

Operation Manual



BTUR-303

3D Rotator

Thank you for Choosing Biolab products. Please read the "Operating Instructions" and "Warranty" before operating this unit to assure proper operation.

Index

1. SAFETY FEATURES.....	03
2. PACKING	03
3. STRUCTURE DESCRIPTION	05
4. TECHNICAL SPECIFICATIONS.....	05
5. F1-F9 FIXED PROGRAM OPERATING INSTRUCTIONS	09
6. PROGRAM DESCRIPTION.....	11
7. CUSTOMIZATION PROGRAM C1-C2.....	13
8. C1,C2 CUSTOMIZATION MODE SETTING	13

01 Safety Features

Please read this manual carefully before operate this machine.

1. It must use the original adapter.
2. The machine should be placed with a flat and steady surface for operating.
3. The machine which have large shake extent, please cover the tube then prevent liquid samples overflowing.
4. Please cut off the power before replacing the tube.
5. Please do not move machine while working.
6. The liquid samples loading should not over the heaviest loads.

02 Packing

Main Body	1 Unit
Standard Rack	1 Unit
Adapter	1 Unit
Wrench for Rack	1 Unit
Packing Box	1 Unit
Operation Manual	1 Unit






Warranty Information

We provide one-year warranty against any manufacturing fault.






If BTUR-303 fails to function according to specifications at any time then please contact the manufacturer or local representative immediately. The warranty will not cover defects caused by normal wear or by a breach of the manufacture's recommendations .Each BTUR-303 is tested before shipping by the manufacturer. The quality assurance procedure guarantees that the BTUR-303 you have purchased is ready for use.

Warranty repair could be performed only if the equipment is delivered in the original manufacturers packaging or equally safe packaging. Therefore, please keep then transportation packaging after unpacking the device. If the above warranty requirements are disturbed, repair charges are applied to the customer. For all further questions and maintenance please contact manufacturer or local representative.






Rack model series

Model	Graphic	Tube No.
S1		10
S2		6
S3		6
S4		6
S5		20

M SERIES RACK MODEL

Model	Graphic	Tube No.
M1		14
M2		8
M3		6
M4		6
M5		24

L SERIES RACK MODEL

Model	Graphic	Tube No.
L1		22
L2		12
L3		12
L4		12
L5		36

RELATIVE MOISTURE OF THE ATMOSPHERE

(AT THE TEMP, +20 °C) : not more than 80%

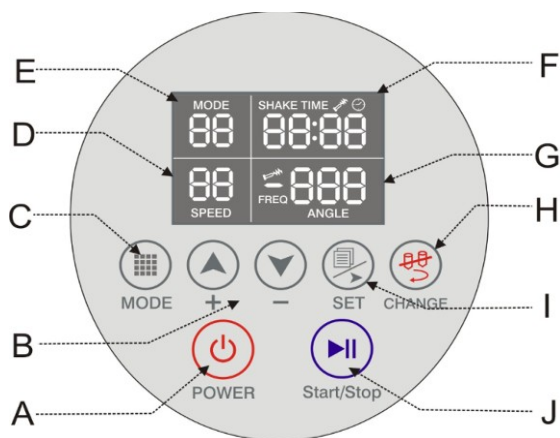
POWER ADAPTER INPUT : 110V-220V/50-60Hz


POWER ADAPTER OUTPUT: 12VDC, 1.5A



POWER CONSUMPTION , W : no more than 12


MODEL	DIMENSION (CM)	WEIGHT (KG)
BTUR-303 with BX-103945	316x125x168	1.5
BTUR-303 with BX-103944	344X125x168	1.6
BTUR-303 with BX-103943	420x125x168	1.9


05 F1-F9 Fixed Program Operating Instructions







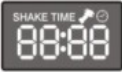






























A.  Press the power button 3 seconds and on/off the machine after plug into a power.

B.  Program mode select button. Program mode from F1 to F9 .In customization mode for " rotation angles", " shaking range", " pause time"and "No action" selecting. The display showing 




C.  Speed and mode adjustable button. Press this button can be adjust the speed when the machine is operating. And it can be adjust mode setting in customization mode.

D.  Rotating and shaking showing.


8. Press  button for  sixth stage setting.


- Press  button for selecting "No rotation" action 
9. Press  button for  seventh stage setting
-  Flashing on display, press  button for adjusting shaking time parameters
- 
10. Press  button for  eighth stage setting  Flashing on display, press  button for setting the action time for complete program 
11. Press  button, then press  button for adjusting rotation and shaking speed
- 
12. Press  button and save the complete program
13. Press  button for starting the complete program.
- Press  button for adjusting angle parameters 
4. Press  button for  second stage setting
- Press  button for selecting shaking action
- Press  button for adjusting "shaking" amplitude 
5. Press  button for  third stage setting
- Press  button for selecting "clockwise rotation" action
- Press  button for adjusting rotation angle
6. Press  button for  fourth stage setting
- Press  button for selecting "Pause time" action
- Press  button for adjusting "Pause time" 
7. Press  button for  fifth stage setting


Press  button for selecting "clockwise rotation" action


Press   button for adjusting rotation angle 


E.  Operating mode showing.

F.  Shaking time and Operating time showing.

G.  Rotating angle and shaking frequency showing.

H.  Press this button the rack can be 180 ° rotating when the machine stopped for exchange tubes.



I.  Select fixed mode F1 to F9 or customization mode C1,C2 ,Press this button for confirming and setting the "rotating angles", " shaking range" , " shaking time" , " pause time" " operating time" when the machine stopped.


J.  Start and stop button.

06 Program Description



MODE display	Rack movement overview	Mixing program description
F1		Variable rotation speed continuous clockwise rotation and complete program can be timing .
F2		Variable rotation speed for clockwise 360° rotation and hold for 2 secs In initial point ; complete program can be timing .
F3		Variable rotation speed ; 180°clockwise rotation , 2 sec hold, 180°clockwise rotation, hold in initial point 2 sec ; the complete program can be timing.
F4		Variable shaking amplitude & rotation speed; 135°Clockwise rotation,2 sec shaking; 225° clockwise rotation ,2 sec hold in initial point; the complete program can be timing.

F5		Variable shaking amplitude & rotation speed ; 135°clockwise rotation , 2 sec shaking ; 90° clockwise rotation, 2 sec shaking; 135° clockwise rotation ;2 sec hold in initial point; the complete program can be timing.
F6		Variable shaking amplitude & rotation speed ; 135°Clockwise rotation, 2 sec shaking ,90° clockwise rotation, 2 sec shaking , 135°clockwise rotation , 2 sec shaking , the complete program can be timing.
F7		Variable rotation speed ; 110°clockwise rotation , 2 sec hold ,, 110°counter clockwise rotation 2 sec hold in initial point, 110°counter clockwise rotation, 2 sec hold , 110°clockwise rotation, 2sec hold in initial point;; the complete program can be timing.
F8		Variable shaking amplitude & rotation speed ; 110°clockwise rotation , 2sec shaking , 110° counter clockwise rotation , hold in initial point 2sec, 110°counter clockwise rotation,2 sec shaking ; 110°clockwise rotation, hold in initial point 2sec ; the complete program can be timing.

3. Press   button for parameters increasing or decreasing.

4. Press  button select the "rotation angles", " shaking range" and "No action" in each paragraph of customization program C1-C2. Display show  









5. Press  button confirming the customization program

6. Press   button for adjusting speed.

07 C1, C2 Customization Mode Setting

The the required actions as below,


1. Counter clockwise rotation 170°
2. Shaking amplitude "3"
3. Clockwise rotation 90°
4. Pause time 8 sec
5. Counter clockwise rotation 80°
6. No need any actions
7. Shaking time 10 seconds
8. The complete set action for one hour.

1. Press  button for selecting C1 or C2 customization mode setting
2. Press  button for  first stage setting.
3. Press  button for selecting counter clockwise  angle.
4. Press  button for confirming the setting
5. Press   button for adjusting the speed

08 Customization Program C1-C2



1. Press  button select customization program C1-C2

2. Press  button select "clockwise rotation", "counter clockwise rotation", "shaking", "pause" " " No action" setting.

F9		Variable amplitude & speed ;110° clockwise rotation ,2 sec shaking ;110° counter clockwise rotation , Initial point 2sec shaking , 110°counter clockwise rotation,2sec shaking ; 110°clockwise rotation , Initial point 2sec shaking ; the complete program can be timing.
-		clockwise rotation and counter clockwise rotation (rotating angles can be adjustable , speed can be adjustable)
C1 C2		Customization mode for the "rotating angles","shaking amplitude" , "pause time" " shaking time" , " operating time" setting.

FIXED PROGRAM FROM F1 TO F9





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