



**REMOVABLE
INSULATION JACKETS**



Product Catalogue

**Removable Insulation Jackets
for Industrial Equipment**

The NPC Advantage

NUTEC Protective Concepts has been providing protective solutions for over thirty years. Focusing on passive fire protection, industrial insulation, and electric heat tracing, our expert team is dedicated to providing customers with a positive experience from start to finish.



Key Differentiators

- Thermal Analysis for Fire Scenario
- 3D Design & Modeling
- Equipment Surveying
- Turnkey Installation
- Heat Loss Analysis
- Acoustic Testing
- R&D

NPC Certifications

- Jet Fire up to 2 hours
- UL-1709 up to 2 hours
- Over Pressure Blast up to 1.4 bar
- Approvals from Lloyds, DNV & ABS



Our Products



Passive Fire Protection

ProSol™ PFP jackets are tested and certified for both Hydrocarbon Pool and Jet Fire scenarios for up to 180 minutes. Additionally, **NPC** has certifications for Overpressure Blast up to 1.4 bar. Our unique jacket design provides easy equipment access for inspections, maintenance, and operation. All jackets are designed and sewn at our facility in Tomball, TX, USA.

Our products fit - no more saggy fire jackets or access points that have drifted off the critical access areas because of poor fit.

Key Customer Benefits Include:

- Removable & reusable
- User friendly Installation and removal
- Custom designed to fit your specific needs
- Lightweight and weather resistance



Other Target Applications:

- **ProSol™ HC:** Heat Conservation
- **ProSol™ FP:** Freeze Protection
- **ProSol™ AP:** Acoustic Protection
- **ProSol™ PV:** Process Vessel
- **ProSol™ PP:** Personnel Protection



Our Products

NPC's expert team uses advanced 3D scanning technology for fast, precise data collection and real-time 3D model visualization, ensuring a perfect fit for every custom insulation jacket.

Each PFP passive fire protection jacket is tailored to client specifications.

If no drawings are available, our On-Site Surveying Services provide accurate measurements using cutting-edge scanning.

Clients can also customize their PFP jackets with color options and logo placement.



Engineering Services



On-Site Surveying

Our experienced team uses the latest technology for fast and accurate data collection to ensure a proper fit in the field to prevent mistakes costing our customers time and money.



Certified Installers

Our installers have years of experience in the industry working closely with our customers to ensure safety & product satisfaction with each installation.



2D/3D Design & Custom Fabrication

Our designers use the latest 2D/3D software to model our jackets, enabling us to get an in-depth view to troubleshoot the end product before it reaches our clients.



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ProSol-PFP

Passive Fire Protection



Our custom **ProSol-PFP** jacket system has been developed to provide Jet Blast Fire and Hydrocarbon Fire protection to critical equipment, especially those that need to retain a degree of accessibility during normal non-fire operations in order to perform maintenance and inspections.

NPC's custom designed jackets are lightweight, weather resistant, durable and user friendly when it comes to removal and installation. Accessibility is of major concern when considering a PFP system. Our system allows easy access to the equipment for maintenance, inspection and operation.

We use the latest in 3D modeling and CAD software to design and manufacture all of our jackets to help ensure a proper fit in the field.

Our Thermal Analysis Software determines the optimal insulation thickness for each PFP application. It also ensures that adequate insulation is provided to protect against the fire condition while keeping the thickness to a minimum. The chemical resistance of our jacket system is completely unaffected by most chemicals that they are likely to come in contact with during their service life.

Kerosene	Diesel Fuel	Acids (General)	Jet Fuels
Saltwater	Crude Oil	Gasoline	Naphtha

Coating Systems cannot be field applied or removed and can create serious corrosion problems leading to stress cracking and possible premature equipment failures. These problems can undermine the integrity of the fire proofing and cause damage to your equipment.

Customized Fit and Colors.

Product Highlights

- Jet Blast and Hydrocarbon Fire Certified
- Customized Fit and Colors
- Maintenance Accessible
- User Friendly Installation and Removal
- Lightweight and Weather Resistant



Product Specialties Include:

- | | |
|-----------------------------------|--------------------|
| • Valves | • Wellheads |
| • Actuators | • Riser Tensioners |
| • Flanges | • Cable Trays |
| • Piping and Associated Equipment | • Bulkheads |
| • Process Vessels | |

Jet Blast and Hydrocarbon Fire Certified

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ProSol-HC

Heat Conservation



Energy represents one of the largest single cost elements of most manufacturing processes.

Thermal insulation is a valuable investment and a tremendous asset to energy conservation and process efficiency.

Properly maintained insulation contributes significantly to an installations operating bottom line, in turn helping to reduce CO2 emissions, carbon footprint and operating costs.

Our **ProSol-HC** jacket systems are high return, **low investment insulation jackets that can reduce energy costs, protect employees** and lower the ambient air temperature in facilities.

Our Heat Loss Calculation software can determine an estimated cost savings based on specific items and show that the **savings typically cover the cost of the jackets in 12 months or less.**

Product Highlights

- Removable & Reusable
- Reduces Energy Consumption
- Improves Equipment Efficiency & Longevity
- Reduces Heat Loss & Unnecessary Emissions
- Maintains Physical Integrity up to 1000° F
- Close Fitting & Shape Conforming



Product Specialties Include:

- | | |
|--------------------------|-------------------|
| • Valves | • Pumps |
| • Flanges | • Manifolds |
| • Fittings | • Sight Glasses |
| • Strainers | • DeSuper Heaters |
| • Pipes | • Heaters |
| • Filters and Regulators | |

Reduces Energy Consumption

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ProSol-FP

Freeze Protection



ProSol-FP jacket systems have been offering solutions for process temperature maintenance and Freeze Protection options both Onshore and Offshore for over 30 years.

Oil, Gas and Petrochemical facilities require that production remains continuous under harsh environmental forces. The oil viscosity in production processes needs to be very well controlled to ensure smooth transfer. Due to the low temperatures in winter, the liquid in piping and platform equipment tends to freeze if exposed to the freezing point for a long time. The best way to protect against freezing is to insulate your piping and equipment. **Our system provides a heat loss of approximately 5% versus a 35-45% heat loss without any insulation.** This will help to lower oil viscosity and solve wax and/or paraffin problems associated with offshore oil wells.

NPC Freeze Protection jackets can help protect expensive equipment and products from the effects of freezing temperatures, which in turn will prevent any downtime in production.

Custom colors available.

Product Highlights

- Save labor costs and reduces downtime
- Protection down to -110°C
- Custom designed to fit your specific needs
- Can accommodate heat tracing where required
- Removable & Reusable



Product Specialties Include:

- Valves
- Actuators
- Flanges
- Piping and Associated Equipment
- Process Vessels
- Wellheads
- Riser Tensioners
- Cable Trays
- Bulkheads
- Penetration Seals

Protection down to -110°C

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ProSol-A

Acoustic Protection



Studies demonstrate that continued exposure to high noise levels produce a plethora of harmful effects such as hearing loss, difficulty concentrating, interference with verbal communication, sleeplessness, increased stress, increased blood pressure and even heart problems. Workplace noise negatively impacts employee health, safety and productivity.

Our **ProSol-A** jacket system is a removable insulation jacket that can be designed for wet or dry applications. The jacket is manufactured to reduce decibels on components including but not limited to compressors, blowers, vacuum systems and reduction components, etc.

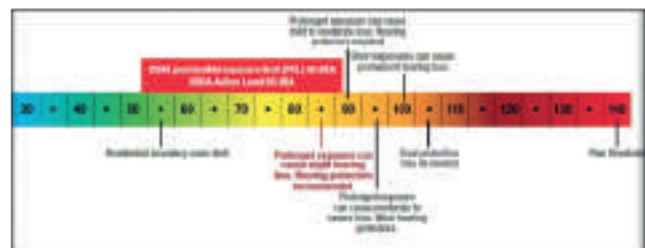
When noisy equipment is a problem, our removable/reusable **Acoustic Insulation jackets are the solution**. We can do on-site acoustic testing and will design our Acoustic Jackets to combat your specific needs with the perfect combination of absorbing, damping and reflective materials.

Our **Acoustic Insulation jackets** are specially designed to be easily removed and replaced to facilitate easy maintenance and repairs on equipment. Most of our insulation covers can be taken off and put back on in 3-5 minutes or less.

Custom colors available.

Product Highlights

- Ensure a Safe and Comfortable Working Environment
- Removable & Reusable
- On-site Acoustic Testing
- Decibel Reduction
- Custom Solutions for all Requirements



Product Specialties Include:

- Compressors
- Blowers
- Motors
- Vacuum Systems
- Pumps
- Valves
- Piping
- Flanges

On-site Acoustic Testing

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ProSol-V Process Vessel



NPC's removable system has the unique capability to provide both Passive Fire Protection requirements, as well as thermal insulation properties. **We can design for any type of protection requirements and surface temperatures from -60° to 1000°C.**

Our vessel system is based on a grid design in order to provide easy installation. High temperature banding secures the **ProSol-V** to the vessel. After that, securing the outside involves nothing more than the jackets being fastened together by hook and loop at the joints to hold it in place and then securing it with our high temp buckle system.

One big advantage is the chemical, weather and moisture resistant properties all of our materials are made from. We don't have the cracking and breakdown that we eventually see in coatings. **Another advantage to our system is the ability to be installed even when the equipment is in operation preventing any downtime.**

Easy accessibility allows inspection of the equipment for any integrity issues and easy replacement of any areas if required. We also have the ability to extend beyond the vessel body to areas that require accessibility such as nozzles, manways and piping.

Custom colors available.

Product Highlights

- Jet Blast and Hydrocarbon Fire Certified
- Improves Equipment Efficiency & Longevity
- Reduces Heat Loss & Unnecessary Emissions
- Maintenance Accessible
- Lightweight and Weather Resistant



Maintenance Accessible

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ProSol-PP

Personnel Protection

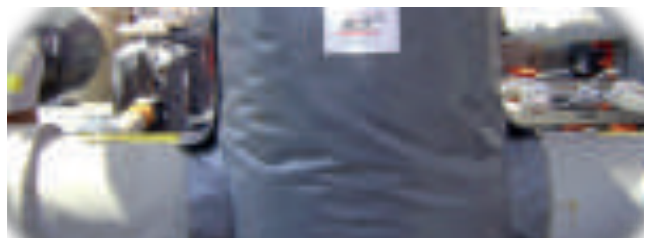


Personnel safety is a major priority on both Onshore and Offshore installations. **To comply with industry codes and standards, thermal insulation is generally installed on metallic equipment and piping operating at 50°C or higher, for Personnel Protection.** The common issue with insulation type systems is corrosion under insulation (CUI). Once moisture gets under the external protective cover, most types of insulation properties then turn to a wicking function that hold moisture and water on the pipe surface allowing the corrosion to continue unnoticed.

Our **ProSol-PP** jacket system is built with venting ports to allow any moisture and water to escape the jacket and prevent any type of corrosion to the protected equipment. Simple closure design also makes for quick removal and reinstallation for routine inspections. **NPC Thermal Analysis software gives us the ability to determine the optimal jacket thickness to ensure maximum protection and personnel safety.**

Product Highlights

- Removable & Reusable
- Meets & Exceeds OSHA's "Touch Safe" Rating
- Reduces Energy Consumption
- Improves Equipment Efficiency & Longevity
- Reduces Heat Loss & Unnecessary Emissions
- Flexible One-Piece Design



Product Specialties Include:

- | | |
|--------------------------|----------------------------|
| • Valves | • Pumps |
| • Flanges | • Manifolds |
| • Fittings | • Sight Glasses |
| • Strainers | • DeSuper Heaters |
| • Pipes | • Heaters |
| • Filters and Regulators | • Pressure Reducing Valves |

Meets & Exceeds OSHA's "Touch Safe" Rating

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