



AC-30 MODEL SERIES

OWNERS GUIDE

NOTICE: This system is intended for use on potable water supplies or disinfected water containing cysts. Do not use where water is microbiologically unsafe or with water of unknown quality. If bacterial contamination is present, a recognized method of water disinfection is required.

Check with your public works department for applicable local plumbing and sanitation codes. Follow your local codes if they differ from the standards used in this manual.

Operational, maintenance and replacement requirements are essential for this product to perform properly. The Good Water Machine™ contains replaceable particulate and activated carbon filters. It also includes a replaceable reverse osmosis membrane filter which is critical for the effective reduction of Total Dissolved Solids. The filtered water should be tested periodically to verify that the system is performing properly.

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Culligan®
GOOD WATER MACHINE™
DRINKING WATER SYSTEM

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SYSTEM SPECIFICATIONS

| | |
|---|---|
| System Flow Sequence | Particle Filter, Activated Carbon Filter, Reverse Osmosis Membrane Filter, Storage Tank, Polishing Filter, Dispensing Faucet |
| Particle Filter | 5 Micron Spun Polypropylene |
| Activated Carbon Filter | Cullar [®] G Activated Carbon |
| Reverse Osmosis Membrane Filter | Culligan [®] Aqua-Clear [®] Thin Film Composite |
| Production Rate ¹ - AC-30 Models | 30 gpd (114 L/day) |
| Ratio of Product to Flush Flow ² | |
| Soft Water Applications | 1:1 ³ |
| Hard Water Applications | 1:3 - 1:5 |
| Polishing Filter | Cullar G Activated Carbon |
| Dispensing Faucet | Culligan Aqua-Clear Faucet Rotary Operation, Stainless Steel and Resin Flow Passages, with Built-in Siphon Break |
| Colors | Polished Chrome, White |
| Storage Capacity - Standard Tank | 2 gallons |
| - Medium Tank | 3 gallons |
| - Large Tank | 9 gallons |
| Dimensions - Filter Assembly | 7.5"W x 3"D x 16.5"H |
| - Storage Tank - Std. | 9" Diameter x 14"H |
| - Medium | 11" Diameter x 14"H |
| - Large | 15.5" Diameter x 24"H |

¹ Rating at 50 psi, 77°F, 500 mg/L TDS Influent, Without Storage Tank

² May vary with pressure. See Technical Manual for all hard water applications and applications where TDS exceeds 1000 mg/L (ppm).

³ Except nitrate models.

INTRODUCTION

Thank you for choosing a Culligan® Good Water Machine™ drinking water system. Your new system is designed to bring you years of healthful, deliciously crystal-clear Culligan® water. With its special faucet installed on your sink, it's like getting bottled water straight from your kitchen tap.

With three separate filter technologies and its unique space-saving design, the Good Water Machine is the most advanced drinking water system available today from Culligan.

ABOUT YOUR SYSTEM

The reverse osmosis method of water treatment has long been regarded as one of the most efficient and effective ways to reduce impurities. It's the technology we've used to build your new Culligan Good Water Machine. In addition, we've incorporated activated carbon and fine particle filtration to bring you one of the most effective systems available today.

GOOD WATER MACHINE SYSTEM COMPONENTS

Refer to Figure 1, page 6

Particle Filter

The particle filter screens out dirt, sand, rust, and other microscopic particles 15 times smaller than a grain of sand.

Activated Carbon Filter

The activated carbon filter gets rid of bad tastes and odors, including chlorine. If present in your untreated water supply.

Reverse Osmosis Membrane Filter

The reverse osmosis (RO) membrane filter squeezes out dissolved substances, including radium, lead, asbestos, and many others. These substances may not be in your water. See Performance Data Sheet for list of substances and removal percentages.

Manifold Assembly

The manifold serves as the functional hub of the system, directing and regulating the flow through each of the system's components. It makes the Good Water Machine extremely space efficient and simplifies filter changes.

Storage Tank

The storage tank holds up to 2 gallons of triple-filtered Culligan® water under pressure for rapid delivery. Optional three and nine-gallon tanks are available.

Polishing Filter

The Good Water Machine™ includes a second activated carbon filter as added assurance that your water will be crystal clear.

Faucet

The special drinking water faucet mounts conveniently on your kitchen sink. A simple twist of the handle is all it takes to enjoy refreshing Culligan drinking water.

CERTIFIED PERFORMANCE

The Culligan® Good Water Machine Model AC-30, AC-30M, AC-30L, AC-30 Premier, AC-30M Premier and AC-30L Premier Drinking Water Systems have been tested and certified to ANSI/NSF International Standard 58 for effective reduction of TDS, Asbestos, Barium, Cadmium, Hexavalent and Trivalent Chromium, Cysts, Fluoride, Lead, Mercury, Radium 226/228, and Selenium. The Model AC-30 Nitrate, AC-30M Nitrate and AC-30L Nitrate have been tested and certified to ANSI/NSF International Standard 58 for effective reduction of the above substances and Nitrate/Nitrite. Nitrate models are acceptable for treatment of influent concentrations of no more than 27 mg/L Nitrate and 3 mg/L Nitrite in combination measured as N and are certified for Nitrate/Nitrite reduction only for water supplies with a pressure of 40 psig (280 kPa) or greater.



Average removal percentages are as follows:

| | | | |
|-------------------------------------|--------|---------------------|-------|
| Asbestos | 99.6% | Fluoride | 96.4% |
| Barium | 90.1% | Lead | 98.6% |
| Cadmium | 98.9% | Mercury | 83.1% |
| Chromium III | 97.9% | Nitrate | 95.0% |
| Chromium VI | 82.6% | Nitrite | 89.6% |
| Copper | 98.9% | Radium 226/228* | 80.0% |
| Cysts (including | 99.99% | Selenium | 94.5% |
| Cryptosporidium, Giardia | | TDS/Sodium Chloride | 91.3% |
| Lambliia and Entamoeba Histolytica) | | | |

*Minimum removal based on approved testing methods with Barium as surrogate.

The substances removed by this system are not necessarily in your untreated water. See Performance Data Sheet for exact percentages of contaminant removal.

HOW TO USE YOUR SYSTEM

With the Good Water Machine™, you'll get a continuous supply of clear, refreshing water for drinking and cooking. But Culligan improves a lot more than just water. Crystal clear Culligan® water is ideal for:

- coffee
- tea
- soup
- juice
- everything you make with water
- recipes
- baby formula
- houseplants
- pets
- pasta
- ice cubes
- steam irons
- drink mixes

PERFORMANCE CHECK

To check the performance of your Good Water Machine, it is necessary to measure the total dissolved solids (TDS) level of the filtered water. This simple test can be done quickly by your dealer.

The Good Water Sentry™ Water Quality Monitor is another way to keep track of your system's performance. This optional accessory checks your drinking water each time you use the special faucet, and signals when the membrane filter may need to be replaced.

The AC-30 Nitrate Models are supplied with a nitrate test kit. Product water must be tested frequently according to the instructions provided with the kit.

If the water quality of your system seems to have declined, drain the storage tank and allow the system to refill. If the problem persists, call your Culligan Man for service.

INSTALLATION

This Owner's Guide provides visual assembly reference only. Since specialized skills are required in the assembly of the drinking water system, we recommend that you contact your local independently operated Culligan dealer to complete this installation.

APPLICATION GUIDELINES

The Good Water Machine[™] is designed for use on potable water supplies meeting the guidelines outlined in Table 1. The system should be installed on your home's cold water line. The flushing stream should discharge through an approved siphon break as illustrated in Figure 1. Installation of this system must comply with state and local laws and regulations.

TABLE 1

| Influent Water Characteristic | |
|---|-------------------------------|
| Pressure ¹ | 40 - 120 psi (280 - 827 kPa) |
| Temperature | 33 - 100°F (1 - 38°C) |
| Total Dissolved Solids (TDS) ² | 0 - 4000 ppm (0 - 4000 mg/L) |
| pH | 5 - 10 |
| Chlorine ³ | 0 - 3 ppm (0 - 3 mg/L) |
| Chloramine | 0 - 3 ppm (0 - 3 mg/L) |
| Turbidity | 0 - 10 NTU |
| Iron | 0 - 1 ppm (0 - 1 mg/L) |
| Bacterial Quality | Potable |

¹ Nitrate units are not certified for nitrate reduction in water supplies with a pressure less than 40 psi (280 kPa). A booster pump is strongly recommended.

² See the Technical Manual for all applications where TDS exceeds 1000 ppm (1000 mg/L). A booster pump is strongly recommended.

³ The reverse osmosis membrane filter used in this system may be damaged by chlorine. This system includes activated carbon which protects this element by reducing chlorine. Influent chlorine should not exceed 3 mg/L.

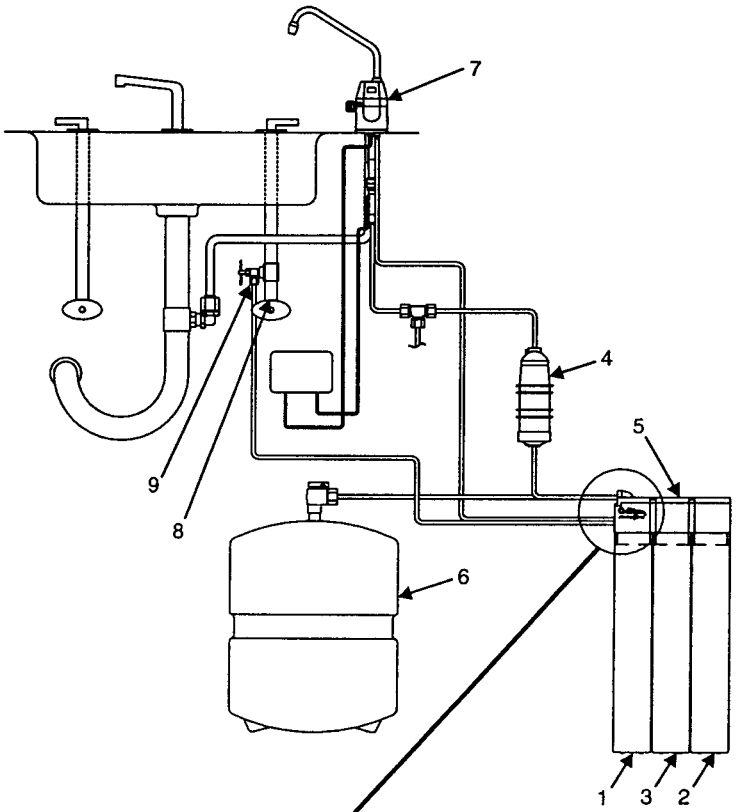
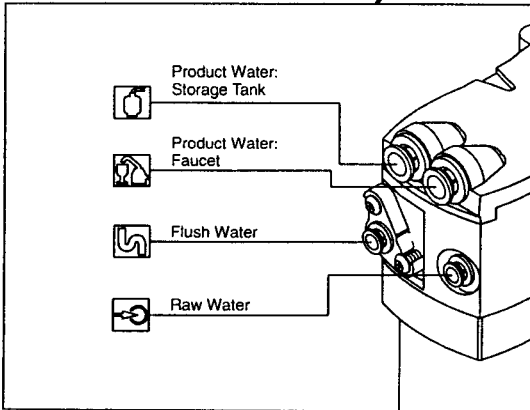


Fig. 1



- 1. Particle Filter
- 2. Activated Carbon Filter
- 3. Reverse Osmosis Membrane Filter
- 4. Polishing Filter
- 5. Manifold Assembly
- 6. Storage Tank
- 7. Faucet
- 8. Cold Waterline
- 9. Water Shutoff

SERVICING YOUR SYSTEM

SERVICE SCHEDULE

When properly maintained, your Good Water Machine™ will give you years of dependable service. Use the following as a guide to get the most out of your system. Service frequency may vary depending on your local water conditions. High sediment, chlorine, turbidity, or hardness levels may require more frequent service. Refer to Figures 3 & 4.

At Least Once Per Year

Replace:

- Particle Filter ①
- Activated Carbon Filter ②
- Polishing Filter ④

Check:

- RO Membrane Filter ③
 - TDS Reduction Performance
 - Flow Rates
- Capillary Assembly

Sanitize the System.

Use the convenient chart inside the back cover of this booklet to keep track of your system's maintenance.

FILTER REPLACEMENT

Culligan recommends that you have your Good Water Machine serviced by your local Culligan Man. You can rely on his or her experience and expertise to keep your system in top operating condition.

If you wish to service your system, the filters are available from your Culligan dealer. See the Parts List at the end of this section for replacement numbers.

Cartridge Conditioning

The activated carbon, reverse osmosis, and polishing filter cartridges must be conditioned as follows prior to installation into the Good Water Machine. Your Culligan Man can do these important procedures at the time of purchase.

Activated Carbon Cartridge - 5 gallon flush to remove carbon dust

RO Membrane Filter - 6 hour flush to remove preservative solution

Polishing Filter - 2 gallon flush to remove carbon dust

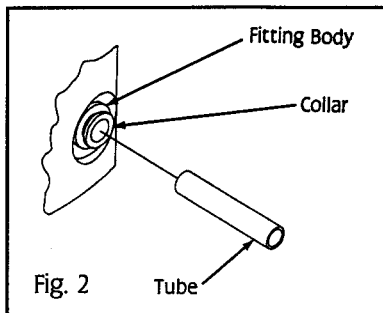


Fig. 2

Tubing Connectors

The Good Water Machine™ features easy-to-use push-in tubing connectors (Fig. 2) on the manifold assembly and the polishing filter.

To disconnect the connector, hold the collar against the fitting body and pull the tube from the fitting.

To assemble lubricate the tubing end with water and push the tubing into the connector until it bottoms out. Be sure the tubing is smooth and free of abrasions, otherwise a leak may result.

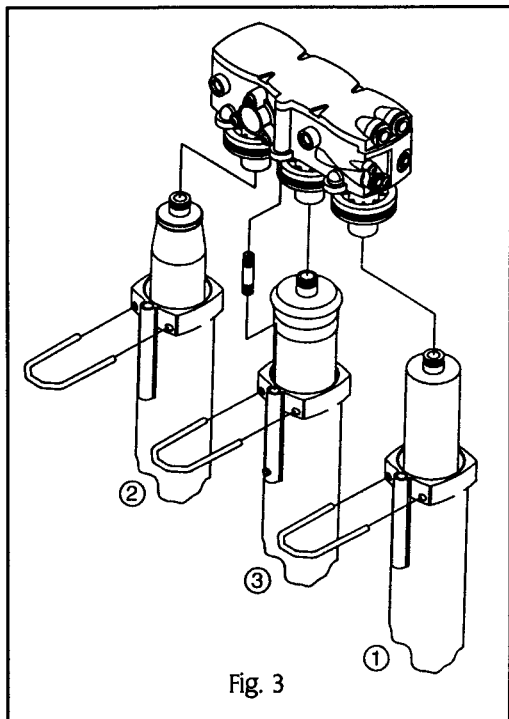


Fig. 3

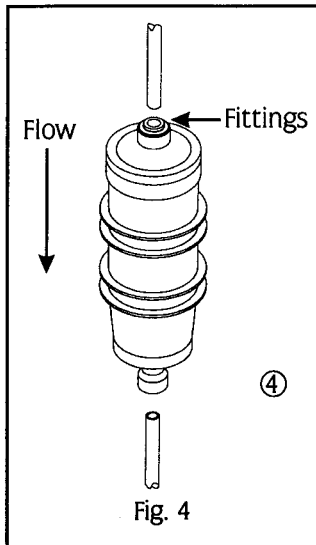


Fig. 4

Filter Replacement and Sanitizing Procedure

Use the following procedure and the reference in Fig. 3 when servicing the Good Water Machine™.

NOTICE: You may want to fill a pitcher with drinking water before beginning service as it will take several hours for the system to refill after servicing.

The Good Water Machine may be sanitized with either 5-1/4% liquid chlorine bleach or a fresh bottle of consumer grade hydrogen peroxide.

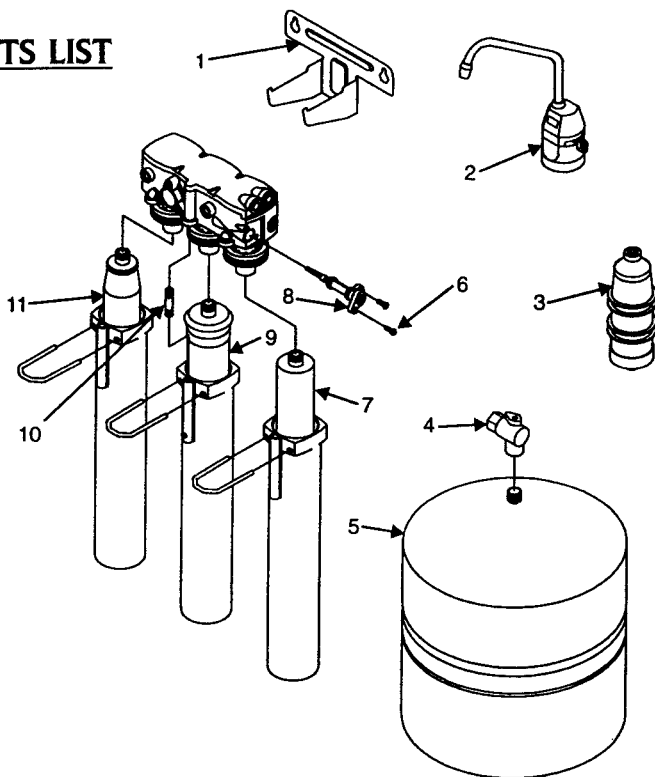
NOTICE: The reverse osmosis membrane filter used in this system may be severely damaged by chlorine. The membrane filter must be removed from the system if chlorine bleach is to be used for sanitizing.

NOTICE: Hydrogen peroxide should not be used if iron is present in the supply water as the RO membrane filter may be damaged.

Cleanliness is essential in the filter replacement procedure. Be sure to wash your hands thoroughly before handling filters. The use of surgical gloves is strongly recommended.

1. Locate the system's supply valve and turn off the system's water supply.
2. Open the dispenser faucet and drain the storage tank.
3. Lift the filter assembly from the mounting bracket and place it in a dish pan or similar container to catch any dripping water.
4. Relieve the pressure in the system by loosening the capillary retaining screws 1/2 turn. Retighten the screws.
5. Pull the u-clip from the rear of the particle filter housing. ①
6. Insert the u-clip into the two square holes at the bottom rear of the manifold. Push up to release the filter housing.
7. Remove the filter cartridge with a downward twisting pull.
8. Clean the inside of the housing.
9. Lubricate the cartridge o-ring with water and insert the new filter cartridge into the manifold.

10. Pour: two tablespoons liquid chlorine bleach or 3 ounces hydrogen peroxide into the particle filter housing.
11. Assemble the housing to the manifold and replace the u-clip.
12. Repeat steps 5-8 and remove the activated carbon cartridge ② and, if using chlorine bleach, the RO membrane filter. ③
NOTICE: If the RO membrane filter is to be reused, place it in a new plastic bag to keep it clean.
13. Assemble the empty housing(s) to the manifold and replace the u-clip(s).
NOTICE: When replacing the RO membrane filter housing, be sure the drain adaptor is in place. (See Item #12, page 11)
14. Turn on the supply valve and allow the system to fill with water. Once water begins to drip or flow from the faucet, close the faucet and allow the tank to fill.
15. Turn off the supply valve and allow the system to sit for ten minutes.
16. Open the dispenser faucet and drain the storage tank.
17. Repeat steps 5, 6, 9, and 11 for replacement of the activated carbon ② and RO membrane ③ filter cartridges.
18. If using hydrogen peroxide, disconnect the storage tank tube from the manifold. With an eyedropper or similar device, inject one tablespoon of hydrogen peroxide into the tube and reconnect it to the manifold.
19. Note the direction of flow and disconnect the tubing from the polishing filter. ④ Fig. 4.
20. Note the direction of flow and install the new polishing filter.
21. Replace the filter assembly onto the mounting bracket.
22. Repeat step 13.
23. After the tank has filled (3-4 hours), open the faucet and drain the storage tank to flush the new postfilter and any remaining sanitizing solution from the system.
24. Allow the system to refill. Your system is now ready for use.
25. Record your service on the chart at the end of this booklet.

PARTS LIST

| Item | Description | Part Number |
|------|--|-------------|
| 1 | Mounting Bracket | 01-0040-81 |
| 2 | Faucet - Chrome | 01-0043-47 |
| | - White | 01-0047-66 |
| 3 | Polishing Filter | 01-0042-91 |
| 4 | Plastic Ball Valve | 01-0045-50 |
| 5 | Storage Tank - Std. | 01-0050-95 |
| | - Medium | 01-0047-76 |
| | - Large | 01-0047-65 |
| 6 | Screw, #10.9 x .625" Pan Head Phil. | 00-4010-16 |
| 7 | Particle Filter Element | 00-4015-38 |
| 8 | Capillary Assembly | 01-0090-25 |
| 9 | Reverse Osmosis Membrane Element AC-30 | 01-0074-02 |
| 10 | Drain Adapter | 01-0040-80 |
| 11 | Activated Carbon Element | 01-0000-78 |
| * | Icemaker Tee - 3/8 x 3/8 x 1/4 | 01-0047-28 |
| * | Tubing, Blue - 1/4" O.D. | 00-4021-84 |
| | - 3/8" O.D. | 01-0002-87 |
| * | Good Water Sentry™ Monitor | 01-0047-12 |
| * | Aqua-Clear® Booster Pump | 01-0093-34 |

* Not Illustrated

CULLIGAN LIFETIME LIMITED WARRANTY

GOOD WATER MACHINE™ AC-30 MODEL SERIES

You have just purchased one of the finest drinking water systems made. As an expression of our confidence in Culligan products, your drinking water system is warranted to the original end-user, when installed in accordance with Culligan International Company specifications, against defects in material and workmanship from the date of original installation, as follows:

For the LIFETIME of the original end-user

The entire reverse osmosis water conditioning unit, EXCLUDING THE EXPENDABLE FILTER CARTRIDGES AND REVERSE OSMOSIS MEMBRANE FILTER USED IN THIS UNIT.

For a period of ONE YEAR

The Culligan brand reverse osmosis membrane filter.

If a part described above is found defective within the specified period, you should notify your independently operated Culligan dealer and arrange a time during normal business hours for the dealer to inspect the drinking water system on your premises. Any part found defective within the terms of this warranty will be repaired or replaced by the dealer. You pay only freight from our factory and local dealer charges.

Damage caused by accident, fire, flood, freezing, Act of God, misuse, misapplication, neglect, alteration, installation or operation contrary to our printed instructions, or by the use of accessories or components which do not meet Culligan specifications, is not covered by this warranty.

Our product performance specifications are furnished with each drinking water system. TO THE EXTENT PERMITTED BY LAW, CULLIGAN DISCLAIMS ALL IMPLIED WARRANTIES INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE; TO THE EXTENT REQUIRED BY LAW, ANY SUCH IMPLIED WARRANTIES ARE LIMITED IN DURATION TO THE ONE-YEAR PERIOD SPECIFIED ABOVE FOR THE PARTS DESCRIBED IN THIS LIMITED WARRANTY. As manufacturer, we do not know the characteristics of your water supply or the purpose for which you are purchasing a drinking water system. Please understand that the quality of water supplies may vary seasonally or over a period of time, and that your water usage rate may vary as well. Water characteristics can also change considerably if your drinking water system is moved to a new location. For these reasons, we assume no liability for the determination of the proper equipment necessary to meet your requirements, and we do not authorize others to assume such obligations for us. Further, we assume no liability and extend no warranties, express or implied, for the use of this product on a non-potable water source. OUR OBLIGATIONS UNDER THIS WARRANTY ARE LIMITED TO THE REPAIR OR REPLACEMENT OF THE FAILED PARTS OF THE DRINKING WATER SYSTEM, AND WE ASSUME NO LIABILITY WHATSOEVER FOR DIRECT, INCIDENTAL, CONSEQUENTIAL, SPECIAL, GENERAL, OR OTHER DAMAGES, WHETHER FROM CORROSION OR OTHER CAUSES.

CONSUMERS:

Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. Similarly, some states do not allow the exclusion of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Consult your telephone directory for your local independently-operated Culligan dealer, or write Culligan International Company, for warranty and service information.

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