	7,92	7,92	7,92	7,92	7,92	7,92
		R	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8
H			142	189	223	256	300	332	409	478
Kvs-value			86	177	244	444	801	1064	1889	2906
Approx. Weight RF *(2)*			22	34	43	78	122	155	285	485
Approx. Weight BW			15	24	30	55	87	111	221	382

(1) Other schedule nos. on request
(2) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Weights in kg
For more information about flanged and welded ends refer to page 16

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The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 600

SERIES 3S ANSI RANGE

Nominal Size		inch	12"	14"	16"	18"	20"	24"	26"	28"
		DN	300	350	400	450	500	600	650	700
End connection	RF	L	838	889	991	1092	1194	1397	1448	*1600*
		ØB	299	327	375	419	464	559	603	648
		ØD	560	605	685	745	815	940	1015	1075
		ØK	489	527	603,2	654	723,9	838,2	914,4	965,2
		ØF	381	412,8	469,9	533,4	584,2	692,2	749	800
		C	66,7	69,9	76,2	82,6	88,9	101,6	108	111,2
		f	7	7	7	7	7	7	7	7
		n-Ød	20 - 1 3/8	20 - 1 1/2	20 - 1 5/8	20 - 1 3/4	24 - 1 3/4	24 -2	28 -2	28 - 2 1/8
	BW	L1	838	889	991	1092	1194	1397	1448	*1600*
		Schedule No.*(1)*	80	80	80	80	80	80	-	-
		ØB	299	327	375	419	464	559	603	648
		ØA1	329	362	413	464	516	619	-	-
		ØB1	289	317,5	363,5	409,5	455,5	547,5	-	-
	RTJ	L2	841	892	994	1095	1200	1407	1461	1613
		ØB	299	327	375	419	464	559	603	648
		ØD	560	605	685	745	815	940	1015	1075
		ØK	489	527	603,2	654	723,9	838,2	914,4	965,2
		ØG	413	457	508	575	635	749	810	861
		ØP	981	419,1	469,9	533,4	584,2	692,15	749,3	800,1
		C	66,7	69,9	76,2	82,6	88,9	101,6	108	111,2
		n-Ød	20 - 1 3/8	20 - 1 1/2	20 - 1 5/8	20 - 1 3/4	24 - 1 3/4	24 -2	28 -2	28 - 2 1/8
		T	11,91	11,91	11,91	11,91	13,49	16,66	19,84	19,84
		S	7,92	7,92	7,92	7,92	9,53	11,13	12,7	12,7
		R	0,8	0,8	0,8	0,8	1,5	1,5	1,5	1,5
H			539	609	660	769	890	954	1025	1062
Kvs-value			4376	5256	6897	8983	10987	15966	21026	25598
Approx. Weight RF *(2)*			615	920	1250	1800	2350	3300	3700	4500
Approx. Weight BW			493	740	1022	1512	1996	2862	3125	3854

(1) Other schedule nos. on request
(2) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Weights in kg
For more information about flanged and welded ends refer to page 16

Information / restriction of technical rules need to be observed!
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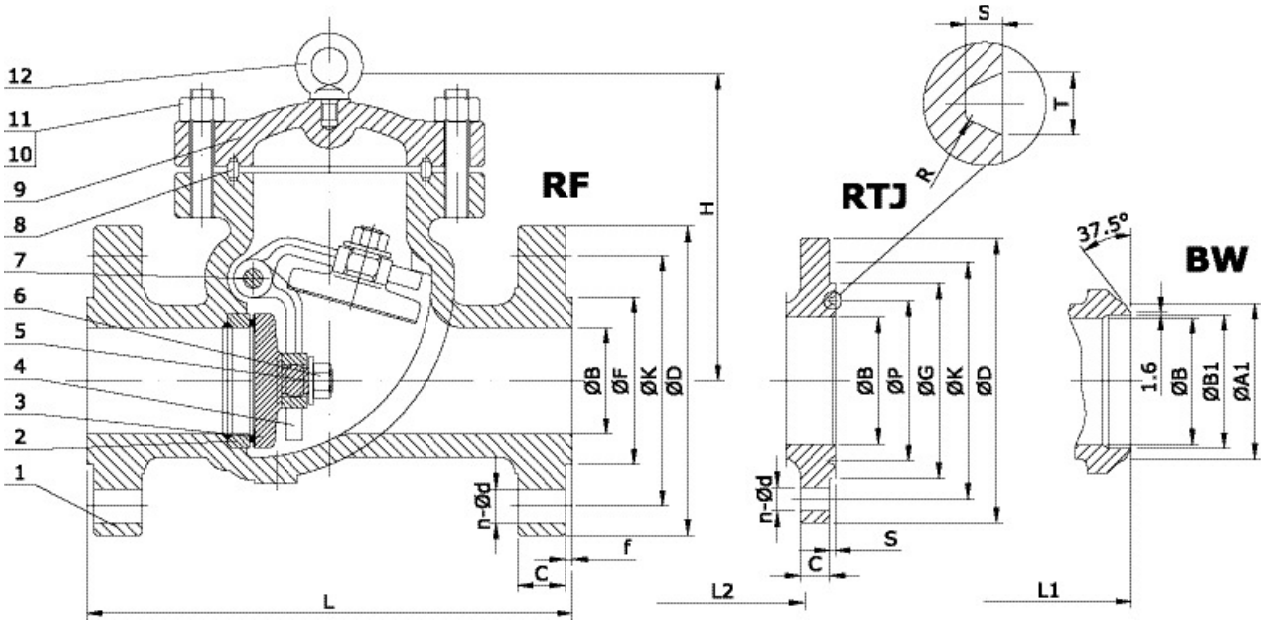
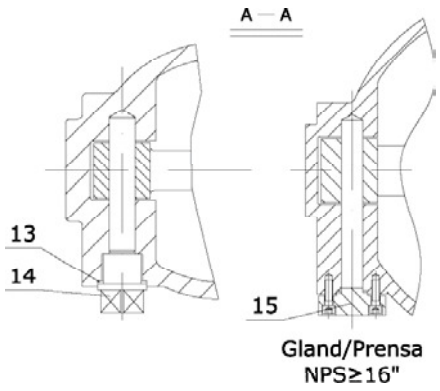
Product suitability must be verified, contact manufacturer for information

Main Parts and Materials

SERIES 3S ANSI RANGE
Class 900





Gland/Prensa
NPS≥16"

No.15 recommended:
Class900 - For size ≥ 6"

Nº	Part name	A216 WCB (3SA0_)	A352 LCB		A217 WC1 (3SB1_)	A217 WC6 (3SB8_)	A217 WC9 (3SB9_)	A217 C5 (3SC2_)	A217 C12 (3SC4_)
			Trim 15 (3SA8K_)	Trim 16 (3SA8L_)					
1	Body	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9	A217 C5	A217 C12
2	Seat Ring	A105	A182 F304+HF	A182 F316+HF	A182 F1+HF	A182 F11+HF	A182 F22+HF	A182 F5+HF	A182 F9+HF
3	Disc	A216 WCB	A351 CF8+HF	A351 CF8M+HF	A217 WC1+HF	A217 WC6+HF	A217 WC9+HF	A217 C5+HF	A217 C12+HF
4	Hinge	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9	A217 C5	A217 C12
5	Washer	SS304	SS304	SS316	SS304			SS304	
6	Disc Nut (1)	A194 2H	A194 4		A194 4			A194 4	
7	Hinge Pin	A182 F6a	A182 F304	Nitronic 50	A182 F6a			A182 F6a	
8	Gasket	SS304	SS304	SS316	SS304			SS304	
9	Cover	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9	A217 C5	A217 C12
10	Cover Bolt (1)	A193 B7	A320 L7		A193 B16			A193 B16	
11	Cover Nut (1)	A194 2H	A194 4		A194 4			A194 4	
12	Eye Bolt	Carbon Steel	Carbon Steel		Carbon Steel			Carbon Steel	
13	Gasket	SS304	SS304	SS316	SS304			SS304	
14	Plug	A105	A350 LF2		A182 F1	A182 F11	A182 F22	A182 F5	A182 F9
15	Gland	A105	A350 LF2		A182 F1	A182 F11	A182 F22	A182 F5	A182 F9

(1) Bolting material for NACE MR0175 compliance available (i.e. B7M / 2HM for WCB bodies)

Fig. 3SA0_	Seat Surface	Disc Surface
TRIM #1 (3SA01)	A105+13Cr	A216 WCB+13Cr
TRIM #5 (3SA05)	A105+HF	A216 WCB+HF
TRIM #8 (3SA08)	A105+HF	A216 WCB+13Cr

HF = Hard faced

Information / restriction of technical rules need to be observed!
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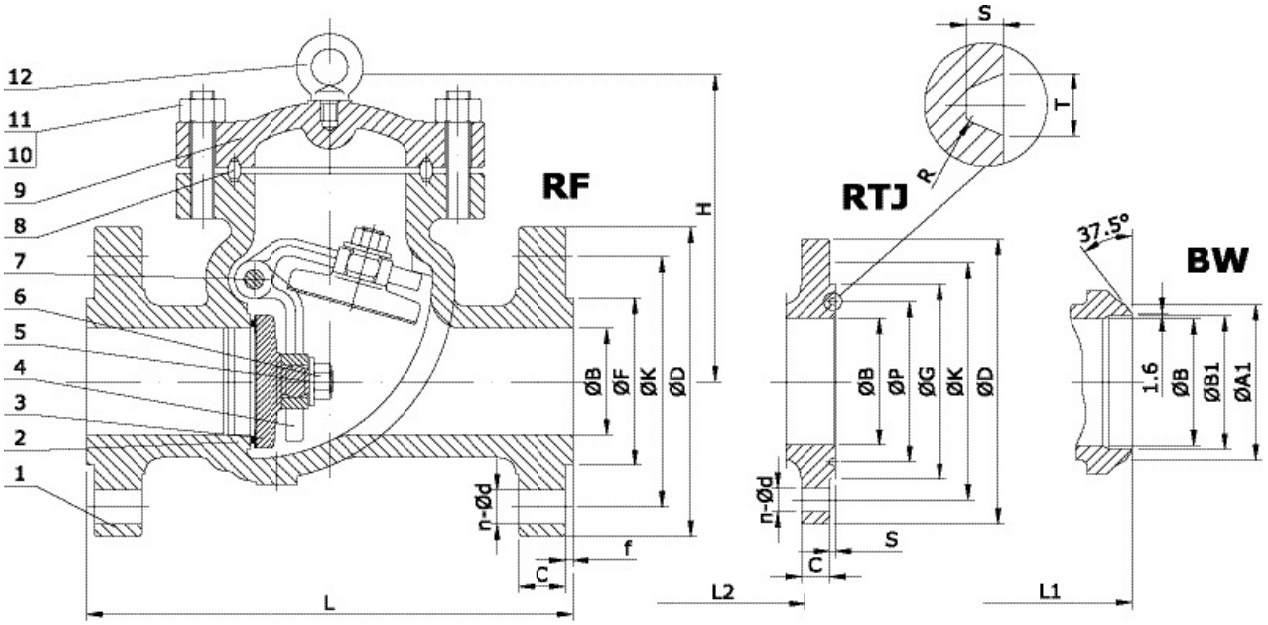
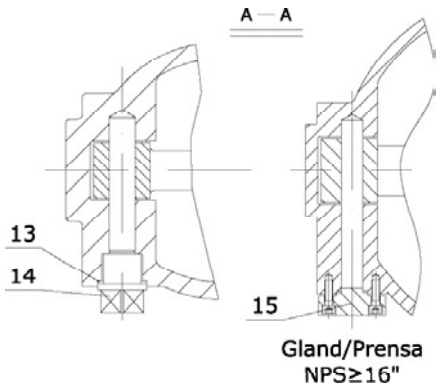
Product suitability must be verified, contact manufacturer for information

Main Parts and Materials

SERIES 3S ANSI RANGE
Class 900





No.15 recommended:
Class900 - For size ≥ 6”

Nº	Part name	CF8 (3SI2_)	CF8M (3SI0_)	CF3 (3SI1_)	CF3M (3SI7_)
1	Body	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2	Seat	Integral+HF	Integral+HF	Integral+HF	Integral+HF
3	Disc	A351 CF8+HF	A351 CF8M+HF	A351 CF3+HF	A351 CF3M+HF
4	Hinge	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
5	Washer	SS304	SS316	SS304L	SS316L
6	Disc Nut	A194 8	A194 8M	A194 8M	A194 8M
7	Hinge Pin	A182 F304	Nitronic 50	A182 F304L	Nitronic 50
8	Gasket	SS304	SS316	SS316	SS316L
9	Cover	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
10	Cover Bolt	A193 B8	A193 B8M	A193 B8M	A193 B8M
11	Cover Nut	A194 8	A194 8M	A194 8M	A194 8M
12	Eye Bolt	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel
13	Gasket	SS304	SS316	SS304L	SS316L
14	Plug	A182 F304	A182 F316	A182 F304L	A182 F316L
15	Gland	A182 F304	A182 F316	A182 F304L	A182 F316L

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The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 900

SERIES 3S ANSI RANGE

Nominal Size		inch	2”	2-1/2”	3”	4”	5”	6”	8”
		DN	50	65	80	100	125	150	200
End connection	RF	L	368	419	381	457	559	610	737
		ØB	48	62,375	73	98	123,2	146	191
		ØD	215	245	240	290	350	380	470
		ØK	165,1	190,5	190,5	235	279,4	317,5	393,7
		ØF	92,1	104,8	127	157,2	185,7	215,9	269,9
		C	38,1	41,3	38,1	44,5	50,8	55,6	63,5
		f	7	7	7	7	7	7	7
		n-Ød	8 - 7/8	8 -1	8 - 7/8	8 - 1 1/8	8 - 1 1/4	12 - 1 1/8	12 - 1 3/8
	BW	L1	368	419	381	457	559	610	737
		Schedule No.*(1)*	160	-	160	120	-	120	100
		ØB	48	62,375	73	98	123,2	146	191
		ØA1	60,3	-	91	117	-	172	223
		ØB1	38,16	-	66,5	92	-	140	189
	RTJ	L2	371	422	384	460	562	613	740
		ØB	48	62,375	73	98	123,2	146	191
		ØD	215	245	240	290	350	380	470
		ØK	165,1	190,5	190,5	235	279,4	317,5	393,7
		ØG	124	137	156	181	216	241	308
		ØP	95,25	107,95	123,83	149,23	180,98	211,12	269,88
		C	38,1	41,3	38,1	44,5	50,8	55,6	63,5
		n-Ød	8 - 7/8	8 -1	8 - 7/8	8 - 1 1/8	8 - 1 1/4	12 - 1 1/8	12 - 1 3/8
		T	11,91	11,91	11,91	11,91	11,91	11,91	11,91
		S	7,92	7,92	7,92	7,92	7,92	7,92	7,92
		R	0,8	0,8	0,8	0,8	0,8	0,8	0,8
H			175	220	254	314	353	381	533
Kvs-value			86	164	222	415	736	974	1718
Approx. Weight RF *(2)*			70	86	98	135	201	250	450
Approx. Weight BW			56	70	81	107	155	190	348

(1) Other schedule nos. on request
(2) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Weights in kg
For more information about flanged and welded ends refer to page 16

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Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 900

SERIES 3S ANSI RANGE

Nominal Size		inch	10”	12”	14”	16”	18”	20”	24”
		DN	250	300	350	400	450	500	600
End connection	RF	L	838	965	1029	1130	1219	1321	1549
		ØB	238	282	311	356	400	445	533
		ØD	545	610	640	705	785	855	1040
		ØK	469,9	533,4	558,8	616	685,8	749,3	901,7
		ØF	323,8	381	412,8	469,9	533,4	584,2	692,2
		C	69,9	79,4	85,8	88,9	101,6	108	139,7
		f	7	7	7	7	7	7	7
		n-Ød	16 - 1 3/8	20 - 1 3/8	20 - 1 1/2	20 - 1 5/8	20 - 1 7/8	20 - 2	20 - 2 1/2
	BW	L1	838	965	1029	1130	1219	1321	1549
		Schedule No.*(1)*	100	100	100	100	100	100	100
		ØB	238	282	311	356	400	445	533
		ØA1	278	329	362	413	464	516	619
		ØB1	236,5	281	308	354	398,5	443	532
	RTJ	L2	841	968	1039	1140	1232	1334	1568
		ØB	238	282	311	356	400	445	533
		ØD	545	610	640	705	785	855	1040
		ØK	469,9	533,4	558,8	616	685,8	749,3	901,7
		ØG	362	419	467	524	594	648	772
		ØP	323,85	381	419,1	469,9	533,4	584,2	692,15
		C	69,9	79,4	85,8	88,9	101,6	108	139,7
		n-Ød	16 - 1 3/8	20 - 1 3/8	20 - 1 1/2	20 - 1 5/8	20 - 1 7/8	20 - 2	20 - 2 1/2
		T	11,91	11,91	16,66	16,66	19,84	19,84	26,97
		S	7,92	7,92	11,13	11,13	12,7	12,7	15,88
		R	0,8	0,8	1,5	1,5	1,5	1,5	2,4
H			558	609	736	762	863	939	1066
Kvs-value			2684	3923	4756	6214	8184	10103	14547
Approx. Weight RF *(2)*			840	1180	1680	1980	2400	3200	5500
Approx. Weight BW			698	984	1457	1711	2040	2752	4684

(1) Other schedule nos. on request
(2) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Weights in kg
For more information about flanged and welded ends refer to page 16

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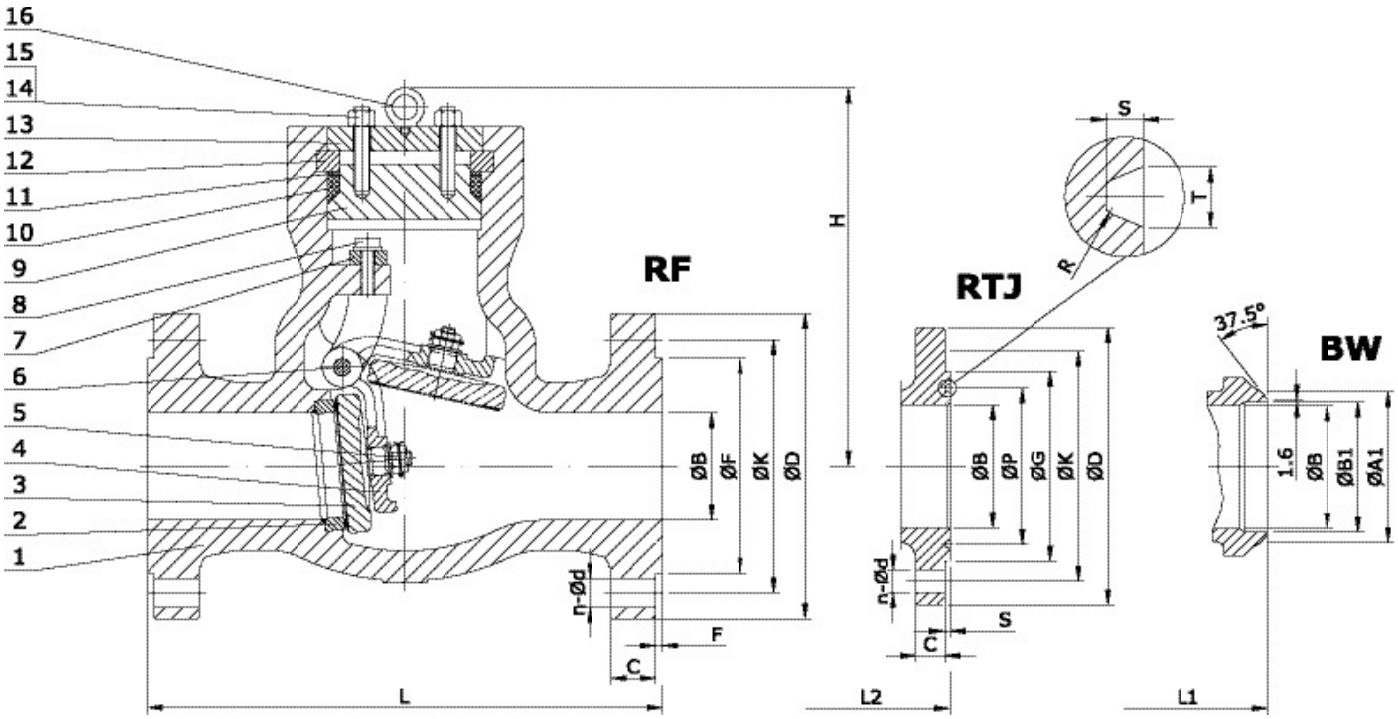
Main Parts and Materials

SERIES 31 ANSI RANGE
Class 1500&2500



Nº	Part name	A216 WCB (31A0_)	A352 LCB		A217 WC1 (3SB1_)	A217 WC6 (3SB8_)	A217 WC9 (3SB9_)	A217 C5 (3SC2_)	A217 C12 (3SC4_)
			Trim 15 (31A8K_)	Trim 16 (31A8L_)					
1	Body	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9	A217 C5	A217 C12
2	Seat Ring	A105	A182 F304 +HF	A182 F316 +HF	A182 F1 +HF	A182 F11 +HF	A182 F22 +HF	A182 F5 +HF	A182 F9 +HF
3	Disc	A216 WCB	A351 CF8 +HF	A351 CF8M +HF	A217 WC1 +HF	A217 WC6 +HF	A217 WC9 +HF	A217 C5 +HF	A217 C12 +HF
4	Hinge	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9	A217 C5	A217 C12
5	Disc Nut (1)	A194 2H	A194 4		A194 4			A194 4	
6	Hinge Pin	A182 F6a	A182 F304	Nitronic 50	A182 F6a			A182 F6a	
7	Gasket	SS304	SS304	SS316	SS304			SS304	
8	Bolt (1)	A193 B7	A320 L7		A193 B16			A193 B16	
9	Cover	A105	A350 LF2		A182 F1	A182 F11	A182 F22	A182 F5	A182 F9
10	Gasket	SS304 +Graphite	SS304 +Graphite	SS316 +Graphite	SS304 +Graphite			SS304 +Graphite	
11	Gasket Washer	A182 F6a	A182 F304	A182 F316	A182 F6a			A182 F6a	
12	Split Ring	A105	A350 LF2		A182 F1	A182 F11	A182 F22	A182 F5	A182 F9
13	Retainer Ring	A105	A350 LF2		A182 F1	A182 F11	A182 F22	A182 F5	A182 F9
14	Bolt (1)	A193 B7	A320 L7		A193 B16			A193 B16	
15	Nut (1)	A194 2H	A194 4		A194 4			A194 4	
16	Eye Bolt	Carbon Steel	Carbon Steel		Carbon Steel			Carbon Steel	

(1) Bolting material for NACE MR0175 compliance available (i.e. B7M / 2HM for WCB bodies)

Fig. 31A0_	Seat Surface	Disc Surface
TRIM #1 (31A01)	A105+13Cr	A216 WCB+13Cr
TRIM #5 (31A05)	A105+HF	A216 WCB+HF
TRIM #8 (31A08)	A105+HF	A216 WCB+13Cr

HF = Hard faced

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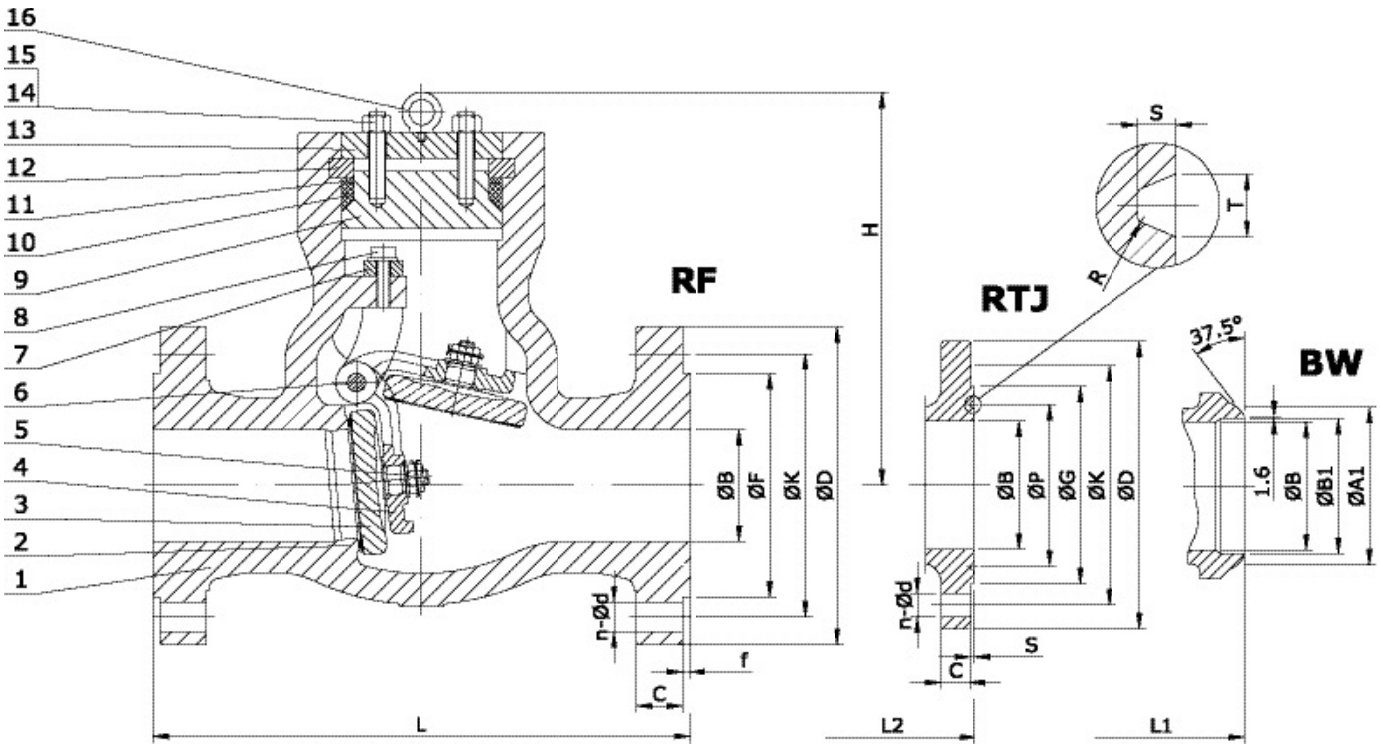
Product suitability must be verified, contact manufacturer for information

Main Parts and Materials

SERIES 31 ANSI RANGE
Class 1500&2500



Nº	Part name	CF8 (31I2_)	CF8M (31I0_)	CF3 (31I1_)	CF3M (31I7_)
1	Body	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2	Seat Ring	Integral+HF	Integral+HF	Integral+HF	Integral+HF
3	Disc	A351 CF8+HF	A351 CF8M+HF	A351 CF3+HF	A351 CF3M+HF
4	Hinge	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
5	Disc Nut	A194 8	A194 8M	A194 8M	A194 8M
6	Hinge Pin	A182 F304	Nitronic 50	A182 F304L	Nitronic 50
7	Gasket	SS304	SS316	SS304L	SS316L
8	Bolt	A193 B8	A193 B8M	A193 B8M	A193 B8M
9	Cover	A182 F304	A182 F316	A182 F304L	A182 F316L
10	Gasket	SS304+Graphite	SS316+Graphite	SS316+Graphite	SS316L+Graphite
11	Gasket Washer	A182 F304	A182 F316	A182 F304L	A182 F316L
12	Split Ring	A182 F304	A182 F316	A182 F304L	A182 F316L
13	Retainer Ring	A182 F304	A182 F316	A182 F304L	A182 F316L
14	Bolt	A193 B8	A193 B8M	A193 B8M	A193 B8M
15	Nut	A194 8	A194 8M	A194 8M	A194 8M
16	Eye Bolt	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel

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Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 1500

SERIES 31 ANSI RANGE

Nominal Size		inch	2"	2-1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"
		DN	50	65	80	100	125	150	200	250	300	350	400
End connection	RF	L	368	419	470	546	673	705	832	991	1130	1257	1384
		ØB	48	60,65	70	92	115,1	136	178	222	263	289	330
		ØD	215	245	265	310	375	395	485	585	675	750	825
		ØK	165,1	190,5	203,2	241,3	292,1	317,5	393,7	482,6	571,5	635	704,8
		ØF	92,1	104,8	127	157,2	185,7	215,9	269,9	323,8	381	412,8	469,9
		C	38,1	41,3	47,7	54	73,1	82,6	92,1	108	123,9	133,4	146,1
		f	7	7	7	7	7	7	7	7	7	7	7
		n-Ød	8 - 7/8	8 -1	8 - 1 1/4	8 - 1 3/8	8 - 1 5/8	12 - 1 1/2	12 - 1 3/4	12 - 2	16 - 2 1/8	16 - 2 3/8	16 - 2 5/8
	BW	L1	368	419	470	546	673	705	832	991	1130	1257	1384
		Schedule No.*(1)*	160	-	160	120	-	120	120	120	120	120	120
		ØB	48	60,65	70	92	115,1	136	178	222	263	289	330
		ØA1	60,3	-	91	117	-	172	223	278	329	362	413
		ØB1	38,16	-	66,5	92	-	140	182,5	230	273	300	344,5
	RTJ	L2	371	422	473	549	676	711	842	1001	1146	1276	1406
		ØB	48	60,65	70	92	115,1	136	178	222	263	289	330
		ØD	215	245	265	310	375	395	485	585	675	750	825
		ØK	165,1	190,5	203,2	241,3	292,1	317,5	393,7	482,6	571,5	635	704,8
		ØG	124	137	168	194	229	248	318	371	438	489	546
		ØP	95,25	107,95	136,53	161,93	193,68	211,14	269,88	323,85	381	419,1	469,9
		C	38,1	41,3	47,7	54	73,1	82,6	92,1	108	123,9	133,4	146,1
		n-Ød	8 - 7/8	8 -1	8 - 1 1/4	8 - 1 3/8	8 - 1 5/8	12 - 1 1/2	12 - 1 3/4	12 - 2	16 - 2 1/8	16 - 2 3/8	16 - 2 5/8
		T	11,91	11,91	11,91	11,91	11,91	13,49	16,66	16,66	23,01	26,97	30,18
		S	7,92	7,92	7,92	7,92	7,92	9,53	11,13	11,13	14,27	15,88	17,48
		R	0,8	0,8	0,8	0,8	0,8	1,5	1,5	1,5	1,5	2,4	2,4
H			200	249	285	320	395	450	561	660	750	850	955
Kvs-value			65	146	205	363	646	855	1496	2338	3410	4103	5355
Approx. Weight RF *(2)*			70	105	130	300	386	450	600	1190	1530	1854	2060
Approx. Weight BW			56	83	104	264	323	366	457	945	1166	1343	1380

(1) Other schedule nos. on request
(2) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Weights in kg
For more information about flanged and welded ends refer to page 16

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The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 2500

SERIES 31 ANSI RANGE

Nominal Size		inch	2"	2-1/2"	3"	4"	5"	6"	8"	10"	12"
		DN	50	65	80	100	125	150	200	250	300
End connection	RF	L	451	508	578	673	794	914	1022	1270	1422
		ØB	38	48,925	57	73	92,95	111	146	184	219
		ØD	235	265	305	355	420	485	550	675	760
		ØK	171,4	196,8	228,6	273	323,8	368,3	438,2	539,8	619,1
		ØF	92,1	104,8	127	157,2	185,7	215,9	269,9	323,8	381
		C	50,9	57,2	66,7	76,2	92,1	108	127	165,1	184,2
		f	7	7	7	7	7	7	7	7	7
		n-Ød	8 - 1 1/8	8 - 1 1/4	8 - 1 3/8	8 - 1 5/8	8 - 1 7/8	8 - 2 1/8	12 - 2 1/8	12 - 2 5/8	12 - 2 7/8
	BW	L1	451	508	578	673	794	914	1022	1270	1422
		Schedule No.*(1)*	160	-	160	160	-	160	160	160	160
		ØB	38	48,925	57	73	92,95	111	146	184	219
		ØA1	60,3	-	91	117	-	172	223	278	329
		ØB1	42,82	-	66,5	87,5	-	132	173	216	257
	RTJ	L2	454	511	581	676	797	918	1027	1276	1430
		ØB	38	48,925	57	73	92,95	111	146	184	219
		ØD	235	265	305	355	420	485	550	675	760
		ØK	171,4	196,8	228,6	273	323,8	368,3	438,2	539,8	619,1
		ØG	133	149	168	203	241	279	340	425	495
		ØP	101,6	111,13	127	157,18	190,5	228,6	279,4	342,9	406,4
		C	50,9	57,2	66,7	76,2	92,1	108	127	165,1	184,2
		n-Ød	8 - 1 1/8	8 - 1 1/4	8 - 1 3/8	8 - 1 5/8	8 - 1 7/8	8 - 2 1/8	12 - 2 1/8	12 - 2 5/8	12 - 2 7/8
		T	11,91	13,49	13,49	16,66	19,84	19,84	23,01	30,18	33,32
		S	7,92	9,53	9,53	11,13	12,7	12,7	14,27	17,48	17,48
		R	0,8	1,5	1,5	1,5	1,5	1,5	1,5	2,4	2,4
H			280	297	310	370	436	485	544	710	800
Kvs-value			41	74	98	167	304	406	726	1154	1684
Approx. Weight RF *(2)*			88	135	170	400	486	550	900	1600	2300
Approx. Weight BW			65	96	118	321	334	344	869	1018	1470

(1) Other schedule nos. on request
(2) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Weights in kg
For more information about flanged and welded ends refer to page 16

Information / restriction of technical rules need to be observed!
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The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

SERIES 3P ANSI RANGE

Check Valves are self-acting valves used for preventing the reverse of flow in a piping system. Series 3P are Piston Check Valves are provided with a guided piston which can be loaded by a spring and closes the disc against a horizontal valve seat. Piston Check Valves provide a larger pressure drop in the pipe line, this design permits a faster closure reaction and more tightness.

Body to cover joint design to apply uniform load to the gasket

Seat surface can be hardened to increase wear resistance

Precise plug guidance

Precise machining of components for optimal performance

Spring loaded to allow installation on vertical lines (standard for small sizes)

Great versatility in end connections, materials and configurations

Marking for identification and full traceability purpose

Main Features / Reference Standards

Design: ASME B16.34 / BS 1868
Pressure Rating: 150/300/600/900/1500/2500#
Face to face length: ASME B16.10
Valve end connections: Flanged RF or RTJ to ASME B16.5
Welded BW to ASME B16.25
Marking: MSS SP-25
Inspections & Tests: API 598
Primer painted grey color similar to RAL 7037 for protection during storage and transport (carbon steel body/bonnet)
Product compliant with Directive 2014/68/EU on Pressure Equipment (PED)
for European Union territory

Main Duties / Limits of use

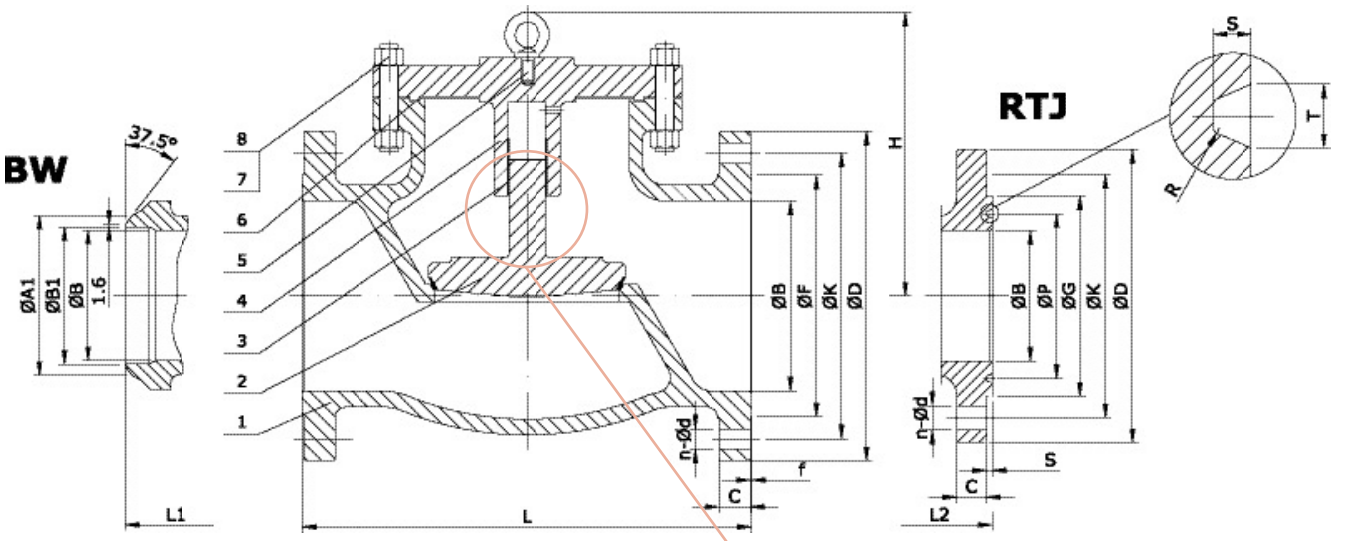
Fluids compatible with materials of construction. Questions referring to chemical resistance, please consult us
Pressure / Temperature Rating to ASME B16.34. See section “Engineering & Performance Data”
For products compliant with Directive 2014/68/EU, observe also limits acc. to Annex II tables 6 & 8 (gases & liquids group 1*) and tables 7 & 9 (gases & liquids group 2*) up to category III
**Classification of fluids (group 1 or 2) acc. to Directive 2014/68/EU, Article 13*

Options

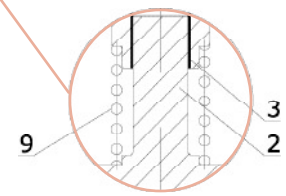
Diverse materials of construction and trim combinations, with or without spring, angle pattern, Y pattern, execution for turbulent flow or unstable condition, execution for aggressive atmosphere, compliance with NACE MR0175, etc. Please consult us

Main Parts and Materials

SERIES 3P ANSI RANGE
Class 150&300



Detailed view with spring option



(recommended for size ≤ 6" and for vertical pipeline)

Nº	Part name	A216 WCB (3PA0_)	A352 LCB		A217 WC1 (3PB1_)	A217 WC6 (3PB8_)	A217 WC9 (3PB9_)
			Trim 2 (3PA82_)	Trim 12 (3PA8G_)			
1	Body	A216 WCB	A352 LCB+SS304	A352 LCB+SS316	A217 WC1+HF	A217 WC6+HF	A217 WC9+HF
2	Disc	A105	A182 F304	A182 F316+HF	A182 F1+HF	A182 F11+HF	A182 F22+HF
3	Bushing	SS304	SS304	SS316	SS304		
4	Cover	A105	A350 LF2		A182 F1	A182 F11	A182 F22
5	Eye Bolt	Carbon Steel	Carbon Steel		Carbon Steel		
6	Cover Gasket	SS304+Graphite	SS304+Graphite	SS316+Graphite	SS304+Graphite		
7	Cover Bolt (1)	A193 B7	A320 L7		A193 B16	A193 B16	A193 B16
8	Cover Nut (1)	A194 2H	A194 4		A194 4		
9	Spring (Option)	17-4PH	17-4PH		17-4PH		

(1) Bolting material for NACE MR0175 compliance available (i.e. B7M / 2HM for WCB bodies)

Fig. 3PA0_	Body Surface	Disc Surface
TRIM #1 (3PA01)	A216 WCB+13Cr	A105+13Cr
TRIM #5 (3PA05)	A216 WCB+HF	A105+HF
TRIM #8 (3PA08)	A216 WCB+HF	A105+13Cr

HF = Hard faced

Nº	Part name	A217 C5 (3PC2_)	A217 C12 (3PC4_)	CF8 (3SI2_)	CF8M (3SI0_)	CF3 (3SI1_)	CF3M (3SI7_)
1	Body	A217 C5+HF	A217 C12+HF	A351 CF8	A351 CF8M+HF	A351 CF3	A351 CF3M+HF
2	Disc	A182 F5+HF	A182 F9+HF	A182 F304	A182 F316	A182 F304L	A182 F316L
3	Bushing	SS304		SS304	SS316	SS316	
4	Cover	A182 F5	A182 F9	A182 F304	A182 F316	A182 F304L	A182 F316L
5	Eye Bolt	Carbon Steel		Carbon Steel		Carbon Steel	
6	Cover Gasket	SS304+Graphite		SS304+Graphite	SS316+Graphite	SS316+Graphite	SS316L+Graphite
7	Cover Bolt	A193 B16	A193 B16	A193 B8	A193 B8M	A193 B8M	
8	Cover Nut	A194 4		A194 8	A194 8M	A194 8M	
9	Spring (Option)	17-4PH		SS304	SS316	SS304	SS316

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The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 150

SERIES 3P ANSI RANGE

Nominal Size		inch	2”	2-1/2”	3”	4”	5”	6”	8”
		DN	50	65	80	100	125	150	200
End connection	RF	L	203	216	241	292	356	406	495
		ØB	51	65	76	102	128	152	203
		ØD	150	180	190	230	255	280	345
		ØK	120,7	139,7	152,4	190,5	215,9	241,3	298,5
		ØF	92,1	104,8	127	157,2	185,7	215,9	269,9
		C	14,3	15,9	17,5	22,3	22,3	23,9	27
		f	2	2	2	2	2	2	2
		n-Ød	4 - 3/4	4 - 3/4	4 - 3/4	8 - 3/4	8 - 7/8	8 - 7/8	8 - 7/8
	BW	L1	203	216	241	292	356	403	419
		Schedule No.*(1)*	40	-	40	40	-	40	40
		ØB	51	65	76	102	128	152	203
		ØA1	60,3	-	91	117	-	172	223
		ØB1	52,48	-	78	102	-	154	203
	RTJ	L2	216	229	254	305	369	419	508
		ØB	51	65	76	102	128	152	203
		ØD	150	180	190	230	255	280	345
		ØK	120,7	139,7	152,4	190,5	215,9	241,3	298,5
		ØG	102	121	133	171	194	219	273
		ØP	82,55	101,6	114,3	149,23	171,45	193,68	247,65
		C	17,5	20,7	22,3	22,3	22,3	23,9	27
		n-Ød	4 - 3/4	4 - 3/4	4 - 3/4	8 - 3/4	8 - 7/8	8 - 7/8	8 - 7/8
		T	8,74	8,74	8,74	8,74	8,74	8,74	8,74
		S	6,35	6,35	6,35	6,35	6,35	6,35	6,35
		R	0,8	0,8	0,8	0,8	0,8	0,8	0,8
H			130	147	160	175	212	240	350
Kvs-value			-	-	-	-	-	-	-
Approx. Weight RF *(2)*			13	19	24	40	48	54	98
Approx. Weight BW			10	15	19	32	37	41	76

(1) Other schedule nos. on request
(2) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Weights in kg
For more information about flanged and welded ends refer to page 16

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The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 150

SERIES 3P ANSI RANGE

Nominal Size		inch	10”	12”	14”	16”	18”	20”	24”
		DN	250	300	350	400	450	500	600
End connection	RF	L	622	698	787	914	978	978	1295
		ØB	254	305	337	387	438	489	591
		ØD	405	485	535	595	635	700	815
		ØK	362	431,8	476,3	539,8	577,9	635	749,3
		ØF	323,8	381	412,8	469,9	533,4	584,2	692,2
		C	28,6	30,2	33,4	35	38,1	41,3	46,1
		f	2	2	2	2	2	2	2
		n-Ød	12 - 1	12 - 1	12 - 1 1/8	16 - 1 1/8	16 - 1 1/4	20 - 1 1/4	20 - 1 3/8
	BW	L1	457	502	572	610	660	711	813
		Schedule No.*(1)*	40	STD	STD	STD	STD	STD	STD
		ØB	254	305	337	387	438	489	591
		ØA1	278	329	362	413	464	516	619
		ØB1	254,5	305	336,5	387,5	438	489	590,5
	RTJ	L2	635	711	800	927	991	991	1308
		ØB	254	305	337	387	438	489	591
		ØD	405	485	535	595	635	700	815
		ØK	362	431,8	476,3	539,8	577,9	635	749,3
		ØG	330	406	425	483	546	597	711
		ØP	304,8	381	396,88	454,03	517,53	558,8	673,1
		C	28,6	30,2	33,4	35	38,1	41,3	46,1
		n-Ød	12 - 1	12 - 1	12 - 1 1/8	16 - 1 1/8	16 - 1 1/4	20 - 1 1/4	20 - 1 3/8
		T	8,74	8,74	8,74	8,74	8,74	8,74	8,74
		S	6,35	6,35	6,35	6,35	6,35	6,35	6,35
		R	0,8	0,8	0,8	0,8	0,8	0,8	0,8
H			420	439	480	565	590	670	760
Kvs-value			-	-	-	-	-	-	-
Approx. Weight RF *(2)*			211	310	578	748	978	1148	1445
Approx. Weight BW			182	266	522	678	901	1056	1303

(1) Other schedule nos. on request
(2) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Weights in kg
For more information about flanged and welded ends refer to page 16

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The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 300

SERIES 3P ANSI RANGE

Nominal Size		inch	2”	2-1/2”	3”	4”	5”	6”	8”
		DN	50	65	80	100	125	150	200
End connection	RF	L	267	292	318	356	400	444	559
		ØB	51	65	76	102	128	152	203
		ØD	165	190	210	255	280	320	380
		ØK	127	149,2	168,3	200	235	269,9	330,2
		ØF	92,1	104,8	127	157,2	185,7	215,9	269,9
		C	20,7	23,9	27	30,2	33,4	35	39,7
		f	2	2	2	2	2	2	2
		n-Ød	8 - 3/4	8 - 7/8	8 - 7/8	8 - 7/8	8 - 7/8	12 - 7/8	12 - 1
	BW	L1	267	292	318	356	400	444	559
		Schedule No.*(1)*	40	-	40	40	-	40	40
		ØB	51	65	76	102	128	152	203
		ØA1	60,3	-	91	117	-	172	223
		ØB1	52,48	-	78	102	-	154	203
	RTJ	L2	283	308	334	372	416	460	575
		ØB	51	65	76	102	128	152	203
		ØD	165	190	210	255	280	320	380
		ØK	127	149,2	168,3	200	235	269,9	330,2
		ØG	108	127	146	175	210	241	302
		ØP	82,55	101,6	123,83	149,23	180,98	211,12	269,88
		C	20,7	23,9	27	30,2	33,4	35	39,7
		n-Ød	8 - 3/4	8 - 7/8	8 - 7/8	8 - 7/8	8 - 7/8	12 - 7/8	12 - 1
		T	11,91	11,91	11,91	11,91	11,91	11,91	11,91
		S	7,92	7,92	7,92	7,92	7,92	7,92	7,92
		R	0,8	0,8	0,8	0,8	0,8	0,8	0,8
H			140	166	185	210	268	310	390
Kvs-value			-	-	-	-	-	-	-
Approx. Weight RF *(2)*			21	30	36	60	84	102	196
Approx. Weight BW			16	23	28	47	65	79	160

(1) Other schedule nos. on request
(2) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Weights in kg
For more information about flanged and welded ends refer to page 16

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The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 300

SERIES 3P ANSI RANGE

Nominal Size		inch	10"	12"	14"	16"	18"	20"	24"
		DN	250	300	350	400	450	500	600
End connection	RF	L	622	711	*838*	*864*	*978*	*1016*	*1346*
		ØB	254	305	337	387	432	483	584
		ØD	445	520	585	650	710	775	915
		ØK	387,4	450,8	514,4	571,5	628,6	685,8	812,8
		ØF	323,8	381	412,8	469,9	533,4	584,2	692,2
		C	46,1	49,3	52,4	55,6	58,8	62	68,3
		f	2	2	2	2	2	2	2
		n-Ød	16 - 1 1/8	16 - 1 1/4	20 - 1 1/4	20 - 1 3/8	24 - 1 3/8	24 - 1 3/8	24 - 1 5/8
	BW	L1	622	711	-	-	-	-	-
		Schedule No.*(1)*	40	STD	STD	STD	STD	STD	STD
		ØB	254	305	337	387	432	483	584
		ØA1	278	329	362	413	464	516	619
		ØB1	254,5	305	336,5	387,5	438	489	590,5
	RTJ	L2	638	727	854	880	994	1035	1368
		ØB	254	305	337	387	432	483	584
		ØD	445	520	585	650	710	775	915
		ØK	387,4	450,8	514,4	571,5	628,6	685,8	812,8
		ØG	356	413	457	508	575	635	749
		ØP	323,85	981	419,1	469,9	533,4	584,2	692,15
		C	46,1	49,3	52,4	55,6	58,8	62	68,3
		n-Ød	16 - 1 1/8	16 - 1 1/4	20 - 1 1/4	20 - 1 3/8	24 - 1 3/8	24 - 1 3/8	24 - 1 5/8
		T	11,91	11,91	11,91	11,91	11,91	13,49	16,66
		S	7,92	7,92	7,92	7,92	7,92	9,53	11,13
		R	0,8	0,8	0,8	0,8	0,8	1,5	1,5
H			425	480	517	580	640	710	810
Kvs-value			-	-	-	-	-	-	-
Approx. Weight RF *(2)*			331	493	918	1020	1318	1658	-
Approx. Weight BW			282	419	817	887	1152	1453	-

(1) Other schedule nos. on request
(2) RTJ weight increases approx. by 10%
(3) Acc. to manufacturer standard

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Weights in kg
For more information about flanged and welded ends refer to page 16

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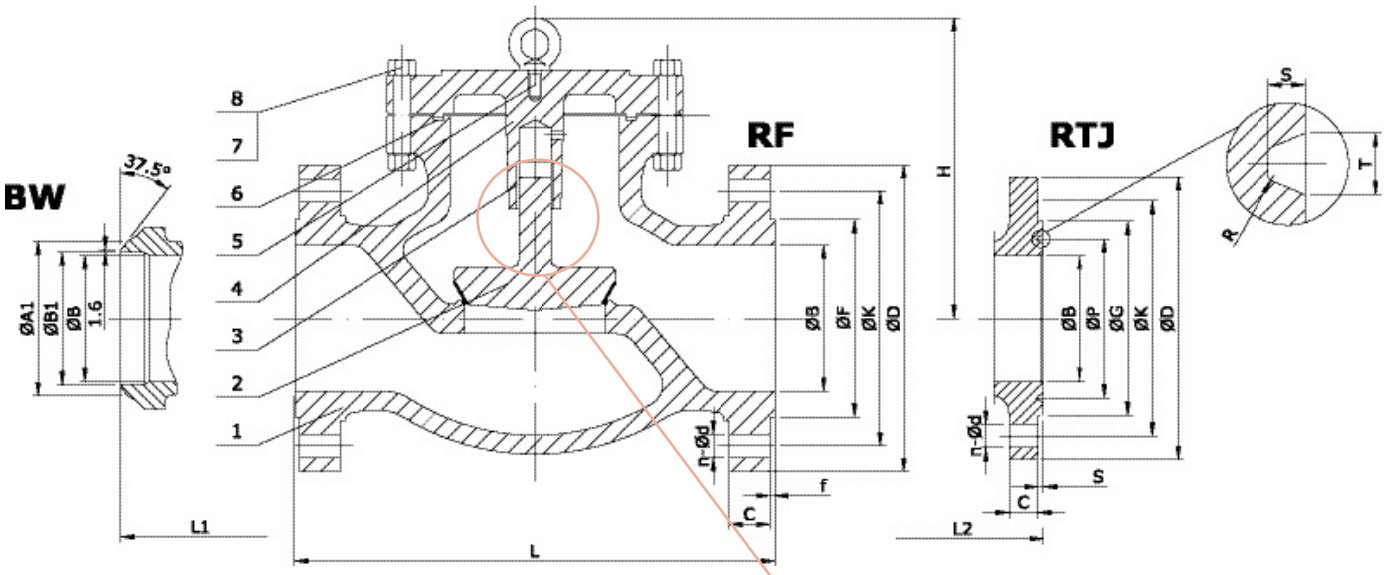
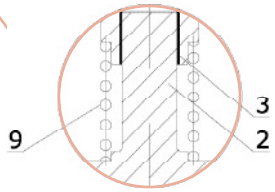
Product suitability must be verified, contact manufacturer for information

Main Parts and Materials

SERIES 3P ANSI RANGE
Class 600



Detailed view with spring option



(recommended for size ≤ 6" and for vertical pipeline)

Nº	Part name	A216 WCB (3PA0_)	A352 LCB		A217 WC1 (3PB1_)	A217 WC6 (3PB8_)	A217 WC9 (3PB9_)
			Trim 2 (3PA82_)	Trim 12 (3PA8G_)			
1	Body	A216 WCB	A352 LCB+SS304	A352 LCB+SS316	A217 WC1+HF	A217 WC6+HF	A217 WC9+HF
2	Disc	A105	A182 F304	A182 F316+HF	A182 F1+HF	A182 F11+HF	A182 F22+HF
3	Bushing	SS304	SS304	SS316	SS304		
4	Cover	A105	A350 LF2		A182 F1	A182 F11	A182 F22
5	Eye Bolt	Carbon Steel	Carbon Steel		Carbon Steel		
6	Cover Gasket	SS304+Graphite	SS304+Graphite	SS316+Graphite	SS304+Graphite		
7	Cover Bolt (1)	A193 B7	A320 L7		A193 B16	A193 B16	A193 B16
8	Cover Nut (1)	A194 2H	A194 4		A194 4		
9	Spring (Option)	17-4PH	17-4PH		17-4PH		

(1) Bolting material for NACE MR0175 compliance available (i.e. B7M / 2HM for WCB bodies)

Fig. 3PA0_	Body Surface	Disc Surface
TRIM #1 (3PA01)	A216 WCB+13Cr	A105+13Cr
TRIM #5 (3PA05)	A216 WCB+HF	A105+HF
TRIM #8 (3PA08)	A216 WCB+HF	A105+13Cr

HF = Hard faced

Nº	Part name	A217 C5 (3PC2_)	A217 C12 (3PC4_)	CF8 (3SI2_)	CF8M (3SI0_)	CF3 (3SI1_)	CF3M (3SI7_)
1	Body	A217 C5+HF	A217 C12+HF	A351 CF8	A351 CF8M+HF	A351 CF3	A351 CF3M+HF
2	Disc	A182 F5+HF	A182 F9+HF	A182 F304	A182 F316	A182 F304L	A182 F316L
3	Bushing	SS304		SS304	SS316	SS316	
4	Cover	A182 F5	A182 F9	A182 F304	A182 F316	A182 F304L	A182 F316L
5	Eye Bolt	Carbon Steel		Carbon Steel		Carbon Steel	
6	Cover Gasket	SS304+Graphite		SS304+Graphite	SS316+Graphite	SS316+Graphite	SS316L+Graphite
7	Cover Bolt	A193 B16	A193 B16	A193 B8	A193 B8M	A193 B8M	
8	Cover Nut	A194 4		A194 8	A194 8M	A194 8M	
9	Spring (Option)	17-4PH		SS304	SS316	SS304	SS316

Information / restriction of technical rules need to be observed!
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The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 600

SERIES 3P ANSI RANGE

Nominal Size		inch	2”	2-1/2”	3”	4”	5”	6”	8”
		DN	50	65	80	100	125	150	200
End connection	RF	L	292	330	356	432	508	559	660
		ØB	51	65	76	102	128	152	200
		ØD	165	190	210	275	330	355	420
		ØK	127	149,2	168,3	215,9	266,7	292,1	349,2
		ØF	92,1	104,8	127	157,2	185,7	215,9	269,9
		C	25,4	28,6	31,8	38,1	44,5	47,7	55,6
		f	7	7	7	7	7	7	7
		n-Ød	8 - 3/4	8 - 7/8	8 - 7/8	8 - 1	8 - 1 1/8	12 - 1 1/8	12 - 1/4
	BW	L1	292	330	356	432	508	559	660
		Schedule No.*(1)*	80	-	80	80	-	80	80
		ØB	51	65	76	102	128	152	200
		ØA1	60,3	-	91	117	-	172	223
		ØB1	49,22	-	73,5	97	-	146,5	193,5
	RTJ	L2	295	346	372	448	524	562	663
		ØB	51	65	76	102	128	152	200
		ØD	165	190	210	275	330	355	420
		ØK	127	149,2	168,3	215,9	266,7	292,1	349,2
		ØG	108	127	146	175	210	241	302
		ØP	82,55	101,6	123,83	149,23	180,98	211,12	269,88
		C	25,4	28,6	31,8	38,1	44,5	47,7	55,6
		n-Ød	8 - 3/4	8 - 7/8	8 - 7/8	8 - 1	8 - 1 1/8	12 - 1 1/8	12 - 1/4
		T	11,91	11,91	11,91	11,91	11,91	11,91	11,91
		S	7,92	7,92	7,92	7,92	7,92	7,92	7,92
		R	0,8	0,8	0,8	0,8	0,8	0,8	0,8
H			145	194	230	265	314	350	415
Kvs-value			-	-	-	-	-	-	-
Approx. Weight RF *(2)*			26	38	47	85	151	200	349
Approx. Weight BW			19	28	34	62	116	156	285

(1) Other schedule nos. on request
(2) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Weights in kg
For more information about flanged and welded ends refer to page 16

Information / restriction of technical rules need to be observed!
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The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 600

SERIES 3P ANSI RANGE

Nominal Size		inch	10”	12”	14”	16”	18”	20”	24”
		DN	250	300	350	400	450	500	600
End connection	RF	L	787	838	889	991	1092	1194	1397
		ØB	248	299	327	375	419	464	559
		ØD	510	560	605	685	745	815	940
		ØK	431,8	489	527	603,2	654	723,9	838,2
		ØF	323,8	381	412,8	469,9	533,4	584,2	692,2
		C	63,5	66,7	69,9	76,2	82,6	88,9	101,6
		f	7	7	7	7	7	7	7
		n-Ød	16 - 1 3/8	20 - 1 3/8	20 - 1 1/2	20 - 1 5/8	20 - 1 3/4	24 - 1 3/4	24 -2
	BW	L1	787	838	889	991	1092	1194	1397
		Schedule No.*(1)*	80	80	80	80	80	80	80
		ØB	248	299	327	375	419	464	559
		ØA1	278	329	362	413	464	516	619
		ØB1	243	289	317,5	363,5	409,5	455,5	547,5
	RTJ	L2	790	841	892	994	1095	1200	1407
		ØB	248	299	327	375	419	464	559
		ØD	510	560	605	685	745	815	940
		ØK	431,8	489	527	603,2	654	723,9	838,2
		ØG	356	413	457	508	575	635	749
		ØP	323,85	981	419,1	469,9	533,4	584,2	692,15
		C	63,5	66,7	69,9	76,2	82,6	88,9	101,6
		n-Ød	16 - 1 3/8	20 - 1 3/8	20 - 1 1/2	20 - 1 5/8	20 - 1 3/4	24 - 1 3/4	24 -2
		T	11,91	11,91	11,91	11,91	11,91	13,49	16,66
		S	7,92	7,92	7,92	7,92	7,92	9,53	11,13
		R	0,8	0,8	0,8	0,8	0,8	1,5	1,5
H			485	560	620	670	780	910	965
Kvs-value			-	-	-	-	-	-	-
Approx. Weight RF *(2)*			497	893	1088	1360	2380	2975	3910
Approx. Weight BW			394	771	908	1132	2092	2621	3472

(1) Other schedule nos. on request
(2) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Weights in kg
For more information about flanged and welded ends refer to page 16

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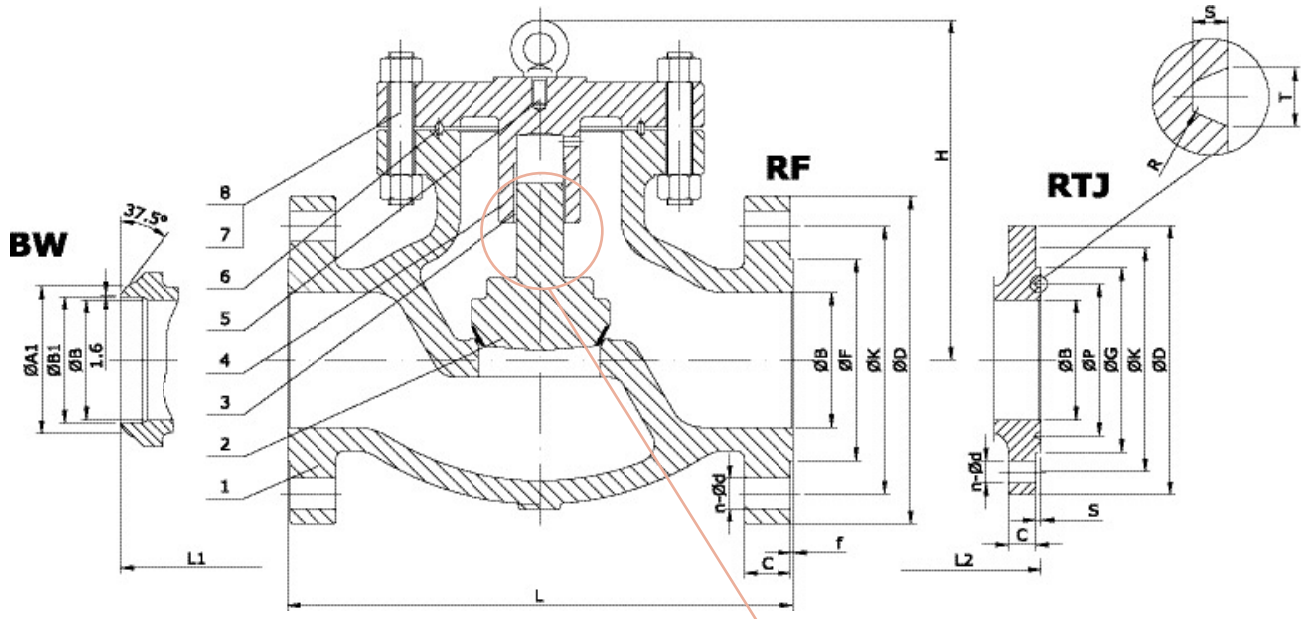
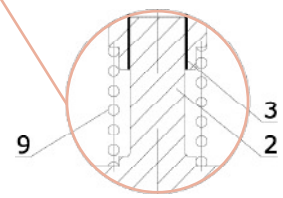
Product suitability must be verified, contact manufacturer for information

Main Parts and Materials

SERIES 3P ANSI RANGE
Class 900,1500&2500



Detail with spring option



(recommended for size ≤ 6" and for vertical installation)

Nº	Part name	A216 WCB (3PA0_)	A352 LCB		A217 WC1 (3PB1_)	A217 WC6 (3PB8_)	A217 WC9 (3PB9_)
			Trim 15 (3PA8L_)	Trim 16 (3PA8K_)			
1	Body	ASTM A216 WCB	A352 LCB+HF	A352 LCB+HF	A217 WC1+HF	A217 WC6+HF	A217 WC9+HF
2	Disc	ASTM A105	A182 F304+HF	A182 F316+HF	A182 F1+HF	A182 F11+HF	A182 F22+HF
3	Bushing	SS304	SS304	SS316	SS304		
4	Cover	ASTM A105	A350 LF2		A182 F1	A182 F11	A182 F22
5	Eye Bolt	Carbon Steel	Carbon Steel		Carbon Steel		
6	Cover Gasket	SS304	SS304	SS316	SS304		
7	Cover Bolt (1)	ASTM A193 B7	A320 L7		A193 B16		
8	Cover Nut (1)	ASTM A194 2H	A194 4		A194 4		
9	Spring (Option)	17-4PH	17-4PH		17-4PH		

(1) Bolting material for NACE MR0175 compliance available (i.e. B7M / 2HM for WCB bodies)

Fig. 3PA0_	Body Surface	Disc Surface
TRIM #1 (3PA01)	A216 WCB+13Cr	A105+13Cr
TRIM #5 (3PA05)	A216 WCB+HF	A105+HF
TRIM #8 (3PA08)	A216 WCB+HF	A105+13Cr

HF = Hard faced

Nº	Part name	A217 C5 (3PC2_)	A217 C12 (3PC4_)	CF8 (3SI2_)	CF8M (3SI0_)	CF3 (3SI1_)	CF3M (3SI7_)
1	Body	A217 C5+HF	A217 C12+HF	A351 CF8+HF	A351 CF8M+HF	A351 CF3+HF	A351 CF3M+HF
2	Disc	A182 F5+HF	A182 F9+HF	A182 F304+HF	A182 F316+HF	A182 F304L+HF	A182 F316L+HF
3	Bushing	SS304		SS304	SS316	SS316	
4	Cover	A182 F5	A182 F9	A182 F304	A182 F316	A182 F304L	A182 F316L
5	Eye Bolt	Carbon Steel		Carbon Steel		Carbon Steel	
6	Cover Gasket	SS304		SS304	SS316	SS316	SS316L
7	Cover Bolt	A193 B16		A193 B8	A193 B8M	A193 B8M	
8	Cover Nut	A194 4		A194 8	A194 8M	A194 8M	
9	Spring (Option)	17-4PH		SS304	SS316	SS304	SS316

Information / restriction of technical rules need to be observed!
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The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 900

SERIES 3P ANSI RANGE

Nominal Size		inch	2”	2-1/2”	3”	4”	5”	6”	8”
		DN	50	65	80	100	125	150	200
End connection	RF	L	368	419	381	457	559	610	737
		ØB	48	62	73	98	123	146	191
		ØD	215	245	240	290	350	380	470
		ØK	165,1	190,5	190,5	235	279,4	317,5	393,7
		ØF	92,1	104,8	127	157,2	185,7	215,9	269,9
		C	38,1	41,3	38,1	44,5	50,8	55,6	63,5
		f	7	7	7	7	7	7	7
		n-Ød	8 - 7/8	8 -1	8 - 7/8	8 - 1 1/8	8 - 1 1/4	12 - 1 1/8	12 - 1 3/8
	BW	L1	368	419	381	457	559	610	737
		Schedule No.*(1)*	160	-	160	120	-	120	100
		ØB	48	62	73	98	123	146	191
		ØA1	60,3	-	91	117	-	172	223
		ØB1	38,16	-	66,5	92	-	140	189
	RTJ	L2	371	422	384	460	562	613	740
		ØB	48	62	73	98	123	146	191
		ØD	215	245	240	290	350	380	470
		ØK	165,1	190,5	190,5	235	279,4	317,5	393,7
		ØG	124	137	156	181	216	241	308
		ØP	95,25	107,95	123,83	149,23	180,98	211,12	269,88
		C	38,1	41,3	38,1	44,5	50,8	55,6	63,5
		n-Ød	8 - 7/8	8 -1	8 - 7/8	8 - 1 1/8	8 - 1 1/4	12 - 1 1/8	12 - 1 3/8
		T	11,91	11,91	11,91	11,91	11,91	11,91	11,91
		S	7,92	7,92	7,92	7,92	7,92	7,92	7,92
		R	0,8	0,8	0,8	0,8	0,8	0,8	0,8
H			180	226	260	320	360	390	540
Kvs-value			-	-	-	-	-	-	-
Approx. Weight RF *(2)*			72	82	89	136	253	340	608
Approx. Weight BW			58	66	72	108	207	280	506

(1) Other schedule nos. on request
(2) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Weights in kg
For more information about flanged and welded ends refer to page 16

Information / restriction of technical rules need to be observed!
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The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 900

SERIES 3P ANSI RANGE

Nominal Size		inch	10”	12”	14”	16”	18”	20”	24”
		DN	250	300	350	400	450	500	600
End connection	RF	L	838	965	1029	1130	1219	1321	1549
		ØB	238	282	311	356	400	445	533
		ØD	545	610	640	705	785	855	1040
		ØK	469,9	533,4	558,8	616	685,8	749,3	901,7
		ØF	323,8	381	412,8	469,9	533,4	584,2	692,2
		C	69,9	79,4	85,8	88,9	101,6	108	139,7
		f	7	7	7	7	7	7	7
		n-Ød	16 - 1 3/8	20 - 1 3/8	20 - 1 1/2	20 - 1 5/8	20 - 1 7/8	20 - 2	20 - 2 1/2
	BW	L1	838	965	1029	1130	1219	1321	1549
		Schedule No.*(1)*	100	100	100	100	100	100	100
		ØB	238	282	311	356	400	445	533
		ØA1	278	329	362	413	464	516	619
		ØB1	236,5	281	308	354	398,5	443	532
	RTJ	L2	841	968	1039	1140	1232	1334	1568
		ØB	238	282	311	356	400	445	533
		ØD	545	610	640	705	785	855	1040
		ØK	469,9	533,4	558,8	616	685,8	749,3	901,7
		ØG	362	419	467	524	594	648	772
		ØP	323,85	381	419,1	469,9	533,4	584,2	692,15
		C	69,9	79,4	85,8	88,9	101,6	108	139,7
		n-Ød	16 - 1 3/8	20 - 1 3/8	20 - 1 1/2	20 - 1 5/8	20 - 1 7/8	20 - 2	20 - 2 1/2
		T	11,91	11,91	16,66	16,66	19,84	19,84	26,97
		S	7,92	7,92	11,13	11,13	12,7	12,7	15,88
		R	0,8	0,8	1,5	1,5	1,5	1,5	2,4
H			570	605	745	770	875	935	1100
Kvs-value			-	-	-	-	-	-	-
Approx. Weight RF *(2)*			765	1233	2763	3570	-	-	-
Approx. Weight BW			623	1037	2540	3301	-	-	-

(1) Other schedule nos. on request
(2) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Weights in kg
For more information about flanged and welded ends refer to page 16

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The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 1500

SERIES 3P ANSI RANGE

Nominal Size		inch	2"	2-1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"
		DN	50	65	80	100	125	150	200	250	300	350	400
End connection	RF	L	368	419	470	546	673	705	832	991	1130	1257	1384
		ØB	48	61	70	92	115	136	178	222	263	289	330
		ØD	215	245	265	310	375	395	485	585	675	750	825
		ØK	165,1	190,5	203,2	241,3	292,1	317,5	393,7	482,6	571,5	635	704,8
		ØF	92,1	104,8	127	157,2	185,7	215,9	269,9	323,8	381	412,8	469,9
		C	38,1	41,3	47,7	54	73,1	82,6	92,1	108	123,9	133,4	146,1
		f	7	7	7	7	7	7	7	7	7	7	7
		n-Ød	8 - 7/8	8 -1	8 - 1 1/4	8 - 1 3/8	8 - 1 5/8	12 - 1 1/2	12 - 1 3/4	12 - 2	16 - 2 1/8	16 - 2 3/8	16 - 2 5/8
	BW	L1	368	419	470	546	673	705	832	991	1130	1257	1384
		Schedule No.*(1)*	160	-	160	120	-	120	120	120	120	120	120
		ØB	48	61	70	92	115	136	178	222	263	289	330
		ØA1	60,3	-	91	117	-	172	223	278	329	362	413
		ØB1	38,16	-	66,5	92	-	140	182,5	230	273	300	344,5
	RTJ	L2	371	422	473	549	676	711	842	1001	1146	1276	1406
		ØB	48	61	70	92	115	136	178	222	263	289	330
		ØD	215	245	265	310	375	395	485	585	675	750	825
		ØK	165,1	190,5	203,2	241,3	292,1	317,5	393,7	482,6	571,5	635	704,8
		ØG	124	137	168	194	229	248	318	371	438	489	546
		ØP	95,25	107,95	136,53	161,93	193,68	211,14	269,88	323,85	381	419,1	469,9
		C	38,1	41,3	47,7	54	73,1	82,6	92,1	108	123,9	133,4	146,1
		n-Ød	8 - 7/8	8 -1	8 - 1 1/4	8 - 1 3/8	8 - 1 5/8	12 - 1 1/2	12 - 1 3/4	12 - 2	16 - 2 1/8	16 - 2 3/8	16 - 2 5/8
		T	11,91	11,91	11,91	11,91	11,91	13,49	16,66	16,66	23,01	26,97	30,18
		S	7,92	7,92	7,92	7,92	7,92	9,53	11,13	11,13	14,27	15,88	17,48
		R	0,8	0,8	0,8	0,8	0,8	1,5	1,5	1,5	1,5	2,4	2,4
H			220	260	290	330	405	460	575	655	780	875	975
Kvs-value			-	-	-	-	-	-	-	-	-	-	-
Approx. Weight RF *(2)*			72	111	140	238	385	493	765	1148	2890	3655	-
Approx. Weight BW			58	90	114	202	321	409	622	903	2526	3144	-

(1) Other schedule nos. on request
(2) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Weights in kg
For more information about flanged and welded ends refer to page 16

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The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 2500

SERIES 3P ANSI RANGE

Nominal Size		inch	2”	2-1/2”	3”	4”	5”	6”	8”	10”	12”
		DN	50	65	80	100	125	150	200	250	300
End connection	RF	L	451	508	578	673	794	914	1022	1270	1422
		ØB	38	49	57	73	93	111	146	184	219
		ØD	235	265	305	355	420	485	550	675	760
		ØK	171,4	196,8	228,6	273	323,8	368,3	438,2	539,8	619,1
		ØF	92,1	104,8	127	157,2	185,7	215,9	269,9	323,8	381
		C	50,9	57,2	66,7	76,2	92,1	108	127	165,1	184,2
		f	7	7	7	7	7	7	7	7	7
		n-Ød	8 - 1 1/8	8 - 1 1/4	8 - 1 3/8	8 - 1 5/8	8 - 1 7/8	8 - 2 1/8	12 - 2 1/8	12 - 2 5/8	12 - 2 7/8
	BW	L1	451	508	578	673	794	914	1022	1270	1422
		Schedule No.*(1)*	160	-	160	160	-	160	160	160	160
		ØB	38	49	57	73	93	111	146	184	219
		ØA1	60,3	-	91	117	-	172	223	278	329
		ØB1	42,82	-	66,5	87,5	-	132	173	216	257
	RTJ	L2	454	511	581	676	797	918	1027	1276	1430
		ØB	38	49	57	73	93	111	146	184	219
		ØD	235	265	305	355	420	485	550	675	760
		ØK	171,4	196,8	228,6	273	323,8	368,3	438,2	539,8	619,1
		ØG	133	149	168	203	241	279	340	425	495
		ØP	101,6	111,13	127	157,18	190,5	228,6	279,4	342,9	406,4
		C	50,9	57,2	66,7	76,2	92,1	108	127	165,1	184,2
		n-Ød	8 - 1 1/8	8 - 1 1/4	8 - 1 3/8	8 - 1 5/8	8 - 1 7/8	8 - 2 1/8	12 - 2 1/8	12 - 2 5/8	12 - 2 7/8
		T	11,91	13,49	13,49	16,66	19,84	19,84	23,01	30,18	33,32
		S	7,92	9,53	9,53	11,13	12,7	12,7	14,27	17,48	17,48
		R	0,8	1,5	1,5	1,5	1,5	1,5	1,5	2,4	2,4
H			290	310	325	395	453	495	565	730	825
Kvs-value			-	-	-	-	-	-	-	-	-
Approx. Weight RF *(2)*			85	139	179	425	792	1063	2040	2805	3570
Approx. Weight BW			62	100	127	346	640	857	2009	2223	2740

(1) Other schedule nos. on request
(2) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Weights in kg
For more information about flanged and welded ends refer to page 16

Information / restriction of technical rules need to be observed!
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Product suitability must be verified, contact manufacturer for information

SERIES F0 ANSI RANGE

Y-Strainers are devices for mechanically removing solids from flowing media by means of a wired mesh or perforated basket, replaceable in line. They combine a rugged and compact design for indoors installation in industrial plants, building industry, etc.

St. steel screen, made out of high resistance wire, rugged and braided type or perforated basket

Precise machined seat slot, to accomodate the screen and avoid dirt to by-pass the strainer

Reinforced Graphite gasket, with. st. steel reinforcement

Standard gasket free threaded blow-off connection

Marking for identification and full traceability purpose

Great versatility in end connections, materials and configurations

Removable bolting cover, to ease maintenance

Main Features / Reference Standards

Design: ASME B16.34
Pressure Rating: 150/300/600#
Face to face length: ASME B16.10 and manufacturer standard
Valve end connections: Flanged RF or RTJ to ASME B16.5
Welded BW to ASME B16.25
Standard mesh width: 1 mm (DN50); 1,25 mm (DN80); 1,6 mm (DN100-DN300)
Marking: MSS SP-25
Inspections & Tests: API 598
Primer painted grey color similar to RAL 7037 for protection during storage and transport (carbon steel body/bonnet)
Product compliant with Directive 2014/68/EU on Pressure Equipment (PED)
for European Union territory

Main Duties / Limits of use

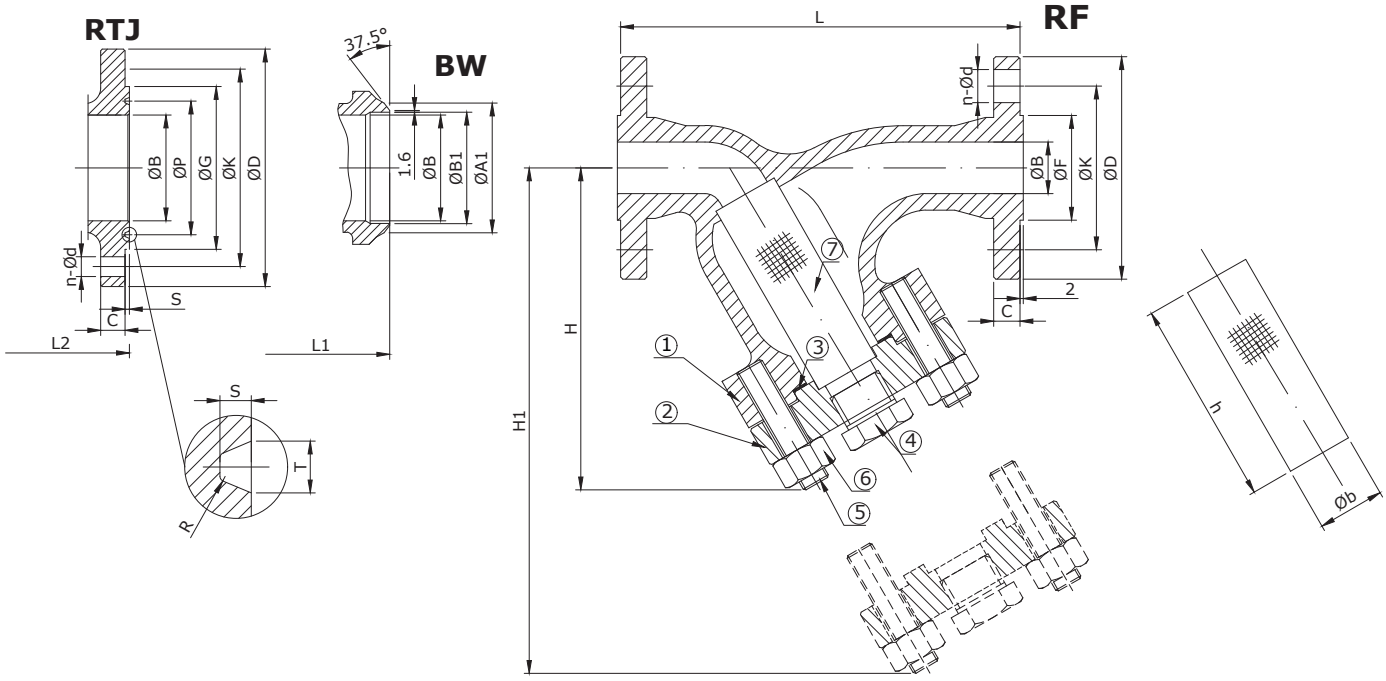
Fluids compatible with materials of construction. Questions referring to chemical resistance, please consult us
Pressure / Temperature Rating to ASME B16.34. See section “Engineering & Performance Data”
For products compliant with Directive 2014/68/EU, observe also limits acc. to Annex II tables 6 & 8 (gases & liquids group 1*) and tables 7 & 9 (gases & liquids group 2*) up to category III
**Classification of fluids (group 1 or 2) acc. to Directive 2014/68/EU, Article 13*

Options

Diverse materials of construction and trim combinations, special designs, pressure seal cover for high pressure, perforated or wire mesh, other mesh width, special mesh for vacuum service or in suction side of pumps, execution for aggressive atmosphere, compliance with NACE MR0175, etc. Please consult us

Main Parts and Materials

SERIES F0 ANSI RANGE
Class 150,300&600



Nº	Part name	A216 WCB (F0A0_)	A352 LCB/SS304 (F0A81_)	A352 LCB/SS304 (F0A80_)	A217 WC1 (F0B1_)	A217 WC6 (F0B8_)	A217 WC9 (F0B9_)
1	Body	A216 WCB	A352 LCB		A217 WC1	A217 WC6	A217 WC9
2	Cover	A105	A350 LF2		A182 F1	A182 F11	A182 F22
3	Gasket	SS304+Graphite	SS304+Graphite	SS316+Graphite	SS304+Graphite		
4	Drain Plug	A105	A350 LF2		A182 F304		
5	Cover Bolt (1)	A193 B7	A320 L7		A193 B16		
6	Cover Nut (1)	A194 2H	A194 4		A194 4		
7	Mesh	SS304	SS304	SS316	SS304		

(1) Bolting material for NACE MR0175 compliance available (i.e. B7M / 2HM for WCB bodies)

Nº	Part name	A217 C5 (F0C2_)	A217 C12 (F0C4_)	CF8 (F0I2_)	CF8M (F0I0_)	CF3 (F0I1_)	CF3M (F0I7_)
1	Body	A217 C5	A217 C12	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2	Cover	A182 F5	A182 F9	A182 F304	A182 F316	A182 F304L	A182 F316L
3	Gasket	SS304+Graphite		SS304+Graphite	SS316+Graphite	SS316+Graphite	SS316L+Graphite
4	Drain Plug	A182 F304		A182 F304	A182 F316	A182 F304L	A182 F316L
5	Cover Bolt	A193 B16		A193 B8	A193 B8M	A193 B8M	
6	Cover Nut	A194 4		A194 8	A194 8M	A194 8M	
7	Mesh	SS304		SS304	SS316	SS316	SS316L

Information / restriction of technical rules need to be observed!
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The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 150

SERIES F0 ANSI RANGE

Nominal Size		inch	2"	2-1/2"	3"	4"	5"	6"	8"
		DN	50	65	80	100	125	150	200
End connection	RF	L	203	216	241	292	356	406	495
		ØB	51	65	76	102	128	152	203
		ØD	150	180	190	230	255	280	345
		ØK	120,7	139,7	152,4	190,5	215,9	241,3	298,5
		ØF	92,1	104,8	127	157,2	185,7	215,9	269,9
		C	14,3	15,9	17,5	22,3	22,3	23,9	27
		f	2	2	2	2	2	2	2
		n-Ød	4 - 3/4	4 - 3/4	4 - 3/4	8 - 3/4	8 - 7/8	8 - 7/8	8 - 7/8
	BW	L1	229	216	318	368	356	470	597
		Schedule No.*(1)*	40	-	40	40	-	40	40
		ØB	51	65	76	102	128	152	203
		ØA1	60,3	-	91	117	-	172	223
		ØB1	52,48	-	78	102	-	154	203
	RTJ	L2	216	229	254	*305*	*369*	*419*	*508*
		ØB	51	65	76	102	128	152	203
		ØD	150	180	190	230	255	280	345
		ØK	120,7	139,7	152,4	190,5	215,9	241,3	298,5
		ØG	102	121	133	171	194	219	273
		ØP	82,55	101,6	114,3	149,23	171,45	193,68	247,65
		C	17,5	20,7	22,3	22,3	22,3	23,9	27
		n-Ød	4 - 3/4	4 - 3/4	4 - 3/4	8 - 3/4	8 - 7/8	8 - 7/8	8 - 7/8
		T	8,74	8,74	8,74	8,74	8,74	8,74	8,74
		S	6,35	6,35	6,35	6,35	6,35	6,35	6,35
		R	0,8	0,8	0,8	0,8	0,8	0,8	0,8
H			140	177	205	245	294	330	400
H1			270	330	375	440	532	600	735
Plug (NPT)			1/2" NPT	3/4" NPT	3/4" NPT	3/4" NPT	3/4" NPT	3/4" NPT	3/4" NPT
Basket		h	92	99	114	142		226	283
		Øb	Ø52	Ø63	Ø83	Ø108		Ø158	Ø210
		Standard perforation	1	1,25	1,25	1,6	1,6	1,6	1,6
Kvs-value			-	-	-	-		-	-
Approx. Weight RF *(2)*			12	16	19	33	49	60	93
Approx. Weight BW			9	12	13,6	24,6	38	47,04	71,4

(1) Other schedule nos. on request
(2) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Weights in kg
For more information about flanged and welded ends refer to page 16

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Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 150

SERIES F0 ANSI RANGE CE

Nominal Size		inch	10"	12"	14"	16"	18"	20"	24"
		DN	250	300	350	400	450	500	600
End connection	RF	L	622	698	787	768 / 914	864 / 978	914 / 978	1067 / 1295
		ØB	254	305	337	387	438	489	591
		ØD	405	485	535	595	635	700	815
		ØK	362	431,8	476,3	539,8	577,9	635	749,3
		ØF	323,8	381	412,8	469,9	533,4	584,2	692,2
		C	28,6	30,2	33,4	35	38,1	41,3	46,1
		f	2	2	2	2	2	2	2
		n-Ød	12 - 1	12 - 1	12 - 1 1/8	16 - 1 1/8	16 - 1 1/4	20 - 1 1/4	20 - 1 3/8
	BW	L1	673	775	787	914	978	978	1067
		Schedule No.*(1)*	40	STD	STD	STD	STD	STD	STD
		ØB	254	305	337	387	438	489	591
		ØA1	278	329	362	413	464	516	619
		ØB1	254,5	305	336,5	387,5	438	489	590,5
	RTJ	L2	*635*	711	800	*927*	*991*	*991*	*1080*
		ØB	254	305	337	387	438	489	591
		ØD	405	485	535	595	635	700	815
		ØK	362	431,8	476,3	539,8	577,9	635	749,3
		ØG	330	406	425	483	546	597	711
		ØP	304,8	381	396,88	454,03	517,53	558,8	673,1
		C	28,6	30,2	33,4	35	38,1	41,3	46,1
		n-Ød	12 - 1	12 - 1	12 - 1 1/8	16 - 1 1/8	16 - 1 1/4	20 - 1 1/4	20 - 1 3/8
		T	8,74	8,74	8,74	8,74	8,74	8,74	8,74
		S	6,35	6,35	6,35	6,35	6,35	6,35	6,35
		R	0,8	0,8	0,8	0,8	0,8	0,8	0,8
H			475	540	600	675	720	790	950
H1			850	1005	1090	1205	1320	1440	1700
Plug (NPT)			3/4" NPT	3/4" NPT	3/4" NPT	1" NPT	1" NPT	1" NPT	1" NPT
Basket		h	360	418					
		Øb	Ø262	Ø295					
		Standard perforation	1,6	1,6	*(3)*	*(3)*	*(3)*	*(3)*	*(3)*
Kvs-value			-	-	-	-	-	-	-
Approx. Weight RF *(2)*			144	267	331	450	650	713	990
Approx. Weight BW			115,2	222,6	274,6	380,4	573,2	620,6	848,4

(1) Other schedule nos. on request
(2) RTJ weight increases approx. by 10%
(3) To be determined

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Weights in kg
For more information about flanged and welded ends refer to page 16

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Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 300

SERIES F0 ANSI RANGE CE

Nominal Size		inch	2"	2-1/2"	3"	4"	5"	6"	8"
		DN	50	65	80	100	125	150	200
End connection	RF	L	267	292	318	356	400	444	559
		ØB	51	65	76	102	128	152	203
		ØD	165	190	210	255	280	320	380
		ØK	127	149,2	168,3	200	235	269,9	330,2
		ØF	92,1	104,8	127	157,2	185,7	215,9	269,9
		C	20,7	23,9	27	30,2	33,4	35	39,7
		f	2	2	2	2	2	2	2
		n-Ød	8 - 3/4	8 - 7/8	8 - 7/8	8 - 7/8	8 - 7/8	12 - 7/8	12 - 1
	BW	L1	267	292	318	356	400	444	533
		Schedule No.*(1)*	40	-	40	40	-	40	40
		ØB	51	65	76	102	128	152	203
		ØA1	60,3	-	91	117	-	172	223
		ØB1	52,48	-	78	102	-	154	203
	RTJ	L2	283	308	334	*372*	416	*460*	*575*
		ØB	51	65	76	102	128	152	203
		ØD	165	190	210	255	280	320	380
		ØK	127	149,2	168,3	200	235	269,9	330,2
		ØG	108	127	146	175	210	241	302
		ØP	82,55	101,6	123,83	149,23	180,98	211,12	269,88
		C	20,7	23,9	27	30,2	33,4	35	39,7
		n-Ød	8 - 3/4	8 - 7/8	8 - 7/8	8 - 7/8	8 - 7/8	12 - 7/8	12 - 1
		T	11,91	11,91	11,91	11,91	11,91	11,91	11,91
		S	7,92	7,92	7,92	7,92	7,92	7,92	7,92
		R	0,8	0,8	0,8	0,8	0,8	0,8	0,8
H			170	210	240	280	326	360	430
H1			305	365	410	470	562	630	770
Plug (NPT)			1/2" NPT	3/4" NPT	3/4" NPT	3/4" NPT	3/4" NPT	3/4" NPT	3/4" NPT
Basket		h	92	114	139	158		228	296
		Øb	Ø52	Ø63	Ø83	Ø98		Ø145	Ø200
		Standard perforation	1	1,25	1,25	1,6	1,6	1,6	1,6
Kvs-value			-		-	-		-	-
Approx. Weight RF *(2)*			16	26	33	46	71	89	153
Approx. Weight BW			11,2	19	24,6	32,8	52	66,2	117

(1) Other schedule nos. on request
(2) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Weights in kg
For more information about flanged and welded ends refer to page 16

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Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 300

SERIES F0 ANSI RANGE

Nominal Size		inch	10”	12”	14”	16”	18”	20”	24”
		DN	250	300	350	400	450	500	600
End connection	RF	L	622	711	762 / 838	838 / 863	914 / 978	991 / 1016	1143 / 1346
		ØB	254	305	337	387	432	483	584
		ØD	445	520	585	650	710	775	915
		ØK	387,4	450,8	514,4	571,5	628,6	685,8	812,8
		ØF	323,8	381	412,8	469,9	533,4	584,2	692,2
		C	46,1	49,3	52,4	55,6	58,8	62	68,3
		f	2	2	2	2	2	2	2
		n-Ød	16 - 1 1/8	16 - 1 1/4	20 - 1 1/4	20 - 1 3/8	24 - 1 3/8	24 - 1 3/8	24 - 1 5/8
	BW	L1	622	711	762 / 838	838 / 863	914 / 978	991 / 1016	1143 / 1346
		Schedule No.*(1)*	40	STD	STD	STD	STD	STD	STD
		ØB	254	305	337	387	432	483	584
		ØA1	278	329	362	413	464	516	619
		ØB1	254,5	305	336,5	387,5	438	489	590,5
	RTJ	L2	*638*	727	778 / 854	*853 / 879*	*930 / 994*	*1008 / 1035*	*1165 / 1368*
		ØB	254	305	337	387	432	483	584
		ØD	445	520	585	650	710	775	915
		ØK	387,4	450,8	514,4	571,5	628,6	685,8	812,8
		ØG	356	413	457	508	575	635	749
		ØP	323,85	981	419,1	469,9	533,4	584,2	692,15
		C	46,1	49,3	52,4	55,6	58,8	62	68,3
		n-Ød	16 - 1 1/8	16 - 1 1/4	20 - 1 1/4	20 - 1 3/8	24 - 1 3/8	24 - 1 3/8	24 - 1 5/8
		T	11,91	11,91	11,91	11,91	11,91	13,49	16,66
		S	7,92	7,92	7,92	7,92	7,92	9,53	11,13
		R	0,8	0,8	0,8	0,8	0,8	1,5	1,5
H			510	575	630	705	750	830	1020
H1			875	1030	1120	1235	1350	1470	1735
Plug (NPT)			3/4" NPT	3/4" NPT	3/4" NPT	1" NPT	1" NPT	1" NPT	1" NPT
Basket		h	371	418					
		Øb	Ø250	Ø295					
		Standard perforation	1,6	1,6	*(3)*	*(3)*	*(3)*	*(3)*	*(3)*
Kvs-value			-	-	-	-	-	-	-
Approx. Weight RF *(2)*			262	400	485	570	750	920	1104
Approx. Weight BW			212,8	325,6	384,2	436,8	584,4	714,8	807,6

(1) Other schedule nos. on request
(2) RTJ weight increases approx. by 10%
(3) To be determined

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Weights in kg
For more information about flanged and welded ends refer to page 16

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The engineer, designing a system or a plant, is responsable for the selection of the correct valve
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Main Valve Parameters - Class 600

SERIES F0 ANSI RANGE

Nominal Size		inch	2”	2-1/2”	3”	4”	5”	6”	8”
		DN	50	65	80	100	125	150	200
End connection	RF	L	292	-	356	432	-	559	660
		ØB	51	65	76	102	128	152	200
		ØD	165	190	210	275	330	355	420
		ØK	127	149,2	168,3	215,9	266,7	292,1	349,2
		ØF	92,1	104,8	127	157,2	185,7	215,9	269,9
		C	25,4	28,6	31,8	38,1	44,5	47,7	55,6
		f	7	7	7	7	7	7	7
		n-Ød	8 - 3/4	8 - 7/8	8 - 7/8	8 - 1	8 - 1 1/8	12 - 1 1/8	12 - 1/4
	BW	L1	292	-	356	432	-	559	660
		Schedule No.*(1)*	80	-	80	80	-	80	80
		ØB	51	65	76	102	128	152	200
		ØA1	60,3	-	91	117	-	172	223
		ØB1	49,22	-	73,5	97	-	146,5	193,5
	RTJ	L2	295	-	359	*435*	-	*562*	*663*
		ØB	51	65	76	102	128	152	200
		ØD	165	190	210	275	330	355	420
		ØK	127	149,2	168,3	215,9	266,7	292,1	349,2
		ØG	108	127	146	175	210	241	302
		ØP	82,55	101,6	123,83	149,23	180,98	211,12	269,88
		C	25,4	28,6	31,8	38,1	44,5	47,7	55,6
		n-Ød	8 - 3/4	8 - 7/8	8 - 7/8	8 - 1	8 - 1 1/8	12 - 1 1/8	12 - 1/4
		T	11,91	11,91	11,91	11,91	11,91	11,91	11,91
		S	7,92	7,92	7,92	7,92	7,92	7,92	7,92
		R	0,8	0,8	0,8	0,8	0,8	0,8	0,8
H			205	248	280	320	363	395	465
H1			340	400	445	510	599	665	805
Plug (NPT)			1/2" NPT	3/4" NPT	3/4" NPT	3/4" NPT	3/4" NPT	3/4" NPT	3/4" NPT
Basket		h		133		177			351
		Øb		Ø63		Ø98			Ø200
		Standard perforation	1	1,25	1,25	1,6	1,6	1,6	1,6
Kvs-value			-	-	-	-		-	-
Approx. Weight RF *(2)*			19,5	31	39	68	135	185	275
Approx. Weight BW			12,9	21	26,4	45,2	100	140,6	211,4

(1) Other schedule nos. on request
(2) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Weights in kg
For more information about flanged and welded ends refer to page 16

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Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 600

SERIES F0 ANSI RANGE CE

Nominal Size		inch	10"	12"	14"	16"	18"	20"	24"
		DN	250	300	350	400	450	500	600
End connection	RF	L	787	838	889	991	1092	1194	1397
		ØB	248	299	327	375	419	464	559
		ØD	510	560	605	685	745	815	940
		ØK	431,8	489	527	603,2	654	723,9	838,2
		ØF	323,8	381	412,8	469,9	533,4	584,2	692,2
		C	63,5	66,7	69,9	76,2	82,6	88,9	101,6
		f	7	7	7	7	7	7	7
		n-Ød	16 - 1 3/8	20 - 1 3/8	20 - 1 1/2	20 - 1 5/8	20 - 1 3/4	24 - 1 3/4	24 -2
	BW	L1	787	838	889	991	1092	1194	1397
		Schedule No.*(1)*	80	80	80	80	80	80	80
		ØB	248	299	327	375	419	464	559
		ØA1	278	329	362	413	464	516	619
		ØB1	243	289	317,5	363,5	409,5	455,5	547,5
	RTJ	L2	*790*	841	892	*994*	*1095*	*1200*	*1407*
		ØB	248	299	327	375	419	464	559
		ØD	510	560	605	685	745	815	940
		ØK	431,8	489	527	603,2	654	723,9	838,2
		ØG	356	413	457	508	575	635	749
		ØP	323,85	981	419,1	469,9	533,4	584,2	692,15
		C	63,5	66,7	69,9	76,2	82,6	88,9	101,6
		n-Ød	16 - 1 3/8	20 - 1 3/8	20 - 1 1/2	20 - 1 5/8	20 - 1 3/4	24 - 1 3/4	24 -2
		T	11,91	11,91	11,91	11,91	11,91	13,49	16,66
		S	7,92	7,92	7,92	7,92	7,92	9,53	11,13
		R	0,8	0,8	0,8	0,8	0,8	1,5	1,5
H			550	615	660	740	785	870	1060
H1			910	1065	1150	1270	1385	1505	1770
Plug (NPT)			3/4" NPT	3/4" NPT	3/4" NPT	1" NPT	1" NPT	1" NPT	1" NPT
Basket		h	433	441					
		Øb	Ø235	Ø308					
		Standard perforation	1,6	1,6	*(3)*	*(3)*	*(3)*	*(3)*	*(3)*
Kvs-value			-	-	-	-	-	-	-
Approx. Weight RF *(2)*			410	500	620	775	870	1050	1340
Approx. Weight BW			306,8	377,6	440	547	582	696	902

(1) Other schedule nos. on request
(2) RTJ weight increases approx. by 10%
(3) To be determined

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Weights in kg
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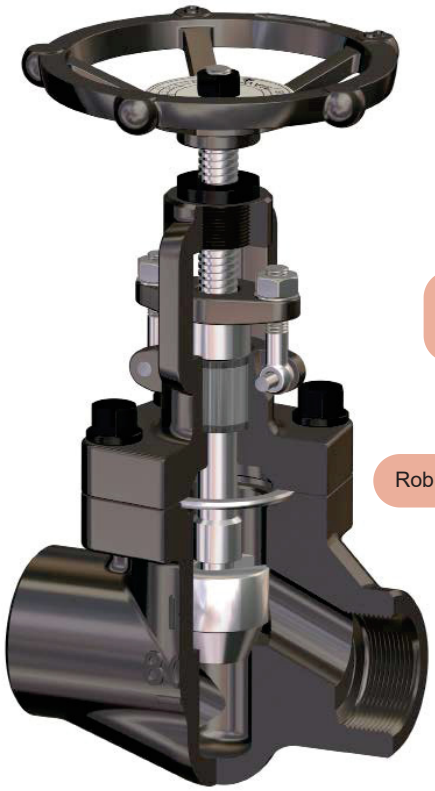
SERIES 89 ANSI RANGE

Series 89 Forged Globe Valves are linear motion valves devised for stopping the flow of the service fluid when necessary. They are of robust and compact design, bolted bonnet, outside screw and yoke, conventional port and rising handwheel, being the closure element a disc seating against a precisely machined seat thus achieving the positive closure. The atmospheric sealing is achieved by flexible graphite rings. The flow comes upwards underneath the seat, being unidirectional. Their shape leads to higher pressure drop compared to gate valves but operation is quicker and this feature allows to use the valve as regulating valve when arranged with throttling plug. Valves are of easy and safe operation being widely used in power, chemical and oil industry. The range is also comprehensive of a wide offer of different versions and options. The standard operation is achieved by handwheel, and they can also be arranged for automation with different kinds of actuators.

- Outside screw and yoke
- Ergonomic rising handwheel
- Precise machining of components for optimal performance
- Marking for identification and full traceability purpose
- Back Seat feature
- Robust and compact construction
- Seat surface can be hardened to increase wear resistance
- Great versatility in end connections, materials and configurations



Main Features / Reference Standards

Design: API 602
Pressure Rating: 800/1500/2500#
Face to face length: Manufacturer standard
Valve end connections: Threaded NPT to ASME B1.20.1 / BSP to ISO 228-1 / BSPT to ISO 7-1
Welded SW to ASME B16.11
Marking: MSS SP-25
Inspections & Tests: API 598
Unidirectional design. See the arrow on the body for normal flow direction
Zinc phosphated surface protection for forged steel valves
Product compliant with Directive 2014/68/EU on Pressure Equipment (PED) and Machinery Directive 2006/42/EC for European Union territory

Main Duties / Limits of use

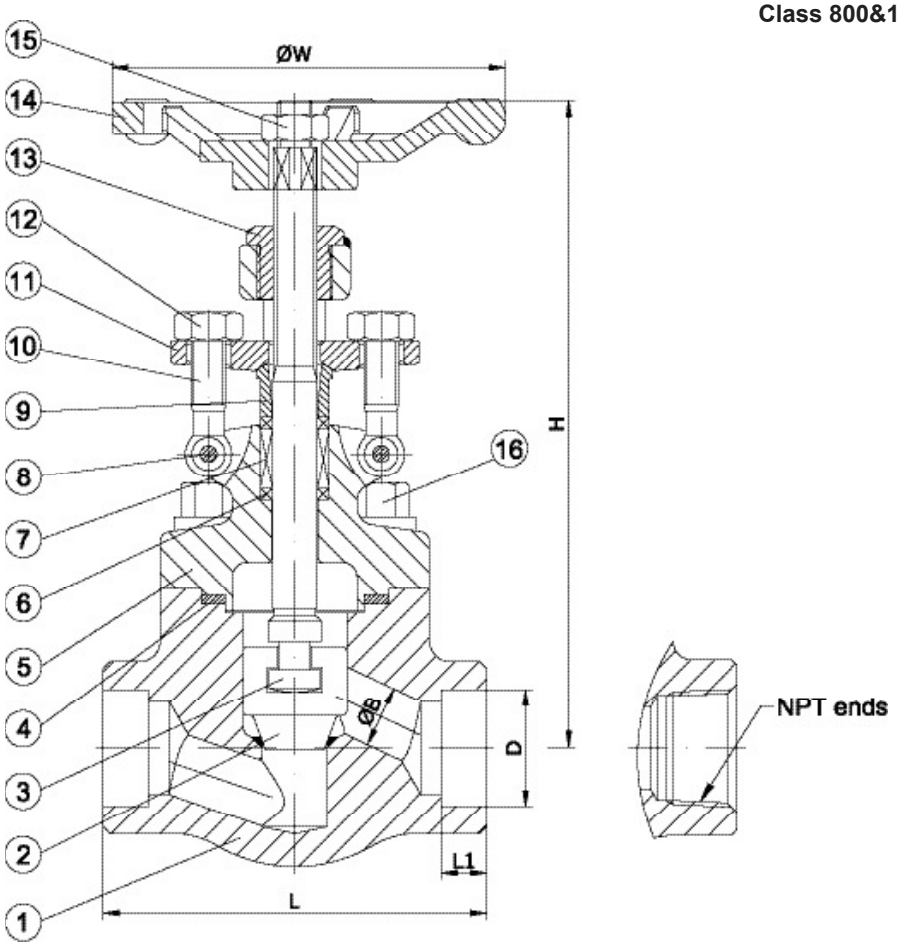
Fluids compatible with materials of construction. Questions referring to chemical resistance, please consult us
Pressure / Temperature Rating to ASME B16.34. See section “Engineering & Performance Data”
For products compliant with Directive 2014/68/EU, observe also limits acc. to Annex II tables 6 & 8 (gases & liquids group 1*) and tables 7 & 9 (gases & liquids group 2*) up to category III
**Classification of fluids (group 1 or 2) acc. to Directive 2014/68/EU, Article 13*

Options

Diverse body materials and trim combinations, different valve connections, Y-Pattern, regulating plug, extended bonnet, bellow seal, pressure seal, welded bonnet, different actuation, limit switches... Please consult us

Main Parts and Materials

SERIES 89 ANSI RANGE
Class 800&1500



Nº	PART	MATERIAL								
		A105N			A350 LF2		A182 F11/F22	A182 F304/F304L	A182 F316/F316L	A182 F51/F53
		Trim 1 (89A01)	Trim 5 (89A05)	Trim 8 (89A08)	Trim 2 (89A12)	Trim 10 (89A1D)	Trim 5 (89B75/89B65)	(89I10/80I90)	(89I30/89J10)	(89K30/89K40)
1	Body	A105N+ 13Cr	A105N+ HF	A105N+ HF	A350 LF2 +SS304	A350 LF2 +SS316	A182 F11/ F22+HF	A182 F304(L)	A182 F316(L)	A182 F51/F53
2	Disc	A182 F6a	A182 F6a+HF	A182 F6a	A182 F304	A182 F316	A182 F6a+HF	A182 F304(L)	A182 F316(L)	A182 F51/F53
3	Stem	A276 410			A276 304	A276 316	A276 410	A276 304(L)	A276 316(L)	A182 F51/F53
4	Bonnet Gasket	SS304+Graphite			SS304+ Graphite	SS316+ Graphite	SS304+ Graphite	SS304+ Graphite	SS316+ Graphite	SS316+ Graphite
5	Bonnet	A105N			A350 LF2		A182 F11/F22	A182 F304(L)	A182 F316(L)	A182 F51/F53
6	Packing	SS304+Graphite			SS304+Graphite		SS304+ Graphite	SS304+ Graphite	SS316+ Graphite	SS316+ Graphite
7	Packing	Flexible Graphite			Flexible Graphite		Flexible Graphite	Flexible Graphite	Flexible Graphite	Flexible Graphite
8	Eyebolt Pin	A276 410			A276 410		A276 410	A276 304	A276 304	A276 304
9	Packing Gland	A276 420			A276 304		A276 420	A276 304(L)	A276 316(L)	A182 F51/F53
10	Eyebolt	A193 B7			A320 L7		A193 B16	A193 B8(M)	A193 B8M	A193 B8M
11	Gland Flange	A105N			A350 LF2		A182 F11/F22	A182 F304(L)	A182 F316(L)	A182 F51/F53
12	Eyebolt Nut	A194 2H			A194 4		A194 4	A194 8(M)	A194 8M	A194 8M
13	Stem Nut	A276 410			A276 410		A276 410	A276 410	A276 410	A276 410
14	Handwheel	A197			A197		A197	A197	A197	A197
15	Handwheel Nut	AISI 1035			AISI 1035		AISI 1035	AISI 1035	AISI 1035	AISI 1035
16	Bonnet Bolt	A193 B7			A320 L7		A193 B16	A193 B8(M)	A193 B8M	A193 B8M

HF = Hard faced

Information / restriction of technical rules need to be observed!
Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

SERIES 89 ANSI RANGE
Class 800&1500

Main Valve Parameters

Class 800

Nominal Size			inch	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
			DN	10	15	20	25	32	40	50
End connection	Threaded	NPT/ BSP/BSPT	L	79	79	92	111	120	152	172
			ØB	8	10,5	13,5	18	23	29	36,5
	Socket weld	SW	L	79	79	92	111	120	120	140
			L1	9,6	9,6	12,7	12,7	12,7	12,7	16
			ØB	8	10,5	13,5	18	23	29	36,5
			ØD	17,6	21,8	27,1	33,8	42,6	48,7	61,2
Top works/ Operation		Handwheel	H (open)	162	162	165	193	224	260	300
			H (close)	153	153	154	182	213	247	287
			ØW	80	80	80	105	130	130	155
Kvs-value				-	1,7	3,1	4,9	7,5	12,2	18
Approx. Weight Threaded/SW				2	2	2,2	3	5,2	6,3	11

Dimensions in mm subject to manufacturing tolerance / Kvs-values in m^3/h / Weights in kg

Class 1500

Nominal Size			inch	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
			DN	10	15	20	25	32	40	50
End connection	Threaded	NPT/ BSP/BSPT	L	92	111	111	120	120	140	178
			ØB	8	10,5	13,5	18	23	29	36,5
	Socket weld	SW	L	92	111	111	120	120	140	178
			L1	9,6	9,6	12,7	12,7	12,7	12,7	16
			ØB	8	10,5	13,5	18	23	29	36,5
			ØD	17,6	21,8	27,1	33,8	42,6	48,7	61,2
Top works/ Operation		Handwheel	H (open)	165	193	193	224	260	300	355
			H (close)	154	182	182	213	247	287	340
			ØW	105	105	105	130	130	155	200
Kvs-value				-	1,7	3,1	4,9	7,5	12,2	18
Approx. Weight Threaded/SW				3,5	3,5	3,8	5,5	8	11	18,5

Dimensions in mm subject to manufacturing tolerance / Kvs-values in m^3/h / Weights in kg

Information / restriction of technical rules need to be observed!
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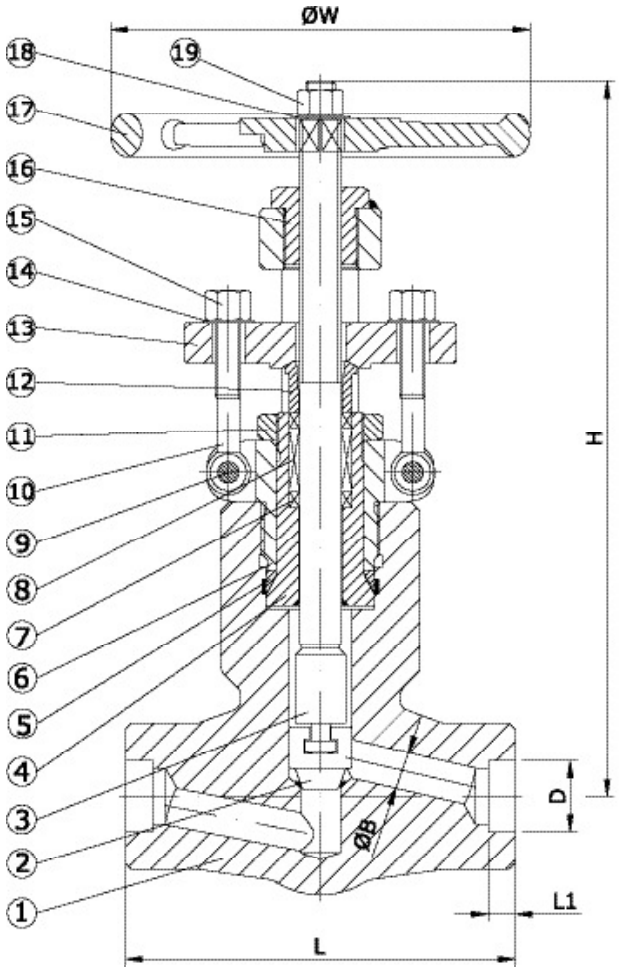
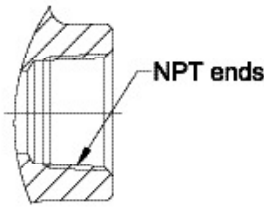
The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Main Parts and Materials

SERIES 87 ANSI RANGE
Class 2500





Nº	PART	MATERIAL								
		A105N			A350 LF2		A182 F11/F22	A182 F304/F304L	A182 F316/F316L	A182 F51/F53
		Trim 1 (87A01)	Trim 5 (87A05)	Trim 8 (87A08)	Trim 2 (87A12)	Trim 10 (87A1D)	Trim 5 (87B75/87B65)	(87I10/80I90)	(87I30/87J10)	(87K30/87K40)
1	Body	A105N+ 13Cr	A105N+ HF	A105N+ HF	A350 LF2+SS304	A350 LF2+SS316	A182 F11/ F22+HF	A182 F304(L)	A182 F316(L)	A182 F51/F53
2	Disc	A182 F6a	A182 F6a+HF	A182 F6a	A182 F304	A182 F316	A182 F6a+HF	A182 F304(L)	A182 F316(L)	A182 F51/F53
3	Stem	A276 410			A276 304	A276 316	A276 410	A276 304(L)	A276 316(L)	A182 F51/F53
4	Seal Nut	A276 420			A276 304	A276 316	A276 420	A276 304(L)	A276 316(L)	A182 F51/F53
5	Gasket	A276 304			A276 304		A276 304	A276 304(L)	A276 316(L)	A182 F51/F53
6	Bonnet	A105N			A350 LF2		A182 F11/F22	A182 F304(L)	A182 F316(L)	A182 F51/F53
7	Packing	SS304+Graphite			SS304+ Graphite	SS316+ Graphite	SS304+ Graphite	SS304+ Graphite	SS316+ Graphite	SS316+ Graphite
8	Packing	Flexible Graphite			Flexible Graphite		Flexible Graphite	Flexible Graphite	Flexible Graphite	Flexible Graphite
9	Eyebolt Pin	A276 410			A276 410		A276 410	A276 304	A276 304	A276 304
10	Eyebolt	A193 B7			A320 L7		A193 B16	A193 B8(M)	A193 B8M	A193 B8M
11	Lock Nut	Carbon Steel			Carbon Steel		Carbon Steel	St.Steel	St.Steel	St.Steel
12	Packing Gland	A276 420			A276 304	A276 316	A276 420	A276 304(L)	A276 316(L)	A182 F51/F53
13	Gland Flange	A105N			A350 LF2		A182 F11/F22	A182 F304(L)	A182 F316(L)	A182 F51/F53
14	Washer	Carbon Steel			Carbon Steel		Carbon Steel	St.Steel	St.Steel	St.Steel
15	Eyebolt Nut	A194 2H			A194 4		A194 4	A194 8(M)	A194 8M	A194 8M
16	Stem Nut	A276 410			A276 410		A276 410	A276 410	A276 410	A276 410
17	Handwheel	A197			A197		A197	A197	A197	A197
18	Gakset	Carbon Steel			Carbon Steel		Carbon Steel	St.Steel	St.Steel	St.Steel
19	Handwheel Nut	AISI 1035			AISI 1035		AISI 1035	AISI 1035	AISI 1035	AISI 1035

HF = Hard faced

Information / restriction of technical rules need to be observed!
Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

SERIES 87 ANSI RANGE
Class 2500

Main Valve Parameters

Class 2500

Nominal Size			inch	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
			DN	10	15	20	25	32	40	50
End connection	Threaded	NPT/ BSP/BSPT	L	186	186	186	186	230	230	275
			ØB	8	10,5	13,5	18	23	29	36,5
	Socket weld	SW	L	186	186	186	186	230	230	275
			L1	9,6	9,6	12,7	12,7	12,7	12,7	16
			ØB	8	10,5	13,5	18	23	29	36,5
			ØD	17,6	21,8	27,1	33,8	42,6	48,7	61,2
Top works/ Operation		Handwheel	H (open)	317	317	317	321	467	480	540
			H (close)	300	300	300	300	445	458	515
			ØW	200	200	200	200	280	300	320
Kvs-value				-	1,7	3,1	4,9	7,5	12,2	18
Approx. Weight Threaded/SW				12	12	12	12	28,4	30	50

Dimensions in mm subject to manufacturing tolerance / Kvs-values in m^3/h / Weights in kg

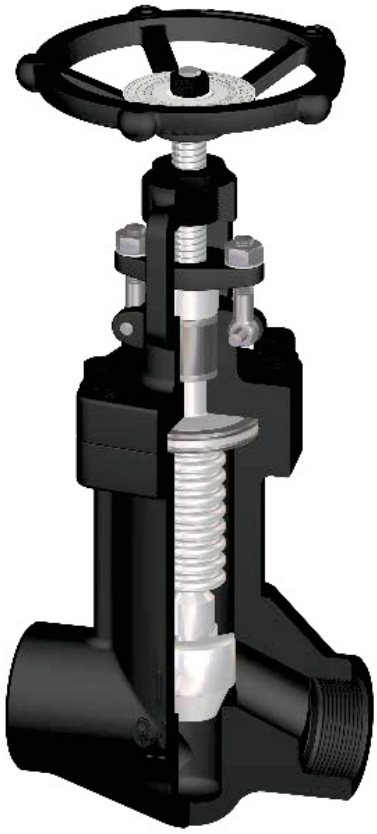
Information / restriction of technical rules need to be observed!
Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

SERIES 88 ANSI RANGE

Series 88 Forged Globe Valves with bellows are linear motion valves devised for stopping the flow of the service fluid when necessary. They are of robust and compact design, bolted bonnet, outside screw and yoke, conventional port and rising handwheel, being the closure element a disc seating against a precisely machined seat thus achieving the positive closure. The atmospheric sealing is achieved by flexible graphite rings and moreover by a full tightness bellow. The flow comes upwards underneath the seat, being unidirectional. Their shape leads to higher pressure drop compared to gate valves but operation is quicker and this feature allows to use the valve as regulating valve when arranged with throttling plug. Valves are of easy and safe operation being widely used in power, chemical and oil industry. The range is also comprehensive of a wide offer of different versions and options. The standard operation is achieved by handwheel, and they can also be arranged for automation with different kinds of actuators.

- Outside screw and yoke
- Precise machining of components for optimal performance
- Bellows feature for a full tightness
- Seat surface can be hardened to increase wear resistance



- Ergonomic rising handwheel
- Marking for identification and full traceability purpose
- Back Seat feature
- Robust and compact construction
- Great versatility in end connections, materials and configurations

Main Features / Reference Standards

Design: API 602
Pressure Rating: Class 800/1500#
Face to face length: Manufacturer standard
Valve end connections: Threaded NPT to ASME B1.20.1 / BSP to ISO 228-1 / BSPT to ISO 7-1
Welded SW to ASME B16.11
Marking: MSS SP-117
Inspections & Tests: API 598
Unidirectional design. See the arrow on the body for normal flow direction
Zinc phosphated surface protection for forged steel valves
Product compliant with Directive 2014/68/EU on Pressure Equipment (PED) and Machinery Directive 2006/42/EC for European Union territory

Main Duties / Limits of use

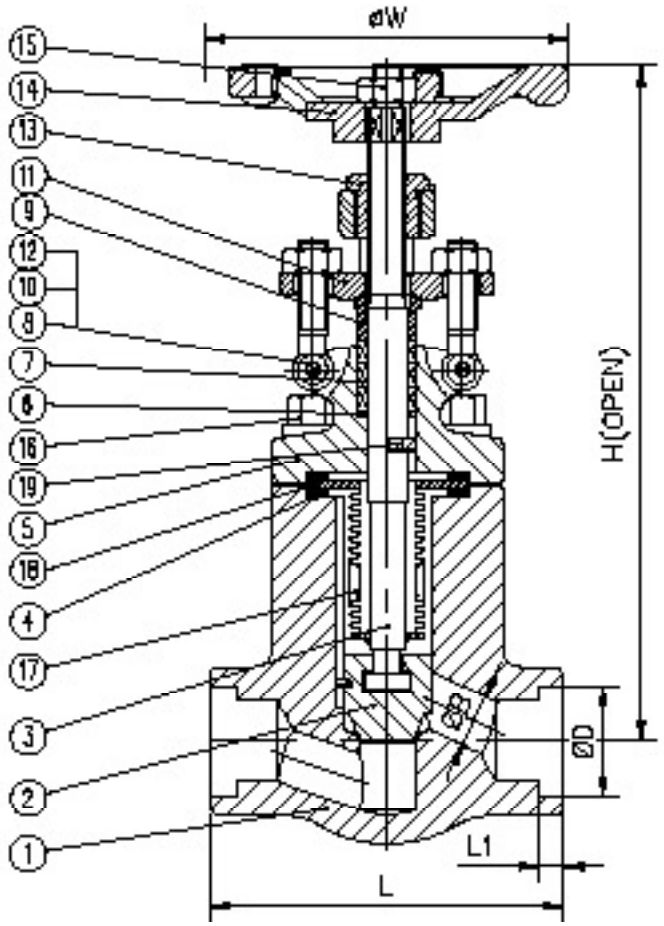
Fluids compatible with materials of construction. Questions referring to chemical resistance, please consult us
Pressure / Temperature Rating to ASME B16.34. See section “Engineering & Performance Data”
For products compliant with Directive 2014/68/EU, observe also limits acc. to Annex II tables 6 & 8 (gases & liquids group 1*) and tables 7 & 9 (gases & liquids group 2*) up to category III
**Classification of fluids (group 1 or 2) acc. to Directive 2014/68/EU, Article 13*

Options

Diverse body materials and trim combinations, different valve connections, Y-Pattern, regulating plug, extended bonnet, bellows seal, pressure seal, welded bonnet, different actuation, limit switches... Please consult us

Main Parts and Materials

Series 88 ANSI RANGE
Class 800/1500



Nº	PART	MATERIAL			
		A105N		A182 F304/F304L	A182 F316/F316L
		Trim 8 (88A08)	Trim 5 (88A05)	Trim 2 (88I102)	Trim 10 (88I30D)
1	Body	A182 A105	A182 A105 + ST6	A182 F304	A182 F316
2	Disc	A276 420 + 13%	A276 420 + ST6	A182 F304	A182 F316
3	Stem	A276 410		A182 F304	A182 F316
4	Bonnet Gasket	SS316+Graphite		SS316+Graphite	SS316+Graphite
5	Bonnet	A182 A105		A182 F304	A182 F316
6	Packing	SS304		SS304	SS316L
7	Packing	Graphite		Graphite	Graphite
8	Eyebolt Pin	Carbon steel		Stainless steel	Stainless steel
9	Packing Gland	1Cr13		SS 304	SS 316
10	Eyebolt	A193 B8		A193 B8	A193 B8
11	Gland Flange	Carbon steel		Stainless steel	Stainless steel
12	Eyebolt Nut	A194 Gr.8		A194 Gr.8	A194 Gr.8
13	Stem Nut	1Cr13		1Cr13	1Cr13
14	Handwheel	Nodular cast iron		Nodular cast iron	Nodular cast iron
15	Handwheel Nut	A194 Gr.8		A194 Gr.8	A194 Gr.8
16	Bonnet Bolt	A193 B7		A193 B8	A193 B8
17	Bellows	SS 316L		SS 316L	SS 316L
18	End plate	SS 316L		SS 316L	SS 316L
19	Stop pin	SS 304		SS 304	SS316L

Information / restriction of technical rules need to be observed!
Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Series 88 ANSI RANGE
Class 800/1500

Main Valve Parameters

Class 800

Nominal Size			inch	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
			DN	15	20	25	32	40	50
End connection	Threaded	NPT/ BSP/BSPT	L	79	92	111	120	120	140
			ØB	10,5	13,5	18	23	29	36,5
	Socket weld	SW	L	79	92	111	120	120	140
			L1	9,6	12,7	12,7	12,7	12,7	16
			ØB	10,5	13,5	18	23	29	36,5
			ØD	21,8	27,1	33,8	42,6	48,7	61,2
Top works/ Operation		Handwheel	H (open)	200	210	230	240	295	474
			H (close)	192	202	222	230	283	459
			ØW	95	95	125	140	140	250
Approx. Weight Threaded/SW				5,2	7,3	10	15,6	18,5	58

Dimensions in mm subject to manufacturing tolerance / Kvs-values in m^3/h / Weights in kg

Class 1500

Nominal Size			inch	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
			DN	15	20	25	32	40	50
End connection	Threaded	NPT/ BSP/BSPT	L	111	111	120	120	140	178
			ØB	10,5	13,5	18	23	29	36,5
	Socket weld	SW	L	111	111	120	120	140	178
			L1	9,6	12,7	12,7	12,7	12,7	16
			ØB	10,5	13,5	18	23	29	36,5
			ØD	21,8	27,1	33,8	42,6	48,7	61,2
Top works/ Operation		Handwheel	H (open)	210	230	240	295	474	-
			H (close)	202	222	230	283	459	-
			ØW	95	95	125	140	140	250
Approx. Weight Threaded/SW				7	10	14,6	23	27	71

Dimensions in mm subject to manufacturing tolerance / Kvs-values in m^3/h / Weights in kg

Information / restriction of technical rules need to be observed!
Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

SERIES 99/96 ANSI RANGE

Series 99 Forged Gate Valves are linear motion valves devised for stopping the flow of the service fluid when necessary, not being suitable for regulating purpose. They are of robust and compact design, conventional port, bolted bonnet, outside screw and yoke, rising stem and bidirectional. The atmospheric sealing is achieved by flexible graphite rings. The two vertical slightly sloped seats with solid wedge finely machined favor a tight shut off, being largely used in the power, chemical and oil industry sectors. The range is also comprehensive of a wide offer of different versions and options. The standard operation is achieved by handwheel, and they can also be arranged for automation with different kinds of actuators.

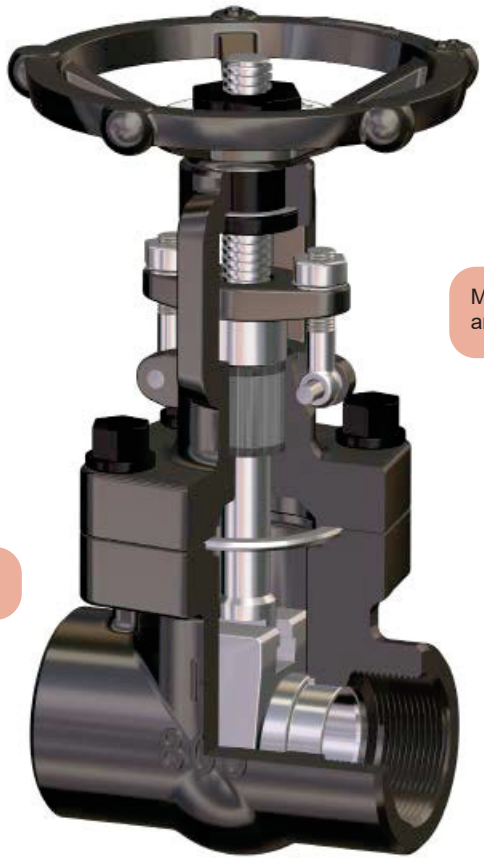
Precise machining of components for optimal performance

Outside screw and yoke rising stem

Back Seat feature

Seat surface can be hardened to increase wear resistance

Solid Wedge



Ergonomic non-rising handwheel

Marking for identification and full traceability purpose

Robust and compact construction

Great versatility in end connections, materials and configurations

Main Features / Reference Standards

Design: API 602
Pressure Rating: 800/1500/2500#
Face to face length: Manufacturer standard
Valve end connections: Threaded NPT to ASME B1.20.1 / BSP to ISO 228-1 / BSPT to ISO 7-1
Welded SW to ASME B16.11
Marking: MSS SP-25
Inspections & Tests: API 598
Bidirectional design
Zinc phosphated surface protection for forged steel valves
Product compliant with Directive 2014/68/EU on Pressure Equipment (PED) and Machinery Directive 2006/42/EC for European Union territory

Main Duties / Limits of use

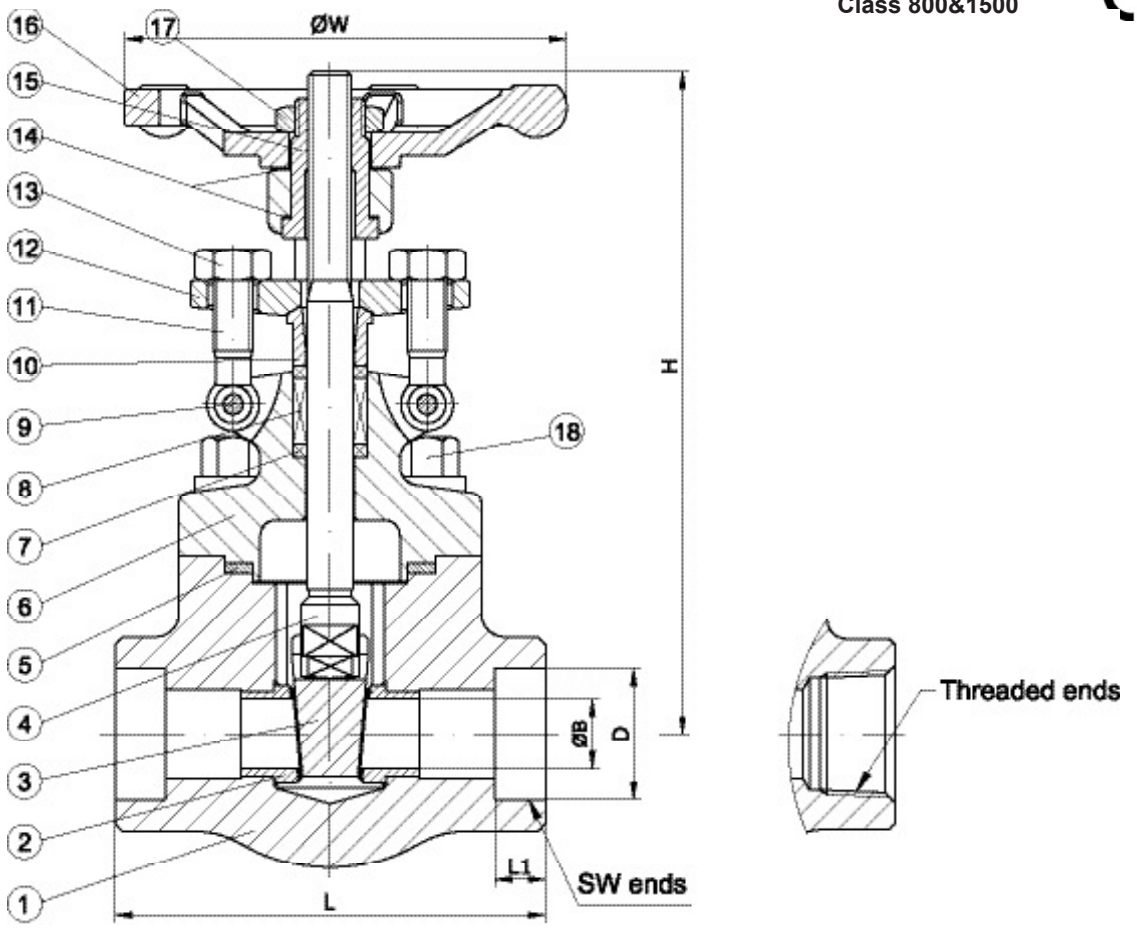
Fluids compatible with materials of construction. Questions referring to chemical resistance, please consult us
Pressure / Temperature Rating to ASME B16.34. See section “Engineering & Performance Data”
For products compliant with Directive 2014/68/EU, observe also limits acc. to Annex II tables 6 & 8 (gases & liquids group 1*) and tables 7 & 9 (gases & liquids group 2*) up to category III
**Classification of fluids (group 1 or 2) acc. to Directive 2014/68/EU, Article 13*

Options

Diverse body materials and trim combinations, different valve connections, extended bonnet, bellow seal, pressure seal, welded bonnet, different actuation, limit switches... Please consult us

Main Parts and Materials

SERIES 99 ANSI RANGE
Class 800&1500



Nº	PART	MATERIAL								
		A105N			A350 LF2		A182 F11/F22	A182 F304/F304L	A182 F316/F316L	A182 F51/F53
		Trim 1 (99A01)	Trim 5 (99A05)	Trim 8 (99A08)	Trim 2 (99A12)	Trim 10 (99A1D)	Trim 5 (99B75/99B65)	(99I10/99I90)	(99I30/99J10)	(99K30/99K40)
1	Body	A105N			A350 LF2		A182 F11/F22	A182 F304(L)	A182 F316(L)	A182 F51/F53
2	Seat	A276 410	A276 410+HF	A276 410+HF	A276 304	A276 316	A276 410+HF	A276 304(L)	A276 316(L)	A182 F51/F53
3	Wedge	A182 F6a	A182 F6a+HF	A182 F6a	A182 F304	A182 F316	A182 F6a+HF	A182 F304(L)	A182 F316(L)	A182 F51/F53
4	Stem	A276 410			A276 304	A276 316	A276 410	A276 304(L)	A276 316(L)	A182 F51/F53
5	Bonnet Gasket	SS304+Graphite			SS304+ Graphite	SS316+ Graphite	SS304+ Graphite	SS304+ Graphite	SS316+ Graphite	SS316+ Graphite
6	Bonnet	A105N			A350 LF2		A182 F11/F22	A182 F304(L)	A182 F316(L)	A182 F51/F53
7	Packing	SS304+Graphite			SS304+ Graphite	SS316+ Graphite	SS304+ Graphite	SS304+ Graphite	SS316+ Graphite	SS316+ Graphite
8	Packing	Flexible Graphite			Flexible Graphite		Flexible Graphite	Flexible Graphite	Flexible Graphite	Flexible Graphite
9	Eyebolt Pin	A276 410			A276 410		A276 410	A276 304	A276 304	A276 304
10	Packing Gland	A276 420			A276 304	A276 316	A276 420	A276 304(L)	A276 316(L)	A182 F51/F53
11	Eyebolt	A193 B7			A320 L7		A193 B16	A193 B8(M)	A193 B8M	A193 B8M
12	Gland Flange	A105N			A350 LF2		A182 F11/F22	A182 F304(L)	A182 F316(L)	A182 F51/F53
13	Eyebolt Nut	A194 2H			A194 4		A194 4	A194 8(M)	A194 8M	A194 8M
14	Gasket	A276 410			A276 410		A276 410	A276 304	A276 304	A276 304
15	Stem Nut	A276 410			A276 410		A276 410	A276 410	A276 410	A276 410
16	Handwheel	A197			A197		A197	A197	A197	A197
17	Handwheel Nut	AISI 1035			AISI 1035		AISI 1035	AISI 1035	AISI 1035	AISI 1035
18	Bonnet Bolt	A193 B7			A320 L7		A193 B16	A193 B8(M)	A193 B8M	A193 B8M

HF = Hard faced

Information / restriction of technical rules need to be observed!
Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

SERIES 99 ANSI RANGE
Class 800&1500

Main Valve Parameters

Class 800

Nominal Size			inch	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
			DN	10	15	20	25	32	40	50
End connection	Threaded	NPT/ BSP/BSPT	L	79	79	92	111	120	120	140
			ØB	8	10,5	13,5	18	23	29	36,5
	Socket weld	SW	L	79	79	92	111	120	120	140
			L1	9,6	9,6	12,7	12,7	12,7	12,7	16
			ØB	8	10,5	13,5	18	23	29	36,5
			ØD	17,6	21,8	27,1	33,8	42,6	48,7	61,2
Top works/ Operation		Handwheel	H (open)	159	159	164	188	223	238	265
			H (close)	135	135	137	160	193	208	234
			ØW	80	80	80	105	130	130	155
Kvs-value				-	3,2	5,5	9.7	18,8	29,9	46,1
Approx. Weight Threaded/SW				2	2	2,2	3	5,2	5,8	8,2

Dimensions in mm subject to manufacturing tolerance / Kvs-values in m^3/h / Weights in kg

Class 1500

Nominal Size			inch	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
			DN	10	15	20	25	32	40	50
End connection	Threaded	NPT/ BSP/BSPT	L	92	111	111	120	120	140	178
			ØB	8	10,5	13,5	18	23	29	36,5
	Socket weld	SW	L	92	111	111	120	120	140	178
			L1	9,6	9,6	12,7	12,7	12,7	12,7	16
			ØB	8	10,5	13,5	18	23	29	36,5
			ØD	17,6	21,8	27,1	33,8	42,6	48,7	61,2
Top works/ Operation		Handwheel	H (open)	180	180	180	223	238	265	316
			H (close)	160	160	160	192	208	234	283
			ØW	105	105	105	130	130	155	200
Kvs-value				-	3,2	5,5	9.7	18,8	29,9	46,1
Approx. Weight Threaded/SW				3,5	3,5	3,8	5,5	7	9,5	18

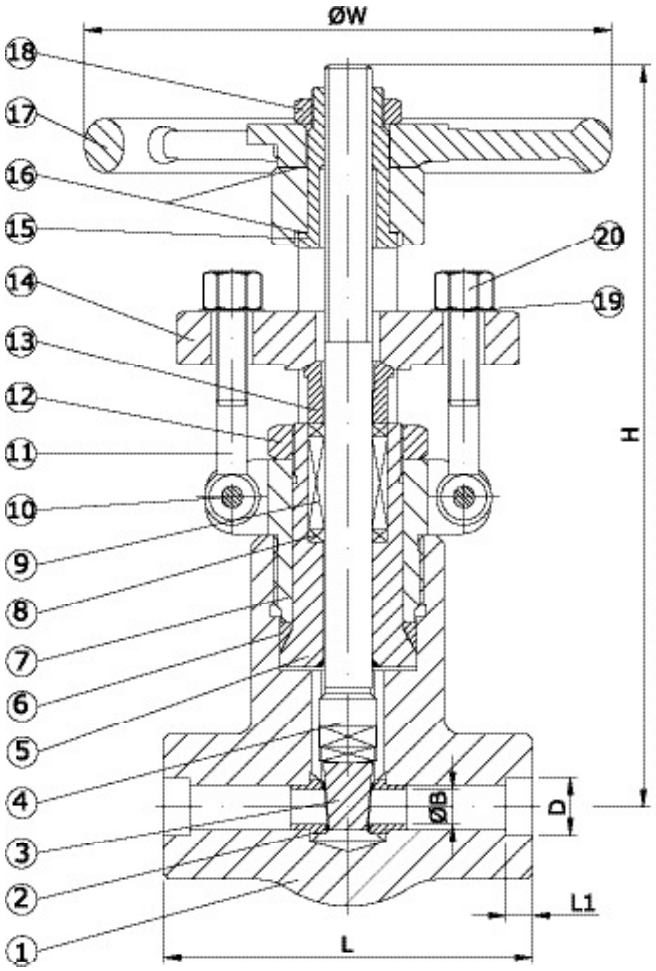
Dimensions in mm subject to manufacturing tolerance / Kvs-values in m^3/h / Weights in kg

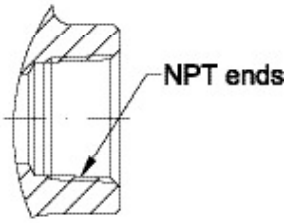
Information / restriction of technical rules need to be observed!
Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Main Parts and Materials

SERIES 96 ANSI RANGE
Class 2500





Nº	PART	MATERIAL								
		A105N			A350 LF2		A182 F11/F22	A182 F304/F304L	A182 F316/F316L	A182 F51/F53
		Trim 1 (96A01)	Trim 5 (96A05)	Trim 8 (96A08)	Trim 2 (96A12)	Trim 10 (96A1D)	Trim 5 (96B75/96B65)	(96I10/96I90)	(96I30/96J10)	(96K30/96K40)
1	Body	A105N			A350 LF2		A182 F11/F22	A182 F304(L)	A182 F316(L)	A182 F51/F53
2	Seat	A276 410	A276 410+HF	A276 410+HF	A276 304	A276 316	A276 410+HF	A276 304(L)	A276 316(L)	A182 F51/F53
3	Wedge	A182 F6a	A182 F6a+HF	A182 F6a	A182 F304	A182 F316	A182 F6a+HF	A182 F304(L)	A182 F316(L)	A182 F51/F53
4	Stem	A276 410			A276 304	A276 316	A276 410	A276 304(L)	A276 316(L)	A182 F51/F53
5	Seal Nut	A276 420			A276 304	A276 316	A276 420	A276 304(L)	A276 316(L)	A182 F51/F53
6	Gasket	A276 304			A276 304		A276 304	A276 304(L)	A276 316(L)	A182 F51/F53
7	Bonnet	A105N			A350 LF2		A182 F11/F22	A182 F304(L)	A182 F316(L)	A182 F51/F53
8	Packing	SS304+Graphite			SS304+ Graphite	SS316+ Graphite	SS304+ Graphite	SS304+ Graphite	SS316+ Graphite	SS316+ Graphite
9	Packing	Flexible Graphite			Flexible Graphite		Flexible Graphite	Flexible Graphite	Flexible Graphite	Flexible Graphite
10	Eyebolt Pin	A276 410			A276 410		A276 410	A276 304	A276 304	A276 304
11	Eyebolt	A193 B7			A320 L7		A193 B16	A193 B8(M)	A193 B8M	A193 B8M
12	Lock Nut	Carbon Steel			Carbon Steel		Carbon Steel	St.Steel	St.Steel	St.Steel
13	Packing Gland	A276 420			A276 304	A276 316	A276 420	A276 304(L)	A276 316(L)	A182 F51/F53
14	Gland Flange	A105N			A350 LF2		A182 F11/F22	A182 F304(L)	A182 F316(L)	A182 F51/F53
15	Stem Nut	A276 410			A276 410		A276 410	A276 410	A276 410	A276 410
16	Gasket	A276 410			A276 410		A276 410	A276 304	A276 304	A276 304
17	Handwheel	A197			A197		A197	A197	A197	A197
18	Handwheel Nut	AISI 1035			AISI 1035		AISI 1035	AISI 1035	AISI 1035	AISI 1035
19	Washer	Carbon Steel			Carbon Steel		Carbon Steel	St.Steel	St.Steel	St.Steel
20	Eyebolt Nut	A194 2H			A194 4		A194 4	A194 8(M)	A194 8M	A194 8M

HF = Hard faced

Information / restriction of technical rules need to be observed!
Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

SERIES 96 ANSI RANGE
Class 2500

Main Valve Parameters

Class 2500

Nominal Size			inch	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
			DN	10	15	20	25	32	40	50
End connection	Threaded	NPT/ BSP/BSPT	L	92	111	111	120	120	140	178
			ØB	8	10,5	13,5	18	23	29	36,5
	Socket weld	SW	L	92	111	111	120	120	140	178
			L1	9,6	9,6	12,7	12,7	12,7	12,7	16
			ØB	8	10,5	13,5	18	23	29	36,5
			ØD	17,6	21,8	27,1	33,8	42,6	48,7	61,2
Top works/ Operation		Handwheel	H (open)	180	180	180	223	238	265	316
			H (close)	160	160	160	192	208	234	283
			ØW	100	120	120	160	160	180	200
Kvs-value				-	3,2	5,5	9.7	18,8	29,9	46,1
Approx. Weight Threaded/SW				3,5	3,5	3,8	5,5	7	9,5	18

Dimensions in mm subject to manufacturing tolerance / Kvs-values in m^3/h / Weights in kg

Information / restriction of technical rules need to be observed!
Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

SERIES 39/38 ANSI RANGE

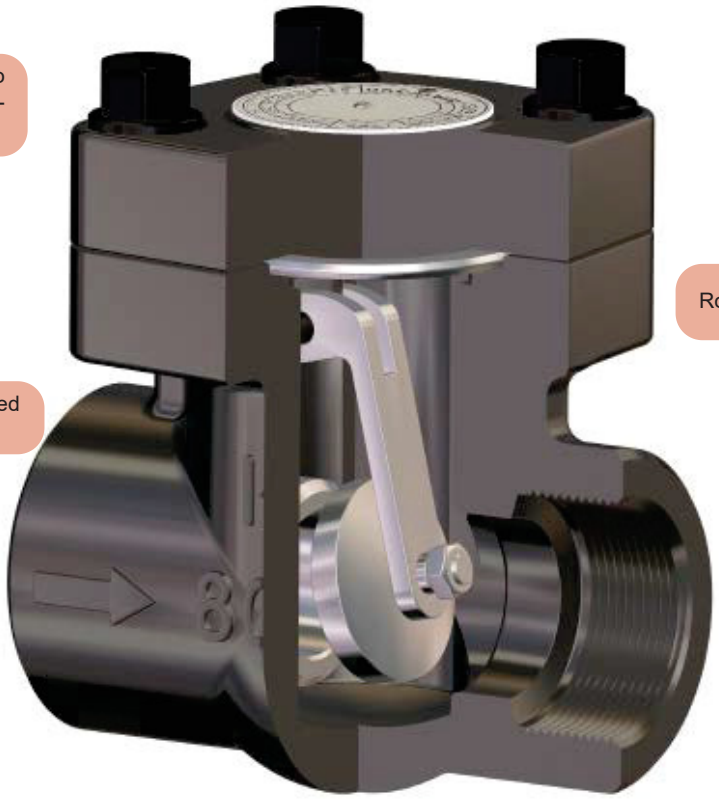
Check Valves are self-acting valves used for preventing the reverse of flow in a piping system. Series 39 are Forged Swing Check Valves that operate by means of its articulated disc. They are featured by its rugged and compact design and easy maintenance.

Body to cover joint design to apply uniform load to the gasket

Disc hold by bolted arm

Seat surface can be hardened to increase wear resistance

Vertical seat, avoids trapping of media particles



Marking for identification and full traceability purpose

Robust and compact construction

Precise machining of components for optimal performance

Great versatility in end connections, materials and configurations

Main Features / Reference Standards

Design: API 602
Pressure Rating: 800/1500/2500#
Face to face length: Manufacturer standard
Valve end connections: Threaded NPT to ASME B1.20.1 / BSP to ISO 228-1 / BSPT to ISO 7-1
Welded SW to ASME B16.11
Marking: MSS SP-25
Inspections & Tests: API 598
Zinc phosphated surface protection for forged steel valves
Product compliant with Directive 2014/68/EU on Pressure Equipment (PED)
for European Union territory

Main Duties / Limits of use

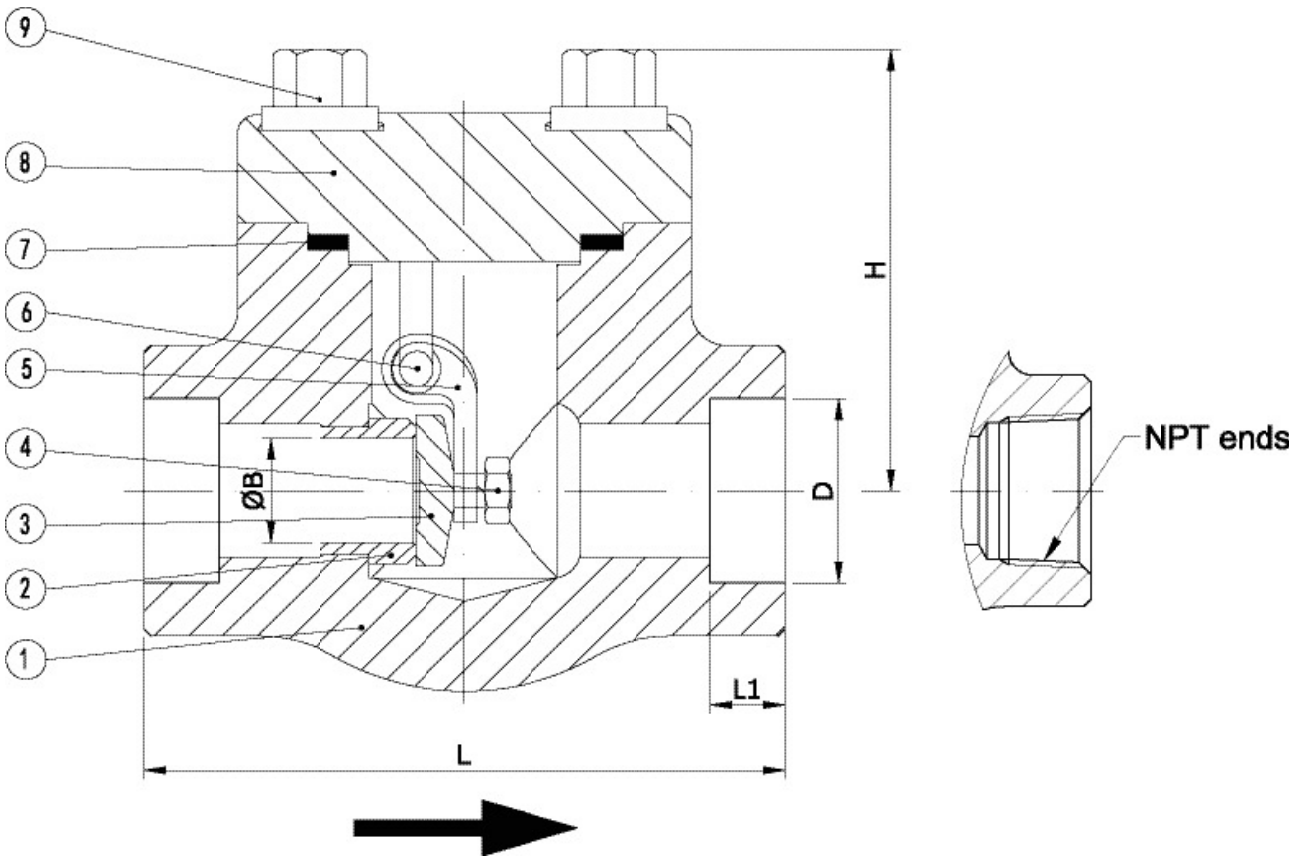
Fluids compatible with materials of construction. Questions referring to chemical resistance, please consult us
Pressure / Temperature Rating to ASME B16.34. See section “Engineering & Performance Data”
For products compliant with Directive 2014/68/EU, observe also limits acc. to Annex II tables 6 & 8 (gases & liquids group 1*) and tables 7 & 9 (gases & liquids group 2*) up to category III
**Classification of fluids (group 1 or 2) acc. to Directive 2014/68/EU, Article 13*

Options

Diverse body materials and trim combinations, different valve connections, pressure seal, welded bonnet... Please consult us

SERIES 39 ANSI RANGE
Class 800&1500

Main Parts and Materials



Nº	PART	MATERIAL								
		A105N			A350 LF2		A182 F11/F22	A182 F304/F304L	A182 F316/F316L	A182 F51/F53
		Trim 1 (39A01)	Trim 5 (39A05)	Trim 8 (39A08)	Trim 2 (39A12)	Trim 10 (39A1D)	Trim 5 (39B75/39B65)	(39I10/39I90)	(39I30/39J10)	(39K30/39K40)
1	Body	A105N			A350 LF2		A182 F11/F22	A182 F304(L)	A182 F316(L)	A182 F51/F53
2	Seat	A276 410	A276 410+HF	A276 410+HF	A276 304	A276 316	A276 410+HF	A276 304(L)	A276 316(L)	A182 F51/F53
3	Disc	A182 F6a	A182 F6a+HF	A182 F6a	A182 F304	A182 F316	A182 F6a+HF	A182 F304(L)	A182 F316(L)	A182 F51/F53
4	Disc Nut	A194 2H			A194 4		A194 4	A194 8(M)	A194 8M	A194 8M
5	Hinge	SS304			SS304		SS304	SS304	SS316	SS316
6	Hinge Pin	A276 410			A276 304		A276 410	A276 304(L)	A276 316(L)	A182 F51/F53
7	Cover Gasket	SS304+Graphite			SS304+ Graphite	SS316+ Graphite	SS304+ Graphite	SS304+ Graphite	SS316+ Graphite	SS316+ Graphite
8	Cover	A105N			A350 LF2		A182 F11/F22	A182 F304(L)	A182 F316(L)	A182 F51/F53
9	Cover Bolt	A193 B7			A320 L7		A193 B16	A193 B8(M)	A193 B8M	A193 B8M

HF = Hard faced

Information / restriction of technical rules need to be observed!
Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

SERIES 39 ANSI RANGE
Class 800&1500

Main Valve Parameters

Class 800

Nominal Size			inch	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
			DN	10	15	20	25	32	40	50
End connection	Threaded	NPT/ BSP/BSPT	L	79	79	92	111	120	120	140
			ØB	8	10,5	13,5	18	23	29	36,5
	Socket weld	SW	L	79	79	92	111	120	120	140
			L1	9,6	9,6	12,7	12,7	12,7	12,7	16
			ØB	8	10,5	13,5	18	23	29	36,5
			ØD	17,6	21,8	27,1	33,8	42,6	48,7	61,2
H				61	61	61	78	84	84	120
Kvs-value				-	3,9	6,3	12,1	21,5	31,4	51
Approx. Weight Threaded/SW				1,4	1,5	1,7	3,3	4,2	4,2	8,5

Dimensions in mm subject to manufacturing tolerance / Kvs-values in m^3/h / Weights in kg

Class 1500

Nominal Size			inch	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
			DN	10	15	20	25	32	40	50
End connection	Threaded	NPT/ BSP/BSPT	L	92	111	111	120	120	140	178
			ØB	8	10,5	13,5	18	23	29	36,5
	Socket weld	SW	L	92	111	111	120	120	140	178
			L1	9,6	9,6	12,7	12,7	12,7	12,7	16
			ØB	8	10,5	13,5	18	23	29	36,5
			ØD	17,6	21,8	27,1	33,8	42,6	48,7	61,2
H				61	78	78	84	103	120	133
Kvs-value				-	3,9	6,3	12,1	21,5	31,4	51
Approx. Weight Threaded/SW				1,5	3,2	3,3	4,2	5	8,5	10,9

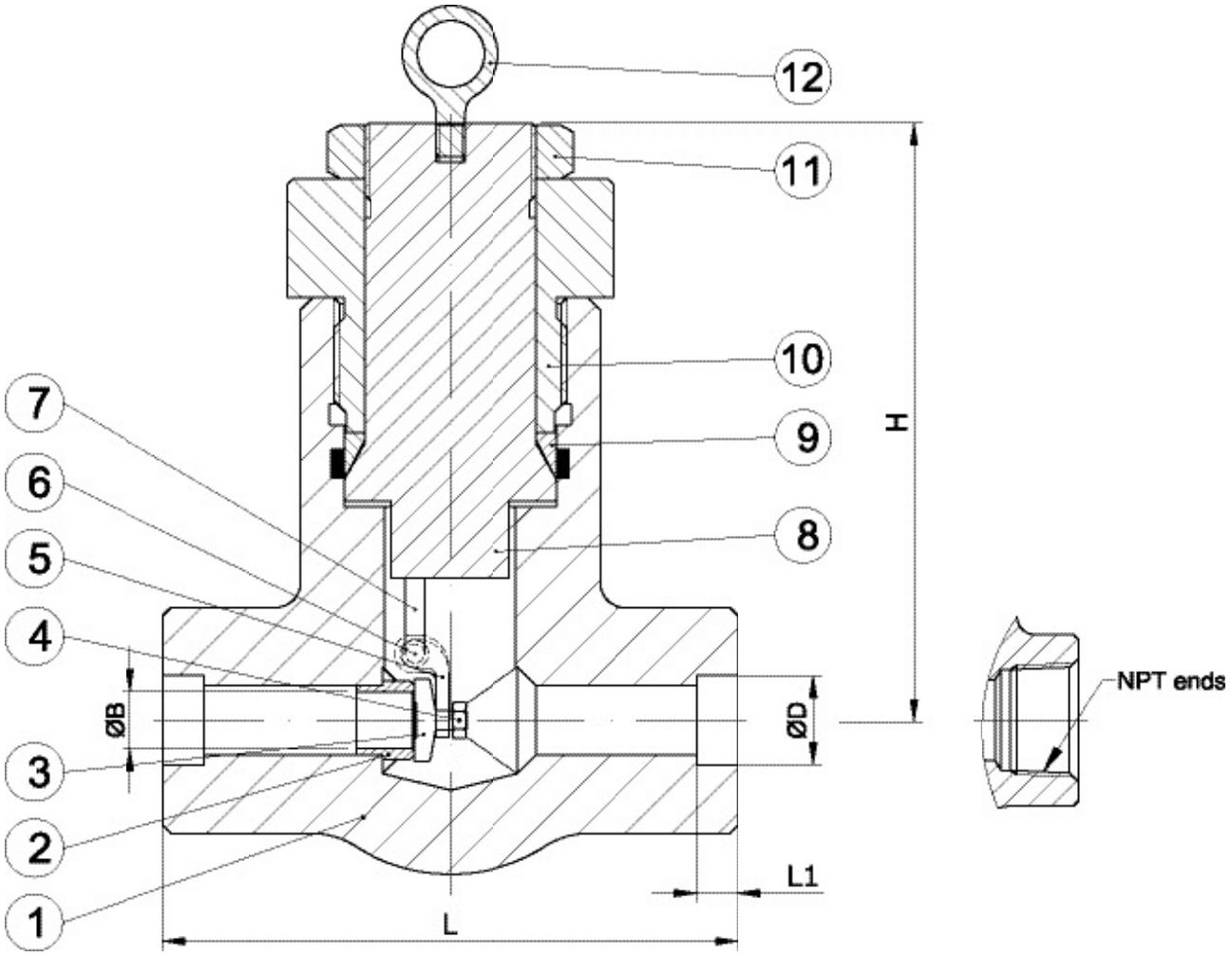
Dimensions in mm subject to manufacturing tolerance / Kvs-values in m^3/h / Weights in kg

Information / restriction of technical rules need to be observed!
Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

SERIES 38 ANSI RANGE
Class 2500

Main Parts and Materials



Nº	PART	MATERIAL								
		A105N			A350 LF2		A182 F11/F22	A182 F304/F304L	A182 F316/F316L	A182 F51/F53
		Trim 1 (38A01)	Trim 5 (38A05)	Trim 8 (38A08)	Trim 2 (38A12)	Trim 10 (38A1D)	Trim 5 (38B75/38B65)	(38I10/38I90)	(38I30/38J10)	(38K30/38K40)
1	Body	A105N			A350 LF2		A182 F11/F22	A182 F304(L)	A182 F316(L)	A182 F51/F53
2	Seat	A276 410	A276 410+HF	A276 410+HF	A276 304	A276 316	A276 410+HF	A276 304(L)	A276 316(L)	A182 F51/F53
3	Disc	A182 F6a	A182 F6a+HF	A182 F6a	A182 F304	A182 F316	A182 F6a+HF	A182 F304(L)	A182 F316(L)	A182 F51/F53
4	Disc Nut	A194 2H			A194 4		A194 4	A194 8(M)	A194 8M	A194 8M
5	Hinge	SS304			SS304		SS304	SS304	SS316	SS316
6	Hinge Pin	A276 410			A276 304	A276 316	A276 410	A276 304(L)	A276 316(L)	A182 F51/F53
7	Positioner	A276 410			A276 304	A276 316	A276 410	A276 304(L)	A276 316(L)	A182 F51/F53
8	Seal Nut	A276 420			A276 304	A276 316	A276 420	A276 304(L)	A276 316(L)	A182 F51/F53
9	Gasket	A276 304			A276 304		A276 304	A276 304(L)	A276 316(L)	A182 F51/F53
10	Cover	A105N			A350 LF2		A182 F11/F22	A182 F304(L)	A182 F316(L)	A182 F51/F53
11	Lock Nut	Carbon Steel			Carbon Steel		Carbon Steel	St.Steel	St.Steel	St.Steel
12	Lift Ring	Carbon Steel			Carbon Steel		Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel

HF = Hard faced

Information / restriction of technical rules need to be observed!
Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

SERIES 38 ANSI RANGE
Class 2500

Main Valve Parameters

Class 2500

Nominal Size			inch	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
			DN	10	15	20	25	32	40	50
End connection	Threaded	NPT/ BSP/BSPT	L	186	186	186	186	230	230	275
			ØB	8	10,5	13,5	18	23	29	36,5
	Socket weld	SW	L	186	186	186	186	230	230	275
			L1	9,6	9,6	12,7	12,7	12,7	12,7	16
			ØB	8	10,5	13,5	18	23	29	36,5
			ØD	17,6	21,8	27,1	33,8	42,6	48,7	61,2
H				117	117	117	117	152	152	195
Kvs-value				-	3,9	6,3	12,1	21,5	31,4	51
Approx. Weight Threaded/SW				9	9	9	9	21	23	39

Dimensions in mm subject to manufacturing tolerance / Kvs-values in m^3/h / Weights in kg

Information / restriction of technical rules need to be observed!
Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

SERIES 35/34 ANSI RANGE

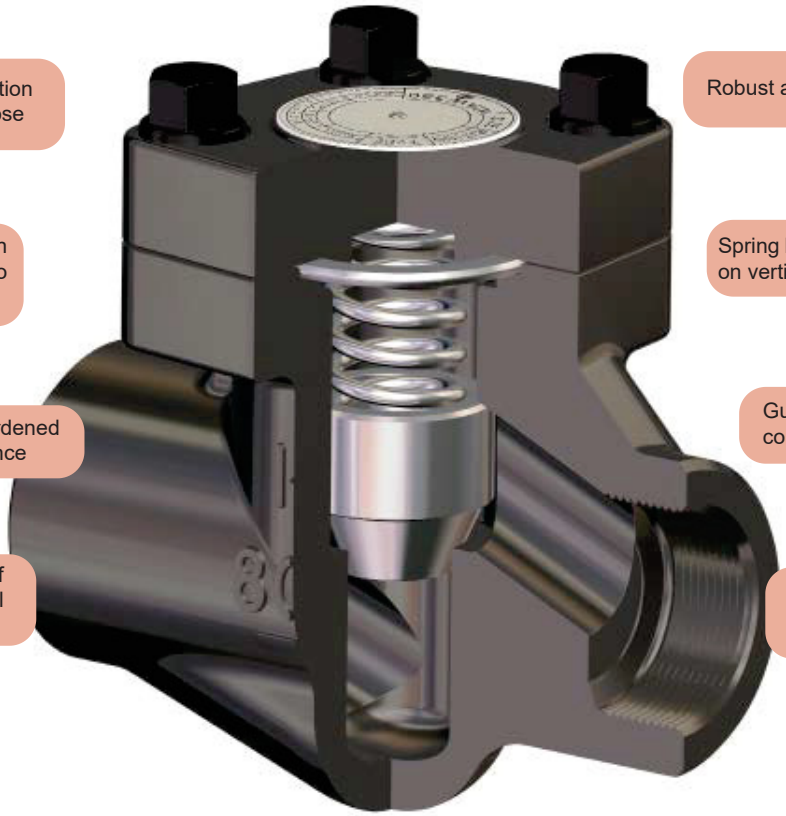
Check Valves are self-acting valves used for preventing the reverse of flow in a piping system. Forged Piston Check Valves Series 35 are featured by its rugged and compact design and easy maintenance. They are provided with a guided piston which is loaded by a spring and the disc closes against a horizontal valve seat. Compared with other check valves, they permit a faster closure reaction and more tightness, with higher pressure drop.

Marking for identification and full traceability purpose

Body to cover joint design to apply a uniform load to the gasket

Seat surface can be hardened to increase wear resistance

Precise machining of components for optimal performance



Robust and compact construction

Spring loaded to allow installation on vertical lines

Guided piston to assure a correct seal

Great versatility in end connections, materials and configurations

Main Features / Reference Standards

Design: API 602
Pressure Rating: 800/1500/2500#
Face to face length: Manufacturer standard
Valve end connections: Threaded NPT to ASME B1.20.1 / BSP to ISO 228-1 / BSPT to ISO 7-1
Welded SW to ASME B16.11
Marking: MSS SP-25
Inspections & Tests: API 598
Zinc phosphated surface protection for forged steel valves
Product compliant with Directive 2014/68/EU on Pressure Equipment (PED)
for European Union territory

Main Duties / Limits of use

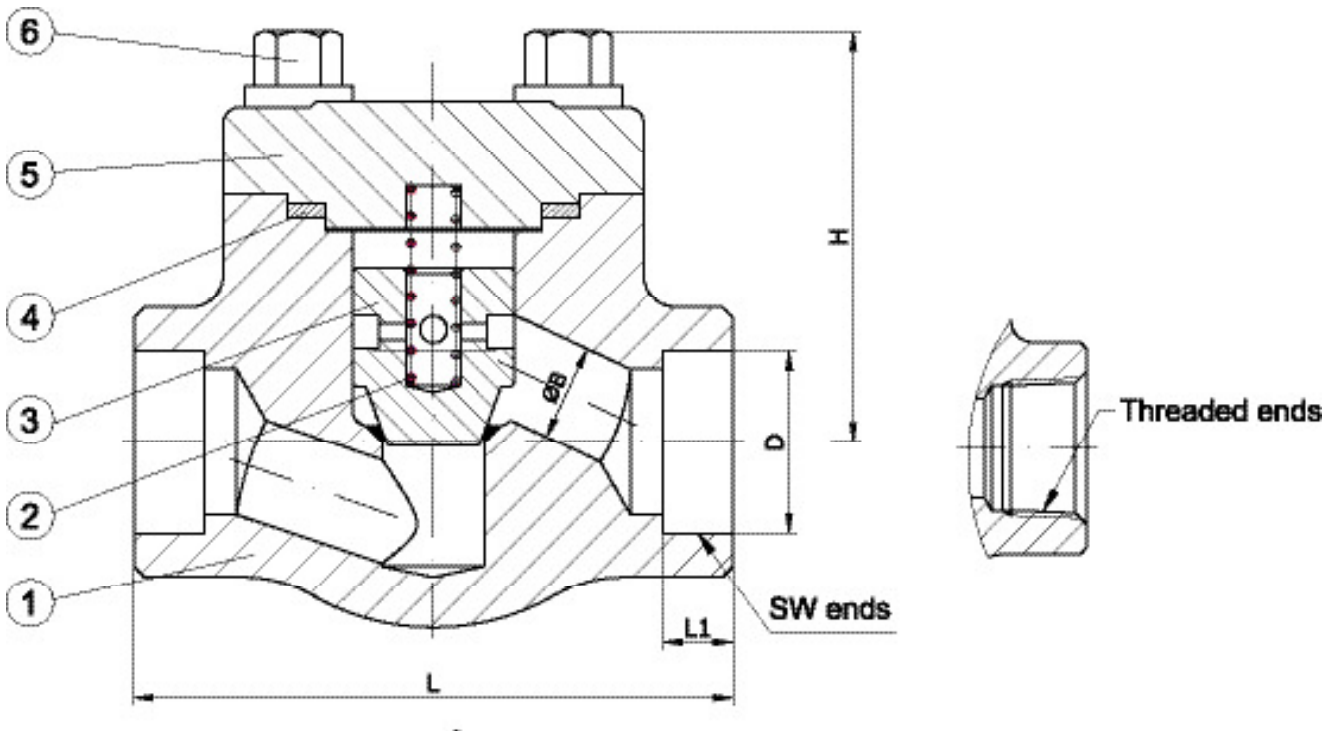
Fluids compatible with materials of construction. Questions referring to chemical resistance, please consult us
Pressure / Temperature Rating to ASME B16.34. See section “Engineering & Performance Data”
For products compliant with Directive 2014/68/EU, observe also limits acc. to Annex II tables 6 & 8 (gases & liquids group 1*) and tables 7 & 9 (gases & liquids group 2*) up to category III
**Classification of fluids (group 1 or 2) acc. to Directive 2014/68/EU, Article 13*

Options

Diverse body materials and trim combinations, different valve connections, pressure seal, welded bonnet... Please consult us

SERIES 35 ANSI RANGE
Class 800&1500

Main Parts and Materials



Nº	PART	MATERIAL								
		A105N			A350 LF2		A182 F11/F22	A182 F304/F304L	A182 F316/F316L	A182 F51/F53
		Trim 1 (35A01)	Trim 5 (35A05)	Trim 8 (35A08)	Trim 2 (35A12)	Trim 10 (35A1D)	Trim 5 (35B75/35B65)	(35I10/35I90)	(35I30/35J10)	(35K30/35K40)
1	Body	A105N+ 13Cr	A105N+ HF	A105N+ HF	A350 LF2+SS304	A350 LF2+SS316	A182 F11/F22+HF	A182 F304(L)	A182 F316(L)	A182 F51/F53
2	Spring	17-7PH			SS304		SS304	SS304	SS316	Inconel X-750
3	Disc	A182 F6a	A182 F6a+HF	A182 F6a	A182 F304	A182 F316	A182 F6a+HF	A182 F304(L)	A182 F316(L)	A182 F51/F53
4	Cover Gasket	SS304+Graphite			SS304+ Graphite	SS316+ Graphite	SS304+ Graphite	SS304+ Graphite	SS316+ Graphite	SS316+ Graphite
5	Cover	ASTM A105N			A350 LF2		A182 F11/F22	A182 F304(L)	A182 F316(L)	A182 F51/F53
6	Cover Bolt	A193 B7			A320 L7		A193 B16	A193 B8(M)	A193 B8M	A193 B8M

HF = Hard faced

Information / restriction of technical rules need to be observed!
Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

SERIES 35 ANSI RANGE
Class 800&1500

Main Valve Parameters

Class 800

Nominal Size			inch	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
			DN	10	15	20	25	32	40	50
End connection	Threaded	NPT/ BSP/BSPT	L	79	79	92	111	120	152	172
			ØB	8	10,5	13,5	18	23	29	36,5
	Socket weld	SW	L	79	79	92	111	120	152	172
			L1	9,6	9,6	12,7	12,7	12,7	12,7	16
			ØB	8	10,5	13,5	18	23	29	36,5
			ØD	17,6	21,8	27,1	33,8	42,6	48,7	61,2
H				61	61	61	78	84	84	118
Kvs-value				-	1,7	3,1	4,9	7,5	12,2	18
Approx. Weight Threaded/SW				1,2	1,5	1,7	3,5	4	4	10,5

Dimensions in mm subject to manufacturing tolerance / Kvs-values in m^3/h / Weights in kg

Class 1500

Nominal Size			inch	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
			DN	10	15	20	25	32	40	50
End connection	Threaded	NPT/ BSP/BSPT	L	92	111	111	120	152	172	220
			ØB	8	10,5	13,5	18	23	29	36,5
	Socket weld	SW	L	92	111	111	120	152	172	220
			L1	9,6	9,6	12,7	12,7	12,7	12,7	16
			ØB	8	10,5	13,5	18	23	29	36,5
			ØD	17,6	21,8	27,1	33,8	42,6	48,7	61,2
H				61	78	78	84	103	118	132
Kvs-value				-	1,7	3,1	4,9	7,5	12,2	18
Approx. Weight Threaded/SW				1,5	3	3,5	4	6	10,5	12,5

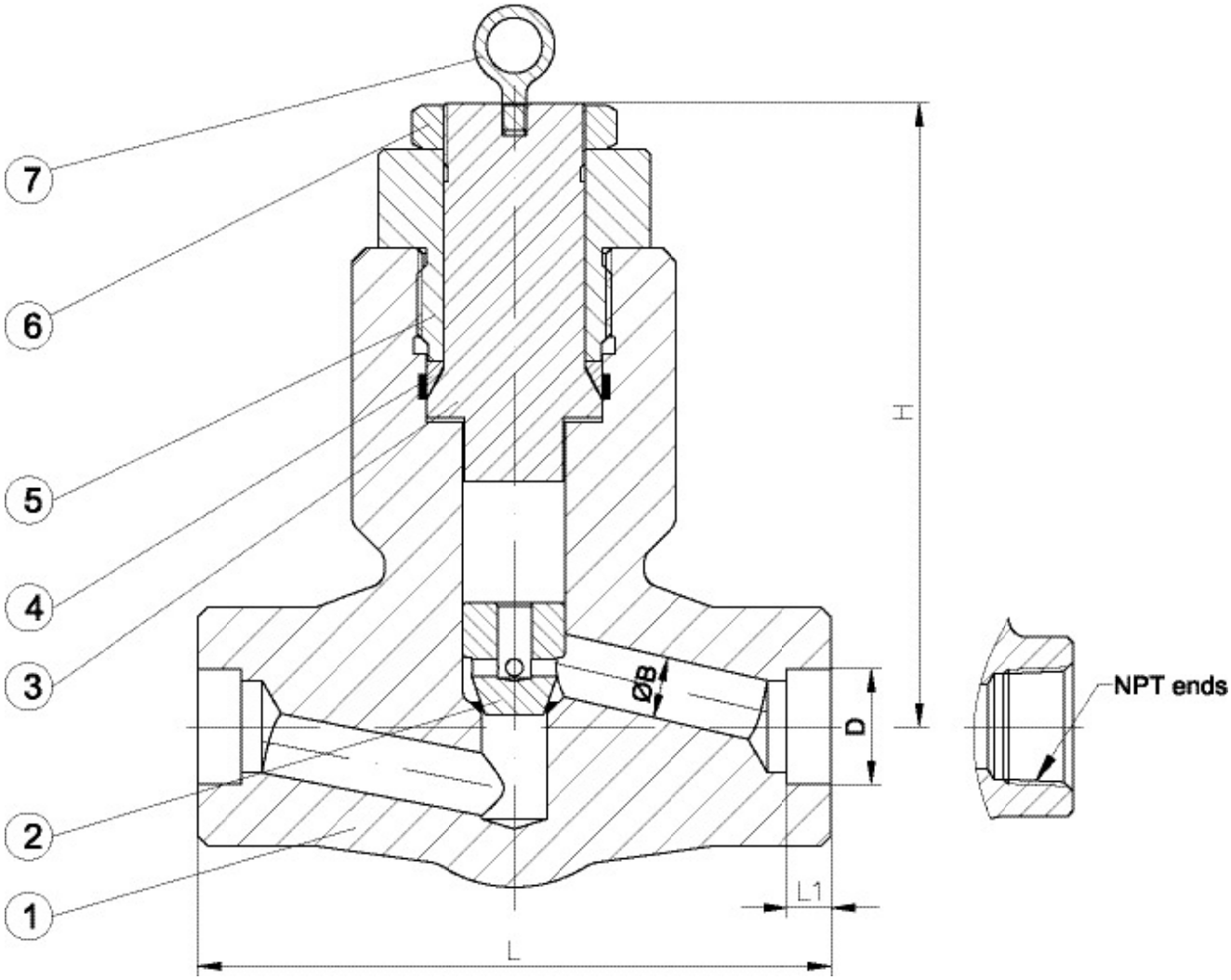
Dimensions in mm subject to manufacturing tolerance / Kvs-values in m^3/h / Weights in kg

Information / restriction of technical rules need to be observed!
Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

SERIES 34 ANSI RANGE
Class 2500

Main Parts and Materials



Nº	PART	MATERIAL								
		A105N			A350 LF2		A182 F11/F22	A182 F304/F304L	A182 F316/F316L	A182 F51/F53
		Trim 1 (34A01)	Trim 5 (34A05)	Trim 8 (34A08)	Trim 2 (34A12)	Trim 10 (34A1D)	Trim 5 (34B75/34B65)	(34I10/34I90)	(34I30/34J10)	(34K30/34K40)
1	Body	A105N+ 13Cr	A105N+ HF	A105N+ HF	A350 LF2+SS304	A350 LF2+SS316	A182 F11/ F22+HF	A182 F304(L)	A182 F316(L)	A182 F51/F53
2	Disc	A182 F6a	A182 F6a+HF	A182 F6a	A182 F304	A182 F316	A182 F6a+HF	A182 F304(L)	A182 F316(L)	A182 F51/F53
3	Seal Nut	A276 420			A276 304	A276 316	A276 420	A276 304(L)	A276 316(L)	A182 F51/F53
4	Gasket	A276 304			A276 304		A276 304	A276 304(L)	A276 316(L)	A182 F51/F53
5	Cover	ASTM A105N			A350 LF2		A182 F11/F22	A182 F304(L)	A182 F316(L)	A182 F51/F53
6	Lock Nut	Carbon Steel			Carbon Steel		Carbon Steel	St.Steel	St.Steel	St.Steel
7	Lift Ring	Carbon Steel			Carbon Steel		Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel

HF = Hard faced

Information / restriction of technical rules need to be observed!
Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

SERIES 34 ANSI RANGE
Class 2500

Main Valve Parameters

Class 2500

Nominal Size			inch	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
			DN	10	15	20	25	32	40	50
End connection	Threaded	NPT/ BSP/BSPT	L	79	79	92	111	120	152	172
			ØB	8	10,5	13,5	18	23	29	36,5
	Socket weld	SW	L	79	79	92	111	120	152	172
			L1	9,6	9,6	12,7	12,7	12,7	12,7	16
			ØB	8	10,5	13,5	18	23	29	36,5
			ØD	17,6	21,8	27,1	33,8	42,6	48,7	61,2
H				61	61	61	78	84	84	118
Kvs-value				-	1,7	3,1	4,9	7,5	12,2	18
Approx. Weight Threaded/SW				1,2	1,5	1,7	3,5	4	4	10,5

Dimensions in mm subject to manufacturing tolerance / Kvs-values in m^3/h / Weights in kg

Information / restriction of technical rules need to be observed!
Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

SERIES F9 ANSI RANGE

Y-Strainers are devices for mechanically removing solids from flowing media by means of a wired mesh or perforated basket, replaceable in line. They combine a rugged and compact design for indoors installation in industrial plants, building industry, etc.

- Great versatility in end connections, materials and configurations
- Marking for identification and full traceability purpose
- St. steel screen, made out of high resistance wire, rugged and braided type or perforated basket
- Precise machined seat slot, to accomodate the screen and avoid dirt to by-pass the strainer
- Reinforced Graphite gasket, with. st. steel reinforcement
- Standard gasket free threaded blow-off connection
- Removable bolting cover, to ease maintenance
- Robust and compact construction

Main Features / Reference Standards

Design: BS 5352
Pressure Rating: 800/1500#
Face to face length: Manufacturer standard
Valve end connections: Threaded NPT to ASME B1.20.1 / BSP to ISO 228-1 / BSPT to ISO 7-1
Welded SW to ASME B16.11
Marking: MSS SP-25
Inspections & Tests: API 598
Zinc phosphated surface protection for forged steel valves
Product compliant with Directive 2014/68/EU on Pressure Equipment (PED)
for European Union territory

Main Duties / Limits of use

Fluids compatible with materials of construction. Questions referring to chemical resistance, please consult us
Pressure / Temperature Rating to ASME B16.34. See section “Engineering & Performance Data”
For products compliant with Directive 2014/68/EU, observe also limits acc. to Annex II tables 6 & 8 (gases & liquids group 1*) and tables 7 & 9 (gases & liquids group 2*) up to category III
**Classification of fluids (group 1 or 2) acc. to Directive 2014/68/EU, Article 13*

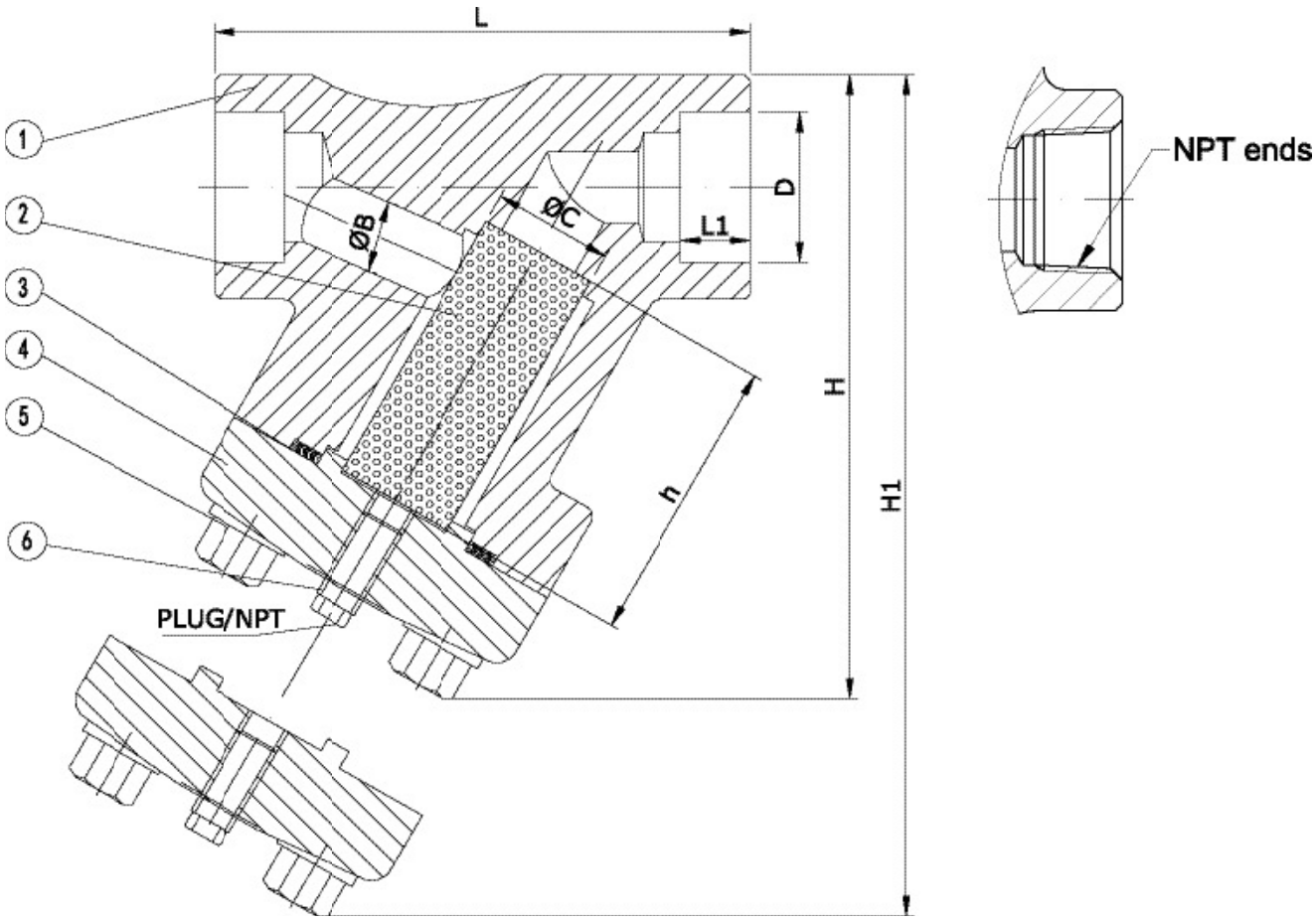
Options

Diverse body materials and trim combinations, different valve connections, pressure seal... Please consult us

SERIES F9 ANSI RANGE
Class 800&1500

CE

Main Parts and Materials



Nº	PART	MATERIAL					
		A105N (F9A0)	A350 LF2 (F9A1)	A182 F11/F22	A182 F304/F304L	A182 F316/F316L	A182 F51/F53
		(F9A0)	(F9A1)	(F9B7/F9B6)	(F9I1/F9I9)	(F9I3/F9J1)	(F9K3/F9K4)
1	Body	ASTM A105N	A350 LF2	A182 F11/F22	A182 F304(L)	A182 F316(L)	A182 F51/F53
2	Mesh	SS304	SS304	SS304	SS304	SS316	SS316
3	Cover Gasket	SS304+Graphite	SS304+Graphite	SS304+Graphite	SS304+Graphite	SS316+Graphite	SS316+Graphite
4	Cover	ASTM A105N	A350 LF2	A182 F11/F22	A182 F304(L)	A182 F316(L)	A182 F51/F53
5	Cover Bolt	A193 B7	A320 L7	A193 B16	A194 8(M)	A194 8M	A194 8M
6	Drain Plug	A276 410	A276 304	A276 304	A276 304	A276 316	A276 316

HF = Hard faced

Information / restriction of technical rules need to be observed!
Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

SERIES F9 ANSI RANGE
Class 800&1500

Main Valve Parameters

Class 800

Nominal Size			inch	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
			DN	10	15	20	25	32	40	50
End connection	Threaded	NPT/ BSP/BSPT	L	98	98	98	120	140	140	172
			ØB	10	15	20	25	32	40	50
	Socket weld	SW	L	98	98	98	120	140	140	172
			L1	9,6	9,6	12,7	12,7	12,7	12,7	16
			ØB	10	15	20	25	32	40	50
			ØD	17,6	21,8	27,1	33,8	42,6	48,7	61,2
H				70	70	70	100	110	120	120
H1				105	105	105	135	155	165	175
Plug				1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"
Basket		h		50	50	50	65	75	80	85
		ØC		20	20	20	28	35	38	48
		Standard perforation		0.8mm	0.8mm	0.8mm	0.8mm	0.8mm	0.8mm	0.8mm
Kvs-value				3,2	3,8	8,6	13,7	19,7	40,3	68,5
Approx. Weight Threaded/SW				2,2	2,2	2,1	4,2	8,9	8,9	10

Dimensions in mm subject to manufacturing tolerance / Kvs-values in m^3/h / Weights in kg

Class 1500

Nominal Size			inch	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
			DN	10	15	20	25	32	40	50
End connection	Threaded	NPT/ BSP/BSPT	L	98	120	120	140	140	172	220
			ØB	10	15	20	25	32	40	50
	Socket weld	SW	L	98	120	120	140	140	172	220
			L1	9,6	9,6	12,7	12,7	12,7	12,7	16
			ØB	10	15	20	25	32	40	50
			ØD	17,6	21,8	27,1	33,8	42,6	48,7	61,2
H				70	100	100	110	120	120	150
H1				105	105	135	155	165	175	210
Plug				1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"
Basket		h		50	50	65	75	80	85	100
		ØC		20	20	20	28	35	38	48
		Standard perforation		0.8mm	0.8mm	0.8mm	0.8mm	0.8mm	0.8mm	0.8mm
Kvs-value				3,2	3,8	8,6	13,7	19,7	40,3	68,5
Approx. Weight Threaded/SW				2,2	4,2	4,2	8,9	8,9	10	18,6

Dimensions in mm subject to manufacturing tolerance / Kvs-values in m^3/h / Weights in kg

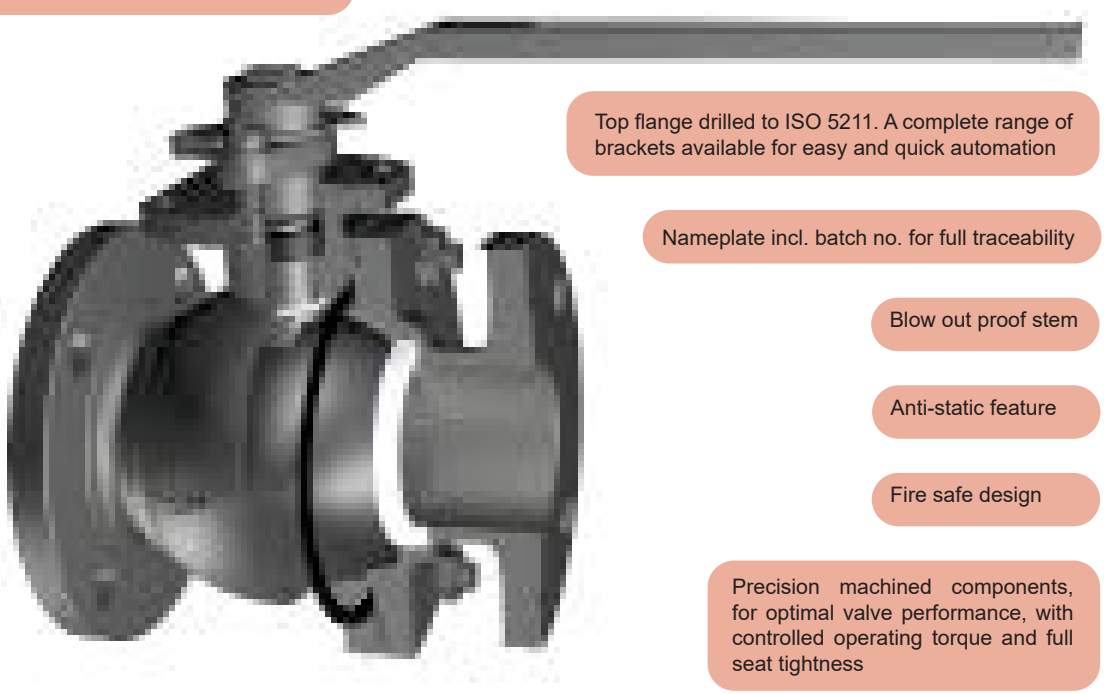
Information / restriction of technical rules need to be observed!
Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

SERIES BV BF-B8 ANSI RANGE

Series BF are floating type, quick closing 90º rotary ball valves, bidirectional, with tightness achieved by friction of the ball blind ends to the seats, devised for stopping the flow of the service fluid when necessary and not being suitable for regulation purposes. Valve closes by turning the hand lever clockwise. They have a robust construction to offer reliable performance in standard services.

Floating ball, full bore, side entry, split body design, with integral flanges



Top flange drilled to ISO 5211. A complete range of brackets available for easy and quick automation

Nameplate incl. batch no. for full traceability

Blow out proof stem

Anti-static feature

Fire safe design

Precision machined components, for optimal valve performance, with controlled operating torque and full seat tightness

Main Features / Reference Standards

Design: API 6D
Pressure Rating: 150/300/600#
Face to face length: API 6D
Valve end connections: Flanged RF or RTJ to ASME B16.5
Welded BW to ASME B16.25
Fire safe design: API 6FA
Bidirectional design
Marking: MSS SP-25
Inspections & Tests: API 598
Primer painted grey color similar to RAL 7037 for protection during storage and transport (carbon steel body/bonnet)
Product compliant with Directive 2014/68/EU on Pressure Equipment (PED) and Machinery Directive 2006/42/EC for European Union territory

Main Duties / Limits of use

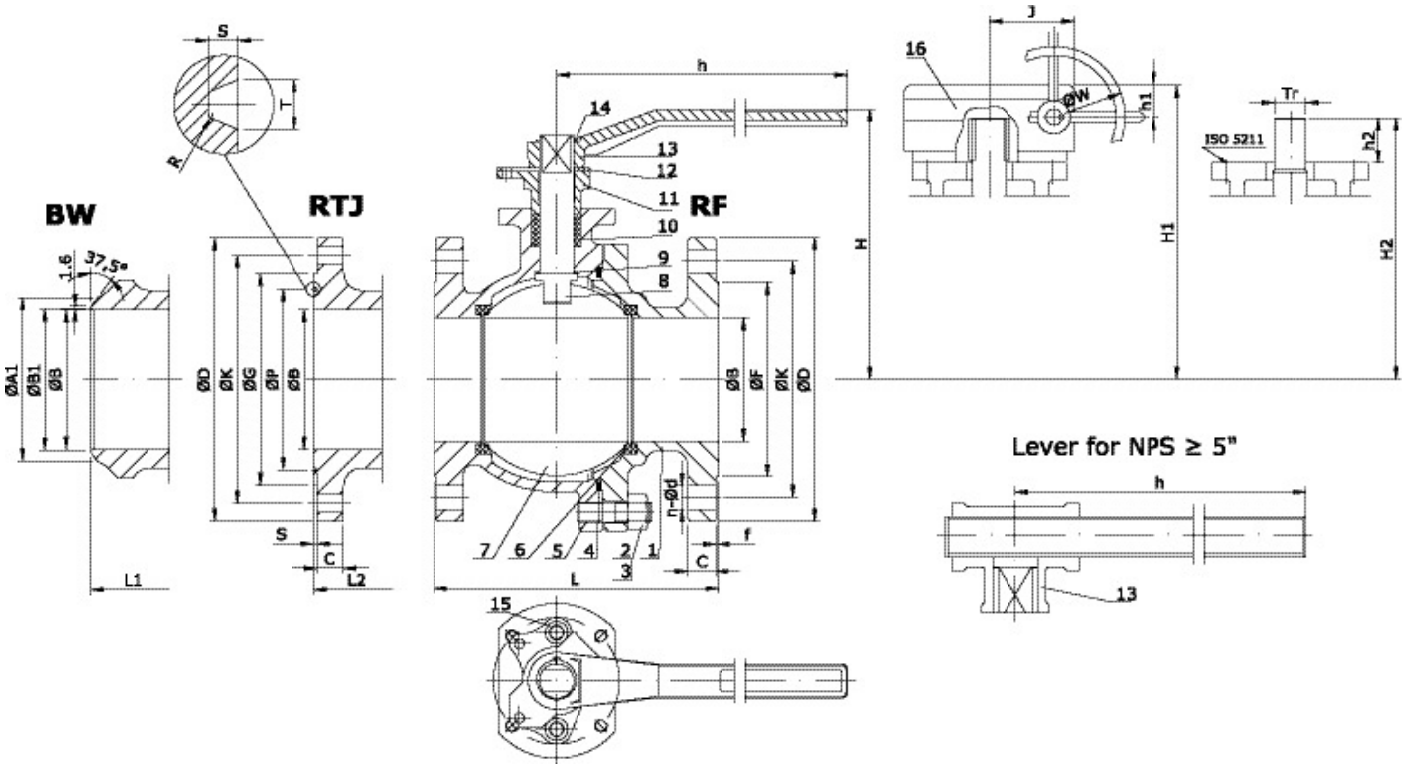
Fluids compatible with materials of construction. Questions referring to chemical resistance, please consult us
Pressure / Temperature Rating to ASME B16.34. See section “Engineering & Performance Data”
For products compliant with Directive 2014/68/EU, observe also limits acc. to Annex II tables 6 & 8 (gases & liquids group 1*) and tables 7 & 9 (gases & liquids group 2*) up to category III
**Classification of fluids (group 1 or 2) acc. to Directive 2014/68/EU, Article 13*

Options

Different material combinations, different valve connections, worm gear, actuators, limit switches, cryogenic design, jacketed body, execution for aggressive atmosphere, compliance with NACE MR0175, etc. Please consult us

Main Parts and Materials

SERIES BV BF ANSI RANGE
Class 150&300



Nº	Part name	A216 WCB (BFA02_)	A216 WCB/NACE (BFA02_)	A352 LCB/SS304 (BFA82_)	A352 LCB/SS316 (BFA83_)
1	Body Cap	A216 WCB		A352 LCB	
2	Body Bolt	A193 B7	A193 B7M	A320 L7	
3	Body Nut	A194 2H	A194 2HM	A194 4	
4	Gasket	SS304+Graphite	SS316+Graphite	SS304+Graphite	SS316+Graphite
5	Body	A216 WCB		A352 LCB	
6	Seat	RPTFE		RPTFE	
7	Ball	SS304		A182 F304	A182 F316
8	Stem	A182 F304	A182 F316	A182 F304	A182 F316
9	Thrust Washer	PTFE		PTFE	
10	Packing	Flexible Graphite		PTFE	
11	Gland Flange	A216 WCB		A352 LCB	
12	Positioner Plate	Carbon Steel		AISI 1035	
13	Lever *(1)*	A216 WCB		A216 WCB	
14	Lever Washer	Carbon Steel		Carbon Steel	
15	Bolt	A193 B7	A193 B7M	A320 L7	
16	Gear	Assembly		Assembly	

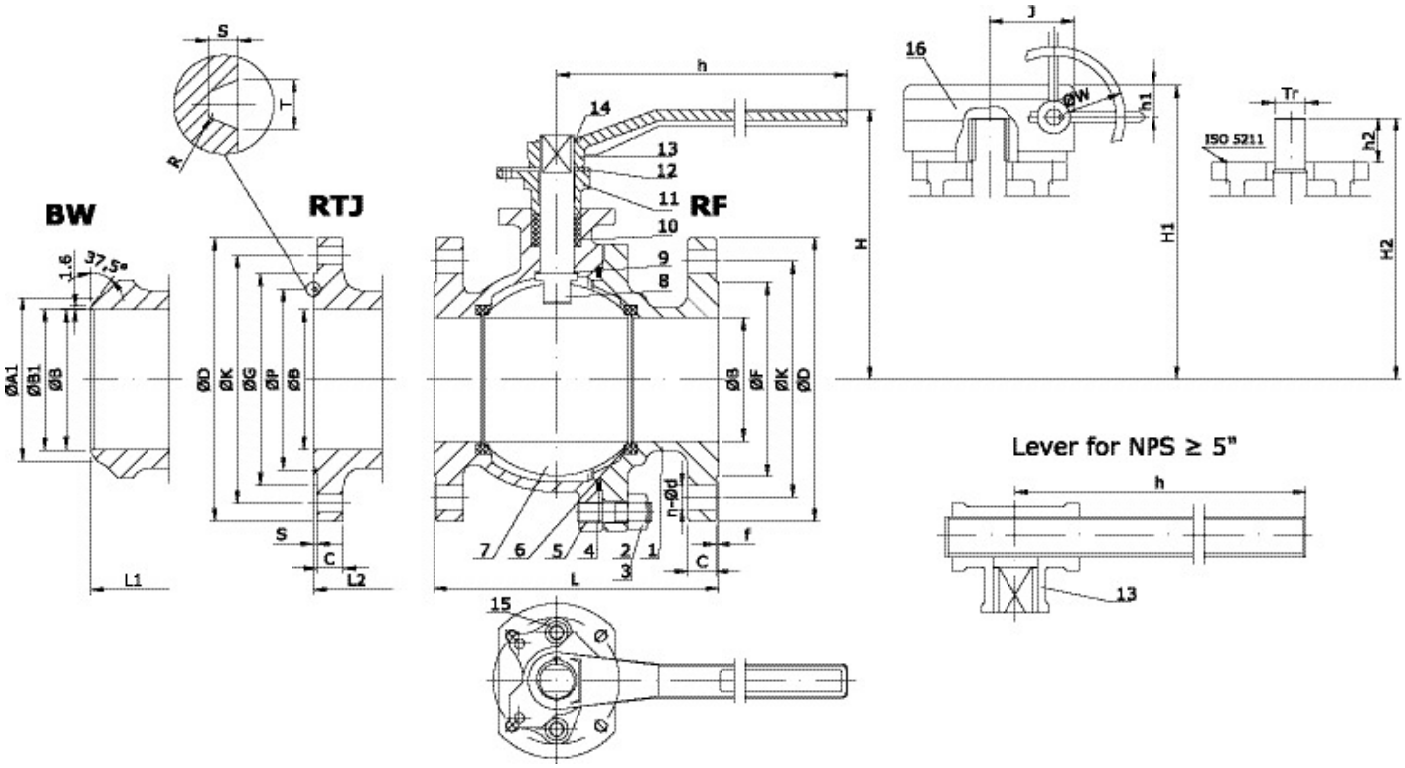
(1) T type lever for NPS≥5"

Information / restriction of technical rules need to be observed!
Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Main Parts and Materials

SERIES BV BF ANSI RANGE
Class 150&300



Nº	Part name	A351 CF8 (BFI2_)	A351 CF8M (BFI0_)	A351 CF3 (BFI1_)	A351 CF3M (BFI7_)
1	Body Cap	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2	Body Bolt	A193 B8	A193 B8M	A193 B8M	
3	Body Nut	A194 8	A194 8M	A194 8M	
4	Gasket	SS304+Graphite	SS316+Graphite	SS304+Graphite	SS316+Graphite
5	Body	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
6	Seat	RPTFE		RPTFE	
7	Ball	A182 F304	A182 F316	A182 F304L	A182 F316L
8	Stem	A182 F304	A182 F316	A182 F304L	A182 F316L
9	Thrust Washer	PTFE		PTFE	
10	Packing	PTFE		PTFE	
11	Gland Flange	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
12	Positioner Plate	St. Steel		St. Steel	
13	Lever *(1)*	A216 WCB+Epoxy Coated		A216 WCB+Epoxy Coated	
14	Lever Washer	Carbon Steel		Carbon Steel	
15	Bolt	A193 B8	A193 B8M		
16	Gear	Assembly		Assembly	

(1) T type lever for NPS≥5"

Information / restriction of technical rules need to be observed!
Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 150

SERIES BV BF ANSI RANGE

Nominal Size		inch	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"
		DN	15	20	25	40	50	65	80	100	125	150	200
End connection	RF	L	108	117	127	165	178	190	203	229	356	394	457
		ØB	13	19	25	38	51	65	76	102	128	152	203
		ØD	90	100	110	125	150	180	190	230	255	280	345
		ØK	60,3	69,9	79,4	98,4	120,7	139,7	152,4	190,5	215,9	241,3	298,5
		ØF	34,9	42,9	50,8	73	92,1	104,8	127	157,2	185,7	215,9	269,9
		C	8	8,9	9,6	12,7	14,3	15,9	17,5	22,3	22,3	23,9	27
		f	2	2	2	2	2	2	2	2	2	2	2
		n-Ød	4 - 5/8	4 - 5/8	4 - 5/8	4 - 5/8	4 - 3/4	4 - 3/4	4 - 3/4	8 - 3/4	8 - 7/8	8 - 7/8	8 - 7/8
	BW	L1	-	-	-	-	216	241	282	305	-	457	521
		Schedule No.*(1)*	-	-	-	-	40	-	40	40	-	40	40
		ØB	-	-	-	-	51	65	76	102	128	152	203
		ØA1	-	-	-	-	60,3	-	91	117	-	172	223
		ØB1	-	-	-	-	52,48	-	78	102	-	154	203
	RTJ	L2	-	-	140	178	191	203	216	242	13	407	470
		ØB	-	-	25	38	51	65	76	102	128	152	203
		ØD	-	-	110	125	150	180	190	230	255	280	345
		ØK	-	-	79,4	98,4	120,7	139,7	152,4	190,5	215,9	241,3	298,5
		ØG	-	-	63,5	82,5	102	121	133	171	194	219	273
		ØP	-	-	47,63	65,07	82,55	101,6	114,3	149,23	171,45	193,68	247,65
		C	-	-	9,6	12,7	17,5	20,7	22,3	22,3	22,3	23,9	27
		n-Ød	-	-	4 - 5/8	4 - 5/8	4 - 3/4	4 - 3/4	4 - 3/4	8 - 3/4	8 - 7/8	8 - 7/8	8 - 7/8
		T	-	-	8,74	8,74	8,74	8,74	8,74	8,74	8,74	8,74	8,74
		S	-	-	6,35	6,35	6,35	6,35	6,35	6,35	6,35	6,35	6,35
		R	-	-	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8
Top works/Operation	Lever	H	85	88	95	124	137	176	205	218	276	318	347
		h	140	150	175	240	240	275	300	370	646	850	1200
	Gear with handwheel	H1	-	-	-	208	213	252	281	301	362	407	424
		h1	-	-	-	39	39	39	39	39	47	53	53
		J	-	-	-	76	76	88	96	96	164	215	215
		ØW	-	-	-	160	160	206	240	240	275	300	300
	With ISO 5211 mounting pad	H2	103	105	115	162	173	213	242	267	320	360	387
		h2	15	16	20	24	30	33	35	40	46	50	60
		ISO	F05	F05	F05	F07	F07	F10	F10	F10	F14	F14	F14
		Tr	12	14	16	20	20	24	24	28	36	36	40
		Torque (Nm) *(2)*	3	5	11	16	25	48	65	125	289	410	700
Kvs-value			-	-	-	-	-	-	-	-	-	-	-
Approx. Weight RF *(3)*			4,1	5	5,6	8,3	13	20	26	41	67	86	151
Approx. Weight BW			3	4	4	6	10	16	21	33	56	73	129

(1) Other schedule nos. on request
(2) Torque includes 30% of safety factor
(3) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Torques in Nm / Weights in kg
For more information about flanged and welded ends refer to page 16

Information / restriction of technical rules need to be observed!
Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 300

SERIES BV BF ANSI RANGE

Nominal Size		inch	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"
		DN	15	20	25	40	50	65	80	100	125	150	200
End connection	RF	L	140	152	165	190	216	241	282	305	-	403	502
		ØB	13	19	25	38	51	65	76	102	128	152	203
		ØD	95	115	125	155	165	190	210	255	280	320	380
		ØK	66,7	82,6	88,9	114,3	127	149,2	168,3	200	235	269,9	330,2
		ØF	34,9	42,9	50,8	73	92,1	104,8	127	157,2	185,7	215,9	269,9
		C	12,7	14,3	15,9	19,1	20,7	23,9	27	30,2	33,4	35	39,7
		f	2	2	2	2	2	2	2	2	2	2	2
		n-Ød	4 - 5/8	4 - 3/4	4 - 3/4	4 - 7/8	8 - 3/4	8 - 7/8	8 - 7/8	8 - 7/8	8 - 7/8	12 - 7/8	12 - 1
	BW	L1	-	-	-	-	216	241	282	305		457	521
		Schedule No.*(1)*	-	-	-	-	40	-	40	40	-	40	40
		ØB	-	-	-	-	51	65	76	102	128	152	203
		ØA1	-	-	-	-	60,3	-	91	117	-	172	223
		ØB1	-	-	-	-	52,48	-	78	102	-	154	203
	RTJ	L2	151	165	178	203	232	257	298	321	16	419	518
		ØB	13	19	25	38	51	65	76	102	128	152	203
		ØD	95	115	125	155	165	190	210	255	280	320	380
		ØK	66,7	82,6	88,9	114,3	127	149,2	168,3	200	235	269,9	330,2
		ØG	51	63,5	70	90,5	108	127	146	175	210	241	302
		ØP	34,14	42,88	50,8	68,27	82,55	101,6	123,83	149,23	180,98	211,12	269,88
		C	12,7	14,3	15,9	19,1	20,7	23,9	27	30,2	33,4	35	39,7
		n-Ød	4 - 5/8	4 - 3/4	4 - 3/4	4 - 7/8	8 - 3/4	8 - 7/8	8 - 7/8	8 - 7/8	8 - 7/8	12 - 7/8	12 - 1
		T	7,14	8,74	8,74	8,74	11,91	11,91	11,91	11,91	11,91	11,91	11,91
		S	5,54	6,35	6,35	6,35	7,92	7,92	7,92	7,92	7,92	7,92	7,92
		R	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8
Top works/Operation	Lever	H	85	88	95	124	142	170	190	218	274	316	370
		h	140	150	175	240	240	292	330	370	646	850	1200
	Gear with handwheel	H1	-	-	-	208	226	232	236	296	357	402	465
		h1	-	-	-	39	39	39	39	39	47	53	68
		J	-	-	-	76	76	88	96	96	164	215	254
		ØW	-	-	-	160	160	206	240	240	275	300	350
	With ISO 5211 mounting pad	H2	103	105	115	162	185	214	236	262	315	355	400
		h2	15	16	20	24	30	33	35	40	46	50	60
		ISO	F05	F05	F05	F07	F07	F10	F10	F10	F14	F14	F16
		Tr	12	14	16	20	20	24	24	28	36	36	40
		Torque (Nm) *(2)*	7	12	26	38	60	118	160	280	665	950	1550
Kvs-value			-	-	-	-	-	-	-	-	-	-	-
Approx. Weight RF *(3)*			3,2	5	6,2	12	17	27	35	61	96	121	215
Approx. Weight BW			2,2	3,4	4,4	8,8	12	20	27	48	77	98	179

(1) Other schedule nos. on request
(2) Torque includes 30% of safety factor
(3) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Torques in Nm / Weights in kg
For more information about flanged and welded ends refer to page 16

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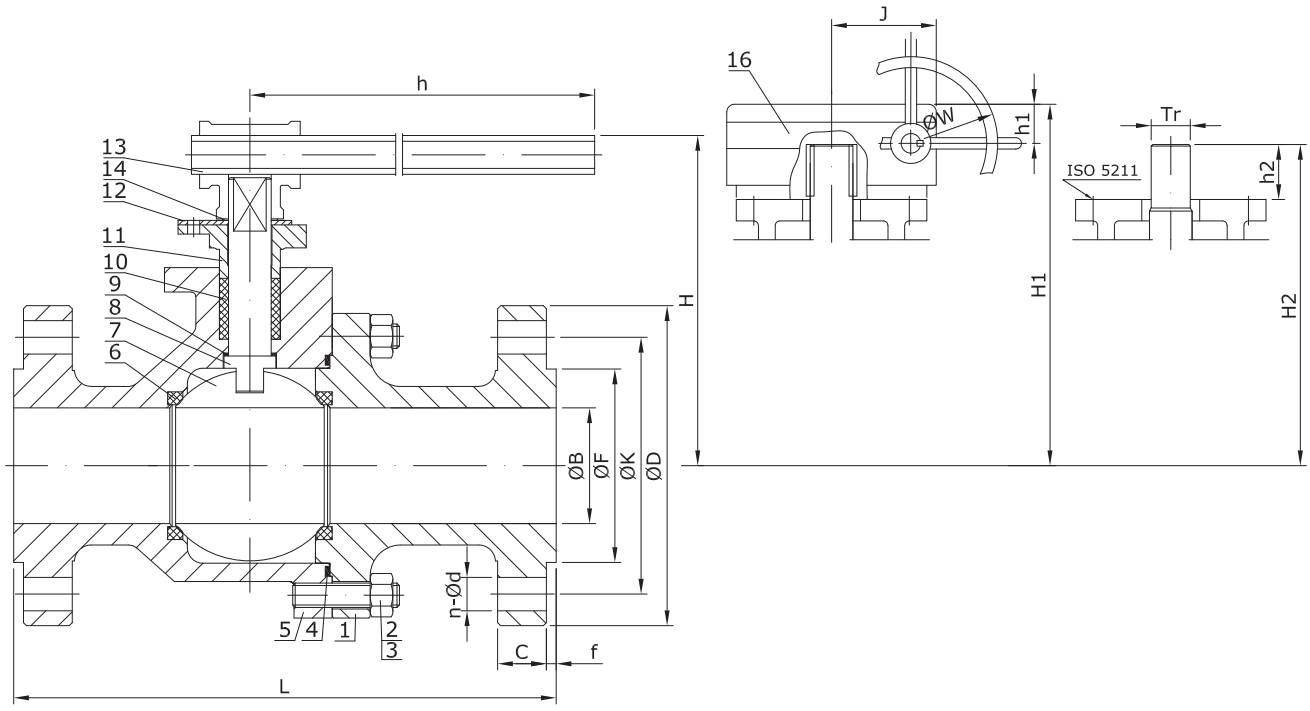
Main Parts and Materials

SERIES BV BF ANSI RANGE
Class 600



Nº	Part name	A216 WCB (BFA02_)	A216 WCB/NACE (BFA02_)	A352 LCB2/SS304 (BFA82_)	A352 LCB3/SS316 (BFA83_)
1	Body Cap	A216 WCB		A352 LCB	
2	Body Bolt	A193 B7	A193 B7M	A320 L7	
3	Body Nut	A194 2H	A194 2HM	A194 4	
4	Gasket	SS304+Graphite	SS316+Graphite	SS304+Graphite	SS316+Graphite
5	Body	ASTM A216 WCB		A352 LCB	
6	Seat	RPTFE			
7	Ball	A105.ENP	A105N.ENP	A182 F304	A182 F316
8	Stem	A182 F6a	A182 F316	A182 F304	A182 F316
9	Thrust Washer	PTFE			
10	Packing	Flexible Graphite		PTFE	
11	Gland Flange	A216 WCB		A352 LCB	
12	Positioner Plate	Carbon Steel		AISI 1035	
13	Lever	A216 WCB			
14	Lever Washer	Carbon Steel			
16	Gear	Assembly			

Nº	Part name	A351 CF8 (BFI2_)	A351 CF8M (BFI0_)	A351 CF3 (BFI1_)	A351 CF3M (BFI7_)
1	Body Cap	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2	Body Bolt	A193 B8	A193 B8M	A193 B8M	A193 B8M
3	Body Nut	A194 8	A194 8M	A194 8M	A194 8M
4	Gasket	SS304+Graphite	SS316+Graphite	SS304+Graphite	SS316+Graphite
5	Body	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
6	Seat	RPTFE			
7	Ball	A182 F304	A182 F316	A182 F304L	A182 F316L
8	Stem	A182 F304	A182 F316	A182 F304L	A182 F316L
9	Thrust Washer	PTFE			
10	Packing	PTFE			
11	Gland Flange	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
12	Positioner Plate	St. Steel			
13	Lever	A216 WCB+Epoxy Coated to Epoxi			
14	Lever Washer	Carbon Steel			
16	Gear	Assembly			

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Main Valve Parameters - Class 600

SERIES BV BF ANSI RANGE

Nominal Size		inch	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"
		DN	15	20	25	40	50	65	80	100
End connection	RF	L	165	190	216	241	292	330	356	432
		ØB	13	19	25	38	51	65	76	102
		ØD	95	115	125	155	165	190	210	275
		ØK	66,7	82,6	88,9	114,3	127	149,2	168,3	215,9
		ØF	34,9	42,9	50,8	73	92,1	104,8	127	157,2
		C	14,3	15,9	17,5	22,3	25,4	28,6	31,8	38,1
		f	7	7	7	7	7	7	7	7
		n-Ød	4 - 5/8	4 - 3/4	4 - 3/4	4 - 7/8	8 - 3/4	8 - 7/8	8 - 7/8	8 - 1
	BW	L1	165	190	216	241	292	330	356	432
		Schedule No.*(1)*	-	-	-	-	80	-	80	80
		ØB	-	-	-	-	51	65	76	102
		ØA1	-	-	-	-	60,3	-	91	117
		ØB1	-	-	-	-	49,22	-	73,5	97
	RTJ	L2	163	190	216	241	295	333	359	435
		ØB	13	19	25	38	51	65	76	102
		ØD	95	115	125	155	165	190	210	275
		ØK	66,7	82,6	88,9	114,3	127	149,2	168,3	215,9
		ØG	51	63,5	70	90,5	108	127	146	175
		ØP	34,14	42,88	50,8	68,27	82,55	101,6	123,83	149,23
		C	14,3	15,9	17,5	22,3	25,4	28,6	31,8	38,1
		n-Ød	4 - 5/8	4 - 3/4	4 - 3/4	4 - 7/8	8 - 3/4	8 - 7/8	8 - 7/8	8 - 1
		T	7,14	8,74	8,74	8,74	11,91	11,91	11,91	11,91
		S	5,54	6,35	6,35	6,35	7,92	7,92	7,92	7,92
		R	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8
Top works/Operation	Lever	H	85	88	95	133	179	206	226	274
		h	140	150	175	240	400	458	500	600
	Gear with handwheel	H1	-	-	180	218	261	297	323	367
		h1	-	-	39	39	40	45	48	53
		J	-	-	76	76	96	149	188	215
		ØW	-	-	160	160	240	263	280	300
	With ISO 5211 mounting pad	H2	103	105	130	172	217	250	275	315
		h2	15	16	20	24	30	36	40	45
		ISO	F05	F05	F07	F07	F10	F12	F12	F14
		Tr	12	14	16	20	22	26	26	30
		Torque (Nm) *(2)*	19	35	68	130	190	345	460	770
Kvs-value			-	-	-	-	-	-	-	-
Approx. Weight RF *(3)*			5,7	6,5	10	18	26	42	54	91
Approx. Weight BW			4,6	4,7	8,1	14	19	32	41	68

(1) Other schedule nos. on request
(2) Torque includes 30% of safety factor
(3) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Torques in Nm / Weights in kg
For more information about flanged and welded ends refer to page 16

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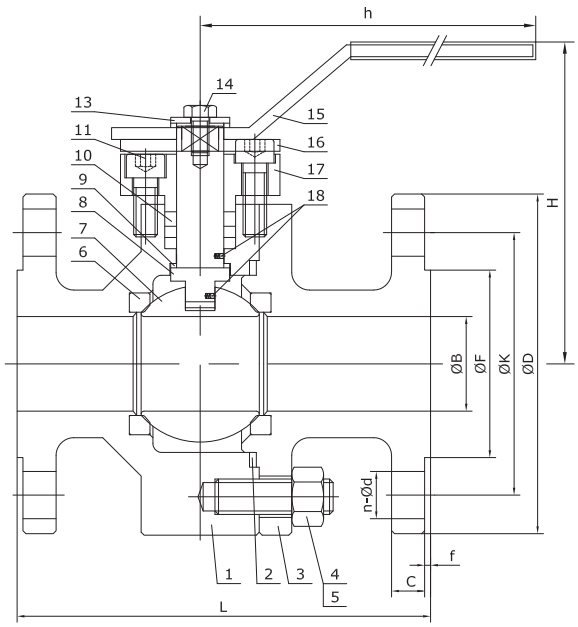
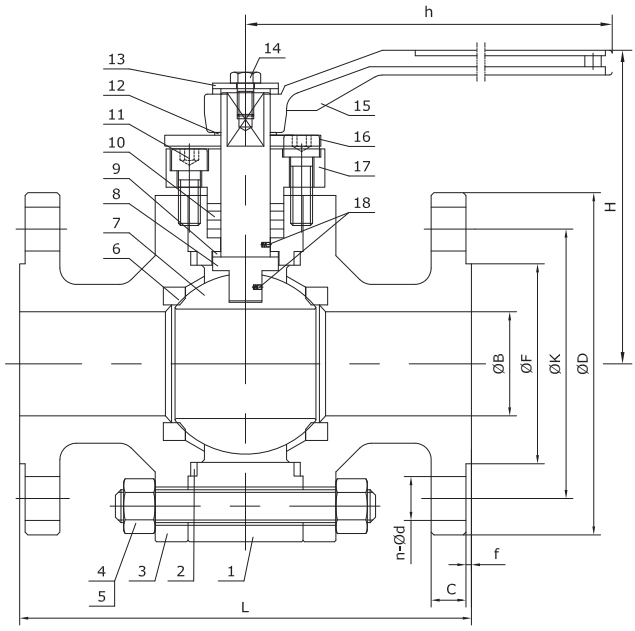
Main Parts and Materials



SERIES BV B8 ANSI RANGE
Class 150 1/2" to 1-1/4"

Nº	Part name	A105	A182 F304	A182 F316
1	Body	ASTM A105	A182 F304	A182 F316
2	Gasket	SS304+Graphite	SS304+Graphite	SS316+Graphite
3	Bonnet	ASTM A105	A182 F304	A182 F316
4	Bolt	A193 B7	A193 B8	A193 B8M
5	Nut	A194 2H	A194 8	A194 8M
6	Seat	RPTFE	RPTFE	RPTFE
7	Ball	A182 F304	A182 F304	A182 F316
8	Stem	A182 F304	A182 F304	A182 F316
9	Gasket	RPTFE	RPTFE	RPTFE
10	Packing	Flexible Graphite	Flexible Graphite	Flexible Graphite
11	Screw	A193 B7	A193 B8	A193 B8M
13	Lever Holder	Carbon Steel	Carbon Steel	Carbon Steel
14	Bolt	A193 B7	A193 B7	A193 B7
15	Lever	St. Steel	St. Steel	St. Steel
16	Positioner	Carbon Steel	Carbon Steel	Carbon Steel
17	Packing Gland	ASTM A105	A182 F304	A182 F316
18	Anti-Static	SS304	SS304	SS316



SERIES BV B8 ANSI RANGE
Class 150 1-1/2" to 2"

Nº	Part name	A105	A182 F304	A182 F316
1	Body	ASTM A105	A182 F304	A182 F316
2	Gasket	SS304+Graphite	SS304+Graphite	SS316+Graphite
3	Bonnet	ASTM A105	A182 F304	A182 F316
4	Bolt	A193 B7	A193 B8	A193 B8M
5	Nut	A194 2H	A194 8	A194 8M
6	Seat	RPTFE	RPTFE	RPTFE
7	Ball	A182 F304	A182 F304	A182 F316
8	Stem	A182 F304	A182 F304	A182 F316
9	Gasket	RPTFE	RPTFE	RPTFE
10	Packing	Flexible Graphite	Flexible Graphite	Flexible Graphite
11	Screw	A193 B7	A193 B8	A193 B8M
12	Washer	Carbon Steel	Carbon Steel	Carbon Steel
13	Lever Holder	Carbon Steel	Carbon Steel	Carbon Steel
14	Bolt	A193 B7	A193 B7	A193 B7
15	Lever	Carbon Steel+epoxy coated	Carbon Steel+epoxy coated	Carbon Steel+epoxy coated
16	Positioner	Carbon Steel	Carbon Steel	Carbon Steel
17	Packing Gland	ASTM A105	A182 F304	A182 F316
18	Anti-Static	SS304	SS304	SS316

Main Valve Parameters - Class 150

Nominal Size		inch	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
		DN	15	20	25	32	40	50
End connection	RF	L	108	117	127	140	165	178
		ØB	13	19	25	32	38	51
		ØD	90	100	110	115	125	150
		ØK	60,3	69,9	79,4	88,9	98,4	120,7
		ØF	34,9	42,9	50,8	63,5	73	92,1
		C	8	8,9	9,6	11,2	12,7	14,3
		f	2	2	2	2	2	2
		n-Ød	4 - 5/8	4 - 5/8	4 - 5/8	4 - 5/8	4 - 5/8	4 - 3/4
Lever		H	80	92	98	109	115	132
		h	136	174	185	185	210	242

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance

For more information about flanged and welded ends refer to page 16

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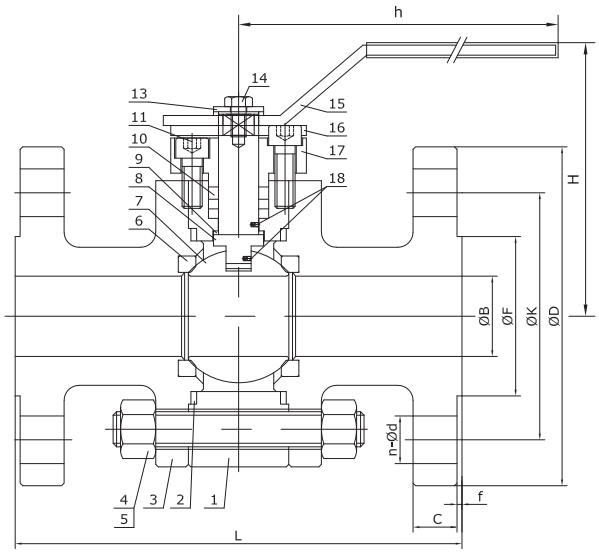
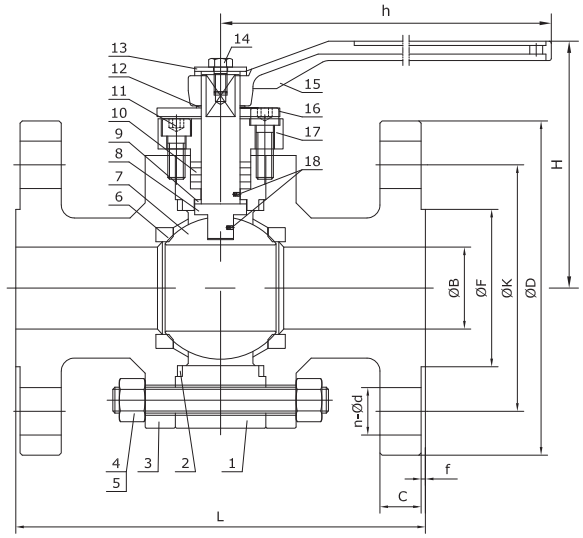
Main Parts and Materials



SERIES BV B8 ANSI RANGE
Class 300 1/2" to 1-1/4"

Nº	Part name	A105	A182 F304	A182 F316
1	Body	ASTM A105	A182 F304	A182 F316
2	Gasket	SS304+Graphite	SS304+Graphite	SS316+Graphite
3	Bonnet	ASTM A105	A182 F304	A182 F316
4	Bolt	A193 B7	A193 B8	A193 B8M
5	Nut	A194 2H	A194 8	A194 8M
6	Seat	RPTFE	RPTFE	RPTFE
7	Ball	A182 F304	A182 F304	A182 F316
8	Stem	A182 F304	A182 F304	A182 F316
9	Gasket	RPTFE	RPTFE	RPTFE
10	Packing	Flexible Graphite	Flexible Graphite	Flexible Graphite
11	Screw	A193 B7	A193 B8	A193 B8M
13	Lever Holder	Carbon Steel	Carbon Steel	Carbon Steel
14	Bolt	A193 B7	A193 B7	A193 B7
15	Lever	St. Steel	St. Steel	St. Steel
16	Positioner	Carbon Steel	Carbon Steel	Carbon Steel
17	Packing Gland	ASTM A105	A182 F304	A182 F316
18	Anti-Static	SS304	SS304	SS316



SERIES BV B8 ANSI RANGE
Class 300 1-1/2" to 2"

Nº	Part name	A105	A182 F304	A182 F316
1	Body	ASTM A105	A182 F304	A182 F316
2	Gasket	SS304+Graphite	SS304+Graphite	SS316+Graphite
3	Bonnet	ASTM A105	A182 F304	A182 F316
4	Bolt	A193 B7	A193 B8	A193 B8M
5	Nut	A194 2H	A194 8	A194 8M
6	Seat	RPTFE	RPTFE	RPTFE
7	Ball	A182 F304	A182 F304	A182 F316
8	Stem	A182 F304	A182 F304	A182 F316
9	Gasket	RPTFE	RPTFE	RPTFE
10	Packing	Flexible Graphite	Flexible Graphite	Flexible Graphite
11	Screw	A193 B7	A193 B8	A193 B8M
12	Washer	Carbon Steel	Carbon Steel	Carbon Steel
13	Lever Holder	Carbon Steel	Carbon Steel	Carbon Steel
14	Bolt	A193 B7	A193 B7	A193 B7
15	Lever	Carbon Steel+e-poxy coated	Carbon Steel+e-poxy coated	Carbon Steel+e-poxy coated
16	Positioner	Carbon Steel	Carbon Steel	Carbon Steel
17	Packing Gland	ASTM A105	A182 F304	A182 F316
18	Anti-Static	SS304	SS304	SS316

Main Valve Parameters - Class 300

Nominal Size		inch	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
		DN	15	20	25	32	40	50
End connection	RF	L	140	152	165	178	190	216
		ØB	13	19	25	32	38	51
		ØD	95	115	125	135	155	165
		ØK	66,7	82,6	88,9	98,4	114,3	127
		ØF	34,9	42,9	50,8	63,5	73	92,1
		C	12,7	14,3	15,9	17,5	19,1	20,7
		f	2	2	2	2	2	2
		n-Ød	4 - 5/8	4 - 3/4	4 - 3/4	4 - 3/4	4 - 7/8	8 - 3/4
Lever		H	80	92	98	109	115	132
		h	136	174	185	185	210	242

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance

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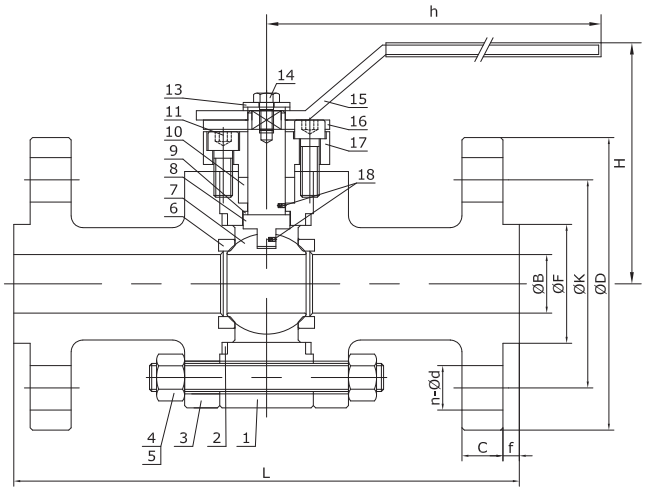
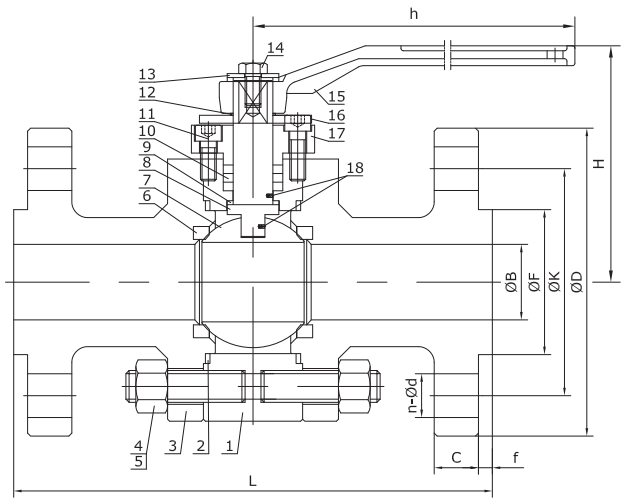
Main Parts and Materials



SERIES BV B8 ANSI RANGE
Class 600 1/2" to 1"

Nº	Part name	A105	A182 F304	A182 F316
1	Body	ASTM A105	A182 F304	A182 F316
2	Gasket	SS304+Graphite	SS304+Graphite	SS316+Graphite
3	Bonnet	ASTM A105	A182 F304	A182 F316
4	Bolt	A193 B7	A193 B8	A193 B8M
5	Nut	A194 2H	A194 8	A194 8M
6	Seat	RPTFE	RPTFE	RPTFE
7	Ball	A182 F304	A182 F304	A182 F316
8	Stem	A182 F304	A182 F304	A182 F316
9	Gasket	RPTFE	RPTFE	RPTFE
10	Packing	Flexible Graphite	Flexible Graphite	Flexible Graphite
11	Screw	A193 B7	A193 B8	A193 B8M
13	Lever Holder	Carbon Steel	Carbon Steel	Carbon Steel
14	Bolt	A193 B7	A193 B7	A193 B7
15	Lever	St. Steel	St. Steel	St. Steel
16	Positioner	Carbon Steel	Carbon Steel	Carbon Steel
17	Packing Gland	ASTM A105	A182 F304	A182 F316
18	Anti-Static	SS304	SS304	SS316



SERIES BV B8 ANSI RANGE
Class 600 1-1/4" to 2"

Nº	Part name	A105	A182 F304	A182 F316
1	Body	ASTM A105	A182 F304	A182 F316
2	Gasket	SS304+Graphite	SS304+Graphite	SS316+Graphite
3	Bonnet	ASTM A105	A182 F304	A182 F316
4	Bolt	A193 B7	A193 B8	A193 B8M
5	Nut	A194 2H	A194 8	A194 8M
6	Seat	RPTFE	RPTFE	RPTFE
7	Ball	A182 F304	A182 F304	A182 F316
8	Stem	A182 F304	A182 F304	A182 F316
9	Gasket	RPTFE	RPTFE	RPTFE
10	Packing	Flexible Graphite	Flexible Graphite	Flexible Graphite
11	Screw	A193 B7	A193 B8	A193 B8M
12	Washer	Carbon Steel	Carbon Steel	Carbon Steel
13	Lever Holder	Carbon Steel	Carbon Steel	Carbon Steel
14	Bolt	A193 B7	A193 B7	A193 B7
15	Lever	Carbon Steel+e-poxy coated	Carbon Steel+e-poxy coated	Carbon Steel+e-poxy coated
16	Positioner	Carbon Steel	Carbon Steel	Carbon Steel
17	Packing Gland	ASTM A105	A182 F304	A182 F316
18	Anti-Static	SS304	SS304	SS316

Main Valve Parameters - Class 600

Nominal Size		inch	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
		DN	15	20	25	32	40	50
End connection	RF	L	165	190	216	229	241	292
		ØB	13	19	25	32	38	51
		ØD	95	115	125	135	155	165
		ØK	66,7	82,6	88,9	98,4	114,3	127
		ØF	34,9	42,9	50,8	63,5	73	92,1
		C	14,3	15,9	17,5	20,7	22,3	25,4
		f	7	7	7	7	7	7
		n-Ød	4 - 5/8	4 - 3/4	4 - 3/4	4 - 3/4	4 - 7/8	8 - 3/4
Lever		H	80	93	103	106	119	139
		h	136	185	185	210	240	330

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance

For more information about flanged and welded ends refer to page 16

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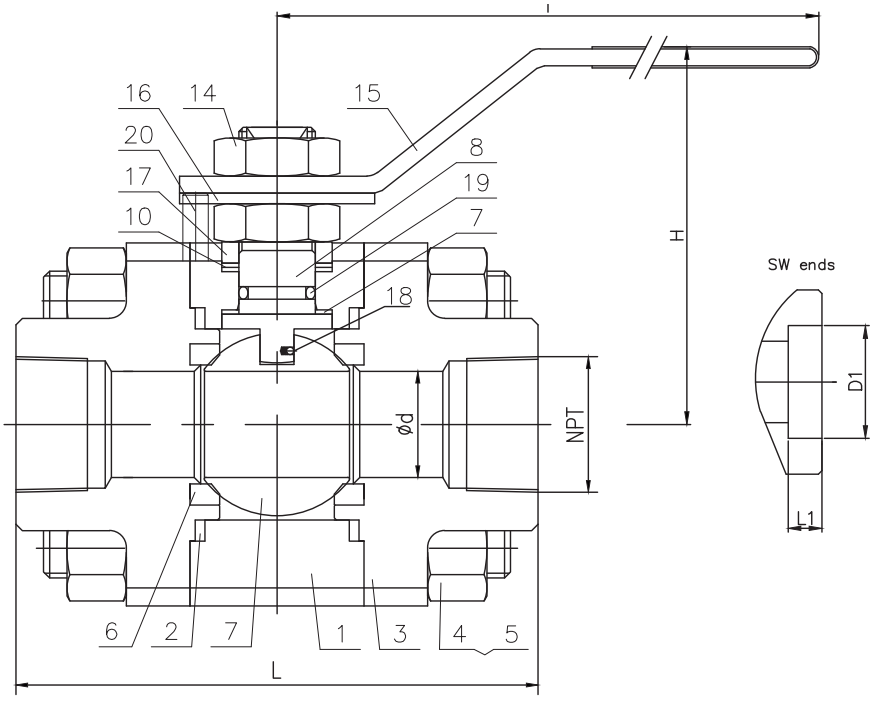
Main Parts and Materials

SERIES BV B8 ANSI RANGE
Class 800 1/2" to 2"



Nº	Part name	A105 (B8A03_)	F304 (B8I22)
1	Body	ASTM A105	A182 F304
2	Gasket	SS316 + Graphite	SS304 + Graphite
3	Bonnet nut	ASTM A105	A182 F304
4	Bonnet bolt	A193 B7	A193 B8
5	Bonnet nut	A194 2H	A194 8
6*	Seat ring	RPTFE	RPTFE
7	Ball	A182 F316	A182 F304
8	Stem	A182 F316	A182 F304
9	Gasket	PTFE	RPTFE
10	Packing	Flexible Graphite	Flexible Graphite
14	Lever nut	A194 2H	A193 B7
15	Lever nut	St. steel	St. steel
16	Positioner	Carbon steel	Carbon steel
17	Packing gland	ASTM A105	A182 F304
18	Anti-static	SS316	SS304
19	O-ring	Viton	Viton
20	Pin	Carbon steel	Carbon steel

**Option PTFE+Graphite*

Main Valve Parameters - Class 800

Nominal Size	inch	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
	DN	15	20	25	32	40	50
d		13	19	25	30	38	50
L		94	110	123	134	147	170
SW ends	L1	10	13	13	13	13	16
	D1	22	27.1	34	42.6	50	61.2
Lever	H	72.5	82	90	94	105	115
	T	136	172	201	201	235	330

Dimensions in mm subject to manufacturing tolerance
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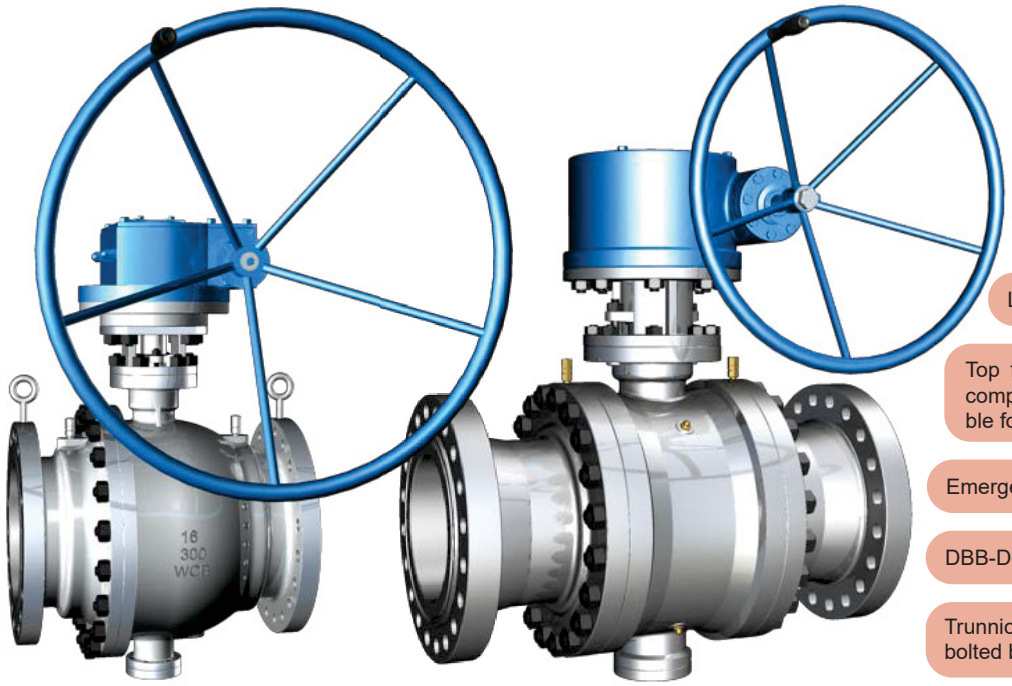
SERIES BV BT ANSI RANGE

Series BT are trunnion type, featured by the upper and lower ball guidance, quick closing 90º rotary ball valves, bidirectional, with tightness achieved by friction of the ball blind ends to the seats, devised for stopping the flow of the service fluid when necessary and not being suitable for regulation purposes. Valves can be operated by manual gear by handwheel (valve closes by turning the hand lever clockwise) or a choice of quarter turn electric, pneumatic or hydraulic actuators. They have a robust construction to offer reliable performance in standard services.



- Fire safe design
- Anti-static feature
- Blow out proof stem
- Self-relieving seat
- Lifting lugs and supporting feet
- Top flange drilled to ISO 5211. A complete range of brackets available for easy and quick automation
- Emergency Sealant Injection System
- DBB-Double block and bleed function
- Trunnion ball, full bore, side entry, split bolted body (two-pieces,three-pieces)
- Nameplate incl. batch no. for full traceability

Main Features / Reference Standards

Design: API 6D
Pressure Rating: 150/300/600/900/1500/2500#
Face to face length: API 6D
Valve end connections: Flanged RF or RTJ to ASME B16.5 (*size ≤ 24"*) / ASME B16.47 (*size > 24"*)
Welded BW to ASME B16.25
Fire safe design: API 6FA
Bidirectional design
Marking: MSS SP-25
Inspections & Tests: API 598
Primer painted grey color similar to RAL 7037 for protection during storage and transport (carbon steel body/bonnet)
Product compliant with Directive 2014/68/EU on Pressure Equipment (PED) and Machinery Directive 2006/42/EC for European Union territory

Main Duties / Limits of use

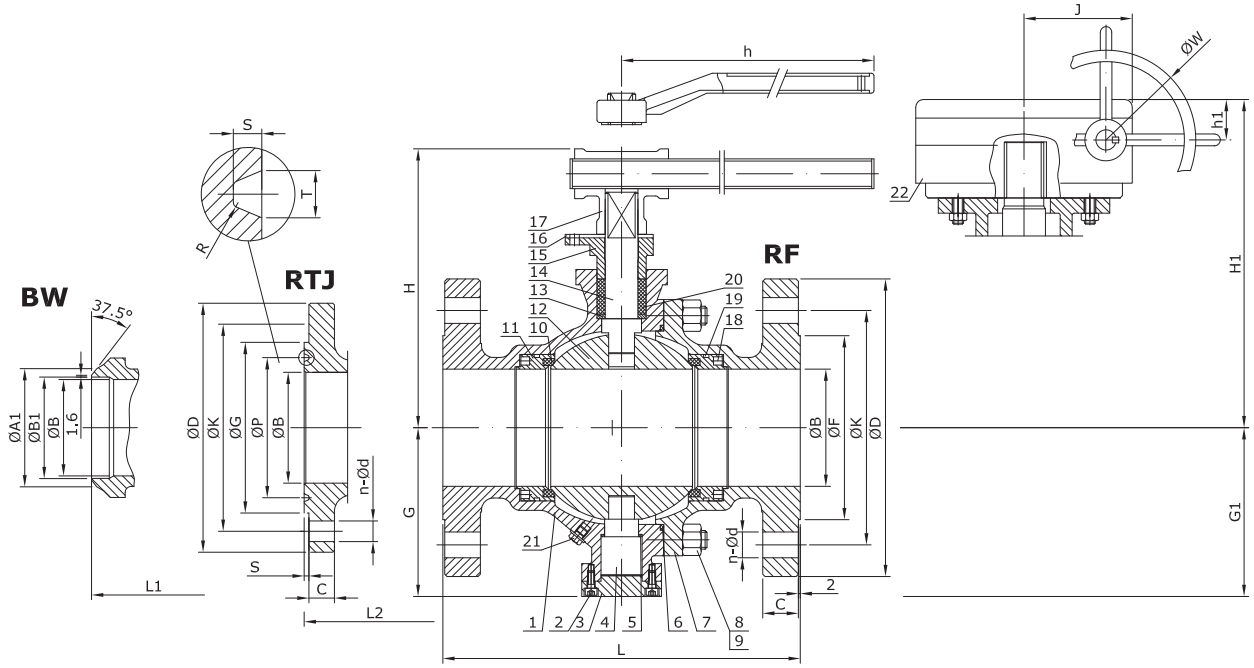
Fluids compatible with materials of construction. Questions referring to chemical resistance, please consult us
Pressure / Temperature Rating to ASME B16.34. See section "Engineering & Performance Data"
For products compliant with Directive 2014/68/EU, observe also limits acc. to Annex II tables 6 & 8 (gases & liquids group 1*) and tables 7 & 9 (gases & liquids group 2*) up to category III
**Classification of fluids (group 1 or 2) acc. to Directive 2014/68/EU, Article 13*

Options

Different material combinations, different valve connections, worm gear, actuators, limit switches, cryogenic design, 3-Way T or L type, DPE-Double piston effect function, jacketed body, execution for aggressive atmosphere, underground application structure, compliance with NACE MR0175, etc. Please consult us

Main Parts and Materials

SERIES BV BT ANSI RANGE
Class 150&300 NPS2-5”



Nº	Part name	A216 WCB (BTA02_)	A216 WCB NACE (BTA02_)	A352 LCB	A352 LCB	A351 CF8 (BTI2_)	A351 CF8M (BTI0_)	A351 CF3 (BTI1_)	A351 CF3M (BTI7_)
1	Body	A216 WCB		A352 LCB		A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2	Screw	A193 B7	A193 B7M	A320 L7	A320 L7	A193 B8	A193 B8M	A193 B8M	
3	Bottom Cover	ASTM A105		A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
4	Trunnion	A182 F6a	17-4PH	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
5	Gasket	A276 410	A276 316	A276 304	A276 316	A276 304	A276 316	A276 316	
6	Body Gasket	SS304 + Graphite	SS316 + Graphite	SS304 + Graphite	SS316 + Graphite	SS304 + Graphite	SS316 + Graphite	SS304 + Graphite	SS316 + Graphite
7	Body Cap	A216 WCB		A352 LCB		A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
8	Body Bolt	A193 B7	A193 B7M	A320 L7		A193 B8	A193 B8M	A193 B8M	
9	Body Nut	A194 2H	A194 2HM	A194 4		A194 8	A194 8M	A194 8M	
10	Seat	RPTFE		RPTFE		RPTFE		RPTFE	
11	Seat Retainer	ASTM A105	ASTM A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
12	Ball	A105.ENP	A105N.ENP	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
13	Packing Gasket	A276 410	A276 316	A276 304	A276 316	A276 304	A276 316	A276 316	
14	Stem	A182 F6a	17-4PH	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
15	Gland Flange	A216 WCB		A352 LCB		A351 CF8		A351 CF3	
16	Positioner Plate	AISI 1035		AISI 1035		St. Steel		St. Steel	
17	Lever	A216 WCB		A216 WCB		A216 WCB+Epoxy Coated	A216 WCB+Epoxy Coated	A216 WCB+Epoxy Coated	A216 WCB+Epoxy Coated
18	Seat Spring	17-7PH		17-7PH		Inconel X-750		Inconel X-750	
19	O Ring	VITON		VITON		VITON		VITON	
20	Packing	Flexible Graphite		Flexible Graphite		PTFE		PTFE	
21	Drain Plug	AISI 1035	A182 F316	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
22	Worm Gear	Assembly		Assembly		Assembly		Assembly	

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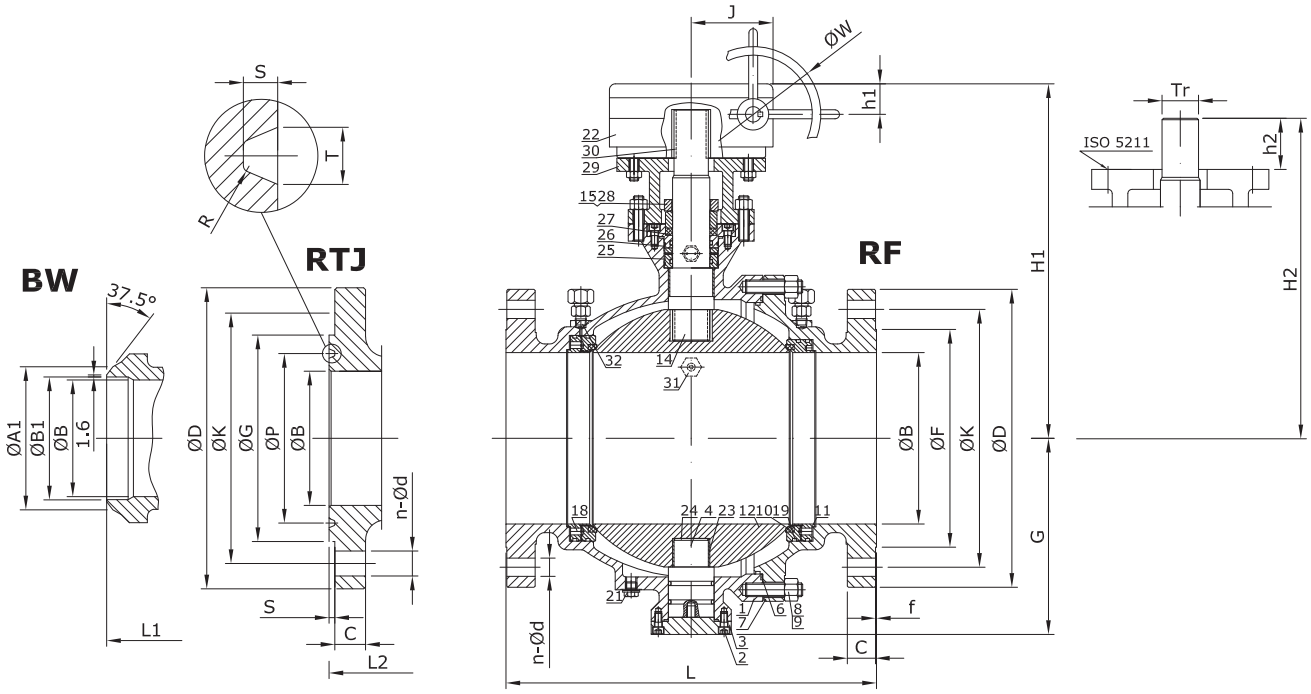
The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Main Parts and Materials

SERIES BV BT ANSI RANGE
Class 150&300 NPS6-16”



Nº	Part name	A216 WCB (BTA02_)	A216 WCB/ NACE (BTA02_)	A352 LCB/ SS304 (BTA82_)	A352 LCB/ SS316 (BTA83_)	A351 CF8 (BTI2_)	A351 CF8M (BTI0_)	A351 CF3 (BTI1_)	A351 CF3M (BTI7_)
1	Body	A216 WCB		A352 LCB		A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2	Screw	A193 B7	A193 B7M	A320 L7		A193 B8	A193 B8M	A193 B8M	
3	Bottom Cover	ASTM A105	ASTM A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
4	Trunnion	A182 F6a	17-4PH	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
6	Body Gasket	SS304 + Graphite	SS316 + Graphite	SS304 + Graphite	SS316 + Graphite	SS304 + Graphite	SS316 + Graphite	SS304 + Graphite	SS316 + Graphite
7	Body Cap	A216 WCB		A352 LCB		A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
8	Body Bolt	A193 B7	A193 B7M	A320 L7		A193 B8	A193 B8M	A193 B8M	
9	Body Nut	A194 2H	A194 2HM	A194 4		A194 8	A194 8M	A194 8M	
10	Seat	RPTFE		RPTFE		RPTFE		RPTFE	
11	Seat Retainer	ASTM A105	ASTM A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
12	Ball	A105.ENP	A105N.ENP	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
14	Stem	A182 F6a	17-4PH	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
15	Gland Flange	A216 WCB		A352 LCB		A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
18	Seat Spring	17-7PH		17-7PH		Inconel X-750		Inconel X-750	
19	O Ring	VITON		VITON		VITON		VITON	
21	Drain Plug	AISI 1035	A182 F316	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
22	Worm Gear	Assembly		Assembly		Assembly		Assembly	
23	Slide Bearing	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE
24	Thrust Bearing	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE
25	Seal Ring	ASTM A105	ASTM A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
26	Top cover	A216 WCB		A352 LCB		A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
27	Packing	Flexible Graphite		Flexible Graphite		PTFE		PTFE	
28	Packing Gland	A182 F6a	A182 F316	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
29	Yoke	A216 WCB		A216 WCB		A351 CF8		A351 CF8	
30	Key	AISI 1035		AISI 1035		A276 304		A276 304	
31	Relief Valve	Assembly		Assembly		Assembly		Assembly	
32	Grease Injector	Assembly		Assembly		Assembly		Assembly	

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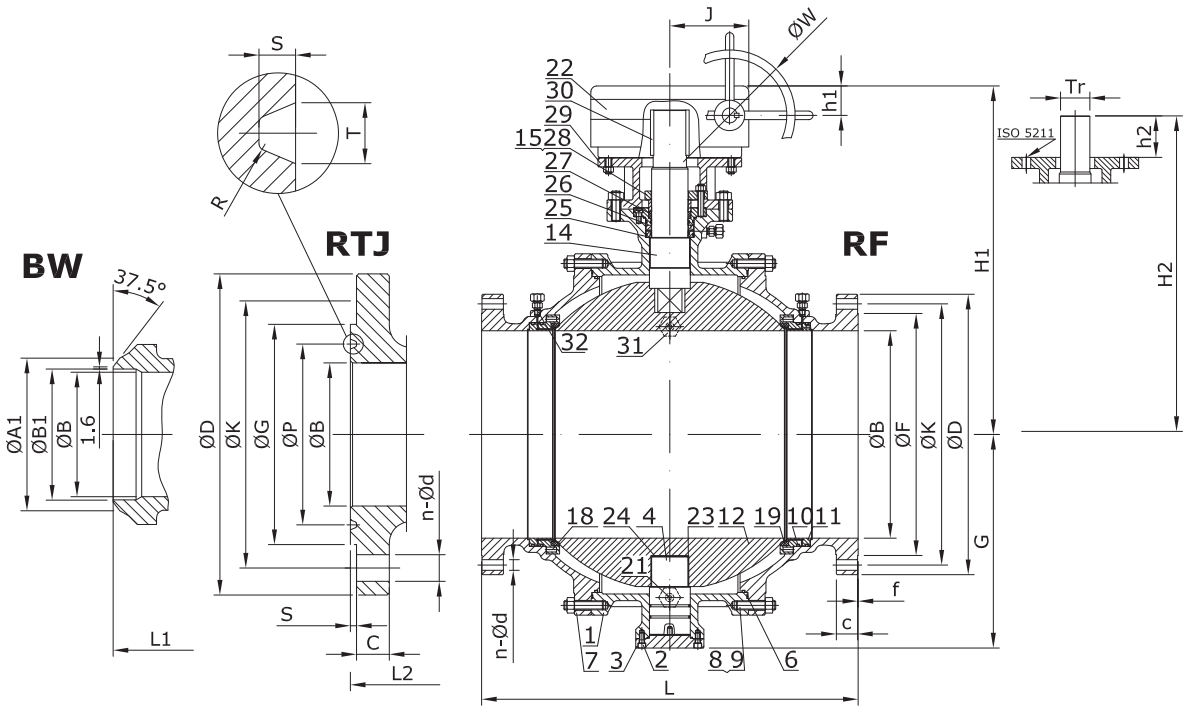
Product suitability must be verified, contact manufacturer for information

Main Parts and Materials

SERIES BV BT ANSI RANGE
Class 150&300 NPS18-36”



Nº	Part name	A216 WCB (BTA02_)	A216 WCB/ NACE (BTA02_)	A352 LCB/ SS304 (BTA82_)	A352 LCB/ SS316 (BTA83_)	A351 CF8 (BTI2_)	A351 CF8M (BTI0_)	A351 CF3 (BTI1_)	A351 CF3M (BTI7_)
1	Body	A216 WCB		A352 LCB		A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2	Screw	A193 B7	A193 B7M	A320 L7		A193 B8	A193 B8M	A193 B8M	
3	Bottom Cover	ASTM A105	ASTM A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
4	Trunnion	A182 F6a	17-4PH	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
6	Body Gasket	SS304 + Graphite	SS316 + Graphite	SS304 + Graphite	SS316 + Graphite	SS304 + Graphite	SS316 + Graphite	SS304 + Graphite	SS316 + Graphite
7	Body Cap	A216 WCB		A352 LCB		A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
8	Body Bolt	A193 B7	A193 B7M	A320 L7		A193 B8	A193 B8M	A193 B8M	
9	Body Nut	A194 2H	A194 2HM	A194 4		A194 8	A194 8M	A194 8M	
10	Seat	RPTFE		RPTFE		RPTFE		RPTFE	
11	Seat Retainer	ASTM A105	ASTM A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
12	Ball	A105.ENP	A105N.ENP	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
14	Stem	A182 F6a	17-4PH	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
15	Gland Flange	A216 WCB		A352 LCB		A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
18	Seat Spring	17-7PH		17-7PH		Inconel X-750		Inconel X-750	
19	O Ring	VITON		VITON		VITON		VITON	
21	Drain Plug	AISI 1035	A182 F316	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
22	Worm Gear	Assembly		Assembly		Assembly		Assembly	
23	Slide Bearing	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE
24	Thrust Bearing	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE
25	Seal Ring	ASTM A105	ASTM A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
26	Top cover	A216 WCB		A352 LCB		A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
27	Packing	Flexible Graphite		Flexible Graphite		PTFE		PTFE	
28	Packing Gland	A182 F6a	A182 F316	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
29	Yoke	A216 WCB		A216 WCB		A351 CF8		A351 CF8	
30	Key	AISI 1035		AISI 1035		A276 304		A276 304	
31	Relief Valve	Assembly		Assembly		Assembly		Assembly	
32	Grease Injector	Assembly		Assembly		Assembly		Assembly	

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The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 150

SERIES BV BT ANSI RANGE

Nominal Size		inch	2"	2-1/2"	3"	4"	5"	6"	8"	10"	12"	14"
		DN	50	65	80	100	125	150	200	250	300	350
End connection	RF	L	178	190	203	229	-	394	457	533	610	686
		ØB	51	65,375	76	102	128,25	152	203	254	305	337
		ØD	150	180	190	230	255	280	345	405	485	535
		ØK	120,7	139,7	152,4	190,5	215,9	241,3	298,5	362	431,8	476,3
		ØF	92,1	104,8	127	157,2	185,7	215,9	269,9	323,8	381	412,8
		C	14,3	15,9	17,5	22,3	22,3	23,9	27	28,6	30,2	33,4
		f	2	2	2	2	2	2	2	2	2	2
		n-Ød	4 - 3/4	4 - 3/4	4 - 3/4	8 - 3/4	8 - 7/8	8 - 7/8	8 - 7/8	12 - 1	12 - 1	12 - 1 1/8
	BW	L1	216	241	282	305	-	457	521	559	635	762
		Schedule No.*(1)*	40	-	40	40	-	40	40	40	STD	STD
		ØB	51	65,375	76	102	128,25	152	203	254	305	337
		ØA1	60,3	-	91	117	-	172	223	278	329	362
		ØB1	52,48	-	78	102	-	154	203	254,5	305	336,5
	RTJ	L2	191	203	216	242	-	407	470	546	623	699
		ØB	51	65,375	76	102	128,25	152	203	254	305	337
		ØD	150	180	190	230	255	280	345	405	485	535
		ØK	120,7	139,7	152,4	190,5	215,9	241,3	298,5	362	431,8	476,3
		ØG	102	121	133	171	194	219	273	330	406	425
		ØP	82,55	101,6	114,3	149,23	171,45	193,68	247,65	304,8	381	396,88
		C	17,5	20,7	22,3	22,3	22,3	23,9	27	28,6	30,2	33,4
		n-Ød	4 - 3/4	4 - 3/4	4 - 3/4	8 - 3/4	8 - 7/8	8 - 7/8	8 - 7/8	12 - 1	12 - 1	12 - 1 1/8
		T	8,74	8,74	8,74	8,74	8,74	8,74	8,74	8,74	8,74	8,74
		S	6,35	6,35	6,35	6,35	6,35	6,35	6,35	6,35	6,35	6,35
		R	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8
Top works/Operation	Lever	H	157	189	212	230	-	-	-	-	-	-
		G	85	113	133	144	-	-	-	-	-	-
		h	240	332	400	500	-	-	-	-	-	-
	Gear with handwheel	H1	238	262	280	295	365	416	482	545	618	651
		G	85	113	133	144	178	203	250	294	343	383
		h1	39	39	39	39	44	48	53	68	70	70
		J	76	88	96	96	107	115	139	170	192	192
		ØW	160	206	240	240	263	280	300	350	400	400
	With ISO 5211 mounting pad	H2	198	222	240	261	331	383	440	489	575	610
		G	85	113	133	144	178	203	250	294	343	383
		h2	30	33	35	40	49	55	55	69	85	87
		ISO	F07	F10	F10	F10	F12	F12	F14	F16	F20	F20
		Tr	20	24	24	28	35	35	40	48	60	60
		Torque (Nm) *(2)*	23	44	59	114	263	373	636	1000	1591	2364
Kvs-value			-	-	-	-	-	-	-	-	-	-
Approx. Weight RF *(3)*			21	30	36	58	86	106	159	292	478	630
Approx. Weight BW			18	25	31	50	75	93	137	263	434	574

(1) Other schedule nos. on request
(2) Torque includes 30% of safety factor
(3) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Torques in Nm / Weights in kg
For more information about flanged and welded ends refer to page 16

Information / restriction of technical rules need to be observed!
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Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 150

SERIES BV BT ANSI RANGE

Nominal Size		inch	16"	18"	20"	24"	26"	28"	30"	32"	36"
		DN	400	450	500	600	650	700	750	800	900
End connection	RF	L	762	864	914	1067	-	-	-	-	-
		ØB	387	438	489	591	633	684	735	779	874
		ØD	595	635	700	815	870	925	985	1060	1170
		ØK	539,8	577,9	635	749,3	806,4	863,6	914,4	977,9	1085,8
		ØF	469,9	533,4	584,2	692,2	749	800	857	914	1022
		C	35	38,1	41,3	46,1	66,7	69,9	73,1	79,4	88,9
		f	2	2	2	2	2	2	2	2	2
		n-Ød	16 - 1 1/8	16 - 1 1/4	20 - 1 1/4	20 - 1 3/8	24 - 1 3/8	28 - 1 3/8	28 - 1 3/8	28 - 1 5/8	32 - 1 5/8
	BW	L1	838	914	991	1143	1245	1346	1397	1524	1727
		Schedule No.*(1)*	STD	STD	STD	STD	20	20	20	20	20
		ØB	387	438	489	591	633	684	735	779	874
		ØA1	413	464	516	619	670	721	772	825	927
		ØB1	387,5	438	489	590,5	635	686	736,5	787,5	889
	RTJ	L2	775	877	927	1080	-	-	-	-	-
		ØB	387	438	489	591	633	684	735	779	874
		ØD	595	635	700	815	870	925	985	1060	1170
		ØK	539,8	577,9	635	749,3	806,4	863,6	914,4	977,9	1085,8
		ØG	483	546	597	711	810	861	917	984	1092
		ØP	454,03	517,53	558,8	673,1	749,3	800,1	857,25	914,4	1022,35
		C	35	38,1	41,3	46,1	66,7	69,9	73,1	79,4	88,9
		n-Ød	16 - 1 1/8	16 - 1 1/4	20 - 1 1/4	20 - 1 3/8	24 - 1 3/8	28 - 1 3/8	28 - 1 3/8	28 - 1 5/8	32 - 1 5/8
		T	8,74	8,74	8,74	8,74	19,84	19,84	19,84	23,01	23,01
		S	6,35	6,35	6,35	6,35	12,7	12,7	12,7	14,27	14,27
		R	0,8	0,8	0,8	0,8	1,5	1,5	1,5	1,5	1,5
Top works/Operation	Lever	H	-	-	-	-	-	-	-	-	-
		G	-	-	-	-	-	-	-	-	-
		h	-	-	-	-	-	-	-	-	-
	Gear with handwheel	H1	764	900	941	1055	1097	1180	1233	1325	1405
		G	440	465	500	611	663	706	754	795	870
		h1	80	50	50	60	60	60	60	65	65
		J	224	305	305	380	380	384	384	516	516
		ØW	500	500	500	500	500	600	600	600	600
	With ISO 5211 mounting pad	H2	716	803	840	950	1007	1073	1150	1230	1340
		G	440	465	500	611	663	706	754	795	870
		h2	106	100	100	139	145	158	180	200	230
		ISO	F25	F30	F30	F35	F35	F40	F40	F48	F48
		Tr	70	80	80	90	100	110	120	130	140
		Torque (Nm) *(2)*	3545	5636	6818	9545	10970	13182	17960	19091	-
Kvs-value			-	-	-	-	-	-	-	-	-
Approx. Weight RF *(3)*			895	1190	1405	2576	3305	3960	4902	6170	7690
Approx. Weight BW			825	1113	1313	2434	3133	3738	4663	5864	7250

(1) Other schedule nos. on request
(2) Torque includes 30% of safety factor
(3) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Torques in Nm / Weights in kg
For more information about flanged and welded ends refer to page 16

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The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 300

SERIES BV BT ANSI RANGE

Nominal Size		inch	2"	2-1/2"	3"	4"	5"	6"	8"	10"	12"
		DN	50	65	80	100	125	150	200	250	300
End connection	RF	L	216	241	282	305		403	502	568	648
		ØB	51	65,375	76	102	128,25	152	203	254	305
		ØD	165	190	210	255	280	320	380	445	520
		ØK	127	149,2	168,3	200	235	269,9	330,2	387,4	450,8
		ØF	92,1	104,8	127	157,2	185,7	215,9	269,9	323,8	381
		C	20,7	23,9	27	30,2	33,4	35	39,7	46,1	49,3
		f	2	2	2	2	2	2	2	2	2
		n-Ød	8 - 3/4	8 - 7/8	8 - 7/8	8 - 7/8	8 - 7/8	12 - 7/8	12 - 1	16 - 1 1/8	16 - 1 1/4
	BW	L1	216	241	282	305	-	457	521	559	635
		Schedule No.*(1)*	40	-	40	40	-	40	40	40	STD
		ØB	51	65,375	76	102	128,25	152	203	254	305
		ØA1	60,3	-	91	117	-	172	223	278	329
		ØB1	52,48	-	78	102	-	154	203	254,5	305
	RTJ	L2	232	257	298	321	16	419	518	584	664
		ØB	51	65,375	76	102	128,25	152	203	254	305
		ØD	165	190	210	255	280	320	380	445	520
		ØK	127	149,2	168,3	200	235	269,9	330,2	387,4	450,8
		ØG	108	127	146	175	210	241	302	356	413
		ØP	82,55	101,6	123,83	149,23	180,98	211,12	269,88	323,85	981
		C	20,7	23,9	27	30,2	33,4	35	39,7	46,1	49,3
		n-Ød	8 - 3/4	8 - 7/8	8 - 7/8	8 - 7/8	8 - 7/8	12 - 7/8	12 - 1	16 - 1 1/8	16 - 1 1/4
		T	11,91	11,91	11,91	11,91	11,91	11,91	11,91	11,91	11,91
		S	7,92	7,92	7,92	7,92	7,92	7,92	7,92	7,92	7,92
		R	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8
Top works/Operation	Lever	H	157	189	212	230	-	-	-	-	-
		G	85	113	133	144	-	-	-	-	-
		h	240	332	400	500	-	-	-	-	-
	Gear with handwheel	H1	238	262	280	295	365	416	482	545	618
		G	85	113	133	144	178	203	250	294	343
		h1	39	39	39	39	44	48	53	68	70
		J	76	88	96	96	107	115	139	170	192
		ØW	160	206	240	240	263	280	300	350	400
	With ISO 5211 mounting pad	H2	198	222	240	261	331	383	440	489	575
		G	85	113	133	144	178	203	250	294	343
		h2	30	33	35	40	49	55	55	69	85
		ISO	F07	F10	F10	F10	F12	F12	F14	F16	F20
		Tr	20	24	24	28	35	35	40	48	60
		Torque (Nm) *(2)*	55	107	145	255	605	864	1409	1818	3000
Kvs-value			-	-	-	-	-	-	-	-	-
Approx. Weight RF *(3)*			26	39	49	76	108	131	219	412	610
Approx. Weight BW			21	32	41	63	89	108	183	363	536

(1) Other schedule nos. on request
(2) Torque includes 30% of safety factor
(3) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Torques in Nm / Weights in kg
For more information about flanged and welded ends refer to page 16

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Main Valve Parameters - Class 300

SERIES BV BT ANSI RANGE

Nominal Size		inch	14"	16"	18"	20"	24"	26"	28"	30"	32"
		DN	350	400	450	500	600	650	700	750	800
End connection	RF	L	762	838	914	991	1143	1245	1346	1397	1524
		ØB	337	387	432	483	584	633	684	735	779
		ØD	585	650	710	775	915	970	1035	1090	1150
		ØK	514,4	571,5	628,6	685,8	812,8	876,3	939,8	997	1054,1
		ØF	412,8	469,9	533,4	584,2	692,2	749	800	857	914
		C	52,4	55,6	58,8	62	68,3	77,8	84,2	90,5	96,9
		f	2	2	2	2	2	2	2	2	2
		n-Ød	20 - 1 1/4	20 - 1 3/8	24 - 1 3/8	24 - 1 3/8	24 - 1 5/8	28 - 1 3/4	28 - 1 3/4	28 - 1 7/8	28 - 2
	BW	L1	762	838	914	991	1143	1245	1346	1397	1524
		Schedule No.*(1)*	STD	STD	STD	STD	STD	20	20	20	20
		ØB	337	387	432	483	584	633	684	735	779
		ØA1	362	413	464	516	619	670	721	772	825
		ØB1	336,5	387,5	438	489	590,5	635	686	736,5	787,5
	RTJ	L2	778	854	930	1010	1165	1273	1371	1422	1552
		ØB	337	387	432	483	584	633	684	735	779
		ØD	585	650	710	775	915	970	1035	1090	1150
		ØK	514,4	571,5	628,6	685,8	812,8	876,3	939,8	997	1054,1
		ØG	457	508	575	635	749	810	861	917	984
		ØP	419,1	469,9	533,4	584,2	692,15	749,3	800,1	857,25	914,4
		C	52,4	55,6	58,8	62	68,3	77,8	84,2	90,5	96,9
		n-Ød	20 - 1 1/4	20 - 1 3/8	24 - 1 3/8	24 - 1 3/8	24 - 1 5/8	28 - 1 3/4	28 - 1 3/4	28 - 1 7/8	28 - 2
		T	11,91	11,91	11,91	13,49	16,66	19,84	19,84	19,84	23,01
		S	7,92	7,92	7,92	9,53	11,13	12,7	12,7	12,7	14,27
		R	0,8	0,8	0,8	1,5	1,5	1,5	1,5	1,5	1,5
Top works/Operation	Lever	H	-	-	-	-	-	-	-	-	-
		G	-	-	-	-	-	-	-	-	-
		h	-	-	-	-	-	-	-	-	-
	Gear with handwheel	H1	651	764	900	941	1055	1097	1180	1233	1325
		G	383	440	465	500	611	663	706	754	795
		h1	70	80	50	50	60	60	60	60	65
		J	192	224	305	305	380	380	384	384	516
		ØW	400	500	500	500	500	500	600	600	600
	With ISO 5211 mounting pad	H2	610	716	803	840	950	1007	1073	1150	1230
		G	383	440	465	500	611	663	706	754	795
		h2	87	106	100	100	139	145	158	180	200
		ISO	F20	F25	F30	F30	F35	F35	F40	F40	F48
		Tr	60	70	80	80	90	100	110	120	130
		Torque (Nm) *(2)*	4545	6818	10727	13091	17818	20509	25636	26795	27091
Kvs-value			-	-	-	-	-	-	-	-	-
Approx. Weight RF *(3)*			809	1260	1510	1690	3175	4390	6210	7590	9300
Approx. Weight BW			708	1127	1344	1485	2879	4044	5802	7103	8738

(1) Other schedule nos. on request
(2) Torque includes 30% of safety factor
(3) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Torques in Nm / Weights in kg
For more information about flanged and welded ends refer to page 16

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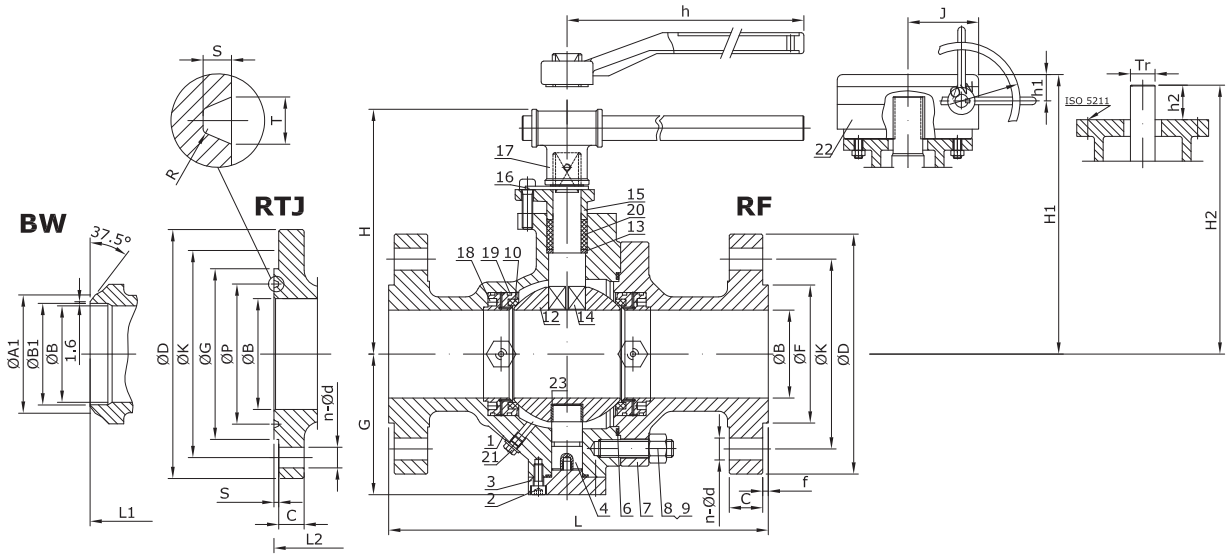
Main Parts and Materials

SERIES BV BT ANSI RANGE
Class 600 NPS2-4”



Nº	Part name	A216 WCB (BTA02_)	A216 WCB/ NACE (BTA02_)	A352 LCB/ SS304 (BTA82_)	A352 LCB/ SS316 (BTA83_)	A351 CF8 (BTI2_)	A351 CF8M (BTI0_)	A351 CF3 (BTI1_)	A351 CF3M (BTI7_)
1	Body	A216 WCB		A352 LCB		A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2	Screw	A193 B7	A193 B7M	A320 L7		A193 B8	A193 B8M	A193 B8M	A193 B8M
3	Bottom Cover	ASTM A105	ASTM A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
4	Trunnion	A182 F6a	17-4PH	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
6	Body Gasket	SS304 + Graphite	SS316 + Graphite	SS304 + Graphite	SS316 + Graphite	SS304 + Graphite	SS316 + Graphite	SS304 + Graphite	SS316 + Graphite
7	Body Cap	A216 WCB		A352 LCB		A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
8	Body Bolt	A193 B7	A193 B7M	A320 L7		A193 B8	A193 B8M	A193 B8M	A193 B8M
9	Body Nut	A194 2H	A194 2HM	A194 4		A194 8	A194 8M	A194 8M	A194 8M
10	Seat	DEVLON		DEVLON		PEEK		PEEK	
11	Seat Retainer	ASTM A105	ASTM A105N	A350 LF2	A350 LF2	A182 F304	A182 F316	A182 F304L	A182 F316L
12	Ball	A105.ENP	A105N.ENP	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
13	Packing Gasket	A276 410	A276 316	A276 304	A276 316	A276 304	A276 316	A276 316	
14	Stem	A182 F6a	17-4PH	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
15	Gland Flange	A216 WCB		A352 LCB		A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
16	Positioner Plate	AISI 1035		AISI 1035		Stainless Steel		Stainless Steel	
17	Lever	A216 WCB		A216 WCB		A216 WCB+Epoxy Coated			
18	Seat Spring	17-7PH		17-7PH		Inconel X-750		Inconel X-750	
19	O Ring	VITON		VITON		VITON		VITON	
20	Packing	Flexible Graphite		Flexible Graphite		PTFE		PTFE	
21	Drain Plug	AISI 1035	A182 F316	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
22	Worm Gear	Assembly		Assembly		Assembly		Assembly	
23	Slide Bearing	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE	SS304(316)+PTFE		SS304(316)+PTFE	

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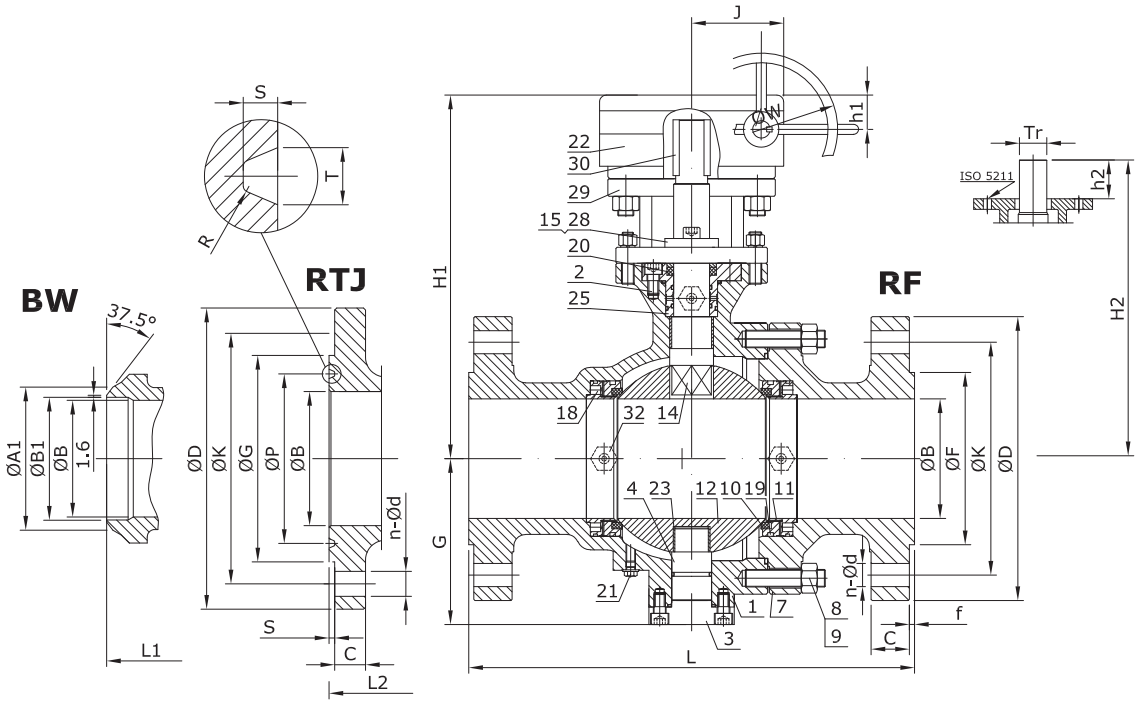
Main Parts and Materials

SERIES BV BT ANSI RANGE
Class 600 NPS6-8”



Nº	Part name	A216 WCB (BTA02_)	A216 WCB/ NACE (BTA02_)	A352 LCB/ SS304 (BTA82_)	A352 LCB/ SS316 (BTA83_)	A351 CF8 (BTI2_)	A351 CF8M (BTI0_)	A351 CF3 (BTI1_)	A351 CF3M (BTI7_)
1	Body	A216 WCB		A352 LCB		A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2	Screw	A193 B7	A193 B7M	A320 L7		A193 B8	A193 B8M	A193 B8M	
3	Bottom Cover	ASTM A105	ASTM A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
4	Trunnion	A182 F6a	17-4PH	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
6	Body Gasket	SS304 + Graphite	SS316 + Graphite	SS304 + Graphite	SS316 + Graphite	SS304 + Graphite	SS316 + Graphite	SS304 + Graphite	SS316 + Graphite
7	Body Cap	A216 WCB		A352 LCB		A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
8	Body Bolt	A193 B7	A193 B7M	A320 L7		A193 B8	A193 B8M	A193 B8M	
9	Body Nut	A194 2H	A194 2HM	A194 4		A194 8	A194 8M	A194 8M	
10	Seat	DEVLON		DEVLON		PEEK		PEEK	
11	Seat Retainer	ASTM A105	ASTM A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
12	Ball	A105.ENP	A105N.ENP	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
14	Stem	A182 F6a	17-4PH	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
15	Gland Flange	A216 WCB		A352 LCB		A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
18	Seat Spring	17-7PH		17-7PH		Inconel X-750		Inconel X-750	
19	O Ring	VITON		VITON		VITON		VITON	
20	Packing	Flexible Graphite		Flexible Graphite		PTFE		PTFE	
21	Drain Plug	AISI 1035	A182 F316	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
22	Worm Gear	Assembly		Assembly		Assembly		Assembly	
23	Slide Bearing	SS304 + PTFE	SS316 + PTFE	SS304 + PTFE	SS316 + PTFE	SS304 + PTFE	SS316 + PTFE	SS304 + PTFE	SS316 + PTFE
24	Thrust Bearing	SS304 + PTFE	SS316 + PTFE	SS304 + PTFE	SS316 + PTFE	SS304 + PTFE	SS316 + PTFE	SS304 + PTFE	SS316 + PTFE
25	Seal Ring	ASTM A105	ASTM A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
28	Packing Gland	A182 F6a	A182 F316	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
29	Yoke	A216 WCB		A216 WCB		A351 CF8		A351 CF8	
30	Key	AISI 1035		AISI 1035		A276 304		A276 304	
31	Relief Valve	Assembly		Assembly		Assembly		Assembly	
32	Grease Injector	Assembly		Assembly		Assembly		Assembly	

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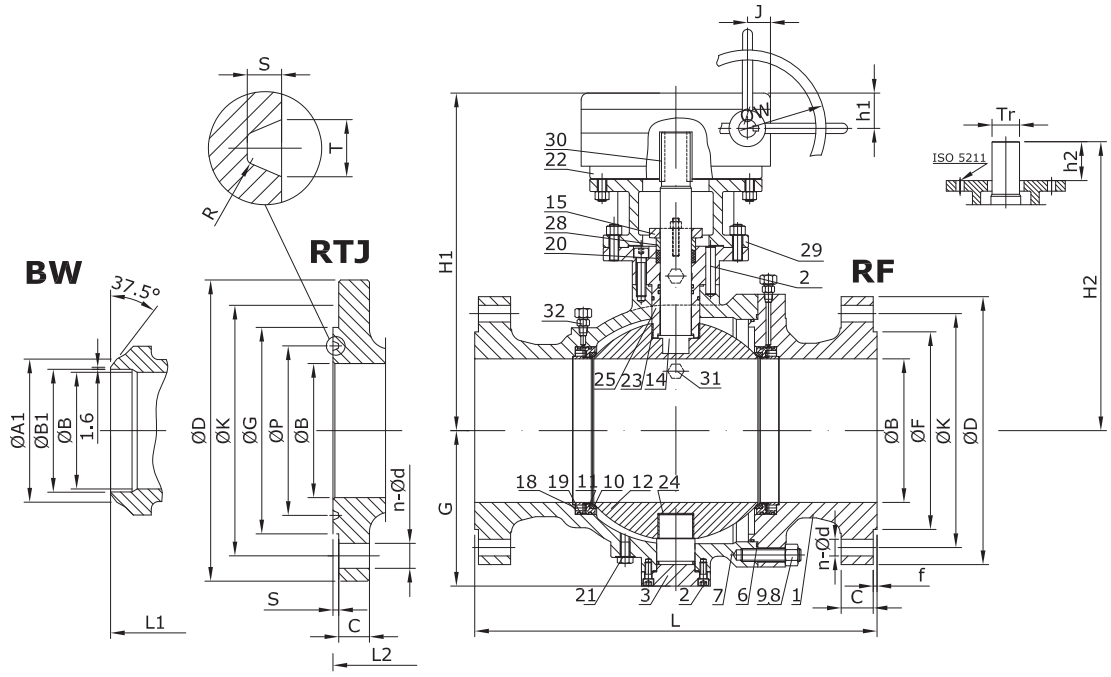
Main Parts and Materials

SERIES BV BT ANSI RANGE
Class 600 NPS10-12”



Nº	Part name	A216 WCB (BTA02_)	A216 WCB/ NACE (BTA02_)	A352 LCB/ SS304 (BTA82_)	A352 LCB/ SS316 (BTA83_)	A351 CF8 (BTI2_)	A351 CF8M (BTI0_)	A351 CF3 (BTI1_)	A351 CF3M (BTI7_)
1	Body	A216 WCB		A352 LCB		A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2	Screw	A193 B7	A193 B7M	A320 L7		A193 B8	A193 B8M	A193 B8M	
3	Bottom Cover	ASTM A105	ASTM A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
4	Trunnion	A182 F6a	17-4PH	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
6	Body Gasket	SS304 + Graphite	SS316 + Graphite	SS304 + Graphite	SS316 + Graphite	SS304 + Graphite	SS316 + Graphite	SS304 + Graphite	SS316 + Graphite
7	Body Cap	A216 WCB		A352 LCB		A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
8	Body Bolt	A193 B7	A193 B7M	A320 L7		A193 B8	A193 B8M	A193 B8M	
9	Body Nut	A194 2H	A194 2HM	A194 4		A194 8	A194 8M	A194 8M	
10	Seat	DEVLON		DEVLON		PEEK		PEEK	
11	Seat Retainer	ASTM A105	ASTM A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
12	Ball	A105.ENP	A105N.ENP	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
14	Stem	A182 F6a	17-4PH	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
15	Gland Flange	A216 WCB		A352 LCB		A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
18	Seat Spring	17-7PH		17-7PH		Inconel X-750		Inconel X-750	
19	O Ring	VITON		VITON		VITON		VITON	
20	Packing	Flexible Graphite		Flexible Graphite		PTFE		PTFE	
21	Drain Plug	AISI 1035	A182 F316	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
22	Worm Gear	Assembly		Assembly		Assembly		Assembly	
23	Slide Bearing	SS304 + PTFE	SS316 + PTFE	SS304 + PTFE	SS316 + PTFE	SS304 + PTFE	SS316 + PTFE	SS304 + PTFE	SS316 + PTFE
24	Thrust Bearing	SS304 + PTFE	SS316 + PTFE	SS304 + PTFE	SS316 + PTFE	SS304 + PTFE	SS316 + PTFE	SS304 + PTFE	SS316 + PTFE
25	Seal Ring	ASTM A105	ASTM A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
28	Packing Gland	A182 F6a	A182 F316	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
29	Yoke	A216 WCB		A216 WCB		A351 CF8		A351 CF8	
30	Key	AISI 1035		AISI 1035		A276 304		A276 304	
31	Relief Valve	Assembly		Assembly		Assembly		Assembly	
32	Grease Injector	Assembly		Assembly		Assembly		Assembly	

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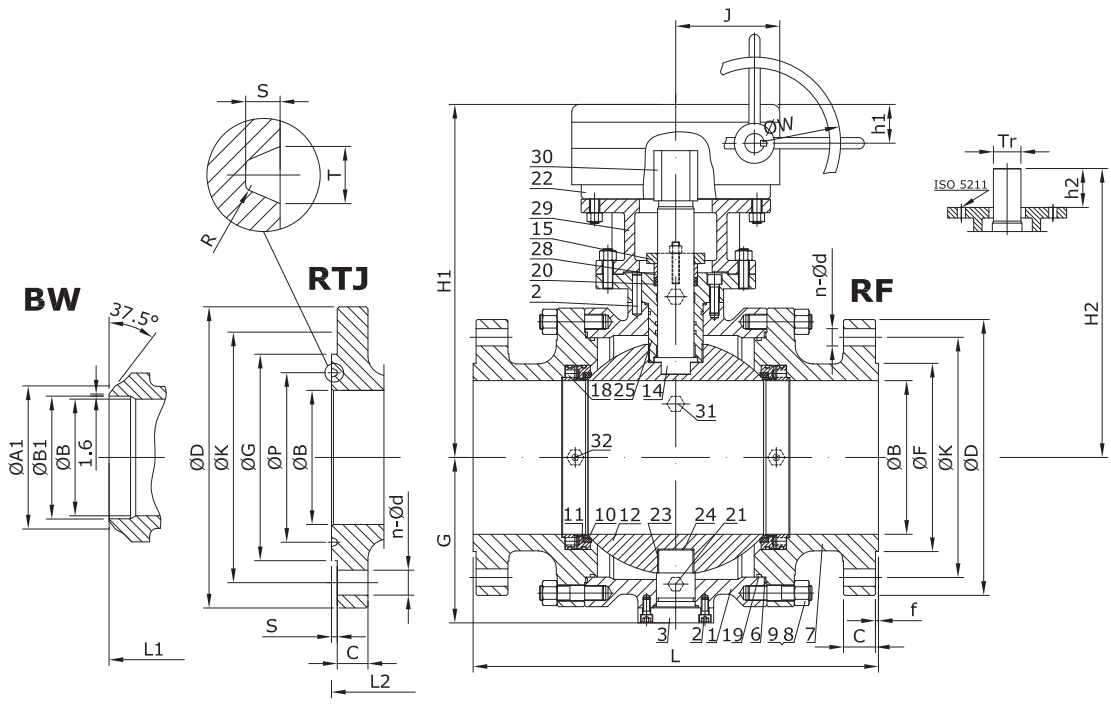
Main Parts and Materials

SERIES BV BT ANSI RANGE
Class 600 NPS14-18”



Nº	Part name	A216 WCB (BTA02_)	A216 WCB/ NACE (BTA02_)	A352 LCB/ SS304 (BTA82_)	A352 LCB/ SS316 (BTA83_)	A351 CF8 (BTI2_)	A351 CF8M (BTI0_)	A351 CF3 (BTI1_)	A351 CF3M (BTI7_)
1	Body	A216 WCB		A352 LCB		A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2	Screw	A193 B7	A193 B7M	A320 L7		A193 B8	A193 B8M	A193 B8M	
3	Bottom Cover	ASTM A105	ASTM A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
4	Trunnion	A182 F6a	17-4PH	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
6	Body Gasket	SS304 + Graphite	SS316 + Graphite	SS304 + Graphite	SS316 + Graphite	SS304 + Graphite	SS316 + Graphite	SS304 + Graphite	SS316 + Graphite
7	Body Cap	A216 WCB		A352 LCB		A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
8	Body Bolt	A193 B7	A193 B7M	A320 L7		A193 B8	A193 B8M	A193 B8M	
9	Body Nut	A194 2H	A194 2HM	A194 4		A194 8	A194 8M	A194 8M	
10	Seat	DEVLON		DEVLON		PEEK		PEEK	
11	Seat Retainer	ASTM A105	ASTM A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
12	Ball	A105.ENP	A105N.ENP	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
14	Stem	A182 F6a	17-4PH	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
15	Gland Flange	A216 WCB		A352 LCB		A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
18	Seat Spring	17-7PH		17-7PH		Inconel X-750		Inconel X-750	
19	O Ring	VITON		VITON		VITON		VITON	
20	Packing	Flexible Graphite		Flexible Graphite		PTFE		PTFE	
21	Drain Plug	AISI 1035	A182 F316	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
22	Worm Gear	Assembly		Assembly		Assembly		Assembly	
23	Slide Bearing	SS304 + PTFE	SS316 + PTFE	SS304 + PTFE	SS316 + PTFE	SS304 + PTFE	SS316 + PTFE	SS304 + PTFE	SS316 + PTFE
24	Thrust Bearing	SS304 + PTFE	SS316 + PTFE	SS304 + PTFE	SS316 + PTFE	SS304 + PTFE	SS316 + PTFE	SS304 + PTFE	SS316 + PTFE
25	Seal Ring	ASTM A105	ASTM A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
28	Packing Gland	A182 F6a	A182 F316	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
29	Yoke	A216 WCB		A216 WCB		A351 CF8		A351 CF8	
30	Key	AISI 1035		AISI 1035		A276 304		A276 304	
31	Relief Valve	Assembly		Assembly		Assembly		Assembly	
32	Grease Injector	Assembly		Assembly		Assembly		Assembly	

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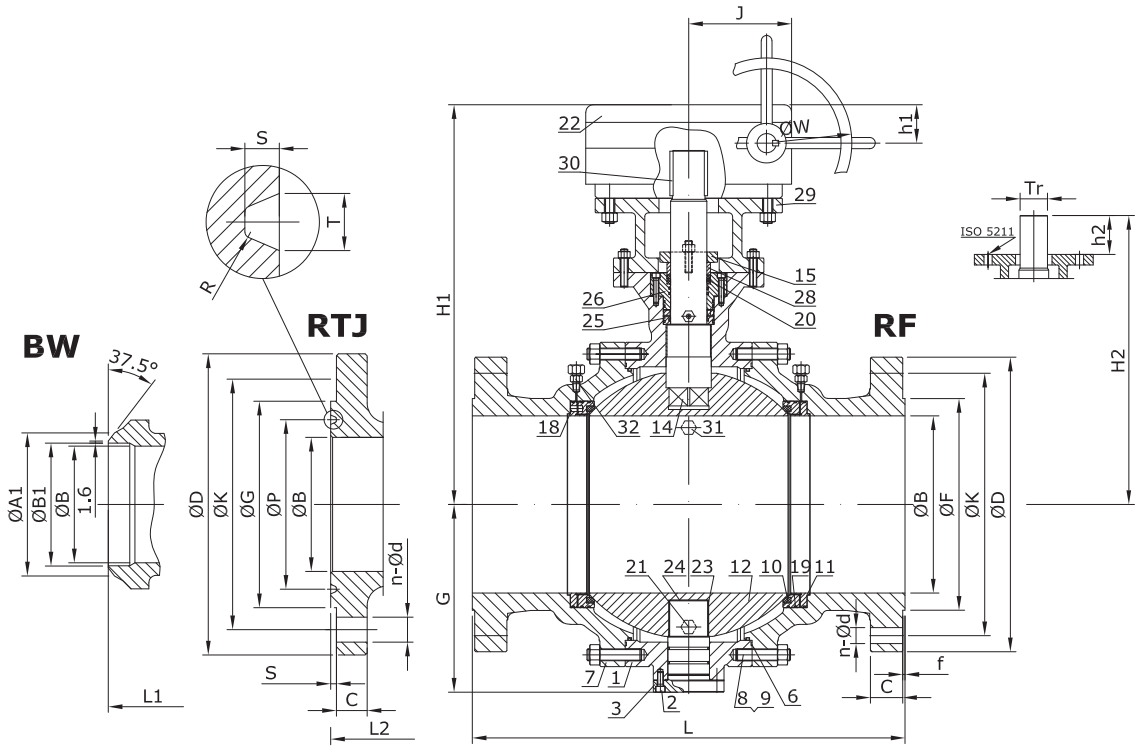
Main Parts and Materials

SERIES BV BT ANSI RANGE
Class 600 NPS20-28”



Nº	Part name	A216 WCB (BTA02_)	A216 WCB/ NACE (BTA02_)	A352 LCB/ SS304 (BTA82_)	A352 LCB/ SS316 (BTA83_)	A351 CF8 (BTI2_)	A351 CF8M (BTI0_)	A351 CF3 (BTI1_)	A351 CF3M (BTI7_)
1	Body	A216 WCB		A352 LCB		A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2	Screw	A193 B7	A193 B7M	A320 L7		A193 B8	A193 B8M	A193 B8M	
3	Bottom Cover	ASTM A105	ASTM A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
4	Trunnion	A182 F6a	17-4PH	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
6	Body Gasket	SS304 + Graphite	SS316 + Graphite	SS304 + Graphite	SS316 + Graphite	SS304 + Graphite	SS316 + Graphite	SS304 + Graphite	SS316 + Graphite
7	Body Cap	A216 WCB		A352 LCB		A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
8	Body Bolt	A193 B7	A193 B7M	A320 L7		A193 B8	A193 B8M	A193 B8M	
9	Body Nut	A194 2H	A194 2HM	A194 4		A194 8	A194 8M	A194 8M	
10	Seat	DEVLON		DEVLON		PEEK		PEEK	
11	Seat Retainer	ASTM A105	ASTM A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
12	Ball	A105.ENP	A105N.ENP	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
14	Stem	A182 F6a	17-4PH	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
15	Gland Flange	A216 WCB		A352 LCB		A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
18	Seat Spring	17-7PH		17-7PH		Inconel X-750		Inconel X-750	
19	O Ring	VITON		VITON		VITON		VITON	
20	Packing	Flexible Graphite		Flexible Graphite		PTFE		PTFE	
21	Drain Plug	AISI 1035	A182 F316	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
22	Worm Gear	Assembly		Assembly		Assembly		Assembly	
23	Slide Bearing	SS304 + PTFE	SS316 + PTFE	SS304 + PTFE	SS316 + PTFE	SS304 + PTFE	SS316 + PTFE	SS304 + PTFE	SS316 + PTFE
24	Thrust Bearing	SS304 + PTFE	SS316 + PTFE	SS304 + PTFE	SS316 + PTFE	SS304 + PTFE	SS316 + PTFE	SS304 + PTFE	SS316 + PTFE
25	Seal Ring	ASTM A105	ASTM A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
26	Top cover	A216 WCB		A352 LCB		A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
28	Packing Gland	A182 F6a	A182 F316	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
29	Yoke	A216 WCB		A216 WCB		A351 CF8		A351 CF8	
30	Key	AISI 1035		AISI 1035		A276 304		A276 304	
31	Relief Valve	Assembly		Assembly		Assembly		Assembly	
32	Grease Injector	Assembly		Assembly		Assembly		Assembly	

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The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 600

SERIES BV BT ANSI RANGE

Nominal Size		inch	2"	2-1/2"	3"	4"	5"	6"	8"	10"
		DN	50	65	80	100	125	150	200	250
End connection	RF	L	292	330	356	432		559	660	787
		ØB	51	65,375	76	102	128,25	152	200	248
		ØD	165	190	210	275	330	355	420	510
		ØK	127	149,2	168,3	215,9	266,7	292,1	349,2	431,8
		ØF	92,1	104,8	127	157,2	185,7	215,9	269,9	323,8
		C	25,4	28,6	31,8	38,1	44,5	47,7	55,6	63,5
		f	7	7	7	7	7	7	7	7
		n-Ød	8 - 3/4	8 - 7/8	8 - 7/8	8 - 1	8 - 1 1/8	12 - 1 1/8	12 - 1/4	16 - 1 3/8
	BW	L1	292	330	356	432		559	660	787
		Schedule No.*(1)*	80	-	80	80	-	80	80	80
		ØB	51	65,375	76	102	128,25	152	200	248
		ØA1	60,3	-	91	117	-	172	223	278
		ØB1	49,22	-	73,5	97	-	146,5	193,5	243
	RTJ	L2	295	333	359	435	3	562	663	790
		ØB	51	65,375	76	102	128,25	152	200	248
		ØD	165	190	210	275	330	355	420	510
		ØK	127	149,2	168,3	215,9	266,7	292,1	349,2	431,8
		ØG	108	127	146	175	210	241	302	356
		ØP	82,55	101,6	123,83	149,23	180,98	211,12	269,88	323,85
		C	25,4	28,6	31,8	38,1	44,5	47,7	55,6	63,5
		n-Ød	8 - 3/4	8 - 7/8	8 - 7/8	8 - 1	8 - 1 1/8	12 - 1 1/8	12 - 1/4	16 - 1 3/8
		T	11,91	11,91	11,91	11,91	11,91	11,91	11,91	11,91
		S	7,92	7,92	7,92	7,92	7,92	7,92	7,92	7,92
		R	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8
Top works/Operation	Lever	H	186	207	222	279	-	-	-	-
		G	101	117	129	160	-	-	-	-
		h	400	458	500	600	-	-	-	-
	Gear with handwheel	H1	260	277	290	353	424	476	555	618
		G	101	117	129	160	188	208	242	277
		h1	40	40	40	48	60	68	30	40
		J	96	96	96	115	147	170	215	237
		ØW	240	240	240	280	320	350	320	350
	With ISO 5211 mounting pad	H2	221	241	256	310	376	425	475	530
		G	101	117	129	160	188	208	242	277
		h2	35	38	40	45	62	74	75	80
		ISO	F10	F10	F10	F12	F16	F16	F16	F20
		Tr	24	26	26	30	40	40	45	50
		Torque (Nm) *(2)*	173	314	418	700	1333	1800	2982	4773
Kvs-value			-	-	-	-	-	-	-	-
Approx. Weight RF *(3)*			35	55	70	98	189	257	460	672
Approx. Weight BW			28	45	57	75	154	213	396	569

(1) Other schedule nos. on request
(2) Torque includes 30% of safety factor
(3) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Torques in Nm / Weights in kg
For more information about flanged and welded ends refer to page 16

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Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 600

SERIES BV BT ANSI RANGE

Nominal Size		inch	12"	14"	16"	18"	20"	24"	26"	28"
		DN	300	350	400	450	500	600	650	700
End connection	RF	L	838	889	991	1092	1194	1397	1448	1549
		ØB	299	327	375	419	464	559	603	648
		ØD	560	605	685	745	815	940	1015	1075
		ØK	489	527	603,2	654	723,9	838,2	914,4	965,2
		ØF	381	412,8	469,9	533,4	584,2	692,2	749	800
		C	66,7	69,9	76,2	82,6	88,9	101,6	108	111,2
		f	7	7	7	7	7	7	7	7
		n-Ød	20 - 1 3/8	20 - 1 1/2	20 - 1 5/8	20 - 1 3/4	24 - 1 3/4	24 -2	28 -2	28 - 2 1/8
	BW	L1	838	889	991	1092	1194	1397	1448	1549
		Schedule No.*(1)*	80	80	80	80	80	80	-	-
		ØB	299	327	375	419	464	559	603	648
		ØA1	329	362	413	464	516	619	-	-
		ØB1	289	317,5	363,5	409,5	455,5	547,5	-	-
	RTJ	L2	841	892	994	1095	1200	1407	1461	1562
		ØB	299	327	375	419	464	559	603	648
		ØD	560	605	685	745	815	940	1015	1075
		ØK	489	527	603,2	654	723,9	838,2	914,4	965,2
		ØG	413	457	508	575	635	749	810	861
		ØP	981	419,1	469,9	533,4	584,2	692,15	749,3	800,1
		C	66,7	69,9	76,2	82,6	88,9	101,6	108	111,2
		n-Ød	20 - 1 3/8	20 - 1 1/2	20 - 1 5/8	20 - 1 3/4	24 - 1 3/4	24 -2	28 -2	28 - 2 1/8
		T	11,91	11,91	11,91	11,91	13,49	16,66	19,84	19,84
		S	7,92	7,92	7,92	7,92	9,53	11,13	12,7	12,7
		R	0,8	0,8	0,8	0,8	1,5	1,5	1,5	1,5
Top works/Operation	Lever	H	-	-	-	-	-	-	-	-
		G	-	-	-	-	-	-	-	-
		h	-	-	-	-	-	-	-	-
	Gear with handwheel	H1	735	764	810	995	1055	1125	1155	1285
		G	325	363	415	480	518	661	685	764
		h1	45	50	50	60	60	60	60	65
		J	275	305	305	380	380	384	384	516
		ØW	400	500	500	500	500	600	600	600
	With ISO 5211 mounting pad	H2	626	673	730	885	945	1040	1090	1203
		G	325	363	415	480	518	661	685	764
		h2	90	110	125	135	135	180	195	210
		ISO	F25	F30	F30	F35	F35	F40	F40	F48
		Tr	60	75	85	90	90	120	130	140
		Torque (Nm) *(2)*	6545	8964	13182	17818	26364	38636	43960	52727
Kvs-value			-	-	-	-	-	-	-	-
Approx. Weight RF *(3)*			980	1330	1895	2513	3085	5610	7570	10190
Approx. Weight BW			858	1150	1667	2225	2731	5172	6995	9544

(1) Other schedule nos. on request
(2) Torque includes 30% of safety factor
(3) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Torques in Nm / Weights in kg
For more information about flanged and welded ends refer to page 16

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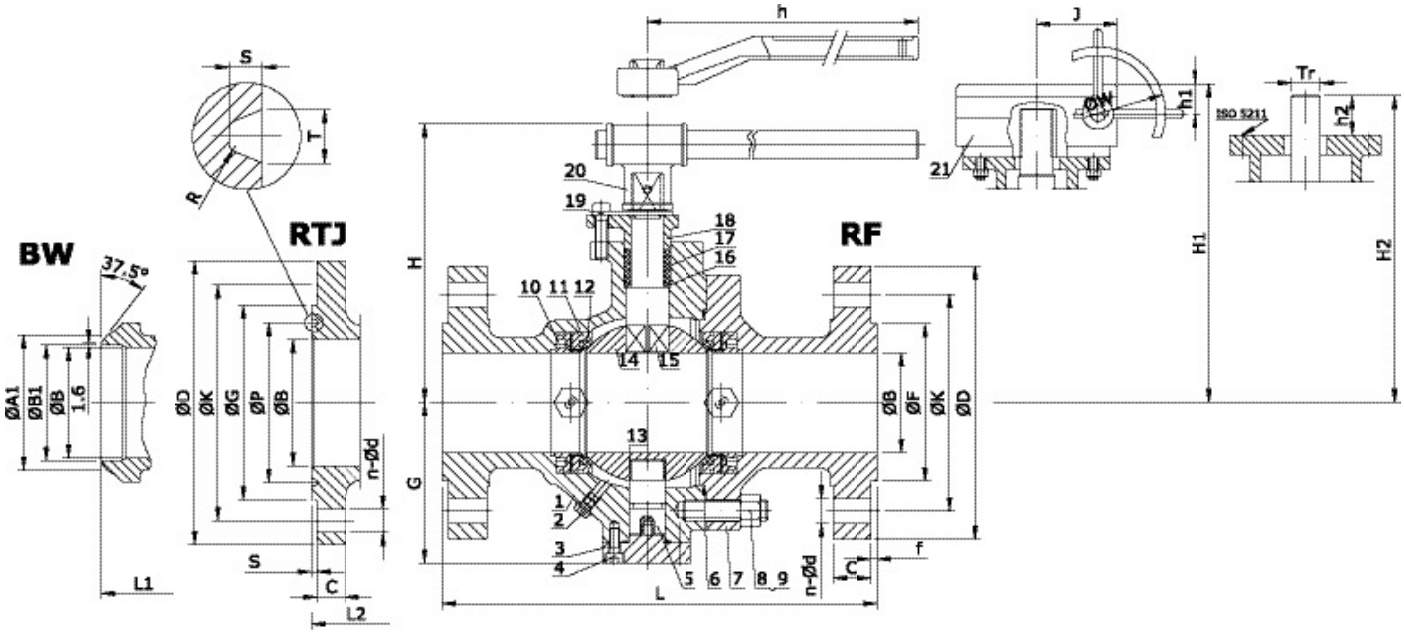
Main Parts and Materials

SERIES BV BT ANSI RANGE
Class 900 NPS2-4”



Nº	Part name	A216 WCB (BTA02_)	A216 WCB/ NACE (BTA02_)	A352 LCB/ SS304 (BTA82_)	A352 LCB/ SS316 (BTA83_)	A351 CF8 (BTI2_)	A351 CF8M (BTI0_)	A351 CF3 (BTI1_)	A351 CF3M (BTI7_)
1	Body	A216 WCB		A352 LCB		A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2	Drain Plug	AISI 1035	A182 F316	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
3	Bottom Cover	A105	A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
4	Screw	A193 B7	A193 B7M	A320 L7		A193 B8	A193 B8M	A193 B8M	
5	Trunnion	A182 F6a	17-4PH	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
6	Body Gasket	SS304+ Graphite	SS316+ Graphite	SS304+ Graphite	SS316+ Graphite	SS304+ Graphite	SS316+ Graphite	SS304+ Graphite	SS316+ Graphite
7	Body Cap	A216 WCB		A352 LCB		A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
8	Body Bolt	A193 B7	A193 B7M	A320 L7	A320 L7	A193 B8	A193 B8M	A193 B8M	
9	Body Nut/	A194 2H	A194 2HM	A194 4	A194 4	A194 8	A194 8M	A194 8M	
10	Seat Spring	17-7PH		17-7PH		Inconel X-750		Inconel X-750	
11	O Ring	VITON		VITON		VITON		VITON	
12	Seat	DEVLON		DEVLON		PEEK		PEEK	
13	Slide Bearing	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE
14	Ball	A105.ENP	A105N.ENP	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
15	Stem	A182 F6a	17-4PH	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
16	Packing Gasket	A276 410	A276 316	A276 304	A276 316	A276 304	A276 316	A276 316	A276 316
17	Packing	Flexible Graphite		Flexible Graphite		PTFE		PTFE	
18	Gland Flange	A216 WCB		A352 LCB		A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
19	Positioner	AISI 1035		AISI 1035		Stainless Steel		Stainless Steel	
20	Lever	A216 WCB		A216 WCB		A216 WCB+Epoxy Coated		A216 WCB+Epoxy Coated	
21	Worm Gear	Assembly		Assembly		Assembly		Assembly	

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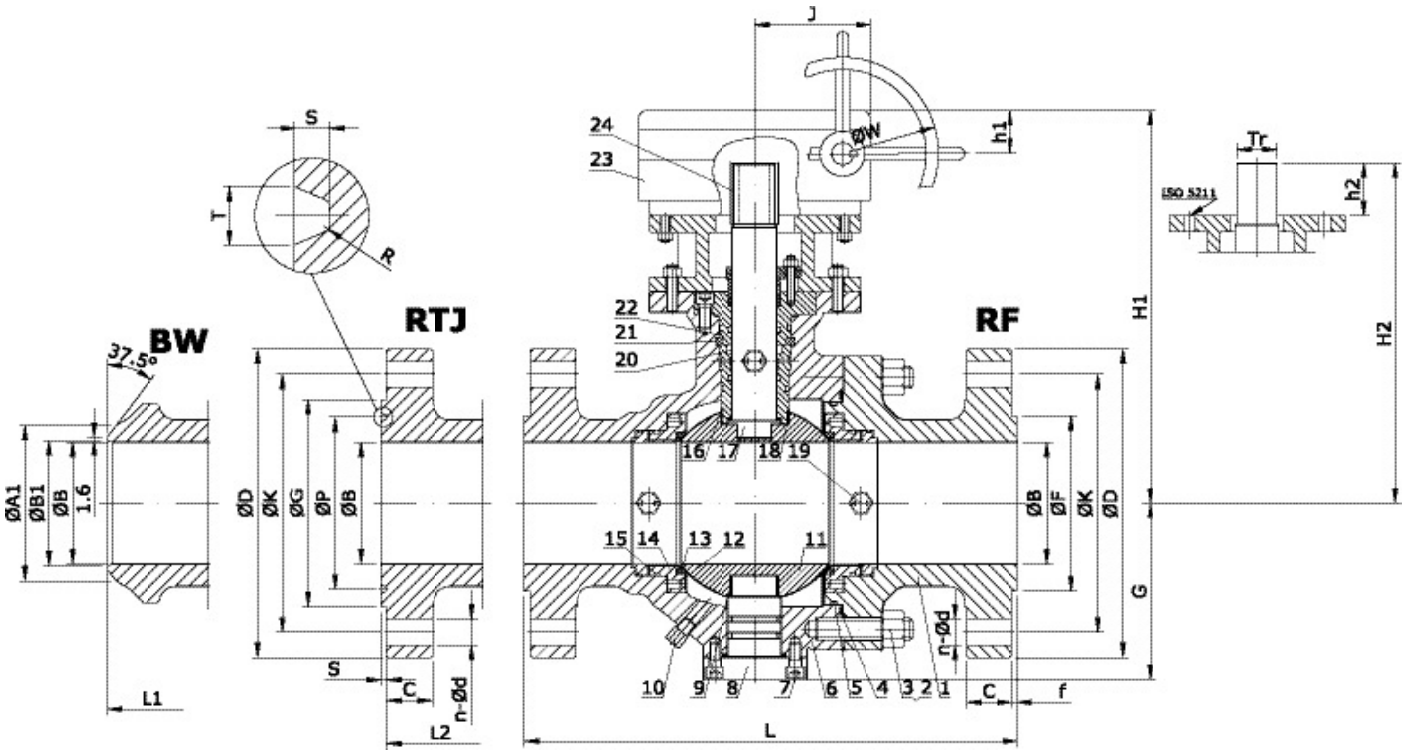
Main Parts and Materials

SERIES BV BT ANSI RANGE
Class 900 NPS6”



Nº	Part name	A216 WCB (BTA02_)	A216 WCB/ NACE (BTA02_)	A352 LCB/ SS304 (BTA82_)	A352 LCB/ SS316 (BTA83_)	A351 CF8 (BTI2_)	A351 CF8M (BTI0_)	A351 CF3 (BTI1_)	A351 CF3M (BTI7_)
1	Body Cap	A216 WCB		A352 LCB		A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2	Body Bolt	A193 B7	A193 B7M	A320 L7		A193 B8	A193 B8M	A193 B8M	
3	Body Nut	A194 2H	A194 2HM	A194 4		A194 8	A194 8M	A194 8M	
4	Body Gasket	SS304+ Graphite	SS316+ Graphite	SS304+ Graphite	SS316+ Graphite	SS304+ Graphite	SS316+ Graphite	SS304+ Graphite	SS316+ Graphite
5	O Ring	VITON		VITON		VITON		VITON	
6	Body	A216 WCB		A352 LCB		A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
7	Screw	A193 B7	A193 B7M	A320 L7		A193 B8	A193 B8M	A193 B8M	
8	Bottom Cover	A105	A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
9	Slide Bearing	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE
10	Drain Plug	AISI 1035	A182 F316	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
11	Ball	A105.ENP	A105N.ENP	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
12	Seat Spring	17-7PH		17-7PH		Inconel X-750		Inconel X-750	
13	Seat	DEVLON		DEVLON		PEEK		PEEK	
14	Seat Retainer	A105	A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
15	O Ring	VITON		VITON		VITON		VITON	
16	Seal Ring	A105	A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
17	Stem	A182 F6a	17-4PH	A182 F304	Nitronic 50	A182 F304	Nitronic 50	A182 F304L	Nitronic 50
18	Slide Bearing	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE
19	Grease Injector	Assembly		Assembly		Assembly		Assembly	
20	Gasket	A276 410	A276 316	A276 304	A276 316	A276 304	A276 316	A276 316	A276 316
21	Split Ring	A105	A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
22	Top cover	A216 WCB		A352 LCB		A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
23	Worm Gear	Assembly		Assembly		Assembly		Assembly	
24	Key	AISI 1035		AISI 1035		A276 304		A276 304	

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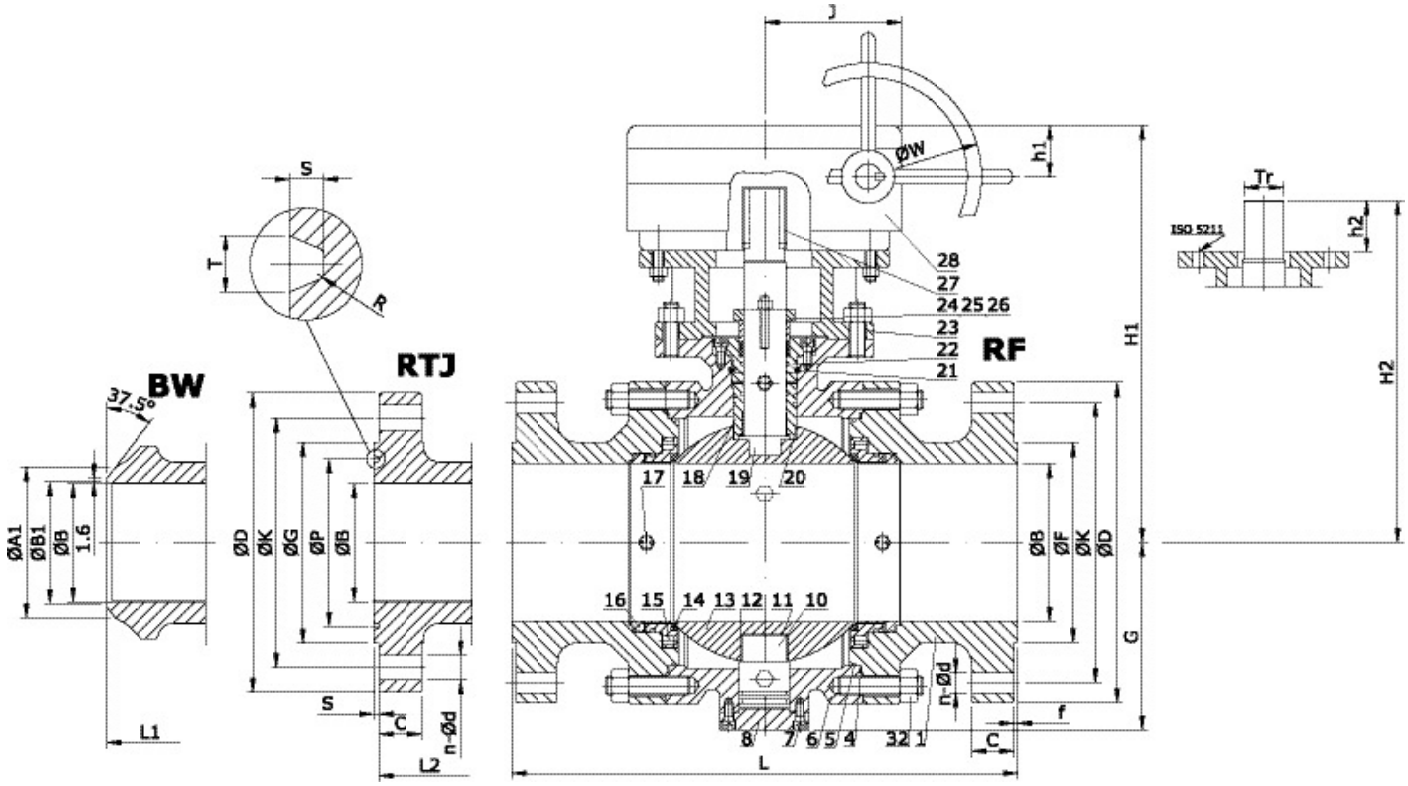
Main Parts and Materials

SERIES BV BT ANSI RANGE
Class 900 NPS8-24”



Nº	Part name	A216 WCB (BTA02_)	A216 WCB/ NACE (BTA02_)	A352 LCB/ SS304 (BTA82_)	A352 LCB/ SS316 (BTA83_)	A351 CF8 (BTI2_)	A351 CF8M (BTI0_)	A351 CF3 (BTI1_)	A351 CF3M (BTI7_)
1	Body Cap	A216 WCB		A352 LCB		A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2	Body Bolt	A193 B7	A193 B7M	A320 L7		A193 B8	A193 B8M	A193 B8M	
3	Body Nut	A194 2H	A194 2HM	A194 4		A194 8	A194 8M	A194 8M	
4	Body Gasket	SS304+ Graphite	SS316+ Graphite	SS304+ Graphite	SS316+ Graphite	SS304+ Graphite	SS316+ Graphite	SS304+ Graphite	SS316+ Graphite
5	O Ring	VITON		VITON		VITON		VITON	
6	Body	A216 WCB		A352 LCB		A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
7	Screw	A193 B7	A193 B7M	A320 L7		A193 B8	A193 B8M	A193 B8M	
8	Bottom Cover	A105	A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
9	Drain Plug	AISI 1035	A182 F316	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
10	Trunnion	A182 F6a	17-4PH	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
11	Thrust Bearing	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE
12	Slide Bearing	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE
13	Ball	A105.ENP	A105N.ENP	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
14	Seat	DEVLON		DEVLON		PEEK		PEEK	
15	Seat Spring	17-7PH		17-7PH		Inconel X-750		Inconel X-750	
16	Seat Retainer	A105	A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
17	Grease Injector	Assembly		Assembly		Assembly		Assembly	
18	Seal Ring	A105	A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
19	Stem	A182 F6a	17-4PH	A182 F304	Nitronic 50	A182 F304	Nitronic 50	A182 F304L	Nitronic 50
20	Slide Bearing	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE
21	Split Ring	A105	A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
22	Top cover	A216 WCB		A352 LCB		A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
23	Yoke	A216 WCB		A216 WCB		A351 CF8		A351 CF8	
24	Packing	Flexible Graphite		Flexible Graphite		PTFE		PTFE	
25	Packing Gland	A182 F6a	A182 F316	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
26	Gland Flange	A216 WCB		A352 LCB		A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
27	Key	AISI 1035		AISI 1035		A276 304		A276 304	
28	Worm Gear	Assembly		Assembly		Assembly		Assembly	

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Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 900

SERIES BV BT ANSI RANGE

Nominal Size		inch	2"	2-1/2"	3"	4"	5"	6"	8"
		DN	50	65	80	100	125	150	200
End connection	RF	L	368	419	381	457		610	737
		ØB	48	62,375	73	98	123,2	146	191
		ØD	215	245	240	290	350	380	470
		ØK	165,1	190,5	190,5	235	279,4	317,5	393,7
		ØF	92,1	104,8	127	157,2	185,7	215,9	269,9
		C	38,1	41,3	38,1	44,5	50,8	55,6	63,5
		f	7	7	7	7	7	7	7
		n-Ød	8 - 7/8	8 -1	8 - 7/8	8 - 1 1/8	8 - 1 1/4	12 - 1 1/8	12 - 1 3/8
	BW	L1	368	419	381	457		610	737
		Schedule No.*(1)*	160	-	160	120	-	120	100
		ØB	48	62,375	73	98	123,2	146	191
		ØA1	60,3	-	91	117	-	172	223
		ØB1	38,16	-	66,5	92	-	140	189
	RTJ	L2	371	422	384	460	3	613	740
		ØB	48	62,375	73	98	123,2	146	191
		ØD	215	245	240	290	350	380	470
		ØK	165,1	190,5	190,5	235	279,4	317,5	393,7
		ØG	124	137	156	181	216	241	308
		ØP	95,25	107,95	123,83	149,23	180,98	211,12	269,88
		C	38,1	41,3	38,1	44,5	50,8	55,6	63,5
		n-Ød	8 - 7/8	8 -1	8 - 7/8	8 - 1 1/8	8 - 1 1/4	12 - 1 1/8	12 - 1 3/8
		T	11,91	11,91	11,91	11,91	11,91	11,91	11,91
		S	7,92	7,92	7,92	7,92	7,92	7,92	7,92
		R	0,8	0,8	0,8	0,8	0,8	0,8	0,8
Top works/Operation	Lever	H	191	207	232	-	-	-	-
		G	107	117	137	-	-	-	-
		h	400	458	500	-	-	-	-
	Gear with handwheel	H1	265	277	304	377	424	559	661
		G	107	117	137	160	188	217	275
		h1	40	40	40	53	60	80	45
		J	96	96	96	139	147	224	275
		ØW	240	240	240	300	320	500	400
	With ISO 5211 mounting pad	H2	226	241	270	337	376	480	577
		G	107	117	137	160	188	217	275
		h2	35	38	40	57	62	75	115
		ISO	F10	F10	F10	F14	F16	F25	F25
		Tr	24	26	28	32	40	50	70
		Torque (Nm) *(2)*	213	314	732	866	1333	2335	3792
Kvs-value			-	-	-	-	-	-	-
Approx. Weight RF *(3)*			42	55	97	150	189	330	590
Approx. Weight BW			28	45	80	122	154	270	488

(1) Other schedule nos. on request
(2) Torque includes 30% of safety factor
(3) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Torques in Nm / Weights in kg
For more information about flanged and welded ends refer to page 16

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Main Valve Parameters - Class 900

SERIES BV BT ANSI RANGE

Nominal Size		inch	10"	12"	14"	16"	18"	20"	24"
		DN	250	300	350	400	450	500	600
End connection	RF	L	838	965	1029	1130	1219	1321	1549
		ØB	238	282	311	356	400	445	533
		ØD	545	610	640	705	785	855	1040
		ØK	469,9	533,4	558,8	616	685,8	749,3	901,7
		ØF	323,8	381	412,8	469,9	533,4	584,2	692,2
		C	69,9	79,4	85,8	88,9	101,6	108	139,7
		f	7	7	7	7	7	7	7
		n-Ød	16 - 1 3/8	20 - 1 3/8	20 - 1 1/2	20 - 1 5/8	20 - 1 7/8	20 - 2	20 - 2 1/2
	BW	L1	838	965	1029	1130	1219	1321	1549
		Schedule No.*(1)*	100	100	100	100	100	100	100
		ØB	238	282	311	356	400	445	533
		ØA1	278	329	362	413	464	516	619
		ØB1	236,5	281	308	354	398,5	443	532
	RTJ	L2	841	968	1039	1140	1232	1334	1568
		ØB	238	282	311	356	400	445	533
		ØD	545	610	640	705	785	855	1040
		ØK	469,9	533,4	558,8	616	685,8	749,3	901,7
		ØG	362	419	467	524	594	648	772
		ØP	323,85	381	419,1	469,9	533,4	584,2	692,15
		C	69,9	79,4	85,8	88,9	101,6	108	139,7
		n-Ød	16 - 1 3/8	20 - 1 3/8	20 - 1 1/2	20 - 1 5/8	20 - 1 7/8	20 - 2	20 - 2 1/2
		T	11,91	11,91	16,66	16,66	19,84	19,84	26,97
		S	7,92	7,92	11,13	11,13	12,7	12,7	15,88
		R	0,8	0,8	1,5	1,5	1,5	1,5	2,4
Top works/Operation	Lever	H	-	-	-	-	-	-	-
		G	-	-	-	-	-	-	-
		h	-	-	-	-	-	-	-
	Gear with handwheel	H1	715	755	847	892	968	1023	1149
		G	317	357	400	445	510	533	625
		h1	50	50	60	60	60	60	60
		J	305	305	380	380	380	384	384
		ØW	500	500	500	500	500	600	600
	With ISO 5211 mounting pad	H2	619	672	747	797	872	900	1080
		G	317	357	400	445	510	533	625
		h2	115	120	145	150	150	165	195
		ISO	F30	F30	F35	F35	F35	F40	F40
		Tr	70	75	90	105	115	115	130
		Torque (Nm) *(2)*	5713	6756	10777	16707	23223	35369	52377
Kvs-value			-	-	-	-	-	-	-
Approx. Weight RF *(3)*			812	1370	1680	2310	3140	3690	6494
Approx. Weight BW			670	1174	1457	2041	2780	3242	5678

(1) Other schedule nos. on request
(2) Torque includes 30% of safety factor
(3) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Torques in Nm / Weights in kg
For more information about flanged and welded ends refer to page 16

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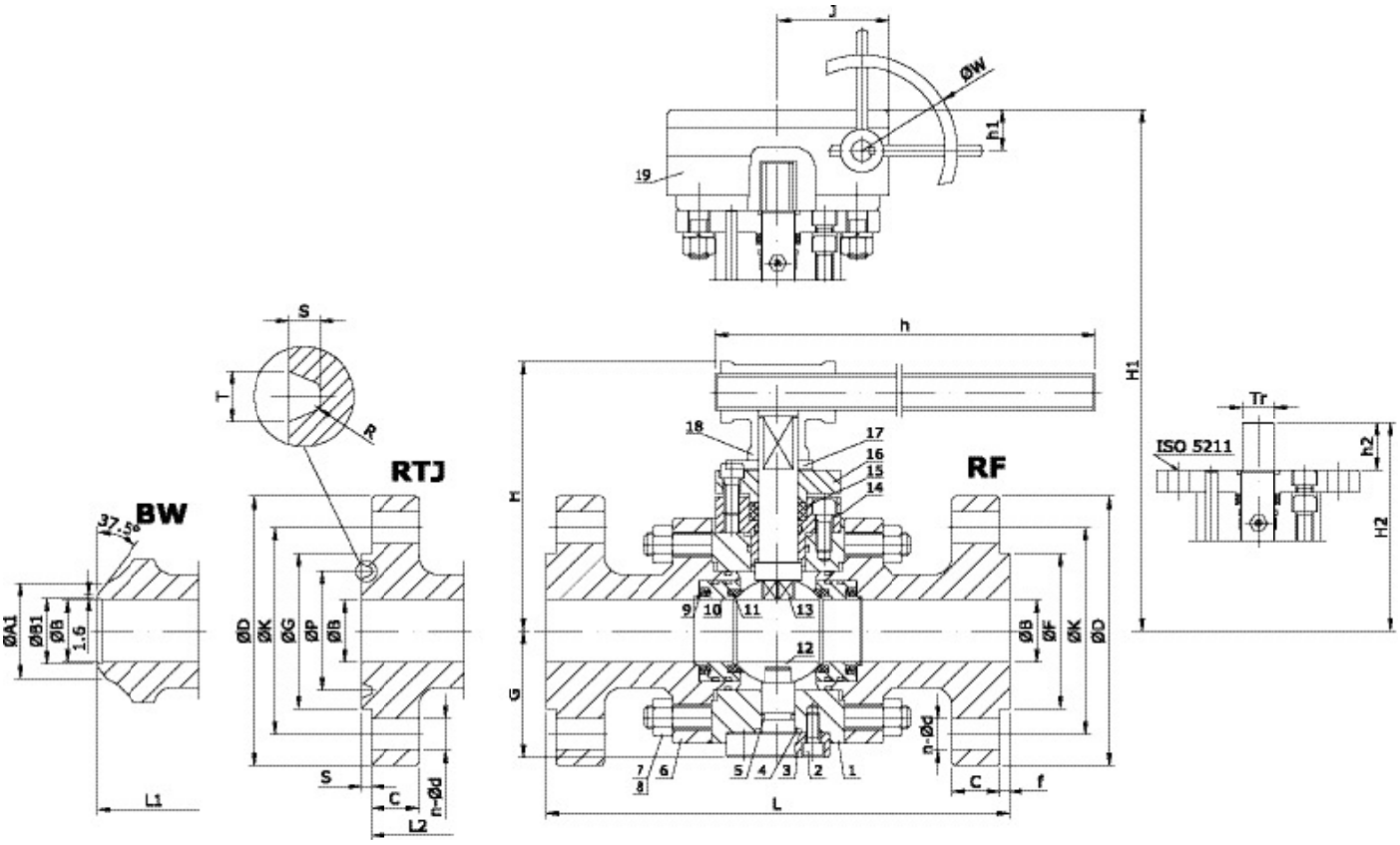
Main Parts and Materials

SERIES BV B9 ANSI RANGE
Class 1500 NPS2-4”



Nº	Part name	A105 (B9A02_)	A105/NACE (B9A02_)	A350 LF2/ SS304 (B9A1_)	A350 LF2/ SS316 (B9A1_)	A182 F304 (B9I1_)	A182 F316 (B9I3_)	A182 F304L (B9I9_)	A182 F316 (B9J1_)
1	Body	A105	A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
2	Screw	A193 B7	A193 B7M	A320 L7		A193 B8	A193 B8M	A193 B8M	
3	Bottom Cover	A105	A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
4	Gasket	A276 410	A276 316	A276 304	A276 316	A276 304	A276 316	A276 316	
5	O Ring	VITON		VITON		VITON		VITON	
6	Body Cap	A105	A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
7	Body Bolt	A193 B7	A193 B7M	A320 L7		A193 B8	A193 B8M	A193 B8M	
8	Body Nut	A194 2H	A194 2HM	A194 4		A194 8	A194 8M	A194 8M	
9	Seat Spring	17-7PH		17-7PH		Inconel X-750		Inconel X-750	
10	Seat Retainer	A105	A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
11	Seat	DEVLON		DEVLON		PEEK		PEEK	
12	Ball	A105.ENP	A105N.ENP	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
13	Stem	A182 F6a	17-4PH	A182 F304	Nitronic 50	A182 F304	Nitronic 50	A182 F304L	Nitronic 50
14	Top cover	A105	A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
15	Packing	Flexible Graphite		Flexible Graphite		PTFE		PTFE	
16	Gland Flange	A105	A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
17	Positioner	AISI 1035		AISI 1035		Stainless Steel		Stainless Steel	
18	Lever	A216 WCB		A216 WCB		A216 WCB+Epoxy Coated		A216 WCB+Epoxy Coated	
19	Worm Gear	Assembly		Assembly		Assembly		Assembly	

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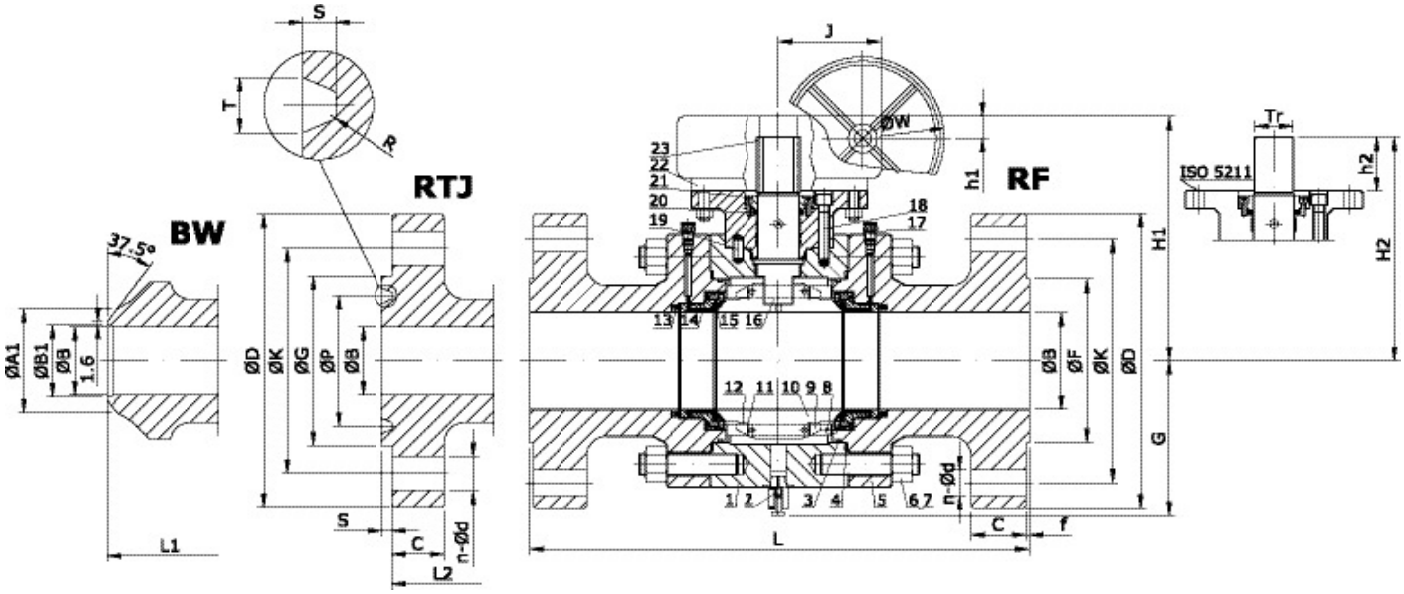
Main Parts and Materials

SERIES BV B9 ANSI RANGE
Class 1500 NPS6-16”



Nº	Part name	A105 (B9A02_)	A105/NACE (B9A02_)	A350 LF2/ SS304 (B9A1_)	A350 LF2/ SS316 (B9A1_)	A182 F304 (B9I1_)	A182 F316 (B9I3_)	A182 F304L (B9I9_)	A182 F316 (B9J1_)
1	Body	ASTM A105	ASTM A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
2	Drain Plug	AISI 1035	A182 F316	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
3	O Ring	VITON		VITON		VITON		VITON	
4	Body Gasket	SS304+ Graphite	SS316+ Graphite	SS304+ Graphite	SS316+ Graphite	SS304+ Graphite	SS316+ Graphite	SS304+ Graphite	SS316+ Graphite
5	Body Cap	ASTM A105	ASTM A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
6	Body Bolt	A193 B7	A193 B7M	A320 L7		A193 B8	A193 B8M	A193 B8M	
7	Body Nut	A194 2H	A194 2HM	A194 4		A194 8	A194 8M	A194 8M	
8	Screw	A193 B7	A193 B7M	A320 L7		A193 B8	A193 B8M	A193 B8M	
9	Ball Supporter	ASTM A105	ASTM A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
10	Ball	A105.ENP	A105N.ENP	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
11	Slide Bearing	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE
12	Thrust Bearing	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE
13	Seat Spring	17-7PH		17-7PH		Inconel X-750		Inconel X-750	
14	Seat Retainer	ASTM A105	ASTM A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
15	Seat	DEVLON		DEVLON		PEEK		PEEK	
16	Stem	A182 F6a	17-4PH	A182 F304	Nitronic 50	A182 F304	Nitronic 50	A182 F304L	Nitronic 50
17	Grease Injector	Assembly		Assembly		Assembly		Assembly	
18	Screw	A193 B7	A193 B7M	A320 L7		A193 B8	A193 B8M	A193 B8M	
19	Screw	A193 B7	A193 B7M	A320 L7		A193 B8	A193 B8M	A193 B8M	
20	Packing	Flexible Graphite		Flexible Graphite		PTFE		PTFE	
21	Gland Flange	ASTM A105	ASTM A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
22	Worm Gear	Assembly		Assembly		Assembly		Assembly	
23	Key	AISI 1035		AISI 1035		A276 304		A276 304	

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Main Valve Parameters - Class 1500

SERIES BV B9 ANSI RANGE

Nominal Size		inch	2"	2-1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"
		DN	50	65	80	100	125	150	200	250	300	350	400
End connection	RF	L	368	419	470	546		705	832	991	1130	1257	1384
		ØB	48	60,65	70	92	115,1	136	178	222	263	289	330
		ØD	215	245	265	310	375	395	485	585	675	750	825
		ØK	165,1	190,5	203,2	241,3	292,1	317,5	393,7	482,6	571,5	635	704,8
		ØF	92,1	104,8	127	157,2	185,7	215,9	269,9	323,8	381	412,8	469,9
		C	38,1	41,3	47,7	54	73,1	82,6	92,1	108	123,9	133,4	146,1
		f	7	7	7	7	7	7	7	7	7	7	7
		n-Ød	8 - 7/8	8 -1	8 - 1 1/4	8 - 1 3/8	8 - 1 5/8	12 - 1 1/2	12 - 1 3/4	12 - 2	16 - 2 1/8	16 - 2 3/8	16 - 2 5/8
	BW	L1	368	419	470	546		705	832	991	1130	1257	1384
		Schedule No.*(1)*	160	-	160	120	-	120	120	120	120	120	120
		ØB	48	60,65	70	92	115,1	136	178	222	263	289	330
		ØA1	60,3	-	91	117	-	172	223	278	329	362	413
		ØB1	38,16	-	66,5	92	-	140	182,5	230	273	300	344,5
	RTJ	L2	371	422	473	549	3	711	842	1001	1146	1276	1406
		ØB	48	60,65	70	92	115,1	136	178	222	263	289	330
		ØD	215	245	265	310	375	395	485	585	675	750	825
		ØK	165,1	190,5	203,2	241,3	292,1	317,5	393,7	482,6	571,5	635	704,8
		ØG	124	137	168	194	229	248	318	371	438	489	546
		ØP	95,25	107,95	136,53	161,93	193,68	211,14	269,88	323,85	381	419,1	469,9
		C	38,1	41,3	47,7	54	73,1	82,6	92,1	108	123,9	133,4	146,1
		n-Ød	8 - 7/8	8 -1	8 - 1 1/4	8 - 1 3/8	8 - 1 5/8	12 - 1 1/2	12 - 1 3/4	12 - 2	16 - 2 1/8	16 - 2 3/8	16 - 2 5/8
		T	11,91	11,91	11,91	11,91	11,91	13,49	16,66	16,66	23,01	26,97	30,18
		S	7,92	7,92	7,92	7,92	7,92	9,53	11,13	11,13	14,27	15,88	17,48
		R	0,8	0,8	0,8	0,8	0,8	1,5	1,5	1,5	1,5	2,4	2,4
Top works/Operation	Lever	H	222	-	-	-	-	-	-	-	-	-	-
		G	101	-	-	-	-	-	-	-	-	-	-
		h	600	-	-	-	-	-	-	-	-	-	-
	Gear with handwheel	H1	221	424	260	362	424	430	540	570	747	762	786
		G	101	188	135	179	188	216	295	326	420	438	465
		h1	48	60	48	70	60	45	50	50	60	60	60
		J	115	147	115	192	147	275	305	305	380	380	380
		ØW	280	320	280	400	320	400	500	500	500	500	500
	With ISO 5211 mounting pad	H2	178	376	226	304	376	352	443	470	637	650	695
		G	101	188	135	179	188	216	295	326	420	438	465
		h2	45	62	55	70	62	90	110	110	135	150	150
		ISO	F12	F16	F12	F20	F16	F25	F30	F30	F35	F35	F35
		Tr	30	40	32	45	40	60	75	75	90	115	115
		Torque (Nm) *(2)*	339	1333	1201	1385	1333	3995	6274	9610	11336	18078	28165
Kvs-value			-	-	-	-	-	-	-	-	-	-	-
Approx. Weight RF *(3)*			72	189	125	207	189	480	815	1315	2090	3976	5560
Approx. Weight BW			58	154	99	171	154	396	672	1070	1726	3465	4880

(1) Other schedule nos. on request
(2) Torque includes 30% of safety factor
(3) RTJ weight increases approx. by 10%

Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Torques in Nm / Weights in kg
For more information about flanged and welded ends refer to page 16

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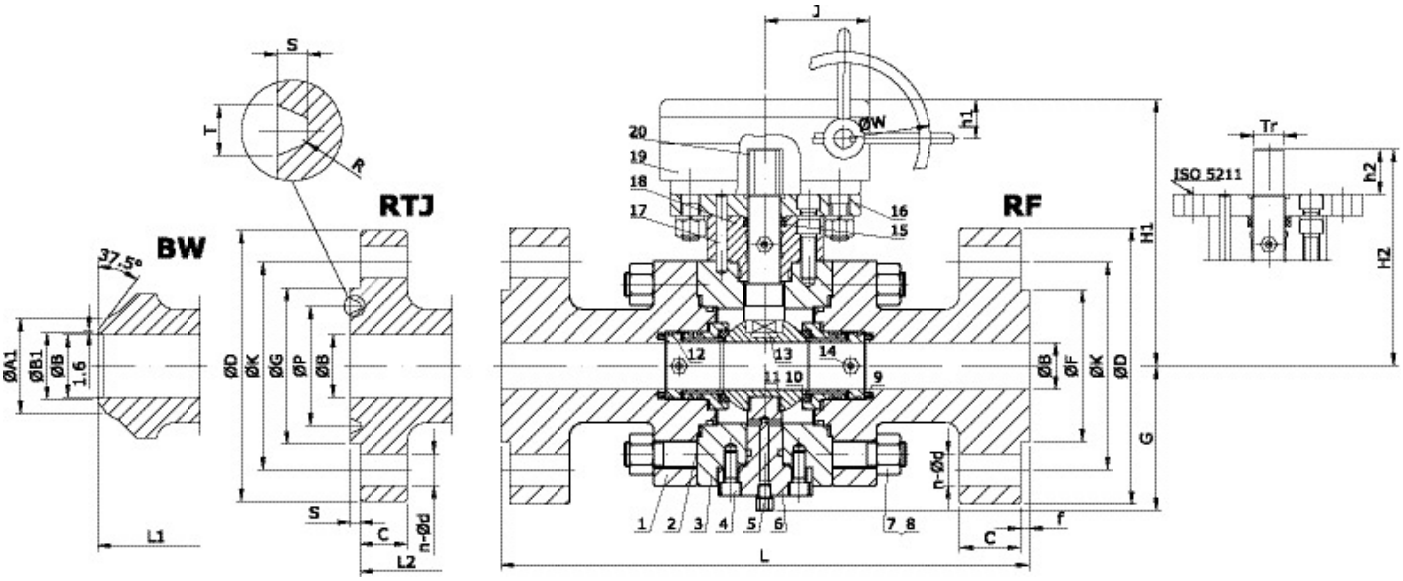
Main Parts and Materials

SERIES BV B9 ANSI RANGE
Class 2500 NPS2-4”



Nº	Part name	A105 (B9A02_)	A105/NACE (B9A02_)	A350 LF2/ SS304 (B9A1_)	A350 LF2/ SS316 (B9A1_)	A182 F304 (B9I1_)	A182 F316 (B9I3_)	A182 F304L (B9I9_)	A182 F316 (B9J1_)
1	Body Cap	ASTM A105	ASTM A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
2	Body Gasket	SS304+ Graphite	SS316+ Graphite	SS304+ Graphite	SS316+ Graphite	SS304+ Graphite	SS316+ Graphite	SS304+ Graphite	SS316+ Graphite
3	Body	ASTM A105	ASTM A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
4	Screw	A193 B7	A193 B7M	A320 L7		A193 B8	A193 B8M	A193 B8M	
5	Drain Plug	AISI 1035	A182 F316	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
6	Bottom Cover	ASTM A105	ASTM A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
7	Body Bolt	A193 B7	A193 B7M	A320 L7		A193 B8	A193 B8M	A193 B8M	
8	Body Nut	A194 2H	A194 2HM	A194 4		A194 8	A194 8M	A194 8M	
9	Seat Spring	17-7PH		17-7PH		Inconel X-750		Inconel X-750	
10	Seat	DEVLON		DEVLON		PEEK		PEEK	
11	Ball	A105.ENP	A105N.ENP	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
12	Seat Retainer	ASTM A105	ASTM A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
13	Stem	A182 F6a	17-4PH	A182 F304	Nitronic 50	A182 F304	Nitronic 50	A182 F304L	Nitronic 50
14	Grease Injector	Assembly		Assembly		Assembly		Assembly	
15	Packing	Flexible Graphite		Flexible Graphite		PTFE		PTFE	
16	Gland Flange	ASTM A105	ASTM A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
17	Screw	A193 B7	A193 B7M	A320 L7		A193 B8	A193 B8M	A193 B8M	
18	Top cover	ASTM A105	ASTM A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
19	Worm Gear	Assembly		Assembly		Assembly		Assembly	
20	Key	AISI 1035		AISI 1035		A276 304		A276 304	

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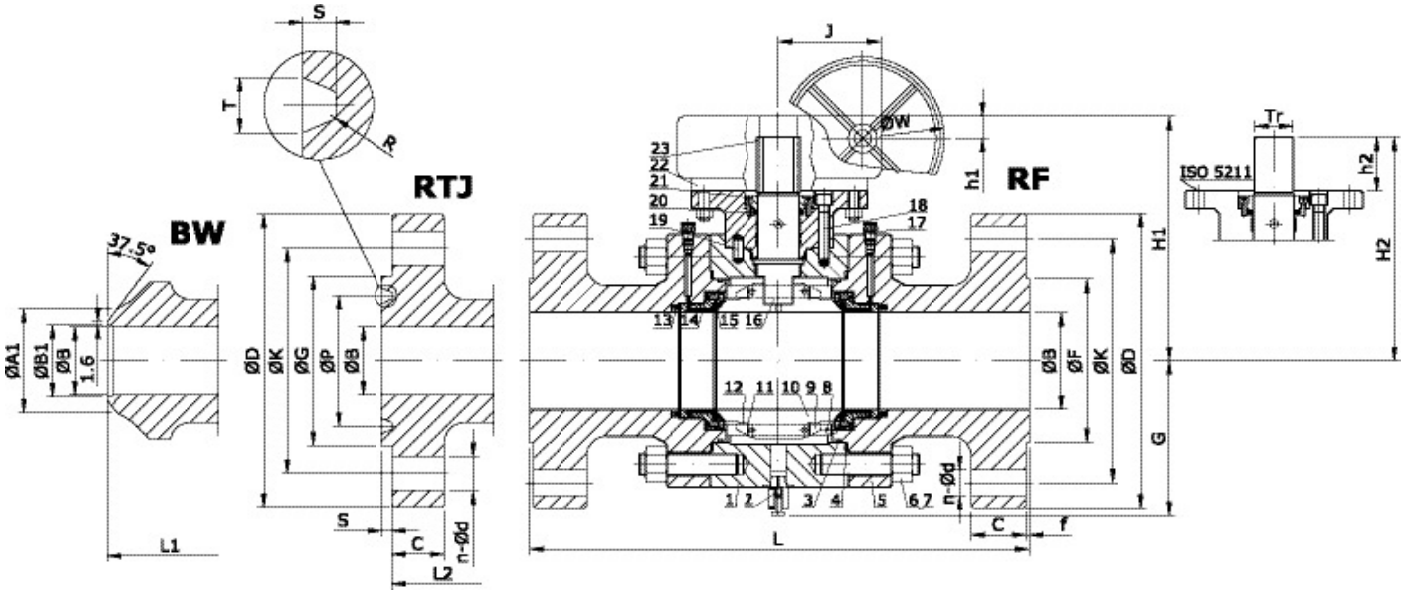
Main Parts and Materials

SERIES BV B9 ANSI RANGE
Class 2500 NPS6-12”



Nº	Part name	A105 (B9A02_)	A105/NACE (B9A02_)	A350 LF2/ SS304 (B9A1_)	A350 LF2/ SS316 (B9A1_)	A182 F304 (B9I1_)	A182 F316 (B9I3_)	A182 F304L (B9I9_)	A182 F316 (B9J1_)
1	Body	ASTM A105	ASTM A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
2	Drain Plug	AISI 1035	A182 F316	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
3	O Ring	VITON		VITON		VITON		VITON	
4	Body Gasket	SS304+ Graphite	SS316+ Graphite	SS304+ Graphite	SS316+ Graphite	SS304+ Graphite	SS316+ Graphite	SS304+ Graphite	SS316+ Graphite
5	Body Cap	ASTM A105	ASTM A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
6	Body Bolt	A193 B7	A193 B7M	A320 L7		A193 B8	A193 B8M	A193 B8M	
7	Body Nut	A194 2H	A194 2HM	A194 4		A194 8	A194 8M	A194 8M	
8	Screw	A193 B7	A193 B7M	A320 L7		A193 B8	A193 B8M	A193 B8M	
9	Ball Supporter	ASTM A105	ASTM A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
10	Ball	A105.ENP	A105N.ENP	A182 F304	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L
11	Slide Bearing	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE
12	Thrust Bearing	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE	SS304+PTFE	SS316+PTFE
13	Seat Spring	17-7PH		17-7PH		Inconel X-750		Inconel X-750	
14	Seat Retainer	ASTM A105	ASTM A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
15	Seat	DEVLON		DEVLON		PEEK		PEEK	
16	Stem	A182 F6a	17-4PH	A182 F304	Nitronic 50	A182 F304	Nitronic 50	A182 F304L	Nitronic 50
17	Grease Injector	Assembly		Assembly		Assembly		Assembly	
18	Screw	A193 B7	A193 B7M	A320 L7		A193 B8	A193 B8M	A193 B8M	
19	Screw	A193 B7	A193 B7M	A320 L7		A193 B8	A193 B8M	A193 B8M	
20	Packing	Flexible Graphite		Flexible Graphite		PTFE		PTFE	
21	Gland Flange	ASTM A105	ASTM A105N	A350 LF2		A182 F304	A182 F316	A182 F304L	A182 F316L
22	Worm Gear	Assembly		Assembly		Assembly		Assembly	
23	Key	AISI 1035		AISI 1035		A276 304		A276 304	

Information / restriction of technical rules need to be observed!
Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Main Valve Parameters - Class 2500

SERIES BV B9 ANSI RANGE

Nominal Size		inch	2"	2-1/2"	3"	4"	5"	6"	8"	10"	12"
		DN	50	65	80	100	125	150	200	250	300
End connection	RF	L	451	508	578	673		914	1022	1270	1422
		ØB	38	48,925	57	73	92,95	111	146	184	219
		ØD	235	265	305	355	420	485	550	675	760
		ØK	171,4	196,8	228,6	273	323,8	368,3	438,2	539,8	619,1
		ØF	92,1	104,8	127	157,2	185,7	215,9	269,9	323,8	381
		C	50,9	57,2	66,7	76,2	92,1	108	127	165,1	184,2
		f	7	7	7	7	7	7	7	7	7
		n-Ød	8 - 1 1/8	8 - 1 1/4	8 - 1 3/8	8 - 1 5/8	8 - 1 7/8	8 - 2 1/8	12 - 2 1/8	12 - 2 5/8	12 - 2 7/8
	BW	L1	451	508	578	673		914	1022	1270	1422
		Schedule No.*(1)*	160	-	160	160	-	160	160	160	160
		ØB	38	48,925	57	73	92,95	111	146	184	219
		ØA1	60,3	-	91	117	-	172	223	278	329
		ØB1	42,82	-	66,5	87,5	-	132	173	216	257
	RTJ	L2	454	514	584	683	13	927	1038	1292	1444
		ØB	38	48,925	57	73	92,95	111	146	184	219
		ØD	235	265	305	355	420	485	550	675	760
		ØK	171,4	196,8	228,6	273	323,8	368,3	438,2	539,8	619,1
		ØG	133	149	168	203	241	279	340	425	495
		ØP	101,6	111,13	127	157,18	190,5	228,6	279,4	342,9	406,4
		C	50,9	57,2	66,7	76,2	92,1	108	127	165,1	184,2
		n-Ød	8 - 1 1/8	8 - 1 1/4	8 - 1 3/8	8 - 1 5/8	8 - 1 7/8	8 - 2 1/8	12 - 2 1/8	12 - 2 5/8	12 - 2 7/8
		T	11,91	13,49	13,49	16,66	19,84	19,84	23,01	30,18	33,32
		S	7,92	9,53	9,53	11,13	12,7	12,7	14,27	17,48	17,48
		R	0,8	1,5	1,5	1,5	1,5	1,5	1,5	2,4	2,4
Top works/Operation	Lever	H	-	-	-	-	-	-	-	-	-
		G	-	-	-	-	-	-	-	-	-
		h	-	-	-	-	-	-	-	-	-
	Gear with handwheel	H1	288	424	330	497	424	591	667	765	780
		G	121	188	152	205	188	301	390	425	445
		h1	68	60	70	45	60	45	50	60	60
		J	170	147	192	275	147	275	305	380	380
		ØW	350	320	400	400	320	400	500	500	500
	With ISO 5211 mounting pad	H2	214	376	260	408	376	517	585	665	685
		G	121	188	152	205	188	301	390	425	445
		h2	50	62	60	110	62	125	140	150	150
		ISO	F16	F16	F20	F25	F16	F25	F30	F35	F35
		Tr	34	40	43	70	40	85	90	110	120
		Torque (Nm) *(2)*	538	1333	1955	2242	1333	6579	10725	15874	18658
Kvs-value			-	-	-	-	-	-	-	-	-
Approx. Weight RF *(3)*			102	189	206	298	189	785	1375	2190	3320
Approx. Weight BW			79	154	154	219	154	579	1344	1608	2490

(1) Other schedule nos. on request
(2) Torque includes 30% of safety factor
(3) RTJ weight increases approx. by 10%

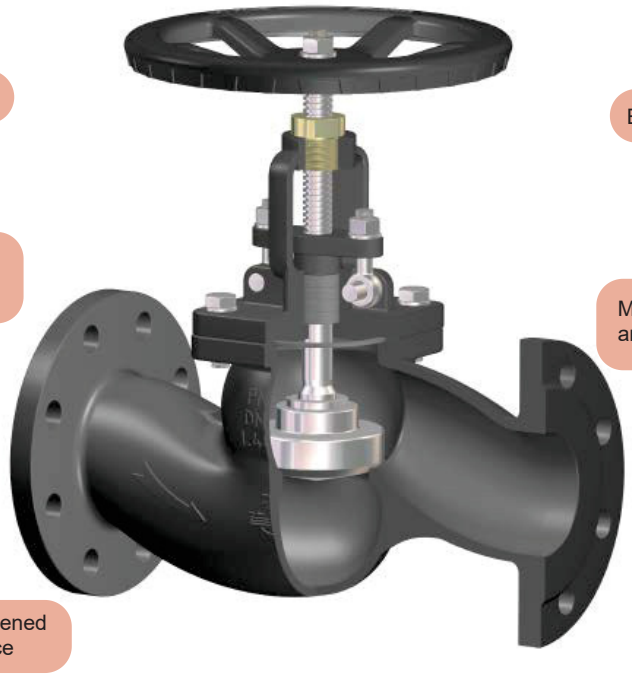
Dimensions in mm (except for bolt holes - Ød -, which are in inch units) subject to manufacturing tolerance
Kvs-values in m^3/h / Torques in Nm / Weights in kg
For more information about flanged and welded ends refer to page 16

Information / restriction of technical rules need to be observed!
Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Series 80 DIN RANGE

Series 80 Globe Valves are linear motion valves devised for stopping the flow of the service fluid when necessary. They are bolted bonnet, outside screw and yoke, rising handwheel, being the closure element a disc seating against a precisely machined seat thus achieving the positive closure. The atmospheric sealing is achieved by flexible graphite rings. The flow comes upwards underneath the seat, being an unidirectional valve. Weir body leads to higher pressure drop compared to gate valves but operation is quicker and this feature allows to use the valve as regulating valve when arranged with throttling plug. Valves are of easy and safe operation being widely used in power, chemical and oil industry. The range is also comprehensive o a wide offer of different versions and options. The standard operation is achieved by handwheel or gear, depending on valve size and working pressure.



- Outside screw and yoke
- Ergonomic rising handwheel
- Precise machining of components for optimal performance
- Marking for identification and full traceability purpose
- Back Seat feature
- Great versatility in end connections, materials and configurations
- Seat surface can be hardened to increase wear resistance

Main Features / Reference Standards

Design: EN 13709
Pressure Design: PN40
Face to face length: EN558 S1 (DIN 3202 F1)
Valve end connections: Flanged to EN1092-1 type 21/B, PN40
Marking: EN19
Inspections & Tests: EN12266-1
Unidirectional design. See the arrow on the body for normal flow direction
Primer painted for protection during storage and transport (carbon steel body/bonnet)
Product compliant with Pressure Equipment Directive PED, up to category III for European territory

Main Duties / Limits of use

Fluids compatible with materials of construction
Pressure / Temperature Rating to EN 1092-1, refers to page 3.
For PED compliant products, limits also acc. to PED Annex II Tables 6, 7, 8 & 9, gases and liquids of fluid groups 1 & 2, up to category III
Questions referring to chemical resistance, please consult us

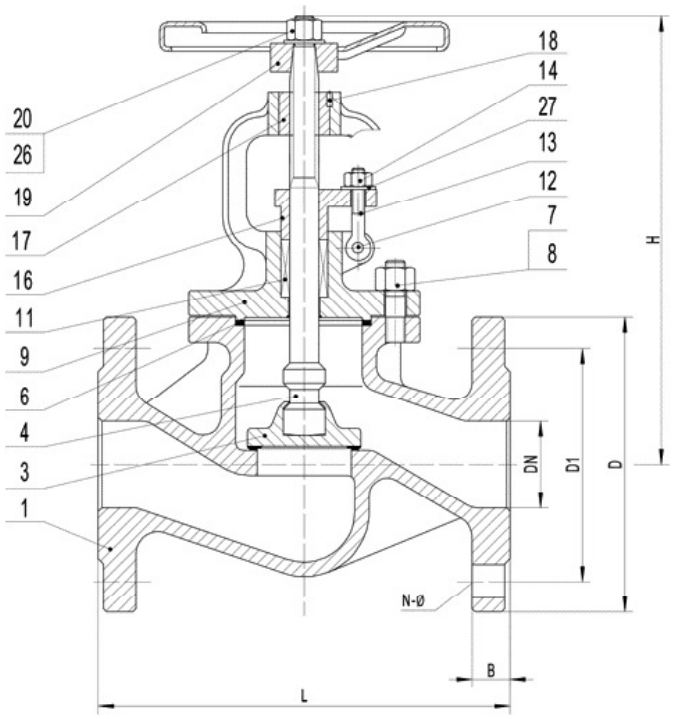
Options

Different body materials and trim combinations, different valve connections, angle pattern, Y-Pattern, regulating plug, extended bonnet, bellow seal, pressure seal, welded bonnet, chained hand wheel, manual gear, limit switches, execution for aggressive atmosphere, etc. Please consult us

Main Parts and Materials

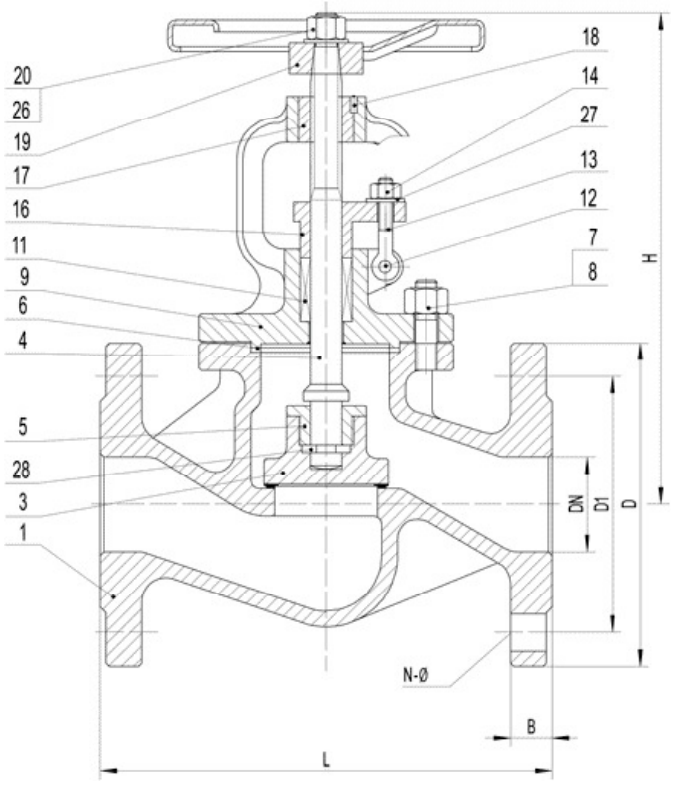
Series 80 DIN RANGE

DN15 - DN50



Nº	PART	MATERIAL
1	Body	1.0619+N
3	Disc	CS+13Cr
4	Stem	1.4021
6	Gasket	SS304+Graphite
7	Bonnet Bolt	A193-B7
8	Bonnet Nut	A194-2H
9	Bonnet	10619
11	Packing	Graphite
12	Eyebolt Pin	C. S
13	Gland Eyebolt	A193-B7
14	Gland Nut	A194-2H
16	Gland Flange	10619
17	Stem Nut	GGG50.3
18	Retaining Screw	A193-B7
19	Handwheel	C. S
20	Handwheel Nut	A194-2H
26	Washer	C. S
27	Washer	C. S

DN65 - DN150



Nº	PART	MATERIAL
1	Body	1.0619+N
3	Disc	CS+13Cr
4	Stem	1.4021
5	Disc Nut	13Cr
6	Gasket	SS304+Graphite
7	Bonnet Bolt	A193-B7
8	Bonnet Nut	A194-2H
9	Bonnet	1.0619
11	Packing	Graphite
12	Eyebolt Pin	C. S
13	Gland Eyebolt	A193-B7
14	Gland Nut	A194-2H
16	Gland Flange	1.0619
17	Stem Nut	GGG50.3
18	Retaining Screw	A193-B7
19	Handwheel	C. S
20	Handwheel Nut	A194-2H
26	Washer	C. S
27	Washer	C. S
28	Split ring	13Cr

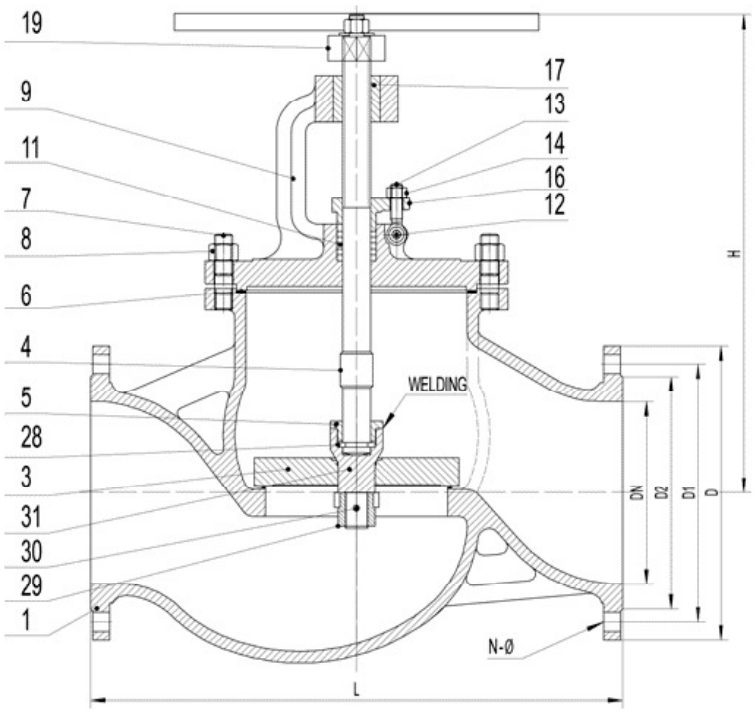
Information / restriction of technical rules need to be observed!
Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Main Parts and Materials

Series 80 DIN RANGE

DN200-400



Nº	PART	MATERIAL
1	Body	1.0619+N
3	Disc	13Cr
4	Stem	1.4021
5	Disc Nut	13Cr
6	Gasket	SS304+Graphite
7	Bonnet Bolt	A193-B7
8	Bonnet Nut	A194-2H
9	Bonnet	1.0619
11	Packing	Graphite
12	Eyebolt Pin	C. S
13	Gland Eyebolt	A193-B7
14	Gland Nut	A194-2H
16	Gland Flange	1.0619
17	Stem Nut	GGG50.3
19	Handwheel	C. S
28	Split ring	13Cr
29	Lock nut	13Cr
30	Lock screw	13Cr
31	Balance disc	CS+13Cr

Main Valve Parameters

DN	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350	400
L	130	150	160	180	200	230	290	310	350	400	480	600	730	850	980	1100
D	95	105	115	140	150	165	185	200	235	270	300	375	450	515	580	660
D1	65	75	85	100	110	125	145	160	190	220	250	320	385	450	510	585
N-Ø	4x14	4x14	4x14	4x18	4x18	4x18	8x18	8x18	8x22	8x26	8x26	12x30	12x33	16x33	16x36	16x39
H	180	190	220	222	252	263	295	330	350	420	455	530	665	720	880	1030
Kvs-value	4,2	7,4	12	19	31	47	77	120	188	288	410	725	1145	1635	2220	3180
Approx. Weight	4,4	5,4	6,3	7	10,5	13,8	21	27,5	40	61	84	160	265	377	510	780

Dimensions in mm subject to manufacturing tolerance / Kvs-values in m^3/h / Weights in kg
Other dimensions on request

Pressure / Temperature Rating

-10°C to 120°C	150°C	200°C	250°C	300°C	350°C	400°C	450°C
40 bar	38,1 bar	35 bar	32 bar	28 bar	25,7 bar	23,8 bar	13,1 bar

Information / restriction of technical rules need to be observed!
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The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Series 90 DIN RANGE

Series 90 Gate Valves are linear motion valves devised for stopping the flow of the service fluid when necessary, not being suitable for regulating purpose. They are bolted bonnet, outside screw and yoke, rising stem, bidirectional, with metal sealing and full bore. The atmospheric sealing is achieved by flexible graphite rings. The two slightly sloped seats favor a tight shut off, being largely used in the power, chemical and oil industry sectors. The range is also comprehensive of a wide offer of different versions and options. The standard operation is achieved by handwheel or gear, depending on valve size and working pressure. Valves can also be arranged for automation with different kinds of actuators.

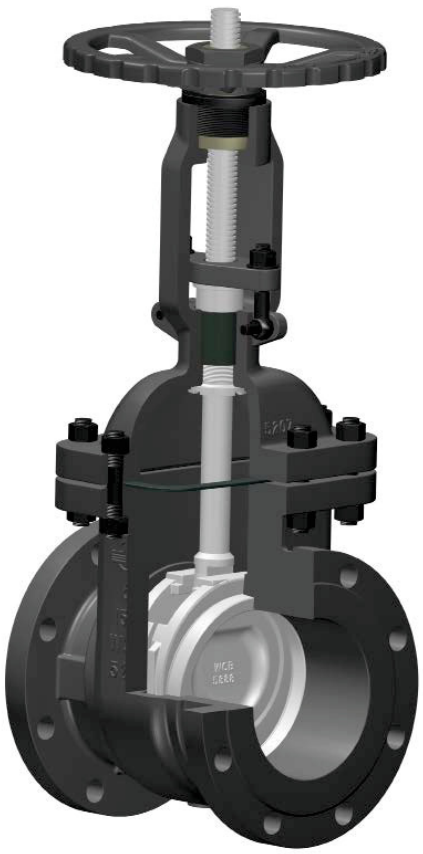
Precise machining of components for optimal performance

Outside screw and yoke, rising stem

Back Seat feature

Seat surface can be hardened to increase wear resistance

Flexible Wedge, favours the closure even at low pressures



Ergonomic non-rising handwheel

Marking for identification and full traceability purpose

Great versatility in end connections, materials and configurations

Sloped valve seats, vertical shut off, flow assists closure

Full bore, mínimum pressure drop

Main Features / Reference Standards

Design: DIN EN 1984
Pressure Rating: PN16-PN100
Face to face length: DIN 3202 F5/F7
Valve end connections: Flanged RF to EN 1092-1 Type 21
Welded BW to EN12627
Marking: MSS SP-25
Inspections & Tests: EN12266-1/2
Bidirectional design
Primer painted grey color similar to RAL 7037 for protection during storage and transport (carbon steel body/bonnet)
Product compliant with Pressure Equipment Directive PED, up to category III for European territory

Main Duties / Limits of use

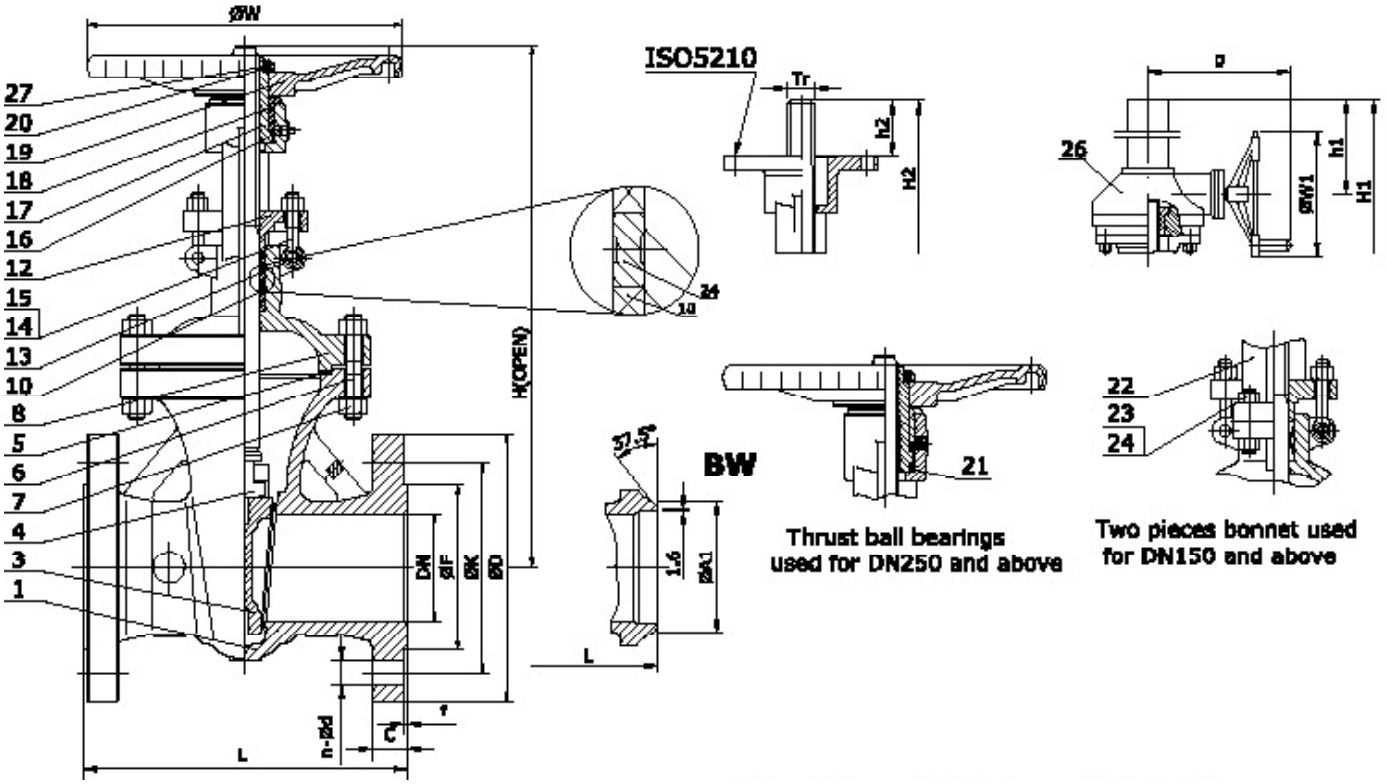
Fluids compatible with materials of construction
Pressure / Temperature Rating to EN 1092-1.
For PED compliant products, limits also acc. to PED Annex II Tables 6, 7, 8 & 9, gases and liquids of fluid groups 1 & 2, up to category III
Questions referring to chemical resistance, please consult us
For installation in horizontal pipelines with stem pointing upwards. For other positions, please consult us.

Options

Different body materials and trim combinations, different valve connections, extended bonnet, bellow seal, pressure seal, welded bonnet, lantern ring with double packing, live loaded packing, chained hand wheel, manual gear, pneumatic, electric or hydraulic actuation, limit switches, execution for aggressive atmosphere, etc. Please consult us

Series 90 DIN RANGE
PN16-100

Main Parts and Materials



Nº	Part name	1.0619+N (90A0_)	1.4408 (90I0_)
1	Body	1.0619+N	1.4408
2	Wedge	1.0619+N	1.4408
3	Stem	A182 F6a	ASTM A182 F316
4	Nut	A194 2H	ASTM 194 8M
5	Bolt	A193 B7	ASTM 193 B8M
6	Gasket	St. Steel 304 + Graphite	St. steel 316 + Graphite
7	Bonnet	1.0619+N	1.4408
8	Packing	Flexible Graphite	
9	Pin	Carbon Steel	St. steel 304
10	Gland Eyebolt	A193 B7	ASTM A193 B8M
11	Nut	A194 2H	ASTM A194 8M
12	Gland	1.0619+N	1.4408
13	Greese Injector	Brass	Copper alloy
14	Stem Nut	A439 D2	Ductile Iron
15	Retaining Nut	Carbon Steel	AISI 1035
16	Handwheel	ASTM A536	Ductile Iron
17	Handwheel Nut	Carbon Steel	AISI 1035
18	Screw	Carbon Steel	AISI 1035
19	Bearings	Alloy Steel	Alloy steel
20	Yoke Nut	A194 2H	ASTM A194 8M
21	Yoke Bolt	A193 B7	ASTM A193 B8M
22	Yoke	1.0619+N	1.4408
23	Gear box	Assembly	
24	Lantern ring	ASTM A276 410	

Fig. 90A0	Seat Surface	Wedge Surface	Stem
TRIM #1 (90A01)	+13Cr	+13Cr	A182 F6a
TRIM #5 (90A05)	+HF	+HF	A182 F6a
TRIM #8 (90A08)	+HF	+13Cr	A182 F6a

Information / restriction of technical rules need to be observed!
Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Series 90 DIN RANGE

Main Valve Parameters - PN16

Nominal Size		DN	50	65	80	100	125	150	200	250
End connection	RF	L	250	270	280	300	325	350	400	450
		ØD	165	185	200	220	250	285	340	405
		ØK	125	145	160	180	210	240	295	355
		ØF	102	122	138	158	188	212	268	320
		C	18	18	20	20	22	22	24	26
		f	3	3	3	3	3	3	3	3
		n-Ød	4-18	8-18	8-18	8-18	8-18	8-22	12-22	12-26
	BW	ØA1	62	77	91	117	144	172	223	278
Top works/operation	Hand-wheel	H (open)	393	430	500	580	655	795	950	1141
		H (close)	340	360	415	475	525	599	740	857
		ØW	200	200	220	250	280	300	350	400
	Gear with handwheel	H1	-	-	-	-	-	-	-	1180
		h1	-	-	-	-	-	-	-	335
		g	-	-	-	-	-	-	-	262
		ØW1	-	-	-	-	-	-	-	310
	With ISO 5210 mounting pad	H2 (open)	405	460	516	611	658	765	970	1114
		H2 (close)	340	380	425	498	520	607	755	860
		h2	45	45	60	60	60	60	80	80
		ISO	F07	F07	F10	F10	F10	F10	F14	F14
		Tr	Tr20x4LH	Tr22x5LH	Tr24x5LH	Tr26x5LH	Tr28x5LH	Tr30x6LH	Tr32x6LH	Tr36x6LH
		Stroke	65	80	91	113	138	158	215	254
		No. of turns	16	16	18	23	28	26	36	42
		Torque	32	35	42	77	88	98	172	227
Kvs-value			168	413	595	1089	1956	2597	4791	7488
Approx. Weight RF			20	28	32	45	62	85	125	190

(1) To be specified by the purchaser

Dimensions in mm subject to manufacturing tolerance / Kvs-values in m^3/h / Torques in Nm / Weights in kg

Nominal Size		DN	300	350	400	450	500	600	700
End connection	RF	L	500	550	600	650	700	800	900
		ØD	460	520	580	640	715	840	910
		ØK	410	470	525	585	650	770	840
		ØF	378	438	490	550	610	725	795
		C	28	30	32	40	44	54	*(1)*
		f	4	4	4	4	4	5	5
		n-Ød	12-26	16-26	16-30	20-30	20-33	20-36	24-36
	BW	ØA1	329	362	413	464	516	619	721
Top works/operation	Hand-wheel	H (open)	1335	1535	1670	1620	2135	2325	*(2)*
		H (close)	1025	1175	1260	1420	1620	1825	*(2)*
		ØW	450	500	500	600	600	700	*(2)*
	Gear with handwheel	H1	1320	1523	1770	1640	2189	2410	2865
		h1	385	443	493	525	598	630	788
		g	262	340	340	340	340	413	413
		ØW1	310	460	460	460	460	530	530
	With ISO 5210 mounting pad	H2 (open)	1353	1465	1741	-	2132	2550	-
		H2 (close)	1045	1125	1335	-	1625	1940	-
		h2	80	100	100	120	120	140	180
		ISO	F14	F16	F16	F25	F25	F30	F35
		Tr	Tr38x6LH	Tr42x8LH	Tr46x8LH	Tr50x8LH	Tr50x8LH	Tr55x8LH	Tr65×10LH
		Stroke	308	340	406	-	507	610	-
		No. of turns	51	43	51	-	63	76	-
		Torque	298	410	550	650	864	1528	2105
Kvs-value			11182	13632	18059	24056	29953	43694	62653
Approx. Weight RF			270	390	460	650	850	1450	2320

(1) To be specified by the purchaser
(2) It works with gear with handwheel

Dimensions in mm subject to manufacturing tolerance / Kvs-values in m^3/h / Torques in Nm / Weights in kg

Information / restriction of technical rules need to be observed!
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The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Series 90 DIN RANGE

Main Valve Parameters - PN25

Nominal Size		DN	50	65	80	100	125	150	200	250
End connection	RF	L	250	270	280	300	325	350	400	450
		ØD	165	185	200	235	270	300	360	425
		ØK	125	145	160	190	220	250	310	370
		ØF	102	122	138	162	188	218	278	335
		C	20	22	24	24	26	28	30	32
		f	3	3	3	3	3	3	3	3
		n-Ød	4-18	8-18	8-18	8-22	8-26	8-26	12-26	12-30
	BW	ØA1	62	77	91	117	144	172	223	278
Top works/operation	Hand-wheel	H (open)	393	430	500	580	655	795	950	1141
		H (close)	340	360	415	475	525	599	740	857
		ØW	200	200	220	250	280	300	350	400
	Gear with handwheel	H1	-	-	-	-	-	-	-	1180
		h1	-	-	-	-	-	-	-	335
		g	-	-	-	-	-	-	-	262
		ØW1	-	-	-	-	-	-	-	310
	With ISO 5210 mounting pad	H2 (open)	405	460	516	611	658	765	970	1114
		H2 (close)	340	380	425	498	520	607	755	860
		h2	45	45	60	60	60	60	80	80
		ISO	F07	F07	F10	F10	F10	F10	F14	F14
		Tr	Tr20x4LH	Tr22x5LH	Tr24x5LH	Tr26x5LH	Tr28x5LH	Tr30x6LH	Tr32x6LH	Tr36x6LH
		Stroke	65	80	91	113	138	158	215	254
		No. of turns	16	16	18	23	28	26	36	42
		Torque	32	35	42	77	88	98	172	227
Kvs-value			168	413	595	1089	1956	2597	4791	7450
Approx. Weight RF			20	29	33	48	65	90	132	225

(1) To be specified by the purchaser

Dimensions in mm subject to manufacturing tolerance / Kvs-values in m^3/h / Torques in Nm / Weights in kg

Nominal Size		DN	300	350	400	450	500	600	700
End connection	RF	L	500	550	600	650	700	800	900
		ØD	485	555	620	670	730	845	960
		ØK	430	490	550	600	660	770	875
		ØF	395	450	505	555	615	720	820
		C	34	38	40	46	48	58	*(1)*
		f	4	4	4	4	4	5	5
		n-Ød	16-30	16-33	16-36	20-36	20-36	20-39	24-42
	BW	ØA1	329	362	413	464	516	619	721
Top works/operation	Hand-wheel	H (open)	1335	1535	1670	1620	2135	2325	*(2)*
		H (close)	1025	1175	1260	1420	1620	1825	*(2)*
		ØW	450	500	500	600	600	700	*(2)*
	Gear with handwheel	H1	1320	1523	1770	1640	2189	2410	2865
		h1	385	443	493	525	598	630	788
		g	262	340	340	340	340	413	413
		ØW1	310	460	460	460	460	530	530
	With ISO 5210 mounting pad	H2 (open)	1353	1465	1741	-	2132	2550	-
		H2 (close)	1045	1125	1335	-	1625	1940	-
		h2	80	100	100	120	120	140	180
		ISO	F14	F16	F16	F25	F25	F30	F35
		Tr	Tr38x6LH	Tr42x8LH	Tr46x8LH	Tr50x8LH	Tr50x8LH	Tr55x8LH	Tr65×10LH
		Stroke	308	340	406	-	507	610	-
		No. of turns	51	43	51	-	63	76	-
		Torque	298	410	550	650	864	1528	2105
Kvs-value			11125	13563	17967	23933	29800	43471	62333
Approx. Weight RF			285	420	490	690	900	1580	2500

(1) To be specified by the purchaser
(2) It works with gear with handwheel

Dimensions in mm subject to manufacturing tolerance / Kvs-values in m^3/h / Torques in Nm / Weights in kg

Information / restriction of technical rules need to be observed!
Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Series 90 DIN RANGE

Main Valve Parameters - PN40

Nominal Size		DN	50	65	80	100	125	150	200
End connection	RF	L	250	290	310	350	400	450	550
		ØD	165	185	200	235	270	300	375
		ØK	125	145	160	190	220	250	320
		ØF	102	122	138	162	188	218	285
		C	20	22	24	24	26	28	34
		f	3	3	3	3	3	3	3
		n-Ød	4-18	8-18	8-18	8-22	8-26	8-26	12-30
	BW	ØA1	62	77	91	117	144	172	223
Top works/operation	Hand-wheel	H (open)	405	430	500	575	640	745	1000
		H (close)	350	360	415	470	510	585	790
		ØW	200	200	220	250	280	300	400
	Gear with handwheel	H1	-	-	-	-	-	-	-
		h1	-	-	-	-	-	-	-
		g	-	-	-	-	-	-	-
		ØW1	-	-	-	-	-	-	-
	With ISO 5210 mounting pad	H2 (open)	405	460	516	611	658	765	998
		H2 (close)	340	380	425	498	520	607	788
		h2	60	60	60	80	80	80	80
		ISO	F10	F10	F10	F14	F14	F14	F14
		Tr	Tr20x4LH	Tr22x5LH	Tr24x5LH	Tr26x5LH	Tr28x5LH	Tr30x6LH	Tr36x6LH
		Stroke	65	80	91	113	138	158	215
		No. of turns	16	16	18	23	28	26	36
		Torque	47	53	61	121	182	205	342
Kvs-value			168	413	595	1089	1956	2597	4791
Approx. Weight RF			20	29	35	50	72	105	189

(1) To be specified by the purchaser

Dimensions in mm subject to manufacturing tolerance / Kvs-values in m^3/h / Torques in Nm / Weights in kg

Nominal Size		DN	250	300	350	400	450	500	600
End connection	RF	L	650	750	850	950	1050	1150	1350
		ØD	450	515	580	660	685	755	890
		ØK	385	450	510	585	610	670	795
		ØF	345	410	465	535	560	615	735
		C	38	42	46	50	57	57	72
		f	3	4	4	4	4	4	5
		n-Ød	12-33	16-33	16-36	16-39	20-39	20-42	20-48
	BW	ØA1	278	329	362	413	464	516	619
Top works/operation	Hand-wheel	H (open)	1278	1510	1670	1898	*(2)*	*(2)*	*(2)*
		H (close)	1006	1201	1308	1483			
		ØW	450	500	550	600			
	Gear with handwheel	H1	1274	1620	1791	2092	2192	2257	2724
		h1	355	392	445	498	570	632	730
		g	340	340	340	340	413	413	413
		ØW1	460	460	460	460	530	530	530
	With ISO 5210 mounting pad	H2 (open)	1161	1365	1541	1801	-	2315	2762
		H2 (close)	900	105	1185	1395	-	1768	2140
		h2	80	80	100	100	120	120	140
		ISO	F16	F25	F25	F30	F30	F30	F35
		Tr	Tr38x6LH	Tr42x8LH	Tr46x8LH	Tr48x8LH	Tr52x8LH	Tr52x8LH	Tr60x8LH
		Stroke	261	315	356	406	-	547	622
		No. of turns	44	39	45	51	-	68	77.75
		Torque	579	786	1139	1448	1945	2483	3910
Kvs-value			7450	11125	13563	17782	23688	29494	43025
Approx. Weight RF			345	460	650	980	1330	1865	2470

(1) To be specified by the purchaser
(2) It works with gear with handwheel

Dimensions in mm subject to manufacturing tolerance / Kvs-values in m^3/h / Torques in Nm / Weights in kg

Information / restriction of technical rules need to be observed!
Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Series 90 DIN RANGE

Main Valve Parameters - PN63

Nominal Size		DN	50	65	80	100	125	150	200	250	300	350	400
End connection	RF	L	250	290	310	350	400	450	550	650	750	850	950
		ØD	180	205	215	250	295	345	415	470	530	600	670
		ØK	135	160	170	200	240	280	345	400	460	525	585
		ØF	102	122	138	162	188	218	285	345	410	465	535
		C	26	26	28	30	34	36	42	46	52	56	60
		f	3	3	3	3	3	3	3	3	4	4	4
		n-Ød	4-M22	8-M22	8-M22	8-M26	8-M30	8-M33	12-M36	12-M36	16-M36	16-M39	16-M42
Top works/operation	Hand-wheel	H (open)	426	463	530	611	725	833	1038	(2)	(2)	(2)	(2)
		H (close)	371	393	442	496	588	668	823				
		ØW	200	200	220	250	350	350	450				
	Gear with handwheel	H1	-	-	-	-	-	-	-	1765	2135	2575	2838
		h1	-	-	-	-	-	-	-	348	398	448	523
		g	-	-	-	-	-	-	-	340	340	340	413
		ØW1	-	-	-	-	-	-	-	460	460	460	530
	With ISO 5210 mounting pad	H2 (open)	426	463	545	622	725	833	1035	1750	2125	2562	2810
		H2 (close)	371	393	460	507	588	668	820	1490	1810	2197	2395
		h2	60	60	60	80	80	100	110	120	120	140	140
		ISO	F10	F10	F10	F12	F12	F14	F16	F25	F25	F30	F30
		Tr	Tr20x4-LH	Tr22x5-LH	Tr24x5-LH	Tr26x5-LH	Tr32x6-LH	Tr32x6-LH	Tr38x6-LH	Tr42x8-LH	Tr46x8-LH	Tr52x8-LH	Tr55x8-LH
		Stroke	55	70	85	115	137	165	215	260	315	365	415
		No. of turns	14	14	17	23	23	28	36	33	40	46	52
		Torque	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)
Kvs-value			(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)
Approx. Weight RF			92	108	120	156	290	389	558	801	1148	1543	2214

(1) To be specified by the purchaser
(2) It works with gear with handwheel
(3) Under request

Dimensions in mm subject to manufacturing tolerance / Torques in Nm / Weights in kg

Main Valve Parameters - PN100

Nominal Size		DN	50	65	80	100	125	150	200	250	300	350
End connection	RF	L	250	290	310	350	400	450	550	650	750	850
		ØD	195	220	230	265	315	355	430	505	585	655
		ØK	145	170	180	210	250	290	360	430	500	560
		ØF	102	122	138	162	188	218	285	345	410	465
		C	30	34	36	40	40	44	52	60	68	74
		f	3	3	3	3	3	3	3	3	4	4
		n-Ød	4-M24	8-M24	8-M24	8-M27	8-M30	12-M30	12-M33	12-M36	16-M39	16-M45
Top works/operation	Hand-wheel	H (open)	440	470	538	617	720	855	(2)	(2)	(2)	(2)
		H (close)	385	396	450	507	585	695				
		ØW	220	250	350	350	400	450				
	Gear with handwheel	H1	-	-	-	-	-	-	1260	1655	1985	2195
		h1	-	-	-	-	-	-	293	348	418	473
		g	-	-	-	-	-	-	340	340	413	413
		ØW1	-	-	-	-	-	-	460	460	530	530
	With ISO 5210 mounting pad	H2 (open)	440	470	538	610	727	850	1185	1565	1876	1925
		H2 (close)	385	396	450	510	592	690	970	1300	1561	1560
		h2	60	60	80	80	100	110	110	120	140	140
		ISO	F10	F10	F12	F12	F14	F16	F16	F25	F30	F30
		Tr	Tr20x4-LH	Tr22x5-LH	Tr26x5-LH	Tr30x6-LH	Tr36x6-LH	Tr38x6-LH	Tr42x8-LH	Tr48x8-LH	Tr52x8-LH	Tr58x8-LH
		Stroke	55	74	88	100	135	160	215	265	315	365
		No. Of turns	14	15	18	17	23	27	27	34	40	46
		Torque	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)
Kvs-value			(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)
Approx. Weight RF			98	130	154	231	410	542	778	1321	2015	2676

(1) To be specified by the purchaser
(2) It works with gear with handwheel
(3) Under request

Dimensions in mm subject to manufacturing tolerance / Torques in Nm / Weights in kg

Information / restriction of technical rules need to be observed!
Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Series 3P DIN RANGE

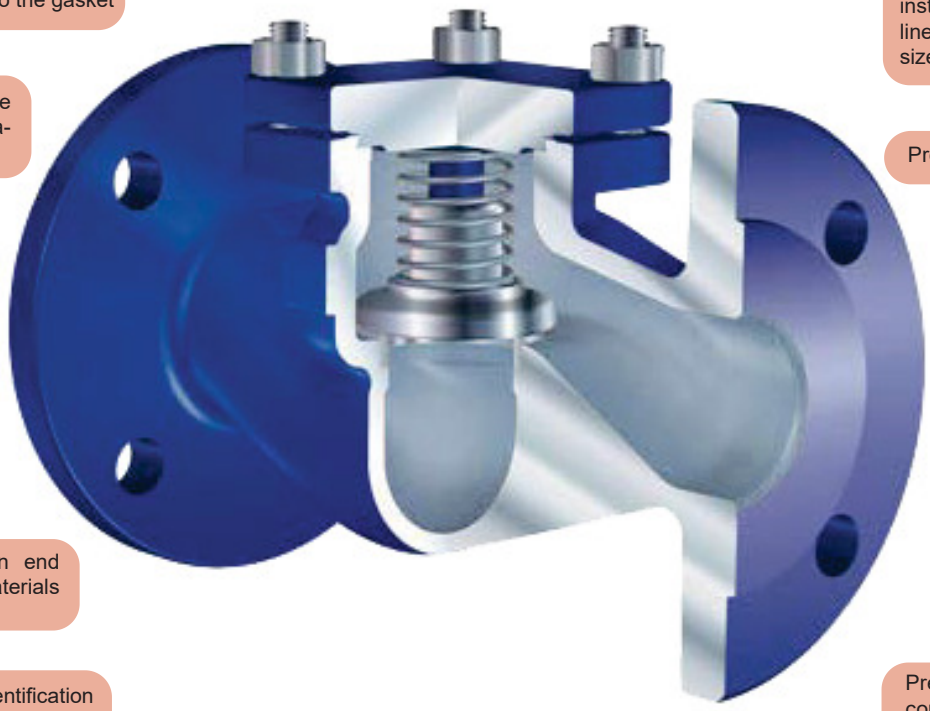
Check Valves are self-acting valves used for preventing the reverse of flow in a piping system. Series 3P are Piston Check Valves are provided with a guided piston which can be loaded by a spring and closes the disc against a horizontal valve seat. Piston Check Valves provide a larger pressure drop in the pipe line, this design permits a faster closure reaction and more tightness.

Body to cover joint design to apply uniform load to the gasket

Seat surface can be hardened to increase wear resistance

Great versatility in end connections, materials and configurations

Marking for identification and full traceability purpose



Spring loaded to allow installation on vertical lines (standard for small sizes)

Precise plug guidance

Precise machining of components for optimal performance

Main Features / Reference Standards

Design: EN 13709
Pressure Design: PN40
Face to face length: EN558 S1 (DIN 3202 F1)
Valve end connections: Flanged to EN1092-1 type 21/B, PN40
Marking: EN19
Inspections & Tests: EN12266-1
Unidirectional design. See the arrow on the body for normal flow direction
Primer painted for protection during storage and transport (carbon steel body/bonnet)
Product compliant with Pressure Equipment Directive PED, up to category III for European territory

Main Duties / Limits of use

Fluids compatible with materials of construction
Pressure / Temperature Rating to EN 1092-1, refers to page 3.
For PED compliant products, limits also acc. to PED Annex II Tables 6, 7, 8 & 9, gases and liquids of fluid groups 1 & 2, up to category III
Questions referring to chemical resistance, please consult us

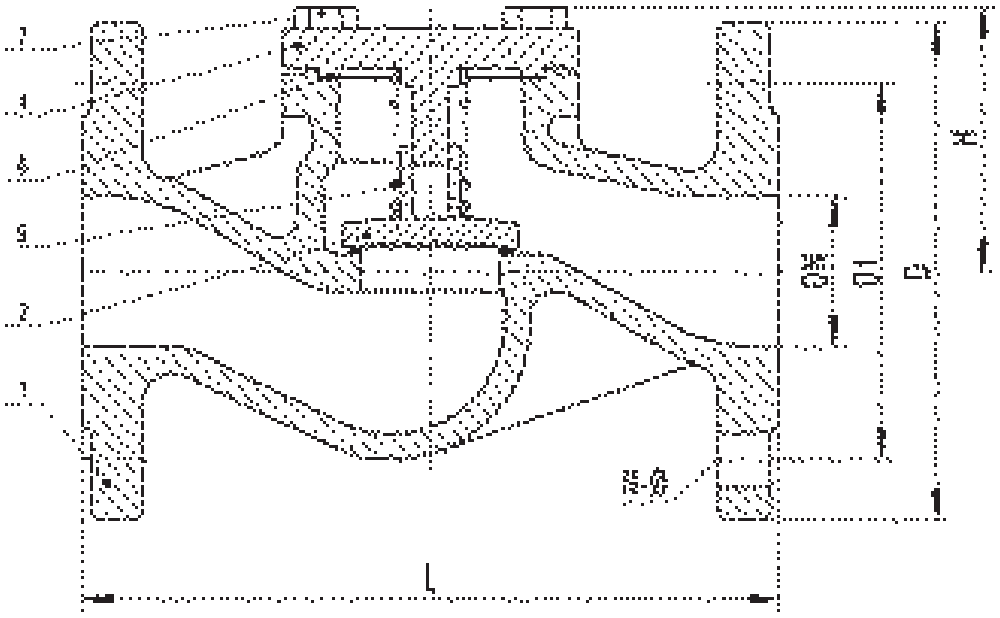
Options

Diverse materials of construction and trim combinations, with or without spring, angle pattern, Y pattern, execution for turbulent flow or unstable condition, execution for aggressive atmosphere, etc. Please consult us

Main Parts and Materials

Series 3P DIN RANGE

DN15-400



Nº	PART	MATERIAL
1	BODY	1.0619+13Cr
2	DISC	CS+13 Cr
4	COVER	1.0619
6	SPACER	St. Steel + Graphite
7	BOLT	A194-B7
9	SPRING	St. Steel

Main Valve Parameters

DN		15	20	25	32	40	50	65	80	100	125	150	200	250	300	350	400
	L	130	150	160	180	200	230	290	310	350	400	480	600	730	850	980	1100
	D	95	105	115	140	150	165	185	200	220	250	285	340	405	460	520	580
PN16	D1	65	75	85	100	110	125	145	160	180	210	240	295	355	410	470	580
	N-Ø	4x14	4x14	4x14	4x18	4x18	4x18	4X18	8x18	8X18	8X18	8X22	12X22	12X26	12X26	16X26	16X30
	H	70	70	80	80	85	95	110	130	155	165	215	285	325	365	440	630
	L	130	150	160	180	200	230	290	310	350	400	480	600	730	850	980	1100
	D	95	105	115	140	150	165	185	200	235	270	300	360	425	485	555	620
PN25	D1	65	75	85	100	110	125	145	160	190	220	250	310	370	430	490	555
	N-Ø	4x14	4x14	4x14	4x18	4x18	4x18	4X18	8x18	8X22	8X26	8X26	12X26	12X30	16X30	16X33	16X36
	H	70	70	80	80	85	95	110	130	155	165	215	285	325	365	440	630
	L	130	150	160	180	200	230	290	310	350	400	480	600	730	850	980	1100
	D	95	105	115	140	150	165	185	200	235	270	300	375	450	515	585	660
PN40	D1	65	75	85	100	110	125	145	160	190	220	250	320	385	450	510	585
	N-Ø	4x14	4x14	4x14	4x18	4x18	4x18	4X18	8x18	8X22	8X26	8X26	12X30	12X33	16X33	16X36	16X39
	H	70	70	80	80	85	95	110	130	155	165	215	285	325	365	440	630

Dimensions in mm subject to manufacturing tolerance / Kvs-values in m^3/h / Weights in kg
Other dimensions on request

Pressure / Temperature Rating

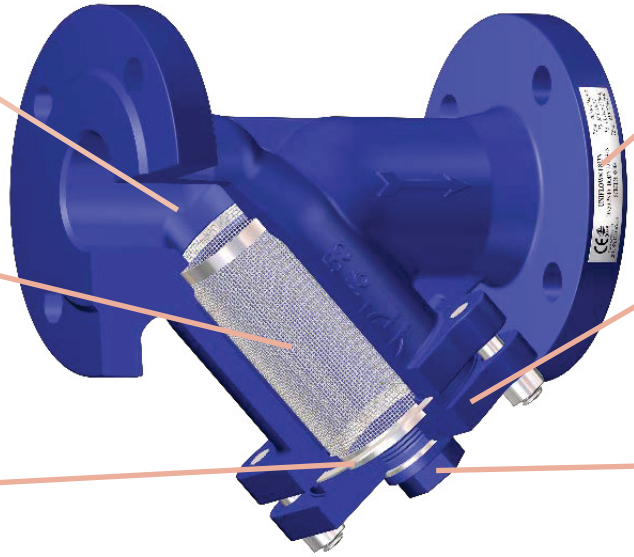
-10°C to 120°C	150°C	200°C	250°C	300°C	350°C	400°C	450°C
40 bar	38,1 bar	35 bar	32 bar	28 bar	25,7 bar	23,8 bar	13,1 bar

Information / restriction of technical rules need to be observed!
Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

SERIES F0A0 DIN RANGE

Y-Strainers type F0A0 DIN are devices for mechanically removing solids from flowing media by means of a wired mesh, replaceable in line. They combine a rugged and compact design for indoors installation in industrial plants, building industry, etc.



Precise machined seat slot, to accomodate the screen and avoid dirt to by-pass the strainer

St. steel screen, made out of high resistance wire, rugged and braided type

Reinforced graphite gasket, with. st. steel reinforcement

Nameplate incl. batch no. for full traceability

Removable bolting cover, to ease maintenance

Standard threaded blow-off connection, with metallic gasket, thus avoiding the gasket replacement on every emptying operation

Main Features

Valve design: EN 12516
Nominal pressure: PN40
Face to face length: EN 558 S1 (DIN 3202 F1)
End connections: Flanged to EN 1092-1 type 21/B PN40
Marking: EN 19
Pressure Tests: EN 12266-1
Inside and outside primer paint layer blue color similar to RAL5002
Product compliant with Directive 2014/68/EU on Pressure Equipment (PED)

Main Duties / Limits of use

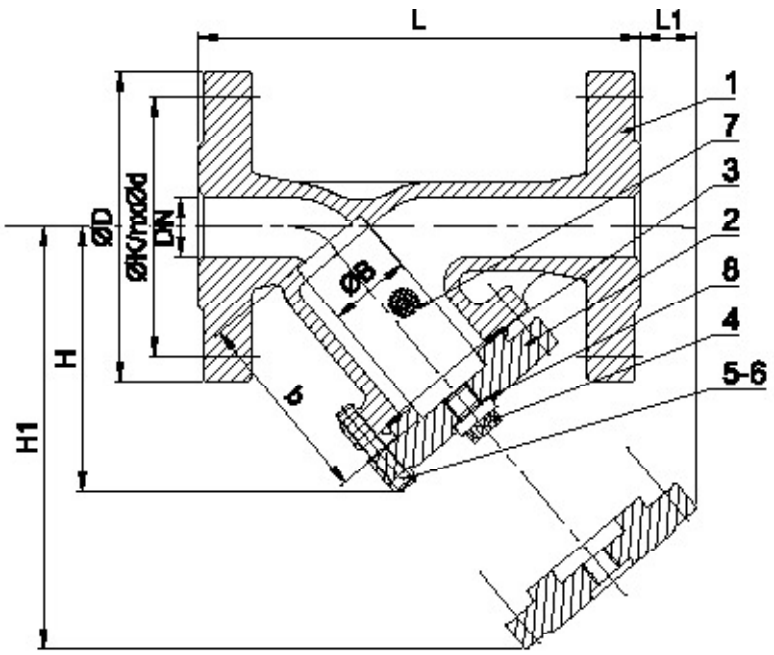
Fluids compatible with materials of construction. Questions referring to chemical resistance, please consult us
Pressure / Temperature rating acc. to EN 1092-1 .
For products compliant with Directive 2014/68/EU, observe also limits acc. to Annex II tables 6 & 8 (gases & liquids group 1*) and tables 7 & 9 (gases & liquids group 2*) up to category III
**Classification of fluids (group 1 or 2) acc. to Directive 2014/68/EU, Article 13*

Options

Other screen width, special screen for vacuum service or in suction side of pumps, etc.
Other designs and approvals, please consult us.

Main Parts and Materials

SERIES F0A0 DIN RANGE



Nº	PART	MATERIAL
1	BODY	Cast steel 1.0619+N
2	COVER	Cast steel 1.0619+N
3	GASKET	Graphite+St. steel 304
4	DRAINING PLUG	Cast steel 1.0619+N
5-6	STUDS-NUTS	Steel A307B/A503A
7	SCREEN	St. steel 304
8	DRAINING PLUG GASKET	Cu alloy

Main Valve Parameters

DN	15	20	25	32	40	50	65	80	100
ØK	65	75	85	100	110	125	145	160	190
nxØd	4xØ14	4xØ14	4xØ14	4xØ18	4xØ18	4xØ18	8xØ18	8xØ18	8xØ22
ØD	95	105	115	140	150	165	185	200	235
L	130	150	160	180	200	230	290	310	350
H	90	116	122	140	145	170	179	212	243
L1	65	103	110	77	78	93	73	88	97
H1	123	158	171	198	206	237	259	297	344
Draining plug	M10x1.5	M10x1.5	M16x1.5	M16x1.5	M27x1.5	M27x1.5	M27x1.5	M27x1.5	M33x2
Basket standard perforation	1	1	1	1	1	1	1,25	1,25	1,6
Kvs	6	9	14	21	29	49	79	117	187

Dimensions in mm subject to manufacturing tolerance

DN	125	150	200	250	300	350	400	500	600
ØK	220	250	320	385	450	510	585	670	795
nxØd	8xØ26	8xØ26	12xØ30	12xØ33	16xØ33	16xØ36	16xØ39	20xØ42	20xØ48
ØD	270	300	375	450	515	580	660	755	890
L	400	480	600	730	850	980	1100	1200	1450
H	281	321	404	482	560	-	-	-	-
L1	103	92	112	193	252	-	-	-	-
H1	399	451	574	747	899	-	-	-	-
Draining plug	M33x2	M33x2	M33x2	M33x2	M48x2	M48x2	M48x2	M48x2	M48x2
Basket standard perforation	1,6	1,6	1,6	1,6	1,6	-	-	-	-
Kvs	301	315	522	980	1498	-	-	-	-

DN350-600 acc. to customer specifications

Dimensions in mm subject to manufacturing tolerance

Information / restriction of technical rules need to be observed!
Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

CE

SERIES F0I0 DIN RANGE

Y-strainers are devices for mechanically removing solids from flowing liquids or gases by means of a perforated wire mesh straining element. Series F0I0 DIN are compact, of cylindrical shape and designed to handle a vast majority of fluids encountered in the process industry such as demineralized water, ammonia, chemicals and gases. They protect equipment downstream and can be either horizontally or vertically installed. Maintenance is easy thanks to the removing screen. These strainers show low pressure drop across thanks to their shape and similarity to pipe line configuration. These Series are made in investment cast stainless steel which adds considerable quality finish to the surface avoiding roughness and pinholes risk.

Marking and tagging, positive flow marking by an arrow, raised symbols denoting heat numbers, Design Pressure and Nominal Diameter. Riveted steel plate in compliance with PED rules

High quality surface made out in investment cast stainless steel

Rugged stainless steel basket screen

Removable bolted cover, to ease maintenance

Raised flange ends and machined slots to better accommodating the assembling gaskets

Drainage screw, leakage proof for blow off maintenance operations

PTFE gasket to avoid deterioration by corrosive media, temperature constrains to PTFE

Main Features / Reference Standards

Valve design: EN 12516
Nominal pressure: PN16
Face to face length: EN 558 S1
Valve end connections: Flanges EN 1092-1 PN40 (DN15-DN50); PN16 (DN65-DN200)
Marking: EN 19
Inspections & Tests: EN 12266-1
Product compliant with Directive 2014/68/EU Pressure Equipment (PED)

Main Duties / Limits of use

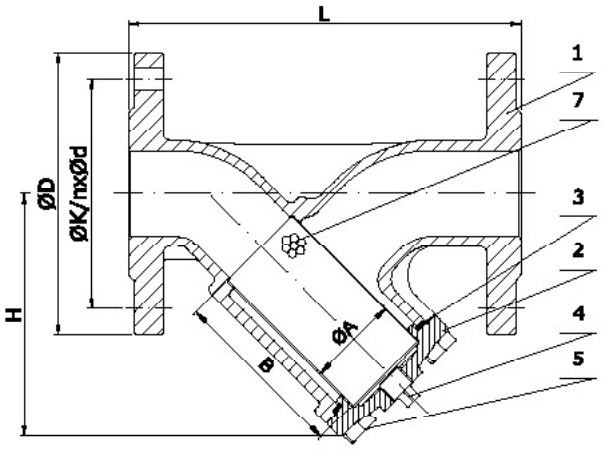
Fluids compatible with materials of construction. Questions referring to chemical resistance, please consult us
Pressure / Temperature rating acc. to EN 1092-1
Pressure Rating: 16 bar (option 40 bar DN15-50)
For products compliant with Directive 2014/68/EU, observe also limits acc. to Annex II tables 6 & 8 (gases & liquids group 1*) and tables 7 & 9 (gases & liquids group 2*) up to category III
**Classification of fluids (group 1 or 2) acc. to Directive 2014/68/EU, Article 13*

Options

Other screen perforation, special screen for vacuum service, or in suction side of pumps, etc.
Other designs and approvals, please consult us.

SERIES F0I0 DIN RANGE

Main Parts and Materials



Nº	Part	Material	Specification
1	Body	St. steel	1.4408
2	Cover	St. steel	1.4408
3	Gasket	Graphite+St. steel	
4	Plug	St. steel	SS30416
5	Bolting	St. steel	A2-70
7	Screen	St. steel	SS316

Main Parameters

DN		L	H	ØD	ØK	nxØd	Screen Perforation	Approx. Weight
15	1/2”	130	75	95	65	4 x 14	1,5	2
20	3/4”	150	75	105	75	4 x 14	1,5	3
25	1”	160	100	115	85	4 x 14	1,5	4
32	1 1/4”	180	120	140	100	4 x 18	1,5	6
40	1 1/2”	200	120	150	110	4 x 18	2	6,5
50	2”	230	140	165	125	4 x 18	2	9
65	2 1/2”	290	175	185	145	4 x 18	2	12
80	3”	310	196	200	160	8 x 18	2	1,5
100	4”	350	244	220	180	8 x 18	2	20
125	5”	400	277	250	210	8 x 18	2	32
150	6”	480	320	285	240	8 x 22	2	45
200	8”	600	390	340	295	12x22	2	85

Dimensions in mm subject to manufacturing tolerance / Weights in kg
Other dimensions on request

Information / restriction of technical rules need to be observed!
Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Conversion table: inch to mm

Inches	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
0	0,0	1,6	3,2	4,8	6,4	7,9	9,5	11,1	12,7	14,3	15,9	17,5	19,1	20,6	22,2	23,8
1	25,4	27,0	28,6	30,2	31,8	33,3	34,9	36,5	38,1	39,7	41,3	42,9	44,5	46,0	47,6	49,2
2	50,8	52,4	54,0	55,6	57,2	58,7	60,3	61,9	63,5	65,1	66,7	68,3	69,9	71,4	73,0	74,6
3	76,2	77,8	79,4	81,0	82,6	84,1	85,7	87,3	88,9	90,5	92,1	93,7	95,3	96,8	98,4	100,0
4	101,6	103,2	104,8	106,4	108,0	109,5	111,1	112,7	114,3	115,9	117,5	119,1	120,7	122,2	123,8	125,4
5	127,0	128,6	130,2	131,8	133,4	134,9	136,5	138,1	139,7	141,3	142,9	144,5	146,1	147,6	149,2	150,8
6	152,4	154,0	155,6	157,2	158,8	160,3	161,9	163,5	165,1	166,7	168,3	169,9	171,5	173,0	174,6	176,2
7	177,8	179,4	181,0	182,6	184,2	185,7	187,3	188,9	190,5	192,1	193,7	195,3	196,9	198,4	200,0	201,6
8	203,2	204,8	206,4	208,0	209,6	211,1	212,7	214,3	215,9	217,5	219,1	220,7	222,3	223,8	225,4	227,0
9	228,6	230,2	231,8	233,4	235,0	236,5	238,1	239,7	241,3	242,9	244,5	246,1	247,7	249,2	250,8	252,4
10	254,0	255,6	257,2	258,8	260,4	261,9	263,5	265,1	266,7	268,3	269,9	271,5	273,1	274,6	276,2	277,8
11	279,4	281,0	282,6	284,2	285,8	287,3	288,9	290,5	292,1	293,7	295,3	296,9	298,5	300,0	301,6	303,2
12	304,8	306,4	308,0	309,6	311,2	312,7	314,3	315,9	317,5	319,1	320,7	322,3	323,9	325,4	327,0	328,6
13	330,2	331,8	333,4	335,0	336,6	338,1	339,7	341,3	342,9	344,5	346,1	347,7	349,3	350,8	352,4	354,0
14	355,6	357,2	358,8	360,4	362,0	363,5	365,1	366,7	368,3	369,9	371,5	373,1	374,7	376,2	377,8	379,4
15	381,0	382,6	384,2	385,8	387,4	388,9	390,5	392,1	393,7	395,3	396,9	398,5	400,1	401,6	403,2	404,8
16	406,4	408,0	409,6	411,2	412,8	414,3	415,9	417,5	419,1	420,7	422,3	423,9	425,5	427,0	428,6	430,2
17	431,8	433,4	435,0	436,6	438,2	439,7	441,3	442,9	444,5	446,1	447,7	449,3	450,9	452,4	454,0	455,6
18	457,2	458,8	460,4	462,0	463,6	465,1	466,7	468,3	469,9	471,5	473,1	474,7	476,3	477,8	479,4	481,0
19	482,6	484,2	485,8	487,4	489,0	490,5	492,1	493,7	495,3	496,9	498,5	500,1	501,7	503,2	504,8	506,4
20	508,0	509,6	511,2	512,8	514,4	515,9	517,5	519,1	520,7	522,3	523,9	525,5	527,1	528,6	530,2	531,8
21	533,4	535,0	536,6	538,2	539,8	541,3	542,9	544,5	546,1	547,7	549,3	550,9	552,5	554,0	555,6	557,2
22	558,8	560,4	562,0	563,6	565,2	566,7	568,3	569,9	571,5	573,1	574,7	576,3	577,9	579,4	581,0	582,6
23	584,2	585,8	587,4	589,0	590,6	592,1	593,7	595,3	596,9	598,5	600,1	601,7	603,3	604,8	606,4	608,0
24	609,6	611,2	612,8	614,4	616,0	617,5	619,1	620,7	622,3	623,9	625,5	627,1	628,7	630,2	631,8	633,4
25	635,0	636,6	638,2	639,8	641,4	642,9	644,5	646,1	647,7	649,3	650,9	652,5	654,1	655,6	657,2	658,8
26	660,4	662,0	663,6	665,2	666,8	668,3	669,9	671,5	673,1	674,7	676,3	677,9	679,5	681,0	682,6	684,2
27	685,8	687,4	689,0	690,6	692,2	693,7	695,3	696,9	698,5	700,1	701,7	703,3	704,9	706,4	708,0	709,6
28	711,2	712,8	714,4	716,0	717,6	719,1	720,7	722,3	723,9	725,5	727,1	728,7	730,3	731,8	733,4	735,0
29	736,6	738,2	739,8	741,4	743,0	744,5	746,1	747,7	749,3	750,9	752,5	754,1	755,7	757,2	758,8	760,4
30	762,0	763,6	765,2	766,8	768,4	769,9	771,5	773,1	774,7	776,3	777,9	779,5	781,1	782,6	784,2	785,8
31	787,4	789,0	790,6	792,2	793,8	795,3	796,9	798,5	800,1	801,7	803,3	804,9	806,5	808,0	809,6	811,2
32	812,8	814,4	816,0	817,6	819,2	820,7	822,3	823,9	825,5	827,1	828,7	830,3	831,9	833,4	835,0	836,6
33	838,2	839,8	841,4	843,0	844,6	846,1	847,7	849,3	850,9	852,5	854,1	855,7	857,3	858,8	860,4	862,0
34	863,6	865,2	866,8	868,4	870,0	871,5	873,1	874,7	876,3	877,9	879,5	881,1	882,7	884,2	885,8	887,4
35	889,0	890,6	892,2	893,8	895,4	896,9	898,5	900,1	901,7	903,3	904,9	906,5	908,1	909,6	911,2	912,8
36	914,4	916,0	917,6	919,2	920,8	922,3	923,9	925,5	927,1	928,7	930,3	931,9	933,5	935,0	936,6	938,2
37	939,8	941,4	943,0	944,6	946,2	947,7	949,3	950,9	952,5	954,1	955,7	957,3	958,9	960,4	962,0	963,6
38	965,2	966,8	968,4	970,0	971,6	973,1	974,7	976,3	977,9	979,5	981,1	982,7	984,3	985,8	987,4	989,0
39	990,6	992,2	993,8	995,4	997,0	998,5	1000,1	1001,7	1003,3	1004,9	1006,5	1008,1	1009,7	1011,2	1012,8	1014,4
40	1016,0	1017,6	1019,2	1020,8	1022,4	1023,9	1025,5	1027,1	1028,7	1030,3	1031,9	1033,5	1035,1	1036,6	1038,2	1039,8
41	1041,4	1043,0	1044,6	1046,2	1047,8	1049,3	1050,9	1052,5	1054,1	1055,7	1057,3	1058,9	1060,5	1062,0	1063,6	1065,2
42	1066,8	1068,4	1070,0	1071,6	1073,2	1074,7	1076,3	1077,9	1079,5	1081,1	1082,7	1084,3	1085,9	1087,4	1089,0	1090,6
43	1092,2	1093,8	1095,4	1097,0	1098,6	1100,1	1101,7	1103,3	1104,9	1106,5	1108,1	1109,7	1111,3	1112,8	1114,4	1116,0
44	1117,6	1119,2	1120,8	1122,4	1124,0	1125,5	1127,1	1128,7	1130,3	1131,9	1133,5	1135,1	1136,7	1138,2	1139,8	1141,4
45	1143,0	1144,6	1146,2	1147,8	1149,4	1150,9	1152,5	1154,1	1155,7	1157,3	1158,9	1160,5	1162,1	1163,6	1165,2	1166,8
46	1168,4	1170,0	1171,6	1173,2	1174,8	1176,3	1177,9	1179,5	1181,1	1182,7	1184,3	1185,9	1187,5	1189,0	1190,6	1192,2
47	1193,8	1195,4	1197,0	1198,6	1200,2	1201,7	1203,3	1204,9	1206,5	1208,1	1209,7	1211,3	1212,9	1214,4	1216,0	1217,6
48	1219,2	1220,8	1222,4	1224,0	1225,6	1227,1	1228,7	1230,3	1231,9	1233,5	1235,1	1236,7	1238,3	1239,8	1241,4	1243,0

Conversion table: mm to inches

mm	0 inches	1 inches	2 inches	3 inches	4 inches	5 inches	6 inches	7 inches	8 inches	9 inches
0	0,00000	0,03937	0,07874	0,11811	0,15748	0,19685	0,23622	0,27559	0,31496	0,35433
10	0,39370	0,43307	0,47244	0,51181	0,55118	0,59055	0,62992	0,66929	0,70866	0,74803
20	0,78740	0,82677	0,86614	0,90551	0,94488	0,98425	1,02362	1,06299	1,10236	1,14173
30	1,18110	1,22047	1,25984	1,29921	1,33858	1,37795	1,41732	1,45669	1,49606	1,53543
40	1,57480	1,61417	1,65354	1,69291	1,73228	1,77165	1,81102	1,85039	1,88976	1,92913
50	1,96850	2,00787	2,04724	2,08661	2,12598	2,16535	2,20472	2,24409	2,28346	2,32283
60	2,36220	2,40157	2,44094	2,48031	2,51969	2,55906	2,59843	2,63780	2,67717	2,71654
70	2,75591	2,79528	2,83465	2,87402	2,91339	2,95276	2,99213	3,03150	3,07087	3,11024
80	3,14961	3,18898	3,22835	3,26772	3,30709	3,34646	3,38583	3,42520	3,46457	3,50394
90	3,54331	3,58268	3,62205	3,66142	3,70079	3,74016	3,77953	3,81890	3,85827	3,89764
100	3,93701	3,97638	4,01575	4,05512	4,09449	4,13386	4,17323	4,21260	4,25197	4,29134
110	4,33071	4,37008	4,40945	4,44882	4,48819	4,52756	4,56693	4,60630	4,64567	4,68504
120	4,72441	4,76378	4,80315	4,84252	4,88189	4,92126	4,96063	5,00000	5,03937	5,07874
130	5,11811	5,15748	5,19685	5,23622	5,27559	5,31496	5,35433	5,39370	5,43307	5,47244
140	5,51181	5,55118	5,59055	5,62992	5,66929	5,70866	5,74803	5,78740	5,82677	5,86614
150	5,90551	5,94488	5,98425	6,02362	6,06299	6,10236	6,14173	6,18110	6,22047	6,25984
160	6,29921	6,33858	6,37795	6,41732	6,45669	6,49606	6,53543	6,57480	6,61417	6,65354
170	6,69291	6,73228	6,77165	6,81102	6,85039	6,88976	6,92913	6,96850	7,00787	7,04724
180	7,08661	7,12598	7,16535	7,20472	7,24409	7,28346	7,32283	7,36220	7,40157	7,44094
190	7,48031	7,51969	7,55906	7,59843	7,63780	7,67717	7,71654	7,75591	7,79528	7,83465
200	7,87402	7,91339	7,95276	7,99213	8,03150	8,07087	8,11024	8,14961	8,18898	8,22835
210	8,26772	8,30709	8,34646	8,38583	8,42520	8,46457	8,50394	8,54331	8,58268	8,62205
220	8,66142	8,70079	8,74016	8,77953	8,81890	8,85827	8,89764	8,93701	8,97638	9,01575
230	9,05512	9,09449	9,13386	9,17323	9,21260	9,25197	9,29134	9,33071	9,37008	9,40945
240	9,44882	9,48819	9,52756	9,56693	9,60630	9,64567	9,68504	9,72441	9,76378	9,80315
250	9,84252	9,88189	9,92126	9,96063	10,00000	10,03937	10,07874	10,11811	10,15748	10,19685
260	10,23622	10,27559	10,31496	10,35433	10,39370	10,43307	10,47244	10,51181	10,55118	10,59055
270	10,62992	10,66929	10,70866	10,74803	10,78740	10,82677	10,86614	10,90551	10,94488	10,98425
280	11,02362	11,06299	11,10236	11,14173	11,18110	11,22047	11,25984	11,29921	11,33858	11,37795
290	11,41732	11,45669	11,49606	11,53543	11,57480	11,61417	11,65354	11,69291	11,73228	11,77165
300	11,81102	11,85039	11,88976	11,92913	11,96850	12,00787	12,04724	12,08661	12,12598	12,16535
310	12,20472	12,24409	12,28346	12,32283	12,36220	12,40157	12,44094	12,48031	12,51969	12,55906
320	12,59843	12,63780	12,67717	12,71654	12,75591	12,79528	12,83465	12,87402	12,91339	12,95276
330	12,99213	13,03150	13,07087	13,11024	13,14961	13,18898	13,22835	13,26772	13,30709	13,34646
340	13,38583	13,42520	13,46457	13,50394	13,54331	13,58268	13,62205	13,66142	13,70079	13,74016
350	13,77953	13,81890	13,85827	13,89764	13,93701	13,97638	14,01575	14,05512	14,09449	14,13386
360	14,17323	14,21260	14,25197	14,29134	14,33071	14,37008	14,40945	14,44882	14,48819	14,52756
370	14,56693	14,60630	14,64567	14,68504	14,72441	14,76378	14,80315	14,84252	14,88189	14,92126
380	14,96063	15,00000	15,03937	15,07874	15,11811	15,15748	15,19685	15,23622	15,27559	15,31496
390	15,35433	15,39370	15,43307	15,47244	15,51181	15,55118	15,59055	15,62992	15,66929	15,70866
400	15,74803	15,78740	15,82677	15,86614	15,90551	15,94488	15,98425	16,02362	16,06299	16,10236
410	16,14173	16,18110	16,22047	16,25984	16,29921	16,33858	16,37795	16,41732	16,45669	16,49606
420	16,53543	16,57480	16,61417	16,65354	16,69291	16,73228	16,77165	16,81102	16,85039	16,88976
430	16,92913	16,96850	17,00787	17,04724	17,08661	17,12598	17,16535	17,20472	17,24409	17,28346
440	17,32283	17,36220	17,40157	17,44094	17,48031	17,51969	17,55906	17,59843	17,63780	17,67717
450	17,71654	17,75591	17,79528	17,83465	17,87402	17,91339	17,95276	17,99213	18,03150	18,07087
460	18,11024	18,14961	18,18898	18,22835	18,26772	18,30709	18,34646	18,38583	18,42520	18,46457
470	18,50394	18,54331	18,58268	18,62205	18,66142	18,70079	18,74016	18,77953	18,81890	18,85827
480	18,89764	18,93701	18,97638	19,01575	19,05512	19,09449	19,13386	19,17323	19,21260	19,25197
490	19,29134	19,33071	19,37008	19,40945	19,44882	19,48819	19,52756	19,56693	19,60630	19,64567

Conversion table: mm to inches

mm	0 inches	10 inches	20 inches	30 inches	40 inches	50 inches	60 inches	70 inches	80 inches	90 inches
500	19,68504	20,07874	20,47244	20,86614	21,25984	21,65354	22,04724	22,44094	22,83465	23,22835
600	23,62205	24,01575	24,40945	24,80315	25,19685	25,59055	25,98425	26,37795	26,77165	27,16535
700	27,55906	27,95276	28,34646	28,74016	29,13386	29,52756	29,92126	30,31496	30,70866	31,10236
800	31,49606	31,88976	32,28346	32,67717	33,07087	33,46457	33,85827	34,25197	34,64567	35,03937
900	35,43307	35,82677	36,22047	36,61417	37,00787	37,40157	37,79528	38,18898	38,58268	38,97638
1000	39,37008	39,76378	40,15748	40,55118	40,94488	41,33858	41,73228	42,12598	42,51969	42,91339
1100	43,30709	43,70079	44,09449	44,48819	44,88189	45,27559	45,66929	46,06299	46,45669	46,85039
1200	47,24409	47,63780	48,03150	48,42520	48,81890	49,21260	49,60630	50,00000	50,39370	50,78740
1300	51,18110	51,57480	51,96850	52,36220	52,75591	53,14961	53,54331	53,93701	54,33071	54,72441
1400	55,11811	55,51181	55,90551	56,29921	56,69291	57,08661	57,48031	57,87402	58,26772	58,66142
1500	59,05512	59,44882	59,84252	60,23622	60,62992	61,02362	61,41732	61,81102	62,20472	62,59843
1600	62,99213	63,38583	63,77953	64,17323	64,56693	64,96063	65,35433	65,74803	66,14173	66,53543

Flowing innovation

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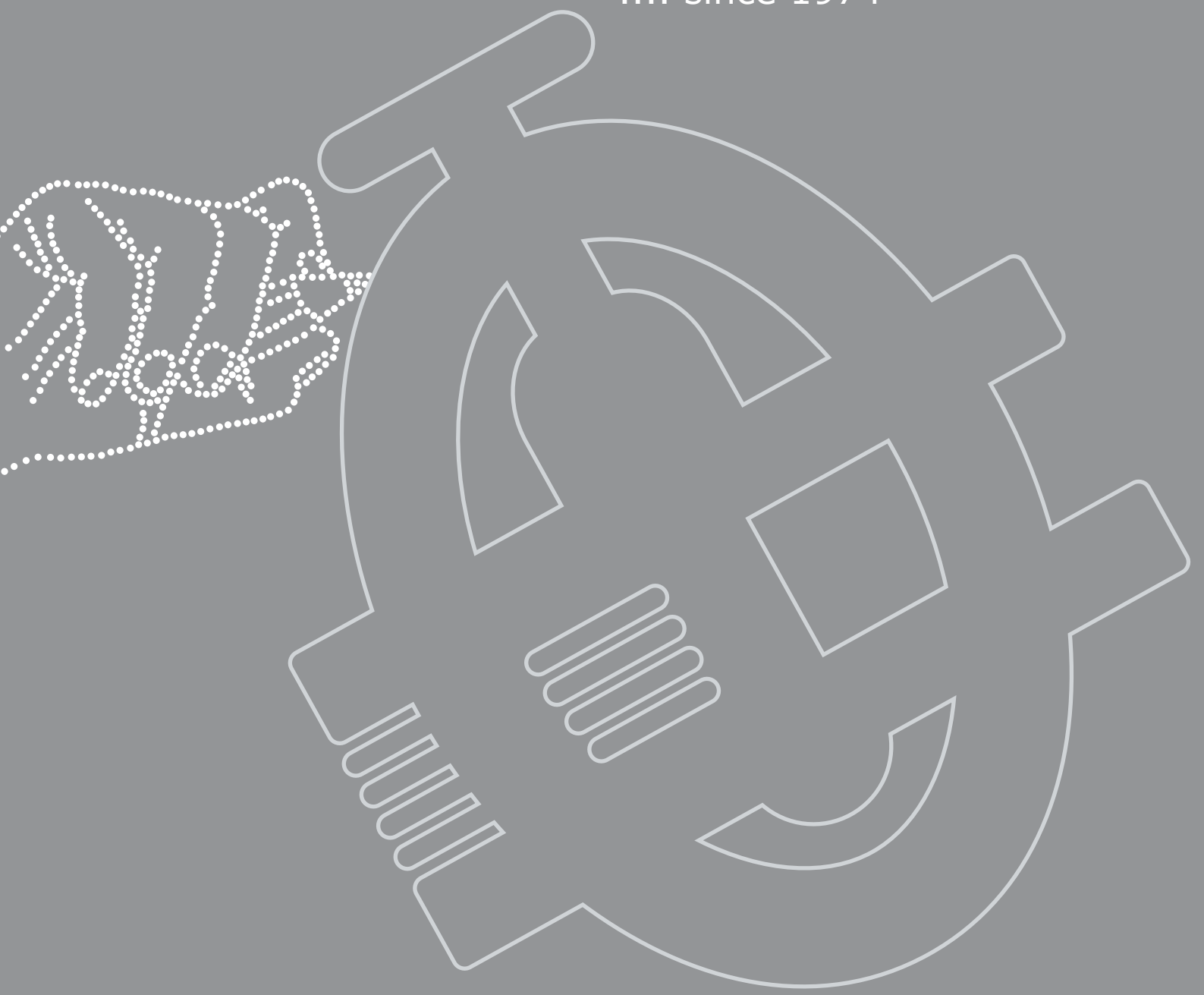

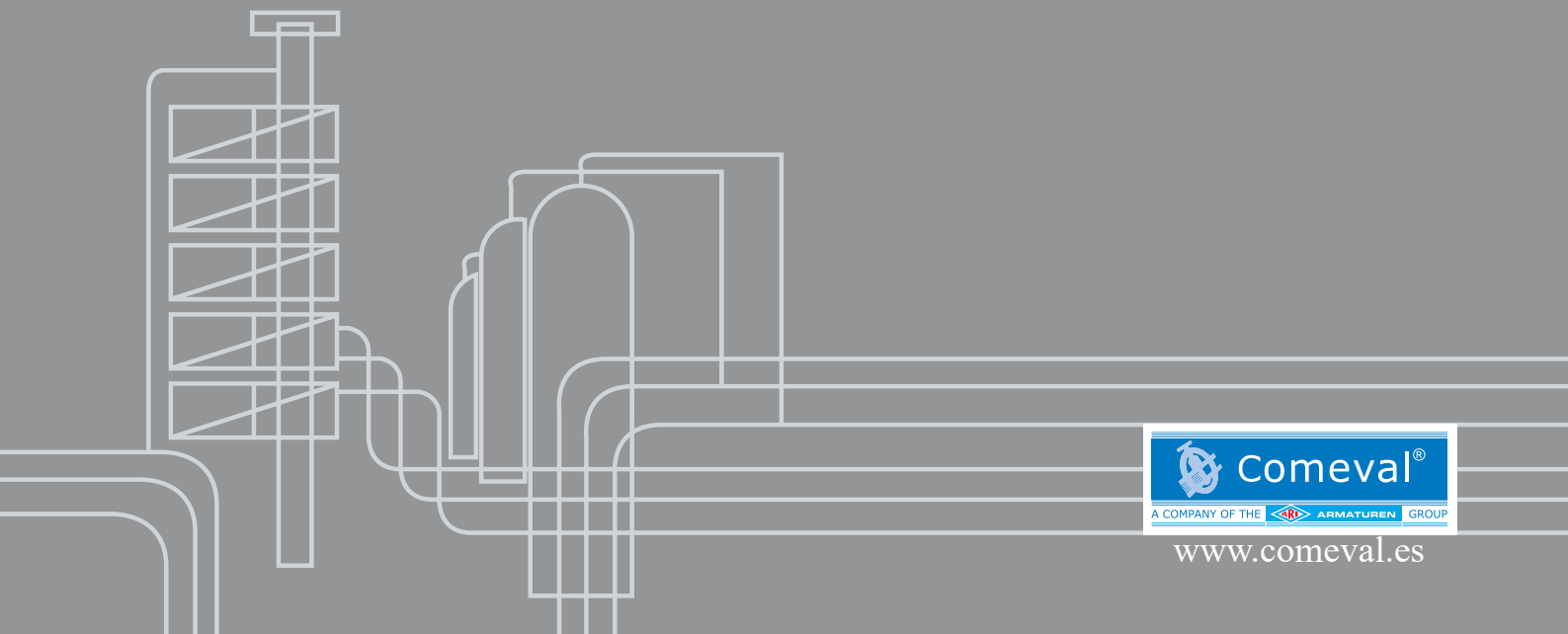

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