

Continued from previous page

| Model                                 | Temperature range (°C)         | Temperature fluctuation (time) (°C) | Temperature variation (spatial) (°C) | Capacity (l)           | Convection type    | Nominal power consumption (W) |
|---------------------------------------|--------------------------------|-------------------------------------|--------------------------------------|------------------------|--------------------|-------------------------------|
| <b>Models with natural convection</b> |                                |                                     |                                      |                        |                    |                               |
| BD 23                                 | Ambient +5...100               | ≤±0,2 at 37 °C                      | ≤±0,5 at 37 °C                       | 20                     | Natural convection | 200                           |
| BD 53                                 |                                |                                     | 53                                   | 400                    |                    |                               |
| BD 115                                |                                | ≤±0,1 at 37 °C                      | ≤±0,4 at 37 °C                       | 115                    |                    | 680                           |
| BD 240                                |                                |                                     | 240                                  | 850                    |                    |                               |
| BD 400                                |                                |                                     | 400                                  | 1250                   |                    |                               |
| BD 720                                |                                |                                     | 720                                  |                        |                    |                               |
| <b>Models with forced convection</b>  |                                |                                     |                                      |                        |                    |                               |
| BF 53                                 | Ambient +5...100               | ≤±0,2 at 37 °C                      | ≤±0,4 at 37 °C                       | 53                     | Forced convection  | 400                           |
| BF 115                                |                                |                                     | 115                                  | 680                    |                    |                               |
| BF 240                                |                                | ≤±0,1 at 37 °C                      | ≤±0,3 at 37 °C                       | 240                    |                    | 850                           |
| BF 400                                |                                |                                     | 400                                  | 1250                   |                    |                               |
| BF 720                                |                                |                                     | ≤±0,4 at 37 °C                       | 720                    |                    |                               |
|                                       |                                |                                     | 720                                  |                        |                    |                               |
| <b>Type</b>                           | <b>Shelves supplied (max.)</b> | <b>Weight (kg)</b>                  | <b>WxDxH ext. (mm)</b>               | <b>WxDxH int. (mm)</b> | <b>Pk</b>          | <b>Cat. No.</b>               |
| <b>Models with natural convection</b> |                                |                                     |                                      |                        |                    |                               |
| BD 23                                 | 2 (3)                          | 26                                  | 435×610×495                          | 222×277×330            | 1                  | 390-6146                      |
| BD 53                                 | 2 (4)                          | 43                                  | 635×665×620                          | 400×330×400            | 1                  | 390-6037                      |
| BD 115                                | 2 (5)                          | 61                                  | 835×735×705                          | 600×400×480            | 1                  | 390-6039                      |
| BD 240                                | 2 (7)                          | 93                                  | 1035×835×825                         | 800×500×600            | 1                  | 390-6041                      |
| BD 400                                | 2 (10)                         | 135                                 | 1235×855×1025                        | 1000×500×800           | 1                  | 390-6034                      |
| BD 720                                | 2 (15)                         | 191                                 | 1235×955×1530                        | 1000×600×1200          | 1                  | 390-6035                      |
| <b>Models with forced convection</b>  |                                |                                     |                                      |                        |                    |                               |
| BF 53                                 | 2 (5)                          | 43                                  | 635×665×620                          | 400×330×400            | 1                  | 390-0006                      |
| BF 115                                | 2 (5)                          | 64                                  | 835×735×705                          | 600×400×480            | 1                  | 390-0007                      |
| BF 240                                | 2 (7)                          | 104                                 | 1035×835×825                         | 800×500×600            | 1                  | 390-0008                      |
| BF 400                                | 2 (10)                         | 145                                 | 1235×855×1025                        | 1000×500×800           | 1                  | 390-0009                      |
| BF 720                                | 2 (15)                         | 180                                 | 1235×955×1530                        | 1000×600×1200          | 1                  | 390-0010                      |



## Incubators, Generation 2012, IN/INplus (natural convection) and IF/IFplus (forced convection) Memmert



The Generation 2012 range has natural and forced convection models with a temperature range up to +80 °C. There is a choice of two different displays, SingleDISPLAY or TwinDISPLAY depending on the application. All models have stainless steel inner chamber and housing, ensuring long working life and easy cleaning. These incubators have an integrated data logger and digital timer which is adjustable from 1 minute to 99 days and 23 hours. All models with TwinDISPLAY feature the intuitive control and logging software, AtmoCONTROL, which uses drag and drop symbols to input values. The software allows online monitoring of up to 32 connected appliances and can send an automatic alarm message to one or several e-mail addresses. INplus and IFplus units have a 4 hour sterilisation cycle at 160 °C. Complex ramping processes can be programmed quickly and easy for TwinDISPLAY models. The SetpointWAIT function ensures the process time does not start before the set temperature is reached. This feature can also be used with additional, freely positionable PT100 sensors, so that the process time starts when the set temperature is reached at all measuring points.

### SingleDISPLAY models, ideal for standard applications:

- ControlCOCKPIT parameters: Temperature (Celsius or Fahrenheit), fan speed, exhaust air flap position, program time, time zones and daylight-saving time
- One PT100 temperature sensor in a 4-wire circuit and Ethernet interface for exporting the protocol log

- Double over-temperature protection including visual alarm: Electronic temperature monitoring with freely adjustable monitoring temperature and mechanical temperature limiter TB Class 1, according to DIN 12880, which switches off the heating if the maximum permitted temperature is exceeded by approx. 10 °C

### TwinDISPLAY models, ideal for complex ramping processes:

- Intuitive, user friendly ovens with 2 TFT displays. ControlCOCKPIT with USB port. ControlCOCKPIT parameters as above
- Two PT100 sensors in a 4-wire circuit for mutual monitoring, taking over functions in case of an error
- The HeatBALANCE function allows application specific adjustment of heating power distribution (balance) between the upper and lower heating areas
- Logged protocol data is displayed on the ControlCOCKPIT (max 10 000 values correspond to approx. 1 week)
- Ethernet interface for reading out the protocol log and for uploading and implementing programmes and for online logging
- Multiple over-temperature protection with audible and visual alarm: Electronic temperature monitoring TWW/TWB adjustable on display (independent adjustable temperature safety device Class 3.1, which protects the samples and the incubator) and mechanical temperature limiter TB (protection Class 1) according to DIN 12880. AutoSAFETY automatically adjusts to the set value within a freely adjustable tolerance range. Setting individual MIN / MAX values for over- or under-temperature

**Ordering information:** Supplied without shelves, please order required shelves, stainless steel grids or trays separately. Range of accessories and factory fitted options such as access ports, interior sockets, lighting and interior door are available on request. Please contact VWR for further details prior to ordering as these cannot be retro-fitted.

Continued on next page