THE NEW GENERATION 
of Selective Soldering Machines
WORLDWIDE NETWORK. INNOVATIVE PRODUCTS. 
PERFECT SERVICE. GERMAN QUALITY.

Selective Soldering 
from InterSelect Germany

A WIDE RANGE FROM A SMALL STAND-ALONE UNIT TO MODULAR IN-LINE MACHINES.

IS-B-335/460/650 
STAND-ALONE UNIT

IS-I-460/700 
IN-LINE

SIMPLE, FLEXIBLE AND COST-SAVING AT 
OPTIMUM PROCESS RELIABILITY.
**IS-B-335/460/650 Selective Stand-alone Soldering Systems**

The InterSelect 335, 460 und 650 stand-alone selective soldering systems are designed to meet the needs of lean manufacturing in combination with flexibility and throughput at minimal cost.

**IS-B-335S, IS-B-460S/D/P and IS-B-650S/P selective soldering systems** are completely automated „stand-alone systems“ with a unique manual hand loaded sliding system, able to handle boards up to 650x650mm (25.6”x25.6”).

The most economic machine, the IS-B-335 needs just 1 sqm of space.

All soldering units are equipped with our inert hot nitrogen atmosphere for better soldering results and to assist the prevention of oxidation. Each solder pot comes with this inert atmosphere feature. As well as all machines come with a micro jet fluxer system for clean soldering results and very low flux consumption. All machines can be equipped with a unique large top and bottom side preheating system, controlled by a pyrometer.

All process parameters are ready for data transfer.

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**The best machine in its class, with unique features**

<table>
<thead>
<tr>
<th>Unique Features</th>
<th>IS-B-335: 335 x 335 mm</th>
<th>IS-B-460: 460 x 460 mm</th>
<th>IS-B-650: 650 x 650 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smallest footprints in its class</td>
<td>IS-B-335: just 1 m²</td>
<td>IS-B-460: just 1,45 m²</td>
<td>IS-B-650: just 2,25 m²</td>
</tr>
</tbody>
</table>

| Large adjustable, energy-efficient top and bottom preheaters                  | IS-B-335: adjustable 1,5 to 4,5 kW per side | IS-B-460: adjustable 1,5 to 6 kW per side | IS-B-650: adjustable 1,5 to 7,5 kW per side |
| (heater size matches PCB size)                                                |                                       |                                       |

**Optional**

- Automatic laser wave height control an correction
- Laser pyrometer control with profiling
- Multi wave for extremely fast cycle times
- Create soldering program while the machine is running with the optional IS Photoscan offline programming software

**Standard Features**

- Integrated PC with Windows 7 features the user-friendly software
- Network-compatible remote maintenance
- Mini wave for solder joints with close components
- 7° and 0° axis system enable use of wetable and jet nozzles

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**This stand-alone selective concept covers six basic machines:**

**IS-B-335S**
- 1 x Solder pot
- 1 x Micro Drop Fluxer

**IS-B-460D**
- 2 x Solder pots for different alloys
- 1 x Micro Drop Fluxer

**IS-B-460S**
- 1 x Solder pot
- 1 x Micro Drop Fluxer

**IS-B-460P**
- 2 x Solder pots for double speed
- 2 x Micro Drop Fluxer for double speed
- 50% cycle time

**IS-B-650S**
- 1 x Solder pot
- 1 x Micro Drop Fluxer

**IS-B-650P**
- 2 x Solder pots for double speed
- 2 x Micro Drop Fluxer for double speed
- 50% cycle time
IS-I-460S and IS-I-700S modular In-Line Selective Soldering Systems

The InterSelect In-Line and modular selective soldering systems are designed to meet the needs of lean manufacturing in combination with flexibility and very high throughput at minimal cost.

This concept covers three basic modules:
Selective soldering module, Fluxing module and Preheat module

The IS-I-460S and IS-I-700S are completely automated „In-line“ and „modular“ versions from InterSelect Germany which can handle boards up to 460x460mm (18” x 18”) and 700x700mm (27,6” x 27,6”). It has a SMEMA pass-through conveyor that features automatic conveyor width adjustment. The IS-I-460S and IS-I-700S combine very high throughput with precise process controls.

The soldering unit is equipped with our inert hot nitrogen atmosphere for better soldering results and to assist the prevention of oxidation. Each solder pot comes with this inert atmosphere feature. The X, Y and Z axis moving solder pot system is installed in many machines and has proven its reliability. Also these machines are equipped with a unique top side designed preheating system, controlled by a pyrometer. All process parameters are ready for data transfer.

The IS-I-460FM and IS-I-700FM are fluxing modules which can be set in line with the corresponding selective modules. While one board is soldered in the soldering module another board is fluxed in the fluxing module, so throughput can be highly increased. Of course the fluxing modules also can be used as stand-alone fluxer.

The IS-I-460PM and IS-I-700PM are preheat modules which can be set in line with the corresponding selective modules. While one board is soldered in the soldering module another board is preheated in the preheat module, so throughput can be highly increased. Of course the preheating modules also can be used as stand-alone preheater.

The IS-I-460: 460 x 460 mm
IS-I-700: 700 x 700 mm

smallest footprints in its class
IS-I-460: just 1,1 m²
IS-I-700: just 1,8 m²

Large adjustable, energy-efficient top and bottom preheaters (heater size matches PCB size)
IS-I-460: adjustable 1,5 to 6 kW
IS-I-700: adjustable 1,5 to 7,5 kW

The best machine in its class, with unique features

Unique Features

| The large soldering area can handle almost every board | IS-I-460: 460 x 460 mm |
| IS-I-700: 700 x 700 mm |

smallest footprints in its class
IS-I-460: just 1,1 m²
IS-I-700: just 1,8 m²

Large adjustable, energy-efficient top and bottom preheaters (heater size matches PCB size)
IS-I-460: adjustable 1,5 to 6 kW
IS-I-700: adjustable 1,5 to 7,5 kW

Optional

Automatic laser wave height control an correction
Integrated PC with Windows 7 features the user-friendly software

Laser pyrometer control with profiling
Network-compatable remote maintenance

Multi wave for extremely fast cycle times
Mini wave for solder joints with close components

Create soldering program while the machine is running with the optional IS Photoscan offline programming software

Standard Features

The IS-I-460PMF and IS-I-700PM are fluxing modules which can be set in line with the corresponding selective modules. While one board is soldered in the soldering module another board is fluxed in the fluxing module, so throughput can be highly increased. Of course the fluxing modules also can be used as stand-alone fluxer.

The IS-I-460PM and IS-I-700PM are preheat modules which can be set in line with the corresponding selective modules. While one board is soldered in the soldering module another board is preheated in the preheat module, so throughput can be highly increased. Of course the preheating modules also can be used as stand-alone preheater.

Variant 1: IS-I-460S or IS-I-700S as individual soldering module
low throughput requirements or during introduction phase of a new product.

Variant 2: two IS-I-460S or IS-I-700S soldering modules:
high throughput requirements. Reduction of cycle time parallel processing with two boards in one time

Variant 3: fluxing module, preheat module and a IS-I-460S or IS-I-700S soldering module:
for high mass assemblies or longer preheat cycles.

Variant 4: fluxing module, preheat module and two IS-I-460S or IS-I-700S soldering modules:
for high mass assemblies and high throughput requirements.
**VP – Easy 500 Vapour Phase Soldering System**

The Vapor Phase - Reflow - System is a perfect and easy to handle unit for lead and lead free solder-paste to soldering complex SMT components like QFP, BGA, flip chip and as well ceramic assemblies can be soldered in highest quality. Through the small footprint construction you will find easy a place for this unit. To set up the unit you need only a 380V connection.

**Your Advantages**

- competitive Soldering-System for future lead-free technological standards
- oxidation free pre-heat and soldering
- uniform temperature distribution in the process room
- repetitious process conditions
- small operating costs
- no preparation of temperature profiles necessary
- better solder results at lower solder temperatures compared to conventional reflow ovens

**Process Sequence**

Everyone can start with production very fast. You only have to put the boards in the large 500x500mm working area, then close the clamshell and press start bottom. Automatically the soldering process starts and after cooling down open the clamshell and take your boards off. The parameters are all computer controlled via Siemens controller.

**System Concept**

Putting up the Easy 500 is easily possible in every location. The Siemens SPS controls and regulates the heating-, liquid- and vapor temperature, and guarantees a perfect solder result. The Easy 500 recognized automatically the used medium and set up the correct parameters. The unit is equipped with a closed stainless steel cabinet and a cooling aggregate.

**Technical Details**

<table>
<thead>
<tr>
<th>Technical Details</th>
<th>VP – Easy 500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. PCB Dimensions</td>
<td>500 x 500 mm</td>
</tr>
<tr>
<td>Max. PCB Height</td>
<td>120 mm</td>
</tr>
<tr>
<td>Cycle Time</td>
<td>ca. 6 min</td>
</tr>
<tr>
<td>Process Temperature</td>
<td>adjustable, max. 260°C</td>
</tr>
<tr>
<td>Capacity Medium</td>
<td>ca. 3 kg</td>
</tr>
<tr>
<td>Medium consumption</td>
<td>ca. 1g per Cycle</td>
</tr>
<tr>
<td>Connection</td>
<td>380V; 50/60Hz</td>
</tr>
<tr>
<td>Power</td>
<td>5,5 kW</td>
</tr>
<tr>
<td>System Dimensions</td>
<td>750 x 750 x 1100 mm (w/l/h)</td>
</tr>
<tr>
<td>Weight</td>
<td>200 kg</td>
</tr>
</tbody>
</table>
S-10 Selective Soldering- and De-Soldering System

The Mini-Wave-System S-10 is perfect for soldering and desolder through hole components on PCBs. In the process the S-10 generates a solder wave which can be trimmed suitable for each different component by choosing one of a variety of nozzles. Besides our standard nozzles all kinds of custom nozzles can be provided. By triggering a foot switch the soldering process can be started and the wave raises until it touches the pins of the component. The temperature, soldering time and the height of the wave can be preadjusted and is digital controlled.

digital controller regulates:

- Solder temperature
- Soldering time
- Wave height
- Nitrogen on/off
- Laser on/off

- 30 soldering profiles can be stored to the controller
- Overhead locator laser light pinpoints position for centering component over the wave.
- A large selection of nozzles for all component sizes is available.
- Height adjustable stainless steel platform
- Nitrogen supply (Option)
- Easy to change bayonet mount nozzles

Technical Details

<table>
<thead>
<tr>
<th></th>
<th>S-10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power</td>
<td>230V 50/60Hz</td>
</tr>
<tr>
<td>Max. solder temp.</td>
<td>360°C</td>
</tr>
<tr>
<td>Solder capacity</td>
<td>25 kg</td>
</tr>
<tr>
<td>Dimensions</td>
<td>420 x 660 x 432 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>20 kg</td>
</tr>
<tr>
<td>Warm-up time</td>
<td>ca. 45 min</td>
</tr>
</tbody>
</table>

various standard nozzle are available:

- 14-20 pin 25x13mm WN 10
- 24-28 pin 38x19mm WN 20
- 30-48 pin 64x19mm WN 30
- PGA 25x25mm WN 40
- PGA 38x38mm WN 50
- PGA 50x50mm WN 60
- Connector 70x 9mm WN 70
- Connector 102x19mm WN 80

Custom nozzles available
Board Handling Transport System and Accessories

We provide an extensive repertoire for PCB handling for automatic manufacturing production lines. Automatic circuit board loader and unloader, magazines, conveyor belts and many more. All from one source.

**SMT anti-statische Magazine**

<table>
<thead>
<tr>
<th>model</th>
<th>base material</th>
<th>setting</th>
<th>temperature °C</th>
<th>external dimensions (mm)</th>
<th>adjustment range</th>
<th>PCB size (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Length</td>
<td>width</td>
<td>height</td>
</tr>
<tr>
<td>C-803</td>
<td>metal</td>
<td>One Touch</td>
<td>85</td>
<td>355</td>
<td>320</td>
<td>563</td>
</tr>
<tr>
<td>C-806</td>
<td>metal</td>
<td>One Touch</td>
<td>85</td>
<td>460</td>
<td>400</td>
<td>563</td>
</tr>
<tr>
<td>C-808</td>
<td>metal</td>
<td>One Touch</td>
<td>85</td>
<td>535</td>
<td>460</td>
<td>570</td>
</tr>
<tr>
<td>C-809</td>
<td>metal</td>
<td>One Touch</td>
<td>85</td>
<td>535</td>
<td>530</td>
<td>570</td>
</tr>
</tbody>
</table>

**Highlights**

1. surface resistance: $10^4$ ~ $10^6$ Ω
2. maximum temperature up to 85°, optional up to 120°
3. maximum amount of circuit boards per magazine: 50 pieces
4. simple one touch adjustment of the circuit boards
5. top and bottom completely made out of metal
6. compatible with all loaders and unloaders
### Nitrogen Generator

PN 1250/1350/1450 for purity up to 99,999%

<table>
<thead>
<tr>
<th>purity (Nm³/h)</th>
<th>95%</th>
<th>97%</th>
<th>98%</th>
<th>99%</th>
<th>99,5%</th>
<th>99,9%</th>
<th>99,99%</th>
<th>99,999%</th>
<th>IS unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS - PN 1250</td>
<td>5,79</td>
<td>5,04</td>
<td>3,15</td>
<td>1,26</td>
<td>0,63</td>
<td></td>
<td></td>
<td></td>
<td>1 solder pot</td>
</tr>
<tr>
<td>IS - PN 1350</td>
<td>20,80</td>
<td>17,10</td>
<td>15,80</td>
<td>12,60</td>
<td>9,50</td>
<td>6,30</td>
<td>3,20</td>
<td>1,80</td>
<td>1-2 solder pots</td>
</tr>
<tr>
<td>IS - PN 1450</td>
<td>31,20</td>
<td>25,60</td>
<td>23,70</td>
<td>18,90</td>
<td>14,20</td>
<td>9,50</td>
<td>4,80</td>
<td>2,40</td>
<td>2 + solder pots</td>
</tr>
<tr>
<td>IS - PN 1550</td>
<td>49,20</td>
<td>40,10</td>
<td>35,60</td>
<td>28,40</td>
<td>22,10</td>
<td>12,60</td>
<td>6,30</td>
<td>3,20</td>
<td></td>
</tr>
<tr>
<td>IS - PN 1650</td>
<td>84,00</td>
<td>59,90</td>
<td>63,80</td>
<td>46,80</td>
<td>37,80</td>
<td>23,20</td>
<td>11,70</td>
<td>5,80</td>
<td></td>
</tr>
<tr>
<td>IS - PN 1750</td>
<td>117,40</td>
<td>94,50</td>
<td>85,10</td>
<td>63,00</td>
<td>50,40</td>
<td>30,30</td>
<td>16,40</td>
<td>7,30</td>
<td></td>
</tr>
<tr>
<td>IS - PN 2000</td>
<td>140,70</td>
<td>116,50</td>
<td>98,30</td>
<td>77,50</td>
<td>63,00</td>
<td>38,80</td>
<td>19,40</td>
<td>9,70</td>
<td></td>
</tr>
</tbody>
</table>