Novo™ Series: Model 460

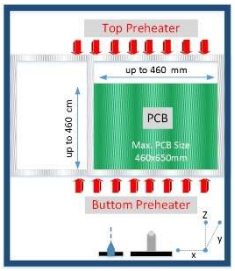
Selective Soldering with combined Flexibility and Modularity

Features and Benefits

- 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

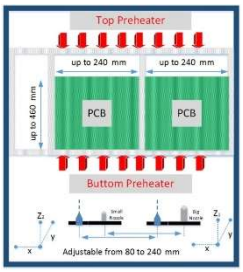
Designed for a wide variety of selective soldering applications, the Novo™ 460 offers exceptional value with superior process capabilities and is ideally suited for cell manufacturing. The Novo™ 460 has many unique features, including drop-jet fluxing, IR preheating and selective soldering with fast and easy programming and machine setup.

Versatility. With its flexible configuration, the Novo™ 460 is a versatile selective soldering platform and can be equipped for either single, parallel or double processing. Use of a single drop-jet fluxer and solder pot allows soldering of printed circuit boards as large as 460 x 460 mm (18.1 x 18.1 in.).



Novo™ 460S flux, preheat and soldering configuration

When configured with dual drop-jet fluxers and dual solder pots, the Novo™ 460 can be used in two different modes and is capable of processing up to 2 boards at one time. The parallel processing mode enables fluxing and soldering of two printed circuit boards at the same time doubling machine productivity.



Novo™ 460PD flux, preheat and soldering configuration

The double processing mode allows soldering with multiple size nozzles within the same program enhancing flexibility and increasing productivity. A single drop-jet fluxer and dual solder pots can be used in the double processing mode and is ideally suited for the use of two different solder alloys without requiring physical changing of solder pots.

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.

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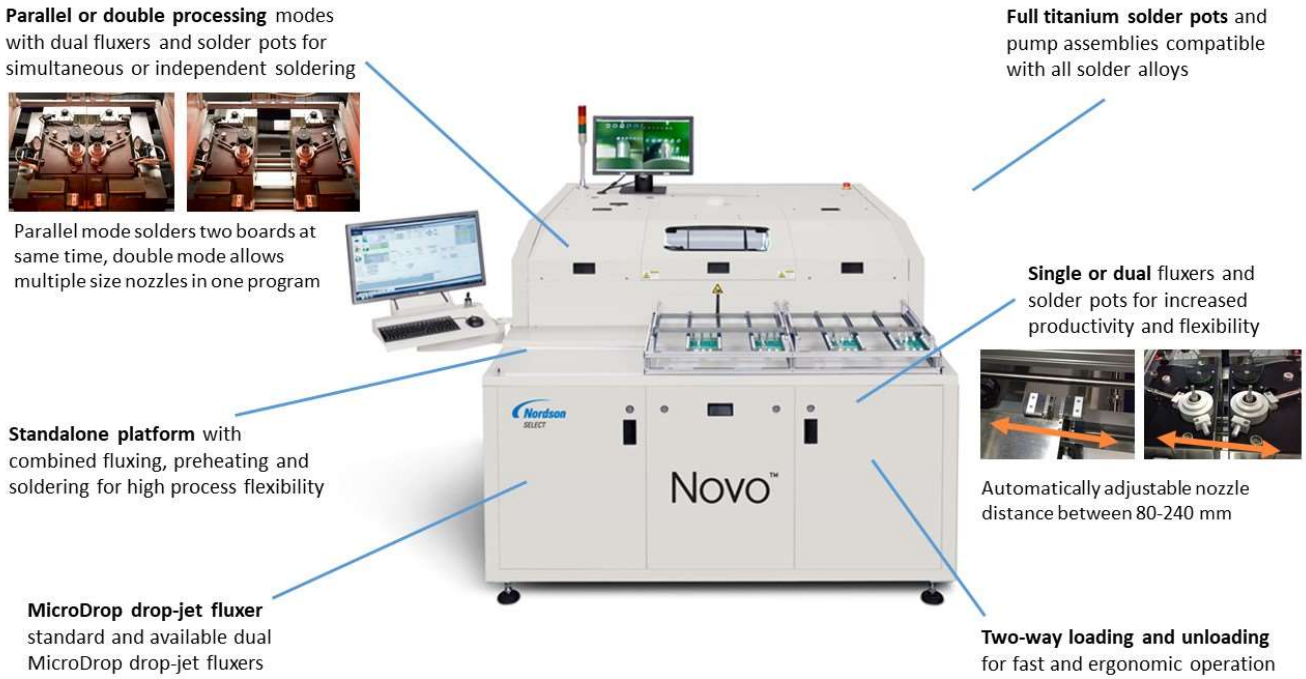
Novo™ 460 Features

The Novo™ 460 is a fully configured 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 pots



Standard Features

Standalone platform with combined fluxing, preheating and single selective soldering station (460S)
Two-way loading and unloading system for PCB frames
Solder frame for printed circuit boards
MicroDrop drop-jet fluxer
Nitrogen preheating
All titanium solder pot and pump assembly
Quick change magnetically coupled solder nozzle
Automatic solder pot level monitoring
Automatic wave height monitoring
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 (460PD)

Optional Features

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 control
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
Data logging system with traceability of all process parameters
Barcode reader

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Specifications: Novo™ 460

Motion System

Z accuracy	±50 µm (0.002 in.)
Z repeatability (1):	±50 µm (0.002 in.), 3 sigma
Z velocity:	0.05 m/s peak (2 in./s)
X-Y accuracy	±50 µm (0.002 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.)

Solderable Area (X-Y)

Single, parallel or double operating mode (3, 4):
Max. 460 x 460 mm (18.1 x 18.1 in.)

Board Handling Capability

Max. board size: 460 x 46 mm (18.1 x 18.1 in.)

Board Clearance

Max. overboard clearance: 120 mm (4.7 in.)
Max. underboard clearance: 40 mm (1.5 in.)

Facilities Requirements

System footprint:	1700 x 2104 mm (66.9 x 82.8 in.)
Compressed air:	6 bar min., 8 bar max.
Power (mains) (5):	Power supply accommodates 3 phase, 400VAC, 50-60 Hz, 2-12 kW, 9-20 A
Nitrogen:	99.99% (4.0) pure, 4-6 bar, 1.3 m³/hour (single pot), 2.6 m³/hour (dual pot)
Ventilation:	Rear 150 m³/hour, 100 mm (4.0 in.) dia. duct
System weight (6, 7):	900 kg (1985 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) Electrical power varies depending on configuration.
(6) System weight varies depending on configuration.
(7) Configuration dependent. Other configurations may be available. Contact Nordson SELECT.

Standards Compliance

SMEMA, CE

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

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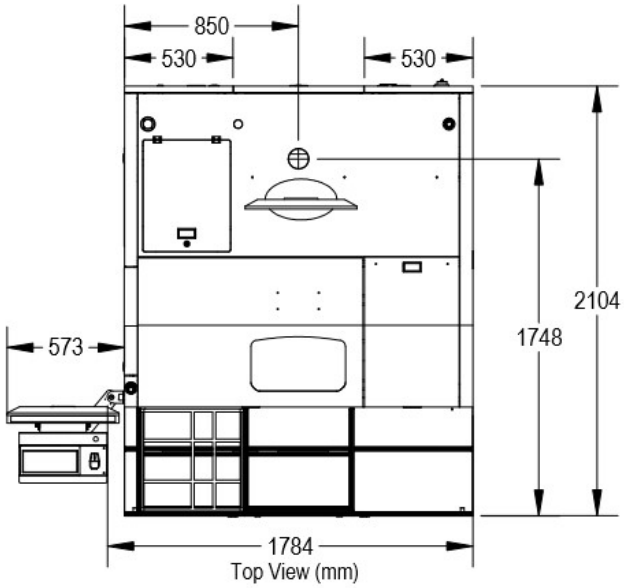
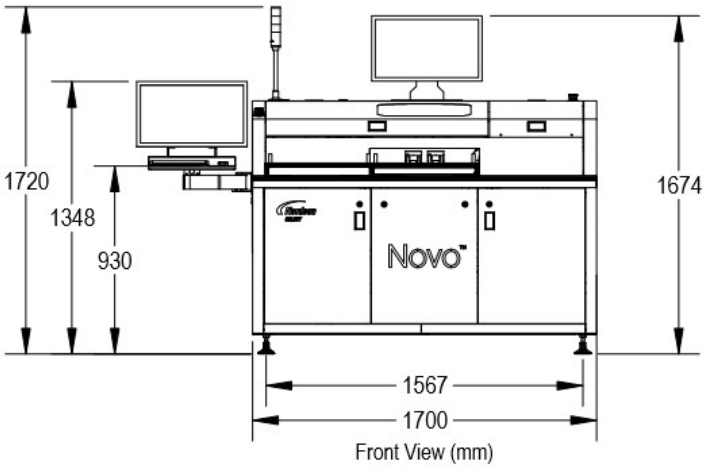
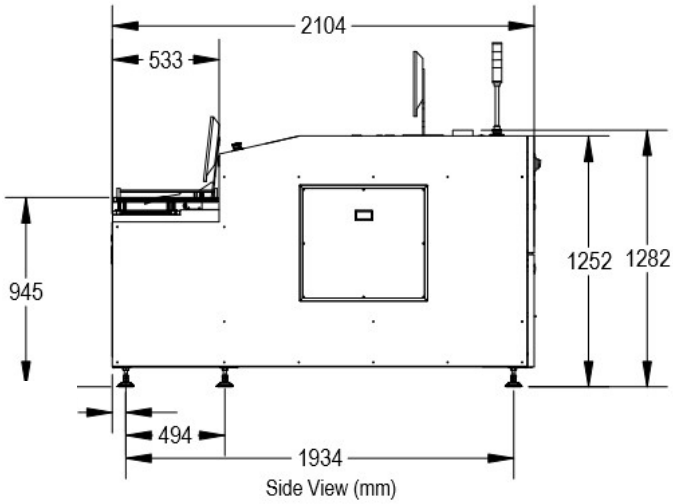
Dimensions are in millimeters



Top View (mm)



Front View (mm)



Side View (mm)

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