



Freedom EVO® Clinical

Dedicated platform for sample distribution and archiving

Open and flexible platform for clinical applications

Dedicated platform

Freedom EVO Clinical was designed for dedicated applications such as sample distribution, sample splitting and archiving. The instrument consists of a set of modules and options to deal with the routine tasks in clinical laboratories.

Positive barcode identification for full tracking of samples and consumables during the routine

Front panel door with interlocks

Window to allow access to the worktable during operation



Instrument safety concept

The platform's panel door is closed during operation to avoid contact of personnel with moving instrument modules. Access to the worktable is via the cut-out in the lower part of the door. Shielded carriers provide full operator protection.

Scalable application

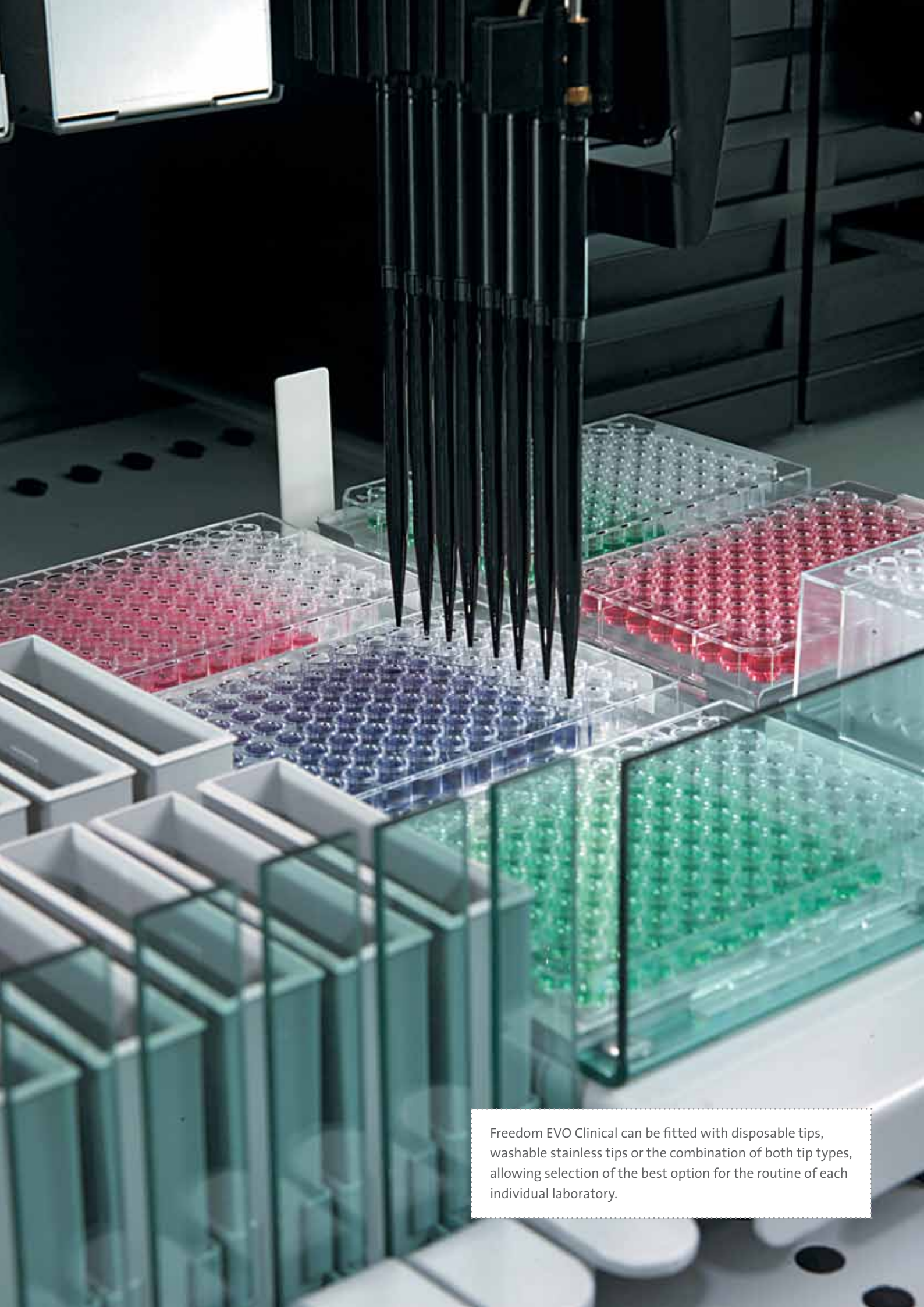
The instrument is available in three sizes – 100, 150 and 200 cm – to suit various throughput requirements: the number of samples and plates used in the routine or the number of secondary tubes that need to be prepared.



Liquid handling arm for liquid distribution

Pipetting tips: choice of disposable tips or washable fixed tips

Freely configurable worktable, depending on throughput needs



Freedom EVO Clinical can be fitted with disposable tips, washable stainless tips or the combination of both tip types, allowing selection of the best option for the routine of each individual laboratory.

Effective routine

Efficient throughput is crucial in hospitals and clinical laboratories, as well as private laboratories, where results need to be provided on time. Tecan offers different instrument configurations to meet these requirements.

Pipetting speed can be adapted to the individual laboratory needs by choosing a different number of pipetting channels: 2,4 or 8. The **8-channel pipetting arm** allows fast column-by-column liquid distribution.



Guided operation by the intuitive Freedom EVOlution™ Run Time control software is enhanced by the **loading interface**, which visualizes the worktable grids for operator interaction.



Walkaway times are greatly increased by the option of pre-checking the liquid volumes and calculating the required volumes of reagents and number of microplate strips prior to processing.



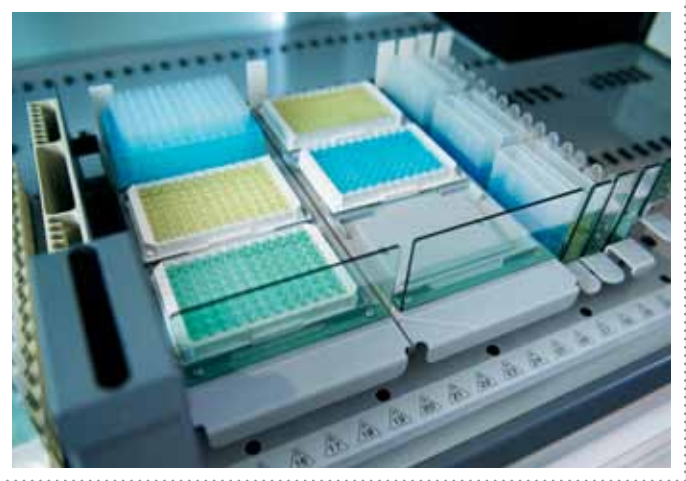
The samples and all barcoded controls, reagents and plates **are tracked** through the whole pipetting procedure. The sample IDs and the pipetting status are reported in the Report Center or are prepared for data transfer via the output file.



Routine applications

The dedicated Freedom EVolution software is perfectly suited for routine applications in the clinical laboratory. Therefore, the application set-up of the pipetting schemes is straightforward, allowing users to configure the instrument within a short time. The operator is guided step-by-step through the processing by the intuitive Freedom EVolution Run Time control software.

Freedom EVO Clinical with the Freedom EVolution software is designed to carry out common tasks for liquid handling, such as sample predilution and distribution into the subsequent vials or plates and reagent addition.



The Freedom EVO Clinical is commonly used as a front-end instrument for ELISA processors, performing the first steps of sample preparation for ELISAs: predilutions, distribution of samples and controls and addition of the conjugate before the first incubation.



Another routine task that can be carried out with the Freedom EVO Clinical is sample splitting. The application is simple to conduct and the instrument set-up allows easy adaption to the daily sample workload. The secondary barcoded tubes are prepared outside the workstation and are processed in two different modes respecting the workflow needs of the laboratory.



Specifications

Freedom EVO Clinical – Technical specifications

Hardware features				
Tip configuration	Freedom EVO Clinical 100: 2, 4 or 8 tips; Freedom EVO Clinical 150: 4 or 8 tips; Freedom EVO Clinical 200: 8 tips Various combinations of different tip types are possible			
Tip types	FEP-coated stainless steel tips and disposable tips with or without filter (200/1000 µl)			
Syringe size	1000 µl			
Liquid handling features				
Pipetting precision (CV)	Volume	Fixed tips	Disposable tips 200 µl	Disposable tips 1000 µl
Standard volumes ¹⁾	10 µl	≤ 3.5%	≤ 3.5%	–
	100 µl	≤ 0.75%	≤ 0.75%	≤ 1%
¹⁾ Typical results pipetting plasma in single pipetting mode (1000 µl syringe)				
Liquid detection	Down to 50 µl of conductive liquid can be detected in round-bottom microplates on standard microplate carrier			
Sample input formats	Sample tubes (tube diameter from approx. 10 up to 16 mm), microplates, strip plates or deep-well plates			
Strip handling	Up to 12 different assays per plate			
Predilution options	Common, serial or exclusive predilution, as well as several predilutions on one plate			
Barcode identification				
Supported formats	Sample tubes, microplates, deep-well plates, strip plates, reagent containers			
Barcode evaluation	Code 39, Code 128, Codabar and 2 of 5 interleaved			
Barcode evaluation	Reagent type, recording of lot number, lot expiry date			
Software				
Interface	Supporting 21 CFR part 11, operating system Windows® XP SP3			
Interface	Unidirectional ASTM ²⁾ (NCCLS ³⁾ LIS ⁴⁾ NCCLS LIS ²⁾ interface			
Dimensions				
	Freedom EVO Clinical 100	Freedom EVO Clinical 150	Freedom EVO Clinical 200	
Height	870 mm/34.3"	870 mm/34.3"	870 mm/34.3"	
Width	1075 mm/42.3"	1450 mm/57"	2050 mm/80.7"	
Depth	780 mm/30.7"	780 mm/30.7"	780 mm/30.7"	
Weight	150 kg	200 kg	230 kg	
Power supply requirements	Power: 600 VA (EVO Clinical 100) and 1200 VA (EVO Clinical 150 & 200) voltage: 100–120 and 220–240 VAC, frequency 50/60 Hz			
Operating conditions	Temperature: 15–32 °C/59–90 °F, relative humidity: 30–80% (non condensing) at 30 °C/86 °F			
Compliance	CE marked; compliant with the directive of <i>in vitro</i> diagnostic medical devices 98/79/EC			

²⁾ American Society for Testing and Materials

³⁾ National Commmittee for Clinical Laboratory Standards

⁴⁾ Laboratory Information System

Tip quality matters

Tecan disposable tips are carefully designed, produced and validated to maintain stringent pipetting reproducibility. Three purity levels are available, each tailored for specific application needs.

	Tecan Standard	Tecan Pure	Tecan Sterile
Application examples/ customer segments	ELISA Sample handling Biochemical screening	Genomics research Forensics Molecular diagnostics	Cell biology Microbiology Cell-based screening
Tecan Standard purity	•	•	•
Human DNA free	—	•	•
PCR inhibitor free	—	•	—
RNase/DNase free	—	•	•
Pyrogen/endotoxin free	—	—	•
Sterile	—	—	•

Austria +43 62 46 89 33 Belgium +32 15 42 13 19 China +86 21 28 98 63 33 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 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

Tecan Group Ltd. makes every effort to include accurate and up-to-date information within this publication, however, it is possible that omissions or errors might have occurred. Tecan Group Ltd. cannot, therefore, make any representations or warranties, expressed or implied, as to the accuracy or completeness of the information provided in this publication. Changes in this publication can be made at any time without notice. All mentioned trademarks are protected by law. For technical details and detailed procedures of the specifications provided in this document please contact your Tecan representative. This brochure may contain reference to applications and products which are not available in all markets. Please check with your local sales representative.

Tecan and Freedom EVO are registered trademarks and Freedom EVOLution is a trademark of Tecan Group Ltd., Männedorf, Switzerland. Windows is a registered trademark of Microsoft Corporation in the United States and other countries.

© 2011, Tecan Trading AG, Switzerland, all rights reserved.

www.tecan.com