



With over a hundred different strut profiles available, the aluminum modular profile system offers a wide range of application options along with numerous advantages.

Aluminum Framing – Everything to Build Anything

Key Insights & Considerations

- **Quick assembly, flexible conversion and reusable components allow for cost-effective assembly solutions.**
- **Easily reconfigurable materials provide customized lean, demand-driven assembly environments.**
- **Software platforms, such as MTpro, makes the planning and design of assembly technology systems easy and efficient.**

Introduction

With its sleek look and seemingly simple function, aluminum structural framing is an unsung hero of manufacturing. Versatile, easy-to-use and practical in a variety of applications, aluminum framing offers numerous advantages across multiple facets of the user's respective industry. With the right system, turn any vision into a reality with the aluminum framing portfolio that provides everything to build anything.

The cost-effective solution

When compared to the alternative, aluminum framing is a cost-effective solution. Instead of using old-fashioned welded steel to build structures, aluminum framing components are a smart replacement. Switching materials enables structures to be built faster and cheaper, saving companies time and money on both parts and labor. With dozens of bolt-together connectors and over a hundred different strut profiles available, structures for virtually any load or application can be quickly assembled without special tools or product expertise. Friendly for both the environment and wallet, aluminum framing is reusable, making it simple and inexpensive to change structures as the needs of the application change.



Aluminum framing helps increase productivity and worker comfort when its customized capabilities are applied to workstations.

- **With over 500,000 potential combination options, Rexroth's Aluminum Profile System can be used in a wide range of applications and industries.**
- **Aluminum framing provides a foundation for linear motion and automation and electrification solutions within the Factory of the Future.**

For additional savings, choosing aluminum framing that already has a clean finish and aesthetically pleasing design saves additional time and costs by eliminating the need for extra painting or another finishing to complete the task.

Aluminum framing builds better work environments

With equal importance to its ability to assemble complex structures, aluminum framing also supports the people who interact with it on a regular basis. A prime example is the use of aluminum framing for manual production systems. Easy to reconfigure and robust enough to withstand hundreds of changes, aluminum framing helps increase productivity and worker comfort when its customizing capabilities are applied to workstations.

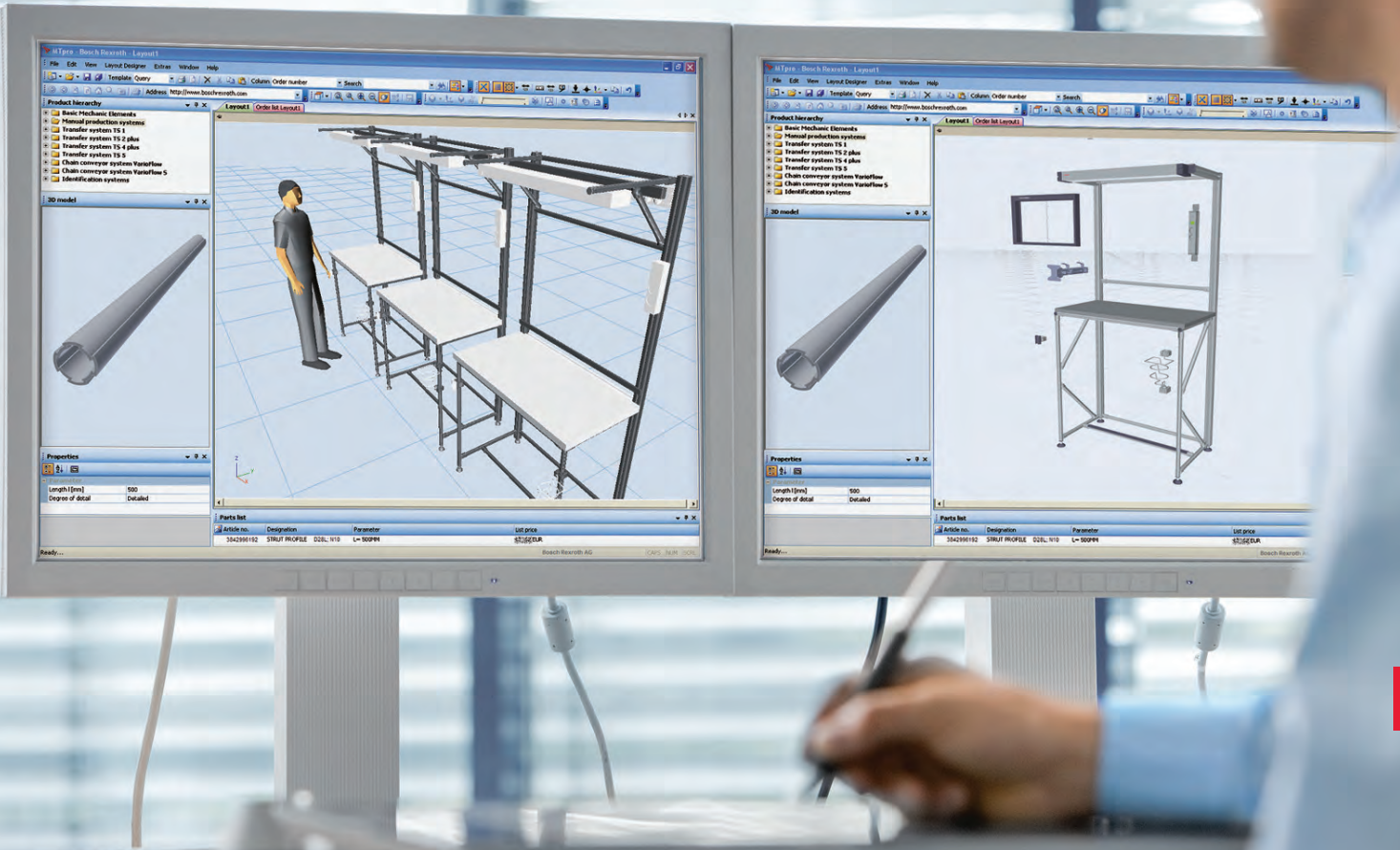
Lean manufacturing is a mindset that encourages production processes resulting in exactly what customers ordered. Nothing more or nothing less. This yields several benefits for the manufacturers including, but not limited to, reduced inventories, increased productivity, faster time-to-market for new products and more. But lean manufacturing benefits the workers just as much as it impacts the company. Lean manufacturing practices can reduce the number of job-related injuries and increase labor productivity to the benefit of employees and aluminum framing is a key player. With aluminum framing, implementing lean manufacturing is a snap.

Versatile and resilient, aluminum framing can be used to make the workstations, flow racks, material shuttles, and more that bring companies closer to the

higher productivity and safer workplace produced by a lean environment. Because lean manufacturing puts an emphasis on cutting processes down to the necessities, it's equally important to clarify that lean manufacturing is not promoting job elimination to achieve more efficient production. When implemented properly, the lean mindset should have the worker's benefit at the forefront, and the technology chosen to support lean should also support the employees using it.



Custom safety structures with corrosion-protected surfaces protect workers and equipment from workplace accidents.



Bosch Rexroth's MTpro design software aids in the planning and design of Aluminum Framing projects.

In addition to supporting a lean workplace, aluminum framing advocates for safer work environments. Easily assembled from standard components for quick installation, physical enclosures, guards and barriers made from aluminum framing protect workers and equipment from accidental workplace disasters. For extra assurance, ordering aluminum framing from a knowledgeable company such as Bosch Rexroth unlocks the expertise of safety experts who have built thousands of custom safety structures and can offer valuable insight on the best solution for the application. In addition, Bosch Rexroth offers MTpro design software, available to download for free, to aid in the planning and design of your Aluminum Framing projects. The digital tool makes it easy to design and customize projects on your own, though a network of national distributors are also available for turnkey assistance.

What can you build with aluminum framing?

With aluminum framing, thinking outside the typical manufacturing box is encouraged. The versatility of aluminum framing allows it to be used in a wide range of applications and industries. Even applications from industries as strict as medical manufacturing are no challenge for the right aluminum framing system. With a flexible product offering that includes framing designed and independently certified for cleanroom manufacturers, cleanroom profile systems by Bosch Rexroth eliminate particulate-trapping surfaces, minimize out-gassing and enhance airflow for adherence to cleanroom and medical manufacturing regulations. Build machine bases, material shuttles, tables, cabinets and almost anything else for clean production with a full range of extrusions, connectors, and accessories uniquely engineered for a medical environment.



Continuing outside the standard manufacturing environment, aluminum framing can also be found in industries such as aerospace. Extrusions and connectors can easily be assembled to create sturdy ladders, platforms and more for aircraft maintenance applications. But the building fun doesn't end with manufacturing, medical and aerospace. Aluminum framing fits into architecture with a snap. Using a little creativity and engineering ingenuity, aluminum framing has taken the form of museum gift shops, a picture gallery, barges and fabricated housing, with more structures constantly being developed.

With an aluminum framing system that provides everything, building anything is limited only by the imagination. Outside of the above-mentioned industries, aluminum framing has made its mark on robust industries including semi-conductor, packaging, solar and more. When thinking outside the box, the applications are near endless.





The versatility of aluminum framing allows it to be used in a wide range of applications and industries.



Factory of the Future

Now. Next. Beyond.

It's easy to think technology as seemingly simple as aluminum framing can't play any role in the new connected industry, but that couldn't be farther from the truth. Aluminum framing is a crucial element to building physical structures that support the new, i4.0-ready connected industry environment. Walk through any Bosch Rexroth facility or trade show booth and see aluminum framing as the foundation of the many innovations that allow Bosch Rexroth to showcase or develop its vision for the Factory of the Future. When engineered with offerings from our linear motion technology portfolio and automation and electrification solutions, aluminum framing supports incredible structures that highlight the Factory of the Future and its capabilities. The Factory of the Future is a journey. Use aluminum framing to help shape the path to discovering all that it has to offer.

Conclusion

With the right aluminum framing system, assembling structures for the unique needs of an application is made simple. Interior design, wall and ceiling structures, houses, retail displays, assembly lines, workstations, you name it. Let your creativity unfold with Rexroth's aluminum framing – the aluminum framing system that gives everything to build anything.



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