

MultiChannel Arm 384™ option

Increased throughput and flexibility for the Freedom EVO® liquid handling workstation

The MultiChannel Arm 384 for the Freedom EVO liquid handling workstation has been designed to offer higher productivity to automated liquid handling processes in pharmaceutical and biotechnology research applications. The arm can be mounted onto Tecan's Freedom EVO 100, 150 or 200 platforms, increasing the efficiency and speed of pipetting processes for higher throughput as well as delivering a greater level of flexibility.

Broad volume range

The pipetting head features a very broad volume range from 0.5 µl to 125 µl in the 384 well and from 0.5 µl to 500 µl in the 96 well format. It works with both disposable tips and washable stainless steel tips, which can be automatically interchanged during a run. Usage of fixed washable tips for the pipetting of reagents or solvents

may offer a reduction of running costs. When the protocol demands a new tip it can be easily switched to disposable tips available in different sizes, 500 µl in 96 and 125 µl, 50 µl and 15 µl in 384 well format.

Pipette with 384, 96, 32, 24, 16, 12 or 8 tips

The head can rapidly change adaptors during a run to offer a variety of pipetting formats. It can mount four sets of 96 tips from a box of 384 tips, saving considerable deck space or alternatively mount 96 tips directly out of a box for 96 tips for higher volume applications. It can even mount single rows of 24 or 12 tips and columns of 32, 16 or 8 tips. This feature can be used to pipette controls or to conduct serial dilutions over different plate formats.



With the Extended Volume Adapter (EVA) the 384-ch. head can pipette up to 500 µl in the 96 well format.

MultiChannel Arm 384 and parallel Processing

The Multichannel arm can be freely combined with other arms on the Freedom EVO resulting in true parallel processing increasing the productivity of the overall system.

Optional gripper

An optional gripper can be mounted on the pipetting arm to move plates, tip racks and other labware for added functionality. The

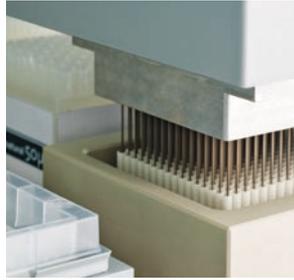
gripper option has individual movements in the y- and z-axes, as well as a 360° rotation axis to transport labware pieces and load positions in landscape and portrait orientation. The gripper module enables fast access to devices located on or around the workstation such as microplate readers and washers as well as storage and incubation devices. Furthermore, it can also be used to de-lid a plate for the duration of a pipetting step.

Main features

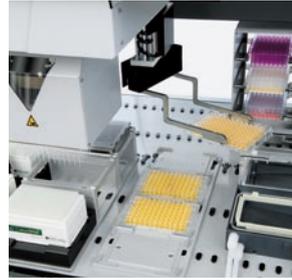
- Highest degree of format flexibility through different adapter plate usage. Tip arrays with 384, 96, 32, 24, 16, 12 or 8 tips
- Satisfy the demands of your assay with a broad volume range of 0.5 to 125 µl in the 384 well and 0.5 to 500 µl in the 96 well format
- Easy reconfiguration through automatic exchange between disposable and washable fixed tips
- Increased productivity using parallel processing with other arms
- Flexible multi-channel pipetting powered by Freedom EVOware® software



The 384-ch. head pipetting with a column of 16 tips.



The 384-ch. head cleaning its stainless tips in the wash station



The MCA 384 gripper is removing a micro plate after dispensing.

Specifications of disposable tips

Pipetting of aqueous solutions

Tip size	Range	Performance*
15 µl [†]	0.5 – 15 µl	CV < 4%, accuracy = ± 10% (at 0.5 µl)
50 µl	1.0 – 50 µl	CV < 4%, accuracy = ± 5% (at 1.0 µl)
125 µl	2.0 – 125 µl	CV < 3%, accuracy = ± 5% (at 2.0 µl)
500 µl (in 96 well format)	25 – 500 µl	CV < 2%, accuracy = ± 5% (at 500 µl)

Pipetting of DMSO solutions

Tip size	Range	Performance*
15 µl [†]	0.5 – 15 µl	CV < 4%, accuracy = ± 5% (at 0.5 µl)
50 µl	0.5 – 50 µl	CV < 4%, accuracy = ± 5% (at 0.5 µl)
125 µl	2.0 – 125 µl	CV < 3%, accuracy = ± 5% (at 2.0 µl)
500 µl (in 96 well format)	25 – 500 µl	CV < 2%, accuracy = ± 5% (at 500 µl)

Specifications of fixed tip adapters

Pipetting of aqueous solutions

Adapter type	Range	Performance*
SC 384	1.0 – 15 µl	CV < 8%, accuracy = ± 5% (at 1.0 µl)
LC 384	3.0 – 125 µl	CV < 5%, accuracy = ± 5% (at 3.0 µl)

Pipetting of DMSO solutions

Tip size	Range	Performance*
SC 384	0.5 – 15 µl	CV < 6%, accuracy = ± 5% (at 0.5 µl)
LC 384	2.0 – 125 µl	CV < 5%, accuracy = ± 5% (at 2.0 µl)

SC = small capacity, LC = large capacity

+ Available in Q4 2010 * Photometry measurement of aqueous solutions, contact dispense; method available on request

Austria +43 62 46 89 33 Belgium +32 15 42 13 19 China +86 10 5869 5936 Denmark +45 70 23 44 50 France +33 4 72 76 04 80 Germany +49 79 51 94 170
Italy +39 02 92 44 790 Japan +81 44 556 73 11 Netherlands +31 18 34 48 174 Portugal +351 21 000 82 16 Singapore +65 644 41 886 Spain +34 93 490 01 74
Sweden +46 31 75 44 000 Switzerland +41 44 922 89 22 UK +44 118 9300 300 USA +1 919 361 5200 Other countries +41 44 922 8125

The MultiChannel Arm option is a scientific instrumentation. Not for use in human clinical or diagnostic procedures.

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