

## Devices

# REMP Seal Piercing Family

REMP offers researchers a choice of three reliable and simple Seal Piercing Devices for accessing previously sealed samples through the use of REMP's Seal Piercing Lids. These instruments include the REMP Manual Plate Piercer™ (MPP), a manual device, the REMP Universal Plate Piercer™ (UPP), a semi-manual device, and the REMP Automated Plate Piercer™ (APP), an automated device that functions as a standalone instrument or may be integrated into a robotic system.

Each instrument employs the use of the same disposable REMP Seal Piercing Lid and is capable of quickly and correctly piercing a wide variety of seals on 96- or 384-well microplates without the need to wash and dry piercing pins, which occurs with other fixed-pin devices. REMP Seal Piercing Lids produce a larger opening than that of traditional piercing heads which allows for easier access for liquid handlers, avoids tip coating damage and reduces the risk of carry-over on liquid handlers. REMP's Seal Piercing Devices are simplistically designed and do not require complicated pierce pin heads to be mounted and cleaned between use.



### REMP Seal Piercing Lids

REMP's Seal Piercing Lids offer an inexpensive alternative to the fixed-pin seal piercing heads. They are available in 96-pin and 384-pin formats and are compatible with a majority of available microplates. They include 384 Piercing Lids (Clear) for use with all 384-well microplates and REMP 384 Storage Tube Racks, 96 Piercing Lids (Red) for all 96-well microplates, 96 Piercing Lids (Orange) specifically designed to work with REMP 96 Storage Tube Racks and

REMP Plate Lids (Purple) to cover any type of microplate. Being disposable and intended for one-time use, the REMP Seal Piercing Lids eliminate carry-over contamination and the need for a wash/dry cycle and thereby reduce the time it takes to pierce plates to only a few seconds. The REMP Seal Piercing Lids may also be used as an effective temporary seal after piercing by mating the piercing lid tightly back onto the pierced plate or rack.



## | REMP Automated Plate Piercer™ (APP)

### REMP Automated Plate Piercer™ (APP)

The REMP Automated Plate Piercer™ (APP) is an automated device ideal for low to high throughput piercing applications. It can be operated as a standalone device or integrated into an automated system through either a digital I/O port, for simple instrument control, or an RS232 serial port, which can be more elaborately controlled via the REMP ActiveX Device Interface Software. This versatile and efficient instrument is capable of piercing the seals of many different types of standard microplates and deepwell plates, as well as, REMP's unique 384 and 96 Storage Tube Racks, using any of the available REMP Seal Piercing Lids, and requires only a minor adapter change to accommodate the various microplate types. As part of the normal piercing cycle of the REMP APP, the device is able to temporarily hold the Seal Piercing Lid so that the pierced microplate can be presented alone to the user. The same microplate can be placed back onto the device and the Seal Piercing Lid can be reapplied for use as a temporary seal for short-term storage.

### Technical Information

#### Features and Benefits:

- Functions as a standalone workstation or integrated module
- Quick and easy changing of plate adapter to accommodate various microplate heights and types
- Uses disposable REMP Seal Piercing Lids to pierce the seals on any ANSI/SBS Standard microplates
- CE Approved

### Performance:

- Cycle time: roughly 4s – 7s (depending on user-adjustable settings)
- No washing/drying of piercing pins with REMP Seal Piercing Lids

### Operating Requirements:

- Electrical: 115/230VAC, 50/60Hz
- Air: 6 bar [87psi] – filtered, oil-less compressed air
- Integration: digital I/O or RS232 (controlled via REMP ActiveX Device Interface Software)

### Technical Specifications:

- Dimensions: 444mm x 187mm x 468mm [17.5" x 7.4" x 18.4"] (LxWxH)
- Weight: 26kg [57lbs]



## | REMP Universal Plate Piercer™ (UPP)

### REMP Universal Plate Piercer™ (UPP)

The REMP Universal Plate Piercer™ (UPP) is a semi-manual device ideal for medium throughput piercing applications. The device is capable of piercing the seals of many different types of standard microplates and deepwell plates, as well as, REMP's unique 384 and 96 Storage Tube Racks. The REMP UPP can be adjusted to accommodate microplates of any height and uses all of the available REMP Seal Piercing Lids.

It operates through a simple push-button control at the rear of the device or it can be optionally controlled by a foot pedal. The REMP Universal Plate Piercer™ is compact and easy-to-use, requiring only compressed air to operate.

### Technical Information

#### Features and Benefits:

- Simple, three-step, semi-manual operation:
  1. Place microplate and REMP Seal Piercing Lid onto device drawer
  2. Close the drawer and initiate operation through push-button control or via optional foot pedal.
  3. Open drawer and remove pierced microplate and REMP Seal Piercing Lid

- Compact, lightweight and portable bench-top design
- Requires only a compressed air connection to operate
- Uses disposable REMP Seal Piercing Lids to pierce the seals on any ANSI/SBS Standard microplates

#### Performance:

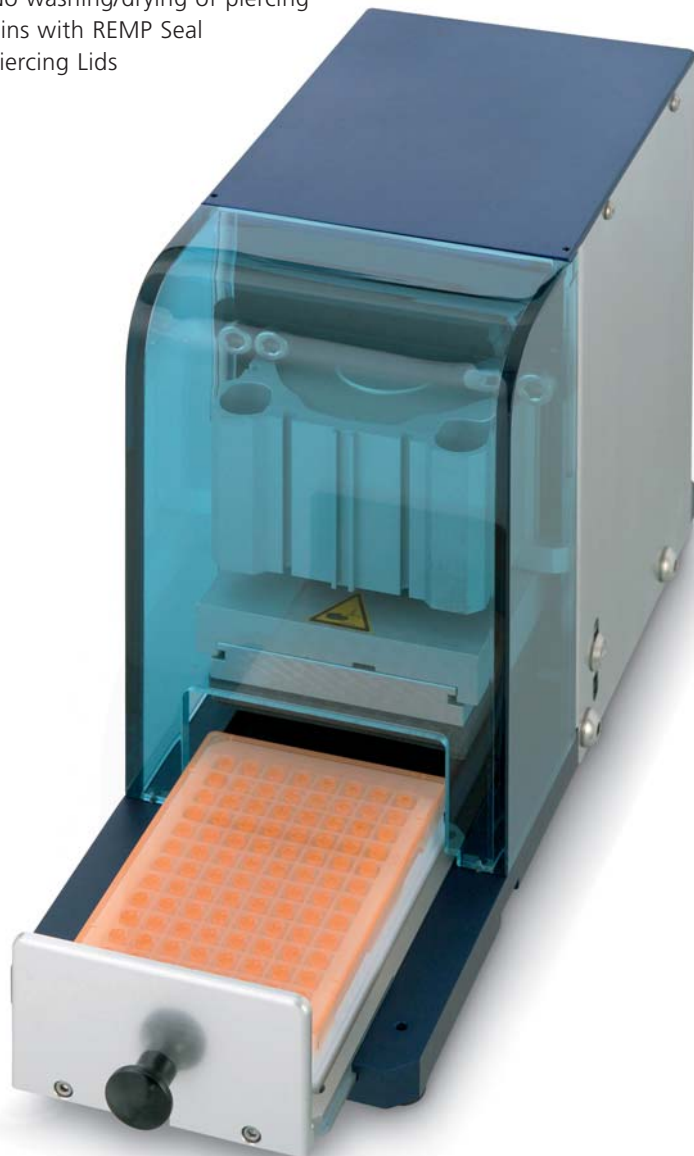
- Cycle time: roughly 1s – 5s (depending on the user)
- No washing/drying of piercing pins with REMP Seal Piercing Lids

#### Operating Requirements:

- Electrical: NONE
- Air: 6 bar [87psi] – filtered, oil-less compressed air

#### Technical Specifications:

- Dimensions: 364mm x 135mm x 226mm [14.3" x 5.3" x 8.9"] (LxWxH)
- Weight: 10kg [22lbs]



## | REMP Manual Plate Piercer™ (MPP)

### REMP Manual Plate Piercer™ (MPP)

The REMP Manual Plate Piercer™ (MPP) is a manual device ideal for low throughput piercing applications. The device is capable of piercing the seals of many different types of standard microplates and deepwell plates. The REMP MPP is available in several heights to accommodate any microplate of a specific height and uses all of the available REMP Seal Piercing Lids.

Its simple lever-actuated design allows for precise and controlled piercing on every plate and contributes to its ease of operation. The REMP Manual Plate Piercer™ is light, requires minimal space to operate and does not need any electrical or air connections.

### Technical Information

#### Features and Benefits:

- Manual, lever-actuated operation is simple and easy-to-use
- Compact, lightweight and portable bench-top design
- Requires no electrical or air connections
- Uses disposable REMP Seal Piercing Lids to pierce the seals on any ANSI/SBS Standard microplates

### Performance:

- Cycle time: roughly 1s – 5s (depending on the user)
- No washing/drying of piercing pins with REMP Seal Piercing Lids

### Operating Requirements:

- Electrical: NONE
- Air: NONE

### Technical Specifications:

- Dimensions: 380mm x 160mm x 100mm [15" x 6.3" x 4"] (LxWxH)
- Weight: 4.5kg [10lbs]



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