

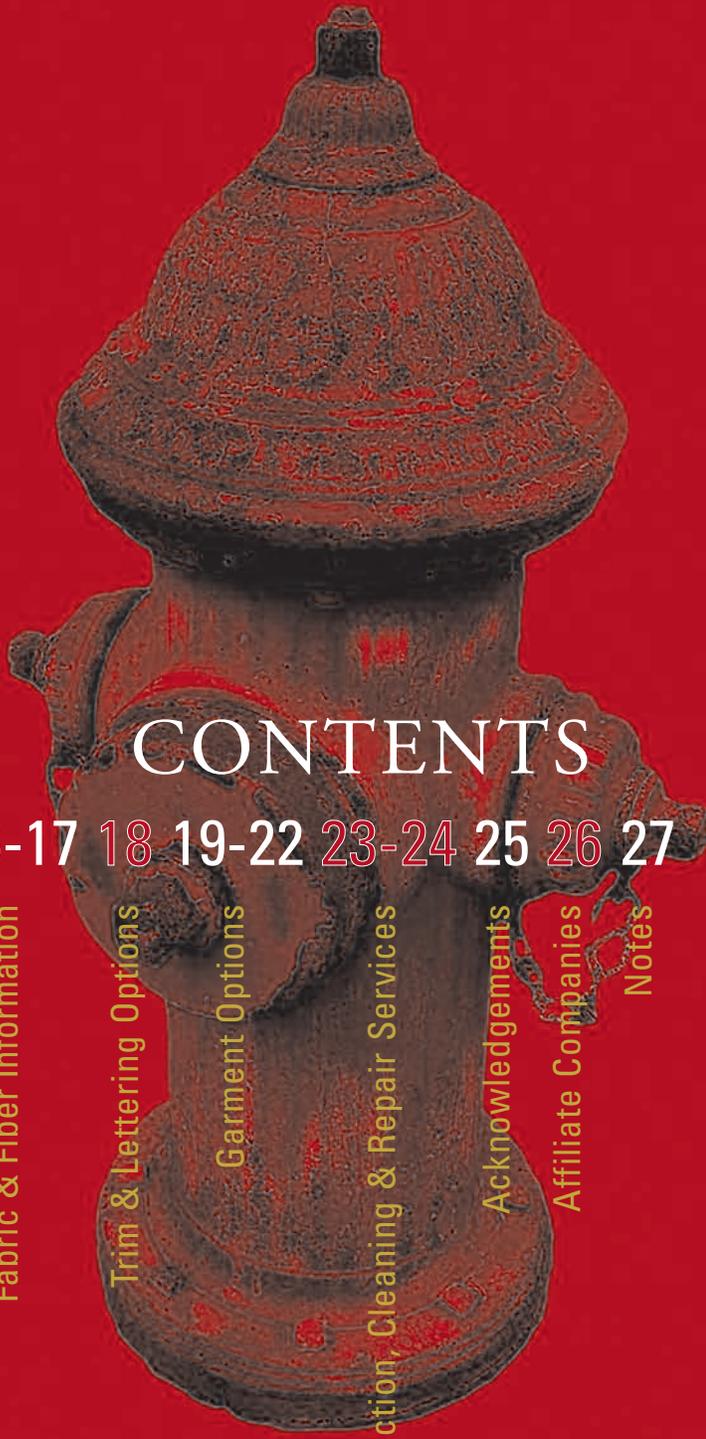


PROTECTIVE CLOTHING *for*  
STRUCTURAL & PROXIMITY  
FIRE FIGHTING

**QuakerSafety**  
Quality  
Fire Protective  
Clothing

3	4-5	6-7	8-9	10-11	12-13	14-15	16-17	18	19-22	23-24	25	26	27
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Introduction	Features & Advantages	Measuring Instructions	Coats	Pants	Axis & Radius Style Gear	QS-103 & QS-103 Style Proximity Gear	Traditional & Responder Style Gear	Fabric & Fiber Information	Trim & Lettering Options	Garment Options	Inspection, Cleaning & Repair Services	Acknowledgements	Affiliate Companies	Notes
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# INTRODUCTION

Quaker Safety has been manufacturing many types of protective clothing since 1946. However, the real roots of the company we know today were established in 1986 when the company began to focus primarily on manufacturing NFPA compliant garments for structural and proximity fire fighting. Substantial market research and development conducted throughout the years has provided Quaker Safety with insight into the requirements of the clothing from the fire department's perspective which, in turn, has enabled Quaker Safety to design and manufacture high quality turnout gear with a quick, reliable delivery schedule. Quaker Safety's rapid delivery, for which the company has become well known, remains unsurpassed in the fire service industry.

Over the last 27 years, Quaker Safety has developed a network of leading distributors and exporters throughout North America. Quaker Safety believes that service through local distribution is the best way to achieve the highest level of customer satisfaction. Quaker Safety's local distributors are always available to measure, provide technical support and to ensure that each order of protective clothing is customized to meet your fire department's specific needs.

Quaker Safety also offers a comprehensive range of on site cleaning and repair services for all brands of turnout gear, including those which are required annually by NFPA 1851. All work is performed to exacting standards by experienced personnel with the objective of maximizing the safety of the wearer and the useful life of the protective clothing.

At Quaker Safety, attaining customer satisfaction by consistently meeting our customers' delivery, quality and service requirements has always been our top priority. This is achieved through the use of our ISO certified Quality Management System consisting of detailed procedures which provide the steps and processes necessary to achieve our goal of complete customer satisfaction. Quaker Safety's Quality Management System has been audited by external auditors and is certified as being in accordance with the latest edition of ISO 9001. This certification demonstrates the commitment of Quaker Safety to continual improvement in the areas of design, manufacture and customer service. We believe that this will give you the assurance that when you specify Quaker Safety turnout gear, you're specifying the highest quality product available.

ISO CERTIFICATION

MADE IN THE  
USA



# FEATURES & ADVANTAGES



**DELIVERY** Quaker Safety's prompt delivery of custom made garments remains unsurpassed in the fire service industry. An express delivery option is also available for those time-critical situations.

**QUALITY** Quaker Safety achieves its industry leading quality by using the finest raw materials available from the most recognized suppliers in the fire service industry and by carefully controlling the garment manufacturing process with our ISO 9001 certified procedures. Quaker Safety stands behind its products by providing a five year warranty against defects in materials and workmanship.



**SERVICE** Quaker Safety's qualified staff, distributors and material suppliers are eager to assist you in every facet of the selection and lifetime care and maintenance of your turnout gear.

**CUSTOM MADE GARMENTS** Quaker Safety offers its customers a broad selection of garment styles, materials and options from which to choose. Custom sized garments enhance the comfort, mobility and safety of the firefighter. Coats are available in a variety of lengths and a range of even chest sizes from 30" to 68", with sleeves available in one inch increments. Pants are available in a variety of styles and a range of even waist sizes from 26" to 64", with inseams available in one inch increments.

**OUTER SHELLS** The majority of Quaker Safety's structural outer shells are treated with an enhanced water repellent finish for superior abrasion and water absorption resistance, as compared to conventional water repellent finishes.



**MOISTURE BARRIERS** All moisture barriers manufactured by W.L. Gore & Associates, Inc. and Stedfast Inc. offer outstanding breathability, thermal stability and durability.

**THERMAL LINERS** The face cloth of all thermal liners manufactured by TenCate Protective Fabrics includes an enhanced wicking finish to maximize comfort by moving perspiration away from the body and spreading moisture for improved dissipation.

**OUTER SHELL SEAMS** All major seams are quadruple stitched with Tex 90 NOMEX<sup>®</sup> thread for unsurpassed strength. Lock stitching is used on all minor seams.

**LINER SEAMS** All major seams are double stitched with Tex 60 NOMEX<sup>®</sup> thread for extra strength. Lock stitching is used on all minor seams.

**FIRE RETARDANT (FR) HOOK AND LOOP TAPE** All hook and loop tape is treated with a fire retardant finish to provide a service life far exceeding that of conventional hook and loop tape.



**POCKETS** External pockets include flaps secured with FR hook and loop tape and brass drainage eyelets.

**REINFORCED HARDWARE** Secured through at least two layers of material or backed by suede leather to prevent the hardware from "pulling through" the garment.

**BAR CODE LABELS** All outer shells and liners include bar code labels to facilitate tracking.

**REINFORCED STRESS POINTS** All stress points are bartacked for extra strength.

# MEASURING INSTRUCTIONS

Please follow these instructions when sizing for Quaker Safety turnout gear. Do not use other manufacturers' sizes, sizing instructions or garments to determine measurements. Do not allow individuals to measure themselves.

## GENERAL GUIDELINES

- Take all measurements over any clothing or equipment that the user would normally wear underneath the protective garment (e.g., belt, cell phone, pager, etc.), taking into account that individuals may weigh more and wear more clothing during colder months.
- Patterns for females are available but are seldom necessary to ensure a proper fit.
- Non-proportional body measurements should be noted on your order.
- Always provide height and weight information.
- Ensure that there is sufficient overlap as required by NFPA 1500 (current edition). NFPA 1500 mandates that all layers shall have at least a 2" overlap between the coat and pant when measured in both of the following positions:
  - Standing, hands together, reaching overhead as high as possible; and
  - Standing, hands together, reaching overhead with body bent forward, to the side, and to the back as much as possible
- Coat lengths of 28" (optional Axis and QS-103), 30" (QS-103 and optional Axis), 32" (Axis and optional QS-103), 34" (optional Axis) and 35" (Traditional and Responder) are available. Radius is available in a standard 30"/36" length and optional 28"/34" and 32"/38" lengths.
- Pant styles are waist level (Axis-GPS, Radius-GPS, Traditional and Responder), low rise front with a 3" gradual rise back (Axis and Radius), and 6" high back (QS-103).
- Appropriate coat length, pant waist style and suspender length should be determined at the time of measuring.
- Round all fractions up to the next whole number.
- If in doubt—contact our **Customer Service Department** at 215-536-2991, ext. 1 for assistance.

## MEASURING USING SIZING SUITS

**Sizing Suits** are available for your use and are the preferred method of obtaining the most accurate measurements; however, properly taken tape measurements work well. Please note that previous generation QS-103/Traditional sizing suits should not be used.

Always try on the sizing coat while wearing the sizing pant to ensure a proper fit.

Belly and hip measurements should not be supplied when measurements have been verified using sizing suits.

**Chest:** Wearer should go through a full range of motion to make sure the shoulders and chest fit comfortably.

**Sleeve:** Determine sleeve length by adding or subtracting from the length of the sizing coat sleeve.

**Waist:** Wearer should go through a full range of motion including squatting and climbing to make sure there is adequate room in the seat and thigh.

**Inseam:** Determine inseam length by adding or subtracting from the length of the sizing pant inseam.

## MEASURING USING TAPE MEASURE

**Chest:** Raise both arms 90° to the body. Position the measuring tape around the fullest part of the chest, over the shoulder blades, and under the arms. Take a deep breath, hold it, and lower arms. Record the largest measurement.

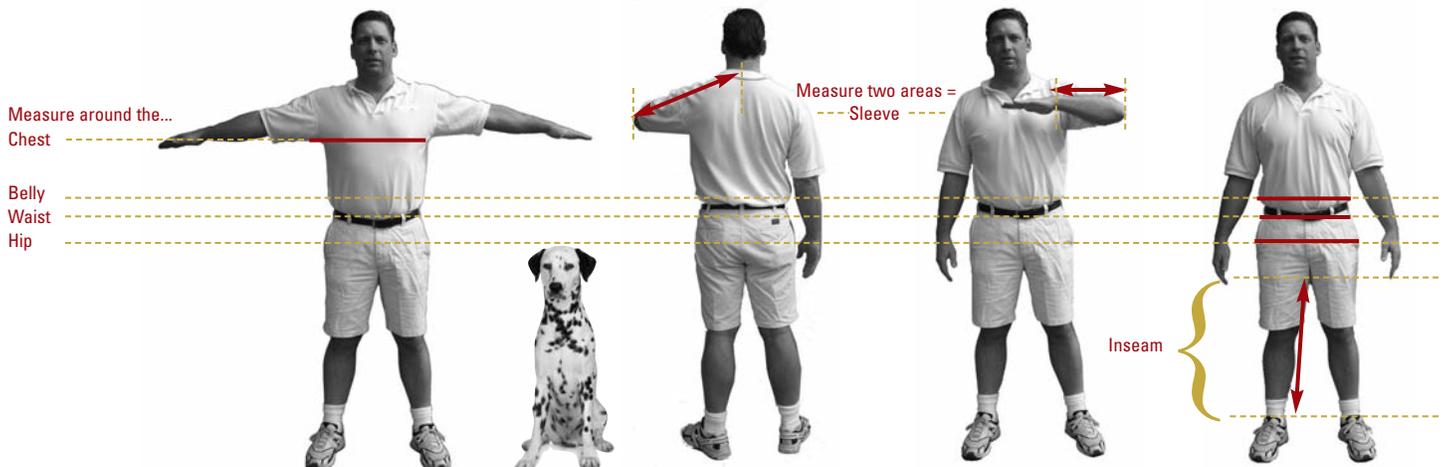
**Sleeve:** Raise one arm so that it is at a 90° angle to the body. Next bend your arm so that your hand is towards your chest. Measure from the spine starting just below the base of the neck, around the shoulder and elbow, to the wrist bone.

**Waist:** Measure at the waistline, over belt or pant waistband.

**Belly:** Measure around the body at the navel.

**Hip:** Measure around the fullest part of the hips.

**Inseam:** Measure from the crotch to the ankle bone, ensuring that the individual is standing up straight and the tape measure is not bunched up in the crotch.



# COATS



## STANDARD FEATURES OF OUR 5 STYLES

		AXIS STYLE	RADIUS STYLE	QS-103 STYLE	TRADITIONAL STYLE	RESPONDER STYLE
<b>PATTERNING</b>	Flexion patterning in all layers	●	●	●	●	●
<b>COAT LENGTH</b>	Standard length	32"	30"/36"	30"	35"	35"
	Optional tall length	34"	32"/38"	32"	--	--
	Optional short length	28", 30"	28"/34"	28"	--	--
<b>4-LAYER STORM FLAP</b>	Streamlined narrow storm flap	●	●	●	●	●
<b>CLOSURE SYSTEM</b>	Brass zipper with 1.5" FR hook & loop tape	●	●	●	●	●
<b>EXPANDABLE POCKETS</b>	Expandable bellows/handwarmer pockets (9"h x 9"w x 2"d)	●	●			
	Expandable handwarmer pockets (9"h x 9"w)			●		
	Expandable patch pockets (9"h x 10"w)				●	●
<b>REINFORCED CUFFS</b>	Fabric	●	●	●	●	●



## HIGHEST LEVELS OF QUALITY & PROTECTION INCLUDED AS STANDARD FEATURES IN OUR COATS

All coats are available in a variety of lengths and a range of even chest sizes from 30" to 68", with sleeves available in one inch increments. All coats have a 4-layer, 3" high stand-up collar and a fully removable Drag Rescue Device (DRD), along with thermally enhanced shoulders, upper back and elbows.

Ⓐ **BODY** // Both outer shell and liner are constructed with three panels (two front and one back) and a full cut back for a compatible, comfortable fit.

Ⓑ **COLLAR** // Constructed with two layers of breathable moisture barrier material and two layers of outer shell material to provide complete thermal and moisture protection.

Ⓒ **THROAT STRAP** // Constructed with two layers of breathable moisture barrier material and two layers of outer shell material to eliminate leakage and designed so that there is no exposed hook and loop tape when deployed.

Ⓓ **THERMALLY ENHANCED SHOULDERS AND UPPER BACK**  
An additional layer of outer shell and thermal liner material provides increased protection and comfort in this high compression area.

Ⓔ **SLEEVES** // Two piece contoured sleeves with built-in underarm bellows in all layers limits coat rise and allows for natural bending of arms and a full range of arm movement with fewer seams than competitive systems.

Ⓕ **THERMALLY ENHANCED ELBOWS** // An additional layer of thermal liner material is provided for increased protection and comfort.

Ⓖ **WATERWELLS** // Moisture barrier material is attached to the lower portion of the sleeves to prevent water, fluid or debris from entering when the arms are in the "raised" position.

Ⓗ **WRISTLETS** // Contain Spandex to improve shape and elasticity retention.

Ⓘ **STORM FLAP** // Constructed with one layer of breathable moisture barrier material, one layer of thermal liner material and two layers of outer shell material to provide complete thermal and moisture protection.

Ⓚ **CLOSURE SYSTEMS** // *(Available in four systems)*

- Our standard - heavy duty brass zipper with FR hook and loop tape
- Heavy duty nylon zipper with FR hook and loop tape
- FR hook and loop tape with hooks and dees *(not available on Proximity coats)*
- Hooks and dees with 3 snaps and FR hook and loop tape *(not available on Proximity coats)*

Ⓛ **DETACHABLE LINER** // This durable, non-gapping attachment system improves freedom of movement as compared to systems which utilize zippers, prevents the separation of the liner from the outer shell when donning the coat, and allows for easy removal and installation when laundering. The liner also includes a durable hang up loop constructed of 1" aramid tape.

Ⓜ **INSIDE FACINGS** // Two layers of outer shell material and one layer of CROSSTECH® breathable moisture barrier material to provide complete protection against leakage to the fire fighter's upper torso.

Ⓝ **LINER POCKET** // Measures 9" high x 9" wide and constructed with the specified breathable moisture barrier and thermal liner materials.

# HIGHEST LEVELS OF QUALITY & PROTECTION INCLUDED AS STANDARD FEATURES IN OUR PANTS

Ⓐ **BODY** // Both outer shell and liner are constructed with four panels (two front and two back) for a compatible, comfortable fit.

Ⓑ **SUSPENDERS** // H back suspenders are available with 2" wide heavy duty elastic and/or non-elastic webbing, leather or metal ends, and with either reflective trim or padding and a quick adjust feature. Suspenders are available in standard or custom made lengths to fit each fire fighter's needs.

Ⓒ **INDEPENDENT WAISTBAND** // The independent two layer waistband distributes weight evenly for a more comfortable fit.

Ⓓ **DETACHABLE LINER** // This durable, non-gapping attachment system improves freedom of movement as compared to systems which utilize zippers, prevents the separation of the liner from the outer shell when donning the pants, and allows for easy removal and installation when laundering.

Ⓔ **CLOSURE SYSTEMS** // *(Available in two systems)*

- Our standard - FR hook and loop tape with snap and hook and dee
- Heavy duty brass or nylon zipper with FR hook and loop tape and hook and dee

Ⓕ **FLY FLAP** // Constructed with one layer of breathable moisture barrier material, one layer of thermal liner material and two layers of outer shell material to provide complete thermal and moisture protection. An inner fly flap extends 2-1/2" on the interior of the outer shell layer to ensure continuous thermal and moisture protection.

Ⓖ **TAKE-UP STRAPS** // One take-up strap is attached at each side seam of the pant to shift the weight from the shoulders and suspenders to the hips. The postman style buckle allows for quick, one-handed adjustment of up to 2".

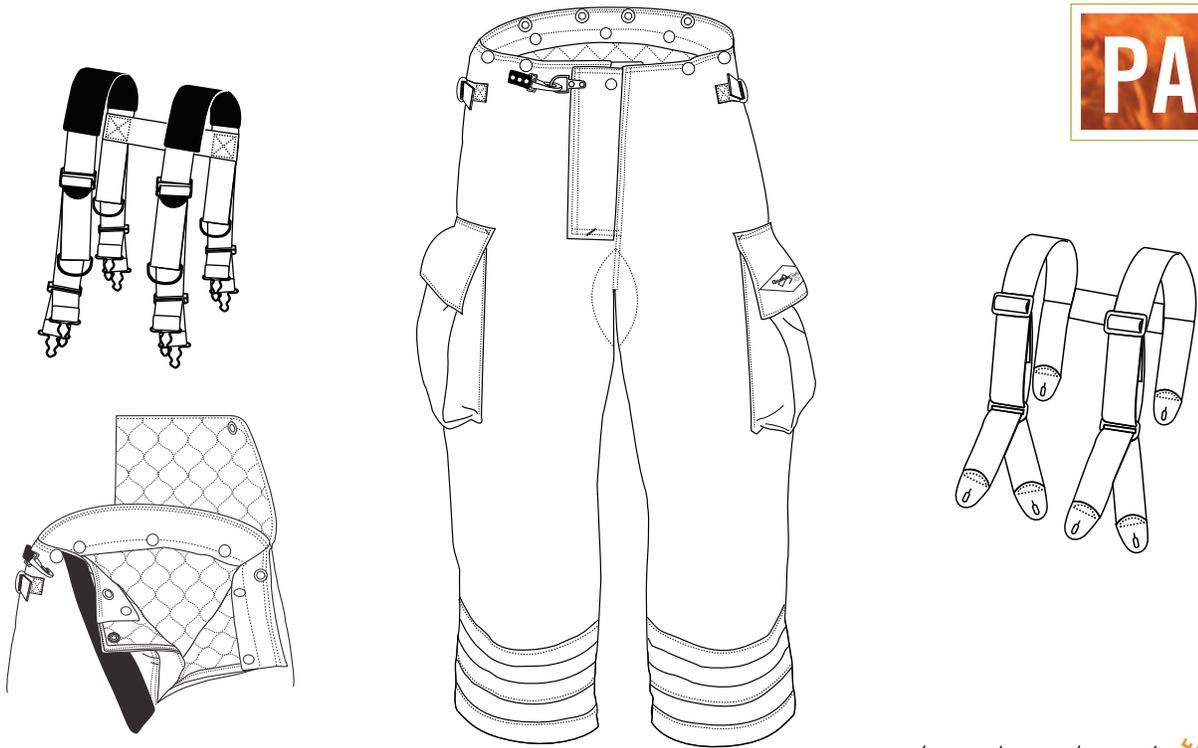
Ⓗ **FABRIC REINFORCED CROTCH** // Internally reinforced with an additional layer of outer shell material to alleviate the excessive stress on the seam when bending, crawling or reaching.

Ⓘ **THERMALLY ENHANCED KNEES** // An additional layer of meta-aramid thermal liner material is sewn to the liner for maximum protection and comfort in this high compression area.

⓿ **REVERSE BACK CUFFS** // Angled approximately 1-1/2" in the back in all layers to prevent the fire fighter from walking on the back of his / her cuffs.



# PANTS



## STANDARD FEATURES OF OUR 5 STYLES

		AXIS STYLE	RADIUS STYLE	QS-103 STYLE	TRADITIONAL STYLE	RESPONDER STYLE
<b>PATTERNING</b>	Flexion patterning in all layers	●	●	●	●	●
	Pleated/darted knees	●				
	Full cut knees		●	●	●	●
<b>FRONT</b>	Low rise	●	●			
	Waist level			●	●	●
<b>BACK</b>	3" gradual rise	●	●			
	Waist level				●	●
	6" high back			●		
<b>4-LAYER FLY FLAP</b>	Streamlined narrow fly flap	●	●	●	●	●
<b>CLOSURE SYSTEM</b>	1.5" FR hook & loop tape with snap and hook & dee	●	●	●	●	●
<b>POCKETS</b>	Expandable bellows pockets (9"h x 10"w x 2"d)	●	●	●		
	Patch pockets (8"h x 7.5"w)					●
<b>REINFORCED CUFFS</b>	Fabric	●	●	●	●	●
<b>SUSPENDERS</b>	2" wide elastic H back with leather ends		●	●		●
	2" wide padded quick adjust H back with metal ends	●				

# AXIS & RADIUS STYLE GEAR

## COAT FEATURES:

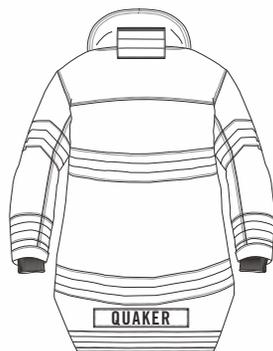
- **AXIS STYLE 32" COAT**  
(34" TALL AND 28" OR 30" SHORT LENGTHS AVAILABLE)  
(PROXIMITY ALSO AVAILABLE)
- **RADIUS STYLE 30" FRONT WITH 36" BACK COAT**  
(32" FRONT WITH 38" BACK TALL AND 28" FRONT WITH 34" BACK  
SHORT LENGTHS AVAILABLE)  
(PROXIMITY ALSO AVAILABLE)

## COMMON TO BOTH COAT STYLES

- Innovative Flexion Patterning in All Layers
  - Three panel body with a full cut back
  - Two piece contoured sleeves with built-in underarm bellows for mobility, fit, a full range of arm movement, and limited coat rise
- Four layer, 3" high stand-up collar provides internal thermal and moisture protection. Four layer contoured throat strap with fire retardant hook and loop tape closure provides internal moisture protection with no exposed hook and loop tape when in use
- Advanced Thermal Enhancement System
  - Shoulders and upper back are thermally enhanced with an extra layer of outer shell and thermal liner material
  - Elbows are thermally enhanced with an extra layer of thermal liner material
- Streamlined narrow four layer storm flap with heavy duty brass zipper and 1.5" fire retardant hook and loop tape closure provides internal thermal and moisture protection
- Cuffs are fabric reinforced for extended wear life (or your choice of leather or Ara-Shield®) featuring 4" black NOMEX® / Spandex Comfort-Fit wristlets
- Two versatile 9" h x 9" w x 2" d expandable bellows /handwarmer pockets with fire retardant hook and loop tape closures and drainage eyelets
- Fully detachable liner includes an oversized pocket lined with moisture barrier material to keep contents dry
- Fully removable Drag Rescue Device (DRD)



AXIS STYLE COAT BACK



RADIUS STYLE COAT BACK

## PANT FEATURES:

- **AXIS STYLE PANT**  
(PROXIMITY ALSO AVAILABLE)
  - Pleated/darted knees offer unrestricted mobility when climbing, bending, kneeling or crawling
  - 2" wide, 8 point, padded quick adjust H back suspenders with metal ends
- **RADIUS STYLE PANT**  
(PROXIMITY ALSO AVAILABLE)
  - Full cut knees
  - 2" wide, 8 point, elastic H back suspenders with leather ends

## COMMON TO BOTH PANT STYLES

- Innovative Flexion Patterning in All Layers
  - Four panel body with a contoured waist
  - Independent two layer waistband
  - Contoured back yoke
  - Front and back panels shaped at the hips and thighsThis exclusive patterning offers unequaled mobility, fit, expansion and flexibility when climbing, bending, kneeling or crawling
- Low rise front with a 3" gradual rise in the back
- Streamlined narrow four layer fly flap with 1.5" fire retardant hook and loop tape, snap, and hook and dee closure provides internal thermal and moisture protection (shown opposite open and closed)
- Outer shell is reinforced at the crotch for increased abrasion resistance in this high stress area
- Two fabric take-up straps to shift weight from shoulders to hips. The postman style buckle allows for quick, one-handed adjustment
- Two 9" h x 10" w x 2" d expandable bellows pockets with fire retardant hook and loop tape closures and drainage eyelets. Fabric reinforced pockets are standard on aluminized outer shells
- Knees are thermally enhanced with an extra layer of thermal liner material. Fabric reinforced knees are standard on aluminized outer shells
- Reverse back cuffs are fabric reinforced for extended wear life (or your choice of leather or Ara-Shield®)
- Fully detachable liner
- All suspender buttons are reinforced with leather for durability

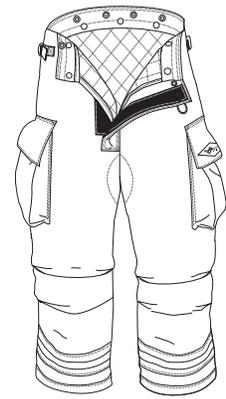
Superior seam construction provided by quadruple stitched outer shell major seams and double stitched liner major seams.

All Axis & Radius Style Gear is NFPA 1971-2013 compliant. Structural gear is also OSHA 29 CFR 1910.156 compliant (for maximum protection, coat and pant with liners, fastened closures, and sufficient overlap (see NFPA 1500-2013) must be worn).





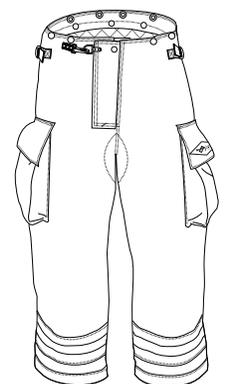
**A** ----- **AXIS STYLE COAT & PANT**



(Fabric reinforced knees are optional)



**R** ----- **RADIUS STYLE COAT & PANT**



**A**

**R**

# QS-103 & QS-103 STYLE PROXIMITY GEAR

## COAT FEATURES:

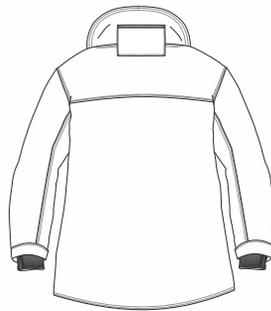
- **QS-103 STYLE 30" COAT**  
(32" TALL AND 28" SHORT LENGTHS AVAILABLE)
- **QS-103 STYLE 30" PROXIMITY COAT**  
(32" TALL AND 28" SHORT LENGTHS AVAILABLE)

### COMMON TO BOTH QS-103 COAT STYLES

- Innovative Flexion Patterning in All Layers
  - Three panel body with a full cut back
  - Two piece contoured sleeves with built-in underarm bellows for mobility, fit, a full range of arm movement, and limited coat rise
- Four layer, 3" high stand-up collar provides internal thermal and moisture protection. Four layer contoured throat strap with fire retardant hook and loop tape closure provides internal moisture protection with no exposed hook and loop tape when in use
- Advanced Thermal Enhancement System
  - Shoulders and upper back are thermally enhanced with an extra layer of outer shell and thermal liner material
  - Elbows are thermally enhanced with an extra layer of thermal liner material
- Streamlined narrow four layer storm flap with heavy duty brass zipper and 1.5" fire retardant hook and loop tape closure provides internal thermal and moisture protection
- Cuffs are fabric reinforced for extended wear life (or your choice of leather or Ara-Shield®) featuring 4" black NOMEX® / Spandex Comfort-Fit wristlets
- Two 9" h x 9" w expandable handwarmer pockets with fire retardant hook and loop tape closures and drainage eyelets
- Fully detachable liner includes an oversized pocket lined with moisture barrier material to keep contents dry
- Fully removable Drag Rescue Device (DRD)



QS-103 STYLE COAT BACK



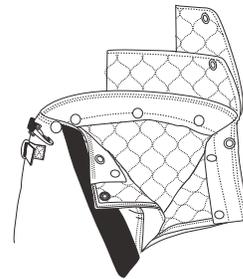
QS-103 STYLE PROXIMITY COAT BACK

## PANT FEATURES:

- **QS-103 STYLE 6" HIGH BACK PANT**
- **QS-103 STYLE 6" HIGH BACK PROXIMITY PANT**
  - Fabric reinforced pockets and knees are standard on aluminized outer shells

### COMMON TO BOTH QS-103 PANT STYLES

- Innovative Flexion Patterning in All Layers
  - Four panel body with a contoured waist
  - Independent two layer waistband
  - Front and back panels shaped at the hips and thighsThis exclusive patterning offers mobility, fit, and flexibility when bending, kneeling or crawling
- 6" high back section provides thermal and moisture protection
- Streamlined narrow four layer fly flap with 1.5" fire retardant hook and loop tape, snap, and hook and dee closure provides internal thermal and moisture protection (shown opposite open and closed)
- Outer shell is reinforced at the crotch for increased abrasion resistance in this high stress area
- Two fabric take-up straps to shift weight from shoulders to hips. The postman style buckle allows for quick, one-handed adjustment
- Two 9" h x 10" w x 2" d expandable bellows pockets with fire retardant hook and loop tape closures and drainage eyelets
- Knees are thermally enhanced with an extra layer of thermal liner material
- Reverse back cuffs are fabric reinforced for extended wear life (or your choice of leather or Ara-Shield®)
- Fully detachable liner
- 2" wide, 8 point, elastic H back suspenders with leather ends
- All suspender buttons are reinforced with leather for durability



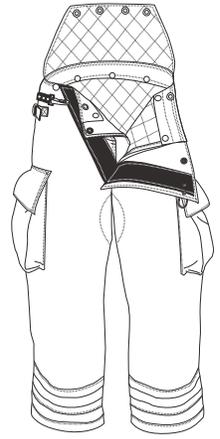
Superior seam construction provided by quadruple stitched outer shell major seams and double stitched liner major seams.

All QS-103 Style Gear is NFPA 1971-2013 compliant. Structural gear is also OSHA 29 CFR 1910.156 compliant (for maximum protection, coat and pant with liners, fastened closures, and sufficient overlap (see NFPA 1500-2013) must be worn).

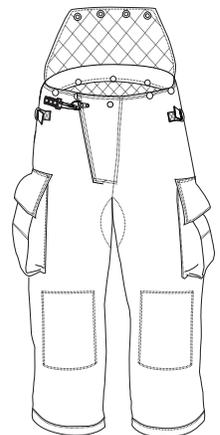




**QS-103 STYLE COAT & PANT**



**QS-103 STYLE PROXIMITY COAT & PANT**



# TRADITIONAL & RESPONDER STYLE GEAR

## COAT FEATURES:

### • TRADITIONAL STYLE 35" COAT (PROXIMITY ALSO AVAILABLE)

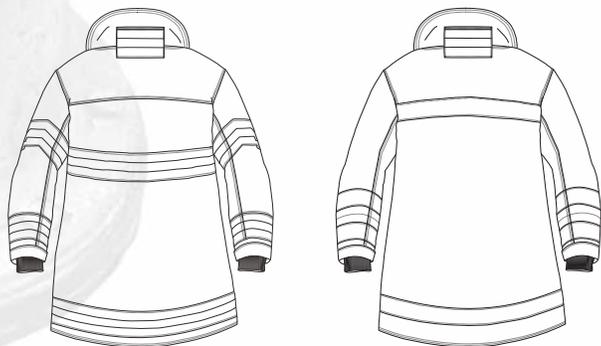
- Cuffs are fabric reinforced for extended wear life (or your choice of leather or Ara-Shield®)

### • RESPONDER STYLE 35" COAT

- Cuffs are fabric reinforced for extended wear life

### COMMON TO BOTH COAT STYLES

- Innovative Flexion Patterning in All Layers
  - Three panel body with a full cut back
  - Two piece contoured sleeves with built-in underarm bellows for mobility, fit, a full range of arm movement, and limited coat rise
- Four layer, 3" high stand-up collar provides internal thermal and moisture protection. Four layer contoured throat strap with fire retardant hook and loop tape closure provides internal moisture protection with no exposed hook and loop tape when in use
- Advanced Thermal Enhancement System
  - Shoulders and upper back are thermally enhanced with an extra layer of outer shell and thermal liner material
  - Elbows are thermally enhanced with an extra layer of thermal liner material
- Streamlined narrow four layer storm flap with heavy duty brass zipper and 1.5" fire retardant hook and loop tape closure provides internal thermal and moisture protection
- 4" black NOMEX® / Spandex Comfort-Fit wristlets
- Two 9" h x 10" w expandable patch pockets with fire retardant hook and loop tape closures and drainage eyelets
- Fully detachable liner includes an oversized pocket lined with moisture barrier material to keep contents dry
- Fully removable Drag Rescue Device (DRD)



TRADITIONAL STYLE COAT BACK    RESPONDER STYLE COAT BACK

## PANT FEATURES:

### • TRADITIONAL STYLE WAIST LEVEL PANT (PROXIMITY ALSO AVAILABLE)

- Fabric reinforced knees are standard on aluminized outer shells
- Reverse back cuffs are fabric reinforced for extended wear life (or your choice of leather or Ara-Shield®)
- Pockets are available at an additional charge
- Suspenders are available at an additional charge

### • RESPONDER STYLE WAIST LEVEL PANT

- Knees are reinforced with a layer of gray Ara-Shield®
- Reverse back cuffs are fabric reinforced for extended wear life
- Two 8" h x 7.5" w rear patch pockets with fire retardant hook and loop tape closures and drainage eyelets
- 2" wide, 8 point, elastic H back suspenders with leather ends

### COMMON TO BOTH PANT STYLES

- Innovative Flexion Patterning in All Layers
  - Four panel body with a contoured waist
  - Independent two layer waistband
  - Front and back panels shaped at the hips and thighsThis exclusive patterning offers mobility, fit, and flexibility when bending, kneeling or crawling
- Streamlined narrow four layer fly flap with 1.5" fire retardant hook and loop tape, snap, and hook and dee closure provides internal thermal and moisture protection (shown opposite closed and open)
- Outer shell is reinforced at the crotch for increased abrasion resistance in this high stress area
- Two fabric take-up straps to shift weight from shoulders to hips. The postman style buckle allows for quick, one-handed adjustment
- Knees are thermally enhanced with an extra layer of thermal liner material
- Fully detachable liner
- All suspender buttons are reinforced with leather for durability

*Superior seam construction provided by quadruple stitched outer shell major seams and double stitched liner major seams.*

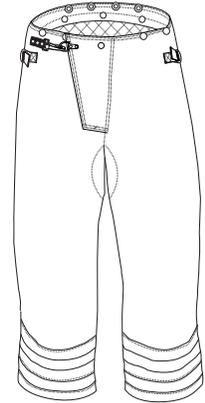
*Responder Style Gear is constructed with: yellow Brigade® 750 outer shell, Stedair® 3000 moisture barrier, Q-8™ thermal liner, 2" NFPA Basic style trim on coat and 2" trim around pant legs in red-orange 3M Scotchlite™. The lead time for Responder Style Gear in sizes Medium through 3XL is 5 business days. Responder Style Gear is stocked with standard sleeve lengths and 29" inseams. Please call for lead time for larger sized orders or orders requiring options.*

*All Traditional & Responder Style Gear is NFPA 1971-2013 compliant. Structural gear is also OSHA 29 CFR 1910.156 compliant (for maximum protection, coat and pant with liners, fastened closures, and sufficient overlap (see NFPA 1500-2013) must be worn).*

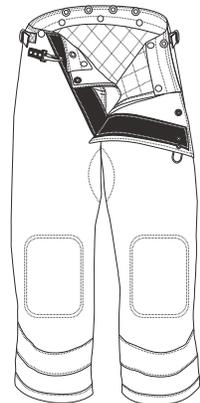




**T** TRADITIONAL STYLE COAT & PANT



**R** RESPONDER STYLE COAT & PANT



**T**

**R**

# FABRIC & FIBER INFORMATION

## OUTER SHELLS



### PBI Max™ 7.0

- 7.0 ounces per square yard
- Blend of 70% PBI/KEVLAR® spun yarns and 30% KEVLAR® filament yarns
- Twill weave
- Teflon® F-PPE enhanced water repellent finish
- Degradation temperature: 1,300° F
- Available in gold and black



### Gemini™ XT

- 7.5 ounces per square yard
- Blend of 40% PBI and 60% KEVLAR® spun yarns reinforced with a high-strength filament grid
- Modified plain weave
- Super Shelltite™ enhanced water repellent finish
- Degradation temperature: 1,300°F
- Available in natural and black



### Advance Ultra®

- 7.5 ounces per square yard
- Blend of 60% KEVLAR®, 20% NOMEX® and 20% PBO
- Rip stop weave
- Super Shelltite™ enhanced water repellent finish
- Degradation temperature: 1,200°F
- Available in light gold and dark gold



### Advance™

- 7.0 ounces per square yard
- Blend of 40% NOMEX® and 60% KEVLAR®
- Rip stop weave
- Super Shelltite™ enhanced water repellent finish
- Degradation temperature: 1,050°F
- Available in black, khaki, yellow and gold



### Brigade® 750

- 7.5 ounces per square yard
- Blend of 93% NOMEX®, 5% KEVLAR® and 2% P-140 (anti-static)
- Plain weave
- Shelltite™ water repellent finish
- Degradation temperature: 700°F
- Available in black, natural/off-white, red, royal, tan and yellow



### Millenia™ XT

- 7.5 ounces per square yard
- Blend of 40% PBO and 60% Para-aramid
- Rip stop weave
- Super Shelltite™ enhanced water repellent finish
- Degradation temperature: 1,300°F
- Available in natural



### Style 1098

- 7.0 ounces per square yard
- Blend of 33% PBI and 67% Para-aramid
- Rip stop weave (knit)
- Dual Mirror® Flexir® five layer structure for maximum reflectivity and durability
- Reflects 95% of radiant heat



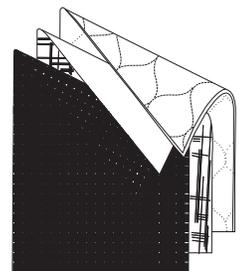
### Z-Flex® P-202

- 7.4 ounces per square yard
- Blend of 40% PBI and 60% Para-aramid
- 3D Mock Knit™ with Para-aramid rip stops
- Z-Flex® MLA multi layer system for maximum protection, insulation, and durability
- Reflects 95% of radiant heat

*Teflon® F-PPE and Super Shelltite® (Teflon® HT) finishes provide maximum water and stain repellency without affecting the breathability of the outer shell. These finishes maintain their durability and high performance even after frequent cleanings.*

*Shelltite™ (Teflon®) finish provides water and stain repellency without affecting the breathability of the outer shell.*

New materials are being introduced on a regular basis and some outer shell and liner combinations are not available. Please contact our Customer Service Department for an up-to-date listing of available materials and composites.



## THERMAL LINERS



### Glide™ Gold 2-Layer

- 7.4 ounces per square yard
- Two layers of NOMEX® E-89™ spunlace batt quilted with NOMEX® thread to an inherently slick filament KEVLAR® and spun NOMEX®/Lenzing FR® Viscose twill weave face cloth



### Caldura® SL2i

- 7.7 ounces per square yard
- Two layers of NOMEX® E-89™ spunlace batt quilted with NOMEX® thread to an inherently slick filament KEVLAR® and spun KEVLAR®/Lenzing FR®/Nylon twill weave face cloth
- Wickwell™ Plus enhanced wicking finish



### Aralite® SL2

- 7.2 ounces per square yard
- Two layers of NOMEX® E-89™ spunlace batt quilted with NOMEX® thread to a spun NOMEX® plain weave face cloth
- Wickwell™ Plus enhanced wicking finish



### OMNI Synergy 2 Layer

- 7.1 ounces per square yard
- Two layers of Basofil®/aramid spunlace blend batt quilted with NOMEX® thread to a calendered spun NOMEX® plain weave face cloth



### Aralite® NP

- 7.2 ounces per square yard
- Aramid needle punched batt quilted with NOMEX® thread to a spun NOMEX® plain weave face cloth
- Wickwell™ Plus enhanced wicking finish



### Bravo™

- 7.4 ounces per square yard
- Two layers of Meta-Aramid/FR Viscose batt quilted with NOMEX® thread to a camo print Meta-Aramid/Viscose/Polvamide plain weave face cloth



### Aralite® SL3

- 8.0 ounces per square yard
- Three layers of NOMEX® E-89™ spunlace batt quilted with NOMEX® thread to a spun NOMEX® plain weave face cloth
- Wickwell™ Plus enhanced wicking finish



### Quantum 3D® SL2i

- 7.7 ounces per square yard
- One 3D and one flat layer of NOMEX®/KEVLAR® spunlace batt quilted with meta-aramid thread to an inherently slick filament KEVLAR® and spun KEVLAR®/Lenzing FR®/Nylon gold check weave face cloth
- Wickwell™ Plus enhanced wicking finish



### Caldura® NPi

- 7.7 ounces per square yard
- Aramid needle punched batt quilted with NOMEX® thread to an inherently slick filament KEVLAR® and spun KEVLAR®/Lenzing FR®/Nylon twill weave face cloth
- Wickwell™ Plus enhanced wicking finish

## MOISTURE BARRIERS

### CROSSTECH® Black, 2F

- 4.6 ounces per square yard
- NOMEX® IIIA woven pajama check substrate with a water repellent finish laminated to an enhanced bicomponent membrane comprised of an expanded PTFE (Teflon®) matrix with a continuous hydrophilic and oleophobic coating that is impregnated into the matrix



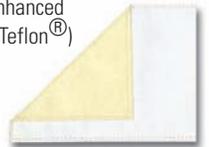
### GORE™ RT7100, 3D

- 4.6 ounces per square yard
- Needle punched NOMEX® non-woven substrate laminated to a GORE™ membrane comprised of an expanded PTFE (Teflon®) matrix with a continuous hydrophilic and oleophobic coating that is impregnated into the matrix



### Stedair® 3000

- 5.0 ounces per square yard
- NOMEX® E-89™ non-woven substrate laminated to an enhanced bicomponent membrane comprised of an expanded PTFE (Teflon®) matrix with a highly engineered polymer coating



### Stedair® 4000

- 5.5 ounces per square yard
- NOMEX® IIIA woven pajama check substrate laminated to an enhanced bicomponent membrane comprised of an expanded PTFE (Teflon®) matrix with a highly engineered polymer coating



## REINFORCEMENTS

### Outer Shell Material

- 7.0 - 7.5 ounces per square yard
- Soft and pliable
- Breathable
- Moderate durability
- Refer to "Outer Shells" section for available materials and colors

### Ara-Shield®

- 16 ounces per square yard polymer coated KEVLAR® (matte finish)
- Prevents moisture absorption
- Easy to clean
- Exceptional durability
- Available in gray, black and gold



### Leather

- 24-26 ounces per square yard suede leather
- Breathable
- Unsurpassed durability
- Available in gray and black



### Wickwell™ Plus

A wicking finish is embedded into the face cloth of the thermal liner. This more effective and durable process enhances comfort by moving perspiration away from the body and spreading moisture for improved dissipation.

# TRIM *equals* VISIBILITY

Low visibility has become a contributing cause in vehicle related accidents while fighting fires and performing emergency medical service and traffic control functions.

Drivers passing an accident scene or emergency response situation have only seconds to notice and respond to the presence of a fire fighter, an EMS technician or a traffic controller. Therefore, being "highly visible" is extremely important.

In accordance with NFPA Standards, Quaker Safety attaches reflective trim, constructed of both fluorescent and retroreflective materials, to the outer shell of its structural fire fighting garments to enhance visibility. The fluorescent trim enhances daytime visibility while the retroreflective trim enhances nighttime visibility. (Retroreflectivity values for retroreflective materials are 150 to 1,500 times higher than skin or white fabric.)

The various brands of reflective trim which Quaker Safety offers improves the likelihood that fire fighters will in fact be "highly visible" both during the daytime and nighttime hours.

## TRIM PATTERN OPTIONS

New York City - Front & Back



NFPA Basic - Front & Back



Project Fires - Front & Back



Quaker - Front & Back



Around Legs



Down and around Legs



## TRIM OPTIONS



### 3M Scotchlite™ Triple Trim

- Color: Lime-Yellow and Red-Orange
- Width: 3"
- More than 4 times brighter than solid 3M Scotchlite™ following 15 launderings



### 3M Scotchlite™

- Color: Lime-Yellow and Red-Orange
- Width: 2" and 3"

## LETTERING & PATCH OPTIONS



### 3M Scotchlite™

- Color: Lime-Yellow and Red-Orange
- Height: 2" and 3"

### 3M Scotchlite™ Reflective Material



Hook & Loop Tape Patch  
16.75" x 6" (one line)  
16.75" x 10" (two lines)



Arched Sewn Patch  
17" x 7" x 5"  
(Arched Snap Patch available)



Sewn Patch  
16.75" x 4" (one line)  
16.75" x 8" (two lines)



Removable Hanging  
Name Patch  
18" x 4"



Snap Patch  
16.75" x 6" (one line)  
16.75" x 10" (two lines)

**3M Scotchlite™**  
Reflective Material

**Reflexite®**  
REFLECTIVE SOLUTIONS

## PANT CLOSURE SYSTEMS

## GARMENT OPTIONS



FR Hook & Loop Tape with Snap and Hook & Dee



Brass Zipper with FR Hook & Loop Tape and Hook & Dee (nylon zipper available)

## COAT CLOSURE SYSTEMS



Brass Zipper with FR Hook & Loop Tape (nylon zipper available)



FR Hook & Loop Tape with Hooks & Dees (N/A on Proximity coats)



Hooks & Dees with 3 snaps and FR Hook & Loop Tape ("Chicago closure") (N/A on Proximity coats)



Don't see an option that you want? Quaker Safety offers hundreds of options and will customize your garments to meet your fire department's needs. Contact our **Customer Service Department** at **215-536-2991 ext. 1** for details.

## REINFORCEMENTS



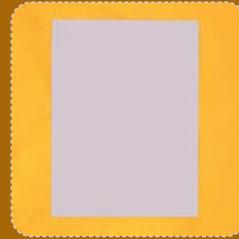
Leather Reinforced Padded Elbows



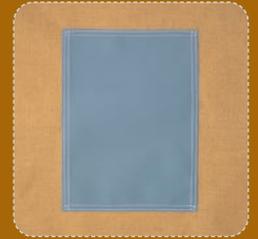
Ara-Shield® Reinforced Padded Elbows



Fabric Reinforced Padded Elbows



Leather Reinforced Knees (padding available)



Ara-Shield® Reinforced Knees (padding available)



Fabric Reinforced Knees (padding available)



Fabric Reinforced Padded Knees (removable) (Ara-Shield® & leather available) (N/A on Axis pants)



Fabric Reinforced Pleated Padded Knees (Ara-Shield® & leather available) (N/A on Axis pants)



Fabric Reinforced Pleated Padded Knees (removable) (Ara-Shield® & leather available) (N/A on Axis pants)

*Some garment options may not be available on all styles of gear.*

Contact our **Customer Service Department** at **215-536-2991 ext. 1** for details.

# POCKETS



Bellows Pocket  
9" h x 10" w x 2" d  
(other sizes available)



Ara-Shield® Reinforced  
Bellows Pocket  
(leather & fabric available)



Bellows Pocket Divider  
(50%-50% & 60%-40%  
splits available)



Rope Pocket  
10" h x 10" w x 2" d



Bellows/Handwarmer Pocket  
9" h x 9" w x 2" d  
(other sizes available)



Expandable Handwarmer  
Pocket  
9" h x 9" w



Expandable Patch Pocket  
9" h x 10" w (coat)



Patch Pocket  
8" h x 7.5" w (pant)



Medical Card Pocket  
3.25" h x 5" w



Liner Pocket  
9" h x 9" w



Radio/Flashlight Pocket  
8", 9", 10" or 12" h x 3" w x 2" d  
(antenna notch available)  
(other sizes available)



6 Compartment Tool Pocket  
9" h x 10" w x 2" d  
(lined with NOMEX®)



Air Mask Pocket  
11.5" h x 8.5" w x 6.5" d  
Zipper in Center (sewn on)  
(other sizes available)



Air Mask Pocket  
8" h x 8" w x 5.5" d  
Zipper in Center (removable)  
(other sizes available)

Quaker Safety offers more than 15 different suspender styles.  
Please contact our Customer Service Department for availability.

# SUSPENDERS



2" Wide, 8 Point  
H Back with Leather Ends



2" Wide, 8 Point  
H Back with Metal Ends &  
1" 3M Scotchlite™ Trim



2" Wide, 8 Point  
H Back with Metal Ends,  
Quick Adjust & Padding



2" Wide, 4 Point  
H Back-Integrated

# WRISTLETS



Wristlets 4"  
Black NOMEX® / Spandex



Wristlets 4"  
KEVLAR® / Spandex



Thumb Wristlets 7"  
Black NOMEX® / Spandex



Thumb Wristlets 7"  
KEVLAR® / Spandex



Double Wristlets  
Black NOMEX® / Spandex

# STRAPS & CLIPS



Dee Ring on Strap



Survivor® Flashlight Holder



Sunlance Flashlight Holder



Flashlight Strap



Take-Up Straps

# MISCELLANEOUS



Glove Strap (sewn on)  
(removable available)



Mic Clip / Pal Strap  
4.5" h x 0.75" w  
with 3" Opening



Helmet Hook / Universal Clip



Embroidered NOMEX®  
American Flag  
2.5" h x 3.5" w

# MISCELLANEOUS



Boot Zippers  
18" Long



Coat Liner  
Inspection Opening  
(in collar)



Pant Liner  
Inspection Opening  
(in waist)



Gear Bag  
23" w x 13" h x 14" d  
Red/Black

# GARMENT OPTIONS

## BELT & HARNESES



3" gradual rise  
(Axis & Radius)



6" high back  
(QS-103)



2" Wide KEVLAR® Belt with Belt Loops  
(take-up straps deleted)



Loops / Straps for Gemtor™ #541R External Harness  
(harness not included, take-up straps deleted)



Configuration for Gemtor™ #544FR Internal Harness  
(harness included)

- Only available with Axis-GPS and Radius-GPS Style Pants
- Only available with CROSSTECH® and Stedair® 4000 moisture barriers
- Not available with aluminized outer shells



Quaker Safety performs a thorough inspection after each advanced cleaning to identify damaged, torn, broken or missing components requiring repair or replacement during our repair process.

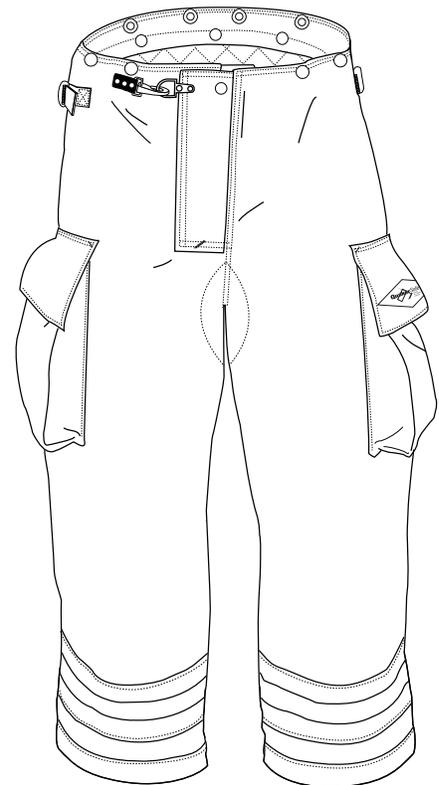
Quaker Safety makes sourcing your turnout gear care and maintenance requirements worry free. With expert service and experienced operators, we can fulfill your fire department's specific maintenance needs.



Please contact your distributor or our Customer Service Department at 215-536-2991 ext. 1 or [info@quakersafety.com](mailto:info@quakersafety.com) for additional information or to request a prepaid UPS Returns Service Label.

## PANTS

<b>Inspection and Cleaning</b>
Advanced Inspection (including complete liner inspection when required)
Advanced Cleaning
<b>Miscellaneous</b>
Decrease Inseam (1" increments, up to 4") (N/A on Axis or Proximity)
Increase Inseam (1" increments, up to 4") (N/A on Axis or Proximity)
Decrease Waist (2" or 4") (N/A on Proximity)
Increase Waist (2" or 4") (N/A on Proximity)
Repair Outer Shell Hole (up to 25 square inches)
Repair Liner Hole (up to 25 square inches)
Restitch Garment Seams or Reflective Trim
Add or Replace Belt Loops
Add or Replace Harness Straps for Gemtor # 541R External Harness
Add or Replace 18" Brass Boot Zippers
Replace Brass or Nylon Fly Zipper
Add or Replace Take-Up Straps
<b>Reflective Trim Replacement</b>
Replace Reflective Trim on Pant or Portion of Pant
<b>Moisture Barrier Replacement</b>
Replace Pant Moisture Barrier
<b>Pockets</b>
Add or Replace Bellows Pockets
Add or Replace Patch Pockets
<b>Reinforcements</b>
Add or Replace Removable Ara-Shield®, Fabric, or Leather Reinforced Padded Knees (N/A on Axis)
Add or Replace Removable Ara-Shield®, Fabric, or Leather Reinforced Pleated Padded Knees (N/A on Axis)
Add or Replace Ara-Shield®, Fabric, or Leather Reinforced Knees
Add or Replace Ara-Shield®, Fabric, or Leather Reinforced Padded Knees
Add or Replace Ara-Shield®, Fabric, or Leather Reinforced Pleated Padded Knees (N/A on Axis)
Replace Ara-Shield®, Fabric, or Leather Pant Cuffs
<b>Hook &amp; Loop Tape Replacement</b>
Replace Hook & Loop Tape on Pant or Portion of Pant
<b>Hardware Replacement</b>
Replace Missing or Damaged Hardware





# TRUST

TRUST forges alliances, it turns those people of like mind into a force unimagined by each individual. We build it day by day, hour by hour, with everything we do, each and every detail. We build trust in the very best of times in preparation for the very worst of times. With it, we can offer you something truly exceptional.



## ACKNOWLEDGEMENTS

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UL and the UL logo are trademarks of UL LLC



## AFFILIATE COMPANIES

Topps Safety Apparel, Inc., a leader in the flame resistant apparel market, offers a variety of flame resistant and public safety garments including coveralls, shirts, pants, shop coats and bib overalls. Topps has a complete range of flame resistant garments offering varying levels of protection depending on the individual requirements of the working situation.

Certain Topps styles are certified by UL as compliant with the requirements of NFPA

1975-Standard on Station/Work Uniforms for Fire and Emergency Services and NFPA 2112-Standard on Flame-Resistant Garments for Protection of Industrial Personnel Against Flash Fire.

Topps also offers jackets, pants and coveralls for Wildland Fire Fighting. These Wildland Fire Fighting garments are certified by UL as compliant with the requirements of NFPA 1977-Standard on Protective Clothing and Equipment for Wildland Fire Fighting.

Bristol is one of the world's leading manufacturers of protective clothing for structural fire fighting. Using the most up-to-date computer aided design and cutting equipment, Bristol has the capability to design and produce protective clothing for fire fighters to meet any specialized demand.

The majority of Bristol's protective clothing is manufactured in England utilizing European materials. Bristol's styles are constructed with soft, flexible, lightweight fabrics which provide the wearer with the comfort of a winter parka combined with the thermal protective performance of a more traditional turnout coat.

Bristol shares its office and warehouse facilities with Topps in Rochester, Indiana.



(800) 848-2820 | [www.toppsafetyapparel.com](http://www.toppsafetyapparel.com)  
info@toppsafetyapparel.com



PROTECTING THE WORLD'S FIREFIGHTERS

(800) 565-5483 | [www.bristolfireapparel.com](http://www.bristolfireapparel.com)  
info@bristolfireapparel.com

NOTES:



Specifications are subject to change without notice

Rev. 1



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