



2016 Catalogue

 **major
science**
Innovative Life Sciences Tools
Shaker

MS Shaker

MS-NOR-30 / MS-NOR-3001

MS-NRC-30 / MS-NRC-3001

MS-NRK-30 / MS-NRK-3001

Three different shaking motions of MS Shaker series is provided for many general purpose shaking application in chemical and life sciences laboratories. The Orbital Shaker digitally controls clockwise and/or counter-clockwise orbits to create superb mixing efficiency. The Reciprocal Shaker features a horizontal (left to right) linear action to provide gentle to vigorous shaking motion. The Rocking Shaker provides a "12-degree" tilted angle rocking motion for variety of applications. All three models provides continuous or timed operation with integral electronic timer, LED display, audible signal for automatic switch-off timed control, interchangeable/stacking platforms. Reciprocal shaker can hold up to 15kg of weight whereas rocking and orbital shaker can hold up to 10kg(orbital) and 8kg(rocking), respectively.

For Anti-moisture model

The MS Anti-moisture Shaker series offers the same capabilities as our original MS shaker series with moisture protection coating. The moisture protection allows you to operate the shaker in cold-room or low temperature environment. An anti-moisture coating is applied on the electrical structure to minimize and prevent the forming of condensation when operating in & out of the cold room. Standard features and accessories from the MS shaker series apply to all three different models.

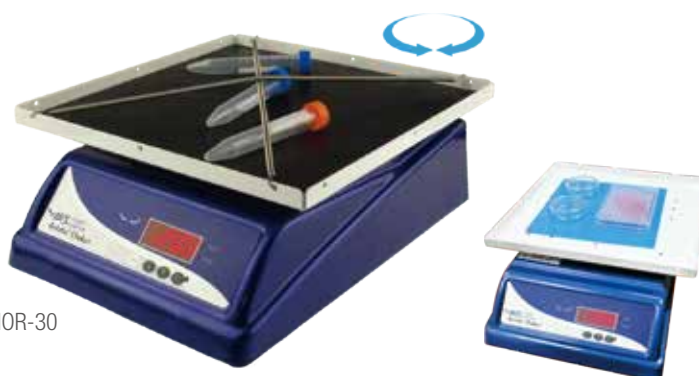


Heavy loading capacity (ex. MS-NRC-30)

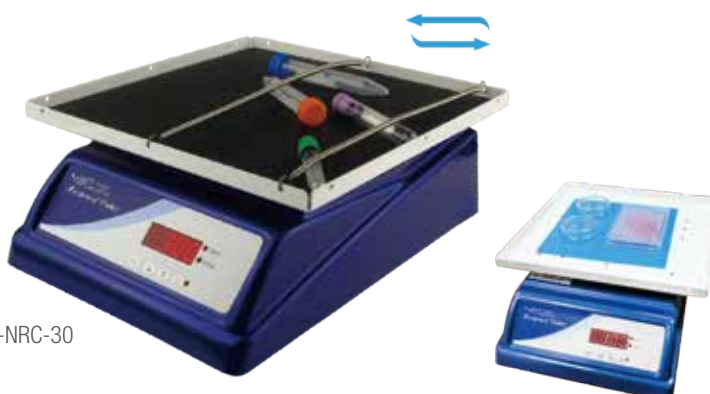
Features

- Continuous one way orbital shaking or two ways clockwise/ counter-clockwise orbital shaking
- Continuous or timed operation with auto shut-off
- Variable shaking speed, up to 200rpm
- Variety of accessories available
- Max. 17.6lb (8kg) loading capacity for MS-NRK-30
- Max. 22.0lb (10kg) loading capacity for MS-NOR-30
- Max. 33lb (15kg) loading capacity for MS-NRC-30
- Special anti-moisture coating allows smooth operation in cold room environment or CO₂ incubation
- Optional 30 x 30 cm platform available for your selection.

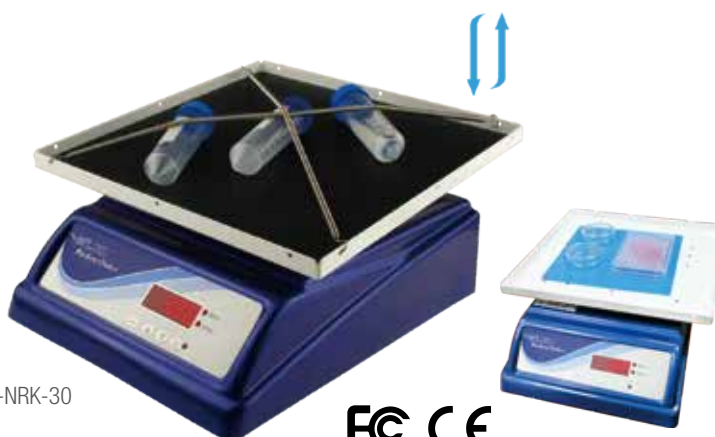
MS-NOR-30



MS-NRC-30



MS-NRK-30



FC CE



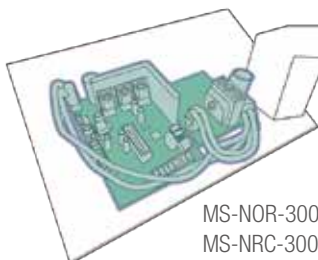
Variety of accessories available



Stacking platform



Maximum tilt angle 12° (MS-NRK-30)



MS-NOR-3001
MS-NRC-3001
MS-NRK-3001

Special coating allows anti-moisture for cold room operation

Platform capability of Flask Holders

Flask	Max. set of flask holder	
	MS-NOR-30	MS-NRC-30 MS-NRK-30
125ml	12	12
250ml	9	9
500ml	5	5
1000ml	4	4
2000ml	1	2

*When operating with second-tier platform, max. loading capacity may change.

Shaker



MW-SP



MS-P3030



MS-DIMPLED-30



MS-FLAT-30



MO-FH-125



MO-FH-250



MO-FH-500



MO-FH-1000



MO-FH-2000



PPL-04-SI-SI-200-3

Specifications

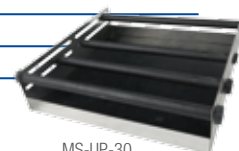
Cat. No.	MS-NOR-30(MS-NOR-3001*)	MS-NRC-30(MS-NRC-3001*)	MS-NRK-30(MS-NRK-3001*)
Motion	Orbital	Reciprocal	Rocking
Moving feature	Orbital action in one direction or two directions	Steady moving motion at 5rpm	
Bi-directional shaking	0.1~10 circle / 0.1 circle	N/A	
Maximum tilt angle	N/A	N/A	12°
Maximum stroke length	20mm	20mm	N/A
Controller	Digital microprocessor controller		
Speed/Inc.	0 ~ 200rpm / 1rpm	5 ~ 100rpm / 1rpm	
Timer	9999 (min) with alarm / Continuous		
Loading capacity	22.0lb (10kg)	33.0lb (15kg)	17.6lb (8kg)
Motor	Stepping motor	DC brushless type	
Operating temperature	Ambient to 40°C		
Platform dimension (WxL)	1.18"x1.18" (30x30cm)		
Platform material	Painted iron metal		
Stacking platform	Yes		
Dimension (WxLxH)	11.81"x12.2"x5.12" (300x310x130mm)		
Material	Flame retardant PC and painted iron metal bottom plates		
Weight	Approx. 15.4lb (7.0kg)		
Rated voltage	110V / 220V (selectable)		

* Anti-moisture coating

Ordering Information

Cat. No.	Product Description
MS-NOR-30	MS Orbital Shaker with 30x30cm platform with flat non-slip rubber mat, 110V / 220V
MS-NOR-3001	MS Orbital Anti-moisture Shaker with 30x30cm platform with flat non-slip rubber mat, 110V / 220V
MS-NOR-30-FH125	MS Orbital Shaker with 12x125ml flask holders
MS-NOR-30-FH250	MS Orbital Shaker with 9x250ml flask holders
MS-NOR-30-FH500	MS Orbital Shaker with 5x500ml flask holders
MS-NOR-30-FH1000	MS Orbital Shaker with 4x1000ml flask holders
MS-NRC-30	MS Reciprocal shaker with 30x30cm platform with flat non-slip rubber mat, 110V / 220V
MS-NRC-3001	MS Reciprocal anti-moisture shaker with 30x30cm platform with flat non-slip rubber mat, 110V/220V
MS-NRC-30-FH125	MS Reciprocal shaker with 12x125ml flask holders
MS-NRC-30-FH250	MS Reciprocal shaker with 9x250ml flask holders
MS-NRC-30-FH500	MS Reciprocal shaker with 5x500ml flask holders
MS-NRC-30-FH1000	MS Reciprocal shaker with 4x1000ml flask holders
MS-NRK-30	MS Rocking shaker with 30x30cm platform with flat non-slip rubber mat, 110V / 220V
MS-NRK-3001	MS Rocking anti-moisture shaker with 30x30cm platform with flat non-slip rubber mat, 110V / 220V
MS-NRK-30-FH125	MS Rocking shaker with 12x125ml flask holders
MS-NRK-30-FH250	MS Rocking shaker with 9x250ml flask holders
MS-NRK-30-FH500	MS Rocking shaker with 5x500ml flask holders
MS-NRK-30-FH1000	MS Rocking shaker with 4x1000ml flask holders
MW-SP	Strip springs (pack of 2), 265mm
MS-P3030	Additional 30x30cm platform with attachable 10cm pillars 8pcs and flat non-slip rubber mat
MS-DIMPLED-30	30x30cm dimpled mat
MS-FLAT-30	Non-slip rubber mat 30x30cm
MO-FH-125	1x125ml flask holder without platform
MO-FH-250	1x250ml flask holder without platform
MO-FH-500	1x500ml flask holder without platform
MO-FH-1000	1x1000ml flask holder without platform
MO-FH-2000	1x2000ml flask holder without platform
PPL-04-SI-SI-200-3	Sticky Pad 20x20cm
MS-UP-30	Universal adjustable platform, 30x30cm (Maximum capacity: 2x2L flasks)

*MS-UP-30 is compatible with MS-NRK, MS-NRC and MS-NOR series.



MS-UP-30

MS Waver Shaker

MW series

Waver Shaker offers optimal movement for the multiple stainings and washings involved in gel, blotting, microscopy and immunostaining applications. Its combination of vertical and horizontal orbital motion provides more rapid exchange of solvents and greater mixing efficiency.

Hybridization Water Bath is offered along with the Waver Shaker for wet hybridization, and it is even used as a shaking water bath. It is a digital controlled instrument equipped with a RS-232 port for data logging. It provides the temperature uniformity which hybridization processes requires.



Adjustable platform angle

Features

- Continuous or timed operation with automatic shut-off mechanism
- Variable shaking speed from 5 to 100rpm for mixing and washing action
- Two shaking movements in 2D or 3D
- Adjustable platform angle
- Interchangeable/stacking platform and extendable shelves available
- 33.0lb (15kg) loading capacity
- LED display for easy reading
- 4 digits red LED display
- High quality DC brushless motor
- Easy expandable shelf installation



MW-23

FC CE



MW-WB

Hybridization Water Bath

CE



MW-23-FH250



MW-23-FH500

Platform capability of Flask Holders

Flask	Maxi set of flask holder
125ml	9 / *12
250ml	9
500ml	9
1000ml	1 / *5

*Customized Specification

Specification



MW-SP



MW-P3333



MW-DIMPLED



MW-FLAT



MW-SL



MO-FH-125



MO-FH-250



MO-FH-500



MO-FH-1000



PPL-04-SI-SI-200-3

Cat. No.	MW-23
Motion	Orbital and Nutation(2D or 3D)
Controller	Digital microprocessor controller
Speed/Inc.	5 ~ 100rpm / 1rpm
Maximum tilt angle	8°
Timer	9999 (min) with alarm / Continuous
Loading capacity	33.0lb (15kg)
Motor	DC brushless type
Operating temperature	Ambient to 40°C
Platform dimension (WxL)	1.3"x1.3" (33x33cm)
Platform material	Painted iron alloy
Dimension (WxLxH)	12.99"x17.72"x11.02" (330x450x280mm)
Material	Painted iron metal
Weight	Approx. 22.0lb (10kg)
Rated voltage	110V / 220V (selectable)

Cat. No.	MW-WB
Display	4 Digital LED
Controller	Digital microprocessor controller
Bath temperature	Ambient to 95°C
Timer	9999 (min) with alarm / Continuous
Bath tank material	304 stainless steel
Bath inner dimensions (WxLxH)	9.45"x10.63"x1.97" (240x270x50mm)
Bath capability	Approx. 0.74gal (2.8L)
Operating temperature	Ambient to 40°C
Dimension (WxLxH)	11.81"x11.81"x11.42" (300x300x290mm)
Material	Painted iron metal
Lid material	Transparent acrylic material assembled with stainless steel construction
Data log	RS232
Weight	Approx. 15.4lb (7.0kg)
Rated voltage	110V / 220V

Ordering Information

Cat. No.	Product Description
MW-23	MS Waver Shaker with flat non-slip rubber mat, 110V / 220V
MW-23-FH250	MS Waver Shaker with 9x250ml flask holders
MW-23-FH500	MS Waver Shaker with 9x500ml flask holders
MW-WB-110/220	Hybridization Water Bath
MW-23-WB-110/220	MS Waver Shaker and Hybridization Water Bath
MW-SP	Strip springs (pack of 2), 265mm
MW-P3333	Additional 33x33cm platform with flat non-slip rubber mat (with 8 of attachable 10cm or 20cm pillars)
MW-DIMPLED	33x33cm dimpled mat
MW-FLAT	33x33cm non-slip rubber mat
MW-SL	Supporting leg (pack of 4)
MO-FH-125	1x125ml flask holder without platform
MO-FH-250	1x250ml flask holder without platform
MO-FH-500	1x500ml flask holder without platform
MO-FH-1000	1x1000ml flask holder without platform
PPL-04-SI-SI-200-3	Sticky Pad 20x20cm



Adjustable platform angle for 3D movement.



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