Precision Laser Wire Stripping Systems

High performance | Low cost | Compact | Flexible
Technology

The Mercury-6 is an industrially sealed carbon dioxide rotary laser stripping machine customized for the stripping of multi-layer cables up to an outer diameter of 1.18” (30 mm). It can strip the Coroplast outer insulation and the Mylar foil inner insulation of electric vehicle cables.

The Mercury-6’s 2D optical system features a rotary and linear axis for circumference cut and longitudinal slit, up to a maximum length of 7.84” / 200 mm. It also has a unique cable end finding system to ensure accurate wire lengths are processed. The optics head has independent, auto-adjust focus to allow for changes in cable diameter at the push of a button.

It’s a benchtop system that is simple to use and effortless to maintain. Fitted with an HMI touchscreen, strip programs can be easily configured and selected. The self-limiting laser process means that a wide range of wires and cables can be stripped in a single machine with the same set-up.

Features & Benefits

Versatile: strips single multi-layer conductor cables, e.g. outer Coroplast insulation and inner Mylar foil on electric vehicle cables.

Powerful and fast: 20-70 Watt laser options; fast loading of wires / cables with automatic and instant focus adjustment to strip variable cable sizes at the push of a button, outer diameters from 0.08” (2 mm) to 1.18” (30 mm). 250 mm (9.84”) per second maximum linear slitting speed.

Clean and precise: perfect, nick-free stripping with no damage to the underlying conductor or shield. Unique cable end locating system for accurate length processing.

Ease of use: operator selects via a touchscreen the desired stripping parameters (strip lengths, laser power and speed, etc) from the programmed library.

Reliable: proven laser source and optics.

Lowest cost of ownership: no laser or machine wear parts.
<table>
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<th>Element</th>
<th>Mercury-6</th>
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<td><strong>Operating environment</strong></td>
<td>Light duty, industrial environment. Cleanliness as a typical office. Bench mounted.</td>
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<td><strong>Operating temperature</strong></td>
<td>60 to 90 degrees Fahrenheit (15.5° to 32°Celsius), 20-80% humidity (non-condensing).</td>
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| **Electrical power**          | 230V - 50 Hz, 4 Amps (Europe)  
115V - 60 Hz, 8 Amps (USA)  
Single phase supply, earthed and stable (spike and surge protected). |
| **Compressed air**            | Dry and oil-free, 5 bar / 90 PSI. |
| **Processed material**        | Polymer insulation, such as PTFE, ETFE. PVC not to be processed unless in writing.  
Strip width: maximum outer diameter 30 mm (1.18”).  
Strip length: up to 200 mm (7.84”). |
| **Laser type**                | Interlocked laser enclosure - Class 1 incorporating continuous wave 40W Class 4 Carbon Dioxide laser. Laser upgrades available upon request. |
| **Optical system**            | Rotary and linear stripping head.  
Automatic focus linked to cable outer diameter.  
1 rev per second maximum rotation stripping speed.  
250 mm (9.84”) per second maximum linear slitting speed. |
| **User control**              | 7” colour (color) touchscreen.  
Storage for 200 recipes (power, speed, cable size, strip length).  
On-board diagnostics - “laser healthy”, “extraction on”, etc indicators.  
Job start via product detect switch. |
| **Safety**                    | Class 1 laser system incorporating a Class 4 laser product as per 21 CFR Chapter 1, Subchapter 1,EN60825-1:2007.  
Category 3 Safety Related Control architecture designed to meet performance level PL4 =d.  
Dual fail-safe interlocked enclosure with monitoring.  
Category 0 emergency stop. |
| **Acoustic noise**            | Machine: 69 db(A)  
Machine and Fume Extractor: 75 db(A) |
| **Power consumption**         | 1.2 kW |
| **Machine dimensions**        | 340 mm x 785 mm x 990 mm  
13.5” x 31” x 39”  
(W x H x D) |
| **Uncrated weight**           | Bench Unit: 75 kg (165 lbs)  
Electrical Cabinet: 35 kg (77 lbs) |
We serve the global market, both directly and through the local Schleuniger sales network. All of our products comply with the latest US and European safety standards. For a full list of international contacts, visit us at www.laserwiresolutions.com.

Laser Wire Solutions is a leading provider of laser stripping solutions for the highest quality medical, automotive, consumer electronics, defense and aerospace interconnects. We can support you with proof of principle samples, contract manufacturing services or machine supply, including customization. Check out our website for more information.

A key factor in the design of the Mercury-6 has been the rotary stripping head with auto-focus optics adjusted to the outer layer of multi-layer cables, such as high voltage Coroplast.

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