



LION[®]

ready for action

**FIRST RESPONDER
PPE CATALOG**

**PROTECTIVE SOLUTIONS FROM
HEAD-TO-TOE**



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SAFETY & COMFORT-FOCUSED

INNOVATION

LION has a legacy and ongoing history of introducing new products and services — always designed to ensure the health, safety and performance of the first responders who serve our communities and our country. LION's game-changing PPE innovations are designed to best prepare firefighters, EMS teams and law enforcement officers for the dangers and hazards they face each day. For decades, LION has been the industry leader in the fight against firefighter stress by incorporating innovative design features and materials to deliver the most natural, least restrictive movement possible. We have secured multiple patents for material application, moisture management, garment and helmet designs. As we continue to develop new and enhance existing PPE products and services, our primary goal remains the same: To keep you safe and always....**ready for action.**

LION's game-changing PPE innovations include:

- **IsoDri® Moisture Management System**, engineered to reduce water inside the turnout system and, therefore, the heat storage capacity.
- **LION Ventilated Trim™**, providing a conduit for the release of vapor and guards against the potential hazards of trapped moisture without adding additional weight to the garment.
- **V-Force® Turnout Gear (with V-Fit® Design)**, based on the stress-reducing designs used in combat and sports gear to increase mobility and comfort.
- **Freedom® Design Mobility System** that reduces firefighter stress through a series of innovative, ergonomic features that help deliver exceptional comfort and mobility.
- **Semper-Dri™ Systems**, which reduces absorption in key areas, keeping garments drier and working weight lighter.
- **Lite-N-Dri™** closed-cell foam padding in turnout garments to add thermal protection to high-compression, high-risk areas.
- **Ever-Dry™ Reach Systems**, reduces vulnerability to water, steam and flame.
- LION's **FIVE-Point Configuration** and **Center of Gravity™** technologies which provide custom-fit helmets.
- **Center Cut and Exhale SRS Liners**, which offers enhanced TPP with very little increased weight and loss of comfort.

Game-changing PPE innovations designed to best prepare first responders for the dangers and hazards they face on their jobs each day.



INNOVATION SPOTLIGHT:

LION ISODRI® Moisture Management System

Firefighters wearing gear with IsoDri report their gear has been dry and comfortable in less than 30 minutes.

When you're wearing SCBA and dragging a fully charged 1 3/4" hose line, the last thing you need is your gear sucking up water and adding more weight to what you're already lugging around.

And, how many times have you had to work in wet, clammy turnout gear because it hadn't dried from an earlier run? LION innovated, and continues to lead, with game-changing moisture management systems designed for turnouts. LION's patented IsoDri Moisture Management System fights the proven problems of wet turnout gear by delivering a superior solution.

Each IsoDri component is engineered to reduce the water intake and transport moisture away from the body. This reduces the heat storage capacity and working weight, promoting both comfort and safety of your turnout gear.

Unlike conventional turnouts, keeping moisture out of the protective envelope takes place in ALL layers of the IsoDri system – the outer shell, moisture barrier and thermal liner. If it doesn't have these, it isn't the IsoDri system:

- **Thermal liner that reduces moisture regain from sweat and other water sources.**
- **High-lubricity face cloth that wicks perspiration away from the body**
- **Semper Dri® in sleeves, lower legs and shoulder/yoke to reduce absorption**
- **Wristlets treated with Teflon® F to repel moisture from outside sources**

The key difference between IsoDri and other systems is IsoDri's ability to manage moisture in the thermal barrier of your gear. The thermal liner traps air inside

of millions of tiny pockets. This trapped air creates a barrier to heat flow. But, if the air pockets are compressed or filled with moisture, the thermal liner's ability to block heat is compromised.

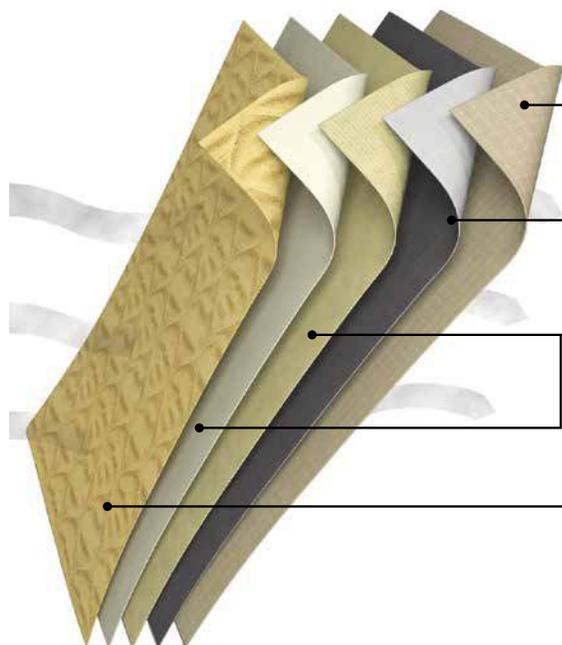
Optimum moisture management comes from a thermal liner that both wicks and sheds water. IsoDri features a face cloth with advanced wicking technology.

By pulling sweat from undergarments, the moisture is channeled away from the body toward layers of the liner system that refuse to draw in moisture. This allows the thermal barrier to maintain airspace and function properly.

In addition, IsoDri thermal liners using apertured AraFlo® promote higher air permeability than other systems and complement state-of-the-art moisture barriers such as CROSSTECH®.

HOW ISODRI WORKS

IsoDri is more than just an outer shell that resists water penetration and absorption. It is a complete system of components (outer shell, moisture barrier, thermal barrier and wristlets) that works together to reduce the water in your turnout gear and the dangers that water presents.



Outer shell is treated with Teflon® F-PPE to reduce moisture intake from outside sources such as hose water and rain.

Moisture barrier that allows body heat, in the form of vapor, to escape, but keeps liquid out.

Thermal barrier is treated with Teflon® F to shed moisture generated by the body and maintain high thermal performance. AraFlo® promotes air permeability to allow vapor released by the body to be more easily transported away from the skin.

Face cloth wicks perspiration away from the body.



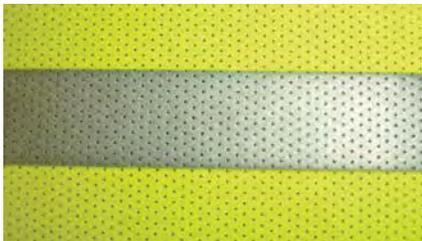
INNOVATION SPOTLIGHT:

LION VENTILATED TRIM™ Reflective Material

PPE Reflective Material Enhances Firefighter Safety

The purpose of trim on turnouts, helmets, boots and other emergency garments is to make the firefighter or medic more visible in both low light and daylight conditions. NFPA 1971 requires reflective material be both retroreflective and fluorescent. Retroreflectivity occurs when light is reflected off a surface and returns to its original source. Fluorescence is the “glow” generated by an object that has absorbed light. It greatly increases daytime visibility.

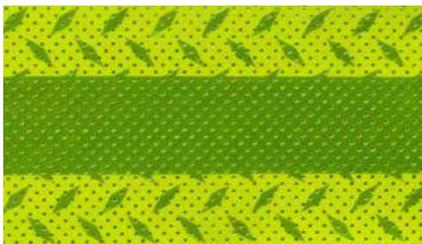
3M™ Scotchlite™ Reflective Material



3M Scotchlite Reflective Material is comprised of millions of tiny, almost round microspheres. Half of each sphere has a mirror coating. When light hits a microsphere, it is refracted through the surface and sent back out toward the light source. 3M Scotchlite Reflective Material is more durable and holds up well to heat in comparison to other trim. However, 3M Scotchlite Reflective Material does tend to lose some of its retroreflective effectiveness when wet.

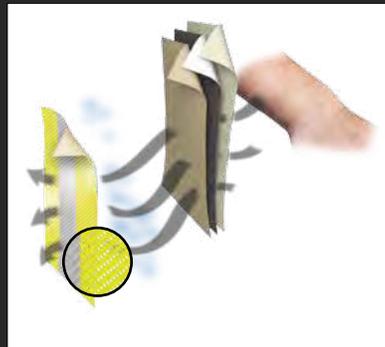
3M Scotchlite Reflective Material is available in what is often referred to as “triple-trim”, which is two bands of fluorescent red-orange or lime-yellow with a band of reflective silver in between.

Oralite® Reflective Material



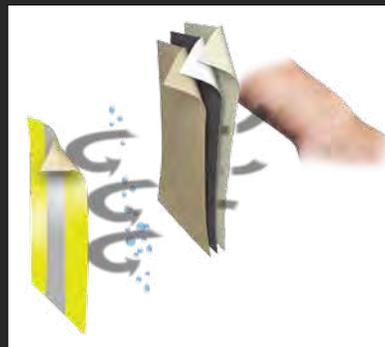
Oralite Reflective Material is vinyl cube-corner prism sheeting with microprismatic optical elements protected by a smooth outer surface. It has excellent retroreflective properties, even when wet. It is available in fluorescent lime-yellow.

Ventilated Trim



The perforations on Ventilated Trim provide a conduit for vapor away from the firefighter's body.

Impermeable Trim



On impermeable trim, moisture can accumulate between the outer shell and trim. When the trim is compressed and heated, the trapped moisture can vaporize and transfer heat toward the firefighter's body.

Ventilated Trim Provides Conduit For Vapor Release on Impermeable Reflective Materials

As vapor escapes your protective envelope, moisture can collect between the reflective trim and the outer shell of your turnout. When the trim is compressed and heated, the trapped moisture can vaporize and transfer heat toward the body. NFPA 1971 has added a Stored Energy test to the 2013 Edition of the standard to address the phenomena of steam-related, stored energy burns.

LION Ventilated Trim is perforated to provide a conduit for the release of vapor and guard against the potential hazards of trapped moisture. These perforations eliminate the need for additional thermal enhancements to meet the Stored Energy Test, as they allow for the release of heat in the system.



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TURNOUTS



3M Scotchlite
Reflective Material

DuPont
Nomex

DuPont
Kevlar

www.lionprotects.com



LION TURNOUTS: Game-Changing Safety & Comfort



Comfort isn't subjective. Much of it is science and quantifiable. Garment design, working weight and the ability to manage the moisture inside your protective envelope are all factors that contribute to the comfort of your turnout gear.

Water Inside Your Protective Envelope Increases Risk

When water collects in your turnout clothing, it gets heavier and uncomfortable. This increases stress. Water also displaces the insulating air in your thermal barrier. Once in your system, water can expand at an explosive rate, making you vulnerable to steam burns and serious injury.

Manage the Moisture in Your Turnout with IsoDri® Technology

LION's exclusive IsoDri technology is an engineered system that manages moisture through a combination of materials that block outside sourced water, wick perspiration off the body and resist storing water inside the protective envelope. The insulating layers and outer shell of an IsoDri system are molecularly bonded with DuPont's Teflon® F to restrict the absorption of moisture and keep the protective layer of air intact.

No Safety Compromises

LION and cutting-edge safety are synonymous. For decades, LION has been the industry leader in the fight against firefighter stress by incorporating innovative design features and materials to deliver the most natural, least restrictive movement possible. We are the innovator of dozens of meaningful patents, including:

- IsoDri Moisture Management System
- Flame-resistant, closed-cell cushioning and reinforcements
- AraFlo® apertured thermal liners
- Integrated lumbar support
- Freedom® mobility system
- V-Fit™ Design
- LION Ventilated Trim™



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3M Scotchlite™
Reflective Material 7



V-FORCE®



3M Scotchlite™
Reflective Material

DuPont™
Nomex.

DuPont™
Kevlar.



V-FORCE®: Combining Military & Sports Technology



V-Force Turnouts with Glide Ice™ & PBI MAX™

V-Force takes the best technology from combat and professional sports clothing and applies it to turnout gear. V-Force is a multi-piece constructed garment, utilizing a cut-in-motion design. The result is the optimum balance of comfort, mobility and protection.

Always on the cutting-edge, V-Force was the first turnout model to incorporate Glide Ice liners and PBI MAX outer shells.

The Difference is in the Details

The V-Force Comfort Collar is ergonomically shaped to improve comfort, interface better with other PPE elements and deliver continuous thermal and moisture protection.

It features a smooth one-piece transition at the shell/liner. There are no bulky seams or hook and loop to rub at the back of your neck. The liner attachment is at the top of the collar to allow for a natural break to use the collar effectively in the up or down position.



Glide Ice™ Thermal Liner with DuPont™ Kevlar® Filament

Glide Ice is the only liner system that features a face cloth with 60% Kevlar® filament. In addition, the low friction properties of Glide Ice means added freedom of movement and less working stress for a more comfortable feel in your turnout gear.

- Easy donning and doffing and more comfortable feel.
- Glide Ice™ is a component of the IsoDri® moisture management system that has fast drying time, always ready when you are.
- 60% Kevlar® face cloth for increased thermal stability, strength and durability.

Outstanding Protection, Durability & Comfort

The PBI MAX outer shell offers firefighters the best combination of break open and thermal protection, the strongest outer shell fabric in the world and the most flexible and comfortable outer shell fabric the fire service has ever seen.



V-FORCE® Coat Details



Just as NASA technology advancements were transitioned into ground breaking protective clothing improvements in the 1970s, LION's V-Force turnout gear has embraced innovations from today's military and sports clothing. The result is an intricate set of turnout gear that is designed to flex and bend like the human body.

Maximum Comfort

The V-Force Coat is more comfortable than common firefighting coats because it's cut much different. The seams are not at the shoulders and sides, but at the back. This significantly reduces hem rise when you're extending your arms. It also prevents SCBA straps from pushing seams into your body and causing discomfort. Fitted sides provide a more tailored fit and better mobility.

Natural Arm Movement

The contoured raglan sleeves have a natural shaping. This combines with the **V-Fit™ Elbow** to promote free and easy movement. The elbow is made up of cutouts, shaped pieces and darts. This reduces bunching and the overall working weight of the coat.

The elbow reinforcements are notched to give you superior thermal and moisture protection without impeding movement. The coat's cuffs extend over the back of your hand for additional thermal protection when reaching or pulling.

Reduced Working Weight

No detail has been overlooked. The streamlined storm flap reduces thermal buildup and working weight.

The **Comfort Collar** and optional throat tab are ergonomically shaped to improve comfort, interface better with other PPE elements and deliver continuous thermal and moisture protection.

It features a smooth one-piece transition at the shell/liner. There are no bulky seams or hook and loop to rub at the back of your neck. The liner attachment is at the top of the collar to allow for a natural break to use the collar effectively in the up or down position.



A. Standard V-Force Coat

- Superior cut delivers superior comfort and mobility.
- Fitted sides for tailored feel and fit.
- Contoured raglan sleeve shaped like the human arm and bends like your arm to reduce pulling and binding.
- V-Notch® elbow reinforcements keep heat and moisture out. Won't bunch.
- Contoured collar and optional shaped throat tab comfortably interface with SCBA mask.
- LION Ventilated Trim™ provides a conduit for the release of vapor and guards against the potential hazards of trapped moisture.



B. V-Force Bi-Swing Coat

- Bi-swing back has inverted pleat in both the outer shell and liner system. It expands as your arms move forward. No tugging or binding at the shoulder. When your arms return to a natural position, the pleat closes so there's no bunching of material.
- All the great comfort and mobility features of the standard V-Force coat.
- LION Ventilated Trim™ provides a conduit for the release of vapor and guards against the potential hazards of trapped moisture.



V-FORCE® Pant Details



Advanced Design Delivers Superior Comfort and Mobility

All V-Force Pants share the superior V-Fit™ Design that reduces bunching of materials in the crotch and delivers the best overall fit of any turnout pants available.

The legs are contoured to match the body and also reduce working weight. The knees are an intricate design of cutouts, shaped pieces and darts to enable free and easy movement. You'll especially notice this when crawling and bending. Nine inches of Semper Dri™ thermal liner in the lower legs repels water to keep your pants dry and the working weight low.

The elimination of crotch seams reduces tension to give added comfort to your turnout gear. A banded insert runs continuously from the top of the knee of one leg, through the crotch and to the top of the opposite knee. In addition to extending the useful life of your pants, it also provides a more comfortable fit. Increased leg circumference increases mobility.

V-Force Pants Styles

V-Force High-Back Pants

Provide the ultimate in thermal protection. A five-inch back panel extends above the waist. A unique hook and loop support pad attaches LION's V-Back™ Suspenders to the pants. Snap tabs fasten the suspenders to the front (V-Back™ High-Back Suspenders are required).

V-Force Belted Pants

Have a traditional waist with belt loops; a two-inch Kevlar® belt with thermoplastic, quick release buckle and suspender buttons to give you the option of using the belt alone or adding suspenders.

V-Force Lumbar Pants

Have a traditional waist and feature the LION Lumbar Support System. This system is integrated into the V-Force® and is orthopedically designed to provide adjustable mechanical support when you're lifting, bending forward, standing or performing emergency rescues.



V-Force High-Back Pants



V-Force Lumbar Pants



V-Force Belted Pants



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V-FORCE® Comfort & Mobility Design Features*

A. Comfort Collar & Optional Throat Tab

Ergonomically shaped to improve comfort, interface better with other PPE elements and deliver continuous thermal and moisture protection.

B. V-Fit Elbows™

Elbows include cutouts, shaped pieces and darts to allow natural arm movement without restrictions or tugging.

C. V-Fit Legs & Knees™

Contoured legs and knees employ cutouts, shaped pieces and darts to enable free and easy movement.

D. V-Fit Sides™

Contoured shaping delivers better fit and mobility, while reducing hem rise. Side panels have a more tailored fit to move with your body during firefighting activities.

E. Raglan Sleeves

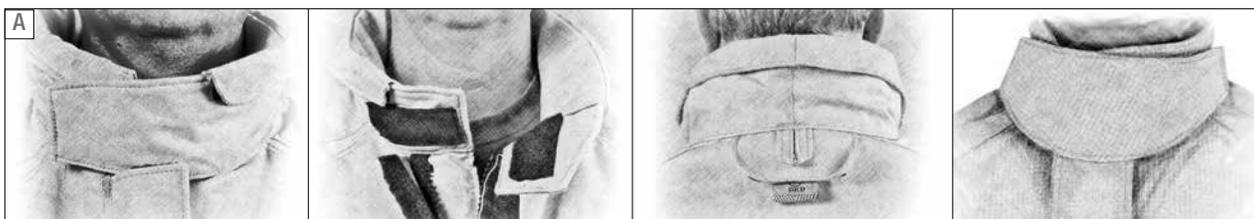
Shaped like your arm to promote free, unrestricted movement and reduce hem rise.

F. Superior Cut

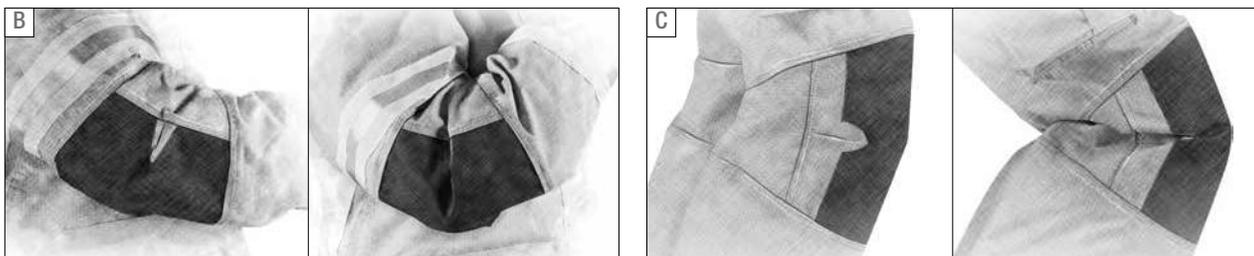
Superior cut evenly distributes weight of the garment. Seams are placed to reduce conflicts with SCBA straps that can cause irritation and discomfort.

G. Radial Inseam

The elimination of crotch seams reduces tension to give added comfort to your turnout gear. A banded insert runs continuously from the top of the knee of one leg, through the crotch and to the top of the opposite knee. This not only increases comfort, but extends the useful life of your turnout pants.



Contoured Collar & Shaped Throat Tab (optional)



V-Fit Elbows

V-Fit Legs & Knees



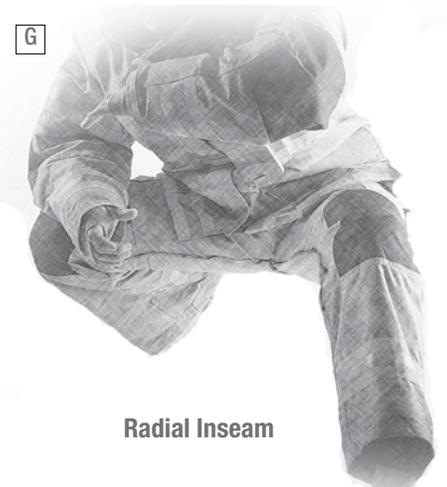
V-Fit Contoured Sides



Raglan Sleeves



Superior Cut



Radial Inseam

* Other options available.



V-FORCE® Standard Design Features & Options*



Streamlined Storm Flap

A. Streamlined Storm Flap

Reduces thermal buildup, bulk and working weight.

B. Viz-a-V™ Trim Pattern

Made with 3M™ Scotchlite™ Reflective Material or Oralite® Reflective Material for high visibility.

C. Extended Cuff

Extra length over back of hand for additional thermal protection when extending your arms.

D. Wrist Shield System™

This system securely seals the wristlet of your turnout coat to your wrist. When you reach, the wristlet and moisture barrier travels with your wrist to minimize exposure to water, steam and flame. Semper Dri™ material is employed in the waterwells of the coat sleeves.



Viz-a-V™ Trim Pattern

E. IsoDri® Moisture Management System

An engineered system that manages moisture by a combination of materials that block outside sourced water, wick perspiration off the body, and resist storing water inside the thermal barrier. Keeps working weight low and helps guard against steam-related injuries.

F. Yoke Extra Thermal Protection

Yoke of coat employs Semper Dri™ System to reduce water absorption and enhance thermal protection.

G. Water-Resistant FR Lite-N-Dri™ Closed-Cell Cushioned Knees

Provides additional thermal protection in a high-compression area.

H. Semper Dri™ System

Reduces water absorption in pants legs, coat cuffs and yoke to keep your working weight lighter.



Extended Cuff

I. Reinforcements

Protects high-abrasion areas using self-fabric or polymer-coated aramid reinforcements on cuffs, elbows, knees and kick shields.

J. Liner Inspection System

Opening allows you to easily examine film side of moisture barrier and inside of thermal liner. Makes Complete Liner Inspections easier and faster.

K. LION Ventilated Trim™

Provides a conduit for the release of vapor and guards against the potential hazards of trapped moisture.

V-Force Pocket Options*



Pleated Semi-Bellows Pocket

A. Pleated Semi-Bellows Pockets

Angled flaps and pull tabs make it easy to open and access tools.



Semi-Bellows Pocket

B. Combination Semi-Bellows and Handwarmer Pockets

Angled flaps and pull tabs make it easy to open. Handwarmer opening for convenience and comfort.

* Other options available.



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SUPER-DELUXE™



SUPER-DELUXE™ Coat & Pant Details



Bi-Swing Back Coat

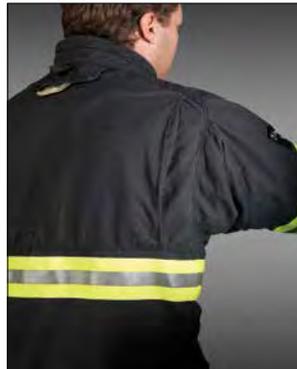
The Super-Deluxe Coat is ergonomically designed to promote free, natural movement when performing firefighting operations. It includes all of LION's industry-leading Freedom® Design features in the underarms and elbows. These features allow your physical energy to be concentrated on the task at hand for greater mobility, reduced stress and increased safety.

No Tugging, Pulling or Bunching

The bi-swing back design is the key comfort and mobility feature on the Super-Deluxe.

This is how it works: an inverted pleat is placed in both the outer shell and thermal liner. It expands as your arms move forward.

There's no tugging or binding at the shoulder. When your arms return to a more natural position, the pleat closes so there's no bunching of material.



Comfort Collar

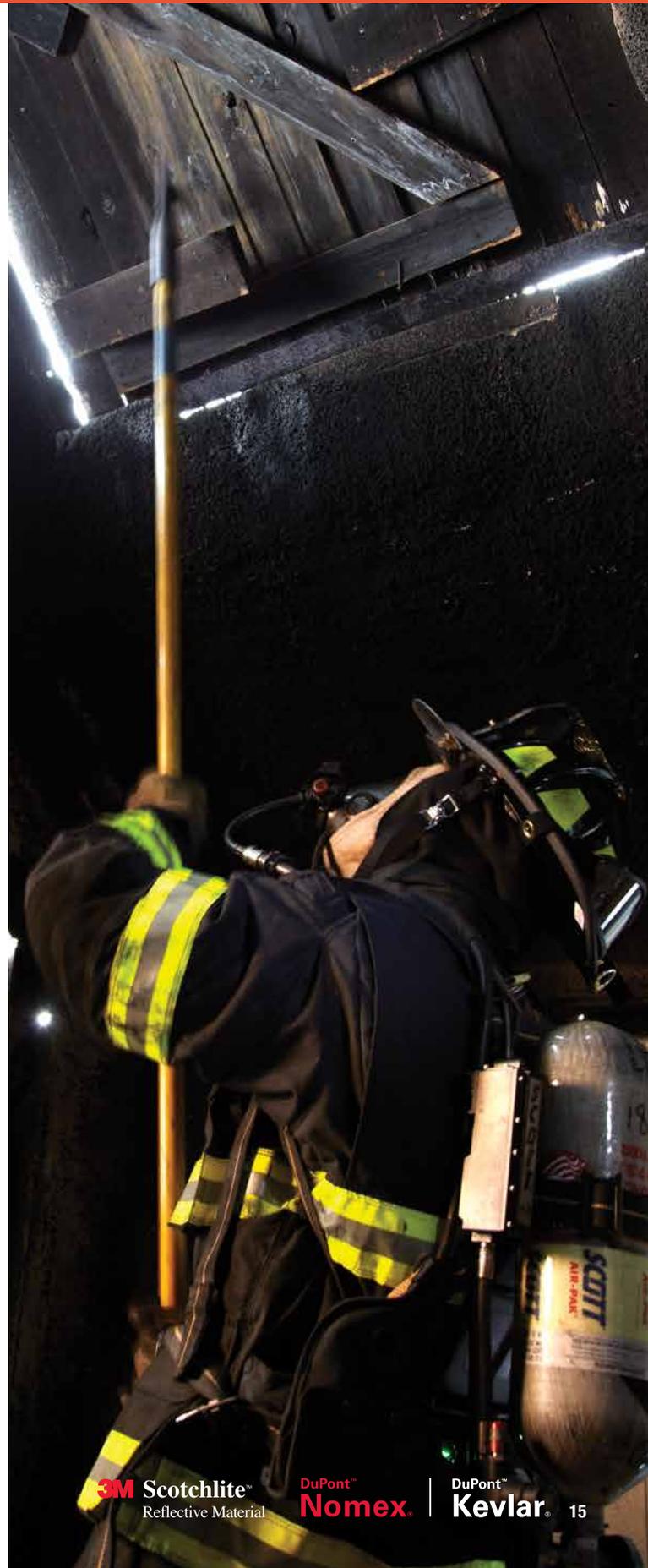
The Comfort Collar and optional throat tab are ergonomically shaped to improve comfort, interface better with other PPE elements and deliver continuous thermal and moisture protection.

It features a smooth one-piece transition at the shell/liner. There are no bulky seams or hook and loop to rub at the back of your neck. The liner attachment is at the top of the collar to allow for a natural break in order to use the collar effectively in the up or down position.

Low-Rise Waist Pants

Super-Deluxe Pants have a low-rise waist design for increased comfort (two inches lower than traditional turnout gear) that complements the natural contours of your body for increased comfort. They fit and feel more like an everyday pair of trousers.

The Freedom Design features in the crotch and knee enhance mobility on the fireground, especially when crawling, climbing or bending. Nine inches of Semper Dri™ in the lower legs repels water to keep your pants dry and the working weight low.



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3M Scotchlite™
Reflective Material

DuPont™
Nomex.

DuPont™
Kevlar. 15

Freedom® Design Comfort & Mobility Features

LION's Freedom Design reduces firefighter stress through a series of innovative, ergonomic features that help deliver exceptional mobility and comfort.



BELLOWS UNDERARM CONSTRUCTION

Underarm bellows keep your protective envelope intact by reducing hem rise and sleeve travel. Football-shaped bellows are located in the armpits of the coat between the shoulder seam and torso on all three layers (outer shell, moisture barrier and thermal barrier). When you reach forward or overhead, the bellows expand. The expansion keeps other parts of the coat, such as the sleeve and body, from traveling and creating exposure.



FREEDOM ELBOW

The Freedom Elbow enables you to bend your arm freely and comfortably while keeping your wrists protected. It works in a similar fashion to the bellows underarm construction. A football-shaped insert is set at the back of the elbow. When your arm flexes, the insert expands to eliminate tugging at the sleeve or shoulder.



RADIAL INSEAM & BANDED CROTCH

The elimination of crotch seams reduces tension to give added comfort to your turnout gear. On LION pants, a banded insert runs continuously from the top of the knee of one leg, through the crotch and to the top of the opposite knee. In addition to extending the useful life of your pants, it also provides a more comfortable fit. Increased leg circumference increases mobility.



FREEDOM KNEE

The Freedom Knee enables a natural flexing motion. It provides a gusset that the knee can fall into when crawling, climbing, bending, kneeling, etc. For added thermal protection, an additional layer of Lite-N-Dri™ cushioning is sewn into the liner at the knee. The padding provided by Lite-N-Dri™ also adds comfort when kneeling or crawling.



Freedom® Design Standard Features



A
Comfort Collar



B
Storm Flap Closure with Hook and Loop and Zipper Coat Closure



B
Storm Fly Closure with Hook and Loop, Snap and Zipper



C
Over-The-Hand Wristlets



D
Leather Reinforcements



D
Kick Shields

- A. Comfort Collar & Optional Throat Tab**
Ergonomically shaped to improve comfort, interface better with other PPE elements and deliver continuous thermal and moisture protection.
- B. Thermoplastic Zipper Closure**
Thermoplastic zipper coat and pants closure with hook and loop. Pants also have a snap storm fly closure for secure thermal and moisture seal.
- C. 8" Over-the-Hand Wristlets**
Made of Nomex/Kevlar on IsoDri versions, others are made of Kevlar®/Spandex®.
- D. Leather Reinforcements**
Reinforcements are on knees, cuffs, kick shields, shoulders and elbows for thermal protection and added wear life.

- E. Ever-Dry™ Reach System**
Reduces vulnerability to water, steam and flame. When you reach, full protection stays on your wrist.
- F. Yoke Extra Thermal Protection**
Yoke of coat employs Semper Dri™ System to reduce water absorption and enhance thermal protection.
- G. Breathable Moisture Barrier Closures**
Storm flap, waterwells and fly facing are all lined with breathable moisture barrier material for dryness and protection.
- H. Zip-In Coat Liner**
Coat liner zips into outer shell for reliable attachment, reduced bulk and superior comfort.
- I. Semper Dri™ System**
Reduces water absorption in pants legs, coat cuffs and yoke to keep your working weight lighter.

- J. Reinforced Knees**
Knees with water-resistant FR Lite-N-Dri™ closed-cell cushioning between the moisture barrier and thermal liner to enhance thermal protection.
- K. Adjustable Fit Take-Up Straps**
Pants have waistband and external take-up straps for a comfortable fit.
- L. Liner Inspection System**
Opening allows you to easily examine film side of moisture barrier and inside of thermal liner. Makes Complete Liner Inspections easier and faster.
- M. LION Ventilated Trim™**
Provides a conduit for the release of vapor and guards against the potential hazards of trapped moisture.



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3M Scotchlite™
Reflective Material

DuPont™
Nomex | DuPont™
Kevlar® 17



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MORE GEAR SOLUTIONS



Liberty™ & LION E-Z GEAR™ Rental

Liberty™ Gear

The LION Liberty coat with bi-swing back is designed to enhance upper body maneuverability when performing firefighting activities. The bi-swing back's inverted pleats in both the outer shell and thermal liner, expand as your arms move forward — reducing tugging, binding and overall stress.

The Liberty High-Back Pants provide added thermal protection to the coat and pant interface. The pants have standard leather-reinforced bellow knees that won't bind or pull when you're crawling, climbing, bending or kneeling. Knees also feature Lite-N-Dri™ closed-cell cushioning for enhanced thermal protection. Cuffs and kick shields give you extended wear life.

LION E-Z Gear™ Rental

Filling the PPE void in the fire training market

Finding safe Personal Protective Equipment (PPE) shouldn't be a training challenge, but often it is. EZGearRental.com remedies this through its easy-to-use, online PPE rental program.

EZGearRental.com provides PPE components that are NFPA 1971-certified, fit properly and ship within five days. It's a perfect solution for fire academy students, training instructors and fire departments.

Rent at a Fraction of the Price to Purchase.

What You'll Get: Complete NFPA 1971-certified PPE ensembles that has been cleaned, inspected and maintained as required by NFPA 1851. Gear ensembles include:

- LION Turnout Coat & Pants
- LION Helmet
- Hood
- Gloves
- Rubber Fire Boots
- Gear Bag

You keep the hood and gloves.

How to Order:

1. Visit www.EZGearRental.com.
2. Watch our Sizing and Fit video.
3. Download the Sizing Form.
4. Get measured and record your sizes on the form.
5. Click "Rent Now", create an account and follow the instructions.

To learn more, visit www.EZGearRental.com.



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3M Scotchlite™
Reflective Material 19

TURNOUT OPTIONS



3M Scotchlite™
Reflective Material

DuPont™
Nomex.

DuPont™
Kevlar.



Turnout Gear Suspenders



EZ H-Back Quick-Adjust Non-Stretch Suspenders

- Black with Navy shoulder padding
- Quick tug of plastic loops delivers perfect adjustment each time
- Makes donning quick and easy
- Wire clip fasteners



EZ H-Back Quick-Adjust Stretch Suspenders

- Traditional Red with Navy shoulder padding
- Quick tug of plastic loops delivers perfect adjustment each time
- Makes donning quick and easy
- Leather tab fasteners



EZ H-Back Quick-Adjust Non-Stretch Suspenders

- Black with yellow trim and navy shoulder padding
- Quick tug of plastic loops delivers perfect adjustment each time
- Makes donning quick and easy
- Rectangular metal loops
- Requires snap tabs on pants



Night Hawk Four-Way Quick-Adjust Suspenders

- Black with Navy shoulderpadding
- 3M™ Scotchlite™ Reflective Material
- Water-resistant wire clips for easy connection and removal



Night Hawk Four-Way Non-Stretch Suspenders

- Traditional Red color
- 3M™ Scotchlite™ Reflective Material
- Water-resistant wire clip



Four-Way Non-Stretch Suspenders

- Traditional Red color (also available in Pink)
- Water-resistant wire clips



Stretch Four-Way Suspenders

- Traditional Red color
- Leather tab fasteners



V-Back™ Quick Adjust, Stretch Padded Suspenders (for Any Pants Model)

- Traditional Red color with Black padding
- Wire clip fasteners on front and back



V-Back™ Quick Adjust, Stretch Padded Suspenders (for Pants with Sewn-In Attachment Loops)

- Traditional Red color with Black padding
- Quick tug of plastic loops delivers perfect adjustment each time
- Rectangular metal loops. Connecting straps on belted pants thread through loop and are secured with snap



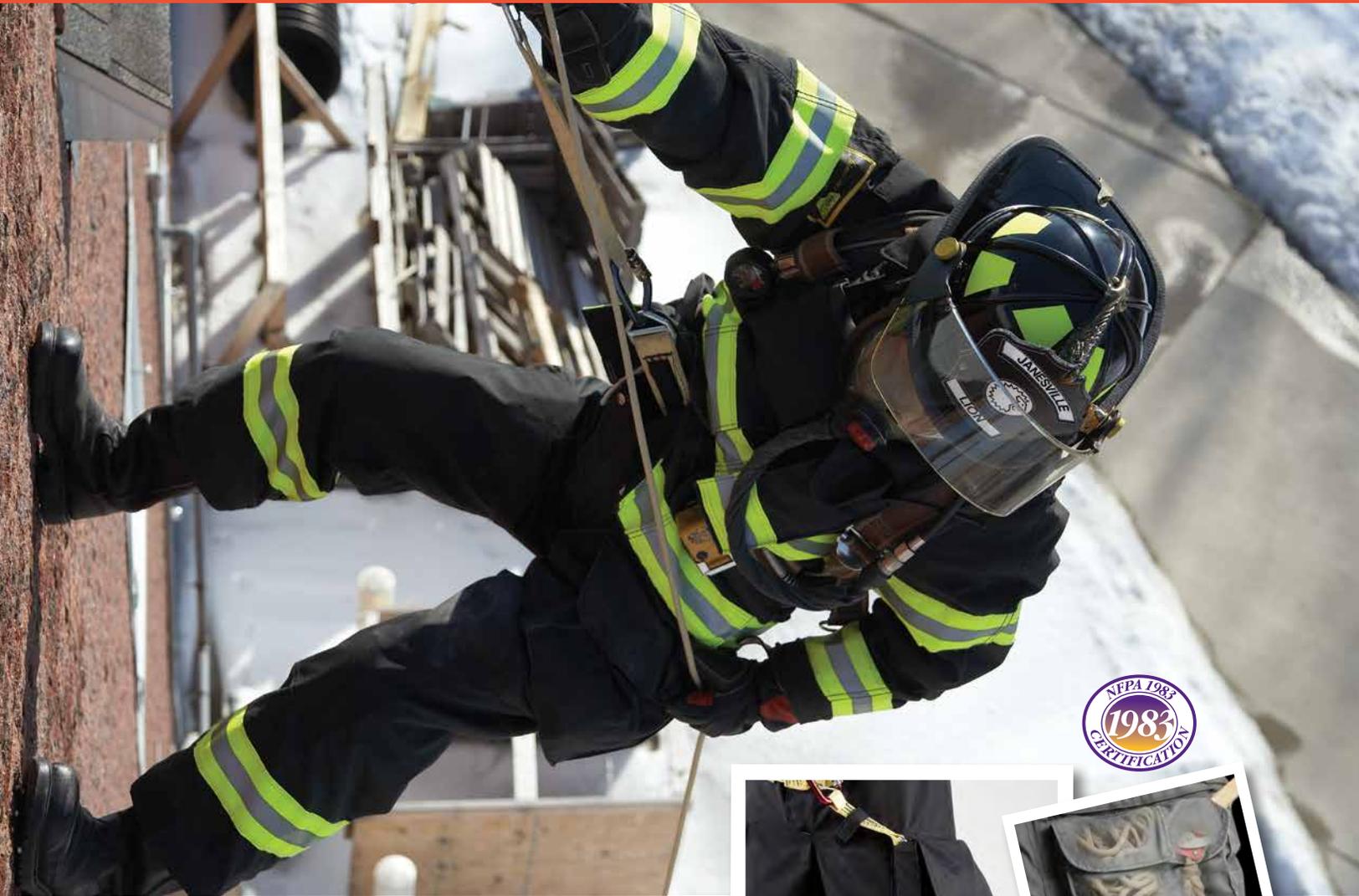
V-Back™ Quick Adjust, Stretch Padded Suspenders (for V-Force® High-Back Pants Only)

- Traditional Red color with Black padding
- Front rectangular metal loops and rear hook and loop fastener panel



1.800.421.2926

LION Personal Rescue System



The Personal Rescue System from LION integrates all escape components (50-foot escape line, descender, anchor, a quick link and a tether) and stows them in a cargo pocket on the leg of turnout pants. It can be deployed using any Class II life safety harness or escape belt.

Choose from horizontal or vertical split cargo pockets. Each keeps the rope from becoming entangled with the other hardware. The Personal Rescue System is available on most LION turnouts. It can also be retrofitted to any manufacturer's turnout pants and works with the LION Integrated Class II Harness, the LION Escape Belt (see next page) or with any manufacturer's Class II harness or escape belt.

The Personal Rescue System integrates all escape components and stows them in a cargo pocket on the leg of turnout pants.



Integrated Harnesses & Escape Belt



READY WHEN YOU NEED IT:

Integrated Class II Rescue Harness™

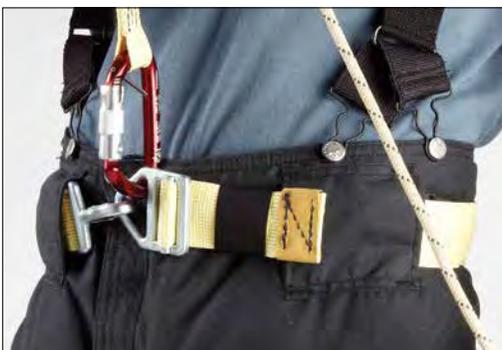
LION's Integrated Class II Rescue Harness, made from Kevlar®, is built into LION turnout pants between the outer shell and liner system. This maintains the integrity of one's PPE and protects the harness.

The sleek, integrated design responds to the user when loaded, but stays relaxed and out of the way when not in use, providing peace of mind and protection from snag and other various hazards. Waist and leg loop adjusters offer a more comfortable and concise fit, while the sliding D-ring provides the best possible interface to the escape kit. The harness is also removable for easier care and maintenance.

The LION Integrated Class II Rescue Harness is designated and certified as an **NFPA 1983**, Class II Life Safety Harness. It is to be used for emergency escape with up to two-person load/capacity. It also meets the requirements of **NFPA 1971** so that the harness retains its integrity when exposed to heat. A LION Integrated Class II A-Frame Rescue Harness and certified ladder tether are also available.



A-Frame Integrated Class II Rescue Harness



Emergency Escape Belt

The LION Escape Belt is an emergency self-rescue device that fastens at the waist outside of your turnout pants. The belt is positioned through belt loops on the pants and fastens with a hook and ring closure. When the escape rope is attached to the belt, it engages in the proper position.

The escape belt is made from two-inch Kevlar webbing and is certified to meet **NFPA 1983**. It is certified for use up to 300 pounds. When the belt is combined with a rope, descender and carabiner, it can be used as an escape system. It is also certified to the requirements of **NFPA 1971**, so the belt retains its integrity when exposed to heat.



1.800.421.2926

Popular Pant Cuff & Pocket Options



HANGING COAT POCKETS

Full bellows and semi-bellows hanging pockets (pockets hang partially below hem line to allow for full depth usage on shorter coats).



TOOL POCKET

Full bellows tool pocket (includes six compartments to store and separate multiple tools).



ELASTICIZED PANTS CUFF

Elasticized thermal liner pants cuff (to help reduce the entry of hot air, smoke or debris up the pants leg).

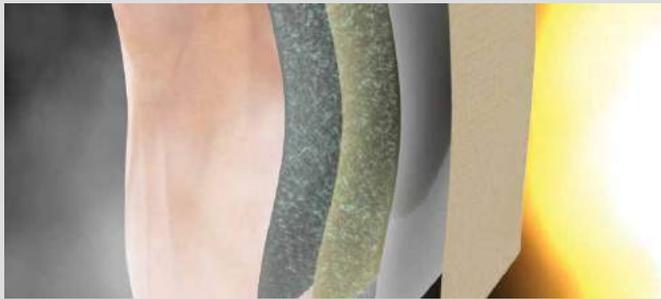


MOISTURE MANAGEMENT SYSTEMS

Save the Water for the Fire

Water is the firefighter's best friend...or at least the best tool. It puts out fires by replacing the air source. No oxygen = no combustion ... sounds great!

But when water replaces the air in your turnouts, gloves or boots, bad things happen. They get heavier, and that's uncomfortable, but the bigger problem is having water instead of air in your PPE. That's a matter of safety!



Water Expands at Explosive Rates

While the outer shell, moisture barrier and impermeable reinforcements help keep water from external sources out of your protective envelope; the thermal barrier can act like a sponge, absorbing perspiration. That's dangerous because water conducts heat 21 times faster than air at a temperature as low as 200° F. And, water can expand at explosive rates when heated (about 1700% the rate of air when the water is in a vaporous state).

IsoDri Systems

Which liner system is best for you? That decision is influenced by your climate, number and types of calls and your fireground operations. The accompanying chart rates performance factors of each IsoDri liner system and should be helpful in identifying which will work best for your department's unique comfort and protection needs.

	TPP	THL	Wicking	Lubricity	Dry Time	Working Weight
Glide Ice™ 2L AraFlo®	★★	★★★★	★★★	★★★	★★★★	★★★★
Glide Ice™ Center Cut	★★★	★★★★	★★★	★★★	★★★★	★★★+
Exhale SRS®	★★★★	★★	★★★	★★★	★★★★	★★★
Gore® Parallon™	★★★	★★★★	★★+	★★+	★★★	★★★+

Water Compromises Your Protection

It's obvious that many scald burns are from wearing wet gear in hot places. But a lot of commonplace contact and compression burns are made worse by water compromising your protection. A burn injury can happen very quickly when water is the conductor, usually without warning. Gear that's thoroughly soaked will sometimes take longer to heat up than dry gear, but that makes the protection less predictable.

IsoDri® is at the Heart of Turnout Moisture Management

There is no raw material that inherently manages moisture. That's why LION designs protective systems engineered to keep external moisture out and transport moisture generated by the body away from the skin to the garment's outer surfaces.

The key player in these systems is IsoDri technology. IsoDri liner systems are engineered to reduce water inside your thermal barrier and, therefore, the heat storage capacity of your turnouts.



Turnout Thermal Liners

Air Layers & Thermal Barriers

The ideal thermal insulation system is comfortable, lightweight, captures air and rejects water absorption while promoting the “wicking” of sweat. The best liners also withstand the effects of heat and have high porosity or air permeability.

The protective value of the fabric composite is really found in the air that’s between the firefighter and the heat source. Air itself is the greatest single source of the insulative qualities in protective clothing. Best of all, it weighs nothing and it’s free! The most functional way to achieve the best protection is to use a multi-layer configuration in which each layer accomplishes part of the job. Extremely efficient insulation can be gained by creating very thin air spaces between the layers, which supplement the air contained within the layers. It’s important that none of these individual air spaces exceed 1.8 cm of thickness, because convective currents start beyond that thickness and may begin to quickly transmit heat. Similarly, air layers that are replaced by water can be unpredictably dangerous. Unlike air, water is an amazing conductor of heat.

Thermal barrier systems with the most air spaces can:

- Create the most layers of air
- Resist absorption (water replacement of the insulating air)
- Provide the most reliable protection

The Face Cloth Can Make a Big Difference

Another important consideration for thermal barriers relates to comfort and mobility. The part of your liner that you can usually see is the “face cloth”. The face cloth is generally the muscle, while the inside of your thermal barrier is the brain. Face cloths that “wick” perspiration off the body are more comfortable and some face cloths have the added advantage of being slippery. Liner systems using high-lubricity face cloths can reduce the strain of moving around and have been proven to be effective in reducing stress (IAFF/Indianapolis FD Study, 1999). Not all shiny liners have high lubricity.

It is now widely recognized that thermal barriers which use slippery yarns on the “face cloth” next to the wearer are far less likely to bind and restrict the firefighter’s movement. The super-strong filament yarns which create this lubricity are also excellent at wicking perspiration away from the body.

Batting, Non-Woven or Combination Liners?

Non-woven material, such as those made with Nomex® and Kevlar®, is normally of consistent weight and thickness. A significant portion of the insulating value of non-woven liners comes from the air space between the layers. Non-woven liner systems usually have multiple layers of insulative fabrics. AraFlo® is an engineered improvement to the original fabric. During production, small evenly spaced apertures are created in the fabric. This promotes greater air permeability and quicker drying.

Another advantage that can be applied to some non-wovens is the addition of a durable water repellent finish. The non-wovens are impregnated with a highly-durable, water-resistant treatment to greatly improve the liner’s ability to resist water absorption. Treated non-wovens also dry very rapidly. Dry liner systems minimize the amount of water that can replace the critical insulative air space in the system.

Battings

Battings (sometimes called felts or needled non-wovens) are a soft, bulky material using the air between the randomly-needled fibers to form an insulative barrier.

Thermal liners using battings are usually made with one layer of needled material quilted to a face cloth. Battings cannot be treated to reduce water absorption and, therefore, they can get very heavy, be slow to dry and may transfer heat when wet.

Combination Systems

The LION “Center Cut” and “Exhale SRS®” systems are examples of true combination liners. They use separate layers of durable, water-repellent materials to sandwich the moisture barrier. The moisture barrier is double-protected. This improves the thermal insulation value (TPP) by protecting the moisture barrier and creating multiple air spaces between the increased number of very thin layers.



Turnout Thermal Liner Options

Low Friction Lets You Move More Freely

Glide Ice™ face cloth has the highest lubricity in the fire service. The slick low-friction properties of Glide Ice™ mean added freedom of movement and less working stress for a more comfortable feel in your gear. Freer movement means thermal liner systems with a Glide Ice Ice™ face cloth help fight stress and fatigue.

Wicking Characteristics Keep you Ready for Action

Glide Ice eliminates the clammy feel of other low-friction filament liners by wicking perspiration away from the body to keep you more comfortable. It also dries twice as fast as other low friction liners. Liners with Glide Ice look and perform better.

Glide Ice 2L AraFlo®

This high-tech liner delivers very high THL values and reduces the risk of water-related burn injuries. The Glide Ice face cloth wicks perspiration quickly, but the entire system carries less water and dries more rapidly than any other traditionally-oriented concept. This liner option uses two layers of spunlace, including one layer of apertured AraFlo®, and a low-friction face cloth. Both layers of spunlace are treated with a durable water repellent finish for high-performance water resistance.

Glide Ice Center Cut

Center Cut represents a breakthrough in the orientation of the internal components. Like all IsoDri® systems, this one picks up very little weight from water and dries in a flash. This combination system places a tough woven layer of water-resistant Nomex® Chambray between the shell and the moisture barrier as well as a quilted composite of Glide Ice face cloth and apertured AraFlo® treated with a durable water repellent finish next to the wearer. This unique system improves the thermal properties (TPP)

of the entire ensemble, while delivering outstanding THL values.

Exhale SRS®

Exhale SRS® is a unique system delivering high TPP while maintaining good THL. The orientation of the thermal insulation helps increase thermal protection yet maintains a compliant THL. Like all IsoDri® systems, this one picks up very little weight from water and dries quickly. This combination system places a durable water repellent finished quilt comprised of a Nomex® Chambray face cloth quilted to a layer of Araflo between the shell and the moisture barrier. Next to the wearer is a quilted composite of Glide Ice face cloth and a durable water repellent finished spunlace.

Gore® Parallon™

LION IsoDri, with the Gore Parallon Liner System, offers a level of firefighter turnout gear breathability and enhanced thermal protection in a wide range of conditions. This moisture management system helps to keep gear drier and provide more reliable thermal protection. All in all, this unique multi-layer combination of the thermal liner and moisture barrier helps to reduce firefighter fatigue from heat stress and heavy, wet gear.

Glide Ice Pure

Glide Ice Pure combines the Glide Ice face cloth characteristics with a batting of completely virgin fibers to provide reliable protection. Glide Ice Pure battings cannot be treated with Teflon® F-PPE.

Prism Pure®

The Prism face cloth blends several spun fibers to offer high wicking characteristics to increase comfort. The Prism face cloth is quilted to a batting of completely virgin fibers. Prism Pure battings cannot be treated with Teflon® F-PPE.



1.800.421.2926

DuPont™
Nomex® | DuPont™
Kevlar®



Thermal Liner Performance Charts

Liner Codes	Thermal Liner	Description	Working Weight ¹	Thermal Insulation ²	Durability ³	Comfort ⁴	Total Heat Loss Range	Cost
	Reprocessed Quilt	8.0 oz/yd ² batt	★★	★★★	★★	★	★	\$
(D7 and D9)	Prism Pure [®]	6.75 oz/yd ² batt	★+	★★	★★★	★★	★★	\$\$
	Caldura [®] Aralite [®]	7.6 oz/yd ² batt	★+	★★	★★★	★★	★★	\$\$\$
(J7 and J9)	Glide Ice [™] Pure	7.5 oz/yd ² batt	★+	★★	★★★	★★+	★★	\$\$\$
(V7 and V9)	Caldura [®] SL2i	7.8 oz/yd ² non-wov	★★	★+	★★★	★★	★★★★	\$\$\$
(K6 and K7)	Glide Ice [™] 2L AraFlo [®]	7.3 oz/yd ² non-wov	★★★★	★+	★★★	★★★★	★★★★	\$\$\$
(C6 and C7)	Glide Ice [™] Center Cut	7.0 oz/yd ² comb	★★★★+	★★★	★★★	★★★	★★★	\$\$\$+
(X7)	Exhale SRS [®]	7.5 oz/yd ² comb	★★★	★★★★	★★★	★★★	★★★	\$\$\$\$
(P8)	Gore [®] Parallon [™]	11 oz/yd ² non-wov	★★★	★★★	★★★	★★★	★★★	\$\$\$\$

1 Working weight = dry weight + moisture regain;
high ranking = low weight.
2 All around; wet, dry, high or low heat.

3 Insulation stability + face cloth durability.
4 Flexibility, bulk, friction resistance.

THL & TPP Test Results*

ISODRI COMPOSITES	7.0 oz. Fusion [™]		7.0 oz. PBI MAX [™]		7.25 oz. PBI Matrix [™]		7.0 oz. Advance [®]		6.5 oz. Armor AP [™]	
	THL	TPP B/W	THL	TPP B/W	THL	TPP B/W	THL	TPP B/W	THL	TPP B/W
C6 Glide Ice [™] Center Cut	280-290	35-40	264-274	44-49	265-275	38-43	N/A	N/A	255-265	40-45
C7 Glide Ice [™] Center Cut	285-295	35-40	264-274	40-45	275-285	35-40	274-284	40-45	260-270	36-41
K6 Glide Ice [™] 2L AraFlo [®]	270-280	35-40	255-265	42-47	263-273	35-40	N/A	N/A	240-250	38-43
K7 Glide Ice [™] 2L AraFlo [®]	270-280	35-40	255-265	40-45	274-284	35-40	255-265	36-41	245-255	36-41
X7 Exhale SRS [®]	240-250	44-49	245-255	50-55	240-250	43-48	N/A	N/A	240-250	48-52
Gore Parallon Liner System	235-240	40-45	235-240	41-46	240-245	43-48	N/A	N/A	240-245	36-41

NON-ISODRI COMPOSITES	7.5 oz. Nomex [®] IIIA		7.0 oz. Fusion [™]		7.0 oz. PBI MAX [™]		7.25 oz. PBI Matrix [™]		7.0 oz. Advance [®]		6.5 oz. Armor AP [™]	
	THL	TPP B/W	THL	TPP B/W	THL	TPP B/W	THL	TPP B/W	THL	TPP B/W	THL	TPP B/W
D7 Prism Pure [®]	235-245	40-45	225-245	38-43	220-230	42-47	220-230	38-43	220-230	44-49	220-230	40-45
D9 Prism Pure [®]	235-245	40-45	230-245	41-46	210-220	42-47	220-230	38-43	210-220	45-50	210-220	45-50
J7 Glide Ice [™] Pure	245-255	38-43	235-245	35-40	240-250	44-49	237-242	35-40	220-230	40-45	230-240	40-45
J9 Glide Ice [™] Pure	245-255	41-46	240-250	40-45	230-240	44-49	230-240	38-43	225-235	41-46	225-235	40-45

*Ranges based on multiple tests over a period of time.



Turnout Moisture Barrier Options

Moisture Barrier Criteria

While the moisture barrier has a number of supplemental functions, its main job is to keep the thermal protective properties of the system intact by preventing external water from penetrating into the critical air spaces of the garment.

A dry system is safer, more dependable, more comfortable and a lot lighter than a wet one. All moisture barriers will shed external water, but there are significant differences in their breathability, durability, thermal integrity and long-term reliability.

Highly-breathable moisture barriers are intended to prevent water from entering into the thermal layers, while allowing body vapor from sweat to escape outward. A more breathable barrier will usually reduce the amount of moisture and body heat that can be trapped inside the gear. Remember, the body heat in your sweat can only escape through your breathable moisture barrier in vapor form.

What is Total Heat Loss?

In its efforts to maintain metabolic equilibrium, the body exhausts excess heat. Some of this thermal energy is dry heat, but most of it is in the form of sweat. The evaporation of sweat is the body's most effective natural cooling mechanism. The Total Heat Loss number for a fabric or a combination of fabrics is the amount of energy that can be transferred through the system ... from the inside out. The higher the THL value, the more likely the system is to allow excess body heat to escape, greatly reducing heat stress, keeping you cooler and dryer in extreme environments.

Moisture Barrier Offerings

LION turnouts offer a full range of moisture barriers from W.L. Gore: CROSSTECH® Black, CROSSTECH 3-Layer and Gore RT7100™. Each is engineered to give you superior penetration resistance against water, blood, bodily fluids and NFPA common fireground chemicals.

CROSSTECH Black Moisture Barrier

CROSSTECH black moisture barrier offers the highest breathability in more conditions to manage heat stress better in conventional turnout gear. High breathability is maintained even after exposure to extreme heat. Its improved durability delivers long-lasting protection call after call while helping to also reduce maintenance costs. Lab tests, and field testing has shown that it remains significantly more liquid-proof and less prone to damage.

CROSSTECH 3-Layer Moisture Barrier

CROSSTECH 3-layer moisture barrier is the most durable, flexible and abrasion-resistant moisture barrier available. It provides the best combination of durability, breathability to manage heat stress better, and thermal protection in a rugged three-layer construction for the most demanding scenarios.

GORE RT7100™ Moisture Barrier

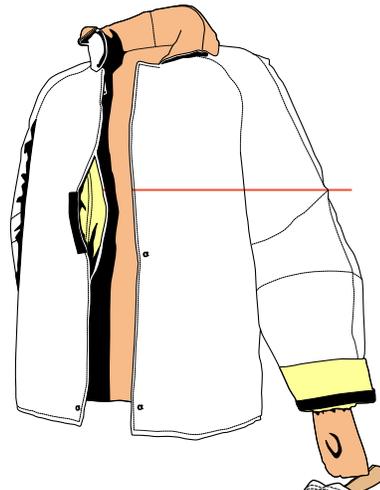
GORE RT7100 moisture barrier meets the performance needs and cost considerations of specific departments. It provides a combination of durability, breathability to manage heat stress better, and thermal protection that are unmatched in its price range.



Vented Moisture Barrier & Liner Details

Liner Inspection System Makes Inspecting Easy

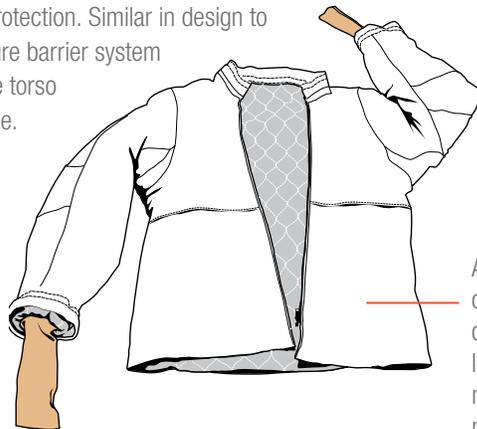
The Liner Inspection System makes Complete Liner Inspections easier and faster. It has a hook and loop opening to allow you to easily examine the film side of the moisture barrier and inside of the thermal liner on both coats and pants. This means no more ripping seams and re-stitching on inspections. This system comes standard on all models.



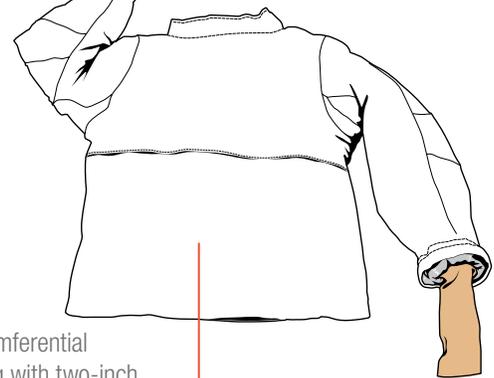
Opening allows access to inner parts of the liner system.

Vented Moisture Barrier for Superior Comfort

LION's Vented Moisture Barrier delivers increased heat loss performance, reduced stress and additional comfort, while maintaining thermal and moisture protection. Similar in design to a golf jacket, it's a two-piece moisture barrier system with a circumferential opening at the torso mid-section to allow vapor to escape. A two-inch overlap keeps water out.



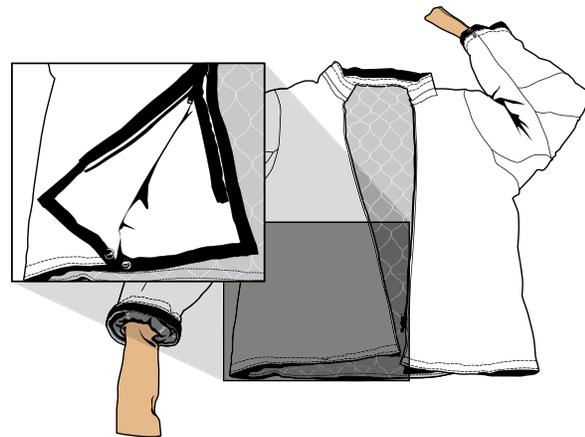
A circumferential opening with two-inch overlap increases heat loss performance while maintaining thermal and moisture protection.



Separable Liner System Eases Cleaning, Inspection & Repair

The Separable Liner System for turnout coats and pants makes it easier to separate, inspect, send for repair and/or replace the moisture barrier or thermal liner of turnout coats or pants. The Separable Liner System, developed by LION, is available with any LION brand custom turnout model.

Turnout liner systems are a composite of face cloth, thermal liner and moisture barrier. Normally, the edges of the composite are sewn together, making it difficult to inspect, test and replace the moisture barrier alone. The Separable Liner System attaches the thermal liner to the moisture barrier with a combination of zippers and hook and loop to form a complete inner liner system that allows the components to be detached for inspection, cleaning, repair and/or replacement.



Turnout Outer Shell Options

The outer shell probably has the most demanding role in the total configuration of a turnout. It has two critical functions: to resist ignition from direct flame impingement and to protect the internal layers from rips, tears, slashes, abrasion, etc. Some outer shell materials can have modest impact on TPP tests or can resist water absorption better than others. The real test of an outer shell material is its ability to maintain its protective qualities under high thermal loads and to stand up on the fireground.

PBI MAX™

A blend of 70% PBI® Dominant PBI®/Kevlar® spun yarns and 30% 600 denier Kevlar filament for high levels of abrasion and tear resistance. PBI MAX is woven in a twill weave for flexibility and comfort. Includes Teflon® F/PPE fuel, chemical and water repellent finish from DuPont™ (developed just for firefighting PPE by Safety Components). Available in natural and black, PBI MAX is 7.0 oz/yd² in weight.

PBI Matrix™

60% Kevlar/40% PBI fabric blend with a matrix of 600 denier filament Kevlar cables inserted for improved tear and abrasion resistance. Delivers outstanding thermal protective performance and water repellency. Includes Teflon F/PPE fuel, chemical and water repellent finish from DuPont (developed just for firefighting PPE by Safety Components). Available in natural. PBI Matrix is 7.25 oz/yd² in weight.

ArmorAP™

65% Kevlar and 35% Nomex (80% Nomex/Kevlar spun yarns and 20% Kevlar filament yarns). Armor AP is constructed of a 6.5 oz./yd² comfort twill with filament twill technology weave for improved comfort/flexibility, strength/durability and protection. Available in gold, khaki and black, Armor AP fabric includes a Teflon F/PPE fuel, chemical and water repellent finish from DuPont (developed just for firefighting PPE by Safety Components). (Khaki color contains Nomex/Kevlar/Teijin Conex® spun yarns.)

Fusion™

A balanced blend of producer-dyed Kevlar and producer-dyed Nomex in a rugged 7.0 oz/yd² ripstop weave. Producer dyeing delivers better color performance and consistency, but also reduces stress on the fabric from finishing. Includes Teflon F/PPE fuel, chemical and water repellent finish from DuPont (developed just for firefighting PPE by Safety Components).

Advance®

60% Kevlar/40% Nomex blend fabric in a 7.0 oz/yd² ripstop weave for added strength. Available in several colors with a Super Shelltite™ finish for good water resistance.

Nomex® IIIA

Available in a 7.5 oz/yd² plain weave construction in a variety of colors, as well as undyed natural (off-white). A workhorse fabric with excellent resistance to rips, tears and abrasion. Nomex IIIA has lower thermal stability under extreme temperatures than many other outer shells because it contains a lower percentage of Kevlar, the “muscle fiber” in most turnout gear.

Outer Shell	Working Weight ¹	Thermal Damage ²	Durability ³	Water Resistance ⁴	Color Fastness ⁵	Cost
PBI MAX™ 7.0 oz/yd ²	★★★★	★★★★	★★★★	★★★★	★★★	\$\$\$\$
PBI Matrix™ 7.25 oz/yd ²	★★★★	★★★★	★★★★	★★★★	★★★	\$\$\$\$
ArmorAP™ 6.5 oz/yd ²	★★★★	★★★	★★★★	★★★★	★★★	\$\$\$
Fusion™ 7.0 oz/yd ²	★★★★	★★★	★★★★	★★★★	★★★	\$\$
Advance® 7.0 oz/yd ²	★★★	★★★	★★★	★★★	★	\$\$
Nomex® IIIA 7.5 oz/yd ²	★★	★★	★★★	★★	★★	\$

1 Dry weight + moisture regain; high ranking = low weight.
2 Strength retention after high-heat exposure.

3 Long-term strength and abrasion characteristics.
4 Sheds liquids, soils and/or ice.

5 Resists change from UV, laundering, heat and abrasion.



DUPONT™ NOMEX® & KEVLAR® BRAND FIBERS

Adding strength and durability to turnouts

It's fair to say that there is not a turnout made in North America that doesn't contain a significant amount of DuPont Nomex and Kevlar fibers. They can be found in every turnout component, adding inherent flame resistance, strength and durability to your protective ensemble.

Outer Shells

DuPont Nomex and Kevlar fibers and filament yarns are engineered together with other high temperature fibers to form materials that stand up to heat, stay strong and protect the inner components. Kevlar filament is engineered into premium fabrics to reduce fabric profile, while strengthening fabrics to new levels of performance. Durable DuPont Teflon® HT water repellant treatments help keep the gear lighter and prevent water from compromising valuable air layers that provide the bulk of the garment's thermal insulation.

Moisture Barrier

Nomex fabrics and Nomex E89™ provide strong flame-resistant substrates for their liquid-impermeable films.

Thermal Liners

Nomex and Kevlar thermal linings are combined with Nomex fiber and filament face cloths to provide durable, flexible, heat insulating components. Multi-layer thermal liners are among the thinnest, most flexible, most breathable components on the market.

A repellant finish is applied to the thermal layers in LION's IsoDri Protective Systems to significantly improve moisture management and reduce garment drying time.

Face cloths using Kevlar filament yarns, such as Glide Ice™, help reduce surface friction, improving overall garment mobility.



Turnout Reinforcement Material Options

Reinforcements Add Life to High-Wear Areas

Shoulders, knees, elbows and cuffs should be reinforced to protect the wearer and extend the useful life of your turnout. It's a lot less expensive to replace a single layer of reinforcement material than it is to try and repair a turnout that has an abraded outer shell, thermal liner and moisture barrier.

In addition to reinforcement, high compression areas such as shoulders, elbows, yoke and knees should be cushioned to provide additional comfort and thermal protection to the firefighter.

Extra Outer Shell Layer

An extra layer of outer shell material is relatively flexible. The cost varies by fabric. "Self fabric" is the least durable of all the reinforcement options. If the extra layer of outer shell material is an IsoDri® fabric, it will have somewhat better durability and water resistance than other outer shell materials.

Leather

Leather is the least expensive option for reinforcement. It is more durable than any outer shell, but can be difficult to clean. It also picks up more water than other reinforcements.

Polymer-Coated Aramid

Polymer-Coated Aramid has outstanding water resistance. It's very durable, easy to clean and stands up to heat. It's a little less flexible than leather or self material and costs a bit more than leather.

SuperFabric® Technology

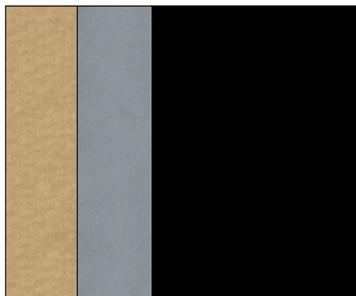
Epoxy bead resin-coated aramid, the best of both worlds. It's durable, easy to clean, flexible and stands up to heat. Although not impermeable, it has better water resistance than outer shell material.

Reinforcement materials	Durability ¹	Thermal Resistance ²	Water Resistance ³	Flexibility (with padding)	Laundering ⁴	Cost
Leather	★★+	★★★	★	★★	★★	\$
Shell Material	★★	★★	★	★★★	★★★	\$\$ ⁵
IsoDri Shell Material	★★+	★★	★★+	★★★	★★★	\$\$ ⁵
Polymer-Coated Aramid	★★★	★★★	★★★★	★★	★★★	\$\$
SuperFabric	★★+	★★★	★★+	★★	★★★	\$\$

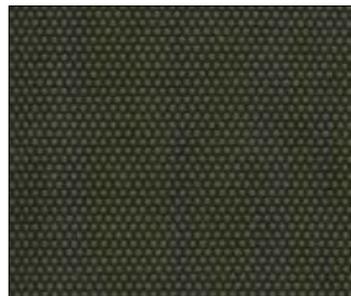
1 Abrasion, slash and puncture resistance.
2 Tolerance to heat exposure and contribution toward contact burn protection.

3 Low moisture regain and protection of underlayers.
4 Soil release and ease of cleaning.

5 Cost is higher for expensive shells.



Polymer-Coated Aramid



SuperFabric



Leather



Compression Burns & Moisture Management

Reducing Compression Burns

One of the most frequent factors in firefighter injuries is the compression burn. These injuries can range from irritating “strawberry” burns all the way up to life-threatening, full-thickness burns.

Compression burn injuries can happen in routine operations or in an inferno. They almost always happen without warning, so it’s sometimes said that nothing can be done about them. That’s not true.

Moisture Management Is the Key

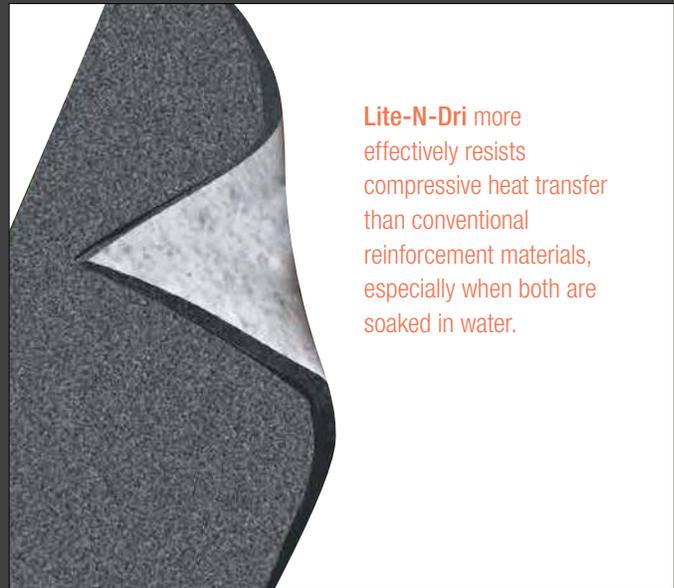
The dangers of compression burns cannot be totally eliminated for firefighters, but the likelihood and frequency can be reduced. Since the presence of water in the PPE system greatly increases the unpredictability of your protection, “moisture management” is a key element in reducing risk.

Lite-N-Dri™ Cushioning Adds Thermal Protection to High-Compression, High-Risk Areas

Lite-N-Dri cushioning provides supplemental thermal insulation to turnout coats and pants in high-compression areas such as knees, shoulders, elbows and yoke.

Its basic function is to guard against extraordinary thermal energy (heat) overpowering the thermal barrier and putting the firefighter at risk. When parts of your protective envelope are compressed, you are more vulnerable to heat-related injury because the compression removes the insulating air from your thermal barrier.

Lite-N-Dri has millions of air pockets that allow it to deflect and absorb energy. Lite-N-Dri is impermeable so it will not absorb water. This further helps reduce your vulnerability to compression-related burn injuries, especially compared to batting-type knee pads that soak up water like a sponge.



Lightweight & Flexible

Compared to other knee systems, Lite-N-Dri is lighter weight and more flexible, increasing mobility and reducing stress on the firefighter.

Most thermal insulators in today’s PPE deflect a little energy and then absorb as much energy as they can. When they’ve absorbed their fill, they transfer that energy. That energy transfer can be quick, explosive and unpredictable, especially when water is introduced into the system. At only 200°F, water transfers heat 21 times more quickly than air.

Lite-N-Dri cushioning helps guard against heat-related injuries in areas of high compression such as knees, shoulders, elbows and yoke. That’s why Lite-N-Dri is built into the knee of every liner and every shell of LION turnout gear



Lite-N-Dri™ & FireWall Knee™ Reinforcements



Delivering Substantially More Protection and Comfort

A firefighter's knees are vulnerable to compression burns unless the properly constructed reinforcement system is used. LION now offers two outstanding systems: Lite-N-Dri and the FireWall Knee. Both systems offer superior comfort while kneeling or crawling.

Lite-N-Dri Knee Reinforcement System Delivers 150% More Thermal Protection

All LION pants include a layer of Lite-N-Dri closed-cell cushioning between the moisture and thermal barrier for increased thermal protection and comfort.

Lite-N-Dri is impermeable to vapor and a proven heat blocker. This is further enhanced with another layer of Lite-N-Dri between the outer shell and the knee reinforcement. The additional layer of Lite-N-Dri gives you 150% more thermal protection.

FireWall Knee Reinforcement System Delivers 250% More Thermal Protection

The FireWall Knee has the same design as the Lite-N-Dri system, but silicone foam is used between the outer shell and the knee reinforcement. Silicone has outstanding thermal resistance and delivers 250% more thermal protection than a standard knee system. Like the Lite-N-Dri Knee Reinforcement System, the FireWall Knee Reinforcement System also offers superior comfort when kneeling or crawling.



1.800.421.2926

Semper Dri™ & Wrist Shield System™

Semper Dri™ System Reduces Water Gain

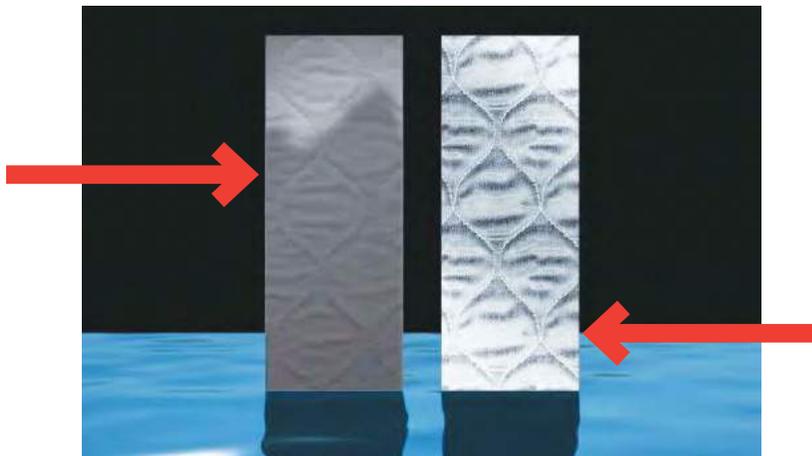
Thermal liners on conventional turnout pants have a tendency to absorb water from fireground activities at the bottom of the leg and migrate upward, sometimes even beyond the knees. This can make the garment heavy and uncomfortable, contribute to stress and possible burn injury during firefighting activities and require more drying time. Gravity of the excess weight can also pull the hems of the pants down, causing contact with ground surfaces. This can contribute to premature wear at the cuffs and even seat and crotch seam failure on turnout pants.

To reduce the stress on you and your turnout gear, Semper Dri™ employs a special treated thermal liner material to reduce absorption, staying drier and lighter. This means more comfort and less stress. In comparative field tests, garments using Semper Dri™ material in the lower legs were noticeably lighter in weight after structural firefighting activities and training exercises involving high volumes of water.

Semper Dri™ material is also standard in the waterwells of coat sleeves and in the shoulder/yoke area of coat liners.

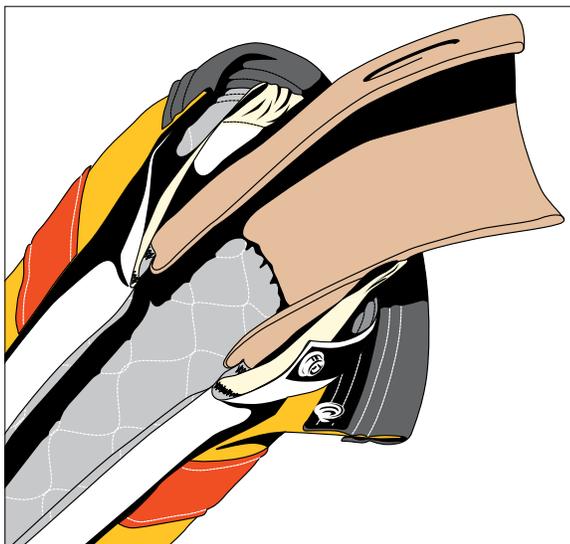
WET PANT

Common thermal liner material absorbs water from the fireground. This adds weight, which can contribute to premature wear and can displace the insulative air in your protective envelope, making you vulnerable to steam and compression burns.



DRY PANT

Semper Dri™ employs Teflon® F treated thermal lining material at the lower part of the legs, the arms and shoulders/yoke area to minimize absorption. This keeps the garment's working weight closer to its dry weight.



Wrist Shield System™ Minimizes Exposure to Water, Steam & Flame

LION's Wrist Shield System™ securely seals the wristlet of your turnout coat to your wrist. When you reach, the wristlet and moisture barrier travels with your wrist to minimize exposure to water, steam and flame. Semper Dri™ material is employed in the waterwells of the coat sleeves to reduce water absorption.





LION[®]
ready for action

TECHNICAL RESCUE



1.800.421.2926

DuPont[™]
Nomex

3M Scotchlite[®]
Reflective Material



VersaPro™ & TR51™ Multi-Purpose Garments

VersaPro Garments

LION created the VersaPro and VersaPro Plus to meet the wide variety of situations that first responders encounter. This dual-certified NFPA 1951 Utility and 1977 Wildland garment is perfect for extrication, technical rescue, grass fires, or scene investigation. This suit offers more protection than a station/work uniform, but is less cumbersome than structural turnouts. It can also prevent wear and tear on your turnout gear.

VersaPro features include:

- Extremely durable, yet very comfortable Sigma™ fabric
- A bi-swing back for added mobility and comfort
- Radio and cargo pockets offer the space to keep you prepared
- Lite-N-Dri™ cushioning in the knees offer additional padding and knee protection

In addition to all the same great features as Versa Pro,

Versa Pro Plus offers:

- Additional Hi-visibility trim
- PCA elbow and knee reinforcements
- Two layers of Lite-N-Dri knee padding
- A flashlight strap

TR51 Garment

The LION TR51 is an extremely versatile technical rescue garment. It's certified to meet NFPA 1999 and 1951, so you can use it for both EMS duty and technical rescue tasks.

The TR51 is offered in various outer shells for tough and durable extended wear life. The 3M™ Scotchlite™ Reflective Material makes sure you're seen in low-light and daylight conditions. The CROSSTECH® SR removable barrier provides liquid penetration resistance to water, blood, and bodily fluids. When the CROSSTECH SR barrier is removed, the garment can be used for technical rescue utility scenarios. Additionally, there are plenty of task-specific pockets for the tools of the trade.

Other TR51 features include:

- Dual EMS and technical rescue NFPA Certification
- Ergonomic-design for optimal rescue and recovery performance
- Adjustable coat and pant features for a more personalized fit
- Durable, high-quality construction
- Available in male and female models





LION[®]
ready for action

HELMETS



1.800.421.2926

DuPont[™]
Nomex

3M Scotchlite[™]
Reflective Material 39

The Science of Helmet Comfort & Safety

Five-point Adjustment System delivers a custom fit

The comfort level of a helmet is much more than a matter of personal preference. It directly corresponds to how closely the fit of your helmet matches the dimensions of your head. Since no two heads are alike, this requires that certain components of the helmet be adjustable.

Comfort is also a safety concern. It's well established that a comfortable helmet will be worn longer with less fatigue.

Delivering Custom Fit

LION Helmets™, both traditional and modern style, provide the wearer with the ability to adjust the helmet's center of gravity, front headband height (three settings) and back headband height (three settings). The headband is padded in both the front and back to dissipate the pressure of a fully-engaged ratchet. These combine to deliver optimum comfort, fit and safety.

Center of Gravity

This is determined by how your suspension system (straps) interfaces with the top of your head. The center of gravity is established by the intersection of the front and back suspension straps with the side straps. A properly-seated center of gravity will provide optimum balance. There should be little to no "wobble", either from side-to-side or front-to-back. Our adjustable straps allow you to determine where the center of gravity will be located.

Headband Height

The height of your headband affects the profile of your helmet, how well it interfaces with the SCBA mask and how well it fits the shape of the back of your head.

The height of the front of the headband should be adjusted so it clears your SCBA mask. This permits the proper seal for your mask and keeps the headband from resting on top of the mask and lifting the helmet, which decreases balance and reduces comfort.

The height of the rear of the headband needs to be set below the occipital lobe (the knot at the base of your skull). This and the proper rear ratchet band angle eliminate peak points that can cause gapping between the headband and your head. Together, the front and back

headband settings should provide enough height so the helmet is not rubbing the tops of the ears.

Cushioning

Cushioning that wraps around the sides and front of the headband increases comfort by dissipating the pressure a tightened headband places on the wearer.

Weight

Unnecessary weight is seldom a good thing for firefighters. It can increase your metabolic stress and reduce your stamina in high-exertion situations. So why would someone want a heavier helmet? There's a myth that a heavier helmet gives additional protection. Advanced composite technology proves this wrong. In fact, the weight of the helmet has almost no correlation to its ability to withstand impact penetration or heat.

Custom-Color Helmets

The Color Lasts Because it's Molded Throughout

Custom-color helmets employ Resin Transfer Molding technology for lasting good looks, just like our standard color helmets. This means there is color pigmentation throughout the shell. If you nick or scratch your helmet, there is no glaring white spot. No touch up paint is required.

Increase Visibility with Custom-Color Helmets

LION's custom-color molding process can mold any color into a fire or rescue helmet, including Safety Yellow. Visibility is essential to firefighter and rescue worker safety. The easier and sooner you can be seen, the safer you are. A custom-color helmet allows you to use colors that reflect longer waves of light than the traditional **Black, Yellow, Red, Orange, Blue** or **White**. This means you can be seen sooner and at a greater distance. That's pretty important when you're working on the side of a road or highway.

While safety is our motivation, the custom-color molding process also offers other benefits to departments. For instance, university departments have ordered helmets that match the school colors. All you need to do is provide a sample of the color or the **Pantone Matching System** (PMS) number.



American Heritage™

Hand-crafted rich, traditional looks



The American Heritage combines time-honored styling and craftsmanship with state-of-the-art advancements in design, leather tanning and composites. The result is a low-profile leather helmet that is attractive, durable and comfortable.

EXCLUSIVE FEATURES

Leather Shell

State-of-the-art chromium tanning process to seal protective qualities and color and to deflect heat. Won't chip or bubble like painted leather helmets.

LeatherGlas™ One-Piece Construction

Process bonds fiberglass composite between the outer and inner layers of the leather shell for superior strength and durability during extreme conditions.

Suspension

Patented Center of Gravity™ adjustment system lets you set the center of gravity to your liking and keeps it positioned in place.

Height Adjusters

Provide three different headband height positions.

Ratcheting Headband

Adjusts from size 5½ to 11. Headband is cushioned with foam and covered with leather for comfort and secure fit.

Eye Protection

Choose from:

- High temperature 4" APEC faceshield with thumbwheel adjustments
- ESS goggles
- Flip downs with goggles (can be purchased without goggles, but will not be NFPA compliant)

Edge Binding

Aluminum core edge binding is durable, but light.

Chinstrap

Easy-to-adjust, quick-release chinstrap with postman's slide.



Ear Covers

Black DuPont™ Nomex® brand fiber/flannel ear covers for added neck/ear protection. Other materials/colors available upon request as replacement parts.

Shield Holder

Hand-carved brass eagle leather shield holder.

3M™ Scotchlite™ Reflective Material (2" x 2½" lime-yellow trapezoids)

Has excellent heat resistance and maintains brightness and color after heat exposure.

Colors

Available in Yellow, Black, White, Red, Blue, Orange or Natural.



1.800.421.2926

DuPont™
Nomex

3M Scotchlite™
Reflective Material

American Classic™

Traditional looks, optimum comfort and protection



The American Classic combines the looks of a traditional-style helmet with the lighter weight and high-performance protection of state-of-the-art fiberglass technology.

EXCLUSIVE FEATURES

Shell

Fiberglass shell employs exclusive patented TherMax™ composite technology to ensure thermal protection, light weight and structural integrity of the entire shell. RTM molding provides color pigmentation throughout for lasting good looks. Additional thermal protection is provided by the Classic's removable thermal insulator and thermoplastic liner.

Suspension

Patented Center of Gravity™ adjustment system lets you set the center of gravity to your liking and keeps it positioned in place. The suspension system is removable for easy inspection, cleaning or maintenance.

Height Adjusters

Provide three different headband height positions.

Ratcheting Headband

Adjusts from size 5½ to 11. Headband is cushioned with foam and covered with black knit Nomex® for comfort and secure fit. Other materials available upon request.

Eye Protection

Choose from:

- High temperature 4" APEC faceshield with thumbwheel adjustments
- ESS goggles
- Flip downs with goggles (can be purchased without goggles, but will not be NFPA compliant)

Edge Einding

Aluminum core edge binding is durable, but light.

Chinstrap

Easy-to-adjust, quick-release chinstrap with postman's slide.



Ear Covers

Black DuPont™ Nomex® brand fiber/flannel ear covers for added neck/ear protection. Other materials/colors available upon request as replacement parts.

Shield Holder

Hand-carved brass eagle leather shield holder.

3M™ Scotchlite™ Reflective Material (2" x 2½" lime-yellow trapezoids)

Has excellent heat resistance and maintains brightness and color after heat exposure.

Colors

Available in Yellow, Black, White, Red, Blue, Orange or Natural. Custom colors available upon request.



Legacy 5™

Low profile, modern-style helmet for superior balance and stability



The Legacy 5 balances the factors of safety, comfort and cost. The modern styling of the helmet offers lighter weight, lower profile and better interfaces than traditional-style helmets. It has a tough, durable fiberglass shell with excellent thermal resistance.

EXCLUSIVE FEATURES

Shell

State-of-the-art fiberglass materials for light weight and structural integrity. RTM technology provides color pigmentation throughout the shell.

Impact Cap

Lexan®/ABS dome encapsulated with urethane foam for outstanding thermal resistance.

Suspension

Patented Center of Gravity™ adjustment system lets you set the center of gravity to your liking and keeps it positioned in place.

Height Adjusters

Provide three different headband height positions.

Ratcheting Headband

Adjusts from size 5½ to 11. Headband is cushioned with foam and covered with black knit DuPont™ Nomex® brand fiber for comfort and secure fit.

Eye Protection

Choose from:

- High temperature 4" APEC faceshield with spring-loaded Safety-Set® brackets or thumbwheel adjustments
- ESS goggles

Edge Binding

Aluminum core edge binding is durable, but light.

Chinstrap

Easy-to-adjust, quick-release chinstrap with postman's slide.



Ear Covers

Yellow Nomex®/flannel ear covers for added neck/ear protection. Other materials/colors available upon request as replacement parts.

3M™ Scotchlite™ Reflective Material (1" x 4" lime-yellow bars)

Has excellent heat resistance and maintains brightness and color after heat exposure.

Colors

Available in Yellow, Black, White, Red, Blue, Orange or Green. Custom colors available upon request.



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DuPont™
Nomex®

3M Scotchlite™
Reflective Material



LION[®]
ready for action

BOOTS



44 DuPont™
Nomex

3M Scotchlite™
Reflective Material

STC
SHOE TECHNOLOGY COMPANY

www.lionprotects.com



Marshall™ & Commander™ Fire Boots

Try on a pair. Feel the difference in ankle support.



Why LION Technical Footwear™?

With dozens of options available, how do you choose the right leather firefighting boot? A comfortable boot is essential to safety on the fireground because, when your feet hurt, you can lose mobility and stamina. LION Technical Footwear™ brings superior working comfort, safety and durability – run after run.

Working Comfort

Rugged, strong and flexible — everything you want in a firefighting boot. The back of a LION Technical Footwear™ boot is designed to match the anatomical shape of your heel, and the molded ankle guard provides a comfortable, athletic fit.

Safety

The Lenzi® puncture-resistant midsole offers a 30% greater coverage area than a stainless steel sole, offering enhanced puncture protection. The patented Lock-Fit Ankle Support System™* grabs the ankle and foot to improve surefootedness and reduce the risk of slips, trips and falls.

Quality

Other boots may look flashy, but are they built to last? Are they really built for firefighters? LION Technical Footwear™ is built with the most durable materials, including Goodyear® storm welt, Lenzi® puncture-resistant midsole, breathable CROSSTECH® fabric, a Vibram® Fire & Ice™ sole and premium, top-grade U.S. fire-resistant leather.

You Can Put These Boots Through Hell, But Your Feet Won't Suffer

- Abrasion-resistant toe –Vibram nitrile-rubber toe covering protects the boot from abrasion when you're crawling. Your boots last longer.
- Lenzi puncture-resistant midsole is positioned further away from the sole for enhanced puncture protection.
- Multi-directional puncture protection. Pierce-Protect Arch Protection System™* is a flexible, ballistic grade composite that delivers superior protection to the arch of your foot
- Guards against impact damage with tempered steel "wide flange" toe cap with rubber lip. Tested to withstand an impact up to 92.2 foot pounds.

* Patent Pending



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Marshall™ & Commander™ Fire Boots



Superior Traction & Dexterity

- Slip-resistant Vibram® Fire & Ice™ sole – special blend of polymers offer durability and superior traction in hot and cold environments.
- Goodyear® storm welt – extremely flexible, provides maximum durability and allows for easy repair.
- Top grain, U.S. leather upper is water repellent, tough, flexible and delivers unparalleled foot dexterity for running, crawling and climbing.

Long-Lasting Comfort Features

- Custom fit and feel – molded thermoplastic heel counters are individually modeled to every size for a custom fit. It keeps its shape even in severely wet conditions.
- Won't rub and irritate – the Lock-Fit Ankle Support System™* is an integrated anatomical ankle padding system that ensures the foot is securely positioned in the boot. This helps prevent your heel from riding up and down against the back of the boot.
- Fight sagging arches – a double-ridged ladder shank supports your arches, reducing painful compression and possible injury.
- Keep dry and cool – breathable CROSSTECH® footwear fabric allows perspiration vapor and moisture condensation to escape.
- Comfort in critical areas – open cell foam cushioning and shock absorbing footbed.
- Anti-chafing padded collar trim – conforms to accommodate all leg sizes.
- Pierce-Protect Arch Protection System™* – a flexible, ballistic grade composite that delivers superior protection to the arch of your foot.

Both Styles Feature:

- CROSSTECH fabric membrane.
- Cambrelle® lining – 300 grams polyfelt insulation.
- Lock-Fit Ankle Support System™* provides anatomical ankle padding that ensures the foot is securely positioned within the boot.
- Lenzi® puncture-resistant midsole.
- Goodyear storm welt construction provides maximum durability and enables easy repairs.
- Removable shock-absorbing foam footbed is anti-odor, anti-fungal and breathable.
- Vibram Fire & Ice sole offers durability and superior traction at both temperature extremes.
- Large 1" rugged Nomex® webbing boot straps with reinforced stitching ensure easy donning and doffing.
- Thermoplastic heel counter individually molded to every size for custom fit.
- Vibram nitrile-rubber toe area covering provides full toe area scuff protection.
- 3M™ Scotchlite™ Reflective Material (Silver) provides added visibility.

* TM used under license from STC Footwear



Marshall™ & Commander™ Fire Boots



Unique Marshall Boot Features

- 14" High Pull-On Design
- Slip-resistant, breathable micro-fiber technology protective heel strip enhances foot stability and minimizes wear on Cambrelle® fabric lining.
- Wide-fitting toe cap with rubber lip tested to withstand an impact up to 92.2 foot pounds meets NFPA, CSA and ASTM standards.
- Leather bound padded collar trim for better all-around fit with no chafing.

Unique Commander Boot Features

- 12" Zip-Lace Design for custom fit
- Protective heel strip with slip-resistant, breathable micro-fiber technology enhances foot stability and minimizes wear on Cambrelle fabric lining.
- Side zip opening which offers minimal resistance on frontal flexion and enhances mobility when climbing and running.
- Leather tongue and side gusset allow for wide entry area and provide an exceptionally comfortable fit.
- Heavy-duty side brass zipper is designed to resist corrosion and adds to long-term durability.
- Wide-entry for easy donning and doffing.

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DuPont™
Nomex.



3M Scotchlite™
Reflective Material



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GLOVES



48 DuPont™
Kevlar®



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Rebel™ & Commander™ Structural Fire Gloves



LION Rebel™

Optimal Protection, Dexterity & Comfort

- A dynamic, three-dimensional design features a 14-piece ergonomic shell that allows for maximum dexterity and comfort.
- Shell is constructed of heat-resistant Aramid knit, reverse goat hide, and top grain cow hide.
- CROSSTECH® glove insert with film technology and Kovenex® thermal lining offers superior liquid penetration resistance, thermal protection and fingertip control.
- Combined glove components are flexible, durable and provide added protection against cuts and sharp objects.
- Available in Kevlar® wristlet and gauntlet style
- Color: Black with gold palm accent
- Sizes: 2XS-5XL

LION Commander™

Combination Liner with Enhanced Back-of-the-Hand Protection

- Enhanced gunn-cut pattern provides increased comfort and better wear. Two middle fingers sewn separately to palm and integrating to a three-piece back provide 3D type performance and feel with gunn-cut wear.
- Shell constructed of 100% Eversoft side-split cowhide leather enhanced through double-chrome tannage. Provides outstanding thermal resistance, long-lasting water repellency and superior softness.
- Glove breathes in wet conditions and stays soft and pliable when air-dried
- Side-split leather shell has looser fiber structure which provides more air space for peak insulation performance in high-heat conditions. Dexterity improves with each use.
- Next-generation CROSSTECH Insert Glove is fully bonded to a form-fitting thermal liner to create a "3D" combination of thermal liner and moisture barrier. This results in better flexibility, less bulk in the palm and improved dexterity.
- Available in Kevlar wristlet or gauntlet style
- Color: Solid Ocean Blue or combination Gold/Black
- Sizes: XXS-2XL and 3XL and 4XL extended sizes

LION COMMANDER ACE™

All existing features of "Commander" gloves plus ...

- Improved leather gauntlet cuff for easier donning and doffing
- Lite-N-Dri in back of hand for advanced thermal protection
- Color: Solid black
- Sizes: 2XS – 4XL



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DuPont™
Kevlar.



Defender™ & Patriot™ 3-Layer Structural Fire Gloves



LION Defender™ & Patriot™ Traditional Three-Layer Structural Firefighting Glove

- Gunn-cut pattern provides increased comfort and better wear. Two middle fingers sewn separately to palm for a single-piece seamless back that provides increased comfort and better wear.
- Shell constructed of 100% Eversoft side-split cowhide leather enhanced through double-chrome tannage. Provides outstanding thermal resistance, long-lasting water repellency and superior softness.
- Glove breathes in wet conditions and stays soft and pliable when air-dried.
- Side-split leather shell has looser fiber structure which provides more air space for peak insulation performance in high-heat conditions. Dexterity improves with each use.
- Thermally stable CROSSTECH® moisture barrier liners for liquid penetration resistance.
- Flame resistant, modacrylic/cotton blend knit thermal liner offers thermal stability. Does not pose a melting hazard during fireground conditions.
- Kevlar® wristlet or gauntlet style cuff.
- Defender Color: Medium Blue or combination Gold/Black
- Patriot Color: Gold
- Sizes: XXS-2XL and 3XL and 4XL extended



Non-NFPA Light-Duty, Extrication & Cold Weather Gloves



LION Spirit™

CAL-OSHA Glove with Lightweight Thermal Liner for Light-Duty Protection

- Gunn-cut pattern provides increased comfort and better wear. Two middle fingers sewn separately to palm for a single-piece seamless back that provides increased comfort and better wear.
- Shell constructed of thermal resistant side-split cowhide leather
- Flame resistant, modacrylic/cotton blend knit thermal liner offers thermal stability. Does not pose a melting hazard during fireground conditions.
- White Nomex® wristlet or gauntlet style cuff
- Color: Medium Blue
- Sizes: XXS-2XL and 3XL and 4XL extended sizes

LION XTreme™

No-Barrier Extrication Glove

- Three-dimensional design for optimal dexterity and flexibility
- Tough nylon outer shell with Armortec palm and finger patches for outstanding dexterity and puncture resistance
- Reflective material on back of glove for high visibility in nighttime extrications
- Color: Black/Lime-Yellow
- Sizes: XS-2XL

LION Cold Weather

Work Glove

- Provides hand protection and warmth during cold temperatures
- "Hi-Vis" lime-yellow on back of hand and reflective accents provide high visibility.
- Thermal liner and waterproof membrane keep warmth in and water out
- Gauntlet style wrist with take up strap and additional cuff toggle closure
- Color: Black/Lime-Yellow
- Sizes: XS-2XL



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DuPont™
Kevlar®



ADDITIONAL SUPPORT



CBRN & StationWear™

LION CBRN

Chem-Bio incidents don't have to mean hot and muggy disposable suits. LION CBRN offers several NFPA-certified chem-bio ensembles to provide mission-specific protection. Each is lightweight and comfortable, and can be reused as long as you're not exposed or contaminated.

- **MT94™** – Delivers NFPA 1994 Class 2 vapor, liquid and FR protection for chem-bio incidents (TICs, TIMs and CWAs). Certified to meet NFPA 1994 Class 2 and NFPA 1992 requirements. Available in front and rear entry configurations.
- **ERS** – an Extended Response Suit designed for protection against NFPA 1994, Class 3 vapor and liquid challenges (TICs, TIMs and CWAs). Certified to meet NFPA 1994 Class 3, NFPA 1994 Class 4, and NFPA 1999 single use requirements.
- **Commando®** – Undergarment certified to NFPA 1994, Class 3 requirements for "warm zone" operations. Easily integrates with a variety of equipment and outer garments. The Commando delivers exceptional mobility and comfort in demanding situations.

LION StationWear™

Designed specifically for firefighting and emergency professionals.

Identity & Performance

Your appearance must communicate authority and professionalism. That's why LION StationWear is available in deep, rich navy; vibrant medium blue and crisp white. Our garments are engineered for easy care and maintenance. Your job is unpredictable and requires a uniform with the strength and performance to stand up to the rigors of the job.

With LION StationWear you get:

- Designs with features that facilitate job performance
- Construction and reinforcements that meet the challenges of your job head-on
- Wicking fabrics that transport sweat away from the body and toward the bunker gear's breathable moisture barrier

NFPA 1975-Compliant

The underlying purpose of NFPA 1975 is "to provide uniforms that will not contribute to burn injury severity". Our NFPA 1975-compliant uniforms are made with fabrics, pocketing, labels, waistbands, zipper tape and sewn with thread all certified to meet this requirement. LION StationWear garments are independently audited and certified.



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DuPont™
Nomex

LION TotalCare® & FASET

TotalCare PPE Maintenance & Repair

Turnouts and other PPE represent a major investment for your department. LION TotalCare, the leader in PPE maintenance and repair, can help save you money and keep your gear safer, longer. LION TotalCare is a verified ISP recognized by all PPE manufacturers that provides professional maintenance services that help enhance firefighter safety, extend the life of your PPE and save you money.

LION TotalCare services include:

- Advanced Inspection
- Advanced Cleaning
- Decontamination & Disinfection
- Repair
- Retrofits & Alterations
- Rental Gear
- Emergency Back-Up Gear
- NFPA 1851 Recordkeeping
- Customized Programs

FASET PPE Tracking

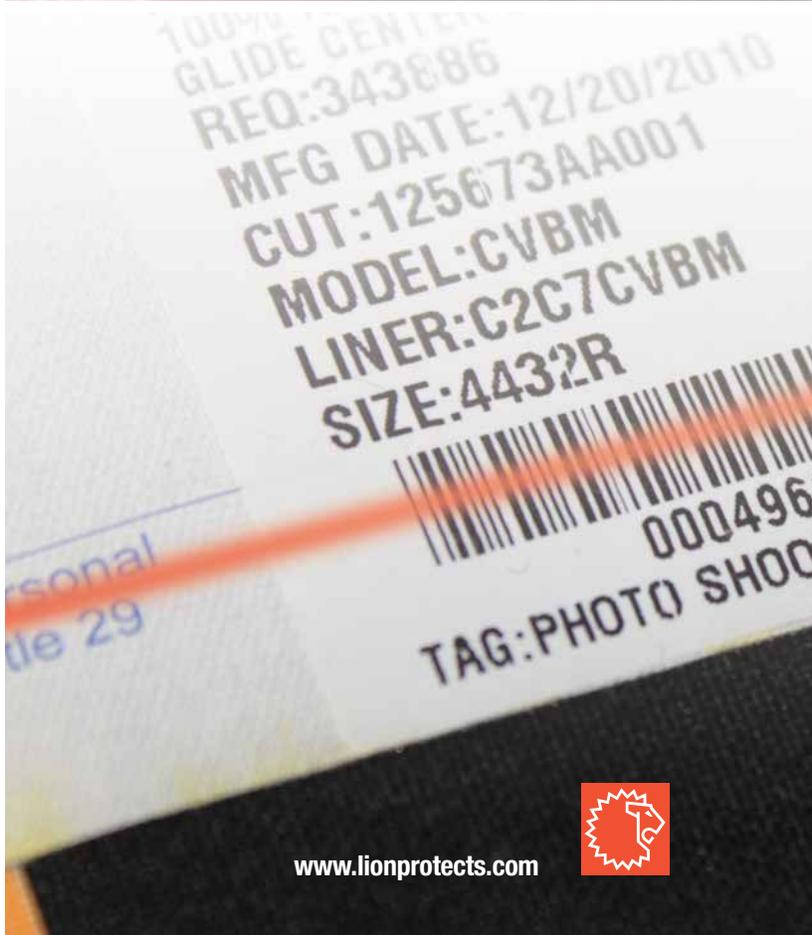
Real-time PPE asset management at your fingertips, exclusively from LION

FASET is a web-based fire and safety equipment tracking software program. This tool allows you to track all record-keeping elements required for fire department compliance to NFPA 1851, Standard on Selection, Care, and maintenance of Structural Fire Fighting and Proximity Fire Fighting Protective Ensembles.

FASET also provides the capability to track hose, ladders, SCBA, rescue tools and anything else you want.

- Easy to learn and easy to use
- Free Help Desk support
- Inspection scheduling is made easy
- Saves you time and money

Software licenses for FASET can be purchased from LION. Contact your LION dealer for additional information. LION also offers an optional Symbol LS2208 scanner. The scanner captures manufacturer's information for error-free data.



LIONFireAcademy.com Online PPE Usage & Maintenance Program

LION Fire Academy is your FREE online destination for PPE resources and education. Whether you're a student or instructor, you'll find videos, training aids and links on all things PPE. Upon successful completion of the full LION Fire Academy program, you'll also receive Continuing Education Units (CEUs).

LION Fire Academy offers:

- **NFPA PPE Safety & Use Instruction**
Learn what every firefighter should know before using NFPA 1971 compliant gear through an in-depth, 12-part video series. Take the test after each video to earn your PPE Safety and Use Certificate.
- **NFPA 1851 Training**
This video series trains you to perform Advanced PPE Inspections, Advanced PPE Cleaning and Basic PPE Repairs. Take the test afterwards to earn your Manufacturer Trained Personnel Certificate.
- **LION Product Training**
Instructional videos about the fit, form and functionality of LION PPE products.

To learn more or start your LION Fire Academy training, visit us online at www.lionfireacademy.com.



A screenshot of the LION Fire Academy website. The header includes the 'Fire Academy' logo with the URL 'www.lionfireacademy.com' and the 'LION ready for action' logo. Navigation links for 'STUDENTS', 'INSTRUCTORS', and 'FIREFIGHTERS' are visible. A video player shows a video titled 'About LION Fire Academy'. Below the video are sections for 'FIREFIGHTERS' and 'INSTRUCTORS'. The 'FIREFIGHTERS' section features 'NFPA 1851 PPE CARE AND MAINTENANCE TRAINING' and 'NFPA 1500 PPE SAFETY AND USE'. The 'INSTRUCTORS' section features 'NFPA 1851 PPE SAFETY AND USE'. The main content area has a 'WELCOME TO THE LION FIRE ACADEMY' heading and text describing the program's offerings and contact information.



Put LION's high-performance protective gear to work for you. Check us out at your local LION dealer:



Aero-Super Pants, Aero-Super Deluxe Coat, Aero-Super Deluxe Pant, American Heritage fire helmet, VersaPro, VersaPro Plus, TR51, American Classic fire helmet, AraFlo, Center of Gravity adjustment system, Chambray Pure, Commando, Deluxe High-Back, Ever-Dry Reach System, Exhale SRS, Firefighter Recovery Harness, FireWall Knee, Freedom Design, Freedom Elbow, Freedom Knee, Free Range, IsoDri Moisture Management System, LeatherGlas molding process, Legacy 5 fire helmet, Liberator rescue helmet, LION Commander, LION Defender, LION Helmets, Liberty, LION Integrated Rescue Harness, LION Mechflex Xtreme, LION Patriot, LION Protective Gloves, LION Rebel, LION Spirit, LION Technical Footwear, LION TotalCare, Lite-N-Dri, Semper Dri, Safety-Set brackets, Super-Deluxe, TherMax composite technology, TotalCare, Ultimate Clean, V-Back, V-Fit, V-Force, Viz-a-v, V-Notch, VersaPro, VersaPro Plus and Wrist Shield System are tradenames of Lion Group, Inc.

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