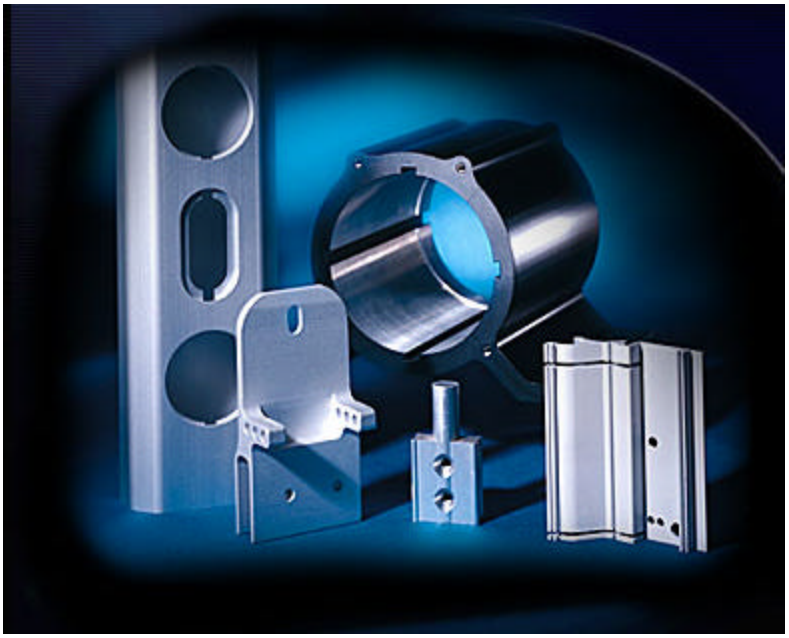
Magnode Corporation

Engineering - Casting - Extrusion - Laboratory - Fabrication

Capabilities Guide



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WWW.Magnode.com

Magnode Corporation

Magnode is a family owned integrated aluminum extruder with 58 years of experience supplying the automotive, building & construction, consumer electronics and defense industries, to mention a few.

Magnode Corporation is recognized worldwide as a premier aluminum extruder, fabricator and finisher. We produce the most difficult, complex and intricate extrusions available in today's marketplace.

The company is at the highest level of vertical integration for an extruder. We have our own aluminum re-melt facility that has been operating since 1979. Magnode has cast and recycled nearly 1 billion pounds of aluminum in our own foundry. On the other side of the extrusion model is the fabrication facility located in Indianapolis, Indiana. This 100,000 square foot operation can service all the fabrication needs of our customer base. From precision sawing and machining, anodizing, welding, silk screening and assembly, Magnode is fully capable of giving you, the customer, a finished product all under one roof.

We operate one of the largest extrusion presses in the domestic United States. The US 4500-ton press can extrude up to 17 inches in circle size and up to 23 Lbs/Foot. Our reputation in the industry centers on our ability to extrude very large zero defect extrusions, exceeding standard aluminum tolerances by more than one half.

Casting - Extrusion Facility Trenton, Ohio

Fabrication Facility Indianapolis, Indiana

Magnode Contact Listing

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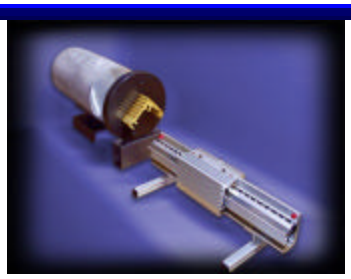


Engineering Capabilities

Magnode wants your part to perform and function perfectly, so we offer engineering assistance to help bring your concept to reality, saving time, reducing costs and improving the capabilities of the extrusion along the way.

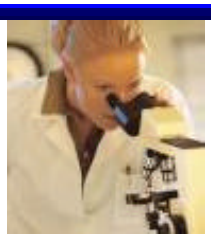
Magnode has produced over 16,000 different profiles gaining the experience from the diversity of geometries, alloys and specifications. No matter what design problem you're trying to solve; our engineering team has probably solved a similar challenge.

Magnode is the only extruder in the world to win the International design competition three times.

ISO/TS 16949:2002 QMI REGISTERED

Engineering Capabilities;

- Engineering Staff: (5) Engineers on Site
- CAD Software: AutoCAD, Solid Works, Inventor, Mechanical Desktop
- Common CAD Files: .IGES, .DXF, .DWG, .PRT
- FEA Software: Algor Structural, Heat Transfer, Vibration & Dynamic Simulation.
- Avant Smart Fit: Model to Part Simulation.
- Design Assistance: GD&T, Extrusion Design, Reverse Engineering, Functional Relationship.
- Data Transfer: FTTP. Email



Laboratory Capabilities

Magnode, as a result of casting their own billet and providing aluminum components in some of today's most technical extrusions, Has invested in the abilities to provide and insure sound material supported by a mechanical and chemical laboratory, Supervised by a Technical Director and three supporting technicians.

Laboratory Capabilities;

- Material Certification; Spectrographic Analysis, Mechanical Property Testing.
- Material Analysis: Hardness, Chemistry, Magnified Photography & Inspection, Chemical Etch, Crush Simulation and Testing, Flare Testing. Ultrasonic Testing.
- Quality: ISO/TS 16949:2002

ISO/TS 16949:2002 QMI REGISTERED

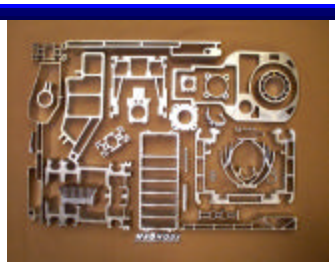
Casting Capabilities

Few extruders cast their own billet, but Magnode insists upon it. This allows us to customize its properties for your specific application and control the quality of the raw material used for your job. Higher quality billet helps extend the life your die and also improves rates of yield and recovery, resulting in lower costs.

Casting Division Capabilities;

- Alloys; 6061, 6060, 6063, 6005, 6105, 6082
- Billet Diameters; 6”, 7”, 8”, 9”, 11”, 14”
- Capacity: 66 Million Lbs/Year
- Homogenization: (2) ovens 90 million Lbs/Year
- Quality: Prime Equivalent, ISO/TS 16949:2002

ISO/TS 16949:2002 QMI REGISTERED



Extrusion Capabilities

Magnode specialty is the manufacture of extraordinary, complex and intricate extrusions parts of which others consider difficult, or even impossible. And while very few extruders can handle a wide range of size, weight and tolerance requirements, Magnode stands out as one of the best. With two presses, Magnode has the unsurpassed flexibility and extrusion capability.

Magnode can extrude very large shapes, up to 17 inches in circle size, or very small components , down to one-half inch circle size, with tolerances reduced from industry standards by four times.

Extrusion Division Capabilities;

- Press Capacity; 2400 Ton, 4500 Ton
- Alloys; 3003, 6060, 6063, 6463, 6005, 6061, 6082, 6105
- Tempers; F, T4, T5, T511, T52, T6
- Billet Sizes; 7”, 9”, 11”, 14”
- Extrudable Lbs./Ft.; 0.150 Lbs/Ft. Up to 23 Lbs/Ft.
- Part Lengths 0.300” to 68.00 Feet
- Profiles Extruded: Solid, Hollow, Semi-Hollow
- Quality: ISO/TS 16949:2002

ISO/TS 16949:2002 QMI REGISTERED

Fabrication Capabilities

Magnode General fabrication and finishing division is based in Indianapolis, Ind. About 120 miles west of the Trenton, Ohio corporate office. Established in 1978, this division employs 125 individuals and occupies 100,000 square feet of manufacturing space.

This facility is ISO/TS 16949:2002 Certified and specializes in custom precision fabricated and finished aluminum extrusions of all sizes serving many diverse industries.

Fabrication Capabilities;

ISO/TS 16949:2002 QMI REGISTERED

- CNC Machining
- Sawing, Shearing, Mitering
- Punching, Blanking, Forming, Braking
- Drilling, Tapping, Countersinking
- Arc, Mig, Tig and Resistance Welding
- Buffing, Polishing, Sanding
- Abrasive Finishing, Machine Deburring
- Etch, Bright Dip, Sulfuric Acid Anodizing, Organic, Inorganic, and Electrolytic Coloring.
- Silk Screening, Bead Blasting
- Assembly and Sub-Assembly
- Tool and Die, Custom Machinery
- Quality: ISO/TS 16949:2002