



**CONSTANT  
SYSTEMS**  
CELL DISRUPTION MADE EASY



# MC Cell Disruptor



The MC Cell Disruptor is the most versatile model for small volume processing offered by Constant Systems Limited. At approximately 500mm<sup>2</sup> the MC sits very comfortable on the benchtop but is best suited when used on its tailor made trolley. The MC trolley ensures that the equipment is situated at its optimum working height and is mounted on full swivel and lockable casters that enables safe and free movement of the equipment when needed. The MC is capable of processing volumes from 0.5mL to 40mL per process and is recommended for volumes up to 80mL which makes the MC ideal for those users who wish to upgrade from small bench-top techniques such as bead beating and sonication.

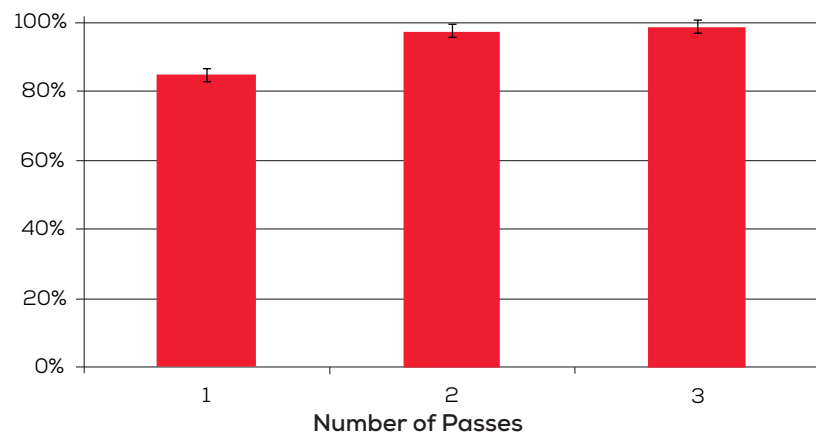
The MC takes advantage of Constant Systems precise and consistent hydraulic control which is fully scaleable through the whole product range from 0.5mL single preparation processing to large volume processing at 150L per hour. This precise control ensures that the entire sample is processed at the operators set pressure to ensure accurate and consistent results and in most cases a single process or pass is adequate therefore multiple passes are not required. The MC model can be utilised in three modes, these being Single Cycle (SC), Multi Cycle (MC) and Re Cycle (RC) for processing fluid, viscous, tissue, plant and frozen sample types.

SC Mode is simply a single cycle process and can be utilised to process 0.5mL - 8mL volumes of all sample types whether fluid, solid, frozen, tissue or plant.

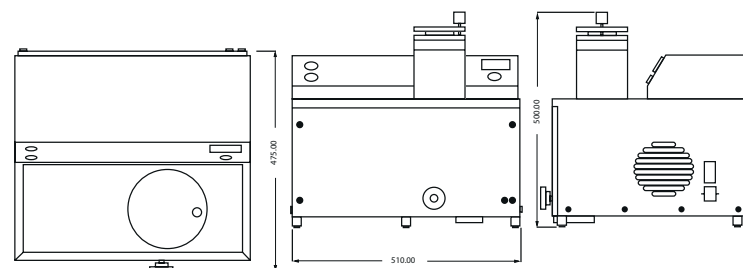
MC Mode can be utilised to process greater than 8mL volumes up to 40mL in each process and recommended for a total volume no greater than 80mL. In MC mode all sample types that are fluid and re-suspended can be processed.

RC Mode enables the user to conduct multiple passes of the same sample (fluid or re-suspended) without collecting and reintroducing the sample time and time again. RC mode is best utilised for very tough sample types such as Gram Positive Bacteria and some Fungi and Algae types. In RC mode a maximum sample volume of up to 80mL can be processed.

Lysis of *Pichia pastoris* ( $2.8 \times 10^9$  Cells/mL) Utilising a Constant Systems MC equipment model



- Simple, quick and easy to use
- No need for compressed air or bottled gas, standard electrical supply required only
- No need to prime or purge the equipment prior to use. Any air in the system is simply processed at no detrimental effect to the sample or the equipment
- Design incorporates a stainless steel tray to capture accidental spillages
- Disruption pressure displayed digitally and is easily and accurately set between 1-40 kpsi
- Ability to process fluid, re-suspended, viscous, tissue, plant and frozen sample types
- Collection cups provided can be transferred to and from ice or fridge to aid temperature control of sample
- Constant Systems precise and consistent hydraulic control ensures that consistency is maintained during each and every process giving you confidence in repeatability with 99% of the sample being processed at the set pressure
- Fully contained during the process
- Utilising industry standard media such as Ethanol (70%), Sodium Hydroxide (1 molar) and detergents such as Virkon (1%) the MC models can be easily cleaned using the following methods:
- Process flow cleaning - simply process cleaning media through the equipment as you would your sample
- Manual cleaning - All product path components can easily be dismantled for autoclaving or manual cleaning
- Product path materials are industry standard Stainless Steel 316L and F51 duplex or equivalent, EPDM, GLFPTFE & PEEK 450G ensuring that all sample types and industry standard cleaning media can be processed as standard
- Unit Dimensions: 475x510x500 mm (DxWxH)
- Unit Weight: 110 kg
- Electrical connections - country specific plug type and standard single phase supply via C15 or C20 connection



Scan here to see a video on the use of the MC Cell Disruptor

The dimensions, weight power and materials are for reference only. Constant Systems Ltd have the right to change these at any time.



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