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.

The best machine in its class, with unique features

Unique Features	
The large soldering area can handle almost every board	IS-B-335: 335 x 335 mm IS-B-460: 460 x 460 mm IS-B-650: 650 x 650 mm
Smallest footprints in its class	IS-B-335: just 1 m² IS-B-460: just 1,45 m² IS-B-650: just 2,25 m²
Large adjustable, energy-efficient top and bottom preheaters (heater size matches PCB size)	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

Optional	Standard Features
Automatic laser wave height control an correction	Integrated PC with Windows 7 features the user-friendly software
Laser pyrometer control with profiling	Network-comapatible 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	7° and 0° axis system enable use of wetable and jet nozzles

This stand-alone selective concept covers six basic machines:
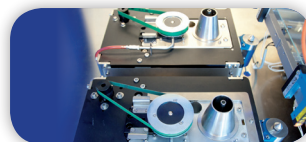
IS-B-335S
1 x Solder pot
1 x Micro Drop Fluxer

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 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

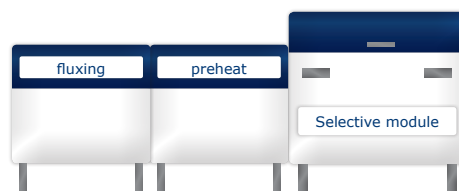| Optional	Standard Features
Automatic laser wave height control an correction	Integrated PC with Windows 7 features the user-friendly software
Laser pyrometer control with profiling	Network-comapatible remote maintenance
Multi wave for extremely fast cycle times	Mini wave for solder joints with close components
Create soldering program while the machine is running with the optional IS Photoscan offline programming software	

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 through put 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 through put can be highly increased. Of course the preheating modules also can be used as stand-alone preheater.
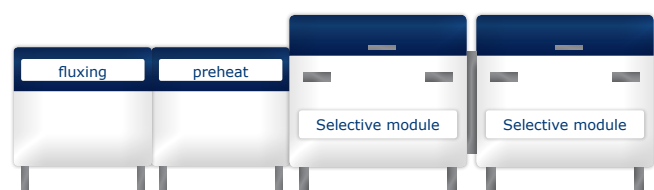
Variant 1: IS-I-460S or IS-I-700S as individual soldering module: low throughput requirements or during introduction phase of a new product.

Variant 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 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 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
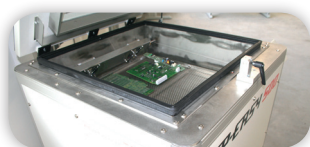
Process Sequence

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	VP – Easy 500
Max. PCB Dimensions	500 x 500 mm
Max. PCB Height	120 mm
Cycle Time	ca. 6 min
Process Temperature	adjustable, max. 260°C
Capacity Medium	ca. 3 kg
Medium consumption	ca. 1g per Cycle
Connection	380V; 50/60Hz
Power	5,5 kW
System Dimensions	750 x 750 x 1100 mm (w/l/h)
Weight	200 kg

A Soldering-System for future lead-free technological standards:
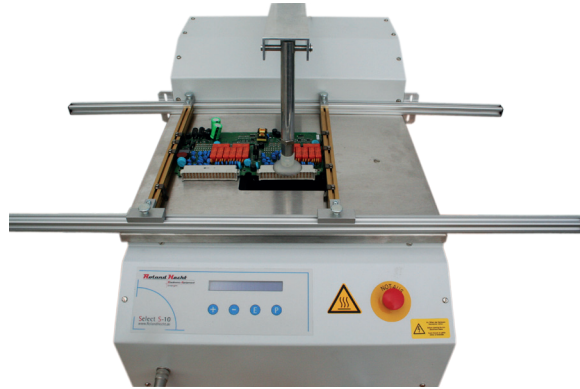FinePitch
BGA / QFP etc.
0201 / 01005 etc.

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 temperatur
- 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	S-10
Power	230V 50/60Hz
Max. solder temp.	360°C
Solder capacity	25 kg
Dimensions	420 x 660 x 432 mm
Weight	20 kg
Warm-up time	ca. 45 min

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.*

Single Magazine Loader
for PCB 50 – 460 mm

Single Magazine Unloader
PCB 50 – 460 mm

Multi Magazine Loader
PCB 50 – 460 mm

Multi Magazine Unloader
PCB 50 – 460 mm

Inspection Conveyor
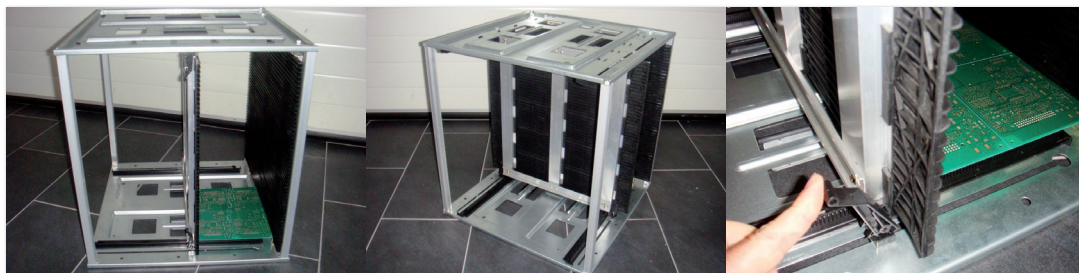0,5 - 1,5 meter
PCB 50 – 400 mm

Standard Conveyor
0,5 - 1,5 meter
PCB 50 – 400 mm

SMT anti-statische Magazine

model	base material	setting	temperature °C	external dimensions (mm)			adjustment range	PCB size (mm)
				Length	width	height		
C-803	metal	One Touch	85	355	320	563	50-250	350x(50-250)
C-806	metal	One Touch	85	460	400	563	50-330	460x(50-330)
C-808	metal	One Touch	85	535	460	570	50-390	535x(50-390)
C-809	metal	One Touch	85	535	530	570	50-460	350x(50-460)

Highlights

1. surface resistance: $10^4 \sim 10^6$ 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%

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