

COMPANY CATALOGUE



INSUSMART
SI TECHNOLOGIES



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INSUSMART – efficiency and safety on each industry!

Reusable and flexible insulation jackets are made of high-technology materials and capable to resist extreme temperatures from -190C up to +1200C

Used for:

 Cooling and conditioning systems

 Oil and gas industries

 Equipment of different shapes

 Equipment with high and low temperature



INSUSMART – a complex solution to solve main industrial challenges!

Equipment:

- No thermo insulation on the equipment and pipe systems
- Fire and eco safety
- Equipment breakdown risk

Losses:

1. Heat losses and energy decrease
2. Additional losses on equipment exploitation and repairment
3. Fines and warrants

Personnel safety:

- Noise impact on the personnel
- Life and health risk
- Burns



INSUSMART – producer near customer!

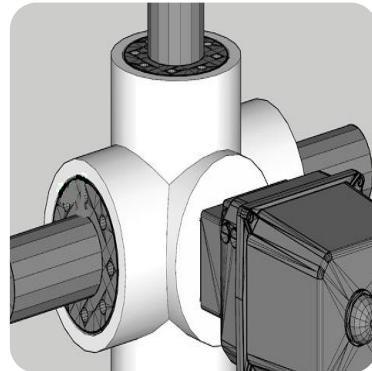
We work in Russia and Middle East



Individual measurement,
technical task



3D model technology
and material selection



Production

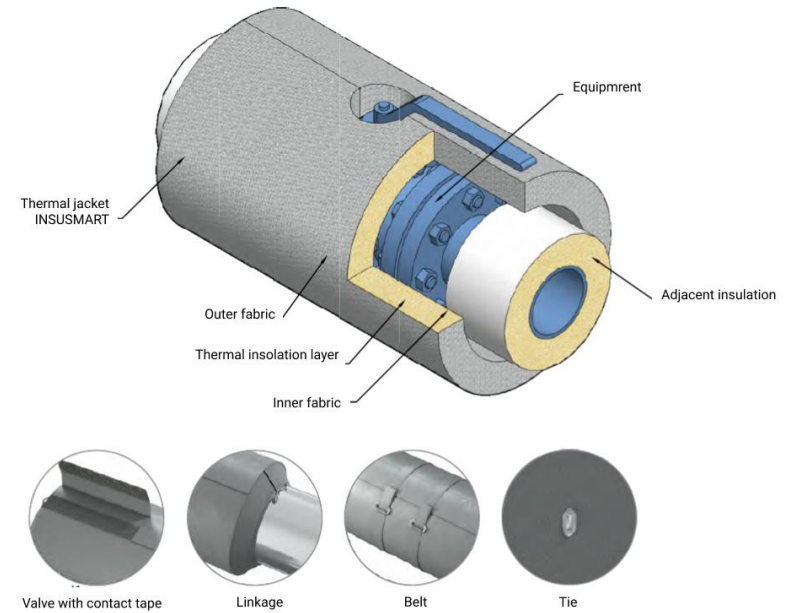
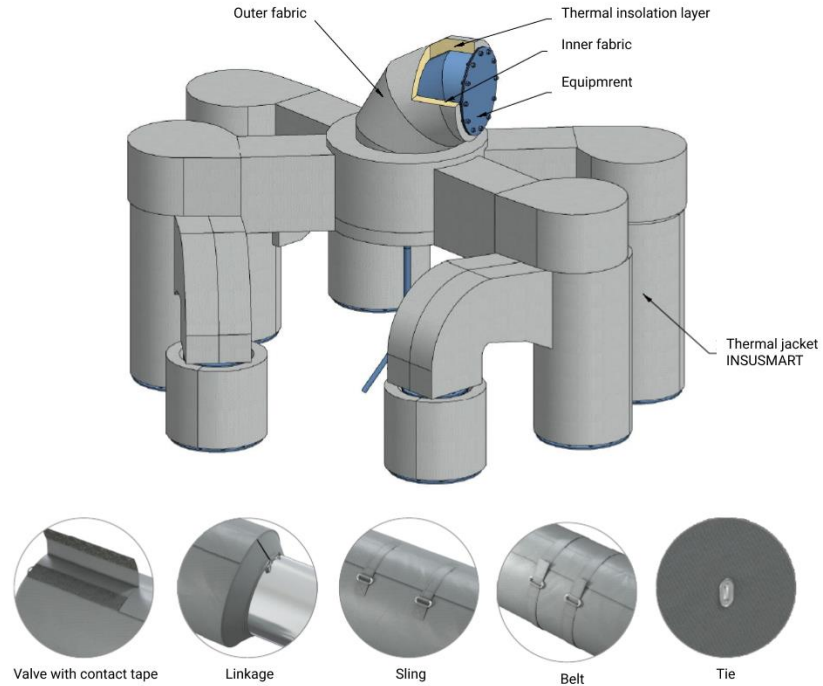


Installation and
guarantee period



INSUSMART – insulation that repeats the shape of the equipment and provide **thermal losses reduction**

Construction solution examples and technical specification



Temperature	Thickness	Outer fabric	Inner fabric	Fastening
- 190°C – +200°C	80mm – 200mm	May differ, depends on technical task from the customer		

Our partners receive not just a insulation jacket, but a complex service with designing, measurement, construction, installation and guarantee maintenance

Efficiency
(thermo energy saving,
safety, equipment
protection)

Reliability
(up to 25 years of service)



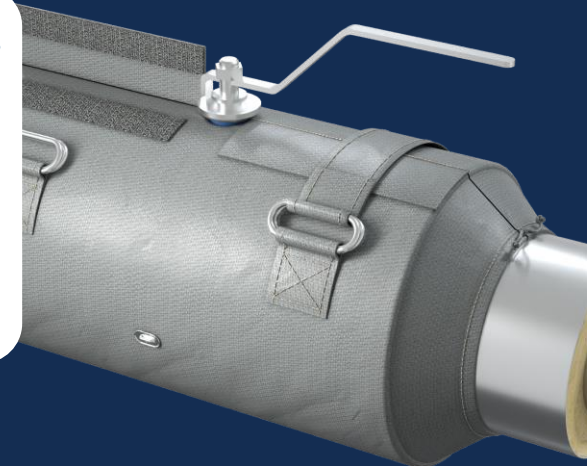
**Convenience to
install/uninstall**
(exportation cost decrease)

25000

insulation jackets
are produced per year

25 DAYS

average period of order
delivery (from the work start)





Our quality and stability are proven by Governmental Auditors Quality inspections and happy partners



We worked with such partners as



Leading American farming company transporter thermo insolation



Leading German auto producer steampipe thermo insolation



National gas company stabilizer thermo insolation



Candy producer cold armature thermo insolation



Leading Russian chemical company receiver thermo insolation



INSUSMART
SI TECHNOLOGIES

INSUSMART Partners



INSUSMART – insulation jackets and traditional metal insulation. What's the difference?

Each equipment need to be regularly maintained. Usually productions use traditional insulation covers made of zinc or aluminum sheets. If the equipment has non-typical shape then metal insulation become inconvenient, expensive and labour-consuming solution for production and exploitation. The best option for non-typical shape equipment is flexible insulation jacket



Insulation jacket



Traditional metal insulation

INSUSMART – dense coating for equipment of non-typical shape



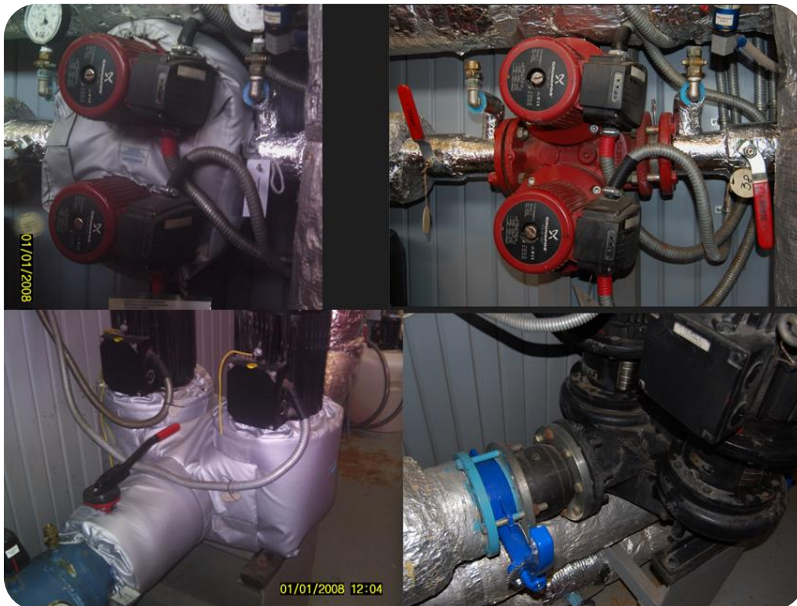
Insulation jacket

We select size, dimensions and shape and sew the jackets which fit perfectly your insulated equipment



Traditional metal insulation

Metal covers are cut and fixed so it is impossible to repeat the equipment's shape and dimensions. Especially if the equipment has obstacles all around it



INSUSMART – quick access to the equipment for control and maintenance



Insulation jacket

You can just take off the insulation jacket by yourself anytime. After the maintenance or repairment put it back without insulation efficiency losses and less work



Traditional metal insulation

For equipment maintenance productions need qualified installation specialists, tools more time and work. Insulation efficiency become worse. It is almost impossible to assembly the construction back as it was after the takedown



INSUSMART – insulation jacket does not need any special skills



Insulation jacket

Easy to install and no need in qualified specialist. Some modes have sealed windows for measurement indicators without takedown



Traditional metal insulation

Specialists, tools, time and many work required. Metal insulation often manufactured at the customer's, increasing time and cost



INSUSMART – lightweight, made of durable, lightweight and flexible material



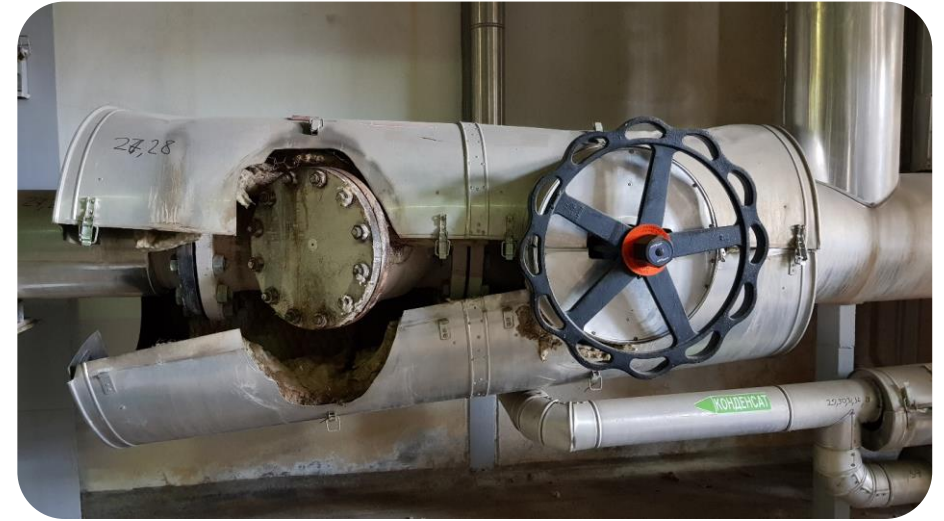
Insulation jacket

Made of durable, lightweight and flexible material. Material flexibility let to manufacture the jacket with the least size, volume and dimensions



Traditional metal insulation

Made of metal that make the construction heavy. The most popular shape is a casing, which has big size, dimensions and overweight



INSUSMART – for different types of equipment



Insulation jacket

Insulation jacket fit any industrial equipment, providing an effective solution to the problem of removable thermal insulation



Traditional metal insulation

Can be used only for simple shaped constructions



INSUSMART – long-lasting service



Insulation jacket

Made of high quality material, which have multi-layer construction and different types of fixators. Their design is unique/ They repeat the equipment shape perfectly, provide easy access to units, have minimum weight. Jackets can be used up to 150 times

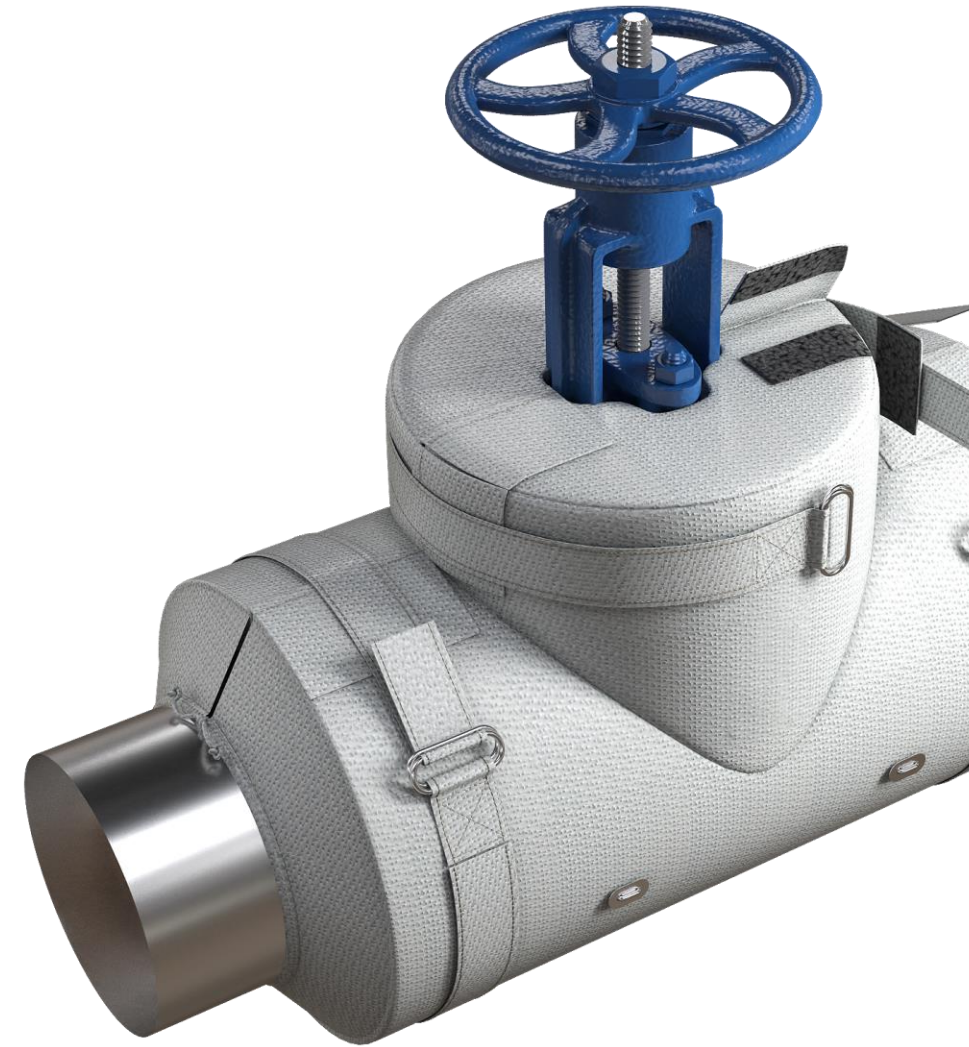


Traditional metal insulation

Non-suitable for multi-usage, protect only mechanically, but not from external ambiance. The service time of inner material – mineral wool – is limited to five years and can be even less if there is frequent equipment maintenance although metal outer cover serve more

INSUSMART – insulation jackets' advantages

- Fast access to the equipment for the control and repairment
- The installation does not require special skills
- Resistant to the aggressive ambient area
- Prolonged equipment service
- Dense coating of the surface of complex shaped equipment
- No condensate and corrosion on the equipment
- Lightweight, made of durable, lightweight and flexible material
- Multifunctional



INSUSMART Insulation jackets' types

Thermo insulation

CD
-60C - +100C

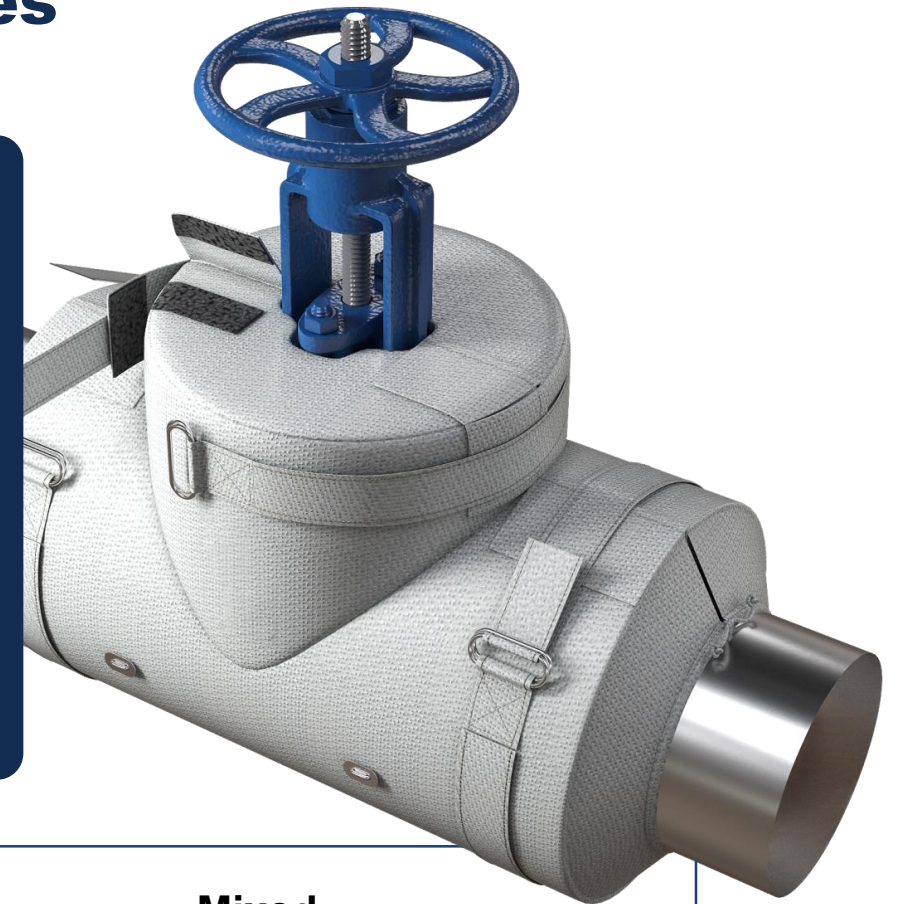
CDX
-190C - +100C

ST
+10C - + 150C

HT
+150C - +270C

XT1
+270C - +450C

XT2
+450C - +700C



Sound protection

ACC
Different
temperatures

Protective

PRT
Different
temperatures

Fire protection

FR
Up to +1200C

Mixed

For example,
sound and thermo
insulation

INSUSMART CD Thermo insulation



Manufacturer of
confectionery products.
Thermo insulation
of cold fittings

Technical features

- **Equipment surface temperature:**
From -60C up to +100C
- **Standard cover:**
Fiberglass with silicone DS cover
- **Thread:** Polyester
- **Standard thermal insulation:**
Foamed synthetic rubber, pyrogel
- **Application:**
Cold water supply, conditioning, nitrogen,
ammonia, compressed gas

Physical features

- Water and oil resistance
- Rotting resistance
- Acids and alkalis resistance
- Thermo resistance
- Abrasion resistance
- UV-rays resistance
- Sound isolation

INSUSMART CDX Thermo insulation



Chemical company in Tolyatti. Thermal insulation of fittings on hot pipelines

Technical features

- **Equipment surface temperature:**
From -190C up to +100C
- **Standard cover:**
Fiberglass with silicone DS cover
- **Thread:** Polyester, fiberglass
- **Standard thermal insulation:**
Foamed synthetic rubber, pyrogel
- **Application:**
Cold water supply, conditioning, nitrogen, ammonia, compressed gas

Physical features

- Water and oil resistance
- Rotting resistance
- Acids and alkalis resistance
- Thermo resistance
- Abrasion resistance
- UV-rays resistance
- Sound isolation

INSUSMART ST Thermo insulation



Engineering company. Thermo insulation of the reducing station



Leading German automaker. Thermo insulation of steam pipeline

Technical features

- **Equipment surface temperature:**
From +10C up to + 150C
- **Standard cover:**
Fiberglass with silicone coating
- **Thread:** Aramid
- **Standard thermal insulation:**
Foamed synthetic rubber, stone, glass wool
- **Application:**
Heating, hot water supply

Physical features

- Water and oil resistance
- Rotting resistance
- Acids and alkalis resistance
- Thermo resistance
- Abrasion resistance
- UV-rays resistance
- Sound isolation

INSUSMART HT Thermo insulation



Oil producing company. Thermo insulation of high temperature pumps

Technical features

- **Equipment surface temperature:**
From +150C up to + 270C
- **Standard cover:**
Fiberglass with silicone coating
- **Thread:** Aramid
- **Standard thermo insulation:**
Foamed synthetic rubber, stone, glass wool.
- **Application:**
Steam and steam condensate systems

Physical features

- Water and oil resistance
- Rotting resistance
- Acids and alkalis resistance
- Thermo resistance
- Abrasion resistance
- UV-rays resistance
- Sound isolation

INSUSMART XT1 Thermo insulation



Chemical enterprise
in Tobolsk. Thermo
insulation of fittings
on a hot pipeline

Technical features

- **Equipment surface temperature:**
From +270C up to + 450C
- **Standard cover:**
Silicone coated fiberglass; high temperature fiberglass
- **Thread:**
Aramid with stainless steel wire, silica
- **Standard thermal insulation:**
Glass, stone wool, pyrogel
- **Application:**
High-pressure steam systems, generating plants

Physical features

- Water and oil resistance
- Rotting resistance
- Acids and alkalis resistance
- Thermo resistance
- Abrasion resistance
- UV-rays resistance
- Sound isolation

INSUSMART XT2 Thermo insulation



National Gas
Company. Stabilizer
thermo insulation

Technical features

- **Equipment surface temperature:**
From +450C up to +700C
- **Standard cover:**
Silicone-coated fiberglass; high-temperature fiberglass reinforced with steel thread
- **Thread:**
Aramid with stainless steel wire, silica
- **Standard thermal insulation:**
Glass, stone wool, pyrogel
- **Application:**
Exhaust system, turbines, etc

Physical features

- Water and oil resistance
- Rotting resistance
- Acids and alkalis resistance
- Thermo resistance
- Abrasion resistance
- UV-rays resistance
- Sound isolation

INSUSMART FR Fire protection



Moscow Metro

Technical features

- **Equipment surface temperature:**
Up to +1200C
- **Standard cover:**
Silicone-coated fiberglass, silica, basalt fabric
- **Thread:**
Aramid with a streak of stainless steel, silica
- **Standard thermal insulation:**
Silica, ceramic wool
- **Application:**
Equipment and structural elements

Physical features

- Water and oil resistance
- Rotting resistance
- Acids and alkalis resistance
- Thermo resistance
- Abrasion resistance
- UV-rays resistance
- Sound isolation

INSUSMART ACC Sound protection



Leading fertilizer manufacturer. Sound insulation of the conveyor

Technical features

- **Equipment surface temperature:**
Different temperatures
- **Standard cover:**
Depending on the temperature conditions and other operating conditions of the equipment
- **Thread:**
Sound insulation membranes, foamed synthetic rubber, stone and glass wool
- **Standard thermal insulation:**
Silica, ceramic wool
- **Application:**
Noise-emitting and vibrating equipment

Physical features

- Water and oil resistance
- Rotting resistance
- Acids and alkalis resistance
- Thermo resistance
- Abrasion resistance
- UV-rays resistance
- Sound isolation

ISUSMART PRT Protective



Candy producer
armature protective
insolation

Technical features

- **Equipment surface temperature:**
Different temperate
- **Standard cover:**
Fiberglass with polymer coating (silicone, fluoroplastic, polypropylene, etc.), resistant to specific types of chemicals
- **Thread:**
Polyester, aramid, and other threads resistant to specific types of chemicals
- **Application:**
Technological production lines, storage

Physical features

- Water and oil resistance
- Rotting resistance
- Acids and alkalis resistance
- Thermo resistance
- Abrasion resistance
- UV-rays resistance
- Sound isolation

INSUSMART problems solved

**SAFETY ON
PRODUCTION**

**EFFECTIVE
PRODUCTION**



**TEMPERATURE
MAINTANANCE**

**BEFORE
AFTER**



**BEFORE
AFTER**



**BEFORE
AFTER**



INSUSMART High quality material and accessories



Foam rubber

Up to + 150°C

- Low thermal conductivity coefficient
- High water vapor diffusion resistance coefficient
- Increased density
- Wide operating temperature range
- UV resistance
- Resistance to mechanical and chemical influences



Mineral wool

Up to + 600°C

- Low thermal conductivity coefficient
- Retains high thermal insulation properties under various operating conditions
- Hydrophobic, the ability not to be wetted
- Withstands high temperatures without ignition and structure disruption and strength
- Deformation resistant

INSUSMART High quality material and accessories



Ceramic glass fiber

Up to + 1200°C

- Excellent thermal insulation and acoustic properties
 - High chemical resistance to water and high pressure steam
 - Not exposed to most chemicals
 - Resistant to organic and mineral acids of all concentrations
- Resistant to sudden temperature changes (thermal shock)

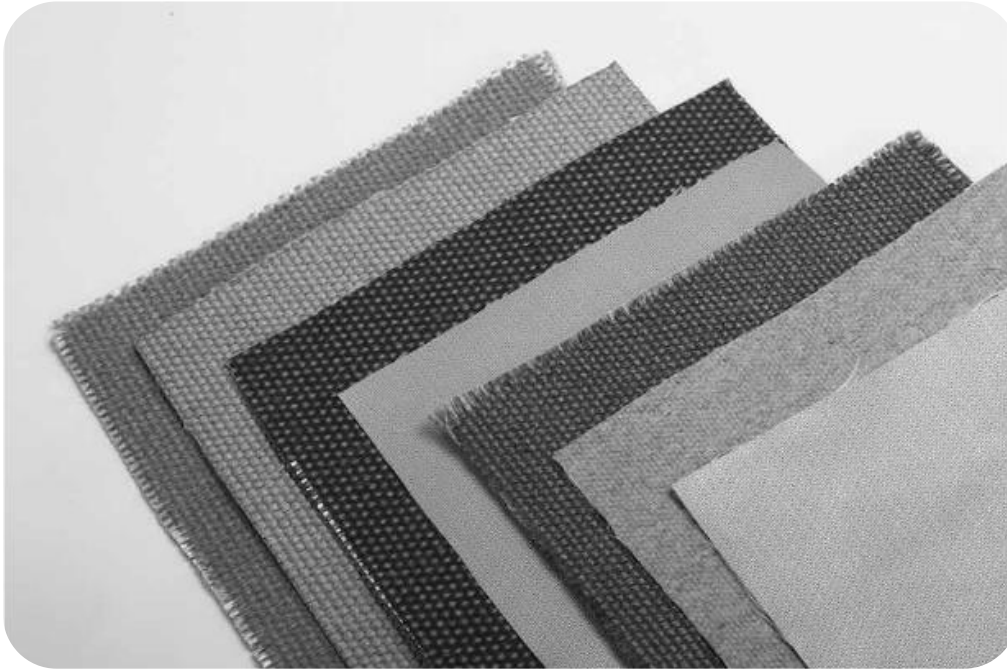


Aerogel

Up to + 650°C

- Resistance to physical load
- Thermal insulation properties: no changes even after compression under 0.7MPa pressure
- Water resistance
- Vapor permeability
- Environmental friendliness
- The material does not contain inhaled fibers, and it can be used in enclosed and underground areas.

INSUSMART Fabric



- Fiberglass with aluminum cover
- Fiberglass with polyurethane cover
- Fiberglass with silicone cover
- Fiberglass with PTFE (polytetrafluoroethylene) cover
- Textured fiberglass with high temperature impregnation
- Textured fiberglass with high temperature impregnation, forced with stainless steel wire
- Textured silica fabric forced with stainless steel wire
- Textured ceramic fabric forced with chrome steel wire

INSUSMART High quality material and accessories



Fixators and accessories

- Rings
- half rings (NJ, nickel-plated)
- Hook on the leg (stainless steel)
- Contact tape (velcro)
- Kevlar thread
- Silica thread
- Wire (stainless / galvanized)
- Brackets for thermal insulation (stainless steel)
- Washers (stainless steel)
- Protective mesh (stainless steel)



INSUSMART
SI TECHNOLOGIES

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