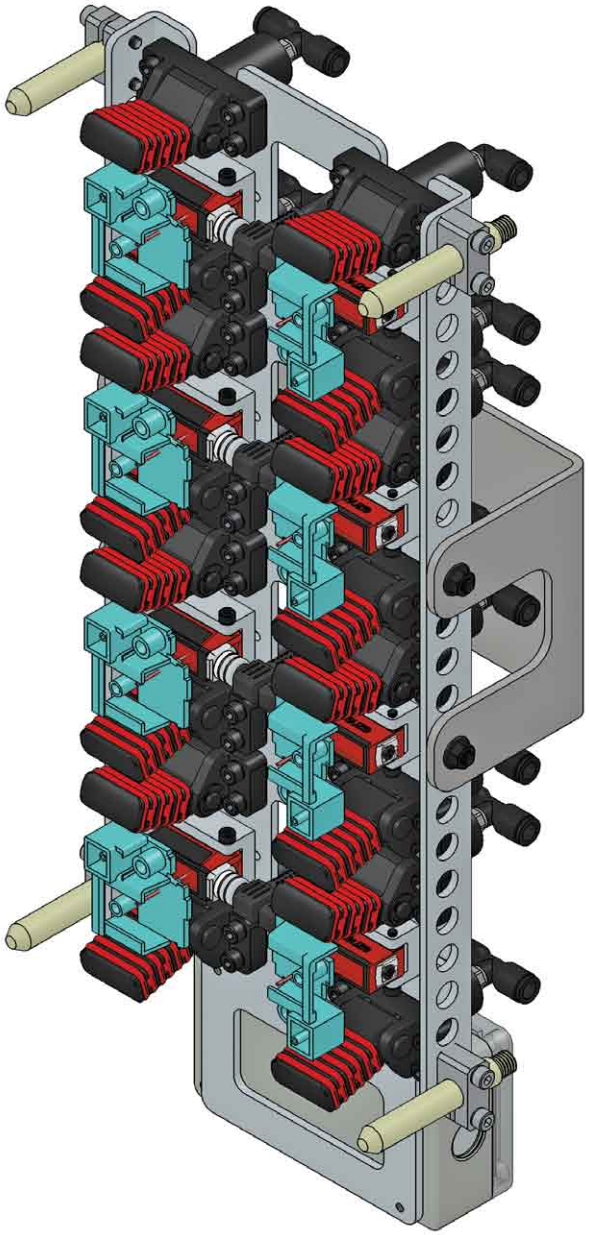
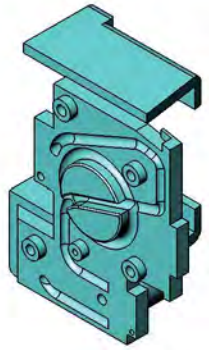
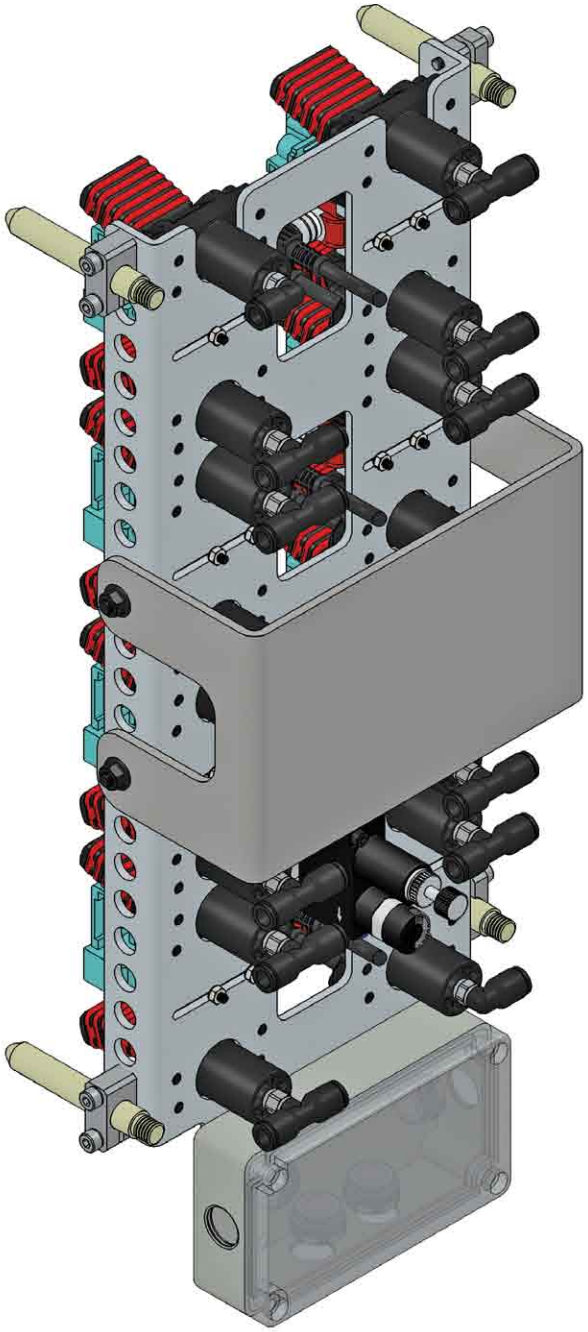
Free Engineering Design Service







Save Time—Use EMI's FREE Engineering Service

Save Money—Assemble the EOAT yourself

It's simple, it's free, and there's no obligation. Send us your part and a completed datasheet (see page 910). Our EOAT engineers will design a complete tooling for you in 3D CAD. We will also supply a complete bill of materials with prices. There's no cost or obligation to you for this service. Obviously, we hope that you are happy with our service and buy the components from us. Then assemble the tooling yourself and save money.

Save Headaches—Use EMI's build service and have EMI assemble the EOAT for you.

Plate-Based EOAT

Profile-based EOAT is great for some applications, but sometimes a lower cost, lighter weight, and easier to assemble option can be used. To suit these needs, EMI also offers plate-based EOAT.

Typical plate-based EOAT is laser cut from 1/8", 3/16", or 1/4" aluminum or 12-gauge stainless steel—standard materials in our inventory. Shown in the following pages of examples, excess weight is removed by material cutouts. Thinner, lighter material can be strengthened by incorporating reinforcing bends.

Other EOAT suppliers generally only offer profile-based and not plate-based EOAT for two reasons:

- Effective plate-based EOAT requires more upfront design engineering, which EMI offers without charge but our competitors don't like to do. Compare the amount and quality of free engineering EMI supplies with a quotation compared to our competitors. We start with a 3-D file such as SolidWorks or a Step file of your part that you provide to us. We then supply you a complete design proposal in 3-D without cost or obligation.
- Secondly, they don't have the equipment. EMI has laser-cutting machinery in our own manufacturing plant that allows us to make plate-based EOAT fast, accurate, and at a low cost.

Call our EOAT engineering department to discuss which is better for your application.

	Plate-Based EOAT	Profile-Based EOAT
Cost	Lower Cost	Higher Cost
Weight	Lighter	Heavier
Adjustability	Limited	Easy
Opinion A	I don't want to be locked into a fixed design. I want the option to tweak and adjust the EOAT easily. I want a profile-based EOAT.	
Opinion B	The EOAT is designed well and it works. I don't want anyone making "adjustments" and potentially causing damage. I want a plate-based EOAT.	
Common Applications		
Flat parts	★★★★★	★★★
High number of cavities	★★★★★	★★
Deep-core parts	★★	★★★★★
Small parts	★★★★★	★★★
Large parts	★★	★★★★★
Insert loading EOAT	★★★	★★★
High-speed molding	★★★★	★★
EOAT for sprue pickers	★★★★★	★★
Degating	★	★★★★★

Plate-Based EOAT Examples

From Simple EOAT...

Flat-Plate tooling is ideal for simple EOAT's. It is lightweight and low cost. As shown, nonessential material can be removed to further reduce weight.

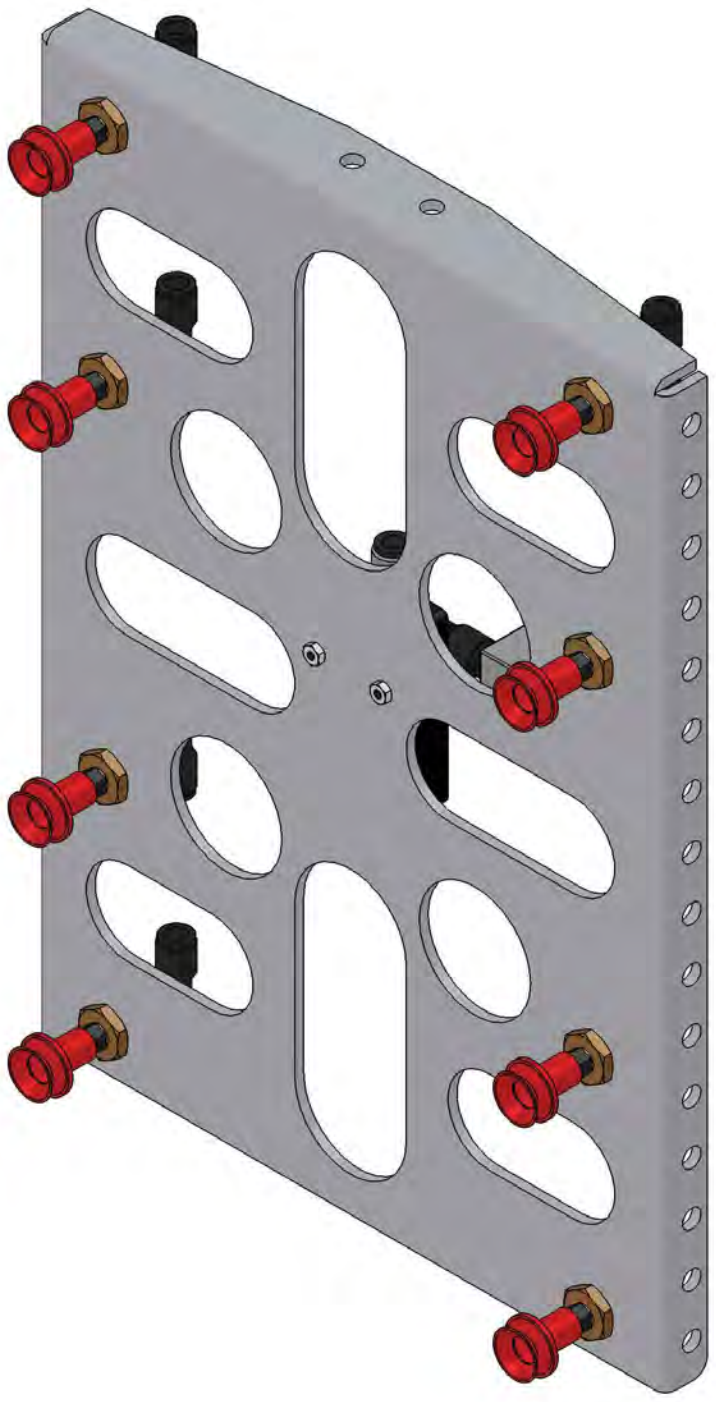


Plate-Based EOAT Examples

...To Complex EOAT

Flat-Plate tooling can also be very useful in complex EOATs. This EOAT utilizes two levels of plates — a thick aluminum base plate and a thin stainless part-locating plate.

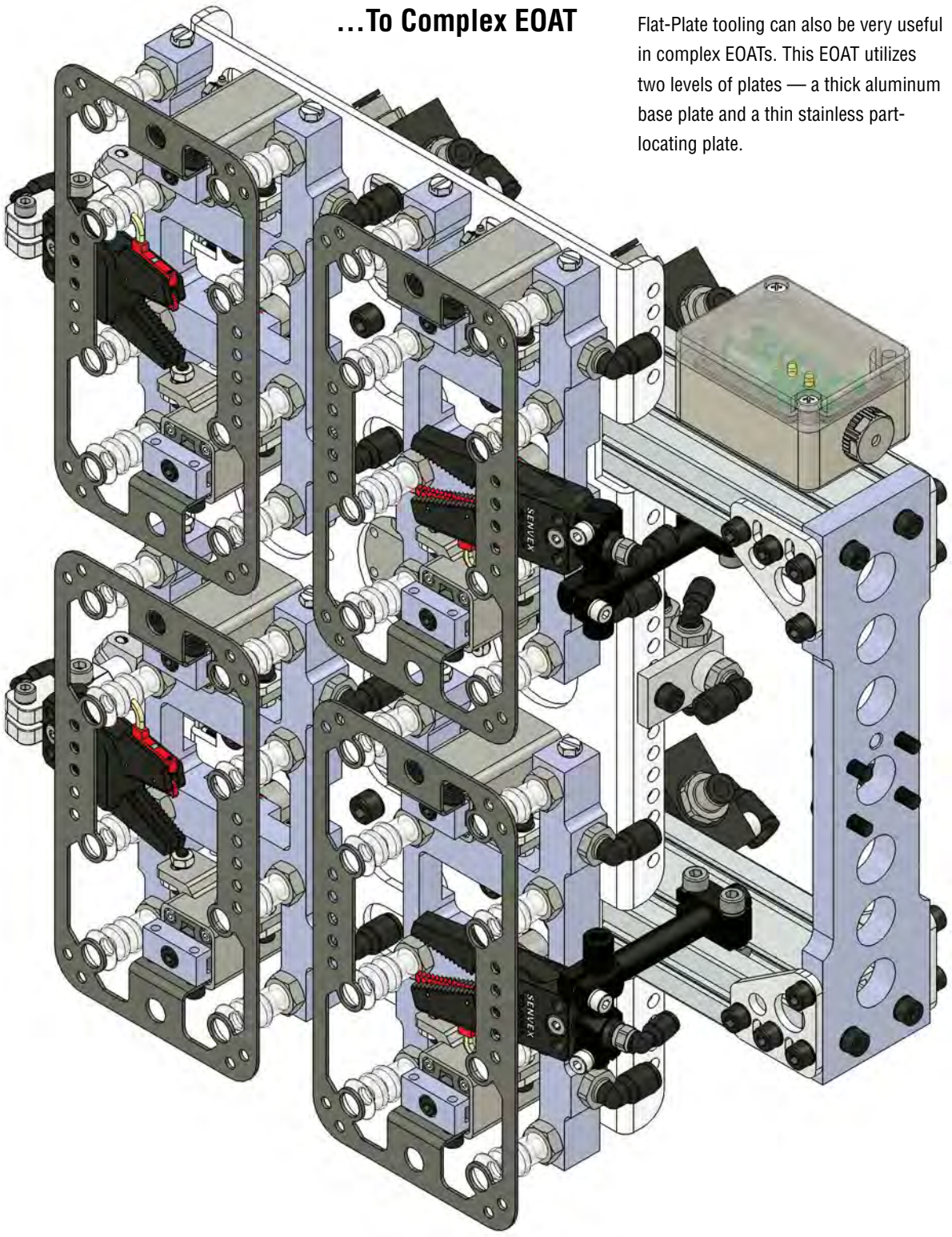
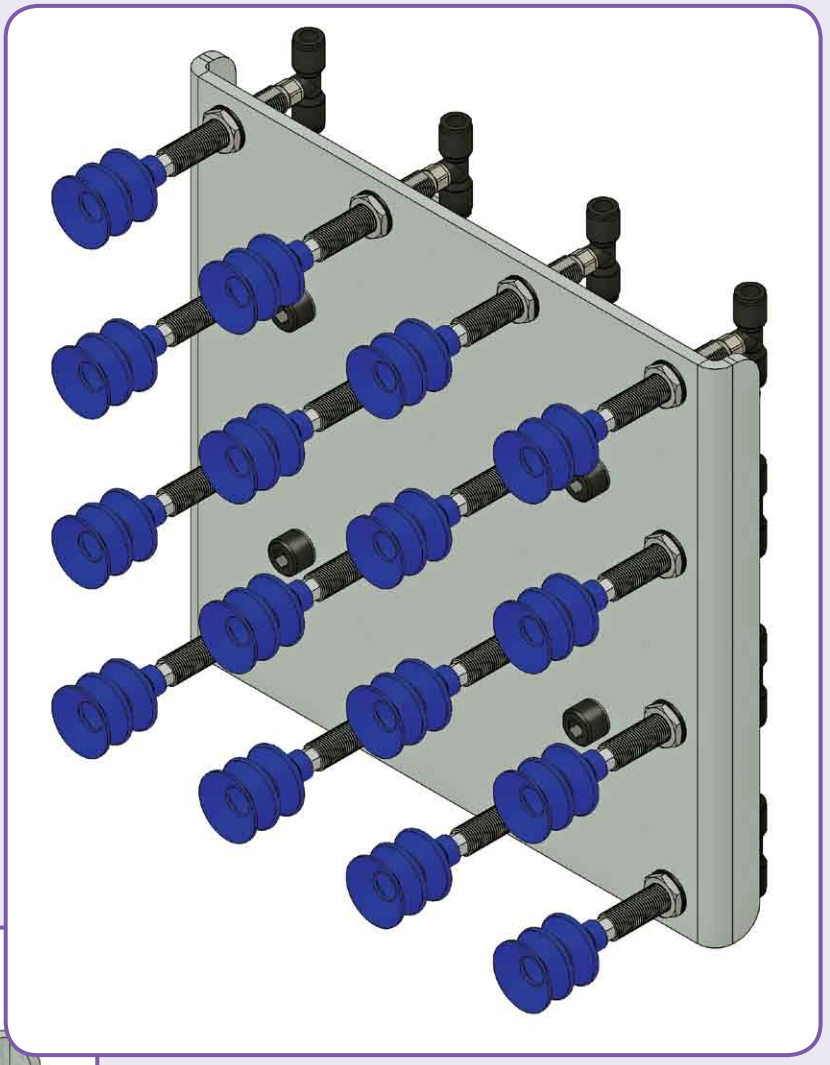


Plate-Based EOAT Examples

Vacuum Cup EOAT

Threaded-body vacuum cup suspensions are very easy to mount on Flat-Plate EOAT's. Smooth body suspensions can also be mounted using clamps shown on page 54.



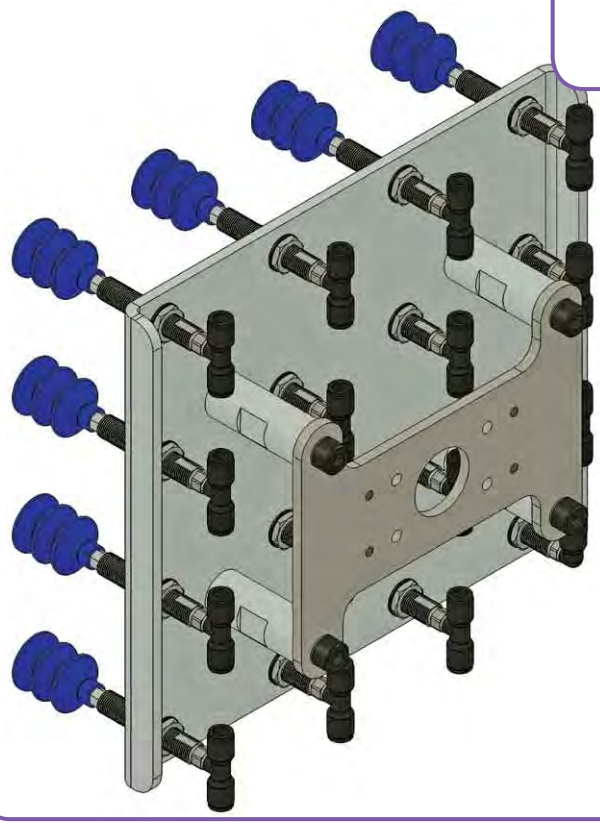
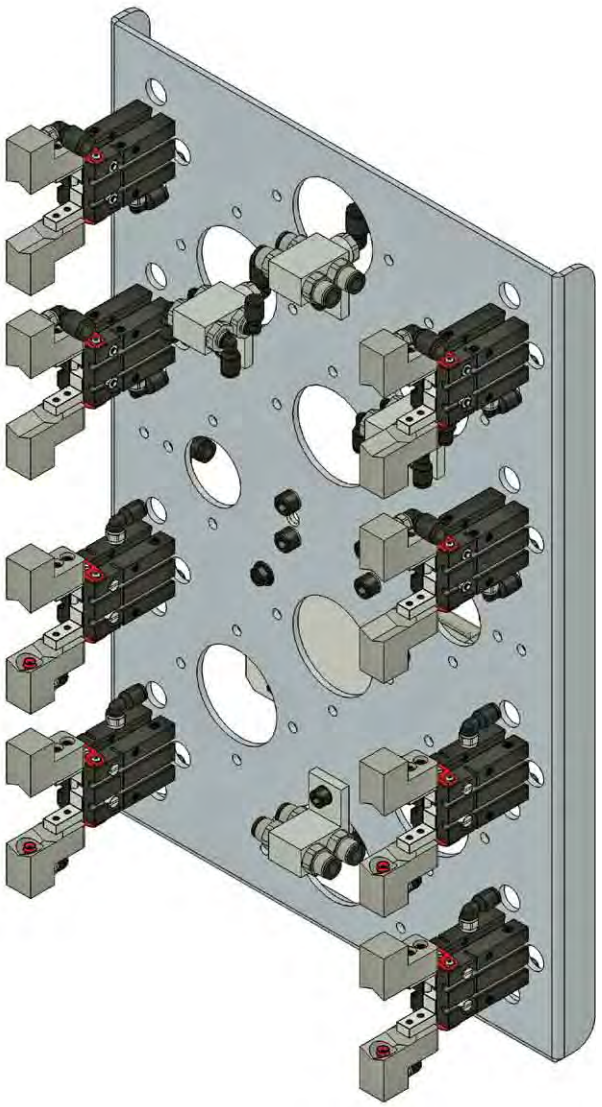


Plate-Based EOAT Examples

Parallel Gripper EOAT

Grippers are also easy to mount on Flat-Plate EOAT's.



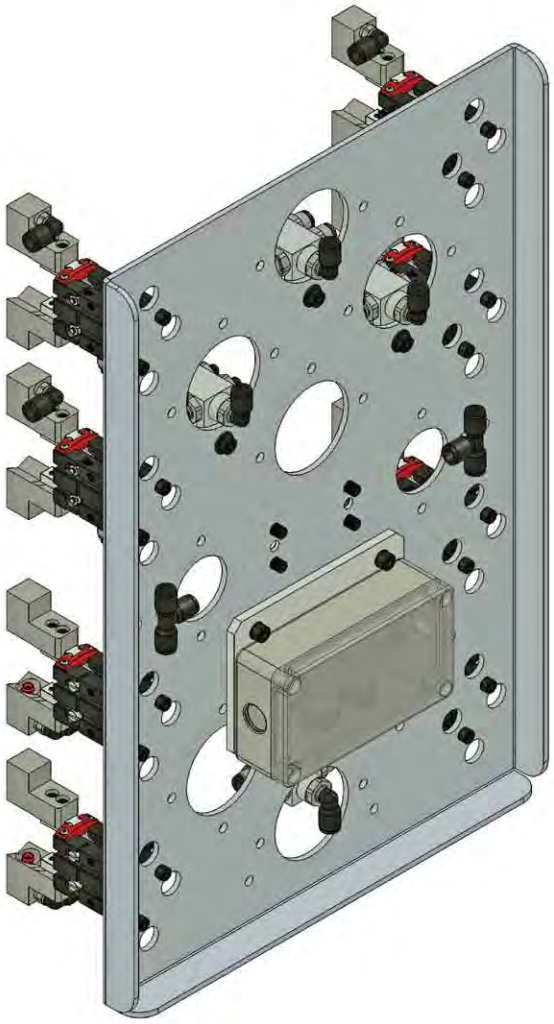
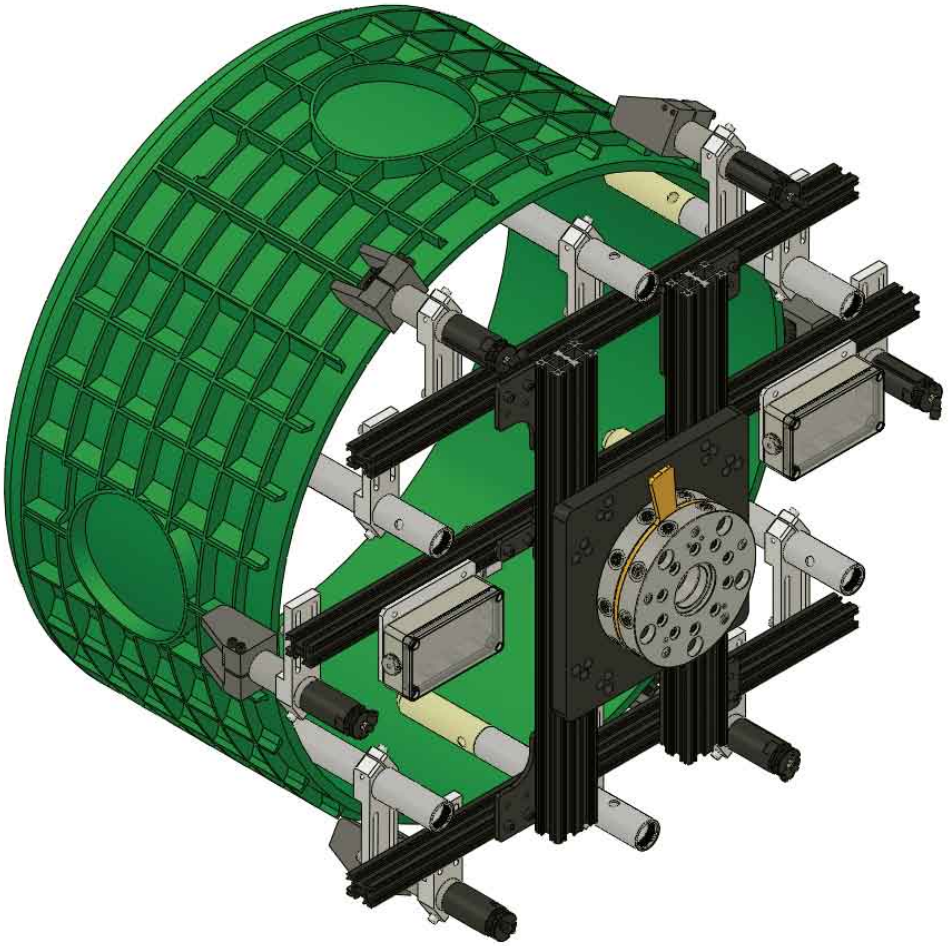
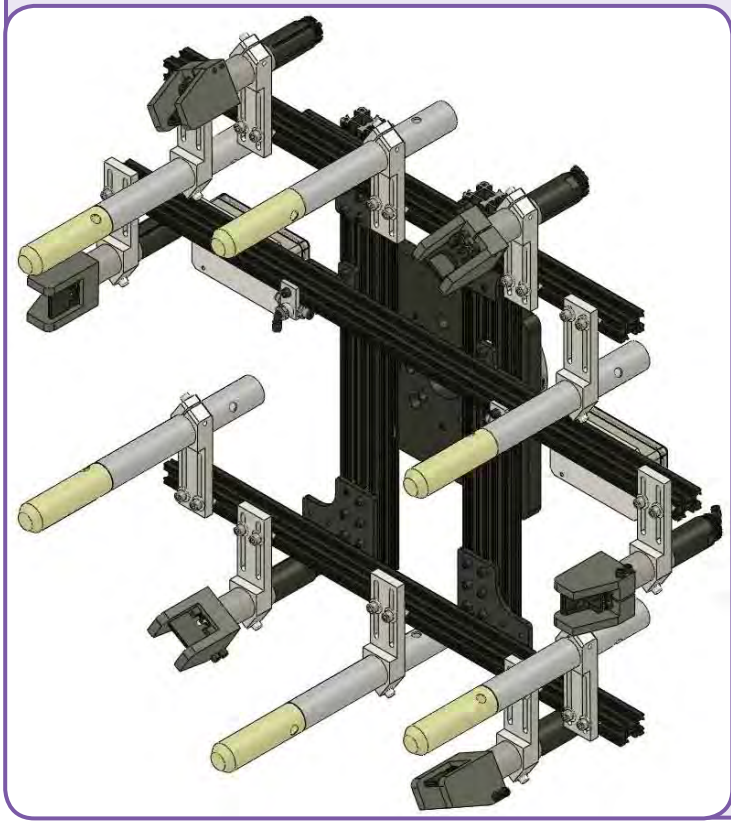


Plate-Based EOAT Examples

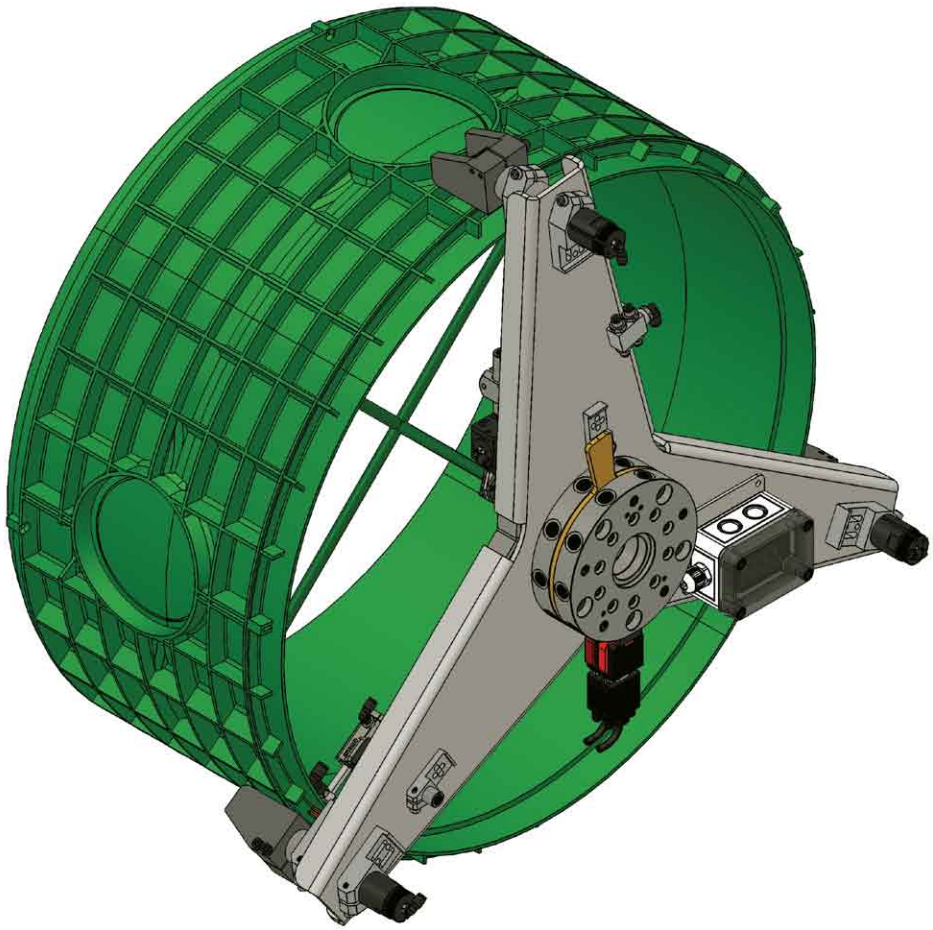




EOAT made with Profile

Here is a EOAT design using profile-based design.

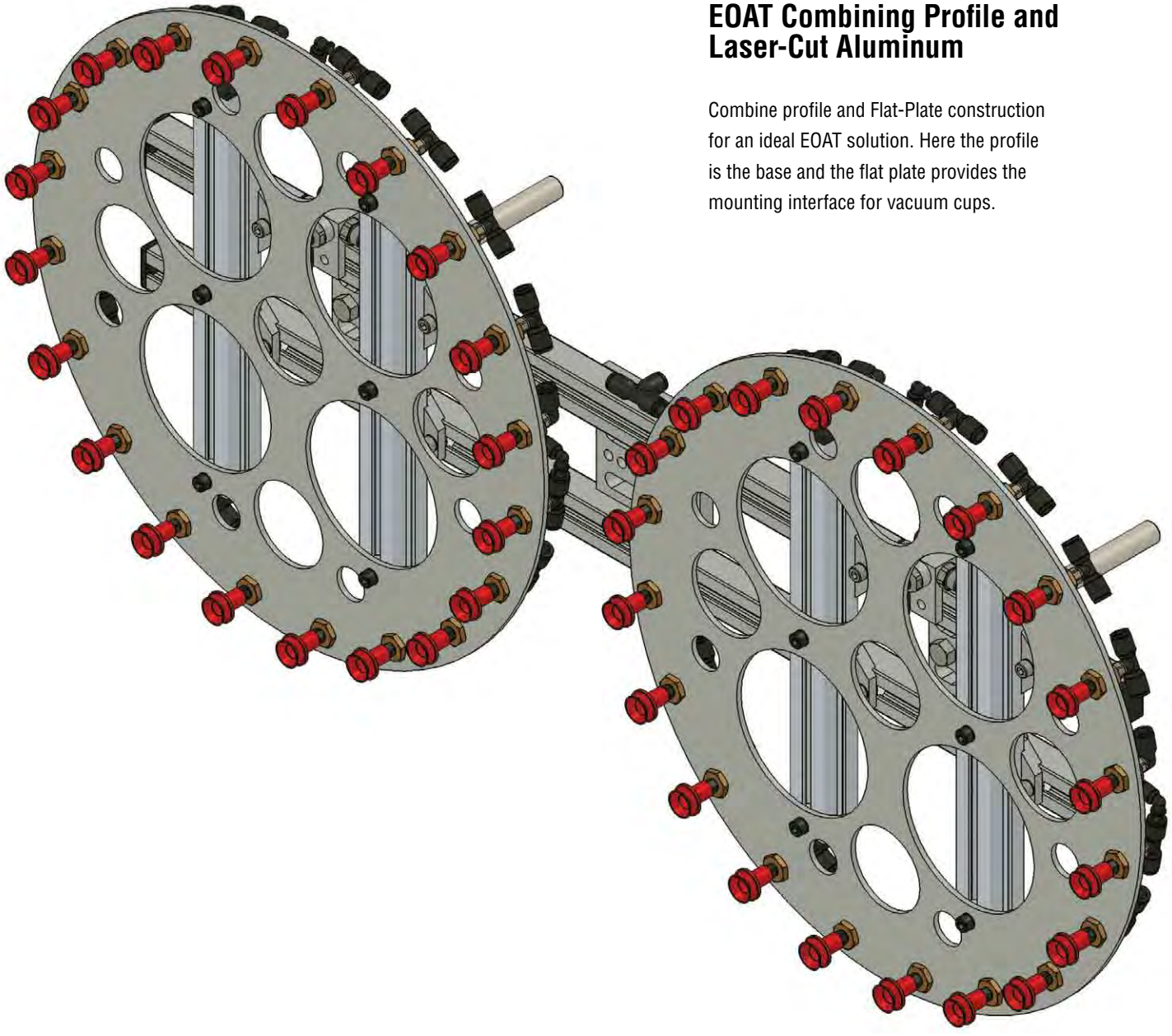
Plate-Based EOAT Examples



EOAT made with Laser-Cut Aluminum

Here is the same part using a Flat-Plate EOAT design resulting in a lower cost and lighter weight.

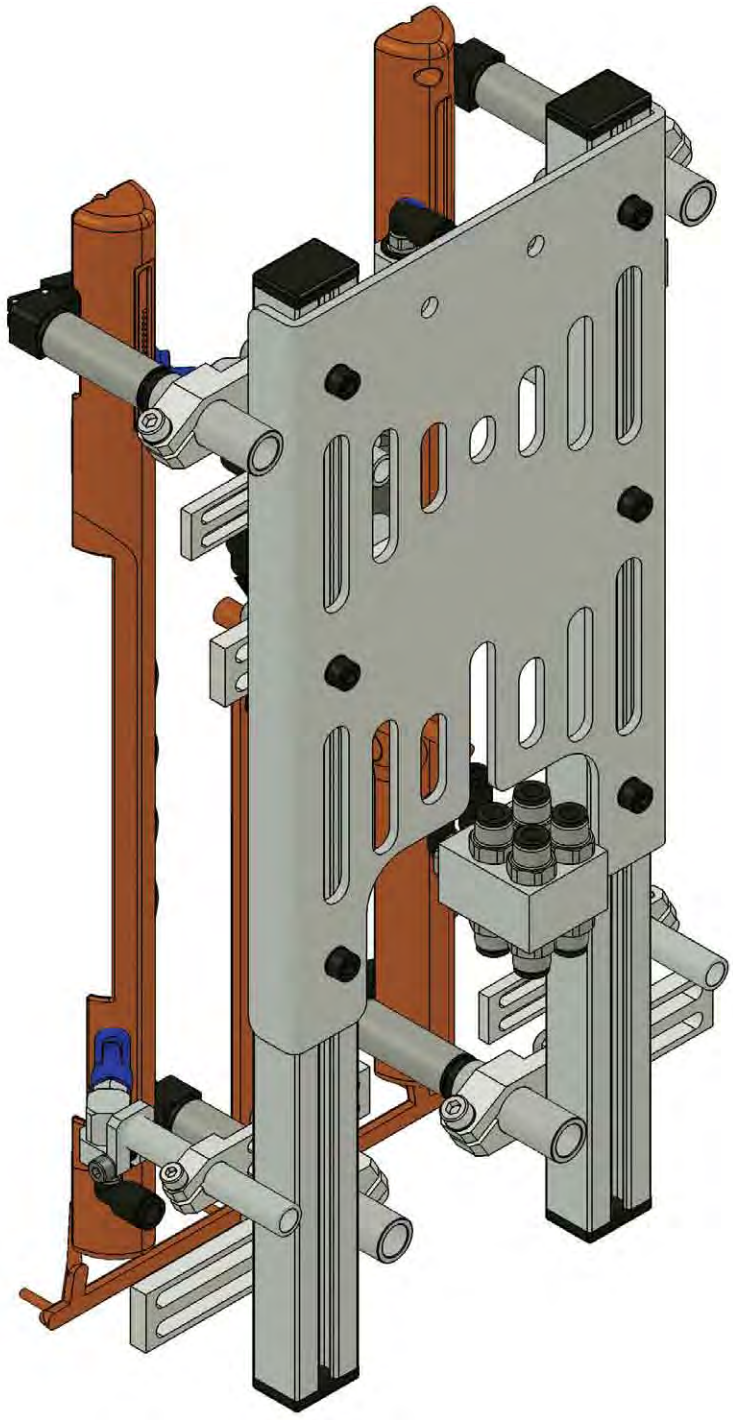
Plate-Based EOAT Examples



EOAT Combining Profile and Laser-Cut Aluminum

Combine profile and Flat-Plate construction for an ideal EOAT solution. Here the profile is the base and the flat plate provides the mounting interface for vacuum cups.

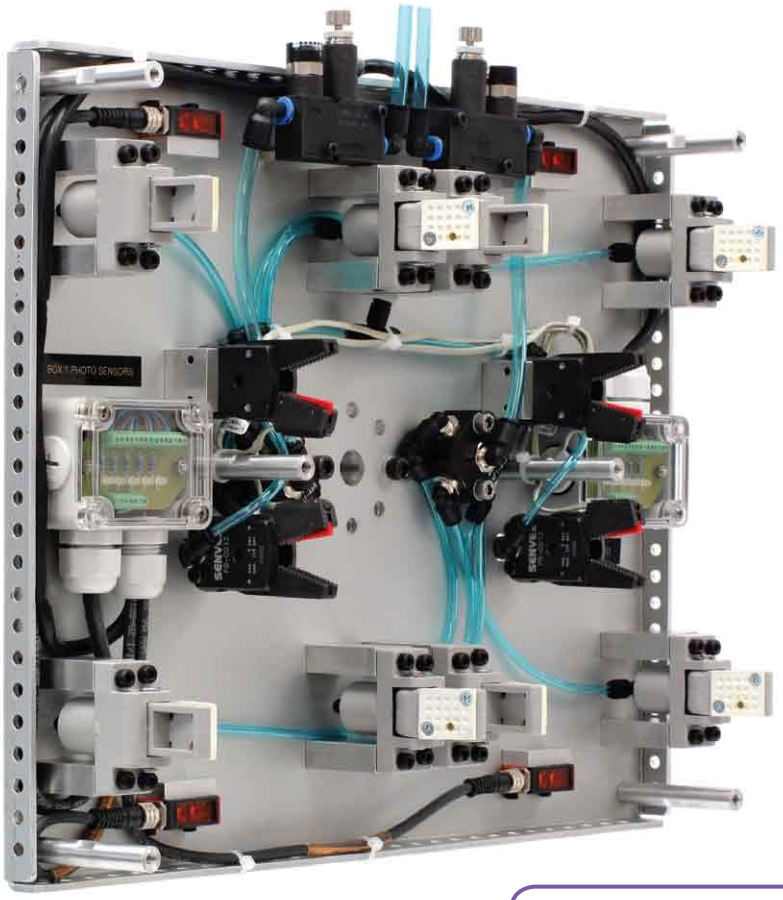
Plate-Based EOAT Examples

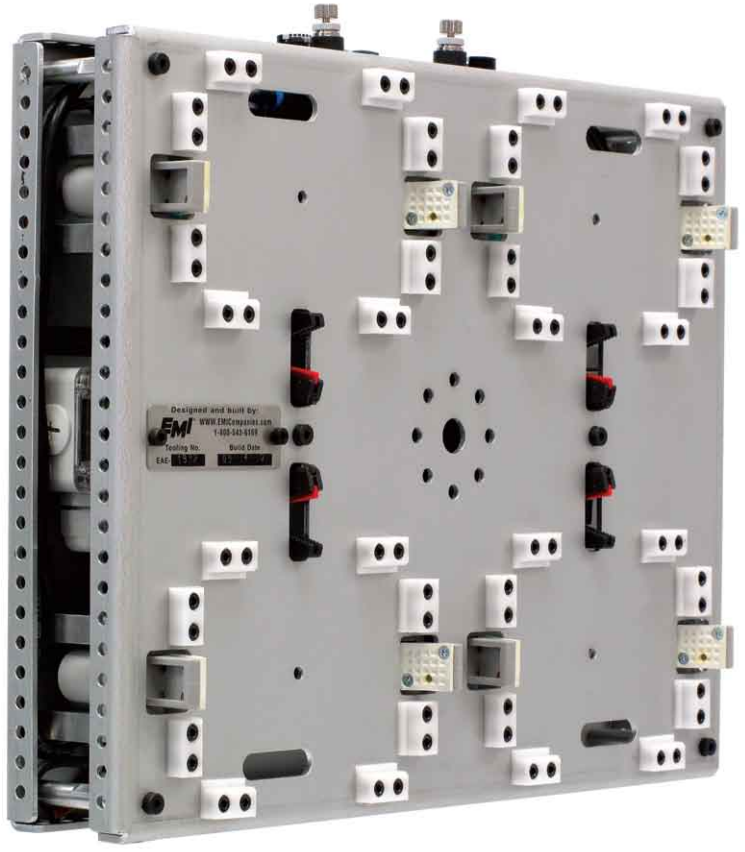


EOAT Combining Profile and Laser-Cut Aluminum

Here is another example showing the combination of profile and Flat-Plate construction. But here the flat plate is the base and the profile provides the mounting interface for grippers.

Plate-Based EOAT Examples

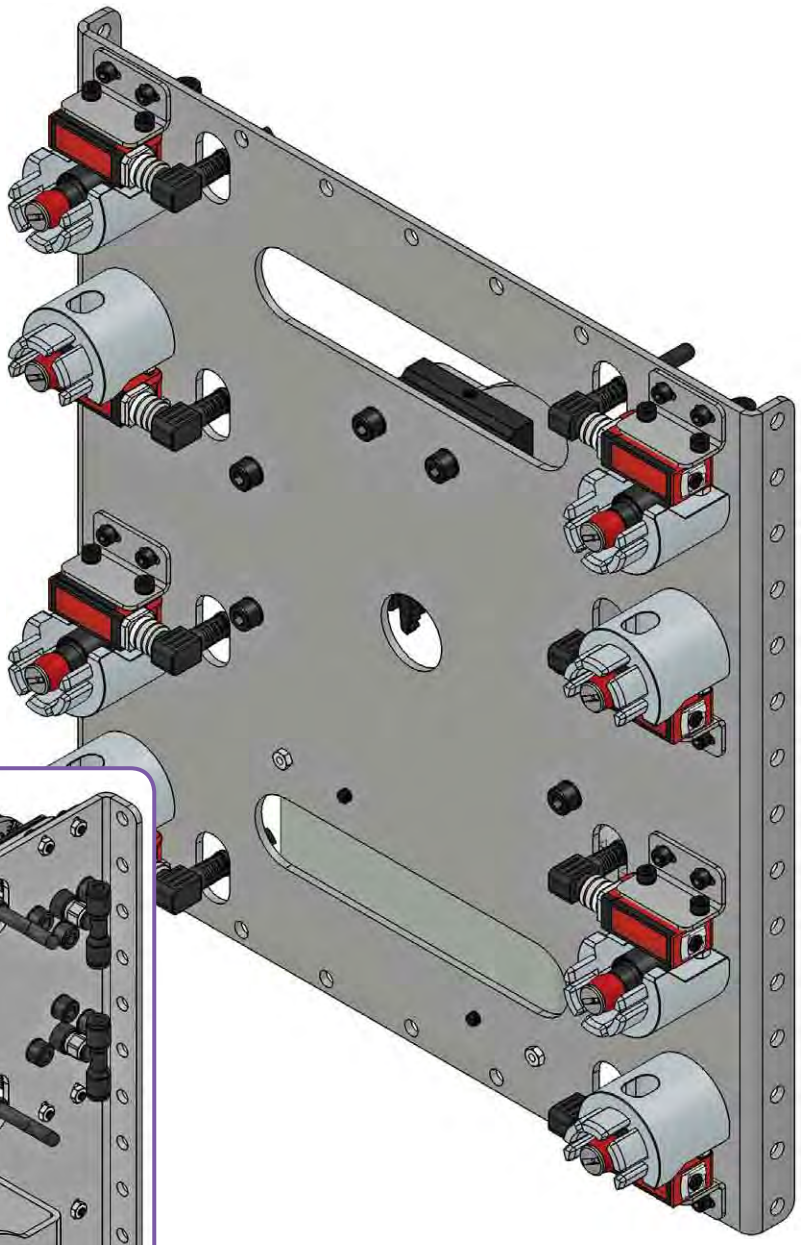


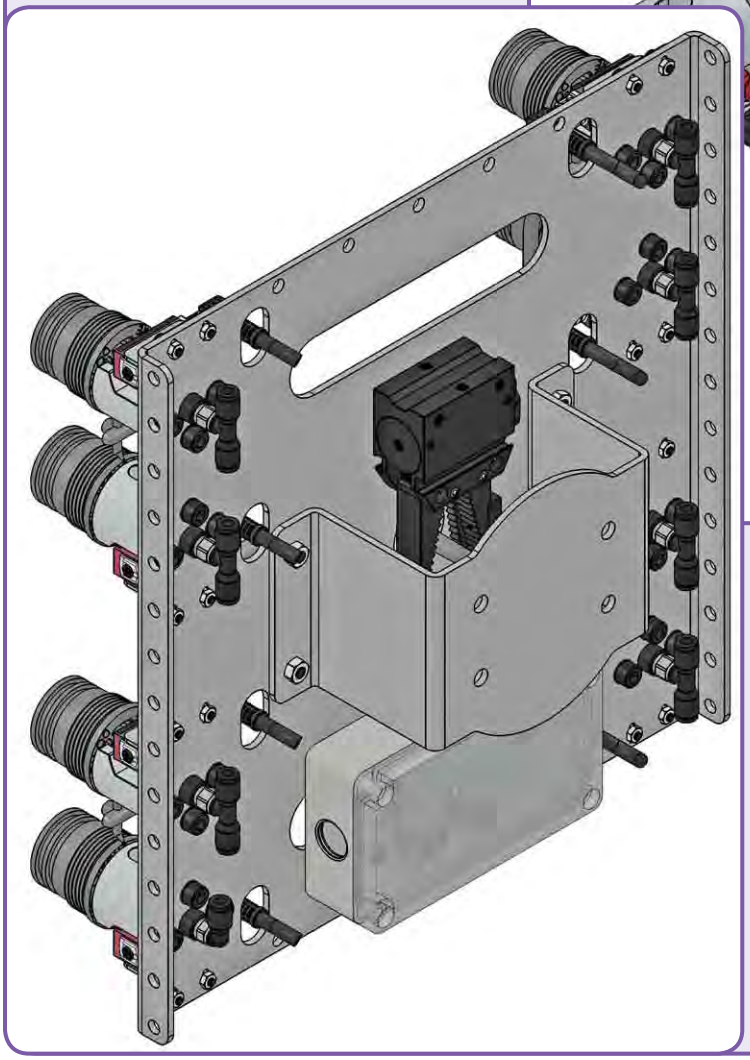


Double Panel EOAT keeps Tubing, Wires, and Grippers Enclosed for a Clean and Neat Design

Flat Plate EOAT can enclose grippers, tubing, and wires for a very clean, streamlined EOAT.

Plate-Based EOAT Examples





Single Panel EOAT to keep Tubing and Wires Separate from Gripping Area

This Flat Plate EOAT keeps tubing and wires separate and behind the part gripping area.

Plate-Based EOAT Examples

Use Laser-Cut Aluminum EOAT with Sprue Pickers or Light Payload Robots

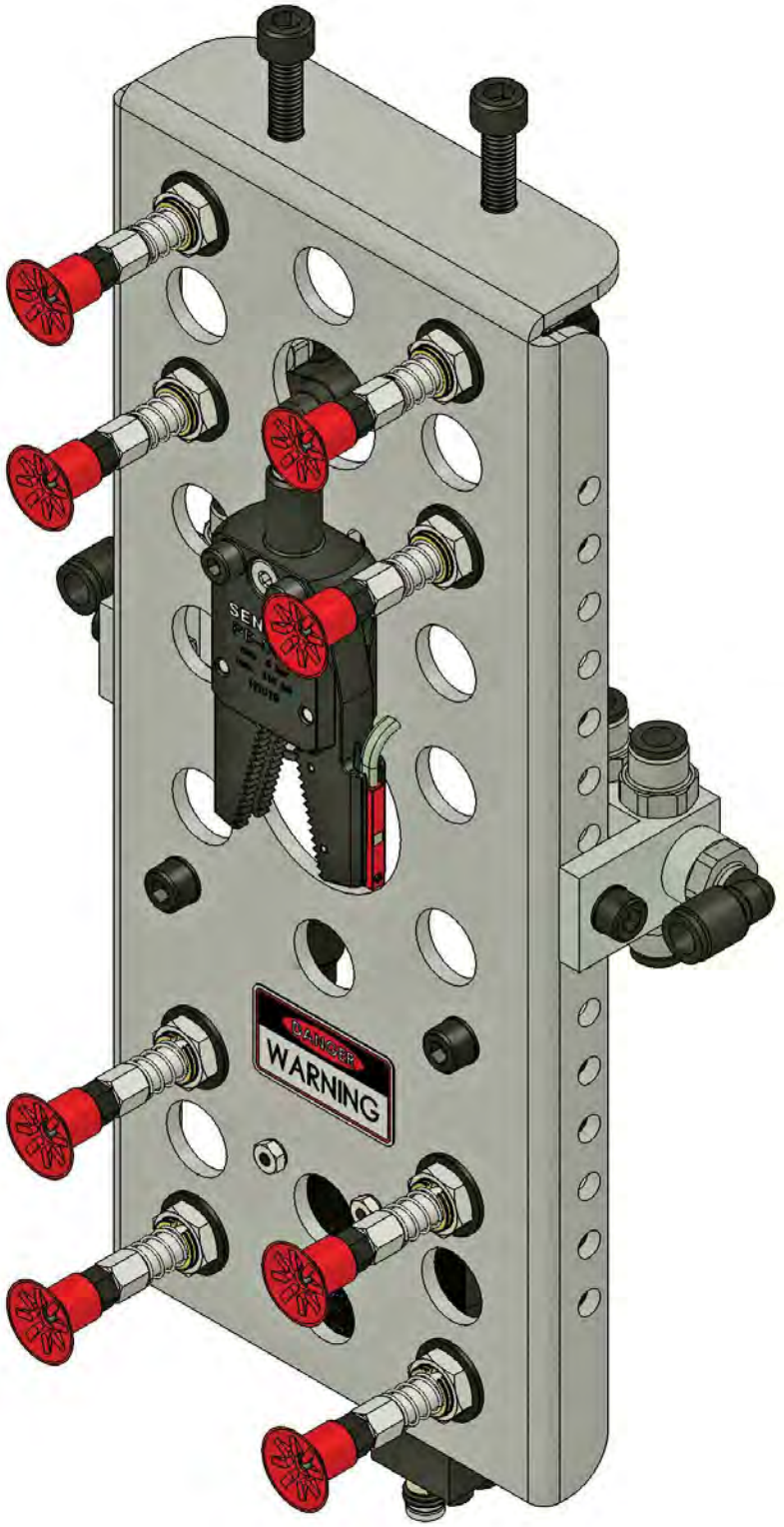
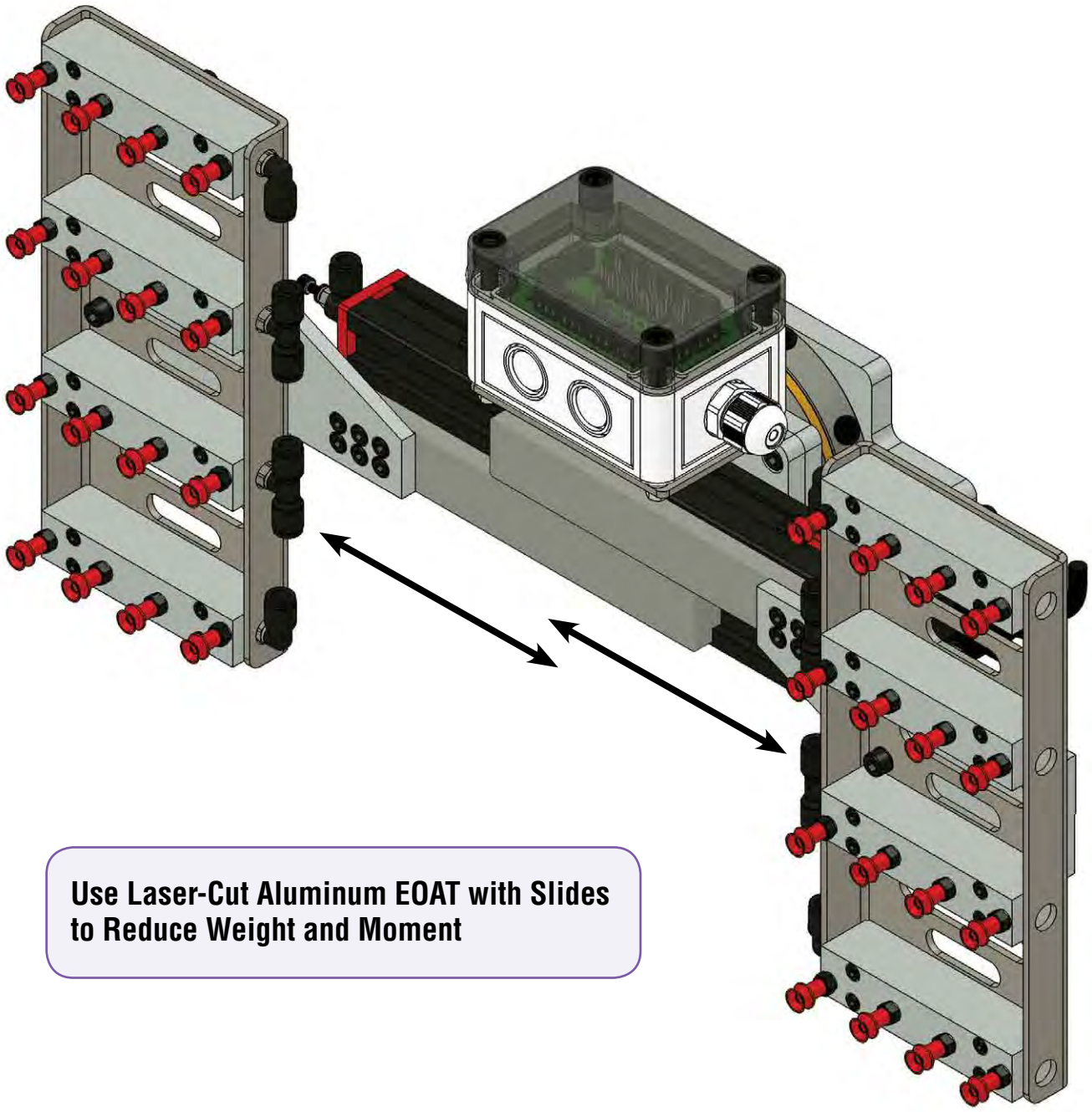


Plate-Based EOAT Examples



Use Laser-Cut Aluminum EOAT with Slides to Reduce Weight and Moment

Plate-Based EOAT Examples

1/4" Thick Laser-Cut Aluminum with Machined Counter Bores

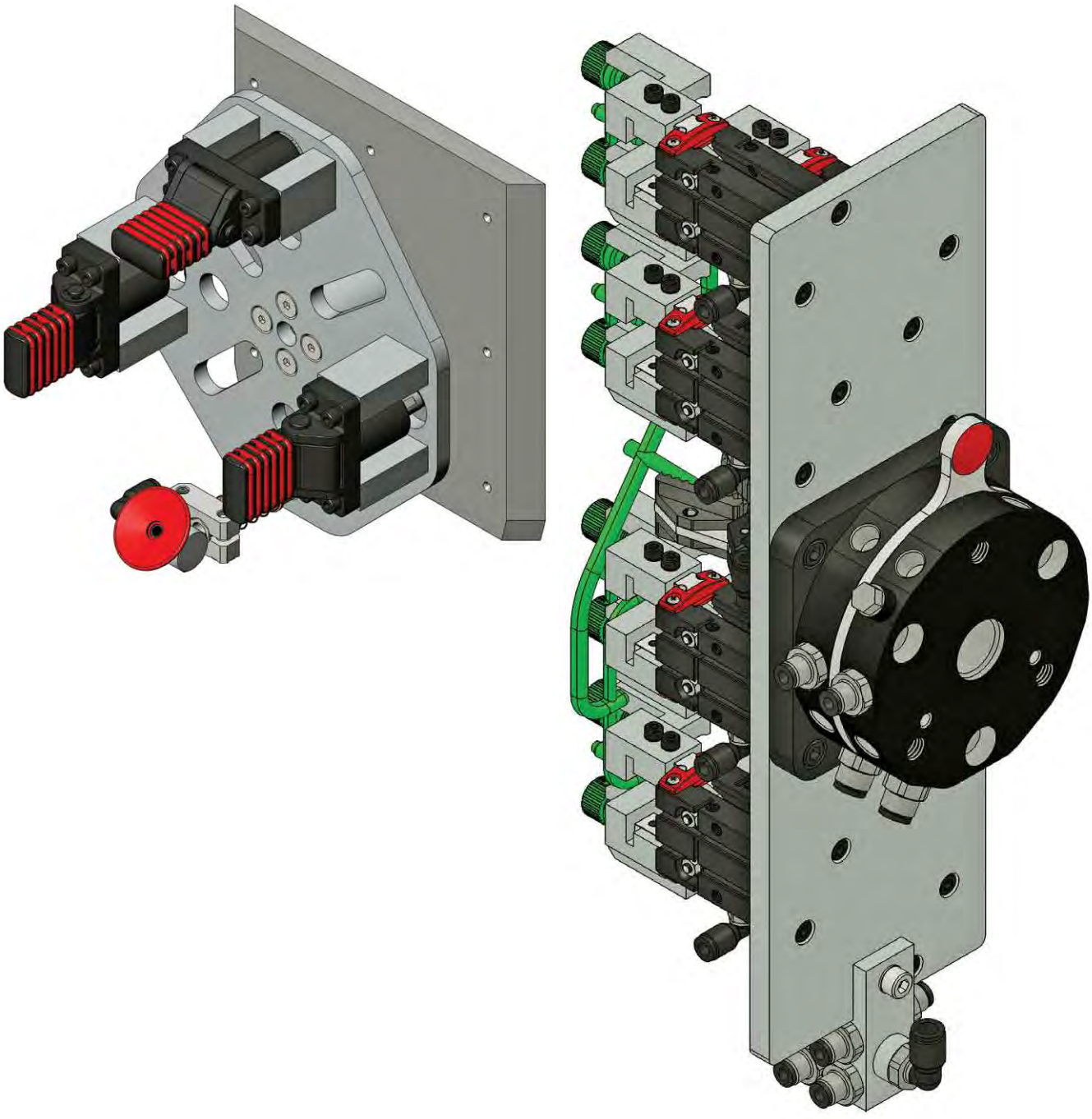


Plate-Based EOAT Examples

Ideal for Many Cavity Molds

A key advantage of laser-cut Flat Plate tooling for many cavity molds is precision positioning. It would be very difficult to assure precision positioning using profile and clamps for this EOAT.