

# MORNING PRIDE PROTECTIVE CLOTHING CATALOG

We're Serious About Firefighter Safety and Comfort!

## Dare-To-Compare

2 0 0 4



**MORNING PRIDE**  
PROTECTIVE CLOTHING SYSTEMS

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Contents*



## Total Fire Group

The Total Fire Group is a team of dedicated, experienced, fire service, technical marketing professionals. We represent the leading products in the emergency and fire service fields, including clothing, helmets, boots, hoods, gloves, fire service safety products and more.

## Mission Statement

To market unique, high-quality, value-in-use products with an emphasis on quality, innovation, integrity, safety and service.

## Background Information

The Total Fire Group Reference Guide, available from our Customer Service Department, should also be consulted as you consider protective product choices since it offers important information on:

- NFPA and national standards on Protective Clothing & Equipment
- Recent research and the resulting implications for appropriate protective technology design
- Details on available Lease/Purchase, Quartermaster and Complete Care Programs for our products (Total PPE)
- A full listing of available technical support personnel through Total Fire Group (including direct-dial numbers and e-mail addresses)



Visit our website at [www.totalfiregroup.com](http://www.totalfiregroup.com) to sign up to receive breaking news on new products, new studies, new standards and special offers via "TotalFireE-News."

Cover Photo Courtesy of Warren Fuchs, FDNY Fire Alarm Dispatcher, Brooklyn Operations

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**Tails...**The only system to offer short coat lightness and mobility without stressful bibs.



**Tails are only one of our 100+ patented or patent pending clothing products (see page 92 for a full listing)**

**Dare-To-Compare...**Spec'ing a brand may be based on what has always been ordered and/or acceptance of what a sales rep offers. We understand. However, we are so confident of our products' unique advantages that we urge everyone to "Dare-To-Compare" (on like products, size, materials, etc.)...then decide for yourself if our products are as uniquely superior as we, most major FDs and patent offices around the world feel they are. Our products are designed by firefighters for firefighters – with safety and comfort our top priority!

**Catalogs:** Our catalog offerings are dedicated to presenting our unique advantages. All Total Fire Group brand line Catalogs, Price Lists and the Reference Guide are available in traditional print format as well as on one convenient CD (pdf file format). The brand line Catalogs and Total Fire Group Reference Guide can also be downloaded from our website ([www.totalfiregroup.com](http://www.totalfiregroup.com)).

**Fire Department Presentations and Local and Regional Seminars:** In some cases, just reading, understanding and then comparing our products' unique advantages is enough, while other products require a hands-on demonstration to truly appreciate their superior differences. Along with your local dealers, we sponsor risk-free hands-on demonstrations and regional seminars. When we present the safety, comfort, quality and cost effectiveness of our products, you'll quickly realize how affordable the best truly is! But don't take our word for it...let us supply you with the facts, case studies and references from other FDs that refuse to buy less than the best. Contact us today for a presentation in your fire station or for information on seminars in your area.

**Leading Edge Technology...**Morning Pride became the largest selling brand of firefighter's protective clothing because of aggressive, and competitively unmatched, investments in research and development. That research has allowed us to offer better performing, more comfortable and more technologically advanced products; it is the superiority of our product line that has fueled our market growth. The innovativeness of the Morning Pride product line has been recognized by 100 U.S. Patents, with 36 additional patents pending (for a list of those concepts currently commercially available, please see page 92 of this catalog). The most progressive departments in the world (including the three largest in the U.S. and the largest in Canada) now specify Morning Pride advantages on a no-exception basis.

**No or Low Cost Field Test Program...**But Morning Pride does not ask you to accept our word on the superiority of our products. Our competitively unparalleled field test program allows you to verify the superiority of the Morning Pride product line for yourself, both low and no cost programs can be arranged by contacting our Customer Service Department. Morning Pride's performance advantages are so clear cut that we have won almost every major, comparative, competitive field test in the last eight years.

**Interfaced Bloodborne Pathogen Resistant Technologies...**The newest requirements in protective clothing are for systems that provide protection against bloodborne pathogens (like the HIV and Hepatitis B virus). As the detailed discussion in the Total Fire Group book suggests, the OSHA Bloodborne Pathogen Standard seems to REQUIRE just such protection for firefighters and EMS workers (and the new NFPA clothing editions make the same requirements). Morning Pride is pleased to be the first firm to be able to offer a full line of interface capable and certified bloodborne pathogen resistant firefighting clothing. Morning Pride is also the first firm to offer interface capable and certified EMS systems. Morning Pride "BPR" products interface with all Servus, Ranger & PRO-Warrington boots to provide full body protection (including interface areas).

**Lifetime Warranty...**All Morning Pride products carry a lifetime guarantee against defects in materials or workmanship. Any such defects will be repaired or replaced at Morning Pride's expense at any time in the product's life. This generous warranty has been offered, competitively unmatched, for over 80 years and is possible only because of the extremely high quality levels evidenced in all of our products.

**Experience & Quality...**Established in 1921, Morning Pride is not just another brand of protective clothing, it is the BEST product manufacturable. For instance, every individual stitch is inspected on our garments and even a single skipped stitch is repaired before shipment. Similarly, our garments are constructed with lock stitched optioning, outershell double layering (rather than cheaper, dry rot prone, water absorbing leather) reinforcements on cuffs, pockets, etc. We avoid cheap, stressful foam that can embrittle at fireground temperatures. The Morning Pride label is your guarantee that the product is the best it could be. After equivalent field service lives, Morning Pride products consistently and dramatically outperform competitive products (just ask any of the many departments who've tried others and now insist only on Morning Pride).

**Factory Support & Service...**Our Customer Service Department features some of the most skilled individuals in the industry. We routinely assist (at no charge) our customers with specification preparation, competitive model number comparison, referrals to local Morning Pride distributors, technical performance details, reviews of certifying test results, exploration of new marketplace trends and assistance with sizing challenges. Additionally, Morning Pride is extremely proud of our record of after sales service. Call on us whenever we can help.

**Selection...**Morning Pride customers also benefit from unparalleled selection. We offer almost 200 models of protective clothing, each available in a variety of colors and with a variety of custom options. No other protective clothing manufacturer offers a line as wide and varied. Morning Pride offers everything from the most economical to the most technically sophisticated products.

**Delivery...** Inventory depth allows Morning Pride to fill most orders very quickly. A large inventory of raw goods also allows us to offer an EXPRESS delivery option on any custom-built protective clothing. There are no restrictions on size, colors, special options, etc. Any garment can be ordered on the Express Line, making quick delivery of custom-built clothing a Morning Pride exclusive. Similarly, our Custom Stock program offers 2 WEEK delivery on customized products.

**Multiple End User Contracts...** Many times, personal protective gear is available to departments without going to bid, no matter what the dollar value or the quantity. Throughout the country, Total Fire Group and its distributors often participate in what would be classified as Multiple End User Contracts. Generally, these types of contracts fall into the following categories:

1. **Statewide Contracts:** In some parts of the country the state government will arrange for bids for certain firefighters' PPE items. Often the bid will include a "Good, Better or Best" type of product selection, or a "discount from manufacturer's retail" allowing access to entire product lines. OH, MA, MS, NJ, and NY currently have full statewide contracts, while other states have only certain items available.
2. **Add-on Contracts:** In every state we have researched, there is a provision in the law that allows one political subdivision within the state, often including state agencies, to purchase off of any other political subdivision's legally awarded bids. Often our products' bid will include a discount from retail that allows the department who adds-on (commonly called "piggybacking") to select the brand and model that suits them best.
3. **General Services Administration (GSA) Municipal Use:** Although mostly a military/federal convenience, civilian departments may also qualify to purchase through the GSA system (if you are interested, we will research it for your FD).
4. **Military Customers:** Total Fire Group works with key and/or prime vendors to maintain full service GSA and Preferred Vendor programs for military customers.

Contact your Total Fire Group Regional Team for more information on the four items above or to discuss how we may assist your department in any other way.

**Firefighter Managed and Operated...** Total Fire Group is owned/managed by an active member of the fire service and a large percentage of our staff are firefighters/EMS/first responders. As a result, we have a special dedication to the total satisfaction of our customers. We feel that this dedication, which reflects itself in every phase of our operation, is the reason that we have risen to market dominance. Firefighters have always been best at taking care of firefighters and Total Fire Group is proud to continue that great tradition.



**Bill Grilliot**  
President, C.E.O



**Jack Reilly**  
VP Metro Accounts and  
FDNY Operations



**Barry Borkowski**  
VP Canadian  
Operations



**Jim Walter**  
VP Technical Marketing



**Bobby West**  
Field Customer Service  
and FDNY Operations



**Doug Sloan**  
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**Teri Hyre**  
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**Doug Topliffe**  
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**Marty Sargent**  
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Senior Regional Director



**Brian Blinn**  
South East U.S.  
Regional Director



**Dave Wiles**  
Director of Thermal  
Imaging



**Will Grilliot**  
Marketing Support and  
Special Projects

**State-of-the-Art Manufacturing Facility...**

Morning Pride clothing is manufactured in a state-of-the-art, automated, bar code controlled, air conditioned, handicapped accessible manufacturing facility. Our facility is always open for your inspection.

Phase I construction was completed in early 1993. Our Phase 2 expansion completed in June 2000 puts our total under roof area at 60,000+ square feet. As more and more stitching work went overseas due to low wage rates, Morning Pride's management recognized that only a world class investment in technology, making our facility's methods more efficient, would secure a stable future for our valued work force. An important part of the "Phase Two" construction was the installation of the largest fully automated garment production line in North America. Our technologically sophisticated staff did much of the programming and line design work themselves, and as a result, several process patents have been applied for.



The Morning Pride manufacturing plant is located in a seven year old City of Dayton and Montgomery County sponsored light industrial park within the county water supply protection district which allows no use or storage of hazardous materials. Conveniently located in an ideal spot for shipping throughout North America, the modern facility is located less than 10 miles from both the "Crossroads of America" (I-70 and I-75 interchange), and Dayton International Airport which is also the world headquarters of Emery Worldwide air cargo. Dayton has the 9th largest "90 minute market" access to the U.S. population by interstate highway.



**Offices...**Corporate offices and all customer service support for the fire market occurs from our Dayton facility, within feet of the actual production line. Inside marketing associates have on-line, real time instant access to production monitoring, stock inventory levels, individual department specification and accounting information. They also have alpha page and email interface with the outside regional director network. All marketing activity and information is coordinated through automated sales reporting and information systems that continuously update throughout the work day and that are accessible to all customer service staff instantaneously.



**The Cutting Room...**The automation continues with cut layout. In house orders are analyzed (with a consideration to required delivery) to determine the optimum mix within a cut to maximize the material utilization. Thousands of differing computer generated combinations are tried until the absolute optimum mix with the least waste is determined.



Morning Pride's "cut analysis programs" analyze in house orders to determine optimum cut mix for most efficient utilization of material.



At the completion of a cut analysis run, the best combination of cut items is determined and pre-programmed into the cutting control server as the cut mockup on the screen above suggests, even the smallest scrap of material is salvaged for some application.

The laser disk, vacuum handling, automated cutting tables perform cuts without any human intervention except to unload precisely cut and labeled parts destined for a specific garment.

Each cutting head is a self contained unit complete with sensing equipment to detect fabric flaws, the cutting disk and a marking unit to label pieces. It moves across the cloth almost too quickly to follow visually and cuts with exacting precision.

After cutting the work is "hung" on computer chip controlled hangers awaiting mounting on the automated production line. The hanger will continually update the production control system on the the location of the particular garment throughout its production cycle.



**The Stitching Production Line...**Automation for improved efficiency continues in the stitching process.

Hung work is mounted on the automated production line on a set schedule to insure promised ship dates are met. The full line is longer than a football field and is a double loop with each side of the loop serving at least two stations on each side. The line is designed so the operators have very little, if any, lifting or moving of product to do. The work comes to them and the line supports the work's weight. All stitching stations are also ergonomically designed, handicapped accessible and maintenance staff customizes station layout for individual stitcher comfort.



A supervisor at the production control station manages garment flow and monitors line balance. The production control program automatically sends individual garments to required work stations in the order necessary and alerts production control to any developing bottlenecks or line imbalances for corrective action. Operators use key pads at their machines to request assistance or ask questions. Team leaders go to the operator to provide any assistance needed. On line inspectors also rotate to provide operator assistance.



Operators can "send" product to any line location if they detect a QC problem without leaving their work station.

**The Shipping Room...**After stitching and final inspection is complete, garments move with their barcode controlled paperwork to the shipping room.

The shipping department is fully air conditioned, well lit and ample in size. Shipping is on line to the production control order control system. Shipping info is also auto downloaded into various carrier's systems (UPS, Roadway, DHL, FedEx, etc.) and auto downloaded into our invoicing/accounting department.

After initial packing, a shipping supervisor double checks against the barcode paperwork to insure accurate packaging has occurred. Portable barcode scanning readers for large orders and a land line for the information is also available at the shipping computer desk.

Clothing shipping is done in an area immediately adjacent to the PRO Warrington distribution center. Clothing shippers often pull boots to pack with clothing for specific individuals. Shipping can also directly access the Rock Island distribution facility for Ranger and Servus to coordinate the receipt of those brand boots with Morning Pride clothing as well (or have those boots sent into the Dayton facility for actual combined packing).

**Compliance to All Requirements...**The Morning Pride facility and labor practices all conform to national and state laws governing worker safety, employment practices, EEOC, current and envisioned "anti-sweatshop" legislation and Ohio/federal worker's compensation laws. In addition, the entire facility and work stations were designed from the ground up to meet and exceed all "Americans with Disabilities Act" provisions for accessibility.



# Morning Pride Advanced Protective Tracking "APT" System proven superior to other programs...



Morning Pride Clothing, as well as most other Total Fire Group products, are now automatically barcoded during manufacturing to allow use of the Advanced Protective Tracking ("APT") program.

**"APT" – Designed to simplify the new NFPA Std. #1851 reporting and tracking requirements**

**"APT" programming is essentially free to our customers...**

The "APT" program is essentially a free service (please see the price list for details) offered to Total Fire Group customers allowing them to effectively track their PPE inventory (or any other asset). Unlike competitive tracking programs, it is not a profit center for TFG. Departments that were quoted over \$70,000 to establish competitive tracking systems within their department have instead implemented "APT" for several hundred dollars in ancillary expenses. Even more importantly, almost every department that has compared the various tracking systems now on the market has STRONGLY preferred the flexibility and firefighter friendliness of the "APT" system (even ignoring the cost advantage).

This hugely expensive program is offered for disk out-of-pocket cost to our customers because it highlights, inarguably, comparative brand product life cycles and hence comparative life cycle cost effectiveness of these brands.

The high quality levels, superior construction and design excellence of our products have always allowed us to offer better life cycle value. The precise record-keeping allowed by the "APT" program allows us to prove those advantages. We are eager to see all fire departments track effectively the life cycle comparative costs of our products versus the competition, hence our decision to provide this program at essentially no out-of-pocket cost to our customers.

**Why are departments turning to asset management systems like "APT" now?**

There are a number of reasons that fire departments today are moving quickly to asset tracking systems:

#1-NFPA Std. #1851 issued in early 2001 imposes significant record-keeping responsibilities on fire departments. "APT" makes NFPA Std. #1851 compliance foolproof and almost effortless.

NFPA, in response to numerous recent studies showing that improperly cleaned and maintained PPE may be contributing to firefighter injuries and illnesses, issued NFPA Std. #1851 in early 2001 on the Selection, Care and Maintenance of structural firefighting equipment. This document requires departments to implement standardized routine, advanced and specialized procedures for inspections, cleanings and repairs. All repairs, cleanings and inspections must occur at specified intervals (usually at least once every six months) and those events must be

recorded in some type of tracking system (to insure they have indeed occurred). Specifically, NFPA Std. #1851 requires the following information be recorded for all PPE elements (i.e. each individual coat, pant, gloves, hoods, boots, and helmets):

1. Person to whom protective element is issued (or re-issued)
2. Date of issue(s)
3. Manufacturer
4. Model name, number or design
5. ID #, lot #, or serial number
6. Month and year of manufacture
7. Dates and findings of inspections
8. Dates cleaned or decontaminated
9. Reason for cleaning/decontamination
10. Who cleaned/decontaminated
11. Dates of repair
12. Who performed the repairs
13. Description of the repairs
14. The person authorizing serviceability

While keeping this detail of information would be prohibitively burdensome and expensive in a manual or self administered system, a properly designed asset tracking system like "APT" makes the process easy, convenient and reliable.

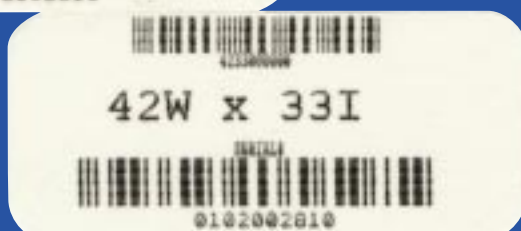
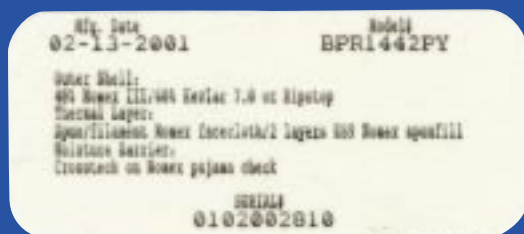
And, of course, with proper record-keeping, the proper care of PPE elements occur and the challenge to firefighter health and safety, which has been identified in improperly cleaned or maintained PPE, is minimized (so the goal of #1851 is certainly a worthwhile one).

#2-PPE is a huge investment for today's fire departments and must, legally, be accounted for properly. Many municipalities have implemented "mayoral decrees" or "executive orders" requiring barcoding and effective tracking systems.

"APT" is extremely flexible, with an easily accessible interactive database, that can be easily used to generate any municipally required reporting as well as the NFPA Std. #1851 reporting.

#3-We live in an increasingly litigious society. In the tragic event of an injury, the detailed life history of the PPE elements often become critical information.

Again because of "APT's" flexibility and easily accessible interactive database, the program can be custom queried to provide almost any life cycle information that is needed in a particular situation.



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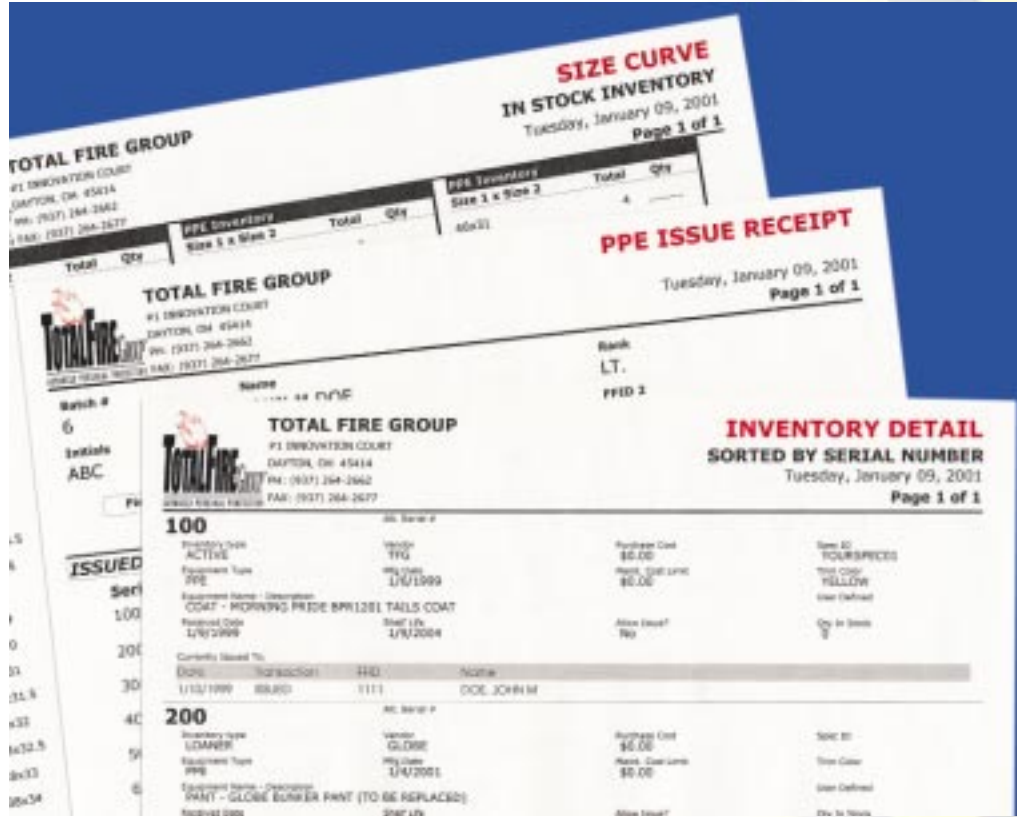


#4-With more comprehensive information, more informed PPE decisions can be made and justified.

To guide proper and informed department decisions, "APT" allows the easy, irrefutable and well presented accumulation of tremendous amounts of detailed data on any key PPE element issue. For instance, during the budget process, "APT" could be queried to determine how many garments are older than 5 years of age to approximate budget required replacement funding. As another example, if the department is considering adding a particular or different reinforcement to some PPE element, "APT" could be queried to determine repair costs in that particular garment area over the last year or two (to help determine if the change was needed or justifiable).

**Why is "APT" better than the other tracking programs on the market today?**

- We have already established that "APT" is not a profit center for TFG, instead it is offered essentially free of charge to allow departments to isolate FOR THEMSELVES the durability and life cycle cost advantages of the Morning Pride product lines.
- Since "APT" is not a profit center for us, there are no hidden programming keys which departments must buy to enable them to customize the program for their needs. The other leading fire service tracking program is full of such keys, which effectively means that all new report generation or refinement comes with a hefty fee to pay for vendor supplied programming. "APT" is Microsoft Access based and is completely open to fire department programming (many, if not most, departments have individuals with Access background or can easily arrange courses. TFG will also help familiarize department personnel with easy programming changes).
- "APT" programming support is also available through Total Fire Group at extremely nominal, if any, charges. Programming support is provided no charge on the basic (i.e. non-customized) "APT" start up for all Total Fire Group customers allowing NFPA Std. #1851 compliance. Our programmers can access your equipment via "PC Anywhere" or can talk you through the process. For more advanced program customizations, our programmers can help at their lower than market cost, out-of-pocket hourly fee (see our price list for details). Even the more advanced customization charges are often



A variety of customized reports are available through "APT."

waived when larger ticket per item Total Fire Group products are used by the department. In contrast, every support service on the major competitive tracking program is PER FEE (and the fees are large and add up quickly).

- "APT" utilizes the Institute of Industrial Cleaners' recommended Interleaved 2 of 5 barcode symbology, while the major competitive tracking program on the market utilizes a far more problematical 2 dimensional barcode symbology. The 2 dimensional barcode systems were developed primarily for clean environments where database memory is not immediately available (i.e. personnel accountability programs initially). The 2 of 5 system is preferred by essentially all the major industrial cleaners because it offers the following strong advantages:
  - The 2 of 5 Interleaved barcode is exceptionally readable. This is important when barcoding on textiles that do not offer the smooth contrast background of paper. All "APT" barcodes are done with Nomex® fabric backing for uncompromised thermal and flame resistant protection. **The major competitive tracking system on the fire market actually uses flammable paper for its barcode background** since the 2 dimensional barcode it utilizes does not read unless it is placed on a

smooth background like paper.

- Since the "APT" system allows the use of textile barcode backgrounds, our barcode labels are completely breathable to reduce stress. **In contrast, the 2 dimensional barcodes used in the major competitive tracking program must be printed on stressfully non-breathable paper.**
- The 2 of 5 Interleaved symbology is functional even with heavy soiling. This, of course, is a key advantage for fire service protective equipment that is often heavily soiled on the fire ground. The problem is so pressing **with the 2 dimensional barcoding, used in the major competitive system, the garments must be re-barcoded with every major event** (i.e. cleaning, repairs, inspection, etc.) so clean barcodes are being constantly re-applied (with the expense and hassle that implies) to assure continued readability. In contrast, the 2 of 5 Interleaved symbology utilized in "APT" is a one-time barcode application that remains readable throughout our garment's life.

Discussion of why "APT" is superior to other programs continues on the next page...

Why "APT" is superior to other programs discussion, continues from previous page...

- The 2 of 5 Interleaved symbology can be read with the most cost effective and durable scanners on the market. Your local Staples or Office Depot has these scanners in stock. In contrast, **the 2 dimensional barcode systems, utilized in the major competitive system, require far more fragile scanners that are typically three times as expensive and far less purchase accessible.**
- Since the industrial cleaners also utilize the "APT" system's Interleaved 2 of 5 symbology, "APT" and the industrial cleaners' systems interface seamlessly. **In contrast, the 2 dimensional barcodes used in the major competitive tracking systems are non-readable to their systems. The industrial cleaners must actually ignore the competitive 2 dimensional barcodes and rebarcode (at the expense and time implied) to interface with their systems.** All the fire service cleaners we are currently aware of are presently qualified and utilizing "APT."
- The "APT" program uses a completely interactive and flexible database that allows almost unlimited custom tuning for reports and queries. The program will respond to multi-level discriminators (e.g. number of members in Battalion 46, with garments older than 5 years, with repair cost exceeding some dollar figure in the last year). This data manipulation allows exceptionally customizable reporting with the minimum of actual programming time. **In contrast, the major competitive program requires extensive programming, using the hidden keys discussed previously, for anything but the most basic reporting or queries.**

## The Levels of "APT"

There are basically four levels of usage for the "APT" Barcoding system. A department can begin at one level and eventually progress upward to another level of "APT," since each ensuing level includes and builds upon the previous levels:

**Level #1 Tracking** – Visual use of the permanent, human readable sizing and serial numbering.

**Level #2 Tracking** – Level #1 tracking plus "APT" program used on new PPE product (that comes from factory with "APT" barcode installed).

**Level #3 Tracking** – Level #2 tracking plus barcode retrofit capabilities for existing department stock (so that existing stock can be tracked in the same database as the new stock arriving barcoded).

**Level #4 Tracking** – Level #3 tracking plus programming to allow "hooks" into other existing commercial asset management programs such as those designed specifically for personnel management or rolling stock.

Each of the levels of APT is discussed in more detail in the paragraphs that follow.

### Level #1 Tracking

**Visual use of the permanent, human readable sizing and serial numbering**

The standard barcode label will allow much easier human read of garment sizes. It will also allow auto read and list print out with over-the-counter barcode readers and simple barcode list programs available through any good office supply store (with this approach, only the bar-coded product is purchased from Morning Pride).

### Level #2 Tracking

**Level #1 tracking plus "APT" program used on new PPE product (that comes from factory with "APT" barcode installed)**

For departments wishing to manage a new (factory barcoded) stock of protective product, we offer the comprehensive Total Fire Group tracking program.

### How does "APT" work?

This program is provided as a CD disk with complete documentation on disk. Specifications are available to allow automated import of personnel information for the start up base or as new hires or transfers are made (if you can provide this personnel data in appropriate form, we will even input it for you. Contact your Total Fire Group Inside Marketing Associate for further info. The Total Fire Group Inside Marketing Associate for your area is listed in the Total Fire Group Reference Guide). Once the personnel data is auto input, the member's file is accessed and a barcode reader scan of the new product "assigns" it to them. The reader scan insures only completely accurate product serial numbering and sizing is recorded in the member's file (as opposed to human input where errors can and do occur). At every future "event" in the product's life (cleaning, repairs, condemnation, etc.), the event is picked from a screen menu and the barcode

label is barcode reader scanned to automatically and accurately update the history on that product. Unlike some other systems, you do NOT need to rebarcode label the garment after each event (the history is maintained on the interactive database not on the product itself).

### What kind of info will "APT" allow me to generate?

The tracking program allows for the creation of a completely interactive database to allow easy management information generation. These are the kinds of questions that "APT" can easily answer for you:

#### Which garments (and who they are assigned to) have not been cleaned within the last six months?

This inquiry would allow you (with a keystroke) to isolate any garments that have not been cleaned at least semi-annually as NFPA Std. #1500 Fire Department OSHA Program and NFPA Std. #1851 on cleaning and care requires.

#### Which garments (and who they are assigned to) are older than 5 (or 6 or 7 or whatever) years of age?

This would allow you (again with a keystroke) to estimate the cost of replacing garments of a certain age within your department.

#### What is the history of a particular garment (serial number, date of issue, members assigned to it, number/ date of repairs, number/date of cleanings, date retired, etc.)?

This type of information would be important in the event of an injury.

#### What is the total inventory of product assigned to a particular member?

This would insure that, at retirement or termination, all department resources are recovered.

#### What are the quantity of products condemned for wear in a given period?

This would allow you to determine the durability and stage in wear-life of your garments.

#### How are garments made in May of 1998 holding up?

This type of inquiry would be used if you note premature wear or some other problem on a particular garment (or a particular shipment, or new type of material, etc.) and would be used to both highlight problems, suggest causes and hence fixes.





Main Menu: Enjoy a user friendly interface accompanied by powerful PPE management tools.



Personnel Detail Screen: Easily view detailed personnel information and the inventory issued to them.



Inventory Detail Screen: Always have the answers about your PPE at your fingertips.

**Note: "APT" has been designed to interface seamlessly with the full management "Total PPE" type programs discussed in the Total Fire Group Reference Guide available from our Customer Service Department.**

## What is our total inventory of protective products?

This would allow you a full record for insurance and inventory purposes.

- Any of these reports can be generated department-wide or by sub department units (divisions, battalions, etc.) to show comparative performance.
- You can also quickly make lists of garments (for instance, garments being shipped for repair or held in a loaner pool etc.) by simply reading their barcode and asking for a list printout.
- There are extensive note fields to allow retention of unique information in each record.
- Department specific inventory curves can be created for sized items to assist in ordering replacement stock.

## What hardware do I need to use Level #2 "APT"?

- Pentium Computer (laptop recommended for portability)
- 32 MB RAM minimum, 64 MB recommended
- 50 MB Hard Drive space for base system
- Up to 500 MB Hard Drive space for data, depending on number of assets tracked
- Win 95, Win 98 or Win NT 4.0 or higher
- CD-ROM Drive
- Printer for Reports
- Modem and PC Anywhere recommended for remote support
- Department Internet Access

## Level #3 Tracking

**Level #2 tracking plus barcode retrofit capabilities for existing department stock (so that existing stock can be tracked in the same database as the new stock arriving barcoded).**

A retrofit kit is also available to create and apply barcode labels for existing (older, non barcoded at the factory) garments. This kit includes a printer, label printing software, labels, ribbons and equipment needed to apply the labels. Please call for a quote. Again we will only assess the out-of-pocket cost and departments will have the option of buying the products direct from their computer supply house or through us. Technical barcode retrofit

experts will be available for telephone consultation during normal business hours for departments considering this approach.

An alternative approach is to return product for factory barcode retrofit (please contact our Customer Service Department to schedule such services). A more expensive alternative is to request a quote to have a Morning Pride team travel to your city and barcode existing stock. Again we will only assess out-of-pocket cost but, because of the high cost of travelling, this approach is usually only cost effective for larger departments.

## Level #4 Tracking

**Level #3 tracking plus programming to allow "hooks" into other existing commercial asset management programs such as those designed specifically for personnel management or rolling stock.**

"APT" has been designed with "hooks" into existing commercial asset management programs for other fire department assets (trucks, tools, etc.) and to track those assets by remote locations. The software has user defined fields to allow for such fields as condition code, last inspection date, next inspection due date, etc. Also available are portable data terminals to conduct inventories of assets at remote locations and upload the information into the master database. Please call to describe your exact needs so we can provide a custom quote.

## "APT" Training and Support Resources Expanded

As predicted, "APT" has become the industry standard. We now offer these value added benefits:

- A comprehensive, easy to use, self implementing "User Guide."
- "APT" programmers have scheduled office hours for calls.
- "APT" programmers attend all major trade shows for consultation and training.
- A full-time auditor for larger in-department "APT" programs.
- Monthly "APT" colleges in Dayton.
- Regional "APT" colleges.
- Individualized, on-site department visits by "APT" programmers.
- Travel or specialized/customized programming support provided at cost.

For details contact the Regional Director or Inside Marketing Associate for your area.

# Only Morning Pride's Patented Technologies Can Deliver Bloodborne Pathogen Tested Performance "As Worn" to Meet the Intent of the OSHA Requirements Imposed on FDs.

## Morning Pride BPR Tested as Actually Worn

Meets OSHA intent for full body protection.

All Morning Pride BPR clothing offers bloodborne pathogen resistant interface capabilities (when worn with other BPR elements) as defined by NFPA #1971 shower test protocol, without taping or plastic bags (see picture on right) but as worn.



**As We Test**

ONLY Available with Morning Pride Garments

## Competitors' Garments are Only Tested as Could NOT be Worn

Not OSHA intent compliant for full body protection.



**As Our Competitors Test**

ONLY Level of Protection Our Competitors Offer

1. Products beginning with "BPR" (Bloodborne Pathogen Resistant), "USR", or "EMS" have been tested in "as actually worn" condition (please see "BPR" shower test photo above).

When used with other Morning Pride "BPR" products (i.e. any BPR glove, any BPR boot, and any BPR helmet) BPR garments provide head-to-toe bloodborne pathogen resistance protection (as defined by the NFPA referenced Material Viral Penetration Resistance Test and the Shower Test, including interface areas).

Since OSHA imposes a full body protective intent on employers (i.e. they are as concerned if an employee is infected at the coat to helmet interface or any other interface as if an infection occurred through the viral barrier), Morning Pride strongly recommends "BPR" products. Morning Pride has spent hundreds of thousands of dollars and several years developing comfortable interface capable technologies (so innovative they are now recognized by numerous patents and patents pending). Please see the Total Fire Group Reference Guide for a full discussion of the OSHA Bloodborne Pathogen requirements for FDs, EMS, etc.

2. Products beginning with "LTO" (Limb and Torso Only) or "TAC" do NOT offer interface certified protection. Morning Pride would prefer not to offer limited area protective products (without tested interface capabilities), but (at the time of catalog printing) this was the ONLY technology which our competitors could offer. Also, the TAC systems offers some important reversibility advantages that may offset this disadvantage sufficiently for firefighters deployed in uniquely hazardous environments.

LTO garments (again, the only product our competitors are offering) and TAC garments are tested with interface areas taped to the mannequin (please see "LTO" shower test photo above). Since firefighters do not wear their garments taped to their bodies, we feel the relevance of this type of testing is at best questionable.

Morning Pride recommends departments purchasing limb and torso only certified systems (ours or our competitors) perform their own whole body, non-taped (BPR recreative) testing with their particular boots, helmets and gloves to insure interface capabilities. However, departments are cautioned that products not designed to interface will almost certainly fail that full body testing.



# The Morning Pride Clothing Family...the Widest Choices in Certification Levels, Standards Compliance and Styling.

All Lines Multiple Patented U.S, CDN and Internationally

The garment models relate to operational uses (Structural, Proximity, Technical Rescue/USAR and EMS) and each operational NFPA Standard has different requirements that must be designed into the garment (to allow certification). Further, within some of the operational models, differing levels of bloodborne protective performance/intended application are offered (this is reflected in the garment prefix ID) and must be designed for. Therefore, there are some specific design differences among prefix ID families of garments to reflect these differing requirements and fine tune the garment to most efficiently meet those varying requirements. Our huge recent investment and self developed sophisticated programming in computerized cutting technologies have allowed us to leap decades ahead of our competitors in terms of the ability to cost effectively cut and produce differentiated products tailored to the specific needs of each operational application.

**In all we offer garments in four operational models, with seven prefix IDs, please see below:**

Model	Prefix ID
Structural NFPA #1971	BPR LTO TAC (LTO levels of Bloodborne Protection)
Proximity NFPA #1976	BPR LTO
Technical Rescue /USAR NFPA #1951 (Also EMS NFPA #1999 and Liquid Splash Haz-Mat NFPA #1992 certified)	USR (BPR levels of Bloodborne Protection)
EMS NFPA #1999	EMS (BPR levels of Bloodborne Protection)

Note: Please see page 8 for photos of the relevant BPR and LTO testing, discussed above.

**Structural BPR, Structural LTO, Proximity BPR and Proximity LTO garments** feature the traditional generous cut of Morning Pride bunker clothing. For the intended applications where sustained operations in high heat are anticipated, a generous cut is desirable for two reasons:

- #1 Compression can be bring surface heated gear closer to the skin which can increase heat transfer rates, a definite undesirable in these high heat applications. Garments cut less generously can effectively force such compression as the gear tightens against the body with movement.
- #2 Stress remains the leading cause of firefighter injury and death. Morning Pride's traditional

generous bunker cut is designed to facilitate cooling, stress reducing ventilation at the exactly appropriate time: when your SCBA is taken off (i.e. when high heat and active flame are not likely). This is accomplished because the generous cut can "bellow" away from the body when the SCBA is removed. The scoop styling at the coat hem actually channels cooling air up to the firefighter's body. The design concept is so effective that we provide sealing take up straps as a standard on our Tails coat, for those occasional assignments where SCBA is not worn and cooling ventilation is not desired (i.e. pump operations on a cold day).

**Structural TAC garments** incorporate a "liner"/alternate outer shell that is extremely thin, compared to the liners in the more traditional garments above. Therefore, this Prefix ID family of garments is a less generous cut than the structural and proximity garments discussed above (or it would fold, adding unnecessary bulk and mass). The thinner profile allowed by the thinner "liner" and other design features allow complete garment inversion to make parachute drops and covert advances more practical for military firefighters deployed in combat or potential combat environments. As shown on pages 11 and 12, the Structural TAC garments also feature all three layers sewn together for rapid inversion with layering intact (standard full tail and pants fly inspection port).

**USAR and EMS garments** also feature the slimmer profiling of the Structural TAC garments, since they are only two layer systems as a standard (winter liners are available and discussed on page 51). Additionally both the Technical Rescue/USAR and EMS applications require slim profiling for frequent confined space operations. Technical Rescue/USAR and EMS garments, like the Structural TAC garments, also feature a sewn in moisture barrier with a full tail and pant fly inspection port but for a different reason. The NFPA 1999 EMS standard (which both the Technical Rescue/USAR and EMS garments meet) has a rigorous 25 wash pre-conditioning test requirement. The moisture barrier must be sewn in to prevent pre-conditioning damage during washing (from shell abrasion).

In addition to the above differences, there are some variations in particular designs between the families. Some of them actually define the prefix-family and will be separately discussed:

- How do Structural BPR and LTO garments differ?** .....Page 10
- How do Structural TAC garments differ from either BPR or LTO?** .Pages 11 & 12
- Proximity garments discussion** ...Page 13
- Technical Rescue/USAR garments discussion** .....Page 14
- EMS garments discussion** .....Page 15

**Model #1**

**Structural Clothing**

**NFPA Standard #1971 Certified Structural Clothing**

**2 BPR Certification Levels and 3 Model Number Prefix IDs**

- NFPA Standard #1971 (2000 Edition Certified)
- Project Fires Certified
- CGSB Certified

**Prefix ID    Level of BPR Certification**

BPR	Tested as worn, to include interface area performance evaluation
LTO	Tested as our competitors do, with plastic bags taped over interface areas
TAC	Tested as our competitors do, with plastic bags taped over interface areas (the reversibility feature precludes some of the BPR design features)

Now also Wildland certifiable with Wildland/Structural Dual Certification Option Specified. Please see page 86.



- For NFPA Std. #1971, Project Fires & CGSB certification, garments must be ordered with appropriate trim. For further details, please see pages 63 and 64.
- The 2000 edition of #1971 requires bloodborne pathogen resistant testing.
- For all certifications, it is necessary to limit material choices and/or specify certain custom options (please see footnoted chart on page 48 for details).
- For both BPR and LTO Structural Firefighting Clothing, exterior hooks and dees with continuous interior hook and pile closure are standard (please see pages 62 - 64 for alternate closure options).
- TAC Structural Clothing is only available with Velcro and Zipper closures.

**How do BPR & LTO Garments Differ?**

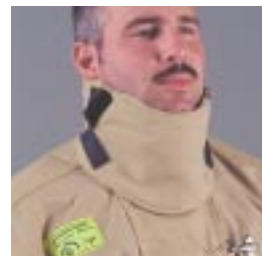
1. In chinstrap design...BPR garments feature a 12" long folding chinstrap with a comfort chinstrap insert of soft knit Nomex.
2. BPR garments feature, as standard, tabbed long wristlet (please see photo and discussion on page 87). This is not mandatory and may be deleted (if noted on order) without loss of interface capabilities. Morning Pride includes the tabbed long wristlet as BPR standard because we feel it helps insure adequate coat cuff to glove overlap in all body positions.
3. BPR garments feature, as standard, liner inspection ports (please see discussion and photos of the liner inspection system on page 72). This is not mandatory and may be deleted (if noted on order) without loss of interface capabilities. Morning Pride included the inspection port as BPR standard to allow inspection of the bloodborne pathogen shielding moisture barrier substrate easily and effectively.

Please see page 11 for a discussion of how the TAC Structural System differs from either the BPR or LTO systems.

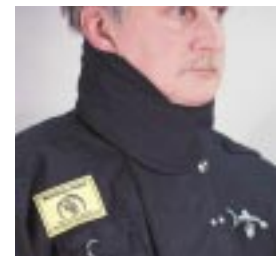
All our collars interface comfortably with SCBA facepiece. Try Morning Pride and competitive garments on with facepiece to see the difference.



BPR chinstrap folded down, for non tactical situations measures 3-3/4" high.



BPR chinstrap folded up, for tactical situations offers tested interface protection and measures 5" high.



LTO garments feature a non-folding 12" long by 4" high chinstrap.



# How Do Structural TAC Garments Differ from BPR or LTO Structural Garments?

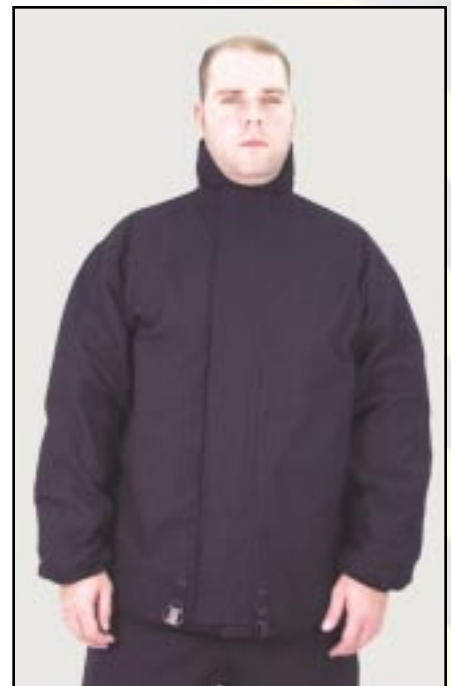
1. The biggest difference is that these TAC garments are designed to be completely reversible. They were designed in response to the requests of military firefighters who wished to be able to deploy in fully certified NFPA Standard #1971 certified structural gear. This NFPA standard requires appropriate reflective trim packages, which can be an obvious problem when operating in a hostile environment (or when parachuting into one). The TAC design allows those firefighters to choose between the all black outer shell without trim or the trimmed outer shell, when the situation becomes more controlled.
2. These TAC garments may also appeal to SWAT teams, covert rescue teams, etc. who need structural firefighting PPE protection but occasionally require stealth as well.
3. These garments may also appeal to fire departments with normal operational parameters because the TAC series garments are exceptionally thin and easy to move in, extremely insulative, and extremely breathable (please see price list for TPP and THL exact numbers for each primary outer shell available). However, for those departments, we suggest you consider ordering this xxNx 9.5 oz. Nomex liner in our BPR or LTO garments, so that you are not paying for reversibility styling that you do not require.
4. It is important to remember that when the reflective trim is not exposed, NFPA Standard #1971 certification does not apply.
5. Initially we are only offering the 9.5 oz. Black Nomex xxNx "thermal liner/reversible outer shell".
6. It is recommended that Black be chosen for the outer shell with reflective trim as well, if you plan to reverse the coat. If that is not done, when reversed the collar, tail, and cuff ends of a different color will "flash" with movement. It is possible to match just those body pieces to the interior "outer shell" black, but then the garment when not worn reversed looks unusual to say the least. If a different color outer shell than black is desired, please contact your regional marketing team in Dayton (our telephone operator or website administrator will refer you) to explore your options.



TAC worn with reflective trim visible, looks essentially identical to regular structural gear.



But, as the photo shows, instead of a traditional thermal liner the interior is a 9.5 oz. Nomex material.



When reversed (reflective trim to the inside) the garment is "low profile" and remains highly comfortable. In this configuration it also retains all NFPA Standard #1971 protective properties except required retro-reflective/fluorescence.



See the Morning Pride Helmet Catalog for TAC Trim/Helmet Cover option.

TAC discussion continued...

- 7.** If you intend to parachute in the coat, releasable straps to secure the tail can be specified.



This photo shows the tails with retaining straps engaged.



This photo shows the deployment release of the straps and their storage.

- 8.** The TAC garments feature slightly slimmer styling than BPR or LTO gear.
- 9.** The reversibility requirement means a separate chin strap will not be functional.



Therefore the extra coverage provided by the chinstrap in BPR/LTO gear has been incorporated into a shield extension.

- 10.** The reversibility requirement means the closure system must be functional in both orientations.



Therefore the zipper is dual tabbed and there are two mini sewn flaps on each side. The only closure available in the TAC series gear is Velcro and Zipper closure, for this reason.

- 11.** As noted on page 8, it is not currently possible to certify TAC model garments for BPR interface capabilities (as worn). Some of the design modifications that allow reversibility make this necessary (we will continue to investigate this issue, however, and will let you know of any new developments). For instance the inner and outer shell are sewn together with a standalone knit cuff at the coat sleeve end.



Photo shows the sleeve ending standalone knit wristlet, which can swivel for functionality whichever layer is being used as the outer most shell. As shown, the standard TAC wristlet is black (unlike the wristlets in our other families of garments which are creamy natural in color).

- 12.** Tail area opens via Velcro (i.e. our Liner Inspection Port) to allow monitoring of moisture barrier. If non-tailed styling is requested, an opening of the same size will be provided.



- 13.** So that suspender buttons do not rub when the system is reversed, tabs for snap attachment suspenders are standard.



- 14.** Replaceable pockets (that can be moved from side to side) can also be custom engineered.
- 15.** Winter Liners are not available as this would complicate reversibility.



## **Proximity Clothing**

### **NFPA Standard #1976 Certified Proximity Clothing**

#### **2 BPR Certification Levels and 2 Model Number Prefix IDs**

- NFPA Standard #1976, 2000 Edition Certified

**Note:** On Jan. 12, 1989, Fed-OSHA issued an opinion letter that "firefighters in refineries and petrochemical plants should wear protective clothing as specified in NFPA #1976" (i.e. not structural clothing). However, a recent TIA to NFPA #1500 does allow the incident commander in any tactical scenario some latitude.

#### **Prefix ID    Level of BPR Certification**

BPR	Tested as worn, to include interface area performance evaluation (please see testing photo on page 8)
LTO	Tested as our competitors do, with plastic bags taped over interface areas

*For Proximity Firefighting Clothing, exterior hooks and dees with continuous interior hook and pile closure are standard (please see page 63 & 64 for alternate closure options).*



- Patterning is identical to BPR and LTO Structural Clothing
- Proximity and Structural BPR and LTO garments have the same differences (please see page 10).
- SCBA Shrouds are also available, please see page 88 for further details.
- The 2000 edition of #1976 requires bloodborne pathogen resistance testing.
- The more narrow width of aluminized materials (required to meet higher 1976 radiant reflective requirements) may mean your proximity garment may have a few more seams than a structural garment of the same size.
- NFPA #1976 follows the NFPA #1971 Standard EXCEPT as relates to a requirement that, in effect, imposes the need for an aluminized outer shell (radiant reflective test of outer shell).
- NFPA #1976 requires no non-reflective materials including, but not limited to trim, lettering patches, name or number stencils, emblems, paints or other marking mediums may be affixed to the outer shell. The only exception is cuff reinforcements and that is limited to 1" over the reflective surface. Our standard will be 7.5 oz. PBI bronze cuffs (coats and pants).
- NFPA #1976 allows the collar face be non-aluminized material (7.5 oz. PBI will be Morning Pride standard) for comfort reasons.



**Model #3**

**NEW...Detachable Moisture Barrier Option Available**

**Technical Rescue/USAR Clothing**

**NFPA Standard #1951 Certified Urban Search and Rescue ("USR")/Technical Rescue Clothing**

Also Certified to **Standard #1999 (EMS) Certified Clothing**

Also Certified to **NFPA Standard #1992 (Haz-Mat Liquid Splash Protection) Clothing**

**All the Tri-certified garments in this product line are BPR level products**

**Prefix ID    Level of BPR Certification**

USR            Tested as worn, to include interface area performance evaluation

- NFPA Std. #1951 (Urban Search and Rescue "USR") 2001 Edition Certified
- NFPA Std. #1999 (EMS) 2003 Edition Certified
- NFPA Std. #1992 (Liquid Splash Protection) 2000 Edition Certified
- For NFPA Std. #1951 certification you must specify both elbow and knee reinforcements (pages 67-69) and appropriate trim packages (page 52-55)

See our new Technical Rescue/USAR Helmets in the MP Helmet Catalog

**Tri-Certified as a Standard**

- Technical Rescue/USAR
- EMS
- Liquid Splash

See our new Technical Rescue/USAR Gloves in the Morning Pride Catalog

See our new Technical Rescue/USAR Boots in the PRO, Ranger and Servus Catalogs



- Windbreaker weight and ease of movement with SERIOUS protection for essentially all non-fire runs.
- The effective use of this tri-certified gear will do much to reduce the stress load on the modern firefighter (excluding the WTC tragedy, stress kills more firefighters annually than all other factors COMBINED).
- The body stores stress. In contemporary North America, over 70% of fire service runs are non fire calls (EMS, rescues, extrications, confined space work, hazardous spills, etc). Yet, firefighters respond in their necessarily heavy bulky bunker gear which causes unnecessary stress that is banked in the body, to be built upon when the next fire run occurs and the heavier, more insulative gear NEEDS to be worn.
- This tri-certified Technical Rescue/USAR product is the perfect alternative for ALL these non fire runs. It is lighter, more mobile and multi-purpose. It actually offers better protection in key ways for these non fire runs, for instance more severe bloodborne pathogen testing pre-conditioning. It is also far more breathable than bunker gear for stress reduction and saves wear on the more expensive bunker gear.
- Technical Rescue/USAR garments feature tabbed long wristlets (Patented) and sealing stirrups (Pat. Pending) to seal the moisture barrier against the leg and arm and prevent debris movement up the leg/arm.
- Combined with a state of the art bunker clothing package for fire runs ONLY, this gear offers the modern firefighter the RIGHT gear for each functional area (fire and non fire).
- Operational requirements preclude the use of suspender buttons, so rig friendly suspender snap button configuration is standard (please see photo on page 56).
- Similarly, non-sparking velcro tabs and high temperature nylon take-up straps are utilized rather than the metal products utilized in other prefix ID families of garments.
- This gear is unbelievably light and flexible.



Technical Rescue/USAR gear features an adjustable, tabbed hook and pile coat cuff closure/tightening system and stirrup cuffs.





**Model #4**

**NEW...Detachable Moisture Barrier Option Available**

## Emergency Medical Services (EMS) Clothing

### NFPA Standard #1999 Certified EMS Clothing

All the NFPA 1999 certified garments in this product line are BPR level products

#### Prefix ID    Level of BPR Certification

EMS    Tested as worn, to include interface area performance evaluation (page 8 bottom)

- NFPA Std. #1999 (2003 Edition Certified)

See our new EMS Helmet in the MP Helmet Catalog



EMS gear features adjustable shirt style cuffing and hood attach strip

#### Non-FR Colors

Royal Blue    Navy Blue    Bright Lime    Bright Orange

See Chart on Page 49 for FR EMS Colors

## For Both Technical Rescue/USAR and EMS Models

- Both models also feature two layer (Shell/Liner) common sense design. This allows the shell to take the punishment of daily use but protects the pathogen/moisture barrier unlike single layer tri-laminate designs. Tears in our shell do not compromise integrity of bloodborne protection and can be repaired locally. The two layer system has been widely preferred in the field and allows on-site customization (patches, rank upgrades, etc.).
- Both models feature a zipper and velcro closure to allow tailored, integrated collar design.
- Both models feature a liner inspection port opening at the tail and pants fly (and a sewn-in moisture barrier).
- Technical Rescue/USAR and EMS garments are a standard two layer product – outer shell and moisture barrier (no thermal liner). Fleece vested liners are available but can only be attached via a zipper (Structural BPR, Structural LTO, Proximity BPR and Proximity LTO winter liners attach via snap buttons). Non-zipper alternative attachment methods can abuse the moisture barrier during the grueling, EMS Standard #1999 25 cycle wash preconditioning (both the Technical Rescue/USAR and EMS garment families meet the EMS standard). Many first responders will utilize sweaters, heavy slacks, thermal underwear, etc. rather than winter liners so we did not standardize the expense of a 1/2 zipper for winter liner attachment on all Technical Rescue/USAR and EMS garments. If you feel you may want a winter liner in the future but are not ordering one when you order your Technical Rescue/USAR or EMS garment new, we strongly suggest you order a zipper winter liner adaption strip in your new garment (to allow easy zip in of a potential future liner, as it is VERY expensive to add a zipper later after the coat is made). If you order a winter liner when ordering the new garment, the zipper to accommodate the winter liner's use will of course be provided (and is included in the Winter Liner in a new coat pricing). Please see page 51 for further winter liner details.



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**Contact Us**

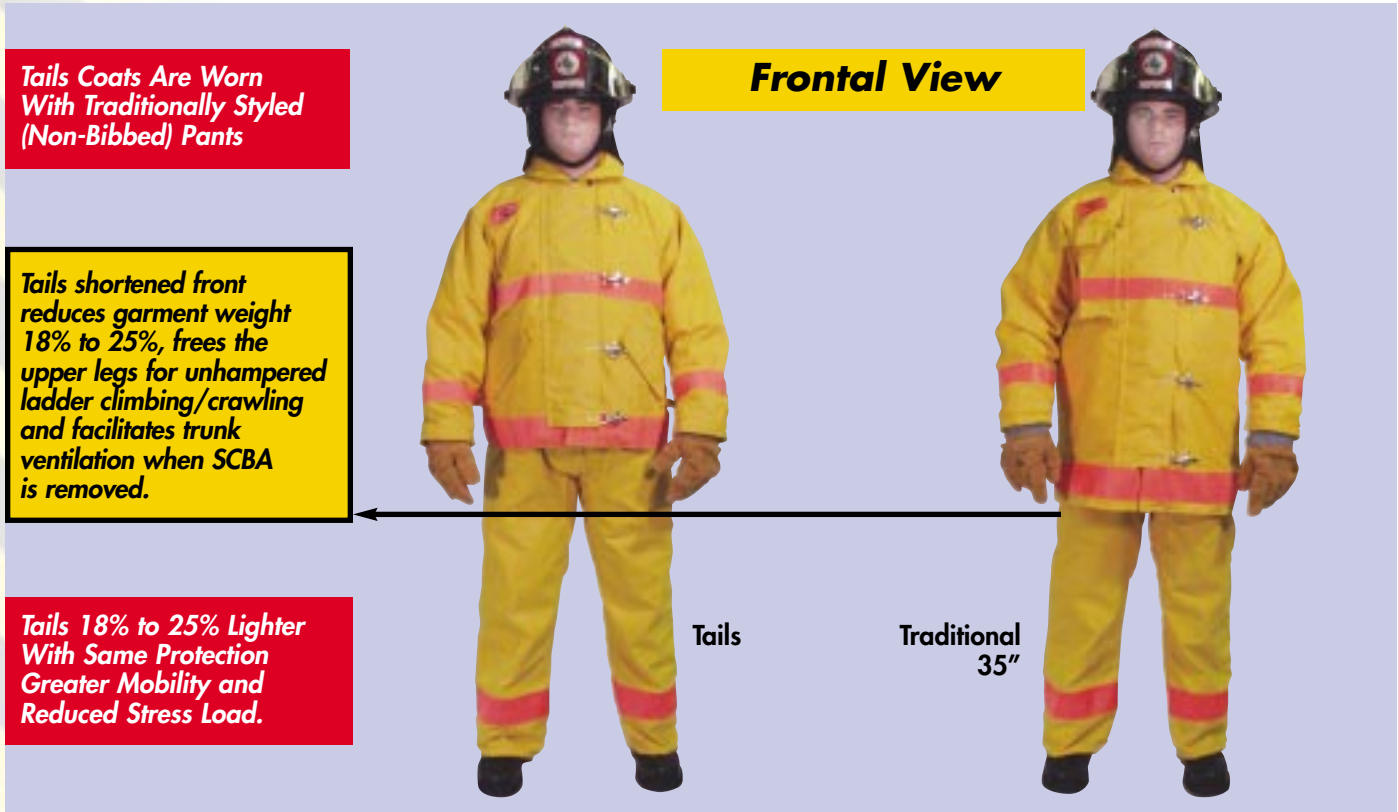
## Summarizing Standard Models, Prefix IDs, Designs and Constructioning

MODELS:	Structural	Structural	Structural	Proximity	Proximity	Technical Rescue/USAR	EMS	COMMENTS
Prefix ID	BPR	LTO	TAC	BPR	LTO	USR	EMS	
<b>FEATURES:</b>								
Certification	Structural – NFPA #1971 CGSB Project FIRES Option for Wildland – NFPA #1977 Dual Cert	Structural – NFPA #1971 CGSB Project FIRES Option for Wildland – NFPA #1977 Dual Cert	Structural – NFPA #1971 CGSB Project FIRES	Proximity – NFPA #1976	Proximity – NFPA #1976	USAR – NFPA #1951 EMS – NFPA #1999 Liquid Splash NFPA – #1992	EMS – NFPA #1999	
Bloodborne Pathogen Interface Areas Tested	Yes	No	No	Yes	No	Yes	Yes	
Reflective Trim	Required w/ fluorescence (specify on order)	Required w/ fluorescence (specify on order)	Required w/ fluorescence (specify on order)	Trim not allowed	Trim not allowed	Required w/ fluorescence (specify on order)	Optional (so any color if desired)	See pages 52 to 55 for further detail on trim requirements
Elbow & Knee Reinforcement	Optional	Optional	Optional	Optional	Optional	Required (specify on order)	Optional	
Styling/Cut	Traditional Bunker	Traditional Bunker	Slim Line	Traditional Bunker	Traditional Bunker	Slim line 2-layer systems	Slim Line 2-layer systems	Slimmer Styling for lower thickness
Hardware (suspender buttons, snaps, zippers)	Metal	Metal	Metal	Metal	Metal	None, Velcro tabs	Metal	USAR allows metal, but users have advised they strongly prefer non-sparking hardware
Stirrups on Moisture Barrier at Pants Cuff	No	No	No	No	No	Yes (normal cuffs can be specified at N/C if preferred)	No	Stirrups provided standard on USAR gear to prevent debris, dust and dirt movement up leg (normal leg cuffing available at no charge if you prefer moisture barrier to ride outside boots, i.e. No Seal)
Suspender Attachments	Suspender Buttons	Suspender Buttons	Loops for snap attach suspenders	Suspender Buttons	Suspender Buttons	Loops for snap attach suspenders	Suspender Buttons	TAC garment cannot include suspender buttons since they will rub on the firefighter's body when the system is reversed & USAR garments do not feature metal to address sparking concerns expressed by users.
Waterproof Wristlet	Yes	Yes	No	Yes	Yes	No	No	TAC gear MUST be reversible so waterproof wristlets are not feasible, USAR and EMS have cinch cuffs to accomplish the same goal.
Tabbed Wristlet	Yes	Optional	Optional	Yes	Optional	Yes	No	
Crotch Seams	No	No	Yes	No	No	Yes	Yes	Crotch seaming is only done in lightweight garments where it does not represent a problem.
Standard Composite Layers	3	3	3	3	3	2	2	
Inner Layer Attachment	Snaps	Snaps	Sewn in	Snaps	Snaps	Sewn-in (New hook & plie removable option available)	Sewn-in (New hook & plie removable option available)	Snaps systems can be ordered sewn in at neck line & waist at no extra charge. Sewn-in systems are normally required to meet certification or functionality requirements (hardware on detachable liners cause failure due to 25 washes pre-conditioning in EMS testing protocols & TAC garments must have sewn-in liners to assure proper orientation when reversed), so snaps cannot be subbed.
Chinstraps	Separate Folding	Separate	Built into Shields	Separate Folding	Separate	Built into Shield	Built into Shield	
Cuffs	Hemmed	Hemmed	Reversible	PBI Cuffs	PBI Cuffs	Shirt Style w/Velcro Adjustable tab	Elastic w/Velcro Adjustable tab	
Wristlet Color	Creamy Natural (may option Black)	Creamy Natural (may option Black)	Black (White would be too visible for stealth, so not available)	Creamy Natural (may option Black)	Creamy Natural (may option Black)	None	None	
Winter Liner	Snaps	Snaps	Not Available	Snaps	Snaps	Zipper	Zipper	Zipper systems are very expensive to retrofit into existing garments, so we suggest you specify zipper winter liner adaption strip for zippered systems if a winter liner may ever be desired in the future (and is not being ordered with the garment).
Inspection Port	Standard at right front coat hem and on fly	Optional	Standard at tail and on fly	Standard at right front on coat hem and on fly	Optional	Standard at tail and on fly	Standard at tail and on fly	
Standard Closures-Coat	Hooks/Ds exterior with continuous Hook & Pile interior (optional closures available)	Hooks/Ds exterior with continuous Hook & Pile interior (optional closures available)	Velcro exterior (2 shields for reversibility) & 2 way interior zipper (no optional closures)	Hooks/Ds exterior with continuous Hook & Pile interior (optional closures available)	Hooks/Ds exterior with continuous hook & pile interior (optional closures available)	Velcro exterior & high temperature nylon interior zipper (no optional closures)	Velcro & Zipper (no optional closures)	Optional closures available on Structural BPR, Structural LTO, Proximity BPR, and Proximity LTO, see pages 62-64
Standard Closures-Pants	Hooks/Ds exterior with Hook & Pile interior	Hooks/Ds exterior with Hook & Pile interior	Velcro exterior (2 shields for reversibility) & 2 way interior zipper (no optional closures)	Hooks/Ds exterior with Hook & Pile interior	Hooks/Ds exterior with Hook & Pile interior	Velcro exterior & high temperature nylon interior zipper (no optional closures)	Velcro & Zipper (no optional closures)	Optional closures available on Structural BPR, Structural LTO, Proximity BPR, and Proximity LTO, see pages 62-64
Standard Hood Attach Strip	No	No	No	No	No	No	Yes	See photos on bottom of page 67



# Tails and Traditional Styling Compared

Both Available in All Garment Prefix #s



## Tailed Styling Explained

**Patented U.S., Canada and Internationally (Patent Pending also)**

Tails are an anti-stress clothing system that reduces garment weight, allows ventilation and improves maneuverability while maintaining maximum protection levels. The Tails concept is based on the recognition that the structure of the human backbone guarantees 95% of all mid-body flex occurs to the front (causing REAR body extension ONLY). Since it is body extension that can cause a protective gap between coats and pants in certain body positions, this implies coats can be worn much shorter in front than in the rear and still assure no protective gap (i.e. we can't bend backwards to the degree we can bend forward so we don't extend in the front to the degree we extend in the back). Shortening the non-functional, same length, coat front reduces garment weight between 18%-25% (same materials, same options, etc.), improves ventilation, allows unrestricted upper leg mobility, and hence fights firefighters' stress (the leading cause of firefighter fatalities).

### NOTES:


- 1) For effective protection in all body positions, the Tails coat composite must be ordered to fall 9" below the waist in the front and 15" in the rear. And as NFPA 1500 requires, bunker pants (of Traditional Design) must be worn at all times. Additionally, as good fireground practice dictates, breathing apparatus should be worn whenever a firefighter might encounter flashovers or extremely high ambient heat conditions.
- 2) Because of the short length of a Tails coat, pockets are not provided as a standard feature on this style coat (they can, however, be ordered as a custom option). Therefore, it is recommended that pants to be worn with Tails coats be ordered or retrofitted with bellows pockets. Moving pockets to the pants lowers the center of gravity making the firefighter more stable during movement, unburdens the collarbone already overburdened with the weight of the air packs and allows unrestricted access to pocket contents even when breathing apparatus is donned (coat pockets are sealed by the SCBA waist strap).
- 3) Tails coats will be provided with an additional strip of 2" trim on the bottom of the "Tail" to prevent "Tail roll". There will be no charge for this additional trim and it will match the trim package ordered in material and color. If no trim has been ordered, a material reinforcement will be provided.
- 4) Tails coats will be provided with two postman slide take up straps. These straps are intended for those fairly rare occasions when thermal sealing is required but breathing apparatus will not be worn (i.e. pump operation on a cold winter day). These straps are **not** normally engaged since doing so prevents coat "bellowing" which allows body cooling ventilation to occur when breathing apparatus is removed.

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## Please Review Carefully

Your choice in design is at least as important as your choice in materials!



**Rear View**

*Beware of false "tails" recreating the look (outer shell only) but not the patented functionality of Morning Pride tails (all layers). False "tails" require stressful high waisted pants and do not feature the synergistic benefits of Morning Pride's other 100 plus patents. If it's not Morning Pride tails, it is NOT THE TAILS!*

Tails                      Traditional 35"

Over 500,000 Tails sets are in daily service.

Tails are the only short coat systems that are certifiable to the IAFF's Project Fires document.

In the back where maximal mid-body extension occurs during motion and where 35" coat length is required to avoid a protective gap with waist high pants, tails are 35" in length.

Tails are sole source specified in hundreds of major cities.

## Traditional Styling Explained

Traditional design concept relies on coat length (or pants overlap) to assure protection. Photo above illustrates a 35" length traditionally styled coat. This length (35") hits the average man mid thigh; as such it is only ordered when bunker pants are worn on ALL responses. The standard traditional styled length (40") hits a man of average height immediately at the knee.

### NOTES:

- 1) While some firefighters in the past have relied on a long bunker coat (approximately 40 inches long) and high boots, the turnout coat is designed to protect basically the upper part of the human body (except head & hands). As manufacturers of protective clothing, we agree strongly with NFPA #1500 and NFPA #1971 requiring bunker pants "be provided" and their "use required" on ALL structural fire calls.
- 2) Since use of 40" coats (without bunker pants) offers no lower torso protection and is now prohibited by NFPA Standards, and since the full length front of a 35" coat serves no functional purpose, we respectfully request customers closely examine the Tails concept before ordering traditional styling. While we will be glad to manufacture traditionally styled garments, we honestly believe they offer only disadvantages in comparison to the Tails styling. Please contact our Customer Service Department for further discussion or referral to departments who can share their excellent Tails field results.

### Note on Bibs, High Waisted Pants, Pants With Raised Backs, Etc.; (i.e. Upside Down Tails)

Morning Pride was one of the first manufacturers to test the third style of bunker clothing; short coat and bib (i.e. extended height) pants. However, both laboratory and field testing soon established the design concept as inherently stressful since it wraps the trunk (where thermal energy is generated) at all times and prevents body cooling ventilation. As stress is already the leading cause of firefighter death, we feel it would be irresponsible to continue to offer the short coat/bibbed systems. Our position on the stressful nature of the bibs has been confirmed by other independent field tests such as that conducted by Project Fires. The mobility and lightness of short coats is duplicated with the Tails system but without the necessity for stressful bibs. Our research indicates that modifying the bib (i.e. shortening it to high waisted pants, rear bib only, etc.) does NOT resolve the stress problem as the biggest part of the trunk (including the high blood flow, high heat exchange kidneys) remains wrapped. This means recent competitive attempts to move the Tails from its patent protected coat position to the pants is design non-functional (still stressfully wraps the kidneys).



## Why Do Morning Pride Garments...

- **Feel more comfortable than competitive products,**
- **Permit more motion than competitive products,**
- **Weigh less than competitive products,**
- **Ride up less than competitive products,**
- **Protect better than competitive products?**

The Kinetic Kut Coat/Tails Patent

The Full Range of Motion Pant Patent – Coat/Tails Patent

**If you don't spec Morning Pride advantages...you probably won't get them.**

Morning Pride builds a garment for maximal safety and comfort. This is not the least expensive way to build a garment. If you write open specs you allow, even encourage, cost cutting compromises. We reserve the right to bid open spec business with the same lower cost designs and construction as our competitors utilize (we must or we would not be competitive). Open spec garments do **NOT** feature our Morning Pride logo on the left chest (or the advantages discussed in this catalog section). Call our Customer Service Department for assistance in writing high quality Morning Pride specs (we'll help you make product choice decisions and then fax you a spec).

The other differences between the operational models/pre-fix ID families of garments are less significant between each other but extremely significant as compared to competitive product lines often designed and constructed to cut manufacturing costs and/or make manufacturing easy. In the next few pages, we discuss our Clothing Design Advantages and Clothing Construction Advantages. Many times, the separate operational models offer the same advantages over competitive operation model offerings (i.e. Better Span of Reach, Less Coat Rise with Overhead Reach, etc.) but with slightly differing construction. When that is the case, we will just show one operational model example to avoid repetitive redundancy. When there is a variance in advantages noted between the pre-fix ID families, we will try to note the difference.

In comparative field tests, Morning Pride is CONSISTENTLY preferred and departments often ask the questions above. Part of the answer lies in our unique, patented design features and part of the answer lies in our uncompromising quality/construction standards. A big part of the answer also lies in our KINETIC COAT (Patented) and FULL RANGE OF MOTION (Patented) PANTS patterning.

Working with an internationally known patterning expert, Mr. Karl Senser; we have translated our research in human stress dynamics, principles of ergonomics and firefighter vocational movement patterns into the most comfortable, least stressful protective clothing products in the market.

Our anti-stress patterning philosophy permeates every aspect of garment design. It is impossible to illustrate all the areas of improvement. However, a few test examples of obvious innovative differences follow. We think you'll agree the magnitude and variety of Morning Pride advantages are almost startling. We have tried to concentrate our discussion on tests you can recreate in the field, on tests that require little or no interpretation and on tests that address the really important issues of protection and freedom of motion. When you really compare the brands it becomes understandable why:

- Morning Pride almost always wins head on competitive field tests (we're simultaneously lighter and offer greater range of motion).
- Morning Pride can sometimes be underbid on open specifications (we take absolutely no shortcuts with your comfort and protection – there are a lot of cheaper; but not better value – ways to make protective clothing).

All Morning Pride garments are designed for maximum functionality, protection, comfort and durability. If there is a shortcut, even a non-detectable shortcut that compromises any of those goals: WE WILL NOT TAKE IT. In the next few pages, we will show you specific examples of such shortcuts that Morning Pride customers never have to worry about. Our brand has become synonymous with the very best in all these areas; we cannot risk our reputation (and will not even if that means we lose the sale at hand). Ultimately, first responders always recognize and specify the supplier who never compromises on their comfort or protection, so we have learned that any such losses are short lived.

## Span of Reach

Reach is the span of movement that garment permits. Extra reach costs the manufacturer money in extra material but less resisted motion means less stress for the firefighter in the field. It also means the sleeves do not pull up with motion, exposing the firefighter's body to allow potential burns. Finally, since the firefighter is not fighting his coat to move, it means a far more durable product (i.e. better life cycle cost effectiveness).

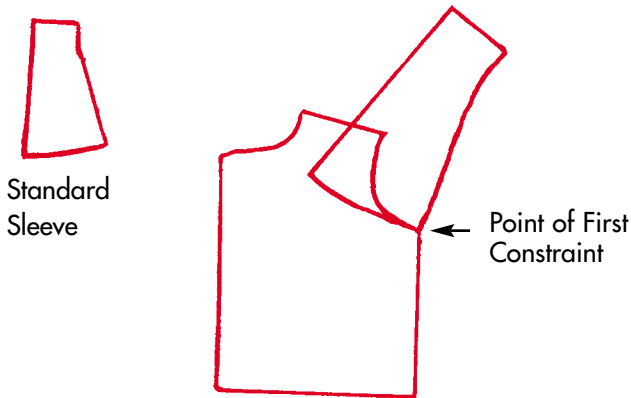
You can also recreate the comparison in the field (same size and operational model garments please) and you can specify reach requirements (as Morning Pride generated specs do).



Photo shows Morning Pride offers a phenomenal 8" more reach (14%) than a competitive structural LTO coat of the same size and sleeve length thanks to Kinetic Kut (patented).

# Coat Rise With Overhead Reach

## The Competitive Product...



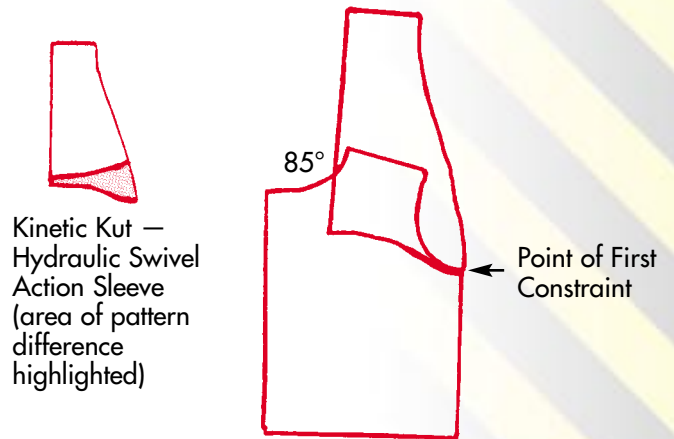
With Standard Sleeve Design, Upper Arm Motion Is Restricted Before It Completes Full Potential Motion

Because this competitive brand structural LTO coat features standard sleeve design, note the astounding 9 FULL INCHES OF RISE...



Competitor

## The Morning Pride Advantage...



With The Hydraulic Sleeve Design, Full Upper Arm Movement Is Allowed. This Means Less Stressful Resistance To Motion, Less Coat "Ride-Up", And Greatest Total Reach

In contrast, MORNING PRIDE'S KINETIC KUT COAT (Patented) allowed only 4 INCHES OF RISE or 229% BETTER PERFORMANCE!!!



Morning Pride

You can verify this Morning Pride rise advantage yourself with in-field comparisons (of same sized gear on one individual). Remember, the more a coat rides up the greater the chance for protective gap between coats and pants and the more the firefighter "carries" with each overhead motion. Morning Pride rise **at maximal extension** is, we believe, the industry lowest. Don't be fooled by competitive rise demos where the salesman holds his shoulders artificially immobile or only raises one arm: Do the tests for yourself and verify the strong Morning Pride advantage. You can specify rise requirements; Morning Pride generated specs (contact our Customer Service Department to obtain) include terms that address this issue. (Contact our Customer Service Department to obtain these high quality specs).

## System Weight

Comparing the same materials, sizing and options, Morning Pride gear offers significant weight reductions. We enjoy such a strong weight advantage, in spite of the extra material Morning Pride needs to provide the significantly better reach, rise, etc. figures discussed in the pages that follow. To confirm our approximately 15% weight advantage, the matched comparison gear is available through our Customer Service Department. When doing this comparison in the field, be sure the gear is a complete match (size, materials, options, level of certification, etc.). We have often caught competitors comparing fully featured, extra optioned Morning Pride gear with "stripped" gear of their own. On same optioned, same sized, same materials gear: our competitors simply can't compete.



Weight Comparison

Design Advantages discussion continues...



Design Advantages discussion continued...

## Wrist Exposure When Arms Are Raised

The wrists are one of the most frequently burned body areas. A well designed bunker coat will remain in place as the arms are raised.

Competitive Coat



The mark on the hand shows **5" competitive sleeve migration** at wrist when arms are raised.



Morning Pride Coat



But, the Kinetic Kut (Patented) design means **no wrist exposure with Morning Pride.**



## Waterproof Wristlets (Patented)

- **Standard on Structural Proximity BPR and LTO Models**
- **TAC, USR and EMS Models function similarly but with different constructioning as moisture barrier is sewn in on these models**

This system features double layer, 4" long Nomex® wristlets (as Std.) on thermal liner and on outer shell (for Structural and Proximity Models). This patented double protection wristlet system is the only continuous moisture barrier protection on the market. Our patent prevents competitors from offering a truly waterproof, waterwell.

With the competitive system when arms are raised, water can flow easily into the system through the wristlet. When arms are down, water moves through the outer shell, down the sleeve's moisture barrier and wicks back up and the open liner cuff. As the photograph shows, **water leakage at the arm of the competitive coat is almost bound to happen given their design; while Morning Pride offers a water resistant seal thanks to our Waterproof Wristlet patent.**

Remember, Outer Shell Is Not Waterproof  
Moisture Barrier is Waterproof

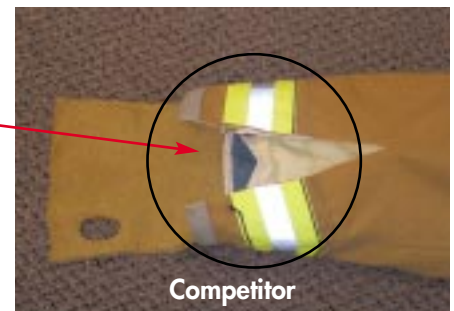


Morning Pride's (Patented) standard waterproof wristlet mounts directly to the moisture barrier for a **continuous liquid seal.**

Competitive waterwell is mounted to the non-waterproof outer shell on one end and the non-waterproof wristlet on the other end. This does not offer a continuous liquid seal.

**Note the open end of sleeve moisture barrier in circle.**

Remember, Outer Shell Is Not Waterproof  
Moisture Barrier is Waterproof



Competitive products also often feature large areas of heat sink capable neoprene at this close to the body area. In contrast, we use the far more capable but more costly to manufacture Aramid based systems at this critical body area. **Kevlar®** wristlets may be substituted at no extra charge (if noted on order); however, knit Kevlar has a tendency to lose its elasticity and become baggy over time (a condition that can be predicted when Kevlar is specified and hence not covered by our warranty). Over the hand wristlets may also be ordered as a custom option (please see page 87 for the various wristlet custom options available).

Again, you don't have to take our word. With the same size competitive and Morning Pride coat and a piece of masking tape, you can run the same test (and get the same results) in the field.

You can also specify wrist exposure design requirements. Morning Pride generated specs include terms that address this issue.

**On gear styled for USAR and similar operations, this issue is especially critical to ensure easy and protected mobility.**

While Morning Pride's Technical Rescue/USAR line features trim styling, sleeves that don't retract and a coat that does not ride up (see photo to the left). Some competitive designs show severe problems in those areas, as shown to the right. Also note the low crotch and bagginess of the pants which will dramatically impede mobility. The competitive design to the right looks like turnout gear with the thermal liners removed, not the from-the-ground-up, carefully engineered Technical Rescue/USAR design needed and provided by Morning Pride.

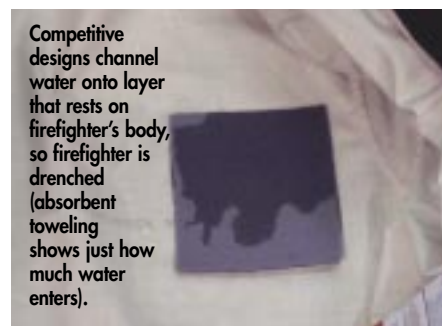


The photos below illustrate just how serious a problem this can be in competitive products by demonstrating a test you can do yourself. Hold the arm of your coat up and introduce water just inside the sleeve (as would happen when you are piking a ceiling or holding a hose line). When comparing brands, be sure to introduce the same amount of water.

Note how much water entry was allowed with the competitive product and how none was allowed with the Morning Pride design.



In inferior non-Morning Pride designs, the water (which may be scalding hot and/or contaminated with body fluids or caustic chemicals on the fireground) is actually channeled in toward the body. In contrast, the Morning Pride liner (thanks to the patented waterproof wristlet design) stays dry as the water is channeled outside the protective envelope.



Design Advantages discussion continues...



Design Advantages discussion continued...

## Crotch Design

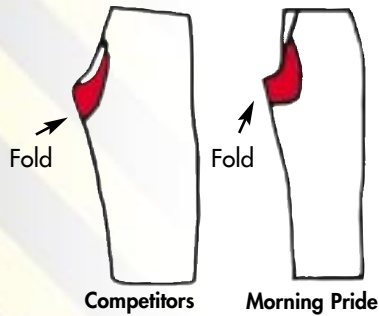


Diagram also shows Kinetic Kut Pants superimposed over standard patterns. Pattern tapering reduces garment weight and eliminates binding material bulk in crotch. In effect, our Kinetic Kut changes the crotch shape from a binding "V" to a roomier "U".

Note, the tremendously larger size of our Structural BPR, Structural LTO, Proximity BPR and Proximity LTO crotch inserts; also our insert has no seaming. Competitive insert is seamed in center. The extra bulk of a seam in this already constricted area on bulky bunker clothing is less than desirable.

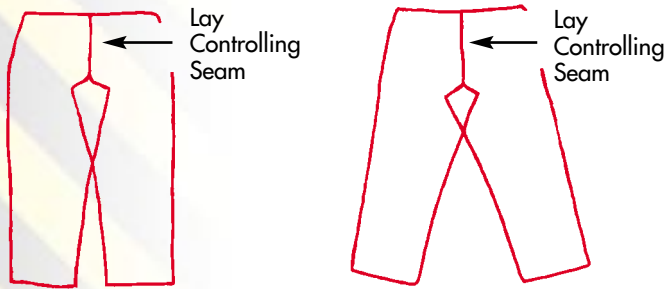
Full Range of Motion Crotch (FROM) Diamond insert moves seaming from constricted area and makes lateral leg-motion easier.

TAC, USA and EMS crotches are seamed, but this presents no comfort issues since they are much thinner systems.



Diamonds circled for better visibility

## Pants Range



Standard Pattern Lay Recreates "Attention" Stance Allowing Only 1½ Feet Of Comfortable Stride

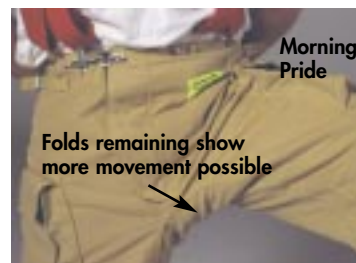
Kinetic Kut Pattern Lay Recreates More Natural "At Ease" Stance Allowing 3½ Feet Of Comfortable Stride



Also, photo shows our Full Range of Motion Pants (Patented) patterning offers 4" more lateral range than competitive pants of the same size and inseam. Again, this means less resisted motion. This comparison to verify the Morning Pride advantage can also be done in the field.

## "Hobbling" Avoidance

Improper crotch design and inadequate reach in this competitive garment causes binding and restricted motion with even simple/routine actions like stepping onto the truck tailboard or taking a ladder rung. See the severe pulling at crotch of other brand; this binding began almost as soon as the knee was lifted. At the point photographed, further movement was impossible.



In contrast, the larger Morning Pride Full Range of Motion (F.R.O.M.) crotch means no binding and far freer motion even at this extended position. In the Morning Pride (F.R.O.M.) pants, the body limits motion NOT the garment.

Again, with competitive and Morning Pride garments of the same size, you can recreate and document these design comparisons in the field. You can also specify minimum requirements (Morning Pride generated specs address the issues in all these areas). But philosophy and diagrams aside, if you want to develop a full understanding of the tremendous improvements offered by KINETIC KUT and FULL RANGE OF MOTION styling; TRY A GARMENT ON, the difference is truly obvious.

## Clothing Construction Advantages...

The commitment to excellence and customer service that has fueled our design/patterning work has also guided our construction/manufacturing work. A Morning Pride garment offers not only the finest patterning in the industry but the finest in construction features as well.

### On Any Garment...

#### Non Flammable Constituent Materials (except EMS family of garments)

This competitive bunker garment liner was purchased in this condition.

**Note flame support on extraneous factory marking.**

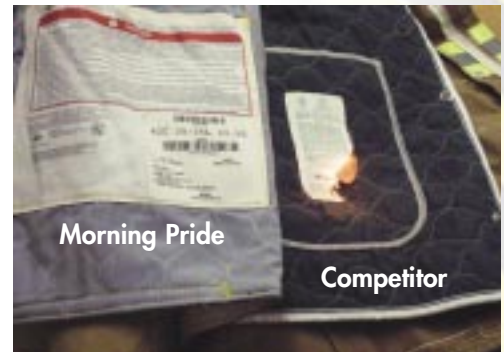


Photo shows that all three items on the competitive liner actively supported flame (they had to be extinguished). There are no cost saving flammable bindings, labels or masking tape on Morning Pride garments.

Since the outer shell can be torn and these flammable items exposed, we believe our more expensive production method that utilizes only non-flammable constituents is the only truly safe and responsible alternative.

Also the competitive hang up loop, after exposure to flame, supported combustion with active flame. Even after being extinguished, the competitive loop glowed until dipped in water.

In contrast, the Morning Pride loop constructed of matching outer shell material fails to react in any way to flame impingement (see the condition of both loops after the test to the right).



Similarly, this competitive label supported combustion (note active flame). While the Morning Pride "integral labeling" (Patent Pending) resisted effective flame support.

Since both the hang up loop and label are placed in the neck area, and since ember movement down the neck is a real possibility, we believe our more expensive production method that utilizes only non-flammable constituents is the only truly safe and responsible alternative.

As to the accuracy of our flammability claims; look at our photos, ask for our samples, or **if you have a match and a competitive garment, you can run the same test yourself.**

**If you don't spec Morning Pride advantages...you probably won't get them.**  
Morning Pride builds a garment for maximal safety and comfort. This is not the least expensive way to build a garment. If you write open specs you allow, even encourage, cost cutting compromises. We reserve the right to bid open spec business with the same lower cost designs and construction as our competitors utilize (we must or we would not be competitive). Open spec garments do NOT feature our Morning Pride logo on the left chest (or the advantages discussed in this catalog section). Call our Customer Service Department for assistance in writing high quality Morning Pride specs (we'll help you make product choice decisions and then fax you a spec).

Clothing Construction Advantages on Any Garment discussion continues...25



Clothing Construction Advantages on Any Garment discussion continued...

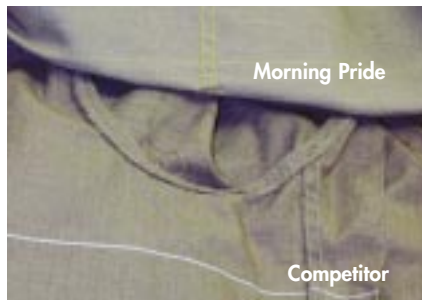
## Reinforcements

Triple or double layers of material are provided at cuffs and pockets to insure added durability in these high wear areas. Competitors don't reinforce at all or use much cheaper, dry rot prone, water absorbing leather that offers lower puncture resistance, lower abrasion resistance, lower tear strength, lower thermal insulation values and lower flame resistance than additional outer shell layers (i.e. PBI, Nomex, etc.). For customers who prefer the appearance characteristics of leather reinforcements, please see the custom option section of this catalog.

## Seams (Sleeve Attachment)

Morning Pride garments are double stitched and double feld **throughout** the garment. Some competitors only serge and single stitch their seams which, while less expensive to do, is also far less durable. The serging exposes part of the material and hence allows considerable fraying (hence seam deterioration) with use.

While many brands feature the strongest seam made (double needle, double feld) at highly visible garment areas, this competitive garment features the far **less** impressive safety stitch at less visible areas (sleeve to coat outer shell attachment shown in photo for instance). In contrast Morning Pride garments feature the more expensive to manufacture but significantly stronger double needle, double feld seaming at ALL joining areas including less visible but still garment critical areas like this sleeve attachment.



On the same point, and perhaps even more interestingly, this photo shows that the **exterior** of this competitive coat **looks** like high quality double needle, double feld seaming is used throughout the garment.



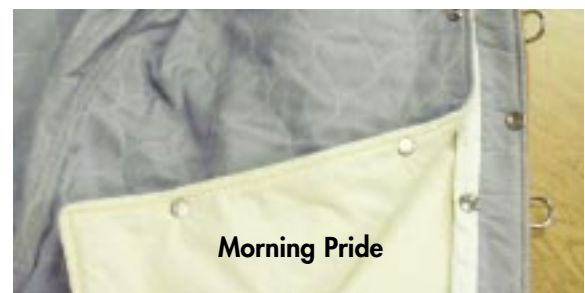
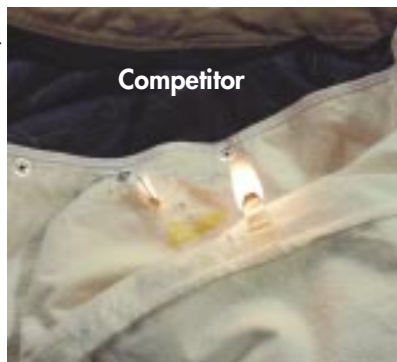
The interior view (at the upper right), however, reveals the truth. **See that true felling is only used on one side of the competitor's gusset insert.** Again, **ALL** Morning Pride seaming is the stronger and more expensive to manufacturer double feld.

Independent data is available from our Customer Service Department to corroborate the superior strength of the double feld seam.

## Self-Binding

All Morning Pride garments feature self binding (for layers not sewn in), which while more expensive, offers some strong advantages over the bulk of separate binding pieces.

Some competitors choice in non-self bindings is also particularly objectionable, **not only for the flammability reasons shown here and noted earlier, but because it is a porous material.** As such it can wick moisture from outside the barrier to the inside of the firefighter's protective envelope. Some competitors intensify the flammability/wicking problems by leaving long ends of the binding hanging on the garments (as this sample competitive product was purchased).



In contrast, Morning Pride's turned and stitched liner edge offers lock stitched strength and durability, with no wicking possibility (and, of course, no flammability problems).



## Protective Overlap At Closures

Panels of moisture barriers specified (not a substitute of cheaper, non-breathable material as used in some competitive garments) and thermal liner facings assure double overlap of the full protective envelope at these critical areas of Morning Pride garments. In contrast, many competitive products don't continue the thermal barrier at the facings so offer **much** lower insulative protection.

Not only does Morning Pride offer as much as 96% higher TPP (Thermal Protective Performance) at Structural and Proximity facings, Morning Pride panels are turned and finished as well, while many competitors are only serged. The Morning Pride anti-wicking strip (Patented and lighter color material in the photo) also offers greater assurance of continued protection.

## Pockets

As a standard, Morning Pride Structural BPR, Structural LTO, Proximity BPR and Proximity LTO coats/tails are provided with a liner pocket constructed of breathable flame resistant cotton (printed with our warning label, please see below). Morning Pride does not use cheaper but breathability blocking neoprene based materials for close to body placement pockets. Beyond that, all pockets must be specified as custom option upgrades (please see pages 76 - 79) since there is no uniformity as to pocket requirements (this reverses our previous standard of two patch pockets on coats).

## Labels

The new warning labels are large to hold all the necessary information. Other firms use non-breathable labels that can block up to 20% of the breathable surface area of your moisture barrier (and often in key ventilative areas like the trunk. In contrast, MP uses the higher cost but fully breathable custom integralization (pat. pend.) process label. Additionally, while most competitors glue their labels on for the cost savings that offers, Morning Pride lock stitches their labeling on. Glued labels are stiff, further block breathability, are less durable and the glue (if exposed by flexing) can be highly flammable.



## Sizing

All Morning Pride garments may be ordered custom tailored to the individual's chest, sleeve length, height, waist inseam and crotch rise. We have a full range of women's patterning as well. Since stress is the major source of fire ground injuries and fatalities we feel proper fit is critical. Some competitors make their garments available in only small, medium, and large sizes which means that they really do not fit anyone well.

## Finishing

To insure maximum durability, there is not a single skipped stitch or raw edge (which will unravel to failure) on a Morning Pride garment. In contrast, some competitive garments feature over 40 inches of raw edges to unravel and eventually fail.

The entire waistband of these competitive pants was raw on all three layers.



## Option Stitching

All options, including trim, are attached to the Morning Pride garment with lock stitching. Most competitors attach all options with chain stitching or double chain stitching.

Chain stitching is used to close the top of a bag of dog food; break one stitch and the whole system unravels (see photo of competitive product to the right).

In contrast, with Morning Pride's lock stitching each stitch is knotted or locked as part of the stitching operation. With lock stitching, when a stitch is broken (hard to avoid in the rugged firefighting environment) the stitches on each side hold and the entire stitch line does not unravel. This is a particularly important issue as it relates to the stitching that attaches the trim to your garment. Trim has a harder, firmer surface than the textiles that comprise most of the garment. While the textiles allow stitches to settle in among the weave, the hardness of the trim surface "presents" the stitches as a raised surface that therefore takes more abrasion and snags in the hostile firefighting environment. The answer as noted above is to lock stitch the trim (and all other options) but that requires a more skilled operator, more expensive stitching equipment, takes longer and uses far more of the very expensive aramid threads. For those reasons, we are the only major producer to 100% lock stitch our trim. Rather than truly fixing the problem in this manner, some of our competitors double chain stitch their trim. This is not an effective design answer since if one stitch line is broken/snagged, the other line only 1/4" away will most frequently also be impacted (and you will have two stitch lines unraveling). Just as non-productively, one of our other competitors tries to address the problem by burying their stitching in a thin webbing strip. This actually increases the profile of the thread assembly which we believe actually causes more snags/unravelings. As the photo (drawn from a national ad for another product) to the left shows, this relatively lightly used garment ALREADY shows three separate places where the trim webbing/stitching has been abraded or snagged and is hanging off the coat. You can specify a requirement for lock stitched trim and options; our Morning Pride generated specs do so.



The photo demonstrates how unraveling occurs when a single stitch of chain is broken and pulled.



Clothing Construction Advantages discussion continues...



Clothing Construction Advantages discussion continued...

## On Coats/Tails

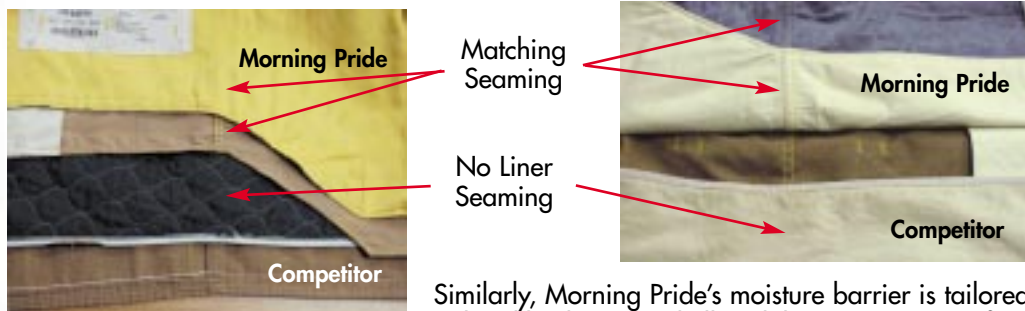
### Design Concept

Almost all finer menswear (suit, coat, sport coat, overcoats) are designed with one-piece set-in sleeves and three-piece bodies. Morning Pride tailors its garments (shell and inner liners) in this proven design style. Most competitors use less expensive one-piece styling (known derisively in the garment trade as a bag coat since it cannot be tailored to follow natural body contours) on at least some of the layers. While three-piece tailoring is more expensive to manufacture, we feel a properly fitting coat is essential to a firefighter's comfort and safety on the fire ground.

### Liner/Moisture Barriers

Tailored with the same built in underarm bellowing and three piece styling as the shell for maximum freedom of movement.

At right, you will notice, Morning Pride seaming on liners matches 3-piece seam tailoring on shell. In contrast many competitive coats (as in photo to right) feature the visible outer shell tailoring but have only a 1-piece liner (no seam on liner). This means they fail to offer FULL 3-piece tailoring advantages.



Similarly, Morning Pride's moisture barrier is tailored 3-piece styling like the outer shell and the competitor is often offering a non-seamed 1-piece moisture barrier styling (see photo above). The extra Morning Pride tailoring costs time and money in production; otherwise just the **illusion** of a tailored 3-piece garment is provided.

All moisture barrier seams are tape sealed for maximum waterproofness.

### Liner Attachment

Structural BPR, Structural LTO, Proximity BPR and Proximity LTO and moisture barrier thermal liners are provided fully detachable via snap buttons (unless the order requests otherwise). Structural TAC outer shell, moisture barrier and thermal liners are sewn together to allow reversibility with a Liner Inspection Port on the tail and pants fly. Similarly, Technical Rescue/USAR and EMS garments feature sewn-in moisture barriers (with liner inspection port at the tail and pants fly). If your order requests the liners be sewn in on garments that normally feature detachable moisture barrier liners, we will do so at no extra charge at waist and collar. In operational models that normally feature detachable liners, the thermal liner and moisture barrier are sewn together as a unit and attach to the outer shell on directly mounted snap buttons. Any winter liners snap in separately in the same manner. For garments with sewn-in moisture barrier/thermal liners, there is usually a design reason they must not be detachable (pre-conditioning survivability, reversibility, etc.)

### Collars

Morning Pride structural and proximity collars are lined with barrier material and liner. These collars are also internally reinforced, thus avoid the necessity of quilt stitching that perforates the collars internal liner and can abrade against the collar barrier. Technical Rescue/USAR and EMS garments feature a tailored collar that provides face shielding on cold days or when providing patient care.

Structural BPR, Structural LTO, Proximity BPR and Proximity LTO Collars comfortably and effectively interface with helmet earflaps.



**Try MP & competitors on with SCBA facepiece in place & chinstrap engaged to see our comfort/ functionality advantage**



Structural TAC, Technical Rescue/USAR and EMS tailored collar integrates into extended shield.

## Chinstrap

We offer the largest chinstrap in the industry (4" x 11") on Structural BPR, Structural LTO, Proximity BPR and Proximity LTO clothing to allow effective interface with SCBA. Some competitive products cut costs by limiting size on eliminating chinstrap entirely (making SCBA interface impossible). Chinstrap is stored and deployed with hook and pile tape to allow easy adjustment, even with gloved hands. Please see photos of LTO & BPR chinstrap differences (for Structural & Proximity gear) on page 10. On EMS and Technical Rescue/USAR clothing, the chinstrap is built into the shield design.

## Sleeves

Morning Pride garments offer extra, full cut sleeves designed to allow maximum freedom of movement.

Morning Pride bellows are built into the sleeve pattern. This photo illustrates the competitive sewn-in gusset requires an additional three bulky seams outer shell, moisture barrier and thermal liner in the already constricted underarm area. While our built-in system consumes more fabric during lay-up, it avoids this additional seaming.



Morning Pride garments feature one-piece styling: in contrast many competitive products feature a two-piece styling that can require a seam that runs directly over the elbow (see photo). This seam (in all three layers) is very uncomfortable when weight is carried on the elbow. Also putting a seam on the high abrasion, movement critical, elbow point is (in our opinion) poor design.



## Cuffs

Structural BPR, Structural LTO, Proximity BPR and Proximity LTO coats/tails feature dimensioning for easy and effective firefighting glove interface. (photo shows shingle cuff option, for further details please see page 65). Structural TAC, Technical Rescue/USAR and EMS garments feature slim line cuffs for unobstructed patient care.



*Structural BPR, Structural LTO, Proximity BPR and Proximity LTO with Shingle Cuff Added*



*Technical Rescue/USAR Shirt Style with Tab*



*EMS Elastic with Tab*

## Hang Up Loop

Non flame supporting triple layer material outer shell material lock stitched into the collar and certified to an 80 lb. hang strength is provided on Structural BPR, Structural LTO, Proximity BPR and Proximity LTO. Structural TAC, USAR and EMS garments can be custom optioned with a hang up loop but, not standard, since these garments feature more freely floating designs and are thus more effectively stored on hangers.

## Storm Shield

In Structural and Proximity garments, a double thickness exterior mounted storm flap offers superior water shielding properties with maximum flexibility. Some competitors use an interior mounted shield that channels water/fluids into the protective envelope. Technical Rescue/USAR and EMS garments do not feature a storm shield as standard. On Structural TAC garments, there are two smaller storm shields to allow reversibility.

## Hardware

Structural BPR, Structural LTO, Proximity BPR and Proximity LTO garments offer sturdy, lightweight, non-sparking, aluminum reverse safety snaps securely riveted and backed with multiple layers of material. The D-Rings are securely mounted through three layers of the storm shield. Technical Rescue/USAR and EMS garments feature a zipper closure as standard. Technical Rescue/USAR garments feature nylon rather than metal hardware to avoid sparking issues sometimes encountered in those working environments.

Clothing Construction Advantages discussion continues...



Clothing Construction Advantages discussion continued...

**On Pants**

**Design Concept**

Like all finer slacks, Morning Pride bunker pants feature tailored four-piece styling. Some competitors use less expensive two-piece styling which cannot provide adequate body conforming, contouring.

**Liner/Moisture Barriers**

All moisture barrier seams are tape sealed for maximum waterproofness. Structural BPR, Structural LTO, Proximity BPR and Proximity LTO moisture barrier/thermal liners are provided detachable at the waist unless order requests sewn-in (no charge for same). Structural TAC, USAR and EMS design requirements dictate sewn in linings be provided (with standard fly area inspection ports on the pant).

**F.R.O.M. Crotch**

Full range of motion crotch diamond shaped. Insert eliminates seaming bulk at crotch and makes lateral leg-motion easier.

Structural BPR, Structural LTO, Proximity BPR and Proximity LTO pants can be designed for close to body "jeans" feel and mobility without mid-crotch seams.

Structural TAC, USAR and EMS crotches also provide close to body "jeans" feel but include seaming (not an issue on these very thin weight systems).



Morning Pride BPR Structural Shown

**Fly Front**

Triple thickness, exterior mounted for maximum water shielding properties. Heavy duty reverse snap closure at waist with back up hook & pile closure. New narrow design minimizes bulk.

**Morning Pride preserves the full protective envelope to the closure for up to 96% greater TPP provided, while many competitors substitute a layer of outer shell for our layer of thermal liner. Photo also highlights another disadvantage of a major competitor's system. When our test subjects donned the competitive gear, the inner facing folded under (and the competitive shield does not offer thermal liner material). The same "roll" is unlikely with Morning Pride pants because of our deeper crotch opening, but even if it did occur, our fly is lined with both moisture barrier and thermal liner material.**



Competitor

**Suspender Attachment Systems**

Structural BPR, Structural LTO, Proximity BPR and Proximity LTO feature sturdy, MIL Spec, rust-resistant buttons mounted through three layer waistband of outer shell material. Some competitive products offer no button reinforcement or use irritating, bulky, dry rot prone, inexpensive leather.

To allow TAC reversibility and to avoid any USAR sparking issues, these garments, as a standard, feature non-button attachment systems.



Suspender Buttons standard on Structural BPR, Structural LTO, Proximity BPR, Proximity LTO and EMS.



"Rig friendly" non-suspender Button Snap Attachments standard on TAC and USAR.

MORNING PRIDE  
**Custom Stock**™  
TWO WEEK DELIVERY - GUARANTEED!

Everyone wants gear available from stock for quick shipment. But everyone also wants their precise mix of options, materials, trim colors and custom options making it impossible to suit most departments with stock programs.

The flexibility and tremendous productive capacity of our newly automated manufacturing facility **now** allows us to be the first and only company to address the problem.

Our new automated production line allows us to pre-cut garments in standard sizes and inventory them in this unfinished "almost-ready-to-go" state. When you order, we can place the garments on the automated production line "immediately" to finish and customize with the exact mix of trim and options **YOU** need and **STILL** ship in two weeks or less from receipt of your order!

**The Six Custom Stock Models**

There are six models of Custom Stock tailed systems available in a complete range of offerings from the most technologically sophisticated to the most economical offerings.



**1. NY Metro Style Custom Stock**

**Model #3232 Tails & Pants**

- Black PBI® outer shell
- Nomex® facecloth with 3 layer E89 thermal liner
- W.L. Gore's CROSSTECH® moisture barrier
- FDNY style larger collar

This Custom Stock offering is built around the highly successful FDNY protective clothing program.



**2. Texas Connection Custom Stock**

**Model #3210 Tails & Pants**

- Bronze PBI® outer shell
- Nomex® semi slick facecloth (Caldura) with light batt (Aralite) thermal liner
- W.L. Gore's RT 7100 moisture barrier

This Custom Stock offering is built closely around our highly successful Texas protective clothing program. This is also very similar to the very successful San Antonio protective clothing program.



**3. Signature Series Custom Stock**

**Model #25E2 Tails & Pants**

- Golden Brown Basofil outer shell
- Cotton (FR) Basofil Spunlace thermal liner
- W.L. Gore's CROSSTECH® moisture barrier

This Custom Stock offering is built closely around our highly successful Signature Series stock clothing program, which is now expanded with this Custom Stock program. This combination of materials is our most popular composite.

While slightly less expensive than the NY Metro or Texas Connection models, it delivers many of their high comfort, high protection functionalities.



Custom Stock discussion continued...



Custom Stock discussion continued...



**4**

## 4. California Composite Custom Stock

### Model #1400 Tails & Pants

- Yellow Kevlar®/Nomex® outer shell
- Nomex® facecloth with light batt (Aralite) thermal liner
- W.L. Gore's RT 7100 moisture barrier

This Custom Stock offering is built closely around the LA City/LA County area highly successful PPE programs. Like the Signature Series model it is in the mid price range and offers exceptional durability.

## What do all the Custom Stock models have in common?

- Tails styling
- Bloodborne pathogen interface capable styling
  - Long wristlet standard
  - Liner inspection ports standard
- Angled rear pant cuffs
- Standard, state-of-the-art, absolutely unsurpassed construction and design advantages...this is Morning Pride quality quickly delivered. It is NOT a stripped down product in any way.

## Are there any options that I cannot order on a Custom Stock product?

These garments are pre-cut so if an option must be cut as part of the pattern lay-up, that option would not be available. Examples of such options:

- Low bulk closure
- Chicago closure
- Undershield pockets
- Harness pants
- All or nothing closure

If you require quick delivery on a garment with these types of options, we suggest our 6-week Express Service (we will call IF you attempt to order such an option).

## Do I pay a premium for Custom Stock product?

The Custom Stock is priced 10% higher than the same product ordered with normal delivery. This 10% compensates us for the increased inventory cost of the pre-cut garments and for the special line handling to make the quick delivery turnaround.

## What sizes are available in Custom Stock product?

Tails in even chest sizes 38 to 54 with any required lengths or sleeve lengths. Pants in even waist sizes 32 to 48 with any required inseam length.



**5**

## 5. Economy Custom Stock

### Model #2420 Tails & Pants

- Yellow 7.5-oz Nomex® outer shell
- Nomex® facecloth with heavy batt (Q9) thermal liner
- W.L. Gore's RT 7100 moisture barrier

This Custom Stock offering is designed to provide value driven protection.

**NEW!**



**6**

## 6. Proximity Custom Stock

### Model #7602 Tails & Pants

- 7.5-oz aluminized PBI® Knit
- Nomex® facecloth with light batt (e.g. Aralite) thermal liner
- W.L. Gore's CROSSTECH® moisture barrier

This Custom Stock offering is our most popular NFPA 1976 (2000 edition) certified system.

**Two Week Delivery!**  
**Gear The Way**  
**You Want It!**



## How do I order Custom Stock?

- **Call 1-800-688-6148...**we will teleconference with your authorized local Morning Pride dealer to follow up or you may contact your local dealer directly.

In either case, we will ask you to:

- **Pick Your Model...**we will ask which of the six composite model numbers you prefer. A full discussion of each material can be found starting on page 34.
- **Choose Your Options...**we will ask which custom options you prefer. All the available custom options can be found starting on page 59.
- **Place Your Order... Two Week Delivery – Guaranteed!** We will ask your Morning Pride dealer to place your order, noting your preferred custom options. The order must note “Custom Stock” or we will assume normal delivery.

## What if I want the outer shell from one composite and the thermal liner (or moisture barrier) from another composite?

We cannot guarantee that we can mix and match these layers and still meet the two-week delivery window. Remember that your need is NOW! You may check with our Customer Service Department (800-688-6148) at time of order to see if your circumstances would allow such an arrangement.

## Are there any qualifiers?

Yes, but only the most reasonable...

- The two-week delivery period begins with Morning Pride’s receipt of your order AND the receipt of answers to any open questions on the order (if any). If we receive your order but there are no sizes on the order and we request the info, our two-week delivery period begins when you are able to provide us the size info. The delivery period ends when we ship product.
- We reserve the right to discontinue particular Custom Stock composites temporarily or permanently if material availability becomes a problem. If you order such a system, we will contact you immediately to determine any alternatives you may wish to pursue (wait for the composite, move to a different custom composite, etc.).
- While our automated line should assure the two-week turnaround time promised, there may occasionally be extenuating circumstances that cause us to miss the two-week window by a few days. In those cases, we will deduct the 10% model up-charge.
- As with all custom-optioned products, we cannot accept cancellations once production has commenced.

## Express Service

### Expanded offerings

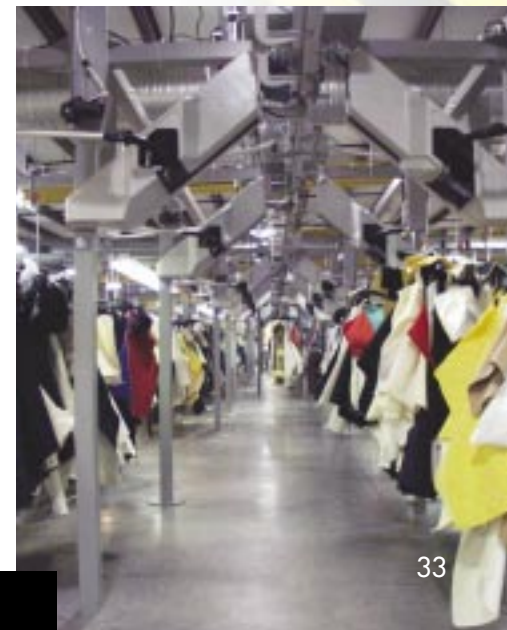
However, there will be times when Custom Stock won’t meet your quick delivery needs. As discussed, the service is only available currently on our six most popular model numbers. And since Custom Stock garments are pre-cut, custom options requiring special cuts are not available through the program. Perhaps you wish a non custom stock composite of materials or perhaps you really want an option that would have to be cut into the pattern (i.e. Chicago closures, Boot Access Panels, etc). For those situations, Morning Pride’s Express Service is the perfect alternative. For decades, we have offered a six-week delivery period for a 10% upcharge (the same % upcharge as the Custom Stock program). The flexibility and sophistication of our new, fully automated factory allows us to now extend and expand that program.

8 Week Express	7% upcharge
6 Week Express	10% upcharge - (std. express)
5 Week Express	15% upcharge
4 Week Express	20% upcharge

As with Custom Stock, upcharges will be reduced if we fail to meet the requested delivery period to reflect the actual delivery (your order will continue to be expedited so any delays should be minimal). We also reserve the right to refuse Express orders for particular materials, if the mills are experiencing temporary production difficulties (if this happens, we will notify you upon receipt of your order to allow you to consider materials substitutions that would still allow the quick delivery you require). Finally, as with Custom Stock, the delivery period is defined as the time between the date we receive the order (and any missing info is provided) and the date we ship from Dayton.

If your order simply states “Express” (without specifying which Express period) we will presume you wish the 6-week Express option that has been our standard express offering for many years.

**A Tip...  
Our New  
Factory has  
really reduced  
our delivery  
period; check  
normal delivery  
before ordering  
EXPRESS.**





# Clothing Material Choices (Listed Alphabetically beginning on page 34)

After making your material choices, the charts on pages 48 and 49 will help you determine the appropriate model numbers. However, it is important to remember that the new 2000 editions of both the NFPA structural and proximity firefighting standards (#1971 and #1976 respectively) require some composite testing where all three layers of the system are tested together. Some possible combinations of materials fail to pass one or several of these composite tests and hence are not available. Additionally, this composite testing is relatively expensive, so not all possible combinations of materials were tested. All popular composites were tested, but some obscure and infrequently combined material combinations were not tested. Therefore, it is necessary to refer to our price list to determine if a particular model number you have decided upon is available. The price list also provides TPP (insulation) and THL (breathability) test numbers for each of the systems certified. If you have selected a model number not listed on our price list, please contact our Customer Service Department in Dayton (ask for the Inside Marketing Associate (IMA) for your geographic region). In all cases, there will be an available system that is very close to what you had initially decided upon and your IMA will assist you in locating that system. Your IMA will also have updated information on any recently tested or added systems.

## Trade Names

The 2000 edition of both NFPA Std. #1971 and #1976 requires that the same materials from different mills must be individually tested in each composite. In other words, if 7.5 oz. duck weave PBI from Southern Mills passes all composite testing (Thermal Heat Loss and Thermal Protective Performance, "THL" & "TPP", primarily); the same material description from Difco must also be tested. Because of the expense of this composite testing, this has effectively meant that on some composite model numbers we may only have done the necessary testing with one mill's material. We suggest for this reason that the customer order by our model number. If you desire a particular mill's product, contact our Customer Service Department to see if that particular mill's product was tested in the composite desired. The mill's trade names are listed here only to allow the customer to cross reference to our model numbering system most efficiently.

## Structural or Technical Rescue/USAR Outer Shell Options Mill Brand Names

- Advance** The trade name of Southern Mills' ("SM") **Kevlar 60%/Nomex 40%** product, please see that product discussion.
- Barrage** The trade name of SM's **BASOFIL** product, please see that product discussion.
- Brigade** The trade name of Difco's **Nomex IIIa**, please see that product discussion.
- Crusader** The trade name of Difco's **Kevlar 60%/Nomex 40%** product, please see that product description.
- Defender** The trade name of SM's **Nomex IIIa**, please see that product discussion.
- Fusion** The trade name of Safety Component Technologies' ("SCT") **Kevlar/Nomex** product, please see that product discussion (60%/40% Brass, 50%/50% Black, Bronze and Gold).
- Gemini Matrix** The trade name of SM's **PBI Matrix**, please see **PBI Matrix** product discussion.
- Guardian** The trade name of Difco's **PBI**, please see that product discussion.
- Gladiator** The trade name of Difco's **Basofil**, please see that product discussion.
- Kombat** The trade name of SM's **PBI**, please see that product discussion.
- Millenia** The trade name of SM's **PBO** product (40% Zylon/60% Technora). Please see **PBO** product discussion.
- Omni 45** The trade name of Amatex Norfab's **Basofil**, please see that product discussion.
- SCT Matrix** The trade name of SCT's **PBI Matrix**, please see **PBI Matrix** product discussion.
- PBI Gold Plus** The trade name of SCT's **PBI**, please see **PBI** product discussion.

## Structural & Proximity Thermal Lining Options Mill Brand Names

- Aralite** The trademarked name for SM's **Nomex Semi Slick/Batt Light** liners, please see that product discussion.
- Caldura** The trademarked name for SM's **Nomex Semi Slick/Batt Light** liners, please see that product discussion.
- Caldura Q-9** The trademarked name for SM's **Nomex Semi Slick/Batt Heavy** liners, please see that product discussion.
- Caldura SL** The trademarked name for SM's **Nomex Semi Slick/E89** liners, please see that product discussion.
- Chambray** The trademarked name for SCT's **Nomex/Batt Light** liners, please see that product discussion.
- Flamequilt** The trademarked name for Westex's **Cotton (FR)/Basofil Batt liner**, please see that product discussion.
- Glide II** The trademarked name for SCT's **Nomex Semi Slick/Batt Light** liners, please see that product discussion.
- Glide II/E89** The trademarked name for SCT's **Nomex Semi Slick/E89** liners, please see that product discussion.
- Isolator** The trademarked name for Spring's **Nomex/Batt Heavy** liners, please see that product discussion.
- Isolator Plus** The trademarked name for Spring's **Nomex/Batt Light** liners, please see that product discussion.
- Omni 1, 2 & 3** Are the trademarked names for Amatex Norfab's **Meta Aramid/Basofil** liners, please see that product discussion.
- Protective Comfort Liner** The trademarked name for Morning Pride's **Cotton(FR)/Basofil Batt liner**, please see that product discussion.
- Q9** The trademarked name for SM's **Nomex/Batt Heavy** liners, please see that product discussion.
- XLT** The trademarked name for Difco's **Nomex/Batt Heavy** liners, please see that product discussion.
- Xtra-Lite** The trademarked name for Difco's **Nomex/Batt Light** liners, please see that product discussion.

**Trade-Offs** — Almost all material choices involve trade-offs. For instance, customers must consider their relative needs for a less stressful, easy to move in (lighter material) system versus their needs for durability and high insulation (typically offered by heavier materials). There are design options that can address material shortcomings while retaining the material's strengths (for instance, replaceable Nomex/Kevlar knees can address the lower wear life of lighter fabrics while allowing the flexibility advantages they offer to be retained). Your Total Fire Group Regional Director and his technical support team can help you understand and address these trade-off issues and design fixes. Contact us via telephone, fax, e-mail or website and we will be glad to help!!!!

## Outer Shells Materials

**Fabric Weights** – Generally the heavier the weight of the material, the higher the durability of the outer shell. However, the lighter the weight of the material, the more flexible, the more breathable, the more minimally stressful and the easier to move in the outer shell generally is. Many departments will opt for a lighter (say 6 oz. Coat/Tails outer shell) and a heavier pants outer shell material (say 7.5 oz.) since crawling imposes such a heavy wear burden (primarily on the knees). Other customers order heavier weight pocket and knee reinforcements for lighter weight shells. The most popular and durable pocket linings are Kevlar or Kevlar/Nomex. For knees, Kevlar/Nomex is the most popular choice (it can be dyed and 100% Kevlar is only available in pale yellow). Removable, replaceable knee options also make high wear knee maintenance easy and affordable.

**Fabric Weaves** – Generally rip stop weaves are slightly more durable than twill weaves but twill weaves are more supple and easy to move in. The most durable rip stops are three pics but two pic rip stops are more supple and less subject to napping or fuzziness after field wear.

**Waterproofing Finishes** – Enhanced waterproofing (Teflon F or F.P.P.E. from Safety Components Technologies, Super Shellite from Southern Mills, Stay Dry Plus from Difco, HyPel from Amatex Norfab, etc.) offers longer lasting outer shell water repellency, but remember it is the moisture barrier, which is unaffected by waterproofing finishes, that is your primary shield against moisture penetration. Enhanced waterproofing may also offer increases in durability on some fabrics.

## Structural or Technical Rescue/USAR Outer Shell Options

**Basofil** products being marketed in the fire service (ours and competitors) are actually an engineered blend of 40% Basofil and 60% Kevlar. This outer shell offers exceptional heat blocking characteristics across a range of heat fluxes and thus will often allow the use of lighter liner systems. Basofil also appears to be exceptionally durable and comfortable. Basofil, however, does not offer all the advantages of the premium outer shells (PBI). Additionally, some competitive fiber providers have raised the issue of formaldehyde off-gassing with Basofil. The third party testing and research we have seen indicate this is NOT a valid concern. Basofil is an intermediately priced product, and we believe is among the best of those intermediate products.

*Basofil is available for quick delivery in our Custom Stock Program – (cat. pgs. 31-33)*

Model	Weight	Weave	Water Repellency	Colors
25xx	7.5 oz	Rip Stop	Enhanced	Natural (pale Yellow), Golden Brown, Black, Bright Yellow

**Kevlar/Nomex** This Kevlar/Nomex blend product is probably the most durable outer shell and offers 300% improvement in char length over Nomex IIIa outer shells. Kevlar/Nomex stays flexible and supple, maintaining its integrity after moderately severe thermal exposure. While Kevlar/Nomex is a superior product to Nomex, customers are cautioned that the premium outer shells (PBI) offer strong comparative advantages. Kevlar/Nomex should be considered a Nomex upgrade rather than a PBI equivalent. Nomex/Kevlar is priced between Nomex and the premium shell alternatives. We believe Kevlar/Nomex is one of the best of the new products positioned between the premium shells and Nomex with very good comfort and durability characteristics. Kevlar/Nomex is our recommendation for knee and/or pocket reinforcements; it wears like iron. Kevlar/Nomex is also now available with an enhanced water repellency treatment and in a choice of weights and pics. The Kevlar/Nomex product has traditionally been available as a three pic (three strands form the rip stop box). But two pic cloth is also available now. While three pic rip stop should be more durable than two pic, the two pic product here is a half ounce heavier so that should compensate. Two pic products will generally be more supple and less likely to become nappy or fuzzy with wear (one less thread strand “presented” for abrasion in the box weave).

*Kevlar/Nomex is available for quick delivery in our Custom Stock Program – (cat. pgs. 31-33)*

Model	Weight	Weave	Water Repellency	Colors
14xx	7 oz	Rip Stop 3 pic (60%/40% blend)	Standard	Black, Yellow, Rust, Navy, Khaki, Gold
34xx	7 oz	Rip Stop 3 pic (60%/40% blend)	Enhanced	Black, Yellow, Rust, Navy, Khaki, Gold
44xx	7 oz	Rip Stop 2 pic (60%/40% blend in Brass, 50%/50% blend other colors)	Enhanced	Black, Bronze, Brass, Gold
54xx	7.5 oz	Rip Stop 2 pic (60%/40% blend)	Enhanced	Black, Yellow, Rust, Navy, Khaki

Structural or Technical Rescue/USAR Outer Shell discussion continues...



Structural or Technical Rescue/USAR Outer Shell discussion continued...

## Nomex IIIa

products being marketed in the fire service (ours and our competitors) are actually an engineered blend of 93% Nomex, 5% Kevlar and 2% Carbon anti stat. Nomex IIIa is the most economical of the available outer shells.

Nomex will not melt, drip or char at temperatures up to 700-750 degrees F. It is also a durable and long wearing material. Nomex is available in two weights (6 oz. & 7.5 oz.) and two weaves (rip stop, and duck). The 7.5 oz duck weave outer shell is the Nomex material which the market is most familiar with, the other Nomex product offerings are newer materials. Nomex IIIa is also now available with enhanced water repellency finishes.

**Nomex IIIa is available for quick delivery in our Custom Stock Program – (cat. pgs. 31-33)**

Model	Weight	Weave	Water Repellency	Colors
20xx	6 oz	Rip Stop	Standard	Natural (cream) Black, Tan, Yellow
21xx	6 oz	Rip Stop	Enhanced	Natural (cream) Black, Tan, Yellow, Red, Navy, Royal Blue
24xx	7.5 oz	Duck	Standard	Natural (cream) Black, Tan, Yellow, Royal Blue, Lime, Red

## PBI

products being marketed in the fire service (ours and our competitors) are actually an engineered blend of 40% PBI and 60% Kevlar. PBI has distinguished itself in some of the most active metro departments. The fabric was initially developed as part of the Project FIRES effort to provide non-charring protection at temperatures above Nomex's capabilities (approximately 750 degrees F). While Nomex remains an effective insulator charred, it can break away with movement and in the event of a

continued or secondary exposure could allow a potentially serious breach in the protective envelope. PBI, in contrast, will resist charring up to temperatures that exceed the firefighter's biological capabilities. Only PBO offers better anti char performance than PBI. PBI is available in two weights (6.0 oz. & 7.5 oz.). PBI is also now available with enhanced waterproofing. The 7.5 oz rip stop product is available in Black and dying the natural bronze color seems to dramatically reduce UV degradation problems and to improve durability. In our opinion, the PBI outer shell (especially in Black) is one of the most preferred and high performing outer shell products.

**PBI - Both Black & Bronze PBI are available for quick delivery in our Custom Stock Program - (cat. pgs. 31-33)**

Model	Weight	Weave	Water Repellency	Colors
10xx	6.0 oz	Rip Stop	Standard	Bronze
30xx	6.0 oz.	Rip Stop	Enhanced	Bronze
32xx	7.5 oz	Rip Stop	Enhanced	Bronze, Black (3 pic)

## PBI Matrix

products being marketed in the fire service (ours and our competitors) are an engineered blend of PBI and Kevlar with the addition of Kevlar "cables" into the weaving of the cloth. In our opinion, the biggest advantage of the addition of these Kevlar cables is an improvement in fabric strength after ultraviolet light exposure for undyed bronze cloth. We consider this significant, primarily for bronze undyed color product, because the dye in Black PBI seems to minimize UV degradation issues already. The only real complaint we have ever had from the field on PBI product is the UV sensitivity of undyed bronze product (of course, all FR materials have the same UV sensitivity, but most products are dyed, which protects against UV somewhat). The addition of the Kevlar cables seems to help the bronze undyed Matrix PBI address this challenge. There are also Taber Abrasion and Trap Tear advantages for the Matrix PBI (as compared to traditional PBI), but since traditional PBI already performed exceptionally well in those areas, we consider those improvements less significant. These products use Kevlar cables, feature enhanced water repellency and are 7.5 oz weight materials. The Gemini Matrix uses a 400 denier Kevlar cable and the SCT Matrix uses a heavier 600 denier Kevlar cable. Both materials are visually distinguishable from traditional PBI, and to a lesser extent from each other.

Model	Weight	Weave	Water Repellency	Colors
42xx	7.5 oz	Rip Stop	Enhanced	Bronze
43xx	7.5 oz	Rip Stop	Enhanced	Bronze

**PBO** products being marketed in the fire service (ours and our competitors) are actually an engineered blend of 40% Zylon and 60% Technora. PBO is the newest of the premium outer shells, being commercialized only in early 2000. PBO performs most like PBI but offers comparatively higher taber abrasion test results (which should translate into better durability), lower water absorption tendencies, higher tear strength and better anti char characteristics (but PBI already offers such high anti char resistance that this latter point may be of suspect value). In fact, PBO offers the best performance in Taber Abrasion resistance testing when compared to any other commercially available outer shell fabric. PBO also offers the highest strength retention and thermal stability after thermal exposure when compared to any other commercially available outer shell fabric. PBO composites, however, tend to deliver lower insulative performance than composites with equivalent weight PBI outer shells. PBO, as initially offered, was somewhat stiff but Southern Mills (currently the only source for PBO under their trade name "Millenia") has done much and continues to work to soften the hand of the product. This catalog introduces a very lightweight and flexible 5.3 oz. PBO shell which we feel will be ideal for USAR applications. PBO is so durable that this lightweight shell will offer acceptable life in USAR use (with very low resistance to motion and bulk). In USAR, the comparative decreased insulation noted with PBO is not a significant issue, as it is in structural firefighting applications. Contact your Regional Director if you wish to arrange field tests or see material samples on this new (or any other current) offering.

Model	Weight	Weave	Water Repellency	Colors
13xx	5.3 oz	Rip Stop	Enhanced	Bronze
33xx	7.5 oz	Twill	Enhanced	Bronze

## Summarizing Recap of Our Structural and Technical Rescue/USAR Outer Shell Model Numbers and Mill Trade Names

Model	Material/Wt.	Weave	Water Repellency	Colors
10xx	PBI 6.0 oz Guardian from Difco, Kombat from Southern Mills	Rip Stop	Standard	Bronze
13xx	PBO 5.3 oz Millenia from Southern Mills	Rip Stop	Enhanced	Bronze
14xx	Kevlar 60%/Nomex 40% 7 oz Advance from Southern Mills	Rip Stop (3 pic)	Standard	Black, Yellow, Rust, Navy, Khaki, Gold
20xx	Nomex 6 oz Defender from Southern Mills	Rip Stop	Standard	Natural (cream) Black, Tan, Yellow
21xx	Nomex 6 oz Defender from Southern Mills	Rip Stop	Enhanced	Natural (cream), Black, Tan, Yellow, Red, Navy, Royal Blue
24xx	Nomex 7.5 oz Brigade from Difco, Defender from Southern Mills	Duck	Standard	Natural (Cream), Black, Tan, Yellow, Royal Blue, Lime, Red
25xx	Basofil 7.5 oz Omni 45 from Amatex Norfab – Barrage from Southern Mills	Rip Stop	Enhanced	Natural (pale Yellow), Golden Brown, Black, Bright Yellow
30xx	PBI 6.0 oz. Kombat from Southern Mills	Rip Stop	Enhanced	Bronze
32xx	PBI 7.5 oz Guardian from Difco (Bronze only) – Kombat from Southern Mills – PBI Gold Plus from Safety Components Technologies	Rip Stop	Enhanced	Bronze, Black (3 pic)
33xx	PBO 7.5 oz Millenia from Southern Mills	Twill	Enhanced	Bronze
34xx	Kevlar 60%/Nomex 40% 7 oz Advance from Southern Mills	Rip Stop	Enhanced	Black, Yellow, Rust, Navy, Khaki, Gold
42xx	PBI Matrix 7.5 oz Gemini Matrix from Southern Mills (400 Denier Kevlar Cables)	Rip Stop	Enhanced	Bronze
43xx	PBI Matrix 7.5 oz SCT Matrix from Safety Components Technologies (600 Denier Kevlar Cables)	Rip Stop	Enhanced	Bronze
44xx	Kevlar/Nomex 7.0 oz Fusion from Safety Components Technologies	Rip Stop (2 pc)	Enhanced	Black, Bronze, Brass, Gold
54xx	Kevlar 60%/Nomex 40% 7.5 oz Crusader from Difco	Rip Stop (2 pic)	Enhanced	Black, Yellow, Rust, Navy, Khaki

Note: This recap is current to the best of our knowledge; it is possible other mills could begin to offer the materials referenced after the catalog is printed.



## Proximity Outer Shell Options

**Aluminized PBI** Although Morning Pride has manufactured proximity products out of aluminized Kevlar and Nomex in the past, the advantages of the new knit PBI aluminum substrate are so strong that we have limited our line to the product. Cracking of the aluminized skin is a problem that plagues most conventional fabrics. The suppleness of this aluminized 33%/PBI/67% Kevlar knit helps to reduce cracking significantly. Because they are stiff, conventional aluminized woven fabrics tend to crease in the same place each time they bend, causing cracks in that area. The flexible PBI knit creases differently each time it bends, and this helps to prolong the life of the aluminum coating. Customers should, however, be aware that while this is the most durable of aluminized shells, all aluminized fabrics have a much shorter wear life than non-aluminized fabrics (but non-aluminized fabrics don't meet the NFPA Std. #1976 radiant heat test requirements). As the chart below shows, the PBI knit fabric is significantly lighter, more flexible and more supple than the earlier aluminized products of Kevlar and Nomex (test results show that it takes up to five times more force to bend the earlier fabrics). The lighter weight of the PBI knit also means wearers may experience less stress and fatigue. Finally, the chart that follows shows better or equivalent protective performance for the PBI knit (in spite of its lower weight and suppleness).

### Comparative Properties of Aluminized PBI/Kevlar vs. Earlier Technology Aluminized Fabrics

Properties	33% PBI/ 67% Kevlar	100% Nomex	100% Kevlar	PBI Blend Advantage
<b>Physical Properties</b>				
Fabric type	Knit	Woven	Woven	PBI significantly lighter than Kevlar
Weight (oz./yd <sup>2</sup> )	7.0	9.0	11.0	
Trapezoidal Tear Strength, WxF (lbs)	23 x 28	39 x 17	41 x 44	Only PBI and Kevlar meet NFPA 1971 tear standard
Force to bend (gm) Outer elbow	65	240	295	Up to 5 times more flexible than Kevlar
Inner elbow	130	240	300	
<b>Thermal Properties</b>				
FSTM 5903 Vertical Flammability After flame (sec)	0 x 0	0 x 0	0 x 0	Significantly better than Nomex, equivalent to Kevlar
Char length (in)	0.4	3.1	0.6	
FSTM 5905 Vertical Flammability				
First After flame (sec)	0 x 0	8 x 12	0 x 0	Significantly better than Nomex, equivalent to Kevlar
Second After flame (sec)	1 x 0	4 x 10	0 x 0	
% consumed	10 x 12	33 x 33	13 x 5	
Thermal Protective Performance (TPP)				
Structural, single layer*	12.0	13.0	14.0	Comparable
Radiant, with ensemble**	79.7	80.4	81.2	Comparable

\*NFPA 1971 Standard TPP test exposure 2.0 cal/cm<sup>2</sup> sec. 5050 radiant/convective

\*\*100% Radiant procedure (no flame, quartz heaters only): 9.6 cal/cm<sup>2</sup> sec. Ensemble used with each outer shell - 9.0 oz/yd<sup>2</sup> neoprene coated polyester/cotton, 9.0 oz/yd<sup>2</sup> reprocessed aramid batt with aramid face cloth.

Model	Weight	Description
76xx	7 oz.	Aluminized PBI Knit

## Technical Rescue/USAR Outer Shell Options

Technical Rescue/USAR garments are available in the following materials (all of which are discussed in some detail above).

- 6 oz. Rip Stop Nomex (21xx)
- 5.3 oz. Twill PBO (13xx)

## EMS Outer Shell Options

**Textured Polyester** This tough yet supple 5.5 oz. outer shell is exceptionally supple and comfortable to wear. Its weave characteristics and surface engineering also help resist soiling. Polyester is NOT flame resistant, however NFPA 1999 does not require flame resistance (We offer FR EMS only certified systems below; we also offer flame resistant USAR gear that is also EMS and Liquid Haz-Mat Splash certified, as well).

Model	Weight	Description	Colors
81xx	5.5 oz.	Texturized Polyester	Navy, Royal Blue, Bright Orange, Bright Lime

EMS garments also are available in the following FR materials (all of which are discussed in some detail above).

- 6 oz. Rip Stop Nomex (21xx)
- 5.3 oz. Rip Stop PBO (13xx)

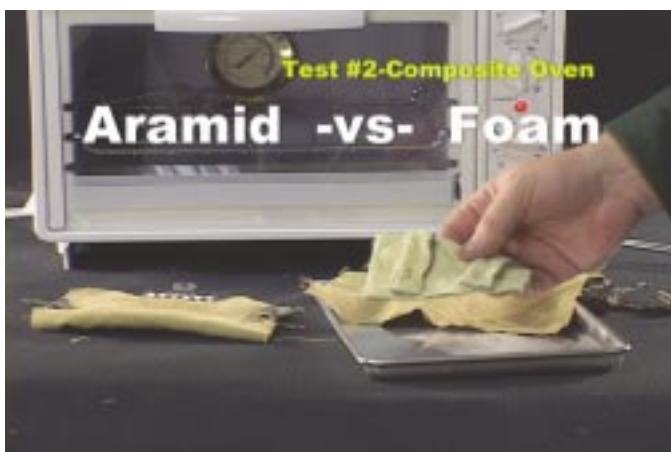
## Thermal Lining Materials Options (Listed Alphabetically)

See Page 34 for Trade Name of Thermal Linings Discussion

**Fabric Weights** - Generally the lower weight the liner material, the less insulation but the more breathability. A recent IAFF study demonstrated that the degree of breathability of a system strongly correlated with the physiological stress imposition of that system on the firefighter (high breathability minimized stress imposition and low breathability increased stress imposition). Stress remains the leading cause of firefighter death. In fact, stress is the causative factor for more firefighter deaths than all other factors added together!!! Therefore maximizing system breathability to reduce stress is a critical design goal. Our customers have enjoyed great success by utilizing dead air panels and extended dead air panels to beef up the insulative performance of the new thinner, high breathability liners (i.e. thus having lighter liner advantages without their disadvantages). We recommend that customers strongly consider some of these new lighter liners with dead air or extended dead air panels as they are proving uniquely effective at maintaining adequate protection levels with minimized stress imposition.

**Slickness** - A slick facecloth will make your liner easier to put on and will make the garment feel much better while trying on (say in a trade show booth). However the slick facecloths tend to not wick as well as the non-slick facecloths. That is why slick liners are often reported as being "clammy" in field use. The slick liners also tend to offer lower breathability performance, which can translate into sharply reduced comfort levels and accelerated stress build-up. Southern Mills has blended slick filament and woven strands in their Caldura faced liners (xx1x, xx4x & xx6x) to help address this problem.

**PVC Foam Thermal Stability** - NFPA Standard #1971 requires thermal liner materials be tested in a 500° F oven for 5 minutes without evidence of "melting, separating or igniting." Unfortunately, the NFPA Standard does not define "separate" nor establish how those observations should be made. There are now liner materials on the market that come out of the oven test almost completely charred and brittle. However, since the NFPA test does not require flexing (or even handling) before observation, these materials (often PVC foam based) are being passed. In the field, materials in that condition would break apart if the firefighter moved (and he could lose a great deal of his protection). Morning Pride has voluntarily chosen to limit ourselves to ONLY composite liner materials that retain their structural integrity after the NFPA oven testing. Customers considering a new liner material (especially a foam based one) should consider asking for material samples after the oven test.



Aramid liners are sound and structurally intact after 450° F testing for 5 minutes.



In contrast, PVC foam liners (and/or thermal enhancements) are embrittled and structurally unsound.

For a practical demo of this point (as well as a discussion of foam's other problems: off gassing, breathability resistance, permanent compression, etc.), please contact our Customer Service Department.

**Quilting** - All Morning Pride liners, except the xxNx one layer liner, feature fill and facecloth stitched together in a quilt pattern for maximum stability and durability.

Thermal Lining Materials discussion continues...



Structural & Proximity Thermal Liner Options discussion continued...

## Sweat Management and the Wet vs. "Dry" Thermal Liner Debate

One of our competitors is putting an anti-wick finish on their liners. It would be easy to treat our liner with water repellent as we do the outer shell, might even make a nifty bucket dunk demo, but it would not serve your best interests. Use your common sense...don't be fooled!

You **ARE** going to sweat...a liner in your bunker gear that doesn't absorb moisture leaves that stressful sweat (and the heat it carries) on your skin... AND it means you stay wet longer!

### Think About It:

- When you're hot and sweaty, would you rather have an absorbent towel to dry off with – or a non-absorbent plastic wrap that will keep that heat and moisture ON your skin?
- The more sweat directly on your body, the more stress and fatigue you will experience through heat re-absorption.
- If you're an aggressive firefighter, the sweat is going to be there – you can choose how to manage that sweat (the sweat still contains part of the heat it took out of the body).
  1. By keeping it concentrated on your skin by wearing non-absorptive garments (plastic wrap "dry" liners)

- or -

2. By wicking it away from your body, increasing the moisture surface area, and spreading it out within your system for faster evaporation (wicking "towel" liners).

Don't be fooled by claims that your system becomes much heavier if it absorbs your sweat (especially if the "proof" involves submerging your garments in water)...the same sweat is going to be there either way – on your body or in the gear. Total weight will not change and a non-absorbent liner can delay drying time since sweat stays pooled near the skin. An absorbent liner spreads the sweat moisture out for quicker drying.

### So, All Aggressive Firefighters Sweat...How You Manage that sweat is YOUR Choice!

**Wicking Ability** – Sweat is the prime mechanism that the human body uses to dissipate excess heat (i.e. psychological stress is measured by heat buildup or core temperature within the body). It is critical to effective stress management that sweat and the heat it still carries be absorbed or ventilated off the skin as soon as possible. When sweat is left to lie on the skin, perhaps because the thermal liner is non-absorptive, the heat energy it carries is stressfully recycled back into the firefighter's body. Some firms are marketing non-absorptive liners with the argument that "the suit stays lighter without water pickup." It is easy to make a non-absorptive liner, commercial finishes are readily available. But it is important to remember that the firefighter is still sweating, a non-absorptive liner does not make the load lighter (the water is still there but on the skin or on the station uniform where it is easier for the heat it carries to be recycled stressfully back into the body).

**Drying Ability** – The perfect liner is one that is highly wickable (to remove the heat, carrying sweat off the firefighter's skin) BUT quick drying (that is how to truly make the whole system light and without stressing the firefighter). Some of the spunlaced fill liners (Nomex/2 layers E89 xx4x, Protective Comfort xxEx, Meta Aramid/2layer Basofil spun xx1x) are among the best in that regard. The spun fill spreads the moisture as it absorbs it, increases the surface area of the moisture which facilitates evaporative drying (consider how much more quickly a puddle on the station floor dries when it is spread over a large area with a squeegee). These particular liners are also thin, highly breathable and work well with our dead air/extended dead air paneling systems. The new xxNx one layer liner also seems to offer excellent dry properties.

**Summary:** Non-Wicking liners stay dry (but do not reduce overall system wetness) by leaving stressful heat carrying sweat on the body or station uniform and should be avoided. Also, since they do not spread moisture for facilitated evaporative drying, these liners also often mean the over-all system stays wetter longer. For the reasons discussed above, all Morning Pride liners are treated with Wickwell to move moisture off the skin to facilitate drying.



## Structural & Proximity Thermal Lining Options

### Cotton (FR)/Basofil Batt

This newer liner is extremely economical and has been extremely well received in the field (in spite of its relatively heavy 10.75 oz sq. yd. weight), perhaps because of cotton's high comfort characteristics. The liner has also proved very durable in the field.

Model #/Wt.	Face/Weight	Fill/Weight	Breathability	Wicking	Drying	Face Color
<b>xx5x</b> 10.75 oz	FR Cotton 5.5 oz	Basofil 50%, FR. Rayon 50% 5.25 oz.	Avg. to Good	Exc.	Good	Dark Gray

### Cotton (FR)/ Basofil Spunlace Protective Comfort Liner

This liner, unique to Morning Pride, is extremely thin and comfortable. It offers the insulation bump of Basofil, 48 TPP units after 5 washes (38.7 TPP units before wash). The PC liner also offers the comfort of cotton and the wicking/drying advantages of a spun lace fill. This liner is becoming one of our most popular. As with all our lighter liners, we STRONGLY recommend the extra insulation of extended Dead Air panels. We also suggest that this very light liner is best mated to a Basofil outer shell (since that shell provides a TPP bump up).

*Cotton (FR) Basofil Spunlace Protective Comfort Liner is available for quick delivery in our Custom Stock Program – cat. pgs. 31-33)*

Model #/Wt.	Face/Weight	Fill/Weight	Breathability	Wicking	Drying	Face Color
<b>xxEx</b> 7.0 oz.	Indura cotton 5.5 oz	Spun Basofil 1 layer 1.5 oz.	Exc.	Exc.	Exc.	Safety Yellow

### Meta Aramid/Basofil

Omni liners from Amatex Norfab. Meta aramid is the type of material that Nomex is. However Nomex is a trademarked name of Du Pont. A meta aramid is a material NOT produced by Du Pont. This group of liners is becoming one of our most popular as they are very thin, comfortable and highly insulative. Some customers have been using slightly lighter Meta Aramid/Basofil liners in the pants and slightly heavier Meta Aramid/Basofil liners in their coats (for instance, a 2 layer in the coat and a 1 layer in the pants).

Model #/Wt.	Face/Weight	Fill/Weight	Breathability	Wicking	Drying	Face Color
<b>xxHx</b> 5.1 oz.	Meta Aramid 3.6 oz	Spun Basofil 1 layer 1.5 oz.	Exc.	Exc.	Exc.	Navy
<b>xxlx</b> 6.6 oz.	Meta Aramid 3.6 oz (New Smooth Facecloth in medium Blue)	Spun Basofil 2 layers 3.0 oz	Exc.	Exc.	Exc.	Med. Blue
<b>xxJx</b> 8.1	Meta Aramid 3.6 oz	Spun Basofil 3 layers 4.5 oz	Above Avg.	Exc.	Exc.	Navy

Note: As with all our lighter liners, we STRONGLY recommend the extra insulation of extended Dead Air panels in the xxHx and xxlx liner equipped systems. We also suggest that these very light liners are best mated to a Basofil outer shell (since that shell provides a TPP bump up).

### Nomex/Batt Heavy

Isolator from Springs; Q9 from Southern Mills; XLT from Difco. This is the heaviest of all the liners and as such it offers the most insulation and the least breathability. It is also one of the most economical liner choices. Sweating guarded hot plate testing is on going as this catalog went to print; it is possible this heavy liner may not meet minimum breathability requirements with some of the less breathable moisture barriers. If there is a problem with your order in this regard, our Customer Service Department will be in contact.

*Nomex/Batt Heavy is available for quick delivery in our Custom Stock Program – (cat. pgs. 31-33)*

Model #/Wt.	Face/Weight	Fill/Weight	Breathability	Wicking	Drying	Face Color
<b>xx2x</b> 9.3 oz.	Nomex Facecloth	Nomex garnetted 6 oz.	Poor	Exc.	Poor	Light Blue

Structural & Proximity Thermal Lining discussion continues...



Structural & Proximity Thermal Lining discussion continued...

## Nomex/Batt Light

*Nomex/Batt Light is available for quick delivery in our Custom Stock Program – (cat. pgs. 31-33)*

Aralite from Southern Mills; Chambray from SCT; Isolater Plus from Springs; Xtra-Lite from Difco. This lighter batt lining material is intended to provide a compromise between the relatively high bulk and insulation of Batt Heavy liner products and the relatively low bulk and insulation of the newer materials such as E/89 products. The batt in this liner is Kevlar (70% garnetted and 30% virgin). Chambray Thermal Liners (xxFx in our model numbering system) often appeal to customers that currently utilize Nomex/Batt Light (“Aralite”) thermal liners, our xxOx model number. Both liners are priced the same, but many customers feel the Chambray facecloth is more comfortable than the Nomex facecloth in the xxOx system. Further, the virgin batt in the Chambray (as compared to 70% garnetted batt in the xxOx) system, is often felt to be more stable during field use (even dimensionality and hence tendency toward consistent insulation levels throughout the liner). The chambray liner features a 3.2 oz. charcoal gray Nomex facecloth, quilt stitched to a 4.0 oz, 100% virgin batt of Nomex and Kevlar batt for a total of 7.2 oz.

Model #/Wt.	Face/Weight	Fill/Weight	Breathability	Wicking	Drying	Face Color
xx0x 7.2 oz.	Nomex Facecloth 3.4 oz.	Kevlar Batt 70% garnetted 30% virgin 3.8 oz.	Avg.	Good	Good	Teal
xxFx	Nomex Chambray Facecloth 3.2 oz.	Nomex and Kevlar Batt 100% Virgin 4.0 oz.	Good	Good	Good	Charcoal Gray

## Nomex/E89

*Nomex/E89 is available for quick delivery in our Custom Stock Program – (cat. pgs. 31-33)*

This liner system is available in a number of lay-ups and has proven to be one of our most popular systems. Nomex E89 appears to be the liner of choice for metro departments. It is light, wicks up sweat well and dries quickly. It is low bulk so movement is facilitated. While this is not one of the very lightest liners, customers may wish to consider dead air paneling systems to beef up its insulative capabilities.

Model #/Wt.	Face/Weight	Fill/Weight	Breathability	Wicking	Drying	Face Color
xx3x 7.9 oz.	Nomex Facecloth 3.4 oz.	3 layers E89 Spunlace 4.5 oz	Exc.	Exc.	Exc	Silver

## Nomex One Layer Liner

This liner is designed for absolute minimal bulk, which also translates into excellent flexibility. The Thermal Heat Loss (THL or breathability) and Thermal Protective Performance (TPP or insulation) are extremely high for this liner. Please consult our price list for details on each available composite (especially for a system that is so minimally bulky). The Nomex One Layer Liner is also the only liner/secondary outer shell that we are offering in our Structural TAC reversible garment design.

Model #/Wt.	Face/Weight	Fill/Weight	Breathability	Wicking	Drying	Face Color
xxNx 9.5 oz	Duck Weave 9.5 oz	None Needed	Exc.	Good	Exc	Black

## Nomex Semi Slick Faces

These Caldura (xx1x, xx4x, xx6x, xxCx and xxKx) and Glide II (xxGx and xxMx) liners attempt to balance a blend of slick or filament yarns with woven yarns. The goal is to preserve the easy movement of the slicker materials while avoiding their problem of minimized moisture pickup (which can lead to a clammy, stressful liner feel against the body once sweating begins). Glide II

Thermal Liners (xxGx in our model numbering system) often appeal to customers that currently utilize Nomex Semi Slick/Batt Light ("Caldura/Aralite") thermal liners, our xx1x model number. Both liners are priced the same, but many customers feel the Glide II facecloth is more comfortable than the Nomex Semi Slick facecloth in the xx1x system. Further, the virgin batt in the Glide II (as compared to 70% garnetted batt in the xx1x) system, is often felt to be more stable during field use (even dimensionality and hence tendency toward consistent insulation levels throughout the liner). Safety Components Technology also points out strong lubricity, weight, drying time and comfort index advantages for Glide II (over Caldura/Aralite).

**Nomex Semi Slick Faces are available for quick delivery in our Custom Stock Program – (cat. pgs. 31-33)**

Model #/Wt.	Face/Weight	Fill/Weight	Breathability	Wicking	Drying	Face Color
<b>xx1x</b> 7.9 oz.	Spun/Filament Nomex 4.1 oz.	Batt Light of Kevlar 3.8 oz.	Avg.	Fair	Fair	Platinum
<b>xx4x</b> 7.1 oz.	Spun/Filament Nomex 4.1 oz.	2 layers E89 Nomex Spunfill 3.0 oz.	Exc.	Fair	Fair	Platinum
<b>xx6x</b> 10.1 oz.	Spun/Filament Nomex 4.1 oz.	Batt Heavy of Nomex garnetted 6 oz.	Poor	Fair	Fair	Platinum
<b>xxCx</b> 6.6 oz.	Spun/Filament Nomex 4.1 oz.	1 layer E89 Nomex Spunfill 1.5 oz.	Exc.	Fair	Good	Platinum
<b>xxKx</b> 7.1 oz.	Spun/Filament Nomex 4.1 oz.	2 layers Basofil Spunlace 3.0 oz.	Exc.	Fair	Fair	Platinum
<b>xxGx</b> 7.8 oz.	Filament/Ring Spun Nomex 3.8 oz.	Batt Light of Nomex/Kevlar 4.0 oz.	Avg.	Fair	Fair	Green Gray
<b>xxMx</b> 6.8 oz.	Filament/Ring Spun Nomex 3.8 oz.	2 layers of E89 Nomex Spunfill 1.5 oz.	Exc.	Fair	Good	Green Gray

**Notes:** Caldura liner products from Southern Mills fit the descriptions above for xx1x, xx4x, xx6x, xxCx and xxKx. Southern Mills has recently re-engineered Caldura to offer new improved feel and wicking Platinum colored facecloth. The liner manufacturer does not recommend the use of the xx4x Liner with 6 oz. outer shells because of barely compliant TPP results with some moisture barriers (please contact our Customer Service Department for further information on your available alternatives if you have strong interest in this thermal liner and a 6 oz. shell). The xxCx liner will meet CEN liner requirements, but not the higher insulation requirements of NFPA.

## Technical Rescue/USAR & EMS Thermal Lining Options

While Structural BPR, Structural LTO, Structural TAC, Proximity BPR and Proximity LTO Operational Models feature three layer (outer shell, moisture barrier and thermal liner) construction, Technical Rescue/USAR and EMS models garments are standard two-layer products (outer shell moisture barrier and no thermal liner). As such, the 3rd space in the model number is always x [no thermal liner]. Fleece vested winter liners are available but can only be attached via a zipper (Structural BPR, Structural LTO, Proximity BPR and Proximity LTO winter liners attach via snap buttons). Non-zipper alternative attachment methods can abuse the moisture barrier during the grueling, EMS Standard #1999 25 cycle wash preconditioning (both the USR and EMS garment families meet the EMS standard). Many first responders will utilize sweaters, heavy slacks, thermal underwear, etc. rather than winter liners, so we did not standardize the expense of a 1/2 zipper on all USR and EMS garments. If you feel you may want a winter liner in the future but are not ordering one when you order your USR or EMS garment new, we strongly suggest you order a winter liner adaptation strip in your new garment (to allow easy zip in of a potential future liner, as it is VERY expensive to add a zipper later after the coat is made). If you order a winter liner when ordering the new garment, the zipper to accommodate the winter liner's use will of course be automatically provided (and included in the price of the winter liner). Please see the winter liner discussion on page 51 for further details.





## Moisture Barrier Options (Listed Alphabetically)

While we do not recommend any particular outer shell or liner material as the best choice for all customers, we DO recommend the improved CROSSTECH® barrier as the moisture barrier of choice (it offers such significant advantages and is a field proven technology) to ALL our customers. While slightly more expensive than alternative moisture barriers, the CROSSTECH® barrier product offers compellingly better properties and with its comparatively better durability is almost assuredly a lower life cycle cost product than products of lower initial cost (but with less durability).

### TWO NFPA BREATHABILITY STUDIES

There were two major studies done prior to the 2000 edition of NFPA Standard #1971. One was sponsored by the IAFF (The Indianapolis Breathability Study) and the other was sponsored by a number of firms (many of them opposed to imposing breathability requirements in the Standard) through the NFPA Research Foundation. The Indy Study used firefighter vocational movement patterns and radio, real time telemetry. The Research Foundation Study was more traditional treadmill work but at differing temperatures and workloads. Both studies (the Indy Study most clearly, but supported as well in many ways by the Research Foundation's Study) showed that a relationship DID exist between system breathability and physiological stress dissipation. Because of these studies, the breathability requirement was included in the 2000 edition of NFPA Std. #1971. One competitor has selectively quoted from these studies to imply THE OPPOSITE: that there is no such relationship (their filament systems tend to do poorly in breathability testing, in our experience). If you come across this type of erroneous representation, please refer to the IAFF Office of Occupational Safety and Health.

As this catalog went to print, manufacturers were still in the process of responding to the manufacturer of Breathetex advising of "Breathetex degradation in the field"... "which is not visually obvious". Morning Pride has advised, since Breathetex was introduced, that we had concerns about its durability and/or thermal resistance and recommended it not be used for firefighting applications. Nonetheless, we have initiated a full recall of all Breathetex products. If you are using a Breathetex equipped garment (barrier or facings, please see below), we suggest you contact your garment manufacturer for information. The myth that ALL barriers are fragile (since Breathetex was) is not supported by our excellent field results with other barriers (most notably CROSSTECH®) and may be an attempt to justify a decision by some of our competitors to not recall their Breathetex liners (i.e. "all barriers are fragile so Breathetex failures are not unique and do not warrant recall!!"). In our experience, the outer shells will require far more maintenance than the barriers (and are the composite element that limits life NOT the barrier).

NFPA standards require full circumferential moisture barrier protection, which most often requires the use of moisture barrier facings at closure areas. The facings can account for as much as 20% of the barrier's defensive shield. It is Morning Pride's policy to use the more expensive CROSSTECH® facings in these critical high wear areas when CROSSTECH® barriers are specified. In contrast, the majority of our competitors substitute less expensive barriers in the critical facings area even when customers spec and pay for the more expensive, more fully featured CROSSTECH® barrier product. During the recent Breathetex degradation problems, many manufacturers did not even advise customers who had ordered and paid for CROSSTECH® that they had substituted Breathetex in the facings. When CROSSTECH® is not specified, Morning Pride will use CROSSTECH® or Gore's new PTFE on Basofil blend barriers for the facings areas. We do reserve the right to modify this standard practice on open spec bids (please see notes at end of the Moisture Barrier discussion).



## Structural & Proximity Moisture Barrier Options

**CROSSTECH®** The CROSSTECH® (Type 2C), from W.L. Gore, is both the most breathable and durable moisture barrier product available today. The enhanced PTFE based bicomponent membrane technology incorporated within the CROSSTECH® moisture barrier improves upon the already superior performance capabilities of Gore’s “original” CROSSTECH® moisture barrier. Among the improvements, the primary benefits to the user are increased total heat loss and an overall greater durability—both of which are still provided in conjunction with the already superior thermal stability performance of Gore’s expanded PTFE Teflon based products. It is Morning Pride’s position that the CROSSTECH® moisture barrier is the preeminent moisture barrier available today. While we do not recommend any particular outer shell or liner material as the best choice for all customers, we DO recommend the improved CROSSTECH® barrier as the moisture barrier of choice (it offers such significant and field proven advantages) to ALL our customers. While slightly more expensive than alternative moisture barriers, the CROSSTECH® barrier product offers compellingly better properties and with its comparatively better durability is almost assuredly a lower life cycle cost product than products of lower initial cost (but with less durability).

**CROSSTECH® is available for quick delivery in our Custom Stock Program – (cat. pgs. 31-33)**

Model #/Weight	Weight of Film	Base/Weight	Breathability	Durability
xxx2 4.0 oz.	.8 oz.	Nomex Facecloth 3.2 oz.	Excellent	Excellent

**RT7100™** This alternative PTFE-based moisture barrier is a product of W.L. Gore. It incorporates Gore PTFE technology, however, NOT the enhanced bicomponent technology that is part of the new and improved CROSSTECH® moisture barrier, nor the technology that was used in the “original” CROSSTECH® barriers. This alternative product is intended as a thermally stable, price competitive alternative to NFPA compliant polyurethane based moisture barriers without the superior product benefit advantages of the CROSSTECH® moisture barrier. While the Crosstech moisture barrier, discussed above, continues to be the market’s premier moisture barrier for excellent performance, not all departments are able to justify the slightly higher investment. The GORE RT7100 moisture barrier was specifically designed to meet the demands and cost considerations of many in the fire service. Its thermal stability and non-cracking, non-flaking performance is unmatched in its price range.

**RT7100 is available for quick delivery in our Custom Stock Program – (cat. pgs. 31-33)**

Model #/Weight	Weight of Film	Base/Weight	Breathability	Durability
xxx0 4.0 oz	.8 oz	Approx. 3.2 oz. of FR Spunlace Product	Excellent	Good

### Moisture Barrier Notes for Structural and Proximity Garments

- Morning Pride CROSSTECH® and RT7100 equipped garments are provided with extra thermal liner layers at the knees and elbows on a standard basis. Customers should also be aware that the moisture barrier substrate to which the film is applied faces to the exterior of the moisture barrier/liner assembly when the garment is shipped (so the film is to the interior where it is protected). This is in contrast to older Neoprene systems where the Neoprene faced to the exterior and the substrate faced to the interior.
- Morning Pride’s standard practice is to construct the pathogen shield facings (patented and patent pending) from breathable moisture barrier material when a breathable moisture barrier is specified. Some of our competitors utilize much less expensive, non-breathing, barrier material at the facings (i.e. bloodborne pathogen certified Neoprene type systems). For this reason, Morning Pride reserves the right to substitute non-breathing barrier material at the facings on bids that specify breathable barriers but do not specify the barrier facing material (failure to do so would guarantee our bid price would be out of the ballpark, since others are making the substitution on a standard basis). Morning Pride generated specs will require breathable moisture barrier panels at the closure facings of all breathable garments. Besides the stressful characteristics of non-breathing products, they are significantly heavier than the breathable products. For instance, substituting non-breathable facing panels for breathable ones on a size 40 coat adds 6 extra ounces. Also, some recent testing suggests that Neoprene based systems are not as durable after cleaning/drying or even simple use as the breathable technologies.



## Technical Rescue/USAR Moisture Barrier Options

### CROSSTECH® SR

CROSSTECH® fabric provides the best liquid penetration resistance against blood, body fluids and NFPA “common” chemicals, as well as superior waterproof and breathable performance unmatched by any other product. CROSSTECH® SR fabric is specially designed for use in search and rescue garments that are compliant to NFPA #1951 standard on protective ensembles for Technical Rescue/USAR operations. These NFPA compliant garments are lightweight, durable, protective and breathable, thus providing a combination of features unavailable in any other NFPA compliant garment. Our CROSSTECH® SR fabric is a 2-layer laminate with a total weight of 5.0 osy using 3.0 osy Nomex fabric as a substrate laminated to a 2.0 osy membrane. It will be especially desirable for use by Technical Rescue/USAR teams tasked with urban search and rescue, trench rescue, vehicle extrication, confined space rescue and rope rescue.

Model #	Weight of Film	Base/Weight	Breathability	Durability
xxxC	1.6 oz.	3.3 oz.	Excellent	Excellent

## EMS Moisture Barrier Options

CROSSTECH® barriers are bloodborne pathogen certifiable and breathable to allow the escape of vaporized body sweat (and the stressful heat it carries). It is an exceptionally light, supple and durable material.

For Non-FR EMS...

### CROSSTECH® EMS

Model #	Weight of Film	Base/Weight	Breathability	Durability
xxx9	1.3 oz.	2.2 oz.	Excellent	Excellent

For FR EMS...

### CROSSTECH® SR

Model #	Weight of Film	Base/Weight	Breathability	Durability
xxxC	1.6 oz.	3.3 oz.	Excellent	Excellent

Through Dealer Advisories and TotalFireE-News, we will keep you informed on these and any other material developments. However, if you have a particular interest in any material product not discussed here; (i.e. pleatpak, closed cell foam, filament materials, etc.) you may wish to contact our Customer Service Department, before ordering, for complete up-to-date information.



## For Structural or Proximity Clothing

### First

Determine the prefix for your product number. All Morning Pride structural and proximity clothing begins with either BPR, LTO, or TAC based on the level of bloodborne pathogen resistant certification testing desired (for comparative photos of BPR and shower testing, please see page 8).

**BPR** – (i.e. Bloodborne Pathogen Resistant)

will prefix your product number if you wish to order garments that have been certified to pass NFPA Std. #1971 bloodborne pathogen resistance shower testing as worn (i.e. including interface areas with other “BPR” products). At time of catalog printing, Morning Pride was the only firm to offer such fully integrated, full body systems.

**LTO** – (i.e. Limb and Torso Only)

will prefix your product number if you wish to order garments that were NOT tested for bloodborne pathogen resistance at interface areas (in fact, Limb and Torso Only protective products are tested TAPED to the test mannequin at neck and wrists). At time of catalog printing, our competitors were only able to offer LTO levels of protection. Morning Pride, however, strongly recommends the use of integrated and interface capable “BPR” clothing and equipment since a bloodborne pathogen firefighter contamination would be as tragic whether it occurred through an interface area or through the garment (and not many firefighters wear their garments taped to their bodies at interface areas).

**TAC** – (i.e. Also Limb and Torso Only)

will prefix your product number if you wish to order garments that are NOT certified for bloodborne pathogen resistant characteristics (neither interface nor non-interface capable) at interface areas (please see full LTO discussion above). TAC garments are also reversible, please see full TAC discussion on pages 11 and 12.

### Second

Determine the four digit material designation that follows the prefix using the charts that follow this page. Please consult material discussions on pages 34-46 for important background info on each material before finalizing your choices. From the first column, pick one outer shell choice from the options available to determine the first two digits. From the second column, pick one thermal liner choice from the options available to determine the third digit. From the third column, pick one moisture barrier choice to determine the fourth digit.

### Third

Designate the style of garment as Tails, Coats or Pants.

### Fourth

Check price list to verify composite selected has passed composite testing (if not, contact our Customer Service Department at 1-800-688-6148 for assistance).

### An Example of Product Numbering:

BPR-xxxx	Prefix designates interface tested bloodborne protection
xxx-12xx	First two digits designate 7.5 oz. PBI outer shell
xxx-xx4x	Third digit designates Nomex Semi Slick w/E-89 (2 layers) thermal liner
xxx-xxx2	Fourth digit designates Crosstech on Facecloth moisture barrier

BPR-1242 Complete product number for this structural garment, level of bloodborne pathogen testing and materials chosen. If this model number is shown on price list, the composite is tested and available. If not shown, contact our Customer Service Department at 1-800-688-6148 for a close composite alternative.



# CHOOSING THE CORRECT PRODUCT NUMBER

Structural and Proximity Model Numbering continued...

## Pick Your Structural Outer Shell (Designated by First Two Digits)

Basofil	25xx <sup>1,3,4</sup>	7.5 oz. Rip Stop, Enhanced Water Repellency	Natural (Pale Yellow), Bright Yellow, Golden Brown, Black
Kevlar/Nomex	14xx <sup>1,4,5</sup>	7 oz. Rip Stop, Standard Water Repellency	Black, Yellow, Rust, Navy, Khaki, Gold
Kevlar/Nomex	34xx <sup>1,4</sup>	7 oz. Rip Stop, Enhanced Water Repellency	Black, Yellow, Rust, Navy, Khaki, Gold
Kevlar/Nomex	44xx <sup>1,4</sup>	7 oz. Rip Stop, Enhanced Water Repellency	Black, Bronze, Brass, Gold
Kevlar/Nomex	54xx <sup>1,4</sup>	7.5 oz. Rip Stop, Enhanced Water Repellency	Black, Yellow, Rust, Navy, Khaki
Nomex IIIa	20xx <sup>1,4,7</sup>	6 oz. Rip Stop, Standard Water Repellency	Natural, Black, Tan, Yellow
Nomex IIIa	21xx <sup>1,4,7</sup>	6 oz. Rip Stop, Enhanced Water Repellency	Natural, Black, Tan, Yellow, Red, Navy, Royal Blue
Nomex IIIa	24xx <sup>1,4</sup>	7.5 oz. Duck, Standard Water Repellency	Natural, Black, Tan, Yellow, Royal Blue, Lime, Red
PBI	10xx <sup>1,3,4,7</sup>	6.0 oz. Rip Stop, Standard Water Repellency	Bronze
PBI	30xx <sup>1,3,4,7</sup>	6.0 oz. Rip Stop, Enhanced Water Repellency	Bronze
PBI	32xx <sup>1,3,4</sup>	7.5 oz. Rip Stop, Enhanced Water Repellency	Bronze, Black 3 pic
PBI Matrix	42xx <sup>1,3,4</sup>	7.5 oz. Rip Stop, Enhanced Water Repellency	Bronze
PBI Matrix	43xx <sup>1,3,4</sup>	7.5 oz. Rip Stop, Enhanced Water Repellency	Bronze
PBO	13xx	5.3 oz. Rip Stop, Enhanced Water Repellency	Bronze
PBO	33xx <sup>1,3,4</sup>	7.5 oz. Twill, Enhanced Water Repellency	Bronze

## Pick Your Proximity Outer Shell (Designated by First Two Digits)

Aluminized PBI	76xx <sup>2</sup>	7.0 oz. 33% Aluminized PBI/67% Kevlar Aramid Knit
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## Pick Your Thermal Liner (Designated by Third Digit – Structural or Proximity Only)

Cotton (FR) / Basofil Batt	xx5x <sup>1,2,3,4,5</sup>	10.75 oz. FR Cotton Facecloth 5.5 oz. w/Basofil 50%, FR Rayon 50% 5.25 oz.
Cotton (FR) / Basofil Spunlace	xxEx <sup>1,2,3,4</sup>	7.0 oz. Indura Cotton Facecloth 5.5 oz. w/Basofil Spunlace 1 layer 1.5 oz.
Meta Aramid / Basofil 1 layer	xxHx <sup>1,2,3,8</sup>	5.1 oz. Meta Aramid Facecloth 3.6 oz. w/1 layer Basofil Spunlace 1.5 oz.
Meta Aramid / Basofil 2 layer	xxIx <sup>1,3,8</sup>	6.6 oz. Meta Aramid Facecloth 3.6 oz. w/2 layer Basofil Spunlace 3.0 oz.
Meta Aramid / Basofil	xxJx <sup>1,2,3</sup>	8.1 oz. Meta Aramid Facecloth 3.6 oz. w/3 layer Basofil Spunlace 4.5 oz.
Nomex/Batt Heavy	xx2x <sup>1,2,4</sup>	9.4 oz. Nomex Facecloth 3.4 oz. w/heavy Nomex batt 6.0 oz.
Nomex/Batt Light	xx0x <sup>1,2,3,4</sup>	7.2 oz. Nomex Facecloth 3.4 oz. w/light Kevlar Batt 70% garneted, 30% virgin 3.8 oz.
Nomex/Batt Light	xxFx <sup>1,2,4</sup>	7.2 oz. Nomex Chambray Facecloth 3.2 oz. w/light Kevlar Batt 100% garneted, virgin 4.0 oz.
Nomex/E89 3 layer	xx3x <sup>1,2,3</sup>	7.9 oz. Nomex Facecloth 3.4 oz. w/3 Layers E89 Spunlace 4.5 oz.
Nomex One Layer	xxNx <sup>1,2,3,4,5,8</sup>	9.5 oz. Nomex Duck Weave One layer
Nomex Semi-Slick	xx1x <sup>1,2,3</sup>	7.9 oz. Spun/Filament Nomex Facecloth 4.1 oz. w/light Kevlar batt 3.8 oz.
Nomex Semi-Slick	xx4x <sup>1,2,3,4,8,9</sup>	7.1 oz. Spun/Filament Nomex Facecloth 4.1 oz. w/2 Layers E89 Nomex Spunfill 3.0 oz.
Nomex Semi-Slick	xx6x <sup>1,2,3</sup>	10.1 oz. Spun/Filament Nomex Facecloth 4.1 oz. w/heavy Nomex batt 6.0 oz.
Nomex Semi-Slick	xxCx <sup>5</sup>	6.6 oz. Spun/Filament Nomex Facecloth 4.1 oz. w/1 Layer E89 Nomex Spunfill 1.5 oz. Note: The xxCx liner will meet CEN requirements but not the higher insulation requirements of NFPA.
Nomex Semi-Slick	xxKx <sup>1,2,3,4,8,9</sup>	7.1 oz. Spun/Filament Nomex Facecloth 4.1 oz. w/2 Layers Basofil Spunlace 3.0 oz.
Nomex Semi-Slick	xxGx <sup>1,2,3</sup>	7.8 oz. Filament/Ring Spun Nomex Facecloth 3.8 oz. w/light Nomex/Kevlar batt 4.0 oz.
Nomex Semi-Slick	xxMx <sup>1,2,3</sup>	6.8 oz. Filament/Ring Spun Nomex Facecloth 3.8 oz. w/2 Layers of E89 Nomex Spunfill 1.5 oz.

## Pick Your Moisture Barrier (Designated by Fourth Digit – Structural or Proximity Only)

CROSSTECH	xxx2 <sup>1,2,3,4</sup>	4.7 oz. CROSSTECH 1.5 oz. on Nomex pajama check Facecloth 3.2 oz.
RT7100	xxx0 <sup>1,2,3</sup>	4.0 oz. PTFE .8 oz. on approx. 3.2 Oz. of FR Spunlace product from W.L. Gore

## For Technical Rescue/USAR Clothing

- First** All Technical Rescue/USAR clothing is bloodborne pathogen interface capable and tested. Therefore, the Technical Rescue/USAR prefix does not need to distinguish between levels of certification, it is always USR.
- Second** Determine the four digit material designation that follows the "USR." Using the chart that follows, pick one outer shell choice from the options available to determine the first two digits. Then pick "x", see explanation below. Finally, pick one moisture barrier choice to determine the fourth digit.
- Third** Designate the style of garment as Tails, Coats, or Pants.

### Technical Rescue/USAR Materials

Outer Shell (Designated by First Two Digits)		
PBO	13xx shell <sup>6</sup>	5.3 oz. Rip Stop – Bronze
Nomex	21xx shell <sup>6</sup>	6 oz. Rip Stop – Natural, Black, Tan, Yellow, Red, Navy, Royal Blue
Thermal Liner (Designated by Third Digit)		
Technical Rescue/USAR Products are 2 layer systems (an outer shell and moisture barrier only), so the third digit will remain "x" in all cases. Winter liners are available for all Morning Pride garments (see discussion on page 51).		
Moisture Barrier (Designated by Fourth Digit)		
CROSSTECH® SR	xxx <sup>6</sup> C <sup>6</sup>	1.7 oz. CROSSTECH SR on Nomex pajama check (3.3 oz.)

## For EMS Clothing

- First** All EMS clothing is bloodborne pathogen interface capable and tested. Therefore, the EMS prefix does not need to distinguish between levels of certification, it is always EMS.
- Second** Determine the four digit material designation that follows the "EMS." Using the chart that follows, pick one outer shell choice from the options available to determine the first two digits. Then pick "x", see explanation below. Finally, pick one moisture barrier choice to determine the fourth digit.
- Third** Designate the style of garment as Tails, Coats, or Pants.

### EMS Materials (Non-FR and FR Materials May Not Be Mixed)

Non-FR		
Outer Shell (Designated by First Two Digits)		
Polyester	81xx <sup>6</sup>	Texturized Polyester (5.5 oz.) – Navy Blue, Royal Blue, Bright Orange, Bright Lime
Thermal Liner (Designated by Third Digit)		
EMS products are 2 layer systems (an outer shell and moisture barrier only) so the third digit will remain "x" in all cases. Winter liners are available for all Morning Pride garments (see discussion on page 51).		
Moisture Barrier (Designated by Fourth Digit)		
CROSSTECH® EMS	xxx <sup>6</sup> 9 <sup>6</sup>	3.5 oz. CROSSTECH® EMS Barrier

FR		
Outer Shell (Designated by First Two Digits)		
PBO	13xx shell <sup>6</sup>	5.3 oz. Rip Stop – Bronze
Nomex	21xx shell <sup>6</sup>	6 oz. Rip Stop – Natural, Black, Tan, Yellow, Red, Navy, Royal Blue
Thermal Liner (Designated by Third Digit)		
EMS Products are 2 layer systems (an outer shell and moisture barrier only), so the third digit will remain "x" in all cases. Winter liners are available for all Morning Pride garments (see discussion on page 51).		
Moisture Barrier (Designated by Fourth Digit)		
CROSSTECH® SR	xxx <sup>6</sup> C <sup>6</sup>	1.7 oz. CROSSTECH SR on Nomex pajama check (3.3 oz.)

Please see pages 50 & 51 to find very important informational footnotes and winter liner information.

## Footnotes, All Charts

1. This material, when used with other layers that are also footnoted (1), will allow a composite system that can be certified to the 2000 edition of NFPA Standard #1971, if appropriate trim is also specified (please see catalog pages 52-55). If all materials chosen are footnoted (1) and you specify appropriate trim, your garment will automatically feature NFPA certification labeling. Please see discussion of NFPA Standard #1971 in the Total Fire Group Reference Guide for further details.
2. This material, when used with other layers that are also footnoted (2), will allow a composite system that can be certified to meet NFPA Standard #1976. If all materials chosen are footnoted (2), your garment will automatically feature NFPA certification labeling. Please see discussion of NFPA Standard #1976 in the Total Fire Group Reference Guide for further details.
3. This material, when used with other layers that are also footnoted (3), will allow a composite system that can be certified to meet Project FIRES-Final Report, if required trim is also specified (please see pages 52-55) and the following custom options are noted on your order:
  - Project FIRES labeling
  - traditional (i.e. non-bibbed) waist high pants with either Tails or 35" nominal coat
  - and a long wristlet (which is standard on our BPR coats/tails).

Please see discussion of Project FIRES standard in Total Fire Group Reference Guide for further details.

4. Canadian General Standards Board – Nearly all Morning Pride composites are certified to CGSB 155.1 (2001). CGSB 155.1 (2001) includes many requirements that are identical to NFPA #1971 (2000 edition): however, there are some key differences (see the Total Fire Group Reference Guide for a description of these differences). For a full discussion of the CGSB (and BNQ) requirements, please refer to those sections of the Total Fire Group Reference Guide.
5. This material, when used with other layers that are also footnoted (5), will allow a composite system that can be certified to the CEN standard, if the following custom options are noted on your order:
  - CEN labeling
  - 32"/35" Tails (when Tails are ordered)
  - and a flapped waistband liner attachment (when pants are ordered).

It is not a Standard requirement but many CEN specifiers also prefer reversed garment closure and tapered pants legs. Finally, many CEN specifiers wish to reduce either/both weight and cost from their garments, a list of such options is provided in our price list. Customers are cautioned that CEN insulation and other requirements are lower than those of the other Standards discussed on this page, so many CEN certifiable materials may NOT be used in other systems. Please see discussion of CEN garments in Total Fire Group Reference Guide for further details.

6. This material, when used with other layers that are also footnoted (6), will allow a composite system that is triple, dual or single certified to NFPA Standard #1999 to insure bloodborne pathogen resistance testing has occurred.
7. 6 oz. shells offer strong, anti-stress advantages but less durability (especially in pants). Customers are encouraged to weigh their relative needs for stress management - vs - durability.
8. Field testing has shown, under some conditions, this very lightweight system may exhibit unusually short alarm times (as compared to other more traditional systems). It is **STRONGLY** recommended that this liner be ordered with Dead Air Paneling – expanded placement (pages 70 and 71), to retain stress reducing lightness while maximizing alarm times. Alarm time is the time between first pain recognition and second degree burns. Maximum alarm time gives the firefighter more time to alter the environment to avoid burns.
9. Southern Mills, manufacturer of this product, recommends this layer not be used with 6 oz. outer shells because of barely compliant NFPA TPP levels (with some moisture barriers). You may request a summary of system composite TPP from our Customer Service Department for further details on how moisture barrier choice affects total insulation TPP provided.



## Winter Liner Options

### **For Structural BPR, Structural LTO, Proximity BPR, and Proximity LTO Garments**

We recommend our 10 oz. Black Nomex fleece vests (no sleeves, ends just below the waist). You may request custom quotations on any other materials used in our FR thermal liners, but the Nomex fleece offers great warmth, flexibility, excellent moisture management properties and is light weight. It is the winter liner of choice. You may also request custom quotes on full liners, not just vests, but they add considerable cost and the vest systems seem to deliver almost as much warmth with much better flexibility. Vests are chosen ten times as often as winter liners by our customers. Pant winter liners may also be custom quoted, but are usually not utilized, since the extra warmth of a winter liner seems most needed in the coat garment area. In these families of garments, winter liners will snap in via MIL spec glove snaps for easy in and out removability.

### **For Structural TAC garments**

We do not recommend a winter liner in these garments as it vastly complicates reversibility.

### **For Technical Rescue/USAR and EMS garments.**

We recommend our 10 oz. Black Nomex fleece vests for the Technical Rescue/USAR and the FR EMS families for the same reasons discussed in the first paragraph above.

For the non-FR EMS family of garments, we recommend our 10 oz. Navy Blue polar fleece vests, again for the same reasons noted above. Thinsulate nylon liners are also a good choice, especially in pants where the smoother surface makes donning easier. The thinsulate liners are also highly insulative and weigh 8.4 oz. The quilt stitch nylon product is red on the side facing the body and royal blue on the other side.

### **If you are not ordering a Winter Liner with your new Technical Rescue/USAR or EMS gear but may want one in the future...**

It is important to remember that Technical Rescue/USAR and EMS garments are standard two layer products (outer shell and moisture barrier, no thermal liner). While winter liners are available, they can only be attached via a zipper. Non-zipper alternative attachment methods (such as snaps used in the Structural BPR, Structural LTO, Proximity BPR and Proximity LTO families) can abuse the moisture barrier during the grueling, EMS Standard #1999 25 cycle wash preconditioning (both the USR and EMS garment families meet the EMS standard). Many first responders will utilize sweaters, heavy slacks, thermal underwear, etc. under these garments rather than winter liners; so we did not standardize the expense of a zipper winter liner adaption strip on all USR and EMS garments. If you feel you may want a winter liner in the future but are not ordering one when you order your USR or EMS garment new, we strongly suggest you order a 1/2 zipper in your new garment (to allow easy zip in of a potential future liner, as it is VERY expensive to add a zipper later after the coat is made). If you order a winter liner when ordering the new garment, the zipper to accommodate the winter liner's use will of course automatically be provided (and the cost is included).



**NOTES: Coats and tails may be ordered with either vest style or sleeved winter liner systems, which end just below the waist. Pants winter liners extend to the cuff. All Structural and Proximity winter liners attach and detach easily from the main garment via MIL spec glove snaps. USR and EMS winter liners are zippered in and out. Please consult the price list for further details.**

## Comparison of Standards' Trim Requirements

**Structural** - There are two primary Standards governing Protective Clothing for Structural Firefighting with slightly differing trim requirements (CEN allows but does not require trim):

### NFPA #1971 2000 EDITION (also meets CGSB requirements)

### Project Fires Design Criteria® 1985

#### General Requirements

- Retroreflective areas must have a width of at least .625".
- Fluorescent area must be at least 2" in width.
- Fluorescent & reflective minimum trim pattern areas of tape must be continuous and not covered by garment components.
- There shall be no reflectivity gaps greater than .125".
- Trim shall have a Coefficient of Retroreflection of not less than 100 cd /fc / ft following simulated rain fall and shall be designated as fluorescent.
- Tape must be at least 2" in width.
- Trim shall not melt, separate or ignite when placed in a 260°C forced air oven for 5 minutes.
- Trim shall not have a char length more than 4" or an after flame of more than 2 seconds when tested for flame resistance.

- Fluorescent & reflective areas must be 3" width.
- Fluorescent & reflective areas of tape must be continuous & not covered by garment components.
- There shall be no reflectivity gaps greater than .125 inches.
- Trim must have a minimum 150 CPL rating (brightness measure equivalent to coefficient of reflectivity).
- Trim shall not melt, separate or ignite when placed in a 260° C forced air oven for 5 minutes.

#### Coat Requirements

- Coats cannot include vertical trim bands on front.
- Coats must have minimum trim pattern of reflective and fluorescent material.
- Coats must have one circumferential band around bottom hem.
- Coats must have one horizontal band on front chest.
- Coats must have either one horizontal or two vertical (one left and one right) on back.
- Coats must have one circumferential band or staggered 360 degree visibility pattern on each cuff between the elbow and the wrist.

- Coats must have circumferential body and wrist bands as well as two rear vertical stripes (or other front to back differentiation of specification approved by the IAFF).
- Coats must feature 325 sq. inches of fluorescent trim.
- Coat must have 100 sq. inches of retroreflective area.

#### Pant Requirements

- Pants must have minimum trim pattern of reflective and fluorescent material.
- Pants must feature one circumferential band around each cuff between the bottom hem and the knee.

- Pants must feature a circumferential band around each leg between hem and knee.
- Pants must feature 100 sq. inches of fluorescent trim.
- Pants must feature 50 sq. inches of retroreflective trim.

**Proximity** - NFPA Standard #1976 prohibits the use of any reflective trim, as it fails the radiant reflective requirements of the Standard.

**Technical Rescue/USAR** - NFPA Standard #1951 imposes the same trim and fluorescent color requirements as NFPA Standard #1971 Structural Firefighting trim requirements.

**EMS** - NFPA Standard #1999 does not require nor prevent the use of trim on a certified EMS garment.

**Wildland** - NFPA Standard #1977 does not impose any trim requirements, nor does it prevent use of trim on certified garments. The NFPA Standard #1977 appendix indicates trim is advantageous but may be covered by the many items which the Wildland firefighter must carry. This means trim of any color, any material and in any placement package may be ordered on a certified Wildland garment but it is not required that trim be ordered (it is at the customer's choice).

## Discussion of Trim Materials Available

New trim products are on the horizon - please contact our Customer Service Department for updates at time of order.

### Reflexite and Reflexite Power Trim

In June of 1986, Reflexite introduced new, brighter products. Like their older products, the new product employs closed cube prisms as the reflective elements. Advantages of Reflexite include ease of cleaning, ability to reflect equally well wet or dry and resistance to abrasion of the reflective elements. Disadvantages include a relatively low melting point (300° F approximately) and loss of reflectivity after high heat exposures. Reflexite is available in 2" or 3" widths in White (EMS only) or fluorescent Lime, 3" Lime with White center strip (Lime/White Power Trim) and 3" Orange with White center strip (Orange/White Power Trim) and 3" Orange with Lime center (Orange/Lime Power Trim). Reflexite has a 150 coefficient of reflectivity.

### Scotchlite™ (3m™ Scotchlite™ Reflective Material)

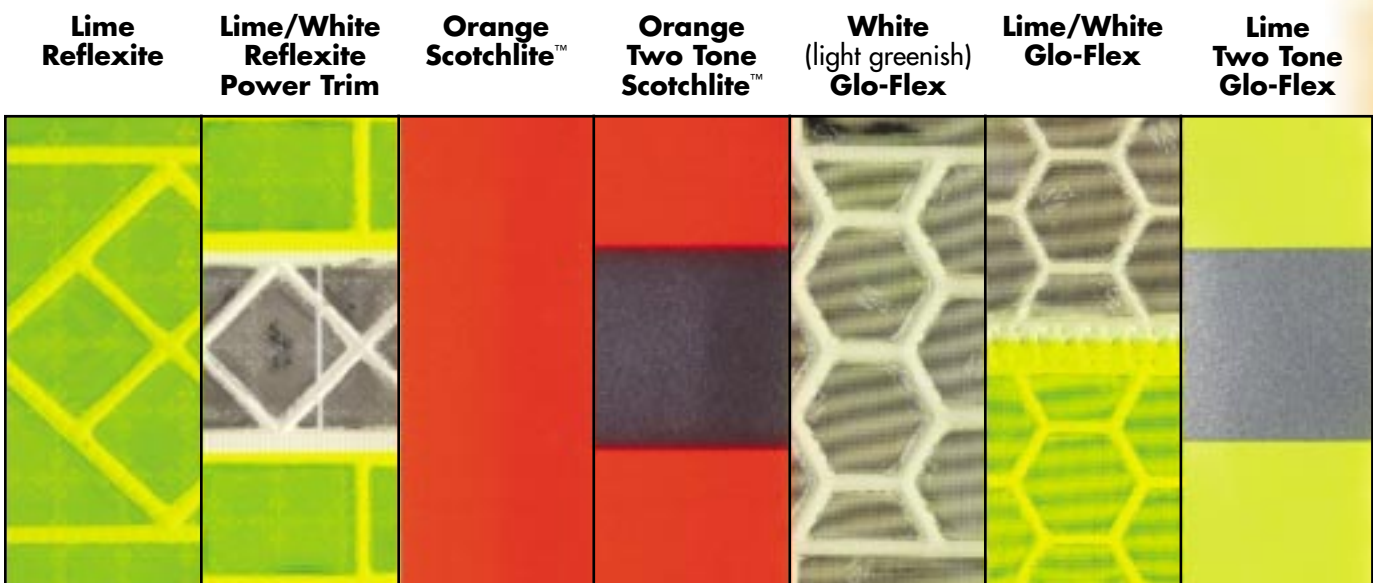
Employs exposed glass bead reflective material. Advantages include higher heat resistance than Reflexite products. Disadvantages include a tendency for the exposed glass beads to abrade off and/or clog with dirt over time (reducing reflectivity) and a slightly lower wet reflectivity. Unlike Reflexite, Scotchlite™ reflects light back in a silver color (not the trim color). Scotchlite is available in 2" or 3" widths in Silver (EMS only) (500 coefficient of reflection), White (EMS only) (100 coefficient of reflectivity), fluorescent Orange or Lime (175 coefficient of reflectivity).

### Two Tone Scotchlite™

Offers the same general characteristics as the one tone Scotchlite™ and is available in Lime and Orange. Additionally, this product offers the highest heat resistance (500° F) of any trim product and meets FSTM 191, method 5903 (a Project FIRES requirement). This 3" width trim features a 1" wide super Silver reflective strip (500 coefficient of reflection) centered on 2" of non-reflective fluorescent backing at a total package coefficient of 150. The new two tone features a mid Silver strip incorporated into the backing for improved durability. This new trim has slightly fuzzy demarcation between the Silver and fluorescent areas (available with both Orange and Lime fluorescent backgrounds). Also, on occasion the width of the new Silver strip will vary slightly.

### Glo-Flex

These Lime two tone, light Greenish White and Lime/White and Orange/White products are both reflective and photoluminescent (it glows in the dark). No other trim offers photoluminescent properties. Glo-Flex exhibits a bright Green after glow to the dark adapted eye for up to 4 hours. Glo-Flex is available in 2" & 3" widths.



Also Available in White (EMS only, slightly different grid pattern)

Also Available in Orange/White and Orange/Lime

Also Available in Lime, Silver (EMS Only) and White (EMS Only)

Also Available in Lime

Also Available in Orange/White



## Trim Placement Packages

- Certified **Proximity** models can **NOT** be ordered with trim.
- Certified **EMS** garments can be ordered with any trim color, any trim material and any trim placement - OR - they may be ordered without trim.
- Certified **Technical Rescue/USAR** garments **MUST** be ordered in any one of the ✓ placements below in any of the fluorescent (not White or one tone Silver) trim colors available.
- Certified **Structural** garments **MUST** be ordered in any of the ✓ placements below in any of the fluorescent (not White or one tone Silver) trim colors available to meet NFPA, Project FIRES & CGSB requirements. CEN certified garments may be ordered with any or no trim.

### NOTE:

Coat diagrams below depict 35" traditional style coats. Tails coats also feature a 2" strip of trim at the base of the Tail (please see photo on page 19). Also on Tails coats, the hem & chest bands are 6" closer together than on a 35" length coat. The NFPA Standard preclude custom option coverage of minimum trim placements (see facing page) so options blocking trim from top will be moved up and options blocking trim from the bottom will be moved down. Trim above required minimums will be covered (i.e. bellows pockets over pants seam trim) without special note on your order.

### SPLIT CUFF OPTION



**Front View** **Back View**  
To preserve some circulation to extremities in view of some reports of burns under trim



Front View



Back View

## Standard Trim Placements\*

Base #	Base & Suffixes	Reflexite (R)	Reflexite Power Trim (P)	Scotchlite Solid (S)	Scotchlite Two Tone (T)	Glo-Flex Solid (GS)	Glo-Flex Two-Tone (GT)	Glo-Flex Dual (GD)
TR-STD1	2" chest/back, sleeves & hem	✓	X	✓	X	✓	X	X
TR-STD2	2" chest/back, sleeve 3" hem (formerly "NFPA" package before other packages became certifiable with edition requirement changes)	✓	X	✓	X	✓	X	X
TR-STD3	3" chest/back, sleeve & hem	✓	✓	✓	✓	✓	✓	✓

\*These trim placements do **NOT** meet Project FIRES requirements.



Front View



Back View

## New York Trim Placements\*

Base #	Base & Suffixes	Reflexite (R)	Reflexite Power Trim (P)	Scotchlite Solid (S)	Scotchlite Two Tone (T)	Glo-Flex Solid (GS)	Glo-Flex Two-Tone (GT)	Glo-Flex Dual (GD)
TR-NY1	2" chest/back, sleeves & hem	✓	X	✓	X	✓	X	X
TR-NY2	3" chest/back, sleeves & hem	✓	✓	✓	✓	✓	✓	✓

\*These trim placements do **NOT** meet Project FIRES requirements (with back lettering, waivers can be requested from IAFF).

## Project FIRES Style Trim Placements\*



Front View



Back View

Back View

Base #	Base & Suffixes	Reflexite (R)	Reflexite Power Trim (P)	Scotchlite Solid (S)	Scotchlite Two Tone (T)	Glo-Flex Solid (GS)	Glo-Flex Two-Tone (GT)	Glo-Flex Dual (GD)
TR-PF1	3" chest/back, sleeves & hem	✓	✓	✓	✓	✓	✓	✓

\*These placements meet Project FIRES requirements.

## Pant Trim Placements



Front/Back View



Front/Back View

Base #	Base & Suffixes	Reflexite (R)	Reflexite Power Trim (P)	Scotchlite Solid (S)	Scotchlite Two Tone (T)	Glo-Flex Solid (GS)	Glo-Flex Two-Tone (GT)	Glo-Flex Dual (GD)
TR-CF 1	2" cuffs	✓	X	✓	X	✓	X	X
TR-CF 2	3" cuffs*	✓	✓	✓	✓	✓	✓	✓
TR-CS 1	2" cuffs, seams	✓	X	✓	X	✓	X	X
TR-CS 2	3" cuffs, seams*	✓	✓	✓	✓	✓	✓	✓
TR-CS 3	3" cuffs, 2" seams*	✓	✓	✓	✓	✓	X	X
TR-CS 4	2" cuffs, 3" seams	✓	X	✓	X	✓	X	X

\*These placements meet Project FIRES requirements.

## Custom Trim and Lettering Packages

Available on a Special Quote Basis. – Please contact our Customer Service Department for pricing and details (the Dayton address, phone and fax is provided on the back cover of this catalog). Please see photo below for one example.

## Lettering and Flags

2" & 3" lettering is available in sewn-on (solid color) Scotchlite (Silver, White, Lime or Orange) and bond-on Scotchlite (Silver, White, Lime or Orange). Sewn-on Reflexite (White, Lime or Orange) and Glo-Flex (3" White only) is also available. Please consult our Customer Service Department for updated information if this type of lettering is desired. Please specify size and material of lettering.

Again, Custom Lettering, as in photo to the right, may also be ordered and quoted. Please contact our Customer Service Department for pricing and details (contact information is on the back cover of this catalog).



Please see page 76 for available American and Canadian sewn-on Glo-Flex Flags.



## Other Reflective Options (EMS Only)

Principally used on helmets (i.e. Stars of Life, First Responder patches, etc.), some may also be ordered sewn onto EMS garments. Please see Helmet catalog for further details.

# Morning Pride Exclusive Suspender Products

## All In Stock For Immediate Shipment

### **Pivot Point** (Patented) **Suspender Technology**



#### Dynamic Action Suspendering Technology Explained:

Dynamic action suspenders feature a unique floating pivot point action mid back. During motion, human body extension is approximately equal BUT redistributed (i.e. when we bend to the left our left side contracts but our right side extends a corresponding amount). The action mid-back allows the dynamic action suspendering products to “mimic” the extension redistribution during motion of the human body. In this way, motion is easily permitted without the use of standard suspenders which must use elastic primarily to permit motion. As the discussion of our industry standard suspenders (on page 58) indicates, there are numerous problems with these “elastic reliant” suspenders since they extend at any time they are stressed (i.e. a firefighter loads his pockets with heavy tools, or the bunker pants become heavier as they get wet). Dynamic action suspenders extend only at appropriate times when the body redistributes through motion; they are not fooled into extending at inappropriate times (again please see industry standard suspender discussion on page 58 for an enumeration of the problems that occur when suspenders extend at inappropriate times). All dynamic action suspender products are constructed of strong, wide non-elastic webbing, heavy duty hardware, extra heavy thread and lock stitching.

- No More Bunker Bounce
- Forged, Extra Strong Hardware
- No Leather To Rot
- No Slip Sizing
- Full Motion Without the Problem of Full Elasticity

### **Six Dynamic Action Suspender Models Available**

**Dyna-Fit Suspenders** – please see page 57

Code	Description
SP-DF8C	Dyna-Fit with eight point suspender button attachment, circle hardware, metal hooks
SP-DF8CSA	Same as above but with button snaps (not metal hooks)*

**Dyna-Max Suspenders** – please see page 57

Code	Description
SP-DMC	Dyna-Max with eight point suspender button attachment, circle hardware, metal hooks
SP-DMCSA	Same as above but with button snaps (not metal hooks)*

**Dyna-Back Suspenders** – please see page 58

Code	Description
SP-DBC	Dyna-Back with eight point suspender button attachment, circle hardware, metal hooks
SP-DBCASA	Same as above but with button snaps (not metal hooks)*

### Two Styles of Suspender Attachment




**Traditional Metal Hooks** (will not interface with TAC and USAR pants). The Structural BPR, Structural LTO, Proximity BPR, Proximity LTO and EMS pants feature suspender buttons as a standard, and would interface with these traditional metal hood suspenders. These garments can also be custom optioned with the loops to accommodate the use of snap bottomed suspenders, shown to the left.

**\*For Technical Rescue/USAR gear, you must order the new “rig friendly,” Non-Suspender Button Snaps.**

**New “rig friendly,” Non-Suspender Button Snap** attachments are the **ONLY** suspendering system that coordinate with Structural TAC pants (suspender buttons would be very uncomfortable when the system was reversed) and with USR pants (where users have asked us to avoid metal use whenever possible due to sparking concerns). Our other prefix-ID families of pants can be custom optioned with this suspender attachment method as well.

*Please see page 58 for discussion of regular industry standard suspenders (NOT recommended) and a discussion of available suspender custom options.*

**IMPORTANT NOTES:** The incredibly positive market reaction to pivot point suspender technology had led some competitors to offer pivot point “lookalikes”. These copies cannot, however, offer the action back firm support WITH FULL MOTION since the floating action pivot back is a patented product available ONLY through Morning Pride. Thus, these copies offer the appearance but not the unique functionality that has made the action back technology suspenders such a success. The H-back suspender products also sometimes offered as dynamic action equivalents fail to offer the dynamic action’s firm support and unrestricted motion; H backs feel good standing still but restrict motion and have a pronounced tendency to slip off the shoulders.

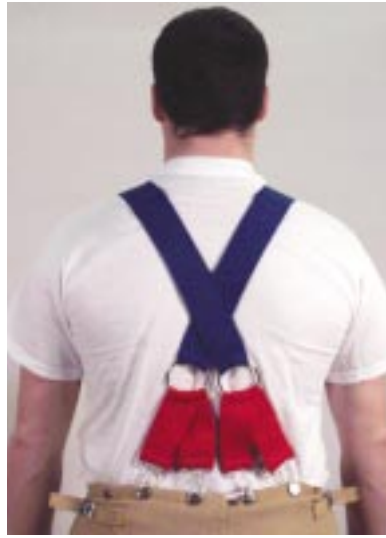


## The Dyna-Fit Suspender

**Our best and most comfortable suspender**



8 Point Dyna-Fit – Shown with Circle Hardware Front with traditional metal hooks



8 Point Dyna-Fit – Shown with Circle Hardware Rear with traditional metal hooks

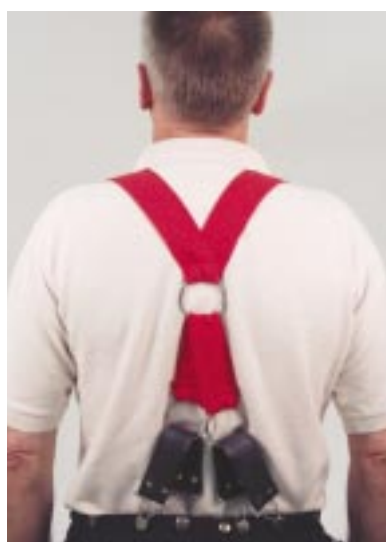
As the photos above show the Dyna-Fit product has no mid back hardware. Float is accomplished through an interplay of the suspender loop. This is probably the strongest and most comfortable firefighter suspender ever offered to the market. Dyna-Fit are blue with red elastic straps.

## The Dyna-Max Suspender

**One of the most durable and technologically sophisticated suspenders on the market.**



Dyna-Max – Shown with Circle Hardware Front with traditional metal hooks



Dyna-Max – Shown with Circle Hardware Rear with traditional metal hooks

**New**

**The Dyna-Fit with padding and quick adjust options is very rapidly becoming the most popular suspender on the market.**

Popular Quick Adjust & Padded Shoulder Options (see pg. 58)

Padding Option      Quick Adjust Option

8 Point Dyna-Fit – Action Back Illustrated with traditional metal hooks

The Dyna-Max and Dyna-Back suspender products are essentially identical products except in the material chosen to connect the suspender button hooks to the cotton webbing of the main helmet body. The Dyna-Max utilizes a double layer of high technology, flame resistant, elasticized polymer, while the Dyna-Back utilizes high grade elastic in that limited area.

The Dyna-Max's polymer material, while a little heavier and stiffer than the Dyna-Back's elastic:

- Allows us to meet the heat resistance requirements of NFPA Std. #1971 (although not yet a requirement for suspenders, it certainly is an important advantage)
- Allows for a more durable product
- Allows absolutely no stretch out over time, as the polymer straps will retain 100% of their rebound memory over their lifetime
- Does not require stay stitching so allows us to create four additional pivot points (in comparison to the Dyna-Back), as well as the mid back for unparalleled mobility

Dyna-Max suspenders are red with black polymer straps.

*Suspender discussion continues...*

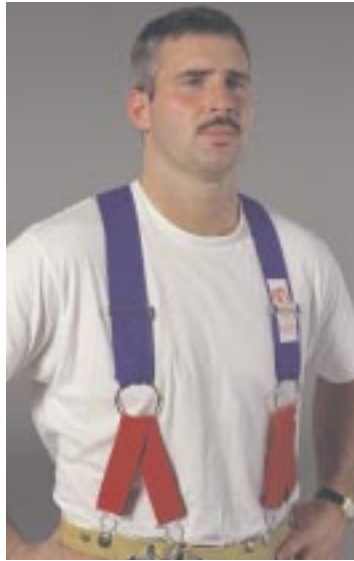
Suspender discussion continued...

## The Dyna-Back Suspender

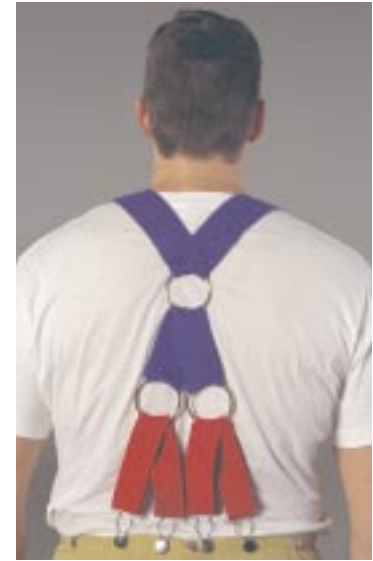
**The original dynamic action suspender, still extremely comfortable, reliable and hugely popular**

Again, the Dyna-Max and Dyna-Back suspender products are essentially identical products except in the material chosen to connect the suspender button hooks to the cotton webbing of the main helmet body. The Dyna-Max utilizes a double layer of high technology, flame resistant, elastomeric polymer, while the Dyna-Back utilizes high grade elastic in that limited area.

Dyna-Back suspenders are blue with red elastic.



Dyna-Back – Shown with Circle Hardware Front



Dyna-Back – Shown with Circle Hardware Rear

## Suspender Upgrades

Available only on Dynamic Action Suspenders

**Reflective Trim:**  
Suspenders trimmed with the two tone reflective Scotchlite material

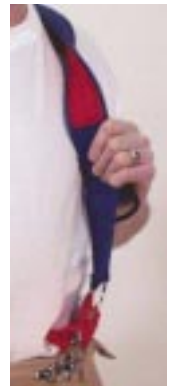


**“Quick Adjust”:**  
Suspenders with “Quick Adjust” mechanism to allow snugged fit after easy donning (no need to duck shoulders)



Note: This option is NOT available on elastic suspenders.

**Padding:**  
Shoulder suspension cushioning



## Industry Standard Suspender Products

Traditionally, firefighters’ suspenders have been constructed of heavy duty elastic. These suspenders permit easy motion and are inexpensive.

However, while these are the best elastic suspenders possible (i.e., premium grade elastic, lock stitching, etc.) there are problems INHERENT and unavoidable with elastic suspenders. The biggest problem is that elastic extends **whenever** it is stressed. Thus, not only does it extend at appropriate times (firefighter extension during motion) but also at inappropriate times (pants become heavier as they become water saturated). Extension at inappropriate times leads to many undesirable results: Bunker “bounce” while walking.

Pants slide down as worn resulting in lowered crotch and upper leg motion restriction (this often results in crotch rip out during attempts at ladder climbing/stepping onto truck, etc.), as well as frayed cuffs, as suspenders extend and fail to provide adequate pants support.

Most firehouses are full of elastic suspenders taped, stapled, sewn, etc. to address these problems. Once these adjustments are made, mobility is severely restricted. Finally, the field life of elastic suspenders is very short (typically one year).

Because of these inherent problems with elastic products, the action backed suspender products (discussed on pages 56 - 58) were developed. Customers are respectfully urged to consider these better performing products first: they are more durable, are not “fooled” into extension at inappropriate times, eliminate “bunker bounce”/ “crotch rip-out” and are consistently preferred in comparative field tests.



Elastic suspenders are available only in red and only with metal hooks (Code H SP-REG).

## Boot Access Panel Pants

This patented design allows a firefighter to slip into his bunker pants without having to remove his dual duty (station wear and firefighting) boots.

The increasing use of leather dual duty boots (either lace up or zippered) had previously presented a problem since normal pants legs are not wide enough to permit quick donning with a booted foot. Simply widening the pants legs did not address the problem since then the garments were cumbersome to work in during firefighting operations.

Working closely with large, leather boot equipped departments, we developed this BOOT ACCESS PANTS concept.

BOOT ACCESS PANTS feature widening inserts on the seam of each leg. These panels extend from cuff to crotch and have accommodated up to a 16 EEE booted firefighter's foot. After donning the pants, the firefighter zips up two leg zippers and the visual appearance of the pants is identical to standard gear. Failsafe panels behind these zippers insure NFPA level protection even if zippers are not closed before firefighting (or break during firefighting).

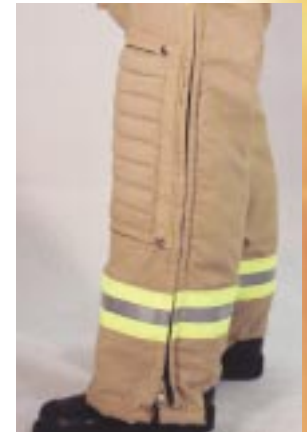


BOOT ACCESS PANTS represent the only way to utilize bunker pants (NFPA #1500 required) and dual duty zippered or lace up (for ankle support) boots with effective response time.

Shorter zippers also available for USR and EMS prefix IDs



Expansion panel allows easy donning, even over the largest booted foot.



With zippers closed, pants have standard visual appearance and do not restrict normal motion.

**Models on Which This Custom Option is Available are ✓:**

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
<b>Prefix ID:</b>	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> USR	<input checked="" type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input type="checkbox"/> TAC			

### Opening Panels After Firefighting Also Reduces Stress By Expediting Heat Escape

**NOTE:** When the full length boot access panel pants are ordered with outseam pockets (like bellows), it is necessary to move those pockets up. This will not usually allow the option of medical records pocket (on longer inseam pants, it is sometimes possible to retain the medical records pocket – please note on your order if you wish us to use that pocket on the longer inseam pants on your order while not using them on shorter inseam pants on the same order).

## Liner Keeper Strap Model BI-LK

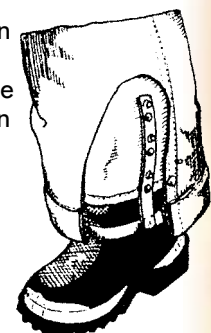
(Patented)

A common fireground complaint is pants or pant liners that ride up over the boots. This condition is not only uncomfortable but can also allow a breach in the protective envelope. To address this problem, our Liner Keeper Strap was developed. The Strap is constructed of heavy duty webbing and adjusts to the circumference of the particular boot (at the ankle area with hook and pile tape). Extending from the webbing circle at the ankle are two vertical webbing strips (see example on the right) that include a series of male and female snap button pieces at various heights. These snap button pieces interface with the hardware on the pants that unite the pant's liner to the outer shell. The Liner Keeper Strap is interfaced to the pants/boot interface area by snapping the male snap piece on the liner into a female snap at the correct height on the vertical webbing strip of the strap. A male snap on the reverse side of the same vertical strip is snapped into a female snap on the pants' outer shell. The result is a secure attachment between boot and pants that helps prevent pant ride-up over boots, while preserving unrestricted air flow and easy motion. Once adjusted, the Strap may be released from the boot via the hook and pile tape to allow laundering with the pants or a change in boots easily.

The Liner Keeper Strap is available as a boot custom option.

**Models on Which This Custom Option is Available are ✓:**

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
<b>Prefix ID:</b>	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> USR	<input checked="" type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input checked="" type="checkbox"/> TAC			



Boot to Pant Interface discussion continues...





## Ankle Fit Strap Model BI-ALK (Patented)

The Ankle Fit Strap is basically a Liner Keeper Strap modified to include a spring mounted tension buckle on the circumferential ankle band. The inclusion of the tension buckle means the strap can be used to cinch down the boot at the ankle to allow tighter fit and better ankle support (but it can be left open until after boots are donned to avoid the more difficult donning of tightly fit boot products).

The Ankle Fit Strap may be ordered as a boot custom option for new or used boots.



**Models on Which This Custom Option is Available are ✓:**

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input type="checkbox"/> USR	<input checked="" type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input checked="" type="checkbox"/> TAC			

## Adjustable, Replaceable Chinstrap (Patented)

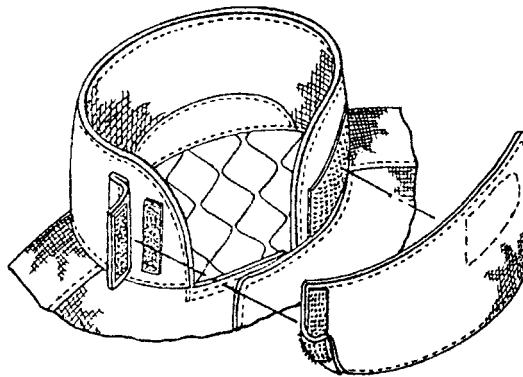
(Patented)

Historically, chinstraps are stitched to the underside of the collar.

Our new adjustable chinstrap attaches via a doubled hook/pile system (or snaps if requested) to offer the following advantages:

- Almost infinite adjustability for personal preference
- Allows separate laundering of the chinstrap

This option does not change how firefighters deploy their chinstrap. This option is particularly effective when ordered in combination with the comfort chinstrap (available on LTO only).

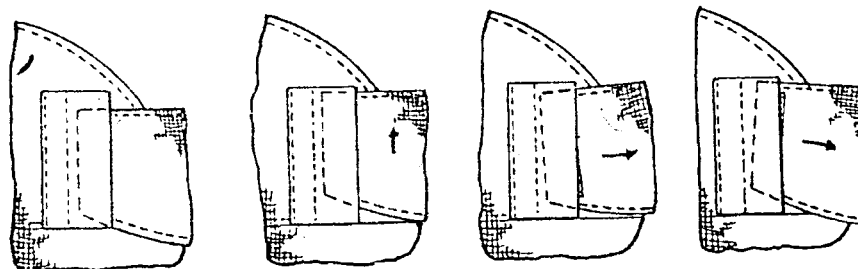


**Models on Which This Custom Option is Available are ✓:**

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input type="checkbox"/> BPR	<input type="checkbox"/> BPR	<input type="checkbox"/> USR	<input type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input type="checkbox"/> TAC			



Allows Firefighter Choice Of Chinstrap Design And/Or Method Of Attachment (Hook & Pile Or Snaps)



The Adjustable Chinstrap allows the firefighter to modify chinstrap placement almost infinitely for perfect comfort and maximum protection.

## **Foldover Comfort Chinstrap** (Patented)

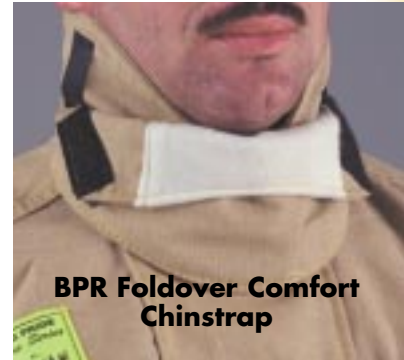
Standard on "BPR" coats/tails

Firefighter neck heights and diameters vary widely by individual. Therefore, it has been extremely difficult to design the "correct" width chinstrap. A strap that was perfect for one individual would be too wide (uncomfortable) for a second and too narrow (gaps in protection) for a third.

Our FOLDOVER COMFORT CHINSTRAP addresses this problem by incorporating a neck conforming (and accommodating) crescent of knit material. The difference in fireground comfort is truly amazing.

**Models on Which This Custom Option is Available are √:**

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
<b>Prefix ID:</b>	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input type="checkbox"/> USR	<input type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input type="checkbox"/> TAC			



## **Stabilized Chinstrap**

(Pat. Pending)

The chinstrap can be stabilized to the shield to assure effective chinstrap to shield overlap is preserved in all situations, as the photo shows.



**Models on Which This Custom Option is Available are √:**

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
<b>Prefix ID:</b>	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input type="checkbox"/> USR	<input type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input type="checkbox"/> TAC			



## All Or Nothing Closure (Patented)

Like certain competitive products, ALL OR NOTHING allows liner detachability (for cleaning) but visual notification if a shell alone is being used.

However, ALL OR NOTHING offers the ADDITIONAL advantage of PREVENTING garment usage unless the liner is properly in place. This is accomplished since ½ the garment closure mechanism is removed when the liner is removed.

An assembled ALL OR NOTHING garment is visually indistinguishable from a normal garment but when the liner is removed, the garment cannot be closed and hence cannot be used. Unlike all competitive products which rely on the diligence and observational skills of the fire officer (already overburdened on the fire scene) to insure proper garment usage, ALL OR NOTHING garments are self policing – they CANNOT be used unless they are used properly.

Another advantage offered by the ALL OR NOTHING CLOSURE (in comparison to competitive products) is the fact that it is applicable on PANTS as well as COATS.

For departments interested in the ALL OR NOTHING CLOSURE concept who also wish to use their outer shells only for non-structural firefighting, a forestry shield is available. This separate forestry shield is completely reflective (hence obviously non-standard) and can be used with an ALL OR NOTHING CLOSURE shell to allow shell only non-structural firefighting.

Models on Which This Custom Option is Available are ✓:				
Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input type="checkbox"/> USR	<input type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input type="checkbox"/> TAC			



ALL OR NOTHING CLOSURE coat assembled is indistinguishable from a standard garment.



Removing liner and ½ coat closure is easy and quick with the concealed Nomex tape zipper.



With liner removed, closure and coat usage is impossible.



ALL OR NOTHING CLOSURE pants assembled are indistinguishable from a standard garment.



Removing liner and ½ pant closure is easy and quick with the concealed Nomex tape zipper.



With liner removed, closure and pants usage is impossible.

**NOTE:** The All or Nothing Closure is actually a liner detection mechanism and leaves the actual garment closure mechanism unaffected.

**ALSO....**

Morning Pride can also provide a notifying only (NOT self policing) LINER LOCATOR system PATENTED (such as our competitors offer). This system is less expensive. This system is discussed as one of our "Liner Custom Options" on page 72.



# Various Velcro Combination Closure Options

## For Structural & Proximity Models

(Structural TAC, USR and EMS only available with their standard closures. Please see chart on pages 16 and 17).

Hooks & Ds / Hook & Pile



2" Exterior Hooks & Ds on shield are supplemented with interior 1 1/2" (std.) on Structural and Proximity models or for those same models, a 2" Hook & Pile tape (upcharge) is also available.

Zipper / Hook & Pile



Exterior 1 1/2" or 2" wide Hook & Pile on shield supplemented by interior zipper

Chicago Closure



7" wide shield with exterior Hook and Pile tape covering interior reverse Hooks & Ds. Top right corner of shield (as worn) is slightly angled with this closure on new edition garments to stabilize the wider shield placement. (Pat. Pend.)

**Models on Which This Custom Option is Available are ✓:**

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input type="checkbox"/> USR	<input type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input type="checkbox"/> TAC			

**Models on Which This Custom Option is Available are ✓:**

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input type="checkbox"/> USR	<input type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input type="checkbox"/> TAC			

**Models on Which This Custom Option is Available are ✓:**

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input type="checkbox"/> USR	<input type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input type="checkbox"/> TAC			

**NOTE:** While our standard Structural BPR, Structural LTO, Proximity BPR and Proximity LTO closure remains Hook & D exterior with interior continuous Hook & Pile tape (illustrated top left) because of the superior pathogen shielding provided, customers may now request Hook & D exterior closure with either no interior Hook & Pile or non-continuous Hook & Pile (or other custom option closures shown here).

## Low Bulk Closures (Zipper Interior)

### Tails/Coats and Pants (Patent Pending)

Firefighter garments were originally designed with the traditional shields and flies because alternative waterproof closure technology was not readily available.

However, the new closure concepts allow for the much lighter, lower bulk closure illustrated to the right (with the preservation of liquid shielding properties).

A coat LOW BULK CLOSURE reduces garment weight 6 ounces and a pants LOW BULK CLOSURE reduces garment weight 2 ounces. In both cases a hook and pile flap covers a Nomex based, non sparking brass zipper. The tails/coat low bulk runs at a diagonal so forward flex is not "opposed" by the bulk of the closure.



**Models on Which This Custom Option is Available are ✓:**

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input type="checkbox"/> USR	<input type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input type="checkbox"/> TAC			

Closure Options continued...

## Pants Closure Options

### Modified Interior Closures

Photo below shows standard Structural BPR, Structural LTO, Proximity BPR and Proximity LTO closures (Reverse Hook & D with 1½" wide Hook & Pile tape for those same models). Interior pants closure may be modified to either 2" width Hook & Pile tape or round glove snaps.



**Models on Which This Custom Option is Available are ✓:**

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input type="checkbox"/> USR	<input checked="" type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input type="checkbox"/> TAC			

## Removable Crotch Reinforcement for Proximity Operational Model

(Pat. Pend.)

The aluminized PBI utilized in our proximity operational model is the most durable of the available aluminized products, but all aluminized products have limitations in that regard. A particularly vulnerable area is the pants crotch area. Our field test program has convinced us that the first and most severe wear occurs in that closely restricted area. The design of our Full Range of Motion (F.R.O.M.) crotch minimizes the amount of self abrasion that occurs, but still some is inevitable given the tightly constricted garment to body interface in that area. To address this problem for our proximity customers, we have developed this removable crotch reinforcement. The removable crotch insert attaches with hook & pile tape to the otherwise complete garment shell around the perimeter of the F.R.O.M. crotch insert. When wear does occur, the functional main shell is protected and the reinforcement piece can be replaced easily in the field (without garment out of service time). When ordering a replacement crotch reinforcement, please specify garment waist size.

**Models on Which This Custom Option is Available are ✓:**

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input type="checkbox"/> USR	<input type="checkbox"/> EMS
	<input type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input type="checkbox"/> TAC			





## Angled Cuff (Patent Pending)

The rear cuff of bunker pants are often the first areas to wear and once that wear begins, it can progress to challenge the integrity of the whole garment (i.e. raveling). By angling the back cuff, much of that wear is prevented. Customers are, however, cautioned that angling the back cuff also requires angling the liner/moisture barrier to prevent their exposure to the rigors of the firefighting environment and thus makes guaranteed protective overlap with the boots (in all body positions) a little more difficult to secure. Customers are urged to consider the use of liner keeper straps or boot ankle strap adjusters (shown on pages 59 and 60) with angled cuffs. Customers are also reminded that properly inseamed pants worn with firm suspenders like the Dyna-Backs and Dyna-Max (shown on pages 57 and 58) will also prevent rear hem deterioration.

Models on Which This Custom Option is Available are ✓:				
Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> USR	<input checked="" type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input checked="" type="checkbox"/> TAC			

## Cuff Reinforcements

Morning Pride sleeves feature an additional, sewn-on piece of outer shell material as a standard (except on Proximity garments where the cuff facing is 7.5 oz. PBI rip stop). Morning Pride pants cuffs feature a standard three layer outer shell hem. Some departments prefer to substitute an additional layer of outer shell material or an additional layer of long wearing Advance or Kevlar twill, irregardless of outer shell choice. Consult the price list for available upgrades and pricing. Leather cuffs are not recommended (but are available) because of dry rot and decontamination problems. Similarly, customers are cautioned that Arashield reinforcements can be a heat sink under certain conditions.

Models on Which This Custom Option is Available are ✓:				
Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> USR	<input checked="" type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input type="checkbox"/> TAC			



Coats

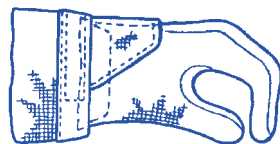


Pants

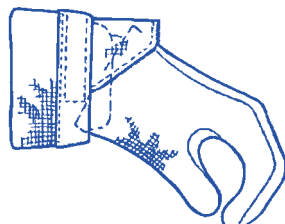
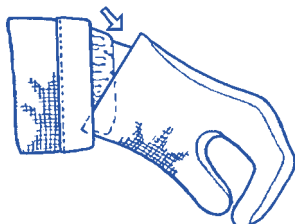
## Shingle Cuff (Patented)



Standard Cuff Design Allows Glove Liquid Entry In Some Hand Positions



Shingle Cuff Prevents Liquid Entry Without Any Hand or Arm Movement Restriction



Models on Which This Custom Option is Available are ✓:				
Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input type="checkbox"/> USR	<input type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input type="checkbox"/> TAC			

In some of our major city field tests, firefighters were reporting that their hands were getting wet even though they had verified the absolute waterproofness of their firefighters' gloves. After much in-field study, we determined that in certain hand positions, there could be a break between the waterproof coat sleeve and the waterproof glove. Liquids could then easily enter through the open gauntlet glove cuff or the (non-waterproof) glove wristlet. Since the glove was otherwise waterproof, any leakage was retained in the glove product. This new, shingle cuff design allows us to provide interface protection without hand restriction. The "shingle" attaches to the coat with Velcro (unless ordered permanently sewn on) so the firefighter can adjust depth and rotation for personal preference. Field tests show it has completely eliminated the glove water entry problem referenced.

Note: Extension matches outer shell material unless another material is specified on the order (no extra charge).



## Disposable Analysis Strip

Increasingly firefighters are facing the risk of exposure to caustic materials such as to PCB's which can represent a significant threat to firefighter health and safety. The testing to determine whether such exposure has occurred can often be destructive of the expensive turnout ensemble. The Disposable Analysis Strip design is an attempt to allow fire departments to get that analysis done without automatically sacrificing what may still be a non contaminated, serviceable and expensive garment.

The Disposable Analysis Strip (DAS) is sewn into each bunker coat and each bunker pant. As shown below, it is a 2 part strip.

The Disposable Analysis Strip is intended to be a removable, replaceable and sacrificial strip of material to be used at the discretion of the fire department. There are a variety of uses for this strip.

For instance it could be used by the fire department to determine through lab analysis whether the routine cleaning process currently in use by the department is effective, without sacrificing or destroying the garment to lab analysis. Also the Disposable Analysis Strip (DAS) may be used to determine whether a garment has been exposed to a chemical or biological agent and/or whether a garment has been properly cleaned after such exposure.

The DAS can be used by fire departments as a quality control measure, as well as to assure compliance with the cleaning requirements of NFPA 1851.

The DAS is made up of the same outer shell fabric as the garment to which it is attached. It is a 2 piece patch:

- a. The top piece is the lettering (see photo above) and on the reverse side a bar code with the garment serial number.
- b. The bottom piece is a separable 4" x 4" piece of outer shell material of sufficient size for most testing. When detached from the garment the analysis strip will be sent to a lab of the department's choosing for analysis. The contract cleaner will attach another strip with appropriate bar code label after the results of the evaluation is ascertained.

As quoted from a portion of the Appendix of NFPA #1851 (Selection, Care and Maintenance of Personal Protective Equipment), it is not always practical to assure that a garment has been cleaned properly, so the Disposable analysis strip could provide real value.

### From NFPA #1851 - November 2000 ROC Sec A 5.4.7.2

*"Organizations should be aware that decontamination of protective clothing and equipment is a complicated process for which there is no guarantee for demonstrating that protective elements are free from contamination. While the purpose of decontamination is to remove all contaminant(s) from the element, decontamination procedures or cleaning processes are not always 100% effective in removing all contamination. The actual success of a decontamination process can only be determined by measuring the concentration of the contaminant(s) in the element before and after the selected decontamination or cleaning process. The sole evaluation of contamination levels in rinse water is not an appropriate measure of decontamination effectiveness. Claims for protective elements being contaminate-free based on statements from contract cleaners or from the use of specific cleaning products should be viewed with caution. Procedures used for measuring contamination in levels of clothing should be specific to the contaminant(s) if known. Useful analytical procedures for measuring levels of semivolatile organic chemicals in materials are found in EPA method 3540 (extraction) and 8720 (analysis). These procedures involve extracting a small piece of fabric in a solvent such as methylene chloride and analyzing the extract solution using gas chromatography in conjunction with mass spectrometry. The gas chromatography separates chemical contaminants and quantifies their amount, while the mass spectrometry identifies the specific chemical."*

Models on Which This Custom Option is Available are ✓:				
Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> USR	<input checked="" type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input type="checkbox"/> TAC			



Barcode with serial number of garment is on reverse side of this lettering

Lower piece of material of sufficient size to test

**NOTE:** This strip is always black (bottom panel will match outer shell



View of Disposable Analysis strip on right sleeve of coat (on pants, DAS is placed right leg front below cuff trim).

## Elbow Reinforcements

There is no standard elbow reinforcement on Structural BPR, Structural LTO, Proximity BPR, Proximity LTO or EMS because we find elbow wear to not be a significant problem on those garments. However, Technical Rescue/USAR garments are used in confined space operations including crawling and the USAR standard thus requires elbow and knee reinforcements. **Even for non-USAR applications, some departments have special needs in that area (perhaps training schools where much knee and elbow crawling is done), so we offer a full range of reinforcement options.** The most durable outer shell reinforcement options are Kevlar twill (available only in pale yellow) or Advance (available in Black, Yellow or Brick Red). Please consult the price list for a complete list of available upgrades and pricing. Leather reinforcements are not recommended (but are available) because of dry rot and decontamination problems. Similarly, customers are cautioned that Arashiield reinforcements can be a heat sink under certain conditions and are not recommended. For proximity garments, only aluminized reinforcements may be ordered (except at collar and cuffs, where our standard is 7.5 oz rip stop PBI). Any reinforcements may be ordered sewn on or detachable via hook and pile tape.

**Models on Which This Custom Option is Available are ✓:**

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input checked="" type="checkbox"/> BPR <input checked="" type="checkbox"/> LTO <input checked="" type="checkbox"/> TAC	<input checked="" type="checkbox"/> BPR <input checked="" type="checkbox"/> LTO	<input type="checkbox"/> USR (Also EMS and Liquid Splash Haz-Mat certified)	<input checked="" type="checkbox"/> EMS



Black Advance on PBI garment Elbow Reinforcement



“Heat Channel Elbows” are very popular on Technical Rescue/USAR garments since they cushion the elbows while crawling through tight spaces.

## CLOTHING CUSTOM OPTIONS – EPAULETTES

### Epaulettes

Epaulettes are also available for rank or department markings.



**Models on Which This Custom Option is Available are ✓:**

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input type="checkbox"/> BPR <input type="checkbox"/> LTO <input type="checkbox"/> TAC	<input type="checkbox"/> BPR <input type="checkbox"/> LTO	<input checked="" type="checkbox"/> USR (Also EMS and Liquid Splash Haz-Mat certified)	<input checked="" type="checkbox"/> EMS

## CLOTHING CUSTOM OPTIONS – GLOVE INTERFACE

### Glove Interface Sleeve

The Glove Interface Sleeve was designed to allow the donning of the coat over an in place glove (perhaps a glove integrated and sealed to a NBC capable undergarment).



**Models on Which This Custom Option is Available are ✓:**

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input checked="" type="checkbox"/> BPR <input checked="" type="checkbox"/> LTO <input type="checkbox"/> TAC	<input checked="" type="checkbox"/> BPR <input checked="" type="checkbox"/> LTO	<input type="checkbox"/> USR (Also EMS and Liquid Splash Haz-Mat certified)	<input type="checkbox"/> EMS

## CLOTHING CUSTOM OPTIONS – HOOD OPTIONS



Hood Attached to Standard Detach Strip



OPTIONAL Storage Hidden Hood

### Hood Models

EMS models only feature a standard hood attachment strip. For these model garments, hoods are an extremely popular option for winter warmth and for water shielding during outdoor operations. Hoods will hang down the wearer's back (from the attachment strip) when not in use. The hoods attach to the strip via MIL Spec snap buttons. As an alternative storage system, we offer hide-away hoods where the hood is stored inside an outer shell zipper when not in use.

**Models on Which This Custom Option is Available are ✓:**

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input type="checkbox"/> BPR <input type="checkbox"/> LTO <input type="checkbox"/> TAC	<input type="checkbox"/> BPR <input type="checkbox"/> LTO	<input checked="" type="checkbox"/> USR (Also EMS and Liquid Splash Haz-Mat certified)	<input checked="" type="checkbox"/> EMS

## Heat Channel Knees (Patented)

**Improves crawling comfort while increasing insulation**

Some departments have found that the knee burns are a particular problem for them. At certain points of the burn curve, compression can reduce insulative performance. When kneeling, the firefighter's entire weight is spread over only a few square inches. If this compression at the knee decreases insulative performance, the transfer of heat is facilitated and conductive or scald burns could occur (in the presence of sweat or water). The Heat Channel Knee option addresses this potential problem in several ways:

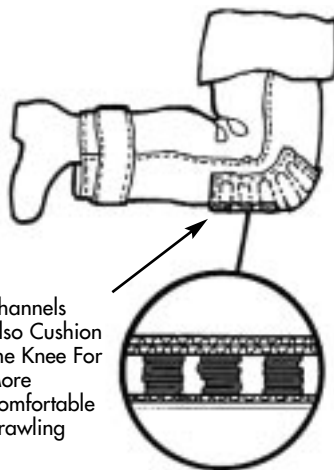
- the pads are highly insulative (in excess of 280 TPP units, when tested per NFPA Std. #1971)
- knee bending is very easy since the bend occurs at the lateral stitch points where there is no added bulk
- the pads hold the firefighter's knees above the kneeling surface, thus minimizing contact with hot embers, super-heated surfaces and scalding liquids
- in the event of a steam filled environment, the channels provide a "least resistance" pathway for steam to move away from the firefighter's body

Heat Channel Knees can be ordered for either outer shell or liner placement (please see photos to right). The exterior placement is strongly recommended, as it is far more comfortable; although the interior placement will keep the assembly drier (i.e. inside the moisture barrier) and therefore lighter. The replaceability option is also highly recommended since it allows adjustment of knee systems to firefighter preference and easy field replacement of this high wear garment area.

We recommend Kevlar/Nomex as the Heat Channel outer shell material of choice since it offers the highest level of abrasion resistance. Kevlar/Nomex is available in Black and that color works well with any outer shell material.

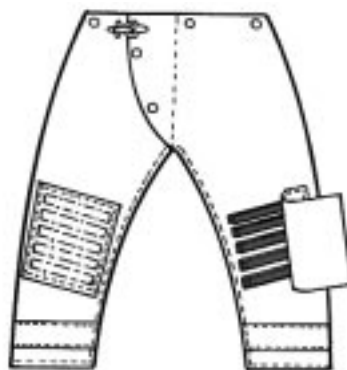
**Technical Rescue/USAR is required to have elbow and knee reinforcements. The heat channel knee is very popular for USAR applications since it is kneeling and crawling on an easy bending pillow (it is also our most popular Structural, Proximity and EMS knee for the same reasons).**

Models on Which This Custom Option is Available are √:				
Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> USR	<input checked="" type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input checked="" type="checkbox"/> TAC			



**Note: Heat Channel shoulders also now available for high intensity applications like advanced fire combat or advanced fire training.**

**Channels also "raise" knees above most hot debris & scalding liquids.**



The Heat Channels run horizontally to facilitate knee bending. Bending occurs only on thin layers at stitch lines. Because they are a soft material, they also effectively cushion crawling.



Photo shows replaceable **Exterior Placement** heat channel knee. Attachment is via Hook & Pile tape as well as corner straps. A three sided "picture frame" helps prevent the knee from catching on items in the fire environment, the bottom of the knee is secured with interior Hook & Pile. This exterior placement is so comfortable than field testers report they are not even aware of the assembly as they work. Its one disadvantage, availability for wetting, can be minimized with the removability feature that allows substitution of a dry assembly after the first fire of the shift. For departments that wish to avoid the channels on the exterior of the knee assembly, a "domed" cover may be specified which will cover the interior channels.



Photo shows replaceable, **Interior Placement** heat channel knee. Please note attachment is via Hook & Pile tape. Top "flap" prevents catching of foot or boot on pad as pants are put on. Customers are cautioned this interior placement is NOT as comfortable as exterior placement (but does prevent more wetting, since it rides inside the moisture barrier).

**NOTE: Please also see flex tucks & flex facilitator knee options under "Liner Options" pages 71 & 73. When removable knees are ordered, frame will typically match knee (please see price list for full details).**



Knee Options continued...



View of steel insert

## Puncture Resistant Knees (Patented and Patent Pending)

A better Heat Channel Knee (see facing page) and available only in combination with the Heat Channel knee, since the puncture resistant panel requires cushioning to stabilize.

For years now, firefighters' boots have offered ANSI Z-41 puncture resistance (the NFPA #1974 boot standard requires it). The need is even more critical now with the possibility of encountering AIDS or hepatitis-infected hypodermics, etc. in the dimly lit firefighting environment.

But let's face it, when the visibility is the worst – you are on your knees, not your feet. Morning Pride's new Puncture Resistant Dry Knee features the same MIL-s-301, Rev D3,020, Full-Hard, Corrosion Resistant Stainless Steel protection as the insole of your fireboots. With this option, the Heat Channel Knee (Patented - please see page 68) is backed with a Kevlar encased, pre-bent stainless insert.

The Kevlar prevents stainless movement and the padding (besides its insulative value) makes it impossible to even detect the presence of the metal.

Models on Which This Custom Option is Available are ✓:				
Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> USR	<input checked="" type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input checked="" type="checkbox"/> TAC			



## Reinforced and Cushioned Reinforced Knees

Photo illustrates a khaki Advance knee reinforcement on a PBI outer shell. A reinforced knee is a single layer of the specified reinforcement. A cushioned reinforced knee features both the reinforcing piece and an additional layer of flame resistant cushioning (although for maximum cushioning, the heat channel knee on the facing page is recommended.)

For all exterior knees discussed, on these two pages...

The most durable outer shell reinforcements available are Kevlar twill (available only in pale yellow) and Advance (available in Black, Yellow or Brick Red). Please consult the price list for a complete listing of all available reinforcements and pricing. Leather reinforcements are not recommended (but are available), because of dry rot and decontamination problems. Similarly, customers are cautioned that Arashield reinforcements can be a heat sink under certain conditions and are not recommended. For proximity garments, only aluminumized reinforcements may be specified (except for at collar and cuffs where our standard is 7.5 oz. rip stop PBI). If your order for a knee reinforcement does not specify a material or color, we will match your outer shell material and color. If your order calls for a different material knee reinforcement from your outer shell material and does not specify a color, your knee reinforcement will be black (or pale yellow if you specify Kevlar twill). If you desire any other color combination, just let us know on your order.

Models on Which This Custom Option is Available are ✓:				
Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> USR	<input checked="" type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input checked="" type="checkbox"/> TAC			

### Notes:

Foam thermal enhancements are sometimes offered by our competitors as an alternative to Dead Air as used in our Heat Channel Knees. While inexpensive, foam has some serious performance downsides (embrittlement with no exterior evidence at fireground temperatures, off gassing of toxics, loss of insulativeness mass and loft, etc. Contact our Customer Service Department for negative field referrals and a practical demo.

On knee reinforcements, Heat Channel and Puncture Resistant Technology also available on other body areas. Contact our Customer Service Department for details.

## Body Armor Linings (Patented)

The BODY ARMOR LINING CONCEPT is based on the recognition that the shoulders, outside of the arms and fronts of the legs, are the most thermally loaded during typical firefighting. While many departments prefer to avoid the bulk of the most insulative liner (Quilt Batt), overall; its insulative advantage is very attractive in these specific body areas.

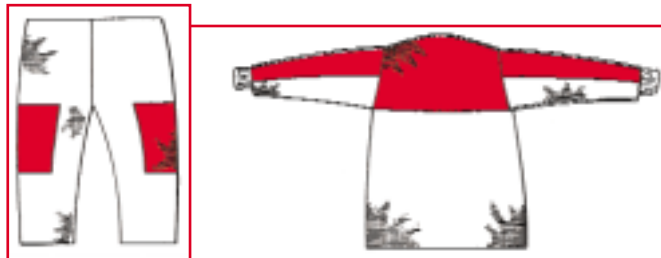
The BODY ARMOR LINING places Quilt Batt (as an integral, integrated element) in these body areas in an otherwise lighter liner system.

### NOTE: to match lubricity of liners and body armor...

- When the base liner for the garment uses a regular Nomex face cloth (including the xxix liner with "Smooth" facecloth), the Body Armor panels will be an xx2x liner, Nomex facecloth with Q-9 batt.
- When the base liner for the garment uses a Semi-slick facecloth, the Body Armor Panels will be an xx6x liner, Semi-slick facecloth with Q-9 batt (unless your order specifies otherwise).

### Models on Which This Custom Option is Available are ✓:

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input type="checkbox"/> USR	<input type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input type="checkbox"/> TAC			



Cut-away illustrates thermal liner material combination with placement of higher insulation material (highlighted in red).

**A great approach for departments currently specifying Quilt Batt**

## Boot Interface Panels (Patented)

This patented design recognizes total system weight may be reduced by substituting lower weight, lower TPP, Quilt E-89 liner material where the pants and boots interface. No effective decrease in protection occurs since the boots provide a known level of additive insulation and MUST be worn.



### Models on Which This Custom Option is Available are ✓:

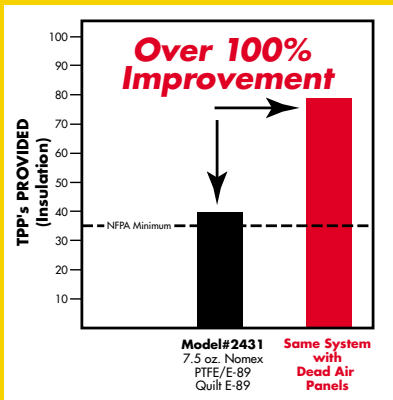
Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input type="checkbox"/> USR	<input type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input type="checkbox"/> TAC			

Drawing illustrates pants equipped with Knee Flex Facilitator (see above) and Boot Interface Panel. Red shading is used to highlight where the lighter liner material would be utilized.

## Dead Air Insulation Panels (Patented)

The very best lining material is (and always will be) dead air insulation. It has no weight, is highly insulative and is totally non-movement restrictive.

The problem in relying on dead air inclusion in bunker clothing design has always been that the weight of auxiliary equipment (i.e. SCBAs) compress the protective system and eliminate the dead air insulation.



### Models on Which This Custom Option is Available are ✓:

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input type="checkbox"/> USR	<input type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input type="checkbox"/> TAC			

**Additional Benefit:** Moisture vapor transmission testing shows Dead Air Panels may also increase e/PTFE breathability by over 100% (a larger volume of air available to the liner surface). Breathability directly relates to comfort levels and stress dissipation.

Photo shows liner and moisture barrier with sleeve moisture barrier removed to allow viewing of interior Dead Air Panels (only the Dead Air Panel's stitch lines on thermal liner interior are visible on the finished garments).

**Note:** Simple additional layers of liner material are also available in the shoulder area. However, they add more weight and less insulation than the Dead Air Panels.

## Flex Facilitator Panels (Patented)

Many departments have been strongly drawn to the flexibility advantages of the new lightweight thermal liners but reluctant to move to them since they represent up to a 40% decrease in thermal protection (as compared to the traditional Nomex liners previously used).

The FLEX FACILITATOR PANEL concept allows the MIXING of liner materials to recognize the differing needs of different body parts.

In the past, if a department wished the extra protection of relatively heavier liners on the high heat load bearing shoulders, thighs and front of knees, etc.; they also had to accept the bulk of that material at relatively shielded flex points like the back of the knees, front of elbows, etc. Thus, liner choice became a compromise between insulation required and the amount of bulk tolerable (a problem almost exclusive to flex points).

The FLEX FACILITATOR concept means compromise is no longer necessary; the exactly appropriate liner material can be chosen for each body part. The design allows the use of the more insulative liners with insertion of less bulky material panels at flex crucial body areas. While the idea allows the use of any lighter material at flex points, we are currently using Quilt E-89 since it is the lightest yet still NFPA minimum TPP liner material currently available.

Normal firefighting posture is a crouch so flex points are normally flexed. This flexing causes liner bunching which increases effective TPP insulative performance (over a single non-bunched layer of the same material); SO A LOWER TPP LINER MATERIAL CAN BE USED AT FLEX POINTS AND STILL IN MOST FIREFIGHTING MOMENTS OFFER INSULATION EQUIVALENT TO THE REST OF THE LINER (which is a heavier, more insulative material but is not bunched since it is not at a flex point).

Thus, the FLEX FACILITATOR PANEL CONCEPT allows the stress reducing flexibility advantages of E-89 at the precise body points where flexibility occurs, while preserving the desired high insulation performance of other lining systems at high heat load bearing body parts. The FLEX FACILITATOR CONCEPT is particularly effective when used in combination with VECTOR FLEX TUCKS CONCEPT (top of page 73).

Models on Which This Custom Option is Available are ✓:				
Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input type="checkbox"/> USR	<input type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input type="checkbox"/> TAC			

**Knee Flex Facilitator Panel**



**Elbow Flex Facilitator Panel**



- Red shading highlights facilitating panels
- Other body areas may also be "flex facilitated." For details & pricing please contact our Customer Service Department.

**Notes:**

- Flex Facilitators offer the most value when the heavier thermal liners are utilized. If you already specify a very light liner, flex points will already have light material in place.
- Moisture barriers must now be taped with specific seam sealing tape which cannot be used with other barriers, therefore flex facilitators on garments now feature only a thermal liner insert of lighter material.

These new patented Dead Air Panels (constructed of NFPA certified thermal liner fibers) prevent system compression and hence guarantee the retention of dead air insulation in the areas they are used.

Firefighter burns through certified systems are very predictable by body area. Year after year, injury statistics show many burns occur in the shoulder/upper back/upper chest area. Dead Air Panels in this area will increase insulative protection up to 129% without adding appreciable weight or restricting motion.

Additionally, Dead Air Panels may be ordered for placement in other body areas (i.e. front of thighs, lower on arms or other area of particular sensitivity – for instance due to previous injury).

For departments considering (or using) the newer, lighter, less stressful but also less insulative liners (i.e. Quilt Aralite, Quilt E-89); these Dead Air Panels would make the transition less likely to allow a higher incidence of burns.

*Dead Air Package Illustrated – shown looking at inside of liner, in an assembled garment, the panels are not visible.*



**New Extended Dead Air Placement Option (i.e. 4 extra forearm panels) recommended for use with the lighter liner systems (please see liner discussions on pages 39-43).**



Liner Options continued...

## Inspection Port Liner

(Patented)

Within this marketplace, it has become common for the moisture barrier and thermal liner to be sewn together as a unit (as opposed to being hemmed separately). This combined hemming method offers the important advantages of minimizing liquid wicking up the thermal liner from the hem and maximally protecting the often fragile moisture barrier from the contaminants of the fireground.

Unfortunately, the combined hemming also has one serious negative. When the liner and moisture barrier are hemmed together, it means that the fill of the liner and the base of the moisture barrier are the ONLY elements of the protective systems that can NOT be routinely inspected in the field. A deteriorated thermal liner fill could mean sharply reduced thermal protective performance. Similarly, a damaged moisture barrier substrate could forecast serious leakage and reduced protection.

Now the INSPECTION PORT LINER (pat. pend.) offers the advantages of a combined hemming system BUT also allows effective inspection of the liner fill and moisture barrier substrate.

Existing Morning Pride garment liners can also be retrofitted with inspection ports. All BPR garments automatically include the liner inspection port, since continued bloodborne pathogen resistance is dependent on moisture barrier integrity (as well as more visible garment design integrity).

When the inspection port is closed, the liner is basically indistinguishable from any ordinary liner. On three layer systems, the tails/coat port is at the right front (and fly of pants). On two layer systems, the tail/coat port is full length of tail (and fly of pants).

**One competitor's liner inspection port is bulky at the neck, is far more expensive and is harder to use, especially to re-assemble.**

**Important Caution: Beware of occasional competitive offerings of separately hemmed, perhaps bartacked together, moisture barriers and thermal liners (as an alternative to this highly popular Inspection Port option). Separate hemming is NOT recommended by the quality barrier manufacturers since it exposes the membrane to damaging contaminants and allows (with movement) wicking up the non-moisture barrier faced thermal liner.**

Models on Which This Custom Option is Available are ✓:				
Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input checked="" type="checkbox"/> BPR	<input type="checkbox"/> BPR	<input type="checkbox"/> USR	<input type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input type="checkbox"/> TAC			



The entire liner is inverted for easy inspection. After inspection it is fed back through the inspection port. Total inversion and inversion reversal (after inspection) takes less than 3 minutes; the secret is to reach through the inspection port to the farthest combined point (end of sleeve cuff) and pull there.

**Note: "BPR" garments include as standard an Inspection Port Liner.**



This photo shows the inspection port open, note the hook and pile closure mechanism.



This photo shows the inverted liner sleeve being drawn through the inspection port (on pants, the port is located in the fly area).



With liner in, locator affixes to Velcro on pant cuff (hem trim on coats) for continuous trim.



Locator tab is sewn to liner so if liner is removed, the unmated Velcro (designed to hold the locator tab) on the outer shell indicates the liner is missing.

## Liner Locator –

(Patented)

Models on Which This Custom Option is Available are ✓:				
Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input type="checkbox"/> USR	<input type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input type="checkbox"/> TAC			

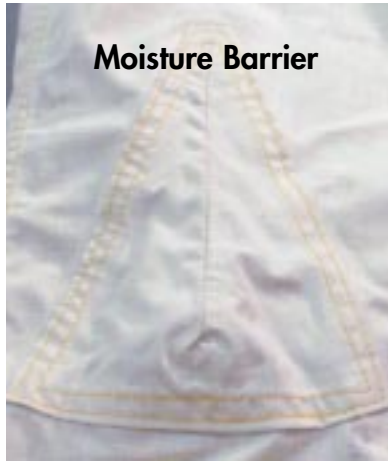
The Liner Locator is an alternative to the more expensive All or Nothing Closure (page 62), when notification of missing liners is desired. However, while the All or Nothing Closure system is self-policing (the garment can't be used when the liner is removed) the Liner Locator system relies on the diligence and observational skills of the fireground officer.

## Vector Flex Tucks

(Patented)

The human body permits motion by extending on the plane opposite the movement (i.e. back extension when we bend to the front). This extension can be substantial. For instance, the front of the leg is 30% longer in a crouch than when standing upright.

The VECTOR FLEX TUCK builds in (3 dimensional) extra liner and moisture barrier material (the outer shell “extends” on the tabs that attach it to the liner moisture barrier) so the clothing can “grow” with movement like the human body does. The result is easier, less restricted motion. In the absence of this “pocket” for limb extension, not only is flex more difficult, but the clothing is also pulled tight to the body sometimes reducing insulative protection.

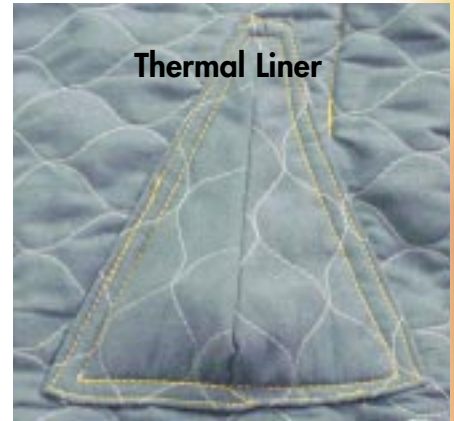


Moisture Barrier

Unlike our earlier “folded” flex tuck system, the new vector tucks are shaped to match the trajectory of body growth and since they are a “3 dimensional pocket”, they don’t have to be “pushed” out of the way by the firefighter’s body as movement occurs.

### Models on Which This Custom Option is Available are ✓:

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input type="checkbox"/> USR	<input type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input type="checkbox"/> TAC			



Thermal Liner

3 dimensional vector flex tucks create pocket for unopposed limb growth during motion.

## Weight Reduction Hemming (Patented)

An option for a 3” shorter coat with the weight savings and mobility enhancements that allows — WITHOUT any decrease in protective overlap.

The inner moisture barrier and thermal liner must be protected from the hostile fire-fighting environment. Historically (standard hemming), this liner protection has been accomplished with an outer shell that overlaps (is longer than) the interior moisture barrier and thermal liner (for reference, NFPA #1971 specifies a maximum 3” overlap); since bringing the outer shell only to the composite length required (usually 32” or 35” length outer shell length less 3” shorter allowance for inner liners) would mean these fragile inner layers would sometimes be exposed during movement.

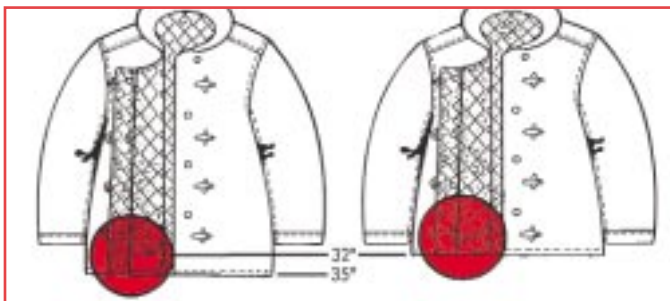
We recognized this shell overlap meant we were carrying the weight, upper leg restriction and pocket access limitations of an extra 3” of outer shell material. By developing weight reduction hemming, we were able to guarantee the fragile inner layers were not exposed, without the negatives associated with an unnecessarily long outer shell. Weight reduction hemming means tails can be shortened to 26” front/32” rear and traditional style coats to 32” with the same effective protective overlap as 3” longer non-weight reduction products.

### Models on Which This Custom Option is Available are ✓:

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input type="checkbox"/> USR	<input type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input type="checkbox"/> TAC			

Standard Hemming

Weight Reduction Hemming



Full composite protection stops at 32” even though coat is 35”

Weight reduction hemming allows same 32” full composite protection with lighter 32” coat



Standard hemming requires a shell overlap (NFPA sets 3” max.) so more fragile liners will never end below sturdier outer shell

Weight reduction hemming uses a MB/liner panel at hem stabilized to outer shell to prevent liner exposure (without requiring the weight of 3” longer shell)



## Lumbar Support Coat (Patented)

**Models on Which This Custom Option is Available are ✓:**

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input type="checkbox"/> USR	<input type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input type="checkbox"/> TAC			

A “coat placed system” that delivers the advantage of a “float away from the body” system that does not retain heat when the lumbar system is not being utilized (i.e. riding in the rig, for instance).

You can purchase this new system in a variety of manners:

### Options:

- Lumbar Support with new coat equipped for system
- Lumbar Belt alone
- Retrofit of existing Morning Pride coat to accommodate Lumbar Belt
- Clip-on suspenders

The photos will give you some idea of how the “close to this body system” works and its many advantages:

For departments that already have Lumbar Support belts, we can engineer your turnout gear to accept those existing belts. However, our Lumbar system offers some important advantages that may not be available in already issued belts:

- Features an automatically engaging cinch strap mechanism. With most commercial belts already on the market, the cinch strap has to be separately engaged after the main belt is engaged, and this could be difficult under a turnout coat.
- The Morning Pride belt is an adaptation of an existing, medically proven belt. This is unlike some competitive products developed for the first time (by firms NOT experienced with lumbar systems) for insertion into the gear.
- A minimally stressful lumbar support system that floats freely away from the body when not engaged (unlike competitive pants based systems).
- A belt that can be removed from the turnout coat for use in non-turnout coat equipped duties.
- A state-of-the-art, field proven belt from a leader in the medically oriented safety products market.
- The ability to allow the belt and the garment to move separately and not bind the firefighter.
- Close to body support placement for maximal effectiveness.
- Very minimal weight impositions. The Morning Pride belt weighs approximately 6 oz. and the holding mechanisms in the coat add approximately 2 ounces.
- No liner compression to potentially reduce insulative performance when the belt is deployed (unlike competitive pants based systems).



When the coat is worn without the belt employed, the belt flows easily away from the firefighter’s body (allowing cooling, stress reducing ventilation).



Shows the configuration of the belt to the coat when belt is engaged.



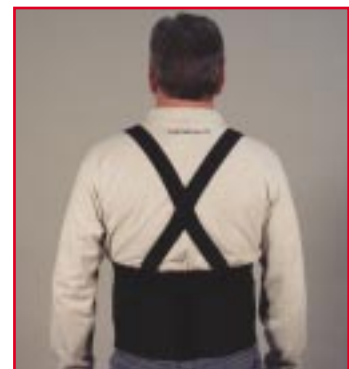
**Coat prepared to receive the Lumbar Belt.** The center strips are pile velcro (not hook, which would irritate your back and potentially pull your shirt when coat was worn without the lumbar in place). The two strips on either side of the pile, hook and loop are elastic pieces covered with Nomex knit.



**Shows the coat with the belt in place.** Morning Pride has received a patent on the concept of integrating a Lumbar Support belt into the linings of a fire garment. We believe this “next to the body” placement of the belt is critical to delivering proper support (separating the belt from the body with bulky liners that bunch, when the belt is engaged, makes no sense). Also compressing the liners (as a belt placed outside them does) often reduces the insulative performance of the system.



When the coat is closed there is no way to tell that there is an engaged Lumbar Support System inside.



**The Lumbar Support Belt can be easily removed from the turnout coat** and be used when turnout gear is not being used (EMS detailing, for instance). Optional velcro on suspender straps allow the firefighter to let the belt float freely (and coolly) away from the body until support is needed, much as the coat allows it to do when the belt is used in combination with the coat.

**PLEASE NOTE:** The elastic supports are loose enough that the belt moves independently of the coat. When you try this composite on you will be surprised to see how easily the coat and the firefighter move. There is no bind up from the mated system (thanks to careful design placement of the anchoring hook and pile point).



## CLOTHING CUSTOM OPTIONS – LUMBAR SUPPORT

Lumbar Support discussion continues...



The belt can easily be engaged or disengaged on a Tails coat without even opening the front closure.



A close-up showing the built-in automatically engaged cinch strap system that forms the supporting boning stays to the individual curvature of the firefighter's back.



The Lumbar Support Belt is easily removed from the turnout coat (mating velcro covers the hook portion).

### Important Note:

There is considerable and continuing debate within the scientific community concerning the efficacy of lumbar support belts. Respected scientists have done scholarly, well researched papers on both sides of the debate. The Morning Pride belt is manufactured by a medically oriented, research driven, industry leader in lumbar support technology. We have worked with these medical specialists to carefully design the belt to address the most common concerns raised about lumbar support systems. The Chase/Morning Pride belt is worn low on the hips as a external skeletal support (a "lumbar lock" to keep the hips and back in proper orientation to minimize the chance of injury) rather than around the abdomen as a soft tissue foundation; thus minimizing the possibility of muscle atrophy over long term use. Similarly, while some belts are constructed of materials that can cause circulatory stress, the Chase/Morning Pride belt features functional panels constructed from exactly the same fabrics that are used clinically to manage scar tissue in burn rehabilitation and for the construction of support stockings prescribed for treatment of varicose veins (and of course, non-impaired circulation is mandated in both of these clinical situations). Nonetheless, Morning Pride's offering of the lumbar support coat should not be interpreted as an endorsement of either side of the debate. Instead, for our customers who feel a lumbar support program offers them value; Morning Pride wanted to be able to offer a belt with some important advantages not available in other competitive belts.

## CLOTHING CUSTOM OPTIONS – PASSPORT OPTIONS

### Passport/Accountability System

Many departments, wanting to initiate, upgrade or build more control into their personnel accountability systems, have turned to MORNING PRIDE to help assist in the design and fabrication of advanced passport identification devices.

Most accountability systems require that a firefighter deposit a marking device with the person responsible for tracking personnel at the scene of an incident. Morning Pride can easily supply one or more tracking tags, attached to the coat with Velcro or snaps, usually under the collar or inside the front storm flap. These tags can be fabricated from shell fabric or reflective material and can be of practically any size to interface with any style of accounting system. If a standard design will not fit your needs, we suggest you contact the Morning Pride Customer Service Department for information and complete specifications on special devices.



This illustrates our #OP-PS1, 2" x 3/4" passport tag with velcro backing that stows on the same panel used for securing the collar chin strap. Storing the tag here helps assure that the firefighter deposits it with the tracking person before entering a hot area. Departments or firefighters can stencil or letter with the firefighters name or other data, and can be easily removed when accounting is necessary.

Models on Which This Custom Option is Available are ✓:				
Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> USR	<input checked="" type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input checked="" type="checkbox"/> TAC			



This illustrates the #OP-PS2, 1" x 4" Reflexite (Morning Pride lettered) tag that, in this case, is shown stowed on the fire coat chest. Placement of the tags is at the option of the department.



## Integral Customization

Now you can customize your protective clothing in **full color**, durably and cost effectively without compromising protective performance.

Our new integral customization process, developed first to allow effectively durable and flame resistant labeling, allows us to recreate any artwork on your bunker gear. These patches are a replica of a fire department's embroidered patch, placed on white FR cotton material and sewn to the sleeve. Background colors used for the patches are matched as close as possible, but due to the dye lots and slight color variations, exact matches are not always possible. This is usually only difficult to match with Khaki and Golden Brown. As always, the background material will be turned under as much as possible to stitch close to the department's logo, so minimal amounts of the background color will be visible. If preferred, we can print these with a black background to avoid a shading issue. Just specify on your quote request (or order) and we will make them with a black background. All we require is your department's patch (or pre-approved artwork exactly the way you want it to appear), the finished dimensions you would like for it to appear on your clothing, and the body area where you would like the artwork placed.

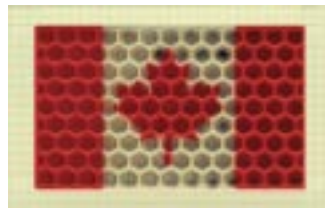
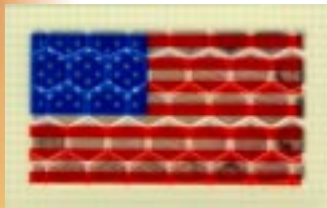
- Logos • Insignias • Lettering

match with Khaki and Golden Brown. As always, the background material will be turned under as much as possible to stitch close to the department's logo, so minimal amounts of the background color will be visible. If preferred, we can print these with a black background to avoid a shading issue. Just specify on your quote request (or order) and we will make them with a black background. All we require is your department's patch (or pre-approved artwork exactly the way you want it to appear), the finished dimensions you would like for it to appear on your clothing, and the body area where you would like the artwork placed.

**Models on Which This Custom Option is Available are √:**

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
<b>Prefix ID:</b>	<input checked="" type="checkbox"/> BPR	<input type="checkbox"/> BPR	<input checked="" type="checkbox"/> USR	<input checked="" type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input checked="" type="checkbox"/> TAC			

## Glo-Flex® American and Canadian Flags



Customize your protective clothing with sewn-on Glo-Flex photoluminescent (3½" x 2¼" glow-in-the-dark after light exposure flags).

Note: Honeycombs might be larger on final production product.

**Models on Which This Custom Option is Available are √:**

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
<b>Prefix ID:</b>	<input checked="" type="checkbox"/> BPR	<input type="checkbox"/> BPR	<input checked="" type="checkbox"/> USR	<input checked="" type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input checked="" type="checkbox"/> TAC			

## Pocket Options

We have illustrated below and in the following pages some of our more popular pocket/clip options. Morning Pride's Customer Service Department will also be glad to work with departments to custom design pockets and clips for their particular applications. All pockets are lock stitched to the garment, are double layer construction and are bartacked as necessary for durability. Standard hook and pile closure systems may also be special order modified. All pockets must be custom ordered, only thermal liner pocket on Structural BPR, Structural LTO, Proximity BPR and Proximity LTO coats/tails are now standard.

**Patch Pockets for Coats**  
9" H x 10" W



**Handwarmer Pocket**  
8-1/2" H x 10" W



**Half Height Bellows Pocket**  
6" H x 9" W x 1-1/2" D



**Models on Which This Custom Option is Available are √:**

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
<b>Prefix ID:</b>	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> USR	<input checked="" type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input checked="" type="checkbox"/> TAC			

**Models on Which This Custom Option is Available are √:**

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
<b>Prefix ID:</b>	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> USR	<input checked="" type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input checked="" type="checkbox"/> TAC			

**Models on Which This Custom Option is Available are √:**

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
<b>Prefix ID:</b>	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> USR	<input checked="" type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input checked="" type="checkbox"/> TAC			

# CLOTHING CUSTOM OPTIONS – POCKET OPTIONS

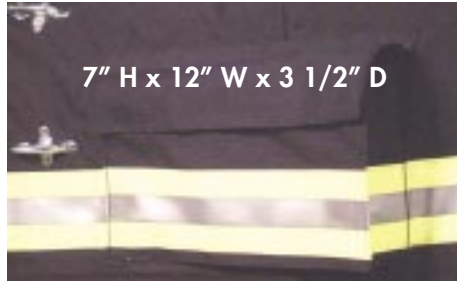
Handwarmer in Front of Bellows Pocket



**Models on Which This Custom Option is Available are ✓:**

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
<b>Prefix ID:</b>	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> USR (Also EMS and Liquid Splash Haz-Mat certified)	<input checked="" type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO		
	<input checked="" type="checkbox"/> TAC			

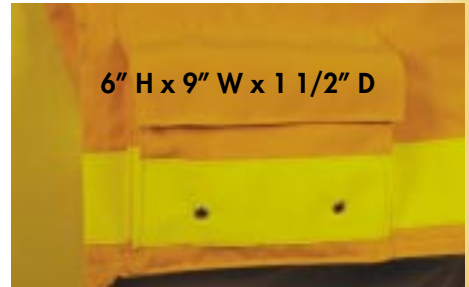
FDNY Semi Bellow Pocket (Kevlar Lined)



**Models on Which This Custom Option is Available are ✓:**

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
<b>Prefix ID:</b>	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> USR (Also EMS and Liquid Splash Haz-Mat certified)	<input checked="" type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO		
	<input checked="" type="checkbox"/> TAC			

Flat Bottom Bellows Pocket



**Models on Which This Custom Option is Available are ✓:**

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
<b>Prefix ID:</b>	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> USR (Also EMS and Liquid Splash Haz-Mat certified)	<input checked="" type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO		
	<input checked="" type="checkbox"/> TAC			

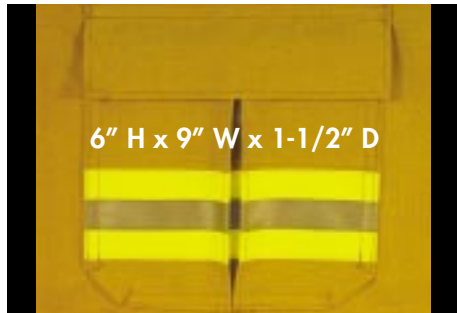
External Expandable Handwarmer



**Models on Which This Custom Option is Available are ✓:**

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
<b>Prefix ID:</b>	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> USR (Also EMS and Liquid Splash Haz-Mat certified)	<input checked="" type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO		
	<input checked="" type="checkbox"/> TAC			

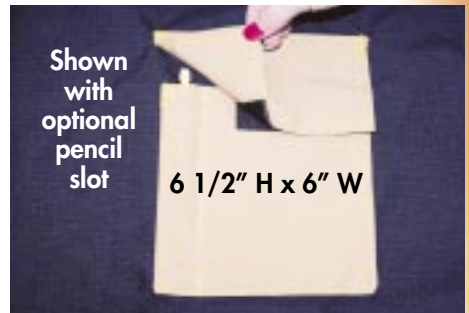
Pleated Patch with Handwarmer Behind



**Models on Which This Custom Option is Available are ✓:**

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
<b>Prefix ID:</b>	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> USR (Also EMS and Liquid Splash Haz-Mat certified)	<input checked="" type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO		
	<input checked="" type="checkbox"/> TAC			

Notebook Pocket



**Models on Which This Custom Option is Available are ✓:**

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
<b>Prefix ID:</b>	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> USR (Also EMS and Liquid Splash Haz-Mat certified)	<input checked="" type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO		
	<input checked="" type="checkbox"/> TAC			

**Hinged Pocket** — New design allows for easy pocket access since waist SCBA strap is worn behind the pocket.



Pockets may also be ordered with special linings and/or Velcro



**Models on Which This Custom Option is Available are ✓:**

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
<b>Prefix ID:</b>	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> USR (Also EMS and Liquid Splash Haz-Mat certified)	<input checked="" type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO		
	<input checked="" type="checkbox"/> TAC			

**Models on Which This Custom Option is Available are ✓:**

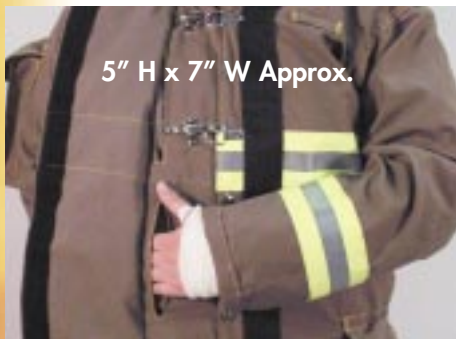
Model:	Structural	Proximity	Technical Rescue/USAR	EMS
<b>Prefix ID:</b>	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> USR (Also EMS and Liquid Splash Haz-Mat certified)	<input checked="" type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO		
	<input checked="" type="checkbox"/> TAC			



# CLOTHING CUSTOM OPTIONS – POCKET OPTIONS

Pocket Options continued...

## Set of 2 Undershield Pockets



**Models on Which This Custom Option is Available are ✓:**

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
<b>Prefix ID:</b>	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> USR (Also EMS and Liquid Splash Haz-Mat certified)	<input checked="" type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO		
	<input checked="" type="checkbox"/> TAC			

## Bandolero Pockets (Set of 2)



**Models on Which This Custom Option is Available are ✓:**

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
<b>Prefix ID:</b>	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> USR (Also EMS and Liquid Splash Haz-Mat certified)	<input checked="" type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO		
	<input checked="" type="checkbox"/> TAC			

## Bandolero Pocket w/Zipper (Set of 2)



**Models on Which This Custom Option is Available are ✓:**

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
<b>Prefix ID:</b>	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> USR (Also EMS and Liquid Splash Haz-Mat certified)	<input checked="" type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO		
	<input checked="" type="checkbox"/> TAC			

## Air Mask Pocket

Shown with Optional Zipper. Air mask pockets are increasingly being deleted from garments because of bulk and weight.



**Models on Which This Custom Option is Available are ✓:**

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
<b>Prefix ID:</b>	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> USR (Also EMS and Liquid Splash Haz-Mat certified)	<input checked="" type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO		
	<input checked="" type="checkbox"/> TAC			

## Radio Pocket

8" H x 3" W x 2" D – Standard Size  
(Radio pocket shown is notched for antenna)



**Models on Which This Custom Option is Available are ✓:**

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
<b>Prefix ID:</b>	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> USR (Also EMS and Liquid Splash Haz-Mat certified)	<input checked="" type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO		
	<input checked="" type="checkbox"/> TAC			

## Flashlight Pocket

2 Cell: 8" H x 4" W x 2½ D  
3 Cell: 11" H x 4" W x 2½ D



**Models on Which This Custom Option is Available are ✓:**

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
<b>Prefix ID:</b>	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> USR (Also EMS and Liquid Splash Haz-Mat certified)	<input checked="" type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO		
	<input checked="" type="checkbox"/> TAC			

Pass Thru Zipper Pocket on Coat and Pants



**Models on Which This Custom Option is Available are ✓:**

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input type="checkbox"/> BPR	<input type="checkbox"/> BPR	<input type="checkbox"/> USR	<input checked="" type="checkbox"/> EMS
	<input type="checkbox"/> LTO	<input type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input type="checkbox"/> TAC			

Medical Records Pocket



**Models on Which This Custom Option is Available are ✓:**

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> USR	<input checked="" type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input checked="" type="checkbox"/> TAC			

Pants Hip Pocket



**Models on Which This Custom Option is Available are ✓:**

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> USR	<input checked="" type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input checked="" type="checkbox"/> TAC			

## Clip and Hook Options

**Models on Which This Custom Option is Available are ✓:**

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> USR	<input checked="" type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input checked="" type="checkbox"/> TAC			

Lanyard Flashlight Clip Style #1



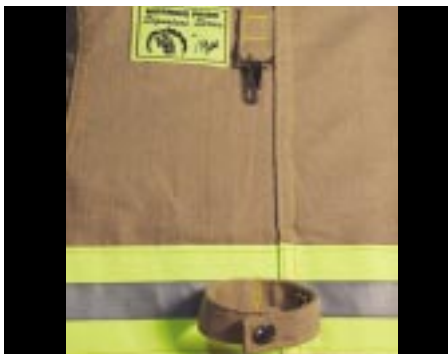
Lanyard Flashlight Clip Style #2



Reverse Clip (Large Hook)



Flashlight Clip



Reverse Clip (Large Hook) on a Patch with a Velcro Strap



SL-90 Flashlight Holder



All Morning Pride pockets are multiple layer reinforced. For additional reinforcement options, please see price list.

## Circumferential Rope Pocket

For Search and/or Escape Ropes - (Patented)

A widespread problem encountered by departments wishing to equip their firefighters with escape ropes and/or search guide ropes is: "Where to carry the bulky, heavy rope without inhibiting mobility or comfort, while still permitting effective use?" As turnout systems have become heavier, the percentile weight of the rope becomes larger and larger and the resulting "imbalance" that occurs while trying to carry the rope in a pocket is even more pronounced.

Designed by an experienced fire officer, the circumferential rope pocket is the first and only design that offers a solution to this problem. Specifically, this pocket design is based on the critical observation that spreading and "balancing" the weight of the rope is key. The design utilizes the shortened length and easy access which the Tails styling offers. An interior pocket which opens and closes via hook and pile tape runs around the interior hem of the coat to hold the major length of the rope. By spreading the rope weight evenly around the entire torso, it is almost un-noticeable (it truly is amazing how effectively the design hides the rope weight). The pocket is also located to not interfere with either sitting or the SCBA. The stop plate and hook (at opposing ends of the rope) are fed through a slit in the outer shell and held in place via slots and flaps. When it becomes necessary to deploy the rope, either the stop plate or hook is simply pulled and the rope unfurls easily through the slit.



Two flaps are the only exterior difference observable.



With both flaps raised, the retaining slots for the hook and stop plate are evident.

**Models on Which This Custom Option is Available are ✓:**

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input type="checkbox"/> USR	<input type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input type="checkbox"/> TAC			



The pocket can be easily opened to allow easy rope loading.



**Note:** Photos show standard circumferential rope pocket (designed for inventor's department rope style). We are glad to custom quote alternative rope styles. The Circumferential Rope Pocket option does NOT include a rope.

## Escape Belt

For Search and/or Escape Ropes - (Patented)

NFPA Standard # 1983 Escape Belt Certified.

This Escape Belt can be ordered:

- as a standalone
- or on new pants with belt loops

If you have existing Morning Pride pants, you can order belt loops for local attachment or return your pants to Dayton for installation. Contact our Customer Service Department to arrange for a return (you will need an RA#).



**Models on Which This Custom Option is Available are ✓:**

Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> USR	<input checked="" type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input checked="" type="checkbox"/> TAC			



# Harness Bunker Pants (Patented)

NFPA Standard #1983 Class II Certified Harness

- Secure, comfortable ladder lock capabilities built into pants
- Emergency escape rappelling capabilities for every firefighter
- 1 step donning of NFPA #1971 certified bunker pants and NFPA #1983 certified class #2 safety harness
- Harness straps protected by storage inside outer shell of bunker pants
- Harness usable WITHOUT removal of bunker pants
- Harness does not reduce comfort or mobility during normal firefighting activities

Increasingly, progressive fire departments (especially in the larger cities) are requiring individual firefighter escape/security systems. However, the use of these systems combined with the use of bunker pants has always been time consuming, bulky and frequently non-compatible.

This new HARNESS PANTS SYSTEMS integrates these two safety items into an effectively functioning package. The Harness is a specially designed NFPA #1983-Class 2 certified product. The pants are Morning Pride, NFPA #1971 (& Project FIRES in appropriate materials) certified bunker pants. The harness straps are stored between the outer shell and liners of the pants, so the straps are protected from the fire environment and the firefighter's body is cushioned from the ride of the harness straps. The harness weighs only 2½ pounds and is carried at the least stressful body point: the waist/hips (i.e. body center of gravity). One motion will close BOTH the bunker pants and the harness. Bunker pants with the harness installed still can be stored over fire boots. When the harness is not installed, the bunker pants may still be closed and used as traditional bunker pants.

Models on Which This Custom Option is Available are ✓:				
Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input type="checkbox"/> USR	<input type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input type="checkbox"/> TAC			



Minimum appearance difference when harness is not being used. Our new standard narrow fly is shown, the older wider fly is also available.



The HARNESS PANTS CONCEPT was developed to be used only in combination with the Tailed Turnout Coat design concept (shown on page 1). The shortened front of the Tails concept allows easy access, attachment and use of the harness. Use of harness bunker pants with the bulky full length fronts of traditionally styled coats is specifically and strongly warned against!!



Departments may utilize their own rope, carabiners, etc. or utilize Morning Pride offerings (including this SCBA Mounted "Escape Bag"). Also please see Circumferential Rope Pocket on page 80. Please see price list for full details.

**NOTE:** Morning Pride will also be glad to engineer pants to accommodate existing department owned harnesses, please contact our Customer Service Department for details. For instance, FDNY STYLE HARNESS PANTS fly is mounted on the right and closes on the left. Harness tabs are mounted on the outside of the pants. Harness not supplied.

# Full Body Harness Coat (Patent Pending)

NFPA Standard #1983 Class III Certified (Anti-Inversion)

**NFPA Std. #1983 Class III certified harness (also ANSI 81014-91 and Z359.1-92 and CSA Z259.10-M90 compliant).** Class III harnesses are anti-inversion systems elements. As such, placement integration has presented unique design challenges. Our new approach makes donning/doffing easy and allows efficient deployment of the harness when desired.

Models on Which This Custom Option is Available are ✓:				
Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input type="checkbox"/> USR	<input type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input type="checkbox"/> TAC			



**Photo 1** – From exterior, a Class III harness equipped system is visually indistinguishable.



**Photo 3**– Lower torso portion of the harness is stored in a releasable pocket on the interior outer shell (note “grap” hooks on each lower corners).



**Photo 6** – Here the clip hardware stored in the pockets is more clearly shown. Please note our Class III harness includes a fall protection strap (upper left in photo), which is covered by an outer shell flap cover. Some FDs also use this fall protection attachment for confined space rescue work. Also, please see our optional work positioning straps and attaching carabiners.



**Photo 4** – When the flap is pulled, the lower torso portion of the harness is free to fall loose.



**Photo 7** – Short and long work positioners are also available (long is standard).



**Photo 2** – The upper chest harness strap closes with a bayonet clip that is engaged as the coat is closed. The bayonet clip is a quick, easy yet secure closure. The storm flap then covers the clip as the first photo shows.



**Photo 5** – Once the lower torso portion of the harness falls loose, the ends can be bayonet clip attached to the mating pieces that are stored in the coat pockets. Photo shows the fully deployed Class III harness.



**Photo 8** – Finally, the deployed harness with standard work positioner and carabiners in use.



## Firefighter Rescue and Escape Device (F.F.R.E.D.™)

NFPA Standard # 1983 Escape Belt Certified

Models on Which This Custom Option is Available are ✓:				
Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input type="checkbox"/> USR	<input type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input type="checkbox"/> TAC			

F.F.R.E.D.™ is a self-contained escape belt designed by firefighters for firefighters. When there is no other way out, it is the ultimate self-escape bailout system.

The patented F.F.R.E.D.™ system utilizes high temperature resistant escape line developed by DuPont. This line, made of 100% Kevlar®, will withstand temperatures up to 862° F! It is also extremely durable, boasting a breaking strength of 5500 pounds! And yet, it weighs less than nylon or traditional rope.

The entire system can be ordered in new gear, worn as an external belt, or retrofitted into most existing gear.

F.F.R.E.D.™ also excels as a personal rescue device. It is ideal for lowering or raising injured firefighters.

- Easily controlled vertical descent
- Raise or lower injured or unconscious firefighter to safety
- Confined space rescue
- Simple retrieval from lower level if the floor gives way
- The integrated system keeps the firefighter in a vertical position during rescue or escape

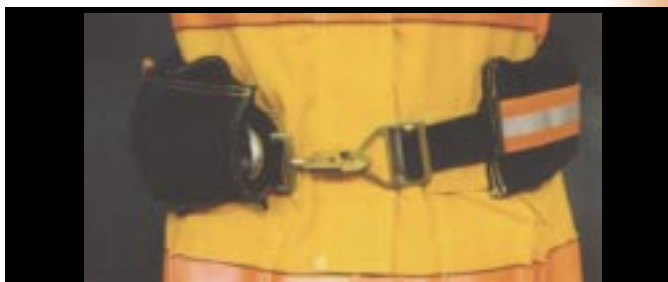
This innovative system includes escape line, belt, descending device and D-ring. The entire system comes pre-rigged for safety and ease of use, eliminating guess work when seconds count.

Fifty feet of escape line comes standard with each unit, but can be customized to your specifications.

Unlike other systems, F.F.R.E.D.™ provides a continuous braking force for a safe and controlled descent.

### Underwriter Laboratory Certified

The Firefighter Rescue and Escape Device is UL certified to the NFPA #1983-95 standards as a complete system and exceeds NFPA standards in all aspects of testing. This product is labeled as a personal escape belt system. It provides firefighters with the highest safety margins available.





## **Cleaning & Inspection Service**

Most of you are aware that NFPA #1500, and by reference NFPA #1971, require routine cleaning/inspection of protective clothing. In fact, the standards even specify such cleaning/inspection **MUST** happen a minimum of once every six months.

Many departments simply do not have the in-house expertise to document and defend such a program on their own. Even those departments with such in-house expertise often do not wish to assume the liability for a fully self-administered program. Just as manufacturers rely on outside, expert test labs (like UL) to review and certify their QC efforts; many departments want the backup of an outside expert in their now mandated cleaning/inspection programs.

Therefore, Morning Pride has developed a very cost effective cleaning and inspection program. For one small fee, your garment will be cleaned in a manner acceptable for all constituent elements and in a manner designed to minimize any degradation of the protective performance or certification level of your gear. Then, your clothing will be inspected by a supervisory level Morning Pride specialist with years of experience evaluating the condition of protective clothing. A record will be generated of the condition of all material components, trim, options, etc. You will receive a hard copy of this record and it will be entered into our computer data base, as well. You will receive an opinion, on our letterhead, as to the continuing serviceability of the gear. If repairs are necessary to the issuance of that opinion, we will provide specific details and contact you personally to discuss same. Of course, no extra cost repairs will be made without your authorization. In combination with routine, after incident inspection; a semi-annual Morning Pride cleaning/inspection would provide a department with a program that addresses the intent of the standards while minimizing demands on department time and minimizing department liability exposure.

It is important to remember that this is a cleaning not decontamination service.

The NFPA Standards reference cleaning, and cleaning has been shown to remove most contaminants; but no guarantees of decontamination are offered as a part of the service. If guarantees of decontamination are desired, we strongly recommend the use of a specialized decontamination house.

It is our intent to route all cleaning/inspection returns through our dealer network, to insure you the best service possible. Please contact your dealer to arrange to have your gear cleaned/inspected (or call our Customer Service Department for a referral to a distributor in your area).

Turnaround time will be as short as possible (approximately 3 days after our receipt of the shipment); however, it will be dependent upon the volume of incoming work. Your distributor will work with our inspection/cleaning department to schedule a return date that guarantees you have the minimum out of service time.

Finally, this cleaning/inspection program is available only for Morning Pride garments.

### **The Cleaning Phase**



**Before Cleaning**



**After Cleaning**

**Also see PPE Support Programs discussion in Total Fire Reference Guide**

### **The Inspection Phase**



Moisture Barriers will be checked for waterproofness



Every stitch will be inspected



## The Pride Series

We are frequently asked to identify the finest, most protective, most advanced package of materials and custom options. With the creation of our "Pride Series," we are not only identifying the ultimate in available protective clothing technology; we are also making the combined package available as a one line item order (it couldn't be simpler to get the best – please see the custom option section of our price list). The Pride Series coat is a model 7.5 BPR-3242 Tails coat PBI (7.5 oz.) outer shell, Crosstech PJ moisture barrier, Caldura/2 layer E-89 thermal liner with the following features as standard: Project FIRES two tone Scotchlite trim, shingle cuff, shoulder dead air panels, handwarmer pockets, tabbed long Nomex wristlets, comfort chinstrap and Inspection Port Liner. The Pride Series pants are a model BPR1242 Pants (same materials as Tailed coat) traditional (non-bibbed) design with the following features as standard: 3" two tone Scotchlite cuff trim, Velcro fly closure, two postman slide take up straps, bellows pockets with Velcro flaps placed on the side of the legs ending just above the knees. Black Kevlar/Nomex replaceable heat channel knees, and Inspection Port Liner. When ordering the Pride Series, be sure to include sizing information, background color (lime or orange) on the trim and any other options you might require: lettering, specialized pocketing, custom closures, etc.

Models on Which This Custom Option is Available are ✓:				
Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input checked="" type="checkbox"/> BPR	<input type="checkbox"/> BPR	<input type="checkbox"/> USR	<input type="checkbox"/> EMS
	<input type="checkbox"/> LTO	<input type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input type="checkbox"/> TAC			

## CLOTHING CUSTOM OPTIONS – TAKE-UP STRAPS

### Take-Up Straps

Take-up straps allow several inches of waist adjustment. They can also be used to transfer pants weight from shoulders (i.e. suspenders) to waist (the take-ups). Since the waist is closer to the body's center of gravity (where it is less stressful to carry weight), this can reduce the stress load on the firefighter.

#### Metal Take-Up Straps



D-Ring Style Offers Economy

#### Our Metal Recommendation



Postman Slide Style Offers More Secure "Set"

#### Hi-Temp Nylon Take-Up Straps

For Technical Rescue/USAR gear, since users have asked us to minimize use of metal on these garments due to sparking concerns, we utilize hi-temp Nylon when take-up straps are optioned.





## Wildland/Structural Dual Certification Option

For Structural Operational Models (Patent Pending)

One of the most significant ways that firefighters are over-stressed is the use of heavy structural gear for Wildland firefighting.

However, it is easy to see how it happens:

- When the civilian calls in to report a grass fire, the responding fire department never can be comfortable that the fire does not impinge on a structure. The appropriate response in such questionable circumstances, is the most aggressive response. Therefore, firefighters arrive on scene in structural gear.
- Since FDs are often in the above situation, why invest in a separate expensive set of wildland gear (they will most often end up responding in their structural gear anyway; once on scene, the wildland gear is not available to them).
- Carrying wildland gear on the rig won't even work; what is the chance that you will have the correct sizes you need.

Finally, our research and development efforts allow us to offer a very low cost, very practical solution. When this option is specified, the attachment of the liner/moisture barrier composite to the outer shell will be modified to prevent any type of hardware body contact when the liner and moisture barrier are removed (this is a NFPA Standard #1977 on Wildland Firefighting Protective Clothing and Equipment).

This design change has allowed us to dual certify structural clothing with this option to BOTH the Structural and Wildland NFPA standards (#1971 and #1977 respectively). Specifically with a removable liner/moisture barrier assembly in place, the garment meets the Structural requirements; when the moisture barrier/liner assembly is removed, the garment meets the Wildland requirements.

With a Wildland/Structural Dual Certification option product, the fire department can respond in their structural gear. When they determine it is truly a Wildland operation, they can simply snap out the moisture barrier/thermal liner assembly. Consider the advantages:

- Very low cost way to have certified Wildland gear.
- The Wildland gear is ALWAYS on the rig in the sizes the responding firefighters require.
- Department markings, rank identification, etc. are retained in Wildland operational mode.
- The FDs can still respond in their most aggressive equipment (structural) and ultimately fight a wildland fire perfectly equipped (not in stressful structural gear).
- The option provides extra productive usage for your turnout dollar investment.

Some considerations to remember:

- This option is not available with sewn-in (at the neck or waist) moisture barrier and liner assemblies.
- Other options on these garments must also not allow hardware to penetrate the outer shell (so that it could contact the body with the moisture barrier/liner assembly removed). For instance a chest mounted flashlight hook would have to be mounted on a separate patch which would then be sewn to the chest.
- Liner locator options may also be considered to notify officers when/if the moisture barrier/liner assembly is removed (appropriately for wildland firefighting and inappropriately for structural firefighting).

Models on Which This Custom Option is Available are ✓:				
Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input checked="" type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input type="checkbox"/> USR	<input type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	<small>(Also EMS and Liquid Splash Haz-Mat certified)</small>	
	<input type="checkbox"/> TAC			





# Tabbed Long Wristlet

(Patented)

Models on Which This Custom Option is Available are ✓:				
Model:	Structural	Proximity	Technical Rescue/USAR	EMS
Prefix ID:	<input type="checkbox"/> BPR	<input checked="" type="checkbox"/> BPR	<input type="checkbox"/> USR	<input type="checkbox"/> EMS
	<input checked="" type="checkbox"/> LTO	<input checked="" type="checkbox"/> LTO	(Also EMS and Liquid Splash Haz-Mat certified)	
	<input checked="" type="checkbox"/> TAC			

Long wristlets are recommended in the NFPA appendix and required for Project FIRES certification. They are highly desirable custom options since they work to prevent any protective gap at the glove to coat cuff interface. Unlike competitive products, which require cutting (& thus destabilizing) the knit wristlet material to create a thumbhole; Morning Pride offers the **TABBED LONG WRISTLET** (patented). This concept allows us to create a thumb locator with Nomex tabbing **WITHOUT** cutting into the knit of the wristlet itself. This new development solves the very high frequency problem previously noted with long wristlets; knit running and unraveling. We believe it is the **ONLY** adequately field serviceable long wristlet on the market!! Because bulky, reinforcing stitching is not required with the **TABBED LONG WRISTLET** between the hand and the thumb, it is also more comfortable than competitive products. When long wristlets are ordered, the tabbed system will be provided on a standard basis.



**NOTE: "BPR" garments include as standard, tabbed long wristlets. Technical Rescue/USAR garments also feature a somewhat shorter tabbed long wristlet as standard.**

Morning Pride can also provide, but does not usually recommend, these other competitively offered long wristlet systems:



For departments requiring palm coverage, this is the only style that does not stretch out (raveling however can still occur).



Turned thumbhole will unravel, again because knit of wristlet was cut into.



Overcast thumbhole is bulky and even the most careful craftsmanship will not be able to catch all the compromised knit stitches.



Bartacked wristlet restricts natural hand movement and will eventually form a hole in the stressed area of the wristlet.

Morning Pride recommends knit Nomex for wristlets (that is our standard – your order must request an alternate material). Extensive field testing has convinced us that Kevlar knits tend to lose their elasticity over time. PBI knit is a higher cost upgrade wristleting product. We are in stock on both Kevlar and PBI knit materials. Please consult our price list for details.

**NOTE: These alternatives are not available on Technical Rescue/USAR.**

## Incident Command Vest

- Allows quick on-scene identification of strategic personnel (i.e. Incident Commander, Water Supply Officer, Communications Officer, Sector Commander, EMS Command, etc.)
- Velcro closure
- Adjustable (with Velcro) to fit over most size bunker coats
- Constructed of NFPA Std. #1971 certified materials for compatibility with your turnout gear
- Standard vest of 7.5 oz. Nomex – please specify your choice of Black, Lime, Natural, Red, Royal Blue, Tan or Yellow (other outer shell materials available on a custom Quote basis – please contact our Customer Service Department)

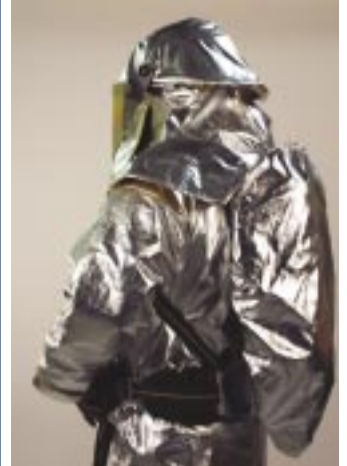


Photos show front and back views of a standard Incident Command Vest with optional sewn-on back lettering and Incident Command 1/2 height bellows pockets.

- Standard vest includes chest band of trim – please specify your choice of Scotchlite or Reflexite fluorescent color choices (Glo-flex trim can also be custom quoted – please contact our Customer Service Department)
- Please see price list for Incident Command Vest pocketing pricing
- Flashlight clips, back and chest lettering (sewn-on or removable) are also available at normal additional pricing levels

## SCBA Cover

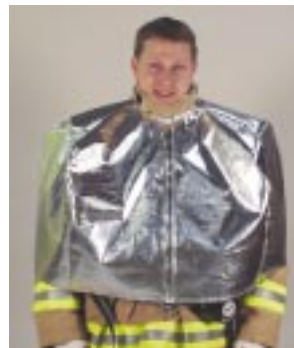
The SCBA Cover is made of the same aluminized PBI as the proximity operational model and is available for all SCBA brands and sizes.



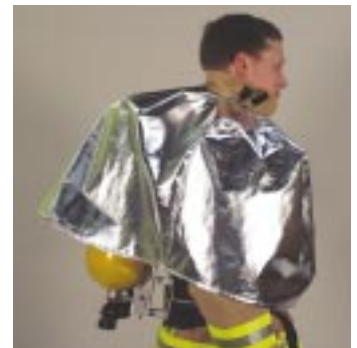
## Training Cape

Aggressive training is vital to maximal firefighting preparedness and protection, but can be tough on expensive PPE. The increasing use of flashover simulators can subject the shoulders and upper torso area to repeated, high thermal loading. Our training cape is aluminized PBI for maximal heat shielding (quotes on other material capes also available up request).

**Note:** As this catalog went to print, we were in the process of developing a Training Poncho. The Poncho protects the same area as the cape but allows freer arm motion. It also uses more material, so will be somewhat more expensive. Please contact our Customer Service Department for further details.



Cape is cut to provide full frontal chest and upper arm coverage.

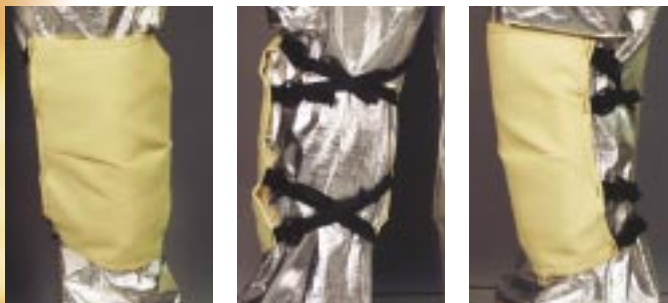


Cape also provides protective coverage over SCBA top.

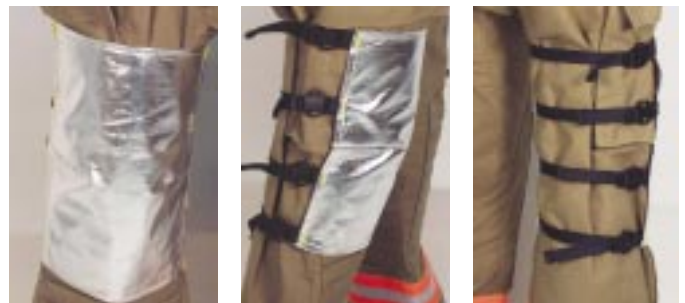
## Training Knee and Thigh Protector

Knees and thighs take a lot of abuse (and a lot of heat) during training.

The training knee is high durability Kevlar (other materials or construction may be custom quoted) and attaches to the pants with adjustable clipped straps. Since compressed systems can be less insulative, training centers may wish to consider this issue with use (perhaps use during non high heat protocols, etc).



Knees



Thighs

## General Sizing/Measuring Information

**NOTE:** When coat length, sleeve length, shoulder, back to waist, inseam, or crotch rise are *not provided* on an order, the following standard sizing is supplied:

<b>COATS</b>	<b>Lengths:</b> . . . . .	Tails™ coats have a standard length of 29" in front and 35" in the rear. Traditional style coats have a standard length of 35".
	<b>Sleeves:</b> . . . . .	Size 38" chest and under – 33" sleeve; Size 40" to 42" chest – 33½" sleeve; Size 44" chest and above – 34" sleeve.
	<b>Shoulder:</b> . . . . .	Standard shoulder is approximately 8" graded according to chest size.
	<b>Back to Waist:</b> . . . . .	Standard measure is 20".
<b>PANTS</b>	<b>Inseam:</b> . . . . .	Standard inseam is 30".
	<b>Crotch Rise:</b> . . . . .	Standard rise is approximately 30" graded according to waist size.

Any non-proportional body measurements should be noted on your order so our cutting room may make allowances (i.e. larger than normal biceps on a weight lifter). Please call our Customer Service Department for assistance with any fit challenges.

**The following four points are important for proper fit and comfort.**

- 1) Whenever you have any doubts, contact the factory for advice.
- 2) We prefer to fit using sizing samples and some dealers have them on hand (see below). This allows for personal fit preferences (i.e. some people prefer a looser fit than measured but within safety guidelines).
- 3) Measuring works well also when done properly (see below and next 2 pages).
- 4) Female patterns are available when needed, but only a very small percentage are actually ever needed. Remember, if in doubt call the factory.

### Measuring Method #1 – Using Sizing Samples\*

**Coat:** \*(Whenever possible use standard size coats)

**Chest:** Do not use the wristlet thumb attachments if your arms are too long or too short for any sizing coat. Make sure the shoulders and chest fit comfortably throughout a full range of motion.

Provide us the even chest size from label on the coat that fits best in the shoulders and chest.

**Body:** Both arms should be raised overhead while bending in *all directions* and the overlap of the composite to the waist of the bunkers should be at least 2" in *all positions*.

Provide full body length in whole inches based on adding or subtracting from body length on garment label (standard is 29" front/35" rear).

**Sleeve:** Provide the full sleeve length in half inch increments by adding or subtracting from the length on the fitting garment's label. When in doubt, measure using Method #2.

**Pant:**

\*(Whenever possible use standard size pants w/30" inseams)

**Waist:** Make sure the fly fastens easily at the waist when donning over your pants, belt and any items. Then go through a full range of motion including squatting and climbing motions to make sure there is room in the seat and thigh.

Provide us the even waist size from pant that fits best at the waist.

**Measuring Method #1\***




Determine Proper Body Length




Record Best Size for Shoulders & Chest Fit




Determine Proper Sleeve Length



Choose Waist Size w/Room for Take-Ups

Sizing Instructions continues...





Squat and Climb to Check Seat and Thigh



Give Inseam Length in Whole Inches

If the pant you find comfortable in the waist is exceedingly full in the seat and thighs, or the pant is comfortable in the seat and thighs but too tight in the waist, call the factory and ask to speak to the vice president of production to get specific instructions for that instance. Our computer generated cutting patterns can provide all dimensional changes as needed.

**Rise:** Once you have found a comfortable pant in the waist, seat and thigh; if the pant does not hit right at or immediately below the belly button, remove the bunker pant and provide a rise measurement as described in Method #2.

**Inseam:** For the inseam, use a tape/ruler and then provide the full inseam length in whole inches by adding or subtracting from the inseam length on the garment's label. If available, cut the tops off an old pair of large boots to slip into when determining the inseam. Again, if in doubt, measure using Method #2.

## Suspenders:

Make sure that the try-on samples have regular length suspenders. If you take them all the way up and they are still too loose, or the buckle hits your collar bone, order shorts. If you let them all the way out and the crotch digs in uncomfortably when you squat, order longs. When in doubt, measure as described below.

Never pull the measuring tape too tight.

## Measuring Method #2\*



Under-the-arm Measurement



Over-the-arm Measurement



Shoulder Measurement



Measuring for Back Length



Measuring for Sleeve Length



Measuring Method #2 continues...

## Measuring Method #2\* - Measuring with a Tape

### Coat:

**Chest:** Arms should be at rest by their sides. Both an under-the-arm and over-the-arm measurement should be taken at the widest part of the chest/bust. Over-the-arm measurements are particularly important on individuals with large muscular development.

Supply both under and over arm measurements in whole inches (see photos).

**Shoulders:** Particularly narrow/wide shoulders should be measured and provided to the half inch from the base of the neck to the tip of the shoulder bone. This measurement is most commonly taken on individuals with very narrow shoulders and most often for female firefighters.

**Body:** Measure from the shirt collar seam/C-5 vertebrae to the height at which the bunker pant hits the lower back. This is normally a point directly opposite the navel when viewed from the side.

Provide back length in whole inches.

**Sleeve:** Measure with the upper arm parallel to the ground and held straight out to the side and with the forearm bent at a right angle to the upper arm. Measure from the center of the spine following a horizontal line around the elbow to a point on the wrist you wish the sleeve to reach. This is normally about one inch past the wrist crease. Measure the sleeve length using the right arm for right-handed people

and the left arm on left-handed people.

Supply sleeve length to the half inch.

**Other:** If any areas on the individual such as neck, stomach, upper arm or forearm are unusually large, supply any "Other" measurements to the half inch.

## **Pants:**

**Waist/Hip:** The physiological waist is at the belly button, which is not necessarily where you might wear your jeans or station pants. Morning Pride bunker pants are designed to be worn at the physiological waist and with the crotch in close proximity to the body. In order to achieve this the pants should be able to be held up by the cinching of take-up straps which we recommend be specified at each hip. This places the weight of the pants on the crest of the hip bones.

Measure the waist somewhat snugly at the bottom of the belly button while in your standard pants and belt. Hips should then be measured at the widest point.

Supply waist/hip measurements in whole inches.

For individuals with very large lower abdomens in relation to their hips and buttocks, or other body proportions well outside normal dimensioning, call the factory and ask to speak to the vice president of production to get specific instructions for that instance. Our computer generated cutting patterns can provide all dimensional changes as needed.

**Rise:** Measure with station pants on and from the belly button down, under the crotch, then up to the same height as the belly button on the back.

Supply the rise measurement in whole inches.

**Inseams** should be measured by having the individual being measured holding the tape end at the top of the crotch and with you reading the tape end at the floor. Measure to one inch below the protrusion of the bone at the ankle. Slightly longer or shorter per individual preference is allowed, but if it is too long they will drag on the ground and knees pads might be out of position. Too short and they may ride up on the boot and the knee pads be out of position.

Provide full inseam measurements in one inch increments.

## **Suspenders:**

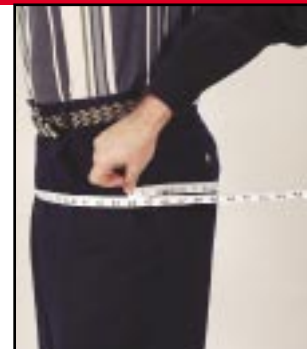
**Suspenders** measuring should be done when wearing bunker pants. Measure from between the left front suspender buttons, up and over the left shoulder, then down and across the back to between the right rear suspender buttons. For measurements less than 40 inches order *shorts*. From 41" to 45" order *regulars*. From 46" to 50" inches order *longs*.

Over 50", provide the measurement in one inch increments.

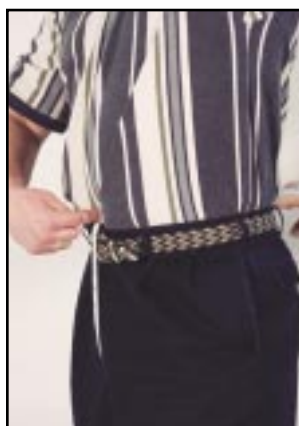
### Measuring, Method #2 (continued)



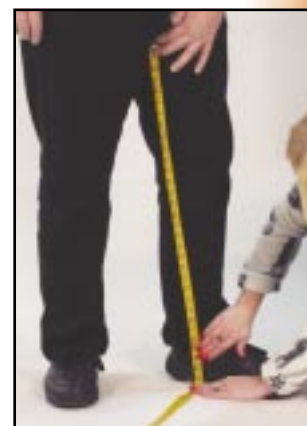
Measuring Waist Size



Measuring Hips



Measuring for Rise



Measuring for Inseam

### Measuring for Suspenders



Measuring Suspenders - Front



Measuring Suspenders - Back



## **Patented or Proprietary Morning Pride Clothing Products**

Morning Pride is NOT just another clothing line. Our aggressive, ongoing re-investments into research and development have allowed us to create and offer truly unique and value added products unavailable elsewhere. These products are unique enough to have been recognized by over 100 U. S. and international patents. These products offer such value added that they are no exception, sole source specified by the largest and most progressive departments in North America. Among our proprietary and/or patented products, discussed in this catalog:

Adjustable, Replaceable Chinstrap	Patented	page 60
Advanced Protective Tracking	Copyrighted	pages 4 - 7
All or Nothing Closure	Patented	page 62
Angled Pants Cuff	Pat. Pending	page 65
Ankle Fit Strap	Patented	page 60
Anti-Wicking Strip	Patented	page 26
Bloodborne Pathogen Resistance Styling	Patented	page 8
Body Armor Linings	Patented	page 70
Boot Access Panel Pants	Patented	page 59
Boot Interface Panels	Patented	page 70
Breathable, FR Labeling	Pat. Pending	page 27
Circumferential Rope Pocket	Patented	page 80
Dead Air Insulation Panels	Patented	pages 70 & 71
Disposable Analysis Strip	Pat. Pending	page 66
Dynamic Suspending	Patented	pages 56 - 58
EMS BPR styling	Patented	page 15
Escape Belt	Patented	page 80
Flex Facilitator Panels	Patented	page 71
Foldover Comfort Chinstrap	Patented	pages 10 & 61
Full Body Harness Coat	Pat. Pending	pages 82 & 83
Full Range of Motion Crotch	Patented	page 24
Glove Interface Sleeve	Pat. Pending	page 67
Harness Bunker Pants	Patented	page 81
Heat Channel Knees	Patented	page 68
Hinged Pocketing	Pat. Pending	page 77
Inspection Port Liners	Patented	page 72
Integral Customization	Pat. Pending	page 76
Kinetic Kut Styling	Patented	pages 20 - 23
Liner Keeper Strap	Patented	page 59
Liner Locator	Patented	page 72
Low Bulk Closures	Pat. Pending	page 63
Lumbar Support Coat	Patented	pages 74 & 75
Puncture Resistant Knees	Patented	page 69
Removable Crotch Reinforcements	Pat. Pending	page 64
Sealing Stirrups	Pat. Pending	page 14
Shingle Coat Cuff	Patented	page 65
Stabilized Chinstrap	Pat. Pending	page 61
Tabbed Long Wristlet	Patented	page 87
TAC Reversible Structural BPR Styling	Pat. Pending	pages 11 & 12
Tails Styling	Patented	pages 18 & 19
Technical Rescue/USAR Styling	Patented	page 14
Vector Flex Tucks	Patented	page 73
Waterproof Wristlet	Patented	pages 22 & 23
Weight Reduction Hemming	Patented	page 73
Wildland/Structural Dual Certification Style	Pat. Pending	page 86



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- |  |                                       |
|--|---------------------------------------|
| Nomex® – E.I. Du Pont de Nemour Inc.             | Isolater+® – Springs Industries       |
| Reflexite® – Reflexite Corp. Inc.                | P84® – Lenzing                        |
| 3M™ Scotchlite™ Reflective Material – 3M company | Caldura – Southern Mills, Inc.        |
| Tyvek® – E.I. Du Pont de Nemour Inc.             | Kevlar® – E.I. Du Pont de Nemour Inc. |
| Advance® – Southern Mills, Inc.                  | Aralite – Southern Mills, Inc.        |
| Arashield® – Southern Mills, Inc.                | Crosstech® – W. L. Gore & Co., Inc.   |
| Isolater® -- Springs Industries                  | Basofil® – BASF                       |

**Total Fire Group Adheres to the Highest Ethical Standards...**

We recognize our success is possible only because the fire service industry has come to respect Total Fire Group's commitment to the highest standards in business practices, product design and customer support. As sustaining members of the following organizations, Total Fire Group brands honor their applicable "Code of Ethics" scrupulously.



F.E.M.S.A. – Fire Equipment Manufacturers & Suppliers Association



N.F.P.A. – National Fire Protection Association



I.S.F.S.I. – International Society of Fire Service Instructors



F.D.S.O.A. – Fire Department Safety Officers Association



I.A.F.C. – International Association of Fire Chiefs



N.F.I.B. – National Federation of Independent Businesses



N.V.F.C. – National Volunteer Fire Council



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