

The right foam moves motion furniture — off the sales floor!



Special attention to unique details of recliner construction is important to keep customers satisfied.

Choosing the right flexible polyurethane foam as a cushioning material is crucial.

■ Carol Milano

Americans are leaning back and enjoying it. They spent nearly \$2 billion on recliners at furniture and department stores in 1998, reports the American Furniture Manufacturers Assn. The popularity of recliners undoubtedly is connected to their most distinctive feature: they move. That's not enough, though: customers won't keep buying recliners unless they're very comfortable, too.

Basically, a recliner is a seesaw that needs to be balanced, which is an act performed by the mechanism design. With the mechanism taking up room, recliners typically have thinner cushioning than sofas. That lack of internal space necessitates high quality foam. "Cheaper foam may sit fine initially, but it will soon lose support," warns Richard Loftin, executive vice president at Vitafoam.

At Klaussner Furniture, mechanism durability is of paramount



The reclining option isn't limited to single seats. Here Sealy Furniture, a division of Klaussner Furniture Industries, demonstrates that a motion sectional with reclining seats is a perfect addition to any family room.



importance, stresses Rick Kite, vice president manufacturing. "The mechanism is an integral part of the frame, but it doesn't affect our choice of foam. We'll use different foams based on the style of the piece. A relaxed piece of furniture will take a different type of foam than a piece with a firmer look and feel."

All Barcaloungers, whether upholstered in fabric or leather, have the same interior construction, including top-grade, high-resilience foam. "We specify high resilience (HR) foam," says Phil Cooper, vice president/merchandising. "In a cheaper foam, other agents that give it weight are added. This makes it harder to explain to customers why the foam we use is the best."

It's all about comfort

Seventy-five percent of Action/Lane's market is in rocker recliners. The size of the mechanism doesn't determine the size of the chair; style does. "In everything we do, we have a common goal: comfort," declares Doug Waggoner, merchandising manager for Action's Reclining Chair Div. "Our Vintage line has

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Some good definitions to know

Research by the Alliance for Flexible Polyurethane Foam has shown that many in the upholstery industry aren't fully aware of the properties that make Flexible Polyurethane Foam (FPF) an excellent material to use in seat cushions. Understanding these terms will help anyone in the industry understand quality seating.

Bottom out — Refers to a cushion that has a lack of support when under a full weight load. A cushion that bottoms out sinks down until the sitter feels the structure underneath.

Comfort — The ability of a cushion to deflect at the surface and to conform to body shape, which prevents a concentration of pressure on the body.

Density — Measures the mass per unit volume in FPF and is expressed in pounds per cubic foot (PCF). The higher the density, the more durable the foam and the more expensive it is to produce. Most furniture uses foam cushions with densities ranging from 0.9 to 2.5. The higher the density the longer the foam will retain its original properties.

Durability — How well FPF retains its comfort, support

and shape with use.

Dynamic fatigue — A durability test performed in the laboratory typically using a pounding type mechanism.

Flex fatigue — The loss of FPF firmness after flexing the foam for a predetermined number of cycles.

High resilience (HR) foam — High Resilience FPF has a high support factor and greater surface resilience than conventional foams. High resilience FPF has a different cell structure, which helps add support, comfort and resiliency or bounce.

Indentation force deflection (IFD) — The measurement used to determine the surface feel of a particular piece of FPF. It's defined as the pounds of force required to indent a 4-inch foam sample. Generally speaking, the lower the IFD number, the softer the cushion.

Resilience — An indicator of the surface elasticity or "springiness" of FPF.

Support — The technical term, "support factor," measures support. A high support factor in a cushion produces a softer surface feel without any threat of bottoming out.

The right foam

a drop-in coil seating unit with Reflex foam that has a soft, supple feel, but with good rebound and noticeable, soft comfort.”

Different elements in motion furniture, including seat pitch and support in the reclining position, require higher density foam than stationary seating. In recliners, pitch varies from style to style. A chair with the wrong pitch won't sell, says John St. John, Flexsteel product manager. Pitch has a gender difference, too: women like to sit straighter than men, so more pitch is needed for males.

According to Waggoner, with more than 125 styles of recliners, Action/Lane has discovered that men tend to want comfort in a recliner, while women seek a chair with more style. It offers some compromise models with traditional reclining backs and attractive style options.

A recliner's seating unit is dif-

ferent from stationary furniture. Most motion furniture is based on sinuous spring units. “Recliner seats are ‘tight’ — non-reversible, non-removable. They require an excellent cushion material which lasts longer,” explains Jim Mulvey, general manager for Future Foam. In a tight seat, the density of the material determines how long the foam retains its shape and does its job. “Get that right, and all a manufacturer has to worry about is correct sizing and getting the product out on time,” he contends.

No one, best choice

Even when a chair is in the recline position, the seat cushion still bears weight and needs the best foam. “Most companies use high resilience (HR) foam,” says Bobby Bush, vice president/foam products at Hickory Springs. The Indentation Force Deflection depends on the cushion wrap that is used, which is generally poly

fiber batting. (IFD or Indentation Force Deflection is a measurement of the pounds of force required to compress a standard-sized foam sample.)

“A common combination for removable cushions is a 6-inch foam core plus 1-inch wrap of batting on either side for a total of 8 inches,” says Bush. For tight seats, poly batting is best used only on the top, he adds.

The specific type of foam that should be used depends on where it will be placed in the recliner. Seat cushions get the most use, observes Greg Barbe, executive vice president at Foamex. “Ask a supplier how the material performs over time, and about dynamic fatigue testing for 10,000 or 100,000 cycles,” he suggests.

La-Z-Boy puts 3 to 5 inches of foam in recliner seats. “We use a heavier, 2-pound density and a higher IFD foam,” reports Dave Westendorf, vice president/prod-

When to specify foam

Make choosing the right Flexible Polyurethane Foam (FPF) a regular part of your design process; foam suppliers can be a valuable resource for your creative team. Too often, “foam cushioning can be an afterthought,” laments Richard Loftin, executive vice president at Vitafoam. “Many times the designer has already spent the allowance on fabric, mechanism, etc. and just puts in the cheapest foam. Six months later, the company gets complaints.”

“While conceptualizing, designers should see what's available and find a foam that does

what they want,” suggests Alvaro Vaselli, vice president, marketing/bedding & furniture, Foamex International. “I believe foam could be used as a selling point. In focus groups with consumers, the issue of cushion performance — articulated in many different ways — comes up time and time again.” Talk to your supplier about durability, comfort, physical properties, elongation and fatigue, he advises.

His colleague, Greg Barbe, executive vice president at Foamex, adds, “We can help the R & D or design person come up with the optimal look and feel

they want. During the design process, we assist manufacturers and designers in finding a foam to do what they want — and probably save them some money.”

“We'd like to be in with the designers when they're picking mechanisms and fabrics, because fabric will change the way a foam feels,” observes Steve Riddle, vice president/sales at North Carolina Foam. “You may need to adjust your IFD, depending on the fabric. An open weave will feel softer than leather over the same foam.”

Future Foam often meets with designers or manufacturers when



Attractive wood legs and arms on Barcalounger's Pacifica recliner make it an attractive addition to any room.



Action/Lane's Dawson recliner and ottoman combine comfort with style to appeal to female recliner buyers.

uct planning & development. "We try to use the very best material." La-Z-Boy uses profiled foam in its cushions to provide "a supple look, round edges, and a nice soft feel when you sit," says Westendorf. He contends that the extra labor required to profile foam yields a better look.

In recliners, back foam is more

they want a sample for their first prototype. "They need to sit on it, to see what the cushioning feels like, and if all the pieces fit together," notes Jim Mulvey, general manager for Future Foam.

The world of furniture design is filled with bright spots. "We go in and specifically create foam products for each new chair — a custom touch — to make sure all the cushioning works, says Dave Westendorf, vice president/product planning & development at La-Z-Boy. "The fun part of my job," he confesses, "is looking at and sitting in all the new chairs."

important than in stationary chairs, because the back takes more body weight, notes Bobby Bush of Hickory Springs. "Most recliner backs are quite intricate as a result." Back height also determines how much room a chair will take up in a reclining position, notes Waggoner of Action/Lane.

La-Z-Boy combines 12 to 16 gauge sinuous wire support with stronger foam for recliner backs. "Our competition uses poly fiber, but we don't. We choose a contoured foam and cut it into a profiled shape to fit your back better," says Westendorf. Using 12 to 16 pound (IFD) foam in its chair backs, La-Z-Boy finds that with an IFD any greater than that the foam is too hard and becomes uncomfortable.

Recliners need extra support

"Ask your [foam] supplier about the support factor," advises Steve Riddle, vice president/sales at North Carolina Foam. "Talk about dynamic fatigue: how much the cushion softens after repeated use." His company makes foam in

a wide range of IFDs. "You need to tailor-make the firmness for the intended use," he says. "The recliner back would need to be softer than a seat."

Manufacturers concur. At Klausner Furniture, "Chairs have many different components. We specify different foam for the back, the seat and the arms. It's important to use the right foam for the right application," says Kite.

"Manufacturers should realize they can do virtually everything they want with FPF cushioning now — and they probably don't do nearly as much as they could," exclaims Alvaro Vaselli, vice president marketing/bedding & furniture, Foamex International.

Furniture manufacturers often tell Foamex that they use a lot of polyester fiber because it's soft. However, fiber tends to collapse in a few months, leaving loose fabric and wrinkles on the cushions. To solve this problem, explains Vaselli, Foamex developed a foam as soft as fiber, using a patented foam production method called Variable Pressure Foaming (VPF).

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The right foam

Reflex HR, from Foamex, is a new high resilience foam. Reflex Wrap also is available in a variety of firmnesses, to replace conventional fibers while matching their filling power. Reflex Wrap does not have the matting problem fiber sometimes produces.

La-Z-Boy uses more foam than poly fiber or cotton, and more foam than its competitors, reports Westendorf. "While cotton rounds nicely, it does not give support," he says. La-Z-Boy stopped using cotton in the early '70s, partly because of dust factors associated with its processing.

Which foam works best

Most foam suppliers have products they recommend specifically for recliners. Generally, HR foam allows the use of a softer foam with a higher comfort level. Ask your supplier to suggest alternatives and to explain why each would work well in the specified recliner.

North Carolina Foam's Riddle suggests Softcel, a very soft foam



Leather, seen here on La-Z-Boy's Cardinal, is a popular recliner option.

used to replace fiber, because it will provide loft without matting down. "Visco-elastic foam — what people call memory foam — has a slow recovery and needs to be combined with other types of foam, but it can give a soft feel in cushioning," he points out.

Vitafoam recommends its Ultracel products, such as Vita XL, a high-density urethane with a good seating and comfort factor. Hickory Springs endorses Enduro-Plush in 1.8 density. It's a high resilience foam with the advantage of durability, Bush explains.

"Seating requires a higher density foam," says Future Foam's Mulvey, who believes that 2.5 pound density foam is the best material. While a manufacturer could start with its 1.8 density conventional foam, "Our HR foam, Future-cell, is an excellent cushion material, which gives a longer life."

"The thicker the foam, the softer it can be," notes Flexsteel's St. John. All foam loses some resilience and firmness over time. But, according to St. John, 1.8 conventional foam loses more firmness than HR foams. He's discovered that 1.8 conventional foam can lose about 7 to 9 percent of its firmness, compared to a loss of only about 2 to 3 percent in an HR foam.

"Anyone who sits in a chair for a long time needs more support, and so do chairs that are used constantly," says St. John. Heavier people need a firmer



La-Z-Boy's Branson chaise recliner in a stylish eggplant cover offers the ultimate in comfort.

foam, he points out, although HR foam isn't only for larger consumers. "Our standard is 2.0 HR foam, which has a higher modulus. It has greater load-carrying capacity and retains its size, shape and firmness better," he notes.

Many customers want their recliners soft and plush. However, as any foam is sure to gradually lose some firmness, choosing a foam that's too soft isn't advised. Manufacturers need to find a middle ground between the firm support that makes a chair perform well, and the softness that customers want. ■

For more information

The Alliance for Flexible Polyurethane Foam offers educational materials to upholstered furniture manufacturers. Call 800/696-AFPF to receive free copies of the Furniture Industry's "Guide to Today's Flexible Polyurethane Foam" or the "Millennium Report on Engineered Comfort." Or, visit the Alliance's newly updated website at www.afpf.com.