## Smart Shopping for Home Furnishings



# Selecting a Water Mattress

*Dr. Leona Hawks*Home Furnishings & Housing Specialist

1987 HI 01

Shopping for a water mattress? When water mattresses first came out, concern was expressed that the weight of the water used in the mattress might make the floor sag or even collapse. This concern was unfounded, since the water weight was distributed evenly over the floor area where the waterbed was placed. In reality,

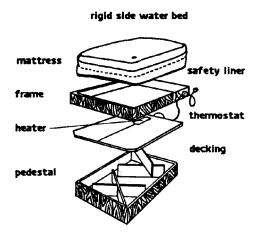
the waterbed weighed less per square foot than many kitchen appliances.

The technology in constructing water mattresses has changed in the last few years. If you are planning to select a water mattress, you may want to look at the new mattresses to see if one of them might fill your needs. If you can answer the following questions, you should be able to purchase a high-quality water mattress.

- ◆ WHAT'S ON THE MARKET?
- ◆ DO I NEED A WATER HEATING PAD?
- ◆ WHAT'S A QUALITY HEATING PAD?
- ♦ WHAT SHOULD I USE FOR A FRAME AND FOUNDATION?
- ◆ WHAT'S ON THE LABEL?
- ◆ WHAT'S ON THE WARRANTY?

### WHAT'S ON THE MARKET?

The many different water mattresses on the market can be grouped into two basic types, the standard and the hybrid (see Figure 1.1, Water Mattress Types). Both the standard and the hybrid are manufactured in full motion and with different degrees of wavelessness. Some general quality characteristics apply to both types.



soft side "hybrid" water bed

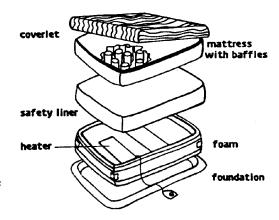
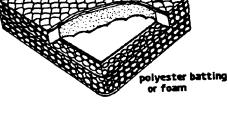
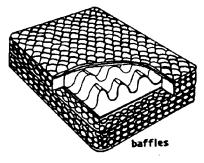


Figure 1.1. Water Mattress Types

The standard water mattress consists of one large vinyl bag, which is often referred to as a bladder. The standard water mattress should have a safety liner, water-heating pad, bed frame and foundation.

The standard water mattress is constructed in several different ways. One method of constructing is to seam two pieces of vinyl together, with the seams running around the edges of the mattress. This type of seaming, which makes the corners round, is often referred to as the radial construction. Another type of mattress construction is the "T" or box shape. One piece of vinyl is seamed at the top and bottom and in the middle of the underside of the





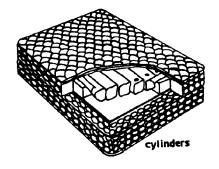


Figure 1.2. Methods of Controlling **Water Mattress Wave Action** 

mattress. The letter "T" can be seen when you look at a corner and the top or bottom seam. The "T" construction usually fits better into safety liners.

The standard water mattress can be purchased from the full motion to completely wave less (90% to 100% motionless). Many manufacturers rate their mattresses according to the degree of motion and may use a combination of different techniques to reduce the movement of water.

Different degrees of wave action are achieved by using baffles, cylinders, polyester batting, or foam (see Figure 1.2 Methods of Controlling Water Mattress Wave Action). The first method used to control the movement of water was with the use of baffles. Baffles consist of extra pieces of vinyl seamed inside the bladder. The number of baffles determines the degree of water motion. The use of several separate cylinder bladders also reduces water motion. Other methods of making waveless mattresses are the use of polyester batting or foam inside the bladder. Sometimes several of these methods are used to reduce water movement.

Polyester batting used inside the water mattress floats on top of the water and seems to provide less firmness than foam. A disadvantage is that if the water mattress is drained improperly, the polyester batting slides around and may pile up in the middle, which takes some know-how to straighten out. Just remember to follow the manufacturer's instructions when draining the mattress. On the other hand, foam does not move around when drained. When wet, however, foam is like a wet

sponge, even when the mattress is drained. The additional moisture and weight make the water mattresses difficult to move and the foam tears easily.

The hybrid mattress, halfway between the innerspring and water mattress, looks like an innerspring mattress. There are many different types of hybrids with many different bladder designs, two separate bladders, several cylinder bladders, different percentages of wavelessness, and even the full motion. Additional items used with the hybrid are a safety liner, fabric outside cover, a frame, usually made of foam, and a foundation especially designed for the hybrid. You can use traditional bedding and headboards, but not a traditional foundation.

Regardless of whether the water mattress is the standard or hybrid, the type of seam and the way the vinyl is joined are very

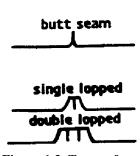


Figure 1.3. Types of **Water Mattress Seams** 

important in determining the quality of the mattress (see Figure 1.3 Types of Water Mattress Seams). When the water mattress first came out; the butt seam was used a great deal. The butt seam consists of two edges of vinyl heat-sealed for about a half-inch with a tab left sticking out from the seam. The problem with this type of seam is that it is not very strong and pulls out with the pressure of water. The more durable seams are the single-lapped or double lapped. The single-lapped consists of two pieces of vinyl folded under once and heat sealed. The double-lapped seam is similar to the single-lapped seam, except that it is folded one more time and heat sealed.

The "T" construction is probably the best type of construction for the waterbed. With the "T" construction, there are only three seams. The fewer the seams, the less chance of one of the seams splitting. The letter "T" is formed when you look at the top or bottom and a corner seam. Two areas of greatest wear are the side seams, where the sleeper gets into and out of bed. Eliminating the side seams makes the mattress last longer.

The proper thickness or mil of the vinyl is another consideration when purchasing a water mattress. Any water mattress with 22 mils of vinyl is a good thickness. The higher the mil number, the thicker the vinyl. Some manufacturers, however, make mattresses of 24, 26, and 28 mil vinyl, which is thick but may be of poor quality.

High-quality vinyl is flexible, not stiff. This flexibility comes from the amount of plasticizer added to the vinyl. Plasticizers give vinyl its flexibility, which is retained with use. The lower quality water mattresses are made with less plasticizer and thus become brittle, crack, and spring leaks. Manufacturers do not indicate on any label the quantity of plasticizer used in the vinyl. The only check you can make is feel the vinyl for flexibility. If it is flexible, it is probably made of good quality vinyl.

With your water mattress, you should purchase a safety liner. The safety liner, the plastic that goes under a water mattress, is very important since it protects the floor against the possibility of water damage if the mattress should leak. Flexible vinyl and lapped seams indicate a quality safety liner.

### DO I NEED A WATER-HEATING PAD?

Heaters are generally recommended for most of the water mattresses, including the hybrids. A water-heating pad is needed because it is uncomfortable to sleep on water at room temperature and because there are usually condensation problems without a heater. Year-round use of a water heating pad helps reduce condensation, mildew growth, and odor on and around the water mattress.

Some manufacturer's claim that their hybrid water mattress does not have to be heated; however, consumers still complain that the unheated hybrid is uncomfortable for sleeping. The cold is transmitted from the water through the top layer of foam to the body. In addition, condensation occurs on the unheated water mattress, especially the hybrids enclosed in a zipper lining. The consumer may think the mattress is leaking when in fact it is condensation. The problem with condensation is that it makes the sleepers uncomfortable from the dampness and causes mildew in the cover, which deteriorates the cover and creates a musty odor.

### WHAT'S A QUALITY HEATING PAD?

The water-heating pad used for hybrids is different from the heater used for the standard water mattress. The hybrids generally take a lower-wattage heater, about 240 watts, because of the shallow water depth. The standard mattress needs a heater between 350 and 400 watts. The higher the wattage, the greater the heat produced.

When selecting a heating pad, look for a large pad surface. Generally, the larger the heating pad surface, the more efficiently the pad heats water.

Consumers often ask how much it costs to operate a water-heating pad. The cost depends on the quantity of water being heated, the room temperature, whether the bed is made, the heating pad size, the wattage of the pad, and the variance of the thermostat temperature control. Under ideal conditions, a queen-sized water mattress can cost as little as \$5 per month to operate and under conditions less than ideal, as much as \$20 per month to operate.

When looking for a water-heating pad, purchase one with a built-in fuse and a light

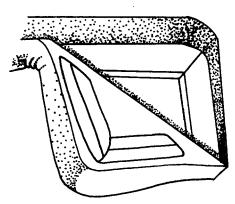


Figure 1.4. Hybrid Water Mattress Foundation

that goes on when the heater is on. The built-in fuse turns the heating pad off if there is a short in the heater, and the light indicates that the heater is working. All ULapproved heaters have built-in fuses.

### WHAT SHOULD I USE FOR A FRAME AND FOUNDATION?

The standard water mattress frame and foundation generally consist of a center support, pedestal, decking, and sideboards. The pedestal consists of a frame and two pieces of wood crossed in the center, which helps distribute the water weight over the floor. If you want strength, the decking should be made of

plywood. The sideboards consist of four heavy boards that hold the water mattress in place. With these needed features, the standard water mattress will have a heavy frame.

The frame and foundation for the hybrid are quite different from the frame for the standard water mattress. The hybrid water mattress consists of a wood-box foundation and a soft-sided frame. The soft sides go around the mattress and contain the water on top of the foundation (see Figure 1.4 Hybrid Water Mattress Foundation). To test the soft sides, push your knee into the foam. If the foam compresses easily, it may not hold up with heavy use. Then sit on the side of the foam to see if it feels firm and gives you support. If it does not support your body weight, it will not support the weight of the water mattress.

Supports used inside the soft sides are wooden slats, fiberglass, air, coils, and reinforced nylon. Foam generally stretches out with age, so it is important to have additional support inside the foam sides.

#### WHAT'S ON THE LABEL?

If the manufacturer's name does not appear on the waterbed mattress, be cautious of purchasing. Some manufacturers have a printed vinyl information sheet attached to the mattress valve. This information may tell you a lot about your water mattress, or it may not tell you anything except the manufacturer's name and lot number. Some of the more valuable information found on some labels are instructions concerning how to drain, fill maintain, and care for your water mattress. The manufacturer's name, the thickness of vinyl, the type of seams used, and whether any materials are used inside the water mattress to reduce water movement may also be found on the label. This information may be in a code form so ask the sales clerk.

Information found on the water-heating pad and box provide a great deal of consumer information. Look for "UL-approved" indicating that the water heater has been tested by "Underwriters" Laboratory for safety. This means that the water heater is grounded, all connections sealed, and the water-heating pad is safe.

### WHAT'S ON THE WARRANTY?

You will find warranties on water mattresses ranging from 0 to 20 years. Most warranties are for manufacturer's defects only and usually are prorated. A life-time warranty is a hoax.

If you do have a defective mattress while it is still under warranty, the manufacturer may repair or replace the water mattress. The warranty does not cover abuse by the consumer or improper installation. In addition, you may have to pay the cost of shipping the water mattress to the manufacturer for repair. If the water mattress has a limited or prorated warranty, you will also be charged a fraction of the normal repair price. Further, the warranty only applies to the original owner.

The heating pad warranty varies from one to four years. Again, the warranty covers only manufacturer's defects. If the water-heating pad is installed incorrectly, such as with a wrinkle or fold in the pad, the warranty will not cover replacement. Another item not covered in the warranty of a heating pad is any foreign substance between the heater and decking, which can burn up the heater. Even a piece of duct tape placed at the edge of heating pad can burn up the heating pad. These are good examples why the dealer should set up the frame and heating pad and fill the water ma tress for you. It takes an experienced installer about 20 minutes to set up a waterbed and a no about 2 hours.

Generally, the heating-pad warranty is found on a separate piece of paper given to the consumer by the dealer. A portion of that paper filled out and mailed into the manufacturer in order for the warranty to be in effect.

### ✓ Quality Checklist

After each question answer with a yes\* or no.

- 1. Does the price of the water mattress incl a fill-and-drain kit, delivery, and installation?
- 2. Is the water mattress put together with the "T" construction?
- 3. Are seams double-lapped?
- 4. Is the mattress comfortable to lie on?
- 5. Does the purchase contain all these essentials: a mattress; a safety liner; a water-heating decking; a bed frame; and a pedestal?
- 6. Is the vinyl used for the water mattress m of 22-mil vinyl or above?
- 7. Is the vinyl used to make the water mattress flexible?
- 8. Does the safety liner have single- or double-lapped seams?
- 9. Is the safety liner made of flexible vinyl?
- 10. If there is a mattress cover, does it have soil and stain-resistant finish applied to the surface?
- 11. Does the warranty indicate that in case manufacturer's defect, the retailer will replace repair the mattress?
- 12. Will the store stand behind the manufacturer's warranty?
- 13. Does the mattress have firm support at the edges if it's a hybrid?
- 14. Is the mattress 6 inches longer than the tallest person using the bed?

- 15. Is there enough width in the mattress to avoid feeling crowded?
- 16. Is the foundation appropriate for the water mattress and is it recommended by the manufacturer?
- 17. Does the heating pad have at least 200 watts for the hybrid or 350 watts for the standard?
- 18. Does the thermostat control for the heater keep the temperature of the water within 2 degrees?
- 19. Does the heating pad have a UL seal on the pad or box?
- 20. Does the pad have a light to indicate when it is working?
- 21. Does the standard water mattress and foundation have center supports in the pedestal?
- 22. Are the soft sides for the hybrid made of foam that is firm?
- 23. Do the soft sides have reinforcement material in addition to the foam?
- 24. Is there labeling on the water mattress with manufacturer's name, thickness of vinyl, and type of seams used?
- 25. Are there any instructions on how to drain, fill, maintain, and care for the water mattress?
- 26. Is there a warranty on the water mattress and did you read it?
- 27. Is the warranty on the water-heating pad for at least 4 years?
- \* If you answered all these questions with a yes, you can be assured of getting a high-quality water mattress.

### **Utah State University is an Equal Opportunity/Affirmative Action Institution**

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Robert L. Gilliland, Vice President and Director, Cooperative Extension Service, Utah State University. (EP/05-95/DF)