

# Nordson SELECT

**Innovative Selective Soldering  
Technologies for Every Application**

[www.nordsonselect.com](http://www.nordsonselect.com)

  
*ELECTRONICS SOLUTIONS*

# Nordson SELECT

## About Us

Our core business is selective soldering. With a combined 25 years of experience in electronics manufacturing, Nordson SELECT is the combination of two highly innovative companies, ACE Production Technologies and InterSelect GmbH, dedicated to enabling the success of our global clients. With a reputation for innovation, all our comprehensive process solutions ensure our customers a maximum return on investment and the ability to achieve a low cost of ownership. Nordson SELECT is pleased to offer a full spectrum of award-winning selective soldering solutions, from compact and economical standalone models to multi-station in-line models with uncompromising high performance. From the initial process development, to full-scale production, our family of industry experts supports our worldwide customer base with anything and everything they may need to ensure their continuing success.

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# Nordson Corporation

## About Nordson

Operating in over 30 countries, Nordson Corporation delivers precision technology solutions to help customers succeed worldwide. We engineer, manufacture and market differentiated products used for dispensing adhesives, coatings, sealants, biomaterials and other materials; for fluid management; for test and inspection, and for UV curing and plasma surface treatment. We support our products with application expertise and direct global sales and service. The Nordson company serves numerous consumer non-durable, durable and technology end markets including packaging, nonwovens, electronics, medical, appliances, energy, transportation, construction, and general product assembly and finishing.

- **Delivers precision technology solutions to customers worldwide in the electronics market and other key end markets**
- **Founded: 1954**
- **Sales: \$2.3 billion in FY 2018**
- **Direct Operations: 35+ countries**
- **Employees: 7500**
- **Customers: 25,000+**
- **Headquarters: Cleveland, OH**
- **CEO: Sundaram Nagarajan**
- **NASDAQ Symbol: NDSN**

Nordson Corporation is organized into three global operating segments, Adhesive Dispensing Systems, Advanced Technology Systems, and Industrial Coating Systems. Every day a typical person around the globe experiences the value Nordson brings to the diverse markets we serve.

The Advanced Technology Systems segment delivers a broad range of precision technology solutions to customers worldwide in the electronics market and other high-tech markets. Our Advanced Technology Systems product lineup includes Nordson ASYMTEK, Nordson DAGE, Nordson DIMA, Nordson MARCH, Nordson MATRIX, Nordson SELECT, Nordson SONOSCAN and Nordson YESTECH.



**Nordson  
YESTECH  
AOI Systems**

**Nordson  
MATRIX  
AXI Systems**



**Nordson  
DAGE  
X-Ray  
Systems**

**Nordson  
ASYMTEK  
Dispensing  
Systems**



Nordson's Advanced Technology Systems segment numerous product offerings serve several end markets including semiconductors, electronic assembly systems, automotive electronics, life sciences, general industrial assembly, solar and aerospace.

The Advanced Technology Systems segment products provide solutions for a broad range of electronics assembly applications including conformal coating, flip chip underfill, semiconductor packaging, flat panel displays, printed circuit board assembly, disk drive assembly, semiconductor surface preparation, medical device assembly, UV curing, bond testing and X-ray inspection, automated optical inspection (AOI) and two component dispensing.

# Best in Class Features

## Lowest Cost of Ownership

Nordson SELECT machines provide our customers with the lowest cost of ownership in the industry. With standard design features including the minimal use of specialty spare parts and tool-free solder pot maintenance, Nordson SELECT customers gain the benefit of reduced operational costs year after year.

## Modularity for Flexible Manufacturing

Several Nordson SELECT models can be reconfigured to provide a highly flexible selective soldering line for the ultimate in manufacturing flexibility. Individual or multiple solder modules can be easily reconfigured providing increased production flexibility and the ability to rapidly adapt to changes in production requirements. This increased production flexibility via rapid line reconfiguration is further enhanced with interchangeable single or dual solder pots equipped with either single or dual selective nozzles.

Modular Selective Soldering Line



## Automated Programs



Before and after automatic nozzle tinning



- **Automatic Solder Nozzle Tinning System** – Unlike other nozzle cleaning systems, Nordson SELECT’s patent pending system does not spray a liquid or powdered flux. Our solder nozzle tinning system keeps our solder nozzles prestigiously clean by automatically removing oxidation residues and re-tinning the surface of the nozzle without any resulting overspray or contamination on the PCB or the selective soldering machine.
- **Automatic Solder Level and Wave Height Control System** – Multiple sensors ensure a reproducible wave height for each and every soldering cycle by continuously checking the solder level with an automatic solder wire feeder deploying solder wire if the solder level drops below a predetermined threshold. To maintain our high levels of consistency, our software records and displays all the appropriate information during production, guaranteeing quality and ensuring complete traceability.
- **Segmented Roller Conveyor** – Some Cerno® and Integra® in-line Nordson SELECT models are available with a segmented roller conveyor providing greater capability to handle heavy printed circuit boards and solder frames with enlarged clearance.
- **Automatic Flux Gel Nozzle Cleaning System** – As industry experts we know that only a clean and oxidation free solder nozzle can be properly wetted. Nordson SELECT’s flux gel nozzle cleaning system meticulously removes all oxidation residues with the direct application of a minute amount of flux gel which re-tins the solder nozzle surface and increases the durability of the solder nozzle without producing overspray or contamination.
- **Automatic Conveyor Width Adjustment** – All Cerno® and Integra® in-line soldering models offer an automatic conveyor width adjustment feature. Adjustment takes place whenever a new soldering program is activated within the machine. No manual intervention or manual data entry is required making these machines highly efficient and adaptable to a wide range of printed circuit board sizes.
- **Board Warp Sensing and Compensation System** – This system measures the height differences of a printed circuit board as it is heated, calculating the downward deflection, and automatically corrects all Z-axis values to compensate for warpage. This eliminates the need for a traditional, and labor intensive, manual adjusting of the soldering program.



Before and after flux gel cleaning



# Fluxing

## Quality Control

- **Closed-Loop Pyrometer Controlled Preheating** – To ensure the consistency and quality of solder joints, Nordson SELECT utilizes pyrometer controlled preheating. The temperature is measured directly on the surface of the circuit board and is adjusted until the desired temperature is reached. Furthermore, the temperature of the PCB can be held constant during the soldering process, significantly improving solder quality. This is particularly important with long soldering cycles, where circuit boards can tend to cool down rapidly before the last solder joints can be properly formed.
- **Process Viewing Cameras** – Our process cameras stream a live video feed of the entire soldering process directly to the operator's screen, enabling them to constantly monitor and adjust the soldering program to their desired parameters. This way nothing goes unseen, and our customers can keep their operators well informed and accountable.
- **Automatic Wave Height Monitoring** – Prior to commencing a soldering program, our machines automatically adjust all nozzle wave height related values by means of a specialized sensor, ensuring the highest level of precision and consistency.
- **Data Logging and Traceability** – All Nordson SELECT machines are configured with multiple sensors capable of monitoring all aspects of the selective soldering process. The information gathered by these sensors is stored in an SQL database and can be instantly exported in XML format for further analysis. Parameters such as the temperature of the solder alloy, printed circuit board temperature, accurate flux application, and error messages are readily available. Any additional parameters can be easily added to adapt to any of our customer's unique traceability needs.
- **AOI Solder Joint Inspection** – Several of our in-line models can be paired with our Automated Solder Inspection system providing a dual-sided plated through-hole optical solder joint inspection solution. This ensures optimum solder joint integrity including MES and Industry 4.0 compatibility.
- **Board Scanning and Fiducial Alignment** – Our integrated board scanning function creates a true-to-scale image of an entire board for fast and more accurate programming. Two clicks directly imports a board image from a circuit board designer including automatic fiducial alignment for rapid machine setup.

- **MicroDrop Drop-Jet Fluxer** – Several Nordson SELECT models come standard with a highly adaptable MicroDrop drop-jet fluxer that can precisely deposit flux both at individual points on a printed circuit board as well as entire lines in sequence. All flux applications can be adapted and customized to the requirements of each printed circuit board assembly. Our integrated MicroDrop fluxers drastically reduce flux consumption and minimize flux residue contamination eliminating the need for post-soldering cleaning of printed circuit board assemblies.
- **FluxJet Precision Drop-Jet Fluxer** – Several Nordson SELECT models offer an available FluxJet precision drop-jet fluxer that can dispense alcohol-based fluxes, water-soluble fluxes, rosin-based fluxes, high solids content fluxes and low pH flux chemistries. In addition, the FluxJet precision drop-jet fluxer can be integrated side-by-side with an atomizing spray fluxer to create a dual fluxing system capable of both site-specific flux dispensing as well as mass flux application.
- **In-Process Flux Verification** – Nordson SELECT machines are available with an in-process flux control system that verifies the presence and accuracy of flux application by a drop-jet fluxer. This system ensures micro deposition of flux to extremely small solder sites with unparalleled accuracy and minimal flux consumption. Monitoring this process has proven to greatly increase consistency and quality during production.
- **Atomizing Spray Flux Applicator** – Several Nordson SELECT models come standard with an atomizing spray flux applicator which is ideal for mass application of fluxes to printed circuit boards that will be cleaned after selective soldering. Compatible with a full spectrum of flux chemistries, the atomizing spray flux applicator can operate flawlessly with very high solids content fluxes.



# Preheating

- **Topside and Bottom-side Infrared Preheat –**

Nordson SELECT machines can hold the temperature of a PCB constant during the soldering process significantly improving the quality of production. This is particularly important with long soldering cycles where circuit boards can have a tendency to cool down rapidly before the last solder joints can be properly formed. Multi-layer printed circuit boards or applications with high-thermal mass components all benefit greatly from having sustained and constant preheating. To minimize thermal stress on the board during preheating and to achieve an optimal heat distribution, our full surface infrared preheaters are carefully monitored and controlled. With sustained preheating, optimized control can heat multiple PCBs simultaneously significantly reducing the cycle time per board, a feature that is particularly valuable for high-volume production.

- **Energy Savings –** Nordson SELECT preheaters regulate themselves according to the size and scope of the PCB in production. Our closed-loop system ensures consistent and accurate heat throughout production. In an effort to save energy costs, we have designed the preheaters to be active only as long as the assembly is above or below them. Our customers have reported substantial energy savings, especially with high-volume application where machines are running virtually non-stop.



Full Surface Infrared Preheater

- **Temperature Control –** Nordson SELECT pyrometer controlled closed-loop preheating eliminates the need for circuit board profiling and attains a more precise temperature with less room for human error. Overheating of the PCB is diminished and thanks to the closed-loop control, the user no longer needs to estimate how much thermal energy the components will drain or how long the assembly must be preheated. The system always brings the exact required amount of energy to the PCB.
- **Sustained Preheating –** As mentioned above, Nordson SELECT machines prevent the cooling of the assembly during soldering by utilizing the top preheater to compensate and maintain the temperature during the entire soldering cycle. It has become apparent that reliable and consistent soldering is best achieved through a closed-loop pyrometer controlled system like ours.
- **Thermal Data Logging System –** Our thermal data logging system provides accurate measurement and control of actual PCB temperature and eliminates the need for traditional circuit board profiling. This system is available on several models and minimizes damage to thermally sensitive components.



Combination Convection/IR Preheater

# Soldering

- **Parallel-Double Configuration (PD)** – Some Nordson SELECT machines can be configured in such a way that doubles machine productivity and versatility. These models can be equipped with dual drop-jet fluxers and dual solder pots. This enables the fluxing and soldering of two PCBs simultaneously, or soldering with multiple sized nozzles within the same program using two distinct alloys without needing to physically change the solder pots. Our customers no longer have to sacrifice throughput for flexibility... or flexibility for throughput, they can have both in the same machine.

- **Interchangeable Solder Pots** – Several Nordson SELECT models are available with interchangeable solder pots capable of processing multiple types of solder alloys including tin-lead, lead-free and high melting point alloys. These interchangeable solder pots can be exchanged in less than 20 minutes. Various Nordson SELECT models feature titanium solder pots permitting them to process all types of solder alloys. Our solder pots are robust and highly resistant to potential damage during cleaning and operational use. This straightforward design allows for effortless tool-free maintenance, rapid cleaning, which minimizes downtime.

As a standard feature these solder pots are nitrogen inerted so inert nitrogen gas covers the entire solder bath, significantly reducing the formation of dross, and ensuring an oxidation free soldering environment. Designed to equalize the flow of molten solder inside the solder pump and to keep it free of fluctuations, our solder pumps have a special anti-cavitation design that minimizes wave height variation at the solder nozzle.

- **Wettable and Non-Wettable Solder Nozzles** – All Nordson SELECT machines can be fitted with either wettable or non-wettable nozzles. Our solder nozzles are made of a specially developed metallic alloy which is highly resistant to the corrosive effects of lead-free solder alloys.



Parallel Double Configuration

A specially designed nozzle body further reduces the formation of dross by more than 90% and avoids disturbed solder from forming on the underside of the PCB. Most non-wetted solder nozzles have a minimal solder height limiting the pin length that can be soldered. Nordson SELECT non-wetted solder nozzles are specially designed with a radial groove to establish backpressure raising the solder height an additional 50% for soldering of longer length pins.

Our wettable mini-wave solder nozzles have directional solder flow and are ideal for soldering multi-row connectors. As an extension of our wettable mini-wave solder nozzles, some Nordson SELECT models can be equipped with a 75 mm (3.0 in.) wide wave solder nozzle that can solder left-to-right or right-to-left and can solder around obstacles thanks to programmable X, Y and Z-axis motion.

- **Nitrogen De-Bridging Knife** – Several Nordson SELECT models can be equipped with an available nitrogen de-bridging knife that ensures bridge free soldering when selective soldering fine-pitch devices such as micro-connectors.



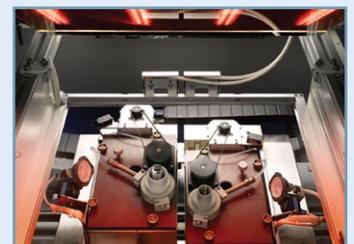
Dual solder nozzle pot and pump



Solder Nozzle with greater solder height



Parallel Mode



Double Mode

# 2segment

## Overview

Some Nordson SELECT Cerno® and Integra® in-line models are available with a 2segment roller conveyor that provides a high grade of flexibility and throughput. These 2segment models can be operated in any of three different modes:

FIGURE 1:

### Single Panel with Multi Size Solder Nozzles

- The 2seg configuration operated with single stopper provides single board processing with one or two different sized solder nozzles.

FIGURE 2:

### Single Panel with Two Solder Nozzles in Parallel

- The 2seg configuration operated with single stopper allows simultaneous soldering of one board or panel with two nozzles operating in parallel.

FIGURE 3:

### Two Singulated Boards in 2segment Mode

- The 2seg configuration operated with two stoppers allows sequential soldering of two singulated board without the need for boards to be in a panel, be palletized or require tooling.

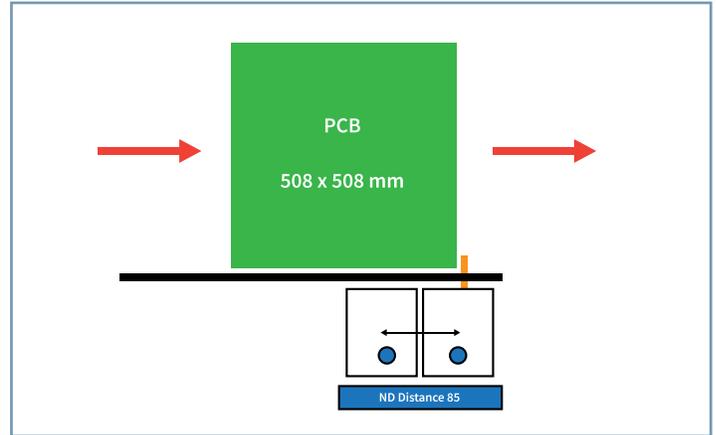


FIGURE 1: 2seg soldering one board with small and large nozzles

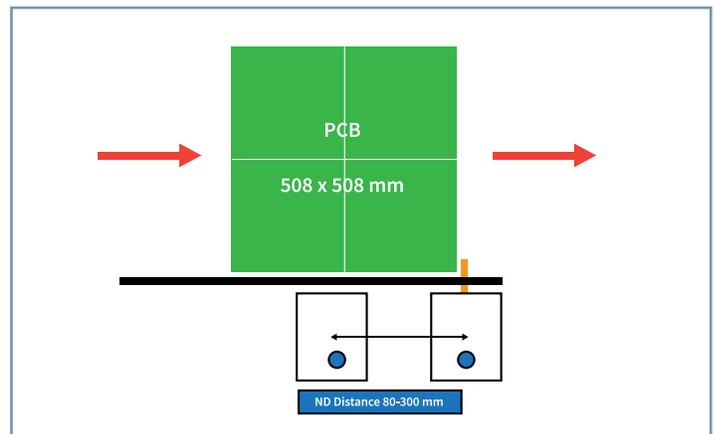


FIGURE 2: 2seg soldering one panelized board with dual nozzles

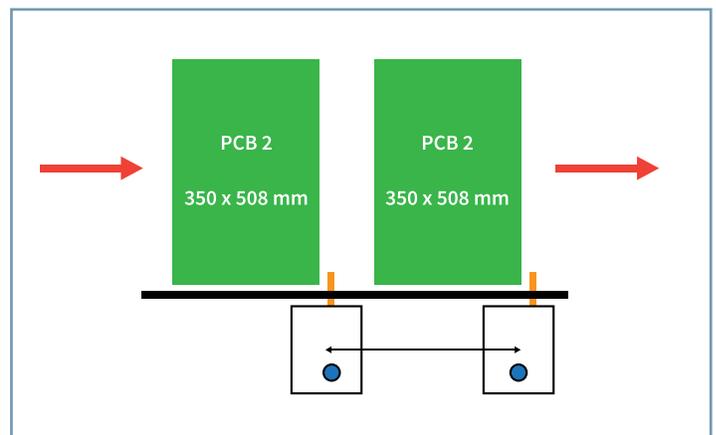
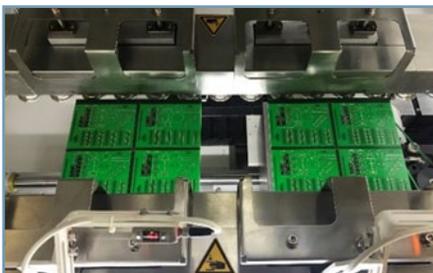
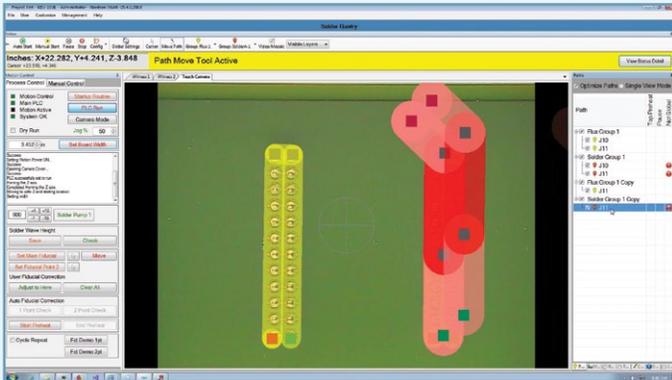


FIGURE 3: 2seg configuration soldering two singulated boards in parallel mode



# Software

## SWAK-OS 4.0 Software



- **Intuitive Graphics-Based Programming –** Some Nordson SELECT models utilize SWAK-OS 4.0 a state-of-the-art programming and editing software that enables graphic monitoring of the entire selective soldering process. Programs are quickly and easily created by painting on flux and solder paths with a single screen graphical user interface. On-the-fly editing for quick adjustments can be made to fully optimize the selective soldering process. SWAK-OS 4.0 is fully network compatible facilitating complete data storage and maintenance logging.
- **Manufacturing Flexibility –** Machines equipped with SWAK-OS 4.0 use a single user interface for global deployment, allowing worldwide program mobility across multiple machine platforms. Programs created at one customer location can be utilized at other global manufacturing sites enabling rapid reconfiguration of selective soldering lines for the ultimate in manufacturing flexibility. This unique capability provides customers with the ability to rapidly adapt to changes in production requirements.

### Innovative Features and Capabilities –

SWAK-OS 4.0 equipped machines have an extensive feature set of advanced software capabilities including:

- Integrated board scanning creates true-to-scale image of entire board
- Automatic fiducial alignment with single click fiducial teach capability
- Seamless fiducial recognition with true board alignment and skew correction
- Board warp compensation function
- Remote machine diagnostics for long distance viewing of possible abnormalities
- Comprehensive library of on-demand help videos

## PhotoScan Software



- **Programming and Editing with Ease –** Some Nordson SELECT models use PhotoScan software that provides easy “point-and-click” programming with highly editable graphical monitoring of programs throughout the selective soldering process. All machine parameters are accessible through a single graphical user interface for both programming and machine operations. This software is fully network compatible through either cable or wi-fi providing backup capabilities for programs and project storage. Crucially, this software is highly editable and can be manipulated on-the-fly while simultaneously soldering boards. Our highly functional control system allows that all parameters of each soldering and flux location can be easily adjusted to obtain optimal soldering performance.

### Advanced Features and Capabilities –

PhotoScan equipped machines have an extensive feature set of unique software capabilities including:

- On-the-fly editing in combination with simultaneous processing
- Remote machine control and maintenance
- Full connectivity to customer’s company network
- Factory information system capability and linkage
- Production data and quality reporting to SQL database

# Product Portfolio

We are selective soldering specialists with 25 years of product development, design and manufacturing experience. Over time we have compiled our customer's feedback and have applied it to our work. Because of this our machines are fine-tuned not just by our dedicated team of engineers, but by the hand of our customers. Based on this invaluable feedback, we have tailored our product line to meet a wider array of demands and they can be adapted to any of our customer's selective soldering needs. For more information please download a product data sheet from [nordsonselect.com](http://nordsonselect.com).

## Current Range of Products

### Novo® Series

#### • Novo® 300

The Novo® 300 offers an economically friendly solution and is a natural fit for prototype, cell manufacturing or small batch production. With a radical design concept, we achieved a remarkably small 1.1 square meter footprint and maintained the accuracy and 200 mm/second production speed of our high-end in-line models.

#### • Novo® 102 and 103

The Novo® 102 and 103 offer an exceptional combination of versatility, productivity and outstanding value in a compact footprint. With feature rich, graphics-based programming and fully-automated fiducial board alignment, the Novo® 102 and 103 are ideally suited for prototype, cell manufacturing or small batch production requirements.

#### • Novo® 460 S/PD

The Novo® 460 expands the reach of Nordson's compact selective soldering systems with the Novo® 460S coming standard with a single MicroDrop fluxer and solder pot, and the Novo® 460PD equipped with two parallel MicroDrop fluxers and solder pots and can process two printed circuit boards at the same time.



### Cerno® Series

#### • Cerno® 300S

The Cerno® 300S is a selective soldering system with a compact footprint designed for small batch in-line production. The compact platform with combined fluxing, preheating, and soldering makes it ideal for small batch production. The modular platform allows options to be added as application needs change.

#### • Cerno® 102IL, 103IL, and 105IL

The Cerno® 102IL and 103IL are durable in-line systems that deliver an exceptional combination of versatility, productivity and value. When paired with our In-Line Flux and Preheat Module, the Cerno® 102IL and 103IL provide a complete modularity and real-time machine reconfiguration for the ultimate in manufacturing flexibility. The Cerno® 105IL is the ideal solution for selective soldering of large printed circuit boards or large back-planes and can accommodate PCBs up to 22.7 kg (50.0 lbs.).

#### • Cerno® 508.1 S/PD/2seg

The Cerno® 508.1S/PD is a compact system that can be used for either batch or in-line production. The Cerno® 508.1PD is fitted with dual drop-jet fluxers and dual solder pots enabling fluxing and soldering of two PCBs simultaneously, or soldering with multiple sized nozzles within the same program. The Cerno® 508.1PD 2seg can sequential solder two singulated boards without the need for boards to be in a panel, be palletized or require tooling.





## Integra® Series

### • Integra® 103ILD

The Integra® 103ILD is a robust selective soldering system delivering an exceptional combination of versatility, productivity and value. The Integra® 103ILD has many unique features, including dual independent X-Y gantries with two solder pots for faster processing time and reduced soldering cycle. With its feature rich, graphics-based programming and fully-automated fiducial board alignment, the Integra® 103ILD is specially designed for demanding selective soldering applications.

With its flexible configuration, the Integra® 103ILD is a versatile selective soldering system capable of processing tin-lead, lead-free, or HMP solder alloys. Interchangeable solder pots and pumps are available with either single selective solder nozzle, dual selective nozzles with independent control or 75 mm (3.0 in.) wide wave soldering nozzle.

### • Integra® 508.2 S/PD/2seg

The Integra® 508.2 is built with two independent zones within an integrated in-line system. The first zone heats and fluxes the PCB board before soldering in the second zone. The Integra® 508.2 can be configured with dual solder pots is supported with an IR topside heater which sustains the PCBs temperature during the soldering process. The Integra® 508.2S comes with a multitude of special capabilities like concurrent fluxing, preheating, and soldering for shorter process time and a reduced soldering cycle. The Integra® 508.2PD can be configured with dual drop-jet fluxers as well as dual solder pots, and can be used in two different modes allowing it to process up to 4 PCBs at one time. The Integra® 508.2PD 2seg can sequential solder two singulated boards without the need for boards to be in a panel, be palletized or require tooling.

### • Integra® 508.3 and 508.4

The Integra® 508.3 and 508.4 are expanded versions of the Integra® 508.2. These systems are needed when our clients require the functionality of the Integra® 508.2 but with more processing power to reach the desired production capabilities. The Integra® 508.3S and Integra® 508.3PD models provide an additional preheating zone for thermally demanding requirements while the Integra® 508.4S and Integra® 508.4PD models provide two additional preheating zones as well as having two soldering stations for greater throughput. Integra® 508.3 and 508.4 PD 2seg models can sequential solder two singulated boards without the need for boards to be in a panel, be palletized or require tooling.

### • Integra® 508.5 S/PD/2seg

Our crème of the crop, the Integra® 508.5S five-zone in-line system combines flux and preheat plus selective soldering stations for concurrent fluxing, preheating, and soldering. Variants are available with two or three soldering stations for high-volume and high-performance soldering. Its modular design allows the Integra® 508.5S to be matched to the needs of various high-volume applications. For maximum throughput, it can be setup with up to three soldering stations, each as an independent zone but connected through a fully adjustable SMEMA automatic chain conveyor.

In addition to processing PCBs at an incredible high rate, the Integra® 508.5PD can, like the rest of our systems, can be setup with dual drop-jet fluxers and dual solder pots. The parallel processing mode enables fluxing and soldering of up to 10 PCBs simultaneously, which effectively doubles the machines productivity. The Integra® 508.5PD 2seg can sequential solder two singulated boards without the need for boards to be in a panel, be palletized or require tooling.

# Novo<sup>®</sup> 300

Selective Soldering with Compact Footprint and Outstanding Value



## Product Highlights

- Entry level selective soldering with compact footprint in less than 1.1 square meters of factory floor space
- Standalone platform ideal for prototype, cell manufacturing or small batch production
- Full titanium solder pot compatible with all solder alloys plus easy tool-free maintenance
- Modular platform design allows options to be added as application need change
- Entry level selective soldering system with capability to solder printed circuit boards at the same speed as larger or more expensive machines

## Features and Options

### PCB Handling:

- PCBs up to 500 x 300 mm (19.6 x 11.8 in.)
- Manual loading and unloading

### Fluxing:

- Maintenance-free MicroDrop drop-jet

### Preheating:

- Selectable infrared preheating from 1.5 kW to 4.5 kW

### Soldering:

- Titanium solder pot and pump assembly
- Quick change magnetically coupled solder nozzles
- Fast and accurate X, Y, Z-axis positioning system

### PhotoScan Software:

- Easy “point-and-click” programming with TFT monitor
- Remote machine control and remote machine maintenance
- Network and FIS capability

### Configurations:

- 300: Manual load/unload, 500 x 300 mm (19.6 x 11.8 in) single solder pot
- 300SD: Sliding door board handling system, 300 x 300 mm (11.8 x 11.8 in), single solder pot

### Available Options:

- Solder frame for printed circuit boards
- Full surface topside infrared preheating
- Customer-friendly process viewing camera
- Automatic solder level sensing system
- Wave height control sensing system
- Automatic solder nozzle cleaning system
- Flux level monitoring with information display
- Data logging system with traceability of all process parameters

### Facilities:

#### System Footprint:

931 x 1235 mm (36.6 x 48.6 in.)

#### System Weight:

350 kg (770 lbs.)

#### Electrical:

230VAC, 50-60 Hz, 2 kW, 9 A without preheater or 400/480VAC, 50-60 Hz, 10 kW, 16 A with preheater

#### Compressed Air:

None Required

#### Nitrogen:

99.99% (4.0) pure, 4-6 bar (60-90 psi), 1.3 m<sup>3</sup>/hour

#### Ventilation:

150 m<sup>3</sup>/hour (90 SCFM), one 100 mm (4.0 in.) dia. duct

# Novo<sup>®</sup> 102 and 103

Selective Soldering with Compact Footprint and Outstanding Value



## Product Highlights

- Selective soldering of PCBs as large as 406 x 406 mm (16.0 x 16.0 in.) or 610 x 457 mm (24.0 x 18.0 in.)
- Standalone platform ideal for prototype, cell manufacturing or batch production requirements
- Interchangeable solder pots and pumps compatible with tin-lead, lead-free and HMP solder alloys
- Choice of single selective solder nozzle, dual selective nozzles with independent control or 75 mm wide wave soldering nozzle
- SWAK-OS graphics-based programming and machine control software enables fast and straightforward program creation

## Features and Options

### PCB Handling:

- PCBs up to 406 x 406 mm (16.0 x 16.0 in.) or 610 x 457 mm (24.0 x 18.0 in.)
- Universal PCB location rails with motor driven adjustment and multiple board stops for processing several boards at one time

### Fluxing:

- Atomizing spray flux applicator with flux level sensing

### Preheating:

- Scalable infrared preheating from 1.0 kW to 3.0 kW or 1.0 kW to 6.0 kW

### Soldering:

- Tin-lead solder pot and pump assembly
- Quick change magnetically coupled solder nozzles
- Automatic solder level and wave height monitoring system
- Solder alloy verification system
- Process viewing camera

### SWAK-OS 4.0 Software:

- Graphics-based programming with seamless board scanning
- Fully-automated fiducial alignment and board warp compensation
- Remote machine diagnostics and FIS capability

### Configurations:

- 102: Manual load/unload, 406 x 406 mm (16.0 x 16.0 in.), single solder pot
- 103: Manual load/unload, 610 x 457 mm (24.0 x 18.0 in.), single solder pot

### Available Options:

- Universal PCB location fixture
- FluxJet precision drop-jet flux dispenser
- In-process flux verification system for drop-jet
- Dual flux heads, 2 atomizing spray heads, 2 drop-jet dispensers or one of each
- Topside infrared preheater with closed-loop control
- Automatic solder nozzle tinning system
- Automatic solder pot level monitoring and fill system
- Lead-free or HMP solder pot and pump assembly (titanium)
- Dual nozzle solder pot and pump assembly, tin-lead or lead-free (titanium)
- 75 mm wide wave nozzle and pump assembly, tin-lead or lead-free (titanium)
- Solder pot exchange cart with warming controls
- Nitrogen de-bridging knife
- Six channel thermal data logging system
- Barcode reader

### Facilities:

#### System Footprint:

1194 x 1411 mm (47.0 x 55.5 in.)  
or 1400 x 1421 mm (55.1 x 55.9 in.)

#### System Weight:

381 kg (840 lbs.) or 422 kg (930 lbs.)

#### Electrical:

208/220/240VAC, 60 Hz single phase,  
30-50 A

#### Compressed Air:

6 bar (90 psi.) min., 7 bar (100 psi) max.

#### Nitrogen:

99.999% (5.0) pure, 4-7 bar (60-100 psi)  
1.3 m<sup>3</sup>/hour

#### Ventilation:

595 m<sup>3</sup>/hour (350 SCFM),  
two 100 mm (4.0 in.) dia. ducts

# Novo<sup>®</sup> 460

Selective Soldering with Compact Footprint and Outstanding Value



## Product Highlights

- Choice of single or dual drop-jet fluxers and solder pots for either simultaneous parallel or independent double processing modes
- Parallel processing significantly increases machine throughput while double processing broadens soldering flexibility
- Software control between different solder alloys without changing solder pots
- Standalone platform with combined fluxing, preheating and soldering for highest possible process flexibility
- Full titanium solder pots compatible with all solder alloys plus easy tool-free maintenance

## Features and Options

### PCB Handling:

- PCBs up to 460 x 460 mm (18.1 x 18.1 in.)
- Two-way loading and unloading system
- Solder frame for printed circuit boards

### Fluxing:

- Maintenance-free MicroDrop drop-jet

### Preheating:

- Nitrogen preheating
- Scalable infrared preheating from 1.5 kW to 6.0 kW

### Soldering:

- Titanium solder pot and pump assembly
- Quick change magnetically coupled solder nozzles
- Automatic solder level monitoring system
- Automatic wave height monitoring system

### PhotoScan Software:

- Easy “point-and-click” programming with TFT monitor
- Remote machine control and remote maintenance
- Network and FIS capability

### Configurations:

- 460S: Single MicroDrop fluxer and single solder pot
- 460PD: Dual MicroDrop fluxers and dual solder pots for parallel or double soldering modes

### Available Options:

- Flux level sensing system
- In-process, closed-loop flux verification system for drop-jet control
- Full surface topside infrared preheating
- Full surface bottom-side infrared preheating
- Closed-loop pyrometer temperature control
- Customer-friendly process viewing camera
- Automatic solder wire feeding system
- Automatic solder nozzle cleaning system
- Data logging system with traceability of all process parameters
- Barcode reader

### Facilities:

#### System Footprint:

1700 x 2104 mm (66.9 x 82.8 in.)

#### System Weight:

900 kg (1985 lbs.)

#### Electrical:

400/480VAC, 50-60 Hz, three phase, 69 kW, 10-15 A without preheater, or 400/480VAC, 50-60 Hz, three phase, 15-16 kW, 24-26 A with preheater

#### Compressed Air:

6 bar (90 psi) min., 8 bar (110 psi) max.

#### Nitrogen:

99.99% (4.0) pure, 4-6 bar (60-90 psi), 1.3 m<sup>3</sup>/hour (single pot), 2.6 m<sup>3</sup>/hour (dual pot)

#### Ventilation:

150 m<sup>3</sup>/hour (90 SCFM), one 100 mm (4.0 in.) dia. ducts

# Cerno<sup>®</sup> 300S

## Selective Soldering for Small Batch In-line Production



## Product Highlights

- Compact in-line platform with combined fluxing, preheating and soldering ideal for small batch production requirements
- Entry level selective soldering with compact footprint requiring less than 1.1 square meters of factory floor space
- Full titanium solder pot compatible with all solder alloys plus easy tool-free maintenance
- Modular platform design allows options to be added as application needs change
- Entry level selective soldering system with capability to solder printed circuit boards at the same speed as larger or expensive machines

## Features and Options

### PCB Handling:

- PCBs up to 500 x 300 mm (19.6 x 11.8 in.)
- In-line SMEMA chain conveyor
- Automatic conveyor width adjustment

### Fluxing:

- Maintenance-free MicroDrop drop-jet

### Preheating:

- Nitrogen preheating
- Scalable infrared preheating from 1.5 kW to 4.5 kW

### Soldering:

- Titanium solder pot and pump assembly
- Quick change magnetically coupled solder nozzles
- Automatic solder level monitoring system
- Automatic wave height monitoring system

### PhotoScan Software:

- Easy “point-and-click” programming with TFT monitor
- Remote machine control and remote maintenance
- Network and FIS capability

### Configurations:

- 300S: Single MicroDrop fluxer and single solder pot

### Available Options:

- Flux level sensing system
- In-process, closed-loop flux verification system for drop-jet control
- Full surface topside infrared preheating
- Full surface bottom-side infrared preheating
- Closed-loop pyrometer temperature control
- Customer-friendly process viewing camera
- Automatic solder wire feeding system
- Automatic solder nozzle cleaning system
- Data logging system with traceability of all process parameters
- Barcode reader

### Facilities:

#### System Footprint:

931 x 1235 mm (36.6 x 48.6 in.)

#### System Weight:

350 kg (770 lbs.)

#### Electrical:

50-60 Hz, single phase, 2 kW, 9 A without preheater, or 400/480VAC, 50/60 Hz, three phase, 10 kW, 16 A with preheater

#### Compressed Air:

6 bar (90 psi) min., 8 bar (110 psi) max.

#### Nitrogen:

99.99% (4.0) pure, 4-6 bar (60-90 psi), 1.3 m<sup>3</sup>/hour

#### Ventilation:

150 m<sup>3</sup>/hour (90 SCFM), one 100 mm (4.0 in.) dia. duct

# Cerno<sup>®</sup> 102IL & 103IL

## Selective Soldering System with Advanced Process Control



### Product Highlights

- Selective soldering of PCBs as large as 406 x 406 mm (16.0 x 16.0 in.) or 610 x 457 mm (24.0 x 18.0 in.)
- Interchangeable solder pots and pumps compatible with tin-lead, lead-free and HMP solder alloys
- Choice of single selective solder nozzle, dual selective nozzles with independent control or 75 mm wide wave soldering nozzle
- SWAK-OS graphics-based programming and machine control software enables fast and straightforward program creation
- Optional in-line flux and preheat module with concurrent fluxing/preheating for greater throughput

### Features and Options

#### PCB Handling:

- PCBs up to 406 x 406 mm (16.0 x 16.0 in.) or 610 x 457 mm (24.0 x 18.0 in.)
- In-line SMEMA edge conveyor
- Program controlled conveyor width adjustment

#### Fluxing:

- Atomizing spray flux applicator with flux level sensing

#### Preheating:

- Scalable infrared preheating from 1.0 kW to 3.0 kW or 1.0 kW to 6.0 kW

#### Soldering:

- Tin-Lead solder pot and pump assembly
- Quick change magnetically coupled solder nozzles
- Automatic solder level monitoring system
- Automatic wave height monitoring system

#### SWAK-OS 4.0 Software:

- Graphics-based programming with seamless board scanning
- Fully-automated fiducial alignment and board warp compensation
- Remote machine diagnostics and FIS capability

#### Configurations:

- 102IL: Left-to-right conveyor, 406 x 406 mm (16.0 x 16.0 in.), single solder pot
- 103IL: Left-to-right conveyor, 610 x 457 mm (24.0 x 18.0 in.), single solder pot

#### Available Options:

- Right-to-left conveyor direction
- FluxJet precision drop-jet flux dispenser
- In-process flux verification system for drop-jet
- Dual flux heads, 2 atomizing spray heads, 2 drop-jet dispensers or one of each
- Topside infrared preheater with closed-loop control
- Automatic solder nozzle tinning system
- Automatic solder pot level monitoring and fill system
- Lead-free or HMP solder pot and pump assembly (titanium)
- Dual nozzle solder pot and pump assembly, tin-lead or lead-free (titanium)
- 75 mm wide wave nozzle and pump assembly, tin-lead or lead-free (titanium)
- Solder pot exchange cart with warming controls
- Nitrogen de-bridging knife
- Six channel thermal data logging system
- Barcode reader

#### Facilities:

##### System Footprint:

- 1371 x 1411 mm (53.9 x 55.5 in.) or 1701 x 1421 mm (66.9 x 55.9 in.)

##### System Weight:

- 409 kg (900 lbs.) or 431 kg (950 lbs.)

##### Electrical:

- 208/220/240VAC, 60 Hz, single phase, 30 A or 208/220/240VAC, 60 Hz, single phase, 50 A

##### Compressed Air:

- 6 bar (90 psi.) min., 7 bar (100 psi) max

##### Nitrogen:

- 99.999% (5.0) pure, 4-7 bar (60-100 psi) 1.2 m<sup>3</sup>/hour consumption

##### Ventilation:

- 595 m<sup>3</sup>/hour (350 SCFM), two 100 mm (4.0 in.) dia. ducts

# In-Line Flux & Preheat Module

## Concurrent Fluxing and Preheating for Increased Throughput

### Product Highlights

- In-line fluxing and preheating of printed circuit boards up to 610 x 457 mm (24.0 x 18.0 in.)
- Concurrent fluxing and preheating increases throughput and reduces processing time
- Atomizing spray flux applicator or precision drop-jet flux dispenser for processing a wide range of various flux chemistries
- Choice of topside or bottom-side infrared or topside or bottom-side convection preheating with controlled ramp rate
- SMEMA edge conveyor with program width adjustment for easy pairing with Nordson SELECT in-line selective soldering systems



### Features and Options

#### PCB Handling:

- PCBs up to 610 x 457 mm (24.0 x 18.0 in.)
- In-line SMEMA edge conveyor
- Program controlled conveyor width adjustment

#### Fluxing:

- Atomizing spray flux applicator with flux level sensing

#### Preheating:

- Topside infrared preheater after fluxing with closed-loop control
- Scalable preheating from 3.0 kW to 6.0 kW

#### SWAK-OS 4.0 Software:

- Graphics-based programming with seamless board scanning
- Fully-automated fiducial alignment and board warp compensation
- Remote machine diagnostics and FIS capability

#### Configurations:

- Concurrent fluxing and preheating for PCBs up to 610 x 457 mm (24.0 x 18.0 in.)

#### Available Options:

- Right-to-left conveyor direction
- FluxJet precision drop-jet flux dispenser
- In-process flux verification system for drop-jet
- Dual flux heads, 2 atomizing spray heads, 2 drop-jet dispensers or one of each
- Four fluxers, any combination of atomizing spray heads or drop-jet dispensers
- Topside infrared preheater during fluxing with closed-loop control
- Bottom-side infrared preheater after fluxing with closed-loop control
- Six channel thermal data logging system
- Barcode reader

#### Facilities:

##### System Footprint:

1981 x 1716 mm (78.0 x 67.5 in.)

##### System Weight:

568 kg (1250 lbs.)

##### Electrical:

208/220/240VAC, 60 Hz single phase, 40 A, 80 A with 2 preheaters, 100 A with 3 preheaters

##### Compressed Air:

6 bar (90 psi.) min., 7 bar (100 psi) max.

##### Nitrogen:

99.999% pure, 4-7 bar (60-100 psi), 1.2 m<sup>3</sup>/hour

##### Ventilation:

890 m<sup>3</sup>/hour (525 SCFM), two 100 mm (4.0 in.) dia. ducts

# Cerno<sup>®</sup> 508.1

## Selective Soldering with Combined Flexibility and Modularity



### Product Highlights

- Batch or in-line platform with combined fluxing, preheating and soldering for highest possible process flexibility
- Choice of single or dual drop-jet fluxers and solder pots for either simultaneous parallel or independent double processing modes
- Parallel processing significantly increases machine throughput while double processing broadens soldering flexibility
- Full titanium solder pots compatible with all solder alloys plus easy tool-free maintenance
- Software control between different solder alloys without changing solder pots

### Features and Options

#### PCB Handling:

- PCBs up to 508 x 508 mm (20.0 x 20.0 in.)
- In-line SMEMA chain conveyor
- Automatic conveyor width adjustment

#### Fluxing:

- Maintenance-free MicroDrop drop-jet
- Flux level sensing system

#### Preheating:

- Heated nitrogen inerting system
- Scalable infrared preheating from 6.0 kW to 12.0 kW

#### Soldering:

- Titanium solder pot and pump assembly
- Quick change magnetically coupled solder nozzles
- Automatic solder level monitoring system
- Automatic wave height monitoring system
- Customer-friendly process viewing camera

#### PhotoScan Software:

- Easy “point-and-click” programming with TFT monitor
- Remote machine control and remote maintenance
- Network and FIS capability

#### Configurations:

- 508.1S: Single MicroDrop fluxer and single solder pot
- 508.1PD: Dual MicroDrop fluxers and dual solder pots for parallel or double soldering mode
- 508.1PD 2seg: 2seg configuration with dual fluxers and solder pots can solder two singulated boards in a parallel mode in-line with two segmented conveyors

#### Available Options:

- In-process, closed-loop flux verification system for drop-jet control
- Full surface topside infrared preheating
- Full surface bottom-side infrared preheating
- Closed-loop pyrometer temperature control
- Board warpage sensing system
- Dual process viewing camera and second monitor
- Automatic solder wire feeding system
- Automatic solder nozzle cleaning system
- Data logging system with traceability of all process parameters
- Barcode reader

#### Facilities:

##### System Footprint:

- 508.1S/PD: 1700 x 1700 mm (66.9 x 66.9 in.)
- 508.1PD 2seg: 1800 x 1700 mm (70.8 x 66.9 in.)

##### System Weight:

- 850 kg (1870 lbs.)

##### Electrical:

- 508.1S: 400V/480VAC, 50-60 Hz, 3-phase, 10 kW, 16 A without preheating, or 17 kW, 28 A with preheating

- 508.1PD: 400V/480VAC, 50-60 Hz, 3-phase, 13 kW, 21 A without preheating, or 32 kW, 46A with preheating

- 508.1PD 2seg: 400V/480VAC, 50-60 Hz, 3-phase, 16 kW, 35 A without preheating, or 24 kW, 32 A with preheating

##### Compressed Air:

- 6 bar (90 psi) min., 8 bar (110 psi) max.

##### Nitrogen:

- 99.99% (4.0) pure, 4-6 bar (60-90 psi), 1.3 m<sup>3</sup>/hour (single pot), 2.6 m<sup>3</sup>/hour (dual pot)

##### Ventilation:

- 150 m<sup>3</sup>/hour (90 SCFM), one 100 mm (4.0 in.) dia. duct

# Integra<sup>®</sup> 508.2

## Selective Soldering System with Advanced Process Control



## Product Highlights

- Two stage operation with combined flux and preheat zone plus selective soldering zone for concurrent fluxing, preheating and soldering
- Choice of single or dual drop-jet fluxers and solder pots for either simultaneous parallel or independent double processing modes
- Parallel processing significantly increases machine throughput while double processing broadens soldering flexibility
- Full titanium solder pots compatible with all solder alloys plus easy tool-free maintenance
- Software control between different solder alloys without changing solder pots

## Features and Options

### PCB Handling:

- PCBs up to 508 x 508 mm (20.0 x 20.0 in.)
- In-line SMEMA chain conveyor
- Automatic conveyor width adjustment

### Fluxing:

- Maintenance-free MicroDrop drop-jet
- Flux level sensing system

### Preheating:

- Full surface bottom-side infrared preheating
- Scalable infrared preheating from 6.0 kW to 12.0 kW

### Soldering:

- Titanium solder pot and pump assembly
- Quick change magnetically coupled solder nozzles
- Automatic solder level monitoring system
- Automatic wave height monitoring system
- Customer-friendly process viewing camera

### PhotoScan Software:

- Easy “point-and-click” programming with TFT monitor
- Remote machine control and remote maintenance
- Network and FIS capability

### Configurations:

- 508.2S: Single MicroDrop fluxer and single solder pot
- 508.2PD: Dual MicroDrop fluxers and dual solder pots for parallel or double soldering modes
- 508.2PD 2seg: 2seg configuration with dual fluxers and solder pots can solder two singulated boards in a parallel mode in-line with two segmented conveyors

### Available Options:

- In-process, closed-loop flux verification system for drop-jet control
- Full surface topside infrared preheating
- Closed-loop pyrometer temperature control
- Board warpage sensing system
- Dual process viewing camera and second monitor
- Automatic solder wire feeding system
- Automatic solder nozzle cleaning system
- AOI solder joint inspection system
- Data logging system with traceability of all process parameters
- Barcode reader

### Facilities:

#### System Footprint:

- 508.2S/PD: 2500 x 1700 mm (98.4 x 66.9 in.)
- 508.2PD 2seg: 3300 x 1700 mm (129.9 x 66.9 in.)

#### System Weight:

- 1200 kg (2640 lbs.)

#### Electrical:

- 508.2S: 400V/480VAC, 50-60 Hz, 3-phase, 23 kW, 33 A without preheating, or 29 kW, 42 A with preheating

- 508.2PD: 400V/480VAC, 50-60 Hz, 3-phase, 26 kW, 38 A without preheating, or 32 kW, 46A with preheating

- 508.2PD 2seg: 400V/480VAC, 50-60 Hz, 3-phase, 29 kW, 42 A without preheating, or 35 kW, 50 A with preheating

#### Compressed Air:

- 6 bar (90 psi) min., 8 bar (110 psi) max.

#### Nitrogen:

- 99.99% (4.0) pure, 4-6 bar (60-90 psi), 1.3 m<sup>3</sup>/hour (single pot), 2.6 m<sup>3</sup>/hour (dual pot)

#### Ventilation:

- 150 m<sup>3</sup>/hour (90 SCFM), one 100 mm (4.0 in.) dia. duct

# Integra<sup>®</sup> 508.3 & 508.4

## Selective Soldering Systems Combining Scalability and Throughput

### Product Highlights

- Three or four-zone operation with concurrent fluxing, preheating and soldering for increased throughput with maximum preheat capabilities
- Choice of single or dual drop-jet fluxers and solder pots for either simultaneous parallel or independent double processing modes
- Parallel processing significantly increases machine throughput while double processing broadens soldering flexibility
- Full titanium solder pots compatible with all solder alloys plus easy tool-free maintenance
- Software control between different solder alloys without changing solder pots



### Features and Options

#### PCB Handling:

- PCBs up to 508 x 508 mm (20.0 x 20.0 in.)
- In-line SMEMA chain conveyor
- Automatic conveyor width adjustment

#### Fluxing:

- Maintenance-free MicroDrop drop-jet
- Flux level sensing system

#### Preheating:

- Full surface bottom-side infrared preheating
- Scalable infrared preheating from 1.5-12.0 kW or 1.5-6.0 kW

#### Soldering:

- Titanium solder pot and pump assembly
- Quick change magnetically coupled solder nozzles
- Automatic solder level monitoring system
- Automatic wave height monitoring system
- Customer-friendly process viewing camera

#### PhotoScan Software:

- Easy “point-and-click” programming with TFT monitor
- Remote machine control and remote maintenance
- Network and FIS capability

#### Configurations:

- 508.3S or 504.4S: Single MicroDrop fluxer and single solder pot
- 508.3PD or 508.4PD: Dual MicroDrop fluxers and dual solder pots for parallel or double soldering modes
- 508.3PD 2seg or 508.4PD 2seg: 2seg configuration with dual fluxers and solder pots can solder two singulated boards in a parallel mode in-line with two segmented conveyors

#### Available Options:

- In-process, closed-loop flux verification system for drop-jet control
- Full surface topside infrared preheating
- Closed-loop pyrometer temperature control
- Board warpage sensing system
- Dual process viewing camera and second monitor
- Automatic solder wire feeding system
- Automatic solder nozzle cleaning system
- AOI solder joint inspection system
- Data logging system with traceability of all process parameters
- Barcode reader

#### Facilities:

##### System Footprint:

- 508.3S/PD and 508.4S/PD:  
3200 x 1700 mm (126.0 x 66.9 in.) or  
4600 x 1700 mm (181.1 x 66.9 in.)

- 508.3PD 2seg and 508.4PD 2seg:  
4300 x 1700 mm (169.3 x 66.9 in.) or  
6000 x 1700 mm (236.2 x 66.9 in.)

#### System Weight:

- 1200 kg (2640 lbs.)

#### Electrical:

- 508.3S/508.4S: 400/480VAC, 50-60 Hz, 3-phase, 23 kW, 33 A without preheating, or 29-34 kW, 39-42 A with preheating

- 508.3PD/508.4PD: 400/480VAC, 50-60 Hz, three phase, 26 kW, 38 A without preheating, or 32 kW, 46 A with preheating

- 508.3PD 2seg/508PD 2seg: 400/480VAC, 50-60 Hz, three phase, 29 kW, 42 A without preheating, or 35-36 kW, 50 A with preheating

#### Compressed Air:

- 6 bar (90 psi) min., 8 bar (110 psi) max.

#### Nitrogen:

- 99.99% (4.0) pure, 4-6 bar (60-90 psi), 1.3 m<sup>3</sup>/hour (single pot), 2.6 m<sup>3</sup>/hour (dual pot)

#### Ventilation:

- 300-450 m<sup>3</sup>/hour (180-270 SCFM), two-three 100 mm (4.0 in.) dia. ducts

# Integra<sup>®</sup> 508.5

## Selective Soldering System for High-Volume, High-Performance Soldering

### Product Highlights

- Five-zone in-line operation with simultaneous fluxing, preheating and up to three individual soldering stations for maximum throughput
- Variants available with two or three soldering stations for high-volume, high-performance selective soldering
- Choice of single or dual drop-jet fluxers and solder pots for either simultaneous parallel or independent double processing modes
- Parallel processing significantly increases machine throughput while double processing broadens soldering flexibility
- Full titanium solder pots compatible with all solder alloys plus easy tool-free maintenance



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### Features and Options

#### PCB Handling:

- PCBs up to 508 x 508 mm (20.0 x 20.0 in.)
- In-line SMEMA chain conveyor
- Automatic conveyor width adjustment

#### Fluxing:

- Maintenance-free MicroDrop drop-jet
- Flux level sensing system

#### Preheating:

- Full surface bottom-side infrared preheating
- Scalable infrared preheating from 1.5-9.0 kW

#### Soldering:

- Titanium solder pot and pump assembly
- Quick change magnetically coupled solder nozzles
- Automatic solder level monitoring system
- Automatic wave height monitoring system
- Customer-friendly process viewing camera

#### PhotoScan Software:

- Easy “point-and-click” programming with TFT monitor
- Remote machine control and remote maintenance
- Network and FIS capability

#### Configurations:

- 508.5S: Single MicroDrop fluxer and single solder pot
- 508.5PD: Dual MicroDrop fluxers and dual solder pots for parallel or double soldering modes
- 508.5PD 2seg: 2seg configuration with dual fluxers and solder pots can solder two singulated boards in a parallel mode in-line with two segmented conveyors

#### Available Options:

- In-process, closed-loop flux verification system for drop-jet control
- Full surface topside infrared preheating
- Closed-loop pyrometer temperature control
- Board warpage sensing system
- Dual process viewing camera and second monitor
- Automatic solder wire feeding system
- Automatic solder nozzle cleaning system
- AOI solder joint inspection system
- Data logging system with traceability of all process parameters
- Barcode reader

#### Facilities:

##### System Footprint:

- 508.5S/PD: 6000 x 1700 mm (226.3 x 66.9 in.)
- 508.5PD 2seg: 7700 x 1700 mm (303.1 x 66.9 in.)

##### System Weight:

- 3000 kg (6600 lbs.)

##### Electrical:

- 508.5S: 400V/480VAC, 50-60 Hz, 3-phase, 23 kW, 33 A without preheating, or 29 kW, 42 A with preheating

- 508.5PD: 400V/480VAC, 50-60 Hz, 3-phase, 26 kW, 38 A without preheating, or 32 kW, 46 A with preheating

- 508.5PD 2seg: 400V/480VAC, 50-60 Hz, 3-phase, 26 kW, 38 A without preheating, or 32 kW, 46 A with preheating

##### Compressed Air:

- 6 bar (90 psi) min., 8 bar (110 psi) max.

##### Nitrogen:

- 99.99% (4.0) pure, 4-6 bar (60-90 psi), 1.3 m<sup>3</sup>/hour (single pot), 2.6 m<sup>3</sup>/hour (dual pot)

##### Ventilation:

- 450 m<sup>3</sup>/hour (270 SCFM), three 100 mm (4.0 in.) dia. ducts



● Direct Support

● Distributor Support

# Global Support Network

**A**s part of the Nordson Corporation (NASDAQ: NDSN) Advanced Technology Systems segment, Nordson SELECT is dedicated to enabling the success of its customers throughout the global electronics manufacturing industry. With a reputation for innovation, comprehensive process solutions from Nordson SELECT ensure a maximum return on investment and of cost of ownership. From initial process development through full-scale production, you are supported by our experienced worldwide engineering, applications development and technical service network.

## Worldwide Support Locations

Liberty Lake, WA, USA  
Hagenbach, Germany  
Guadalajara, Mexico  
Deurne, Netherlands  
Juarez, Mexico  
Chennai, India  
Shanghai, China  
Dongguan, China  
Penang, Malaysia  
Tokyo, Japan  
Taipei, Taiwan  
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