

## SEMI AUTOMATIC SOLDERING AND DESOLDERING MACHINE ONYX 25

MACHINES

4.103



APPLICATION: SMT

ZEVAC-LINE: ONYX

The complete ONYX product line documentation is composed of the following data sheets:

MACHINES 4.101 - 4.105

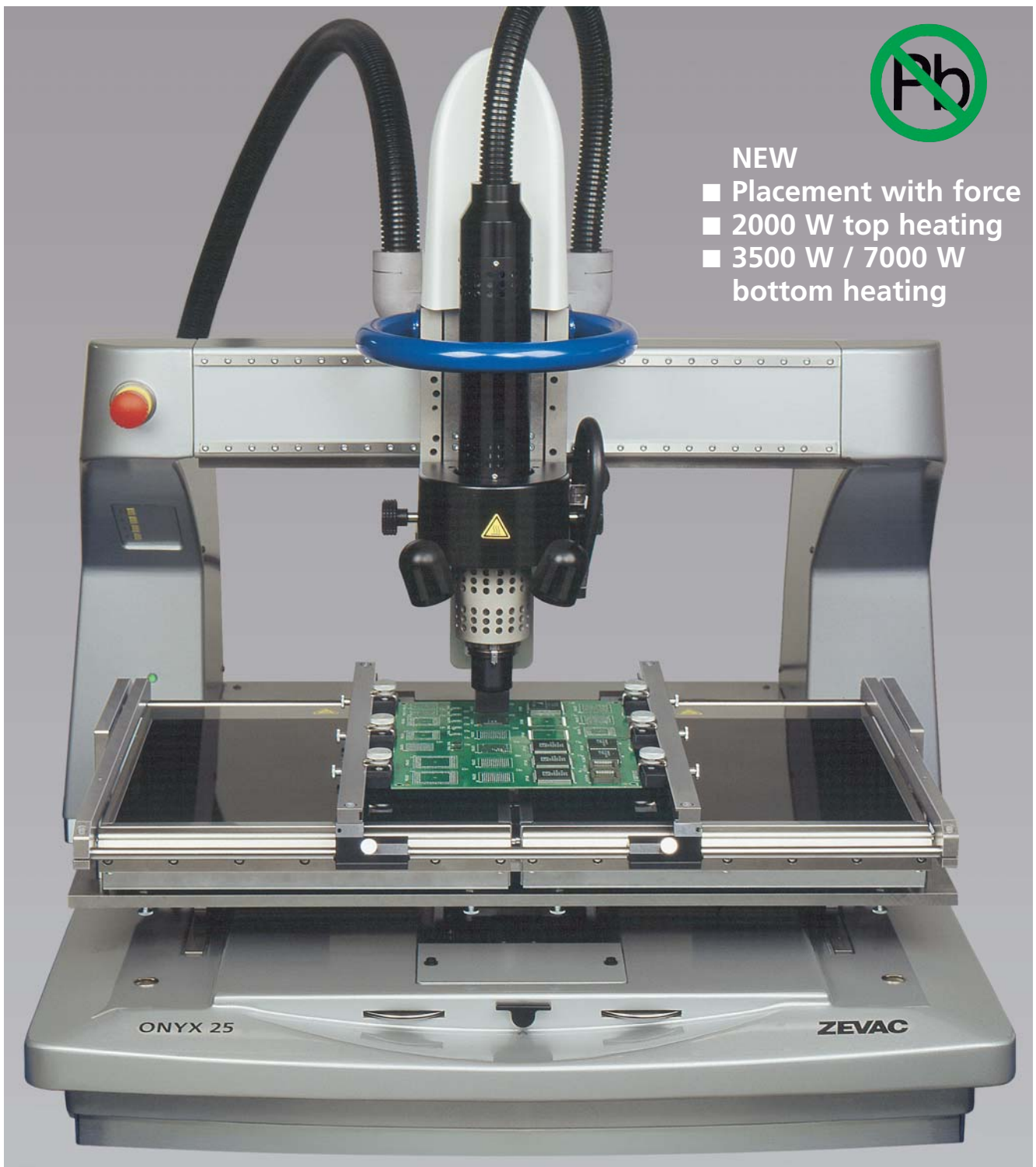
ACCESSORIES 2.201, 2.202

OPTIONS 4.301



NEW

- Placement with force
- 2000 W top heating
- 3500 W / 7000 W bottom heating



**WIDE APPLICATION RANGE**

SELECTIVE SOLDERING AND DESOLDERING OF SMD COMPONENTS. THE HIGH PERFORMANCE ONYX 25 GUARANTEES HIGH RELIABILITY AND EASE OF OPERATION. IT IS EQUIPPED WITH A SPECIAL VISION SYSTEM FOR ACCURATE ALIGNMENT OF ALL SMD'S AND FINE-PITCH COMPONENTS AND IS IDEAL FOR:

**Repairs**

Misaligned devices can be accurately repositioned, and defective components replaced.

**Prototyping**

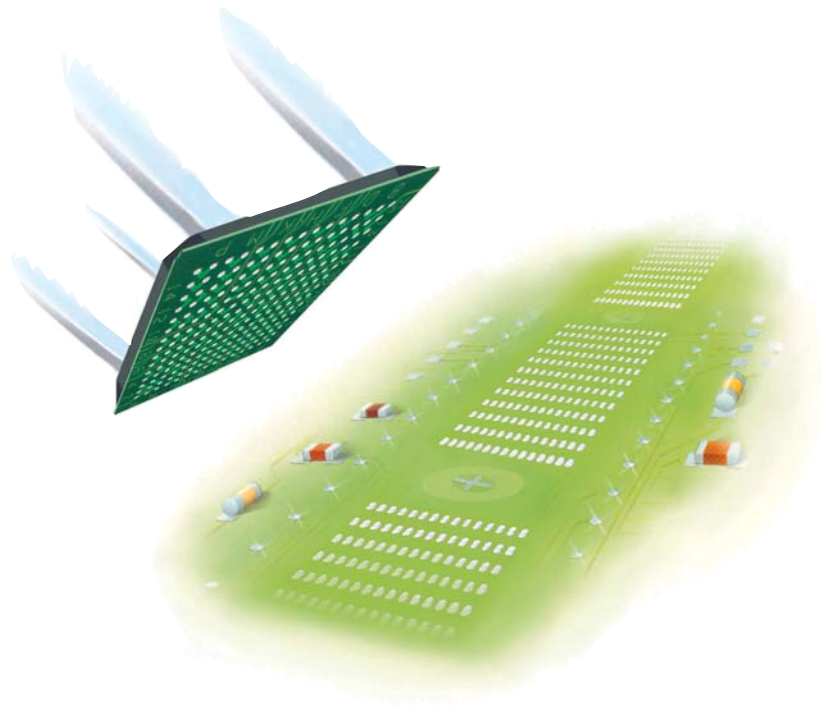
The ONYX 25 simultaneously assembles and solders prototypes. It allows expensive components to be desoldered and re-used.

**Post-assembly**

Components that are missing at assembly time can be placed and soldered later. Individual devices which cannot be handled by available production resources can be retrofitted.

**Assembly**

The ONYX 25 soldering and desoldering machine is the most accurate tool for assembly, from the simplest to the most densely populated boards.

**MARKET REQUIREMENTS**

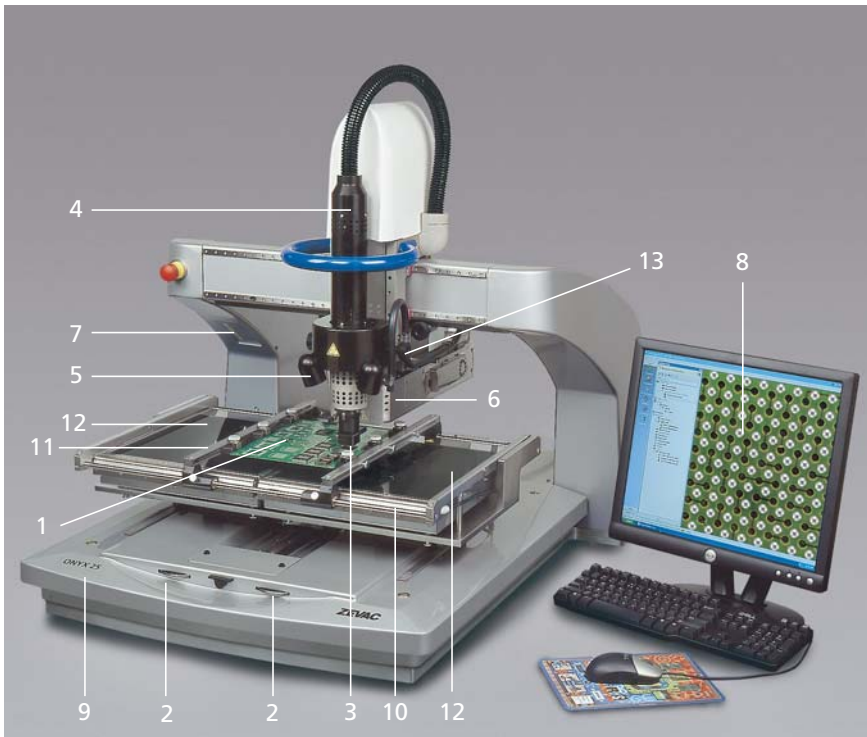
THE COMPLEXITY OF MANUAL SMD SOLDERING OPERATIONS IS GROWING. COMPONENT POSITIONING REQUIREMENTS HAVE BECOME MORE CRITICAL WITH THE INTRODUCTION OF MORE COMPLEX AND EXPENSIVE DEVICES AS WELL AS MORE INTEGRATED CIRCUIT BOARDS. RAPIDLY INCREASING SOPHISTICATION IN SMT HAS GENERATED AN URGENT NEED FOR A TRULY PROFESSIONAL SOLUTION. THE NEW ONYX 25 MACHINE MEETS ALL THESE REQUIREMENTS IN A PRECISE MANNER:

**High accuracy positioning with reproducible results**

Rapid positioning of circuit boards with precise adjustments in x, y, and theta directions. Boards are locked in position by a mechanical locking system. SMD components are centered in gas nozzles specially designed and adapted to the component housing. This design shields components and circuit boards against excess heat.

**Easy operation****Availability**

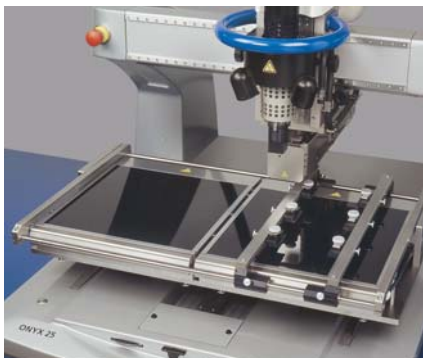
Ergonomic design.  
Fast, uncomplicated nozzle exchange.  
Short heat-up period with powerful, efficient heating system.  
More than 100 different standard nozzles in stock.  
Custom nozzles for special applications are available on short notice (see Nozzle Data Sheets 2.201, 2.202).



**ONYX 25:**

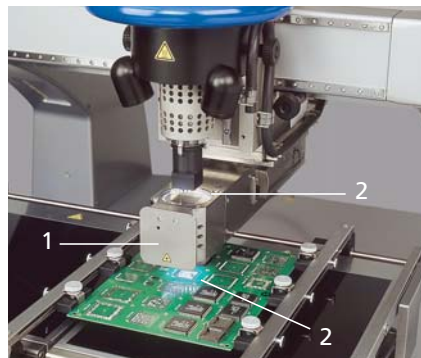
High production unit with high accuracy:

- 1 printed circuit board
- 2 fine adjustment of x/y-table
- 3 gas nozzle
- 4 2000 W Top heating system
- 5 illumination
- 6 MFOV VISION
- 7 4 Thermocouple inputs
- 8 flat screen
- 9 base plate
- 10 board cooling
- 11 board holder
- 12 preheater (second is option)
- 13 theta adjustment for heater head



**IR PREHEATER SYSTEM**  
For leadfree applications

Single preheater: 300 x 300 mm  
3500 W  
Double preheater: 600 x 300 mm  
7000 W  
Optional board cooling for faster cool down.



**VISION (MFOV)**  
Guarantees a highly accurate positioning

With the motorized VISION system, the component and the layout of the board are projected on top of each other, verifying the position on all 4 sides. The LED illumination, one for the component and one for the board-layout, guarantees an optimum view independent of surrounding conditions.

- 1 Vision system  
For components up to 70 mm.
- 2 LED illumination

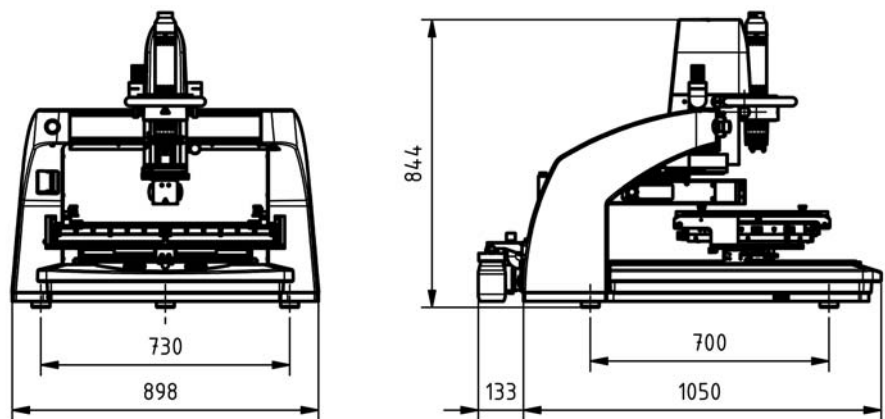


**MOVEABLE SOLDERHEAD**  
For fast and reliable rework

The solderhead can be moved to any place of the 520 mm x-axis. Large boards can be left in their position and don't need to be turned around. An optimal position can be found very easily. Ergonomic and open design for simple to complex applications.

<b>Technical data</b>	Product designation	ONYX 25
	Max. board size	560 mm width, depth unlimited
	Max. component height	20 mm bottom side (optional 30 mm) 30 mm top side (optional 70 mm)
	Gas pressure	4 – 6 bar
	Angle rotation of heater head	± 15°
	Hot gas	compressed air or nitrogen, 20-80l/min
	Max. power consumption	6400 VA (+ 3500 VA per add. preheater module)
	Power requirements	3 x 400 / 230 VAC, 50 / 60 Hz
	Dimensions (W x D x H)	898 x 1050 x 1022 mm
	Weight	150 kg (basic machine)
	Max. component size	70 x 70 mm
	Hotgas temperature	20 - 475°C
	Technical data subject to change	

### Dimensions



<b>Accessories</b>	Hot gas nozzles	Data sheet 2.201
	Gas nozzles for BGA and CSP components	Data sheet 2.202
<b>Options</b>	Options - Site Solder Removal System - 2nd preheater 300 x 300 mm - Board cooling - IR sensor - Component pick up tool - Direct View Camera System - Fume extraction - Machine base	Data sheet 4.301

### ZEVAC Distributor

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