

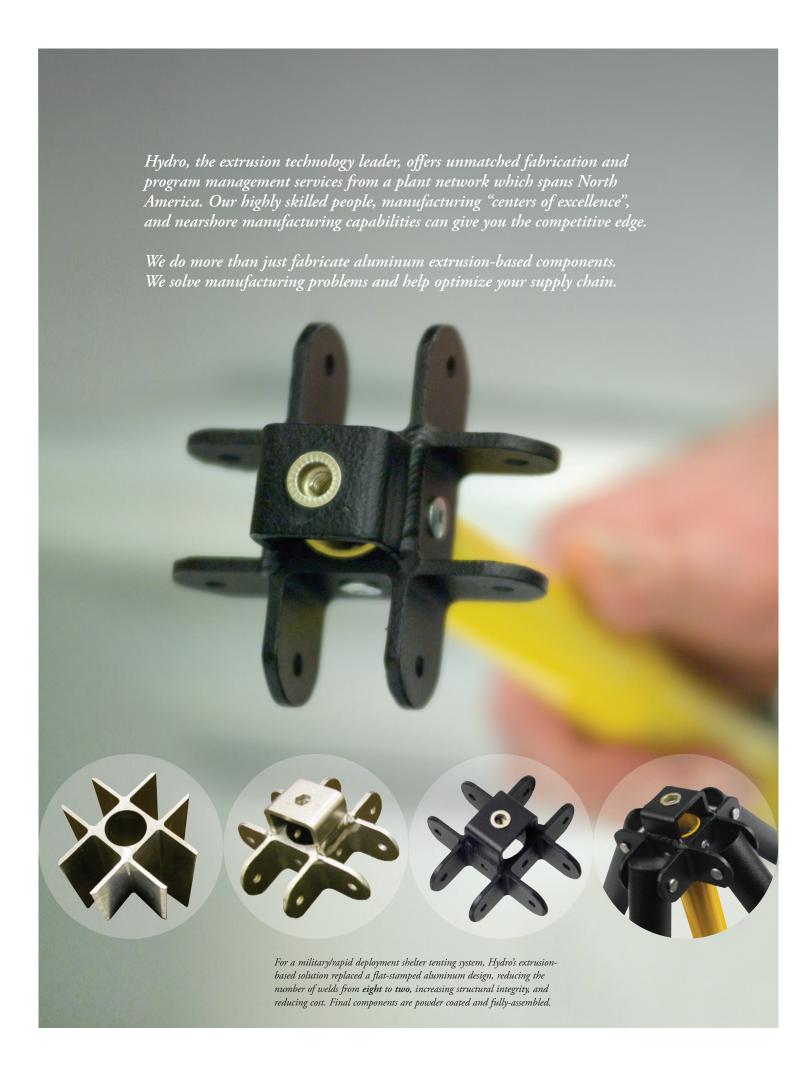


# We are Hydro...

Aluminum extrusion fabrication and program management solutions











### Add decades of fab experience...overnight!

e have the advanced equipment and project management systems in place to handle almost any fabrication project. But, what really sets us apart is our people...their skill, experience, and knowhow... their willingness to collaborate with customers to solve challenging fabrication problems... and an uncanny ability to consistently develop innovative solutions which improve product performance, create manufacturing efficiencies, and streamline supply channels.

Grounded in the aluminum extrusion process, we can design an extrusion profile which minimizes fabrication, develop a process which reduces manufacturing steps, and help you fully exploit the benefits of using extrusions in your product. We can also procure needed parts, assemble components or complete products, and provide fulfillment and JIT delivery services.

From the initial product concept stage through delivery of finished products, the Hydro Team is committed to developing solutions to help you achieve success!

- Optimize an aluminum alloy to match your cost and performance requirements
- Simplify your product design to increase press efficiency and minimize fabrication steps (reducing cost)
- Tap Hydro's global network of technology centers to improve your product and solve difficult manufacturing issues
- Streamline your supply chain and bring your product to market faster by utilizing our "single-source" capability















#### Fabrication

## We can meet your production requirements with uncompromising quality across a wide spectrum of fab services

A ll of our plants can take you extrusion to the next step of production with basic fabrication services like precision sawing, drilling, and deburring. Many of our facilities also offer leading-edge CNC machining, welding, advanced adhesive bonding, and thermal break application. You can also rely on us for more complex forming operations like stretch forming and press bending;

operations where aluminum extrusion knowledge and experience can mean the difference between success and failure.

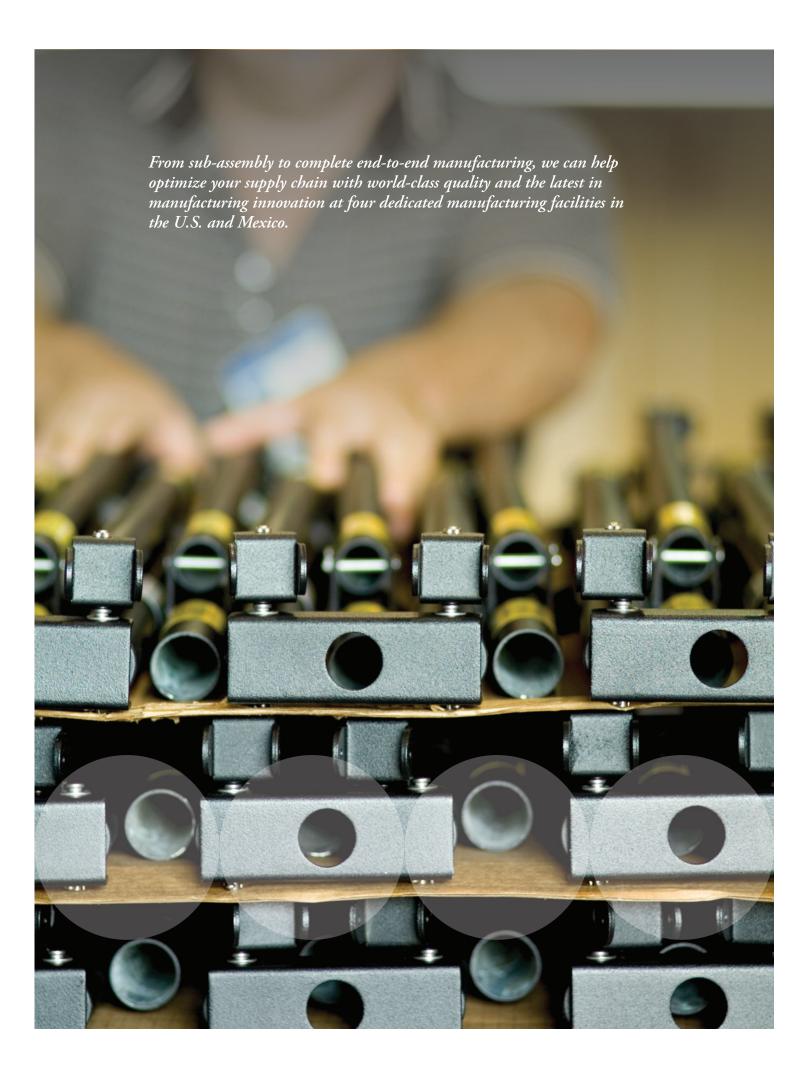
We have the tools, systems, and fabrication experts to provide the full range of aluminum fab solutions and deliver a component ready to be incorporated in your assembly operation...or ready to ship to your customer!

- CNC machining for milling, notching, tapping, lathing, and countersinking
- High production punch/cut operations
- Close tolerance high-speed precision automatic sawing/automatic miter cutting
- Manual TIG/MIG welding
- Rotary, stretch, chain, press, and roll bending
- More than 600,000 sq. ft. of dedicated manufacturing space



www.hydro.com/northamerica









# Complex fabrication & program management

#### Solution centers of manufacturing excellence

Products which require complex fabrication, high-level assembly, or contract manufacturing, our four manufacturing "centers of excellence" offer the most advanced equipment, well-developed production processes, and creative problem solving. We provide engineering, process design, and program management services starting at product inception through turn-key manufacturing for a wide range of industries including transportation, solar power, and consumer durables. And, we are ready to incorporate

new materials, customize equipment, expand plant capacity, and make other investments as necessary, in order to take your product to the next phase of production.

Our dedicated manufacturing plants are incubators for the development of new manufacturing technology and provide advanced solutions to our customers. We can help solve your most challenging manufacturing issues, streamline your supply chain, and help bring your product to market faster.

- Dedicated manufacturing cells
- 3-axis CNC bending and robotic TIG/MIG welding
- Aluminum sheet blanking, forming, and assembly
- Project management and product/process engineering
- Component sourcing
- Just-In-Time (JIT) manufacturing and line-sequencing capabilities
- PPAP and APQP systems in place
- Nearshore manufacturing in Mexico
- ISO 9001:2008 and ISO 14001:2004 certified facilities



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### Unparalleled customer support

#### Technical resources and knowledge sharing to help ensure your success

ur Metal Management Program can help optimize the "metal" side of your program from start to finish. Our engineers can assist with alloy selection, while our global trading desk can help you manage your future metal needs and minimize the impact of normal market volatility. With our network of casthouses, we can assure metal availability... and assure the high recycled content that many customers demand. Finally, we can help you realize optimal value from your aluminum process scrap through our scrap buy-back programs.

To support our plants, we have a **global network of Technology Centers**, including one in Holland, MI, where we conduct aluminum-extrusion related research and assist with resolving customer product and manufacturing issues.

Our Extrusion Academies & Workshops are interactive educational sessions, developed for designers, engineers, and managers who currently use aluminum extrusions or could benefit from the integration of aluminum in their design. Topics include the extrusion process, profile design, alloy selection, bending, advanced welding techniques, etc.

And, our
Extrusion Design
Manual is the
culmination of
knowledge gained
from over 50 years
of experience in
aluminum extrusion

and is our continued commitment to aluminum extrusion research. It is an invaluable source of information and inspiration for anyone involved in the design and production of products that could utilize aluminum extrusions... and it's absolutely free!



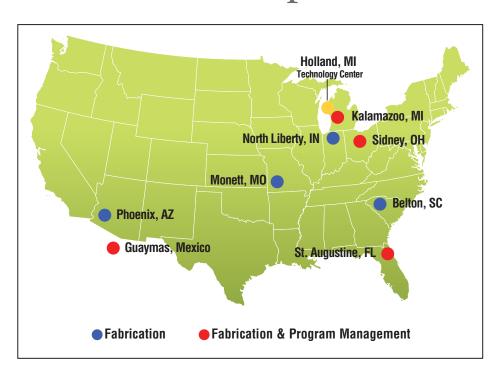
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### North America Network Capabilities

Our North America network is eight facilities offering different levels of fabrication and contract manufacturing services. All offer basic fab like tighttolerance sawing, drilling, and punching. Several offer advanced fab services like CNC machining, CNC bending, and robotic welding. Our manufacturing "centers of excellence" provide subassembly and complete end-to-end manufacturing. Common systems and procedures facilitate transfer of work between plants to accommodate unique production requirements and fluctuations in demand. And, extensive technology and best practices sharing ensures Hydro quality throughout the entire network.

Need fabrication outside of the North America? Hydro can help. We have facilities in 16 countries which provide extrusion, fabrication, and manufacturing services.











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Casthouse products (remelt)	<b>***</b>		1		Mo	6/r	<b>9</b>	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	
Extrusion					•				
Drawn tubing									
Anodizing/painting/mechanical finishing		<b>1</b>	<b>1</b>	<b>O</b> <sup>1</sup>	<b>1</b>	<b>O</b> <sup>1</sup>	1	1	
Sawing, drilling, shearing									
Notching, tapping, lathing									
Sheet blanking, forming, assembly									
CNC machining									
TIG and MIG manual welding									
TIG and MIG robotic welding									
Rotary, stretch, press bending									
End-to-end manufacturing									

<sup>\*</sup>ISO 9001:2000 \*\*ISO 9001:2008 \*\*\*ISO 9001:2008, ISO 14001:2004  $^{-1}$ In-house or partnered

Our network capabilities are constantly evolving. Please visit our website for the most current list of capabilities.













#### On top of the Dow Jones Sustainability Indexes

Hydro is one of only two aluminum companies included in the 2010 Dow Jones Sustainability World Indexes(DJSI World), which includes the 10 percent best performers in each industry. Hydro has been included in the DJSI every year since the indexes were launched in 1999.



Hydro is listed on the following social responsibility indices:





Hydro is a global supplier of aluminum with activities throughout the value chain, from bauxite extraction to the production of rolled and extruded aluminum products and building systems. Based in Norway, the company employs 23,000 people in more than 40 countries. Rooted in a century of experience in renewable energy production, technology development and progressive partnerships, Hydro is committed to strengthening the viability of the customers and communities we serve.

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#### Association memberships







American ArchitecturalManufacturer's Association (AAMA) www.aamanet.org

Hydro

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