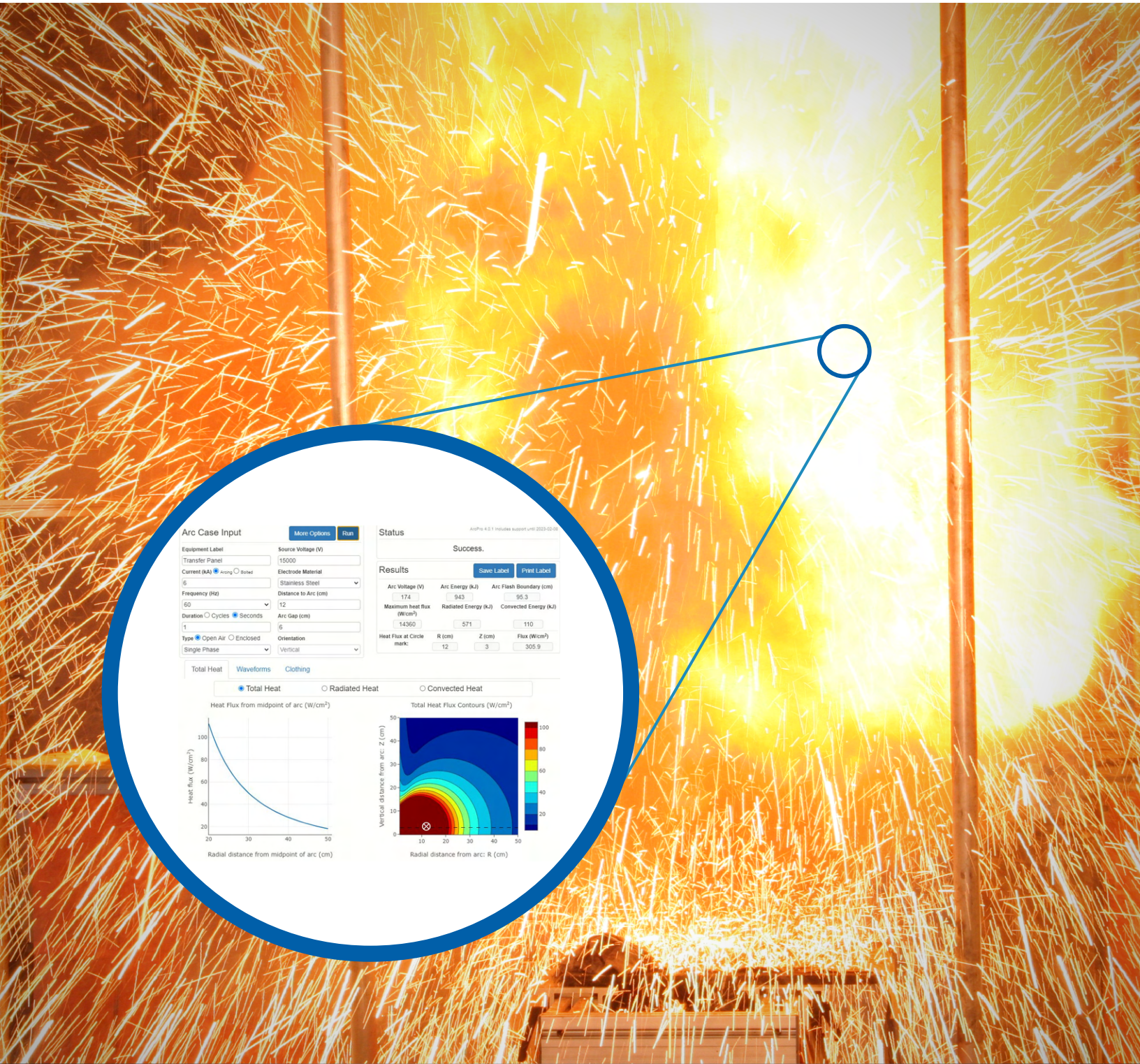
KINECTRICS

ArcPro™ 4

The Premier Solution for Electrical Arc Hazard Assessment Software



ArcPro™ 4 Overview

Offers proven value in helping to select protective clothing and meet workplace regulations for safety apparel while complying with the National Electrical Safety Code (NESC) and NFPA 70E.

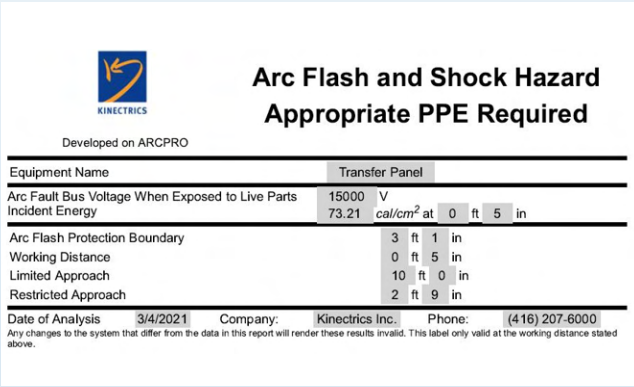
- ArcPro™ is the only software listed by the US OSHA (Occupational Safety and Health Administration) for calculation of incident heat energy from an electric arc.

ArcPro™ 4 is an easy-to-use software package for the calculation of radiated and convected thermal energy from electric arcs. A state-of-the-art program, ArcPro™ includes a physics based model of electric arcs. The software models high power arcing by taking into account such complex variables as gas properties, arc electrode materials, thermal radiation and convective energy dissipation. ArcPro™ considers the arc current, arc duration, arc gap, worker's distance from the arc, and a number of other factors required in accurate assessment of arc exposure.

ArcPro™'s approach particularly excels in higher voltage ranges (>10kV) which is of significant concern to you. We now also address different electrode orientations. ArcPro™ computations have been verified by live arc testing in Kinectrics' High Current Laboratory.

Kinectrics' ArcPro™ has become the industry's most widely-respected application for computing arc hazards and selecting protective clothing for single phase arc situations, particularly for medium voltage and high voltage Transmission and Distribution applications that other methods do not address. Originally developed in 1996, Kinectrics is celebrating over 25 years of ArcPro™ servicing the arc hazard community and currently enjoys a worldwide user base.

Learn more about and purchase ArcPro™ today at https://arcpro.kinectrics.com



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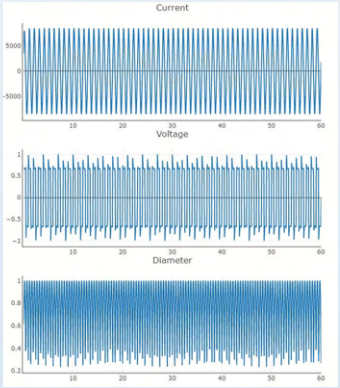
Arc Flash and Shock Hazard
Appropriate PPE Required

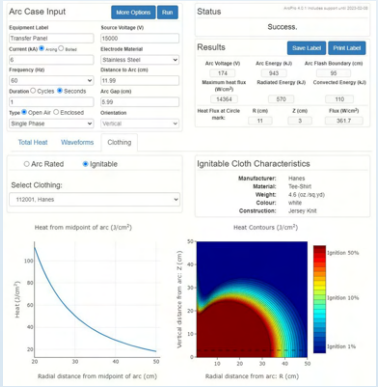
Developed on ARCPRO

Equipment Name	Transfer Panel	
Arc Fault Bus Voltage When Exposed to Live Parts	15000	V
Incident Energy	73.21	cal/cm^2 at 0 ft 5 in
Arc Flash Protection Boundary	3 ft 1 in	
Working Distance	0 ft 5 in	
Limited Approach	10 ft 0 in	
Restricted Approach	2 ft 9 in	

Date of Analysis 3/4/2021 Company: Kinectrics Inc. Phone: (416) 207-6000

Any changes to the system that differ from the data in this report will render these results invalid. This label only valid at the working distance stated above.





ArcPro™ 4 Features

New ArcPro™ 4 Features

- New high-resolution heat flux graph display
- Can perform DC in-box arc flash calculation
- Can specify fault duration in seconds or cycles
- Can perform three-phase arc flash calculations with different electrode orientation using IEEE1584-2018 equations
- Added the ability to specify frequency, 50Hz, 60Hz and 100 Hz (for worldwide and specialized applications)
- New ability to specify X/R Ratio and Closing angle (rad) for waveforms
- Now generates, saves and prints warning labels
- New ITERATIVE ENGINE to calculate a working distance for a prespecified Incident Energy Threshold
- New ITERATIVE ENGINE to calculate a fault clearing time for a prespecified Incident Energy Threshold
- Now performs bolted fault current to arcing fault current conversion
- Now supports multiple languages including French, German and Spanish
- Automatic software updates for subscribed users
- Several minor bug fixes

A reduction in safety clothing costs, while ensuring workers remain protected

Documentation for modified work practices to remove staff from hazardous areas

User Base

Existing ArcPro™ 4 User Base

- Large scale power generation plants
- Medium and small scale power generation plants
- Large scale distribution utilities
- Medium and small scale distribution utilities
- Manufacturing companies
- Automotive industry
- Research and standards bodies
- Electrical engineering consultants
- Distributed grid entities

Key Benefits

Key User Benefits

- ✓ Easily define arc hazards and select appropriate clothing
- ✓ Comply with safety mandates
- ✓ Reduce safety clothing costs and ensure workers remain protected

ArcPro™ 4 Includes:

- + Electronic User Manual
- + User license and limited warranty
- + 1-year included free technical support (option for multi-year)

ArcPro™ 4 offers key technical features that accurately analyze and predict the degree of hazard associated with electrical arcs, including the calculation of:

- ⟩ Total heat and heat flux reaching clothing
- ⟩ Amount of thermal energy radiated by the arc
- ⟩ Heat release through convective effects
- ⟩ Spatial heat contours
- ⟩ Arc parameters, including voltage, current and diameter

Most of the calculations results are provided in numeric and graphic forms on the screen and can be sent to a printer. Batch calculations allow for export of derived values.

www.kinectrics.com

Head Office
800 Kipling Ave., Unit 2
Toronto, ON M8Z 5G5
Canada
416-207-6000

Canada
393 University Ave. 4th Floor
Toronto, ON M5G 1E6

USA
2135 City Gate Lane, Suite 100
Naperville, IL 60563

United Kingdom
17-18 Frederick Sanger Road
Surrey Research Park
Guildford, Surrey GU2 7YD

Germany
Hertha-Lindner-Strasse 10-12
01067 Dresden

Denmark
c/o 360 Law Firm
Gl.Kongevej 60
DK - 1850
Frederiksberg C

Romania
59 Grigore Alexandrescu Street.,
2nd Floor Bucharest 010623

India
Sy No.125,
Banda Mailaram Village,
Mulugu Mandal, Siddipet District
Telangana – 502 336

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