



## PDR IR-C3 CHIPMATE

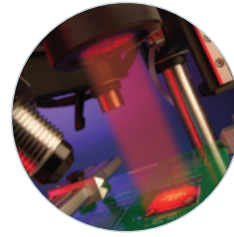
PDR's Entry-Level SMT/BGA Rework Station

Trusted by Experts

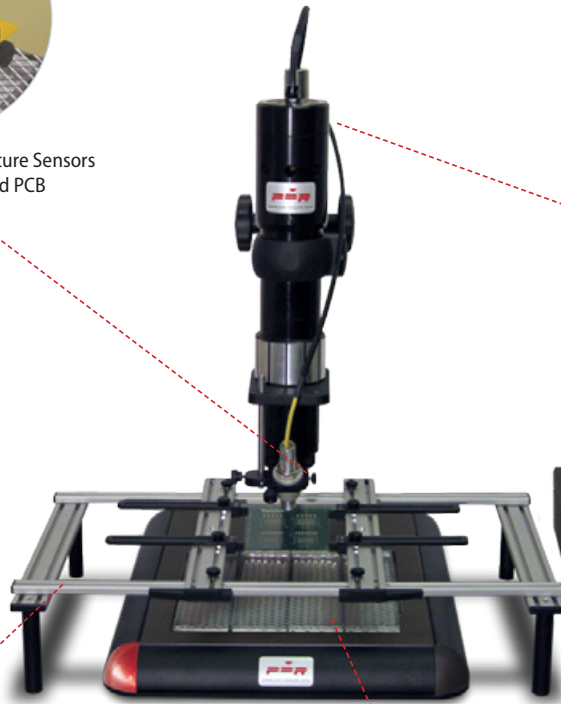




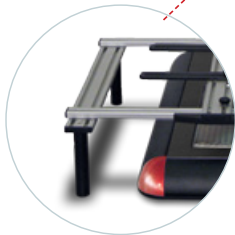
Non Contact IR Temperature Sensors for Component and PCB



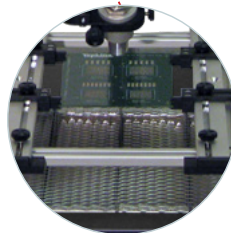
150w Focused IR Component Heating



Digital auto profile thermal control



Portable Benchtop PCB workholder



2000W, single zone (240mm x 240mm heating area)

## Advanced Features

- **Advanced Focused IR component heating**  
150W, lens based Focused IR heating with adjustable image system
- **Quartz IR PCB preheating**  
2000W, single zone (240mm x 240mm heating area)
- **Precision Component Pick and Placement**  
Handheld vacuum placement system
- **Precision PCB Handling**  
Portable Benchtop PCB workholder
- **Component Temperature Sensing**  
Standard non-contact IR temperature sensor
- **PCB Temperature Sensing**  
K-type wire thermocouple
- **Advanced Thermal Process Control**  
Digital auto profile thermal control

## Entry-Level SMD/BGA Rework Station



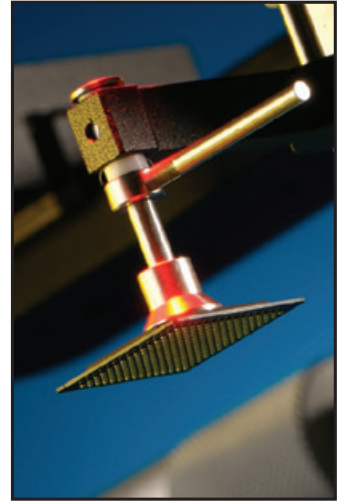
*Click above for video link*

## Low Cost, Upgradeable BGA Rework Station

Today there is a need for lower cost and upgradeable equipment without a loss in soldering quality. The PDR IR-C3 Chipmate SMT/BGA rework stations, using PDR's patented Focused IR technology, have been specifically engineered to meet this challenge.

The IR-C3 Chipmate comes with a good range of standard features allowing the operator to quickly, safely rework all types of components.

The station is tool free, gas free, instantly/precisely controllable, clean, modular and produces 100% yield BGA rework without any complications. The IR-C3 uses all the proven attributes of PDR's Focused IR technology, first introduced in 1987 and now used worldwide by over 4500 customers.



## Simple BGA rework procedure

BGA rework poses the problem of accessing hidden interconnects in a high density environment. Consequently, it requires a station that is able to access the hidden joints without affecting neighbouring components. A station that is safe, gentle, adaptable and, above all, simple to operate.

The IR-C3 Chipmate is such a station. It is so easy to operate that technicians are able to instantly achieve excellent process control for BGA/SMT rework without the complexities and frustrations normally associated with 'high end' rework stations.

The IR-C3's standard features, with the use of simple aids, operators can simply pick up the BGA, align it, place it into fluxed pads and reflow with the station's accurate closed-loop component temperature control.

# Details and specifications of advanced features available

- **Advanced Focused IR component heating**

150W, lens based Focused IR heating with adjustable image system  
PDR lens attachments with IR image from 4 to 70mm diameter  
Reworks SMDs/ BGAs/QFNs/CSPs + lead free applications

- **PDR Lens Attachments**

F150 (Ø4 - 18mm spot size) optional  
F200 (Ø10 - 28mm spot size) optional  
F400 (Ø12 - 35mm spot size) optional  
F700 (Ø25 - 70mm spot size) standard

- **Quartz IR PCB preheating**

High power, medium wave quartz IR  
Large area IR PCB preheater system  
2000W, single zone (240mm x 240mm heating area)  
Optional 750W, single zone (120mm x 120mm heating area)

- **Handheld Vacuum Placement System**

Vacuum operated pick up tool, hand held with silicon cups

- **Standard Vacuum Placement System (Optional)**

With precise placement action, Z axis movement and rotation  
Interchangeable pick-up heads for different application

- **Handheld Component Nest and Flux Application Tool (Optional)**

Handheld nest plate with 'component print frame' or dip tray  
for flux and solder paste application

- **Portable Benchtop PCB Workholder**

650mm, up to 12" x 10" (300mm x 250mm) PCB capacity

- **Component Temperature Sensing - Non-contact, IR Sensor**

Manually adjustable, K-type non-contact IR sensor, Ø7-10mm spotsize  
Real time monitoring of component temperature throughout process

- **PCB Temperature Sensing**

Manually attached K-type wire thermocouple  
Optional non-contact IR sensor with real time temperature sensing

- **PCB Temperature Sensing - Non-contact, IR Sensor (Optional)**

Manually adjustable, K-type non-contact IR sensor, Ø7-10mm spotsize  
Real time monitoring of component temperature throughout process

- **Digital, Closed-loop Electronic Control**

Digital programmable controller (20 internal profile storage)  
Simple key pad setting power/time/temperature controls  
2 Channel component and PCB temperature control

## Bench Top Requirements

Top heat power	150W IR
Back heater power	2000W IR
Voltage/frequency	110-240 volts 50/60Hz
Typical components	CSPs, BGAs, uBGAs, QFNs, QFPs, PLCCs, SOICs, small SMDs
Bench area	1200mm (w) x 600mm (d)
Weight	45 Kg

The above features are mostly optional and also, PDR reserves the right to improve or change specifications without giving notice.

	PDR Station	IR-C3	IR-D3	IR-E3	IR-E6
• = Standard Feature    ○ = Optional Feature	Typical Application	Entry-Level SMT/BGA Rework Station - small/medium PCBs	Professional BGA Rework Station - small/medium PCBs	Ultimate Performance, BGA Rework Station for Small-Medium PCBs	Ultimate Performance, BGA Rework Station for Very Large PCBs
<b>Advanced Focused IR Component Heating</b>		IR-C3	IR-D3	IR-E3	IR-E6
Focused IR Lens System		•	•	•	•
F150 - Ø 4-18mm - Lens Attachment		○	○	○	○
F200 - Ø10-28mm - Lens Attachment		○	○	○	○
F400 - Ø12-35mm - Lens Attachment		○	○	○	○
F700 - Ø25-70mm - Lens Attachment		•	•	•	•
<b>Quartz IR PCB Preheating</b>		IR-C3	IR-D3	IR-E3	IR-E6
750W, single zone (120mm x 120mm heating area)		○	○	○	
2000W, single zone (240mm x 240mm heating area)		•			
2000W, two zone (240mm x 240mm heating area)			•		
2250W, two zone (240mm x 240mm heating area)				•	
2800W, three zone (360mm x 240mm heating area)				○	
3050W, three zone (360mm x 240mm heating area)				○	
3200W, two zone (500mm x 270mm heating area)					•
<b>Component Pick and Placement</b>		IR-C3	IR-D3	IR-E3	IR-E6
Handheld vacuum placement system		•			
Standard vacuum placement system (Z-axis and Rotation)		○			
Compressed air based high vacuum pickup system		○	○	○	○
Professional vacuum placement system (Z-axis, Rotation and Soft Landing)			•		
Advanced Professional vacuum placement system (Y/Z-axis, Rotation and Soft Landing)				•	•
<b>Component Nest/Flux Application Facility</b>		IR-C3	IR-D3	IR-E3	IR-E6
Handheld flux dip tray or component print frame		○	•		
Jaw mounted nest with flux dip tray or component print frame			○		
Integrated nest with flux dip tray or component print frame				•	•
<b>PCB Handling (PCB Capacity)</b>		IR-C3	IR-D3	IR-E3	IR-E6
Portable Benchtop Mounted PCB Workholder (12" x 10"/300mm x 250mm)		•			
Professional PCB table with micro X/Y (12" x 12"/300mm x 300mm)			•		
Advanced Professional PCB table with macro-micro X/Y (18" x 12"/450mm x 300mm)			○	•	
XL Advanced Professional PCB table with macro-micro X/Y (24" x 18"/620mm x 460mm)					•
<b>Component Temperature Sensing</b>		IR-C3	IR-D3	IR-E3	IR-E6
Standard non-contact IR temperature sensor (Pyrometer) - Ø7mm+ Spot		•	•	•	•
<b>PCB Temperature Sensing</b>		IR-C3	IR-D3	IR-E3	IR-E6
K-type wire thermocouple		•	•	•	•
Standard non-contact IR temperature sensor (Pyrometer) - Ø7mm+ Spot			○	○	•
<b>Advanced Thermal Process Control</b>		IR-C3	IR-D3	IR-E3	IR-E6
Digital controller based thermal control		•	○		
Software based auto profile thermal control		○	•	•	•
<b>Camera Based Vision Systems</b>		IR-C3	IR-D3	IR-E3	IR-E6
Camera/Prism Based BGA/CSP/QFN Alignment System			•	•	•
Auxillary Process Observation Camera			○	○	○
<b>Forced Air PCB Cooling</b>		IR-C3	IR-D3	IR-E3	IR-E6
Highly effective, integral PCB cooling with air knife system				○	○



#### **PDR**

PDR - Design and Manufacturing  
Crawley, West Sussex, RH10 9SE, England  
T: +44 (0)1293 614 000 E: sales@pdr.co.uk

#### **PDR Europe**

Sales, Support and Technology Center  
83300 Draguignan, France  
T: +33 (0)9 77 19 56 36 E: sales@pdr.co.uk

#### **PDR Americas**

Sales, Manufacturing and Technology Center  
Shingle Springs, CA 95682, USA  
T: (530) 676 6262 E: sales@pdrxy.com

#### **PDR India**

Sales, Support and Technology Center  
Chennai – 600 092, Tamilnadu, India.  
M: +91 (0) 94440 10898 / 90034 86777 E: sales@pdr.co.uk

PDR's products are available worldwide via our international distributors, all offering professional sales and support.

For contact, product and company details please visit [www.pdr-rework.com](http://www.pdr-rework.com)

