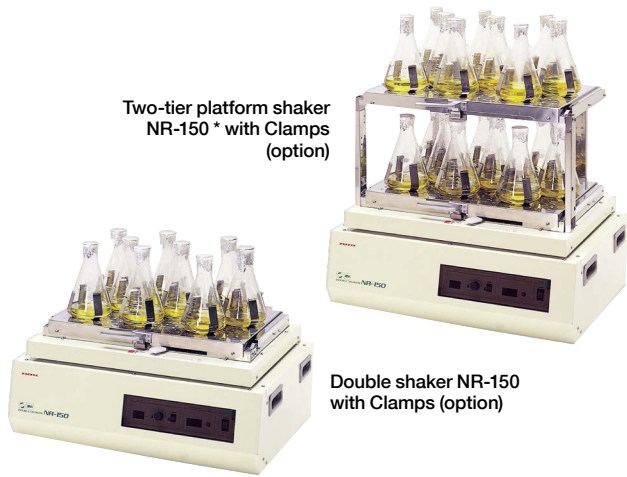


# Double shaker NR-150/Two-tier platform NR-150

**Being placed on the floor for use. Switchable Reciprocal/Orbital shaking. The capacity doubles in Two-tier platform. The adjustable shaking width enables effectively to stir large Erlenmeyer flasks and Shake flasks.**

"Bioshaker BR-300LF with temp. control" series --> P.024 "Bioshaker Double platform BR-300LF" series --> P.026 OD-Monitor Turbidimeter while shaking --> P.034

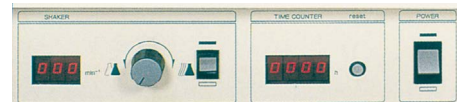


## Features

- Switchable Reciprocal/Orbital, Shaking platform drawer lever
- Shaking width can be 10mm to 50mm by stepless
- The capacity doubles in Two-tier platform except some vessels

## Applications

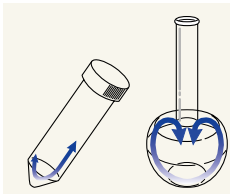
- Shaking culture of Microbes inside Incubators etc.
- Shaking culture of Algae etc. inside Incubators with LED irradiation
- Various Dissolution/Elution testing



The control unit is protected by an openable cover. (Photo shown the cover open)

## Compatibility of Reciprocal shaking and Vessels.

Reciprocal shaking is suitable for Test tubes and Shake flasks. In shaking culture with Shake flasks adjust the flow rate to 1/2 of the capacity so that the liquid can be moved properly.

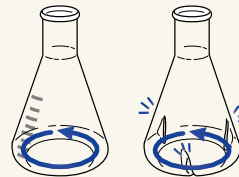


**Movement of liquid in Reciprocating shaking (left: Centrifuge tube, right: Shake flask)**

Shaking width is important rather than shaking speed so that the liquid moves like the figure in shaking flasks. The shaking width can be adjusted in NR-150.

## Compatibility of Orbital shaking and Vessels.

Orbital shaking is suitable for Erlenmeyer flasks. In shaking culture with Erlenmeyer flasks adjust the flow rate to 1/5 to 1/3 of the capacity so that the liquid can be moved properly.



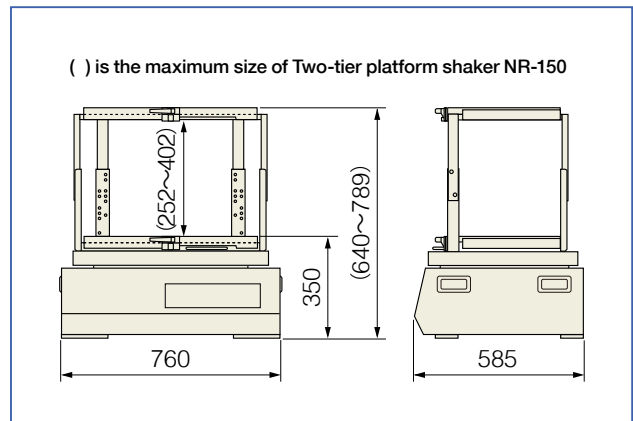
**Movement of liquid inside Erlenmeyer flasks in Orbital shaking.**

The baffled Erlenmeyer flask (right) has good aeration but is prone to bubbles so the applications are limited.

Model	NR-150	Two-tier platform NR-150
Shaking motion	Reciprocal/Orbital	
Shaking speed	25 to 250r/min	25 to 160r/min
Shaking width	10 to 50mm, Stepless (Default: 25mm)	
Platform dimensions and Capacity	600 x 400mm, Erlenmeyer flask 500mL x 15 (Two-tier platform 30pcs), 5L x 3	
Maximum load	Approx. 26kg (Shaking platform and vessel holders included *)	
Shaking duration integrator	0.1h to 999.9h (Automatic resetting function)	
Safety devices/ functions	Motor protection circuit at overload, Fuse	
Dimensions (W x D x H)	760 x 585 x 350mm	760 x 585 x 789mm (*2)
Weight	Approx. 73kg	Approx. 83kg
Power supply	AC220 to 240V/2A	
Standard accessories	1 x Universal shaking platform MT-6040C (Two-tier platform : 2 sets), 4 x Spacer (2 x 1mm thick and 2 x 2mm thick), 4 x Slip prevention sheet, 1 x Hex wrench	


(\*1) When the clamps are attached to the platform of NR-150, the max. load of NR-150 is approx. 19kg and that of Two-tier platform is approx 10kg.  
(\*2) The height is maximum value (Upper platform height can be adjusted.)

## Dimensions



# Optional accessories and Capacity of Vessels


## Universal shaking platform and Capacity of Flasks

Model	MT-6040C			
	It is used together Optional Clamps, Angle racks and "OD-Monitor" series. 2 sets used with Double shaking platform type (Standard accessories).			
Dimension/Weight	600x400x42Hmm, Apporx.7kg			
Capacity of Vessels	Erlenmeyer flasks 50mL	70	Erlenmeyer flasks 2L (*)	6
	Erlenmeyer flasks 100mL	35	Erlenmeyer flasks 3L (*)	4
	Erlenmeyer flasks 200mL	28	Erlenmeyer flasks 5L/ Disposable 3&5L	3
	Erlenmeyer flasks 250mL	21	Sakaguchi flasks 500mL	15
	Erlenmeyer flasks 300mL	21	Sakaguchi flasks 1L	9
	Erlenmeyer flasks 500mL	15	Sakaguchi flasks 2L (*)	6
	Erlenmeyer flasks 1L	9	Sakaguchi flasks 3L (*)	4
Capacity in Two-tier shaking platform type.				
Capacity of Vessels (two tiers in total)	Erlenmeyer flasks 50mL	140	Erlenmeyer flasks 2L (*)	6
	Erlenmeyer flasks 100mL	70	Erlenmeyer flasks 3L (*)	4
	Erlenmeyer flasks 200mL	56	Erlenmeyer flasks 5L/Disposable 3&5L (*)	3
	Erlenmeyer flasks 250mL	42	Sakaguchi flasks 500mL	30
	Erlenmeyer flasks 300mL	42	Sakaguchi flasks 1L (*)	9
	Erlenmeyer flasks 500mL	30	Sakaguchi flasks 2L (*)	6
	Erlenmeyer flasks 1L	18	Sakaguchi flasks 3L (*)	4

(\*) It cannot be used in the upper platform. Sakaguchi flask 3L with height 370Hmm assumed for use.  
 • Place the vessels (samples) so that the upper load lighter than the lower load.



## Spring net shaking platform and Capacity of Vessels.

(Mounted on MT-6040C for use)

Model	MR-4030L		
	The usable Shaking platform that Vessels can be easily mounted on regardless its shapes. Fixed with the screws on Platform MT-6040C for using. Up to Two sets can be mounted. (See Left figure.) 4 sets in total can be mounted on Two-tier platforms.		
Spring net Pitch	20mm		
Spring net Pitch	2 tier (Height is changeable.)		
Dimension/Weight	400x300x108Hmm, Apporx.2kg		
Capacity of Vessels (*)	φ16 mm test tubes (*)	96pcs (When Four sets mounted: 2 x 96 = 196pcs) x 2 tiers	
	Disposable Centrifuge tube for 50 mL (*)	48pcs (When Four sets mounted: 2 x 48 = 96pcs) x 2 tiers	
	Erlenmeyer flasks	50mL	24pcs (When Four sets mounted: 2 x 24 = 48pcs) x 2 tiers
		100mL	20pcs (When Four sets mounted: 2 x 20 = 40pcs) x 2 tiers
		200mL	12pcs (When Four sets mounted: 2 x 12 = 24pcs) x 2 tiers
		250mL	9pcs (When Four sets mounted: 2 x 9 = 18pcs) x 2 tiers
		300mL	9pcs (When Four sets mounted: 2 x 9 = 18pcs) x 2 tiers
		500mL	6pcs (When Four sets mounted: 2 x 6 = 12pcs) x 2 tiers
		1L (*3)	3pcs (When Four sets mounted: 2 x 3 = 6pcs) x 2 tiers
	2L (*3)	2pcs (When Four sets mounted: 2 x 2 = 4pcs)	
3L (*3)	1pcs (When Four sets mounted: 2 x 1 = 2pcs)		
Sakaguchi flask 500mL	6pcs (When Four sets mounted: 2 x 6 = 12pcs) x 2 tiers		

(\*) The number is when Angle rack tilted 45°.  
 When below φ16mm test tubes, fix the test tube stand (incl. φ16mm) whole with the spring net.  
 (\*) Note: The kinds (size) of fixable vessels will less than those of Universal shaking platforms.  
 (\*) It cannot be used in the upper platform.  
 • Place the vessels (samples) so that the upper load lighter than the lower load.

## Clamps (Mounted on MT-6040C and AF-2070/2570 for use)

	Vessels / Volume		Model
		50mL	
100mL			<b>CF-0100</b>
200mL			<b>CF-0200</b>
250mL			<b>CF-0250</b>
300mL			<b>CF-0300</b>
500mL			<b>CF-0500</b>
1L			<b>CF-1000</b>
2L (*)			<b>CF-2000</b>
3L (*)			<b>CF-3000</b>
5L (*)			<b>CF-5000</b>
	3&5L (*)		<b>CF-3000DSP</b>
	500mL		<b>SF-0500</b>
	1L (*)		<b>SF-1000</b>
	2L (*)		<b>SF-2000</b>
	3L (*)		<b>SF-3000</b>

(\*) It cannot be used in the upper platform and can be used on the lower platform when that of upper removed.  
 (\*) For Disposable Erlenmeyer flasks (Corning 3L and Thomson 5L).

## Angle rack for Test tubes

(Mounted on MT-6040C for use)

Model	AT-1250	AT-1620	AT-1650	AT-1820
Capacity	φ12mm x50	φ16.5mm x20	φ16.5mm x50	φ18mm x20
Qty of mounting on MT-6040C	4 (*)x2 tier	5 (*)x2 tier	4 (*)x2 tier	5 (*)x2 tier
Dimension (mm)	250x100x95H	285x70x80H	286x110x100H	320x70x80H
Weight	Apporx.0.8kg	Apporx.0.6kg	Apporx.0.9kg	Apporx.0.7kg

(\*) The qty is when Angle rack with 160mm test tube tilted 45°.

## Angle rack for Disposable Centrifuge tube

(Mounted on MT-6040C for use)

Model	AT-3518	
Capacity	50mLx18	
Qty of mounting on MT-6040C	4 (When Angle rack tilted 45°) x 2 tier	
Dimension/Weight	285x110x102Hmm, Apporx.0.8kg	
Remarks	Be sure be used below 50°C.	

## Angle rack for Erlenmeyer flasks

(Mounted on MT-6040C \*Clamps required)

Model	AF-2070	AF-2570
Capacity	50mL:4,100mL:3pcs, 200 to 300mL:2pcs, 500mL:1pc	50mL:5pcs, 100mL:4pcs, 200mL:3pcs, 250 to 500mL:2pcs
Qty of mounting on MT-6040C	4 (*)x2 tiers	
Dimension	250x110x50Hmm	300x110x50Hmm
Weight	Apporx.0.8kg	Apporx.0.9kg

(\*) When Angle rack tilted 30°