

Integra® Series: Model 508.5

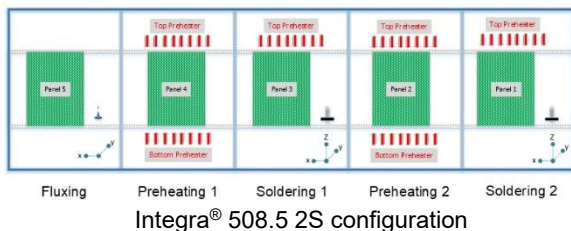
Selective Soldering System in 508.5S, 508.5PD, or 508.5PD 2Seg Configurations

Features and Benefits

- 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
- 2segment configuration can solder two singulated boards in-line with the conveyor without being panelized or requiring tooling

The Integra® 508.5 is a multi-station selective soldering system designed for high-volume applications with maximum throughput. The Integra® 508.5 has many unique features, including concurrent fluxing, preheating and soldering for faster processing time and reduced soldering cycle.

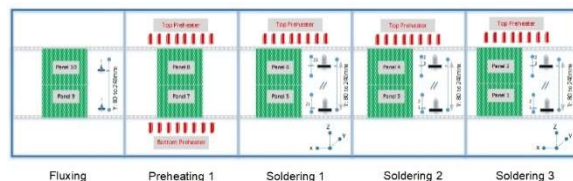
Versatility. Customers can choose between three different variants of the Integra® 508.5 to meet a broad range of selective soldering requirements. The Integra® 508.5S configuration with single fluxer and solder pot provides single board processing.



The Integra® 508.5PD 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® 508.5PD 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® 508.5PD 2seg configuration with dual fluxers and solder pots can solder two singulated boards in a parallel mode in-line with the conveyor. 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® 508.5 Features

The Integra® 508.5 is a multi-station SMEMA compatible selective soldering platform designed for demanding high-volume 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 pots

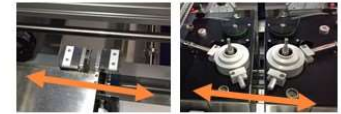
Parallel or double processing modes with dual fluxers and solder pots for simultaneous or independent soldering



Parallel mode solders two boards at same time, double mode allows multiple size nozzles in one program

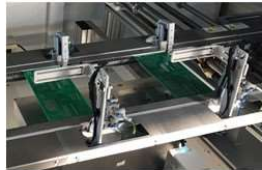
Multiple soldering stations for high-volume applications with maximum throughput

Single or dual fluxers and solder pots for increased productivity and flexibility



Automatically adjustable nozzle distance between 80-240 mm

Five-zone in-line operation with concurrent fluxing, preheating and soldering for increased throughput



2 segment configuration can solder two singulated boards without being panelized or requiring tooling

Full titanium solder pots and pump assemblies compatible with all solder alloys

Standard Features

- Five-zone operation with independent zone for concurrent fluxing and preheating plus either 2 (508.5 2S) or 3 selective soldering stations (508.5 3S)
- 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 (508.5PD)
- Dual MicroDrop drop-jet fluxers and dual solder pots for parallel or double soldering modes or sequential soldering of two boards in-line (508.5PD 2seg)

Optional Features

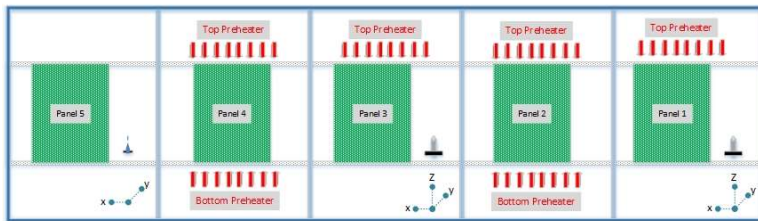
- In-process, closed-loop flux verification system for drop-jet control
- Full surface topside infrared preheating
- Closed-loop pyrometer control
- Board warpage sensing system
- Dual process viewing camera and second monitor
- Automatic solder wire feeding system
- Automatic solder level sensing system
- 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

Integra® 508.5 Configurations

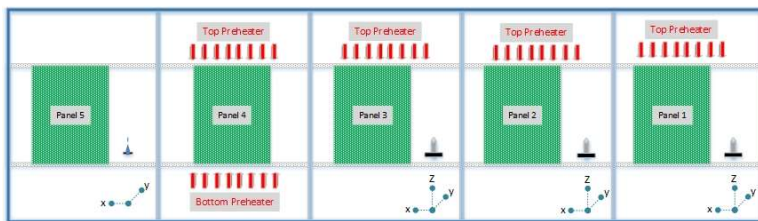
The Integra® 508.5 multi-station selective soldering system is available in either two or three soldering station variants designed to meet a wide range of demanding high-volume, high-performance soldering applications. Both two and three soldering station variants have top and bottom preheating directly after fluxing and can be equipped for either single, parallel or double processing, or sequential soldering of two boards in-line.

Two soldering station variants have top preheating above each soldering station and a second top and bottom preheating station for soldering of high-thermal mass printed circuit board assemblies. Three soldering station variants have top preheating above each soldering station and are designed for maximum throughput.

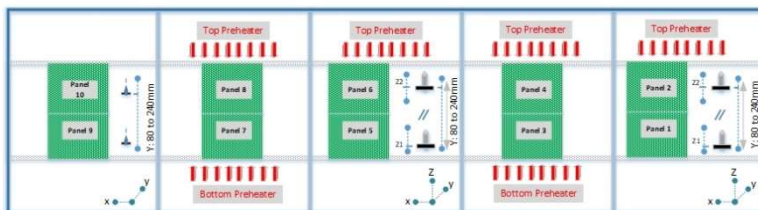
Integra® 508.5 Available Machine Configurations



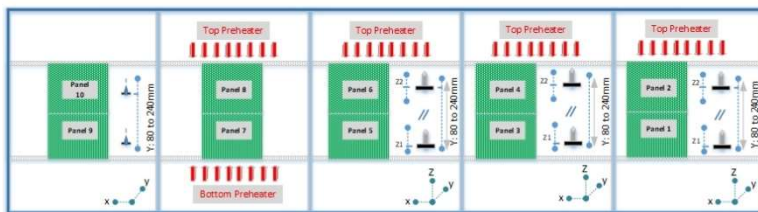
Integra® 508.5 2S – two soldering stations, single



Integra® 508.5 3S – three soldering stations, single



Integra® 508.5PD 2S – two soldering stations, parallel or double



Integra® 508.5PD 3Seg – three soldering stations, parallel or double

Advantages of the Integra® 508.5

- Modular design with high flexibility
- Concurrent fluxing, preheating and soldering
- Single, parallel or double fluxing and soldering
- Dual solder pots allow use of different solder alloys
- High solder joint quality with complete process traceability
- Parallel processing of multi-up panels

When used in the parallel processing mode, boards need to be panelized and individual boards need to be spaced at a distance between 80-240 mm. A panel with any multiple of two boards aligned in the direction of the dual nozzles will derive the full benefit of fluxing and soldering two boards at the same time, including 2-up, 4-up, 6-up or 8-up panels.

With an odd number of boards within a multi-up panel a partial benefit is obtained. For example, a 3-up panel has the full benefit of fluxing and soldering two boards at the same time and single fluxing and soldering the third board. A 5-up panel has the full benefit of parallel fluxing and soldering four boards and single fluxing and soldering the fifth board.

Specifications: Integra® 508.5

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

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 together with solder pot and pump assembly ⁽²⁾: Approx. 22.4 kg (49.2 lbs.)
Total weight of lead-free solder together with 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 9.0 kW to 24.0 kW

Board Handling Capability

508.5S and 508.5PD ^(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.)
508.5PD 2seg ^(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 floor to bottom of board
Load capacity ⁽⁷⁾: 7.5 kg (16.5 lbs.)
Operation modes: Automatic (SMEMA), manual or pass-through

Facilities Requirements

System footprint:
508.5S/PD 6000 x 1700 mm (236.2 x 66.9 in.)
508.5PD 2seg 7700 x 1700 mm (303.1 x 66.9 in.)
Compressed air: 6 bar min., 8 bar max.
Power (mains) ⁽⁸⁾: Power supply accommodates
508.5S 400V/480VAC, 50-60 Hz, 3-phase, 23 KW, 33A without preheating, or 29 KW, 42A with preheating
508.5PD 400V/480VAC, 50-60 Hz, 3-phase, 26 KW, 38A without preheating, or 32 KW, 46 with preheating
508.5PD 2Seg 400V/480VAC, 50-60 Hz, 3-phase, 26 KW, 38A without preheating, or 32 KW, 46 with preheating
Nitrogen: 99.99% (4.0) pure, 4-6 bar, 1.3 m³/hour (each single pot station), 2.6 m³/hour (each dual pot station)
Ventilation: Rear 450 m³/hour (270 SCFM), three 100 mm (4.0 in.) dia. ducts
System weight ^(9,10): 3000 kg (6600 lbs.)

- (1) Repeatability is measured at full rated system speed.
- (2) Solder capacity and total weight of each 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.

Windows is a registered trademark of Microsoft Corporation in the United States and other countries.

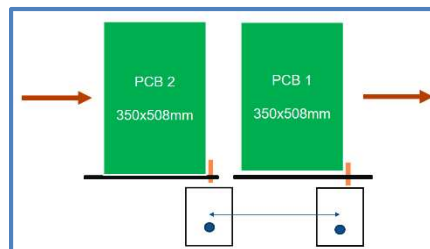
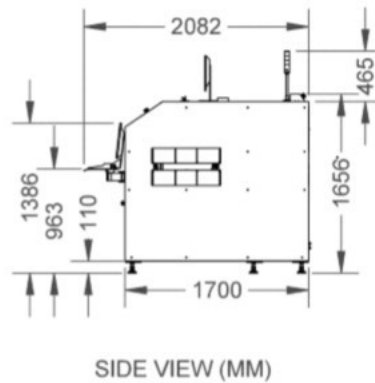
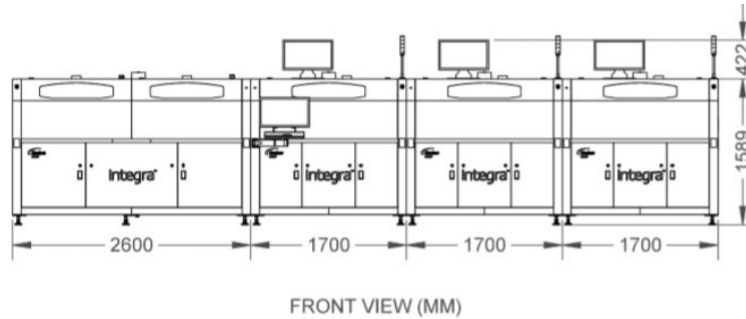
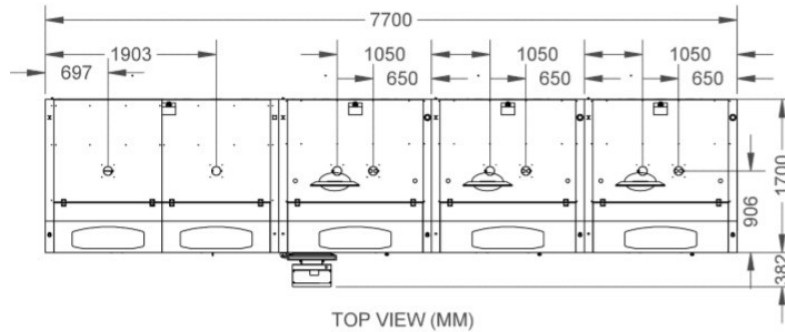
Standards Compliance

SMEMA, CE

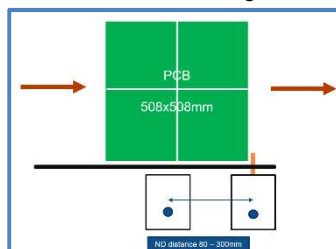
Additional options may be available: contact Nordson SELECT for further information.



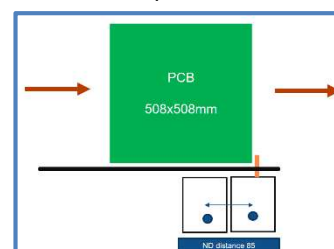
Integra® 508.5PD 2seg



Integra® 508.5PD 2seg soldering two separate boards in sequential mode



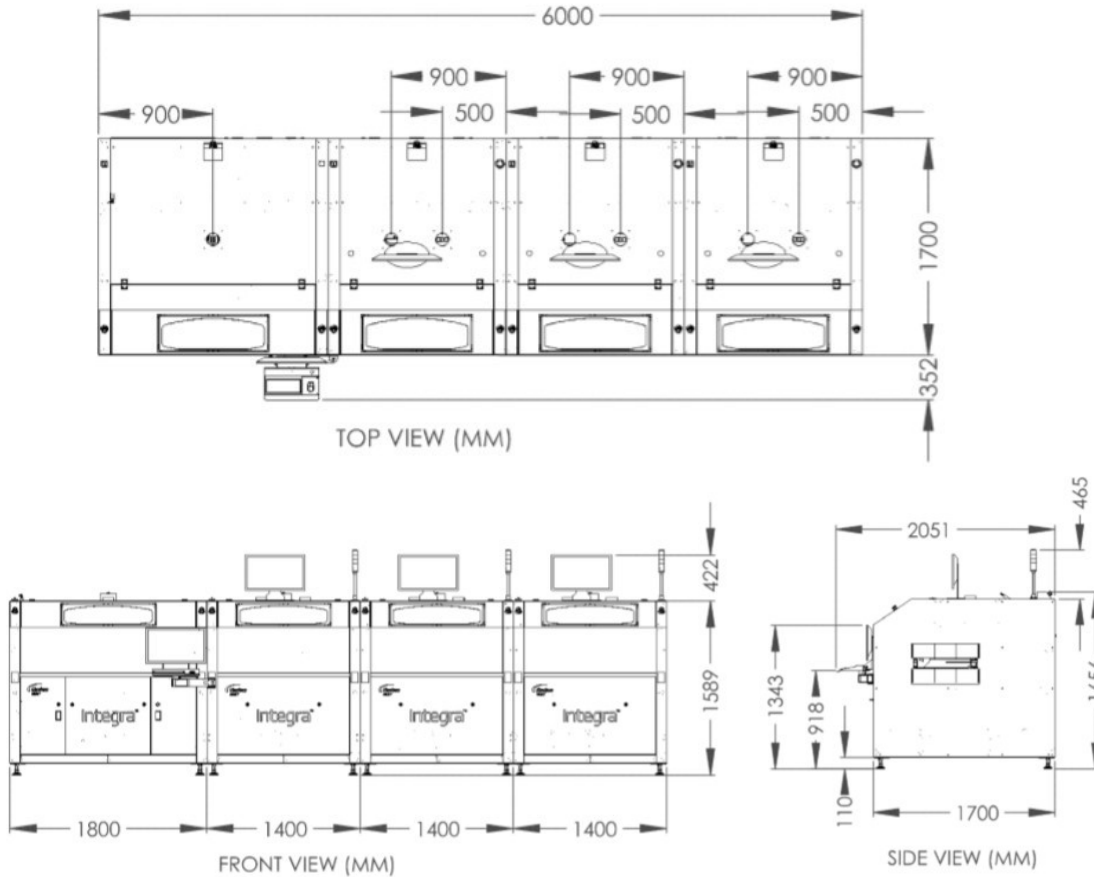
Integra® 508.5PD 2seg soldering one panelized board with dual nozzles



Integra® 508.5PD 2seg soldering one board with small and large nozzles

Integra® 508.5S and PD

Dimensions are in millimeters



Nordson SELECT GmbH
+49 (0) 7273 949466 0 Phone
sales.eu@nordsonselect.com Email
Perlückerstraße 11
76767 Hagenbach
Germany
www.nordsonselect.com

Published 2019-06-21

**For more information, speak with
your local representative or
contact your regional office.**

Nordsonselect.com

North America

Headquarters

Liberty Lake, WA, USA

+1.509.924.4898

sales.usa@nordsonselect.com

China

Email:

info.cn@nordsonselect.com

Shanghai

+86.21.3866.9166

Beijing

+86.10.8453.6388

Guangzhou

+86.20.8554.9996

Europe

Maastricht, Netherlands

+31.43.352.4466

info.eu@nordsonselect.com

Japan

Tokyo

+81.3.3599.5920

Info.japan@nordsonselect.com

Korea

Seoul

+82.31.765.8337

info.kr@nordsonselect.com

India

Chennai

+91.44.4353.9024

info.in@nordsonselect.com

S.E. Asia/Australia

Singapore

+65.6796.9514

info.sg@nordsonselect.com

Taiwan

+886.229.02.1860

info.tw@nordsonselect.com

