

# Integra® Series: Model 508.4

Selective Soldering System in 508.4S, 508.4PD or 508.4 2seg Configurations



The Integra® 508.4 is a multi-station selective soldering system designed for high-volume applications with maximum throughput. The Integra® 508.4 has many unique features, including concurrent fluxing, preheating and soldering for faster processing time and reduced soldering cycle.

**Versatility.** Customers can choose between three different variants of the Integra® 508.4 to meet a broad range of selective soldering requirements. The Integra® 508.4S configuration with single fluxer and solder pot provides single board processing.

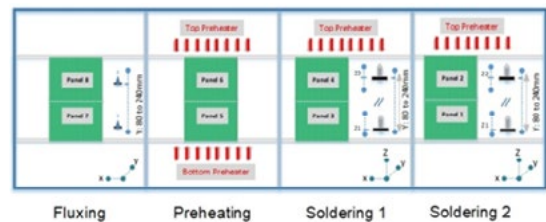


**Integra® 508.4S configuration**

The Integra® 508.4PD configuration with dual drop-jet fluxers and dual solder pots allows for using two solder nozzles in the same soldering station or processing two boards in a panel simultaneously. The Integra® 508.4PD is capable of processing up to 8 boards at one time. Parallel processing enables fluxing and soldering of two printed circuit boards at the same time doubling machine productivity. The Integra® 508.4PD 2seg configuration with dual fluxers and solder pots can solder two singulated boards in a parallel mode in-line with two

## Features and Benefits

- **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**
- **2segment configuration can solder two boards in-line with two segmented conveyors without boards being panelized or requiring tooling**
- **Full titanium solder pots compatible with all solder alloys plus easy tool-free maintenance**
- **Software control between different solder alloys without changing solder pots**



**Integra® 508.4PD configuration**

segmented conveyors. This allows sequential soldering of two printed circuit boards at the same time without the need for the boards to be in a panel, to be palletized or to require tooling.

**Value.** With a reputation for innovation, comprehensive process solutions from Nordson SELECT ensure a maximum return on investment and low 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.

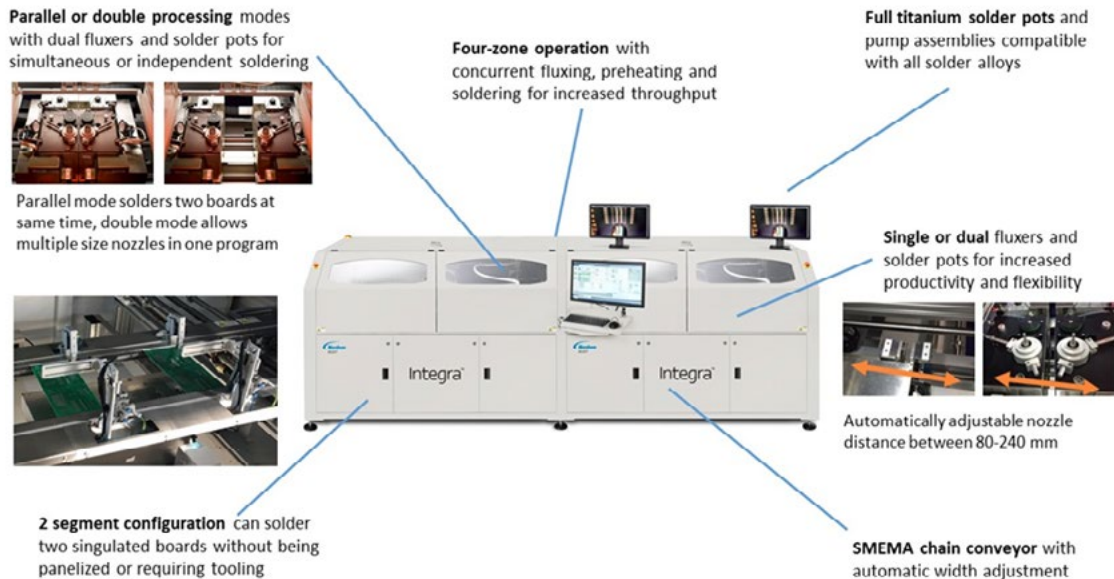
# Integra® Series: Model 508.4

Selective Soldering System in 508.4S, 508.4PD or 508.4PD 2seg Configurations

## Integra® 508.4 Features

The Integra® 508.4 is a fully configured SMEMA compatible selective soldering platform and is a reliable and cost-effective solution for many demanding through-hole and SMT mixed-technology soldering applications including:

- **Double-sided TH/SMT assemblies**
- **TH selective and mini-wave soldering**
- **Multiple solder alloy soldering without changing solder pot**



### Standard Features

Four-zone operation with independent zones for concurrent fluxing and preheating plus two selective soldering stations (508.4S)

SMEMA chain conveyor with positive PCB location Automatic conveyor width adjustment

MicroDrop drop-jet fluxer

Flux level sensing system

Full surface bottom-side infrared preheating

All titanium solder pot and pump assembly

Quick change magnetically coupled solder nozzle

Automatic solder pot level monitoring

Automatic wave height monitoring

Heated nitrogen inerting system

Process viewing camera

PhotoScan editor and machine control software

- Easy "point-and-click" programming
- Remote machine control
- Remote machine maintenance
- Network and FIS capability

TFT monitor

### Additional Configurations

Dual MicroDrop drop-jet fluxers and dual solder pot and pump assemblies for parallel or double soldering modes (508.4PD)

Dual MicroDrop drop-jet fluxers and dual solder pots for parallel or double soldering modes or sequential soldering of two boards in-line (508.4PD 2seg)

### Optional Features

Fully-automated fiducial alignment and board mapping  
In-process, closed-loop flux verification system for drop-jet control

Full surface topside infrared preheating

Closed-loop pyrometer control

Board warpage sensing system

Dual process viewing camera and second monitor

Automatic solder wire feeding system

Automatic solder level sensing system

Wave height control sensing system

Automatic solder nozzle cleaning system

AOI solder joint inspection system

Data logging system with traceability of all process parameters, barcode reader

## Specifications

### Motion System

Z accuracy	±100 µm (0.004 in.)
Z repeatability <sup>(1)</sup> :	±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 <sup>(1)</sup> :	±50 µm (0.002 in.), 3 sigma
X-Y velocity:	0.2 m/s peak (8 in./s)

### Computer

PC with Windows® operating system

### Software

PhotoScan “point-and-click” programming editor and machine control software

### Solder Pot Capacity and Weight

Capacity <sup>(2)</sup> :	Approx. 12.0 kg (26.4 lbs.)
Total weight of tin-lead solder together with solder pot and pump assembly <sup>(2)</sup> :	Approx. 22.4 kg (49.2 lbs.)
Total weight of lead-free solder together with solder pot and pump assembly <sup>(2)</sup> :	Approx. 19.7 kg (43.3 lbs.)
Max. temperature:	320°C

### Solderable Area (X-Y)

Single, parallel or double operating mode<sup>(3,4)</sup>:  
 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 9.0 kW to 18.0 kW

### Board Handling Capability

508.4S and 508.4PD <sup>(3,4)</sup> :	
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.)
508.4PD 2seg <sup>(3,4)</sup> :	
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 <sup>(4)</sup> :	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 <sup>(5)</sup> :	3 mm (0.12 in.), edge conveyor including on-rail clamps
Transport height <sup>(6)</sup> :	Conforms to SMEMA standard for conveyor height; height adjustable from 940-965 mm (37.0 - 38.0 in.) from floor to bottom of board
Load capacity <sup>(7)</sup> :	7.5 kg (16.5 lbs.)
Operation modes:	Automatic (SMEMA), manual or pass-through

### Facilities Requirements

Electrical specs are configuration pending and may vary

System footprint:

508.4S/PD	4750 x 1700 mm (187.0 x 66.9 in.)
508.4PD 2Seg	6200 x 1700 mm (244.1 x 66.9 in.)
Compressed air:	6 bar (90 psi) min., 8 bar (110 psi) max.

Power (mains)<sup>(8)</sup>:

508.4S	Power supply accommodates 400V/480VAC, 50-60 Hz, 3-phase, 23 kW, 33 A without preheating, or 34 kW, 39 A with preheating
508.4PD	400V/480VAC, 50-60 Hz, 3-phase, 26 kW, 38 A without preheating, or 32 kW, 46 A with preheating
508.4PD 2seg	400V/480VAC, 50-60 Hz, 3-phase, 29 kW, 42 A without preheating, or 35 kW, 50 A with preheating

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

System weight<sup>(9,10)</sup>:

2000 kg (4400 lbs.)

- (1) Repeatability is measured at full rated system speed.
- (2) Solder capacity and total weight of solder pot and pump assembly varies depending on solder alloy.
- (3) Board size is reduced when operating in parallel or double modes
- (4) Contact 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 conveyor at any one time. Contact factory regarding requirements for greater load capacity.
- (8) Electrical power varies depending on configuration.
- (9) System weight varies depending on configuration.
- (10) Configuration dependent. Other configurations may be available. Contact Nordson SELECT.

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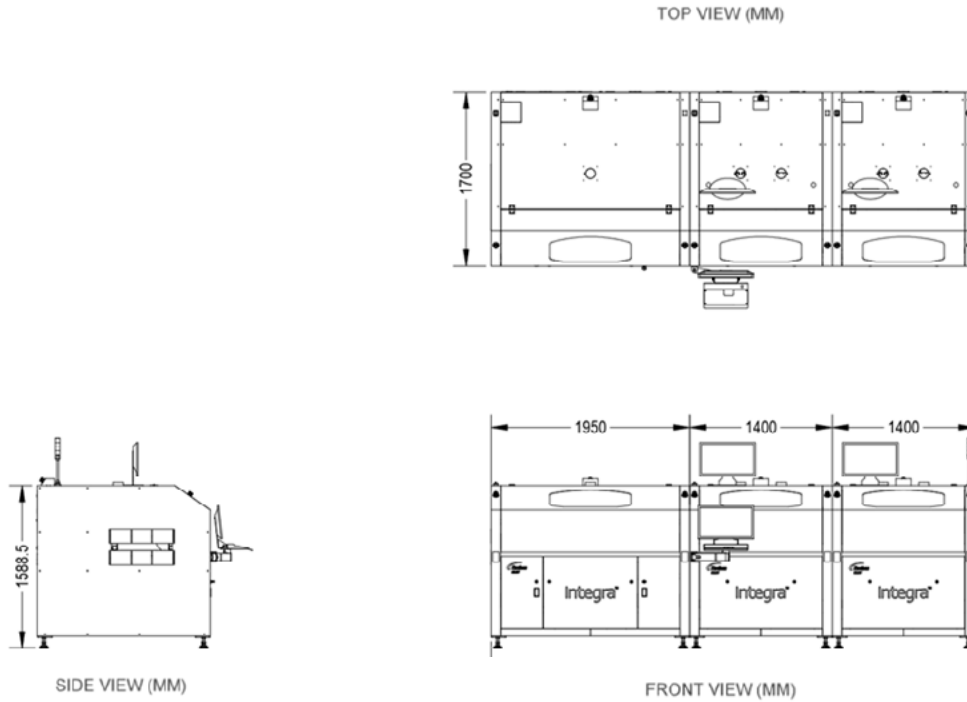
### Standards Compliance

SMEMA, CE

**Additional options may be available: contact Nordson SELECT for further information.**

# Integra® Series: Model 508.4S and PD

Dimensions are in Millimeters



For more information  
speak with your local sales  
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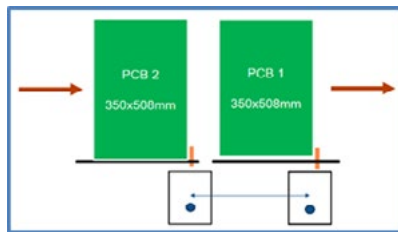
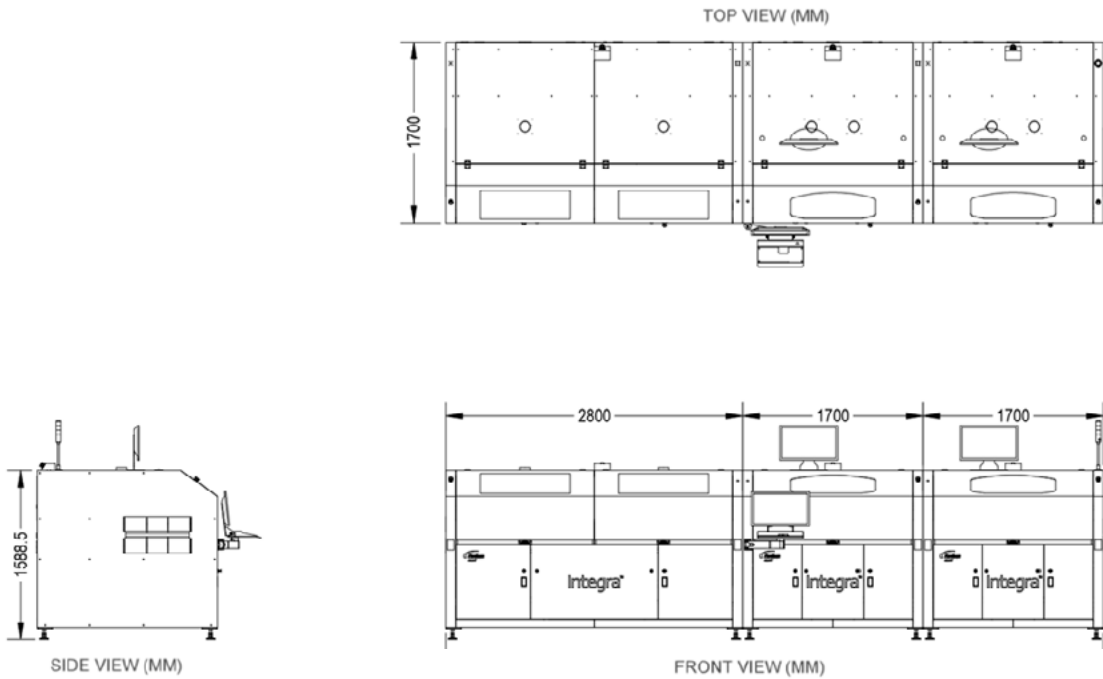
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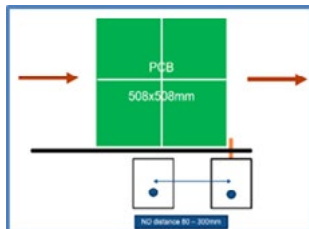
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# Cerno® Series: Model 508.4PD 2seg

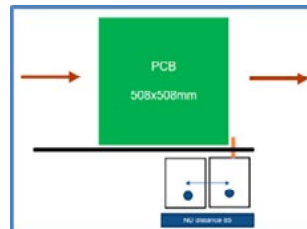
Dimensions are in Millimeters



**Integra® 508.4PD 2seg soldering two singulated boards in parallel mode**



**Integra® 508.4PD 2seg soldering one panelized board with dual nozzles**



**Integra® 508.4PD 2seg soldering one board with small and large nozzles**

For more information speak with your local sales rep or contact your regional office.

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

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