

FLAME **PRO**

670/675 Structural Suit

670 Structural Jacket

675 Structural Trouser

This suit is based on 770/775 Valiant Structural Suit certified with BTTG under certificates (523946 "EU" and SH00036 "UKCA"). This suit is a simplified design of ergonomics and features, it uses the same materials and hardware as the valiant certified suit with exception that 670/675 also uses a new assembly system "EC3" as referred to in the bill of materials page. (assembly refers to outer shell, moisture barrier and thermal barrier)



Gold 
Navy 

Intended Use

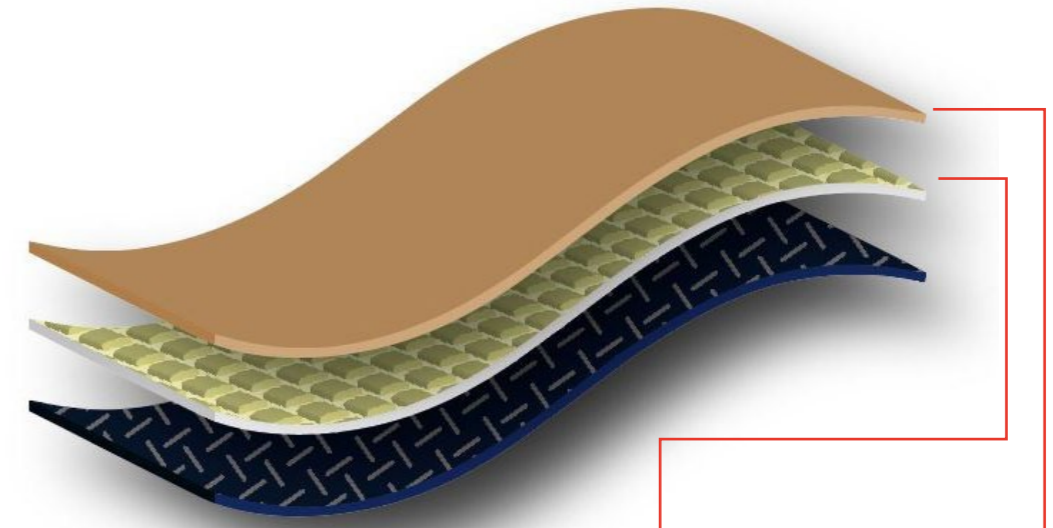
Firefighting operations and associated activities such as rescue work, assistance during disasters.

Size Ranges

Chest/Waist: XS-4XL
Fit: Extra Short, Short, Regular, Tall, Extra Tall, XX Tall

Module B and MED approval process

- Module B certification under UK Regulation 2016/425 and EU PPE Regulation 2016/425
- EC type-examination of Marine Equipment to Annex II of Directive 2014/90/EU
- UK type-examination of Marine Equipment to Annex II of Merchant Shipping (Marine Equipment) Regulation 2016)



Fabric Systems & Options

670/675 Suit can be manufactured in multiple fabric systems (main assembly) with a choice of reflective tape, rest of bill of materials is the same for all systems. A fabric system is comprised of outer shell, moisture barrier and thermal barrier/lining as per above image.

1. Outer shell (variant colour depending on system)
2. Moisture barrier (membrane faces thermal barrier)
3. Thermal barrier/ lining

System Code	EC1	EC3	AR1	AR2	AR3	HE3
System Overall Weight (gms)	580	530	535	560	545	545
Outer Shell	Kermel A90	Kermel A90	Tough Plus	AV9400	Core FX	PBI MAX 205
Moisture Barrier	95/7	80/7	95/7	CX140	95/7	95/7
Thermal Barrier / Liner	WQA 5656	WQA 5656	3D - 1123	CQ760	3D - 1123	3D - 1123
Colours Available (Outer shell)	Gold, Navy Red, Orange	Gold, Navy Red, Orange	Gold Navy	Gold Navy	Gold Navy	Gold
Outer Shell : Tensile Strength	1231/1128	1231/1128	1200/1200	2000/2000	2500/3100	2102/2231
Outer Shell : Tear Resistance	75/60	75/60	86/87	210/210	270/310	167/145
Outer Shell : Residual Tensile Strength	1048/992	1048/992	1200/970	1293/1286	2000/2513	2021/2032
*Heat Transfer (Flame) - HTI24 (as received)	19.1	18	14.3	19	14	14
*Heat Transfer (Flame) - HTI24-12 (as received)	5.3	5	4.1	5	4	4
*Heat Transfer (Radiant) - RHTI24 (as received)	31.7	23	21.2	21	23	23
*Heat Transfer (Radiant) - RHTI24-12 (as received)	9.6	7	7.2	7	7	8
Heat Transfer (Flame) - HTI24 (after 5x washes)	22.4	18	17.1	20.8	18	18
Heat Transfer (Flame) - HTI24-12 (after 5x washes)	6.3	5	5	5	5	6
Heat Transfer (Radiant) - RHTI24 (after 5x washes)	32.8	24	25.6	27.8	27	28
Heat Transfer (Radiant) - RHTI24-12 (after 5x washes)	10.1	7	8.8	8.9	9	9
Water Vapour Resistance (RET)	19.67	17.64	11.67	11.85	12.19	11.20
Suit Weight (size Large/Regular)	TBC	TBC	3.70 kg	TBC	3.80 kg	3.70 kg

EC2 system in development - not being certified as part of this specification file



EN ISO 13688:2013



EN 469:2005 Level 2



MED Approved



Certified for:
Structural
Firefighting

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670 Structural Jacket (v2)

Features & benefits

- Collar hanging loop
- Adjustable collar tab for better fit
- High shaped mandarin collar for better comfort and protection
- One microphone loops at upper chest
- Internal FR 3D spacer shoulder and back padding
- Puncture resistant Kevlar® padding at the elbow.
- Adjustable torch/radio strap at left chest area
- Bellow radio pocket, adjustable for different radio heights
- Napoleon pocket on left side as worn with whistle loop on the inside
- Adjustable cuff tabs for better fit
- Thumb loop to stop sleeving riding up when arms are extended
- Extended hem at the back to ensure full coverage of the lumber region when bending
- Storm guard attached using spot Velcro® closure
- Industrial wash, flame retardant sew-on solid (or perforated) reflective tape, attached with twin needle stitching for added strength, 50mm wide.
- Main zip attached to zip carrier for easier repair
- Strategic panelling that's ergonomically shaped for wearer comfort and ease of movement
- Anti-wicking panels on the cuff and body hem



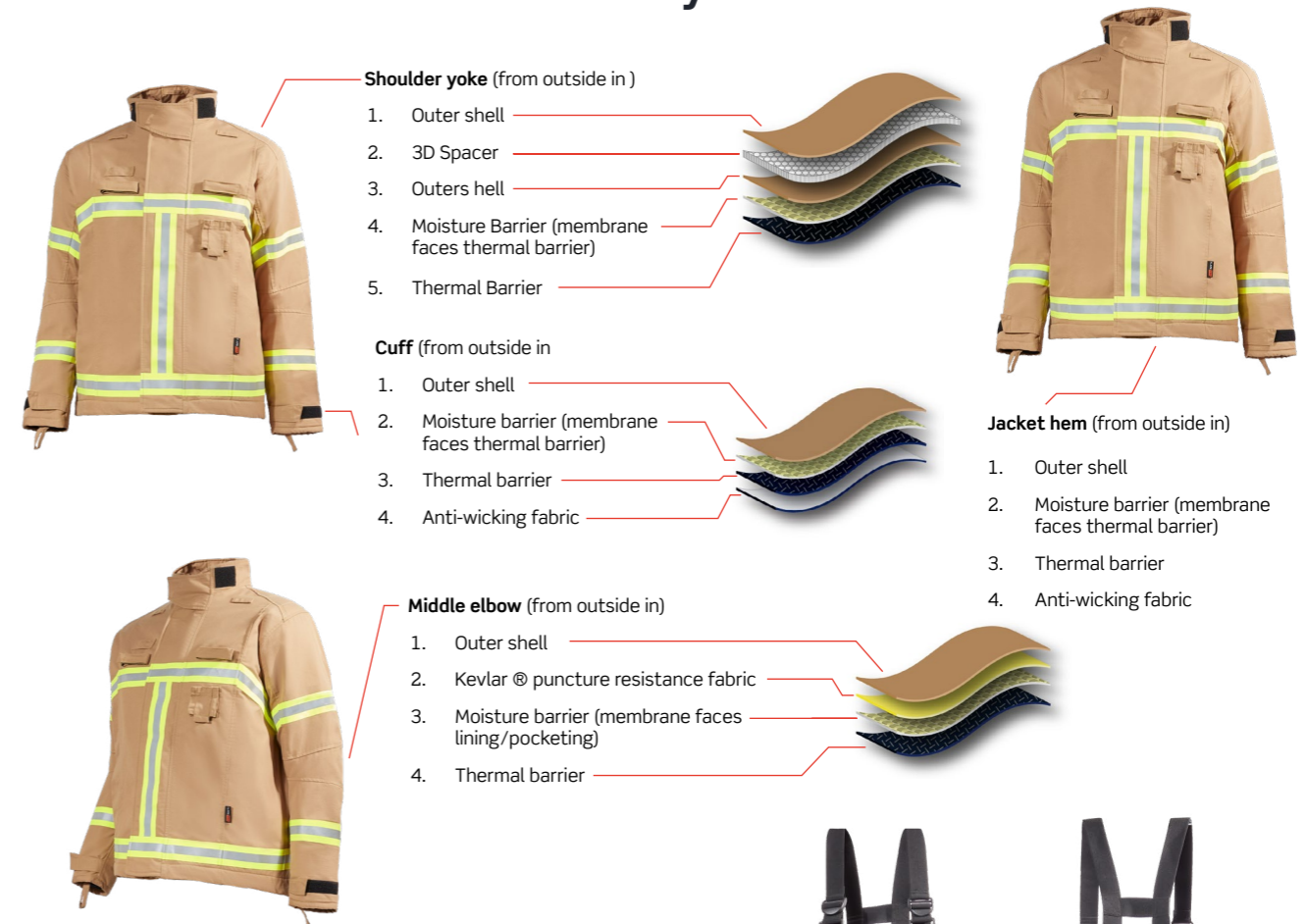
675 Structural Trouser (v2)

Features & Benefits

- Fixed H style braces with quick adjustment.
- Front waist adjustment for better fit.
- Ergonomically shaped abrasion resistant knee reinforcement panels with Kevlar padding for additional puncture protection. Internal fixed knee pads to ensure wearers comfort.
- Reinforced leg hem for abrasion resistance
- Centralised fly zip with inner zip guard – fly zip is covered with a storm guard.
- Industrial wash, flame retardant sew-on solid (or perforated) reflective tape, attached with twin needle stitching for added strength, 50mm wide.
- Ergonomically shaped knee panels
- All closures are easily operated whilst wearing gloves.
- Leg bottoms have a gusset and secured zip closure system to facilitate donning and doffing whilst wearing boots.



670 Reinforced & Padded Layers



675 Reinforced & Padded Layers



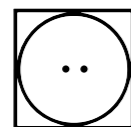
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Washing, Maintenance & Repair Instructions

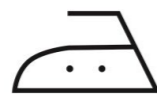
Washing Instructions



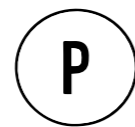
Wash machine temperature 60°C



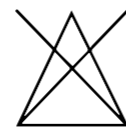
Tumble Dry Settings
Two Dot: Mid temperature



Ironing
Two Dot: High temperature



Dry cleaning
P: Dry cleaning with perchlorethylene



Do not use bleach

General PPE Maintenance Guidelines

- Wash the PPE regularly using specially adapted programs for contaminated emergency clothing.
- The garments should be cleaned after incidents where they have been affected by fire gases or soiled by soot, by-products of combustion, blood, body fluids, tar, fuel, resin, paint, acid or other dangerous substances.
- Contaminated clothing should be transported so that gases are enclosed.
- Pressure clothing should be cleaned separately from other garments.
- Do not hang the garment in direct sunlight, as UV radiation will eventually weaken the outer fabric.

Before washing

- Ensure all zips within the garments are fastened, including inspection zips on inside of garment
- Ensure all Velcro® closures are fastened
- Ensure all buttons are closed
- Ensure all pockets are empty
- Remove any detachable ID tags
- Remove all carabine snap hooks
- Relax any adjustable closures, typically in the cuff, collar, ankle, waist
- Check fluorocarbon

Repairs

The garment should be inspected regularly for any damages, repairs should be performed by a trained specialist, modifications to garment are not allowed. Any repair or modification made by un-authorized service centre will void the warranty. We recommend that the suit be removed from service if the repair costs exceed 50% of the replacement cost. please contact FlamePro Global Ltd for advice.

After washing & Drying

- Ensure closures are functioning after wash
- Ensure the fit of garment is still suitable, the garment is not too loose or close fitting
- There is a sufficient overlap between jacket and trouser when performing stretching movements of legs and arms
- There is no damage or soiling
- The clothing is dry on inside and outside
- Perform a spray test to ensure the fluorocarbon finish is functioning
- Check seams integrity or broken stitches
- Check reflective tape condition

Important Notes

- Ensure cleaning is performed by a trained specialist, do not clean in the private household
- Follow product care label instructions
- Do not use domestic washing detergents, powders, softeners or whitening agents
- Do not use a tunnel dryer
- Do not wash with combustible materials
- Wash hoods separately

Storage

Store the garment in dry conditions, not in direct sunlight. Do not store in airtight containers or vacuum packed, do not store at temperatures less than -32°C or above 82°C, do not store in contact with contaminants such as (not limited to) oils, solvents, acids or alkalis.

Quality Control

Quality Control Procedures

- FP11 - Certificate of Conformity (Fabric Supplier) - alternatively a Quality Report from supplier. This certificate or document is received by supplier at receipt of FR fabric, refer to Goods In Pro-cedure for more details.
- FP19 - Quality Check Form : This form is used for checking receipted batch of finished garments, where 3 samples of garments are fully checked for Quality, Measurements, Critical Design Spec, this form is also used to collate all other CP documents below including delivery note, landing cost. form is scanned and filed away once completed. - every production batch would have one.
- FP32 - Master Sample Form - A form completed by ProGARM and attached to master sample confirming approval
- FP02 - Product Construction File: Document that details how the style is made, critical design criteria that must be met otherwise causing a major NCR and amendment log to design changes.
- FP03 - Product Size Chart: Excel file showing key measurement points, reflective tape usage, and another key detail relating to measurements.

Warranty

1 Year warranty from date of manufacture on structural seams, subject to wear & tear. Modifications or repairs made by unauthorised specialist will invalidate the warranty.

We recommend care and maintenance in line with BS 8617 which can be obtained from BSI shop (shop.bsigroup.com)

Statement

FlamePro Global Ltd confirm that:

- Module C Internal production control requirements will be adhered to, ensuring conformity of manufactured PPE to the type described in the EU type examination certificate, as laid down in Annex VI of the regulations.
- Module D conformity to type based on quality assurance of the production process will be adhered to, ensuring conformity of manufactured PPE to the type described in the EU type examination certificate, as laid down in Annex VII of the regulations. The audit is to be conducted by BTTG, notified body number 0338.
- The PPE products described in this technical file are not known to contain any materials or substances (including decomposition products) likely to harm the health or hygiene of the user or other person likely to come into contact with the product.