



## FDM Environment Makers Products

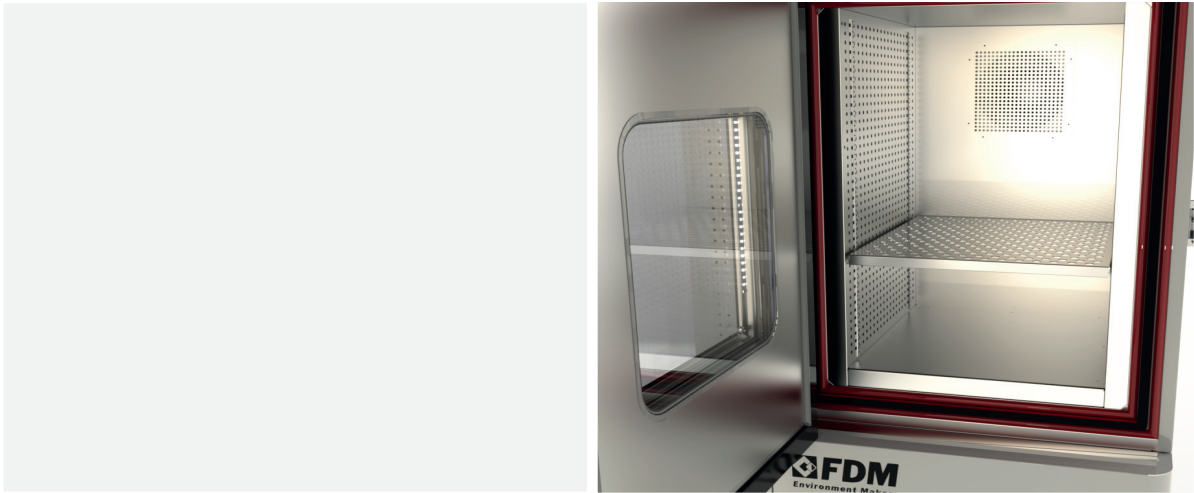
Climatic and Thermostatic Chambers

Growth Chambers

Environmental Chambers

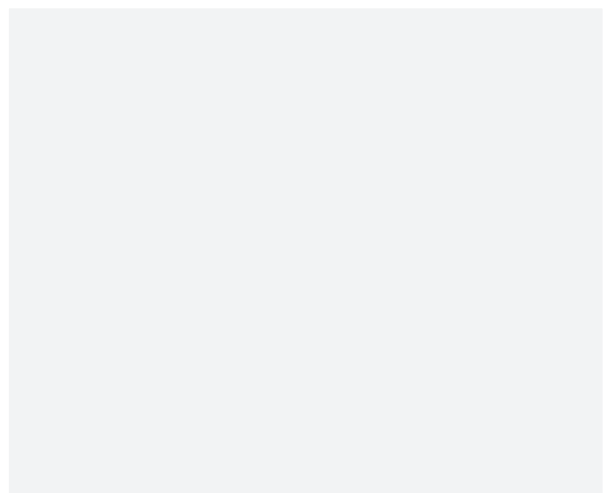
Ultrafreezers

Custom Products



# Environmental Chambers

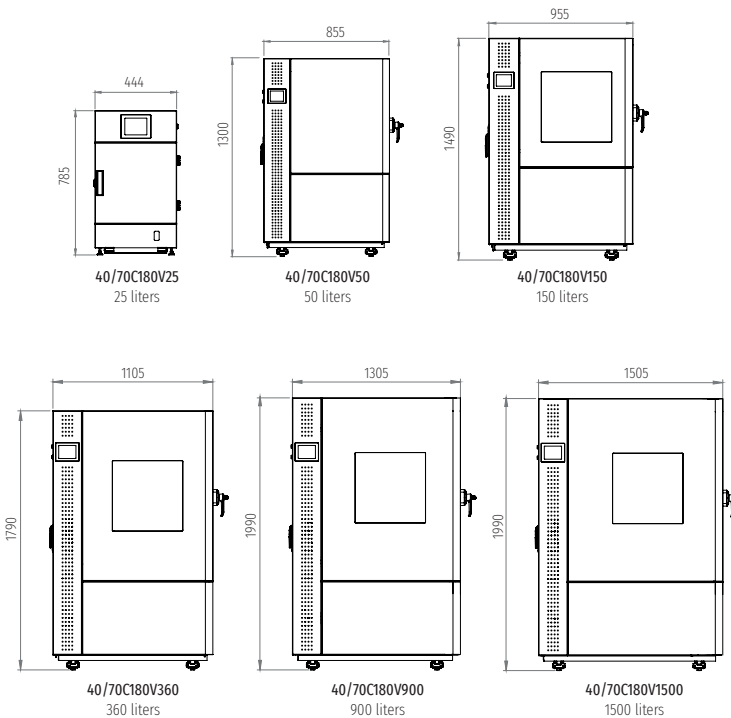
40/70C180V Series



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Technical specifications are subject to change

## Sizes



The 40/70C180V series is the category of FDM's best performing environmental chambers: you can choose different temperature, humidity and volume parameters.

You can also choose between a cyclic or constant climate chamber, the latter for those who need a stable test environment.

The environmental chamber is a fundamental instrument for the laboratory, also and above all because the various tests to be carried out are regulated by the various standards established by official research bodies.

FDM environmental simulation chambers are equipped with a thermo-glazed door with quadruple toughened glass, to give a complete internal view of the chamber, without penalizing the test performance. Excluding models with a volume of 25 and 50 liters.

Moreover, as standard, the environmental chamber is equipped with a lateral hole for the passage of cables inside, 4 rotating wheels and the water tank for the humidification system, positioned so as to have easy access to it.

## Advantages

Volumes from 25 to 1500 liters
Adjustable temperature -70°C...+180°C
Humidity range 10...98% ur
Internal stainless steel shelves adjustable in height
Programmable controller revoFACE or for stillFACE stable tests
Anti-fog inspection window with LED lighting
Distilled water tank with easy access
Hole for cables passage inside the chamber Ø50 with cap
Internal forced and homogeneous ventilation
High and low temperature and humidity alarms
Electric power 220-240V /50Hz or 110V



The stillFACE controller is designed for stability testing.



The revoFACE programmer is designed for cycle testing.



Interior of environmental chamber constructed of stainless steel, including reinforced, adjustable and removable shelves.



Cable hole installed on the side of the chamber that allows the passage of cables inside without loss of performance.



Moisture system canister readily available via dedicated compartment.



Easy access to chamber maintenance parts.

Model <b>A</b>	40C180V25	40C180V50	40C180V150	40C180V360	40C180V900	40C180V1500
Model <b>B</b>	70C180V25	70C180V50	70C180V150	70C180V360	70C180V900	70C180V1500
<b>Temperature performance</b>						
Temperature range without humidity [°C]	<b>A</b>		-40/+180			
	<b>B</b>		-70/+180			
Temperature range with humidity [°C]	30/98		10/98			
Temperature uniformity depending on setpoint [± K]			0,5..1,5			
Temperature fluctuation depending on setpoint [± K]			0,1..0,5			
Average heating-up rate according to EN 60068-3-5 [K/min]	+2		+5			
Average cooling down rate according to EN 60068-3-5 [K/min]	-2		-4			
<b>Performance Data Climate</b>						
Humidity range [%]	30/98		10/98			
Humidity fluctuation depending on setpoint [±%]			0,5..2			
Water tank [L]	4	5	12	12	18	25
<b>Outer dimensions</b>						
Width net [mm]	444	855	955	1105	1335	1505
Depth net [mm]	695	902	1102	1202	1559	1912
Height net [mm]	785	1300	1490	1790	1990	1990
Wall clearance back/ sidewise [mm]	250/250	250/250	250/250	250/250	250/250	250/250
Viewing window width/ height [mm]	O	O	480/480	480/480	480/480	480/480
<b>Doors</b>						
Unit doors	1	1	1	1	1	1
<b>Internal Dimensions</b>						
Width [mm]	300	350	450	600	800	1000
Depth [mm]	280	350	550	650	1000	1360
Height [mm]	300	410	600	900	1100	1100
<b>Measures</b>						
Interior volume [L]	25	50	150	360	900	1500
Net weight of the unit (empty) [kg]	80	150	450	700	860	950
Load per rack [kg]	20	20	20	20	20	20
<b>Fixtures</b>						
Number of shelves (std./max.)	1/2	1/2	2/4	2/4	2/4	2/4
Width net [mm]	300	350	450	600	800	1000
Depth net [mm]	235	350	550	650	1000	1360
<b>stillFACE Controller</b>						
Controller	Constant monitoring temperature and humidity controllers					
Interface port	Optional: RS485					
<b>revoFACE Programmer</b>						
Set-up Display	Programme status, set up temperature, humidity and time					
Programmer	10 programs and 50 segments each, adjustable from 1 min. to 999 hrs.					
Calibration	Possibility to calibrate all parameters					
Interface port	Optional: RS485 - Optional: Ethernet - Wifi - Dedicated mobile app					
<b>Environment-specific data</b>						
Sound-pressure level [dB(A)]	< 65					

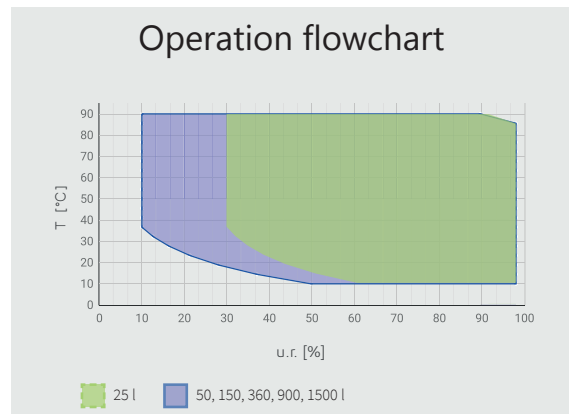
O = Optional

All technical data are specified for units with standard equipment at an ambient temperature of +24 °C and a voltage fluctuation of ±10 %.

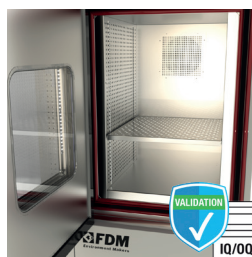
Model <b>A</b>	40C180V25	40C180V50	40C180V150	40C180V360	40C180V900	40C180V1500	
Model <b>B</b>	70C180V25	70C180V50	70C180V150	70C180V360	70C180V900	70C180V1500	
<b>Structure and insulation</b>							
Exterior material	Painted phosphated steel sheet						
Internal material	AISI 304 Stainless Steel						
Insulation	CFC and HCFC free						
Shelf grill	Removable and height adjustable steel grid						
<b>Ventilation</b>							
Fan	Forced						
<b>Safety</b>							
Temperature	Class 2 independent adjustable temperature safety devices (DIN 12880)						
Alarm	Audio-Visual						
<b>Electrical data</b>							
Rated Voltage [V]	<b>A</b>	230	230	230	230	400	400
	<b>B</b>	230	230	230	400	400	400
Power frequency [Hz]	50						
Nominal power [kW]	<b>A</b>	2,3	5,2	7,1	8,5	15	18
	<b>B</b>	5	8	10	13	19	23
Phase (nominal voltage)	<b>A</b>	1	1	1	1	3	3
	<b>B</b>	1	1	1	3	3	3

## Main Options

- ETH100 - Ethernet interface for remote connection
- RS485 - Interface port RS485
- PG50200 - Upgrade. 50 program 200 step for revoFACE
- PE100 - Interior socket coverable universal 220-230 V
- VOLXXE - Volume extension of testing area
- W65T00 - Kit for directly connection to the water source
- BDS020 - Relative humidity decreasing up to 2% @ 20°C
- UMS100 - Sterilised flux vapor humidifier
- TE110 - Power supply 110 V 50-60 Hz
- CO200 - CO2 Regulation System for EN 12390-10



- UDB100  
USB port for downloading test data with the possibility of viewing them on a PC in Excel format.



- IQ/OQ-100  
IQ/OQ Validation



- EAC100  
Compressed air drying system.

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