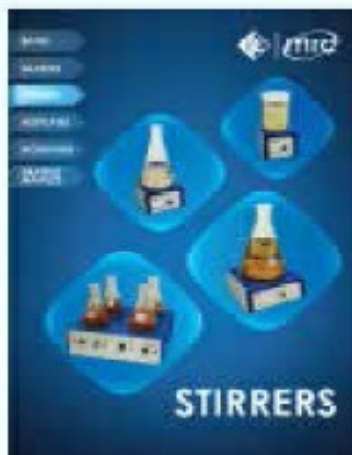
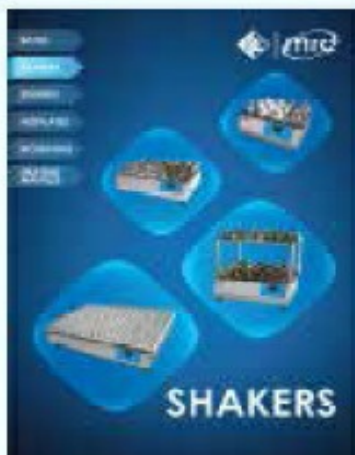


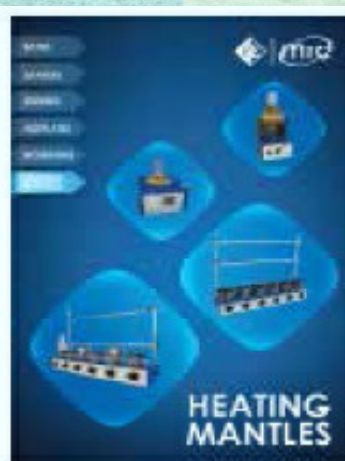
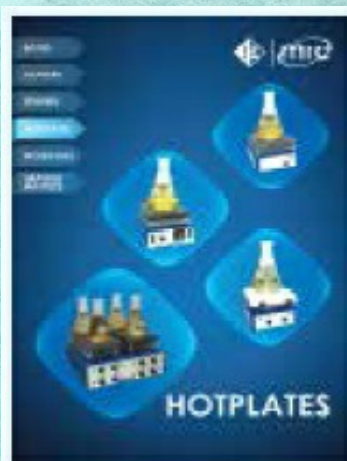
MRC Labs

**UPDATE
2016**



**Mini-Catalog
Updates
115 pages Total
in FLIPHTML5**

**+ Best
Sellers
Section**

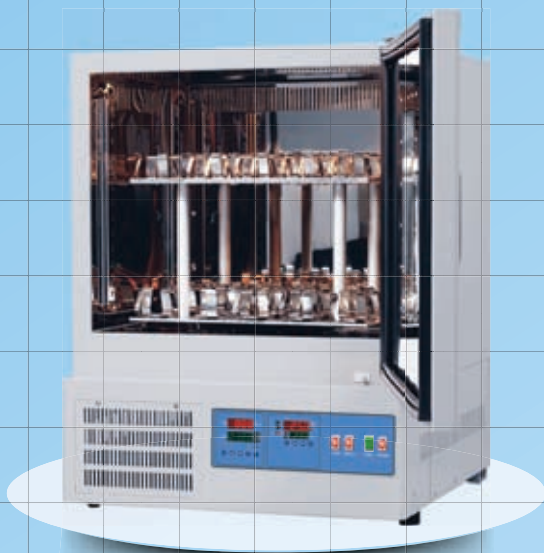
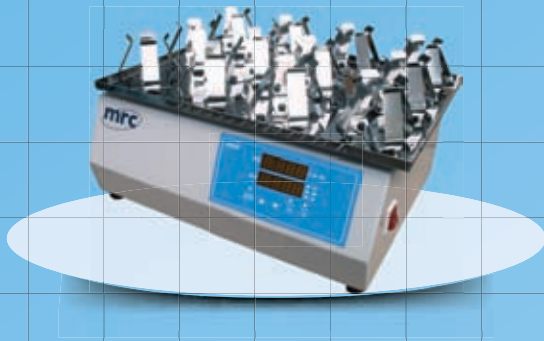
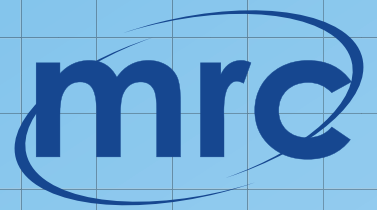


HOT!
**Products
2014**



**See also 2013/14
full catalog
last published
2013
714pages
In FlipPAGE**





Laboratory Products

DIGITAL PRECISE CIRCULATION WATER BATH

WBO-Series, Unstirred Up To 80°C Water Bath

The MRC stainless steel water bath are available in 2 sizes: 10 & 20 Liters. Model WBO-100 and WBO-200 unstirred bath are used for general applications in laboratories. They provides excellent temperature uniformity of the liquid. A PID temperature controller provides instant and accurate temperature. The tank of the bath is made of corrosion resistant stainless steel with round corners for easy cleaning. Include hood cover.

Features:

- Ideal for biotechnology, clinical, environmental, medical, petroleum, food industry
- Stainless steel lid prevents evaporation & keeps constant temperature
- Excellent uniformity & stability
- Seamless, corrosion-resistant, stainless steel chamber
- Available in 10, 20 Liters
- Gable cover included.



Applications:

- Incubate cultures
- Warm bacteriological media
- Perform chemical reactions
- Thaw samples.

Model	WBO-100	WBO-200
Temp. range	Room temperature ~ +5°C to 80°C	
Temp. constancy	±0.1	
Temp. control	PID	
Heater	300W	600W
Safety devices	Short circuit, over head protector, sensor abnormality	
Bath opening (mm)	W295xD235xH150	W495xD295xH150
Inside dimensions (mm)	W295xD235xH150	W495xD295xH150
Outside dimensions (mm)	W420xD280xH185	W620xD340xH185
Volume	10L	20L
Weight	6.5 kg	9 kg

DIGITAL PRECISE CIRCULATION WATER BATH

WBH-200



WBH-100



WBH-Series, Digital Precise Circulation Water Bath

There are 2 models with internal circulation pump, 10 & 20 Liters. The immersion circulator bridge can easily remove for easy cleaning of the tank.

Features: Ideal for Biotechnology, Clinical, Environmental, Medical, Petroleum, Food Industry, Pharmaceutical or Industrial Applications • Powerful Circulation Pump Assures Temp. Uniformity.: Internal and optional external Circulation • Stainless Steel Bath(#304) for Superior Durability & High Thermal Efficiency • Stainless Steel lid Prevents Evaporation and keeps Constant Temperature.



External Circulation Option

Model	WBH-100	WBH-200	WBH-200I
Temp. range	Ambient +5°C to 100°C		
Temp. constancy	±0.1		
Temp. control	PID		
Internal circulating pump	9Liter/Minute		
External circulating pump	No	No	Yes
Heater	800W	1000W	
Safety devices	Short circuit, over head protector, sensor abnormality		
Bath opening (mm)	W200xD235xH150	W400xD295xH150	
Inside dimensions (mm)	W295xD235xH150	W495xD295xH150	
Outside dimensions (mm)	W340xD280xH320	W540xD340xH320	
Volume	10L	20L	
Weight	7kg	10kg	

DIGITAL PRECISE REFRIGERATED BATH



WBL-Series, Digital Precise Refrigerated Bath, Internal and External Circulator

Refrigerated Circulating Baths

- Compact design.
- For external & internal temperature applications.
- Low noise level.
- Rapid cool down and heating time.
- Water drain for easy cleaning of the inner tank.
- Models WBL-200 has casters.
- Water level protector.
- Ideal for direct immersion of samples or external circulating system in the field of biotechnology and laboratories.
- Powerful circulation pump ensures temp. uniformity: internal and external circulation.
- Connection with evaporator or viscometer is applicable.

Options:

- Display resolution to 0.01°C
- Build in RS-232/485
- PT-100Ω temperature probe for direct measurements and control of external systems
- Analog inputs and outputs for external programmer and temperature recorder.

Model	WBL-100	WBL-101	WBL-200
Temperature range	-30°C~100°C		
Temp. constancy	±0.1°C		
Temp. control	PID		
Temp. sensor	PT-100Ω		
Circulation pump	9L/min. max. head 2m	18L/min. max. head 7m	27L/min. max. head 7m
Heater	1600W		2500W
Refrigerator	1/3HP		1 HP
Safety devices	Short circuit breaker, over heat protector, sensor abnormality, overload protector		
Bath opening (mm)	W200xD150xH150		W300xD210xH180
Bath dimension	W200xD300xH150		W300xD360xH180
Outside dimensions	W315xD450xH630		W420xD530xH800
Volume	9.0L		19.4L
In/Output	9.5mm		12.5mm
Weight	35kg		63kg

DIGITAL PRECISE SHAKING WATER BATH

WBT-200/400/401, Digital Precise Shaking Water Bath, 22 & 38 Liter, & Digital PID Control, Reciprocating Motion, 20~200rpm, to 100°C, $\pm 0.1^\circ\text{C}$, up to 1 Liter Flask



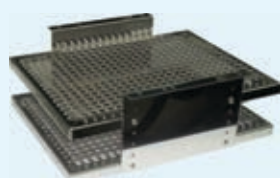
These reciprocating water bath shakers are available in three models. Model WBT-200 small platform 250x300mm, Model WBT-400 large platform 300x400mm & Model WBT-401 refrigerated to 0°C . Temperature control is precise, temp. range of 5°C above ambient to 100°C , speed range 20 – 200 rpm, heat loss and evaporation minimized with use of stainless steel hood cover.

Easy emptying through a drain at the lowest point. Micro processor temperature PID controller with dual display of measured temperature and set temperature.

Electronically Controlled Shaking Mechanism Provides Quiet Reciprocating Motion and Precise Speed Control.

Options:

- Water level protector.
- Universal platform.
- Digital speed control.



Universal Spring Racks

Optional: Tube Holders



AC-220-30-16



WBT-200D
Optional: Dig. Speed Control

Features:

Stainless Steel Bath for Superior Durability & High Thermal Efficiency • Innovative Easy-to-Use Digital PID Controller • Electronically Controlled Shaking Mechanism Provides Quiet Reciprocating Motion and Precise Speed Control • Universal Stainless Steel Spring Rack (Optional): for various kind of Flasks dishes and Tubes (optional) • Patent shaking mechanism: minimum noise and vibration.



Flask Holders

Model	WBT-200	WBT-400	WBT-401
System	Reciprocation shaking circulation		
Temp. range	Room temperature - 100℃		0℃-100℃
Temp. constancy	±0.1℃		
Temp. control	PID		
Temp sensor	PT-100Ω		
Inside material	SUS304		
Rate of shaking	20~200 rpm		
Shaking width	20 and 40 mm variable		
Shaking plate (mm)	W300xD250xH130	W400xD300xH160	
Refrigerator			1/4HP
Heater	1.0KW	1.6KW	
Safety devices	Short circuit breaker, over heat protector, sensor abnormality, refrigerator over protector		
Inside dimensions (mm)	W500xD300xH150	W600xD350xH180	
Outside dimensions (mm)	W700xD350xH300	W830xD415xH350	W980xD415xH430
Volume (Liters)	22.5	37.8	
Weight	25kg	30kg	53kg

capacity of flasks	50 ml	125 ml	250 ml	500 ml	1000 ml
WBT-200 number of flasks	20	12	6	4	2
WBT-400/401 number of flasks	35	20	12	6	4

HEAT INCUBATORS

DFI Series, 36 Liter, 80 Liter, 150 Liter, 240 Liter Incubators



Incubator With Forced Convection

Premium equipment for all gentle incubation applications, including processing large numbers of samples at high throughput. Outstanding dynamics keep the required temperature virtually stable with homogenous distribution, irrespective of how many times the door is opened. The modern range of incubators is available in 4 sizes.

DFI Series offers excellent uniformity and stability & are used for many applications as incubation of culture test, drying slides, microbiological incubation, bacteriological test and more. The inner case is constructed from polished stainless steel. Internal glass door for incubator. All units are provided with wire plated shelves with multi position settings.

All models are with fans assisted air circulation.

The chamber ventilation and exhaust vent are easily adjustable.

Wide choice of control options is available.

PID controller is fitted as standard with dual display of measured value and setpoint.

Options:

- 38mm cable port
- Gas inlet
- 5 programs of 8 segments model: 3216CP
- 4 programs of 16 segments model: 2416P4
- RS-232/485 communication model: 3216E
- Datalogger



Model	DFI-36	DFI-80	DFI-150	DFI-240
Temp. range	Room temperature ~ 80°C			
Temp. constancy	±0.1°C			
Temp. uniformity	±2% at 37°C			
Temp. control	PID			
Temp. sensor	Thermocouple K			
Heater: Incubator	400W	400W	600W	800W
Inside Material	S.S -430			
Timer	99hr 59min			
Safety devices	Short circuit breaker, over heat protector, sensor abnormality			
Inside dimensions (mm)	W400xD300xH300	W500xD400xH400	W600xD500xH500	W600xD500xH800
Outside dimensions (mm)	W525xD420xH595	W620xD520xH620	W720xD620xH720	W720xD620xH1020
Volume (Liters)	36	80	150	240
Shelves	2	2	2	3
Weight	34kg	47kg	60kg	76kg

HEAT/COOL INCUBATORS



- Automatic high and low temperature alarm to prevent the temperature from going too high and dropping too low
- Built-in circulating fan for temperature stability
- Illumination and Timer can be installed if required
- The compressor will be delayed to start working if power cut & with timer for defrost. Using environmental protection cold-media R134a
- Internal Power socket.

BOD-80/150

The MRC model BOD-80/150/175x2

cooled incubator designed to obtain freezing, incubating, drying & test temperatures between 0°C and +70°C (or -10°C and +60°C). It has stainless steel chamber and two doors, when the outer metallic door is opened there is inner glass door. Very good uniformity is achieved by forced air circulation. A PID temperature controller provides constant and accurate temperature. Inside power socket enable the use of the shaker rotator or other instrument inside. Cable port with cup is available upon request.

The MRC model BOD-400/550/590

is ideal for BIOCHEMICAL OXYGEN DEMAND of sewage and waste water. Other applications include fermentation studies, drug stability tests. Excellent temperature uniformity is obtained by forced air circulation. A PID microprocessor temperature controller provides accurate and constant temperature. Dual display of setpoint and chamber temperature. Hermetically sealed compressor and automatic defrost.

Options: 38mm cable port • Gas inlet • Day/Night Light+Timer

Model	BOD-590	BOD-550	BOD-400	BOD-150	BOD-175 Dual	BOD-80
Temp. range	0°C~70°C (or -10°C to 60°C)					
Temp. Accuracy	±0.1°C					
Temp. control	PID					
Temp. Display	LED digital display actual and setting temperature					
Temp. Sensor	PT-100Ω					
Heater	900W	1200W	1200W	900W	900W x 2	900W
Volume	590L	550L	400L	150L	175L x 2	80L
Shelf (Adjustable)	4	4	4	2	2	2
Inside Material	Strengthen white porcelain	SUS 304				
Refrigerator	1/3HP			1/4HP		
Inside dimensions WxDxH(mm)	680x600x1450	680x580x1400	600x500x1350	600x500x500	700x500x500	500x400x400
Outside dimensions WxDxH(mm)	815x800x1940	760x820x1860	670x740x1820	680x700x825	780x690x1720	560x550x670
Weight	90Kg	90Kg	90Kg	78Kg	150Kg	50Kg

HYBRIDIZATION INCUBATORS



HD-801D

Features:

- Requires less probe to produce consistent films with sharp bands.
- Forced air convection provides excellent temperature uniformity.
- Compact design saves bench space.
- Broad temperature range from ambient +5°C to 80°C.
- Precise microprocessor-based PID temperature control from 5°C above ambient to 70°C in 0.1°C increments.
- Forced air circulation maintains temperature uniformity of $\pm 0.5^\circ\text{C}$.
- Variable speed models provide consistent speed even at low rpms for uniform distribution of solutions and complete wetting of membrane.

HD-Series, Hybridization Incubator

The MRC hybridization incubators offers high performance with precise temperature control, safety and convenience. It is small and space saving incubator.

The bottle carousel is easily removable for easy cleaning of the chamber. The bottle carousel accept up to eight bottles (300mm). Very homogeneous temperature distribution in the chamber is obtained by air forced ventilation. This airflow system also ensures fast recovery of chamber temperature after door opening. A PID temperature controller provide constant & no temperature overshoot. Dual display of actual chamber temperature & set point temp.

Tempered glass viewing window provides clear chamber visibility without opening the door. Simple operation of speed by means of rotary switch & the speed display is by analog tachometer.

Applications:

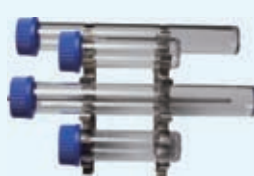
- Northern (RNA) blot hybridizations
- Southern (DNA) blot hybridizations
- Western (Protein) blot hybridizations.



HD-800D



HD-AC-H



HD-AC-1.5



HD-AC-15



HD-AC-50



AC-210-96

Model	HD-800D	HD-801RD	HD-801DS	HD-801RK
Shaking	Rotation+orbital	Rotation	orbital	Rocking
Temp. range	Ambient +5°C~80°C			
Temp. Accuracy	$\pm 0.1^\circ\text{C}$			
Temp. control	PID			
Temp. Display	LED			
Rotor Speed	6 ~ 50rpm		-	-
Rotor Capacity	8 pcs (Max)	Supplied 8 pcs (Max)	-	-
Shaker Speed	10 ~ 100rpm	-	20 ~ 200rpm	6 ~ 60rpm
Shaking Width	25mm	-	-	-
Shaker Capacity	Carry 6 kg			
Timer	999 h / 999 min / 999 sec			
Shaking Plate (mm)	310 x 210			
Inside dimensions WxDxH(mm)	350x250x425		350x255x250	
Outside dimensions WxDxH(mm)	440x375x660		440x375x410	
Weight	33kg		23kg	

BENCHTOP SHAKER INCUBATORS



TON-50N

- Automatic stop of shaking, when the door is opened
- Accommodate flasks up to 2000ml
- Universal spring rack for various shapes/sizes of flasks is available (optional).



Optional: Universal spring tray



LOM-65/TON-50N/TON-120N, Orbital Shaking Incubator, BenchTop

Applications

- Areas of application: cultivation of cell & tissue cultures or micro organisms. molecular biology, cell and insect culture, and entomology studies.
- Production of secondary natural substances and biogenetic pharmaceuticals etc.

Features:

- Space saving with transparent window in the front which provide good visibility that minimize the need to open the chamber, automatic cutout of shaker when lid is open to protect operator.
- Platform 300 x 400 mm or 450 x 450mm accept flasks up to 2 Liter, test tubes racks and gel trays.
- Shakers feature a triple eccentric drive that handles heavy workloads, provides uniform agitation & enables continuous 24-hour operation even at high speeds.
- Precisely monitor and control chamber temperature over complete range with $\pm 0.1^\circ\text{C}$ accuracy at 37°C with PID temperature controller
- DC motor & variable speed control from 40 to 400rpm, controlled by a rotary dial
- Integrated tachometer monitors & displays speed in rpm to guarantee an accurate setting
- Easy-to-read digital display shows temperature
- Advanced shaking mechanism provides quiet shaking & precise speed control
- Min. noise & no vibration



TON-50N - Top opening

LOM-65 - Front opening with one standing shelf

Model	TON-50N	TON-120N	LOM-65
Type	Flip-up door		Upright
Temp. range	Ambient + 5°C ~ 70°C		
Temp. Accuracy	$\pm 0.1^\circ\text{C}$		
Temp. control	PID		
Temp. Display	LED		
Shaker Speed	20~250 rpm (optional 400 rpm)		
Shaking width	25 mm		
Timer	999h / 999min / 999sec		
Volume	66L	102L	65L
Shelve	N/A	N/A	1
Shaking Plate Size (mm)	400x300	450x450	400x300
Inside dimensions (mm)	W455xD390xH380	W500xD540xH380	W450xD390xH370
Outside dimensions (mm)	W460xD510xH540	W510xD650xH540	W520xD550xH610
Weight (Approx.)	30Kg	40Kg	50Kg

Capacity of flask holders

Model	111-1-110050	111-1-110125	111-1-110250	111-1-110500	111-1-111000	111-1-112000
Flask clamps	50ml	125ml	250ml	500ml	1000ml	2000ml
TON-50N	35	20	12	6	4	2
TON-120N	64	36	25	16	9	5
LOM-65	35	20	12	6	4	2

COOLED SHAKER INCUBATORS



LOM-150

Optional: Tube Holders

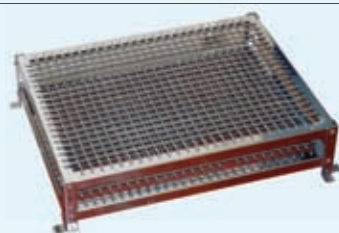


FLASK HOLDERS



Universal platform for LOM-150

111-1-111143



LOM-150-Series, 150Liter Shaking Incubator, Orbital Motion

This multipurpose model can shake, incubate & refrigerate. The 480x380mm platform accepts flasks up to 6 Liter. Large viewing window & internal light provide clear chamber visibility, with moveable window blind.

One stationary shelf for incubating added samples with a front opening door, the LOM-570 can be used on the bench or on the floor, wide temp. range 0°C to 60°C.

Model LOM-150D: two stage shaker enable to shake two platform simultaneously.

Useful for biological culture under various temperature.

- Useful for biological culture under various temp.
- Inside material is SUS304 & outside body is powder painting
- Screen-touch panel
- The compressor will be delayed to start working if power cut and with timer for defrost.
- With safety switch to stop shaking when opening door
- Three-point bearing transmission is adopted suitable for heavy loads and continuous duty.
- Minimum noise, no vibration.
- Refrigeration using non cfc gas R134A
- Optional day/night light with timer.
- Transparent glass observation window & internal light.
- Provide clear visibility without opening the door.
- Uses brush less AC motor for long durability and stable performance of the shaking system.
- Overheat and over low protector, built-in circulating fan for temperature stability.
- Optional: Day/night light+timer.



Double Platform, LOM-150D

Model	LOM-150	LOM-150D
System	Forced air circulation	
Shaking system	Orbital	
Shaking platform	Single	Double
Temp. range	0°C~70°C	
Temp. constancy	±0.1°C	
Temp. uniformity	±1°C (at 37)	
Temp. control/display	PID/LED	
Temp. sensor	PT-100Ω	
Inside material	SUS-304	
Rate of shaking	20~300 rpm (option 400 rpm)	20~150 rpm
Shaking width	25 mm	
Shaking plate	W480xD380	W480xD380 Double platform
Refrigerator	1/4 HP	
Heater: Incubator	900W	
Safety devices	Short circuit breaker, over heat protector, refrigerator over load protector, sensor abnormality, over low protector	
Inside dimensions (mm)	W600xD500xH500	
Outside dimensions (mm)	W680xD690xH860	
Volume (Liter)	150	
Shelves	1 (Adjustable)	N/A
Power supply	110/220V, (8.5A)	
Weight	98Kg	100Kg

Capacity for flasks holders:

Model	111-1-110125	111-1-110250	111-1-110500	111-1-111000	111-1-112000	111-1-113000	111-1-114000	111-1-115000
Flask clamps	125ml	250ml	500ml	1000ml	2000ml	3Liter	4Liter	5Liter
LOM-150	30	20	12	6	5	4	2	1
LOM-150D	30x2 set	20x2 set	12x2 set	-	-	-	-	-

DUAL SHAKER INCUBATORS



LOM-175-Dual

LOM-175-Dual/LOM-175D-Dual, Orbital Dual Shaking Incubator

Features:

- Useful for biological culture under various temp.
- Inside material is SUS304 & outside body is powder painting
- Screen-touch panel
- The compressor will be delayed to start working if power cut and with timer for defrost.
- With safety switch to stop shaking when opening door
- Three-point bearing transmission is adopted suitable for heavy loads and continuous duty.
- Minimum noise, no vibration.
- Refrigeration using non cfc gas R134A
- Optional day/night light with timer.
- Transparent glass observation window & internal light.
- Provide clear visibility without opening the door.
- Uses brush less AC motor for long durability and stable performance of the shaking system.
- Overheat and over low protector, built-in circulating fan for temperature stability.

Optional: Tube Holders



FLASK HOLDERS



Model	LOM-175-Dual	LOM-175D-Dual
Platform	Single	Double
Temp. range	0°C~70°C	
Temp. Accuracy	±0.1°C	
Temp. control	PID	
Temp. Display	LED 2-screen digital display actual and setting temperature	
Shaker Speed	20~250 rpm (option 400 rpm)	20~150 rpm
Shaking width	25 mm	
Timer	999h / 999min / 999sec	
Heater	900 W each chamber	
Refrigerator	1/4HP	
Volume	Each chamber 175L	
Shaking Plate Size (mm)	640x440	
Inside dimensions (mm)	W700xD500xH500	
Outside dimensions (mm)	W780xD690xH1720	
Shelf (Adjustable)	1	N/A
Weight (Approx.)	170Kg	180Kg

Capacity of flask holders

Model	111-1-110125	111-1-110250	111-1-110500	111-1-111000	111-1-112000	111-1-113000	111-1-114000	111-1-115000
Flask clamps	125ml	250ml	500ml	1000ml	2000ml	3Liter	4Liter	5Liter
LOM-175-Dual	40	28	20	12	6	6	2	2
LOM-175D-Dual	40x4 set	28x4 set	20x4 set	-	-	-	-	-

SHAKER INCUBATORS



LOM-300

LOM-300, Orbital Shaking Incubator, Double Door

Features:

- Useful for biological culture under various temp.
- Inside material is SUS304 & outside body is powder painting
- Screen-touch panel
- The compressor will be delayed to start working if power cut and with timer for defrost.
- With safety switch to stop shaking when opening door
- Three-point bearing transmission is adopted suitable for heavy loads and continuous duty.
- Minimum noise, no vibration.
- Refrigeration using non cfc gas R134A
- Optional day/night light with timer.
- Transparent glass observation window & internal light.
- Provide clear visibility without opening the door.
- Uses brush less AC motor for long durability and stable performance of the shaking system.
- Overheat and over low protector, built-in circulating fan for temperature stability.

Optional: Tube Holders



Optional: Universal spring tray for LOM-300



FLASK HOLDERS

Model	LOM-300
Temp. range	0°C~70°C
Temp. Accuracy	±0.1°C
Temp. control	PID
Temp. Display	LED
Shaker Speed	20~250 rpm (option 400 rpm)
Shaking width	50 mm
Timer	999h / 999min / 999sec
Illumination	Fluorescent lamp 20 W
Heater	1200 W
Refrigerator	1/3HP
Volume	300L
Shaking Plate Size (mm)	900x500
Inside dimensions (mm)	W1000xD600xH500
Outside dimensions (mm)	W1380xD690xH890
Shelf (Adjustable)	1
Weight (Approx.)	280Kg

Capacity of flask holders

Model	111-1-110125	111-1-110250	111-1-110500	111-1-111000	111-1-112000	111-1-113000	111-1-114000	111-1-115000
Flask clamps	125ml	250ml	500ml	1000ml	2000ml	3Liter	4Liter	5Liter
LOM-300	66	50	32	18	10	10	3	3

LARGE SHAKER INCUBATORS

LOM-560/LOM-834, Orbital Shaking Incubator, Large Vertical Type



LOM-834D

Features:

- Useful for biological culture under various temperature.
- Inside material is SUS304 & outside body is powder painting
- Screen-touch panel
- The compressor will be delayed to start working if power cut and with timer for defrost.
- With safety switch to stop shaking when opening door
- Three-point bearing transmission is adopted suitable for heavy loads and continuous duty.
- Minimum noise, no vibration.
- Refrigeration using non cfc gas R134A
- Optional day/night light with timer.
- Transparent glass observation window & internal light.
- Provide clear visibility without opening the door.
- Uses brush less AC motor for long durability and stable performance of the shaking system.
- Overheat and over low protector, built-in circulating fan for temperature stability.



LOM-560D

FLASK HOLDERS



Model	LOM-560	LOM-560D	LOM-834	LOM-834D
Shaking platform	Single	Double	Single	Double
Temp. range	0°C~70°C			
Temp. Accuracy	±0.1°C			
Temp. control	Micro-computer PID temperature controller			
Temp. Display	LED 2-screen digital display actual and setting temperature			
Shaker Speed	20~250 rpm	20~150 rpm	20~250 rpm	20~150 rpm
Shaking width	50 mm			
Timer	999h / 999min / 999sec			
Heater	1600 W			
Illumination	Fluorescent lamp 20 W			
Shelf (Adjustable)	2	1	2	1
Refrigerator	1/3HP		1/2HP	
Volume	560L		834L	
Shaking Plate Size (mm)	740x480		960x600	
Inside dimensions (mm)	W860xD600xH1100		W1100xD690xH1100	
Outside dimensions (mm)	W940xD800xH1840		W1190xD920xH1840	
Weight (Approx.)	280Kg		300Kg	

Capacity of flask holders

Model	111-1-110125	111-1-110250	111-1-110500	111-1-111000	111-1-112000	111-1-113000	111-1-114000	111-1-115000
Flask clamps	125ml	250ml	500ml	1000ml	2000ml	3Liter	4Liter	5Liter
LOM-560	48	40	24	12	9	6	6	4
LOM-560D	96	60	40	24	–	–	–	–
LOM-834	78	50	36	18	10	10	8	8
LOM-834D	156	100	72	36	–	–	–	–

LARGE SHAKER INCUBATORS

LOM-200N/400N, Precise Shaking Incubator, Top Door, Orbital Motion With Digital PID Control Up To 70°C



LOM-400N

Optional: Tube Holders



FLASK HOLDERS



Features:

- Useful for biological culture under various temp.
- Inside material is SUS304 & outside body is powder painting
- Screen-touch panel
- The compressor will be delayed to start working if power cut and with timer for defrost.
- With safety switch to stop shaking when opening door
- Three-point bearing transmission is adopted suitable for heavy loads and continuous duty.
- Minimum noise, no vibration.
- Refrigeration using non cfc gas R134A
- Optional day/night light with timer.
- Transparent glass observation window & internal light.
- Provide clear visibility without opening the door.
- Uses brush less AC motor for long durability and stable performance of the shaking system.
- Overheat and over low protector, built-in circulating fan for temperature stability.



LOM-200N

Model	LOM-200N	LOM-400N
System	Forced air circulation	
Shaking system	Orbital	
Temp. range	0°C~70°C	
Temp. constancy	±0.1°C	
Temp. uniformity	±1°C (at 37)	
Temp. control / display	PID / LED	
Temp. sensor	PT-100	
Inside material	SUS-304	
Rate of shaking	20~250rpm	
Shaking width	50 mm	
Shaking plate (mm)	W600xD480mm	W960xD600mm
Refrigerator	1/4 HP	1/3 HP
Heater: Incubator	1200W	
Safety devices	Short circuit breaker, over heat protector, refrigerator over load protector, sensor abnormality, over low protector	
Inside dimensions	W680xD560xH540mm	W1040xD680xH540mm
Outside dimensions	W1010xD640xH870mm	W1370xD760xH870mm
Volume (Liters)	205	381
Power supply	110/220V, 50/60Hz, (8.5A)	
Weight	200Kg	300Kg

Capacity of flask holders

Model	111-1-110125	111-1-110250	111-1-110500	111-1-111000	111-1-112000	111-1-113000	111-1-114000	111-1-115000
Flask clamps	125ml	250ml	500ml	1000ml	2000ml	3Liter	4Liter	5Liter
LOM-200N	48	30	20	12	9	6	6	4
LOM-400N	96	60	40	24	15	15	12	8

GROWTH INCUBATORS



PGI-550RH

PGI-550R/PGI-550RH, Plant Growth Incubator 550 Liter

- Customized design
- Apply to microorganism Lab / Cell culture / Biotechnology experiments / Analytical Lab / Food Science and Technology / Agricultural Lab / The Fisheries Laboratory / Gardening / Plant Research / Seeds.

Illuminated growth chamber controllers, allow setting of two temp. conditions day & night & an On/Off illumination cycle relative to the program selected. Timers can be set to adjust cycles from 10 minutes up to 24 hours.

Each system operates independently allowing for simulation of a diurnal cycle, such as an eight hour day cycle of 30°C with light followed by a sixteen hour night cycle of 18°C without light.

Forced air circulation ensures the most reproducible test conditions. The chamber air is gently & continuously circulated at a rate that ensures temp. uniformity of all test samples. The unit is equipped with a hermetically-sealed compressor & an independent over temp. safety controller. It also includes a circuit breaker to protect from electrical overload, 5 shelves, adjustable leveling feet, steel exterior with welded seams & corners, & double-coated, baked enamel finish.

MRC Diurnal growth chambers are designed for studies requiring day and night time simulation.



Internal

Model	PGI-550R	PGI-550RH
Temperature Range	0°C ~ 60°C	
Temperature Control	PID temperature controller, PV actual value and SV setting value displayed at the same time	
Temperature Precision	±0.1°C	
Touch Setting	Power, cooling temperature, humidity, illumination timer device	
Safety Device	overheat and over low cut off device. 2-stage protection with safety protection alarm and indicator, compressor delay-start, high and low pressure of cold media protection device	
Heater	1200 W SUS 304#	
Refrigerator	1/3 HP R134a	
Humidity Display	-	PID temperature controller, PV actual value and SV setting value displayed at the same time
Humidity Control	-	30% RH ~ 95% RH
Control Precision	-	± 3%
Humidity Display	-	Digital
Humidity Device	-	Ultrasonic wave stainless steel (Back-mounted)
Illumination	4000-8000 LUX	
Timer	24H Temperature and light control	
Shelf / Inner Chamber	5 psc / SUS 304# stainless steel	
Inside Dimension (WxDxH)	680 x 580 x 1400 mm (Approx 550 L)	
Outside Dimension (WxDxH)	760 x 820 x 1870 mm	
Volume	550 L	
Power Voltage	110V/220V14A/7A	110V/220V16A/8A
Weight	150 kg	180 kg

GROWTH INCUBATORS



PGI-2660

- Animals, plant cell culture
- Insect
- Plant culture
- Tissue culture
- Domestication treatment
- Algae culture
- Pathology observation
- Biochemical experiment.



Model	PGI-2460/ PGI-2460H	PGI-2660/ PGI-2660H
Temperature range	0°C ~ 45°C	
Temperature control	Micro-computer PID temperature controller, PV actual value and SV setting value displayed at the same time, with independent day/night temperature	
Control Precision	±0.02°C dpi 0.1°C	
Touch Setting	Power, cooling, temperature, humidity, light, timer, all using touch setting	
Safety Device	Electronic LCD display, precision setting 0.1°C, overheat and over low cut off device. 2-stage protection with safety protection alarm and indicator, compressor delay-start, high and low pressure of cold media protection device	
Heater / Cooler	1KW SUS 304# / 7000 BTU	1.5KW SUS 304# / 12000 BTU
Humidity Control	Micro-computer PID temperature controller, PV actual value and SV setting value displayed at the same time	
Humidity Range	30% RH ~ 90% RH	
Control Precision	±0.02% dpi: 0.1%RH / ±3% RH	
Display / Safety Device	Digital display/Electronic setting precision 0.1%RH, with high or low humidity alarm	
Humidifier	Ultrasonic wave stainless steel humidifier	
Illumination Device	4-sides glasses heat insulation illumination: 0-30000LUX for choose, independent light control	
Timer Device	24h temperature and light control	
Shelf / Material	5pcs	10pcs
Inside Dimension (WxDxH)	620 x 620 x 1300 mm	1200 x 690 x 1300 mm
Outside Dimension (WxDxH)	910 x 930 x 2070 mm	1490 x 1000 x 2070 mm
Weight	500 L	1076 L
Power Voltage	220V 50/60Hz	

250°C FORCED AIR OVENS



DFO-36

DFO-80

DFO-150

DFO-240

DFO-Series, 36 Liter, 80 Liter, 150 Liter, 240 Liter Ovens

DFO Series units are primarily used in applications needing rapid drying and sterilization. Totally homogenous temperature distribution and/or rapid dynamic response. This modern range of ovens is available in 4 sizes.

DFO Series offers excellent uniformity and stability & are used for many applications as Glassware drying, warming, sterilizing, ageing, curing, softening, annealing, preheating and testing, drying slides. The inner case is constructed from polished stainless steel.

All units are provided with wire plated shelves with multi-position settings.

All models are with fan assisted air circulation, the chamber ventilation and exhaust vent are easily adjustable.

Wide choice of control options is available, PID controller & timer is fitted as standard with dual display of measured value and setpoint.

Options:

- 38 mm cable port
- Gas inlet
- 5 programs of 8 segments model: 3216CP
- 4 programs of 16 segments model: 2416P4
- RS-232 / 485 communication model: 3216E



DFO-36

Specifications:

Model	DFO-36	DFO-80	DFO-150	DFO-240
Temp. range	Room temperature – 250°C			
Temp. constancy	±0.1°C			
Temp. uniformity	±2%			
Temp. control	PID			
Temp. sensor	Thermocouple K			
Heater: Oven	1100W	1500W	1800W	2200W
Inside Material	S.S-430			
Timer	99hr 59min			
Window (mm)	W200xH300			W200xH500
Safety devices	Short circuit breaker, over heat protector, sensor abnormality			
Inside dimensions (mm)	W400xD300xH300	W500xD400xH400	W600xD500xH500	W600xD500xH800
Outside dimensions (mm)	W525xD420xH595	W620xD520xH620	W720xD620xH720	W720xD620xH1020
Capacity (Liters)	36	80	150	240
Shelves	2			3
Weight	34kg	47kg	60kg	76kg

250°C LARGE CAPACITY FORCED AIR OVENS



DFO-2160

DFO-600/720/1008/2160, Large Force Convection, Double Door

- Ovens are used for many applications as baking, drying, conditioning, sterilizing, electroplate, plastic, chemical industry, printing, hard ware, pharmacy, tea fired, bake industry etc
- Inner case is SUS 304 and outside body is powder painting.
- Tempered Safety Glass Window to see inside without door opening
- Install double over temperature protection.
- All models are with fan assisted air circulation, air vent on both side.
- Brake wheels, easy to move.
- Silent fan motor.

Model	DFO-600	DFO-720	DFO-1008	DFO-2160
Temp. range	40°C~200°C (250°C)			
Temp. Accuracy	±0.1°C			
Temp. control / Display	PID / LED			
Temp. Sensor	Thermocouple K type			
Keep Warm	Mineral wool/Glass wool			
Safety Device	EGO (Double over temperature protection)			
Volume	600L	720L	1008L	2160L
Timer	99 h / 59 min			
Shelf (Adjustable)	4			
Power Voltage	220V 50/60Hz 1PH		220V 50/60Hz 3PH	
Inside dimensions (mm)	W1000xD600xH1000	W1200xD600xH1000	W1400xD600xH1200	W1800xD1000xH1200
Outside dimensions (mm)	W1250xD750xH1580	W1450xD750xH1580	W1650xD750xH1820	W2000xD1200xH1980



DFO-480

DFO-270/480, Large Force Convection, Single Door

- Ideal for Large Volume Baking Electronic Parts, Drying, Conditioning and Sterilizing
- Inner case is SUS 304 and outside body is powder painting.
- Tempered Safety Glass Window to see inside without door opening
- Install double over temperature protection.
- All models are with fan assisted air circulation, air vent on both side.
- Brake wheels easy to move.

Model	DFO-270	DFO-480
Temp. range	Ambient + 5°C~210°C (250°C)	
Temp. Accuracy	±1°C	
Temp. control / Display	PID / LED digital display	
Temp. Sensor	K type	
Heater	4000 W	
Volume	270L	480L
Timer	99 h / 59 min	
Keep Warm	Rock wool fiber	
Shelf (Adjustable)	4	
Power Voltage	220V 50/60Hz 1PH	
Inside dimensions (mm)	W600xD500xH900	W800xD600xH1000
Outside dimensions (mm)	W780xD620xH1520	W980xD720xH1620

BENCHTOP PLATFORM ORBITAL SHAKERS

BenchTop Platform Shakers:



MRC orbital shakers are for shaking in ambient conditions on the bench or in incubator or warm room or cool room. These shakers are available in three models. Model TOS-4030PD – flat platform shaker, model TOS-4030TD universal platform shaker and model TOS-4030FD flask clamps platform shaker. Platform can be easily removed and replaced by opening the four screws on the center of the platform. Model TOS-4030FD platform can accommodate a mix of flask clamps. A powerful, quiet, space saving, reliable, either for gentle shaking of liquids or vigorous mixing of materials. Maintenance free, the tray is proof against aggressive liquids. Flexible platform system. All kinds of dishes can be placed on the platforms: beakers, erlenmeyer flask, test tube racks etc. All models feature a large easy to read LED display. A specific run time can be entered or continuous running can be selected. These medium size orbital shakers are well engineered & provide smooth operation when under maximum load and speed. The top tray of each model has threaded holes to accommodate flask holders from 50ml to 6000ml.

Applications:

- Cell cultures
- Bacterial suspensions
- Solubility studies
- Staining
- Extraction procedures
- Destaining
- Diagnostic tests
- Washing Procedures
- General Mixing
- Hybridization

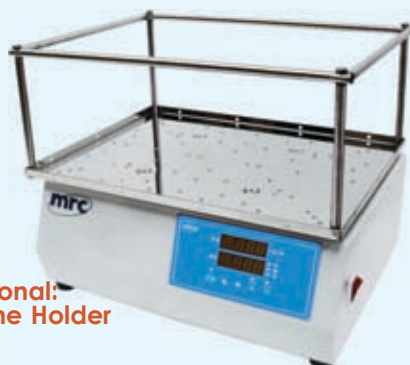
Features:

- Triple eccentric drive enables continuous 24-hours operation, handles heavier loads and provides smooth uniform agitation of full or unbalanced loads even at high speeds.
- Units operate in temperature range of 4 to 40°C and humidity conditions from 20 to 80% non condensing enabling them to be used in incubators, warm rooms, environmental chambers and refrigerators.
- Easy to adjust speed up to 300rpm.
- Easy to adjust timer up to 9999 minutes.
- Memory of speed when power cut.

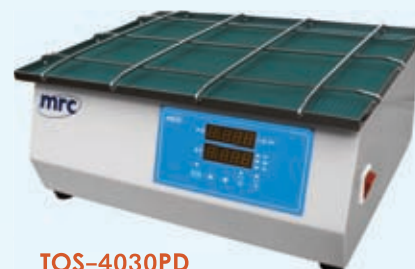
Optional: Tube Holders



Optional: Universal spring tray for TOS-4030FD



Optional: Frame Holder



TOS-4030PD

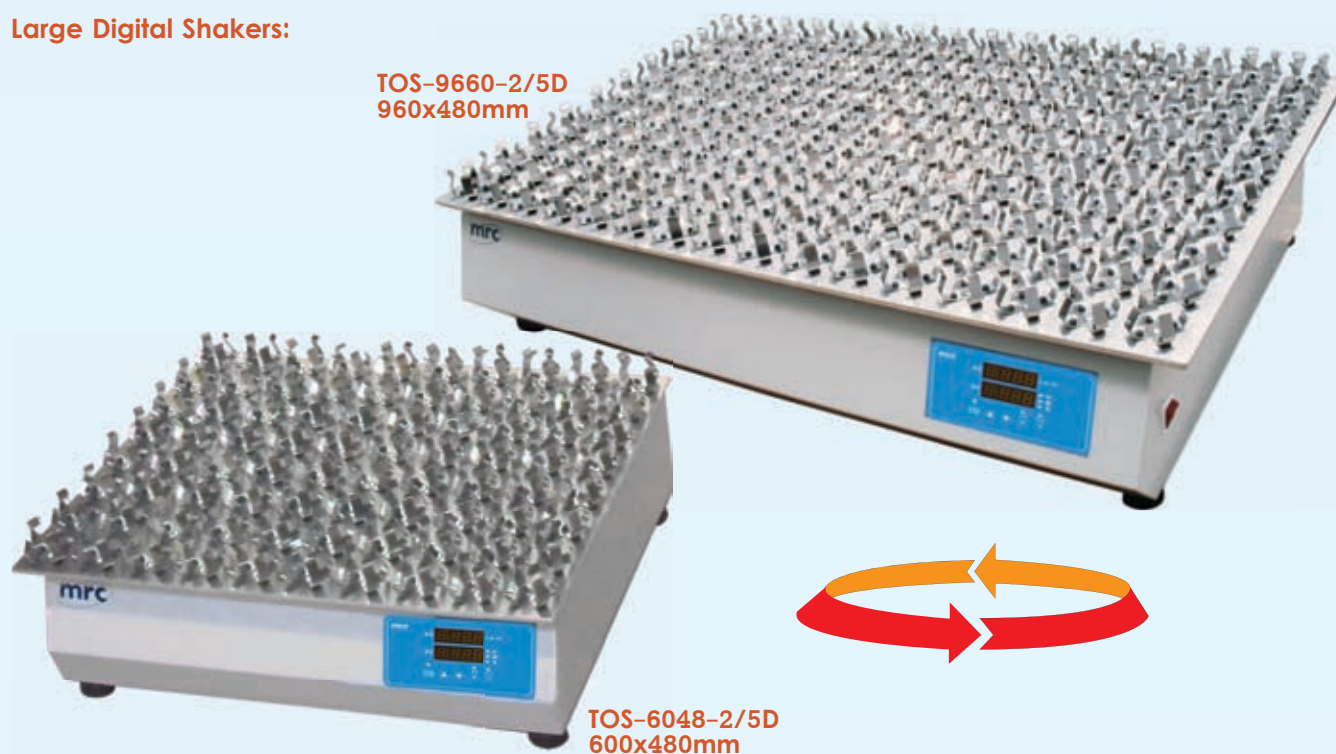
Model	TOS-4030PD	TOS-4030FD	TOS-4838FD	TOS-6048FD
System shaking	Orbital			
Speed range	20-300 rpm			
Shaking orbit	25m			
Shaking plate (mm)	W400xD300		W480xD380	W600xD480
Outside DIM. (mm)	W400xD330xH165		W480xD380xH165	W600xD480xH210
Shaking plate	Plate	Flask rack	Flask rack	
Power supply	110/220V, 60/50Hz (1A)			
Weight	11kg	12kg	18kg	25kg

Accessories:

Model	111-1-110050	111-1-110125	111-1-110250	111-1-110500	111-1-111000	111-1-112000	111-1-113000	111-1-114000	111-1-115000	111-1-116000
Model/flask clamps	50ml	125ml	250ml	500ml	1000ml	2Liter	3Liter	4Liter	5Liter	6Liter
TOS-4030F Capacity	35	20	12	6	4	2	1	1	–	–
TOS-4838F Capacity	48	30	20	12	6	4	2	2	1	1
TOS-6048F Capacity	80	48	30	20	12	6	6	4	2	2

LARGE DIGITAL ORBITAL SHAKERS

Large Digital Shakers:



MRC large open air shakers designed to uniformly shake hundreds of samples, day-in & day-out, under the extreme conditions of an environmental room. New engineering concepts in load balancing minimize stress & vibrations, even when fully loaded & running at the maximum speed. Accepts hundreds of samples on up to 2 accessory platforms. As pictured, platforms have easy access to all glassware, & lock in place without tools. Maintenance free, the tray is proof against aggressive liquids. A powerful, quiet, reliable, either for gentle shaking of liquids or vigorous mixing of materials. Optional: Digital speed control.

Unique Advantage:

Precisely balanced, extremely stable shaker mechanism with massive cast-iron base need not be bolted to the floor.

Four large capacity Orbital Shakers available. Both are well engineered and have heavy duty orbital mechanisms that provide smooth operation when under maximum loading and speed. The top plate is 6mm aluminium and has tapped holes to accommodate flask holders from 50ml up to the heavy flasks sizes: 1 Liter to 6 Liter. Both models can carry a maximum load of 40kg. Both models feature an easy to use digital control with speed and timer display and are attractively finished in a durable grey powder coating.

A specific run time can be entered or continuous running can be selected.

Optional: Tube Holders



FLASK HOLDERS

Model	TOS-6048-2D	TOS-6048-5D	TOS-9660-2D	TOS-9660-5D
Shaking system	Orbital			
Speed range	30-400 rpm	20-250 rpm	30-400 rpm	20-250 rpm
Shaking orbit	25 mm	50 mm	25 mm	50 mm
Shaking plate	W600xD480		W960xD600	
Outside dimensions (mm)	W600xD480xH210		W960xD600xH210	
Weight	63 kg		75 kg	

Accessories:

Model	111-1-110050	111-1-110125	111-1-110250	111-1-110500	111-1-111000	111-1-112000	111-1-113000	111-1-114000	111-1-115000	111-1-116000
Flask clamps	50ml	125ml	250ml	500ml	1000ml	2Liter	3Liter	4Liter	5Liter	6Liter
TOS-6048-2/5 Capacity	80	48	30	20	12	6	6	4	2	2
TOS-9660-2/5 Capacity	160	96	60	40	24	15	8	8	6	6

DOUBLE PLATFORM LARGE ORBITAL SHAKERS

Double Platform Large Orbital Shakers

TOS-9660D-2/5D
960x480mm



TOS-6048D-2/5D
600x480mm



MRC large open air shakers designed to uniformly shake hundreds of samples, day-in & day-out, under the extreme conditions of an environmental room. New engineering concepts in load balancing minimize stress & vibrations, even when fully loaded & running at the maximum speed. Accepts hundreds of samples on up to 2 accessory platforms. As pictured, platforms have easy access to all glassware, & lock in place without tools. Maintenance free, the coated tray is proof against aggressive liquids. A powerful, quiet, reliable, either for gentle shaking of liquids or vigorous mixing of materials. Optional: Digital speed control.

Unique Advantage - Precisely balanced, extremely stable shaker mechanism with massive cast-iron base need not be bolted to the floor.

Four large capacity Orbital Shakers available. Both

are well engineered and have heavy duty orbital mechanisms that provide smooth operation when under maximum loading and speed. The top plate is 6mm aluminium and has tapped holes to accommodate flask holders from 50ml up to the heavy flasks sizes: 1 Liter to 6 Liter. Both models feature an easy to use digital control with speed and timer display and are attractively finished in a durable grey powder coating. A specific run time can be entered or continuous running can be selected.

Optional: Tube Holders



FLASK HOLDERS

Model	TOS-6048D-2D	TOS-6048D-5D	TOS-9660D-2D	TOS-9660D-5D
Shaking system	Orbital			
Speed range	30-400 rpm	20-250 rpm	30-400 rpm	20-250 rpm
Shaking orbit	25 mm	50 mm	25 mm	50 mm
Shaking plate	W600xD480 Double		W960xD600 Double	
Outside dimensions (mm)	W600xD480xH560		W960xD600xH560	
Weight	75 kg		95 kg	

Accessories:

Model	111-1-110050	111-1-110125	111-1-110250	111-1-110500	111-1-111000	111-1-112000
Flask clamps	50ml	125ml	250ml	500ml	1000ml	2Liter
TOS-6048D-2/5 Capacity	160	96	60	40	25	15
TOS-9660D-2/5 Capacity	320	192	120	80	48	30



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Distributed by:

BATHS

SHAKERS

STIRRERS

HOTPLATES

INCUBATORS

HEATING
MANTLES

STIRRERS

ANALOG MODELS

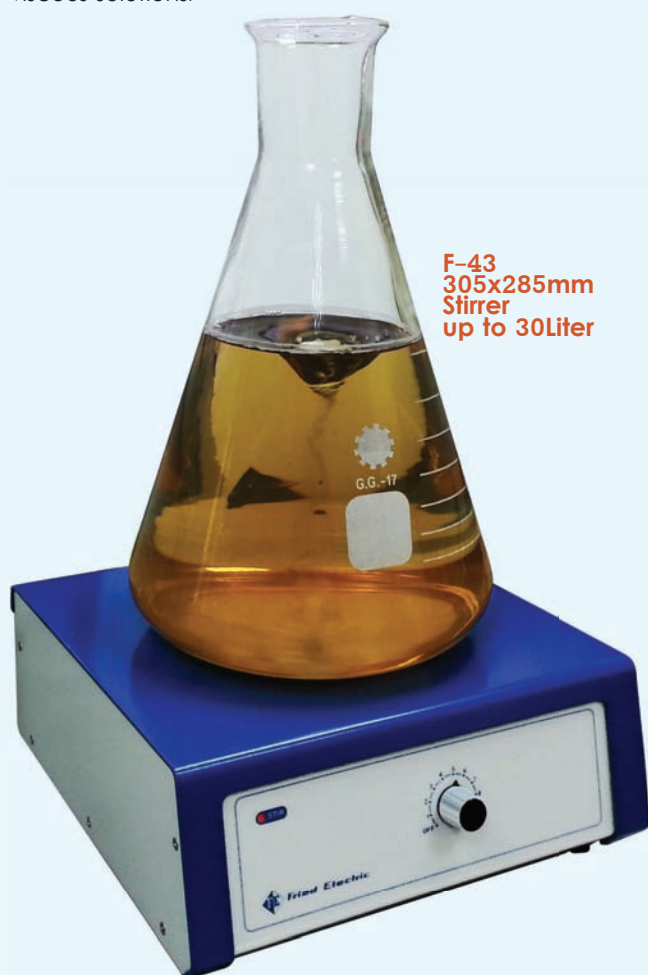
Stirring Assembly:

Electronic speed control provides constant torque over a speed range from 100 to 1200 RPM, regardless viscosity changes of the medium.

Application:

Stirring viscous gels • Stirring latex mixtures • Mixing polymers, starches & Molasses • Standard reagent mixing • Stir up to 4 Liters of aqueous solution • Aluminium top plate remains cool while stirring • For safe operation, all models include a power indicator light that illuminates when power is applied to the control • Quiet stirring at a gentle 100rpm as well as at a vigorous 1000 rpm operation • Strong magnetic coupling ensures that stir bar remains coupled with drive magnet, even in viscous solutions.

For Continuous
Work



F-43
305x285mm
Stirrer
up to 30Liter

F-23, Magnetic Stirrer, Up To 8 Liter (H₂O)

Powerful drive magnet • Strong motor-stirs up to 8 Liter water • Compact design maximizes use of available bench space • Variable speed control up to 1200rpm • Electronic speed control with "OFF" position • Available as 4-position stirrer, & 6-position stirrer • Powerful motor & strong magnet provide exceptional stirring even with a solution that has a viscosity similar to cooking oil • Durable, easy-to-clean, corrosion-resistant top plate available.



F-23
130x145mm
Stirrer
up to 8Liter

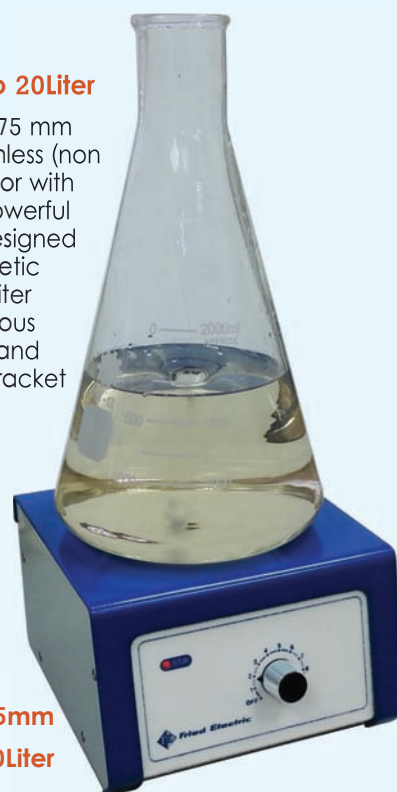
F-33, Magnetic Stirrer, Up To 8 Liter

Similar to F-23 but with bigger plate 18.5 X 17.5 cm.

★ ★ ★
German AC Motor
Robust & Maintenance
Free Design
★ ★ ★

F-33S, Medium-High Volumes Stirrer, Up To 20Liter

Magnetic stirrer 185 x 175 mm with a heavy duty brushless (non sparking) induction motor with condenser. Exclusive powerful magnet is especially designed for most efficient magnetic coupling. Stir up to 20 Liter water • Gentle or vigorous stirring • Integral ring-stand holder • Include rear bracket for support rod.



F-33S
185x175mm
Stirrer
up to 20Liter

F-43, Large Volume Stirrer, Up To 30Liter

The giant stirrer is similar to the above described Model F-33 but with a 30.5 x 28.5 cm. top plate. The giant size top plate easily accommodates stirring loads as large as 30 Liter water.

Optional Rod.

Model	Top plate	Capacity	Speed range	Dimensions (WxHxD)	Weight
F-23	W130xD145 mm	8 Liter	100 to 1200 rpm	130x125x186 mm	1.2 kg
F-33	W185xD175 mm	8 Liter	100 to 1200 rpm	130x125x186 mm	1.2 kg
F-33S	W185xD175 mm	20 Liter	100 to 1400 rpm	186x125x197 mm	3.2 kg
F-43	W305xD285 mm	30 Liter	100 to 1400 rpm	305x125x305 mm	4.2 kg

DIGITAL MODELS

Stirring Assembly:

Electronic speed control with digital display provides constant torque over a speed range from 100 to 1200 RPM, regardless viscosity changes of the medium.

Application:

Stirring viscous gels • Stirring latex mixtures • Mixing polymers, starches & Molasses • Standard reagent mixing • Stir up to 4 Liters of aqueous solution • Aluminium top plate remains cool while stirring • For safe operation, all models include a power indicator light that illuminates when power is applied to the control • Quiet stirring at a gentle 100rpm as well as at a vigorous 1000 rpm operation • Strong magnetic coupling ensures that stir bar remains coupled with drive magnet, even in viscous solutions.



F-33SD, Medium-High Volumes Digital Stirrer, Up To 20Liter

Magnetic stirrer 185 x 175 mm with a heavy duty brushless (non sparking) induction motor with condenser. Exclusive powerful magnet is especially designed for most efficient magnetic coupling. Stir up to 20 Liter water • Gentle or vigorous stirring • Integral ring-stand holder
Optional Rod.

F-43D, Large Volume Digital Stirrer, Up To 30Liter

The giant stirrer is similar to the above described Model F-33 but with a 30.5 x 28.5 cm. top plate. The giant size top plate easily accommodates stirring loads as large as 30 Liter water.

Include rear bracket for support rod.



★ ★ ★
**German AC Motor
Robust & Maintenance
Free Design**
★ ★ ★

Model	Top plate	Capacity	Speed range	Dimensions (WxHxD)	Weight
F-33D	W185xD175 mm	8 Liter	100 to 1200 rpm	130x125x186 mm	1.2 kg
F-33SD	W185xD175 mm	20 Liter	100 to 1400 rpm	186x125x197 mm	3.2 kg
F-43D	W305xD285 mm	30 Liter	100 to 1400 rpm	305x125x305 mm	4.2 kg

MULTI-MAGNETIC STIRRERS

Multi-Magnetic Stirrer, Separate Speed Controller For Each Channel

The Multi-magnetic Stirrer provides 4 or 6 stirring places. Separate stirrer control knobs & pilot lamps are provided, so that each stirrer can be independently controlled. 220V/50Hz. (On request 115 V/60Hz).



F-13/6



For Continues
Work



F-13/2x2

F-13/3x2



F-13/4

★ ★ ★
German AC Motor
Robust & Maintenance
Free Design
★ ★ ★

Model		F-13/4	F-13/6	F-13/3x2	F-13/2x2
Speed range		0~1300 rpm			
Distance between stirring point Maximum diameter of beaker		133 mm		150 mm	
Capacity		One point maximum – 8L 2-6 Liter each			
Material		Plate: Aluminium			
Weight		5kg	7.5kg		5kg
Dimensions (mm)		W600xD146xH80	W800xD146XH120	W450xD300XH120	W300xD300XH80
VA		80VA	120VA		80VA
Power		AC110/220/230V, 50/60Hz			
Unit	F-13/4 / F-13/2x2	4 Point magnetic stirrer			
	F-13/6 / F-13/3x2	6 point magnetic stirrer			

- Multichannel series remains cold even after several days of continuous operation
- Chemical resistant top plate
- Support devices at the rear of the base
- Independent controlled stirring positions
- Powerful magnets for strong magnetic coupling.



BATHS

SHAKERS

STIRRERS

HOTPLATES

INCUBATORS

HEATING
MANTLES



SHAKERS

BENCHTOP PLATFORM ORBITAL SHAKERS

BenchTop Platform Shakers:



TOS-4030FD
400x300mm



TOS-6048FD
600x480mm

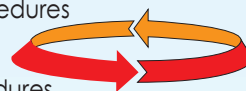


TOS-4838FD
480x380mm

MRC orbital shakers are for shaking in ambient conditions on the bench or in incubator or warm room or cool room. These shakers are available in three models. Model TOS-4030PD – flat platform shaker, model TOS-4030TD universal platform shaker and model TOS-4030FD flask clamps platform shaker. Platform can be easily removed and replaced by opening the four screws on the center of the platform. Model TOS-4030FD platform can accommodate a mix of flask clamps. A powerful, quiet, space saving, reliable, either for gentle shaking of liquids or vigorous mixing of materials. Maintenance free, the tray is proof against aggressive liquids. Flexible platform system. All kinds of dishes can be placed on the platforms: beakers, erlenmeyer flask, test tube racks etc. All models feature a large easy to read LED display. A specific run time can be entered or continuous running can be selected. These medium size orbital shakers are well engineered & provide smooth operation when under maximum load and speed. The top tray of each model has threaded holes to accommodate flask holders from 50ml to 6000ml.

Applications:

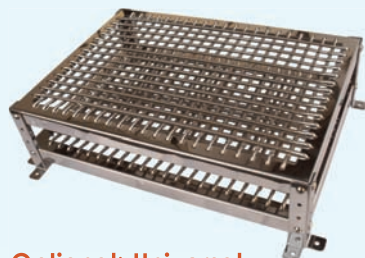
- Cell cultures
- Bacterial suspensions
- Solubility studies
- Staining
- Extraction procedures
- Destaining
- Diagnostic tests
- Washing Procedures
- General Mixing
- Hybridization



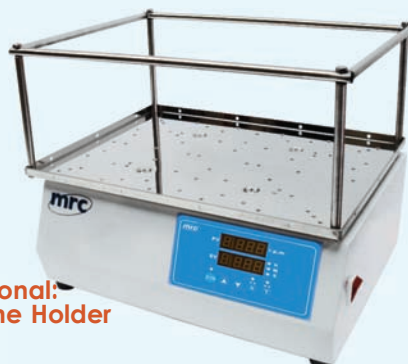
Features:

- Triple eccentric drive enables continuous 24-hours operation, handles heavier loads and provides smooth uniform agitation of full or unbalanced loads even at high speeds.
- Units operate in temperature range of 4 to 40°C and humidity conditions from 20 to 80% non condensing enabling them to be used in incubators, warm rooms, environmental chambers and refrigerators.
- Easy to adjust speed up to 300rpm.
- Easy to adjust timer up to 9999 minutes.
- Memory of speed when power cut.

Optional: Tube Holders



Optional: Universal spring tray for TOS-4030FD



Optional: Frame Holder



TOS-4030PD

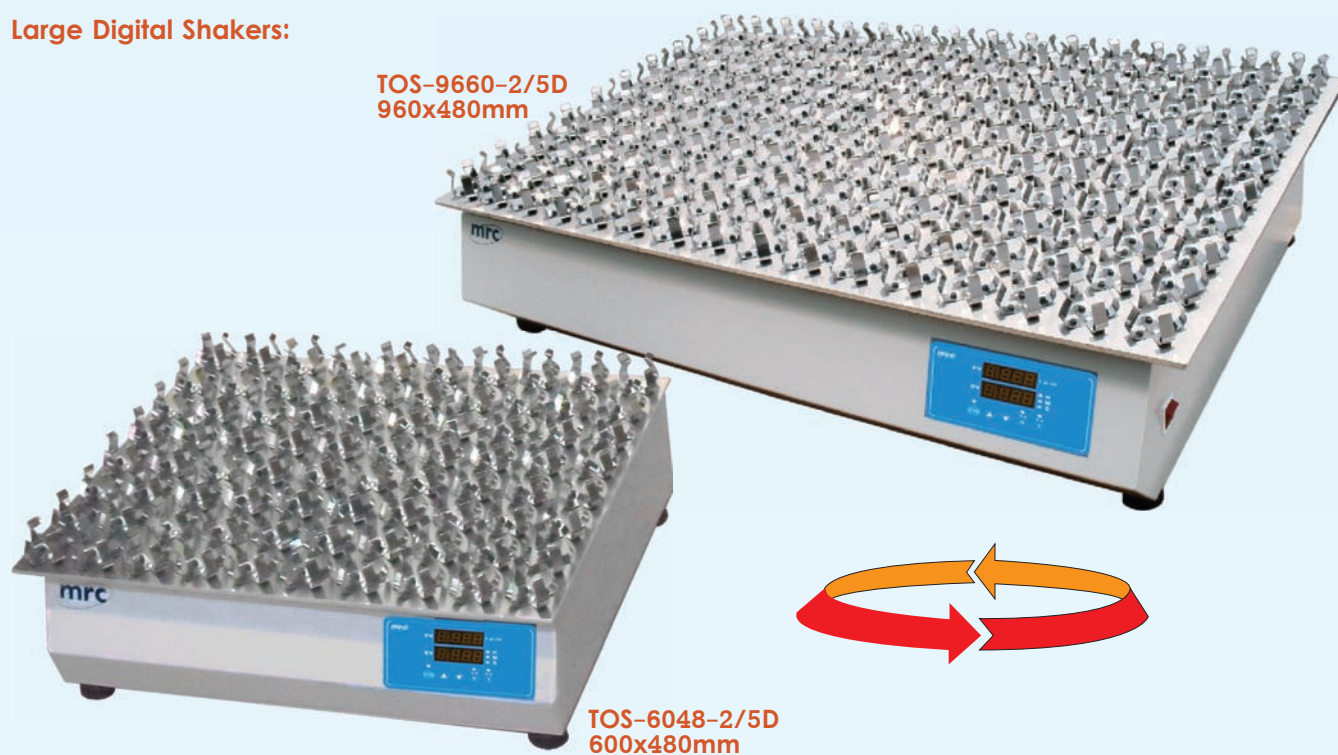
Model	TOS-4030PD	TOS-4030FD	TOS-4838FD	TOS-6048FD
System shaking	Orbital			
Speed range	20-300 rpm			
Shaking orbit	25m			
Shaking plate (mm)	W400xD300		W480xD380	W600xD480
Outside DIM. (mm)	W400xD330xH165		W480xD380xH165	W600xD480xH210
Shaking plate	Plate	Flask rack	Flask rack	
Power supply	110/220V, 60/50Hz (1A)			
Weight	11kg	12kg	18kg	25kg

Accessories:

Model	111-1-110050	111-1-110125	111-1-110250	111-1-110500	111-1-111000	111-1-112000	111-1-113000	111-1-114000	111-1-115000	111-1-116000
Model/flask clamps	50ml	125ml	250ml	500ml	1000ml	2Liter	3Liter	4Liter	5Liter	6Liter
TOS-4030F Capacity	35	20	12	6	4	2	1	1	–	–
TOS-4838F Capacity	48	30	20	12	6	4	2	2	1	1
TOS-6048F Capacity	80	48	30	20	12	6	6	4	2	2

LARGE DIGITAL ORBITAL SHAKERS

Large Digital Shakers:



MRC large open air shakers designed to uniformly shake hundreds of samples, day-in & day-out, under the extreme conditions of an environmental room. New engineering concepts in load balancing minimize stress & vibrations, even when fully loaded & running at the maximum speed. Accepts hundreds of samples on up to 2 accessory platforms. As pictured, platforms have easy access to all glassware, & lock in place without tools. Maintenance free, the tray is proof against aggressive liquids. A powerful, quiet, reliable, either for gentle shaking of liquids or vigorous mixing of materials. Optional: Digital speed control.

Unique Advantage:

Precisely balanced, extremely stable shaker mechanism with massive cast-iron base need not be bolted to the floor.

Four large capacity Orbital Shakers available. Both are well engineered and have heavy duty orbital mechanisms that provide smooth operation when under maximum loading and speed. The top plate is 6mm aluminium and has tapped holes to accommodate flask holders from 50ml up to the heavy flasks sizes: 1 Liter to 6 Liter. Both models can carry a maximum load of 40kg. Both models feature an easy to use digital control with speed and timer display and are attractively finished in a durable grey powder coating.

A specific run time can be entered or continuous running can be selected.

Optional: Tube Holders



FLASK HOLDERS

Model	TOS-6048-2D	TOS-6048-5D	TOS-9660-2D	TOS-9660-5D
Shaking system	Orbital			
Speed range	30-400 rpm	20-250 rpm	30-400 rpm	20-250 rpm
Shaking orbit	25 mm	50 mm	25 mm	50 mm
Shaking plate	W600xD480		W960xD600	
Outside dimensions (mm)	W600xD480xH210		W960xD600xH210	
Weight	63 kg		75 kg	

Accessories:

Model	111-1-110050	111-1-110125	111-1-110250	111-1-110500	111-1-111000	111-1-112000	111-1-113000	111-1-114000	111-1-115000	111-1-116000
Flask clamps	50ml	125ml	250ml	500ml	1000ml	2Liter	3Liter	4Liter	5Liter	6Liter
TOS-6048-2/5 Capacity	80	48	30	20	12	6	6	4	2	2
TOS-9660-2/5 Capacity	160	96	60	40	24	15	8	8	6	6

DOUBLE PLATFORM LARGE ORBITAL SHAKERS

Double Platform Large Orbital Shakers



TOS-6048D-2/5D
600x480mm



TOS-9660D-2/5D
960x480mm

MRC large open air shakers designed to uniformly shake hundreds of samples, day-in & day-out, under the extreme conditions of an environmental room. New engineering concepts in load balancing minimize stress & vibrations, even when fully loaded & running at the maximum speed. Accepts hundreds of samples on up to 2 accessory platforms. As pictured, platforms have easy access to all glassware, & lock in place without tools. Maintenance free, the coated tray is proof against aggressive liquids. A powerful, quiet, reliable, either for gentle shaking of liquids or vigorous mixing of materials. Optional: Digital speed control.

Unique Advantage – Precisely balanced, extremely stable shaker mechanism with massive cast-iron base need not be bolted to the floor.

Four large capacity Orbital Shakers available. Both

are well engineered and have heavy duty orbital mechanisms that provide smooth operation when under maximum loading and speed. The top plate is 6mm aluminium and has tapped holes to accommodate flask holders from 50ml up to the heavy flasks sizes: 1 Liter to 6 Liter. Both models feature an easy to use digital control with speed and timer display and are attractively finished in a durable grey powder coating. A specific run time can be entered or continuous running can be selected.

Optional: Tube Holders



FLASK HOLDERS

Model	TOS-6048D-2D	TOS-6048D-5D	TOS-9660D-2D	TOS-9660D-5D
Shaking system	Orbital			
Speed range	30-400 rpm	20-250 rpm	30-400 rpm	20-250 rpm
Shaking orbit	25 mm	50 mm	25 mm	50 mm
Shaking plate	W600xD480 Double		W960xD600 Double	
Outside dimensions (mm)	W600xD480xH560		W960xD600xH560	
Weight	75 kg		95 kg	

Accessories:

Model	111-1-110050	111-1-110125	111-1-110250	111-1-110500	111-1-111000	111-1-112000
Flask clamps	50ml	125ml	250ml	500ml	1000ml	2Liter
TOS-6048D-2/5 Capacity	160	96	60	40	25	15
TOS-9660D-2/5 Capacity	320	192	120	80	48	30



BATHS

SHAKERS

STIRRERS

HOTPLATES

MECHANICAL
MEASUREMENTHEATING
MANTLES

MECHANICAL MEASUREMENT



MT-1101060

MT-1101060, Universal Digital Calipers

Features:

- Universal Digital Calipers (Updatable for different measuring tasks with all kinds of attachment).
- Can measure $\Phi 1\text{mm}$ hole.
- Can measure inside flat groove.
- Can measure very narrow grooves.
- Can measure outside dimensions.
- Can measure the center distance between two holes.
- Can measure from edge to hole center.
- Can measure stepped sections.
- Can measure outside groove.
- Can measure inside groove.
- Can measure sectioned shafts.
- Can measure tube wall thickness.
- Broad measuring faces can easily measure the diameter of steel wire rope.



Can measure stepped sections



Can measure inside groove



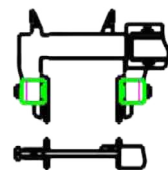
Can measure outside groove



Can measure sectioned shafts



Can measure from edge to hole center



Broad measuring faces can easily measure the diameter of steel wire rope



Can measure the center distance between two holes



Can measure tube wall thickness

Specifications:

Model	MT-1101060
Measuring Range	0-150mm
Resolution	0.01mm



MT-111101G

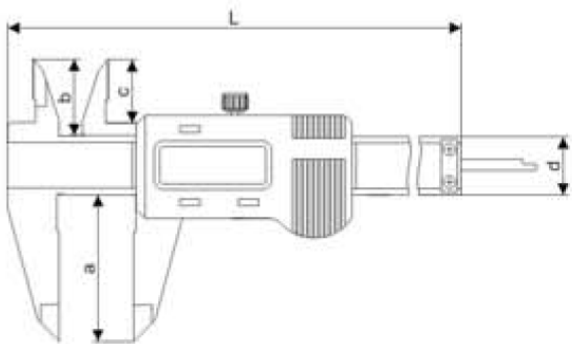
MT-111101B

MT-111101G/B, Complete Titanium Coated Digital Calipers

Features:

- TiAlN or TiN coating to improve greatly durability and working life.
- The internal jaws measurement accuracy can accord with DIN862.
- Zero-setting at any position.
- Inch/mm conversion.
- Data output.

Model	MT-111101G	MT-111101B
Measuring Range	0-150mm	0-150mm
Resolution	0.01mm	0.01mm
Limit Error	$\pm 0.02\text{mm}$	$\pm 0.02\text{mm}$
Color	Golden	Black
L (mm)	236	236
a (mm)	40	40
b (mm)	21	21
c (mm)	16.5	16.5
d (mm)	16	16

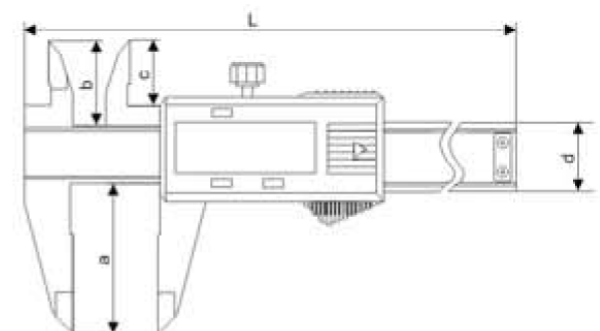


CALIPERS

Digital Calipers



MT-11001X

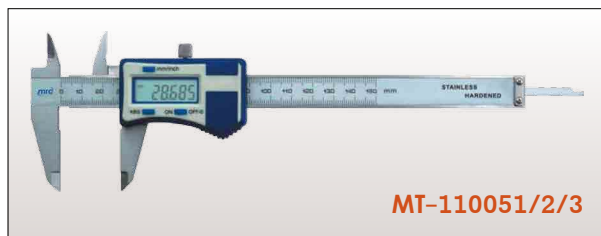


MT-11001X, MT-11025X Micron Digital Calipers

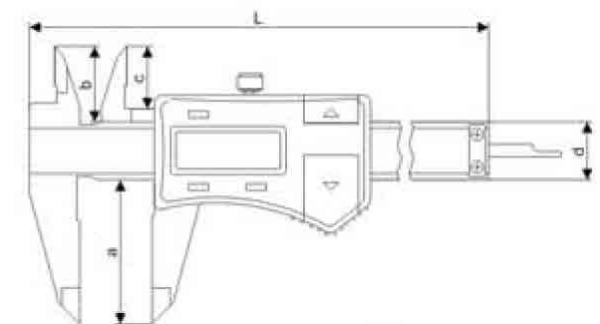
Features:

- Resolution 0.001mm.
- Used for measuring the work piece demanding higher accuracy.
- Calibrated by master gauges, measurement can reach higher accuracy.
- Zero-setting at any position.

Model	MT-110011	MT-110012	MT-110013
	MT-110251	MT-110252	MT-110253
Measuring Range	0-50mm	50-100mm	100-150mm
Resolution	0.001mm	0.001mm	0.001mm
Limit Error	±0.005mm	±0.007mm	±0.009mm
L (mm)	236	236	236
a (mm)	40	40	40
b (mm)	21	21	21
c (mm)	16.5	16.5	16.5
d (mm)	16	16	16



MT-110051/2/3

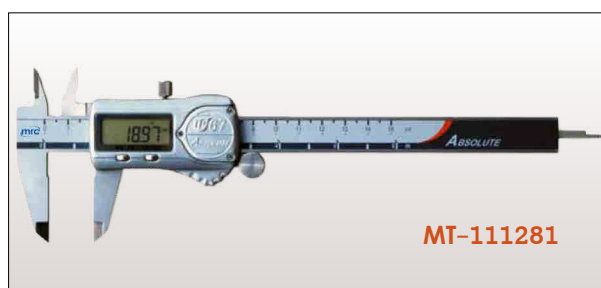


MT-110051/2/3. High Precision Digital Calipers

Features:

- Resolution: 0.005mm.
- The internal jaws measurement accuracy can accord with DIN862.
- Zero-setting at any position.
- Absolute and relative measurement conversion at any position.
- Data output.

Model	MT-110051	MT-110052	MT-110053
Measuring Range	0-150mm	0-200mm	0-300mm
Resolution	0.005mm	0.005mm	0.005mm
Limit Error	±0.015mm	±0.020mm	±0.025mm
L (mm)	236	286	400
a (mm)	40	50	60
b (mm)	21	24	25
c (mm)	16.5	19.5	20.5
d (mm)	16	16	17



MT-111281

MT-111281/2/3, IP67 Water Proof Digital Calipers

Features:

- This product has the high protective level IP67(CEI 60529). It can be used in workshop, exposed to coolant, water, dust or oil. Absolute encoding measuring system can avoid the loss of the measurement origin when the slider is fast moved or interfered. It can also avoid the trouble of setting origin before measurement each time. The origin won't be lost even after replacing the battery.
- Two-button design, menu prompt, simple, convenient

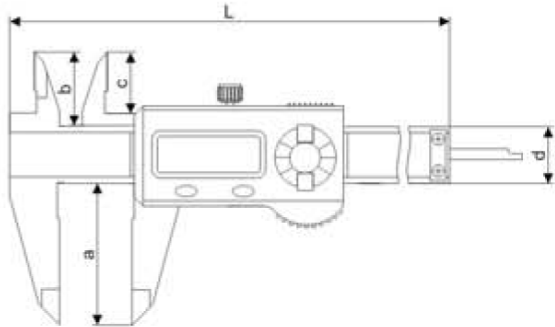
Model	MT-111281	MT-111282	MT-111283
Measuring Range	0-150mm	0-200mm	0-300mm
Resolution	0.01mm	0.01mm	0.01mm
Limit Error	±0.02mm	±0.03mm	±0.04mm

and easy to operate.

- Manual / automatic power switch. automatic shutdown after 5 minutes without being used (Some models will automatically reboot at a 16-hour shutdown when the slider is moved.)
- Low-voltage alarm, high and low temperature, and other error alarm.
- Infinite response speed, no speed error.
- ABS / INC mode & metric/inch system conversion.



MT-111261/2/3



MT-111261/2/3, IP54 Damp Proof Digital Calipers

Features:

- Advanced design styling and high accuracy.
- Protection conforms to IP54 Level.
- Zero-setting at any position.
- Inch/mm conversion.

Model	MT-111261	MT-111262	MT-111263
Measuring Range	0-150mm	0-200mm	0-300mm
Resolution	0.01mm	0.01mm	0.01mm
Limit Error	±0.02mm	±0.03mm	±0.04mm
L (mm)	236	286	400
a (mm)	40	50	60
b (mm)	21	24	25
c (mm)	16.5	19.5	20.5
d (mm)	16	16	17



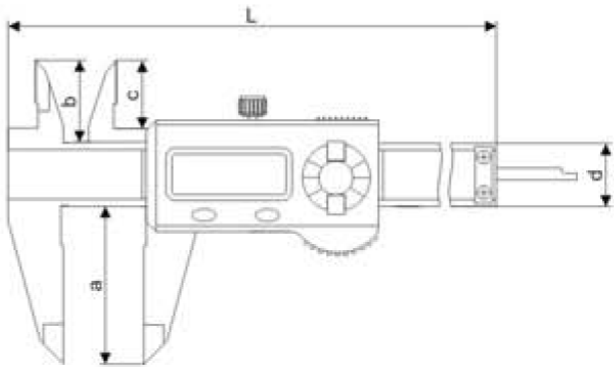
MT-111261/2/3

MT-111261/2/3

MT-111075, MT-11110X, MT-1110XG, MT-11125X, Digital Calipers

Features:

- The internal jaws measurement accuracy can accord with DIN862.
- Zero-setting at any position.
- Data output.
- Available with carbide-tipped measuring faces to improve the durability and working life.



Carbide - tipped measuring faces

Model	MT-111075	MT-111100	MT-111101	MT-111102	MT-111103
	-	-	MT-111101G	MT-111102G	MT-111103G
	-	-	MT-111251	MT-111252	MT-111253
Measuring Range	0-75mm	0-100mm	0-150mm	0-200mm	0-300mm
Resolution	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.02mm	±0.02mm	±0.02mm	±0.03mm	±0.04mm
L (mm)	145	170	236	286	400
a (mm)	30.5	30.5	40	50	60
b (mm)	17	17	21	24	25
c (mm)	12.5	12.5	16.5	19.5	20.5
d (mm)	13	13	16	16	17

CALIPERS

Digital Calipers



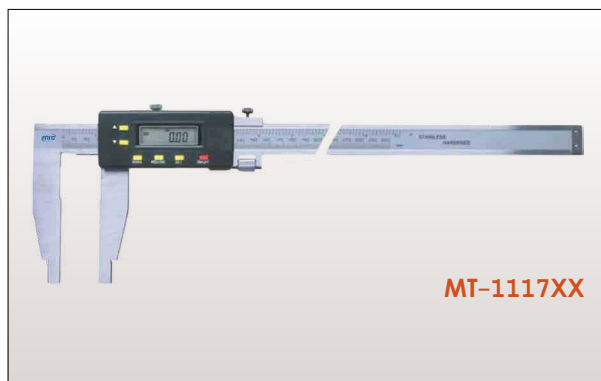
MT-11129X

MT-11129X, Protective Digital Calipers

Features:

- The protective device can prevent sweat, coolant, etc. from dropping to the front main scale. Sweat and coolant have Electrolyte which can shield the sliding sensor and cause reading error.

Model	MT-111291	MT-111292	MT-111293
Measuring Range	0-150mm	0-200mm	0-300mm
Resolution	0.01mm	0.01mm	0.01mm
Limit Error	±0.02mm	±0.03mm	±0.04mm

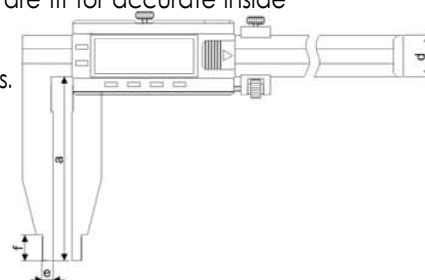


MT-1117XX

MT-1117XX, Digital Calipers without upper jaws (Type D)

Features:

- With fine adjustment.
- Dual-purpose (O.D, I.D) and Tri-purpose (O.D, I.D & Steps) are available.
- Jaw ends radiused are fit for accurate inside measurement & more durable than the knife edge jaws.
- With presetting function.
- Zero-setting at any position.
- Data output.



Model	MT-111705	MT-111706	MT-111708	MT-111710	MT-111715
Measuring Range	0-500mm	0-600mm	0-800mm	0-1000mm	0-1500mm
Resolution	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.04mm	±0.04mm	±0.05mm	±0.05mm	±0.08mm
a (mm)	100	100	125	125	150
d (mm)	24	24	31	42	42
e (mm)	10	10	10	10	10
f (mm)	18	24	24	24	24



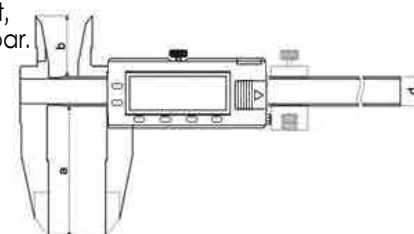
MT-1114XX

The cover is for digital calipers within 300mm range

MT-1114XX, Digital Calipers with Knife-edge Jaws (Type B)

Features:

- Both upper & lower jaws are knife-edge.
- Inside readings can be read directly from the indicated reading when measuring the inside diameter with upper jaws
- Do not need to add the nib width to the indicated reading.
- With fine adjustment, but without depth bar.
- With presetting function.
- Zero-setting at any position.
- Data output.



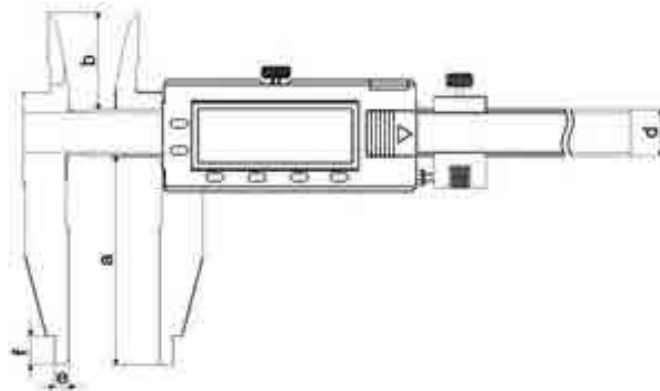
Model	MT-111405	MT-111406	MT-111408	MT-111410
Measuring Range	0-500mm	0-600mm	0-800mm	0-1000mm
Resolution	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.05mm	±0.06mm	±0.07mm	±0.07mm
a (mm)	100	100	125	125
b (mm)	45	45	45	60
d (mm)	24	24	24	31

MT-1116XX, Digital Calipers with Two Types of I.D Jaws (Type E)



Features:

- With a fine adjustment screw.
- Round edge jaws and knife edge jaws permit higher accuracy in internal measurement.
- With presetting function.
- Zero-setting at any position.
- Data output.



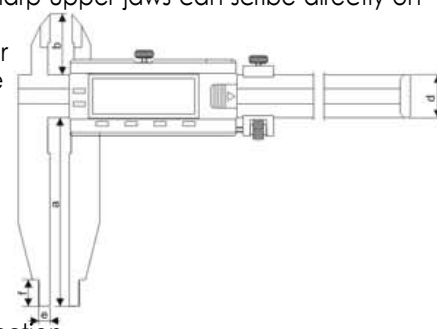
Model	MT-111602	MT-111603	MT-111605	MT-111606	MT-111608	MT-111610
Measuring Range	0-250mm	0-300mm	0-500mm	0-600mm	0-800mm	0-1000mm
Resolution	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.04mm	±0.04mm	±0.05mm	±0.06mm	±0.07mm	±0.07mm
a (mm)	60	90	100	100	125	125
b (mm)	28	28	45	45	45	60
d (mm)	17	17	24	24	24	31
e (mm)	5	5	10	10	10	10
f (mm)	12	12	18	18	18	24

MT-1113XX, Digital Calipers with Two Types of O.D Jaws (Type C)



Features:

- With a fine adjustment.
- Two types of outside jaws are fit for accurate outside measurement.
- Knife edge and sharp upper jaws can scribe directly on the workpiece.
- The radiused lower jaws can measure the inside diam. of hole. The inside radiused measuring faces are more wear resistant than knife edge measuring faces.
- With presetting function.
- Zero-setting at any position.
- Data output.

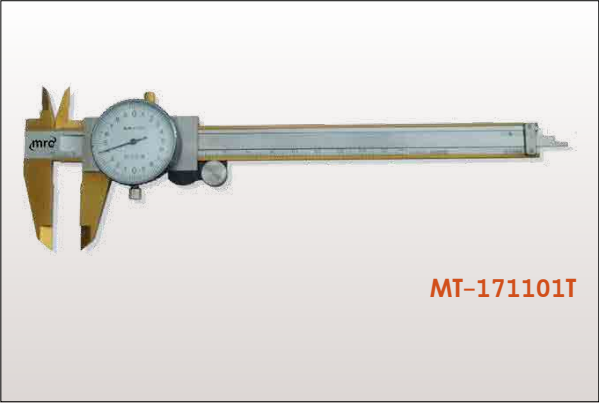


Model	MT-111305	MT-111306	MT-111308	MT-111310
Measuring Range	0-500mm	0-600mm	0-800mm	0-1000mm
Resolution	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.05mm	±0.06mm	±0.07mm	±0.07mm
a (mm)	100	100	125	125
b (mm)	45	45	45	60
d (mm)	24	24	24	31
e (mm)	10	10	10	10
f (mm)	18	18	24	24

CALIPERS

Dial Calipers

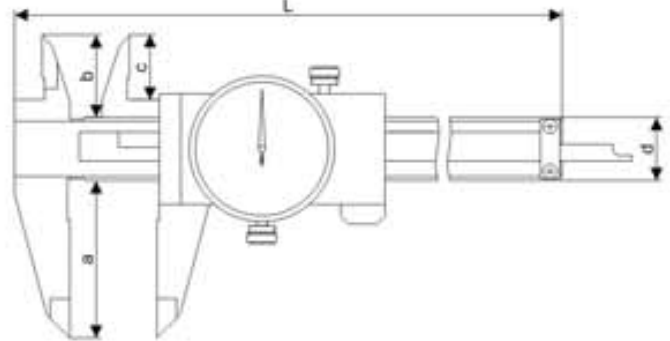
MT-171101T, Titanium Coated Dial Calipers



MT-171101T

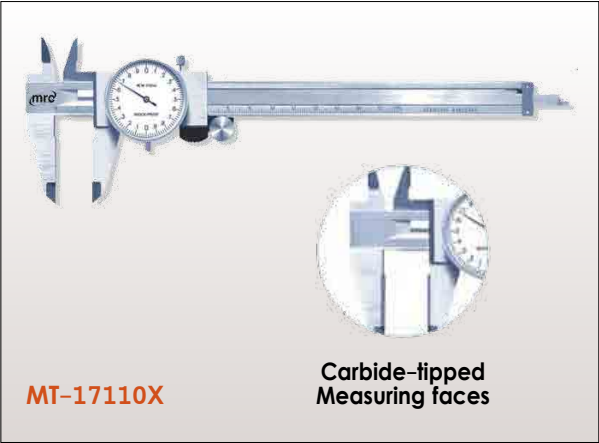
Features:

- TiAIN or TiN coating to improve greatly durability and working life.
- Good shockproof.
- Clear and direct reading.
- Can measure outside diameter (O.D), inside diameter (I.D), depth and steps.



Model	MT-171101T
Measuring Range	0-150mm
Graduation	0.02mm
Range/rev.	2mm
Limit Error	±0.02mm
L (mm)	236
a/b (mm)	40/21
c/d (mm)	16.5/16

MT-17010X/17110X, Dial Calipers

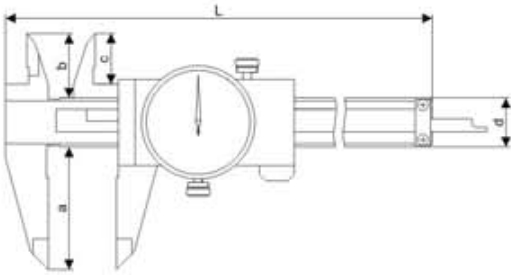


MT-17110X

Carbide-tipped
Measuring faces

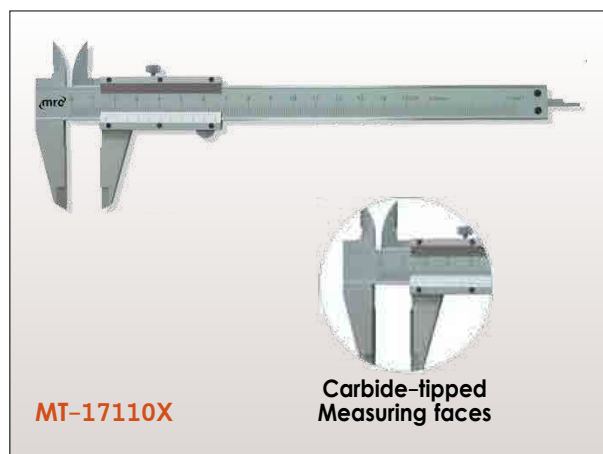
Features:

- Good shockproof.
- Clear & direct reading.
- Can measure outside diameter (O.D), inside diameter (I.D), depth and steps.
- Available with carbide-tipped measuring faces to improve the durability & working life.



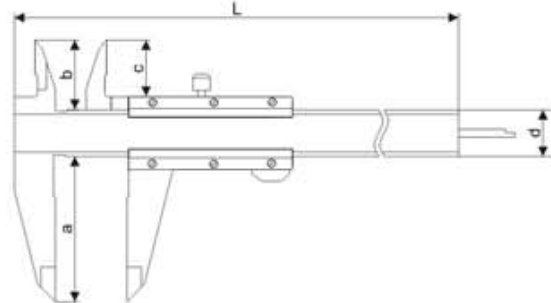
Model	MT-171101	MT-170101	MT-171102	MT-170102	MT-171103
	MT-171251	-	MT-171252	-	MT-171253
Measuring Range	0-150mm	0-150mm	0-200mm	0-200mm	0-300mm
Graduation	0.02mm	0.01mm	0.02mm	0.01mm	0.02mm
Range/rev.	2mm	1mm	2mm	1mm	2mm
Limit Error	±0.02mm	±0.02mm	±0.03mm	±0.03mm	±0.04mm
L (mm)	236	236	286	286	400
a (mm)	40	40	50	50	60
b (mm)	21	21	24	24	25
c (mm)	16.5	16.5	18.5	18.5	19.5
d (mm)	16	16	16	16	17

MT-1411XX/14125X, Vernier Calipers



Features:

- Traditional measuring tool with good durability.
- Can measure outside diameter (O.D), inside diameter (I.D), depth and steps.
- Available with open and close type.
- Available with carbide-tipped measuring faces.

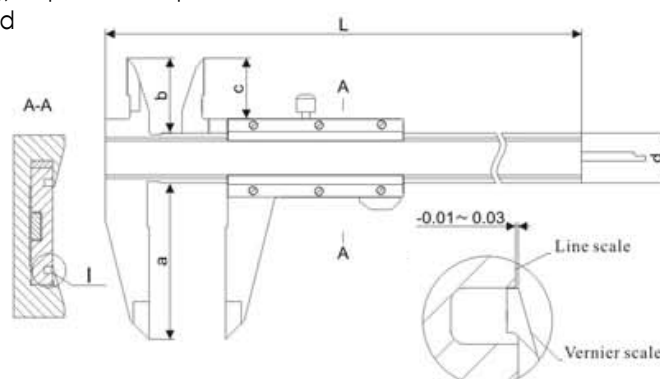
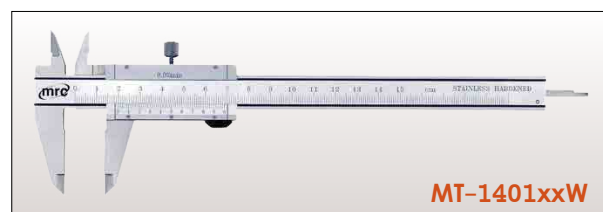


Model	MT-141100	MT-141101	MT-141102	MT-141103
	MT-141110	MT-141111	MT-141112	MT-141113
	MT-141250	MT-141251	MT-141252	MT-141253
Measuring Range	0-100mm	0-150mm	0-200mm	0-300mm
Vernier Reading	0.02mm	0.02mm	0.02mm	0.02mm
Limit Error	±0.02mm	±0.02mm	±0.03mm	±0.04mm
L (mm)	160	236	286	400
a (mm)	30	40	50	60
b (mm)	19	21	24	25
e (mm)	15	16.5	19.5	20.5
d (mm)	13	16	16	17

MT-1401xxW, Parallax-free Plane Vernier Calipers

Features:

- The jet black straight grooves on both sides of the master bar allow for positive alignment of graduations and flush fitting of the vernier scales to the main scale, which eliminates parallax.
- Can measure outside diameter (O.D), inside diameter (I.D), depth and steps
- Stainless steel, hardened throughout. Satin chrome finished vernier and main scale with jet black graduations for glare free reading. All graduations are marked by laser machine for accuracy.
- With depth measuring bar.

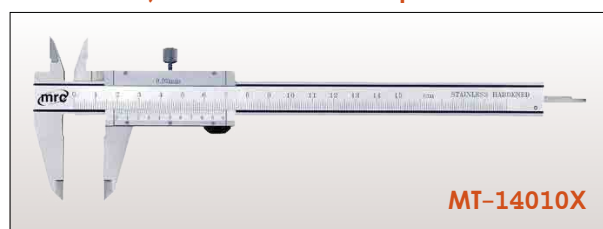


Model	MT-140101W	MT-140102W	MT-140103W
	MT-140111W	MT-140112W	MT-140113W
Measuring Range	0-150mm	0-200mm	0-300mm
Vernier Reading	0.02mm	0.02mm	0.02mm
Limit Error	±0.02mm	±0.03mm	±0.04mm
L (mm)	236	286	400
a (mm)	40	50	60
b (mm)	21	24	25
c (mm)	16.5	19.5	20.5
d (mm)	16	16	17

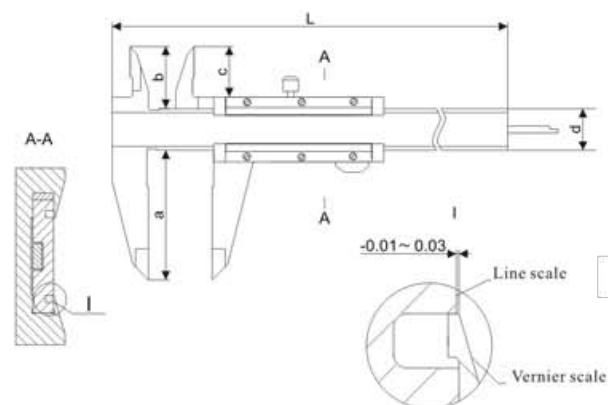
CALIPERS

Vernier Calipers

MT-14010X, Master Vernier Calipers



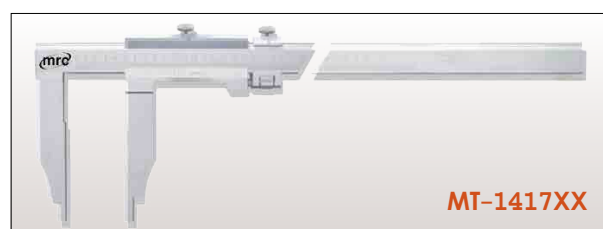
MT-14010X



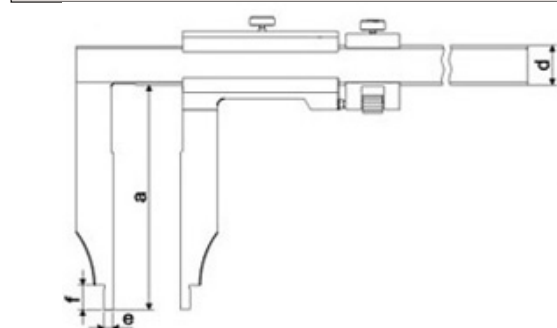
Features:

- Screwed vernier caliper has the fatal shortcomings that its verniers are easily budged when bumped, which causes reading error. But the screwed vernier caliper has the virtue of its repairable worn measuring faces and budged verniers and long-life.
- Monoblock vernier caliper has the fatal shortcomings that it can not be repaired due to its non-adjustable monoblock verniers when its measuring faces are worn, which is quite wasteful of resources. But the monoblock vernier caliper has the virtue of its unmovable verniers when bumped.
- Master vernier caliper has the virtues of both screwed vernier caliper and monoblock vernier caliper, but without their shortcomings, because the left part and right part of its verniers are unmovable monoblock, but the middle part of its vernier is screwed vernier.
- The jet black straight grooves on both sides of the master bar allow for positive alignment of graduations and flush fitting of the vernier scales to the main scale, which eliminates parallax.
- Can measure outside diameter (O.D), inside diameter (I.D), depth and steps
- Stainless steel, hardened throughout. Satin chrome finished vernier and main scale with jet black graduations for glare free reading. All graduations are marked by laser machine for accuracy.
- With depth measuring bar.

Model	MT-140101	MT-140102	MT-140103
Measuring Range	0-150mm	0-200mm	0-300mm
Vernier Reading	0.02mm	0.02mm	0.02mm
Limit Error	±0.02mm	±0.03mm	±0.04mm
L (mm)	236	286	400
a (mm)	40	50	60
b (mm)	21	24	25
c (mm)	16.5	19.5	20.5
d (mm)	16	16	17



MT-1417XX

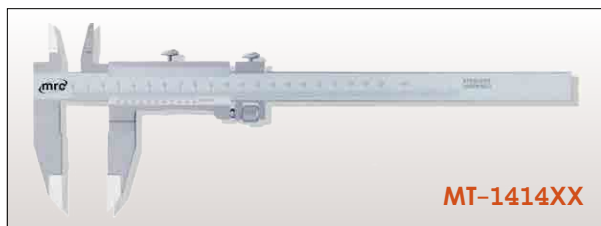


MT-1417XX, Vernier Calipers without Upper Jaws (Mono-block Vernier, Type D)

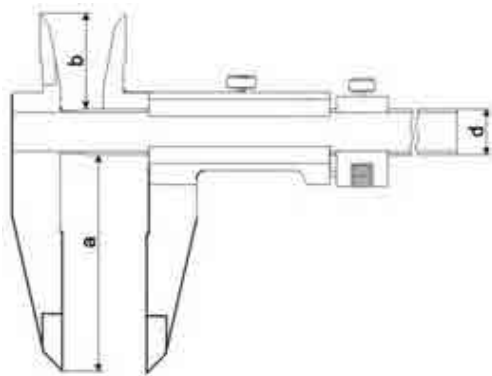
Features:

- Monoblock vernier won't be budged when bumped, therefore its reading is always reliable.
- The radiused measuring faces are fit for accurate inside measurement.
- Long jaws for measuring hard-to-reach portions.
- Can measure outside diameter (O.D), inside diameter (I.D), and steps.
- Stainless steel, hardened throughout. Satin chrome finished vernier and main scale with jet black graduations for glare free reading. All graduations are marked by laser machine for accuracy.
- With fine adjustment.

Model	MT-141743	MT-141745	MT-141746	MT-141748	MT-141750
Measuring Range	0-300mm	0-500mm	0-600mm	0-800mm	0-1000mm
Vernier Reading	0.02mm	0.02mm	0.02mm	0.02mm	0.02mm
Limit Error	±0.03mm	±0.04mm	±0.04mm	±0.05mm	±0.05mm
a (mm)	65	100	100	125	125
d (mm)	20	24	24	31	31
e (mm)	5	10	10	10	10
f (mm)	12	18	18	24	24



MT-1414XX

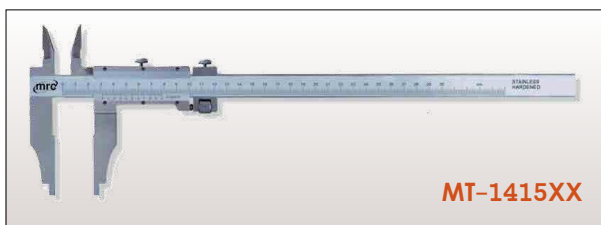


MT-1414XX, Vernier Calipers with Knife-edge (Mono-block Vernier, Type B)

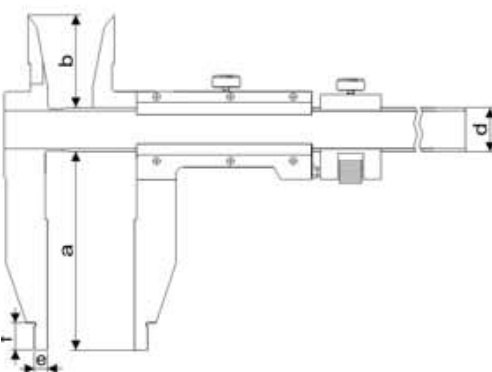
Features:

- Both upper & lower jaws are knife edge.
- Inside readings can be read directly from the indicated reading when measuring the inside diameter with upper jaws,
- Do not need to add the nib width to the indicated reading.
- With fine adjustment, but without depth bar.
- Can measure outside diameter (O.D), inside diameter (I.D), and steps.
- Stainless steel, hardened throughout. Satin chrome finished vernier and main scale with jet black graduations for glare free reading. All graduations are marked by laser machine for accuracy.

Model	MT-141485	MT-141486	MT-141488	MT-141490
Measuring Range	0-500mm	0-600mm	0-800mm	0-1000mm
Vernier Reading	0.02mm	0.02mm	0.02mm	0.02mm
Limit Error	±0.05mm	±0.05mm	±0.07mm	±0.07mm
a (mm)	100	100	125	125
b (mm)	45	45	60	60
d (mm)	24	24	31	31



MT-1415XX



MT-1415XX, Vernier Calipers with Two Types of I.D Jaws (Type E)

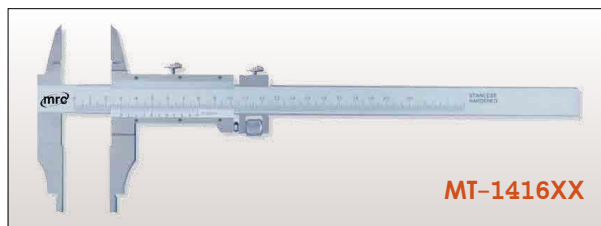
Features:

- Inside readings can be read directly from the indicated reading when measuring the inside diameter with upper jaws, do not need to add the nib width to the indicated reading.
- The radiused measuring faces are fit for accurate inside measurement.
- Long jaws for measuring hard-to-reach portions.
- With fine adjustment, but without depth bar.
- Can measure outside diameter (O.D), inside diameter (I.D), and steps.

Model	MT-141565	MT-141566	MT-141568	MT-141570
	MT-141585	MT-141586	MT-141588	MT-141590
Measuring Range	0-500mm	0-600mm	0-800mm	0-1000mm
Vernier Reading	0.02mm	0.02mm	0.02mm	0.02mm
Limit Error	±0.05mm	±0.05mm	±0.07mm	±0.07mm
a (mm)	100	100	125	125
b (mm)	60	45	45	60
d (mm)	31	24	24	31
e (mm)	10	10	10	10
f (mm)	24	18	18	24

CALIPERS

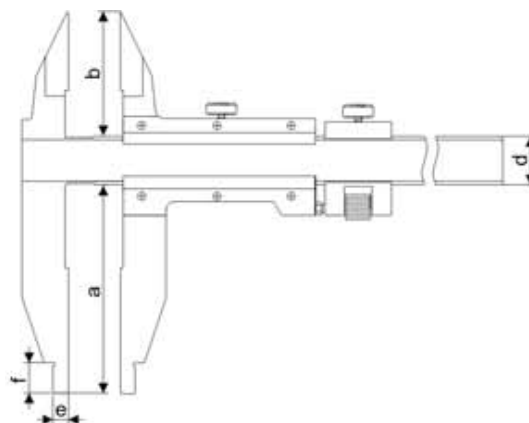
Vernier Calipers



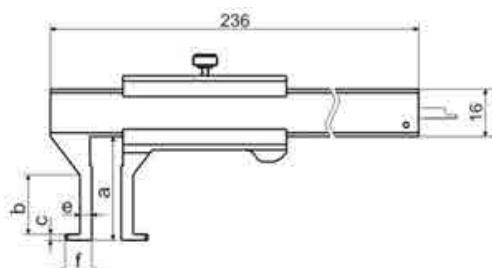
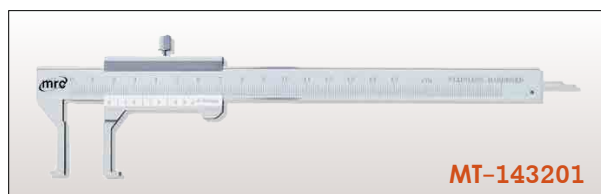
Features:

- Two types of outside jaws are fit for accurate outside measurement. Knife edge and sharp upper jaws can scribe directly on the workpiece.
- The radiused measuring faces are fit for accurate inside measurement.
- Long jaws for measuring hard-to-reach portions. With fine adjustment, but without depth bar.

MT-1416XX, Vernier Calipers with Two Types of O.D Jaws (Type C)



Model	MT-141605	MT-141606	MT-141608	MT-141610
	MT-141645	MT-141646	MT-141648	MT-141650
Measuring Range	0-500mm	0-600mm	0-800mm	0-1000mm
Vernier Reading	0.02mm	0.02mm	0.02mm	0.02mm
Limit Error	±0.05mm	±0.05mm	±0.07mm	±0.07mm
a (mm)	100	100	125	125
b (mm)	56	56	67	67
d (mm)	24	24	31	31
e (mm)	10	10	10	10
f (mm)	18	18	24	24

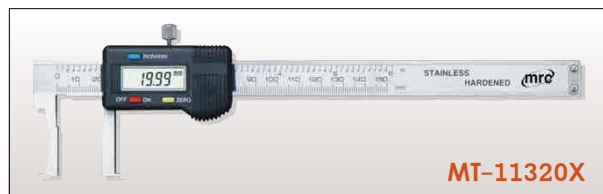


MT-143201, Inside Groove Vernier Calipers with Flat Points

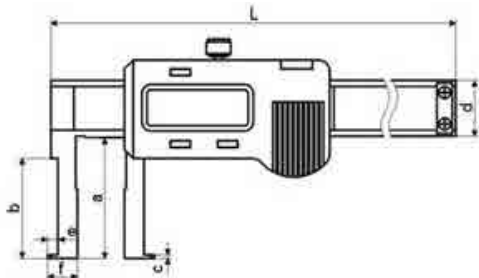
Features:

- Can measure narrow grooves in a hole.
- Special order requires the following data:
 - 1.The diameter of the hole
 - 2.The distance from the groove to the orifice
 - 3.The width of the groove
 - 4.The depth of each groove
 - 5.The shape of the groove bottom.

Model	MT-143201
Measuring Range	18-150mm
Vernier reading	0.02mm
Limit Error	±0.04mm
a (mm)	35
b (mm)	20
C (mm)	2
e (mm)	4
f (mm)	9



MT-11320X

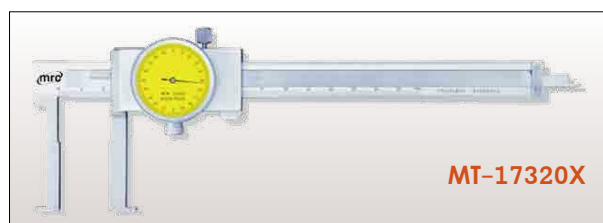


MT-11320X, Inside Groove Digital Calipers with Flat Points

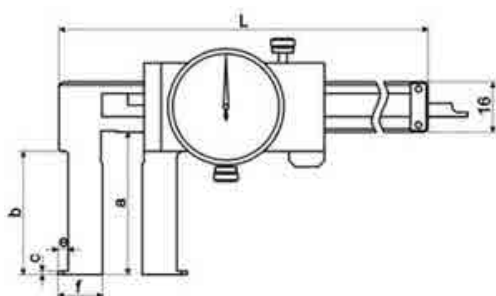
Features:

- Can measure narrow grooves in a hole.
- Special order requires the following data:
 - 1.The diameter of the hole
 - 2.The distance from the groove to the orifice
 - 3.The width of the groove
 - 4.The depth of each groove
 - 5.The shape of the groove bottom.

Model	MT-113201	MT-113201-1	MT-113202	MT-113202-1	MT-113203	MT-113203-1	MT-113205	MT-113205-1	MT-113205-2
Measuring Range	22-150mm	35-150mm	25-200mm	40-200mm	30-300mm	50-300mm	40-500mm	60-500mm	80-500mm
Resolution	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.04mm	±0.05mm	±0.04mm	±0.05mm	±0.05mm	±0.06mm	±0.06mm	±0.07mm	±0.07mm
L (mm)	250	250	310	310	410	410	680	680	680
a (mm)	36	66	46	76	56	86	100	130	160
b (mm)	30	60	40	70	50	80	90	120	150
C (mm)	1	1.5	1	1.5	1.5	1.5	1.5	2	3
d (mm)	16	16	16	16	17	17	24	24	24
e (mm)	5	6	5	7	5	8	5	10	16
f (mm)	11	17.5	12.5	20	15	25	20	30	40



MT-17320X



MT-17320X, Inside Groove Dial Calipers

Features:

- Achieve narrow and small inside groove.
- Special order requires the following data:
 1. The diameter of the hole
 2. The distance from the groove to the orifice
 3. The width of the groove
 4. The depth of one-sided groove
 5. The shape of the slot base.

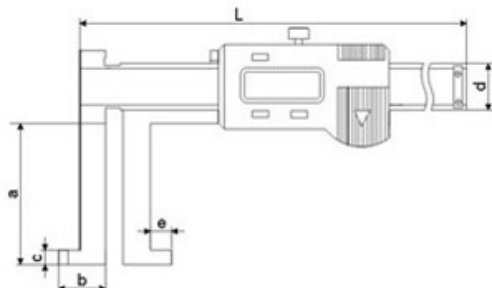
Model	MT-173201	MT-173202
Measuring Range	25-150mm	20-200mm
Dial reading-Graduation	0.02mm	0.02mm
Dial reading-Range/rev.	2mm	2mm
Limit Error	±0.04mm	±0.04mm
L (mm)	236	286
a (mm)	50	40
b (mm)	44	34
C (mm)	1.5	1.5
d (mm)	16	16
e (mm)	5	3
f (mm)	1.5	10

CALIPERS

Groove Calipers



MT-11310X



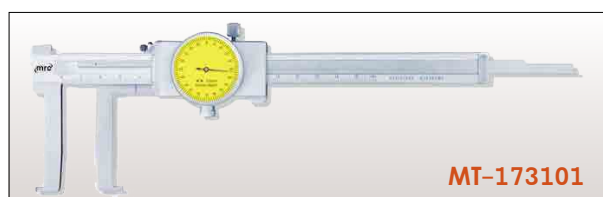
MT-11310X, Inside Groove Digital Calipers with Flat Points

Features:

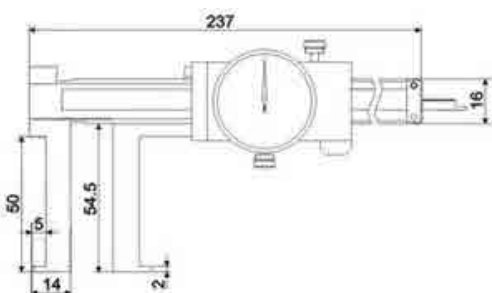
- Can measure narrow grooves in a hole.
- Special order requires the following data:
 - 1.The diameter of the hole
 - 2.The distance from the groove to the orifice
 - 3.The width of the groove
 - 4.The depth of each groove
 - 5.The shape of the groove bottom.

Model	MT-113101	MT-113101-1	MT-113101-2	MT-113102	MT-113102-1	MT-113102-2
Measuring Range	14-150mm	19-150mm	25-150mm	15-200mm	23-200mm	29-200mm
Resolution	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.03mm	±0.05mm	±0.05mm	±0.04mm	±0.05mm	±0.05mm
L (mm)	236	236	291	290	290	347
a (mm)	30	60	90	40	70	100
b (mm)	12	17	23	13	20	27
C (mm)	1	2	3	1	2	3
d (mm)	16	16	20	16	16	20
e (mm)	5	6	8	5	7	10

Model	MT-113103	MT-113103-1	MT-113103-2	MT-113105	MT-113105-1	MT-113105-2
Measuring Range	17-300mm	16-300mm	33-300mm	25-500mm	35-500mm	47-500mm
Resolution	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.05mm	±0.06mm	±0.06mm	±0.06mm	±0.07mm	±0.07mm
L (mm)	400	400	453	670	670	670
a (mm)	50	80	110	90	120	150
b (mm)	15	24	31	23	33	45
C (mm)	1.5	2.5	3.5	2	3	3
d (mm)	17	17	20	24	24	24
e (mm)	5	8	12	6	8	20



MT-173101



MT-173101, Inside Groove Vernier Caliper with Flat Points

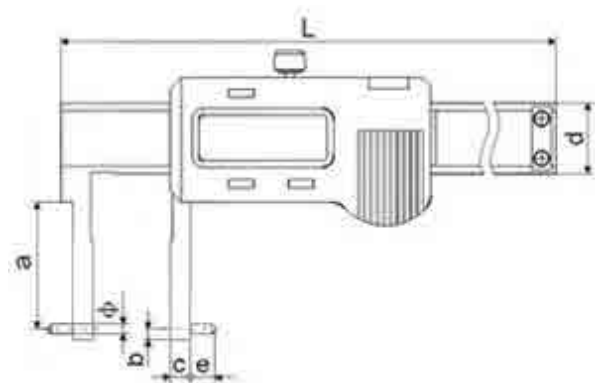
Features:

- Achieve narrow and small inside groove.
- Special-made required following data:
 - 1.The diameter of the hole
 - 2.The distance from the groove to the orifice
 - 3.The width of the groove
 4. The depth of one-sided groove
 5. The shape of the slot base..

Model	MT-173101
Measuring Range	16-150mm
Dial reading-Graduation	0.02mm
Dial reading-Range/rev.	2mm
Limit Error	±0.03mm



MT-11330X



MT-11330X, Inside Groove Digital Calipers with Cylindrical Contacts

Features:

- Flat measuring surfaces or spherical measuring surfaces are optional.
- Can measure the narrow inside groove in the hole..
- Special-made orders require following specifications:
 - 1.The diameter of the hole
 - 2.The distance between the groove and the orifice
 - 3.The width of the groove
 - 4.The depth of any side of the grooves
 - 5.The shape of the groove bottom.

Model	MT-113301	MT-113301-1	MT-113301-2	MT-113302	MT-113302-1	MT-113302-2
Measuring Range	24-150mm	35-150mm	50-150mm	25-200mm	40-200mm	60-200mm
Resolution	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.04mm	±0.05mm	±0.05mm	±0.04mm	±0.05mm	±0.05mm
L (mm)	250	250	260	310	310	310
a (mm)	30	60	90	40	70	100
b (mm)	3	3	4	3	3	3
C (mm)	7	11.5	17	7.5	13	20
d (mm)	16	16	20	16	16	20
e (mm)	5	6	8	5	7	10
Ø	2	2	3	2	3	3

Model	MT-113303	MT-113303-1	MT-113303-2	MT-113305	MT-113305-1	MT-113305-2
Measuring Range	30-300mm	50-300mm	60-300mm	40-500mm	60-500mm	80-500mm
Resolution	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.05mm	±0.06mm	±0.06mm	±0.06mm	±0.07mm	±0.07mm
L (mm)	410	410	410	680	680	680
a (mm)	50	80	110	90	120	150
b (mm)	3	3	3	3	3	3
C (mm)	10	17	20	15	20	24
d (mm)	16	16	20	24	24	24
e (mm)	5	8	10	5	10	16
Ø	2	3	3	3	3	3

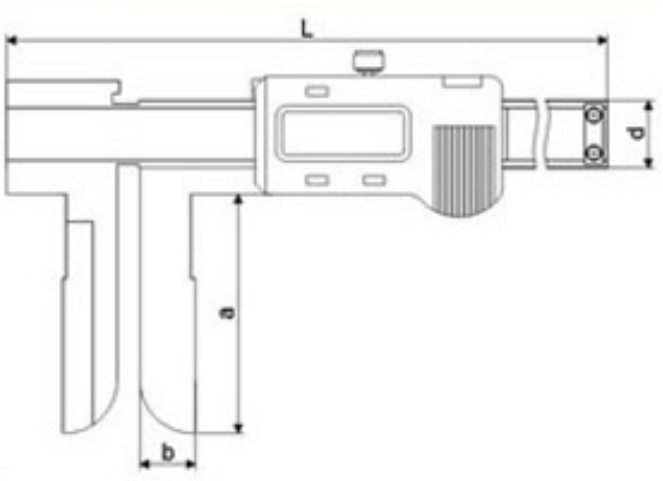
CALIPERS

Digital/Groove Calipers

MT-11350X, Inside Groove Digital Calipers with Flat Points

Features:

- Facilitate the measurement of the inside diameter of a deeper hole.
- Zero-setting at any position.
- Data output.

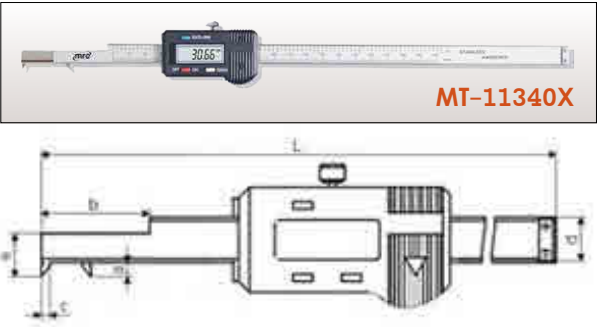


Model	MT-113501	MT-113501-1	MT-113501-2	MT-113502	MT-113502-1	MT-113502-2
Measuring Range	15-150mm	20-150mm	25-150mm	18-200mm	22-200mm	25-200mm
Resolution	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.03mm	±0.04mm	±0.05mm	±0.05mm	±0.06mm	±0.07mm
L (mm)	250	250	250	305	305	305
a (mm)	60	90	150	75	100	150
b (mm)	12	14	22	14	17	22
d (mm)	16	16	24	16	16	24

Model	MT-113503	MT-113503-1	MT-113503-2	MT-113505	MT-113505-1	MT-113505-2
Measuring Range	20-300mm	22-300mm	25-300mm	22-500mm	25-500mm	35-500mm
Resolution	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.05mm	±0.06mm	±0.07mm	±0.07mm	±0.08mm	±0.09mm
L (mm)	410	410	410	700	700	700
a (mm)	90	120	150	100	150	200
b (mm)	15	20	22	20	22	30
d (mm)	16	24	24	24	24	24

Groove Calipers

CALIPERS



MT-11340X, Hook Type Digital Calipers

Features:

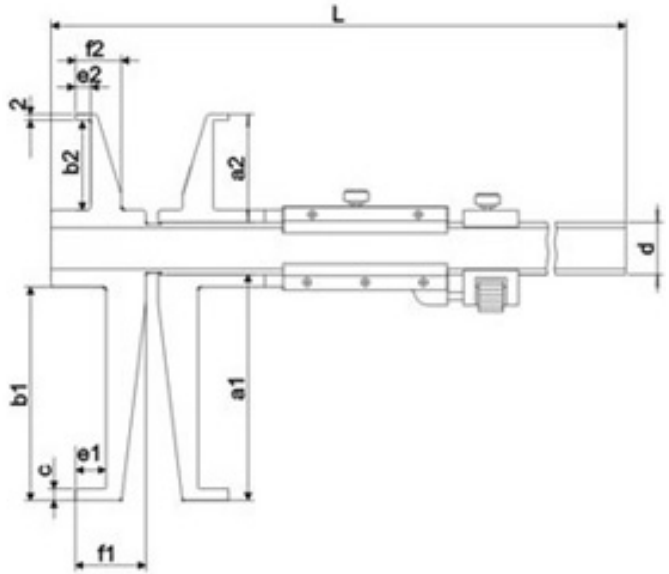
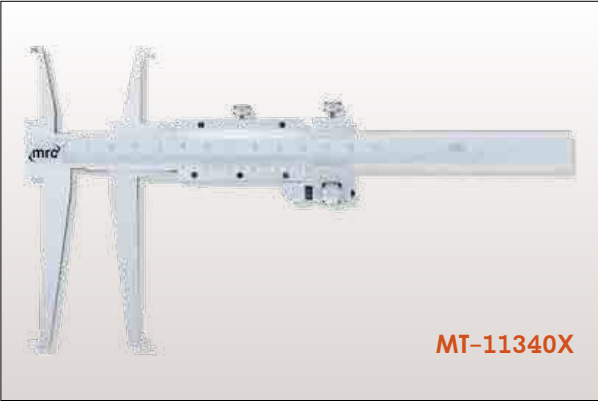
- Measure the width of inside groove and position of a groove.
- Zero-setting at any position.
- Data output.

Model	MT-113502	MT-113502-1	MT-113502-2
Measuring Range	3-125mm	3-200mm	4-300mm
Resolution	0.01mm	0.01mm	0.01mm
Limit Error	±0.03mm	±0.03mm	±0.04mm
L (mm)	235	310	466
a (mm)	4	4	5
b (mm)	24	24	86
c (mm)	3	3	4
d (mm)	16	16	17
e (mm)	12	12	14

MT-11340X, Hook Type Digital Calipers

Features:

- Thin chisel edge contacts are convenient to measure the narrow grooves in the hole.



Model	MT-143200A	MT-143202A
Measuring Range	15-125mm	18-150mm
Vernier Reading	0.02mm	0.02mm
Limit Error	±0.04mm	±0.04mm
L (mm)	230	258
a1 (mm)	73.5	73.5
a2 (mm)	35.2	35.2
b1 (mm)	70.5	69.5
b2 (mm)	31.5	31.2
c (mm)	2.9	3.8
d (mm)	16	17
e1 (mm)	5	10
e2 (mm)	4	5
f1 (mm)	17	23
f2 (mm)	11	15

CALIPERS

Digital/Groove Calipers

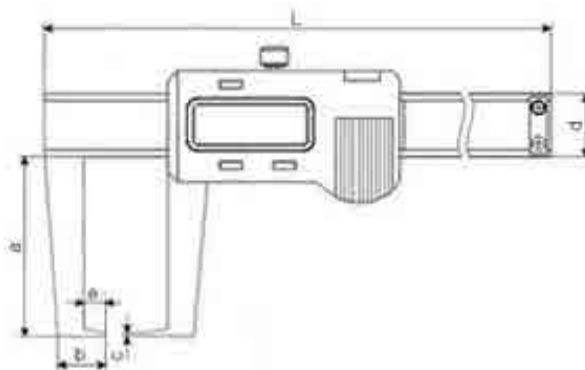
MT-11210X, Outside Groove Digital Calipers with Flat Points



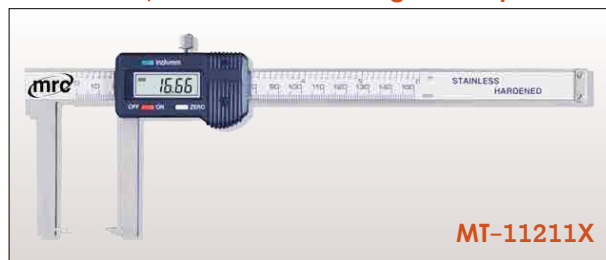
MT-11210X

Features:

- Can measure the diameter of the outside groove or the tube wall thickness.
- Zero-setting at any position.
- Data output.



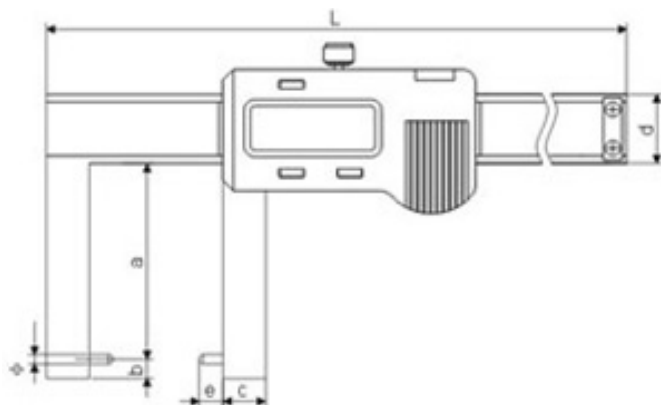
MT-11211X, Outside Groove Digital Calipers with Round Points



MT-11211X

Features:

- Flat measuring surfaces or spherical measuring surfaces are optional.
- Can measure the width of outside groove or the dimension of bent surfaces.
- Zero-setting at any position.
- Data output.



Model	MT-112101	MT-112101-1	MT-112101-2	MT-112102	MT-112102-1	MT-112102-2
	MT-112111	MT-112111-1	MT-112111-2	MT-112112	MT-112112-1	MT-112112-2
Measuring Range	0-150mm	0-150mm	0-150mm	0-200mm	0-200mm	0-200mm
Resolution	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.03mm	±0.04mm	±0.04mm ±0.05mm	±0.04mm	±0.04mm	±0.05mm
L (mm)	250	250	290	310 300	310 300	340
a (mm)	40	70	100	50	80	110
b (mm)	15 3	20 3	30 3	19 3	23 3	34 3
c (mm)	1 10	2 10	2 20	1 12	1.5 12	2 22
d (mm)	16	16	20	16	16	20
e (mm)	5	7 5	10	7 8	9 8	12
Ø	2	2	3	2.5	2.5	3

Model	MT-112103	MT-112103-1	MT-112103-2	MT-112105	MT-112105-1	MT-112105-2
	MT-112113	MT-112113-1	MT-112113-2	MT-112115	MT-112115-1	MT-112115-2
Measuring Range	0-300mm	0-300mm	0-300mm	0-500mm	0-500mm	0-500mm
Resolution	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.04mm	±0.05mm	±0.05mm	±0.06mm	±0.07mm	±0.08mm
L (mm)	400 410	440	480	690 680	690 680	690 680
a (mm)	60	100	150	100	150	200
b (mm)	21 3	30 3	32 3	34 3	36 3	36 3
c (mm)	1.5 14	2 20	2 20	2 20	2 20	2 20
d (mm)	17	20	24	24	24	24
e (mm)	8 10	10	12	12	12	12
Ø	2.5	3	3	3	3	3

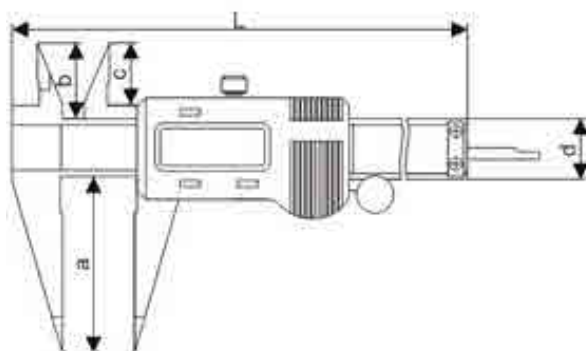


MT-11120X

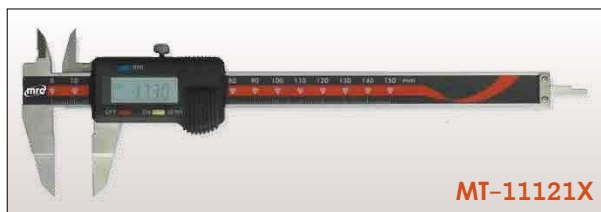
Features:

- Easy to measure the very narrow or small outside grooves or small holes.
- The measurement accuracy of the inside jaws can accord with DIN862.
- Zero-setting at any position.
- Data output.

MT-11120X/14120X, Pointed-jaw Digital/Vernier Calipers



Model	Digital Type				Vernier Type		
	MT-111200	MT-111201	MT-111202	MT-111203	MT-141201	MT-141202	MT-141203
Measuring Range	0-100mm	0-150mm	0-200mm	0-300mm	0-150mm	0-200mm	0-300mm
Resolution	0.01mm	0.01mm	0.01mm	0.01mm	0.02mm	0.02mm	0.02mm
Limit Error	±0.02mm	±0.03mm	±0.03mm	±0.04mm	±0.03mm	±0.03mm	±0.04mm
L (mm)	170	236	286	400	236	286	400
a (mm)	30	40	50	60	40	50	60
b (mm)	17	21	24	25	21	24	25
c (mm)	12	16	19	20	16	19	20
d (mm)	13	16	16	17	16	16	17

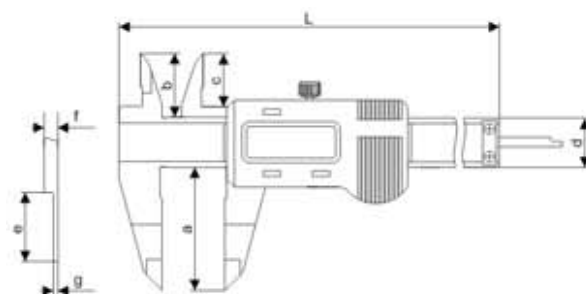


MT-11121X

Features:

- Thin jaws as thin as knife blade can easily reach narrow grooves for measurement.
- The measurement accuracy of the inside jaws can accord with DIN862.

MT-11121X/14121X, Blade Calipers

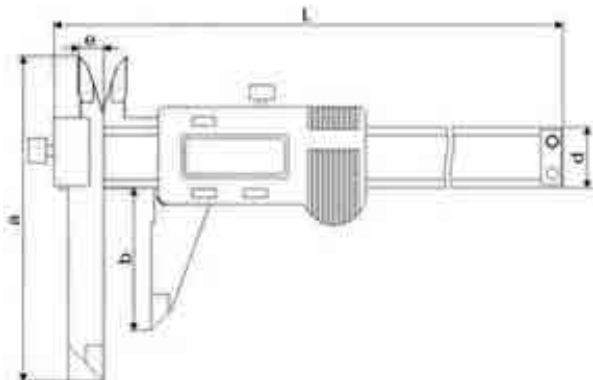
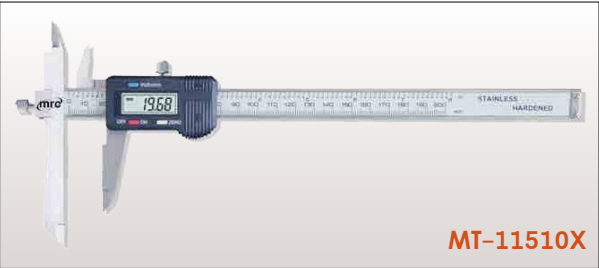


Model	Digital Type				Vernier Type		
	MT-111210	MT-111211	MT-111212	MT-111213	MT-141211	MT-141212	MT-141213
Measuring Range	0-100mm	0-150mm	0-200mm	0-300mm	0-150mm	0-200mm	0-300mm
Resolution	0.01mm	0.01mm	0.01mm	0.01mm	0.02mm	0.02mm	0.02mm
Limit Error	±0.02mm	±0.02mm	±0.03mm	±0.04mm	±0.02mm	±0.03mm	±0.04mm
L (mm)	170	236	286	400	236	286	400
a (mm)	30	40	50	60	40	50	60
b (mm)	17	21	24	25	21	24	25
c (mm)	12	16	19	20	16	19	20
d (mm)	13	16	16	17	16	16	17
e (mm)	20	20	20	20	20	20	20
f (mm)	3	3.2	3.6	3.8	3.2	3.6	3.8
g (mm)	0.7	0.7	0.7	1	0.7	0.7	1

CALIPERS

Offset Calipers

MT-11510X, Offset Digital Calipers

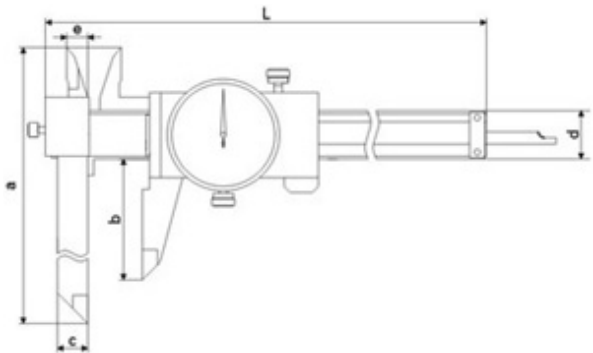
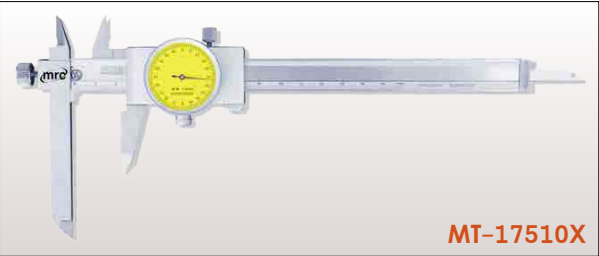


Features:

- Main scale jaw can be slid up and down to measure stepped sections.

Model	MT-115101	MT-115102	MT-115103	MT-115105
Measuring Range	0-150mm	0-200mm	0-300mm	0-500mm
Resolution	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.04mm	±0.04mm	±0.05mm	±0.07mm
L (mm)	239	289	389	685
a (mm)	110	120	130	210
b (mm)	40	50	60	100
c (mm)	10	10	10	24
d (mm)	16	16	16	17
e (mm)	7	7	7	11

MT-17510X, Offset Dial Calipers

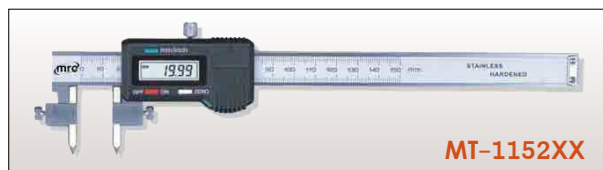


Features:

- The left jaw is adjustable up and down for a suitable height.
- Measure of stepped sections.

Model	MT-175101	MT-175102
Measuring Range	0-150mm	0-200mm
Dial reading-Graduation	0.02mm	0.02mm
Dial reading-Range/rev.	2mm	2mm
Limit Error	±0.04mm	±0.04mm
L (mm)	239	289
a (mm)	110	120
b (mm)	40	50
c (mm)	10	10
d (mm)	16	16
e (mm)	7	7

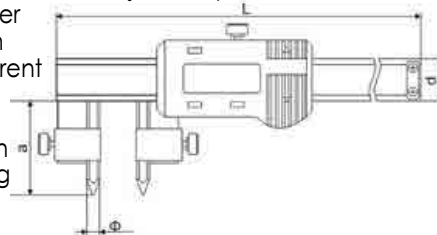
MT-1152XX, Centerline Digital Calipers with Conical Points



MT-1152XX

Features:

- Can measure the center distance between two holes.
- The conical points can be adjusted up or down to measure the center distance between two holes on different heights.
- The caliper with presetting function for easy measuring is optional.



Model	MT-115201	MT-115201-1	MT-115202	MT-115202-1	MT-115203
Measuring Range	5–150mm	10–150mm	5–200mm	10–200mm	5–300mm
Resolution	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.03mm	±0.03mm	±0.04mm	±0.04mm	±0.05mm
L (mm)	236	236	285	285	385
a (mm)	35	40	35	40	35
d (mm)	16	16	16	16	16
Ø	5	10	5	10	5

Model	MT-115203-1	MT-115205	MT-115205-1	MT-115210	MT-115210-1
Measuring Range	10–300mm	10–500mm	20–500mm	10–1000mm	20–1000mm
Resolution	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.05mm	±0.06mm	±0.06mm	±0.08mm	±0.08mm
L (mm)	385	650	650	1200	1200
a (mm)	40	50	60	50	60
d (mm)	16	24	24	31	31
Ø	10	5	5	10	20

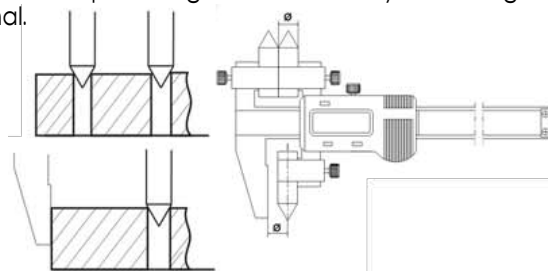
MT-11522X, Apothem and Centerline Caliper with Conical Points



MT-11522X

Features:

- Can measure the center distance between two holes.
- Can measure the distance between edge and center.
- Centerline contacts can be slid up and down to measure the center distance between stepped holes.
- The caliper with presetting function for easy measuring is optional.



Model	MT-115221	MT-115222	MT-115223
Measuring Range	S–150mm	S–200mm	S–300mm
Resolution	0.01mm	0.01mm	0.01mm
Limit Error	±0.03mm	±0.04mm	±0.05mm
S (mm)	5/10/20	5/10/20	5/10/20

CALIPERS

Digital Calipers

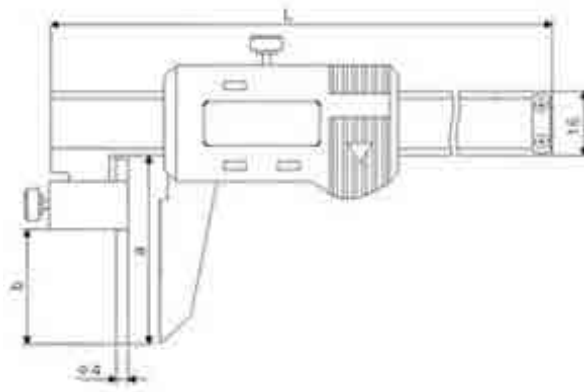
MT-11410X, Tube Thickness Digital Calipers



MT-11410X

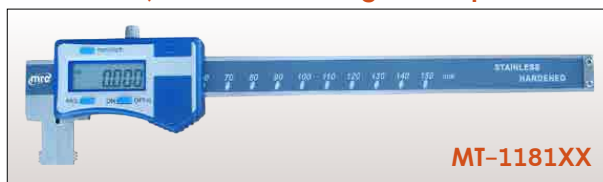
Features:

- According to hardness of workpieces, long anvil and short anvil are available.
- Long cavity mould anvil for measuring the soft suckers, such as plastic; and short anvil for measuring hard tubular tools including metal tubes, porcelain tubes and the like.



Model	MT-114101	MT-114102	MT-114105
Measuring Range	0-150mm	0-200mm	0-300mm
Resolution	0.01mm	0.01mm	0.01mm
Limit Error	±0.03mm	±0.03mm	±0.04mm
L (mm)	244	294	394
a (mm)	30	38	48
b (mm)	30	40	50

MT-1181XX, Screw Thread Digital Calipers



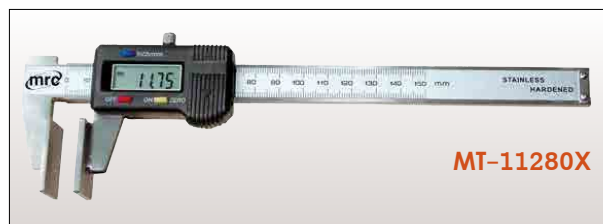
MT-1181XX

Features:

- Measure the working and single pitch diameters of internal and external threads.
- Can design according to each kind of pitch for wide measuring range of pitch diameter.
- Available with Carbide-tipped jaws and the high precision electronic component.
- Calibrated by master gauge for a higher accuracy.

Model	MT-118121	MT-118122	MT-118123	MT-118125	MT-118126
Measuring Range	0-150mm	0-200mm	0-300mm	0-500mm	0-600mm
Resolution	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.03mm	±0.04mm	±0.05mm	±0.06mm	±0.06mm

Model	MT-118111	MT-118112	MT-118113	MT-118000	MT-118001
Measuring Range	0-150mm	0-200mm	0-300mm	0-100mm	0-150mm
Resolution	0.005mm	0.005mm	0.005mm	0.001mm	0.001mm
Limit Error	±0.020mm	±0.030mm	±0.040mm	±0.007mm	±0.009mm



MT-11280X

MT-11280X, Rope Calipers

Features:

- Broadened measuring faces are mainly used for measuring the diameter of the wire rope to ensure the measurement for safe.
- Hardened measuring faces are wear resistant.
- Zero-setting at any position.
- Measuring faces dimension can be customized.

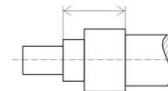
Model	MT-112801	MT-112802	MT-112803
Measuring Range	0-150mm	0-200mm	0-300mm
Resolution	0.01mm	0.01mm	0.01mm
Limit Error	±0.03mm	±0.04mm	±0.05mm
General Measuring Faces Dimension	20x30mm	20x30mm	20x30mm



MT-11530X

MT-11530X, Tube Thickness Digital Calipers**Features:**

- Rotate the jaw to easily measure the step shaft & other ends not in a line.



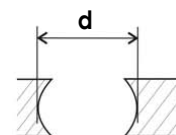
Model	MT-115301	MT-115302	MT-115303	MT-115305
Measuring Range	0-150mm	0-200mm	0-300mm	0-500mm
Resolution	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.04mm	±0.05mm	±0.06mm	±0.08mm



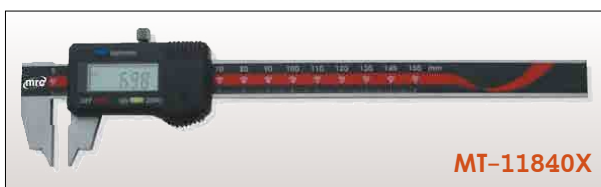
MT-11870X

MT-11870X, Bearing Raceway Calipers**Features:**

- Used in the bearing industry.
- Designed for measuring the diameters of the theoretical center in large scale bearing raceway.



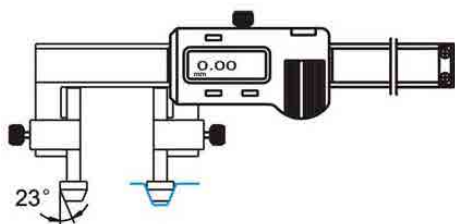
Model	MT-118702	MT-118703	MT-118705
Measuring Range	0-200mm	0-300mm	0-500mm
Resolution	0.01mm	0.01mm	0.01mm
Limit Error	±0.05mm	±0.06mm	±0.07mm



MT-11840X

MT-11840X, RTJ Ring Groove Digital Calipers**Features:**

- Used to measure the ring groove in valve flange and pipe flange.
- Can measure the outside diameter of the Rh J (Ring Type Joint) ring groove.
- With presetting function, easy for origin-setting.
- Available with conical and accurate cutting points.
- The angle of jaws: 23°.



Model	MT-118401	MT-118402	MT-118403
Measuring Range	0-150mm	0-200mm	0-300mm
Resolution	0.01mm	0.01mm	0.01mm
Limit Error	±0.03mm	±0.04mm	±0.05mm



MT-11250X

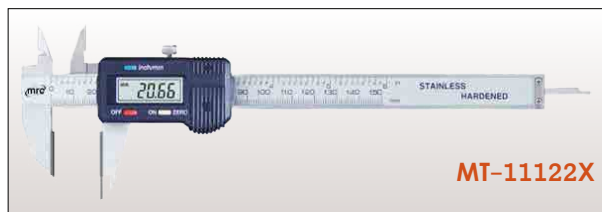
MT-11250X, Hook Type Digital Calipers**Features:**

- Can measure the width of groove and reach the inside wall of holes and concave portions.
- mm/inch conversion.
- Zero-setting at any position.
- With data output.

Model	MT-112501	MT-112502	MT-112503
Measuring Range	0-150mm	0-200mm	0-300mm
Resolution	0.01mm	0.01mm	0.01mm
Limit Error	±0.03mm	±0.04mm	±0.05mm

CALIPERS

Digital Calipers



MT-11122X

MT-11122X, Digital Scribing Calipers

Features:

- Carbide-tipped jaws for scribing.
- mm/inch conversion.
- Zero-setting at any position.
- With data output.

Model	MT-111221	MT-111222	MT-111223
Measuring Range	0-150mm	0-200mm	0-300mm
Resolution	0.01mm	0.01mm	0.01mm
Limit Error	±0.02mm	±0.03mm	±0.04mm

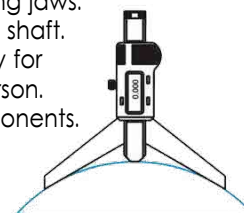


MT-11850X

MT-11850X, Digital Scribing Calipers

Features:

- Designed for measuring large accurate shaft diameter.
- Can greatly reduce the measurement error of conventional caliper with extral long jaws.
- Can check the cylindricity of large shaft.
- Suitable thickness and weight, easy for independent operation of one person.
- High accuracy of electronic components.
- mm/inch conversion.
- Zero-setting at any position.
- With data output.



Model	MT-118501	MT-118502	MT-118503
Measuring Range	Φ300-1000mm	Φ1000-2000mm	Φ2000-3000mm
Resolution	0.001mm	0.001mm	0.001mm
Limit Error	±0.07mm	±0.12mm	±0.18mm

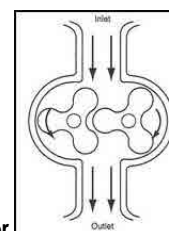


MT-11860X

MT-11860X, V-Anvil Digital Calipers

Features:

- Designed to measure the diameter of workpiece with odd flutes, such as end mills, taps, reamers and the like.
- Used to measure shafts for lobe-error (out of roundness) .
- Used to measure the diameter of workpiece formed with circular arrays, such as fan blades.
- Used to measure the diameter of Roots Blower with 3 blades.
- Easy to operate with high efficiency.
- mm/inch conversion.
- Zero-setting at any position.
- With data output.



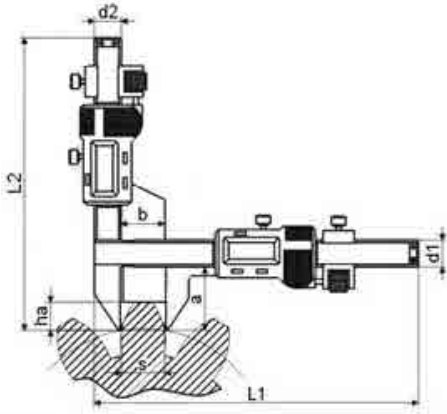
Roots Blower

Model	MT-118601	MT-118602	MT-118603	MT-118604	MT-118605	MT-118606
Measuring Range	3-50mm	50-100mm	100-150mm	150-200mm	200-250mm	250-300mm
Resolution	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.03mm	±0.03mm	±0.03mm	±0.04mm	±0.04mm	±0.05mm



MT-11831X, Digital Gear Tooth Calipers

- Features:
- Facilitates measurement of gear thickness.
 - mm/inch conversion.
 - Zero-setting at any position.
 - With data output.



Model	MT-118311	MT-118312
Measuring Range	m1-25	m5-50
Resolution	0.01mm	0.01mm
Limit Error	±0.03mm	±0.03mm
L1 (mm)	156	210
L2 (mm)	156.5	185.5
a (mm)	30.5	50.5
b (mm)	21	50.5
d1 (mm)	13	13
d2 (mm)	13	13



MT-119001, Caliper Type Micrometers

- Features:
- High Resolution 0.001mm.
 - It looks like a micrometer, accords with the Abbe's principle. It is the combination of calipers and micrometers. However it is not operating like micrometers, you just operate it in a caliper form, quick, convenient and accurate than those micrometers.
 - This caliper type micrometer has higher accuracy than micron digital calipers.



Model	MT-119001
Measuring Range	0-25mm
Resolution	0.001mm
Limit Error	±0.004mm

CALIPERS

Digital/Dial Calipers/Gauges

MT-11903X, Two-point Internal Digital Calipers



Features:

- It is convenient to keep the beam balance while measuring.
- The positioning is accurate which can avoid the manual interfere.
- With force limit devices, it can avoid the error by manual operation.
- The measuring range is larger than those three-point internal micrometers.
- It can measure the diameters; even can measure the cone angle of small hole by the Equal sizing blocks.

Model	MT-119031	MT-119032	MT-119033	MT-119034	MT-119035	MT-119036
Measuring Range	10-60mm	50-100mm	100-150mm	150-200mm	200-250mm	250-300mm
Resolution	0.001mm	0.001mm	0.001mm	0.001mm	0.001mm	0.001mm
Limit Error	±0.007mm	±0.007mm	±0.008mm	±0.008mm	±0.009mm	±0.009mm

MT-17850X, Dial Inside Calipers



Features:

- Used in the workshops and can be exposed to coolant, water or oil.
- Made up of vernier caliper and dial indicator, this caliper has high accuracy.

Model	MT-178501	MT-178502
Measuring Range	500mm	600mm
Graduation	0.01mm	0.01mm
Limit Error	±0.04mm	±0.04mm



MT-32580X, Dial Internal Caliper Gauges

Features:

- Can measure the inside diameter of holes and inside grooves.

Model	MT-325801	MT-325802	MT-325803	MT-325804	MT-325805	MT-325806	MT-325807
Measuring Range	15-35mm	35-55mm	55-75mm	75-95mm	95-115mm	115-135mm	135-155mm
Graduation	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.04mm	±0.04mm	±0.04mm	±0.04mm	±0.04mm	±0.04mm	±0.04mm

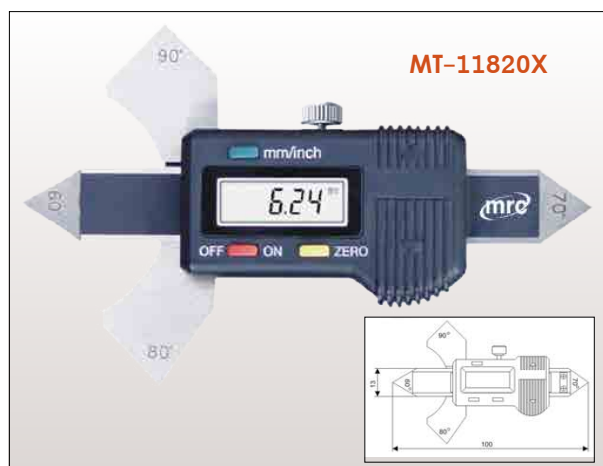


MT-32581X, Dial Outside Caliper Gauges

Features:

- Can measure the outside diameter of holes and outside grooves.

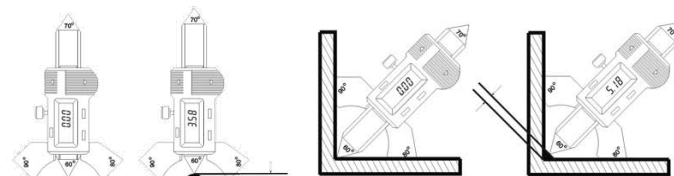
Model	MT-325811	MT-325812	MT-325813	MT-325814	MT-325815	MT-325816
Measuring Range	0-20mm	20-40mm	40-60mm	60-80mm	80-100mm	100-120mm
Graduation	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.04mm	±0.04mm	±0.04mm	±0.04mm	±0.04mm	±0.04mm



MT-11820X, Digital Welding Gauges

Features:

- Widely used for checking the weld of various manufacturing industries such as auto industry, shipbuilding industry, boiler industry and the like.
- Can measure the height of the weld.
- Can check the angle of the groove (The gauge has four angular templates: 60°, 70°, 80° and 90° are provided).



Model	MT-118201	MT-118202
Measuring Range	0-12.5mm	0-20mm
Resolution	0.01mm	0.01mm
Limit Error	±0.03mm	±0.03mm



MT-3151X1, Digital Snap Gauge with Single Broad Measuring Face

Features:

- Portable, easy to use and efficient.
- Usually used to measure dimensions of small workpieces.
- Manual power on/off.
- Inch/mm conversion at any position.
- Zero-setting at any position.
- Data output.



Model	MT-315121	MT-315111	MT-315101
Measuring Range	0-30mm	0-30mm	0-30mm
Resolution	0.01mm	0.005mm	0.001mm
Limit Error	±0.03mm	±0.020mm	±0.009mm



MT-3152X1, Inside/Outside Digital Snap Gauges

Features:

- Light weight, portable and easy to operate with one single hand.
- Can measure the inside and outside dimensions and easily reach the part in narrow interspace.
- Zero-setting at any position.
- Inch/ Metric conversions.



Model	MT-315221	MT-315211	MT-315201
Measuring Range	0-30mm	0-30mm	0-30mm
Resolution	0.01mm	0.005mm	0.020mm
Limit Error	±0.03mm	±0.020mm	±0.009mm

MECHANICAL MEASURES

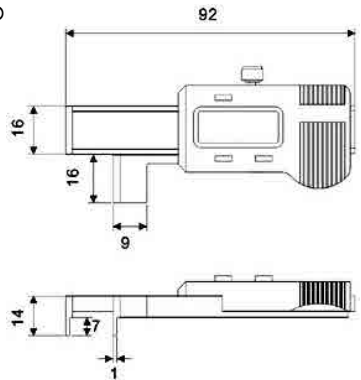
Steps/Calipers

MT-118901, Digital Gap & Step Gauge



Features:

- Used for checking the mutual position of two adjacent surfaces of vehicles
- Can measure the step between two adjacent surfaces
- Can measure the gap between two adjacent surfaces.
- Portable and easy to operate.
- mm/inch conversion.
- Zero-setting at any positio
- With data output.



Model	MT-118901
Measuring Range	0-12.7mm
Resolution	0.01mm
Limit Error	±0.03mm



MT-178601, Sawtooth Profile Dial Gauge

Features:

- To measure the left-right spacing of adjacent sawtooth rake.
- With magnetic disks in the bottom face , it's easily stuck on the workpieces.
- Portable and easy to use.

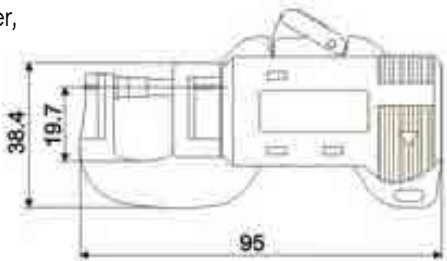
Model	MT-178601	MT-178602
Measuring Range	500mm	600mm
Graduation	0.01mm	0.01mm
Limit Error	±0.04mm	±0.04mm



MT-315801, Digital Thickness Gauge (Horizontal Type)

Features:

- Portable, light weight, easy to operate with one single hand.
- It's fit for measuring the thickness of jewellery, leather, metal sheet, paper, film, wire, etc..



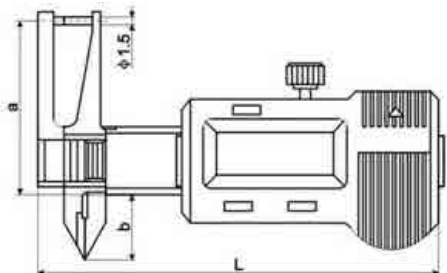
Model	MT-315801
Measuring Range	0-12mm
Resolution	0.01mm
Limit Error	±0.03mm



MT-31534X, Mini Digital Thickness Gauges

Features:

- Pocket size, light weight, easy to operate with one single hand.
- For measuring small workpieces, such as jewelry, electronic components and the like.
- Zero-setting at any position.
- Inch/ Metric conversion.



Model	MT-315340	MT-315341
Measuring Range	0-15mm	0-25mm
Resolution	0.01mm	0.01mm
Limit Error	±0.03mm	±0.03mm
L (mm)	77	87
a (mm)	33.2	33.2
b (mm)	12.5	12.5

THICKNESS Dial/Digital Gauges

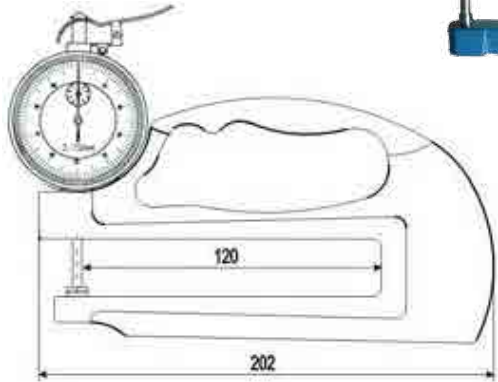


MT-326101

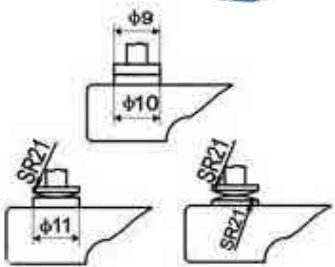
MT-326101/326201, Dial Thickness Gauges

Features:

- Two types of measuring faces .
- Contact points automatically close when not using.
- Fit for measuring the thickness of paper ,film, wire, sheet metal ,jewelry, leather & similar materials.
- Various kinds of contacts can be customized.



MT-326201



Model	MT-326101	MT-326201
Measuring Range	0-10mm	0-10mm
Resolution	0.01mm	0.01mm
Limit Error	±0.02mm	±0.03mm
Probe depth	30mm	120mm

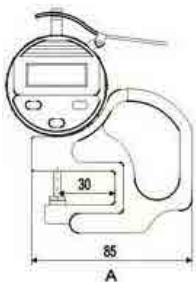


MT-316101

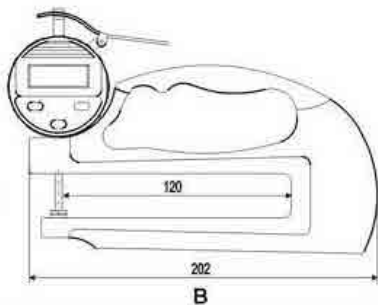
MT-316X0X, Digital Thickness Gauges

Features:

- In/metric system conversion at any position.
- Zero setting at any position.
- Two types of measuring faces .
- Contact points automatically close when not using.
- Fit for measuring the thickness of paper, film, wire, sheet metal, jewelry, leather and similar materials.
- Various kinds of contacts can be customized.



MT-316202



Model	MT-316101	MT-316202	MT-316001
Measuring Range	0-10mm	0-10mm	0-10mm
Resolution	0.01mm	0.01mm	0.001mm
Limit Error	±0.02mm	±0.03mm	±0.009mm
Probe depth	30mm	120mm	30mm

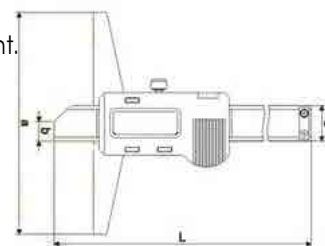
MT-12110X



MT-12110X, Digital Depth Gauges

Features:

- Used for depth measurement.
- Zero-setting at any position.
- Inch/mm conversion
- Data output.



Model	MT-121101	MT-121102	MT-121103	MT-121105
Measuring Range	0-150mm	0-200mm	0-300mm	0-500mm
Vernier reading	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.03mm	±0.03mm	±0.04mm	±0.05mm
L (mm)	230	280	380	580
a (mm)	100	100	100	100
b (mm)	8.5	8.5	8.5	7
c (mm)	14.5	14.5	14.5	15

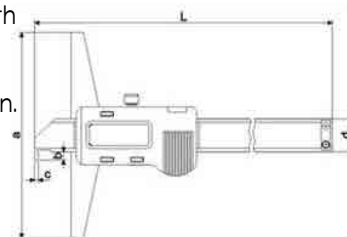
MT-12310X



MT-12310X, Digital Depth Gauges (Hook Type)

Features:

- Used for depth measurement.
- Can measure groove width and position dimension of a groove.
- Zero-setting at any position.



Model	MT-123101	MT-123102	MT-123103	MT-123104
Measuring Range	0-150mm	0-200mm	0-300mm	0-500mm
Resolution	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.03mm	±0.03mm	±0.04mm	±0.04mm
L (mm)	230	280	380	580
a (mm)	100	100	100	100
b (mm)	5	5	5	8
c (mm)	2	2	2	3
d (mm)	14.5	14.5	14.5	15

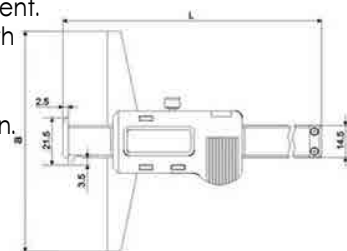
MT-12320X



MT-12320X, Digital Depth Gauges (Hook Type)

Features:

- Used for depth measurement.
- Can measure groove width and position dimension of a groove.
- Zero-setting at any position.



Model	MT-123201	MT-123202	MT-123203
Measuring Range	0-150mm	0-200mm	0-250mm
Resolution	0.01mm	0.01mm	0.01mm
Limit Error	±0.03mm	±0.03mm	±0.04mm
L (mm)	232.5	282.5	382.5
a (mm)	100	100	100

DEPTH

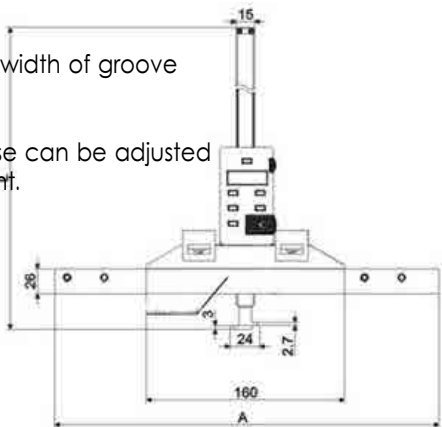
Digital/Vernier Gauges



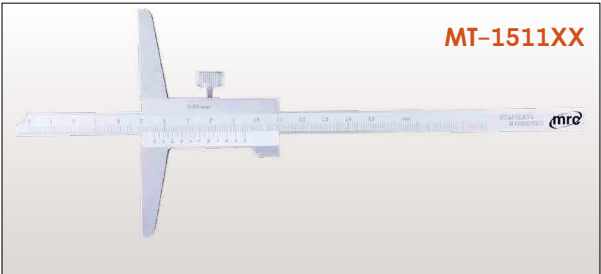
MT-12220X, Digital Depth Gauges with Adjustable Extra Long Base

Features:

- Can measure the width of groove and position of groove.
- The extra long base can be adjusted to the left and right.



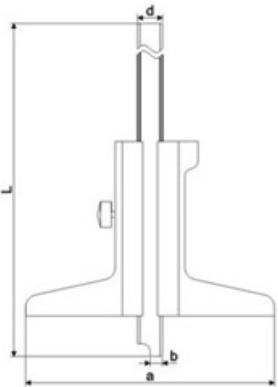
Model	MT-122201	MT-122202	MT-122203	MT-122204
Measuring Range	0-300mm	0-400mm	0-500mm	0-600mm
Resolution	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.04mm	±0.05mm	±0.05mm	±0.07mm
L (mm)	460	560	660	760



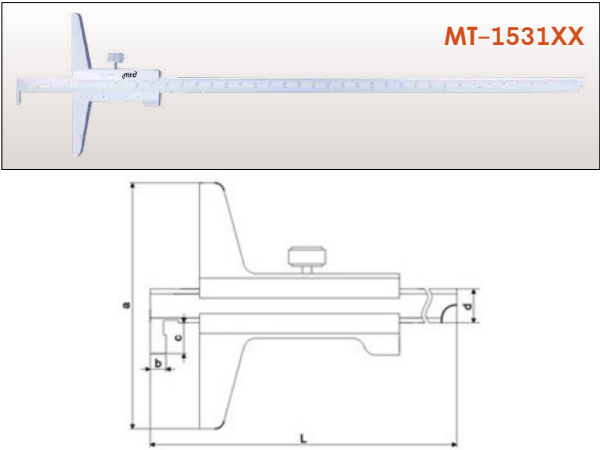
MT-1511XX/1513XX, Vernier Depth Gauges

Features:

- Used for depth measurement and step measurement.
- Stainless steel. Hardened throughout. Satin chrome finished vernier and main scale with jet black graduations for glare free reading. All graduations are marked by laser machine for accuracy.



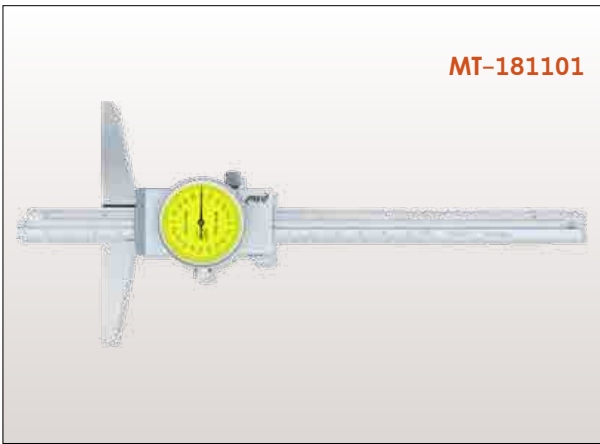
Model	MT-151100	MT-151102	MT-151104	MT-151106	MT-151108	MT-151110	MT-151112	MT-151114	MT-151116
	MT-151300	MT-151302	MT-151304	MT-151306	MT-151308	MT-151310	MT-151312	MT-151314	MT-151316
Measuring Range	0-150mm	0-200mm	0-250mm	0-300mm	0-400mm	0-500mm	0-600mm	0-800mm	0-1000mm
Resolution	0.02mm	0.02mm	0.02mm	0.02mm	0.02mm	0.02mm	0.02mm	0.02mm	0.02mm
Limit Error	±0.03mm	±0.03mm	±0.04mm	±0.04mm	±0.05mm	±0.05mm	±0.07mm	±0.07mm	±0.07mm
L (mm)	250	300	350	400	505	605	768	968	1168
a (mm)	100	100	100	100	150	150	150	150	150
b (mm)	5	5	5	5	4	4	6	6	6
d (mm)	10	10	10	10	11	11	11	18	18



MT-1531XX/ 1533XX, Vernier Depth Gauges (Hook Type)

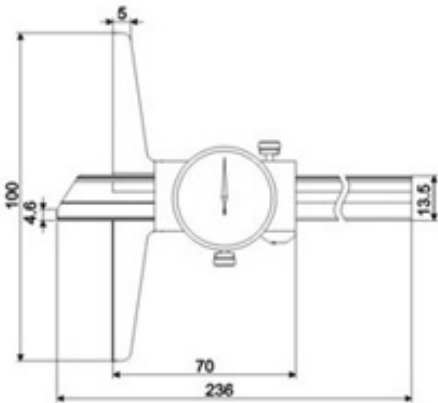
- Features:**
- Used for depth measurement.
 - Can measure the width of groove & position of groove.
 - Stainless steel. Hardened throughout. Satin chrome finished vernier and main scale with jet black graduations for glare free reading. All graduations are marked by laser machine for accuracy.

Model	MT-153100	MT-153102	MT-153104	MT-153106	MT-151108	MT-153110
	MT-153300	MT-153302	MT-153304	MT-153306	MT-153308	MT-153310
Measuring Range	0-150mm	0-200mm	0-250mm	0-300mm	0-400mm	0-500mm
Vernier Reading	0.02mm	0.02mm	0.02mm	0.02mm	0.02mm	0.02mm
Limit Error	±0.03mm	±0.03mm	±0.04mm	±0.04mm	±0.05mm	±0.05mm
L (mm)	250	300	350	400	505	605
a (mm)	100	100	100	100	150	150
b (mm)	2	2	2	2	5	5
c (mm)	2.5	2.5	2.5	2.5	10	10
d (mm)	10	10	10	10	11	11



MT-181101, Dial Depth Gauges

- Features:**
- Both the slider & beam are made of hardened stainless steel.
 - Mono-block structure for more reliability.



Model	MT-181101
Measuring Range	0-150mm
Dial reading-Graduation	0.02mm
Dial reading-Range/rev.	2mm
Limit Error	±0.03mm

DEPTH

Dial/Digital Gauges



MT-32710X, Dial Bore Gauges

- Features:
- For internal measurement.
 - Stainless steel contacts hardened.
 - With changeable contacts, wide measuring range.
 - With dial indicator.

Model	MT-327101	MT-327102	MT-327103	MT-327104	MT-327105	MT-327106	MT-327107	MT-327108	MT-327109
Measuring Range	10–18mm	18–35mm	35–50mm	50–100mm	50–160mm	100–160mm	160–250mm	20–200mm	250–450mm
Graduation	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.012mm	±0.015mm	±0.015mm	±0.018mm	±0.018mm	±0.018mm	±0.018mm	±0.018mm	±0.018mm



MT-32850X, Dial Depth Indicators

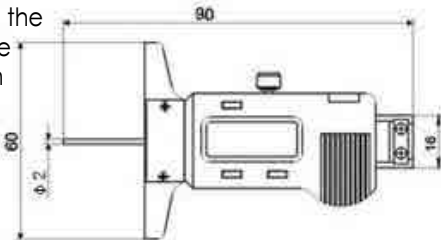
- Features:
- Bottom surface of the base is hardened, ground and lapped for high degree of flatness.
 - With interchangeable rods.

Model	MT-328501	MT-328502
Measuring Range	0–50mm	0–100mm
Graduation	0.01mm	0.01mm
Limit Error	±0.012mm	±0.012mm



MT-121002, Pocket Digital Tire Thread Depth Gauges

- Features:
- Thin and long rod, pointed contact, flat contact or spherical contact is available for different needs.
 - Used for checking the tread depth to see if the wear is still in the safety area.
 - Zero-setting at any position.



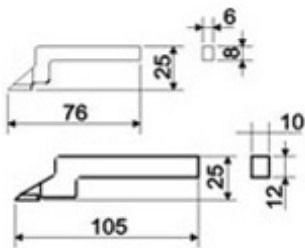
Model	MT-121002
Measuring Range	0–25mm
Resolution	0.01mm
Limit Error	±0.02mm



MT-1311XX

MT-1311XX, Digital Height Gauges

- Features:**
- Carbide-tipped scribe.
 - Can easily measure height of small workpieces.
 - With fine adjustment .
 - The base bottom is made of hardened stainless steel.
 - With data hold function and tolerance presetting functions.
 - With absolute and relative measurement functions.
 - With data output port.



Model	MT-131103	MT-131105	MT-131106	MT-131110
Measuring Range	0-300mm	0-500mm	0-600mm	0-1000mm
Resolution	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.04mm	±0.05mm	±0.06mm	±0.07mm



MT-13120X

MT-13120X, Single-Column Digital Height Gauge with Hand Wheel

- Features:**
- Carbide-tipped scribe.
 - Made of stainless steel, high rigid vertical column permits highly stable measurement.
 - Fine-adjustment carriage to feed slider finely.

Model	MT-131203	MT-131205	MT-131206
Measuring Range	0-300mm	0-500mm	0-600mm
Resolution	0.01mm	0.01mm	0.01mm
Limit Error	±0.04mm	±0.05mm	±0.06mm



MT-13210X

MT-13210X, Twin-Beam Digital Height Gauges

- Features:**
- Carbide-tipped scribe.
 - With fine adjustment .
 - The base bottom is made of hardened stainless steel.
 - With data hold function and tolerance presetting functions.
 - With absolute and relative measurement functions.
 - With data output port.

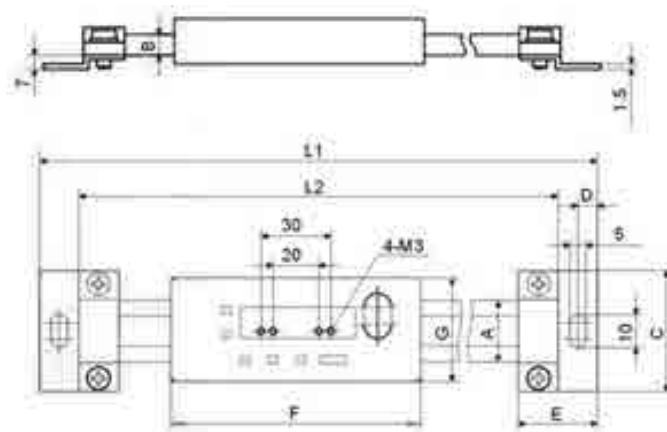
Model	MT-131203	MT-131205	MT-131206
Measuring Range	0-300mm	0-500mm	0-600mm
Resolution	0.01mm	0.01mm	0.01mm
Limit Error	±0.04mm	±0.05mm	±0.06mm

SCALE UNITS

MT-8121XX, Digital Scale Units (Horizontal Type)

Features:

- Designed to be installed on the machines and fixtures to measure the axial movement.
- Can be connected with large LCD display unit easy reading.
- Zero-setting at any position.
- Data output.



Model	MT-812100	MT-812101	MT-812102	MT-812103	MT-812104	MT-812105	MT-812106
Measuring Range	100mm	150mm	200mm	300mm	400mm	500mm	600mm
Resolution	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.02mm	±0.03mm	±0.03mm	±0.04mm	±0.05mm	±0.05mm	±0.08mm

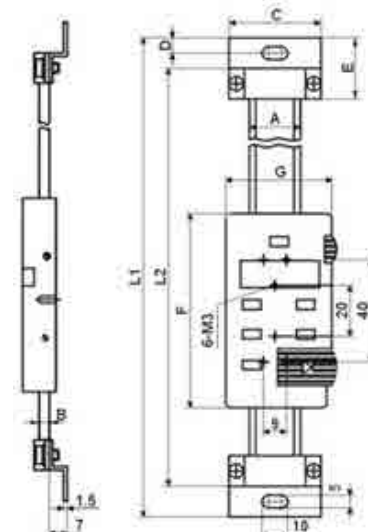
Model	MT-812107	MT-812108	MT-812109	MT-812110	MT-812112	MT-812115	MT-812120
Measuring Range	700mm	800mm	900mm	1000mm	1200mm	1500mm	2000mm
Resolution	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.08mm	±0.10mm	±0.10mm	±0.10mm	±0.12mm	±0.14mm	±0.20mm

MT-8122XX, Digital Scale Units (Vertical Type)



Features:

- Designed to be installed on the machines and fixtures to measure the axial movement.
- Can be connected with large LCD display unit easy reading.
- Zero-setting at any position.
- Data output.



Model	MT-812200	MT-812201	MT-812202	MT-812203	MT-812204	MT-812205	MT-812206
Measuring Range	100mm	150mm	200mm	300mm	400mm	500mm	600mm
Resolution	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.02mm	±0.03mm	±0.03mm	±0.04mm	±0.05mm	±0.05mm	±0.08mm

Model	MT-812207	MT-812208	MT-812209	MT-812210	MT-812212	MT-812215	MT-812220
Measuring Range	700mm	800mm	900mm	1000mm	1200mm	1500mm	2000mm
Resolution	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.08mm	±0.10mm	±0.10mm	±0.10mm	±0.12mm	±0.14mm	±0.20mm

Micrometers/Heads

MICROMETERS



MT-24200X/21200X, Mechanical/Digital Micrometer Heads

Features:

- Used on machine tools, fixtures, special gauges, tooling, and other equipment where micrometer accuracy in setting and adjustment is required.
- Carbide-tipped measuring faces (excluding spherical heads).
- Applied to accurate measuring of linear displacement on XY worktable.

Model	MT-242002	MT-242003	MT-242004	MT-242005	MT-242006	MT-242007
Measuring Range	0-5mm	0-6.5mm	0-13mm	0-15mm	0-25mm	0-50mm
Resolution	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.004mm	±0.004mm	±0.004mm	±0.004mm	±0.004mm	±0.005mm

Model	MT-212001	MT-212002
Measuring Range	0-25mm	0-50mm
Resolution	0.001mm	0.001mm
Limit Error	±0.003mm	±0.005mm



MT-24110X, Outside Micrometers

Features:

- Baked enamel frame.
- Carbide-tipped measuring faces.
- With ratchet stop and spindle lever lock.

Model	MT-241101	MT-241102	MT-241103	MT-241104
Measuring Range	0-25mm	25-50mm	50-75mm	75-100mm
Resolution	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.004mm	±0.004mm	±0.005mm	±0.005mm



MT-21110X, Electronic Digital Outside Micrometer

Features:

- Extra large LCD for easy reading, Resolution: 0.001mm.
- Carbide-tipped measuring faces.
- Manual power on/off.
- Zero setting at any position.

Model	MT-211101	MT-211102	MT-211103	MT-211104
Measuring Range	0-25mm	25-50mm	50-75mm	75-100mm
Resolution	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.003mm	±0.003mm	±0.004mm	±0.004mm

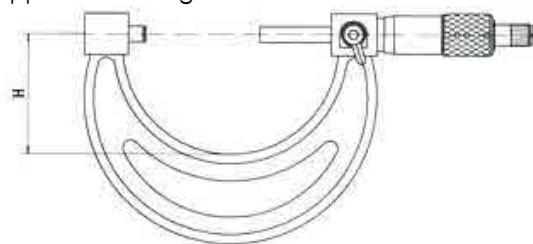
MICROMETERS



MT-24118X, Outside Micrometers

Features:

- Baked enamel frame.
- Carbide-tipped measuring faces.



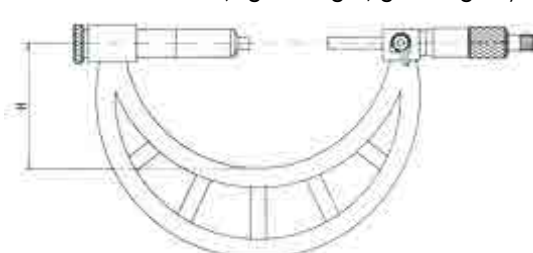
Model	MT-241181	MT-241182	MT-241183	MT-241184	MT-241185	MT-241186	MT-241187	MT-241188
Measuring Range	100-125mm	125-150mm	150-175mm	175-200mm	200-225mm	225-250mm	250-275mm	275-300mm
Reading	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.006mm	±0.006mm	±0.007mm	±0.007mm	±0.008mm	±0.008mm	±0.009mm	±0.009mm
H (mm)	73.5	86	98.5	111	123.5	136	148.5	161



MT-24119X, Outside Micrometers

Features:

- With interchangeable standard anvils.
- Wide measuring range, high accuracy.
- Carbide-tipped measuring faces.
- Baked enamel tubular frame, light weight, good rigidity.



Model	MT-241191	MT-241192	MT-241193	MT-241194	MT-241195	MT-241196	MT-241197
Measuring Range	300-400mm	400-500mm	500-600mm	600-700mm	700-800mm	800-900mm	900-1000mm
Reading	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.011mm	±0.013mm	±0.015mm	±0.016mm	±0.018mm	±0.020mm	±0.020mm
H (mm)	225	275	325	375	430	480	530



MT-2119XX, Digital Thread Micrometers

Features:

- Pointed anvil & spindle are ideal for measuring the wall thickness of drills, small grooves & other hard-to-reach dimensions.
- Carbide-tipped measuring faces.

Model	MT-211901	MT-211904	MT-211907	MT-211911
Measuring Range	0-25mm	25-50mm	50-75mm	75-100mm
Reading	0.001mm	0.001mm	0.001mm	0.001mm
Limit Error	±0.004mm	±0.004mm	±0.004mm	±0.005mm



MT-242101

MT-21210X/24210X, Spherical Micrometers**Features:**

- For measuring wall thickness of bearings, tubing, sleeves, rings, cylinders and from a hole an edge.

Mechanical Type:

Model	MT-242101	MT-242102	MT-242103	MT-242104	MT-242105	MT-242106	MT-242107
Measuring Range	0-25mm	25-50mm	50-75mm	75-100mm	100-125mm	125-150mm	150-175mm
Graduation	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.004mm	±0.004mm	±0.005mm	±0.005mm	±0.006mm	±0.006mm	±0.007mm

Digital Type:

Model	MT-212101	MT-212102	MT-212103	MT-212104	MT-212105	MT-212106	MT-212107
Measuring Range	0-25mm	25-50mm	50-75mm	75-100mm	100-125mm	125-150mm	150-175mm
Graduation	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.003mm	±0.003mm	±0.004mm	±0.004mm	±0.005mm	±0.005mm	±0.006mm



MT-211301

MT-21130X/24130X, Blade Micrometers**Features:**

- Non-rotating spindle, blade anvil and spindle.
- Typically used to measure groove diameter on shafts or other narrow recess.

Mechanical Type:

Model	MT-241301	MT-241302	MT-241303	MT-241304	MT-241305	MT-241306	MT-241307
Measuring Range	0-25mm	25-50mm	50-75mm	75-100mm	100-125mm	125-150mm	150-175mm
Graduation	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.004mm	±0.004mm	±0.005mm	±0.005mm	±0.006mm	±0.006mm	±0.007mm

Digital Type:

Model	MT-211301	MT-211302	MT-211303	MT-211304	MT-211305	MT-211306	MT-211307
Measuring Range	0-25mm	25-50mm	50-75mm	75-100mm	100-125mm	125-150mm	150-175mm
Graduation	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.003mm	±0.003mm	±0.004mm	±0.004mm	±0.005mm	±0.005mm	±0.006mm



MT-211401

MT-21140X/24140X, Deep Throat Micrometers**Features:**

- Deep throat frame for measuring thickness of sheet metal, paper and sheet plastic.
- Carbide-tipped measuring faces.

Mechanical Type:

Model	MT-241401	MT-241402	MT-241403	MT-241404	MT-241405	MT-241406
Measuring Range	0-25mm	0-25mm	0-25mm	25-50mm	25-50mm	25-50mm
Graduation	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.004mm	±0.004mm	±0.005mm	±0.004mm	±0.004mm	±0.005mm
Throat Depth	50mm	100mm	150mm	50mm	100mm	150mm

Digital Type:

Model	MT-211401	MT-211402	MT-211403	MT-211404	MT-211405	MT-211406
Measuring Range	0-25mm	0-25mm	0-25mm	25-50mm	25-50mm	25-50mm
Graduation	0.001mm	0.001mm	0.001mm	0.001mm	0.001mm	0.001mm
Limit Error	±0.003mm	±0.003mm	±0.004mm	±0.003mm	±0.003mm	±0.004mm
Throat Depth	50mm	100mm	150mm	50mm	100mm	150mm

MICROMETERS



MT-22110X

MT-22110X, Digital Depth Micrometers

Features:

- Wide measurements range.
- High precision measuring depth rod.

Model	MT-221101	MT-221102	MT-221104
Measuring Range	0-25mm	0-50mm	0-100mm
Reading	0.001mm	0.001mm	0.001mm
Limit Error	±0.003mm	±0.004mm	±0.005mm



MT-24310X

MT-24310X, Inside Micrometer (Single Rod)

Features:

- Carbide measuring faces.

Model	MT-243101	MT-243102	MT-243103	MT-243104	MT-243105	MT-243106	MT-243107	MT-243108
Measuring Range	50-75mm	75-100mm	100-125mm	125-150mm	150-175mm	175-200mm	200-225mm	225-250mm
Resolution	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm
Accuracy	±0.005mm	±0.005mm	±0.006mm	±0.006mm	±0.007mm	±0.007mm	±0.008mm	±0.008mm



MT-24313X

MT-24313X, Inside Micrometers

Features:

- The combining of extension rods provides a wide measuring range.
- Carbide-tipped measuring faces.
- Diameter of extension rods: Φ22mm.
- Supplied with a standard caliper gage for zero setting.

Model	MT-243131	MT-243132	MT-243133	MT-243134
Measuring Range	150-175mm	150-1400mm	150-2000mm	150-2100mm
Resolution	0.01mm	0.01mm	0.01mm	0.01mm
Extension Rods	Micrometer head	25mm, 50mm(2pcs.), 100mm, 200mm, 400mm(2pcs.)	25mm, 50mm(2pcs.), 100mm, 200mm(2pcs.), 400mm(3pcs.)	25mm, 50mm(2pcs.), 100mm(2pcs.), 200mm(2pcs.), 400mm(3pcs.)



MT-243201

MT-24320X/21320X, Inside Micrometers (Caliper Type)

Features:

- Ideal for measuring various inside dimensions.

Mechanical Type:

Model	MT-243201	MT-243202	MT-243203	MT-243204	MT-243205	MT-243206	MT-243207	MT-243208
Measuring Range	5-30mm	25-50mm	50-75mm	75-100mm	100-125mm	125-150mm	150-175mm	175-200mm
Graduation	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.005mm	±0.006mm	±0.007mm	±0.008mm	±0.009mm	±0.009mm	±0.010mm	±0.010mm

Digital Type:

Model	MT-213201	MT-213202	MT-213203	MT-213204	MT-213205	MT-213206	MT-213207	MT-213208
Measuring Range	5-30mm	25-50mm	50-75mm	75-100mm	100-125mm	125-150mm	150-175mm	175-200mm
Graduation	0.001mm	0.001mm	0.001mm	0.001mm	0.001mm	0.001mm	0.001mm	0.001mm
Limit Error	±0.005mm	±0.006mm	±0.007mm	±0.008mm	±0.009mm	±0.009mm	±0.010mm	±0.010mm

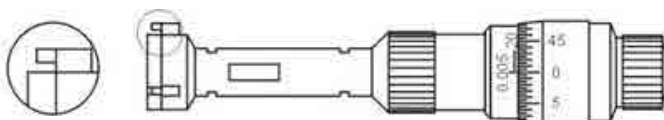


MT-2433XX

MT-2433XX, Three Point Internal Micrometers

Features:

- Carbide-tipped contact points and three lateral protruding fingers for highly wear- resistance.
- Measurement can be taken close to the bottom of a blind bore.
- With Ratchet Stop for constant force.
- With precision ring gauge for zero setting and re-setting.



Model	MT-243301	MT-243302	MT-243303	MT-243304	MT-243305
Measuring Range	6-8mm	8-10mm	10-12mm	12-16mm	16-20mm
Graduation	0.001mm	0.001mm	0.001mm	0.005mm	0.005mm
Limit Error	±0.004mm	±0.004mm	±0.004mm	±0.004mm	±0.004mm

Model	MT-243306	MT-243307	MT-243308	MT-243309	MT-243310
Measuring Range	20-25mm	25-30mm	30-40mm	40-50mm	50-63mm
Graduation	0.005mm	0.005mm	0.005mm	0.005mm	0.005mm
Limit Error	±0.004mm	±0.004mm	±0.004mm	±0.004mm	±0.004mm



MT-21330X

MT-21330X, Digital Three Point Internal Micrometers

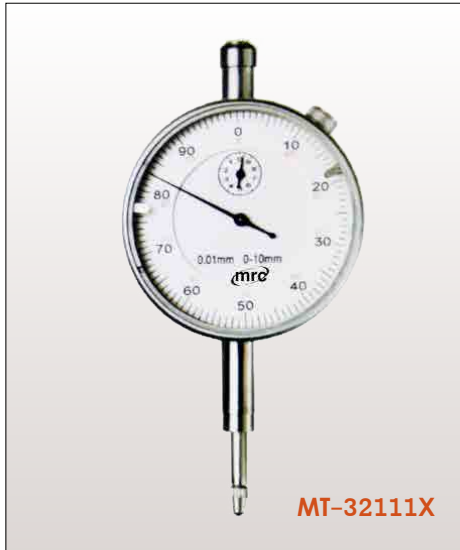
Features:

- Self-centering with 3 points, fit for accurate measurement of blind holes and through holes.
- Can measure deep holes by attaching an extension rod (optional).
- Carbide-tipped contact points.

Model	MT-213301	MT-213302	MT-213303
Measuring Range	6-8mm	8-10mm	10-12mm
Graduation	0.001mm	0.001mm	0.001mm
Limit Error	±0.004mm	±0.004mm	±0.004mm

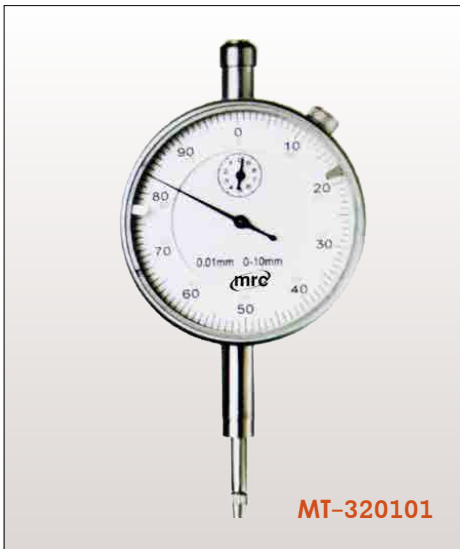
INDICATORS

Dial

**MT-32111X, Dial Indicators****Features:**

- The main moving components are made of stainless steel and have been heat treated, which have good performance in anti-rust and wear-resistance.
- With lock screw for locking the bezel.
- Shock-proof type uses jeweled bearing for good sensitiveness.
- Back cover with lug is optional.

Model	MT-321111	MT-321112	MT-321113
Measuring Range	0-3mm	0-10mm	0-30mm
Graduation	0.01mm	0.01mm	0.01mm
Limit Error	±0.014mm	±0.020mm	±0.030mm

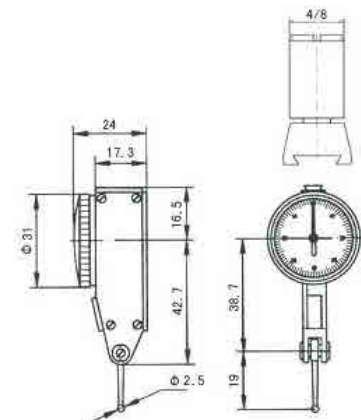
**MT-320101, Dial Micron Indicators****Features:**

- Used for more accurate measurement.
- To measure errors and relative position deviations of geometric shapes.
- With anti-dirt cap on the upper end of the measuring spindle.
- With tolerance indicator.
- With lock screw for locking the bezel.
- Back cover with lug is optional.

Model	MT-320101
Measuring Range	0-1mm
Graduation	0.001mm
Limit Error	±0.005mm

**MT-323201, Dial Test Indicators****Features:**

- Small and lightweight.
- Can easily and accurately measure the long-narrow or concave portions and the inside and outside diameters which are hard to reach.
- High sensitivity and quick response.
- Steel and ruby styli are optional.



Model	MT-323201
Measuring Range	0-0.8mm
Graduation	0.01mm
Limit Error	±0.013mm



MT-31210X

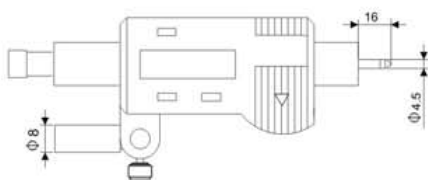
MT-31210X/31210X-D, Digital Indicators**Features:**

- Hand/auto power off
- Preplace started position value
- Direction switch
- mm/in conversion
- Absolute and relative measurement
- Set zero at any position.

Model: With flat back	MT-312101	MT-312102	MT-312103
Model: With lug back	MT-312101D	MT-312102D	MT-312103D
Measuring Range	0-12.7mm	0-25.4mm	0-50.8mm
Graduation	0.01mm	0.01mm	0.01mm
Limit Error	±0.02mm	±0.02mm	±0.04mm

MT-311XXX, Rectangle Digital Indicators

MT-311XXX

**Features:**

- Easy & convenient to clamp.
- Wide measuring range.
- Zero-setting at any position.
- Data output.

Model	MT-311101	MT-311102	MT-311103	MT-311104
Measuring Range	0-10mm	0-20mm	0-30mm	0-50mm
Resolution	0.01mm	0.01mm	0.01mm	0.01mm
Limit Error	±0.02mm	±0.03mm	±0.03mm	±0.04mm

Model	MT-311105	MT-311011	MT-311012	MT-311013
Measuring Range	0-100mm	0-10mm	0-25mm	0-50mm
Resolution	0.01mm	0.001mm	0.001mm	0.001mm
Limit Error	±0.05mm	±0.007mm	±0.009mm	±0.012mm

ANGLE/INCLINE**Inclinometers/Bevel Boxes****MT-451101****MT-451101A****MT-451101 Series, Inclinometers****Features:**

- 4x90° measurement.
- Widely used in angle measurement in auto industry, building industry and drilling machinery, etc.
- Display always reads upright, no matter which way the level is turned.
- Simple calibration requires no special fixtures.
- Versatile measuring tool, angle finder, protractor and level three in one.
- One 3V Cr2032 lithium battery.

Model	MT-451101 Series
Measuring Range	4x90° (0 ~ 360°)
Work temperature	+5°C ~ +40°C
Work humidity	≤85%RH
Resolution	0.1°
Accuracy	0.2°
Power	CR2032 3V lithium battery

**MT-451101W****MT-451101WM****MT-451101V****MT-451101M**

- MT-451101: Stainless steel measuring faces.
- MT-451101H: Stainless steel measuring faces with small screw thread bottom outlets holes in the bottom panel.
- MT-451101M: Stainless steel measuring faces with magnetic disks in bottom panel.
- MT-451101W: Stainless steel measuring faces with large measuring face in bottom panel.
- MT-451101WM: Stainless steel measuring faces with large and magnetic disks in the bottom panel.
- MT-451101VM: Stainless steel measuring faces with V-type measuring face in bottom panel.
- MT-451101A: Aluminum-alloy measuring faces with up and down large measuring base.
- MT-451101AM: Large Aluminum flame measuring faces with magnetic bottom panel.

**MT-451102****MT-451102M****MT-451102W****MT-451102WM****MT-451102 Series, Bevel Boxes****Features:**

- Large LCD display for easy reading.
- Small size, light weight, easy to carry and operate.
- With magnetic disks in the bottom measuring face, it can be stuck to the workpiece to be measured.

Model	MT-451102 Series
Measuring Range	±180.00°
Resolution	0.1°
Repeatability	0.2°
Water Proof	IP54
Power	3V CR2032 Lithium battery
Working current	<100μA
Dimension	2"x2"x1.3"
Measuring plane containing disk magnet can stick to the surface to be measured	

- MT-451102: Bevel Box (Plastic frame house).
- MT-451102W: Bevel Box (Plastic frame house with bubble).
- MT-451102M: Bevel Box (Metal frame house).
- MT-451102WM: Bevel Box (Metal frame house with bubble).

ANGLE/INCLINE Inclinometers/Bevel Boxes

MT-431112, Angle Gauge

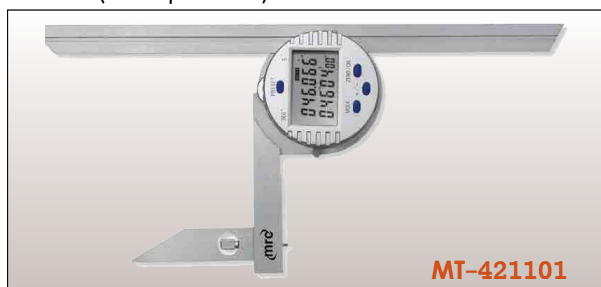


Model	MT-431112
Measuring Range	360°
Working Current	<80μA
Work temperature	+5°C~+45°C
Work humidity	<85%RH
Resolution	0.05°/3'
Accuracy	0.2°
Length	254mm
Water Proof	IP54
Power/Battery Life	3V CR2032 Lithium battery/ more than 2000 hours

- Easy to measure all kinds of angles and draw lines.
- Absolute and relative conversion.
- Display always reads upright, no matter which way is turned.
- Easy calibration and zero setting.
- Analogue quadrant showing for easy reading.
- High accurate level bubble for measuring horizontal and vertical levels easily.
- Type MT-431112 can lock the movable blade at any angle.

MT-421101, Digital Universal Bevel Protractor

- With presetting function.
- Removable blade.
- Blades can be rotated to the desired angle.
- Three modes of measurement : 1×360°, 2×180° and 4×90° (four-quadrant).



Model	MT-421101
Measuring Range	0-360°
Resolution	30"
Accuracy	± 5'
Material	Stainless steel throughout
The blade	0.05°/3'
Accuracy	150mm, 200mm, 300mm
Contact force	1.5N or less
Operating temp.	0-40°C
Power/Battery Life	3V LR2032/approx. 1 years



MT-423101, Universal Bevel Protractors

Features:

- Made of stainless steel, by perfect heat treatment and surface treatment, this Universal Bevel Protractors are featured in high accuracy, long working life, rust resistant, easy to use and wide use, etc..
- Used for measuring inside and outside angles in machining.

Model	MT-423101
Measuring Range	0-320°
Reading Value	2'
Limit Error	±2'

MT-423111, Universal Bevel Protractors with Fine Adjustment



- Made of stainless steel, by perfect heat treatment and surface treatment, this Universal Bevel Protractors are featured in high accuracy, long working life, rust resistant, easy to use and wide use, etc..
- Used for measuring inside and outside angles in machining.

Model	MT-423111
Measuring Range	0-360°
Reading Value	5'
Limit Error	±5'



MT-723101/723102/723104, Magnetic Stands

Features:

- Widely used in the manufacturing industry.
- Used for clamping dial indicators, micron dial indicators and dial test indicators, etc. It can scribe on workpiece if it's attached with a scriber.
- Can be adjusted to any angle needed. It's an ideal checking device.
- This strong stand is with ON/OFF switch.



- MT-723101: Magnetic Stand with Fine Adjustment.
- MT-723102: Universal Mechanical Arm Magnetic Stand.
- MT-723104: Flexible Stem Magnetic Stand.

Model	MT-723101/723102/723104
Magnetic force	60kg/588N



MT-723111/723112, Micrometer Stands

Features:

- This micrometer stands is specially designed for clamping micrometers and other measuring tools.
- MT-723111: Conventional type.
- MT-723112: Adjustable type.

MT-723112



MT-74111X, Granit Measuring Stands

Features:

- This granite measuring stand is specially designed for clamping dial indicators and other measuring tools.

Model	MT-741111	MT-741112	MT-741113
Measuring Range	0-100mm	0-200mm	0-250mm
Flatness	0.002mm	0.002mm	0.002mm
Size (LxWxH)mm	150x100x40	200x150x50	300x200x50

ACCESSORIES

Plates/Gauges/Interfaces



MT-5211XX

MT-5211XX, Granite Inspection Surface Plate

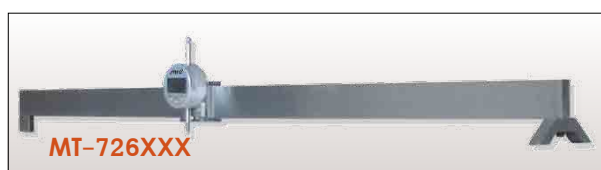
Features:

- With high hardness, stable function, long working life.
- Less susceptible to corrosion, non-distorted, minimal changes in dimension due to temperature changes.
- No burrs or protrusions can form on its surface. Its flatness remains high even though it has been used for a long time. It causes no damage to work pieces or instruments.

Model	MT-521101	MT-521102	MT-521103	MT-521103-1	MT-521104	MT-521104-1	MT-521104-2	MT-521105
Size (mm)	150x100x40	160x160x50	250x160x50	250x250x50	300x200x50	300x200x80	300x300x70	350x300x100
Grade 00 precision (μm)	2.5	2.5	3	3	3	3	3	3
Grade 0 precision (μm)	5	5	5.5	5.5	5.5	6	6	6

Model	MT-521106	MT-521106-1	MT-521107	MT-521107-1	MT-521108	MT-521110	MT-521110-1	MT-521110-2
Size (mm)	400x250x70	400x400x100	630x400x100	630x630x100	800x500x130	1000x630x150	1000x750x150	1000x1000x150
Grade 00 precision (μm)	3	3.5	3.5	4	4	4.5	5	5
Grade 0 precision (μm)	6	6.5	7	8	8	9	9	10

Model	MT-521116	MT-521120	MT-521116-1	MT-521120-1	MT-521125	MT-521130	MT-521140	MT-521160
Size (mm)	1600x1000x200	2000x1000x250	1600x1600x300	2000x1600x300	2500x1600x300	3000x2000x500	4000x2000x500	6000x2000x700
Grade 00 precision (μm)	6	6.5	6.5	7	8	9	11	15
Grade 0 precision (μm)	12	13	14	15	16	18	22	30



MT-726XXX

MT-726XXX, Strightness Gauges

Features:

- Used for measuring the flatness and straightness of the workpieces.
- Direct reading without using any feeler gauges.

Model	MT-726106	MT-726108	MT-726110	MT-726112	MT-726115
Measuring Range	600mm	800mm	1000mm	1200mm	1500mm
Resolution	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm

Model	MT-726006	MT-726008	MT-726010	MT-726012	MT-726015
Measuring Range	600mm	800mm	1000mm	1200mm	1500mm
Resolution	0.001mm	0.001mm	0.001mm	0.001mm	0.001mm

MT-71120X, Computer Interfaces

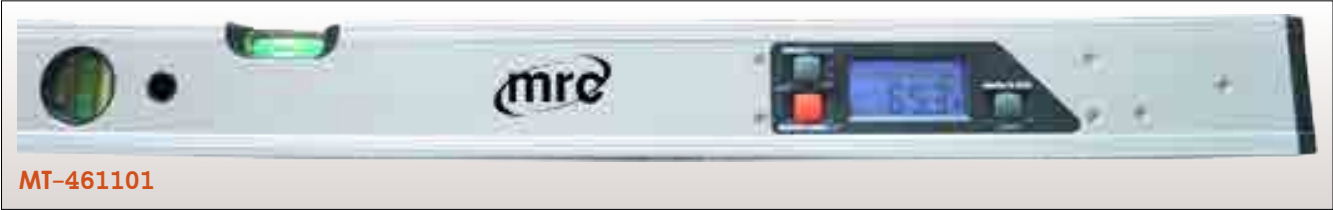
Features:

- Special connecting cable for electronic digital measuring tools, used to connect the tools with computers.
- Interface Protocol: 9600 bps, 1 start bit, 8 data bits, 1 stop bit, no parity bit.
- Transferred with ASCII code data format . Press the Enter key to end a measured value. Transfers are done continuously and initiatively.



LEVELS

MT-461101, Digital Levels



Features:

- 4×90° measurement.
- Widely used in angle measurement in auto industry, building industry and drilling machinery, etc.
- Display always reads upright, no matter which way the level is turned.
- Simple calibration requires no special fixtures.
- Versatile measuring tool, angle finder, protractor and level three in one.
- One 3V Cr2032 lithium battery.

Model	MT-461101
Measuring Range	4×90° (0 ~ 360°)
Work temperature	+5°C ~ +40°C
Work humidity	≤85%RH
Resolution	0.1°
Accuracy	0.2°
Power	CR2032 3V lithium battery

MRC.4.14

BATHS

SHAKERS

STIRRERS

HOTPLATES

INCUBATORS

HEATING
MANTLES

INCUBATORS

INCUBATORS

DFI Series, 36 Liter, 80 Liter, 150 Liter, 240 Liter Incubators



DFI-36

DFI-80

DFI-150

DFI-240

Incubator With Forced Convection

Premium equipment for all gentle incubation applications, including processing large numbers of samples at high throughput. Outstanding dynamics keep the required temperature virtually stable with homogenous distribution, irrespective of how many times the door is opened. The modern range of incubators is available in 4 sizes. DFI Series offers excellent uniformity and stability & are used for many applications as incubation of culture test, drying slides, microbiological incubation, bacteriological test and more. The inner case is constructed from polished stainless steel. Internal glass door for incubator. All units are provided with wire plated shelves with multi position settings. All models are with fans assisted air circulation. The chamber ventilation and exhaust vent are easily adjustable. Wide choice of control options is available. PID controller is fitted as standard with dual display of measured value and setpoint.

Options:

- 38mm cable port
- Gas inlet
- 5 programs of 8 segments model: 3216CP
- 4 programs of 16 segments model: 2416P4
- RS-232/485 communication model: 3216E
- Datalogger



DFI-36

Model	DFI-36	DFI-80	DFI-150	DFI-240
Temp. range	Room temperature ~ 80°C			
Temp. constancy	±0.1°C			
Temp. uniformity	±2% at 37°C			
Temp. control	PID			
Temp. sensor	Thermocouple K			
Heater: Incubator	400W	400W	600W	800W
Inside Material	S.S -430			
Timer	99hr 59min			
Safety devices	Short circuit breaker, over heat protector, sensor abnormality			
Inside dimensions (mm)	W400xD300xH300	W500xD400xH400	W600xD500xH500	W600xD500xH800
Outside dimensions (mm)	W525xD420xH595	W620xD520xH620	W720xD620xH720	W720xD620xH1020
Volume (Liters)	36	80	150	240
Shelves	2	2	2	3
Weight	34kg	47kg	60kg	76kg

COOLED INCUBATORS



- Automatic high and low temperature alarm to prevent the temperature from going too high and dropping too low
- Built-in circulating fan for temperature stability
- Illumination and Timer can be installed if required
- The compressor will be delayed to start working if power cut & with timer for defrost.
- Using environmental protection cold-media R134a
- Internal Power socket.

BOD-80/150

The MRC model BOD-80/150/175x2

cooled incubator designed to obtain freezing, incubating, drying & test temperatures between 0°C and +70°C (or -10°C and +60°C). It has stainless steel chamber and two doors, when the outer metallic door is opened there is inner glass door. Very good uniformity is achieved by forced air circulation. A PID temperature controller provides constant and accurate temperature. Inside power socket enable the use of the shaker rotator or other instrument inside. Cable port with cup is available upon request.

The MRC model BOD-400/550/590

is ideal for BIOCHEMICAL OXYGEN DEMAND of sewage and waste water. Other applications includes fermentation studies, drug stability tests. Excellent temperature uniformity is obtained by forced air circulation. A PID microprocessor temperature controller provide accurate and constant temperature. Dual display of setpoint and chamber temperature. Hermetically sealed compressor and automatic defrost.

Options: 38mm cable port • Gas inlet • Day/Night Light+Timer

Model	BOD-590	BOD-550	BOD-400	BOD-150	BOD-175 Dual	BOD-80
Temp. range	0°C~70°C (or -10°C to 60°C)					
Temp. Accuracy	±0.1°C					
Temp. control	PID					
Temp. Display	LED digital display actual and setting temperature					
Temp. Sensor	PT-100Ω					
Heater	900W	1200W	1200W	900W	900W x 2	900W
Volume	590L	550L	400L	150L	175L x 2	80L
Shelf (Adjustable)	4	4	4	2	2	2
Inside Material	Strengthen white porcelain	SUS 304				
Refrigerator	1/3HP			1/4HP		
Inside dimensions WxDxH(mm)	680x600x1450	680x580x1400	600x500x1350	600x500x500	700x500x500	500x400x400
Outside dimensions WxDxH(mm)	815x800x1940	760x820x1860	670x740x1820	680x700x825	780x690x1720	560x550x670
Weight	90Kg	90Kg	90Kg	78Kg	150Kg	50Kg

HYBRIDIZATION INCUBATORS



HD-801D

Features:

- Requires less probe to produce consistent films with sharp bands.
- Forced air convection provides excellent temperature uniformity.
- Compact design saves bench space.
- Broad temperature range from ambient +5°C to 80°C.
- Precise microprocessor-based PID temperature control from 5°C above ambient to 70°C in 0.1°C increments.
- Forced air circulation maintains temperature uniformity of $\pm 0.5^\circ\text{C}$.
- Variable speed models provide consistent speed even at low rpms for uniform distribution of solutions and complete wetting of membrane.

HD-Series, Hybridization Incubator

The MRC hybridization incubators offers high performance with precise temperature control, safety and convenience. It is small and space saving incubator.

The bottle carousel is easily removable for easy cleaning of the chamber. The bottle carousel accept up to eight bottles (300mm). Very homogeneous temperature distribution in the chamber is obtained by air forced ventilation. This airflow system also ensures fast recovery of chamber temperature after door opening. A PID temperature controller provide constant & no temperature overshoot. Dual display of actual chamber temperature & set point temp.

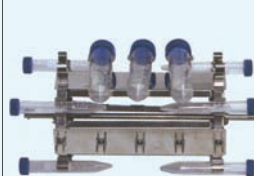
Tempered glass viewing window provides clear chamber visibility without opening the door. Simple operation of speed by means of rotary switch & the speed display is by analog tachometer.

Applications:

- Northern (RNA) blot hybridizations
- Southern (DNA) blot hybridizations
- Western (Protein) blot hybridizations.



HD-800D



HD-AC-H



HD-AC-1.5



HD-AC-15

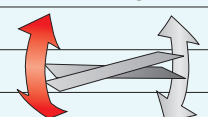


HD-AC-50



AC-210-96

Model	HD-800D	HD-801RD	HD-801DS	HD-801RK
Shaking	Rotation+orbital	Rotation	orbital	Rocking
Temp. range	Ambient +5°C~80°C			
Temp. Accuracy	$\pm 0.1^\circ\text{C}$			
Temp. control	PID			
Temp. Display	LED			
Rotor Speed	6 ~ 50rpm		-	-
Rotor Capacity	8 pcs (Max)	Supplied 8 pcs (Max)	-	-
Shaker Speed	10 ~ 100rpm	-	20 ~ 200rpm	6 ~ 60rpm
Shaking Width	25mm	-	-	-
Shaker Capacity	Carry 6 kg			
Timer	999 h / 999 min / 999 sec			
Shaking Plate (mm)	310 x 210			
Inside dimensions WxDxH(mm)	350x250x425		350x255x250	
Outside dimensions WxDxH(mm)	440x375x660		440x375x410	
Weight	33kg		23kg	

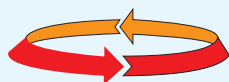


BENCHTOP SHAKER INCUBATORS

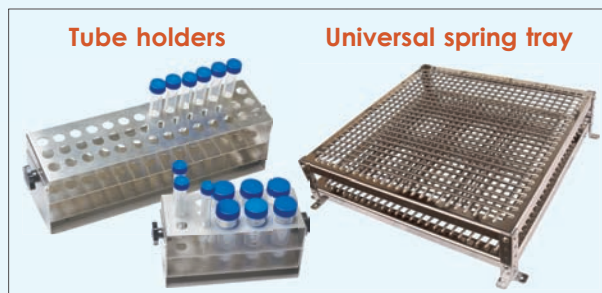


TOU-50N

- Automatic stop of shaking, when the door is opened
- Accommodate flasks up to 2000ml
- Universal spring rack for various shapes/sizes of flasks is available (optional).



Optional: Universal spring tray



Tube holders

Universal spring tray

LOM-65/TOU-50N/TOU-120N, Orbital Shaking Incubator, BenchTop

Applications

- Areas of application: cultivation of cell & tissue cultures or micro organisms. molecular biology, cell and insect culture, and entomology studies.
- Production of secondary natural substances and biogenetic pharmaceuticals etc.

Features:

- Space saving with transparent window in the front which provide good visibility that minimize the need to open the chamber, automatic cutout of shaker when lid is open to protect operator.
- Platform 300 x 400 mm or 450 x 450mm accept flasks up to 2 Liter, test tubes racks and gel trays.
- Shakers feature a triple eccentric drive that handles heavy workloads, provides uniform agitation & enables continuous 24-hour operation even at high speeds.
- Precisely monitor and control chamber temperature over complete range with $\pm 0.1^\circ\text{C}$ accuracy at 37°C with PID temperature controller
- DC motor & variable speed control from 40 to 400rpm, controlled by a rotary dial
- Integrated tachometer monitors & displays speed in rpm to guarantee an accurate setting
- Easy-to-read digital display shows temperature
- Advanced shaking mechanism provides quiet shaking & precise speed control
- Min. noise & no vibration



TOU-50N - Top opening

LOM-65 - Front opening with one standing shelf

Model	TOU-50N	TOU-120N	LOM-65
Type	Flip-up door		Upright
Temp. range	Ambient + 5°C ~ 70°C		
Temp. Accuracy	$\pm 0.1^\circ\text{C}$		
Temp. control	PID		
Temp. Display	LED		
Shaker Speed	20~250 rpm (optional 400 rpm)		
Shaking width	25 mm		
Timer	999h / 999min / 999sec		
Volume	66L	102L	65L
Shelve	N/A	N/A	1
Shaking Plate Size (mm)	400x300	450x450	400x300
Inside dimensions (mm)	W455xD390xH380	W500xD540xH380	W450xD390xH370
Outside dimensions (mm)	W460xD510xH540	W510xD650xH540	W520xD550xH610
Weight (Approx.)	30Kg	40Kg	50Kg

Capacity of flask holders

Model	111-1-110050	111-1-110125	111-1-110250	111-1-110500	111-1-111000	111-1-112000
Flask clamps	50ml	125ml	250ml	500ml	1000ml	2000ml
TOU-50N	35	20	12	6	4	2
TOU-120N	64	36	25	16	9	5
LOM-65	35	20	12	6	4	2

COOLED SHAKER INCUBATORS



LOM-150

Optional: Tube Holders

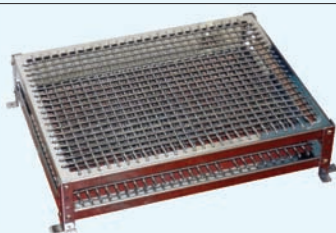


FLASK HOLDERS



Universal platform for LOM-150

111-1-111143



LOM-150-Series, 150Liter Shaking Incubator, Orbital Motion

This multipurpose model can shake, incubate & refrigerate. The 480x380mm platform accepts flasks up to 6 Liter. Large viewing window & internal light provide clear chamber visibility, with moveable window blind.

One stationary shelf for incubating added samples with a front opening door, the LOM-570 can be used on the bench or on the floor, wide temp. range 0°C to 60°C.

Model LOM-150D: two stage shaker enable to shake two platform simultaneously.

Useful for biological culture under various temperature.

- Useful for biological culture under various temp.
- Inside material is SUS304 & outside body is powder painting
- Screen-touch panel
- The compressor will be delayed to start working if power cut and with timer for defrost.
- With safety switch to stop shaking when opening door
- Three-point bearing transmission is adopted suitable for heavy loads and continuous duty.
- Minimum noise, no vibration.
- Refrigeration using non cfc gas R134A
- Optional day/night light with timer.
- Transparent glass observation window & internal light.
- Provide clear visibility without opening the door.
- Uses brush less AC motor for long durability and stable performance of the shaking system.
- Overheat and over low protector, built-in circulating fan for temperature stability.
- Optional: Day/night light+timer.



Double Platform, LOM-150D

Model	LOM-150	LOM-150D
System	Forced air circulation	
Shaking system	Orbital	
Shaking platform	Single	Double
Temp. range	0°C~70°C	
Temp. constancy	±0.1°C	
Temp. uniformity	±1°C (at 37)	
Temp. control/display	PID/LED	
Temp. sensor	PT-100Ω	
Inside material	SUS-304	
Rate of shaking	20~300 rpm (option 400 rpm)	20~150 rpm
Shaking width	25 mm	
Shaking plate	W480xD380	W480xD380 Double platform
Refrigerator	1/4 HP	
Heater: Incubator	900W	
Safety devices	Short circuit breaker, over heat protector, refrigerator over load protector, sensor abnormality, over low protector	
Inside dimensions (mm)	W600xD500xH500	
Outside dimensions (mm)	W680xD690xH860	
Volume (Liter)	150	
Shelves	1 (Adjustable)	N/A
Power supply	110/220V, (8.5A)	
Weight	98Kg	100Kg

Capacity for flasks holders:

Model	111-1-110125	111-1-110250	111-1-110500	111-1-111000	111-1-112000	111-1-113000	111-1-114000	111-1-115000
Flask clamps	125ml	250ml	500ml	1000ml	2000ml	3Liter	4Liter	5Liter
LOM-150	30	20	12	6	5	4	2	1
LOM-150D	30x2 set	20x2 set	12x2 set	-	-	-	-	-

DUAL SHAKER INCUBATORS



LOM-175-Dual

LOM-175-Dual/LOM-175D-Dual, Orbital Dual Shaking Incubator

Features:

- Useful for biological culture under various temp.
- Inside material is SUS304 & outside body is powder painting
- Screen-touch panel
- The compressor will be delayed to start working if power cut and with timer for defrost.
- With safety switch to stop shaking when opening door
- Three-point bearing transmission is adopted suitable for heavy loads and continuous duty.
- Minimum noise, no vibration.
- Refrigeration using non cfc gas R134A
- Optional day/night light with timer.
- Transparent glass observation window & internal light.
- Provide clear visibility without opening the door.
- Uses brush less AC motor for long durability and stable performance of the shaking system.
- Overheat and over low protector, built-in circulating fan for temperature stability.

Optional: Tube Holders



FLASK HOLDERS



Model	LOM-175-Dual	LOM-175D-Dual
Platform	Single	Double
Temp. range	0°C~70°C	
Temp. Accuracy	±0.1°C	
Temp. control	PID	
Temp. Display	LED 2-screen digital display actual and setting temperature	
Shaker Speed	20~250 rpm (option 400 rpm)	20~150 rpm
Shaking width	25 mm	
Timer	999h / 999min / 999sec	
Heater	900 W each chamber	
Refrigerator	1/4HP	
Volume	Each chamber 175L	
Shaking Plate Size (mm)	640x440	
Inside dimensions (mm)	W700xD500xH500	
Outside dimensions (mm)	W780xD690xH1720	
Shelf (Adjustable)	1	N/A
Weight (Approx.)	170Kg	180Kg

Capacity of flask holders

Model	111-1-110125	111-1-110250	111-1-110500	111-1-111000	111-1-112000	111-1-113000	111-1-114000	111-1-115000
Flask clamps	125ml	250ml	500ml	1000ml	2000ml	3Liter	4Liter	5Liter
LOM-175-Dual	40	28	20	12	6	6	2	2
LOM-175D-Dual	40x4 set	28x4 set	20x4 set	-	-	-	-	-

SHAKER INCUBATORS



LOM-300

LOM-300, Orbital Shaking Incubator, Double Door

Features:

- Useful for biological culture under various temp.
- Inside material is SUS304 & outside body is powder painting
- Screen-touch panel
- The compressor will be delayed to start working if power cut and with timer for defrost.
- With safety switch to stop shaking when opening door
- Three-point bearing transmission is adopted suitable for heavy loads and continuous duty.
- Minimum noise, no vibration.
- Refrigeration using non cfc gas R134A
- Optional day/night light with timer.
- Transparent glass observation window & internal light.
- Provide clear visibility without opening the door.
- Uses brush less AC motor for long durability and stable performance of the shaking system.
- Overheat and over low protector, built-in circulating fan for temperature stability.

Optional: Tube Holders



Optional: Universal spring tray for LOM-300



FLASK HOLDERS

Model	LOM-300
Temp. range	0°C~70°C
Temp. Accuracy	±0.1°C
Temp. control	PID
Temp. Display	LED
Shaker Speed	20~250 rpm (option 400 rpm)
Shaking width	50 mm
Timer	999h / 999min / 999sec
Illumination	Fluorescent lamp 20 W
Heater	1200 W
Refrigerator	1/3HP
Volume	300L
Shaking Plate Size (mm)	900x500
Inside dimensions (mm)	W1000xD600xH500
Outside dimensions (mm)	W1380xD690xH890
Shelf (Adjustable)	1
Weight (Approx.)	280Kg

Capacity of flask holders

Model	111-1-110125	111-1-110250	111-1-110500	111-1-111000	111-1-112000	111-1-113000	111-1-114000	111-1-115000
Flask clamps	125ml	250ml	500ml	1000ml	2000ml	3Liter	4Liter	5Liter
LOM-300	66	50	32	18	10	10	3	3

LARGE SHAKER INCUBATORS

LOM-560/LOM-834, Orbital Shaking Incubator, Large Vertical Type



LOM-834D

Features:

- Useful for biological culture under various temperature.
- Inside material is SUS304 & outside body is powder painting
- Screen-touch panel
- The compressor will be delayed to start working if power cut and with timer for defrost.
- With safety switch to stop shaking when opening door
- Three-point bearing transmission is adopted suitable for heavy loads and continuous duty.
- Minimum noise, no vibration.
- Refrigeration using non cfc gas R134A
- Optional day/night light with timer.
- Transparent glass observation window & internal light.
- Provide clear visibility without opening the door.
- Uses brush less AC motor for long durability and stable performance of the shaking system.
- Overheat and over low protector, built-in circulating fan for temperature stability.



LOM-560D

FLASK HOLDERS



Model	LOM-560	LOM-560D	LOM-834	LOM-834D
Shaking platform	Single	Double	Single	Double
Temp. range	0°C~70°C			
Temp. Accuracy	±0.1°C			
Temp. control	Micro-computer PID temperature controller			
Temp. Display	LED 2-screen digital display actual and setting temperature			
Shaker Speed	20~250 rpm	20~150 rpm	20~250 rpm	20~150 rpm
Shaking width	50 mm			
Timer	999h / 999min / 999sec			
Heater	1600 W			
Illumination	Fluorescent lamp 20 W			
Shelf (Adjustable)	2	1	2	1
Refrigerator	1/3HP		1/2HP	
Volume	560L		834L	
Shaking Plate Size (mm)	740x480		960x600	
Inside dimensions (mm)	W860xD600xH1100		W1100xD690xH1100	
Outside dimensions (mm)	W940xD800xH1840		W1190xD920xH1840	
Weight (Approx.)	280Kg		300Kg	

Capacity of flask holders

Model	111-1-110125	111-1-110250	111-1-110500	111-1-111000	111-1-112000	111-1-113000	111-1-114000	111-1-115000
Flask clamps	125ml	250ml	500ml	1000ml	2000ml	3Liter	4Liter	5Liter
LOM-560	48	40	24	12	9	6	6	4
LOM-560D	96	60	40	24	-	-	-	-
LOM-834	78	50	36	18	10	10	8	8
LOM-834D	156	100	72	36	-	-	-	-

LARGE SHAKER INCUBATORS

LOM-200N/400N, Precise Shaking Incubator, Top Door, Orbital Motion With Digital PID Control Up To 70°C



LOM-400N

Optional: Tube Holders



FLASK HOLDERS



Features:

- Useful for biological culture under various temp.
- Inside material is SUS304 & outside body is powder painting
- Screen-touch panel
- The compressor will be delayed to start working if power cut and with timer for defrost.
- With safety switch to stop shaking when opening door
- Three-point bearing transmission is adopted suitable for heavy loads and continuous duty.
- Minimum noise, no vibration.
- Refrigeration using non cfc gas R134A
- Optional day/night light with timer.
- Transparent glass observation window & internal light.
- Provide clear visibility without opening the door.
- Uses brush less AC motor for long durability and stable performance of the shaking system.
- Overheat and over low protector, built-in circulating fan for temperature stability.



LOM-200N

Model	LOM-200N	LOM-400N
System	Forced air circulation	
Shaking system	Orbital	
Temp. range	0°C~70°C	
Temp. constancy	±0.1°C	
Temp. uniformity	±1°C (at 37)	
Temp. control / display	PID / LED	
Temp. sensor	PT-100	
Inside material	SUS-304	
Rate of shaking	20~250rpm	
Shaking width	50 mm	
Shaking plate (mm)	W600xD480mm	W960xD600mm
Refrigerator	1/4 HP	1/3 HP
Heater: Incubator	1200W	
Safety devices	Short circuit breaker, over heat protector, refrigerator over load protector, sensor abnormality, over low protector	
Inside dimensions	W680xD560xH540mm	W1040xD680xH540mm
Outside dimensions	W1010xD640xH870mm	W1370xD760xH870mm
Volume (Liters)	205	381
Power supply	110/220V, 50/60Hz, (8.5A)	
Weight	200Kg	300Kg

Capacity of flask holders

Model	111-1-110125	111-1-110250	111-1-110500	111-1-111000	111-1-112000	111-1-113000	111-1-114000	111-1-115000
Flask clamps	125ml	250ml	500ml	1000ml	2000ml	3Liter	4Liter	5Liter
LOM-200N	48	30	20	12	9	6	6	4
LOM-400N	96	60	40	24	15	15	12	8

GROWTH INCUBATORS



PGI-550RH

PGI-550R/PGI-550RH, Plant Growth Incubator 550 Liter

- Customized design
- Apply to microorganism Lab / Cell culture / Biotechnology experiments / Analytical Lab / Food Science and Technology / Agricultural Lab / The Fisheries Laboratory / Gardening / Plant Research / Seeds.

Illuminated growth chamber controllers, allow setting of two temp. conditions day & night & an On/Off illumination cycle relative to the program selected. Timers can be set to adjust cycles from 10 minutes up to 24 hours.

Each system operates independently allowing for simulation of a diurnal cycle, such as an eight hour day cycle of 30°C with light followed by a sixteen hour night cycle of 18°C without light.

Forced air circulation ensures the most reproducible test conditions. The chamber air is gently & continuously circulated at a rate that ensures temp. uniformity of all test samples. The unit is equipped with a hermetically-sealed compressor & an independent over temp. safety controller. It also includes a circuit breaker to protect from electrical overload, 5 shelves, adjustable leveling feet, steel exterior with welded seams & corners, & double-coated, baked enamel finish.

MRC Diurnal growth chambers are designed for studies requiring day and night time simulation.



Internal

Model	PGI-550R	PGI-550RH
Temperature Range	0°C ~ 60°C	
Temperature Control	PID temperature controller, PV actual value and SV setting value displayed at the same time	
Temperature Precision	±0.1°C	
Touch Setting	Power, cooling temperature, humidity, illumination timer device	
Safety Device	overheat and over low cut off device. 2-stage protection with safety protection alarm and indicator, compressor delay-start, high and low pressure of cold media protection device	
Heater	1200 W SUS 304#	
Refrigerator	1/3 HP R134a	
Humidity Display	-	PID temperature controller, PV actual value and SV setting value displayed at the same time
Humidity Control	-	30% RH ~ 95% RH
Control Precision	-	± 3%
Humidity Display	-	Digital
Humidity Device	-	Ultrasonic wave stainless steel (Back-mounted)
Illumination	4000-8000 LUX	
Timer	24H Temperature and light control	
Shelf / Inner Chamber	5 psc / SUS 304# stainless steel	
Inside Dimension (WxDxH)	680 x 580 x 1400 mm (Approx 550 L)	
Outside Dimension (WxDxH)	760 x 820 x 1870 mm	
Volume	550 L	
Power Voltage	110V/220V14A/7A	110V/220V16A/8A
Weight	150 kg	180 kg

GROWTH INCUBATORS



PGI-2660

- Animals, plant cell culture
- Insect
- Plant culture
- Tissue culture
- Domestication treatment
- Algae culture
- Pathology observation
- Biochemical experiment.



Model	PGI-2460/ PGI-2460H	PGI-2660/ PGI-2660H
Temperature range	0°C ~ 45°C	
Temperature control	Micro-computer PID temperature controller, PV actual value and SV setting value displayed at the same time, with independent day/night temperature	
Control Precision	±0.02°C dpi 0.1°C	
Touch Setting	Power, cooling, temperature, humidity, light, timer, all using touch setting	
Safety Device	Electronic LCD display, precision setting 0.1°C, overheat and over low cut off device. 2-stage protection with safety protection alarm and indicator, compressor delay-start, high and low pressure of cold media protection device	
Heater / Cooler	1KW SUS 304# / 7000 BTU	1.5KW SUS 304# / 12000 BTU
Humidity Control	Micro-computer PID temperature controller, PV actual value and SV setting value displayed at the same time	
Humidity Range	30% RH ~ 90% RH	
Control Precision	±0.02% dpi: 0.1%RH / ±3% RH	
Display / Safety Device	Digital display/Electronic setting precision 0.1%RH, with high or low humidity alarm	
Humidifier	Ultrasonic wave stainless steel humidifier	
Illumination Device	4-sides glasses heat insulation illumination: 0-30000LUX for choose, independent light control	
Timer Device	24h temperature and light control	
Shelf / Material	5pcs	10pcs
Inside Dimension (WxDxH)	620 x 620 x 1300 mm	1200 x 690 x 1300 mm
Outside Dimension (WxDxH)	910 x 930 x 2070 mm	1490 x 1000 x 2070 mm
Weight	500 L	1076 L
Power Voltage	220V 50/60Hz	



BATHS

SHAKERS

STIRRERS

HOTPLATES

INCUBATORS

HEATING
MANTLES



HOTPLATES

ALUMINIUM TOP HOTPLATES



HP-6
175x175mm
hotplate

HP Series Aluminium Top Hotplates

Uniform Heating at a Reasonable Price!

This modern range of aluminium hotplates provides superior temperature uniformity and stability is available in 7 sizes.

GHP-4
250x250mm
hotplate



HP-1
115x115mm
hotplate

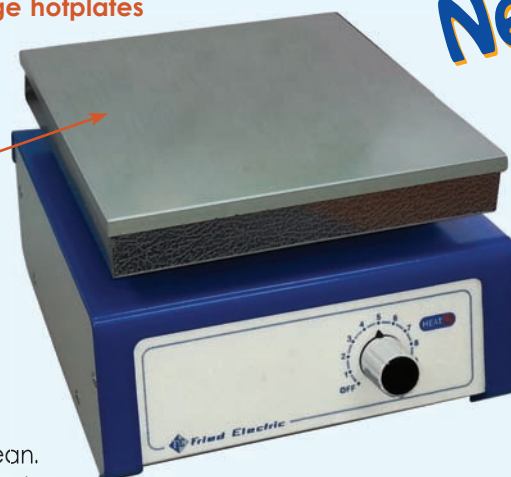
Compact & lightweight hotplate, great to use in limited space. Making possible for processing of delicate materials at low critical temperatures.



E-1
Iron hotplate,
up to 450°C, dia. 80mm

HP-6-xxx
Large hotplates

400x400mm
400x600mm
600x600mm
Digital or Analog



New

Application:

- Distillations, extractions & digestions
- Heat aqueous reagents
- Semiconductor baking
- Acid/Base digestions – trace metal analysis. etc.
- Sample drying
- General reagent heating
- Heating TLC plates
- Evaporations
- Warning/curing applications – pastes, adhesives, & solder
- Ideal for general lab heating
- Liquid evaporations

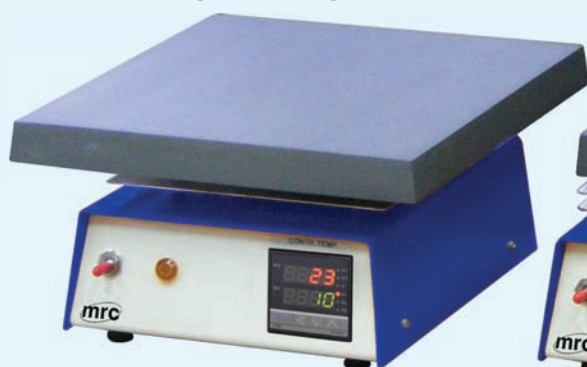
Features:

- Chemical resistant top plate, easy to clean.
- Excellent heat conduction distributes the heat evenly and uniformly over the entire heating surface.
- Sensitive "stepless" temperature control is maintained by means of a hydraulic thermostat with minimum overshoot and undershoot Making possible the processing of delicate materials at low critical temperatures.
- Pilot lamp indicates when heat is on.
- Special radiation shields keep apparatus relatively cool during continuous operation.
- Supplied with a 3-wire line cord and sturdy screw type support device at the rear of the base to hold standard rod.

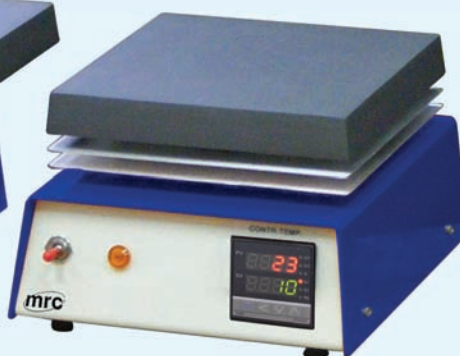
Model	Temperature range	Top plate	Dimensions	Watt	Weight
HP-1	40–300°C (optional 350°C)	115x115mm	W140xH110xD220mm	450W	1.2kg
HP-6	40–300°C (optional 350°C)	175x175mm	W200xH150xD260mm	750W	2.3kg
GHP-4	40–300°C (optional 350°C)	250x250mm	W250xH150xD260mm	1500W	3.3kg
E-1	up to 450°C	Diameter 80mm	W120xH120xD180mm	450W	1.1kg

DIGITAL & PROGRAMMABLE HOTPLATES, ALUMINIUM TOP

HP-D Series Digital & Programmable Hotplates, Aluminium Top



GHP-4D
250x250mm Hotplate



HP-4D
175x175mm Hotplate



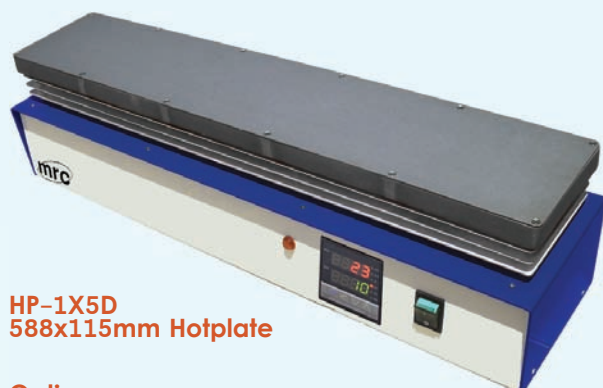
HP-1D
115x115mm Hotplate

Application:

- Distillations, extractions and digestions
- Heat aqueous reagents
- Semiconductor baking
- Acid/Base digestions – trace metal analysis. etc.
- Sample drying
- General reagent heating
- Heating TLC plates
- Evaporations
- Warning/curing applications–pastes, adhesives, and solder
- Viscosity studies
- Reaction optimization
- Solubility studies
- Safety thermostat.

Features:

- Temperature can be displayed in °C or °F.
- Digital timer and ramp to temperature function.
- Digital set-point and read-out of actual temperature.
- PID microprocessor controller provides precise temperature regulation all over the temp. range, include the low temp close to the ambient.
- Temperature may be controlled either at the plate surface by internal sensor, or at the sample by a Thermocouple Immersion probe.
- Safety: in the event of broken sensor, power to the heater is shut-down.
- Temperature range: above ambient to 300°C (optional 400°C).
- Chemical resistant top plate, easy to clean.
- Excellent heat conduction distributes the heat evenly & uniformity over the entire heating surface.
- Pilot lamp indicates when heat is on.
- Special radiation shields keep apparatus relatively cool during continuous operation.
- Support device at the rear of the base.
- Option: External temp. sensor 200mm length, 3.2mm diameter.



HP-1X5D
588x115mm Hotplate

Options:

- RS232 Communication
- RS485 Communication
- Separate Control box.
- Programmer
- Up to 400°C

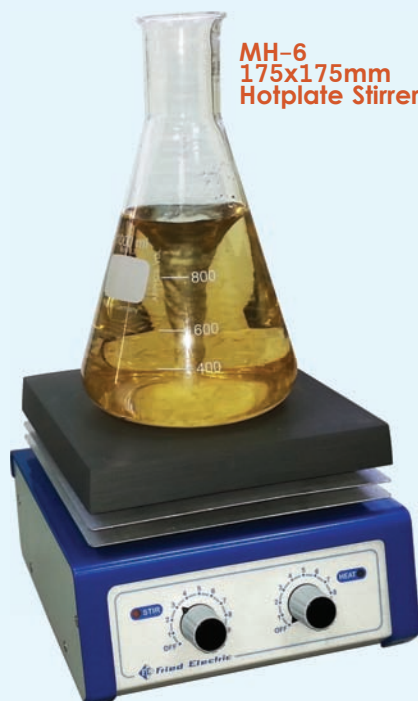


GHP-4X2D
500x250mm Hotplate
Large surface for large loads

Model	Temp. range	Top plate	Temp. stability	Dimensions	Watt	Weight
HP-1D	40–300°C (optional 400°C)	115x115mm	±1°	W140xH110xD220mm	450W	1.3kg
HP-4D	40–300°C (optional 400°C)	175x175mm	±1°	W200xH150xD260mm	750W	2.4kg
GHP-4D	40–300°C (optional 400°C)	250x250mm	±1°	W250xH150xD260mm	1500W	3.4kg
GHP-4X2D	40–300°C (optional 400°C)	500x250mm	±1°	W500xH150xD250mm	3000W	6.6kg
HP-1X5D	40–300°C (optional 400°C)	588x115mm	±1°	W600xH150xD145mm	2000W	5kg

MAGNETIC STIRRERS ALUMINIUM TOP HOTPLATES

MH-Series Hotplate Magnetic Stirrers



MH-6
175x175mm
Hotplate Stirrer



GMH-5
250x250mm
Hotplate Stirrer



MH-1

Compact & lightweight hotplate, great to use in limited space. Making possible the processing of delicate materials at low critical temperatures.

★ ★ ★
German AC Motor
Robust & Maintenance
Free Design
★ ★ ★

Features:

- Chemical resistant top plate, easy to clean.
- Excellent heat conduction distributes the heat evenly & uniformity over the entire heating surface.
- Sensitive "stepless" temperature control is maintained by means of a hydraulic thermostat with minimum overshoot & undershoot Making possible the processing of delicate materials at low critical temperatures.
- Pilot lamp indicates when heat is on.
- Special radiation shields keep apparatus relatively cool during continuous operation.
- Supplied with a 3-wire line cord and sturdy screw type support device at the rear of the base to hold standard rod.
- Designed for continuous use, to handle fluids of varying viscosities in up to 30Liter capacity
- Gentle or vigorous stirring

Applications:

- Warming/mixing applications – gels, pastes, & adhesives
- Standard reagent mixing & heating
- Preparing culture media
- Evaporation and distillation procedures
- Titration requiring heating and stirring of solution
- General microbiological applications.
- Gentle heating
- Micro scale chemistry
- General lab heating & stirring
- Sample drying
- Media preparation

MH-1 115x115mm Hotplate Stirrer
GMH-5 For large capacity up to 30Liter, stir viscous solution

For Continues
Work



Specifications:

Model	Temp. range	Speed range	Capacity max.	Top plate	Dimensions	Watt	Weight
MH-1	40–300°C (optional 350°C)	100–1200rpm	8 Liter	115x115mm	W140xH110xD220mm	450W	1.9kg
MH-6	40–300°C (optional 350°C)	100–1200rpm	10 Liter	175x175mm	W200xH150xD260mm	750W	3kg
MH-5	40–300°C (optional 350°C)	100–1400rpm	25 Liter	175x175mm	W200xH150xD260mm	750W	3.4kg
GMH-5	40–300°C (optional 350°C)	100–1400rpm	30 Liter	250x250mm	W250xH150xD260mm	1500W	4.4kg

DIGITAL MAGNETIC STIRRERS ALUMINIUM TOP HOTPLATES

MH-D Series Digital Magnetic Stirrers



★ ★ ★
**German AC Motor
Robust & Maintenance
Free Design**
★ ★ ★

Application:

- Warming/mixing applications – gels, pastes, & adhesives.
- Standard reagent mixing and heating.
- Preparing culture media.
- Evaporation and distillation procedures.
- Titration requiring heating & stirring of solution.
- General microbiological applications.
- Gentle heating.
- Micro scale chemistry.
- General lab heating & stirring.
- Sample drying.
- Media preparation.

Options:

- RS232 Communication
- RS485 Communication
- Separate Control box.
- Programmer
- Up to 400°C

**For Continues
Work**



Features:

- Temperature can be displayed in °C or °F.
- Digital timer and ramp to temperature function.
- Digital set-point and read-out of actual temperature.
- PID microprocessor controller provides precise temperature regulation all over the temp. range, include the low temp close to the ambient.
- Temperature may be controlled either at the plate surface by internal sensor, or at the sample by a Thermocouple Immersion probe.
- Safety: in the event of broken sensor, power to the heater is shut-down.
- Temperature range :above ambient to 300°C (optional 400°C).
- Chemical resistant top plate, easy to clean.
- Excellent heat conduction distributes the heat evenly and uniformity over the entire heating surface.
- Pilot lamp indicates when heat is on.
- Special radiation shields keep apparatus relatively cool during continuous operation.
- Designed for continuous use, to handle fluids of varying viscosities in up to 30Liter capacity.
- Available in 3 models to accommodate most laboratory applications requiring mixing and temperature control.
- Gentle or vigorous stirring.

Specifications:

Model	Temp. range	Speed range	Capacity max.	Top plate	Dimensions	Watt	Weight
MH-4D	40–300°C (optional 400°C)	100–1200rpm	10 Liter	175x175mm	W200xH150xD260mm	750W	3kg
MH-5D	40–300°C (optional 400°C)	100–1400rpm	20 Liter	175x175mm	W250xH150xD260mm	750W	3.1kg
GMH-5D	40–300°C (optional 400°C)	100–1400rpm	30 Liter	250x250mm	W500xH150xD250mm	1500W	3.5kg

CERAMIC HOTPLATES / STIRRERS

MHK-1 & MHK-6, Analog Models



Features:

- High impact strength, Acid and alkali resistance
- Heats rapidly up to 500°C in 8 minutes
- Stepless heat control
- Ceramic top remains perfectly flat to ensure maximum heat transfer.
- Reflective white top makes sample viewing easy.
- Not recommended for use with metal vessels.

Applications:

- Models are excellent for microscale chemistry
- General lab heating and stirring
- Sample drying
- Media preparation
- General microbiological applications.

★ ★ ★
**German AC Motor
Robust & Maintenance
Free Design**
★ ★ ★

HPK-4D & MHK-4D, Digital Models Measures Temp. in Sample



Features:

- Microprocessor closed-loop control
- Digital display of all parameters for easy operation. Temperature can be displayed in °C or °F
- PID microprocessor controller provides precise temperature regulation all over the temp. range, include the low temp close to the ambient.
- Temperature may be controlled either at the plate surface by internal sensor, or at the sample by a Thermocouple Immersion probe.

Description:

- Solid state feedback control monitors & adapts to sudden changes in ambient or sample temperature, preventing boil-overs, ruined samples, and lost time.
- Digital display for quick and easy observation.
- Previous set point is stored in memory & will appear on the display when the unit is switched on.

Options:

- RS232 Communication
- RS485 Communication
- Separate Control box.

Back Panel

support device at the rear of the base to hold standard rod.

Model	Temp. range	Top-plate	Temp. control	Magnetic stirrer
HPK-4	up to 500°C	175x175mm	Analog	No
HPK-4D	up to 500°C	175x175mm	Digital	No
MHK-6	up to 500°C	175x175mm	Analog	100~1200rpm
MHK-4D	up to 500°C	175x175mm	Digital	100~1200rpm
HPK-1	up to 500°C	115x115mm	Analog	No
HPK-1D	up to 500°C	115x115mm	Digital	No
MHK-1	up to 500°C	115x115mm	Analog	100~1200rpm

MULTI-POSITION HOTPLATE STIRRERS



MH-1/6, 6 position hotplate stirrer



MH-1/4, 4 position hotplate stirrer



MH-1/3 3 position hotplate stirrer



**MH-1/2
2 position
hotplate stirrer**



**MH-1/2x2,
4 position hotplate stirrer**



**MH-1/3x2,
6 position hotplate stirrer**



Model: MH-1/6, 6 Positions

Dimensions: Overall W81xH14.5xD22cm
(Includes support rod clamp)

Power: 230V (or 115V), 50/60Hz, 2400W-6x400W

Net weight: 12Kg.

Model: MH-1/4, 4 Positions

Dimensions: Overall W60.5xH14.5xD22cm

Power: 1600 watt-4x400 watt.

Weight: 8Kg.

Model MH-1/3, 3 positions, 1200watt

Model MH-1/2, 2 positions, 800watt

Model: MH-1/2x2, 4 Positions

Dimensions: Top plate 11.5x11.5cm

Overall W30xH14.5xD31cm

(D includes support rod clamp)

Placed in two rows 2+2

Power: 230V (or 115V), 50/60Hz, 1600W-4x400W

Net weight: 8Kg.

Model: MH-1/3x2

Dimensions: Top plate 11.5x11.5cm,

Overall W45xH14.5xD31cm

Power: 2400 watt-6x400 watt.

Weight: 12Ka.

★ ★ ★
**German AC Motor
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Free Design**
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Multi-Position Hotplate Stirrers, 2,3,4 Or 6 Places

- Aluminium Top Plate 115x115mm
- Independent Heating & Stirring Control
- up to 300°C (optional 350°C)/1600 rpm
- Excellent for multi-use and a wide various sample testing.
- Multi position hotplate stirrer with 2,3,4,6 positions.
- Independent Heating and Stirring Control.
- Maximum Temperature of 300°C (optional 350°C).
- Aluminium tops are chemical resistant & heat up quickly and uniformly. Great for low temperature applications.
- Units are built from durable cast aluminium cases & painted with chemically resistant paint.
- Individually controlled stirring and heating positions.
- Each position can be used to stir only, heat only or heat and stir at the same time.
- Ideal for a narrow bench-top or for applications needing support rack system.
- Stirrers are equipped with strong magnets and high torque motors. Up to 8 Liter of water for each position.

CERAMIC HOTPLATE STIRRERS MULTI-POSITION



MHK-1/6, 6 Positions

115x115mm
hotplate

MHK-1/4, 4 Positions

MHK-1/3, 3 Positions

MHK-1/2
2 Positions

★ ★ ★
**German AC Motor
Robust & Maintenance
Free Design**
★ ★ ★

Model: MHK-1/6, 6 Positions

Dimensions: Overall W81xH14.5xD22cm
(Includes support rod clamp)

Power: 230V (or 115V), 50/60Hz, 2400Watt-6x400W

Net weight: 12Kg

Model: MHK-1/4, 4 Positions

Dimensions: 60.5x14.5x22cm

Power: 1600 watt-4x400 watt

Net weight: 8 kg

Model: MHK-1/3 3 positions, power 1200watt

Model: MHK-1/2 2 positions, power 800watt

Model: MHK-1/2x3

Dimensions: Overall W45xH14.5xD31cm
(Includes support rod clamp)
Placed in two rows 3+3

Power: 230V (or 115V), 50/60Hz, 2400W-6x400W

Net weight: 12Kg

Model: MHK-1/2x2

Dimensions: 30x14.5x31cm

Power: 1600 watt-4x400 watt

Weight: 8 kg

Model: MHK-4/3 3 positions, 175x175mm plate,
3x1100watt=3300watt

Model: MHK-4/2 2 positions, 175x175mm plate,
2x1100watt=2200watt.

500°C



MHK-1/2x2
4 Positions

115x115mm
hotplate



MHK-1/2x3
6 Positions

175x175mm
hotplate



MHK-4/2
2 Positions

175x175mm
hotplate



MHK-4/3
3 Positions

Ceramic Hotplate Stirrers Multi-Position, 2,3,4 Or 6 Places, 115x115mm or 175x175mm

- Heat to 500°C on plate surface in minutes
- Stir from up to 1600 rpm on each stirring position with individual controls.
- Plate size for all units is 115x115 or 175x175mm.
- Solid ceramic heater surface for excellent chemical resistance.
- Multi position hotplate stirrer with 2,3,4,6 positions.
- Individually controlled stirring and heating positions.
- Each position can be used to stir only, heat only or heat and stir at the same time.
- Ideal for a narrow bench-top or for applications needing support rack system.
- Stirrers are equipped with strong magnets & high torque motors, up to 8 Liter of water.



MHK-4/3D. Digital temp. Controller+Timer, 175x175mm

HEATING TAPES



HT1-1 & HT1-2

Model	Width (") x Length (m)	Wattage
HT 1-1	1"x1m	200 W
HT 1-1.5	1"x1.5m	250 W
HT 1-2	1"x2m	300 W
HT 1-2.5	1"x2.5m	350 W
HT 1-3	1"x3m	400 W
HT 1-4	1"x4m	460 W

Heating Tapes Width 1" up to 450°C

- Extremely flexible.
- Exceptional durability.
- Rapid temp. response.
- Max. Exposure temp. 450°C
- Choice of power plugs
- Temp. or voltage controller required.
- Electrical cable length 80cm.
- Perfect for heating of curved parts of irregular shapes such as valve, pump, vacuum line, pipe, flange, elbow, etc.
- It must be used with a separate temperature voltage controller.
- Insulation type fiber glass.
- Technical Data:
 - Heating Element: Ni-chrome wire.
 - Heating Element Temperature: Up to 450°C
 - Power Supply: AC220 ~230V, 50/60Hz
- Products are not waterproof.



HT11-2.5



Silicon Heaters

300Watt/18x17cm

250Watt/8x20cm

45Watt/6x9cm

130Watt/5x23cm

500Watt/10x37.5cm

For control of heating tapes, max. watt – 2000 watt. Power regulator: 0–100%

- Solid state electronics make this variac the perfect instrument for research and especially teaching labs.
- Safety features include sparkless solid state regulation of voltage output to oil baths, heat lamps, heating mantles, or virtually any heater.

TEMPERATURE CONTROLLER/PROGRAMMER

Box-3216, Precise Digital Temperature Controller For Control Of Heating Tapes, Heating Mantles, Hotplates, Ovens, Water Baths, Immersion Heaters, incubators etc.



Front



Back

- Wide range of temperature controls to match most heating applications: mantles, hotplates, heating tapes, small ovens & other resistive heating loads up to 3500 Watt.
- Quick connections for load and temperature sensor.
- Digital dual display for set point and process temperature indication.
- Easy to operate.
- Non-volatile memory retains temp. settings during power interruptions.
- Models are available for use with Type-K (other T/C optional).
- Supplied with Thermocouple Probe.
- Fuzzy modified PID control.
- Auto tune function.
- Soft start ramp and dwell timer.
- Bright dual color display.
- Fast sampling rate 5meas/sec.
- Power 110–250VAC 50/60Hz.
- High accuracy 18 Bit A/D converter.
- Max. temp. 1370°C dec point to 999.9.
- Size: W185xD190xH115mm.
- Weight: 1.4kg.

Available power sockets



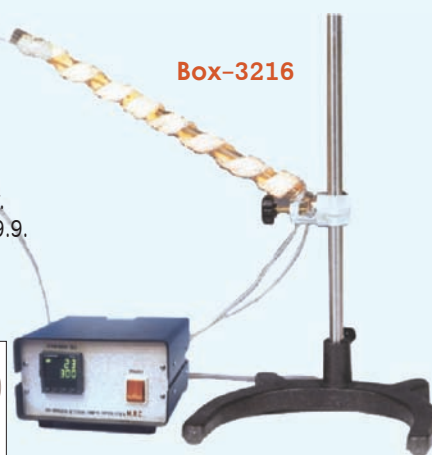
ISR

USA

EURO

UK

CHIN



Box-3216

Model	Function	Thermocouple	Temp. range	Power output
Box-3216	Control with ramp to set point & 100 hrs timer	K	-50~1200°C	3500 watt 230V/50Hz
		T	-20~400°C	
Box-2416P4	Programmer with 4 programs of 8 segment	K	-50~1200°C	3500 watt 230V/50Hz
		T	-20~400°C	

OVENS

DFO-Series, 36 Liter, 80 Liter, 150 Liter, 240 Liter Ovens

DFO Series units are primarily used in applications needing rapid drying and sterilization. Totally homogenous temperature distribution and/or rapid dynamic response. This modern range of ovens is available in 4 sizes.

DFO Series offers excellent uniformity and stability & are used for many applications as Glassware drying, warming, sterilizing, ageing, curing, softening, annealing, preheating and testing, drying slides. The inner case is constructed from polished stainless steel. All units are provided with wire plated shelves with multi-position settings. All models are with fan assisted air circulation, the chamber ventilation and exhaust vent are easily adjustable. Wide choice of control options is available, PID controller & timer is fitted as standard with dual display of measured value and setpoint.

Options:

- RS-232 / 485 communication model: 3216E
- 4 programs of 16 segments model: 2416P4
- 5 programs of 8 segments model: 3216CP
- 38 mm cable port
- Gas inlet



Specifications:

Model	DFO-36	DFO-80	DFO-150	DFO-240
Temp. range	Room temperature – 250°C			
Temp. constancy	±0.1°C			
Temp. uniformity	±2%			
Temp. control	PID			
Temp. sensor	Thermocouple K			
Heater: Oven	1100W	1500W	1800W	2200W
Inside Material	S.S-430			
Timer	99hr 59min			
Window (mm)	W200xH300			W200xH500
Safety devices	Short circuit breaker, over heat protector, sensor abnormality			
Inside dimensions (mm)	W400xD300xH300	W500xD400xH400	W600xD500xH500	W600xD500xH800
Outside dimensions (mm)	W525xD420xH595	W620xD520xH620	W720xD620xH720	W720xD620xH1020
Capacity (Liters)	36	80	150	240
Shelves	2			3
Weight	34kg	47kg	60kg	76kg

LARGE OVENS



DFO-480

DFO-270/480, Large Force Convection, Single Door

- Ideal for Large Volume Baking Electronic Parts, Drying, Conditioning and Sterilizing
- Inner case is SUS 304 and outside body is powder painting.
- Tempered Safety Glass Window to see inside without door opening
- Install double over temperature protection.
- All models are with fan assisted air circulation, air vent on both side t
- Brake wheels easy to move.



Fan motor



Wheels

Model	DFO-270	DFO-480
Temp. range	Ambient + 5°C~210°C (250°C)	
Temp. Accuracy	±1°C	
Temp. control / Display	PID / LED digital display	
Temp. Sensor	K type	
Heater	4000 W	
Volume	270L	480L
Timer	99 h / 59 min	
Keep Warm	Rock wool fiber	
Shelf (Adjustable)	4	
Power Voltage	220V 50/60Hz 1PH	
Inside dimensions (mm)	W600xD500xH900	W800xD600xH1000
Outside dimensions (mm)	W780xD620xH1520	W980xD720xH1620



DFO-2160

DFO-600/720/1008/2160, Large Force Convection, Double Door

- Ovens are used for many applications as baking, drying, conditioning, sterilizing, electroplate, plastic, chemical industry, printing, hard ware, pharmacy, tea fired, bake industry etc
- Inner case is SUS 304 and outside body is powder painting.
- Tempered Safety Glass Window to see inside without door opening
- Install double over temperature protection.
- All models are with fan assisted air circulation, air vent on both side t
- Brake wheels, easy to move
- Silent fan motor.



Fan motor



Wheels

Model	DFO-600	DFO-720	DFO-1008	DFO-2160
Temp. range	40°C~200°C (250°C)			
Temp. Accuracy	±0.1°C			
Temp. control / Display	PID / LED			
Temp. Sensor	Thermocouple K type			
Keep Warm	Mineral wool/Glass wool			
Safety Device	EGO (Double over temperature protection)			
Volume	600L	720L	1008L	2160L
Timer	99 h / 59 min			
Shelf (Adjustable)	4			
Power Voltage	220V 50/60Hz 1PH		220V 50/60Hz 3PH	
Inside dimensions (mm)	W1000xD600xH1000	W1200xD600xH1000	W1400xD600xH1200	W1800xD1000xH1200
Outside dimensions (mm)	W1250xD750xH1580	W1450xD750xH1580	W1650xD750xH1820	W2000xD1200xH1980

SLIDE HEATERS



HPS-1
Up to 10 slides

HPS-6
Up to 21 slides

Options:
Programmable RAMP/SOAK
2 programs of 8 Segments each.

HPS-1/6, Slide Heater

Our modern aluminium slide heater is designed for cytology, histology, pathology & other biological applications in industrial & clinical lab environments. Easy slide pickup, Excellent temp. accuracy, Uniformity, Stability.

Application:

- Slide warming
- Slide drying
- In situ hybridization
- Slide incubation
- Histology
- Heictology
- Imuno histochemistry
- Fish.



Model	HPS-1	HPS-6
Capacity	Up to 10 slides	Up to 21 slides
Temperature Adjust	Digital front panel	
Temperature Range	RT +5 – 99.9°C (°C/ °F selection)	
Digital Microprocessor	PID controller	
Temperature Stability	±0.1°C	
Accuracy	±0.2°C	
Power Consumption	400 Watt	900 Watt
Electrical Requirements	230V, 50/60Hz	
Dimensions	WxHxDmm	
Weight	1.3Kg	2.4Kg

Available Products Catalogs:



BATHS

SHAKERS

STIRRERS

HOTPLATES

INCUBATORS

HEATING
MANTLES



HEATING MANTLES

SPILLPROOF HEATING MANTLES

Specialty Spillproof Heating Mantles



- Units are designed with a built-in stainless steel liner that gives electrical & mechanical protection against spillage & enables easy cleaning
- Built-in electronic controller regulates heating element from ambient to 750°C, 2 ranges: low & high
- Durable housing is chemically resistant
- Accept a large range of flasks
- For maximum operator protection, models are grounded should spillage or flask breakage occur
- All models include support rod holder at the back.

Three Flask Size In One Mantle

Model K-1

- For flasks up to 1000ml.
- Stepless heat control.
- Operating temp. up to 750°C.

Model K-2

- For flasks up to 2000ml.



KM-1D

Optional: Digital Temp. control

Features:

- Three in one design accommodates 250, 500 or 1000ml round bottom flasks (K-1, KM-1).
- Three in one design accommodates 500, 1000 or 2000ml round bottom flasks (K-2, KM-2).
- Different vessel sizes, spill proof heater.
- Includes rear bracket for support rod.
- Stepless heat control up to 750°C (650°C with stirrer)
- Variable speed control up to 1800rpm (KM-1, KM-2).
- Heater on light.
- Element temperature range of ambient to 750°C.

Heating Mantle With Magnetic Stirrers

Model KM-1/KM-2

- Stepless heat control up to 650°C
- Variable speed control up to 1800 RPM

Specifications:

Analog Model	Digital Model	Temp. range	Capacity	Stirring	Dimensions	Weight	Watt
K-1	K-1D	up to 750°C	250-1000ml	-	W12xD17xD18cm	1.2kg	550
K-2	K-2D	up to 750°C	500-2000ml	-	W21xD20xD24cm	1.4kg	750
KM-1	KM-1D	up to 650°C	250-1000ml	up to 1600rpm	W16xD17xD23cm	2.3kg	550
KM-2	KM-2D	up to 650°C	500-2000ml	up to 1600rpm	W21xD20xD24cm	2.5kg	750

E-Series, Multi Position Round Top Extraction Heater



E-6

- Optional: Aluminium top mould for round bottom flasks up to 250ml/500ml for extraction apparatus soxhlet.
- Digital temperature control.

The Multi Heating Apparatus offers such versatility that is suitable for many laboratory purposes: extractions, distillations, digestions, evaporation etc. The 6 separate heat controls allow the heaters to be used for several different projects or multiple runs of the same project. The Multi Heating Apparatus in conjunction with interchangeable top mould for round bottom flasks - solves the most varied heating problems.

Model E-6

- Six individual heat controls with pilot lights
- Built-in temperature regulator
- For 6 places, 220 Volt (on request 115 V), 2700 Watts (6x450 W)
- Approximate temp.: 40 - 450°C
- Hotplate top 85 mm. dia.
- Dimensions (WxD): 80x17x20 cm
- Accessories: Optional: 6 interchangeable aluminum top moulds for round bottom flasks up to 100 ml or 250 to 500ml (Kjeldahl flasks 500-800 ml)
- 4 support rods 800x12 mm. with 4 clamps.

Model E-4 as described above, but for 4 places 220Volts 1800Watts (4x450W). DIM. (WxD): 60x17x20 cm.

MULTI UNIT KJELDAHL APPARATUS

K-Series, Multi Unit Macro Kjeldahl Apparatus



K-6

Model K-6, 6 Positions

Up to 6 flasks • 220 Volt (or 110V), 6x550 Watt • Dimensions: (WxHxD) 80x19x20 cm (D includes rear bracket for support rod) • Nett weight: 6.8 Kgs.



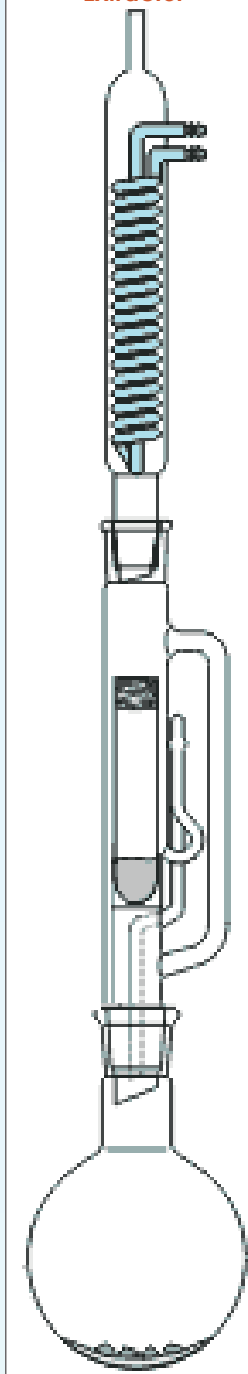
K-4

Model: K-4, 4 Positions

Up to 4 flasks • 220 Volt (or 110 V), 4 x 550 Watt • Dimensions: (WxHxD) 60x19x20cm (D includes rear bracket for support rod) • Net weight: 4.8 Kgs.

- For flasks 250 up to 1000 ml.
- Spillproof–Stainless Steel Heater.
- Stepless– heat control.
- Operating temp.: up to 750°C.
- Includes 4 support rods and 4 clamps.
- Durable housing is chemically resistant.
- Built-in electronic controller regulates element temp. to 750°C, 2 ranges: low & high.
- Robust aluminium construction permits operation of the units as required by extraction and distillation processes.
- "Heat on" light for each recess indicates when power is being supplied to the heater.
- For maximum operator protection, models are grounded should spillage or flask breakage occur.
- Units are designed with a built-in stainless steel liner that gives electrical and mechanical protection against spillage & enables easy cleaning.
- Lower profile for space-saving convenience.
- Ideal for repetitive extracting (kjeldahl, soxhlet, and other extraction procedure), refluxing & distilling laboratory applications.
- Analog controller built-in system.
- Rods & clamps are offered as standard.
- Ideal for all brands round flasks.
- Highly-processed aluminium case offers robust standing, easy handling.

Soxhlet Extractor



Soxhlet Extractors

For the extraction from solids with solvents. The solvent is recirculated continuously and distilled from the extracted sample before contacting the solid again. The extract is concentrated in the distillation flask.

The method allows an effective separation with relatively small amounts of extracting solvents.

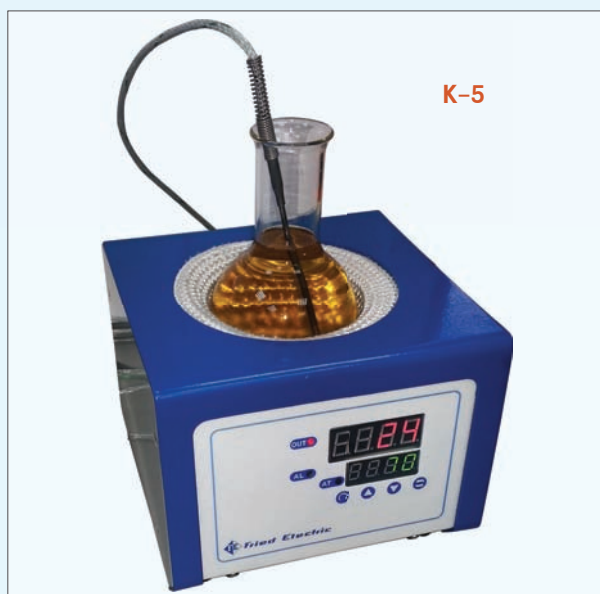
The complete apparatus consists of

- round bottom flask
- compact and robust designed extractor with NS 29/32 flask connection.



Cat.No.	Extractor ml	Condenser NS	Flask ml	Condenser
5.3600.25	30	29/32	100	dimroth
5.3600.31	70	34/35	100	dimroth
5.3600.37	100	45/40	250	dimroth
5.3600.43	150	45/40	250	dimroth
5.3600.46	200	45/40	250	dimroth
5.3600.49	250	45/40	500	dimroth
5.3600.52	300	60/46	500	dimroth
5.3600.58	500	60/46	1000	dimroth
5.3600.70	1000	71/51	2000	dimroth

DIGITAL METAL CASE MANTLES



K-5

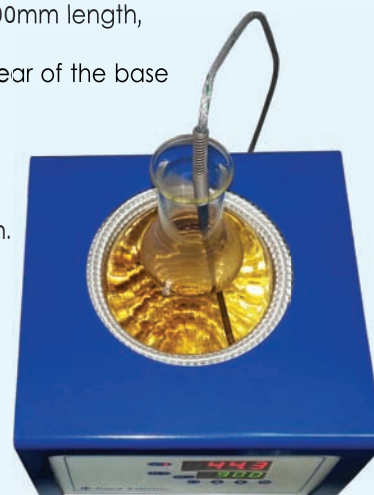
Aluminum housing is chemical resistant, tough, lightweight and easy to clean • Max. temp. 450°C • Full pid temperature controller. Ensure high temp stability. Process accuracy. Dual display of set value & process • 7 series mantles sizes available from 50 to 3liter • Unique air flow through ventilation slots beneath & around the case keeps the exterior safe to touch • Flexible coiled heating element provides good heat transfer while absorbing shock minimizing risk of flask breakage • Heating element and insulation form an easily replaceable heating cartridge • A "Heater On" light indicates when power is being supplied to the heaters • Aluminium housed case, rigid housing to support the weight of the vessel • Provide uniform heating of vessel without the danger of open frame • Covering only the bottom half of the vessels & provide full view of the contents of the vessel • Fabric mantles for effective heating & protection of glass vessels from thermal shock.

K-5, Metal Case Mantles, Digital Control, Up to 450°C

- Digital set-point and read-out of actual temperature.
- PID microprocessor controller provides precise temperature regulation all over the temp. range, include the low temp close to the ambient
- External temp. sensor 200mm length, 3.2mm diameter
- Support device at the rear of the base to hold standard rod
- External sensor input.

Options:

- Digital timer and ramp to temperature function.
- Programmer
- Separate Control box: You can have your controller separated for wide variety of applications for example for glove-box.
- Coming soon with magnetic Stirrer.



Model	Capacity	Power
K-5-50D	50ml	60W
K-5-100D	100ml	80W
K-5-250D	250ml	200W
K-5-500D	500ml	300W
K-5-1000D	1000ml	400W
K-5-2000D	2000ml	500W
K-5-3000D	3000ml	600W

K-5-3/6 Multi Position Heating Mantles With 3 or 6 Heating Places

Models	Capacity	Units	Total watts
K-5-3-250	250 ml	3	600W
K-5-3-500	500 ml	3	900W
K-5-3-1000	1000 ml	3	1200W
K-5-6-250	250 ml	6	1200W
K-5-6-500	500 ml	6	1800W
K-5-6-1000	1000 ml	6	2400W

- Temp. range up to 450°C
- Unique air flow ensure unit is safe to touch
- Independent digital temp. control to each channel
- Optional: Magnetic stirrer to each mantle.



BATHS

SHAKERS

STIRRERS

HOTPLATES

INCUBATORS

HEATING
MANTLES



BATHS

WATER BATH FOR FULL VISIBILITY OF SAMPLES

WB-Series, For Full Visibility Of Samples



Removable Modular Heating Assembly enables convenient cleaning of all parts & makes it usable in other vessels.



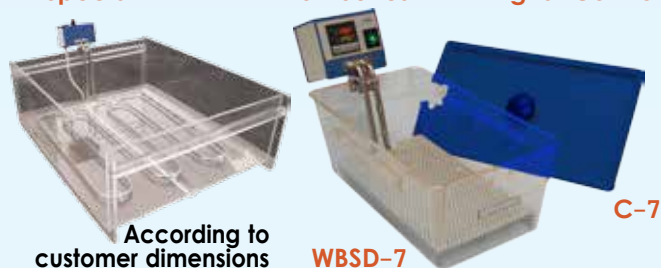
Features:

- Low-cost fully compatible substitute for expensive Water Bath.
- Seamless transparent polycarbonate tank-withstands temperature 120°C.
- Fast-Acting thermostat also serves as low-water-level protector, preventing heating-element burn-out & fire hazard.
- Temperature setting in °C from ambient to +100°C
- Temperature control accuracy of approximately $\pm 1^\circ\text{C}$ ensures precise test conditions
- Robust & reliable – designed for years of trouble-free service.

Options:

WB-Special:

WBSD Series: With Digital Control



WBSD Series, Transparent Polycarbonate Thermostatic Bath

Ideal for sample pre treatment in QC, pathology and educational purposes, routine laboratory purposes, procedures requiring visibility of reactions inside the vessels & as a 'personal' water bath for scientists needing only a small working area with a compact footprint. Temperature control accuracy of approximately $\pm 0.2^\circ\text{C}$ ensures precise test conditions.

Temp. Range: from slightly above ambient to +100°C (with cover)
Accuracy: approx.: 0.3°C at 37°C (depending on operating conditions).
Voltage: 230 V, 50 Hz (or 120 V, 50/60 Hz).

							Accessories		
Standard model	With safety thermostat model	Digital model	Bath capacity (Liters)	Inside dim's (cm) W1xD1xH1	Outside dim's (cm) W2xD2xH2	Watts	Bath cover model	Floating balls model	Evap. lid model
WB-3	WBS-3	WBSD-3	2.7	10 x 17 x 10	15 x 31 x 24	500	C-3	FB-3	–
WB-4	WBS-4	WBSD-4	4.5	10 x 27 x 10	16 x 41 x 24	600	C-4	FB-4	–
WB-5	WBS-5	WBSD-5	5.5	16 x 20 x 11	22 x 34 x 24	750	C-5	FB-5	EL-5
WB-7	WBS-7	WBSD-7	7.0	16 x 3 x 11	22 x 44 x 24	1000	C-7	FB-7	–
WB-8	WBS-8	WBSD-8	8.5	21 x 35 x 12	28 x 50 x 26	1000	C-8	FB-8	–
WB-11	WBS-11	WBSD-11	11.0	18 x 27 x 16	24 x 43 x 30	1200	C-11	FB-11	–
WB-14	WBS-14	WBSD-14	14.0	21 x 35 x 16	28 x 50 x 30	1500	C-14	FB-14	EL-14
WB-30	WBS-30	WBSD-30	30	32 x 51 x 18	38 x 66 x 24	*2000	C-30	FB-30	EL-30/8/11

*1500W at 120V

Accessories:



Floating balls

A balls blanket of Floating Polypropylene Balls is most effective for reducing evaporation and loss of heat from the Water Bath. The Balls act as effectively as a lid (flat or gabled), while enabling immersion and removal of flasks & other vessels without having to lift a lid. Usable UP to 110°C .



EL-30/8

Evaporation lids

Evaporation Lids (EL) for use with WB and WBS Baths. Each Lid has openings equipped with concentric rings. The rings reduce the diameters of the openings to accommodate containers of all sizes. The EL-5 Lids, for use with WB(S)-5 Baths, have four 80mm diameter openings.

IMMERSION CIRCULATOR



TEPS-1, Immersion Circulator – Basic Model

Features:

- Temperature range: ambient to 100°C (with cooling +10 to 100°C).
- Accuracy: approx. ± 0.3 to $\pm 1^\circ\text{C}$.
- Pumping capacity: up to 12 l/min.
- Safety Cut Off.
- 12L/min max. head 2m.
- Immersion depth: min. 6cm, max. 15.5cm.
- Optional: Glass Thermometer
- **Optional: External circulation apparatus.**



TEPS-4, Digital Immersion Circulator

Features:

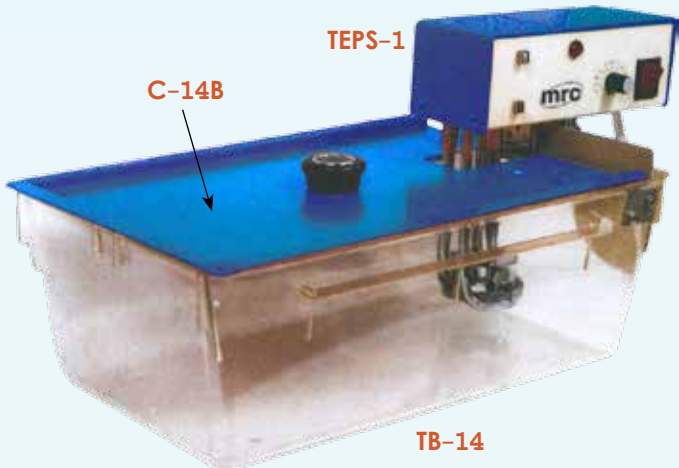
- Digital set and display of actual operating temperatures.
- PID controller provides very precise temperature control.
- Adapts to many different containers.
- Temperature range: ambient +5°C to 100°C (with cooling -10°C to 100°C),
- Accuracy: approx. $\pm 0.1^\circ\text{C}$.
- Pumping capacity: up to 12 l/min.
- Immersion depth: minimum 6 cm, maximum 15.5 cm.
- Safety Cut Off.
- **Optional up to 200°C (for oil).**

Model	TEPS-1	TEPS-4
Temperature range	up to 100°C	
Temperature stability	$\pm 0.3^\circ\text{C}$ to 1°C	$\pm 0.1^\circ\text{C}$
Controller	Basic analog	PID Digital
Readout	Thermometer	Digital $^\circ\text{C}/^\circ\text{F}$
Pumping flow	12 Liter/min	
Immersion	Minimum 6cm, Maximum 155mm	
Heater	1000Watt (optional, 1500, 2000watt)	
Over temp. safety	Adjustable	
Dimensions (mm)	W200xD240xH90 / W120xD140xH135	W200xD240xH90 / W120xD140xH135
Weight	2kg	2.3kg

TB-Series, Polycarbonate Tank TB Type For Immersion Thermostat / Circulator

PC Tank with bridge for fixing immersion circulator TEPS-1/TEPS-4, Seamless Transparent Polycarbonate Tank - withstands 120°C. Heating circulators are commonly used for cell cultures, enzyme assays, coliform testing, DNA incubation & procedures.

TB-7	16x30x13cm-Height, 7 Liter
TB-8	21x35x14cm-Height, 8.5 Liter
TB-11	18x27x18cm-Height, 11 Liter
TB-14	21x35x18cm-Height, 14 Liter
TB-30	32x51x20cm-Height, 30 Liter



PORTABLE CLIP-ON DIGITAL IMMERSION CIRCULATOR



TEPS-V6

TEPS-V6 SPL

Options:

TEPS-V6SPL

Longer immersion heater for deep and large containers.



TEPS-V6, Portable clip-on digital immersion circulator

MRC immersion heaters and water baths with a precise temperature controlled environment, to produce consistently perfect results Ideal for sous vide and other demanding applications.

MRC immersion circulator is a space saving clip on heater/ stirrer unit. It can be easily fitted to a standard stainless or polycarbonate gastronorm square tank or round(minimum depth 18cms) and maximum volume of approximately 60 Liters.

For large tanks and pots there are several immersion heaters with higher wattage and immersion lengths. Precise temperature achieved by PID high precision controller, accuracy and repeatability are guaranteed. Actual temperature is clearly displayed to 0.1°C. Temperature settings are retained in memory even after 'power off'.

Temperatures can be easily and rapidly set with the push button, wipe clean control panel. Easy clamping method, safety protection for low water level and optional sturdy handle for easy carrying.

The case is constructed from high quality stainless steel. If the water drops below the recommended minimum level or the unit is inadvertently switched.

Applications:

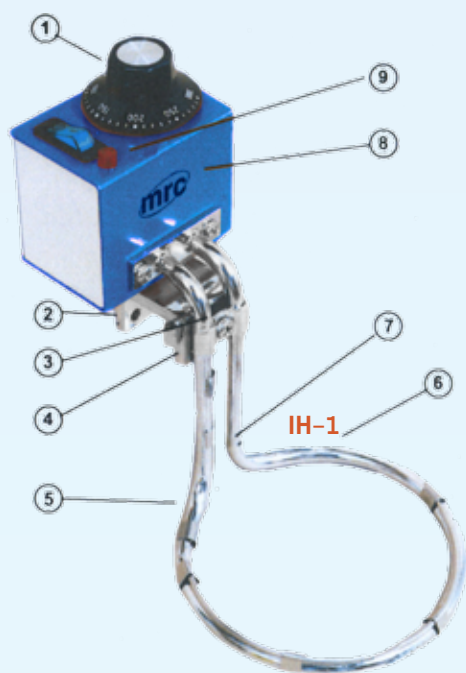
- Laboratory water baths
- Calibration baths
- Sous vide.



TEPS-V6

Model	TEPS-V6
Display/resolution	Digital LED/0.1°C
Temp. range	Ambient + 5°C – 95°C
Temp. setting	Push button
Stability	±0.1°C
Display/resolution	Digital LED/1 min. increments

THERMOSTATIC CONTROLLED IMMERSION HEATERS



IMMERSION HEATER IH-1

- 1- Temperature setting in °C
- 2- Threaded hole for attachment to stand
- 3- Height adjustment permits wide range of application
- 4- Mounting bracket (patented design) with teflon-tipped disc permitting secure clamping to all surfaces, including glass
- 5- Heating element chromium-plated copper sheath: also available in stainless steel on special order
- 6- Fast-acting thermostat also serves as low-level cut-out, preventing element burn-out and fire hazard
- 7- Shallow immersion depth (3 cm)
- 8- The control housing is located outside the vessel and thus protected against vapors and temperature effects
- 9- Indicator light



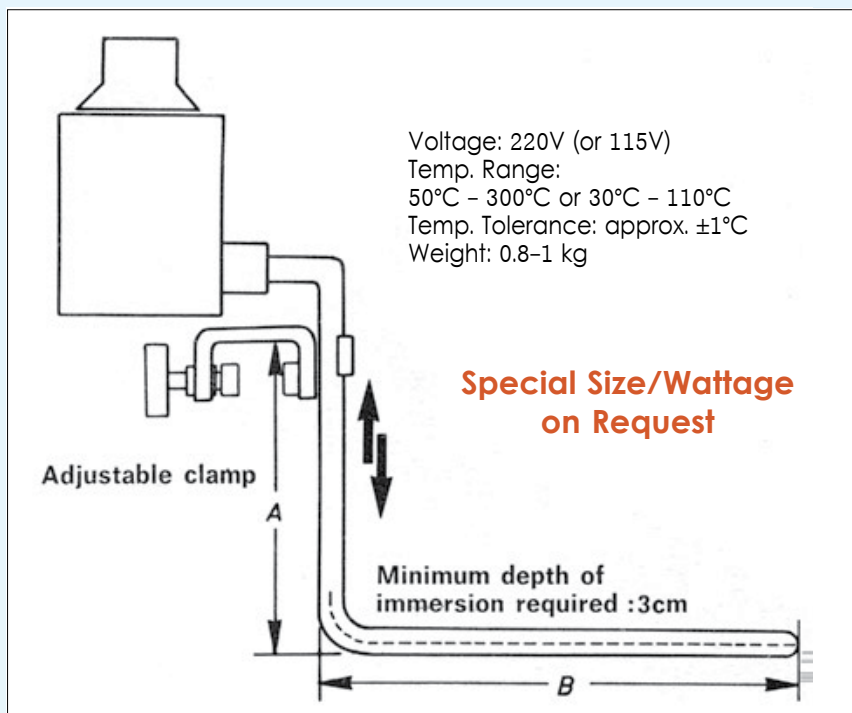
**Optional:
digital
control**

IH-Series, Thermostatic Controlled Immersion Heaters

Immersion heat:

Thermostatically Controlled Immersion Heaters.

Reliable element for accurately heating liquids to temperatures of up to 300°C with a tolerance of approx. $\pm 1^\circ\text{C}$. Designed for trouble-free application. Suitable for use in science and industry for: Distillation, evaporation, sterilization, rotary evaporation, ultrasonic cleaning, photographic bath etc.



Model 50-300°C	Digital 50-300°C	Model 50-110°C	Digital 50-110°C	Watts	"A" mm	"B" mmØ
IH3/13	IHSD-3/13	IH1/13	IHSD-1/13	500	100	130
IH3/15	IHSD-3/15	IH1/15	IHSD-1/15	750	110	150
IH3/17	IHSD-3/17	IH1/17	IHSD-1/17	750	120	170
IH3/19	IHSD-3/19	IH1/19	IHSD-1/19	1000	130	190
IH3/21	IHSD-3/21	IH1/21	IHSD-1/21	1000	150	210
IH3/23	IHSD-3/23	IH1/23	IHSD-1/23	1250	180	230
IH3/25	IHSD-3/25	IH1/25	IHSD-1/25	1500	200	250
IH3/27	IHSD-3/27	IH1/27	IHSD-1/27	1500	200	270

Immersion heater Features:

- Easily converts any container into a thermostatically controlled bath from ambient to 300°C.
- Rugged, reliable, convenient, maintenance-free, energy-saving & reasonable priced.
- Fully valid substitute for expensive water and oil baths.
- Permits utilization of the entire contents of the container, without effecting the functioning of stirrers.
- Heat is applied directly to the liquid, ensuring rapid rise of temperature.
- Safe - fast acting thermostat server as low-water level cut out.
- You get the temperature you set.
- Control box is located on the outside and is unaffected by vaporous and temperature effects.

DIGITAL PRECISE SHAKING WATER BATH

WBT-200/400/401, Digital Precise Shaking Water Bath, 22 & 38 Liter, & Digital PID Control, Reciprocating Motion, 20~200rpm, to 100°C, $\pm 0.1^\circ\text{C}$, up to 1 Liter Flask



These reciprocating water bath shakers are available in three models.

Model WBT-200 small platform 250x300mm, Model WBT-400 large platform 300x400mm & Model WBT-401 refrigerated to 0°C . Temperature control is precise, temp. range of 5°C above ambient to 100°C , speed range 20 – 200 rpm, heat loss and evaporation minimized with use of stainless steel hood cover.

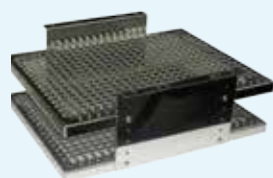
Easy emptying through a drain at the lowest point.

Micro processor temperature PID controller with dual display of measured temperature and set temperature.

Electronically Controlled Shaking Mechanism Provides Quiet Reciprocating Motion and Precise Speed Control.

Options:

- Water level protector.
- Universal platform.
- Digital speed control.



Universal Spring Racks

Optional: Tube Holders



AC-220-30-16



WBT-200D
Optional: Dig. Speed Control



Flask Holders

Features:

Stainless Steel Bath for Superior Durability & High Thermal Efficiency • Innovative Easy-to-Use Digital PID Controller • Electronically Controlled Shaking Mechanism Provides Quiet Reciprocating Motion and Precise Speed Control • Universal Stainless Steel Spring Rack (Optional): for various kind of Flasks dishes and Tubes (optional) • Patent shaking mechanism: minimum noise and vibration.

Model	WBT-200	WBT-400	WBT-401
System	Reciprocation shaking circulation		
Temp. range	Room temperature – 100℃		0℃-100℃
Temp. constancy	±0.1℃		
Temp. control	PID		
Temp sensor	PT-100Ω		
Inside material	SUS304		
Rate of shaking	20~200 rpm		
Shaking width	20 and 40 mm variable		
Shaking plate (mm)	W300xD250xH130	W400xD300xH160	
Refrigerator			1/4HP
Heater	1.0KW	1.6KW	
Safety devices	Short circuit breaker, over heat protector, sensor abnormality, refrigerator over protector		
Inside dimensions (mm)	W500xD300xH150	W600xD350xH180	
Outside dimensions (mm)	W700xD350xH300	W830xD415xH350	W980xD415xH430
Volume (Liters)	22.5	37.8	
Weight	25kg	30kg	53kg

capacity of flasks	50 ml	125 ml	250 ml	500 ml	1000 ml
WBT-200 number of flasks	20	12	6	4	2
WBT-400/401 number of flasks	35	20	12	6	4

DIGITAL PRECISE CIRCULATION WATER BATH

WBH-Series, Digital Precise Circulation Water Bath

There are 2 models with internal circulation pump, 10 & 20 Liters. The immersion circulator bridge can easily remove for easy cleaning of the tank.



WBH-100

WBH-200

Features:

Ideal for Biotechnology, Clinical, Environmental, Medical, Petroleum, Food Industry, Pharmaceutical or Industrial Applications

• Powerful Circulation Pump Assures Temp. Uniformity.:

Internal and optional external

Circulation • Stainless Steel Bath(#304) for Superior

Durability & High Thermal Efficiency • Stainless Steel lid

Prevents Evaporation and keeps Constant Temperature.



External Circulation Option

Model	WBH-100	WBH-200	WBH-200I
Temp. range	Ambient +5°C to 100°C		
Temp. constancy	±0.1		
Temp. control	PID		
Internal circulating pump	9Liter/Minute		
External circulating pump	No	No	Yes
Heater	800W	1000W	
Safety devices	Short circuit, over head protector, sensor abnormality		
Bath opening (mm)	W200xD235xH150	W400xD295xH150	
Inside dimensions (mm)	W295xD235xH150	W495xD295xH150	
Outside dimensions (mm)	W340xD280xH320	W540xD340xH320	
Volume	10L	20L	
Weight	7kg	10kg	

WBO-Series, Unstirred Up To 80°C Water Bath

The MRC stainless steel water bath are available in 2 sizes: 10 & 20 Liters. Model WBO-100 and WBO-200 unstirred bath are used for general applications in laboratories. They provides excellent temperature uniformity of the liquid. A PID temperature controller provides instant and accurate temperature. The tank of the bath is made of corrosion resistant stainless steel with round corners for easy cleaning. Include hood cover.



WBO-200

Features:

- Ideal for biotechnology, clinical, environmental, medical, petroleum, food industry
- Stainless steel lid prevents evaporation & keeps constant temperature
- Excellent uniformity & stability
- Seamless, corrosion-resistant, stainless steel chamber
- Available in 10, 20 Liters
- Gable cover included.



WBO-100

Applications:

- Incubate cultures
- Warm bacteriological media
- Perform chemical reactions
- Thaw samples.

Model	WBO-100	WBO-200
Temp. range	Room temperature ~ +5°C to 80°C	
Temp. constancy	±0.1	
Temp. control	PID	
Heater	300W	600W
Safety devices	Short circuit, over head protector, sensor abnormality	
Bath opening (mm)	W295xD235xH150	W495xD295xH150
Inside dimensions (mm)	W295xD235xH150	W495xD295xH150
Outside dimensions (mm)	W420xD280xH185	W620xD340xH185
Volume	10L	20L
Weight	6.5 kg	9 kg

DIGITAL PRECISE REFRIGERATED BATH



WBL-200

WBL-100

s, Digital Precise Refrigerated Bath, Internal and External Circulator

Refrigerated Circulating Baths

- Compact design.
- For external & internal temperature applications.
- Low noise level.
- Rapid cool down and heating time.
- Water drain for easy cleaning of the inner tank.
- Models WBL-200 has casters.
- Water level protector.
- Ideal for direct immersion of samples or external circulating system in the field of biotechnology and laboratories.
- Powerful circulation pump ensures temp. uniformity: internal and external circulation.
- Connection with evaporator or viscometer is applicable.

Options:

- Display resolution to 0.01°C
- Build in RS-232/485
- PT-100Ω temperature probe for direct measurements and control of external systems
- Analog inputs and outputs for external programmer and temperature recorder.

Model	WBL-100	WBL-101	WBL-200
Temperature range	-30°C~100°C		
Temp. constancy	±0.1°C		
Temp. control	PID		
Temp. sensor	PT-100Ω		
Circulation pump	9L/min. max. head 2m	18L/min. max. head 7m	27L/min. max. head 7m
Heater	1600W		2500W
Refrigerator	1/3HP		1 HP
Safety devices	Short circuit breaker, over heat protector, sensor abnormality, overload protector		
Bath opening (mm)	W200xD150xH150		W300xD210xH180
Bath dimension	W200xD300xH150		W300xD360xH180
Outside dimensions	W315xD450xH630		W420xD530xH800
Volume	9.0L		19.4L
In/Output	9.5mm		12.5mm
Weight	35kg		63kg

Available Products Catalogs:



THE STANDARDS INSTITUTION OF ISRAEL

