

Pyure IDU™ - Induct Unit

Owner's Manual





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Safety Information Warning!

Use this hydroxyl generator only for its intended purpose as described in this Owner's Manual.

PLEASE READ AND SAVE THESE IMPORTANT SAFETY INSTRUCTIONS.

IMPORTANT SAFEGUARDS

When using electrical equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and injury to persons, including the following:

- Read all instructions before using this hydroxyl generator.
- If the generator is covered by a bag or contains packing material when shipped: Remove plastic bag and packing materials before use.
- · To protect against electrical hazards, DO NOT immerse in water or other liquids. DO NOT use near water.
- · WARNING!: Always turn electrical power off to the unit prior to maintenance or cleaning.
- Use generator only for intended use as described in this manual.
- INDOOR USE ONLY!
- · CAUTION!: For General Ventilating Use Only. DO NOT Use to Exhaust Hazardous or Explosive Materials and Vapors.
- · DO NOT attempt to repair or adjust any electrical or mechanical components on this unit. Doing so will void your warranty. The inside of the unit contains no user serviceable parts. All servicing should be performed by authorized personnel only.
- · NEVER use detergents, gasoline, furniture polish, paint thinner or other household solvents to clean any part of the generator.

Safe Handling and Disposing of Mercury

Mercury is used in the IDU™ device in order to generate the plasma needed to produce UV-C radiation. This is similar to the use of mercury in many types of commercial, fluorescent light fixtures. As long as the glass or quartz outer bulb is intact, mercury is contained within the fixture and poses no health hazard. In the event that an optic breaks, less than 25 mg of mercury could be released. This is much less than what is present in a commercial thermometer. Liquid metallic mercury is hazardous due to its potential to release mercury vapor. In humans, approximately 80% of inhaled mercury vapor is absorbed via the respiratory tract, where it enters the circulatory system and is distributed throughout the body. Short term exposure to 25 mg of spilled mercury does not pose a health hazard, **provided that the source of the mercury is removed promptly**. Chronic exposure by inhalation, even at low concentrations in the range 0.7–42 µg/m3, can cause effects such as tremors, impaired cognitive skills, and sleep disturbance in workers. The OHSA limit for occupational exposure of elemental mercury is 0.1 mg/m3. Mercury is also used in most fluorescent light fixtures.

In the event that the device optic light does not function, the optics should be checked to ensure that they are intact. If the optic is cracked, but not broken, it should be replaced. Cracked optics should be double sealed in plastic bags and disposed of according to local, approved procedures. In the event that the optic breaks and the mercury spilled is clean-up should be done immediately according to the following procedure published by the Environment Protection Agency.

- Evacuate the room for at least 15 minutes
- DO NOT attempt to clean up the spill with a vacuum cleaner, mop or broom.
- Dispose of clothing, fabric etc. that has come in contact with mercury; DO NOT wash.
- Only the individual to clean up the spill should reoccupy the space.
- Close the doors to the area of the spill and turn off the HVAC system; open exterior windows and direct room air out of the window with fans or use an exhaust fan if the area is equipped with one that vents directly outdoors.
- Cover shoes with disposable foot covers or wear shoes that will be disposed of.
- Remove jewelry as mercury will amalgamate with metals and ruin them.
- Use a commercial mercury spill clean-up kit to remove the spilled mercury. (See list of suppliers on the next page).
- Identify items in the spill area that can be cleaned and those that cannot. Non-porous surfaces (finished wood, plastic or concrete) can be cleaned following this guidance. Porous surfaces or fabric-covered items (upholstery,

- carpeting, stuffed animals, pillows, backpacks, unfinished wood, cork, cardboard) are difficult to clean because mercury beads may be trapped in these materials. If you decide you cannot clean these items, place them in plastic trash bags or cover or wrap them in a double layer of plastic and carefully seal with tape. Place the wrapped items in a secure place, preferably outdoors and out of the reach of children and pets. You should consult with a trained professional about how to decontaminate or dispose of these items safely.
- Wear gloves to carefully pick up the larger pieces of broken glass and what remains of the broken device and place them on a paper towel. Gently fold the paper towel around these pieces so you can pick the bundle up and place it in a zipper-type plastic bag. Use index cards or stiff cardboard to push smaller pieces of glass and mercury beads together into a pile. Shine a flashlight at an angle to locate beads of mercury. The beads will reflect light from the flashlight. Check for mercury in cracks or in hard-to-reach areas where beads may be hidden or trapped. Check a wide area beyond the spill.

- Use the eyedropper to collect mercury beads and place them in the plastic bag. Hold the eyedropper at an angle to draw the mercury into the tip. Keep the eyedropper at an angle to stop the mercury from rolling back out until you can put the mercury into the plastic bag. Wrap tape (sticky side out) around your gloved fingers and carefully use it to pick up any remaining glass or beads. Check again with the flashlight to be sure that no beads of mercury remain.
- · At this point, mercury beads may still be trapped in cracks or crevices on irregular surfaces. Sprinkle sulfur powder over the contaminated area and rub it gently all over the surface and into the cracks with a paper towel. Sulfur powder binds with mercury. Use a paper towel dampened with water followed by wiping with another damp paper towel to clean up the sulfur and mercury. Place the used paper towels in a zipper-type plastic bag.
- Put all the items that were used to pick up the mercury, including index cards or cardboard, eyedropper, contaminated tape, paper towels, and zipper-type bags into the trash bag. Carefully remove rubber gloves by grabbing them at the wrist and pulling them inside out as they come off. Place the used gloves in the trash bag.
- · Carefully seal the trash bag that contains the mercury-contaminated waste and put it in a secure place, preferable outdoors and out of reach of children and pets until it can be disposed of safely.
- If possible, open a window and use a fan to ventilate the area to the outdoors for 24-48 hours before resuming normal use. If possible, heat the area (for example, with a space heater) while still ventilating to the outdoors. Avoid blowing the exhaust back indoors or into other nearby residences.
- · Clothes or shoes that did not come in direct contact with liquid mercury should be removed and put into the trash bag that was left outside the contaminated area at the beginning of the cleanup. Close the trash bag and take it outdoors. Carefully remove the shoes and or clothing from the trash bag and air them out thoroughly outdoors for 24 to 48 hours. After the outdoor

- airing, items that are washable can then be laundered.
- Dispose of contaminated items properly! Mercury-contaminated items should not be placed in the regular household trash. Contact your town or county officials for information about hazardous waste disposal in your community.

Mercury Spill Kit Suppliers		
Crackle Scientific	800-334-7725	
Lab Safety Supply	800-356-0783	
Cole-Parmer	800-323-4340	
For schools and businesses only:		
Fisher Scientific	800-766-7000	
Mallinckrodt/Baker	800-582-2537	
Sigma Aldrich	800-325-3010	
VWR Scientific	800-932-5000	
For schools only:		
Fisher Scientific	800-452-1261	

Package Contents

- 1) One Pyure IDU™ Hydroxyl Generator Unit
- 2) One IDU02MD13A Duct Reinforcement Plate, Outside
- 3) One IDU02MD14A Duct Reinforcement Plate, Inside
- 4) One 108" GSK-XX-311 Gasket, Rubber & Foam, Adhesive, 3/16" THK, 1/2" W, Gray
- 5) One Owner's Manual



Installation Instructions

LOCATION

The preferred installation location for the Pyure IDU™ unit is in the return duct as the air will be treated before the filter and HVAC coil. If it is not possible to install in the return duct, it may be installed in the supply duct. If a humidifier is present, the IDU should be installed in the air stream before the humidifier. Make sure the location can be supplied with the necessary power requirements. The IDU™ unit has a power consumption of 96 watts and requires a 120 / 220 volt, 50/60 Hz power source.

Note: The IDU™ unit is not waterproof. If installing outdoors, the IDU™ unit must be installed in a watertight enclosure.

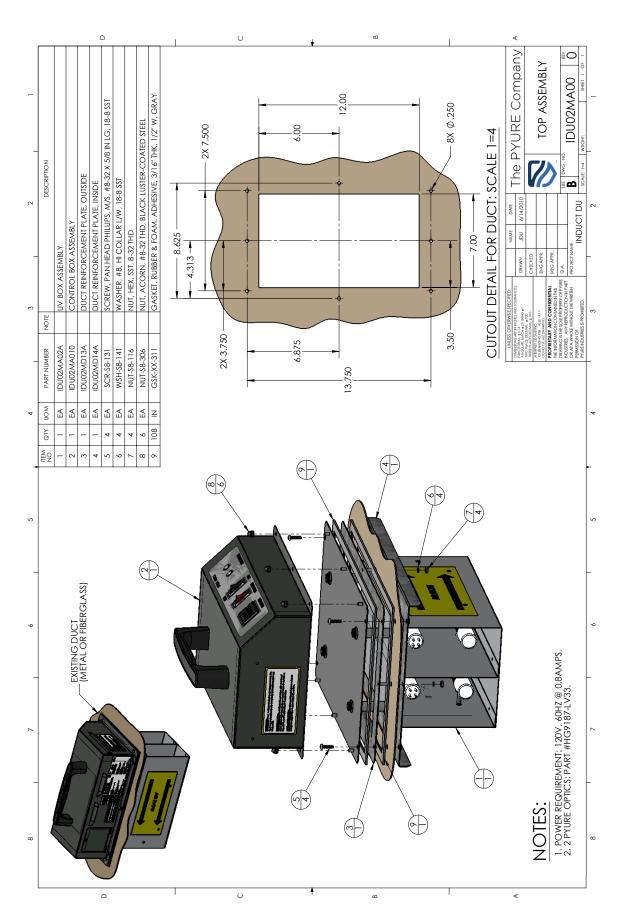
The light/energy produced from the optics used in this product may damage if direct exposure to certain plastics and exposed wires. If any plastic or wires are within the light exposure area, wrap exposed plastic with aluminum tape and cover wires with metal conduit.

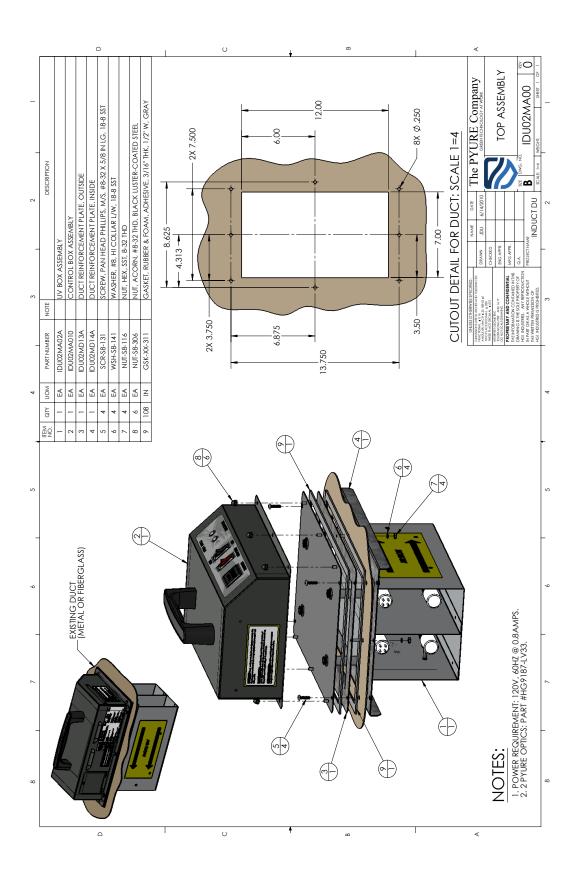
Important Airflow Information: The Pyure IDU™ unit must be installed in the air stream in the proper direction (refer to the Air Flow directional arrows on the side of the reflection chamber). The IDU™ unit can be installed vertically or horizontally, depending on the duct location. Recommended airflow velocity is 25 - 500 ft/min (0.13 - 2.54 m/sec). With flow rates in excess of recommended values, optionally* add the IDU™ to a bypass duct or, please consult Pyure for installation options.

PYURE IDU™ INSTALLATION

- **STEP 1:** Remove the IDU™ unit from its packaging.
- STEP 2: Remove the optics from the packaging material. The optics are fragile, use extreme care. DO NOT touch the glass on the optic with bare hands. Handle the optic from the ceramic ends.
- STEP 3: Position the optics inside the aluminum chamber. The side of the optic containing the four-pronged connector must be pushed into the two optic clamps (use caution to ensure the two small white wires do not get pinched by the clamp). The curved portion of the optic must get pushed into the remaining third optic clamp.
- STEP 4: Connect the wire harness to the optic connector. The wire harness fits in one direction only. If the wire harness will not connect to the optic, turn the harness 180 degrees.
- STEP 5: Remove paper backing from foam gasket on the back of the IDU™ unit and from the duct reinforcement plate (IDU02MD130).

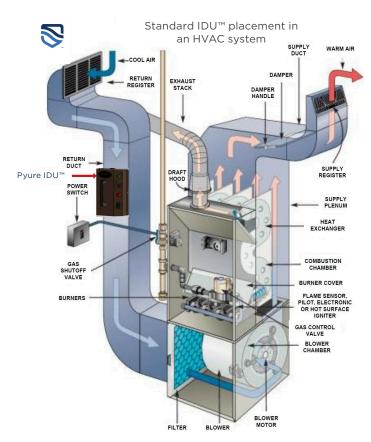
*Optional addition of bypass duct





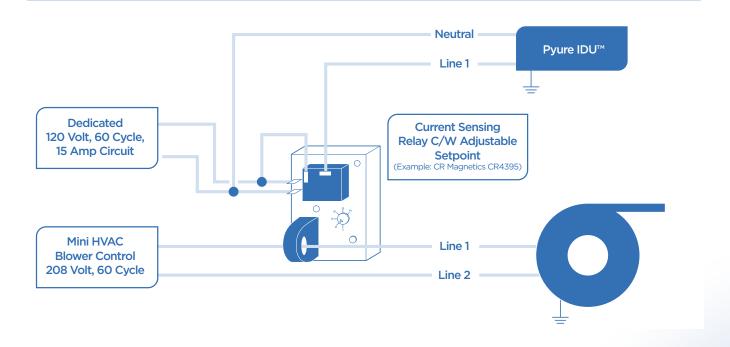
RETURN OR SUPPLY AIR PLENUM INSTALLATION

- STEP 1: Turn off all power to HVAC equipment (lockout and tag).
- STEP 2: Use the included template to mark the necessary cutout and holes onto the duct.
- STEP 3: Cut out the 7 inch by 12 inch opening (use safety glasses and leather gloves).
- STEP 4: Drill the eight quarter inch holes (use safety glasses and leather gloves).
- STEP 5: Install duct reinforcement plate (IDU02MD130) on outside of duct.
- **STEP 6:** Route duct reinforcement plate (IDU02MD140) through the opening and position over studs (use caution to avoid dropping plate inside duct).
- STEP 7: Secure duct reinforcement plates by installing four 8-32 nuts and lock washers (provided).
- **STEP 8:** Install the IDU™ unit by routing the aluminum chamber through the opening, and securing to the plate with four 8-32 screws (provided).
- **STEP 9:** Connect the line voltage as per code to the HVAC EAC terminals or to the blower control. A current sensing relay or pressure switch may be necessary. Check with the equipment manufacturer.
- **STEP 10:** Remove the power entry access cover on the IDU™ unit. Install connector for the power feed in the 7/8 inch hole. Connect cable/wire as per code and make connections to identified wires for ground, neutral, and line (see electrical schematic).
- **STEP 12:** Re-install the power entry access cover of the IDU™ unit.
- STEP 13: Turn power back on to the HVAC equipment (remove lockout and tag).



Note: The IDU™ unit must be hardwired into the HVAC system. Connect to the HVAC EAC terminals or to the blower control. A current sensing relay or pressure switch may be necessary. Check with the equipment manufacturer.

Example of Control Circuit for IDU™ Using a Current Sensing Relay



Operating Guidelines

The IDU™ series can be used in medical, senior living, office, retail and other commercial, scholastic or hospitality use. It is equipped with two hydroxyl generating optics, designed for continuous operation when inserted in a duct and operates using less than 120 Watts (refer to specification page for additional ratings).

The IDU™ series comes in three models, based on the volume of the treatment space (floor area and ceiling height), the air exchange rate (air changes per hour), and the amount of air that is recirculated through the system relative to the introduction of fresh air. The table below summarizes the optimal treatment area for each model, assuming 2 air changes per hour (ACH), 85% recirculated air and 9 foot (2.7 m) ceilings. The guidelines should be adhered to in order to ensure optimal performance and safety.

Model #	Part #	Optimal Treatment Area
IDU™ - IDU02 model	0819355020300	300 ft ² - 1,000 ft ² (27.8 m ² - 92.9 m ²)
IDU™ - IDS02 model	0819355020324	1,000 ft ² - 2,000 ft ² (92.9 m ² - 185.8 m ²)
IDU™ - IDB02 model	0819355020331	1,700 ft ² - 3,000 ft ² (157.9 m2 - 278.7 m ²)

Note: if the air changes per hour are higher than 2, the recirculated air is less than 85%, or the ceilings are higher than 9 feet, the areas listed in the table above will be smaller. If your conditions are considerably different, please contact customer support for additional guidance.

The Pyure Induct (IDU™) devices are Ultra Violet air purifying devices intended for the reduction of bacteria, virus, Volatile Organic Compounds (VOCs) and mold contamination. These units are designed to be utilized as part of HVAC systems or with an auxiliary air distribution system.

Care Instructions

▲ Caution: DISCONNECT the unit from an electrical power source before performing any maintenance or cleaning on the unit.

SYSTEM CASE CLEANING

EXTERIOR

The exterior of the Pyure product can be cleaned with mild dishwashing detergent and a clean cloth, and then rinsed with clean water. DO NOT use any all-purpose cleaners with harsh detergents or abrasives, as these may damage the decals and the exterior finish. Care should also be taken to avoid spraying or otherwise directing detergent or water into or around electrical components.

INTERIOR

The interior of the Pyure product can be cleaned in the same manner as the exterior.

OPTIC CLEANING

Cleaning of the optics is recommended to maintain peak processing efficiency. Fingerprints, smudges, dirt, dust particles, etc. will interfere with the hydroxyl production and should be avoided.

Note: Remove the optics from the optic chamber prior to cleaning to avoid any damage to the optics during the cleaning process (refer to the Optic Replacement Instructions and Safety Information for proper removal).

To clean the optics, use a solution of 10% Isopropyl Alcohol and 90% filtered/distilled water on a clean lint-free cloth and wipe gently. DO NOT use any type of commercial glass cleaner. Using another lint-free cloth, gently wipe the optic until completely dry. Allow the optic to dry completely before operating the system.

Optic Replacement Instructions

- ▲ Warning: DISCONNECT the unit from the electrical power source before performing any maintenance or cleaning on the IDU™ Unit.
- ▲ Caution: Optics contain Mercury. Read and follow the Safety Information on pages 2 and 3 of this manual when handling the optics in the IDU™ unit.
- STEP 1: Turn MAIN POWER switch to the "Off" position
- **STEP 2:** Disconnect power from the IDU™ unit
- **STEP 3:** Remove optics following these instructions:

CAUTION!: Use clean powder free latex gloves and eye protection when handling the optics in this unit

- · With a firm grip on the upper porcelain end of the optic, use your other hand to grip the optic
- Gently 'wiggle' connector while pulling from the optic base.
- Gently pull the optic from the three optic support clips (DO NOT put any pressure on the side of the optic without support).

STEP 4: Install new optic following these instructions:

- Remove new optic from packaging and gently insert into the three optic clips.
- With a firm grip on the upper porcelain end of the optic, use your other hand to grip the optic connector.
- Gently connect the optic connector to the optic.

Note: Optic connector is keyed with the optic base and will connect in one direction only

- Ensure optic connector and optic base are firmly pressed together.
- **STEP 5:** Re-install the IDU™ unit inside the duct.
- **STEP 6:** Reconnect power to the IDU™ unit.
- **STEP 7:** Test unit for proper operation.

Troubleshooting Guide

Problem	Possible cause Solution	
OPTIC 1 or OPTIC 2 indicator light will not light up	MAIN POWER switch is in the "Off" position.	Turn on MAIN POWER switch to the "On" position.
	Optic has failed.	Contact local distributor for service.
	Blue LED has failed.	Contact local distributor for service.
	Internal component failure.	Contact local distributor for service.
Optic not functioning	Rated life of optic has been met.	Contact local distributor for replacement optic service.
	Optic has been damaged.	Contact local distributor for replacement optic service.
	Internal component failure.	Contact local distributor for service.

Specifications

Dimensions (LxWxD): 14.50" x 9.63" x 14.35" [368mm x 245mm x 365mm]

Min. Duct Size (LxWxD): 36" x 10" x 8" [914.4mm x 254mm x 203.2mm]

Weight: 13.47lbs [6.11kg]

100 - 240 VAC 50/60Hz Voltage:

Power: 100 Watts (Nominal) | 195 Watts (Max)

Control: MAIN POWER Selector Switch & OPTIC High/Low Switch

Meter: Hour Meter

Number of Optics: 2

Shipping Dimensions: 16.00" x 16.00" x 16.00" [407mm x 407mm x 407mm]

Shipping Weight: 17.50lbs [7.94kg]

Pyure's manufacturing facility is registered with the Environmental Protection Agency (EPA). (Establishment Number is 99502-FL-1, EPA Region: 04)

Replacement Parts

For replacement parts, warranty service, or any questions regarding the operation and maintenance of your Pyure product, please contact your local Pyure distributor. To find a distributor in your area, please visit:

www.pyure.com/contact

EAN number	PYURE part #	Part description
0819355021147	OPT-XX-176	Hydroxyl Generating U-Optic Lt Blue
0819355021154	OPT-XX-177	Hydroxyl Generating U-Optic White
0819355021130	OPT-XX-078	Hydroxyl Generating U-Optic Brown
0819355021925	XSA00MA10	Ballast Assembly - International
0819355021932	EPC-HM-027	Hour Meter
0819355021949	EPC-IL-180	LED, 5mm Blue

Limited Warranty

The Pyure Company, Incorporated warrants that this Pyure product (excluding spare parts and consumables) shall be free from defects in workmanship or materials for a period of two (2) years from the delivery thereof to the customer. Visit www.pyure.com/warranty-registration to complete and register your warranty online.

The Pyure Company ("Pyure") warrants that the product set forth below will be free from defects in materials and workmanship for the period of two (2) years from the date of original purchase under the following terms and conditions: To obtain service under this warranty, send or deliver this product within the warranty period together with the warranty certificate to any Pyure regional office or Pyure authorized warranty service center. If requested, by Pyure or an Pyure authorized service center, you must present proof of purchase showing date and place of purchase. If upon inspection by Pyure or an Pyure authorized warranty service center, the product is proved to be defective, it will be repaired without charge using, if necessary, new parts or comparable used parts that have been fully reconditioned and returned to you. The warranty period for replacement parts shall extend for a period of six (6) months following the installation of same or for the remaining period of this warranty whichever is longer. This warranty card does not apply in the following cases: (a) damage to product due to mishandling, alteration, failure to follow operation, maintenance or environmental instructions prescribed by applicable instruction manual or shipping damage; (b) damage caused during service performed other than Pyure or an Pyure authorized service center; (c) if the product has had its serial number(s) or other identifying data removed: or (d) damage, defect or unsatisfactory performance caused by the use of equipment not manufacturered or distributed by Pyure. IN NO EVENT WILL PYURE BE LIABLE FOR ANY DAMAGE, INCLUDING INCONVENIENCE, LOST PROFITS, OR LOST SAVINGS, OTHER INCIDENTAL DAMAGE STEMMING FROM THE USE OF THE PRODUCT OR OUT OF DEFECTS THEREIN, OR BY BREACH OF THIS EXPRESSED WARRANTY OR ANY IMPLIED WARRANTY WITH THE RESPECT OF THIS PRODUCT, WHETHER ON ACCOUNT OF NEGLIGENCE OR OTHERWISE, EVEN IF PYURE OR AN PYURE AUTHORIZED WARRANTY SERVICE CENTER HAS BEEN ADVISED OF THE POSSIBLITY OF SUCH DAMAGES.

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6. Miscellaneous.

This EULA is governed by the laws of the State of Florida, U.S.A., and jurisdiction for any action based on the Licensed Pyure Software shall lie in a court located in Palm Beach County Florida. If any part of this EULA is found void and unenforceable, it will not affect the validity of the balance of the EULA, which shall remain valid and enforceable according to its terms. Should you have any questions concerning this EULA, or if you desire to contact The Pyure Company for any reason, please visit: www.pyure.com/contact.



Need Support?

Contact our support team

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