





The HABITAT cell control tower package is particularly suitable for HABITAT's cell culture applications and is used to monitor and control the bioprocess. It includes the control unit with all connection options for gas supply, liquid addition, sensors and temperature control as well as a tablet for easy and clear operation of the bioreactor.

Control and monitoring

The bioprocess and all associated test parameters can be easily controlled and monitored via the tablet attached to the control unit and with the help of the intuitive and easy-to-use software. Depending on the type of cultivation, you can choose between the operating modes batch, fed-batch and perfusion/continuous. The new Chaotic Mixing function

www.ika.com Subject to technical changes





ensures faster and more effective mixing when required. The 10.4-inch tablet allows direct access to all actuators directly on the main screen. A clear calibration management, a diagram overview and the complete documentation of the process round off the operation. A software version that meets FDA CFR Part 11 requirements is available as an option.

Gas supply

Built in mass flow controllers for 4 separate gas lines (for N2, O2, air and CO2) ensure precise, individually adjustable gassing, ideally tailored to the needs of your cells. Flow rates of 0.01 - 2 l/min can be achieved.

Liquid supply

4 integrated Watson Marlow pumps, adjustable in direction and speed, give you the variability to pump in and pump out different liquids (like acid, base, anti-foam agent, feeding solutions).

Sensors

HABITAT cell enables the measurement of the following parameters by means of sensors:

- pH
- DO (dissolved oxygen)
- temperature
- filling level
- foam

Temperature control

The constant and precise temperature control during the cultivation is guaranteed by the heating sleeve, which is adapted to the respective vessel size. (Heating sleeve is included with the HABITAT cell vessel package).

All features at a glance

- > compact, space-saving design, dimensions: 223 x 402 x 450 mm (WxDxH)
- > large tablet for clear operation (10,4 inch)
- > intuitive, easy-to-use software with a lot of functionalities.
- > 4 integrated fast-load pumps (Watson Marlow)
- > connectivity: USB, PC, RS232, ethernet, external signal input, external pump, single-use unit, thermostat
- > data storage
- > gas supply with 4 built-in mass flow controllers: e.g. for O2, Luft, N2, CO2
- > Status LED display: direct error display by indicator light

Note: Only a control tower package and the separately available vessel package make up a functional unit.





Technical Data

Cell Growth
timer, continuous and program operation
Tablet PC
touch screen
32
yes
yes ves
yes
yes
yes
yes voc
yes yes, with CGQ BioR Sensor
-
yes
yes
Accessory
yes
off, manual, profile, Cascade-pO2 control, chaotic
1 - 2200
±2
±5
TFT
yes
yes
TFT
1 - 120
yes
250
TFT
PID
5 - 80
PT1000
yes
0 - 100
0.1
±0.2
0
110
yes
off, auto, profile
TFT
0 - 14
0.01



IKA designed for scientists

Accuracy of pH measurement [pH]	±0.02
Set resolution pH value [pH]	0.01
pH control accuracy [pH]	±0.05
Conncetion for pO2 sensor	yes
pO2 control mode	off, manual, auto, profile
Measurement range pO2 min. [%sat]	0
Measurement range pO2 max. [%sat]	200
Resolution pO2 measurement [%sat]	0.01
Accuracy of pO2 measurement [%sat]	±0.3
pO2 control accuracy [%sat]	0.3
Exhaust Gas Analyzer	yes, with Blue Vary Sensor
OUR,CER,RQ calculation	yes, with Blue Vary Sensor
RQ feeding	yes, with Blue Vary Sensor
Digital pH sensor	yes, with EasyFerm Bio Arc Sensor
Measuring Range min. digital pH [pH]	
Measuring Range max. digital pH [pH]	14
	±0.02
Accuracy digital pH [pH] Digital DO sensor	yes, with OxyFerm FDA Arc
Measuring Range min. digital DO [%sat]	yes, with OxyFerm FDA Arc
Measuring Range max. digital DO [%sat]	200
	±2
Accuracy digital DO [%]	
Optical DO sensor	yes, with VisiFerm RS485-ECS
Measuring Range min. optical DO [%sat]	0
Measuring Range max. optical DO [%sat]	300
Accuracy optical DO [%]	±1
Biomass sensor	yes, with CGQ BioR Sensor
Measuring Range min. Biomass [OD]	0.5
Measuring Range max. Biomass [OD]	50
Digital Redox / ORP sensor	yes, with EasyFerm Plus ORP Arc
Measuring Range min. digital ORP [mV]	-1500
Measuring Range max. digital ORP [mV]	1500
Digital biomass sensor	yes, with Excell Sensor
Measuring Range min. digital biomass [AU]	0
Measuring Range max. digital biomass [AU]	6
Accuracy digital biomass [%]	±1
Viable Cell Density Sensors	yes, with Incyte Sensor
Measuring Range min. cell density [cells/mL]	5 x 10^5
Measuring Range max. cell density [cells/mL]	8 x 10^9
Accuracy cell density [%]	±1
Gas in connection Air [mm]	6
Gas out connection Air [mm]	6
Gas in connection O2 [mm]	6
Gas out connection O2 [mm]	6
Gas in connection N2 [mm]	6
Gas out connection N2 [mm]	6
Gas in connection CO2 [mm]	6
Gas out connection CO2 [mm]	6
Aeration mode	continuous & automatic
Display flowrate	I/min, cc/min
Input pressure [mbar]	200 - 3000
Pressure out min. [mbar]	200
Pressure out max. [mbar]	1000



IKA designed for scientists

Flowrate Air max, [cc/min] 2000 Flowrate O2 max, [cc/min] 1 Flowrate O2 max, [cc/min] 2000 Flowrate N2 min, [cc/min] 1 Flowrate CO2 min, [cc/min] 1 Flowrate CO2 min, [cc/min] 2000 Flowrate CO2 min, [cc/min] 1 Flowrate CO2 min, [cc/min] 2000 Measuring and control accuracy of the gas control units [% fsr] 22 Peristalic pump yes Numbers of pump heads 4 Pump head function Acid, Base, AntiFoam, Level Number of pump rollers 4 Flow rate min, [m/min] 0.3 Flow rate max, [m/min] 200 Pum page min. [m/min] 20.3 Pum page min. [m/min] 4.00 Pum page min. [m/min] 20.3 Pum page min. [m/min] 4.00 Pum page display TFT Inner tube diameter max, [mm] 4.8 Tube outer diameter max, [mm] 4.8 Tube outer diameter max, [mm] 5.5 Tioner tube diameter max, [mm] 4.1 Tube ma	Flowrate Air min. [cc/min]	1
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Flow rate max. [ml/min] 270 Flow rate control accuracy [ml/min] ±0.3 Pump Speed min. [rpm] 33 Pump speed display 400 Pump speed display TFT Inner tube diameter max. [mm] 0.5 Inner tube diameter max. [mm] 4.8 Tube outer diamter max. [mm] 8.4 Tube outer diamter max. [mm] 8.4 Tube outer diamter max. [mm] 50 - 60 Dimensions (W x H x D) [mm] 224 x 624 x 405 Weight [kg] 14 Packing unit [pcs] 1 Permissible ambient temperature ["C] 5 - 40 Rs 232 interface yes USB interface yes WiFi Interface yes WiFi Interface yes WiFi Interface yes Woltage [V] 100 - 240 Frequency [Hz] 50/60 Power input (M] 300	Number of pump rollers	4
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Weight [kg]14Packing unit [pcs]1Permissible ambient temperature [°C]5 - 40Permissible relative humidity80% (up to 31°C), decreasing linearly to max. 50 (@40°C)Protection class according to DIN EN 60529IP 20RS 232 interfaceyesUSB interfaceyesWiFi InterfaceyesVoltage [V]100 - 240Frequency [Hz]50/60Power input [W]300Power input standby [W]100	Dimensions (W x H x D) [mm]	224 x 624 x 405
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WiFi InterfaceyesVoltage [V]100 - 240Frequency [Hz]50/60Power input [W]300Power input max. [W]1100Power input standby [W]10	RS 232 interface	yes
Voltage [V] 100 - 240 Frequency [Hz] 50/60 Power input [W] 300 Power input max. [W] 1100 Power input standby [W] 10	USB interface	yes
Frequency [Hz] 50/60 Power input [W] 300 Power input max. [W] 1100 Power input standby [W] 10	WiFi Interface	yes
Power input [W] 300 Power input max. [W] 1100 Power input standby [W] 10	Voltage [V]	100 - 240
Power input [W] 300 Power input max. [W] 1100 Power input standby [W] 10	Frequency [Hz]	50/60
Power input standby [W] 10		300
Power input standby [W] 10		1100
Fuse 2x T5.0A 250V		10
	Fuse	2x T5.0A 250V

