



# LABORATORY VERTICAL AUTOCLAVE BDN-411

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## VERTICAL AUTOCLAVE



### Safety:

#### 1. Nice look

The lid and bench corners are covered with insulation to avoid getting scald

#### 2. Lid closing check

The machine can not start if the lid is not locking well by checking mechanically and electrically.

#### 3. Interlock

Only when the temperature and pressure are safe inside, can the door be opened. If the door is not closed in place, it cannot start working

#### 4. Triple protection for water shortage

The bottom of the sterilization chamber is equipped with three different dry burning protection devices: liquid expansion type, copper temperature sensing type,

## SPECIFICATIONS

Model	BDN-411
Capacity (L)	54
Dimensions (LxWxH) mm	460x785x1105
Chamber dimension (DiaxH) mm	Φ320x725
Rated power (W)	2300
Basket size (pcs)	(Φ298x195)x3
Power requirement	220V+10% 16A 50HZ/60HZ
Temperature display accuracy	0.1°C
Sterilization temp. range	105°C~135°C
Sterilization time range	1~6000 min
Melting temp. range	60°C~115°C
Melting time	1~6000 min
Warming temp.	45°C~79°C
Warming time	1~9999 min
Controller	"SMART III" smart microcomputer controller
Memory function	60 program saved in system,999 cycles saved by USB
Appointment timer range	Auto start up appointment)0 ~ 15 days
Exhaust speed control	Fully automatic internal discharging with 6 levels choice
Cooling way	Fast cooling fan
Drying	Drying time: 1~300min Drying temp.: 80~160°C
Sterilization mode	Liquid,liquid with warming,solid,wrapped instrument,fabric,rubber,fast,waste,agar,self-defined, Drying, Vacuum leak test, BD test.
Pressure gauge range	-0.1~0.5MPa
Vacuum pump	Pulse times: 1~ 9 times Vacuum degree: <-80kpa Vacuum leakage rate (per min)<0.13kpa
Safety device	Lid closing checking,dry scorch protection,,safety valve,water level sensor,over temperature/pressure protection,Safety device temperature/pressure monitor, electricity safety(over current/short circuit/leakage),cooling lock,anti-scald lid andbench corner,automatic troubleshooting
Packing Dimension	96*74*125
CBM	0.89
Net Weight	115

Gross weight	138
Alt Name	Vacuum

## ACCESSORIES FOR PURCHASE

No	Name	Description
1	Micro printer	To print temp. time and FO value Printing set:printer+digital pressure sensor:can print temp.and pressure in data and flowchart way
2	Digital pressure sensor	Printing set:printer+digital pressure sensor:can print temp.and pressure in data and flowchart way
3	Load thermometer	Floating PT100 sensor
4	Tray	
5	Stainless steel bucket	
6	IQ/OQ/PQ (3Q)adapter joint	
7	Adjust foot	



1



2



3



4



5



6



7

## FEATURES

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3. Interlock

Only when the temperature and pressure are safe inside, can the door be opened. If the door is not closed in place, it cannot start working

4. Triple protection for water shortage

The bottom of the sterilization chamber is equipped with three different dry burning protection devices: liquid expansion type, copper temperature sensing type, and electric ion type (water level sensor), to avoid misjudgment caused by a single method.

5. Double protection for over pressure

Mechanical pressure gauge and electric sensing system, once pressure is abnormal, the system will cut power, release the pressure and send out an alarm.

6. Auto troubleshooting

System will monitor the working status, and will cut the power, send out alarm, and report the error information once any abnormal situation is detected.

7. Safety test function

Regular testing of system security and safety protection measures is possible

8. Temperature monitor

Power cut and alarming sent, if there is temperature is too high or temperature rising is abnormal

9. Electrical production

Prevention for over current, short circuit and electricity leakage

## 10. Saturated steam monitoring

The system automatically monitors the purge out of cold air to ensure the pure steam

Intelligent:

### 1. Calibration port

Offer temp. and pressure interface, together with the 3Q adapter joints, can insert max 15 sensors one time to do the calibration work

### 2. Saturated steam monitoring

The system automatically monitors the purge out of cold air to ensure the pure steam environment

### 3. Program memory storage system

Users can set their own program, and save it in the system.

### 4. Special software for drug packaging materials (option)

The product meets the 2020 Chinese Pharmacopoeia or EP10.2 standards

Humanization:

### 1. Just right depth

Conforming to ergonomics, the chamber depths of 29/54/80/100L chamber are 378/725/670/780 (mm), making it easy to take and place samples and maintain the instrument.

Advanced:



Colorful LCD screen

LCD screen with English and Chinese choice, using text, data, and graphical methods to dynamically display various statuses, the sterilization process is clear at a glance.



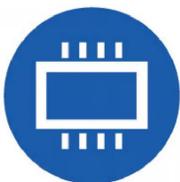
6 level of exhaust speed control

After sterilization, you can choose a different exhaust speed, and you can adjust it freely at any time of exhausting.



Condenser (Option)

Equipped with a professional condenser, the steam generated during the sterilization process is converted into water through the condenser, achieving zero discharge of water vapor/mist.



F0 value calculation

FO value 1s automatic calculated, can print out by micro-printer



#### 5 level access permission

The operation permissions for instruments are divided into five levels, with each level of user having an independent password and multiple IDs that can be assigned. Each level of user has limited access to certain usage permissions



#### Fast cooling fan

To shorten cooling process after sterilization



#### Auto water fill(Option)

Offer pipe and pump to connect to the direct water supply to achieve automatic water feeding, must be added while production.

## MORE INFO

#### Vacuum pump

Original imported vacuum pump from Germany, with good vacuum effect

#### Air inlet filter

Filtration is higher than 99.99% in particles with diameter of 0.2  $\mu\text{m}$

#### Vacuum drying

Set drying temperature and time, and start vacuum drying after sterilization



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