



**REATORG
TECHNOLOGIES™**



EQUIPMENT CATALOGUE

**PRODUCED IN
RUSSIA**

REATORG REPRESENTS THE REACTOR SYSTEMS OF ITS OWN PRODUCTION – REATORG TECHNOLOGIES™



REATORG TECHNOLOGIES™ is a registered trademark under which REATORG designs and manufactures non-standard chemical equipment.

All equipment is designed and manufactured in accordance with international standards, technical conditions and has certificates of compliance and permits for use for chemical, petrochemical, pharmaceutical industries and facilities.

Having extensive experience in the organization of processes of chemical technology, competence in the design of chemical devices, knowledge of the field of regulations and legislative acts, we implement projects considering all requirements and budget constraints imposed by the customer, while ensuring the quality of the equipment being designed and manufactured.



Georgy Khachiyani,

CEO of LLC Reatorg



QUALITY MATERIALS

When creating the equipment, the spare parts of our own production are used as well as the spare parts of leading Russian and foreign manufacturers.



LOW PRICES

The Reatorg Technologies™ equipment is not inferior in quality to the well-known European brands, however, due to the deep localization of the production, our equipment is much cheaper.



EXCLUSIVE WORK

We design equipment using the latest scientific and technical solutions and developments in accordance with the requirements of the customer and of the technological process, which makes each manufactured unit unique.



OPERATIONAL SERVICE

Availability of our own spare parts and accessories warehouse allows to minimize the time of its manufacture and the forced downtime in case of repair.



EASY TO UPGRADE

In case of reorganizing the technological process, you do not have to completely change the Reatorg Technologies™ equipment, because it can easily be upgraded.



DEMOUNTABLE CONSTRUCTION

For systems made of borosilicate glass, a modular design has been developed, thanks to which you do not need to create erection openings or use load-lifting mechanisms when installing the Reatorg Technologies™ equipment.



As a developer of technical documentation, the company was included in the Federal Register and in accordance with GOST 2.201 it was assigned a RSTG code

MANUFACTURED PRODUCTS

All equipment designed and manufactured under the brand REATORG TECHNOLOGIES™ is produced in accordance with international standards, technical conditions and has certificates of compliance and permits for use in chemical, petrochemical, pharmaceutical industries and facilities.

We use our experience and competence in the field of chemical technologies, processes and devices in our work, as well as knowledge of technological regulations and standards. Our facilities are designed using the latest scientific and technical developments in accordance with the requirements of the Customer and the technological process.

Quality control:

- Quality control of basic and welding materials - availability of certificates, visual control, styloscoping;
- Non-destructive quality control of glass or metal and welded joints - visual, measuring, radiographic;
- Destructive quality control of welded joints - mechanical tests of control welded joints, control of welded joints by hydraulic tests in water and using a penetrating liquid;
- Quality control polishing of internal surfaces - measuring the height of microroughness;
- A unique serial number is assigned to each unit of the produced equipment.



REACTOR SYSTEM ON THE BASIS OF A GLASS JACKETED REACTOR



Borosilicate glass 3.3



Scaffolding, connectors-AISI 304



Working volume of the reactor
from 15 to 100 L



Any configuration is possible



Stirring device of any type



Materials in contact with the product:
glass and PTFE



Materials in contact with the product
are GMP-certified



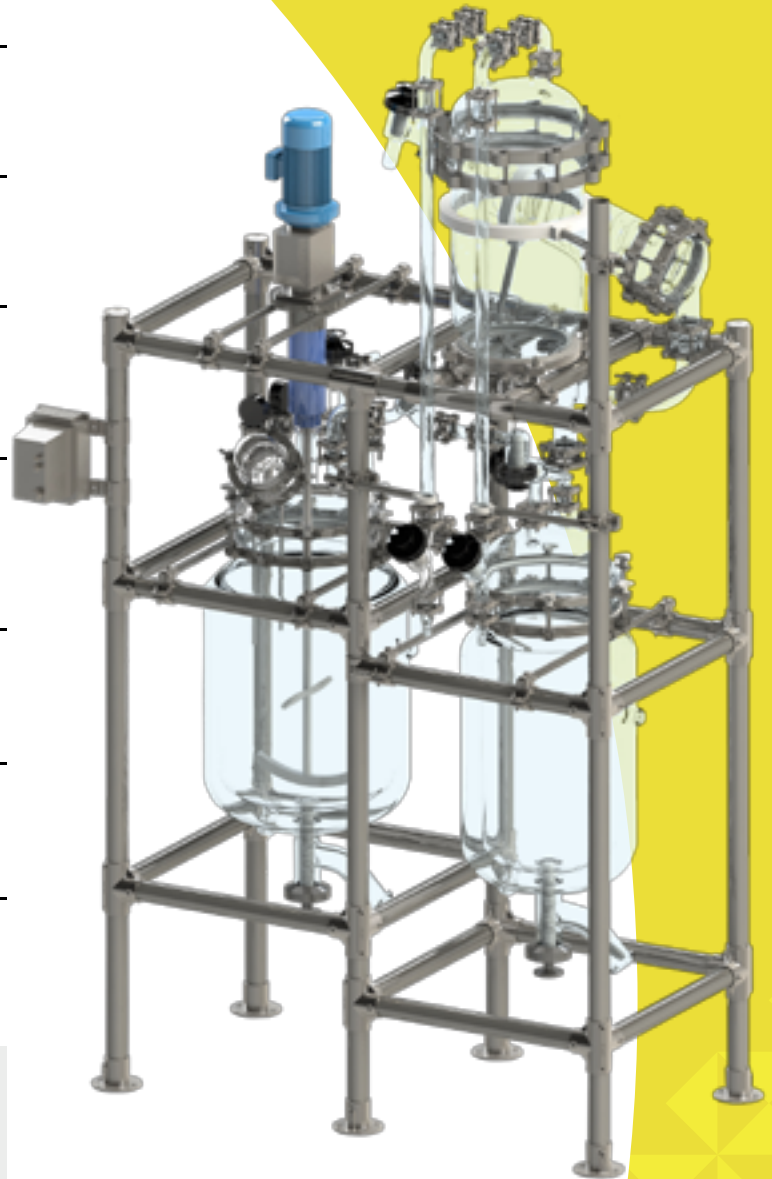
Sealing of the agitator shaft:
dry mechanical seal



Smooth speed control
without loss of power



Explosion-proof version is possible



Scaffolding is made of AISI 304L
steel pipe

Connectors of tubes cast
in stainless steel AISI 304L

THIN FILM EVAPORATOR



Borosilicate glass 3.3



Scaffolding, connectors-AISI 304



Materials in contact with the product: glass and PTFE



Sealing of the agitator shaft:
dry mechanical seal



Smooth speed control
without loss of power



It is possible to provide a certificate

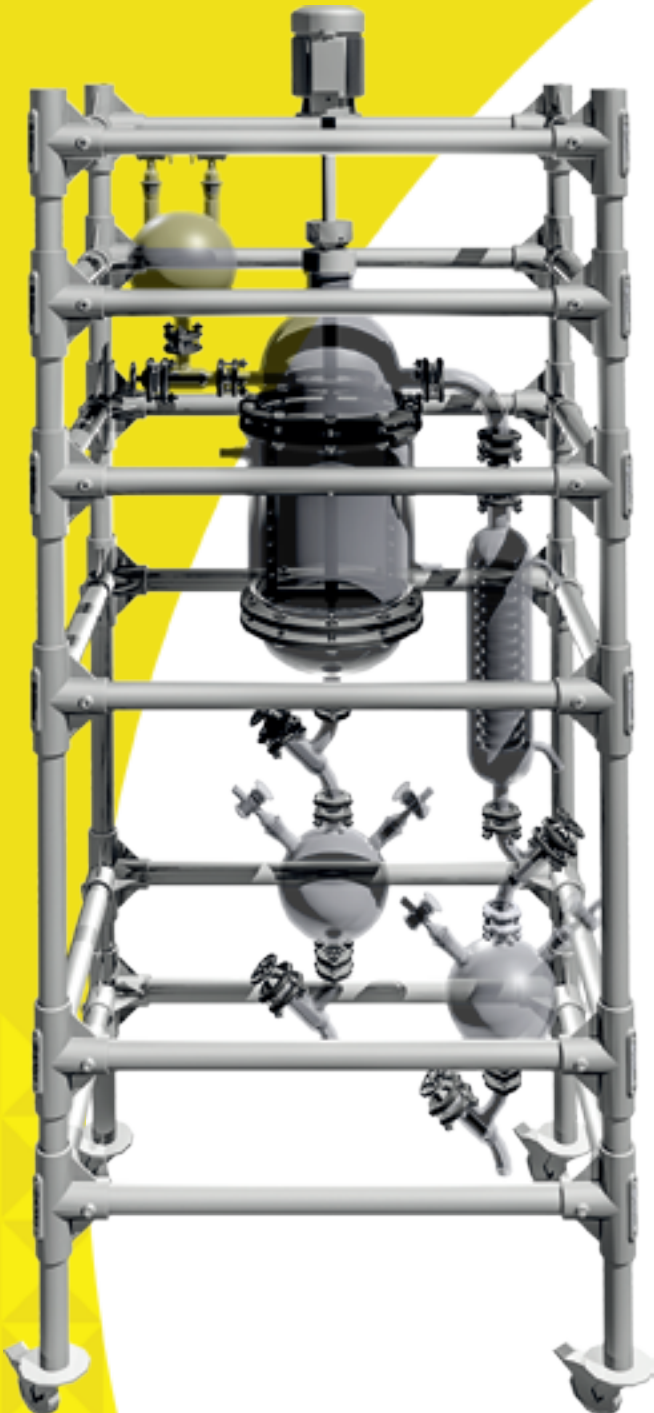


Explosion-proof version is possible

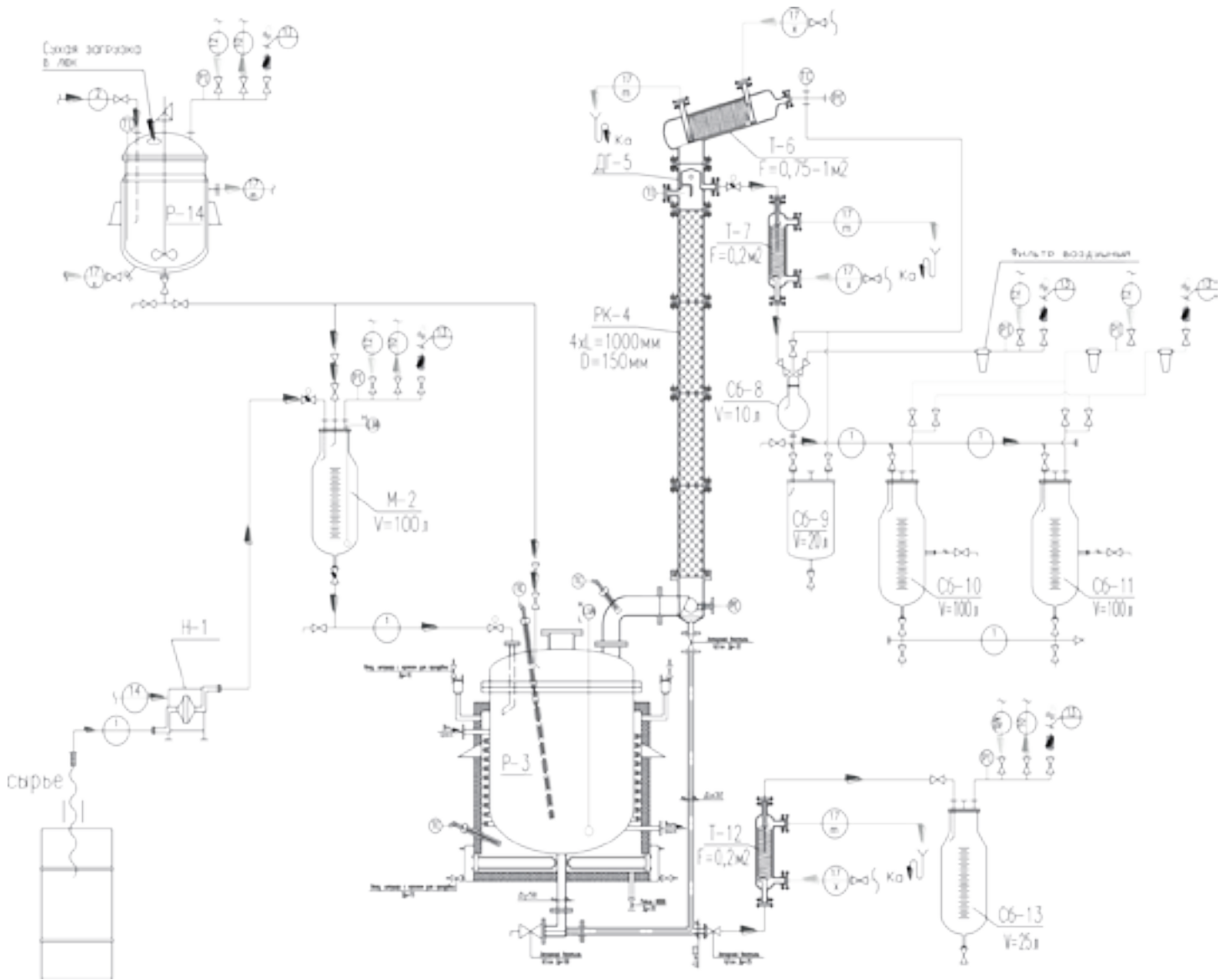


Scaffolding is made of
AISI 304L steel pipe

Connectors of tubes cast
in stainless steel AISI 304L



Rectification column

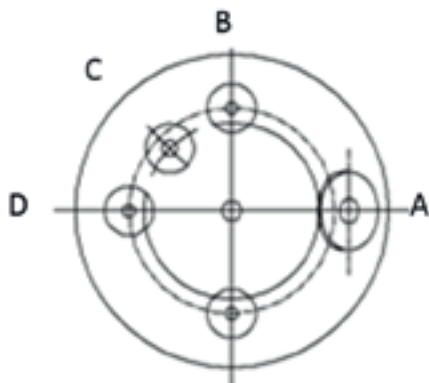
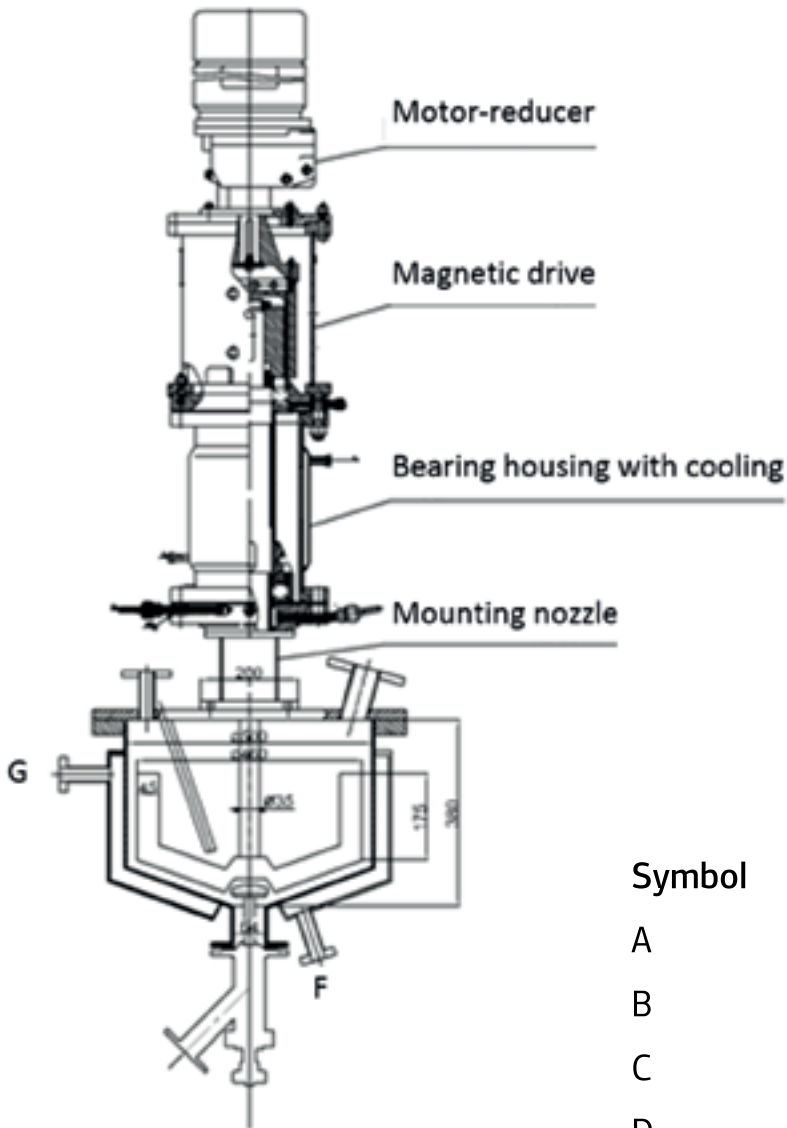


Legend:

- 1 Material pipeline
- 2 water purified
- 10 vacuum
- 12 Nitrogen
- 13 air
- 14 compressed air
- 17 water circulating (x-cold)
- 17 water circulating (t-warm)

FINISHED PROJECTS

Reactors from stainless steel and titanium V=63 L

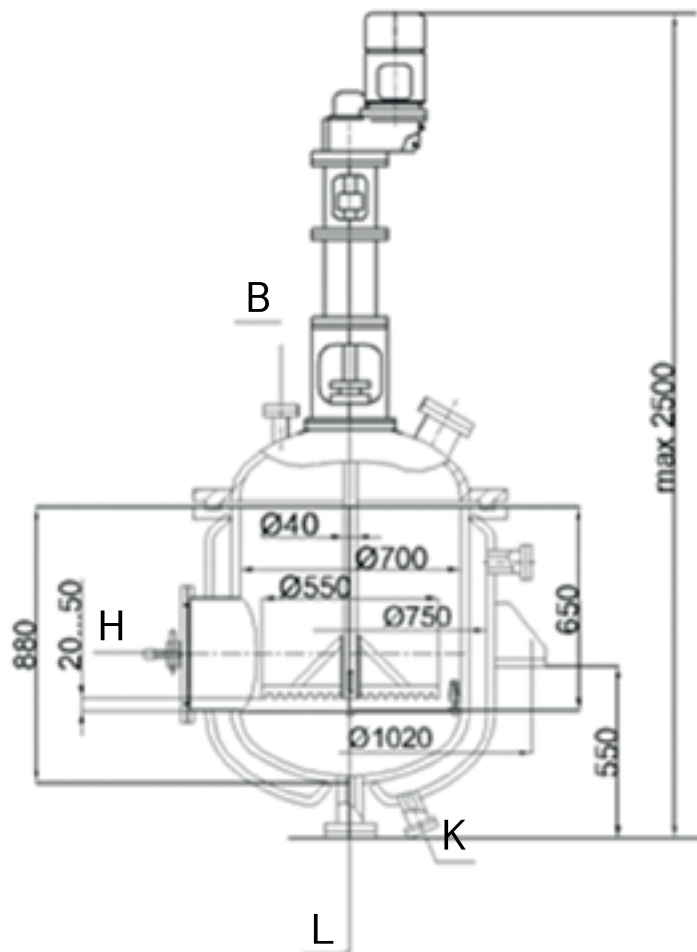


Symbol	Usage	DN, mm
A	Charging port	50
B	Spare nozzle	25
C	Thermowell pocket	32
D	Spare nozzle	25
E	Spare nozzle	32
F	Inlet jacket connection	32
G	Outlet jacket connection	32

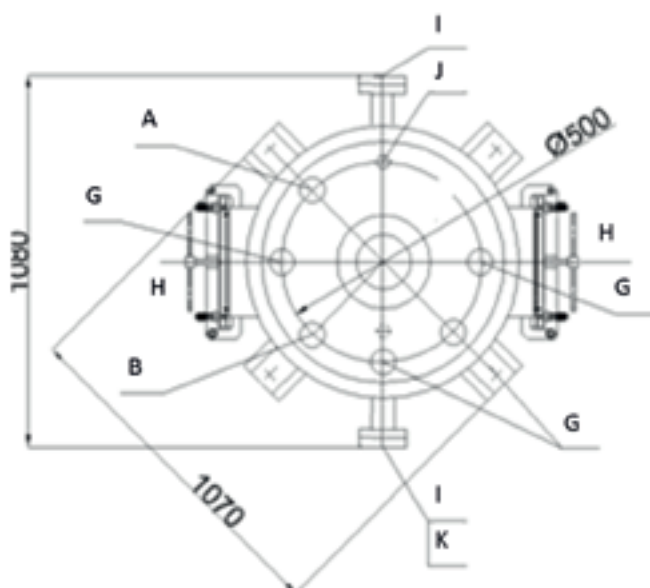
Material of reactor vessel, jacket, in/outlet jacket flanges - titanium grade 2 (IMI 125)

Material of the reactor lid, flanges A, B, C, D - AISI 321

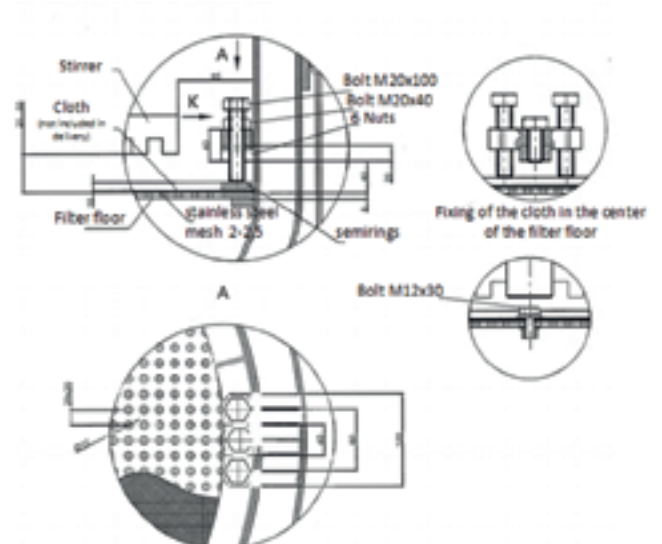
Agitated Nutsche Filter $V=0.25\text{ m}^3$



Arrangement of supports and fittings



Installation of the filter floor and cloth in the nutsche filter $V=0.25\text{ m}^3$



FINISHED PROJECTS

Lab reactor with insulated jacket



Overview:

Working volume	0,1 m ³
Geometry (total) volume	0,22 m ³
Inside diameter	600 mm
Outer diameter, no more than	805 mm
Overall height, no more than	1550 mm
Working pressure in the vessel	-1...0,3 MPa
Working pressure in jacket	up to 0,6 MPa
Operating temperature in the vessel	+100 °C

Materials of manufacture:

Vessel	steel AISI316L
Outer jacket	steel AISI316L s = 1.5 mm
Insulation	basalt mineral wool mats "Paroc" s = 50 mm

Surface quality:

The inner surface is mirror-polished Ra 0.63, welded seams are flush with the base metal, polished, etched and passivated.

The outer surface is mirror-polished Ra 0.63, welded seams are flush with the base metal, polished, etched and passivated.

Equipment:

1	Mixing device - magnetic drive Alfa Laval N=0,55kw, n=0-350 rpm	1 pc.
2	Sight glass with illumination	1 pc.
3	Charging port DN100	1 pc.
4	Discharge valve with pneumatic drive DN40 SED	1 pc.
5	Diaphragm valve DN25 SED	5 pcs.
6	Pressure gauge - Wika	1 pc.
7	Cleaning nozzle	1 pc.
8	Set of branch pipes for connection of technological pipelines	1 set
9	Lockable swivel castors	2 pcs.
10	Non-lockable non-swivel castors	2 pcs.

Execution:

Vertical vessel	
Top cover	spherical
Bottom	torispherical
Castors	4 pcs.
U-shaped jacket on the cylindrical part and lower bottom	
Insulation of the cylindrical part and the lower bottom	

Pressure reactor system from titanium grade 2 (IMI 125)



Technical characteristics:

Working volume	10 liters
The total volume	16.5 liters
Internal diameter of the vessel	324mm
Overall height, not more than	1704 mm

Working media:

In the vessel	Chlorine-containing substances, acid and alkaline media
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In the jacket	Steam
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Working pressure in the vessel	6 MPa
Working pressure in the jacket	0.6 MPa
Operating temperature in the vessel	+250 °C
Working temperature in jacket	+300 °C
Type of agitator	blade
Rotating frequency of the agitator	0 ... 156 rpm
Motor power	1100w
Type of the motor: explosion proof	
The torque on the shaft is 69 Nm	
Power supply	380 V, 50 Hz

Material:

Vessel / jacket / blades of agitator, discharge valve	titanium grade 2
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Degree of protection of the electric drive in accordance with IEC 529:1989	IP-55
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Insulation class of the electric drive in accordance with IEC 85:1984	F
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Protection class according to ATEX	II2GExeIIAT
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Equipment category according to TR TC 032/2013	2nd
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FINISHED PROJECTS

Lab jacketed insulated reactor $V=0.05 \text{ m}^3$



Mixing reactor $V=12 \text{ m}^3$



Starter can $V=100 \text{ L}$





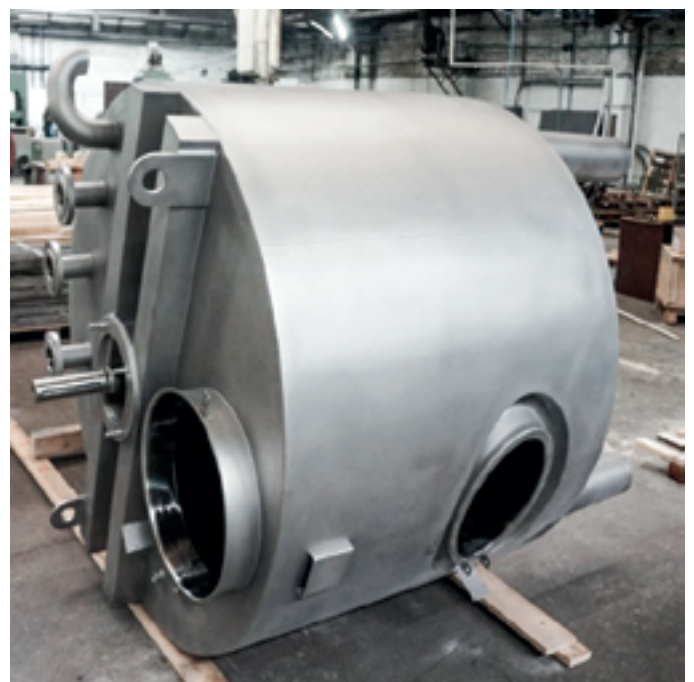
Container for receiving and storing water $V=50 \text{ m}^3$



Equipment for water treatment



Reactor vessel $V=2 \text{ m}^3$





**REATORG
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