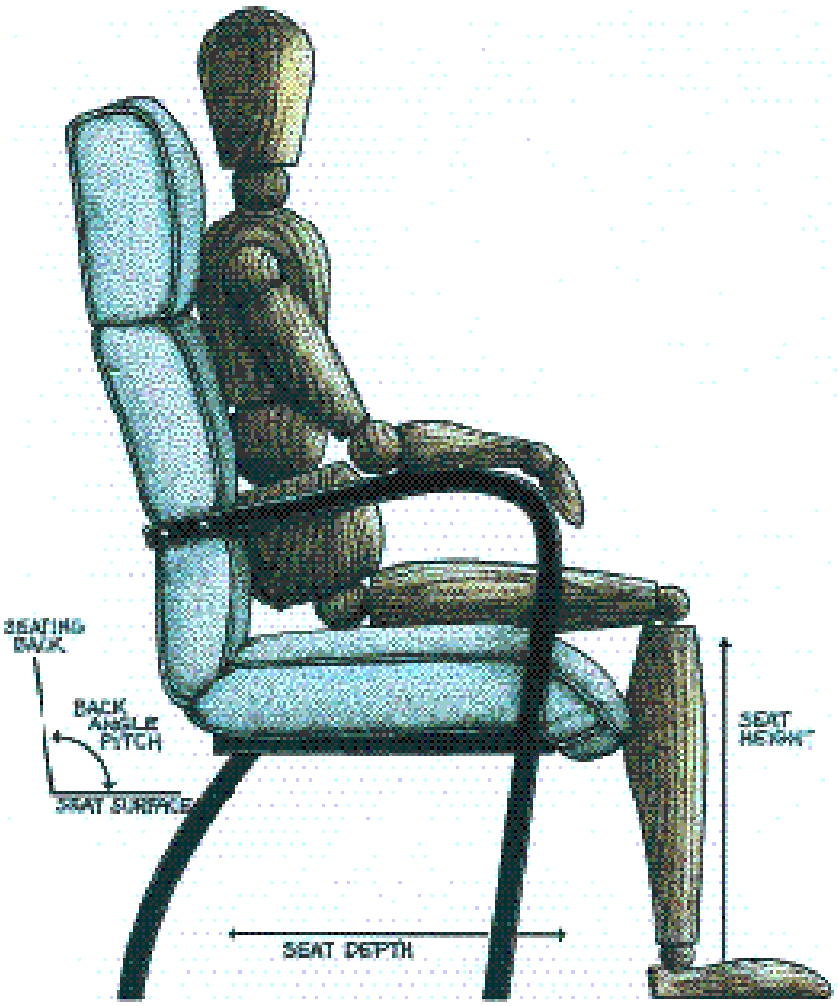
Engineered Comfort:

A Systematic Approach to Customer Satisfaction

Upholstery that flies off the retail floor needs to balance creative design with comfort and value. If it looks good, rides well, and is priced right, your chances for success will increase dramatically.



Consumer studies consistently indicate that one of the top decision-making standards for buyers of upholstered furniture is comfort. After all, the purpose of cushioning is to achieve a more relaxing, comfortable seating experience. How the human body relates to a piece of furniture depends on both art and science, and the successful marriage of the two hinges on careful consideration by designers and precise construction by engineers.

Today's technology unlocks a new universe of style options that lend a refreshing versatility to furniture designs. The trend toward customized components gives consumers many more choices in their furniture selection. But with creative design comes the need for technical precision to maintain the comfort criteria that your customers demand in their furniture.

Balancing cost and comfort

Given the trend toward customization, the challenge of balancing comfort with cost, while still offering creative features, must be addressed by upholstery manufacturers. Currently, the industry is abuzz

with talk about "Engineered Comfort," a newly defined concept that integrates furniture component properties with aesthetics. A new booklet produced by the Alliance for Flexible Polyurethane Foam defines engineered comfort and explains how it links art and science to create comfort, versatility, and value in upholstered seating.

Many factors are incorporated into the comfort of a piece of upholstered seating. Like a finely tuned engine, the performance of one component is linked directly to the performance of another. As long as every piece of furniture has different parameters and each component has a different capability, no one formula can satisfy every design option. Engineered comfort encourages the use of information based on scientific data obtained by standardized performance characteristics.

Back to basics

AFPF's "Millennium Report on Engineered Comfort" is an easy-to-read primer on the properties of furniture components. Descriptions of seat height and depth, total vertical motion, cradling, seat and back pitch angles, the effect of fabric selection, and ratio of firmness help upholstery manufacturers and designers understand the close association between the components and how their interaction impacts comfort.

The report also defines flexible polyurethane foam properties such as density, IFD, support factor, flex fatigue, and resilience, and characterizes the role each plays in comfort and quality. In addition to the ABCs of furniture design and construction, the report also highlights the working relationships between supplier and manufacturer.

When it comes to manufacturing comfortable and versatile upholstery, including suppliers such as FPF manufacturers, early in the process helps integrate valuable performance data and expertise into design and construction. In so doing manufacturers can specify the best cushioning materials for the greatest comfort at the lowest possible cost.

"Utilizing the expertise of suppliers who really know their product's properties and applications takes a lot of the guesswork out of design," says Lou Peters, executive director of the Polyurethane Foam Assn. "Finding the right materials with the right components makes the process more cost-efficient in the long run. A key to the successful integration of scientific data with creative design is the development of working relationships between flexibile polyurethane foam suppliers and furniture manufacturers."

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In this era of customized products it's important for manufacturers to remember that any change in style, however subtle, affects the design criteria. Features such as fabric selection, seat height and depth, and total vertical motion are all linked to the overall comfort of a piece of furniture. Any variation has the potential to create an imbalance. That's one reason why the intelligence gained from working relationships between suppliers and manufacturers becomes crucial to the comfort of that piece.

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Engineered Comfort:

Taking a more quantitative approach to the design process will encourage more technical accuracy.

To help designers, specifiers, and engineers reach their comfort and performance objectives, the Millennium Report cites five critical questions that should be asked at the outset of any project:

1. What is the end use of the upholstered product? By nature commercial and residential upholstery have different requirements and specifications. Knowing a product's end-use makes a critical difference in design decisions.
2. What are the limitations of the upholstered piece? Certain types of furniture have regulatory and legal requirements that may affect their design. For example, commercial products may have more stringent safety restrictions than residential pieces, depending on their application. In other cases, products may have to meet flammability requirements.
3. What is the time of use? The frequency and length of time a piece is going to be utilized bears heavily on the design of a piece of upholstery. For example, an upholstered chair or leather recliner that is used for long periods of time will require a much different construction than a dining room chair.
4. What are the target price points for the upholstered piece? With a low price point, you can't spend a lot of money on exotic materials. Planning in the early stages allows you to build in as much performance as possible for the dollars available.
5. Have you discussed your design "vision" and production requirements with your FPF supplier? Because of the wide range of options available with flexible polyurethane foam, consulting with your FPF supplier can make a critical difference. Input in the early stages can help designers, specifiers, and engineers understand and use new innovations to achieve the desired performance, look, and feel.

Knowing the answers to these questions will help identify the components and features necessary to build a high-quality, comfortable piece of furniture.

The changing landscape

Upholstery manufacturers have long known the importance of precise measurements in their designs. Now, taking a more quantitative, engineered approach to the design and construction process will encourage more technical accuracy and aesthetic satisfaction. Forging bonds between manufacturers and suppliers strengthens the link between art and science.

The value of a supplier's perspective on a new design is slowly being recognized. In recent years, we have begun to see the emergence of technical support teams that assist manufacturers in the development and application of new products. This new relationship is mutually beneficial because suppliers can assure the proper application of their products.

Jerry Epperson, furniture industry analyst with Mann, Armistead & Epperson, believes in the growing trend toward mass customization that requires designers, engineers, and suppliers to work together to find that perfect blend of comfort and individuality. Cooperation, he says, is the key to opening new doors toward innovation, productivity, and increased customer satisfaction.

For your free copy of the "Millennium Report on Engineered Comfort," call the Alliance for Flexible Polyurethane Foam at 800/696-AFPF or circle No. 50 on the Reader Service Card in this issue.