



**GAZSINTEZ**

**FUEL GAS CONDITIONING PACKAGE (FGCP)**  
of the maximum grade of manufacture





## FUEL GAS CONDITIONING PACKAGE (FGCP)

FGCP is a modern engineering solution developed by the specialists of Factory GazSintez

Purpose: preliminary gas conditioning prior to supply to gas-using equipment

Application: used as part of process systems at oil and gas fields and electric stations



## PERFORMED TASKS



Purification of associated petroleum gas from condensed moisture and mechanical impurities



Provision of fiscal and process gas metering



Increase of operating medium temperature to pre-set parameters



Pressure reduction and maintaining its value at the pre-set level in automatic mode



## TECHNICAL SPECIFICATIONS



### CHARACTERISTIC

### VALUE

Operating medium

Associated petroleum gas, natural gas incl. one containing heavy multi-component hydrocarbons

Throughput capacity

Depends on installed pressure controllers and can differ from the table values

Minimum – from 200 m<sup>3</sup>/h  
Maximum – up to 95 000 m<sup>3</sup>/h

Operating pressure

Minimum – 0.1 MPa  
Maximum – up to 10 MPa

Climatic category as per GOST 15150-69

NF 1

Ambient temperature

From -60°C to +40°C

Operation mode

Year-round

Service life with operating conditions observed, at least

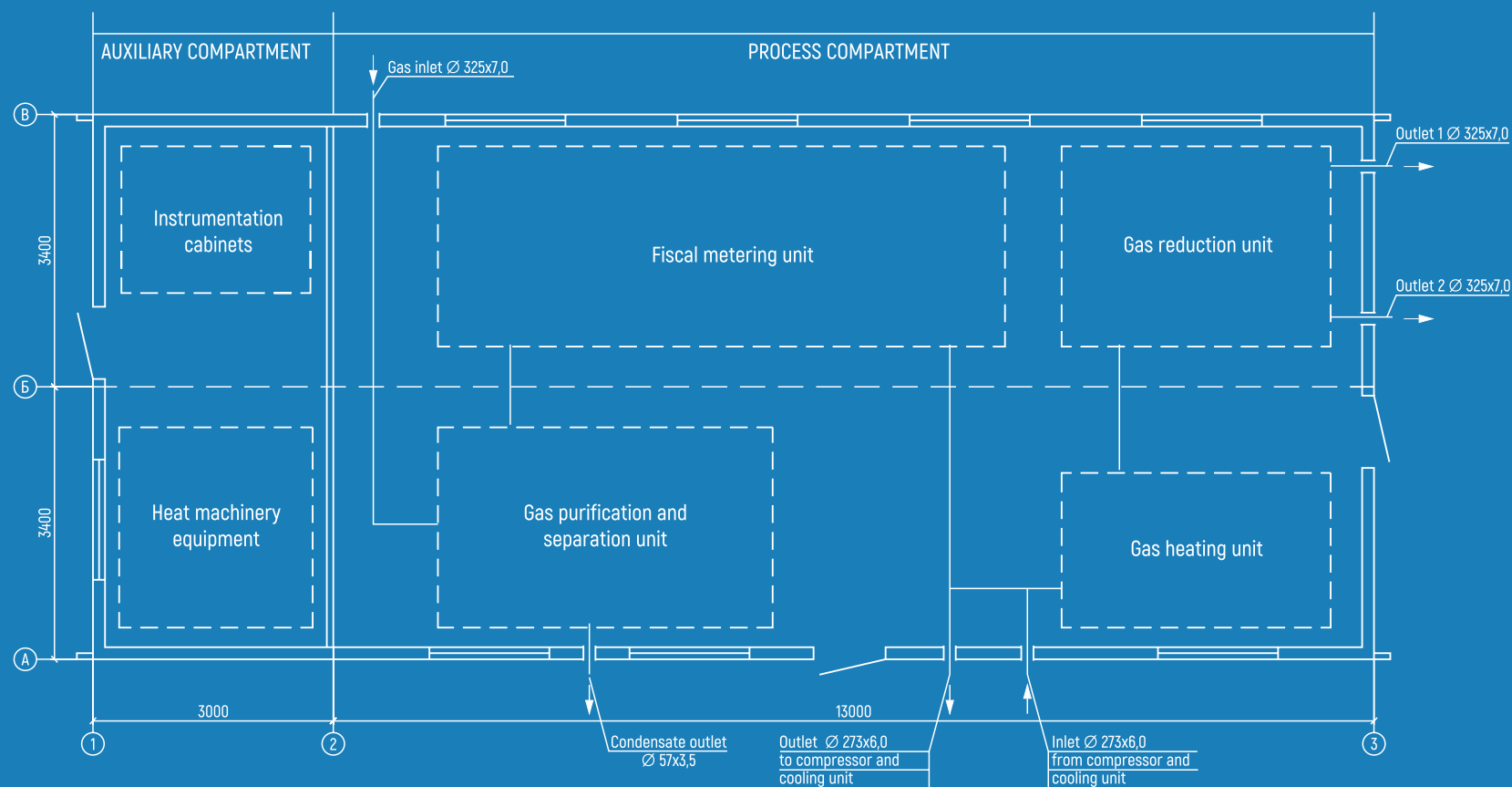
15 years



## LAYOUT SCHEME

The modular package is supplied to a facility in a modular box of the maximum grade of manufacture with the installed set of the equipment and devices


The modular box is divided inside with a gas-proof partition into two compartments: process one and auxiliary one



## COMPONENTS OF THE PROCESS COMPARTMENT'S EQUIPMENT

- Filter separators
- Gas meters
- Gas heaters
- Gas pressure control valves
- Sampling system
- Primary instrumentation
- Pipeline systems
- Shut-off valves

 A category room


 100% system  
redundancy is possible



## COMPONENTS OF THE AUXILIARY COMPARTMENT'S EQUIPMENT

- Secondary instrumentation
- Automation panels
- Electric boilers
- Heat machinery equipment

 D category room

 100% system  
redundancy is possible





## ENGINEERING SYSTEMS

- Heating (electric explosion-proof heaters)
- Lighting (work and escape)
- Fire and security alarm system
- Dry chemical fire suppression system
- Emergency button for gas filtering and heating process shutdown



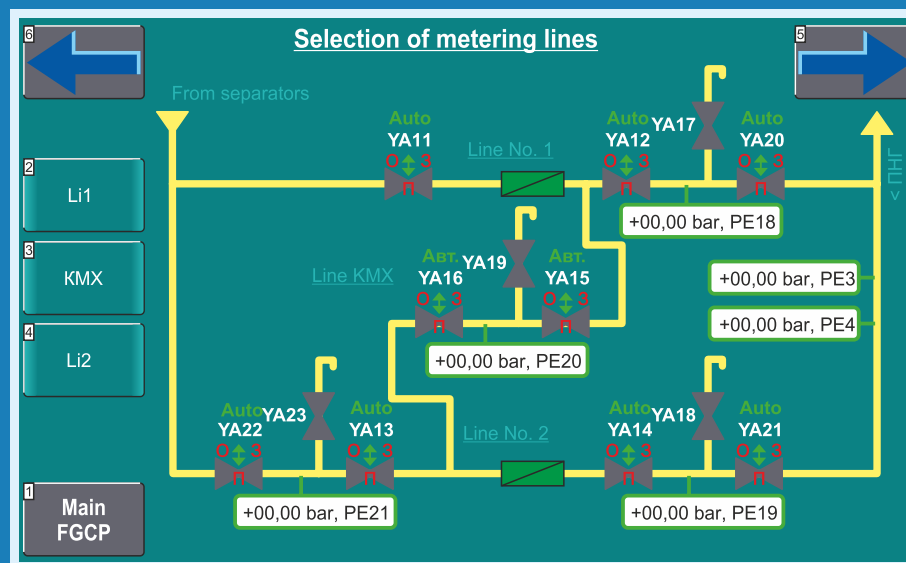
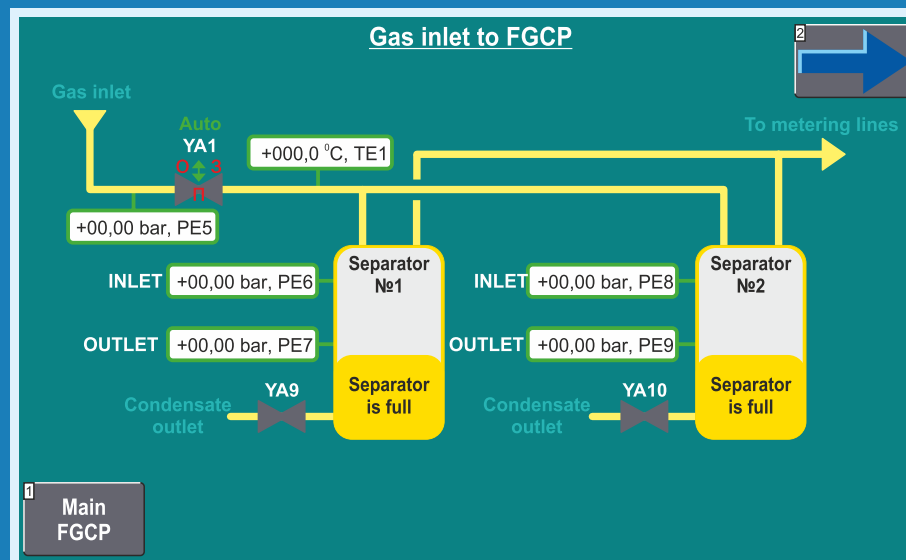


## AUTOMATION SYSTEM

1 Main general	+00,0bar Gas inlet to FGCP	12 Graphics
2 General accidents	+00,0°C Gas inlet to FGCP	13 Leak control KMX
3 Separators	+00,0/+00,0bar Inlet/outlet of separator No. 1	14 Gate LI1 Inlet
4 Gas inlet to FGCP	+00,0/+00,0bar Inlet/outlet of separator No. 2	15 Leak control LI1 Outlet
5 Reduction units	+00,0bar Inlet of reduction units	16 Leak control LI2 Inlet
6 Fire, CxHy, CH4	+00,0bar Outlet of reduction unit No. 1	17 Leak control LI2 Outlet
	+00,0°C Outlet of reduction unit No. 1	
	+00,0°C Outlet of reduction unit No. 2	
	+00,0°C Outlet of reduction unit No. 2	
	+00,0°C Air to FGCP	

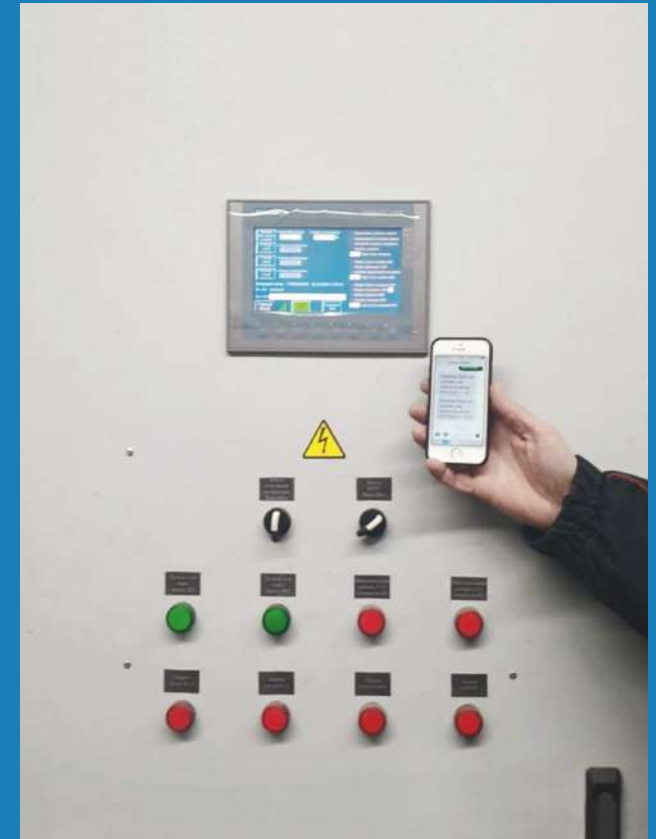
Leak control unit, KMX		
+00,0bar PE20 Pressure at leak control unit <span style="color: red;">Leak</span>		
<input type="checkbox"/> Gate YA15 opened	<input type="checkbox"/> Gate YA15 opens	18 Gate autom. mode
<input type="checkbox"/> Gate YA15 closed	<input type="checkbox"/> Gate YA15 closes	19 Manual opening YA15
<input type="checkbox"/> Gate YA16 opened	<input type="checkbox"/> Gate YA16 opens	20 Manual closing YA15
<input type="checkbox"/> Gate YA16 closed	<input type="checkbox"/> Gate YA16 closes	21 Manual opening YA16
<input type="checkbox"/> Discharge vent valve YA19 opened		22 Manual closing YA16
1 Main FGCP	2 Faults, settings	3 Pressure relief

The automation system performs monitoring of gas parameters and control of shutoff valves' electric drives and solenoid valves



## AUTOMATION SYSTEM

- FGCP automatics is based on the freely programmable logic controller SIEMENS with built-in interface
- Automatic SMS-informing in emergencies with indication of type of accident and current values
- Uninterruptable control over metrological parameters' and automatics' status even with no supply mains
- Possibility of integration into a customer's Computer-Aided Process Control System (CAPCS)



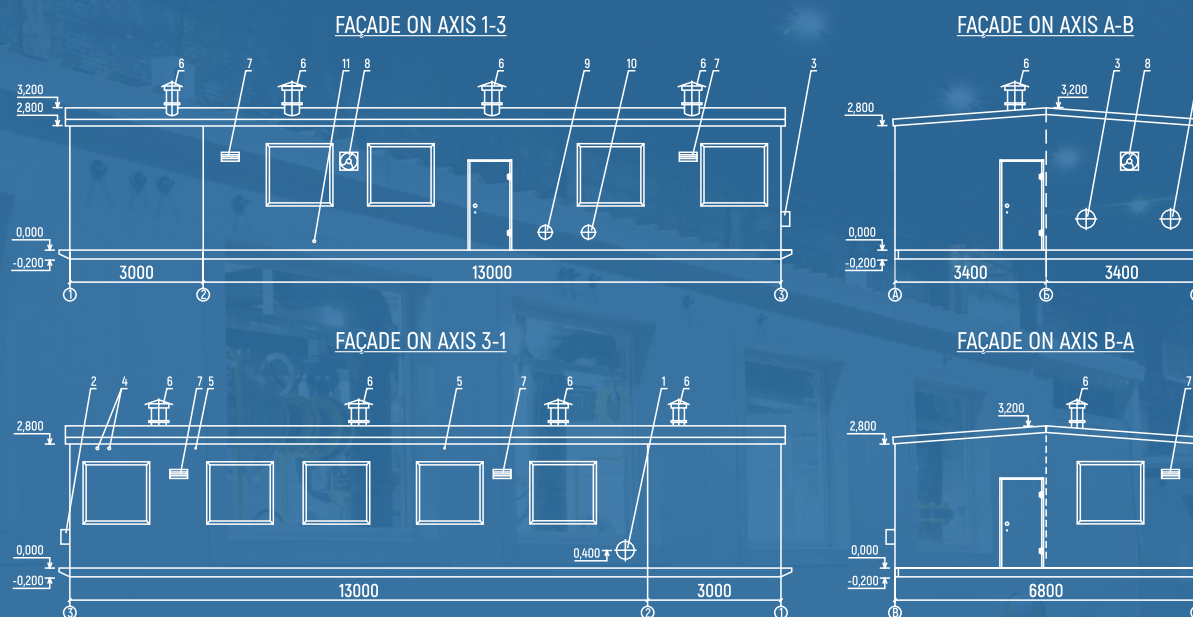


## OUTLINE DRAWING

The modular package is a transportable welded frame jacketed with sandwich panels up to 200 mm thick



Colour: at customer's option



1 - Pressure inlet (DN 300), 2, 3 - Pressure outlet (DN 300), 4 - PSK outlets (DN 50), 5 - Blowoff tubes (DN 20), 6 - Deflector, 7 - Louvered grille, 8 - Explosion-proof fan, 9 - Outlet to compressor and cooling unit (DN 250), 10 - Inlet from compressor and cooling unit (DN 250), 11 - Condensate outlet (DN 50).

Overall dimensions of a fuel gas conditioning package are given as an example and can be changed at a technical assignment preparation stage.



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IF YOU STILL HAVE QUESTIONS,  
DO NOT HESITATE TO CONTACT US!



The material contains the photos of the fuel gas conditioning package (FGCP).  
The equipment was manufactured by Factory GazSintez for operation at the Trebs and Titov field  
in the Nenets Autonomous Okrug.

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