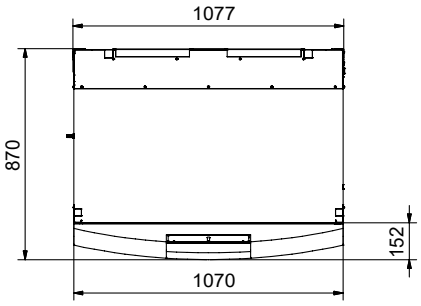
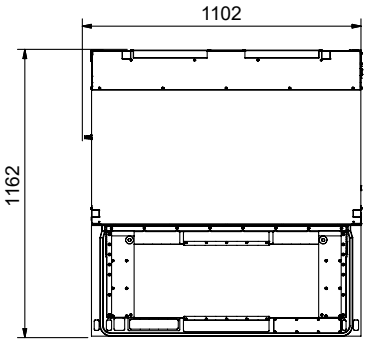
INFORS HT
We bring life to your laboratory

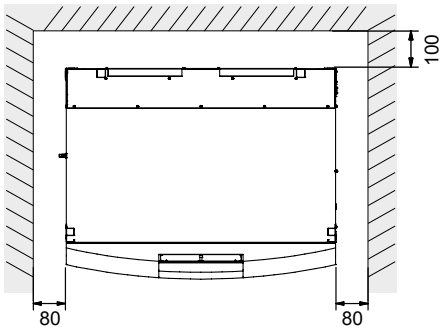
Multitron Standard (230 V)

This incubation shaker comes standard with everything you need for microbial applications. All you need to determine is the number of units, the shaking throw and if a cooling is needed – and then you can get right to work.

Dimensions and Weights







Exterior dimensions	
Height single unit (w/o base)	530 mm
Height two units (w/o base)	1060 mm
Height three units (w/o base)	1580 mm
Height rubber feet	20 mm
Height low base	130 mm
Height high base	315 mm
Height top cooling	290 mm

Interior dimensions	
Width	925 mm
Depth	550 mm
Height	390 mm
Volume	approx. 200 L
Tray size	M (850 x 470 mm)

Weight single unit without base frame and cooling	
Single unit 25 mm throw	94 kg
Single unit 50 mm throw	96 kg

Weight base frames	
Rubber feet	6 kg
Low base (H = 13 cm)	25 kg
High base (H = 31 cm)	23 kg

Weight stacked units (throw = 50 mm) without cooling	
2 units with low base	239 kg
3 units with low base	339 kg

Weight options and accessories	
Additional weight top cooling	approx. 65 kg
Additional weight bottom cooling	approx. 14 kg
Universal tray	4.5 kg

Shaker Drive / Rotation Speed

Direction of rotation	Clockwise
Throw	25 or 50 mm
Setting range (25 mm throw)	20 to 400 min^{-1}
Setting range (50 mm throw)	20 to 350 min^{-1}
Increment setpoint	1 min^{-1}
Control precision (at maximum rotation speed, full scale)	± 1 %

Max. Rotation Speeds

Single unit	25 mm throw	50 mm throw
	400 min^{-1}	350 min^{-1}

Two units stacked (low base)	25 mm throw	50 mm throw
Top unit	400 min^{-1}	300 min^{-1}
Bottom unit	400 min^{-1}	350 min^{-1}

Two units stacked (high base)	25 mm throw	50 mm throw
Top unit	250 min^{-1}	250 min^{-1}
Bottom unit	400 min^{-1}	350 min^{-1}

Three units stacked	25 mm throw	50 mm throw
Top unit	350 min^{-1}	250 min^{-1}
Middle unit	400 min^{-1}	300 min^{-1}
Bottom unit	400 min^{-1}	350 min^{-1}

Operating Conditions

Load	Throw	Speed	
Load max.	All	All	19 kg
Load optimal	25 mm	< 350 min^{-1}	9 to 19 kg
	25 mm	≥ 350 min^{-1}	12 to 16 kg
	50 mm	< 250 min^{-1}	9 to 19 kg
	50 mm	≥ 250 min^{-1}	12 to 16 kg

Ambient conditions	
Ambient temperature	10 to 30 °C
Ambient humidity	10 to 85 %
Altitude operating location	max. 2000 m above sea level
Pollution degree as per EN 61010-1	2
Minimum distance side	80 mm
Minimum distance back	100 mm

Temperature Control

Setting range	4 to 65 °C
Increment setpoint	0.1 °C
Control precision 4 to 50 °C	± 0.3 °C
Control precision > 50 °C	± 0.5 °C

Lowest Attainable Temperature

Configuration	Lowest attainable temp.
Single unit without cooling	6 °C above ambient temp.
Single unit with bottom cooling	15 °C below ambient temp.
Single unit with top cooling	12 °C below ambient temp.

Materials

Housing	Polyurethane (PUR-IHS) with flame retardant
Door	PUR-IHS, safety glass
Cover plate temperature control	Stainless steel (1.4301-2B)
Shaking table	Aluminium, anodised
Universal tray	Aluminium, anodised

Various

IP rating	IP20
Sound pressure	< 70 dB(C)
Cooling agent in compressor	R134a

Interfaces

Ethernet interface	RJ45, 10/100 Mbps Ethernet

Electrical Connection and Power Values

General		
Mains voltage		230 V (± 10 %)
Mains frequency		50/60 Hz
Max. power consumption base unit		880 W
Max. current consumption base unit		3.8 A
Power consumption cooling compressor	Bottom cooling	220 W
	Top cooling	540/690 W
Fuse (two 5 x 20 mm fuses, time lag)		10 A

eve®

eve® is a platform software for planning, execution and analysis of bioprocesses. eve® allows you to record bioprocess data and store it in a central database. The software offers workflows from simple bioprocesses to the planning and execution of complex strategies with various phases.

eve® makes it possible to generate and store bioprocess knowledge. Various libraries for storing information on organisms and culture media are available. Thanks to soft-sensors, additional knowledge can be generated.

In addition to INFORS HT products, biotech machines and analysis devices from third-part manufacturers can be connected. This makes it possible to holistically control, monitor and analyse bioprocesses using a single software.

eve® is installed on a centralised server. Access takes place via a browser, no client side installation is required. Bioprocess data is therefore available directly via the browser and independent of the operating system.

Various packages of the software are available. This makes it possible to adapt it to the individual needs and requirements of its users. eve® (in the premium version) is also suitable for working in a validated environment as per FDA CFR 21 Part 11.