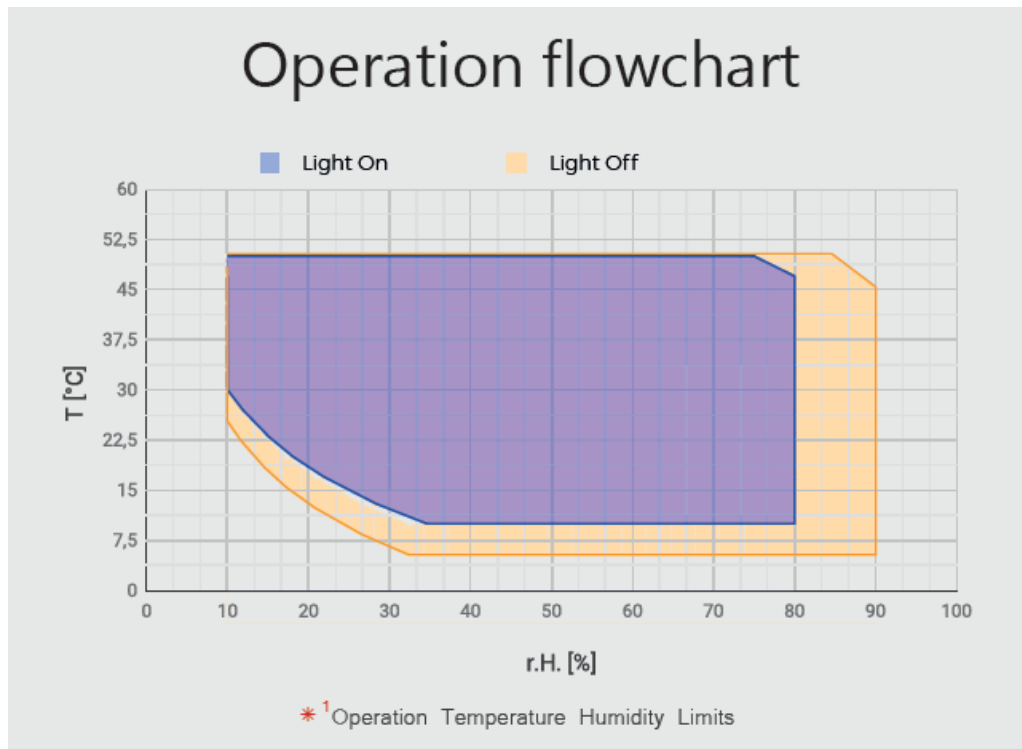


## (1) Illumination chambers with temperature and humidity (FDML-130-THL Series)

|   |           | FDML-130-THL-PRO<br>Touch Screen Controller          | FDML-130-THL<br>PID Constant Controller |
|---|-----------|--|---|
| <b>(1) Climatic performance:</b>                    |           |  |   |
| Temperature Range without Humidity                  | Light OFF | (S) 0 to +55°C / (B) -10°C to +55°C                  |   |
|   | Light ON  | (S) +5°C to +50°C / (B) -5°C to +50°C                |   |
| Temperature uniformity dep. on setpoint             |           | 0.5 to 2.5±°C  |   |
| Temperature fluctuation dep. on setpoint            |           | 0.1 to 0.5±°C  |   |
| Temperature range with active humidity              |           | +10°C to +55°C                                       |   |
| Average heating-up rate according to EN 60068-3-5   | Light OFF | +2°C/Min   |   |
| Average cooling down rate according to EN 60068-3-5 | Light OFF | -1°C/Min   |   |
| Humidity Range                                      | Light OFF | 10 to 90 %rH   |   |
|   | Light ON  | 10 to 80 %rH   |   |
| Humidity fluctuation                                |           | ≤ 3%rH   |   |
| <b>(2) Dimension and weight:</b>                    |           |  |   |
| External Dimension                                  | Width     | 530 mm   |   |
|   | Depth     | 810 mm   |   |
|   | Height    | 950 mm   |   |
| Internal Dimension                                  | Width     | 450 mm   |   |
|   | Depth     | 540 mm   |   |
|   | Height    | 520.50 mm  |   |
| Internal net volume                                 |           | 130 L  |   |
| Net weight (Empty)                                  |           | 78 Kg  |   |
| <b>(3) Door and shelves:</b>                        |           |  |   |
| Number of doors                                     |           | 1  |   |
| Number of shelves                                   | Standard  | 2  | Maximum 3                               |
| Shelf Dimension                                     | Width     | 400 mm   | Depth 500 mm                            |
| Permitted load per rack                             |           | 20 Kg (Optional 35 Kg)                               |   |
| Shelf Type  |           | Removable and height adjustable stainless-steel grid |   |

|  |                         | FDML-130-THL-PRO<br>Touch Screen Controller                              | FDML-130-THL<br>PID Constant Controller     |
|--|-------------------------|--|---|
| <b>(4) Controller:</b>                     |                         |  |   |
| Controller                                 |                         | Touch Screen<br><b>revoFACE</b><br>Fully programmable                    | Constant PID Controller<br><b>stillFACE</b> |
| <b>(5) Materials of construction:</b>      |                         |  |   |
| External materials                         |                         | White coated galvanized steel or full Stainless steel AISI 304           |   |
| Internal materials                         |                         | AISI 304 Stainless Steel   |   |
| Insulation                                 |                         | CFC and HCFC free  |   |
| Shelves                                    |                         | Stainless-steel grid   |   |
| <b>(6) Safety:</b>                         |                         |  |   |
| Temperature                                |                         | Class 2 independent adjustable temperature safety devices<br>(DIN 12880) |   |
| Alarms                                     |                         | Audio-Visual   |   |
| <b>(7) Other technical specifications:</b> |                         |  |   |
| Humidification system                      |                         | Ultrasonic   |   |
| Water filter                               |                         | Water softening filter and replaceable cartridge equipped                |   |
| Max Water hardness permitted               |                         | 600 ppm CaCO <sub>3</sub>  |   |
| Inlet Water                                |                         | Pressure 0.2 to 5 BAR; Temperature 10°C to 40°C; Pipe connection 3/4"    |   |
| Sound-pressure level                       |                         | 60 dB(A)   |   |
| Ventilation                                |                         | Fan forced ventilation   |   |
| <b>(8) Electrical Data:</b>                |                         |  |   |
| Voltage                                    |                         | 220 / 240 VAC single phase   |   |
| Frequency                                  |                         | 50 Hz  |   |
| Nominal power                              | Light OFF<br><b>(S)</b> | 1.4 kW   |   |
|  | Light OFF<br><b>(B)</b> | 1.6 kW   |   |
| Unit fuse                                  |                         | 16A  |   |

| <b>(9) Light options:</b>                                |   |   |   |                                 |
|--|---|---|---|---------------------------------|
| Lamp Type  | Day lamp                                    | Fluolamp  | Biolamp   | Arablamp                        |
| Application  | Sunlight Simulation                         | Accelerated Plant Growth                            | Insect and bacteria incubation                                | Arabidopsis Growth Acceleration |
| Temperature performance Light on:                        |   |   |   |                                 |
| At 0% light  | (S) 0 to +55°C                              |   |   |                                 |
|  | (B) -10°C to +55°C                          |   |   |                                 |
| At 100% light  | (S) 5 to +50°C                              |   |   |                                 |
|  | (B) -5°C to +50°C                           |   |   |                                 |
| Horizontal Shelf Illumination:                           |   |   |   |                                 |
| Illumination on Shelf (W/m <sup>2</sup> )                | 45  | 45  | x   | x                               |
| Illumination on Shelf (LUX)                              | 10.500                                      | 4.500   | x   | x                               |
| PPFD [μmol/m2s]  |   | 150   |   | x                               |
| Vertical Walls Illumination:                             |   |   |   |                                 |
| Lateral inner walls illumination [LUX]                   | 10.000                                      | 4.000   | 7.000   | 8.000                           |
| PPFD [μmol/m2s]  |   | 120   |   | 230                             |
| ICH Lamp - Photostability Test                           |   |   |   |                                 |
| Temperature performance Light on:                        |   |   |   |                                 |
| At 0% light  | (S)   | 0 to +55°C  |   |                                 |
| At 100% light  | (S)   | 5 to +50°C  |   |                                 |
| Horizontal Shelf Illumination:                           |   |   |   |                                 |
| Illumination on Shelf for UV-A lamps [W/m <sup>2</sup> ] | Illumination on Shelf for White lamps [LUX] | Exposition time to reach 1,2 million of lux [Hours] | Exposition time to reach 200 W/m <sup>2</sup> of UV-A (Hours) |                                 |
| 130  | 8.000                                       | 153   | 1.3   |                                 |



### Main Options:

- Ethernet interface for remote connection
- Interior socket coverable universal 220-230 V
- Interior neon lighting
- Interior LED lighting
- Dimmable adjusting light for individual lamp
- CO200 - CO2 Regulation System for EN 12390-10
- Cable Hole
- USB port for downloading test data
- Power supply 110 V 50-60 Hz
- Regulation System for EN 12390-10
- The reinforced stainless steel shelf
- Swivel castors with chamber lock
- The touch-screen interface
- System of supply demineralized water tank 16 liters