

VWR 401L CO₂/NonCO₂ Incubator Shakers





VWR® 401 L CO₂ INCUBATOR SHAKERS

The CO₂ Incubator Shaker features Temperature, Shaking, CO₂ Concentration, and Humidity controls. Its stackable design helps maximize floor space, with the capability to stack up to three units high.

PRODUCT FEATURES

- 10" High-Res Color Touch Screen with intuitive graphic interface
- Innovative chamber design features smooth rounded internal corners for easy cleaning
- Infra-Red(IR) CO₂ sensor for precise and reliable CO₂ detection
- Optional WiFi and RS485 control
- UV light for easy sterilization
- Audible and visual alarms
- Mirror finish, pharmaceutical grade stainless steel chamber
- Stackable design up to 3 units
25 mm and 50 mm orbit models available

INNOVATIVE DESIGN

- Intuitive 10" capacitive touchscreen makes many functions, such as setting alarm parameters, easy to complete
- Slide rail platform makes it easy to load and unload fixtures
- Highly efficient inverter compressor refrigeration allows for temperatures as low as 18 °C below room temperature with low energy consumption (minimum temperature of 4 °C)
- Combination of Proportional-Integral-Derivative control and Fuzzy control for temperature ensure temperature accuracy within ±0.1 °C
- Program mode allows user to set up to 12 segments of varying temperature and speed
- Infrared CO₂ sensor provides accurate and reliable CO₂ detection (CO₂ Incubator Shakers only)
- Noise reduction design keeps the instrument noise level to 55 dB
- WiFi monitoring allows the user to stay in touch with the instrument even outside of the lab
- Three axis eccentric balance system provides stable and reliable shaking
- Terminal feedback system ensures precise shaking speed
- Brushless DC motor is highly efficient, quiet, durable, and produces negligible heat that does not affect the chamber temperature

MAIN INTERFACE:

1. Displays the current instrument status.
2. Light button: Press to turn the light on or off.
3. Displays the current function's running status, orbit diameter (for speed), and any alarms.
4. Plus and Minus buttons: Adjusts the corresponding function's value.
5. Displays the set value and allows user to manually input the set value.
6. Run/Stop button: Runs and stops function.
7. Edit button for programmable mode: Sets up to 12 running segments of varying temperatures and speed.
8. Running mode button: Switches between "Easy" and "Program Control" mode.
9. Run/Stop all button: Runs and stops all functions.
10. Main Settings button: Enters settings page (image below), which features specific settings for the user to edit.
11. Function icon buttons: Graphically displays the real-time function data.

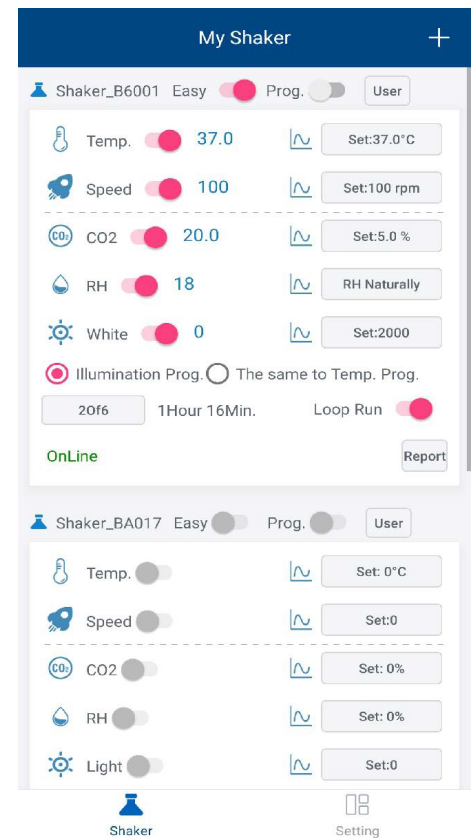
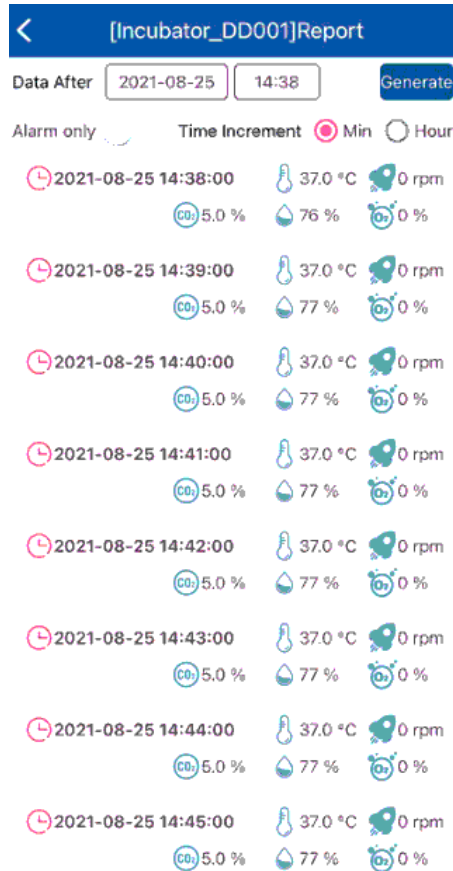
**CONTROL FEATURES**

- Powerful Data storage: Data is stored for more than 2 years.
- Recorded in 1 minute intervals. Real-time data view: On the display, operator can view the running data from latest 7 days.
- Data export: Easily export more than 2 years of parameter data via USB.
- Remote WiFi monitoring accessory and smart phone app enable remote monitoring and control.
- Various Alarms: Alarms can be armed to activate when parameter values deviate outside of users' set bounds.
- Alarm recording: Alarm information is stored and viewable.
- Easy Calibration: Calibrating functions only require inputting the difference between set and actual values.



REMOTE MONITORING APP

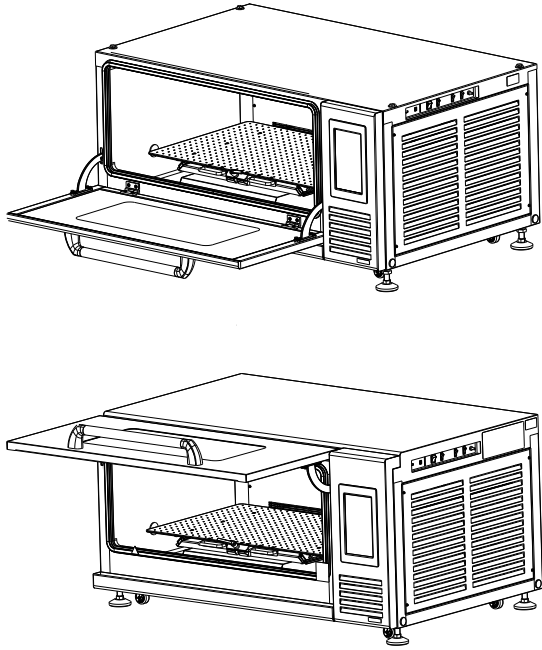
The Remote Monitoring accessory and app gives customers the ability to control their Incubator right from their phone or tablet via WiFi Connection. Features of the incubator app include the ability to set and change the incubator's parameters (including temperature and CO₂ concentration). Text notification are sent when an alarm is activated. This unique app makes it possible to stay conveniently connected with VWR® CO₂/NonCO₂ Incubator Shakers and ongoing projects, whether you are in the lab or not, and Fuzzy control for temperature ensure temperature accuracy within ±0.1 C.



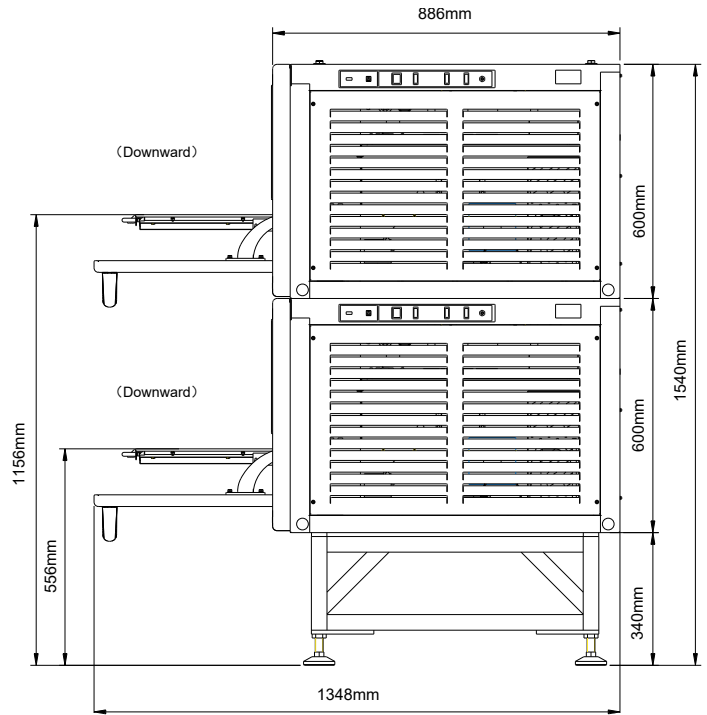
OVERVIEW

- **High Resolution 10-inch Color Touch Screen:** Modular display presents instrument status and function values in a clear and concise manner.
- **Capacitive Touch Screen:** The capacitive screen is more responsive and durable than a resistance screen as there is no reaction delay when the screen is pressed.
- **Screen Lock:** The display screen has an automatic lock screen with password protection function. This prevents any accidental or unauthorized alterations of the programmed operations or settings.
- **Pull Out Rail Platform:** Operators can easily pull the platform out to load or unload fixtures. Only one locking handle in the middle of the platform makes the process fast and convenient.
- **Excellent Temperature Control Performance:** When the incubator is at a stable temperature of 37 °C, the uniformity is ±0.3 °C.
- **Strong Cooling Capacity:** The incubator chamber can be cooled to 18 °C below the ambient temperature (lowest temp is 4 °C).
- **Inverter Compressor:** Makes cooling a noiseless, durable, and highly efficient process while also saving energy.
- **Three Units Can Be Stacked:** This product can be purchased as a single, double, or triple stack.
- **Bi-Directional Ultraviolet Sterilization:** The chamber is equipped with a UV sterilization light component to enhance the germicidal irradiation effect and reach all areas of the chamber.
- **Ultra Quiet Design:** The noise level is less than 55 dB when incubator is running and cooling (loudest process), providing a quiet environment for the operator.
- **Slow Acceleration and Deceleration:** Shaking function starts and stops slowly to prevent large shear forces on the bacteria or cells.
- **High Pressure Water Rinse:** Both the platform and chamber feature an integrated draining system that is fast and efficient.
- **Efficient and Durable Insulation:** Foamed Polyurethane insulation provides advanced thermal insulation. The material is also air-tight, waterproof, lightweight, shockproof, electrically insulated, heat resistant, cold resistant, and solvent resistant.

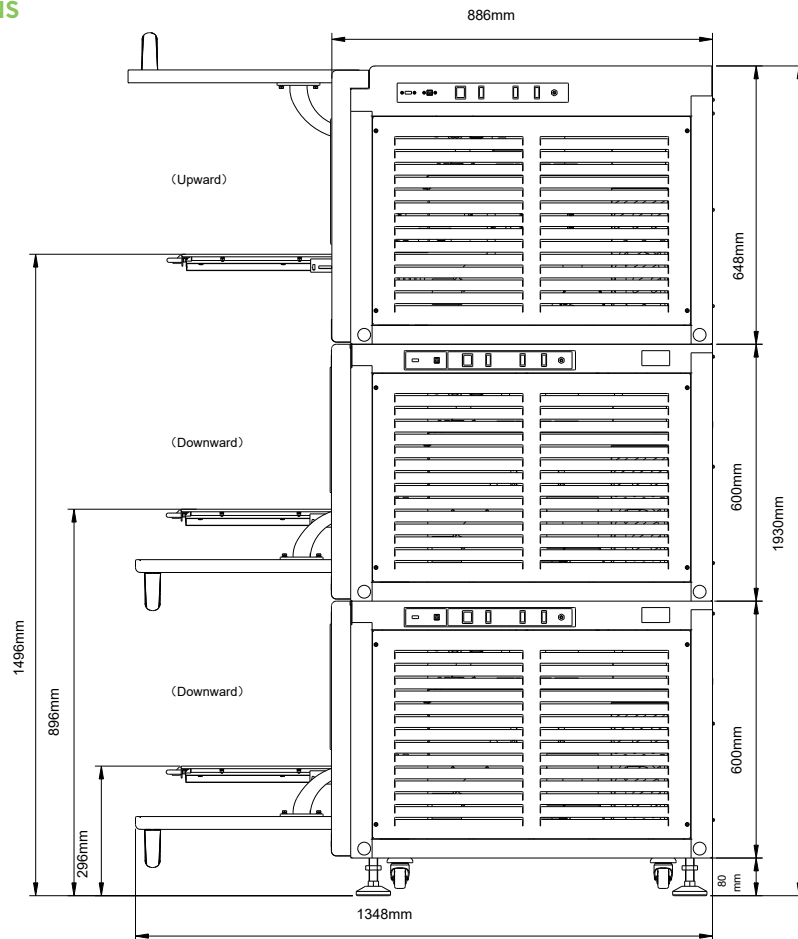
SINGLE UNIT DIMENSIONS



DOUBLE STACK DIMENSIONS WITH STAND



TRIPLE STACK DIMENSIONS



Model	76628-492 / 76628-490 / 76628-494 / 76628-496	76628-472 / 76628-470 / 76628-474 / 76628-498	76628-486 / 76628-484 / 76628-488 / 76628-468	76628-478 / 76628-476 / 76628-480 / 76628-482
Product Name	VWR® 401 L CO ₂ Stackable Incubator Shaker	VWR® 401 L Stackable Incubator Shaker	VWR® 401 L CO ₂ Stackable Incubator Shaker	VWR® 401 L Stackable Incubator Shaker
Platform Dimensions	900x560mm			
Maximum Capacities (Flask Clamps / Sticky Mats*)	Flask Clamps: 50mlx135 / 100mlx60 / 150mlx60 / 200mlx60 / 250mlx60 / 500mlx38 / 1000mlx24 / 2000mlx15 / 3000mlx12 / 5000ml (Thomson)x6 Sticky Mat: 50mlx187 / 100mlx112 / 150mlx104 / 200mlx84 / 250mlx77 / 500mlx40 / 1000mlx28 / 2000mlx15 / 3000mlx15 / 5000ml(Thomson)x8			
Capacity	401 L			
Maximum Load	20 kg			
Temperature Range	18 °C–60°C below room temperature (minimum 4)			
Temperature Accuracy	±0.1°C			
Temperature Uniformity	±0.5°C (@37°C)			
Speed**	0 (stop), 30–300rpm			
Speed Accuracy	±1 rpm			
Orbit Diameter	Φ25mm		50mm	
CO ₂ sensor	IR	NA	IR	NA
CO ₂ Control Range	0–20%	NA	0–20%	NA
CO ₂ Control Accuracy	±0.1%	NA	±0.1%	NA
Temp Recovery Time after Open Door for 30s	≤6min (@37°C)			
CO ₂ Recovery Time after Open Door for 30s	≤6min (@5%)	NA	≤6min (@5%)	NA
Humidity Type	Active Humidification			
Max Humidity	95%			
Programmable Sections	Max 12 segments			
Illumination	Fluorescent Lamps on Left and Right Chamber Walls			
Sterilization	UV sterilization (UV Lamps on Left and Right Chamber Walls)			
Door Open Direction	Downward* (*except units 76628-498 / 76628-496 / 76628-482 / 76628-468 have Upswing Door on top unit)			
Parameter Protection	Password Protection			
Display Data	Temp Curve, Speed Curve, CO ₂ Curve, Humidity Curve	Temp Curve, Speed Curve, Humidity Curve	Temp Curve, Speed Curve, CO ₂ Curve, Humidity Curve	Temp Curve, Speed Curve, Humidity Curve
Display	10" Capacitive Color Touch Screen			
Timer	0–999 hours 59 minutes			
U Disk Export Data	Yes			
Screen Data Display	Displays Most Recent 7 Days of Data			
USB Data Export	Most Recent 912 Days of Data			
Data Storage Interval	1 min.			
Data Stored	Time, Temp, Speed, CO ₂ Concentration, Humidity, Instrument Status	Time, Temp, Speed, Humidity, Instrument Status	Time, Temp, Speed, CO ₂ Concentration, Humidity, Instrument Status	Time, Temp, Speed, Humidity, Instrument Status
Automatic Defrost	Yes			
Touch Screen Auto-Sleep	Screen Sleeps After Set Screen Inactivity Time			
Touch Screen Auto Lock	Screen Requires Password After Set Screen Inactivity Time			
Third Platform Height (for Triple Stack)	1496mm			
Platform Movement	Slides on Rails			
Noise Level	≤55dB			
Water Spray Resistant	Yes			
Interface Languages	English or Chinese			
Auto-run after Power Recovery	Yes			
Heating Power	≤850W			
Cooling Power	70–230W (inverter refrigeration)			
Power	180–1000W	180–950W	180–1000W	180–950W
Power Supply	AC110V±11V, 60Hz			
Mobile Monitoring and Control via WiFi	Optional through 76628-570 Accessory			
PC Monitoring and Control via RS485	Optional			
Visor	Optional through 76628-576 Accessory			
net weight	315kg			
Internal Working Height	335mm			
Outer Dimensions	1400x886x600(+80 foot height)mm			
Warranty	2 Years Parts and Service			
Certification	CE, UL, cUL			

*Sticky Mat can be cut to fit platform

**Note: Double Stack units it is recommended that the Shaker Speed of the top unit <250 rpm. Triple Stack units it is recommended that the Shaker Speed of the middle and top unit < 250 rpm.

PRODUCT ACCESSORIES



Tube Rack



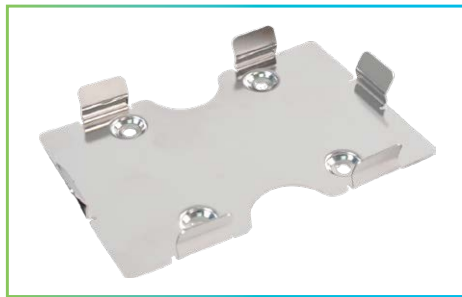
Adjustable Tube Rack



Flask Clamps



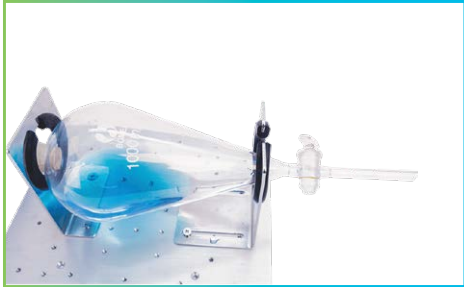
Mini Universal Spring Platform



'96-Well Micro-Plate Holder



Infusion Bottle Clamp



Fixture for Separating Funnel



Sticky Pad



Visor cover



CO₂ Cylinder Pressure Regulator



Stand for VWR Compact Incubator Shakers



Water Carboy

ACCESSORY SPECIFICATIONS

Item Type	Specifications	Max Capacity	Cat. No.
	Holds 25 ml Flask	135	76628-552
	Holds 50 ml Flask	135	76628-514
	Holds 100 ml Flask	60	76628-528
	Holds 150 ml Flask	60	76628-544
	Holds 200 ml Flask	60	76628-550
	Holds 250 ml Flask	60	76628-566
	Holds 500 ml Flask	34	76628-572
	Holds 1000 ml Flask	22	76628-574
	Holds 2000 ml Flask	15	76628-578
	Holds 3000 ml Flask	12	76628-588
Flask Clamps	Holds 5000 ml (Thomson)	8	76628-500
	Holds 40 Tubes x 14 mm	9	76628-502
	Holds 40 Tubes x 16 mm	9	76628-506
	Holds 40 Tubes x 18 mm	9	76628-522
	Holds 27 Tubes x 22 mm	9	76628-524
Tube Racks	Holds 21 Tubes x 30 mm	9	76628-546
	Holds 40 Tubes x 14 mm	9	76628-516
	Holds 40 Tubes x 16 mm	9	76628-518
	Holds 40 Tubes x 18 mm	9	76628-530
	Holds 27 Tubes x 22 mm	9	76628-532
	Holds 21 Tubes x 30 mm	9	76628-534
Adjustable Angle Tube Racks	Holds 24 Tubes x 30 mm	6	76628-542
96-Well Plate Holder	-	30	76628-508
Separating Funnel Holder	-	4	76628-540
	Holds 500 ml Bottle	40	76628-536
Infusion Bottle Clamp	Holds 1000 ml Bottle	28	76628-538
	428x295x80mm	2	76628-510
	165x165x500mm	15	76628-512
	450x400x80mm	1	76628-520
	350x240x80mm	4	76628-526
Spring Frame	550x470x80mm	1	76628-586
	140x140mm	24	76628-548
Sticky Mat	280x280mm	6	76628-504
Stand for Single or Double Stacks only	-	1	76628-528
WiFi Remote Monitor Kit	-	1/unit	76628-570
Visor Cover	Light Blocker	1/unit	76628-576
Water Carboy	Use 1 For Up to 3 Units	1	76628-580
CO ₂ Gas Regulator	Use 1 For Every 2 Units	1 or 2	76628-466