

"APPROVE"

Chief mechanical engineer of
«Shurtan GCC», LLC
Kh. Allayorov
2022 y



Per. № 074/ _____

TECHNICAL ASSIGNMENT

for the purchase of shut-off valves with a steel flange
for the needs of LLC «Shurtan GCC»

LLC «Shurtan GCC» 2022 y.

1. GENERAL INFORMATION

1.1 Name

Rising stem gate valve 3" #600
 Rising stem gate valve 4" #600
 Rising stem gate valve 6" #600
 Rising stem gate valve 12" #600
 Valve. 8" #600
 Cryogenic rising stem gate valve 1.1/2" #300
 Double Disc Wafer Check Valve 12" #600
 Geared Ball Valve 12" #150
 Geared ball valve 12" #300
 Double flange butterfly valve 28" #150.

1.2 Reason and purpose of purchasing the goods

Reason: annual application for 2021 and 2022.

Purpose: replacement of the existing shut-off valves is that during 20 years of operation, the shut-off valves were repaired several times without replacement and elimination of the problems associated with the flow leakage in the pipelines in the ethylene production shop. Shut-off valves with steel flanged and welded joints are used on pipelines in the oil and gas industry to completely shut off the flow of the working medium.

1.3 Notice of novelty

The product must be new and suitable for use, which has not been in use, including has not been restored, which has not been restored to consumer properties.

2. APPLICATION

Shut-off valves are used to open and close technological pipelines of the ethylene production shop.

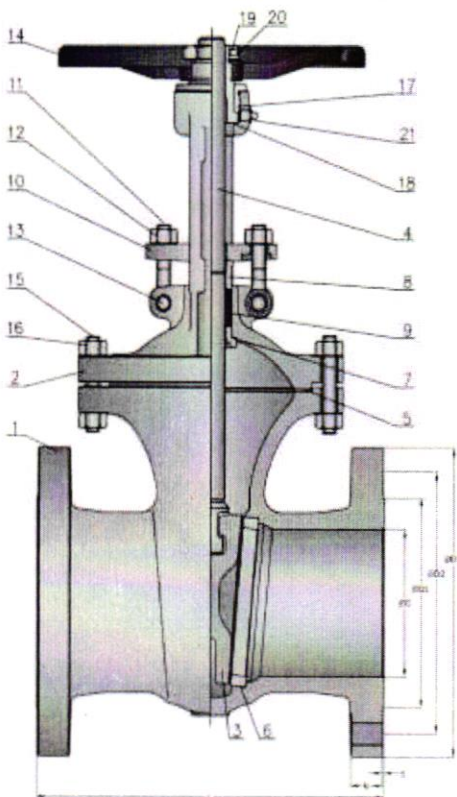
3. SERVICE CONDITIONS

3.1 General operating conditions

The operating mode of the installation is continuous. The unit is stopped for repairs once a year for 18 days. The shut-off valves are installed in an open area with an ambient temperature of $-20 +60^{\circ}\text{C}$.

4. TECHNICAL REQUIREMENTS

4.1 Basic technical requirements

**Gate Valve / Gate valve.**

Quantity / Quantity 1 piece

Size / Nominal pass: 3"

Class / Class pa ASME 600.

Operator - Hand wheel / Drive - hand wheel;

Tightness class: "A".

Design and Manufacture / General design requirements: API 600

Face to Face Dimensions / Face to face: ASME B16.10

Flange Ends Dimensions / Connecting flanges: ASME B 16.5

Inspection and Test/ Tests for strength and tightness: API 598.

Pressure-Temperature chart/ Pressure-temperature relationship: ASME B 16.34

Type Flange / Raised Flange: RF (STD)

Working medium / Working environment: Saturated-regenerated diethanolamine 30%.

Suitable Temperature / Working environment temperature: $-29 \sim 425^{\circ}\text{C}$

Body/Case Material: ASTM A217 Grade CA15

Bonnet/Cap Material: ASTM A217 Grade CA15

Disc/ Disc material: CF8M

Stem/ Stem material: AISI 316

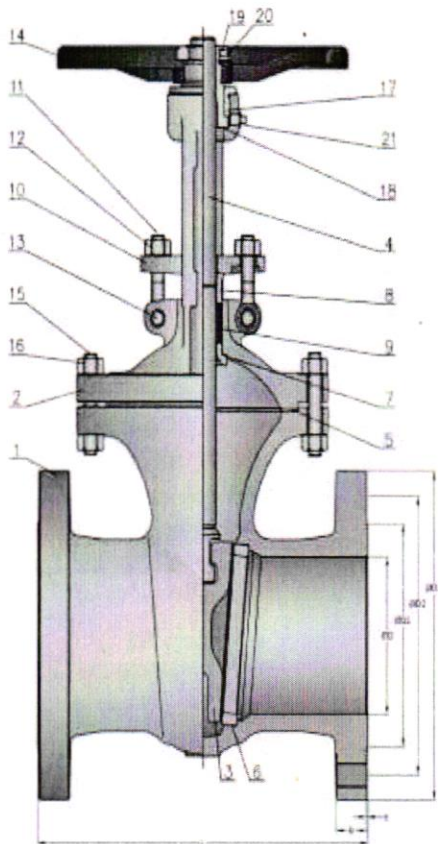
Gasket/ Gasket material: 304+GYLON

Seat Ring Material: ASTM A182 GR F304

Backseat/ Top Seal Sleeve Material: ASTM A182 GR F304

Gland/ Material: ASTM A182 GR F6a





Gate Valve / Gate valve.

Quantity / Quantity 17 pcs.

Size / Nominal pass: 4"

Class /Class pa ASME 600.

Operator - Hand wheel / Drive - hand wheel;

Tightness class: "A".

Design and Manufacture / General design requirements: API 600

Face to Face Dimensions / Face to face: ASME B16.10

Flange Ends Dimensions / Connecting flanges: ASME B 16.5

Inspection and Test / Strength and tightness tests: API 598.

Type Flange/ Raised Flange: RF (STD)

Pressure-Temperature Ratio: ASMEB 16.34

Working environment: Saturated-regenerated diethanolamine 30%.

Suitable Temperature: -29~425°C

Body / Housing material: A351 CF8M

Bonnet/ Lid material: A351 CF8M

Disc/ Disc material: CF8M

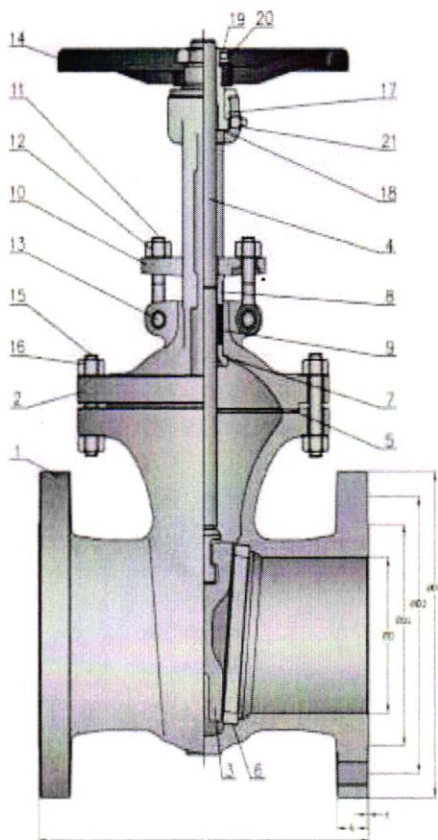
Stem/ Stem material: AISI 316

Gasket/ Gasket material: 304+GYLON

Seat Ring Material: A351 CF8M

Backseat/ Top Seal Sleeve Material: ASTM A182 GR F304

Gland/ Material: ASTM A182 GR F6a



Gate Valve / Gate valve.

Quantity / Quantity 8 pcs.

Size /Nominal pass: 6"

Class /Class according to ASME 600.

Operator - Hand wheel / Drive - hand wheel;

Tightness class: "A".

Design and Manufacture / General design requirements: API 600

Face to Face Dimensions / Face to face: ASME B16.10

Flange Ends Dimensions / Connecting flanges: ASME B 16.5

Inspection and Test/ Tests for strength and tightness: API 598.

Pressure-Temperature chart/ Pressure-temperature relationship:
ASME B 16.34.

Type Flange / Raised Flange: RF (STD)

Working medium / Working environment: Saturated-regenerated
diethanolamine 30%.

Suitable Temperature: -29~425°C

Body / Housing material: A351 CF8M

Bonnet/ Lid material: A351 CF8M

Disc/ Disc material: CF8M

Stem/ Stem material: AISI 316

Gasket/ Gasket material: 304+ GYLON

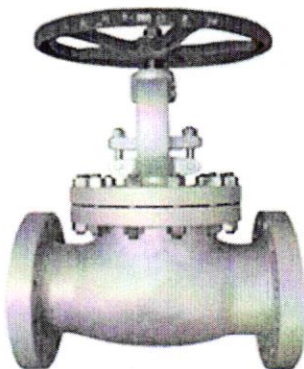
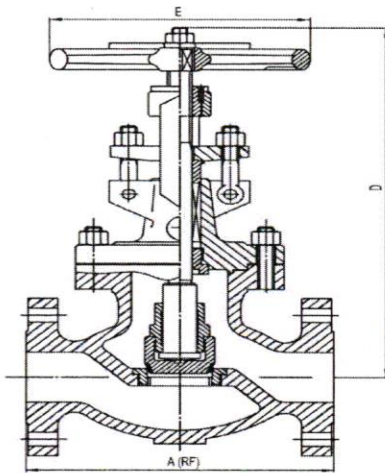
Seat Ring Material: A351 CF8M

Backseat/ Top Seal Sleeve Material: ASTM A182 GR F304

Gland/ Material: ASTM A182 GR F6a



Gate Valve / Gate valve.
Quantity / Quantity 2 pcs.
Size / Nominal pass: 12"
Class / Class according to ASME 600.
Operator – operated gearbox
Tightness class: "A".
Design and Manufacture / General design requirements: API 600
Face to Face Dimensions / Face to face: ASME B16.10
Flange Ends Dimensions / Connecting flanges: ASME B 16.5
Inspection and Test / Strength and tightness tests: API 598.
Type Flange/ Raised Flange: RF (STD)
Pressure –Temperature chart/ Pressure-Temperature Relationship:
ASME B 16.34
Working medium / Working environment: Saturated-regenerated
diethanolamine 30%.
Suitable Temperature: -29~425°C
Body / Housing material: A351 CF8M
Bonnet/ Lid material: A351 CF8M
Disc/ Disc material: CF8M
Stem/ Stem material: AISI 316
Gasket/ Gasket material:304+ GYLON
Seat Ring Material: A351 CF8M
Backseat/ Top Seal Sleeve Material: ASTM A182 GR F304
Gland/ Material: ASTM A182 GR F6a



Globe Valve / Valve.

Quantity / Quantity 1 piece

Size / Nominal pass: 8"

Class / Class according to ASME 600.

Operator - Hand wheel / Drive - hand wheel;

Tightness class: "A".

Design and Manufacture / General Design Requirements: BS1873/API 6D

Face to Face Dimensions / Face to face: ASME B16.10

Flange Ends Dimensions / Connecting flanges: ASME B 16.5

Inspection and Test / Strength and tightness tests: API 598.

Type Flange/ Raised Flange: RF (STD)

Pressure –Temperature chart/ Pressure-Temperature Relationship:
ASME B 16.34

Working medium / Working environment: Saturated-regenerated
diethanolamine 30%.

Suitable Temperature: -29~425°C

Body / Housing material: A351 CF8M

Bonnet/ Cover material: A351 CF8M

Disc/ Disc material: F316

Stem/ Stem material: SS 316


Gasket/ Gasket material: 304+GYLON

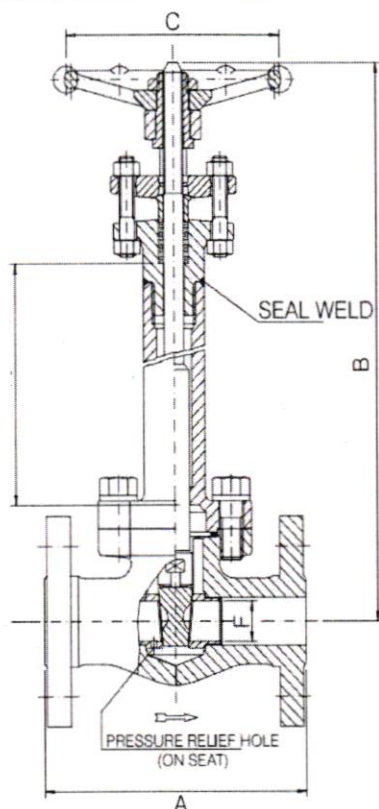
Seat Ring/ Sealing ring material: Co Cr alloy faced F316

Back seat/ Upper seal sleeve material: SS 316

Disc nut/ Disc nut material: SS 316

Gland Flange Material: SS





Cryogenic Gate Valve / Cryogenic gate valve.

Quantity / Quantity 2 pcs.

Size / Nominal bore: 1.1/2"

Class / Class according to ASME 300.

Operator - Hand wheel / Drive - hand wheel;

Tightness class: "A".

Design standard as per / Design standard according to: BS 6364

Face to Face Dimensions / Face to face: ASME B16.10

Flange Ends Dimensions / Connecting flanges: ASME B 16.5

Inspection and Test / Strength and tightness tests: API 598.

Type Flange/ Raised Flange: RF (STD)

Pressure-Temperature chart / Pressure-Temperature Relationship: ASME B 16.34

Cryogenic testing BS 6364 (-196°C)

Suitable Temperature: -196°C~+120°C

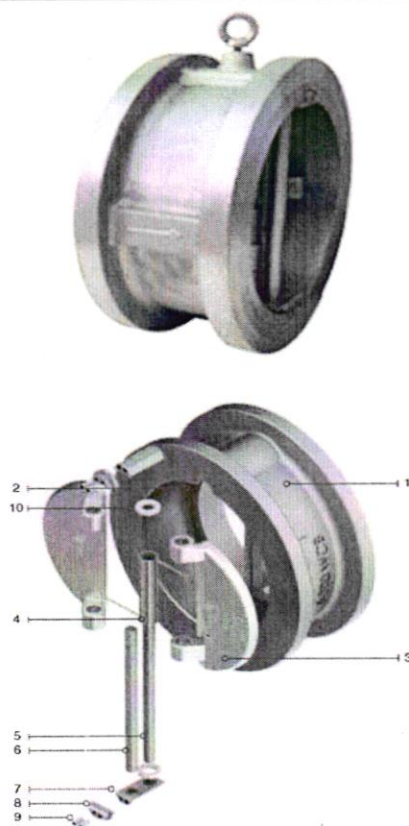
Body / Housing material: ASTM SS316

SeatRing/ Seal Ring Material: ASTM SS316

Stem/ Stem material: ASTM SS316ST

Stem Packing/ Seal Material: Graphite

Gasket/ Gasket material: SS spiral wound



DUAL PLATE WAFER CHECK VALVE (Wafer Retainer less) TYPE BR.

Double disc wafer check valve without plug.

Quantity / Quantity 3 pcs.

Size / Nominal diameter: 12"

Class / ASME 600 class

Design in accordance with API 594

End to end dimension in accordance with API 594

Flange ends in accordance to /Connection flanges: ASME B16.5

Inspection and Test according to API 598.

Type Flange / Raised Flange: RF (STD)

Manufacturing: metal-to-metal seal. / Manufacture: metal-to-metal seal.

Connection type / Accession type: Wafer type.

Working medium / Working medium: Working medium / Working medium:

Saturated-regenerated diethanolamine 30%.

Suitable Temperature: -29~425°C

Working environment pressure: 5500 kPa.

Body / Housing material: A351 CF8M

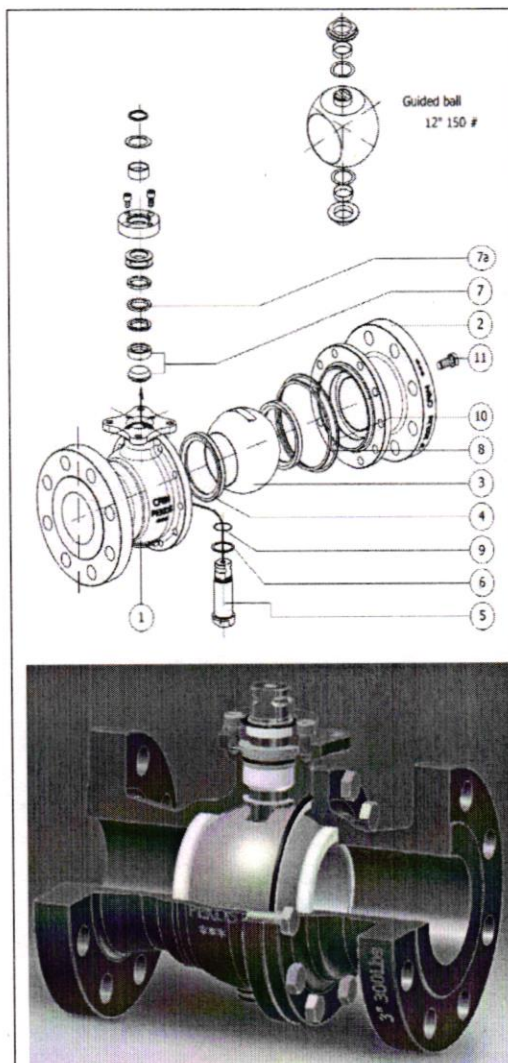
Body Seat: ASTM CF8.

Disc seat ASTM CF8.

Plot: ASTM CF8.

Spring/ Spring material: Inconel X750®.





Ball Valve (Manual Worm Gear Operators)

Accession type: flange.

Quantity 3 pieces.

Face to Face Dimensions / Face to face: ASME B16.10

Flange Ends Dimensions / Connecting flanges: ASME B 16.5

Inspection and Test / Tests for strength and tightness: API 598 API 6D.

Pressure-Temperature Relationship: ASME B 16.34

Type Flange / Raised Flange: RF (STD)

Class pa ASME 150.

Nominal passage of the ball valve: 12"

Tightness class: "A".

Working medium / Working environment: water mixture, 30% solution of regenerated diethanolamine.

Suitable Temperature / Working environment temperature: +135°C

Body / Housing material: A351 CF8M

Ball / Ball: AISI 316

Stem / Stem: AISI 316

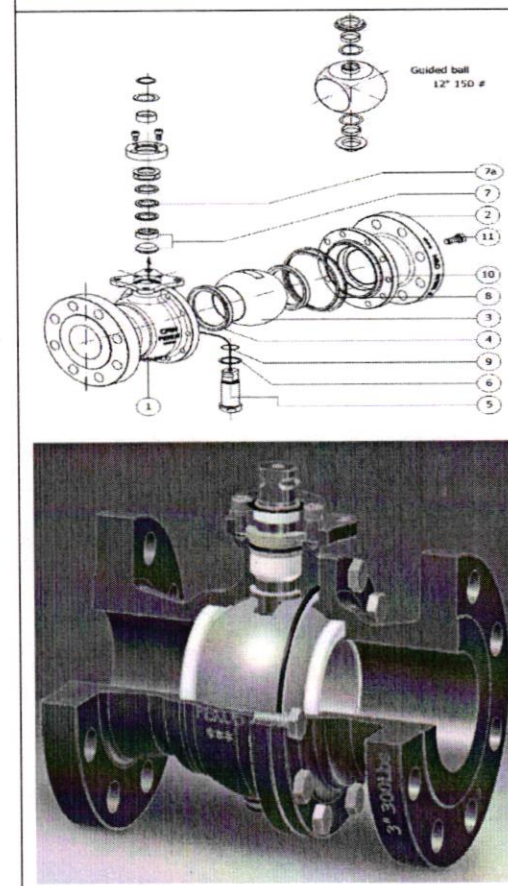
Seat Ring / Ball Seal: AISI 316/ PEEK

Stem Seal / Stem Seal: PEEK

O-ring stem / Gland seal: Viton

Seal body / Body seal: PEEK

Notes: The valve shall be fire-sate design and shall be tested per API-607.



Ball Valve (Manual Worm Gear Operators)

Accession type: flange.

Quantity 1 piece.

Face to Face Dimensions / Face to face: ASME B16.10

Flange Ends Dimensions / Connecting flanges: ASME B 16.5

Inspection and Test / Tests for strength and tightness: API 598 API 6D.

Pressure-Temperature Relationship: ASME B 16.34

Type Flange / Raised Flange: RF (STD)

Class pa ASME 300.

Nominal passage of the ball valve: 12"

Tightness class: "A".

Working medium / Working environment: Saturated-regenerated diethanolamine 30%.

Suitable Temperature / Working environment temperature: +135°C

Body / Housing material: A351 CF8M

Ball / Ball: AISI 316

Stem / Stem: AISI 316

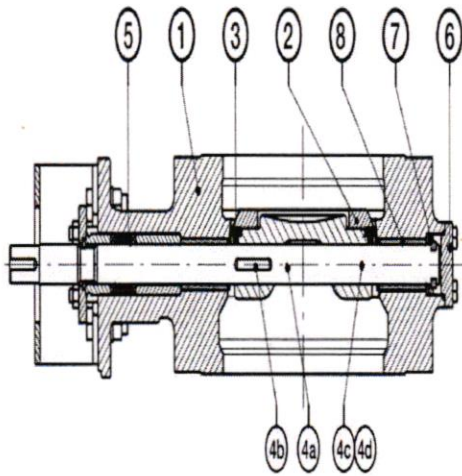
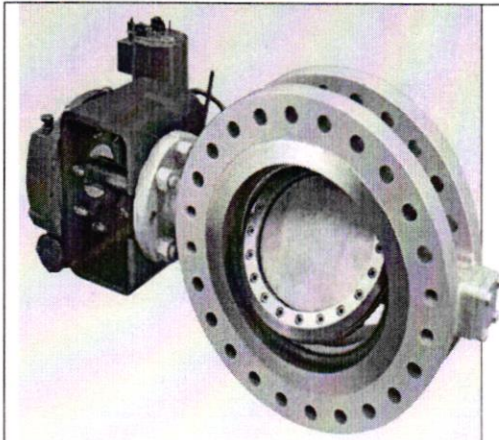
Seat Ring / Ball Seal: AISI 316/ PEEK

Stem Seal / Stem Seal: PEEK

O-ring stem / Gland seal: Viton

Seal body / Body seal: PEEK





Double Flanged Butterfly Valve

Quantity 3 pieces.

Nominal diameter in inches: ASME size: 28"

Nominal pressure: Pa class ASME 150.

General design requirements: API 609

Face to face: ASME B16.10

Connecting flanges: ASME B16.47 Serie B
connecting lug RF.

Strength and leak test: API 598.

Management: Local mechanical.

Pressure-Temperature Relationship: ASME B 16.34

Tightness class: "A".

Working environment: Saturated-regenerated diethanolamine 30%.

Working environment temperature: 120°C

Body / Housing material: ASTM A351 CF8M

Disc: ASTM A351 CF8M

Stem: ASTM A351 CF8M

Down Bearing Bushing: SS304+PTFE

Seat ring: PTFE

Locating ring: S S304

Stem Packing: S S304

Gland Bush: PTFE

Bottom Cover: ASTM A105N

Bolt: ASTM A193 B7

Gasket: PTFE

Bolt: ASTM A320 L7

The Participant, as part of his application of the established form, must indicate the position of the manufacturer of the Goods, the country of manufacture, as well as submit documents issued directly by the manufacturer of the Goods, certifying the dealer's powers of the Participant or a letter confirming the readiness of the manufacturer of the Goods to deliver in accordance with the ToR.

The participant must provide a technical proposal (all documentation) in Russian or English.

The supplier must provide in the technical proposal drawings for each item, which indicate the dimensions of the structures, materials, parameters of the required tests developed by the manufacturer, the name and logo of the manufacturer's company.

The supplier is obliged to provide the manufacturer's form, which specifies the conditions for the fulfillment of warranty obligations.

If the above requirements are not provided in the technical proposal, this technical proposal will be considered non-compliant. Documents not submitted will not be re-requested.

4.2 Additional requirements

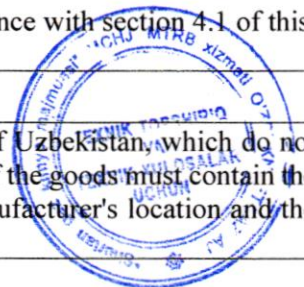
Input control of materials at the manufacturing plant, confirmed by the relevant documentation.

Quality control of shut-off valves in the manufacturing process at manufacturing plants, confirmed by relevant documentation.

The materials used for the manufacture of valves must have quality certificates, in accordance with section 4.1 of this specification.

4.3 Labeling requirements

The marking must comply with the requirements of the state standards of the Republic of Uzbekistan, which do not contradict and are not inferior to generally accepted international standards. The labeling of the goods must contain the deciphered name of the equipment, the name of the manufacturer, the address of the manufacturer's location and the date of issue.



4.4 Dimensions and packaging requirements

Packaging must ensure the safety of the goods during transportation, loading and unloading operations and movement of the goods to the place of its installation.

The packaging must comply with the requirements of the state standards of the Republic of Uzbekistan and generally accepted international standards.

Packaging must strictly comply with the product labeling.

The Goods are delivered in a special container (packaging) provided for this type of Goods, which ensures the integrity of the Goods during transportation and delivery.

The packaging is disposable and cannot be returned to the Supplier.

5. REQUIREMENTS FOR THE RULES OF DELIVERY AND ACCEPTANCE

5.1 Order of delivery and acceptance

The goods are accepted after testing ZRA (shutoff and control valves), if the technical parameters comply with clause 4.1, an acceptance certificate is drawn up in accordance with the contract.

When accepting the goods from the carrier, the Customer (consignee) is obliged to check the compliance of the goods with the information specified in the contract, specifications or additional agreements to it, as well as in transport, accompanying documents, quality certificates of the manufacturer.

In case of non-compliance of the delivered goods with the ordered specification or if the goods did not pass the incoming quality control, the Supplier is obliged to replace it within 14 calendar days. Transportation costs for the replacement of the goods are borne by the Supplier of the goods.

5.2 Requirements for the transfer to the customer of technical and other documents upon delivery of equipment

To confirm the novelty of the equipment, the supplier must, at the time of delivery, submit the following documents confirming the novelty, quality and compliance with the technical specifications of the equipment proposed for delivery:

- technical passports, operating instructions for the goods, originals of the quality document for products in Russian.
- a copy of the certificate of conformity (valid at the time of the auction) confirming compliance with the requirements of regulatory documents;
- manufacturer's test certificate;
- samples of warranty cards.

The Contractor guarantees the Customer that the equipment purchased by him corresponds to the technical characteristics of the equipment declared by the customer of this equipment.

It is necessary to provide Material Certificates indicating chemical analysis and strength characteristics. It is necessary to provide Certificates of conformity of the material. Provide manufacturer's quality certificates in the scope of the technical proposal. Indicate the place and country of the product being produced.

6. TRANSPORT REQUIREMENTS

Transportation conditions must ensure the safety of products, dimensions based on the possibility of transportation to the recipient's warehouse.

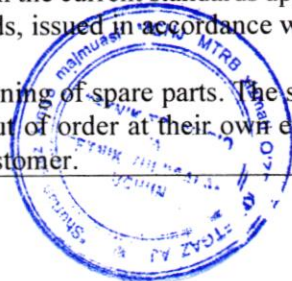
7. REQUIREMENTS FOR THE VOLUME AND/OR TERM OF GUARANTEES

The supplier provides a quality guarantee for the goods in accordance with the manufacturer's guarantee.

The supplier is obliged to provide a document on the letterhead of the manufacturer, which specifies the conditions for the fulfillment of warranty obligations.

The supplier guarantees the quality and safety of the supplied goods in accordance with the current standards approved for this type of goods, and the availability of certificates required for this type of goods, issued in accordance with the legislation of the Republic of Uzbekistan.

The warranty period of operation must be at least 5 years from the date of commissioning of spare parts. The supplier of the goods during the warranty period must replace the delivered goods that are out of order at their own expense, provided that the defect (breakage) of the product occurred through no fault of the customer.



8. REQUIREMENTS FOR QUALITY AND CLASSIFICATION

The product must be of high quality and meet the requirements for its intended purpose, having the necessary consumer properties and technical characteristics, environmental and industrial safety characteristics. The quality of the goods must be confirmed by a quality certificate issued by the manufacturer.

9. ADDITIONAL (OTHER) REQUIREMENTS

Technical documentation must be in Russian. Upon delivery, the Supplier must submit documents confirming the compliance of the products offered by him with the established requirements:

it is necessary to provide a quality certificate (original or a copy certified by the Supplier's seal) for the delivery batch.

the supplier is also responsible for compliance with technical parameters and for quality;

- in case of non-compliance of the Products with quality requirements, the Products shall be returned, and all costs for its purchase and delivery shall be borne by the Supplier.

The supplier must be a manufacturer or an official dealer of the manufacturer (it is obligatory to provide a copy of the dealer certificate). Copies of these duly certified documents specified in this procurement documentation must be included by the participant in his proposal.

10. REQUIREMENTS TO THE QUANTITY, PACKAGING, PLACE AND TERM (FREQUENCY) OF DELIVERY

1. Gate valve with rising stem 3" #600 in the amount of 1 pc.
2. Gate valve with rising stem 4" #600 in the amount of 17 pcs.
3. Gate valve with rising stem 6" #600 in the amount of 8 pcs.
4. Gate valve with rising stem 12" #600 in the amount of 2 pcs.
5. Valve 8" #600 in the amount of 1 pc.
6. Cryogenic rising stem wedge gate valve 1.1/2" #300, 2 pcs.
7. Double disc wafer check valve 12" #600 in quantity of 3 pcs.
8. Ball valve with mechanical gear 12" #150 in the amount of 3 pcs.
9. Ball valve with a mechanical gearbox 12" #300 in the amount of 1 pc.
10. Double flange butterfly valve 28" #150 in the amount of 3 pcs.

Delivery time: until 09/20/2022.

Wagon delivery / Container delivery: DAP - railway. Art. Kengsoy (station code - 732602), SJSRC "Uzbekiston Temir Yullari"

Transport supply: DAP - Republic of Uzbekistan, Kashkadarya region, Guzar district, Shurtan village, 180300

1.1. REQUIREMENTS FOR THE FORM OF INFORMATION TO BE SUBMITTED

Textual information (description, drawings, diagrams) must be provided in Russian and / or English, in paper and electronic form (1 copy).

**Note: The developer is responsible for the correctness of the filling and the unfilled item.*

