



Soft enclosures RIZUR for EC&I instrumentation and process equipment

Intended use and application area

Heat-insulated soft enclosures RIZUR are manufactured in compliance with Technical regulations TU-5763-002-12189681-2014 and conform to GOST R MEK 60079-18-2012. Depending on design and materials, RIZUR soft enclosures are designed for covering different equipment (instrumentation and control, shut-off and control valves, motor-driven equipment, and PCS elements) and are aimed at protecting it from environmental factors (precipitation, icing, wind load capacity, direct solar radiation, high temperatures, corrosive substances, etc.), reducing heat loss (mainly the soft enclosures designed for protecting shut-off and control valves used in high temperature technological processes), as well as maintaining the required air temperature (object's surface temperature) inside the enclosure when the equipment is used at low or negative temperatures (mainly the soft enclosures for EC&I, flowing wellhead equipment, electrical and pneumatic drives, back pressure valves).

Soft enclosures are especially widely used in oil and gas facilities in northern areas being the most cost-effective and high-quality solution for equipment heating. RIZUR soft enclosures are approved for use in explosion hazardous areas in indoor and outdoor facilities. All soft enclosures are manufactured from flame-resistant materials.

The operational safety of soft enclosures when used at explosion-hazardous facilities is confirmed by the Customs Union's Certificate of Compliance, «On Safety of Equipment for operation in explosive environments» №TC RU C-RU.ME92.B.00041/19.

Design description

Heat-insulated soft enclosure RIZUR has a multi-layer body made of abrasion and flame-resistant antistatic materials. There's also a thermal insulator for heat insulation between the internal and external layers.

Coating and thermal insulation materials, as well as the thickness of the thermal insulator, are chosen depending on the peculiarities of the technological process and operating conditions.

The releasable joints are made of freeze-resistant Velcro fasteners. Special textile tightening sleeves (can be insulated or non-insulated) are used for sealing the cable glands. The configuration and dimensions of a soft enclosure depend on the heated equipment features and the soft enclosure's design.

To maintain the required temperature inside inside the soft enclosures RIZUR, different types of equipment can be used: explosion-proof self-regulating or resistive heating cables, RIZUR-ONP, RIZUR-OShA, RIZUR-OUR-PL, RIZUR-TERM and similar, as well as any other kinds of heating elements that are approved for use in a prescribed manner - upon an agreement with the customer.

A special feature of RIZUR soft enclosures is that their assembly/disassembly does not require process shutdown. Due to precise design and the usage of belt straps, disconnection of the data cables or other parts of protected equipment is not required.

RIZUR soft enclosures are designed individually, taking into consideration all the structural features and peculiarities of the mounting process. A full up-front simulation is done for each product during the preparation of the technical and commercial proposal.



ООО «НПО RIZUR» mass-produces soft enclosures for:

- control and measuring equipment (EC&I);
- shut-off and regulating equipment (gate valves, motors, filters, valves, taps, etc);
- flowing wellhead equipment, including the back pressure valves;
- electrical equipment;
- any other kinds of industrial equipment.

Design variants for RIZUR soft enclosures

Through-the-thickness stitching design variant

This design variant enables the production of soft enclosures of all forms for constructions of any complexity. Soft enclosures RIZUR manufactured according to this technology, have high structural flexibility that makes their mounting much easier, especially at low ambient temperatures.



Solid construction design variant (without through-the-thickness stitching)

This design variant has high heat-insulating and moisture-protective properties; however, this technology allows the manufacture of only rectangular or cylindrical enclosures with a rather rigid structure. These peculiarities significantly limit the area of soft enclosures' application and the possibility of their installation at negative ambient temperatures.

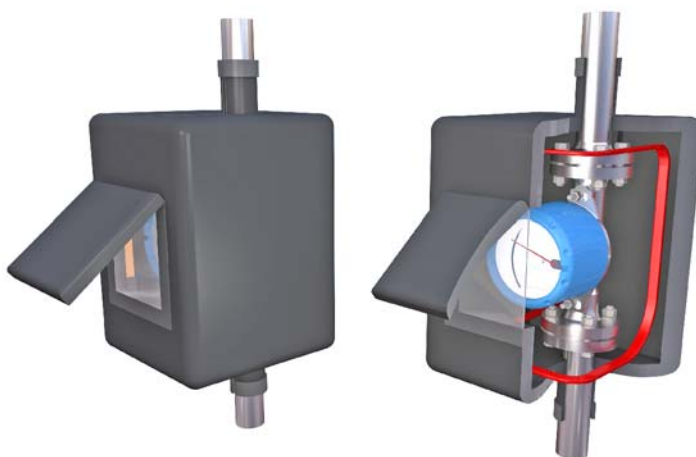


Technical specifications

Installation area	General industrial areas Areas exposed to explosion hazards V-1a and V-1d, acc. to Electrical Installation Regulations (PUE), Ch. 7.3
Ingress protection	IP54 acc. to GOST 1425-96
External layer material	Flame-resistant antistatic PVC-material Fiberglass with double-sided silicon coating
Internal layer/tightening sleeves' material	Fiberglass with double-sided silicon coating Flame-resistant antistatic PVC-material Silica fabric with polyurethane coating
Thermal insulator material	Foam rubber, modified expanded polyethylene, nonwoven mineral insulation
Threads material	Lavsan/kevlar
Closing/fixation system	Flame and frost resistant Velcro strips; O-rings made of stainless steel; Belt straps
Total wall thickness	10... 100 mm (depending on the soft enclosure's design variant)
Thermal conductivity	0,03 W/(m*K)
Surface resistivity (antistatic)	Under 109 Ohm
Ambient temperature	-70°C...+70°C (up to +1000°C for the heat-insulating soft enclosures)
Temperature maintained without a thermoregulator	+20°C...+35°C
Temperature maintained with a thermoregulator	-40°C...+110°C (see thermoregulator's technical specifications)
Power cable length in a metal hose	0,5 ... 50 m (depending on the order specification)
Supply power	From 15 to 5000 W (depending on the soft enclosure's dimensions and configuration)
Warranty period	12 months 24/36 months (depending on the order specification)
Average operation time	Over 7 years

Soft enclosure RIZUR for a rotameter:

- Observation window
- Heating device: explosion-proof self-regulating heating cable RIZUR-SGL
- Explosion-proof junction box RIZUR-KC



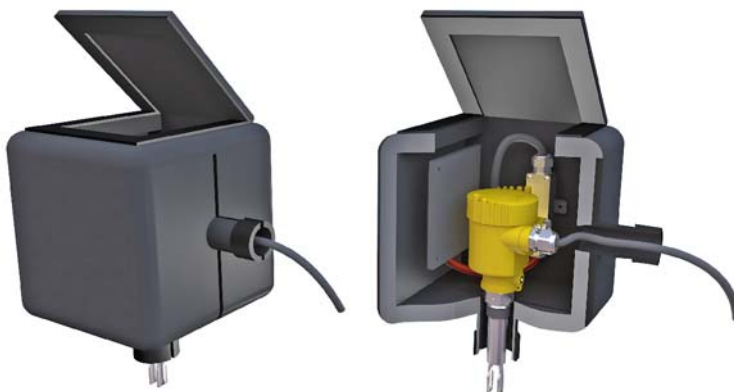
Soft enclosure RIZUR for a reflex-radar level transmitter:

- Observation window
- Heating device: explosion-proof self-regulating heating cable RIZUR-SGL
- Explosion-proof junction box RIZUR-KC



Soft enclosure RIZUR for a vibrational level switch:

- Observation window
- Heating device: explosion-proof heater RIZUR-OUR-PL-1
- Explosion-proof junction box RIZUR-KC



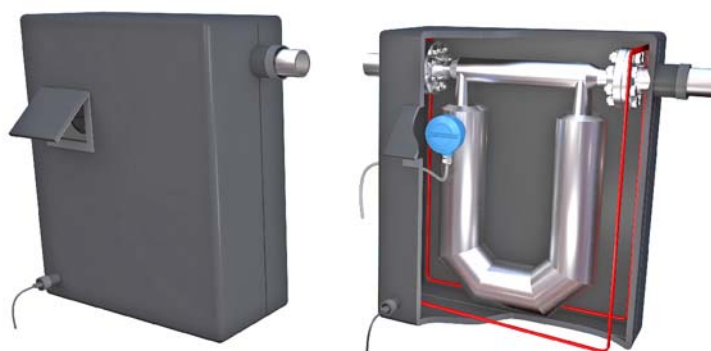
Soft enclosure RIZUR for a pressure gauge with two valve manifold and isolating diaphragm:

- Observation window
- Heating device: explosion-proof self-regulating heating cable RIZUR-SGL
- Explosion-proof junction box RIZUR-KC



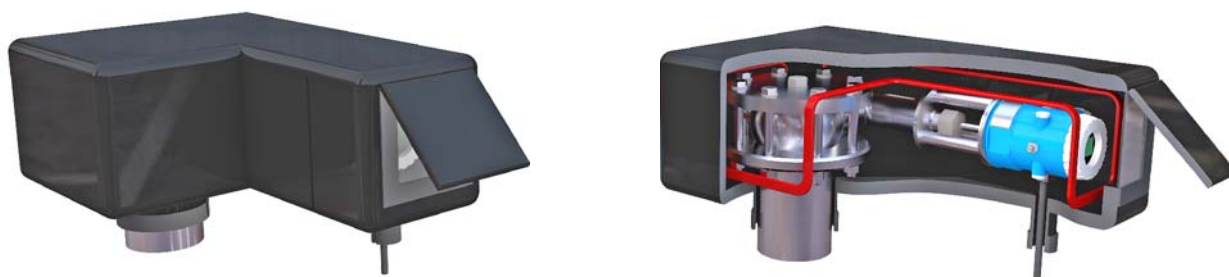
Soft enclosure RIZUR for a mass coriolis flow meter:

- Observation window
- Heating device: explosion-proof self-regulating heating cable RIZUR-SGL
- Explosion-proof junction box RIZUR-KC



Soft enclosure RIZUR for a displacer level meter:

- Observation window
- Heating device: explosion-proof self-regulating heating cable RIZUR-SGL
- Explosion-proof junction box RIZUR-KC





000 «NPO RIZUR» www.rizur.ru +7 (4912) 20-20-80

INQUIRY FORM № _____

Soft enclosure RIZUR

Company name			
Name of the facility			
Contact person			
Phone/fax/e-mail			
Quantity of soft enclosures	_____ pcs.		
Position tag			
Detail specifications of the equipment to be installed in RIZUR soft enclosure (specify the order code of the products, valve assemblies, etc.)			
Equipment dimensions, HxWxD	_____x_____x_____mm Please, provide a scheme of the equipment and specify: 1. Equipment dimensions 2. Heated areas 3. Location of glands (cable, pulse) and observation windows		
Maximum surface temperature of the heated equipment	_____°C		
Observation window	<input type="checkbox"/> None	<input type="checkbox"/> Transparent observation window	<input type="checkbox"/> Transparent observation window with a through opening
Electric heating	<input type="checkbox"/> None <input type="checkbox"/> Self-regulating heating cable, 1ExellC T6...T3GbX <input type="checkbox"/> Heater RIZUR-OUR-PL, 1ExmbllC T3...T6GbX		
Min. and max. ambient temperatures	from _____ to _____°C		
Temperature inside RIZUR soft enclosure during the heating process (Heating power is calculated individually depending on the enclosure's parameters)	Min _____°C Max _____°C <input type="checkbox"/> Output relay signals for decrease/increase in temp. _____°C/_____°C		
Electrical connection	<input type="checkbox"/> to the customer's junction box The length of the supply cable (to a junction box) _____m <input type="checkbox"/> Protection of the power cable with a metal hose	<input type="checkbox"/> Junction box is supplied with the soft enclosure Supply cable (to the junction box) _____m <input type="checkbox"/> Protection of the power cable with a metal hose Power cable parameters: Ø cable _____mm Ø armor _____mm Ø metal hose _____mm	<input type="checkbox"/> Fixation of a junction box on the soft enclosure <input type="checkbox"/> Protection of the power cable with a metal hose Power cable parameters: Ø cable _____mm Ø armor _____mm Ø metal hose _____mm
Options for a soft enclosure	<input type="checkbox"/> RIZUR soft enclosure for impulse tubes Length of a soft enclosure (impulse tube) _____ m Diameter of an impulse tube _____mm Maximum medium temperature of an impulse tube _____°C Cleaning-up/steaming-out operation _____°C Quantity of the impulse tubes _____pcs <input type="checkbox"/> Pre-insulated tubing bundle RizurPak (please, attach an inquiry form for RizurPak)		
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