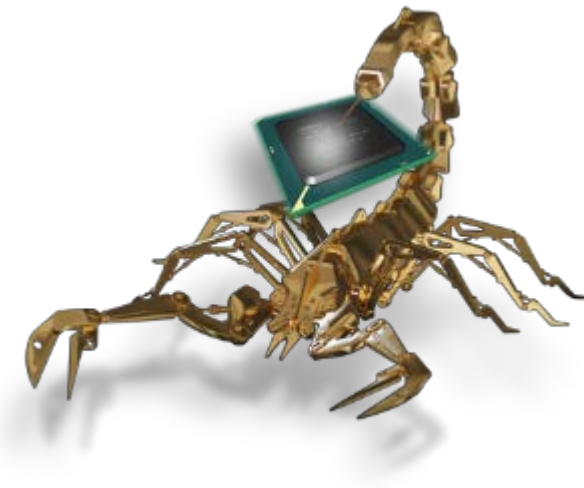


APR



ADVANCED PACKAGE REWORK

SCORPION PRODUCT TRAINING – VER.02-2018



DESCO INDUSTRIES INCORPORATED

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**Press Release for general distribution.
(Media, Customers, Suppliers & Employees)**

FOR IMMEDIATE RELEASE

Chino, California - Desco Industries Inc. of Chino, California has acquired the Metcal APR Product Line; this includes [Scorpion](#), [Scarab](#) and the older [APR-5000](#) rework machines. Effective immediately, all APR orders should be placed with Menda. Metcal will retain the HCT/PCT/MRS products.

Information about Metcal can be found at <http://www.metcal.com/>.

Information about Desco Industries can be found at <http://www.descoindustries.com/>.

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www.smarttec.dk



Scorpion Product Range

■ Scorpion APR-1100-SRS

- Single head with vision alignment accuracy of placement .1mm(4 mills).45mm by 57mm field of view.(camera 720p and 1080p resolution). 8 zoom levels.

■ Scorpion APR-1200-SRS

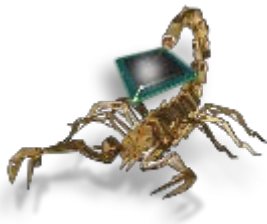
- Dual head with fine placer manual “z” axis placement accuracy .015mm(1.5mills). 45mm by 57mm field of view. .(camera 720p and 1080p resolution). Also can be ordered with MOB camera. 8 zoom levels.

■ Scorpion APR-1200A-SRS

- Automatic placement head with gram force placement pressure sense motorized by tethered remote. 45mm by 57mm field of view. (Apr-1200A-SRS camera 720p and 1080p resolution). 8 zoom levels.

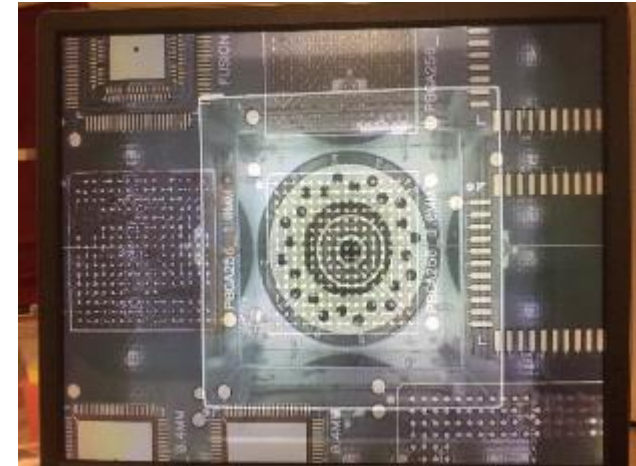
■ Scorpion APR-1200A-MOB

- Camera is HD 1080dpi resolution with 5 zooms at 1080p resolution with smaller field of view 25mm by 25mm better vision camera for mobile products such as cell phones I pads.



Scorpion Camera Zoom Function

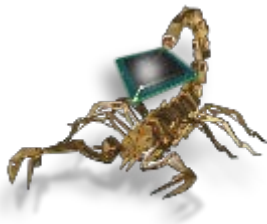
- The Scorpion Magnification is 25x magnification from min to max zoom
- The field of View (FOV) is 45mm by 57mm on the 1100, 1200 and 1200A
- The 1200A-MOB version utilizes the same lens so has the same 25X magnification but on a small FOV
- The camera has firmware that displays the first 4 zoom levels at HD 720p and then switches to HD 1080p on the 4 higher zoom levels
- The 1200A-MOB has 5 zooms all at HD 1080p but the FOV is only 25mm by 25mm.





Scorpion Advantages

- Linux internal PC - **Not windows.**
- Software upgrades at no-charge
- 12 Tool tip languages available
- Profiles can be imported or exported by USB
- Patented inner and outer convection pre-heater.
- Pre-heaters can be operated simultaneously at different temperatures.
- Pre-heater can be used to reduce top heat needed to reflow heavy PCB.
- Use as a cooler to keep bottom mirror image BGA from reflowing.
- Scorpion can have up to 14 added live in a process run.
- Single phase power 208-240v 13A no expensive three phase needed
- All materials used are Static Safe
- Turn Key application support, including making custom tools
- Auto profile is built in for PB and LF. Side camera available to view reflow of parts live.
- Contactless IR sensor option available, to start profile at a given preselected temperature
- Self contained system, no compressed air needed
- Small footprint 457mm by 559mm(18 Inch by 22 inch footprint).

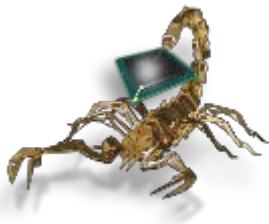


Scorpion APR-1100-SRS

- Single head Lower cost
- Dual pre-heater(as in all scorpion designs)
- Vision placement. Camera 45mm by 45mm field of view with 25x magnification
- Fast to remove parts
- Head does not move left to right as in other scorpions
- Often bought as a removal only machine, that compliments other full featured Scorpions. For high volume rework applications
- Any APR /Scorpion accessories will work with these products
- Single phase 220v-240v 13A no shop air required all pumps blowers are self contained on any Scorpion.(Especially good for Labs where airline is sometimes not available)

Dual Preheater
Uses same nozzles
as top NZA Reflow



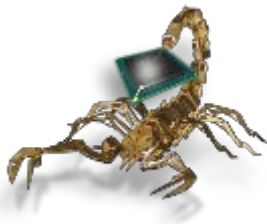


Scorpion APR-1200-SRS

- Dual head with fine placer.
- Vision placement camera 45mm by 57mm field of view.
- The advantage of two heads, is the placement head is not required to be in heated RF head .So pick up tools are easy to use, so do not need to be heat proof.
- No need for custom tools as the pick up, heads are from a placement manufacturer, so all tools exist and are supplied by Metal, separate PDF is available to easily select tools. For BGA/QFN/LED/as small as 0201/01005 chips.
- 360° rotation on pick up head with spring assisted placement head
- Single phase 220v-240v 13A no shop air required all self contained
- Both heads move left to right easily to be centered over inner spot heater

Dual Preheater
Uses same nozzles
as top NZA Reflow



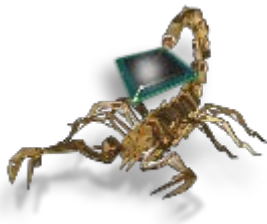


Scorpion APR-1200A-SRS

- Auto Z Head.
- Fully motorized head in z and rotation with $\frac{1}{4}$ deg rotation by remote for accurate placement of ultrafine pitch parts.
- 360 ° rotation on pick up head
- Gram force placement to 50 grams automatically sensed.
- Placement head memorizes place height over camera for a given package thickness.
- Uses same pick up tools as previous machine APR-1200-SRS.
- Single phase 220v-240v 13A no shop air required all self contained.
- Both move left to right easily to be centered over inner spot heater

Dual Preheater
Uses same nozzles
as top NZA Reflow

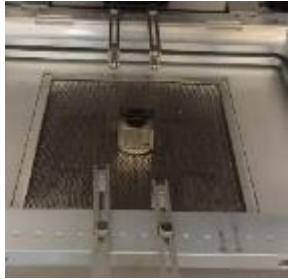




Scorpion APR-1200A-MOB

- Scorpion 1200A-MOB
- 22 Inch HD monitor with 5 x HD digital zoom.
- Field of view 25mm x 25mm with 25 X magnification.
- Fully motorized head in z and rotation with ¼ deg rotation by remote for accurate placement of ultrafine pitch parts.
- Gram force placement to 50 grams automatically sensed.
- Placement head memorizes place height over camera for a given package thickness.
- Dual zone preheater
- 360° rotation on pick up head
- Single phase 220v-240v 13A no shop air required all self contained.
- Both heads move left to right easily to be centered over inner spot heater.
- Uses the same tools as any Scorpion's.

Dual Preheater
Uses same nozzles
as top NZA Reflow





Tooling available to make sale turn key

Custom Stencil Plates

- QFN/LED/BGA, To print solder paste on Packages not PCB makes rework easy.
- Dipping plates for BGA/CSP ,DTP-BGA.
- Dipping blocks for Micro Usmd BGA(DTBK-USMD BTBK-USMD 3+4 mill).
- Dipping blocks Flip chip DTBK-FC 1+2 mill.
- 0201/01005 Reflow tools.
- Tape feeder for picking 0201/01005 and sots from 8 mm tape TF-AT-SRS.
- Nozzles NZA -030-Round(3 mm round).
- Nozzle NZA-018-Round(1.8 mm round).
- Small vacuum cup for reflow head for removal (VNZ-0201).



Tooling available to make sale turn key

Nozzles

- 35 Standard nozzles.
- Tweezers nozzles are unique to Desco Industries grip parts with mechanical tweezers that bend in 1-2mm at 200°C.
- Pick up PNZ-xxx part is used for fine placer pick up heads. A separate PDF document is available with all.



- PNZ style custom pick up heads are available as example LED custom nozzles any size.
- Custom size reflow nozzles any size.
- Custom tweezers nozzles available.

