



SELECT Cerno 508.1

All-in-One Flux, Preheat, and Selective Soldering for Batch and Inline Production

The Cerno® 508.1 balances flexibility, throughput, and the processing of large board sizes. The system combines fluxing, preheating, and soldering for easy integration into your batch or in-line process.

Choose from two Cerno 508.1 systems to meet a range of process requirements.

- **Cerno 508.1 S**, with a single drop-jet fluxer and solder pot, provides single-board processing.
- **Cerno 508.1 Two-Segment**, with a single drop-jet fluxer and two solder pots, solders two singulated boards in-line simultaneously without panelization, palletization, or special tooling.

Features and Benefits

- Cost-effective processing of demanding double-sided, through-hole surface mount (SMT), through-hole selective, and mini-wave soldering applications.
- Solder two boards in-line with two segmented conveyors without panelization, palletization, or special tooling.
- Run through-hole and SMT mixed-technology soldering applications with multiple solder alloys and without changing solder pots.
- Easy tool-free maintenance and full titanium solder pots compatible with all solder alloys.
- Experienced global engineering, applications development, and technical service support from process development to full-scale production.

Specifications

Motion System	Z accuracy	±100 µm (0.004 in.)
	Z repeatability ⁽¹⁾	±50 µm (0.002 in.), 3 sigma
	Z velocity	0.05 m/s peak (2 in./s)
	X-Y accuracy	±100 µm (0.004 in.)
	X-Y repeatability ⁽¹⁾	±50 µm (0.002 in.), 3 sigma
	X-Y velocity	0.2 m/s peak (8 in./s)
Computer	PC with Windows® operating system Windows is a registered trademark of Microsoft Corporation in the United States and other countries.	
Software	PhotoScan “point-and-click” programming editor and machine control software	
Solder Pot Capacity and Weight	Capacity ⁽²⁾	Approx. 12.0 kg (26.4 lbs.)
	Total weight of tin-lead solder, solder pot, and pump assembly ⁽²⁾	Approx. 22.4 kg (49.2 lbs.)
	Total weight of lead-free solder, solder pot, and pump assembly ⁽²⁾	Approx. 19.7 kg (43.3 lbs.)
	Max. temperature:	320°C
Solderable Area (X-Y)	Single, parallel or double operating mode ^(3,4)	Max. 508 x 508 mm (20.0 x 20.0 in.) Min. 50 x 50 mm (2.0 x 2.0 in.)
Preheating	Selectable infrared preheating from 6.0 kW to 12.0 kW	
Board Handling Capability	508.1 S ^(3,4)	Max. board size: 508 x 508 mm (20.0 x 20.0 in.) Min. board size: 50 x 50 mm (2.0 x 2.0 in.)
	508.1 Two-Segment ^(3,4)	Max. board size: 350 x 508 mm (13.8 x 20.0 in.) Min. board size: 50 x 50 mm (2.0 x 2.0 in.)
Conveyor	Max. board/carrier length	508 mm (20.0 in.)
	Min. board/carrier length	50 mm (2.0 in.)
	Max. board/carrier width	508 mm (20.0 in.)
	Min. board/carrier width ⁽⁴⁾	50 mm (2.0 in.)
	Max. board/carrier thickness	15.2 mm (0.6 in.)
	Max. overboard clearance	120 mm (4.7 in.)
	Max. underboard clearance	40 mm (1.5 in.)
	Edge clearance ⁽⁵⁾	3 mm (0.12 in.), edge conveyor including on-rail clamps
	Transport height ⁽⁶⁾	Conforms to SMEMA standard for conveyor height; height adjustable from 940-965 mm (37.0 -38.0 in.) from the floor to bottom of the board.
	Load capacity ⁽⁷⁾	7.5 kg (16.5 lbs.)
	Operation modes	Automatic (SMEMA), manual or pass-through

(1) Repeatability is measured at full-rated system speed.

(2) Solder capacity and the total weight of the solder pot and pump assembly vary depending on the alloy.

(3) Board size is reduced when operating in parallel or double modes.

(4) Contact the factory regarding smaller or larger boards/carriers.

(5) Edge conveyor conforms to SMEMA standards.

(6) 900 mm (35.4 in.) non-SMEMA conveyor height available upon request.

(7) Total weight of all parts on a conveyor at any time. Contact the factory regarding requirements for greater load capacity.

Cerno 508.1

Specifications

Facilities Requirements	System footprint	508.1 S 508.1 Two-Segment	1700 x 1700 mm (66.9 x 66.9 in.) 1800 x 1700 mm (70.8 x 66.9 in.)
	Compressed air	6 bar (90 psi) min., 8 bar (110 psi) max.	
	Power (mains) ⁽⁸⁾	508.1 S 508.1 Two-Segment	400V/480VAC, 50-60 Hz, 3-phase, 10 kW, 16 A without preheating, or 17 kW, 28 A with preheating 400V/480VAC, 50-60 Hz, 3-phase, 16 kW, 35 A without preheating, or 24 kW, 32 A with preheating
	Nitrogen	99.99% (4.0) pure, 4-6 bar (60-90 psi), 1.3 m ³ /hour (single pot), 2.6 m ³ /hour (dual pot)	
	Ventilation	150 m ³ /hour (90 SCFM), one 100 mm (4.0 in.) dia. duct	
	System weight ^(9,10)	850 kg (1870 lbs.)	
	Standards Compliance	SMEMA, CE	

(8) Electrical power varies depending on the configuration.

(9) System weight varies depending on the configuration.

(10) Configuration dependent. Other configurations may be available. Contact Nordson.

Cerno 508.1

System Solutions

Nordson Electronics Solutions builds the future of electronics reliability all across the globe. We're proud of the decades of service and solutions we've provided to enhance product reliability. No matter where you are, you've likely manufactured or purchased a product made reliable with our equipment.

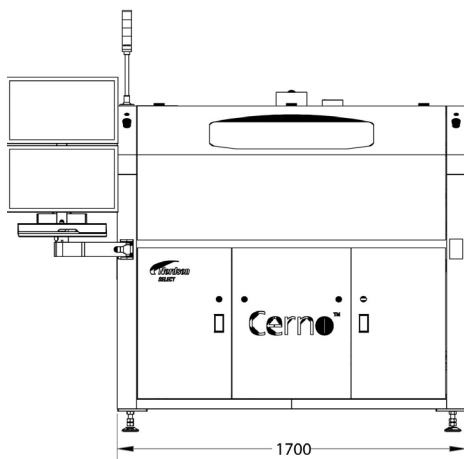
Explore the Cerno selective soldering solutions. Continue to see how we support the future.

For more information, contact us at info-electronics@nordson.com.

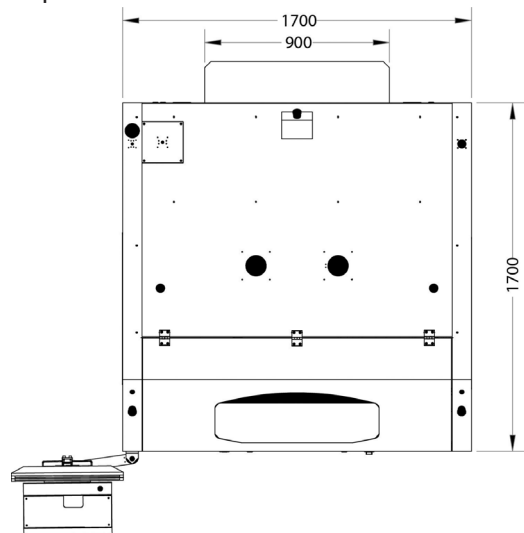
<p>Essential — Cerno 508.1 S</p>	<p>Single-pot selective soldering for batch and in-line production.</p>	<p>An all-in-one flux, preheat, and selective soldering solution equipped with a single station and single solder pot, ideal for precise batch processing.</p>
<p>Flexible Efficiency — Cerno 508.1 Two-Segment</p>	<p>Dual-pot selective soldering in three modes for batch and in-line production.</p>	<p>An all-in-one flux, preheat, and selective soldering solution equipped with two stations, dual solder pots, top and bottom-side preheat, and precision single-lane in-line processing.</p>

System Dimensions — Cerno 508.1 S

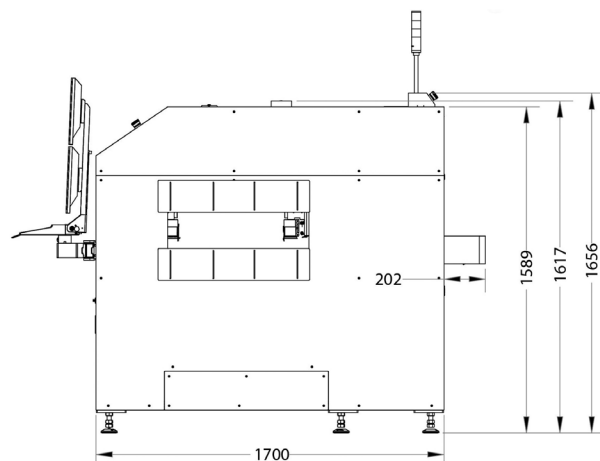
Front View



Top View



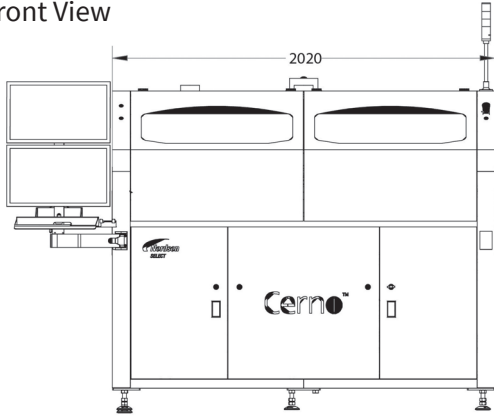
Side View



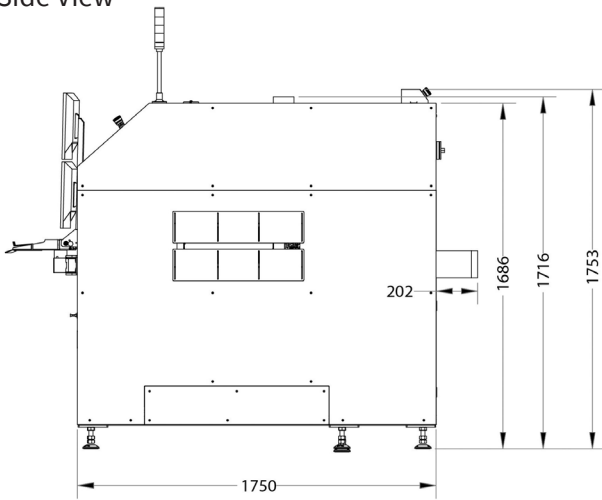
Cerno 508.1

System Dimensions — Cerno 508.1 Two-Segment

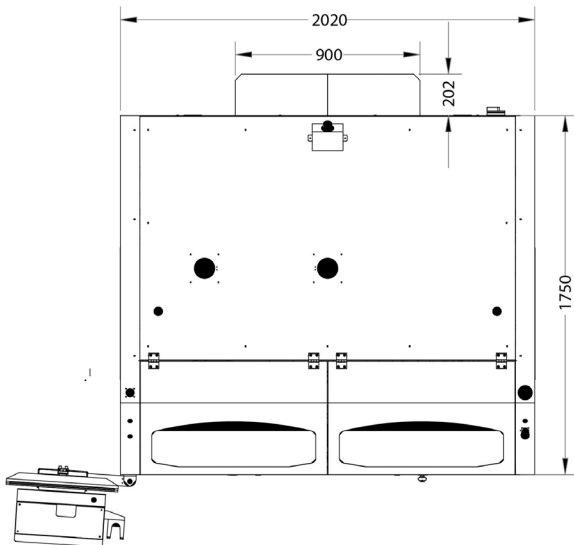
Front View



Side View



Top View



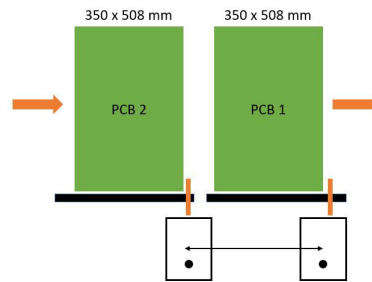
For more information, visit our website to find your local regional office or representative.

We have several global locations to serve you.

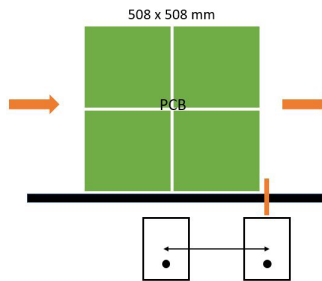
North America
Asia Pacific
EMEA

www.nordson.com/electronics
info-electronics@nordson.com

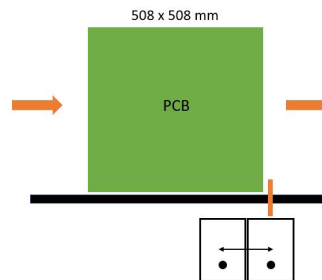
Cerno 508.1 Two-Segment — two singulated boards in parallel mode.



Cerno 508.1 Two-Segment — soldering a panelized board with dual nozzles.



Cerno 508.1 Two-Segment — soldering a board with small and large nozzles.



North America Headquarters
2747 Loker Avenue West
Carlsbad, CA 92010-6603, USA

+1.760.431.1919

June 2023