

Quality service  
Quality products  
Attractive price

# mekko<sup>™</sup>

technologies

**MTX-Flow**<sup>™</sup>  
Technology

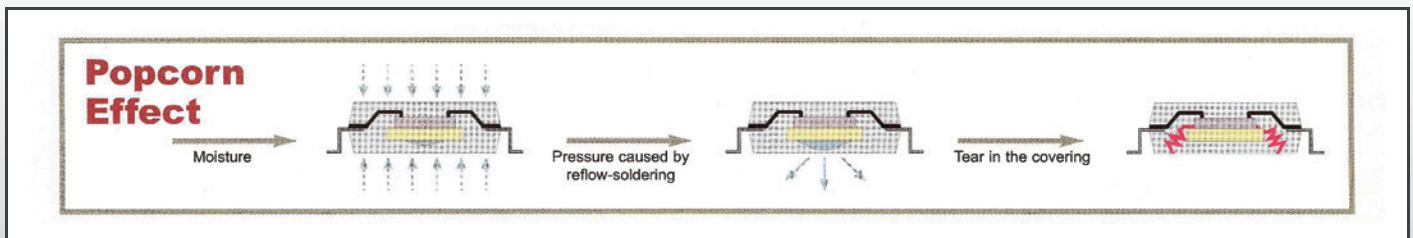
## Drying cabinet with ultra-low humidity 1%-3% RH

Fulfils the industry standard  
IPC/Jedec J-STD-033B



- Closed loop humidity controlled drying and storage cabinets.
- Mekko Technologies "Active Desiccant" dehumidifier incorporating MTX – Flow Technology.
- Continually regenerated molecular sieve desiccant.
- Protect your valuable components from micro-cracking and delamination.
- Less than 5% RH guaranteed, normal hysteresis 1-3% RH.
- Closed loop humidity control ensures swift return to spec if humidity rises.
- Normally less than 2 minutes to return to <5% RH after a door is opened!
- Not only dry storage, but also rapid moisture removal from components.
- Exceeds the requirements of IPC/Jedec standard J-STD-033B, which details recommendations for handling, packing, shipping and use of moisture/reflow sensitive surface mount devices.
- Less than 50 W average power consumption.
- Accuracy of humidity display = +/- 1% RH.

## For the next generation ...



ESD - 61340 - 5 - 1

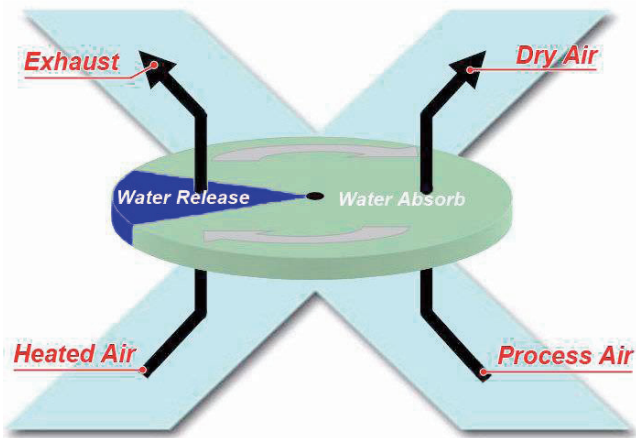
### MEKKO Technologies

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## Principle of operation:

**MTX-Flow**  
Technology

### Desiccant Rotor



The drying unit is built into the base of the cabinet. We have designed a new powerful absorbing desiccant rotor system incorporating our own "MTX-Flow" technology. This new development is more efficient and faster reacting than our competitors. We have developed and air flow system to optimize the drying and regenerating ability with minimal air leakage into the cabinet.

The desiccant rotor rotates in two separate streams of air. One sector has air flowing through it within the cabinet (moisture absorb), while a smaller sector uses an external heated air flow to regenerate the desiccant (moisture release). As the disk rotates, dry desiccant is always presented to the process air flow.

Much research was done into the air flow, and our new design uses a unique air flow system to guarantee speed, efficiency, and minimal cross-over at the wet/dry interface.

## Active Desiccant:

The new Mekko Technologies "Active Desiccant" range of drying and storage cabinets was designed to guarantee the new class of quality and reliability standards required by Surface Mount Devices and substrates. By assuring moisture free components, solder reflow can be achieved without damage from micro-cracking or delamination.

If moisture is absorbed from the environment by surface mounted components, and then the components are exposed to high temperatures, as in solder reflow ovens (convection, infrared, IR/convection, vapour phase, hot air rework tools), then the absorbed moisture will expand rapidly, causing internal or external cracking, delamination, and internal corrosion.

Eliminate "popcorning" and micro-cracking of ICs and BGAs during reflow by using MTX-Flow Technology "Active Desiccant" component drying and storage, rather than baking.

Drying out the components resets the "floor life" clock. Active Desiccant cabinets with MTX-Flow technology offer the best solution for storage and drying.

The only consumable costs are an average 50 Watts mains power! There is no need extra consumables or services to operate the unit. The rotor drying units continually regenerate the powerful Zeolite desiccant.

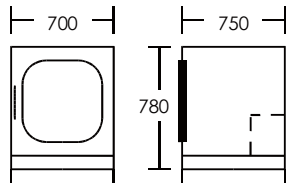
## Benefits of the system:

- Less complicated than baking.
- Closed loop control of internal humidity.
- No "off" time. The desiccant will **always** be absorbing moisture.
- No need for moisture barrier bags, nitrogen or compressed air.
- Reduces oxidation.
- Prevents "popcorning" or other problems associated with ingress of moisture.
- Can use low temperature packaging.

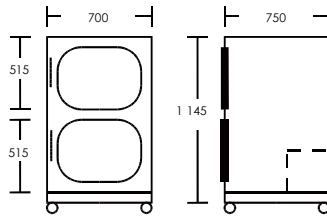


# Low Humidity Drying & Storage: 1%~3% RH

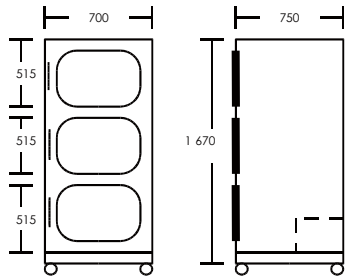
## AD – Series



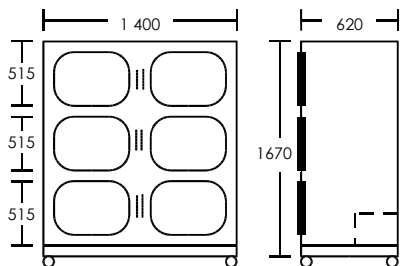
Specifications	AD - 101
External dimensions (mm)	780(H) x 700 (W) x 750 (D)
Capacity	Ca. 250 litre
Drying unit	MTX – Flow Zeolite Desiccant rotor
Material / colour	1.5mm steel, RAL7035, light-grey
Removable Shelves	Maximum 10
Doors	1
Weight	CA. 80kg
Power	AC 230V (50/60 Hz) average 50W
Integrated accessories	MT5 control meter, 4 shelves



Specifications	AD - 202
External dimensions (mm)	1 245(H) x 700 (W) x 750 (D)
Capacity	Ca. 450 litre
Drying unit	MTX – Flow Zeolite Desiccant rotor
Material / colour	1.5mm steel, RAL7035, light-grey
Removable Shelves	Maximum 20
Doors	2
Weight	CA. 120kg
Power	AC 230V (50/60 Hz) average 50W
Integrated accessories	MT5 control meter, 6 shelves



Specifications	AD - 303
External dimensions (mm)	1 770(H) x 700 (W) x 750 (D)
Capacity	Ca. 750 litre
Drying unit	MTX – Flow Zeolite Desiccant rotor
Material / colour	1.5mm steel, RAL7035, light-grey
Removable Shelves	Maximum 30
Doors	3
Weight	CA. 150kg
Power	AC 230V (50/60 Hz) average 50W
Integrated accessories	MT5 control meter, 9 shelves



Specifications	AD - 606
External dimensions (mm)	1 770(H) x 1 400 (W) x 620 (D)
Capacity	Ca. 1 300 litre
Drying unit	MTX – Flow Zeolite Desiccant rotor
Material / colour	1.5mm steel, RAL7035, light-grey
Removable Shelves	Maximum 60
Doors	6
Weight	CA. 200kg
Power	AC 230V (50/60 Hz) average 50W
Integrated accessories	MT5 control meter, 18 shelves

**Finish:** Powder coated steel cabinet and doors in RAL 7035 (light grey gloss) with optional static conductive powder coat. Stainless steel shelf holders with light-weight aluminium sliding removable shelves.

**Control system:** High quality humidity and temperature sensor probe, with Mekko Technologies microprocessor control system. Closed loop control of internal humidity level with upper and lower set points. Clear illuminated digital display of humidity and temperature. Our standard meter includes set points for humidity, temperature, and humidity alarm level. System accuracy = +/- 1% RH, +/- 0.6°C

**Status LEDs:** Red/Green = humidity level, Orange = Drying Unit power on

**Earth bonding point** fitted as standard for ESD standard EN 61340-5-1.

**Cabinet base:** 2-door models and above are fitted with 4 x anti-static castors as standard. Optional extra on 1 door cabinet.

# High Speed Recovery: 50%→5% RH in 2 min!

## Options:

2100mm high, 1250mm deep



Telescopic slides



Fixtures for tape feeders



Fixtures for magazine racks



Tape reel racks with telescopic slides



Pass-through system



Tape reel racks



4-door cabinet



9-door cabinet



16-door cabinet



Any size can be made!



Some more optional extras:

- Convection heater for faster drying of components
- Static dissipative powder coat
- Locking doors
- Vertical racking for tape reels
- Telescopic sliding fixed shelves
- Status beacon light tower
- Fixed stainless steel shelves
- Data recording software with transfer of data to PC
- Pass-through systems with doors on front and back
- Any other sizes built to order!

## Mekko Technologies

Humidity controlled storage equipment  
Conveyor ovens and screen/stencil printers  
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