

BGA/QFP Rework

Weller WQB Repair System

NEW

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The WQB 4000 SOPS repair system upgrades the Weller product range in the SMD tool sector. A well thought-out design concept combines reliability and maximum process control with ease of use and technically mature detail solutions. Useful accessories increase the possible uses of these repair work stations. For the universal circuit board repair of BGA, QFP and SMD components, it is necessary to preheat the circuit board effectively from below and from above to precisely heat the components to be repaired to the reflow temperature as well as to reliably control the process. On the WQB 4000 the temperature regulated 2-Zone infrared bottom heater provides rapid warm-up and homogeneous substrate temperatures. The hot air top heater, with digital control electronics for temperature monitoring and regulation of the air flow rate, facilitates the finely metered supply of heat to the components. A temperature sensor placed directly in the hot air nozzle efficiently regulates the top heater and thus provides maximum process control. On the digital programming unit all process steps can be programmed, saved and if necessary protected against unauthorized use as required. The most important process parameters are optionally displayed on the LC display during operation. Camera with two-color lighting for exact positioning.

Order No.	Model	Description
005 33 516 99	WQB 4000SOPS	BGA/SMT Rework system 2300 W / 230 V, for component placement with camera guided positioning system At the heart of the placing system is the modern USB colour camera with fully digital data transfer. The data transfer from the camera to the PC is made in real time via the IEEE 1394a interface. The telecentric precision split optic produces an image of the component to be placed free of perspective distortion and has a wide depth of focus. The included positioning software contains a component library, from which the component to be placed is selected. New components can be edited very easily by the user and added to the library. Using the built-in positioning frame in the live image from the camera, the circuit board and the component can be aligned independently of each other using the X,Y and Theta axis fine adjustment drives.



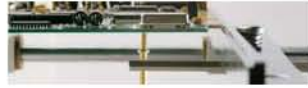
consists of:

- Base unit with top heater, bottom heater, control electronics and pneumatic unit
- Infrared radiation 1600 W
- Positioning unit with digital camera and split optic
- Circuit board holder with fine adjustment in X and Y direction
- Temperature sensor PT 100
- Nozzle change tool
- Thermoelement type K 0,1 mm
- 5 pcs. Vacuum inserts Ø 4,5 mm
- 5 pcs. Vacuum inserts Ø 10,0 mm
- Reducer insert for the vacuum pickup
- Software WQB 4000 CONTROL and WQB 4000 SOPS
- Serial interface cable
- Calibration tool
- Vacuum pick up with 2 changeable vacuum inserts
- Mains cable
- 2 m connecting tube for compressed air
- Instruction manual

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Accessory for WQB 4000 SOPS, WQB 3000OPS, WQB 3000 and WHA 3000 PS / VS

Order No.	Description
005 87 549 24	Clamping set for irregular shaped circuit boards (e.g. mobilephones, video/digital camera boards, etc.)
005 87 557 45	Support for large dimensioned circuit boards
005 87 548 73	Adjustable circuit boarder stop
005 87 557 41	Downholder for circuit boards
005 87 549 48	Temperature sensor for top heater
005 87 557 82	Thermoelement type K, Ø 0,1 mm
005 31 190 99	Thermoelement type K, Ø 0,5 mm
005 87 549 70	Adapter for NQ/NO hot air nozzles only for WQB 2000/3000 (see page 132)
005 87 137 99	10 pcs. Vacuum inserts Ø 4,5 mm
005 87 137 98	10 pcs. Vacuum inserts Ø 10,0 mm
005 31 191 99	Serial interface cable



BGA/QFP Rework

Hot Air Nozzles for WQB 4000SOPS, WQB 3000OPS and WQB 3000

The patented hot air nozzles of the WQB rework stations, coupled with digital control of the hot air temperature and its flow rate provide an even convective heating of the component. This in turn ensures repeatability of the reflow process.



Order No.	Nozzle Housing Inside	Nozzle Housing Outside
005 87 479 47	7,6 x 7,99 mm	8,6 x 8,9 mm
005 87 479 43	6,5 x 6,5 mm	7,5 x 7,5 mm
005 87 479 45	8,5 x 8,5 mm	9,5 x 9,5 mm
005 87 479 61	8,5 x 10,6 mm	9,5 x 11,6 mm
005 87 549 67	10,0 x 10,0 mm	11,0 x 11,0 mm
005 87 478 48	12,0 x 12,0 mm	13,0 x 13,0 mm
005 87 479 04	13,5 x 13,5 mm	14,3 x 14,3 mm
005 87 479 35	15,5 x 15,5 mm	16,5 x 16,5 mm
005 87 478 93	15,0 x 11,0 mm	16,0 x 12,0 mm
005 87 548 36	18,5 x 10,0 mm	19,5 x 11,0 mm
005 87 479 77	15,5 x 23,5 mm	16,5 x 24,5 mm
005 87 478 33	18,0 x 18,0 mm	20,0 x 20,0 mm
005 87 547 70	21,0 x 21,0 mm	23,0 x 23,0 mm
005 87 548 20	22,0 x 22,0 mm	24,0 x 24,0 mm
005 87 477 64	25,0 x 25,0 mm	27,0 x 27,0 mm
005 87 479 93	27,0 x 23,0 mm	29,0 x 25,0 mm
005 87 478 50	27,0 x 27,0 mm	29,0 x 29,0 mm
005 87 479 27	29,0 x 29,0 mm	31,0 x 31,0 mm
005 87 479 99	28,0 x 32,0 mm	30,0 x 34,0 mm
005 87 479 06	33,0 x 33,0 mm	35,0 x 35,0 mm
005 87 548 87	35,0 x 35,0 mm	37,0 x 37,0 mm
005 87 477 53	37,0 x 37,0 mm	39,0 x 39,0 mm
005 87 478 71	39,5 x 39,5 mm	41,5 x 41,5 mm
005 87 478 74	42,0 x 42,0 mm	44,0 x 44,0 mm
005 87 549 03	45,0 x 11,0 mm	47,0 x 13,0 mm
005 87 477 63	46,0 x 46,0 mm	48,0 x 48,0 mm
005 87 479 16	47,0 x 47,0 mm	49,0 x 49,0 mm
005 87 479 41	49,0 x 49,0 mm	51,0 x 51,0 mm
005 87 479 85	57,0 x 18,5 mm	59,0 x 20,0 mm

BGA/QFP Rework

Positioning Templates for WQB 3000

The Weller template system offers a low cost but still precise positioning system for BGA and leaded components. The templates can be used on populated boards and are manufactured for most BGA, QFP and PLCC components. Templates for other components on request.

Positioning Templates for BGA Components



Order No.	Matrix	Pitch
005 87 549 46	35 x 35	0,5
005 87 479 58	10 x 10	0,8
005 87 549 81	12 x 12	0,8
005 87 479 59	13 x 13	0,8
005 87 557 05	16 x 16	0,8
005 87 557 06	20 x 20	0,8
005 87 557 07	21 x 21	0,8
005 87 557 08	22 x 22	0,8
005 87 479 30	14 x 14	1,0
005 87 479 31	16 x 16	1,0
005 87 547 78	18 x 18	1,0
005 87 547 60	22 x 22	1,0
005 87 547 79	24 x 24	1,0
005 87 547 77	26 x 26	1,0
005 87 547 61	29 x 29	1,0
005 87 548 50	34 x 34	1,0
005 87 479 87	39 x 39	1,0
005 87 478 57	16 x 16	1,27
005 87 478 61	17 x 17	1,27
005 87 477 81	19 x 19	1,27
005 87 479 66	20 x 20	1,27
005 87 479 11	23 x 23	1,27
005 87 478 94	25 x 25	1,27
005 87 477 79	26 x 26	1,27
005 87 478 59	31 x 31	1,27
005 87 477 82	15 x 15	1,5

Positioning Templates for QFP Components

Order No.	Component	Pitch
005 87 478 44	TQFP 100	0,5
005 87 549 82	TQFP 128	0,5
005 87 478 69	QFP 176	0,5
005 87 478 40	QFP 208	0,5
005 87 478 67	QFP 240	0,5
005 87 478 38	QFP 160	0,65