



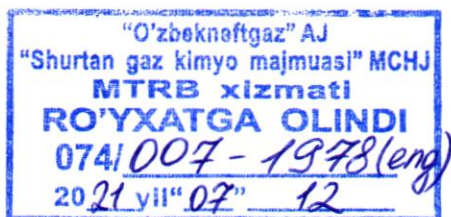
«APPROVED»

Chief Metrologist

of "Shurtan GCC", LLC

H. Makhmudov

2021 y.



## TECHNICAL ASSIGNMENT

for purchasing of the electromagnetic actuated spool valves  
for the needs of "Shurtan Gas Chemical Complex", LLC.

## 1. GENERAL INFORMATION

### 1.1 Name

**NAMUR 3/2 & 5/2 Indirect electromagnetic actuated spool valves with single and double acting actuators.**

### 1.2 Basis and purpose of goods purchase

Basis: Unscheduled application for 2021, approved by the first deputy general director of the enterprise, according to protocol No. 16 of Scientific and Technical Council of «SGCC», LLC dated from 16.11.2020.

Purpose: To replace the failed control valves and ensure stable operation of the Hydrogen Production Unit.

### 1.3 Information on novelty (year of production/production of goods)

The products supplied must be new, previously unused and usable.

### 1.4 Development/fabrication steps

According to the regulatory technical documents and construction documents of the manufacturer.

### 1.5 Documents for Development/Fabrication

As per the normative technical documents and construction documents of the manufacturer.

## 2. SCOPE OF USE

Electromechanical shutoff element performing the function of remote automatic control of directions of movement of gaseous working medium inside the pipeline. By means of the electromagnetic coil, the required volumes of flow are dosed at a certain moment of time.

Working medium energy impact leads to opening and closing of conditional passage. Remotely controlled by pilot valve actuating when electric current is supplied to coil.

## 3. SERVICE CONDITIONS

As per Section 4.1 of the present TA.

## 4. TECHNICAL REQUIREMENTS

### 4.1 Technical characteristics of NAMUR 3/2 & 5/2 Indirect electromagnetic actuated SPOOL VALVES with single and double acting actuators.

Medium:	Filtered, non-lubricate and dried compressed air, instrument air, nitrogen and other non-flammable neutral, dry fluids
Operation:	Solenoid, indirectly controlled
Mounting position:	Optional;
Operating pressure:	2,5 ... 8 bar with internal air supply 0 ... 8 bar with external air supply,
control pressure:	2,5 ... 8 bar (only for G1/2 or low power pilot system)
Nominal diameter:	ND 6 mm, ND 8 mm
Port size:	1/4 NPT



Temperature: -40 ... +85°C (NBR),

**Solenoid:**

Body material: Aluminium 3.0615 with surface treatment for critical environmental conditions (Condensate test with alternating temperatures in sulphuric atmosphere, Salt spray test with different sodium chloride solution, tested in ammonia atmosphere).

Seals: Special NBR or HNBR

Valves for safety systems, up to SIL 4 (IEC 61508).

The solenoid valves are applicable in the protection class EEx me, EEx md, EEx m, EEx ia for zones 1 & 2 (gases) 21 and 22 (dusts) ATEX cat. II 2GD.

International approvals: IECEX, FM, CSA,

No	Name of product	Technical characteristics Solenoid valves
1	Solenoid valve / 3/2 WAY/24V/Eexi/ 1/4" NPT. Type: 97105, 1-Silencer 1/4" NPT	<b>Solenoid:</b> Function: H3, (3/2 way with adapter plate for NAMUR flange). Body material: Aluminium 3.0615 with surface treatment for critical environmental conditions. Voltage: 24 V d. c. Temperature: -40°C ... +85°C. Port size: G 1/4, Operating pressure: 2,5...8 (bar),
2	Solenoid valve / 5/2 WAY/24V/Eexi/ 1/4" NPT. Type: 97105, 2-Silencer 1/4" NPT	<b>Solenoid:</b> Function: H3, (5/2 way with spring return). Body material: Aluminium 3.0615 with surface treatment for critical environmental conditions. Voltage: 24 V d. c. Temperature: -40°C ... +85°C. Port size: G 1/4, Operating pressure: 2,5...8 (bar),

#### 4.2 Main technical, economic and operational indicators

For stable operation of valves, the repair period and replacement of spare parts shall be carried out no more than 1 time every three years.

#### 4.3 Design, Installation and Technical Requirements

According to the normative technical documents and construction documents of manufacturer.

#### 4.4 Requirements for materials

According to the normative technical documents and construction documents of manufacturer.

#### 4.5 Requirements for marking





Marking shall be performed accurately, an indelible marker in Russian and English and shall include the following shipping mark:

This Way Up; Handle with care; Consignee's mark, Destination and order number; Weight Marking.

#### 4.4 Requirements for the sizes and packing

The goods shall be packed into export standard packing (the closed, tight packing, serviceable) the manufacturer, ensuring its full safety from any damages at long storage and transportation of products taking into account several transmissions on the way. Packing shall fit for processing of cargo by cranes and manually.

The seller is responsible for all losses and/or losses which arose because of inadequate and/or negligent packing or protection of the equipment.

Other options and the amount of packing are subject to additional coordination with the Customer on condition of their acceptability.

### 5. REQUIREMENTS AS PER RULES OF DELIVERY AND ACCEPTANCE

#### 5.1 Procedure of delivery and acceptance, additional requirements of the Customer

The goods shall be accepted after incoming control and drawing up an act in accordance with the contract.

The Customer accepts the goods according to the quantity, quality and completeness of the batch, and external signs of preservation of the goods (presence of mechanical damages, visible deformation of individual blocks and parts of the goods and other similar obvious signs of damage) in accordance with transport and accompanying documents, quality certificates of the manufacturer.

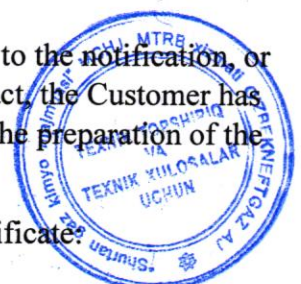
Upon acceptance of the goods from the carrier, the Customer (consignee) shall check the conformity of the goods with the information specified in the contract, specifications or additional agreements to it, as well as in transport, accompanying documents, quality certificates of the manufacturer.

If upon acceptance of the goods, upon receipt from the carrier, the quality/quantity discrepancy of the goods is revealed, the Customer (consignee) shall suspend the acceptance of the goods, take measures to ensure the safety of the goods and prevent mixing with other homogeneous goods and notify the Seller in writing form within 20 (twenty) working days from the moment of detection of defects.

The Seller shall send to the Customer (consignee) not later than 10 (ten) working days from the moment of receipt of the notification the response on participation of its representative in further acceptance of the goods. The Seller's representative shall appear to participate in the acceptance of the goods within a reasonable period not exceeding 20 (twenty) calendar days from the date of receipt of the notice.

If the Seller refuses to participate in the acceptance, or refuses to respond to the notification, or its representative does not appear within the period specified in the contract, the Customer has the right to further accept the goods by quality/quantity unilaterally with the preparation of the relevant act.

The following information shall be specified in the goods acceptance certificate:



- name of the Customer (consignee) of the goods;
- number and date of the certificate, place of acceptance of the goods, the time of beginning and finishing of acceptance of the goods;
- names and initials of persons taking part in the acceptance of goods, their positions, information about documents confirming the authority of these persons to participate in the acceptance of goods, their details;
- names and addresses of the manufacturer of the Seller;
- date and number of notification of the Seller's representative call;
- detected non-conformity of the goods, its nature;
- indication of contract number and specification;
- name and marking of goods according to shipping documents for the corresponding batch of goods;
- number of places and weight of metal products according to shipping documents;
- condition of tare (packaging);
- weight of the identified deficiency for each place;
- number of shipping document and quality certificate;
- size, steel grade, lot number, presence of label;
- conclusion on the nature of the detected defects of the goods and the reason for their occurrence.

The certificate must be signed by all persons who participated in the acceptance of the goods.

## 5.2 Requirements for handling-over of technical and other documents to the customer during the delivery of goods.

The goods shall be accompanied by the following documentation:

- certificate of conformity of the goods;
- invoice (invoice) of the Seller with description of the goods, indication of the quantity, price of the unit of goods and total amount;
- consignment note issued in the name of the consignee with the mark of the departure station and the mark of the destination, the name of the Customer, the number and the date of signing of the existing contract;
- certificate of origin of the country of goods indicating the invoice number and date;
- packing list;
- certificate on the quality of goods issued by the manufacturer;
- product safety passport.

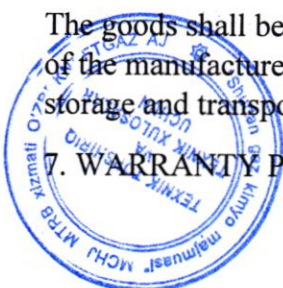
## 5.3 Requirements for insurance of goods.

The goods must be insured.

## 6. TRANSPORTATION REQUIREMENTS

The goods shall be shipped in the export standard packing (closed, sealed package, serviceable) of the manufacturer, ensuring its complete safety from all kinds of damage during long-term storage and transportation of products, taking into account several transshipments on the way.

## 7. WARRANTY PERIOD REQUIREMENTS





The goods shall be produced no more than six months before the date of shipment, in full compliance with the description, specifications, manufacturer's specification and/or the terms of this specification, as well as ensure the prescribed quality.

#### 8. ENVIRONMENTAL AND SANITARY REQUIREMENTS

The goods shall be safe during their operation, storage and disposal.

The goods shall comply with international requirements of quality and environmental safety.

#### 9. QUALITY AND CLASSIFICATION REQUIREMENTS

The goods must be of high quality; the quality guarantee period is at least 5 years.

Certificates (manufacturer's quality certificate and/or other certificates of international, recognized laboratories and test centers) shall be provided.

The service life of the goods in accordance with the normative and technical documentation is 5 years.

#### 10. REQUIREMENTS FOR QUANTITY, COMPLETING, AND DELIVERY TIME (PERIODICITY)

<b>№</b>	<b>Name</b>	<b>Unit</b>	<b>Quantity</b>
1	Solenoid valve / 3/2 WAY/24V/Eexi/ 1/4" NPT. Type: 97105, 1-Silencer 1/4" NPT	Pcs	4
2	Solenoid valve / 5/2 WAY/24V/Eexi/ 1/4" NPT. Type: 97105, 2-Silencer 1/4" NPT	Pcs	2

Applicants shall submit their technical and commercial proposals to the customer.  
Customer shall provide with technical conclusion.

The delivery period of the goods is 3 months (90 calendar days) after the conclusion of the contract.

Transport delivery: CIP - Republic of Uzbekistan, Kashkadarya region, Guzar district, Shurtan settlement, 180300.

#### 11. EACH BIDDER SHALL INCLUDE IN TECHNICAL PROPOSAL THE FOLLOWING INFORMATION:

The submitted technical proposal shall be prepared in Russian and duplicated in English language.

The public information about the manufacturer company (company site) shall be provided.

\* Note: The developer is responsible for the correctness of filling and blank items.



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**M. Hobiev**