



*Your Ideas Taking Shape!*

# 2020 ALUMINUM EXTRUSION DESIGN COMPETITION

*Show Your Talent, Creativity & Design Skills!*

**Call for Entries!** Due by March 30, 2020



Winners of the 2020 Aluminum Extrusion Design Competition – **both Student and Professional Classes** – will be announced at the International Aluminum Extrusion Technology Seminar & Exposition – ET '20, scheduled for May 19–21, 2020 at the Hyatt Regency Orlando in Orlando, FL. This international technical event, produced by the ET Foundation and the Aluminum Extruders Council (AEC), will offer more than 120 technical sessions, additional add-on workshops and ET Expo. Winning Design Competition entries are displayed in the Extrusion Showcase, highlighting extrusion applications.

Visit **ET20.org**  
*for program details.*



*Scan this code with your smart phone for easy access to design resources.*

The Aluminum Extrusion Design Competition is intended to enlighten students as well as engineering, design and architecture professionals about aluminum extrusion's superior design advantages and infinite application possibilities.

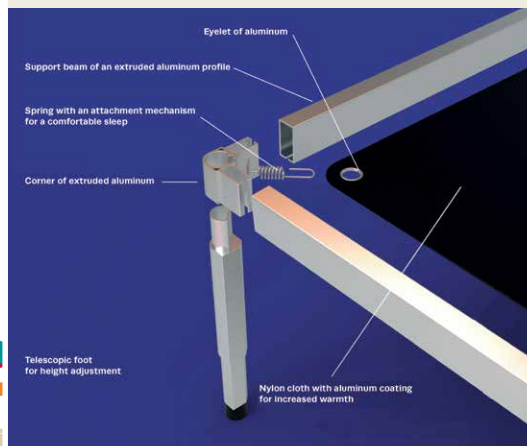
Enter your unique and original design in the 2020 International Aluminum Extrusion Design Competition. Show off your talent, ingenuity and creativity by designing components, systems, products, or product assemblies that feature aluminum extrusions.



*Bonnellaluminum.com*

The ET Foundation is grateful to **Bonnell Aluminum** for sponsoring the 2020 Aluminum Extrusion Design Competition student scholarships.

Visit the Aluminum Extruders Council (AEC) website at **AEC.org** for a wealth of resources, including design tips, application examples and technical information to help you in your design journey.



# PROFESSIONAL CLASS

Individual designers and companies are eligible to enter the ET Foundation Design Competition. Aluminum extruders and their customers are encouraged to team up to enter their extrusion design in the competition. Prizes may be awarded in the following four categories:

## 1) Architectural/Structural

With virtually limitless design potential, versatile aluminum extrusions enable sophisticated and expressive design features and labor-saving multi-functionality to be readily incorporated into building components, including:

- Balconies, canopies
- Decking, walkways, bridges
- Fencing, guardrails
- Modular building systems
- Facades, curtainwall
- Ventilation, shading and lighting louvers
- Skylights, entryways, windows, and doors
- Office component systems

## 2) Transportation

Design engineers focused on lightweighting and durability and strength increasingly turn to aluminum extrusions to improve fuel economy, crash performance, and increase load-carrying capacity for:

- Automotive
- Aerospace
- Marine
- Rail and mass transit
- Truck/trailer/RV
- Space vehicles

## 3) Engineered/Industrial Products

Aluminum extrusions are used in a variety of consumer and industrial components due to aluminum's many material and process advantages.

This category may include:

- Sporting and recreational equipment
- Machine components and controls
- Heatsinks and insulating components
- Lighting and lighting components
- Electrical components
- Appliances
- Communications equipment, and more

## 4) Alternative Energy

Aluminum extrusions play a key role in both alternative and conventional energy generation and power distribution systems, including:

- Solar power systems/photovoltaics (PV)
- Building-integrated photovoltaic (BIPV) modules
- Wind power systems (turbines)
- Hydro-electric power systems
- Geothermal energy systems

## CASH PRIZES AND STUDENT SCHOLARSHIP AWARDS

*Your design could win money!* Enter the Aluminum Extrusion Design Competition to compete for cash prizes and student scholarships totaling **\$27,000**.

**One Grand Prize \$3,500** awarded across all categories and classes

### PROFESSIONAL CLASS - \$11,500 in Cash awards

First Place cash awards are available for the best aluminum extrusion design in each of four categories:

- Structural / Architectural \$2,000
- Transportation \$2,000
- Engineered Products \$2,000
- Alternative Energy \$2,000



*The ET Foundation Thanks  
Bonnell Aluminum for their  
support and sponsorship of the  
2020 Student Scholarship Awards*



### STUDENT CLASS

Scholarships totaling **\$15,500** will be presented as cash awards to the best student designs submitted. Winning entries in the Student Class will be awarded in the following amounts:

- First Place \$5,000
- Second Place \$4,000
- Third Place \$3,000
- **Bonnell Sustainable Design Award \$3,500**

*If you would like an AEC member to come to your school and give a presentation to your class, please contact AEC at [mail@aec.org](mailto:mail@aec.org) or use the contact us form at [www.aec.org](http://www.aec.org)*

# STUDENT CLASS

Students have a unique and clear way of looking at the world, which makes them well-qualified to offer creative solutions to design challenges. Think beyond the ordinary to come up with new, innovative and resourceful ways to use extruded aluminum!

To be eligible to participate, you **must be** currently enrolled as a student in high school, college/university, technical college, or graduate school.

## Eligibility Tips for a Winning Design

To ensure your best chance of winning an award in the 2020 Aluminum Extrusion Design Competition, it is highly recommended that you conduct research and consider these tips prior to beginning your project:

- 1) **Visit AEC.org** to review the Aluminum Extruders Council (AEC) sections on: applications, extrusion design and sustainability.
- 2) **Visit the AEC YouTube channel (YouTube.com/aec)** to view educational design webinars.
- 3) **Download/read “Designing to the Limit of Your Imagination” PDF** in the Design Competition/For Students section.
- 4) **Demonstrate the knowledge gained from viewing the educational information noted** above was carefully incorporated into your design.
- 5) **Size matters.** See the shaded circle on this page to ensure your shape fits within the 10-inch circle (no larger); if your profile doesn't fit within this circle size, you won't win.

**6) Presentation is important.** A winning design will demonstrate an innovative product made with extrusions, and the use of an innovative extrusion design. Spelling and grammar counts!

**7) Extra consideration will be given to entries that supply a 3-D printed sample or other forms of prototyping of your profile.**

**8) Do your research:** is your design idea new, or has it been done before? Have you considered the market and performed research to support your product development?

**9) Provide a variety of supporting materials** (a video, explanation, drawings, model, PowerPoint, etc. Include as much as possible to explain and demonstrate your design and why it should win.

**10) Be certain that your entry adequately addresses all four judging criteria** and is supported in your presentation materials.



## BONNELL ALUMINUM SUSTAINABLE DESIGN CHALLENGE

Humanitarian and environmental disasters and challenges for people with physical disabilities often inspire and motivate savvy designers and inventors with ideas to develop solutions for these difficulties. Aluminum extrusions offer the ideal sustainable material to implement such design solutions. The Bonnell Aluminum Sustainable Design Challenge will be presented to a Student design that, in addition to meeting the four basic ET Foundation Design Competition criteria, best addresses societal and/or environmental challenges/concerns. The entry must be a viable, extrusion-based product that meets the sustainability demands for the environment, while contributing to the quality of life for its intended users. Interested students should indicate they are seeking consideration for the Sustainable Design Award on the Student Design Competition Entry Form. Explain in the written brief how the entry meets the criteria. Examples of entries for the Sustainable Design Challenge Category include:

- Refugee or temporary housing
- Hydroponic gardening system
- Water purifier
- Assistive device for individuals with physical limitations
- Emergency or specialty medical equipment

## COMPETITION RULES AND JUDGING CRITERIA

For complete rules and criteria, visit [www.aec.org/CompetitionRules](http://www.aec.org/CompetitionRules)  
Designs must be original and use at least one extruded aluminum component. Multiple entries may be accepted. If any category yields no entries deemed by the judges to adequately address the competition's criteria, a prize will not be awarded in that category.

### Entries are judged based on the following criteria:

A panel of aluminum extrusion industry, academia and/or trade press professionals will judge the competition in Spring 2020.

Winning entries will be those that best demonstrate the benefits of aluminum extrusions – whether by inventing a new product or improving an existing one, by achieving the following objectives:

#### Creativity

Innovative design, new or expanded application capability, methods to meet a new design challenge.

#### Practicality

Ease of fabrication and assembly, cost-effectiveness, integrated or multi-functionality, use of extruded aluminum over other materials and/or processes.

#### Product/Process Advantage

Product and Process improvement: product design versatility or customization capability, improvement of extrusion processes, close tolerances, takes full advantage of extrusion's abilities to improve a product.

#### Market Impact/Potential

Product design marketability, clearly identified product use(s) within the target market, and likelihood of market success.

If your extrusion profile fits within this circle – you are one step closer to winning!



STEP 1: Complete Your Information - please print legibly ENTRY DUE BY MARCH 30, 2020

I AM A STUDENT STUDYING:

Design  Engineering  Architecture  Other \_\_\_\_\_

In addition, I am entering my design in the BONNELL ALUMINUM SUSTAINABLE DESIGN CHALLENGE CATEGORY (see the Call for Entries for entry criteria).

STUDENT'S PERMANENT ADDRESS

Name \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

City \_\_\_\_\_

State/Province \_\_\_\_\_

Country \_\_\_\_\_ Zip/Postal Code \_\_\_\_\_

Telephone \_\_\_\_\_

E-mail \_\_\_\_\_

Class (junior, senior, etc.) \_\_\_\_\_ Student's Major \_\_\_\_\_

UNIVERSITY OR COLLEGE ATTENDING INFORMATION

School Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State/Province \_\_\_\_\_

Country \_\_\_\_\_ Zip/Postal Code \_\_\_\_\_

STUDENT'S FACULTY ADVISOR INFORMATION

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State/Province \_\_\_\_\_

Country \_\_\_\_\_ Zip/Postal Code \_\_\_\_\_

Instructor's Email \_\_\_\_\_

Instructor's Phone \_\_\_\_\_

STEP 2: Explain Your Entry

Name of part and/or product \_\_\_\_\_

What is your product's use? \_\_\_\_\_

Alloy Specified \_\_\_\_\_

On this form or on a separate sheet of paper, answer and explain the following questions:

Reason aluminum and this alloy were chosen \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Why is this entry an exceptional example of aluminum extrusion?

What objective(s) does it accomplish? Explain what judging criteria your entry addresses.

(Use additional pages if necessary.) \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

ACCOMPANYING MATERIALS

While it is not always practical to include a sample of the product, it is advisable to include as much support material with as much detail as possible that illustrates the design, its utility, and practicality.

sample of part/product

design drawings (PDF or JPG files preferred)

model

descriptive literature

audio-visual materials

photos

video (3 minutes or less)

3-D printed model (recommended, if available)

other \_\_\_\_\_

For team submissions, each member shall complete and sign a copy of this form.

A photocopy of this form may be used for additional submissions.

Student Signature \_\_\_\_\_ Date \_\_\_\_\_

STEP 3: Mail Your Entry

Please enclose completed entry form with your supporting materials by **March 30, 2020** and send to:

2020 International Aluminum Extrusion Design Competition

ET Foundation

1000 N. Rand Road, Suite 214

Wauconda, IL 60084 USA

phone 847.526.2010 fax 847.526.3993

email mail@etfoundation.org



COMPETITION RULES: Entries must be received by the ET Foundation® at the address above by **March 30, 2020**.

Submission of an entry acknowledges the right of the ET Foundation to use the entry for exhibition and publication. All entries received shall become the property of the ET Foundation. However, entrants may request that their entries be returned at the conclusion of the competition at their own expense. The ET Foundation is not responsible for any lost, late, or damaged entries. Winners shall be selected by a panel of independent judges chosen by the ET Foundation. If any category yields no entries deemed by the judges to address adequately the competition criteria, a prize will not be awarded in that category. Winners will be announced via a news release posted to the ET Foundation website and disseminated to the media. All taxes due on cash awards are the winner's responsibility. Entry into the competition constitutes permission to use the entrant's design and his, her, or its name, likeness, and affiliation for promotional purposes without further compensation.

Any person signing the application on behalf of a company, firm, or organizational entity represents and warrants that he or she has authority to enter the competition on the company's behalf and bind the company to any and all competition rules. All entrants agree to be bound by any and all additional rules established by the ET Foundation for the competition.

Visit [www.etfdesign.org](http://www.etfdesign.org) for updates and additional information.



STEP 1: Complete Your Contact Information - please print legibly ENTRY DUE BY MARCH 30, 2020

CHOOSE ONE:

- Designer Engineer Extruder Manufacturer Other

Name Title Company Email Company Address City State/Province Country Zip/Postal Code Telephone

STEP 2: Explain Your Entry

Name of part Product that uses part Is product in production? Alloy Specified Reason aluminum and this alloy was chosen Explain why this entry is an exceptional example of aluminum extrusion. What objective(s) does it accomplish? Explain what judging criteria it addresses.

ACCOMPANYING MATERIALS

While it is not always practical to include a sample of the product, it is advisable to include as much support material as possible, to illustrate the design, its utility, and practicality.

- sample of part/product design drawings (PDF or JPG files preferred) 3-D model (printed) descriptive literature audio-visual materials photos video (3 minutes or less) other

For team submissions, each member shall complete and sign a copy of this form. A photocopy of this form may be used for additional submissions.

Signature Date

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2020 International Aluminum Extrusion Design Competition

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www.etfdesign.org

1000 N. Rand Road, Suite 214  
Wauconda, IL 60084 USA

## 2020 INTERNATIONAL ALUMINUM EXTRUSION DESIGN COMPETITION



# Call for Entries

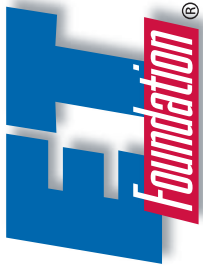
**Open to professionals and students.**

Enter your a chance to win cash prizes and student scholarship awards!

*Details Inside!*

ENTRIES ARE DUE MARCH 30, 2020

 @AExtDesignCompetition  @AEC\_org



## Call for Entries

### 2020 ALUMINUM EXTRUSION DESIGN COMPETITION

*Your Ideas Taking Shape!*

**Open to Professionals and Students**

*Student scholarship awards sponsored*

*by*



\$20,000 in prize money and student scholarship awards

**Entries are due  
March 30, 2020**

