



Insulated metal enclosures RizurBox-M

Intended use and application area

RizurBox-M enclosures are manufactured according to TU-3442-001-12189681-2014 and are designed for different types of equipment (pressure sensors, flowmeters, level meters, network devices, shut-off valves, etc.) in outdoor and indoor facilities.

Enclosures RizurBox-M are used for the protection of the equipment from the impact of negative temperatures, condensation, atmosphere precipitation, dust, chemicals, physical damages, unlawful access, theft, etc.

Application area - hazardous areas of the indoor and outdoor facilities in accordance with the markings, industry safety instructions, and the manufacturer's recommendations.

All enclosures are made of inflammable materials and have all the necessary certification.



- **We can manufacture enclosures of any type and dimensions in accordance with the Customer's requirements.**

Design description

Insulated enclosures RizurBox-M are welded constructions manufactured using modern high-quality equipment. The body of the enclosure is made out of carbon steel 1,5 mm thick. The inside panels are made out of galvanized steel at least 1 mm thick. Walls and doors of the enclosure are insulated. Non-flammable mineral mats or heat-insulating materials on the basis of foamed synthetic rubber are used as an insulator. The thickness of the wall in the double-walled design variant is 45 mm.

Enclosures RizurBox-M are also manufactured as single-wall constructions with an insulator of 10...40 mm thickness with a shielding coating glued onto the inside surface. The outer surface of the enclosure is carefully processed with a power-polymer coating applied later to protect the surface from the impact of the environmental factors and premature corrosion.

Depending on the intended use and dimensions, the enclosure can be made either with a supporting frame or without it. In the design variant without the supporting frame, the pressure is distributed along the enclosure walls. The standard supporting frame is a welded steel construction made out of a non-circular tube or an integrated power rack.

Main materials used for the production of the body and supporting frame of the enclosure are different kinds of steel: general-purpose and stainless. It's possible to manufacture the enclosure in a split-type design if there's a need for mounting the enclosure onto the pipeline or to install the large-size equipment. The doors and splitting points have insulation made from cold-resistant rubber along the perimeter. The insulation protects the housing from heat-loss and penetration of the atmosphere precipitation, providing ingress protection of at least IP 54.

Technical specifications

Installation area	General industrial areas Explosion hazard zones V-1a and V-1g acc. to Regulations of equipment installation (PUE), Ch.7.3
Ingress protection	IP54 acc. to GOST1425-96 IP65 acc. to GOST1425-96 (on request) IP66 acc. to GOST1425-96 (on request)
Operating temperature	-60 ...+70 °C -70 ...+100 °C (on request)
Wall thickness	10 ... 50 mm (depending on the enclosure's design variant)
Metal thickness	1,2...2 mm (depending on the enclosure's design variant)
Thermal conductivity	0,03 W/(m·K)
Fittings materials (locks, hinges)	Galvanized steel, stainless steel
Surface resistance (antistatic agent)	Less than 10 ⁹ Ohm
Temperature maintained inside	-40 ... +100 °C (depending on the heating system used)
Explosion protection marking	
<ul style="list-style-type: none"> • enclosure with electric heating (enclosure with electric heating) 	II Gb IIC T6...T3 X 1Ex e mb IIC T6...T3 Gb X 1Ex e d IIC T6...T3 Gb X 1Ex e d mb IIC T6...T3 Gb X 1Ex e d IIB T6...T3 Gb X 1Ex e d mb IIB T6...T3 Gb X 1Ex e IIC T6...T3 Gb X (depending on the design variant of the heater and thermoregulator used)
<ul style="list-style-type: none"> • with a heating section 	1 Ex e IIC T6...T3 Gb X
<ul style="list-style-type: none"> • water /steam heating under 195 °C 	II Gb IIC T3 X or II Gb IIB T3 X
<ul style="list-style-type: none"> • water /steam heating under 130 °C 	II Gb IIC T4 X or II Gb IIB T4 X
<ul style="list-style-type: none"> • water /steam heating under 95 °C 	II Gb IIC T5 X or II Gb IIB T5 X
<ul style="list-style-type: none"> • water /steam heating under 80 °C 	II Gb IIC T6 X or II Gb IIB T6 X
<ul style="list-style-type: none"> • without heating 	II Gb IIC or II Gb IIB
Colour	Dark grey (antique-silver) Any colour (on request)
Warranty period	12 months 24/36 months (on request)
Average operation time	Over 10 years

Delivery options:

Basic set

The Basic set includes an enclosure and all components that are supplied separately: mounting elements for equipment installation, mounting elements for enclosure installation, tube heat exchanger (water steam), electric heater/heating section, temperature control device, signaling system, lamp, junction box, cable, and tube glands, blind flanges, junctions, bolts, washers, nuts, etc.

Thus, the Basic set includes everything required for the installation, performed by the Customer or by an installation crew.

Standard set

The Standard set is almost identical to the Basic set. However, the heaters and the inside mounting elements are installed in accordance with the Customer's technical drawing.

The installation of the enclosure is performed by the Customer or by an installation crew. Monitoring and measuring equipment is installed and connected by the Customer or by an installation crew.

System Set

The System set is similar to the Standard set but apart from the heating system and the mounting elements it also includes all the necessary connecting, shut-off, and control equipment (fittings, valves, impulse tubes, pre-insulated tube bundles RizurPak, valve device assemblies, etc.).

This set is a package solution combining different types of equipment (enclosures, soft enclosures, pre-insulated impulse tubes, equipment of other manufacturers).

The Customer or an installation crew only have to install the control and measurement equipment inside and mount the enclosure itself.

Complete set

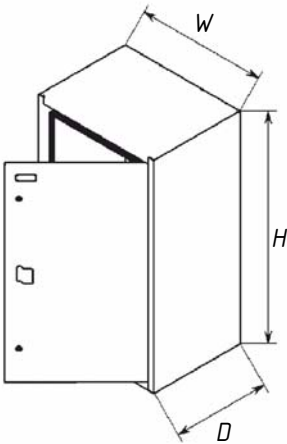
The Complete set is a fully assembled and ready-for-connection unit with installed control and measuring equipment. The control and measuring equipment is specified by the Customer:

- it can be selected by the engineers of RIZUR in accordance with the requirements of the Customer.
- it can be specified by the Customer.
- it can be selected and supplied by the Customer.

This set is a packaged solution that contains a fully-equipped metering station which is ready for installation.

Standard variants of the enclosures:

Enclosures RizurBox-M with a classical opening

	Design variant	Dimensions HxWxD*, mm	Design variant	Dimensions HxWxD*, mm
		RizurBox-M-RK-450x600x650	450x600x650	RizurBox-M-RK-1200x800x600
	RizurBox-M-RK-500x350x210	500x350x210	RizurBox-M-RK-1250x1800x500	1250x1800x500
	RizurBox-M-RK-500x500x400	500x500x400	RizurBox-M-RK-1350x500x300	1350x500x300
	RizurBox-M-RK-600x500x500	600x500x500	RizurBox-M-RK-1400x700x600	1400x700x600
	RizurBox-M-RK-600x500x600	600x500x600	RizurBox-M-RK-1400x800x600	1400x800x600
	RizurBox-M-RK-600x600x600	600x600x600	RizurBox-M-RK-1490x1790x800	1490x1790x800
	RizurBox-M-RK-600x900x600	600x900x600	RizurBox-M-RK-1500x600x600	1500x600x600
	RizurBox-M-RK-650x400x600	650x400x600	RizurBox-M-RK-1500x1400x2000	1500x1400x2000
	RizurBox-M-RK-745x745x630	745x745x630	RizurBox-M-RK-1600x800x500	1600x800x500
	RizurBox-M-RK-800x500x500	800x500x500	RizurBox-M-RK-1600x800x740	1600x800x740
	RizurBox-M-RK-800x600x500	800x600x500	RizurBox-M-RK-1600x1200x500	1600x1200x500
	RizurBox-M-RK-800x1100x600	800x1100x600	RizurBox-M-RK-1600x1400x800	1600x1400x800
	RizurBox-M-RK-1000x600x300	1000x600x300	RizurBox-M-RK-1700x600x600	1700x600x600
	RizurBox-M-RK-1000x600x500	1000x600x500	RizurBox-M-RK-1850x900x500	1850x900x500
	RizurBox-M-RK-1000x600x600	1000x600x600	RizurBox-M-RK-1850x1300x1300	1850x1300x1300
	RizurBox-M-RK-1000x800x600	1000x800x600	RizurBox-M-RK-2000x700x700	2000x700x700
	RizurBox-M-RK-1000x1500x1000	1000x1500x1000	RizurBox-M-RK-2000x990x990	2000x990x990
	RizurBox-M-RK-1090x890x480	1090x890x480	RizurBox-M-RK-2000x1400x750	2000x1400x750
	RizurBox-M-RK-1100x700x700	1100x700x700	RizurBox-M-RK-2060x900x600	2060x900x600
	RizurBox-M-RK-1190x690x690	1190x690x690	RizurBox-M-RK-2100x1600x800	2100x1600x800
	RizurBox-M-RK-1200x600x600	1200x600x600	RizurBox-M-RK-2100x2000x1100	2100x2000x1100
	RizurBox-M-RK-1200x800x500	1200x800x500	RizurBox-M-RK-2200x1000x600	2200x1000x600

*The sizes of enclosures are for reference. To get the drawings with precise dimensional and internal specifications of enclosures, please contact RIZUR engineering department, +7 (4912) 20-20-80, marketing@rizur.ru



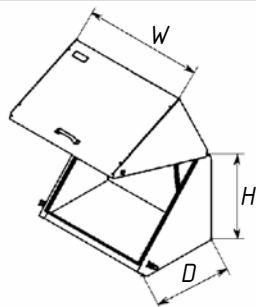
Enclosure RizurBox-M-RK



Enclosures RizurBox-M-RK, multiple-door execution



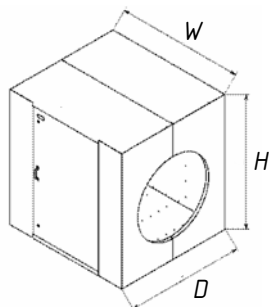
Enclosures RizurBox-M-RD with diagonal opening



Design variant	Dimensions HxWxD*, mm
RizurBox-M-RD-550x400x400	550x400x400
RizurBox-M-RD-650x600x600	650x600x600
RizurBox-M-RD-650x850x600	650x850x600
RizurBox-M-RD-650x1100x600	650x1100x600
RizurBox-M-RD-650x890x600	650x890x600
RizurBox-M-RD-750x600x400	750x600x400

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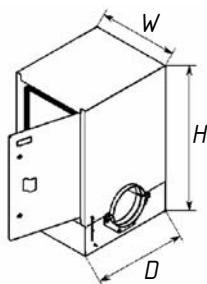
Enclosures RizurBox-M-RV with vertical opening



Design variant	Dimensions HxWxD*, mm
RizurBox-M-RV-800x1700x800	800x1700x800
RizurBox-M-RV-1085x2685x585	1085x2685x585
RizurBox-M-RV-1600x1280x800	1600x1280x800
RizurBox-M-RV-1730x1650x1520	1730x1650x1520
RizurBox-M-RV-2100x1600x800	2100x1600x800

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Enclosures RizurBox-M-RG with horizontal opening



Design variant	Dimensions HxWxD*, mm
RizurBox-M-RG-1100x600x700	1100x600x700
RizurBox-M-RG-1150x1200x600	1150x1200x600
RizurBox-M-RG-1200x2100x1100	1200x2100x1100
RizurBox-M-RG-1400x800x600	1400x800x600
RizurBox-M-RG-1400x1200x1000	1400x1200x1000

* The sizes of enclosures are for reference. To get the drawings with precise dimensional and internal specifications of enclosures, please contact RIZUR engineering department, +7(4912) 20-20-80, marketing@rizur.ru



Enclosures RizurBox-M-RG



Enclosures RizurBox-M-RD

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INQUIRY FORM № _____

Insulated metal enclosure RizurBox-M (page 1 of 3)

Company			
Name of the facility			
Contact person			
Phone/fax/e-mail			
Min. and max. operation temperatures, °C		from _____ to _____	
Position tag			
Installed equipment specification (specify ordering codes for equipment, valve assemblies, etc.)			
Number of enclosures acc. to the inquiry form		_____ pcs.	
Enclosure variant RizurBox-M HxWxD, mm			
Diagonal opening <input type="checkbox"/> RizurBox-M-RD-550x400x400 <input type="checkbox"/> RizurBox-M-RD-650x600x600 <input type="checkbox"/> RizurBox-M-RD-650x850x600 <input type="checkbox"/> RizurBox-M-RD-650x1100x600 <input type="checkbox"/> RizurBox-M-RD-650x890x600 <input type="checkbox"/> RizurBox-M-RD-750x600x400 <input type="checkbox"/> RizurBox-M-RD-____x____x____ Classical opening <input type="checkbox"/> RizurBox-M-RK-450x600x650 <input type="checkbox"/> RizurBox-M-RK-500x350x210 <input type="checkbox"/> RizurBox-M-RK-500x500x400 <input type="checkbox"/> RizurBox-M-RK-600x500x500 <input type="checkbox"/> RizurBox-M-RK-600x500x600 <input type="checkbox"/> RizurBox-M-RK-600x600x600 <input type="checkbox"/> RizurBox-M-RK-600x900x600 <input type="checkbox"/> RizurBox-M-RK-650x400x600 <input type="checkbox"/> RizurBox-M-RK-745x745x630 <input type="checkbox"/> RizurBox-M-RK-800x500x500 <input type="checkbox"/> RizurBox-M-RK-800x600x500 <input type="checkbox"/> RizurBox-M-RK-800x1100x600 <input type="checkbox"/> RizurBox-M-RK-1000x600x300 <input type="checkbox"/> RizurBox-M-RK-1000x600x500 <input type="checkbox"/> RizurBox-M-RK-1000x600x600 <input type="checkbox"/> RizurBox-M-RK-1000x800x600 <input type="checkbox"/> RizurBox-M-RK-1000x1500x1000 <input type="checkbox"/> RizurBox-M-RK-1090x890x480 <input type="checkbox"/> RizurBox-M-RK-1100x700x700 <input type="checkbox"/> RizurBox-M-RK-1190x690x690 <input type="checkbox"/> RizurBox-M-RK-1200x600x600 <input type="checkbox"/> RizurBox-M-RK-1200x800x500 <input type="checkbox"/> RizurBox-M-RK-1200x800x600 <input type="checkbox"/> RizurBox-M-RK-1250x1800x500 <input type="checkbox"/> RizurBox-M-RK-1350x500x300		<input type="checkbox"/> RizurBox-M-RK-1400x700x600 <input type="checkbox"/> RizurBox-M-RK-1400x800x600 <input type="checkbox"/> RizurBox-M-RK-1490x1790x800 <input type="checkbox"/> RizurBox-M-RK-1500x600x600 <input type="checkbox"/> RizurBox-M-RK-1500x1400x2000 <input type="checkbox"/> RizurBox-M-RK-1600x800x500 <input type="checkbox"/> RizurBox-M-RK-1600x800x740 <input type="checkbox"/> RizurBox-M-RK-1600x1200x500 <input type="checkbox"/> RizurBox-M-RK-1600x1400x800 <input type="checkbox"/> RizurBox-M-RK-1700x600x600 <input type="checkbox"/> RizurBox-M-RK-1850x900x500 <input type="checkbox"/> RizurBox-M-RK-1850x1300x1300 <input type="checkbox"/> RizurBox-M-RK-2000x700x700 <input type="checkbox"/> RizurBox-M-RK-2000x990x990 <input type="checkbox"/> RizurBox-M-RK-2000x1400x750 <input type="checkbox"/> RizurBox-M-RK-2060x900x600 <input type="checkbox"/> RizurBox-M-RK-2100x1600x800 <input type="checkbox"/> RizurBox-M-RK-2100x2000x1100 <input type="checkbox"/> RizurBox-M-RK-2200x1000x600 <input type="checkbox"/> RizurBox-M-RK-____x____x____ Vertically-split <input type="checkbox"/> RizurBox-M-RV-800x1700x800 <input type="checkbox"/> RizurBox-M-RV-1085x2685x585 <input type="checkbox"/> RizurBox-M-RV-1600x1280x800 <input type="checkbox"/> RizurBox-M-RV-1730x1650x1520 <input type="checkbox"/> RizurBox-M-RV-2100x1600x800 <input type="checkbox"/> RizurBox-M-RV-____x____x____ Horizontally-split <input type="checkbox"/> RizurBox-M-RG-1100x600x700 <input type="checkbox"/> RizurBox-M-RG-1150x1200x600 <input type="checkbox"/> RizurBox-M-RG-1200x2100x1100 <input type="checkbox"/> RizurBox-M-RG-1400x800x600 <input type="checkbox"/> RizurBox-M-RG-1400x1200x1000 <input type="checkbox"/> RizurBox-M-RG-____x____x____	
		Options	
		<input type="checkbox"/> Observation window <input type="checkbox"/> Additional insulation (foamed insulator with metallized coating) <input type="checkbox"/> Non-insulated <input type="checkbox"/> Insulated, single-walled (foamed insulator with metallized coating) <input type="checkbox"/> Made from stainless steel <input type="checkbox"/> RAL _____ (powder-polymer coating «antique silver»)	
Mounting elements for the equipment:			
<input type="checkbox"/> Tube adapter (OD=57mm) <input type="checkbox"/> Standard (250 mm) <input type="checkbox"/> Non-standard _____	<input type="checkbox"/> Mounting panel <input type="checkbox"/> Standard (260x340 mm) <input type="checkbox"/> Non-standard _____	<input type="checkbox"/> DIN-rail <input type="checkbox"/> DIN _____mm, L _____mm, ____pcs. <input type="checkbox"/> DIN _____mm, L _____mm, ____pcs.	<input type="checkbox"/> Mounting rails <input type="checkbox"/> L _____mm, ____pcs. <input type="checkbox"/> L _____mm, ____pcs. <input type="checkbox"/> L _____mm, ____pcs. <input type="checkbox"/> L _____mm, ____pcs.
			<input type="checkbox"/> Other Describe the required mounting parts in the field «Additional information»



INQUIRY FORM № _____

Reinforced fiberglass enclosures RizurBox-M (page 2 of 3)

Mounting elements for enclosure:	Heating:
<input type="checkbox"/> Without mounting elements	<input type="checkbox"/> Without heating
<input type="checkbox"/> Floor - floor stand (enclosure is mounted on a horizontal surface) . Standard height 1000 mm If not standard, please specify H=_____ mm <u>Variants of floor mounting:</u> <input type="checkbox"/> mounting under the bottom <input type="checkbox"/> mounting to enclosure rear wall	<input type="checkbox"/> Electric heating: <input type="checkbox"/> FT-variant <input type="checkbox"/> ST-variant -maintaining _____ °C (specify within the range of -40°C ...+50°C) <input type="checkbox"/> SR-variant -maintaining _____ °C (specify within the range of -40°C ...+50°C) -temperature when alarm indication is on (relay output) _____ °C / _____ °C <input type="checkbox"/> AR-variant <u>Heating power:</u> <input type="checkbox"/> recommended by the manufacturer <input type="checkbox"/> _____ W
<input type="checkbox"/> Wall hanging - rail for enclosure mounting onto vertical surface. <input type="checkbox"/> On site fence rail	
<input type="checkbox"/> On a pipeline - clamps for enclosure mounting on a pipeline Please, specify the external diameter of the pipe Ø=_____ mm <u>Options for mounting on a pipeline:</u> <input type="checkbox"/> Horizontal pipe passes through enclosure <input type="checkbox"/> Vertical pipe passes through enclosure <input type="checkbox"/> Horizontal pipe passes under enclosure <input type="checkbox"/> Vertical pipe passes behind enclosure	
<input type="checkbox"/> On a flange Please, specify flange diameter Ø=_____ mm	
<input type="checkbox"/> Other Specify the necessary mounting elements _____	<input type="checkbox"/> Heat-exchange pipe (water/steam) <input type="checkbox"/> welded <input type="checkbox"/> thread G3/4" <input type="checkbox"/> thread G1/2" <input type="checkbox"/> other thread _____

Cable/tube glands:

Heating power cable Ø _____ mm metal hose Ø _____ mm, _____ pcs
 Cable/tube Ø _____ mm metal hose Ø _____ mm, _____ pcs
 Cable/tube Ø _____ mm metal hose Ø _____ mm, _____ pcs
 Cable/tube Ø _____ mm metal hose Ø _____ mm, _____ pcs
 Heat-insulated gland PILT _____ pcs

Holes for cable glands and impulse lines:
 not drilled (supplied as a set)
 drilled (it's necessary to specify the holes layout in your order)

Impulse tubing heating:

- Without heating
 Preinsulated tubing bundle of impulse lines RizurPak (see below)
 Soft enclosure RIZUR for impulse tubes (see below)

Preinsulated tubing bundle of impulse lines RizurPak

Length of tubing bundle _____ m
 Quantity of impulse tubes inside the bundle, _____ pcs.
 External diameter of impulse tubes _____ mm
 Maximum temperature of the medium in the tubes _____ °C
 Temperature of cleaning/steam-cleaning _____ °C
 Required maintained temperature of the medium in the tube _____ °C
 Maximum pressure in the tube _____ MPa
 Compression fitting for process connection _____ pcs.
 Process connection thread type: male/female _____
 Compression fitting for equipment connection _____ pcs.
 Equipment connection thread type male/female _____
 Heat shrinks for sealing bundle ends _____ pcs.
 Sealing kit for junction box entry and heating cable termination _____ pcs.
 Adjustable thermoregulator to maintain exact temperature inside the bundle
 (shipped with a coating repair kit for installing the thermoregulator sensor under
 the bundle coating) _____ pcs.
 Insulation repair kit in the event of external insulation damage _____ pcs.
 Sealant heat-shrinkable fitting for tubing bundle entry into an enclosure
 _____ pcs. (Please, specify enclosure wall width - _____ mm)

Scope of supply:
 Fully assembled tubing bundle of impulse lines
 (see the scheme below)
 Specify the length in accordance with the scheme:

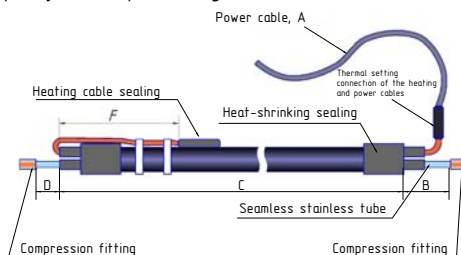
A= _____ mm C= _____ mm B= _____ mm

D= _____ mm F= _____ mm

Tubes shipped in coils, without preliminary cutting
 or other preparations.

Specify the required length of bundle: _____ m

Shipped as tube segments of specified lengths,
 without preliminary sealing or other preparations
 Specify the required length of the bundle: _____





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INQUIRY FORM № _____

Reinforced fiberglass enclosures RizurBox-C (page 3 of 3)

Soft enclosure RIZUR for impulse tubes
Length of the enclosure (tubing bundle) _____ m External diameter of impulse tubes inside the bundle _____ mm Maximum temperature of the medium in tubes _____ °C Temperature of cleaning/steam cleaning _____ °C Required temperature of the medium maintained in a tube _____ °C
Heating of the pressure tap
<input type="checkbox"/> Soft enclosure for the pressure tap (root, tap, diaphragm, etc.) Please, provide a drawing of the pressure tap point
Delivery options
<input type="checkbox"/> Basic (all parts are shipped non-assembled) <input type="checkbox"/> Standard (similar to the Basic set, except the heating system and all mounting components inside the enclosure are assembled) <input type="checkbox"/> System (similar to the Standard set, except it includes all the required connecting, locking and regulating components (fittings, taps, valves, impulse tubes, pre-insulated tubing bundles RizurPak, valve assemblies, etc.) <u>For System set, you need the following :</u> 1. Provide the layout of tubing/impulse framework in the enclosure 2. Specify maximum temperature of the medium in the tubes _____ °C 3. Specify maximum pressure in the tubes _____ MPa <input type="checkbox"/> Full set (Full set includes an assembled unit ready for connection on-site, with control and measuring equipment installed) <u>For Full set you need the following:</u> 1. Provide the layout of tubing/impulse framework in the enclosure 2. Provide a full list of control and measuring equipment to be installed <input type="checkbox"/> the equipment is delivered by the Customer <input type="checkbox"/> the equipment is delivered by the Supplier (specify the exact codes for the required equipment or inquiry forms with preferable manufacturers) 3. Specify maximum temperature of the medium in the tubes _____ °C 4. Specify maximum pressure in the tubes _____ MPa
Additional information

If the phrasing in the inquiry form seems unclear or there're any other questions,
 please phone for an explanation +7 (4912) 20-20-80