



# ARC FLASH PROTECTION THE SOLUTION FOR COMPLETE ELECTRIC ARC PROTECTION.

## THE ARC FLASH PHENOMENON.

An electric arc follows a short circuit. It produces nearly instant effects with serious consequences for an operator not wearing proper protection.

As with an explosion, and as well as the high level of heat released, an arc flash produces the following effects:

- detonation,
- shockwave,
- emission of ultraviolet radiation,
- projection of debris and molten particles.

When electric arc danger exists, heat-resistant clothing must be worn. The arc's characteristics are given by:

- **The Arc Thermal Protective Value (ATPV) of an open arc, expressed in cal/cm<sup>2</sup> according to NFPA 70 E, ASTM standards, and IEC 61482-1-1 (Open arc).**

or

- **The Arc Protection Class (APC 1 or 2) with a constrained arc according to IEC 61482-1-2 (Box test).**



Flame-retardant clothing in case of exposure to an electric arc, conforming to IEC 61482-2 and the NFPA 70E regulation.

### PROTECTION AGAINST ARC FLASH

The following inputs are used to determine the proper equipment for protecting against an electric arc:

- The maximum fault current value.
- The phase/ground rated voltage at the site of the risk.
- The distance between the source of the arc and the reception surface.
- The AC cycle number and the mono or three-phase circuit type.
- The location where the arc is produced (confined space). After recording these parameters, we can estimate the level of risk and determine the proper protective clothing and PPE to use: ATPV 12 to 100 cal/cm<sup>2</sup> or APC 1 or 2. For more information, please contact our technical department.



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PPE - CPE / Arc Flash Protection



## ARC FLASH FACE SHIELD KIT

### APC 2 - ATPV 12 cal/cm<sup>2</sup>

<b>Composition</b>	<b>Reference:</b> KIT-ARC-01	
		Weight
		1.5
<b>MO-187</b>	1 Face shield with chincup APC 2 and 12 cal/cm <sup>2</sup> , absorbs > 99.9% of harmful UV radiation, 60% light transmission, tested to ASTM F 2178 specifications	
<b>MO-182/1-B</b>	1 ABS white helmet electrical insulation EN397, EN 50365, ANSI Z89.1 20 kV	
<b>M-87384</b>	1 carrying bag for face shield and helmet	

## BENEFITS

- Electrician ABS helmet.
- Large field of view.
- Anti-UV and polycarbonate 1.5 mm thickness.
- Chin protection.

EN 166 / EN 170 / EN 397

EN 50365 

IEC 61482-1-2  / GS-ET-29 / ANSI Z 89.1

ASTM F2178 / IEC 61482-1-1 

NFPA 70E



## ARC FLASH HELMETS

The unique all integrated helmet with Arc Flash face shield on the market. Patented by CATU.

<b>Reference</b>	<b>Characteristics</b>	
		Weight
<b>MO-180-ARC-4</b>	Face shield 4 cal/cm <sup>2</sup> APC 2 Light transmission > 75%	0.79
<b>MO-180-ARC-12</b>	Face shield 12 cal/cm <sup>2</sup> APC 2 Light transmission > 60%	0.79
<b>MO-180-ARC4 VISOR</b>	Face shield 4 cal/cm <sup>2</sup>	-
<b>MO-180-ARC12 VISOR</b>	Face shield 12 cal/cm <sup>2</sup>	-

## BENEFITS

- Mechanical & Electrical Protection helmet EN 397 EN 50365 - 1 000 V / ANSI Z 89.1 - 20 kV.
- IEC 61482-1-1 / IEC 61482-1-2 arc protection. EN166 and EN170 protection.
- Flexible and compact fabric protection Arc Flash.
- Optimal colour recognition and visibility (MO-180-ARC-4). Retractable screen and neck protection.

EN 166 / EN 170 / EN 397

EN 50365 

IEC 61482-1-2  / GS-ET 29 / ANSI Z 89.1

ASTM F2178 / IEC 61482-1-1 

NFPA 70E



Retractable screen and flaps



## INSULATING GLOVES FOR ARC FLASH

Reference	Class			Category		APTV
		Voltage (AC)	Voltage (DC)		Length	cal/cm <sup>2</sup>
<b>CGM-4-(*)-ARC-40</b>	4	≤ 36 000 V	≤ 54 000 V	RC	410	12

(\*) Complete by size codes 07 to 12 (Sizes 07 and 12 on request).

### BENEFITS

- Safety first by providing best in class insulating gloves (class 4) with best thermal (40 cal/cm<sup>2</sup>) protection. Electrical and mechanical protection certified according to IEC 60903 Electrical insulating gloves. Thermal protection certified according to IEC 61482-2 against the thermal hazards of an electric arc : IEC 61482-1-2:APC Class 2 & ASTM F2675 (identical test to IEC 61482-1-1) 40 cal/cm<sup>2</sup>.
- Comfort of use: Softness and dexterity enabling to easily handle your electronic equipments and tools.
- Traceability : QR code included facilitating the fleet management with the employee user, compliance with re test date reducing risk of accidents.



EN 60903:2003 / IEC 60903:2014   
 ASTM F2675 and EN-61482-1-1:2009  
 ATPV 40 cal/cm<sup>2</sup>  
 EN-61482-1-2:2007 APC 2



**NEW**

CGM-4-ARC-40  
 Bi-colour:  
 Orange outside.  
 Natural inside.

## NOMEX III® UNDERGLOVES

100% Nomex III® fire-resistant and heat-resistant undergloves. Protects the hands against heat of up to 100°C. Ideal protection for "Arc Flash" equipment.

Reference	Characteristics		
		Set	Weight
<b>CG-37</b>	One size	Includes 5 pairs	32

### BENEFITS

- High performance synthetic Nomex III® fibre.



Fire protection



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**NEW**

## ARC FLASH AND MULTI-RISK LONG SWITCHING JACKET

Designed to be worn on top of the usual clothing, for short operations (i.e.: power-breaking operations, live working on electrical vehicle batteries...). This long jacket offers the protection required by the French Organism of Live Working.

**CAUTION, ONLY THE AREAS COVERED BY THE SWITCHING JACKET ARE PROTECTED.**

Reference	Size
AFG-2300-*	S, L, 2XL or 4XL
(*) To be completed by the sizes: S, L, 2XL, 4XL.	

### BENEFITS

- An adjustable hood for a better protection of the head and the neck in case of a higher risk, to be wear with a visor or a helmet.
- A Velcro® fastening along the entire length: easy to open and close.
- A back length of 121 cm to ensure an efficient protection of the operator down to the knees.



NFPA 70E



IEC 61482-2:2018



APC 1 / ATPV 12 cal/cm²

ISO 11612:2015 A B1 C1 E2 F1



EN 1149-5:2018



ASTM F1959



## ARC FLASH AND MULTI-RISK PARKA

Outdoor multi-risk protective garment.

Reference	Size
M-883374	S
M-883377	M
M-883378	L
M-883379	XL
M-883380	2XL
M-883381	3XL



IEC 61482-2



IEC 61482-1-2 APC 2



EN ISO 11611



EN ISO 11612



EN 1149-5



EN ISO 13034-6



IEC 61482-2  
APC 2



EN ISO 20471 (3)



EN 343 (3-2)



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PPE - CPE / Arc Flash protective clothing





# ARC FLASH PROTECTIVE CLOTHING



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## ARC FLASH AND MULTI-RISK PROTECTIVE CLOTHING

The CAT'ARC APC 1 and ATPV 12 cal/cm<sup>2</sup> garments are daily workwear and maintain optimal safety for operators being exposed to the danger of electric arc during live-working or while switching.

The protection offered by CAT'ARC is multiple (Arc-Flash, heat and flames, welding, and anti-static) ensuring the operators full protection against the identified risks.

Tips and tricks to optimize comfort and safety of operators: numerous pockets for easy access to tools, high collar for an effective neck protection, crotch and knees reinforcements for a good resistance.

**CAT'ARC** 



- ① An anti-panic zip in order to quickly and easily remove the garment if needed after an Arc Flash accident.
- ② Red colored zip is an extra feature for a safer PPE: no red visible = a PPE that is being worn properly.
- ③ Smart reinforcements at crotch and knees for a more resistant and durable garment.





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**ARC FLASH AND MULTI-RISK CAT'ARC GARMENTS**



**CAT'ARC clothing:** Developed and tested in accordance with current standards, the range offer a multi-risk protection (arc flash, heat and flame, welding, anti-static). Fabric : 80% flame retardant treated cotton, 19% polyester, 1% anti-statique fiber - 300 g/m<sup>2</sup>.

**CAT'ARC kits for arc flash protection:** Complete ready-to-use kits provide a comprehensive protection against the thermal effects of an arc flash.

NFPA 70E



IEC 61482-2:2009



APC 1 / ATPV 12 cal/cm<sup>2</sup>

ISO 11612:2015 A B1 C1 E2 F1



ISO 11611:2015 Class 1

EN 1149-5:2018

ASTM F1959

ASTM F1506



**BENEFITS**

- **EVERYDAY COMFORT:** Selected fabric and designed to ensure that operators are able to wear the garments for a full working day.

CATU provides the possibility of CAT'ARC garment customization to create a unique product with your logo.



AFG-BELT

AFG-1001

Reference	Description	Sizes
AFG-2000-*	Jacket	XS to 5XL
AFG-2001-*	Trousers	XS to 5XL
AFG-1001-*	Coverall	XS to 5XL
(*) To be completed by the size: XS, S, M, L, XL, 2XL, 3XL, 4XL ou 5XL.		
AFG-BELT-**	Plastic buckle: non-conductive.	100 cm (Sizes XS, S, M), 110 cm (Sizes L, XL, 2XL), 120 cm (Sizes 3XL, 4XL, 5XL)
**To be completed by the size: 100 cm, 110 cm, 120 cm.		
Kits		
KIT-ARC-A-01-JP***	1 set jacket trousers CAT'ARC, 1 electrician helmet ABS white MO-182/1-B, 1 Arc Flash face shield MO-187, 1 carrying bag for face shield and helmet, 1 safety glasses clear lenses MO-11000, 1 arc flash protective hood, 1 all kit carrying bag.	S to 2XL
KIT-ARC-A-01-C***	1 Coverall Cat'Arc, 1 electrician helmet ABS white MO-182/1-B, 1 Arc Flash face shield MO-187, 1 carrying bag for face shield and helmet, 1 safety glasses clear lenses MO-11000, 1 arc flash protective hood, 1 all kit carrying bag.	S to 2XL
KIT-ARC-A-02-JP***	1 set jacket trousers CAT'ARC, 1 electrician helmet ABS white MO-182-ARC-12, 1 carrying bag for helmet, 1 arc flash protective hood, 1 all kit carrying bag.	S to 2XL
KIT-ARC-A-02-C***	1 Coverall CAT'ARC, 1 electrician helmet ABS white MO-182-ARC-12, 1 carrying bag for helmet, 1 arc flash protective hood, 1 all kit carrying bag.	S to 2XL
***To be completed by the size: S to 2XL.		





# ARC FLASH PROTECTIVE CLOTHING

## ARC FLASH KITS

25, 40, 65, 100 cal/cm<sup>2</sup>

Complete ready-to-use kits providing arc flash protection.

Reference	ATPV cal/cm <sup>2</sup>	Color
KIT-ARC-25-B-(*)	25 cal/cm <sup>2</sup>	KAKI 
KIT-ARC-40-B-(*)	40 cal/cm <sup>2</sup>	GREY 
KIT-ARC-65-B-(*)	65 cal/cm <sup>2</sup>	CAMEL 
KIT-ARC-100-B-(*)	100 cal/cm <sup>2</sup>	CAMEL 

(\* Reference to be completed by the size M, L or XL. Size S to 3 XL on request.

Composition of KITS	
-	1 <b>protective set (jacket and bib overall)</b> 25, 40, 65 or 100 cal/cm <sup>2</sup> and tested according to the ASTM F 1506 and NFPA 70E specifications.
MO-11000	1 <b>safety glasses</b> EN 166/EN 170.
M-87295	1 <b>carrying bag</b> for the complete kit.
-	1 <b>protective hood</b> with integrated screen (12, 40, 65 ou 100 cal/cm <sup>2</sup> ), and tested according to the ASTM F 1506 and NFPA 70E specifications.
MO-182/1-B	1 <b>electrician helmet</b> EN 397, EN 50365, ANSI Z89.1 - 20 kV.

Gloves not included into the kits.



NFPA 70E



ASTM F1506

IEC 61482-2 



KIT-ARC-25-B-(\*)

KIT-ARC-65/100-B-(\*)

KIT-ARC-40-B-(\*)

## BENEFITS

- 4 Complete ready-to-use kits.

INSULATING GLOVES  
FOR ARC FLASH  
PROTECTION  
PAGE 38



NEW

**WORK GLOVES**

Reference	Size		
		Weight	
<b>CG-96-(*)</b>	A = 8	115	3122
	B = 9		
	C = 10		
	D = 11		
<b>CG-97-XX</b>	Size : 09 and 10	115	3132

(\*) Reference to be completed by the size of A, B, C or D.  
 Mechanical protection class: Abrasion 3/5, Slicing: 1/5, Tearing: 2/5, Perforation: 2/5.  
 CG-97-XX: supplied by 10 pairs of gloves per bag.



CG-96-C



CG-97-XX



EN 388:2016  
 EN 420:2003 T  
 A/:2009  
 CE



**BENEFITS**

- American style gloves with very soft and flexible full bloom leather allowing full finger movement.
- Tightening elastic on the back of the hand.
- CG-97 : Hand protection for risky operations. Suitable for assembly, logistics, maintenance activities.
- CG-97 : All natural bovine flower, wrist type with elastic band on the back. Good dexterity.

**HANDLING & CUT RESISTANT GLOVES**

Reference	Characteristics	Sizes	
<b>CG-951-(*)</b>	Handling gloves	7 to 10	4131
<b>CG-952-(*)</b>	Resistant gloves	7 to 10	4443C

(\*) Reference to be completed by the size of 7 to 10.



CG-951



CG-952

EN 388:2016  
 EN 420:2003 T  
 A/:2009  
 CE

**BENEFITS**

- CG-951: Knitted in grey polyamide, black nitrilfoam coating on palm and fingertips with additional pins for a better hanging. Mechanical protection 4131.
- CG-952: Knitted gloves in cut resistance technical yarns (High Density Polyethylene/polyamide/Glass fibers), heather grey, with black polyurethane coating on the palm and fingertips. Mechanical protection 4443C.
- Slim fit for better dexterity.
- 10 pairs of gloves in a bag.





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## EARTHING CLAMP/ LOCK-OUT PADLOCK SOLUTION

Secure and protect installations during maintenance operations

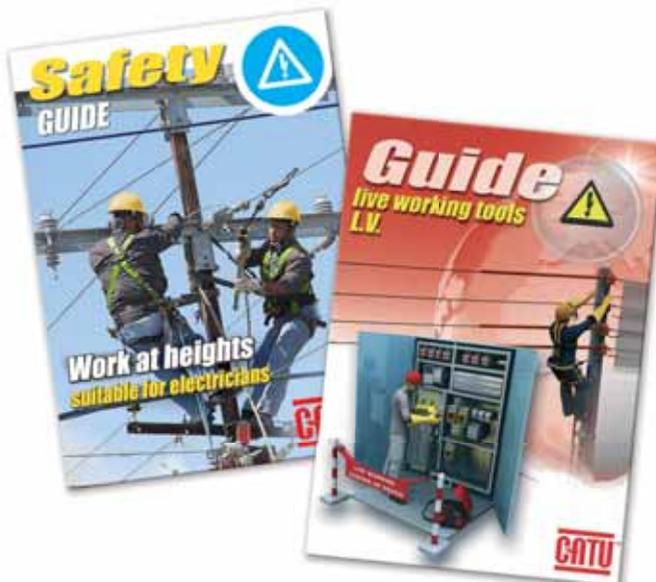


**MT-870**



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