

**BIOMEDICAL**

R-281 ESSENTIAL

ENERGY EFFICIENT

ECO MODE AVAILABLE

A built-in ECO function together with the optimized cooling system and hydrocarbon refrigerants save energy and reduces your carbon footprint.

Integrated LED light in the door frame offers full exposure of the stored contents while still maintaining a low operational cost.

The flexible and robust glass shelves can easily be adjusted to fit your products.



DIMENSIONS

Outer Dimensions HxWxD, mm	1560x595x595
Inner Dimensions HxWxD, mm	1282x500x415
Weight Gross/Net, kg	72 / 70
Material inner cabinet	White/PS
Material outer cabinet	Painted steel
Packaging weight, kg	2
Packaging dimensions HxWxD, mm	1625x636x671
Insulation thickness	42
Insulation type	Polyurethane with cyclopentane
Mobility	2 feet front, 2 wheels back
Refrigerant, Type / gram	R600a / 50g

CONTROLLER

Controller	Danfoss
Controller language	No Language - only 3 digits
USB Connection	No
Logging	-
Temperature graph	No
High/Low temp. Alarm	Yes
Open door alarm	Yes
Probe failure alarm	Yes

STORAGE

Volume, Gross/Net, L	281 / 193
SPOR Full length half length	15 Full / 2Half
Shelves Full length half length	4Full / 1Half

FEATURES

Lock	Yes
Defrost tray	No
No. of shelf	4 + 1 no.
Lid color/type	Glass
Light inside lid	Yes
Cabinet color	White
Inside color/material	White / PS
Electronic display	Yes



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Voltage/Frequency	Voltage/Hz	230V/50Hz
Max Ambient	°C	32°C
Max Humidity	% rh	65%
PERFORMANCE		
All data in RT20°C		
Temperature Range	°C	2 to 10
Uniformity in performance - difference between top and bottom	°C	+/- 0,8
Pull down time	Minutes	24 min to 6°C
Hold over time	Minutes	78 min to 10°C
Noise	dB	45
Energy Consumption, kWh / 24h	kWh/24h	0,826kWh/24h set 5°C
Energy year	kWh/year	302kWh/y set 5°C
Energy class		B
Instant Power Consumption	kW	PD 0,2 /Stable 0,18
Heat Rejection	W	-
U-Value	W/m ² K	-
COOLING COMPONENTS		
Refrigerant/Amount (gram)		R600a/50gr
Number of compressors	pcs	1
Variable speed compressor	Yes/No	No
Internal air distribution (type of)		Dual Air Stream
Evaporator Fan	Yes/No/Variable	Yes
Condenser Fan	Yes/No/Variable	No
Number of probes	pcs	2
Defrost	Yes/No	Yes - automatic
FEATURES		
Safety thermostat	y/n/optional	No
Lock	y/n	Yes
LED light	y/n	Yes
Battery Back Up For Controller	y/n/optional	Yes
Porthole	y/n - Ømm	Yes - Ø 12,7 mm
Dry contact	y/n	No
Castors	y/n/optional	Optional
Door	glass/solid	Glass
Reference bottle	y/n/optional	No
Door closure	y/n/optional	Yes
Door reversibility	y/n	Yes
Automatic Hold 90°C	y/n	No
Vacum ventil + VIP (Vacum panel)	y/n	No
Bluetooth connection	y/n	Yes
Aluminum shelf	y/n/optional	Optional

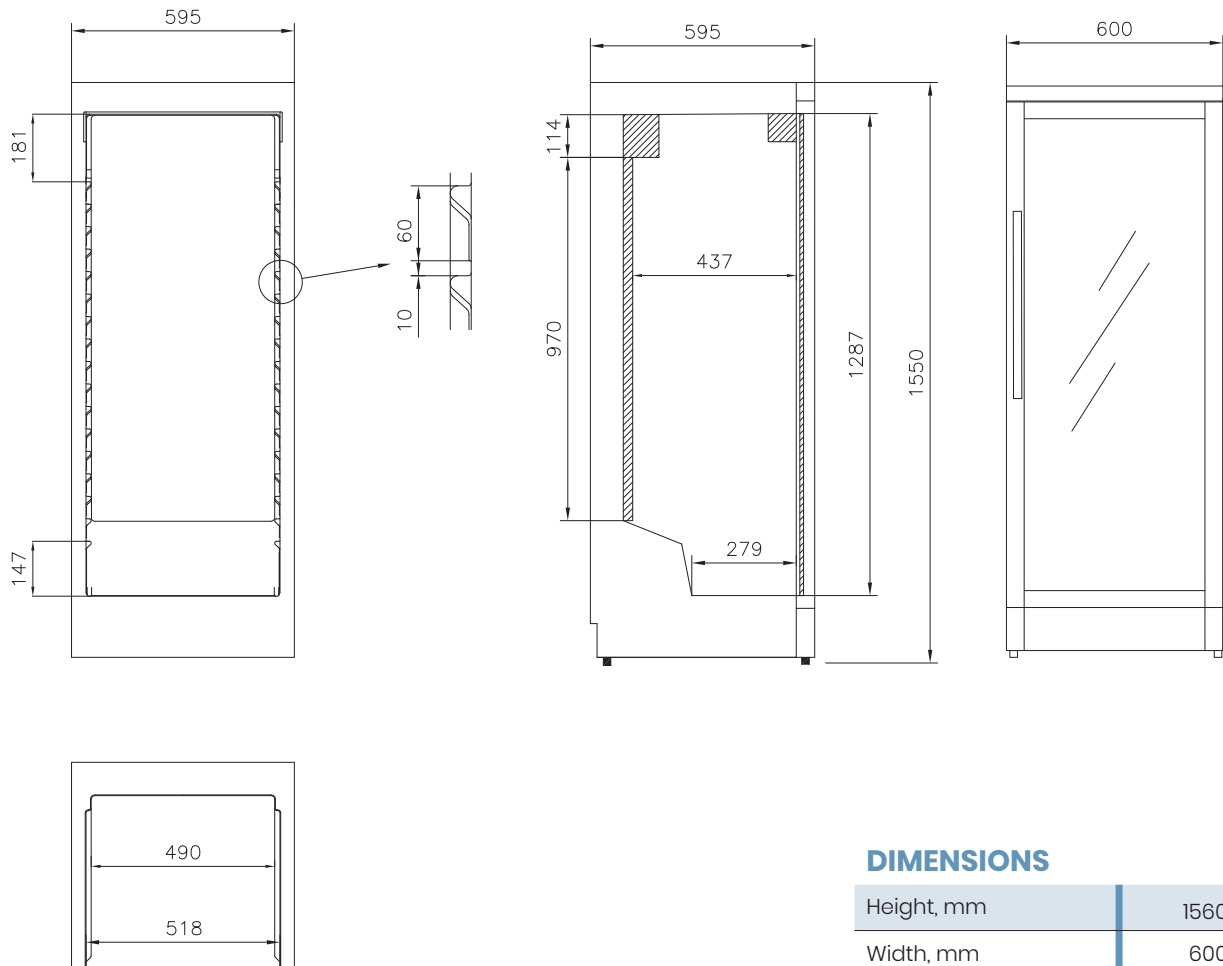


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DIMENSIONS

Height, mm	1560
Width, mm	600
Depth, mm	595
Incl. handle, mm	640
Incl. open door, mm	1180

All measurements in mm.



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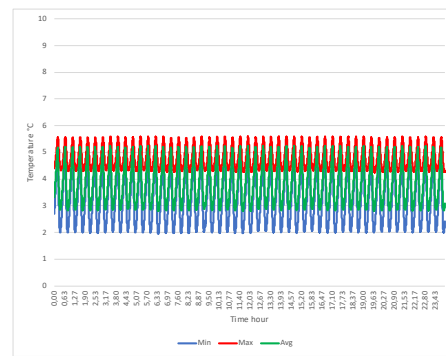
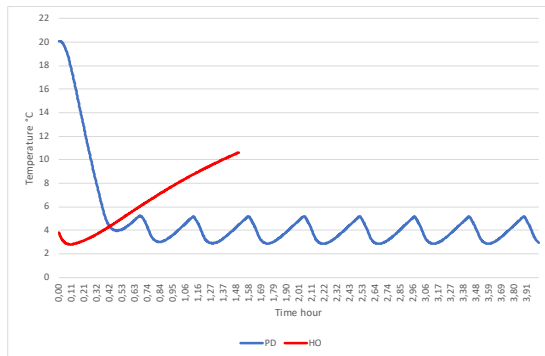
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SENSOR POSITION		MODEL	R-281 ESSENTIAL
<p>FRONT VIEW</p> <p>TOP VIEW</p>		<p>Test environment</p> <p>Controlled conditions,</p>	
		<p>Sensor used</p> <p>25gr tinned brass formed as a cylinder with a diameter of 15,2 mm</p>	
		<p>Installation</p> <p>Appliance installed according to instruction manual conditions</p>	
		<p>Refrigerant</p> <p>R600a</p>	

SENSOR TEMPERATURE WITH SET POINT 5°C IN STABLE CONDITION 24HR AMBIENT 20°C

Sensor position	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15
Max	4,1	3,7	4,3	4,8	3,8	3,8	3,7	3,8	3,9	3,3	3,7	3,2	3,7	3,8	3,8
Avg.	5,3	5,2	5,6	5,6	5,1	5,4	5,4	5,4	5,3	5	5,1	4,8	5	5,3	5
Min.	3,1	2,6	3,4	4,3	2,8	2,6	2,4	2,5	2,8	2	2,7	2,8	2,8	2,6	3

WARM UP & PULL DOWN CYCLIC OPERATION



TYPICAL PERFORMANCE IN AMBIENT 20°C – EMPTY CABINET

Avg. cabinet temperature at 5°C setpoint	3,8°C
Uniformity	+/- 1,5°C
Stability	2,4°C
1 min. door open recovery to 6°C	7 min.
Cycle rate on/off	5 / 23 min.
Duty cycle	18%
Energy consumption	0,826 kWh/day
Pull down time to 6°C	24 min.
Hold over time from avg to 10°C	78 min.
Heat rejection	- W
U-Value	- W/m ² *K
Noise	45 dB