

1. **EU-TYPE EXAMINATION CERTIFICATE**
2. **Equipment or Protective System Intended for use in Potentially explosive atmospheres
Directive 2014/34/EU**
3. EU-Type Examination Certificate Number: **EESF 19 ATEX 020**
4. Product: **Process Gas Chromatograph MAG**
Certified types: **KC 50.310-000, KC 50.310-000-01, KC 50.360-000, KC 50.360-000-01**
5. Manufacturer: **OOO NTF BACS**
6. Address: **Prospekt Kirova 10, 443022 Samara, Russian Federation**
Manufacturing locations:
Prospekt Kirova 22, 443022 Samara, Russian Federation
7. This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
8. Eurofins Expert Services Oy, Notified Body number 0537, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report No. RU/CCVE/ExTR18.0001/00.
9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0:2012/A11:2013 EN 60079-1:2014
10. If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.
11. This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.
12. The marking of the product shall include the following:



II 2G Ex db IIB+H₂ T4 Gb

Espoo, 22.03.2019
Eurofins Expert Services Oy

Kari Koskela
Expert

Jenni Hirvelä
Expert

This document is digitally signed.



13. **Schedule**

14. **EU-Type Examination Certificate EESF 19 ATEX 020**

15. **Description of Product**

The Process Gas Chromatograph MAG (hereinafter referred to as "chromatograph") has the following models:

- KC 50.310-000 - is used for continuous automatic measurement of the molar fraction of the components of natural gas in accordance with GOST 31371.7-2008 and ISO 6974 series with the subsequent calculation of the components of the values of the calorific value, relative and absolute density, the compressibility factor and the Wobbe number according to the component composition in accordance with GOST 31369-2008 and ISO 6976:2016;

- KC 50.310-000-01 - is used for continuous automatic measurement of the content of organic and inorganic substances in gas mixtures, liquefied petroleum gases and liquids;

- KC 50.360-000 - is used for continuous automatic measurement of the mass concentration of sulfur-containing components in various gas media, including natural gas with subsequent calculation of the total and mercaptan sulfur content in accordance with GOST R 53367-2009, ASTM D 7493-14 (2018) and ISO 19739:2004/Cor.1:2009;

- KC 50.360-000-01 - is used for continuous automatic measurement of the content of sulfur-containing components in various gaseous media, including natural combustible gas.

The chromatograph consists of the following units:

- control unit;
- gas supply unit;
- electronics unit;
- power supply unit;
- analytical unit.

All of the above units are enclosed in an explosion-proof enclosure with the type of protection "d".

The process gas chromatographs model KC 50.310-000-01 can include up to 4 analytical channels.

Ambient temperature range: $-10\text{ }^{\circ}\text{C} \leq T_a \leq +50\text{ }^{\circ}\text{C}$.

Electrical parameters

Ratings	Models			
	KC 50.310-000	KC 50.310-000-01	KC 50.360-000	KC 50.360-000-01
Voltage and frequency	220^{+22}_{-33} V and with frequency (50±1) Hz			
Power consumption:				
at the warm-up	300 W	Depending on the equipment, but not more than 900 W	300 W	300 W
after the warm-up	80 W		80 W	80 W
Pressure and flow rate of carrier gas	Pressure 0.5 - 0.6 MPa; flow rate: 8 - 12 cm ³ /min	Pressure 0.5 - 0.6 MPa; flow rate: 5 - 30 cm ³ /min		
Phase of analyzed mixture	Gaseous	Gaseous, liquefied gas and liquid	Gaseous	Gaseous
Pressure and flow rate of a sample	Gas: pressure: 0.04 - 0.1 MPa; flow rate: 50 - 150 cm ³ /min; Liquid / liquefied gas: pressure: not more than 7 MPa.			

16. Report Number

RU/CCVE/ExTR18.0001/00

17. Specific Conditions of Use

None

18. Essential Health and Safety Requirements

The Essential Health and Safety Requirements are covered by the standards listed at item 9.

19. Drawings and Documents

Drawings and documents are listed in the confidential report.