



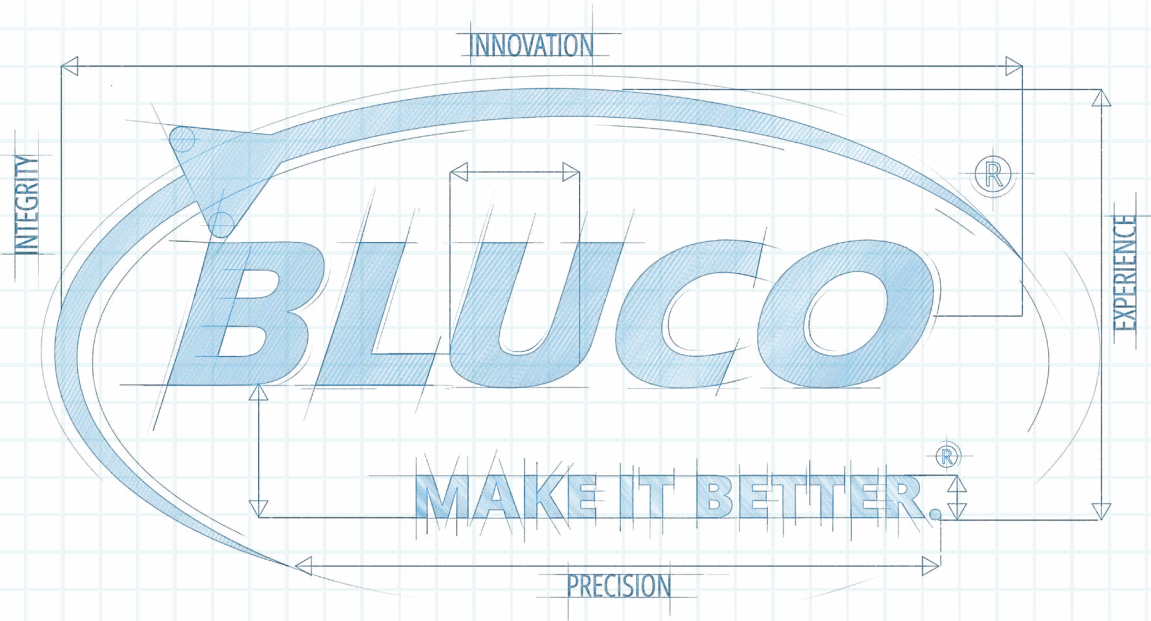
MODULAR FIXTURING
SOLUTIONS
FOR CNC MACHINING



Bluco® Modular Fixturing Solutions Deliver

PRECISION, EFFICIENCY & VERSATILITY

For Vertical Machining | Horizontal Machining | Extra-Large Parts



See for Yourself

HOW WE PUT 30 YEARS OF EXPERIENCE TO WORK FOR YOU

Visit our showroom

If you haven't yet, come see our 4,500 sq. ft. Showroom, and all of our modular systems. Let our experienced engineers walk you through the real-world challenges that each solution can help solve.



Visit our Validation Center

Explore 7,000 sq. ft. of modular solutions, new technologies, and innovative ideas in our hands-on Validation Center.



Send your Parts to Bluco

If you would like to see the system in action, you'll be able to work with our tooling under the guidance of our engineers and even machine your parts complete in our machine shop.



Welcome to Bluco®

Precision. Efficiency. Versatility. As you read through these pages, remember those three words. You'll soon see that Bluco modular solutions are engineered to help you achieve all three, no matter what your machining challenge might be.

Our work over the last 30 years, on thousands of applications, has given us first-hand experience in developing solutions for every challenge large or small, mechanical or process-related. Our experienced fixturing specialists can apply that knowledge to your unique situation because they've been where you are. They speak your language, and they're expert problem solvers.

Within these pages, you'll discover what makes Bluco the first and only choice for modular fixturing, and you'll see how one modular kit and customized baseplate can be used to create an unlimited number of fixtures. You'll learn what's next on the journey you've already begun — the journey through the Bluco Buying Experience — and see how much easier it is to boost your bottom line when you're not relying on dedicated fixturing anymore. You'll get to imagine what it's like to work with fixturing that does everything on your wish list.

But don't take our word for it, come experience it first-hand. We work best when we're face to face, and we know it's not a proven solution until you've proven it yourself. Send us CAD files of your part, come visit our Showroom or Validation Center, and let's work together to make it better.

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OR GO TO [BLUCO.COM/GET-A-QUOTE](https://www.bluco.com/get-a-quote)





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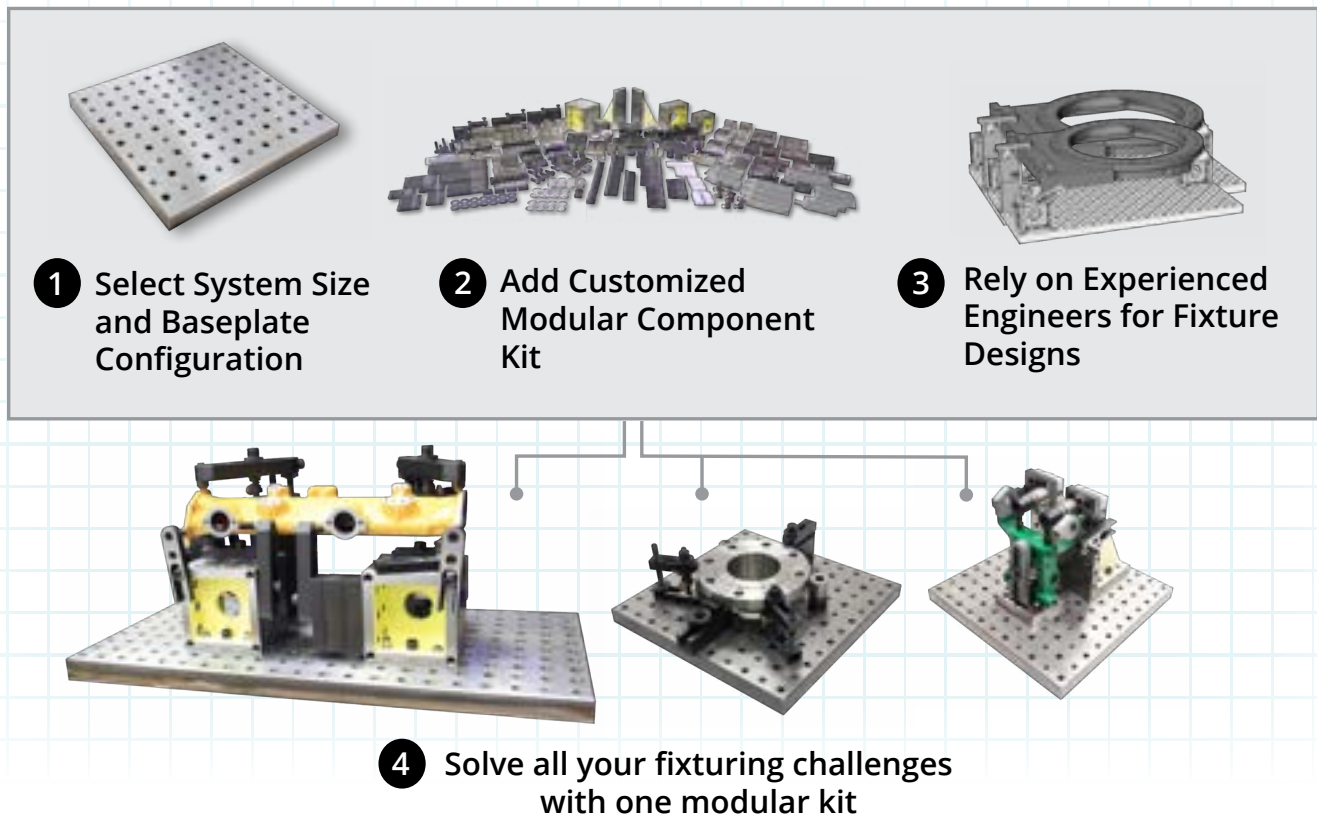
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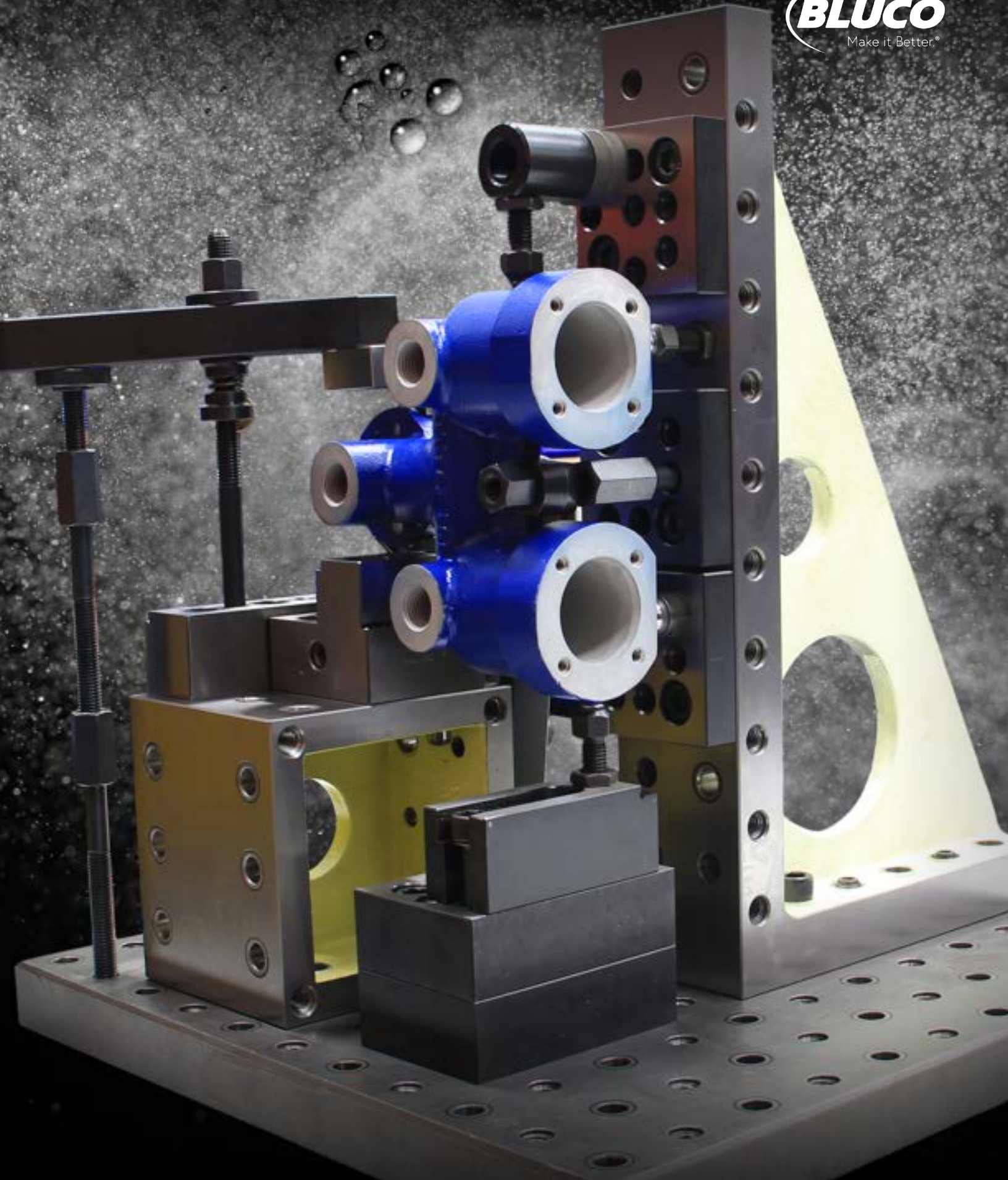
The part at the left is fixtured with Bluco's newest innovation: a line of modular components and baseplate options designed especially for extra-large parts like the knife gate shown here. Our fixturing specialists can curate the right kit for your parts from over 120 components in this line. Bluco offers solutions in three sizes to solve any challenge and fit any size part.

Bluco Modular Fixturing for CNC machining

Our fixturing system is more than just table top accessories like toe clamps, cap screws and parallel blocks. It is an engineered system of interchangeable, hardened and precision-ground locating elements designed to work exclusively together with our baseplates and tombstones. The design of your solution starts when we work together to select a system size based on your needs, and a baseplate that fits your machine. Next, we expertly curate a component kit designed to hold your parts. Couple that with our engineering support and you have the ultimate fixturing system for any part that goes into a CNC machining center.

BLUCO MODULAR SOLUTION DESIGN PROCESS:

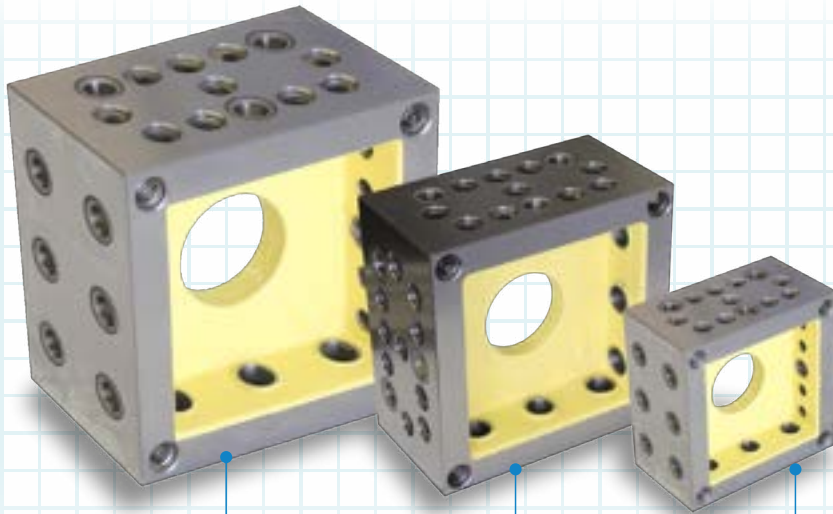






System Sizing

You can't get the accuracy you need from a system that's not sized for the parts you make. That's why Bluco offers three distinct lines of world-class modular components. So whether you're machining small, medium or extra large parts, Bluco has a system — and a solution — that can be customized to fit your needs precisely.



8024 System

3220 Console
280 x 280 x 160mm
103 lbs

5016 System

3220 Console
180 x 180 x 100mm
24 lbs

4012 System

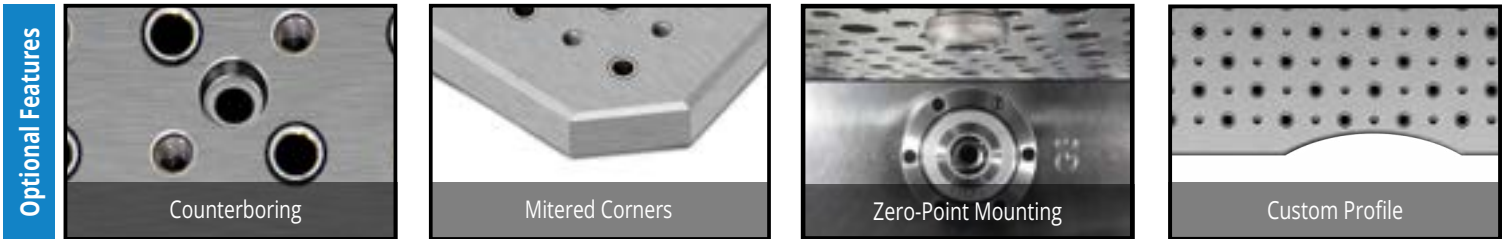
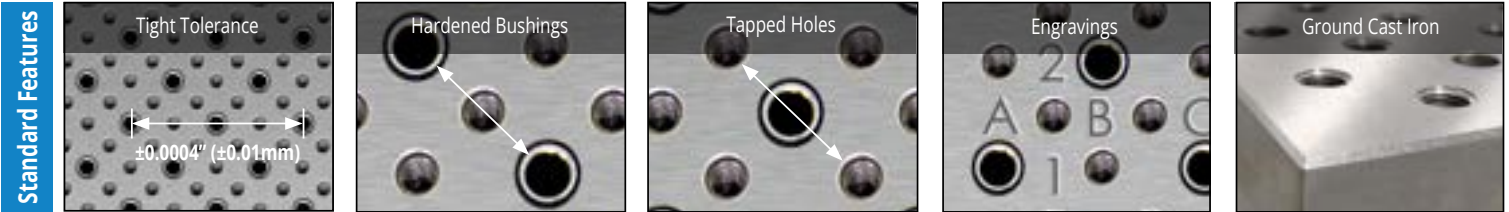
3220 Console
140 x 140 x 80mm
12 lbs

	8024 System	5016 System	4012 System
Machining uses	Large to Extra-Large	Medium to Large	Small to Medium
Component kits	120 Components Available	104 Components Available	120 Components Available
Baseplate Sizes	Customized to machine		
Grid Spacing	80 mm on Center	50 mm on Center	40 mm on Center
Grid Pattern	Alternating pattern of bushings and tapped holes		
Tapped Holes	M24 - 30	M16 - 2.0	M12 - 1.75
Nominal Bore Size	24 mm	16 mm	12 mm
Surface Hardness	58 - 62 HRC Equivalent		
System Tolerance	+/- 0.0006" (+/-0.015mm)	+/- 0.0004" (+/-0.01mm)	+/- 0.0004" (+/-0.01mm)

Modular Bases



Each hand-crafted and precision-tested cast iron baseplate comes with standard features designed to make your job easier and your part more precise. Features like an alternating pattern of hardened bushings and tapped holes for flexibility in component placement, and alpha-numeric engraving to help identify hole location. We also offer optional features that address individual manufacturing challenges.



Tie-Down Holes match up with tapped holes and/or t-slots in the machine bed or pallet.

Mitered corners allow for clearance when indexing the worktable.

A variety of mounting and locating options are available.

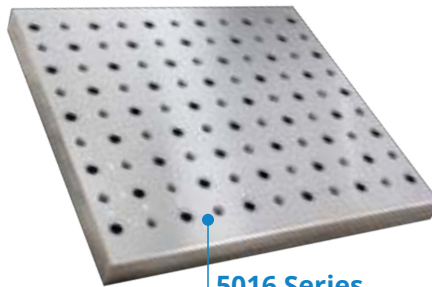
Custom profiles can be included to meet customer requirements.

Baseplate & mounting options

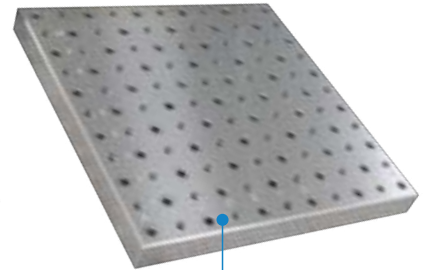
Baseplates come in three size configurations to match the three sizes of modular component kits, and customized tombstones are also available.



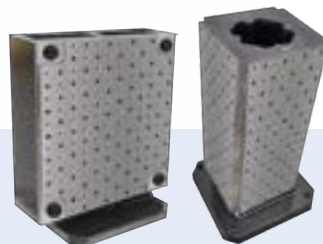
8024 Series
Large to Extra-Large Applications



5016 Series
Medium to Large Applications



4012 Series
Small to Medium Applications



4-Sided and 2-Sided
Modular Tombstones available



Components Tooling Kits

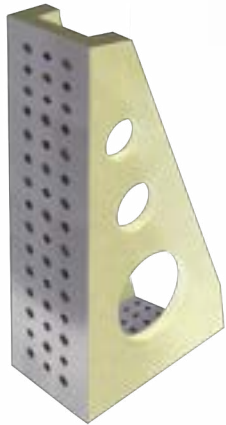
Blocks
Precision ground and hardened locating blocks



Vises
Modular vises generate up to 2,000 lbs of force



Towers
Precision ground and hardened multi-height towers



Angles
Precision ground angles with hardened bushings



Surface Towers
Precision ground and hardened 6-sided step blocks



Edge Blocks
Precision ground and hardened edge blocks



V-Blocks
Precision ground and hardened v-blocks



Tower Blocks
Stackable clamping support base blocks



Clamp Bars
Wide variety of clamping bars to secure work piece



Screws and Bolts
Hardware for locking fixture components together



Dowel Pins
Precision ground and hardened locating pins



Surface Blocks
Precision ground and hardened surface blocks



Adjustable Locators
Infinite adjustability with variety of locating screws



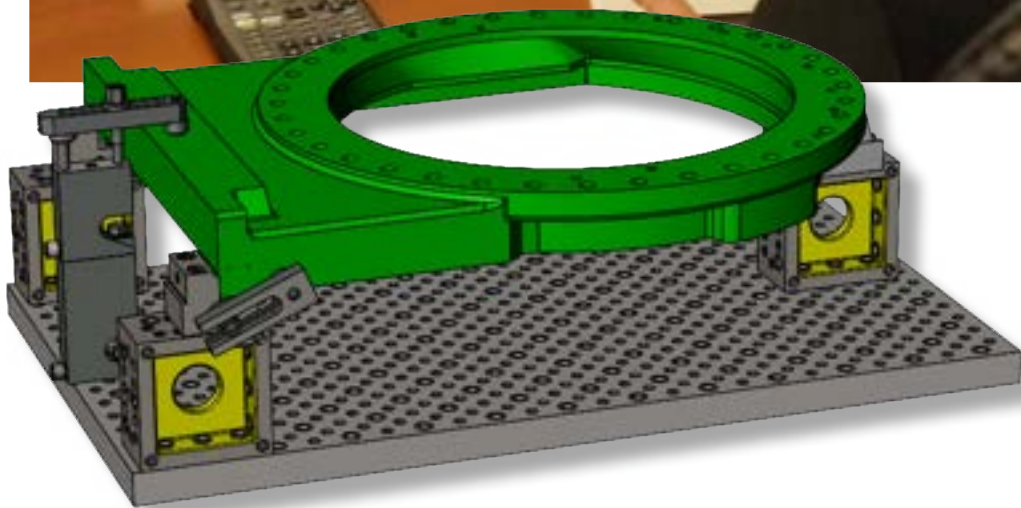
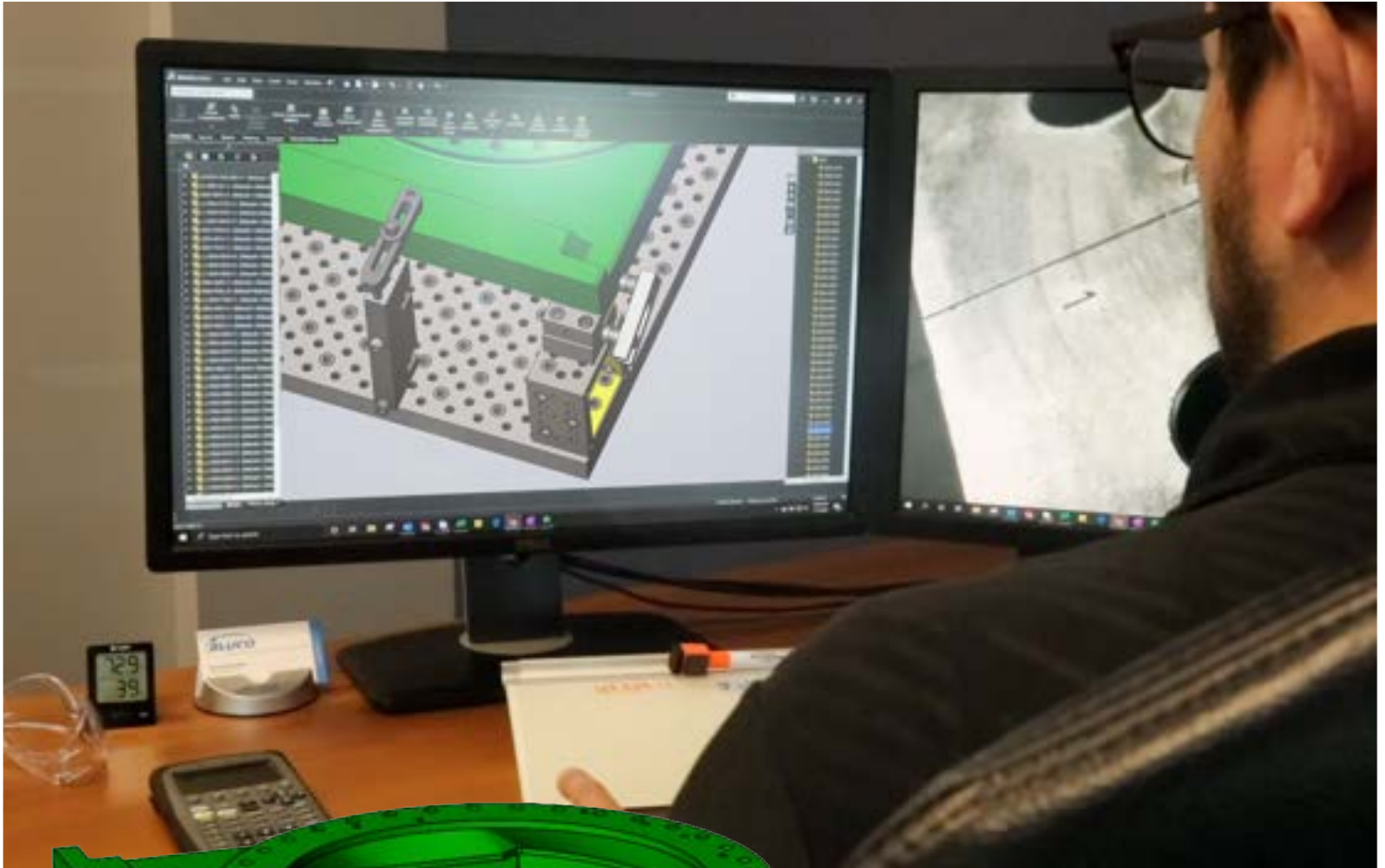
Consoles
Precision ground riser blocks with bushed holes





Engineering

Our solutions don't just work on paper: they work in the shop, because we've worked in the shop. We understand manufacturing, and we can help you maximize productivity. Most of our sales and engineering team have used our tooling in their former positions in machining and welding industries, and they use that experience to craft better solutions . From CAD, to consult, to on-site installation and training, our team is second to none in modular fixturing and problem solving.



Every custom solution begins as a concept that goes from the minds of our engineers into a CAD environment. There, it's manipulated and fine-tuned until it's ready to be tested.



Here, a solution has gone from concept to design to real-world use. Throughout the process, we use the input of our customers to Make it Better as we work toward a perfect solution.



Why Modular

Choose modular fixturing and you choose to unlock benefits that are often unattainable with dedicated fixturing. Modular solutions make it easy to assemble fixtures, take them apart and re-assemble new ones. Standardizing work — and accuracy — between shifts and employees becomes a built-in part of the process, giving you a consistently better quality end product.



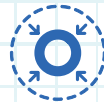
INCREASE YOUR ROI



BUILD 100'S OF FIXTURES WITH ONE KIT



SAVE TIME ON FIXTURE SETUP



SAVE SPACE

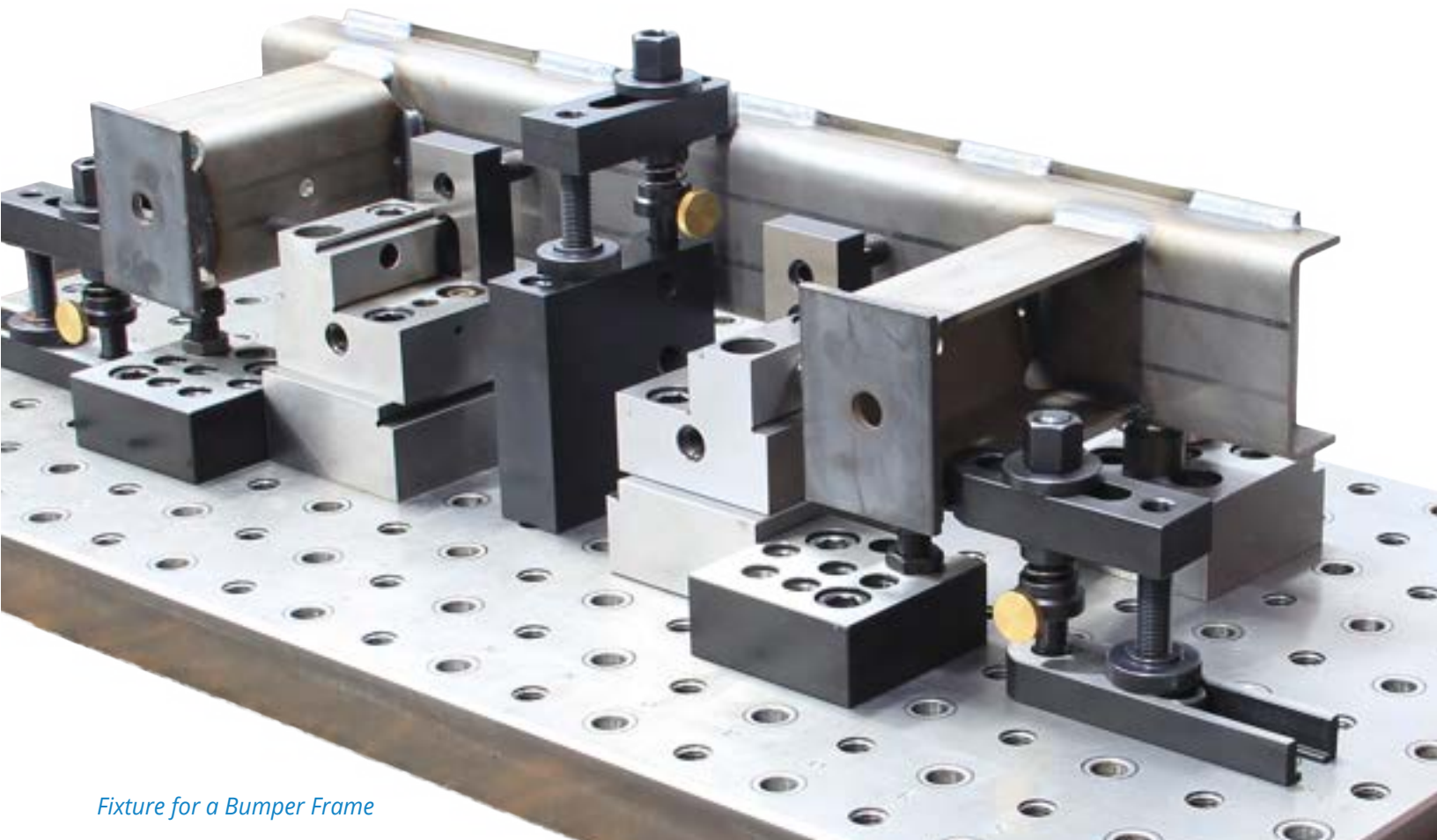


Return on Investment



Increase your ROI

A single purchase of a modular fixturing system can easily last as long as the lifespan of a CNC machine, and will pay for itself in just 8 - 10 fixtures. Imagine never having to worry about fixturing costs again. Our system is designed with precision ground and hardened components to be reused over and over for years to come. The more modular fixtures you build, the more you'll save over the long run.



Fixture for a Bumper Frame

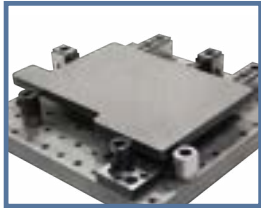
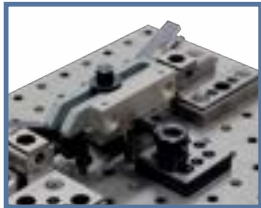
Modular fixturing pays for itself in only 8-10 fixtures

Flexibility



Build 100's of fixtures with one kit

With just one set of modular tooling, an unlimited number of fixtures can be built. In addition, changes can quickly be made on the fly during the prototyping process.



Alpha-numeric baseplate engraving makes it easy to change out components

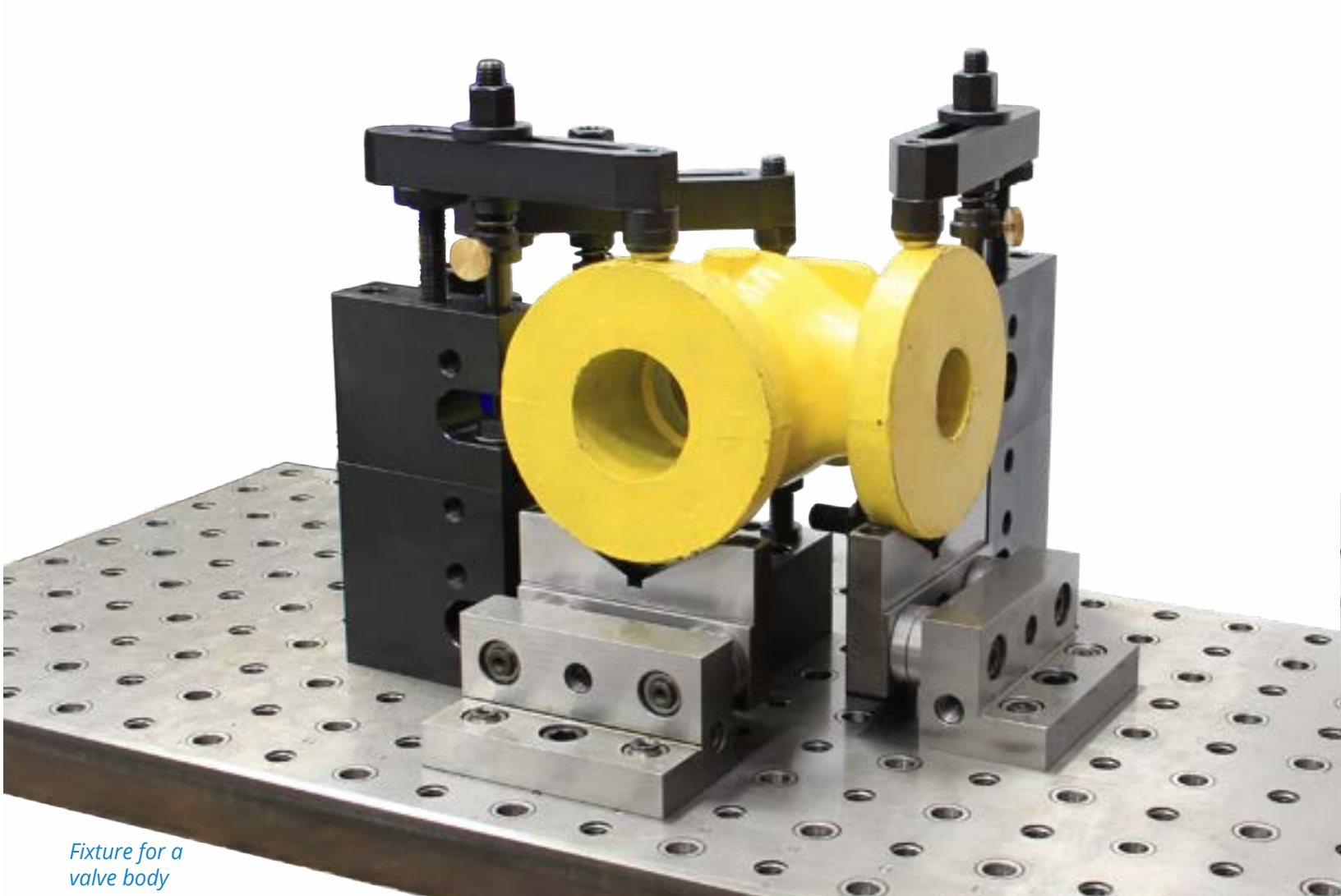


Efficiency



Save time on fixture setup

A typical modular fixture can be designed, built and ready to run the first piece in under an hour whereas dedicated fixtures often require days or weeks to be completed. Rebuilding a modular fixture that has already run parts in the past is even faster, taking only minutes to assemble.



Fixture for a valve body

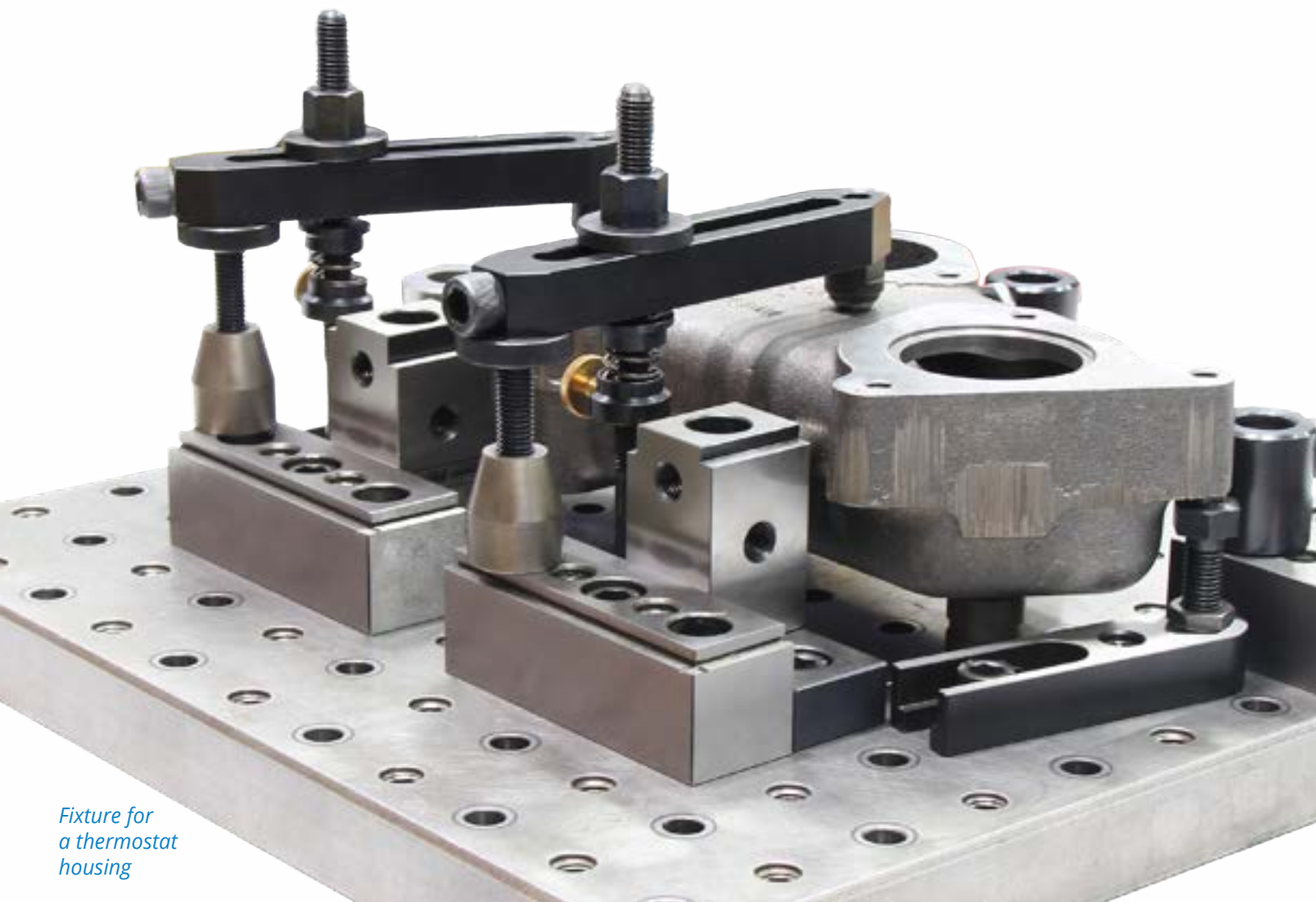
Set up in under an hour instead of days or weeks

Space savings



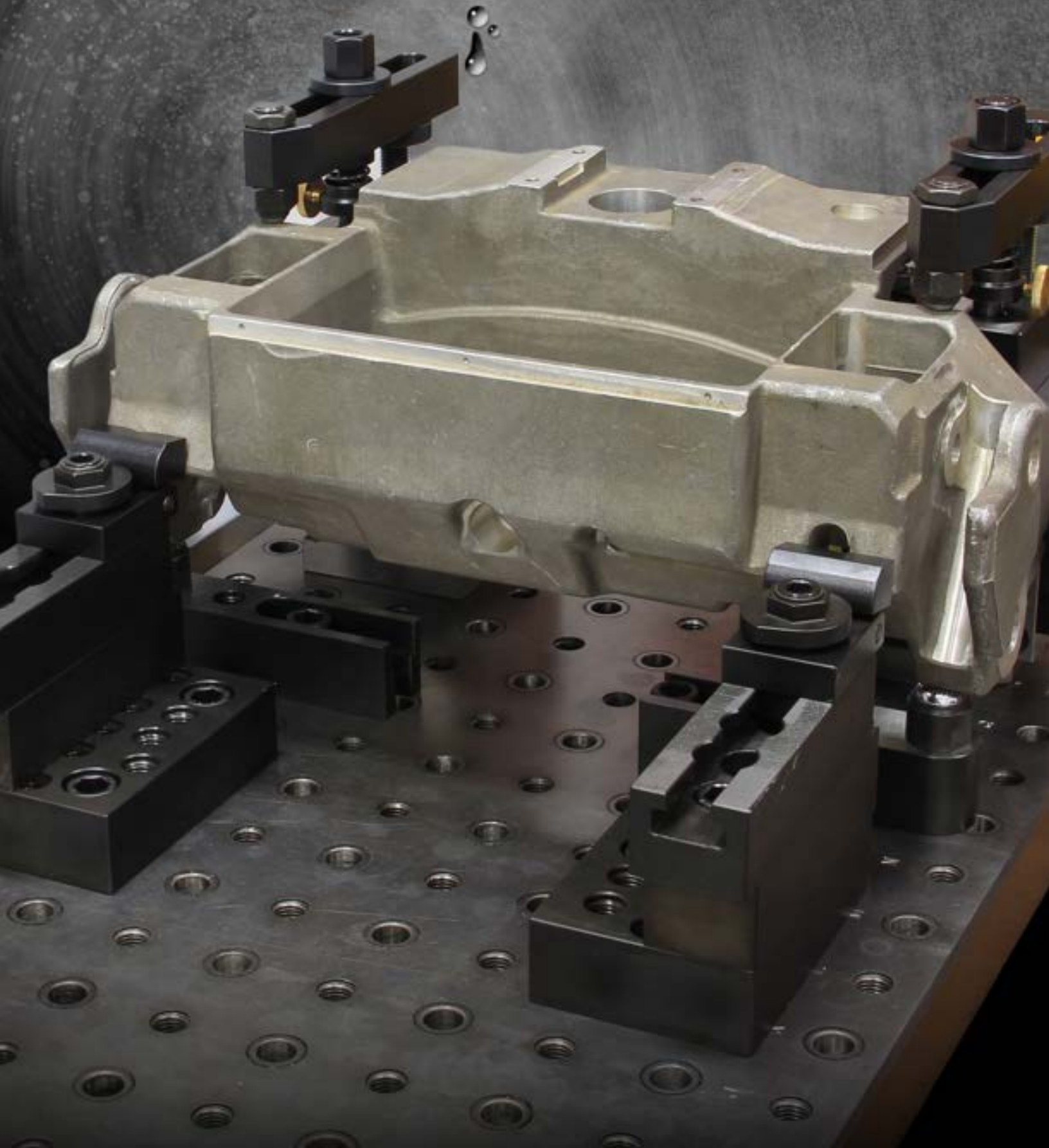
Eliminate wasted space

Modular solutions allow you to change your fixture to fit your part. So there's no more square footage taken up by fixtures that are sitting idle, waiting for the only part they can hold. And because Bluco modular fixturing components can be neatly stored inside lockable workbench drawers, there's no more looking around the shop for a missing fixture.



Fixture for a thermostat housing

No more dedicated fixtures sitting idle on the floor



Why Bluco

Leading the way for over 30 years, Bluco Corporation continues to be an innovator in modular fixturing for both the machining and welding industries. We strive to offer the highest quality products backed by the expertise of fixturing specialists who provide insight, training and ongoing support.





Experience



Trust experts who've been where you are

Our experience is real-world, hard-earned and comes from all facets of the machine industry. We can solve your challenges because we've been there, in the chips. We know how to create modular fixturing solutions that don't just work on paper: they work in the shop, because we've worked in the shop.



Our experts designed a fixture for this 19,000 lb part

Partnership



Collaborate to create better solutions

Our close customer partnerships allow us to design perfect-fit solutions every time. Our fixturing specialists will work with you to tap into the knowledge only you have about your parts and your processes. Then they'll add their specialized expertise to create the kind of solution that can only be built through strong collaboration.



We design with your machines, processes and parts in mind



Quality



Expect world-class modular fixturing

At Bluco, nothing less than perfection is acceptable. That's why we manufacture many of our components the same way you'll make yours — using our own fixturing to make your new fixturing. We deliver the precise tolerances and ultra-flat surfaces you expect.



Precise tolerances and ultra-flat surfaces deliver better part quality

Commitment



Rest assured we've got your back

Our customers know we're in this together, and we're in it for the long haul. From our Lifetime Manufacturing Warranty to our Two-Year Exchange Program, you'll always have up-to-date equipment, so you can do your best work with the most long-term benefit.



We're committed to helping you get the most out of your solution



Innovation



Experience cutting-edge tooling

We've fixtured thousands of parts for hundreds of industries. And we've woven over 30 years of experience into every component. We constantly update and upgrade even the smallest individual features, and we've introduced the largest modular tooling solution available. When you notice that you're achieving accuracy that simply wasn't possible before, you're experiencing Bluco innovation at work.



Innovative features deliver precise, repeatable results

Customization

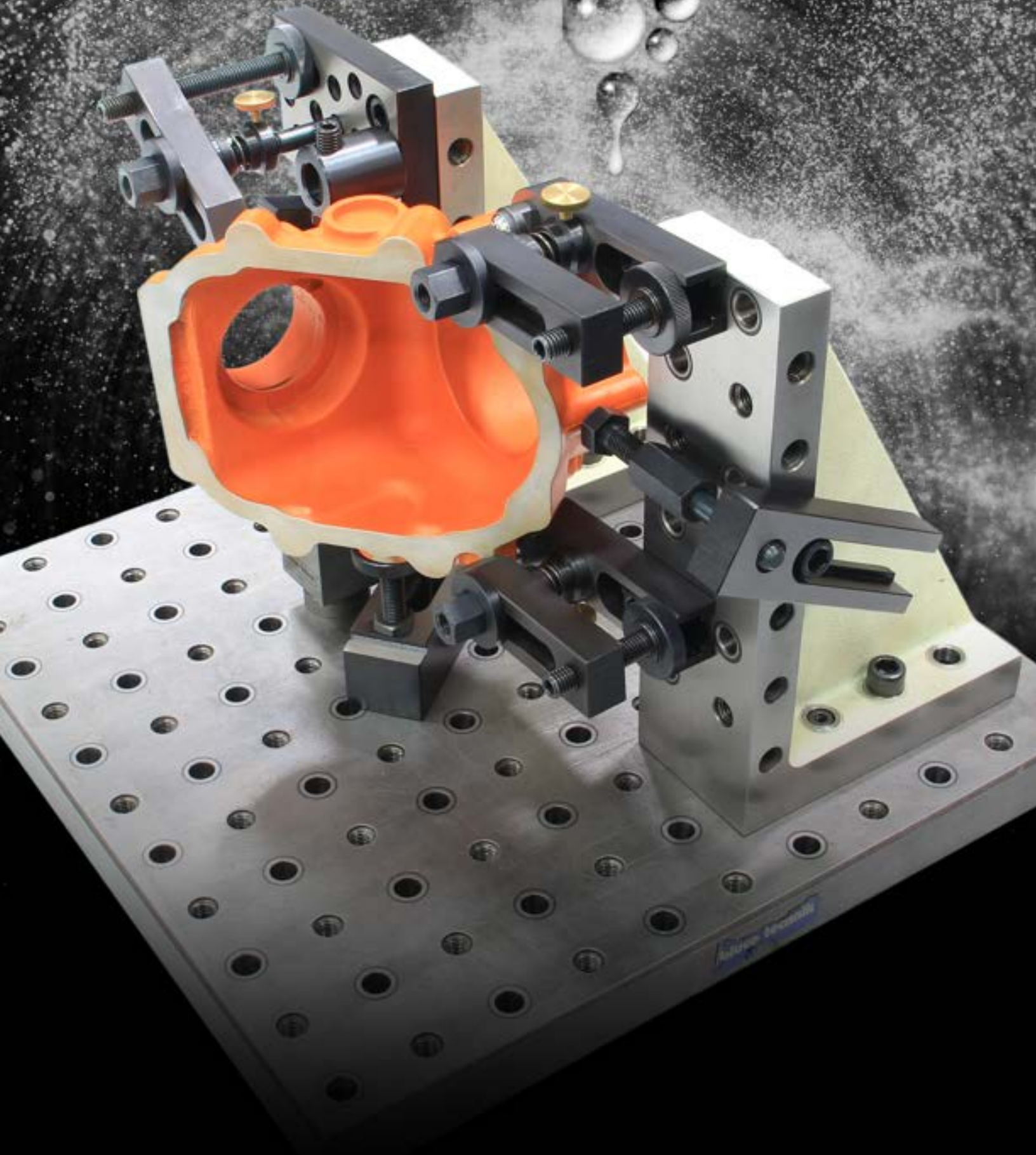


Let us make exactly what you need

Our extensive line of machine fixturing comes in three sizes and includes over 350 modular components. Your modular kit will be hand-selected to fit your parts. Bluco's on-site engineering and manufacturing capabilities mean that we have the ability to create customized components to complement the solutions we create.



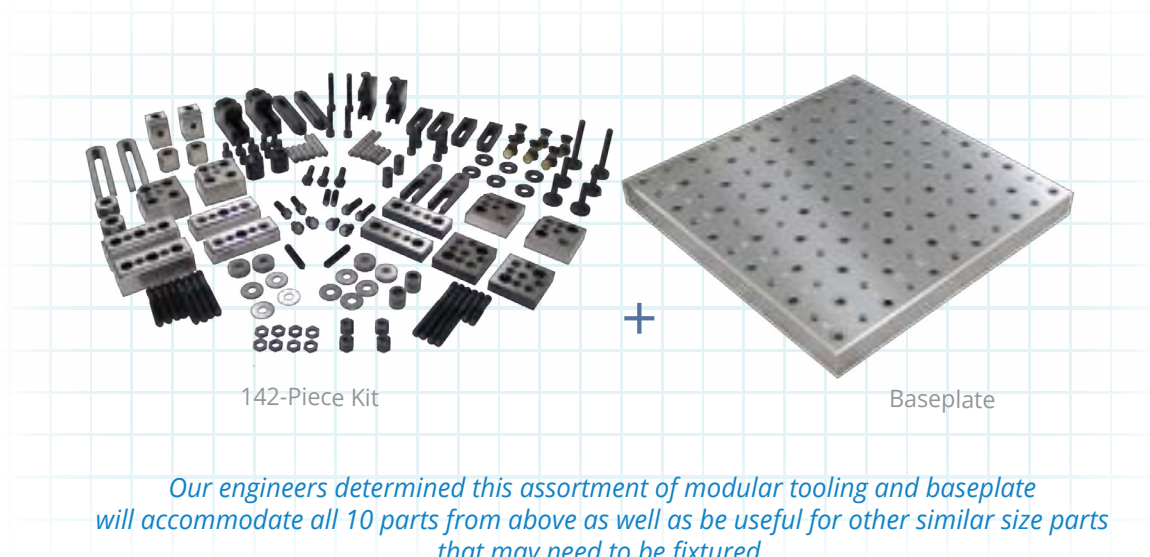
350 standard modular components, custom parts manufactured on-site



Case Study



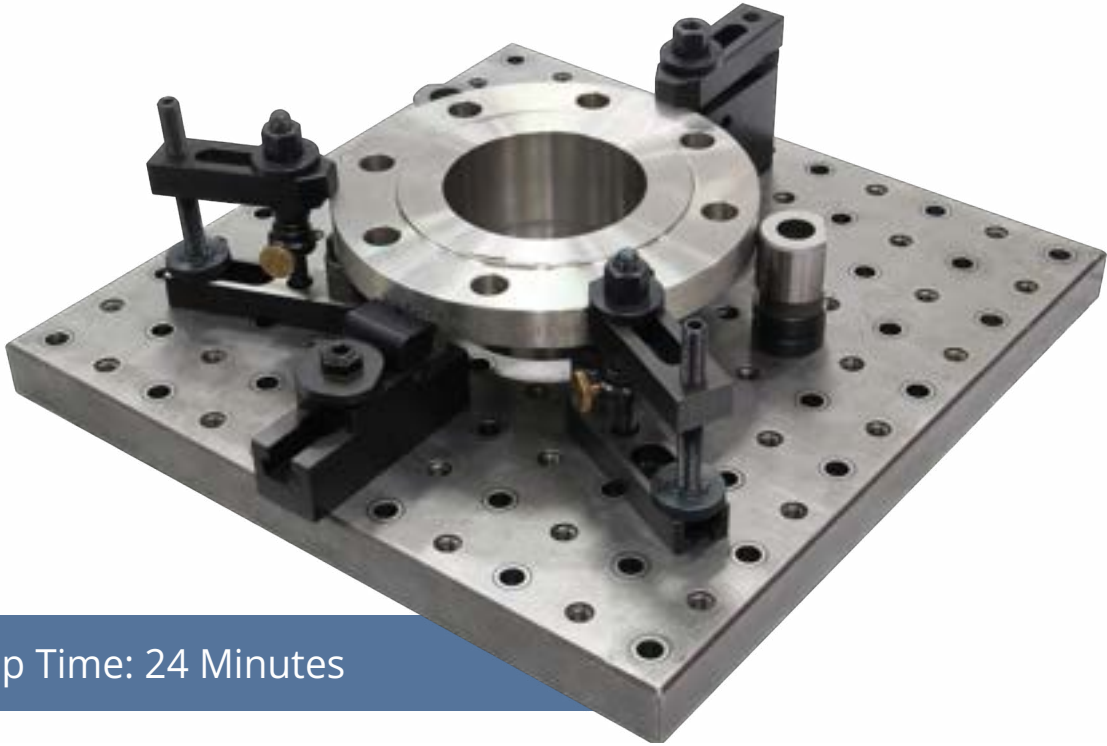
A typical job shop machines hundreds of different size and shape parts every day. Imagine your shop needs to put the 10 parts above into a vertical CNC mill. You need to minimize changeover time, and you don't have the floor space — or the budget — for 10 dedicated fixtures. Explore the following pages to discover how one modular solution gets all 10 jobs done, saving time, money and space.



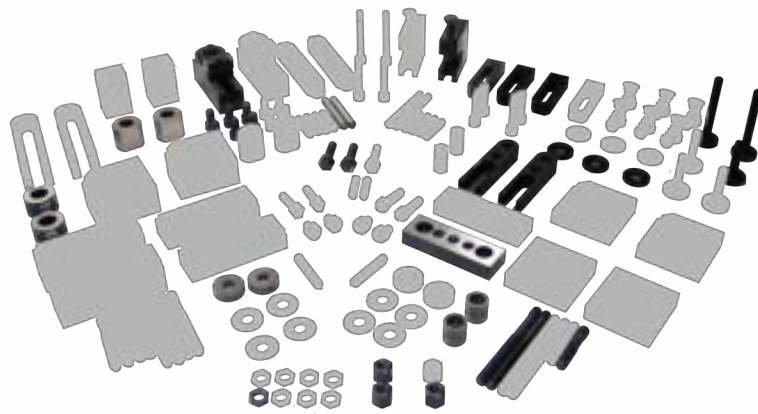


1st Fixture Built

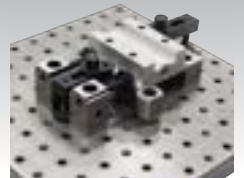
(Modular Fixture for a Machined Flange)



Set Up Time: 24 Minutes

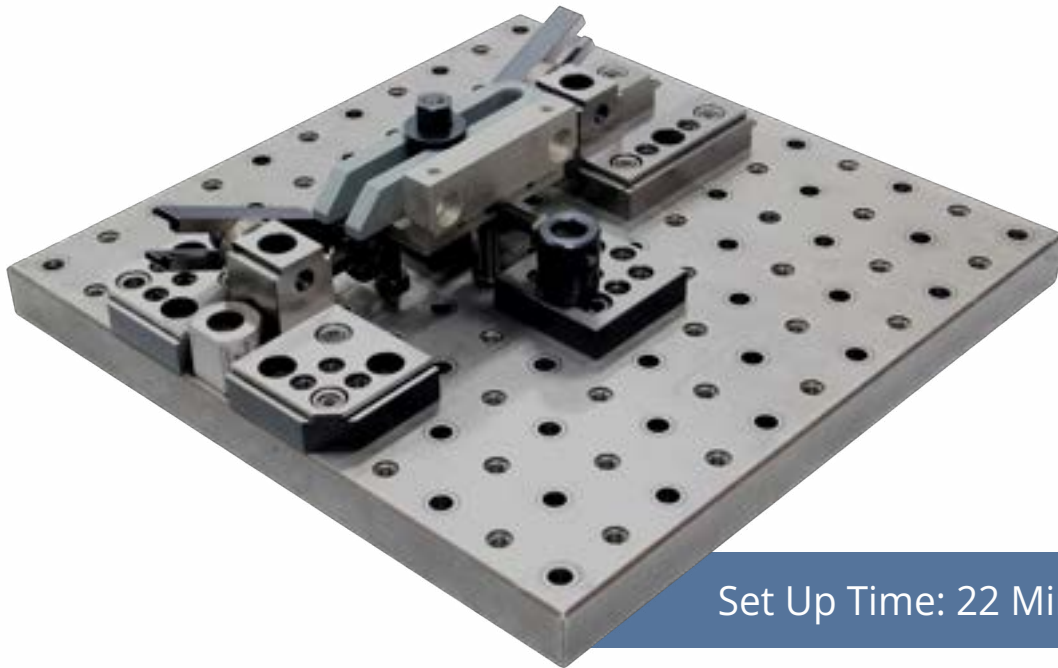


Highlighted parts from the same 142-Piece kit are used to build this fixture.

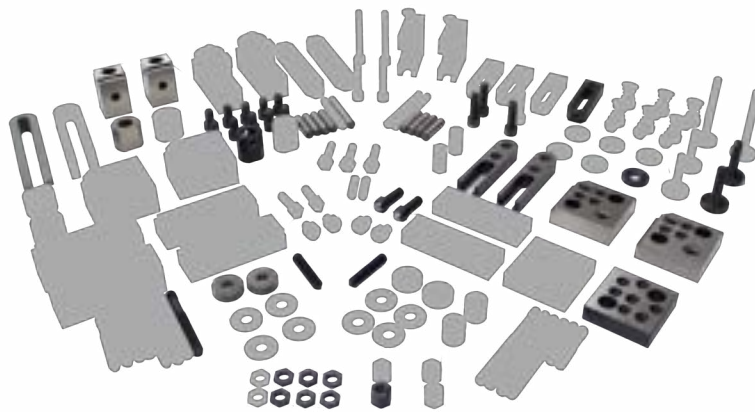


2nd Fixture Built

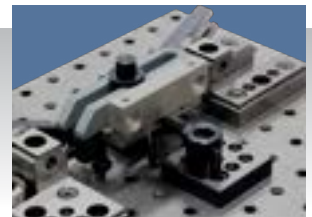
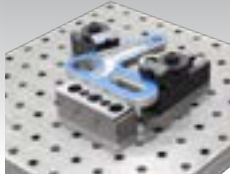
(Modular Fixture for a Connecting Bracket)



Set Up Time: 22 Minutes



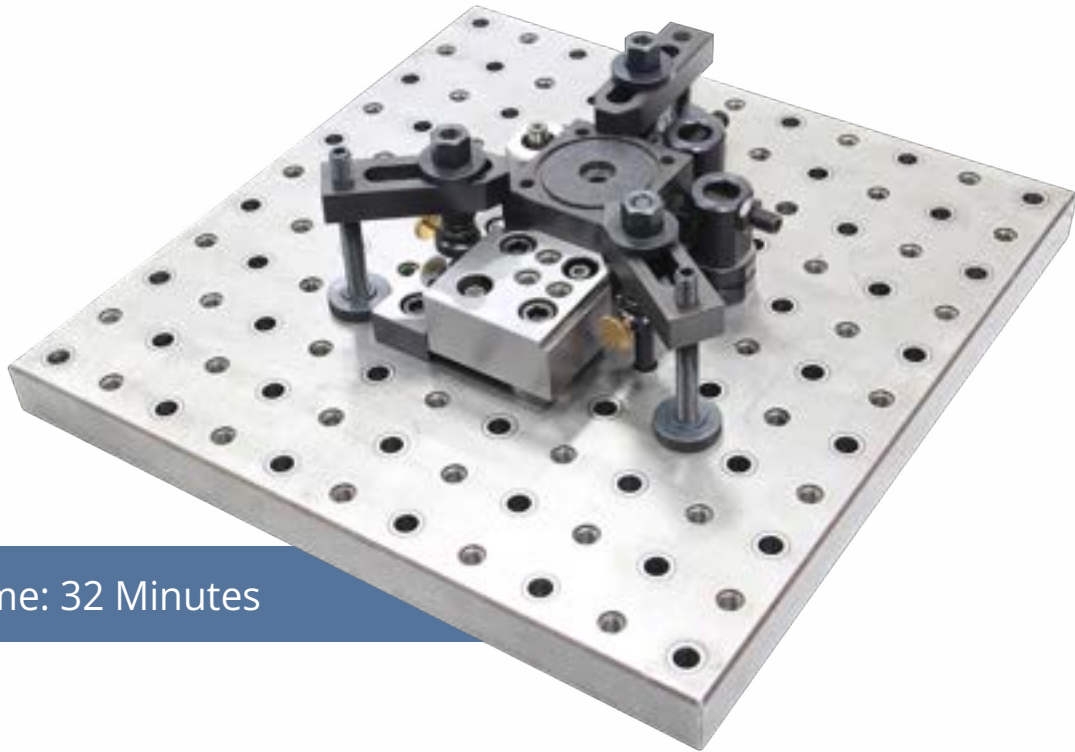
Highlighted parts from the same 142-Piece kit are used to build this fixture.



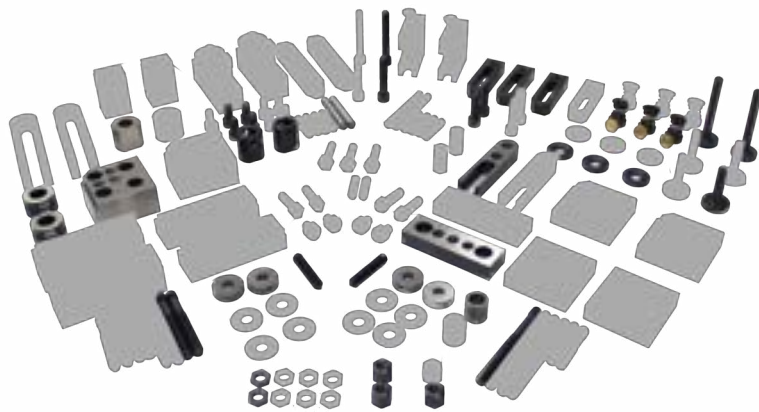


3rd Fixture Built

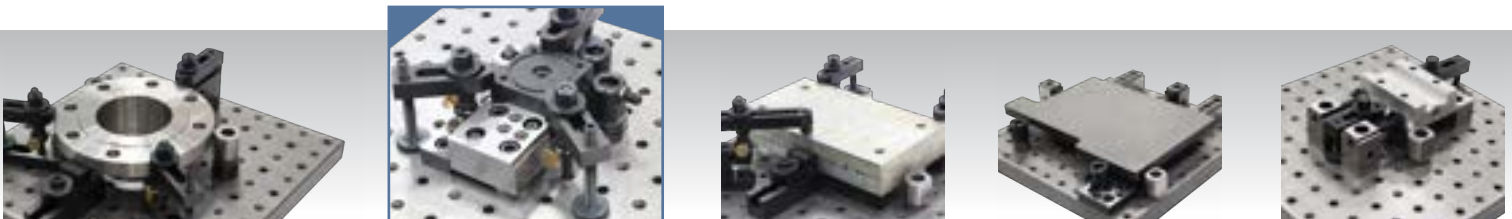
(Modular Fixture for an End Cap)



Set Up Time: 32 Minutes

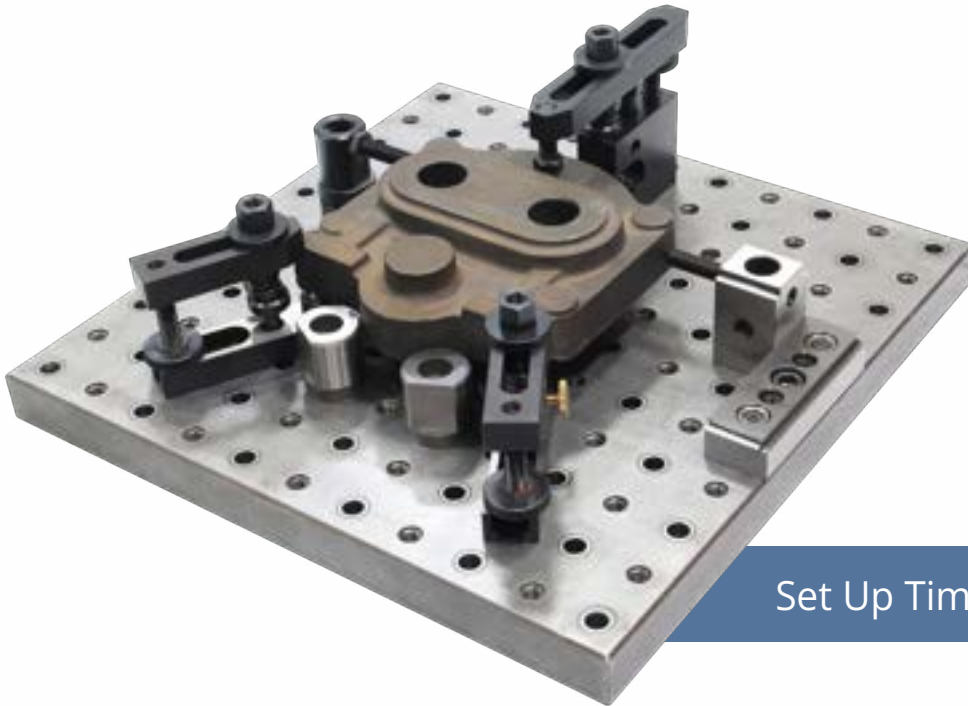


Highlighted parts from the same 142-Piece kit are used to build this fixture.

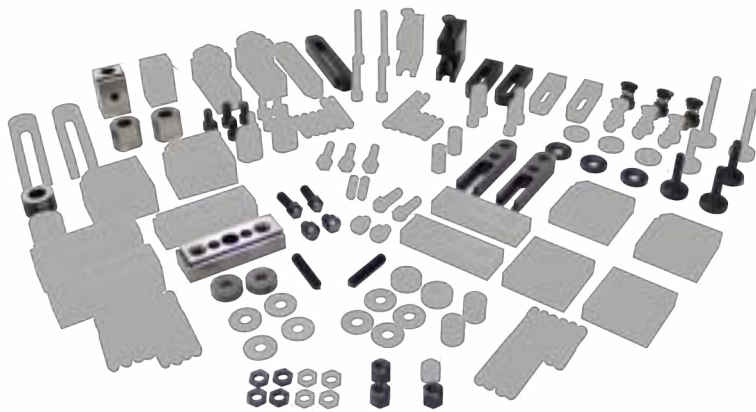


4th Fixture Built

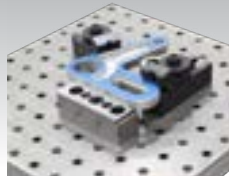
(Modular Fixture for a Manifold Cover)



Set Up Time: 36 Minutes



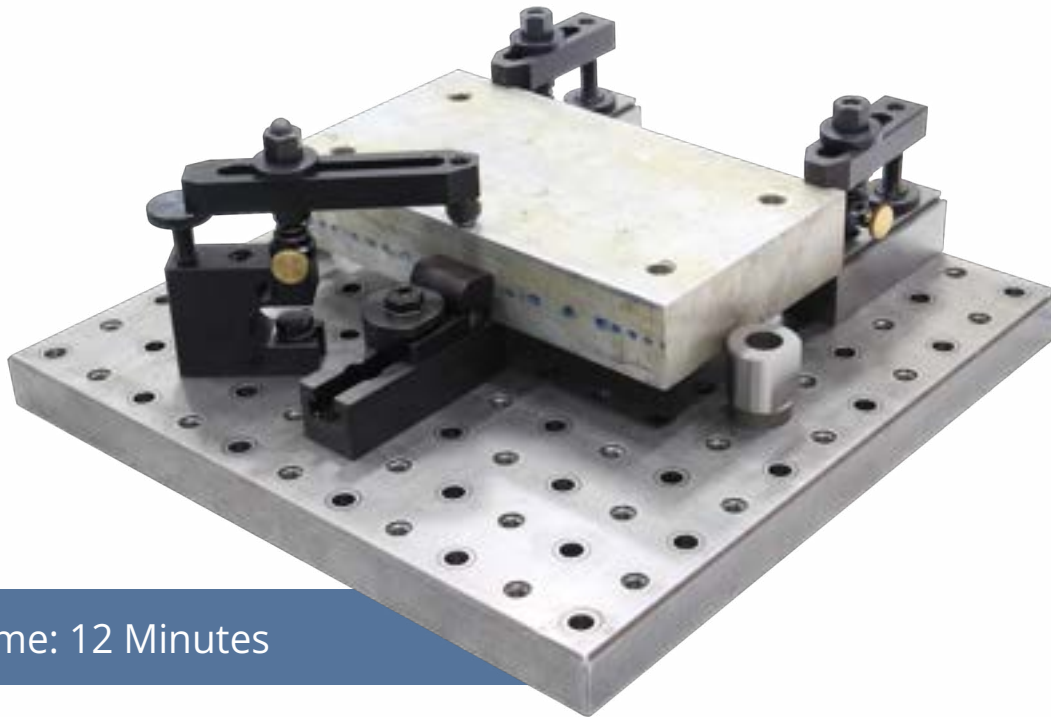
Highlighted parts from the same 142-Piece kit are used to build this fixture.



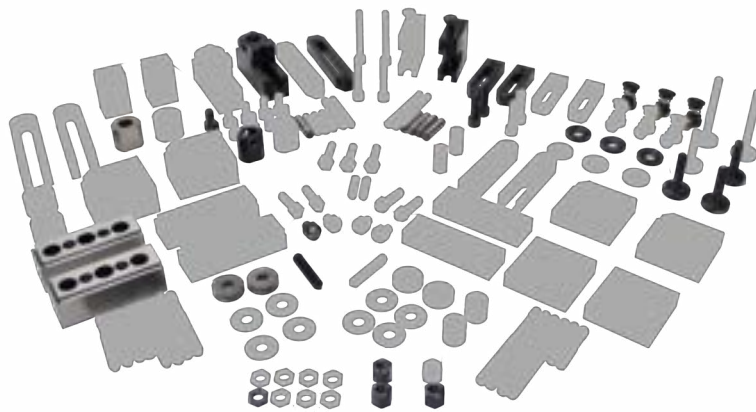


5th Fixture Built

(Modular Fixture for a Mounting Block)



Set Up Time: 12 Minutes



Highlighted parts from the same 142-Piece kit are used to build this fixture.

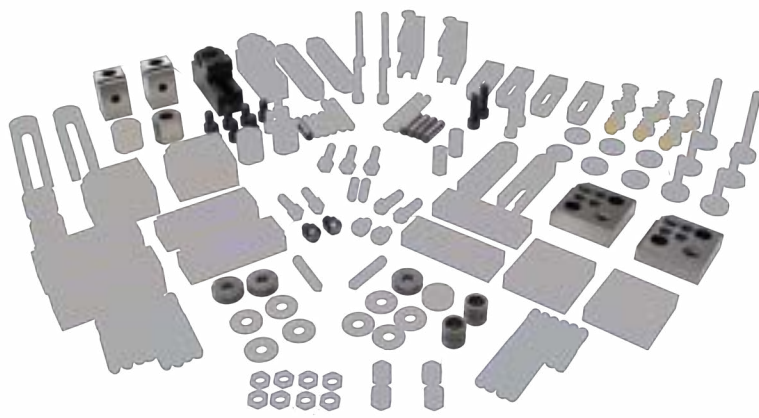


6th Fixture Built

(Modular Fixture for an Actuator Arm)



Set Up Time: 18 Minutes



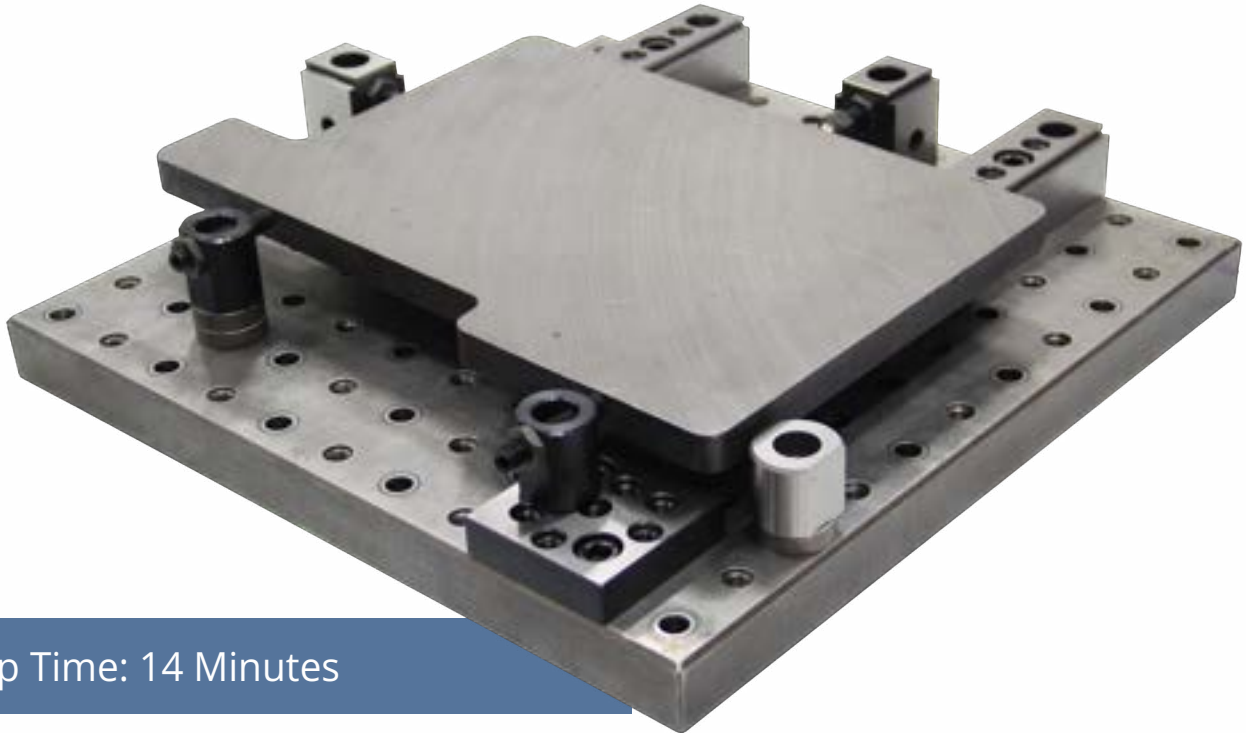
Highlighted parts from the same 142-Piece kit are used to build this fixture.



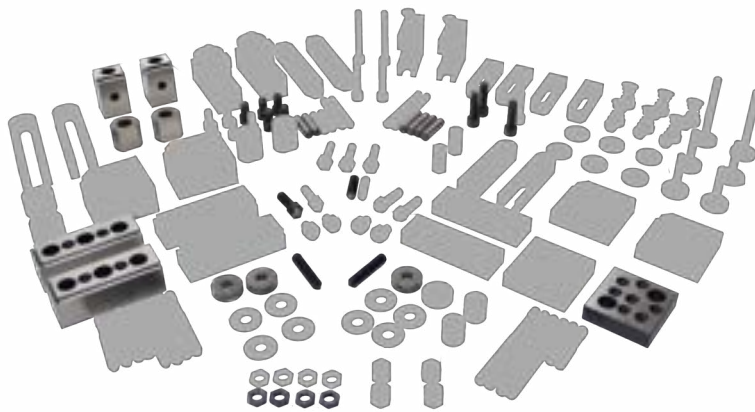


7th Fixture Built

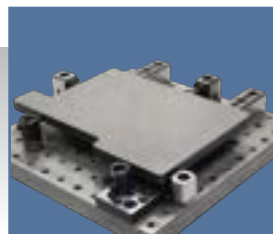
(Modular Fixture for a Shaped Plate)



Set Up Time: 14 Minutes

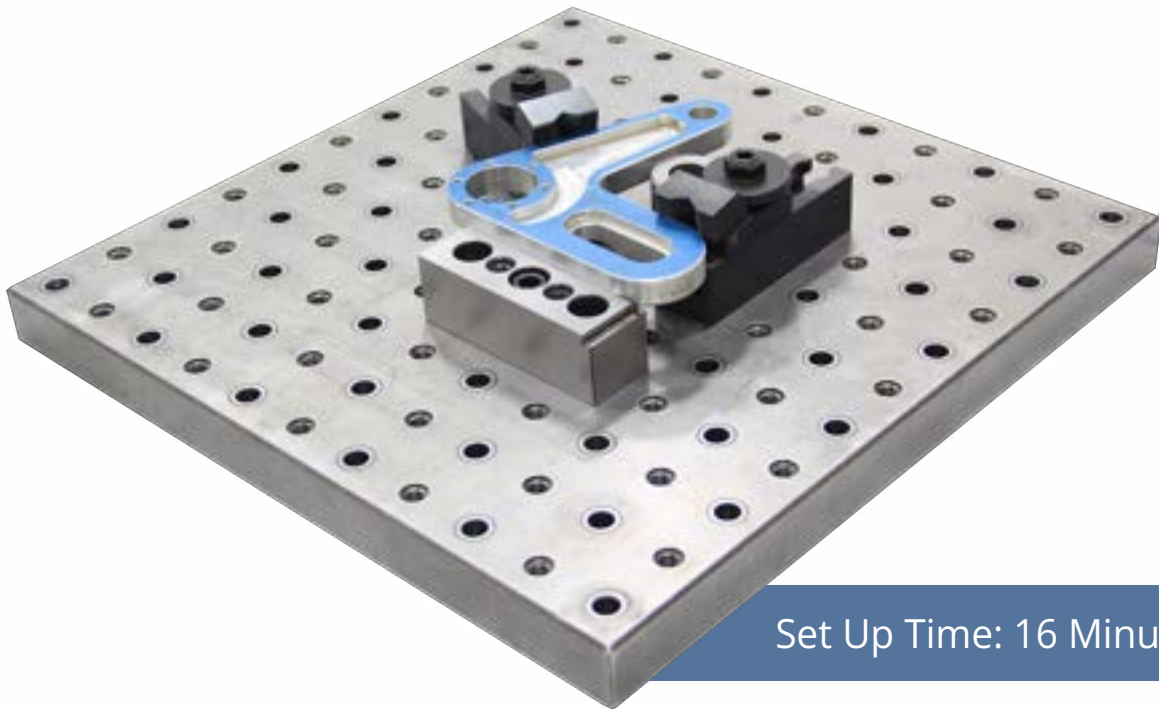


Highlighted parts from the same 142-Piece kit are used to build this fixture.

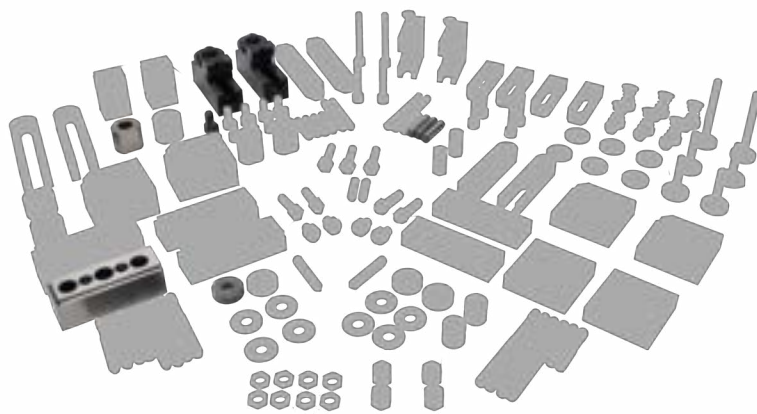


8th Fixture Built

(Modular Fixture for a Linkage Arm)



Set Up Time: 16 Minutes



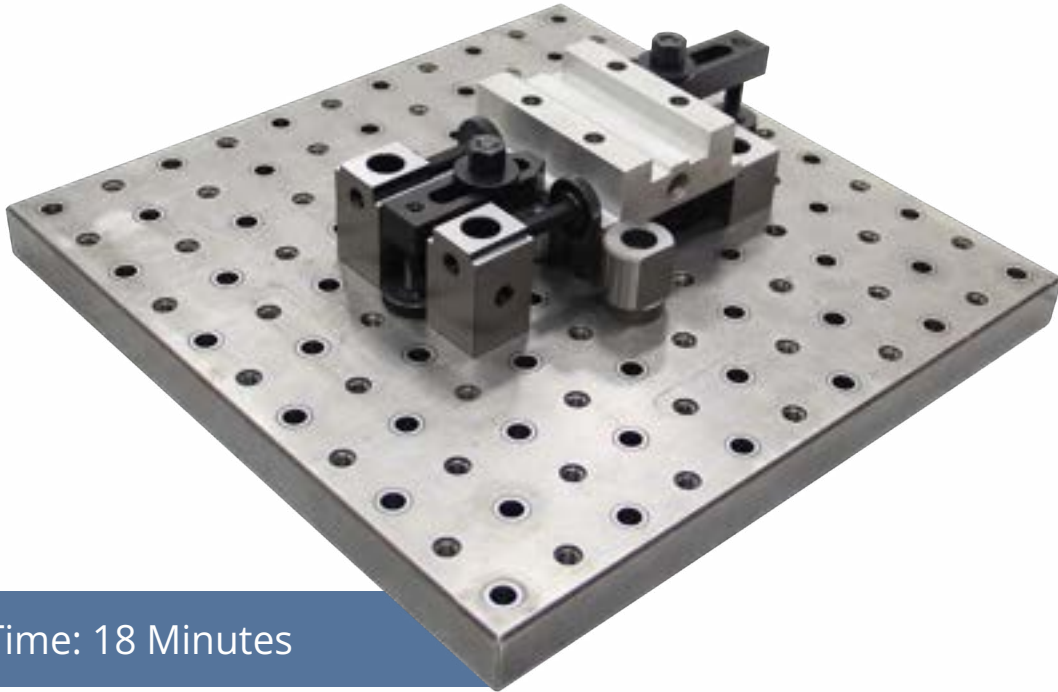
Highlighted parts from the same 142-Piece kit are used to build this fixture.



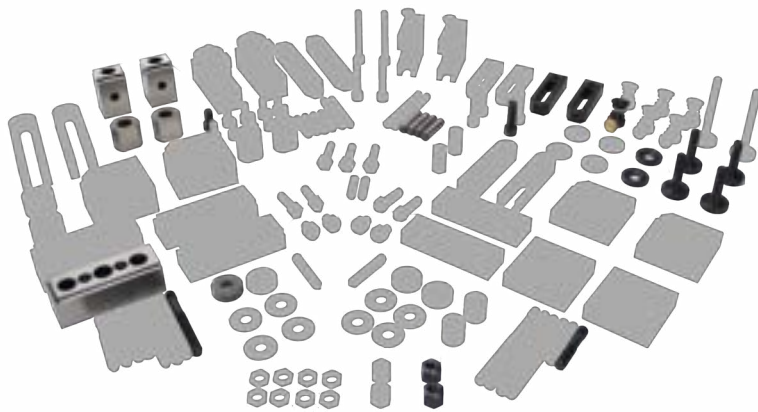


9th Fixture Built

(Modular Fixture for a Aluminum Guide)



Set Up Time: 18 Minutes

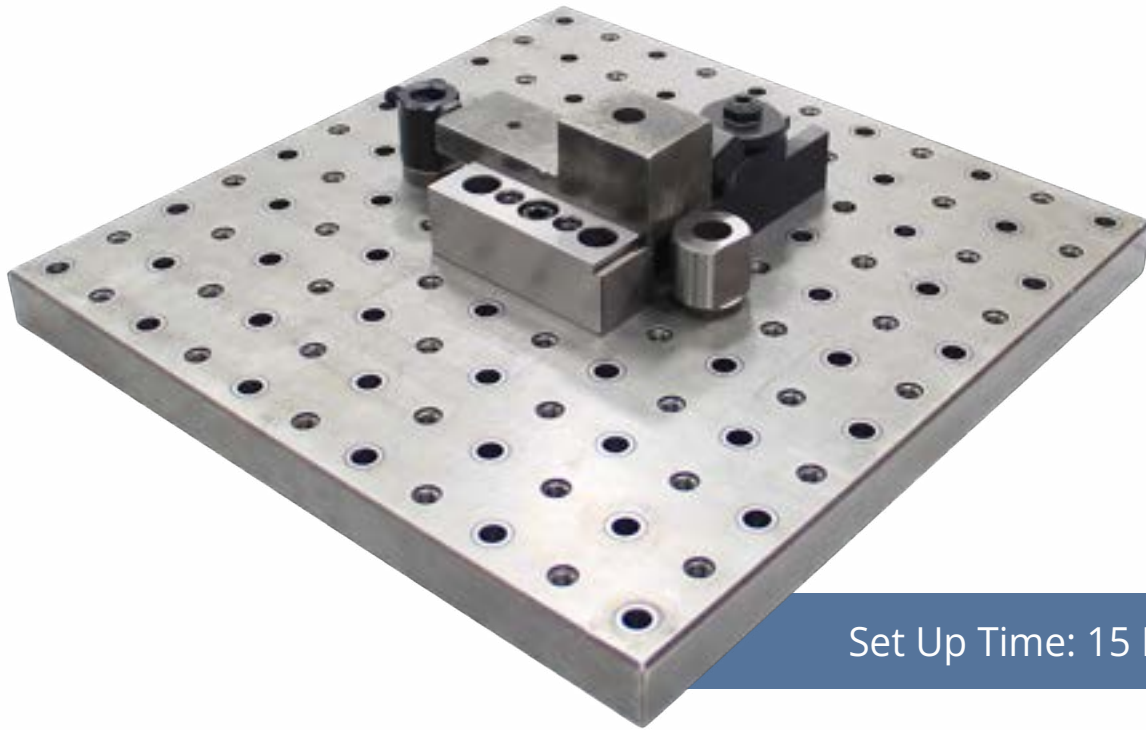


Highlighted parts from the same 142-Piece kit are used to build this fixture.

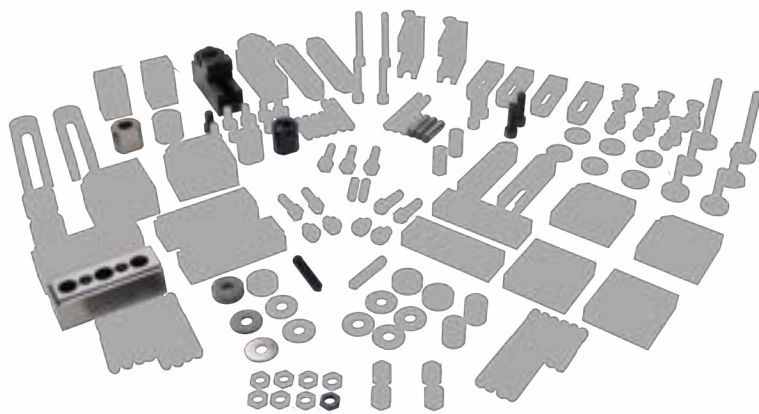


10th Fixture Built

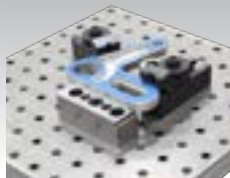
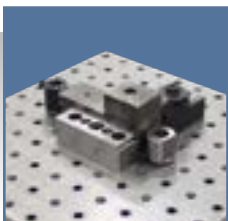
(Modular Fixture for a Step Block)



Set Up Time: 15 Minutes

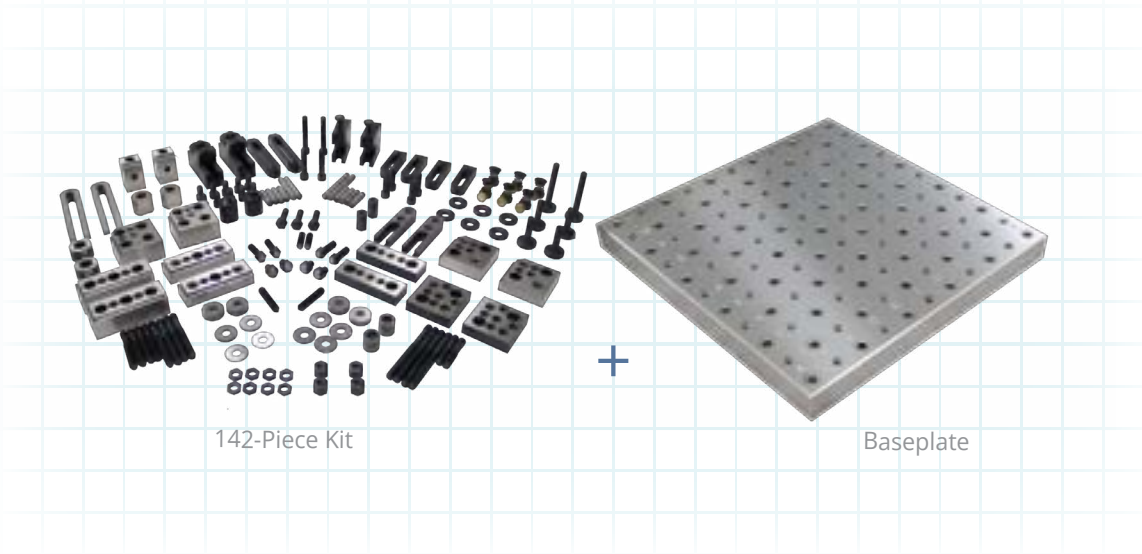


Highlighted parts from the same 142-Piece kit are used to build this fixture.





System Cost



142-Piece Kit

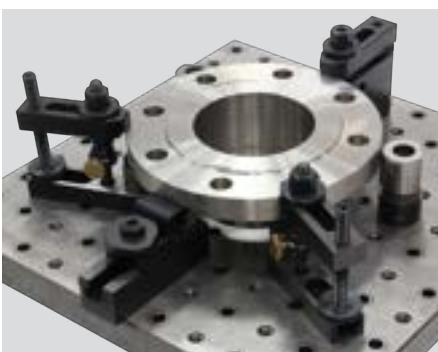
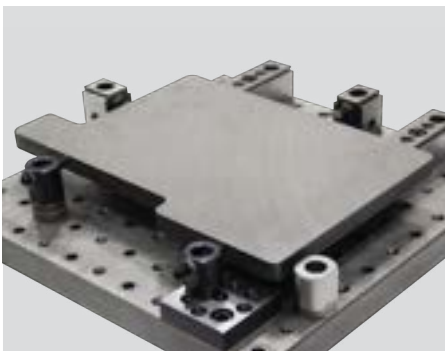
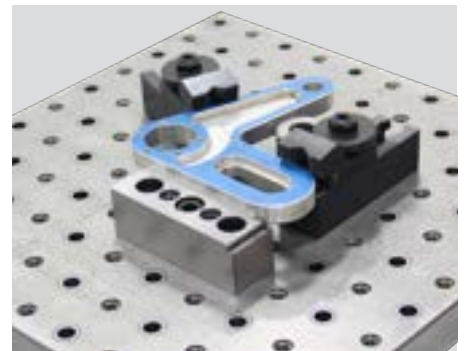
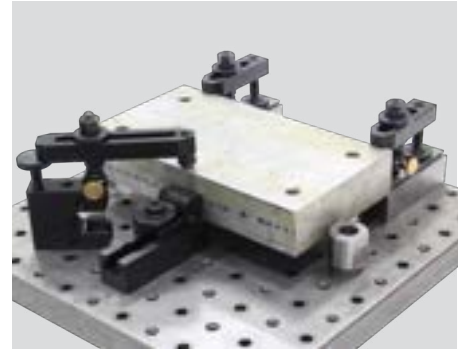
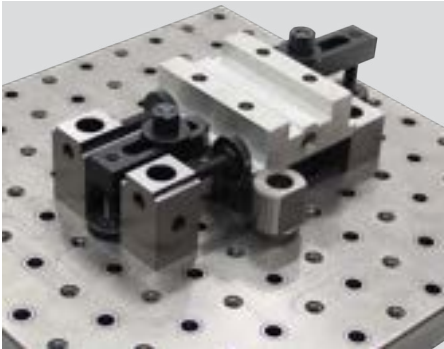
Baseplate

The selection of modular components needed to fixture the 10 sample parts in this case study can also be used to build more fixtures for parts not yet identified. The cost of a fixturing system can be handled in two ways, depending on your company's needs.

You can purchase the system as a one-time capital expenditure. Or, you can choose one of our Rent-to-own programs if you prefer monthly payments, or would rather classify a purchase as a deductible expense rather than CAPEX. The details of this particular custom package are shown below.

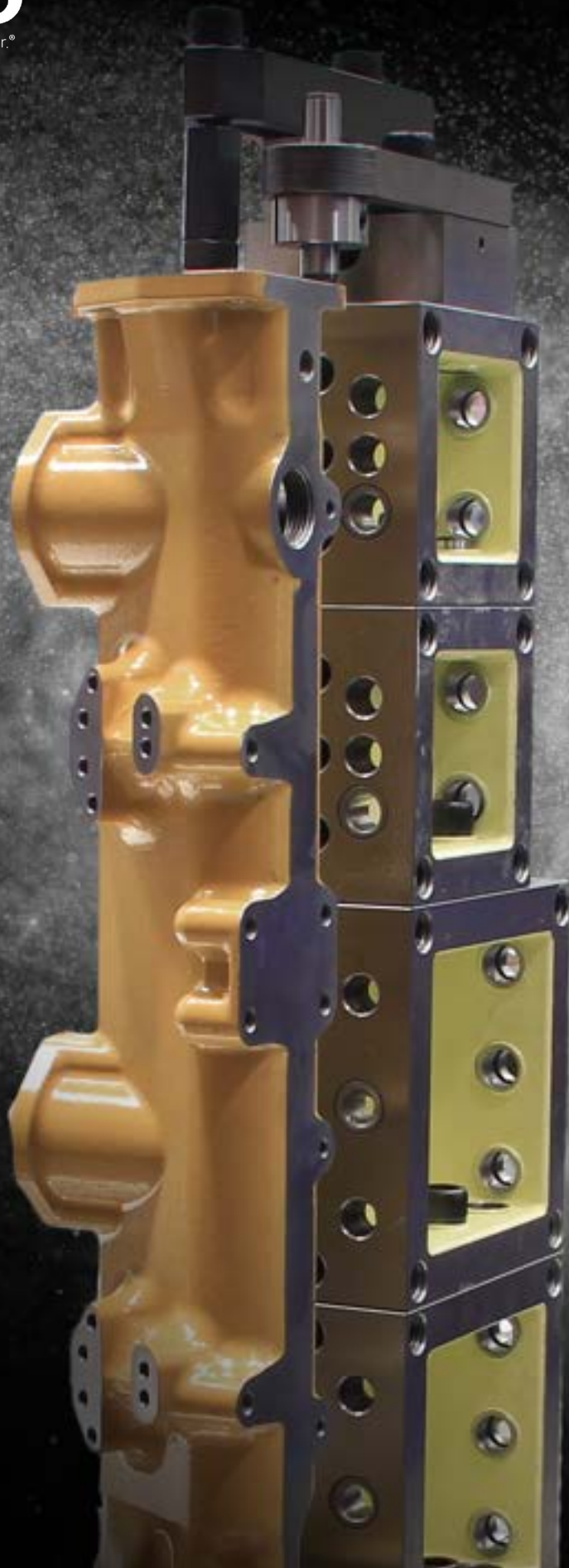
Customized Fixturing Package	
Number of Pieces in Kit	142
Size of Baseplate	440 x 440 x 40mm
Package Price	\$14,369
Rent-to-own Price	\$287/mo.

Average Fixture Price	
Based on 10 fixtures built (\$14,369/10)	\$1,437
Based on 20 fixtures built (\$14,369/20)	\$718
Based on 30 fixtures built (\$14,369/30)	\$479
Based on 52 fixtures (1 per week)	\$276



FLEXIBILITY. EFFICIENCY. ACCURACY.

A modular kit of 142 pieces was used to build all 10 fixtures, and hundreds more are possible. What's more, Bluco customers report cutting set up time by 50-60% of what it took for old-fashioned manual set up. And with system tolerances as low as .0004", expect precise results every time.



Getting Started

Every modular solution we design is unique. That's because no two customers, parts or processes are the same. In order to build a custom-fit solution that provides you with the quickest ROI, the most flexibility and the highest quality end product, we've developed a process that guarantees you get exactly what you need as quickly as possible.



**TWO WAYS TO SHARE
YOUR PART**



**SCHEDULE DESIGN
CONSULTATION**



VISIT US



PROVE OUT YOUR PART

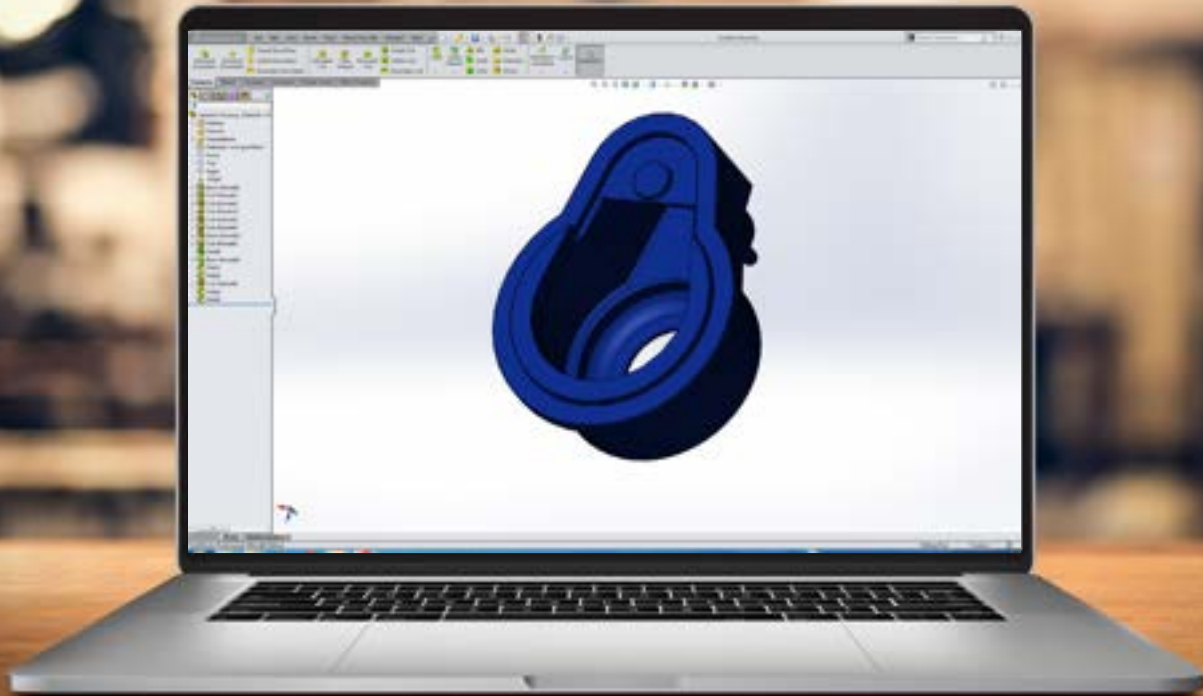


Two ways to share your part



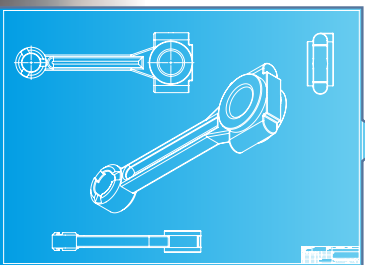
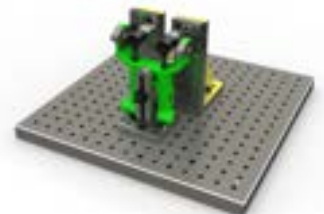
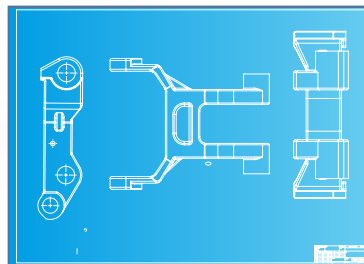
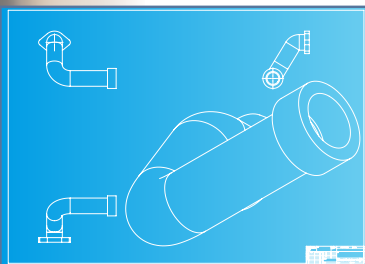
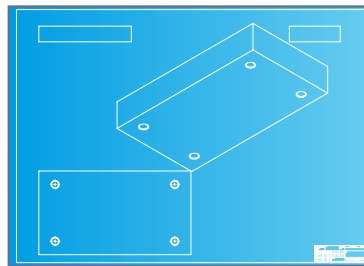
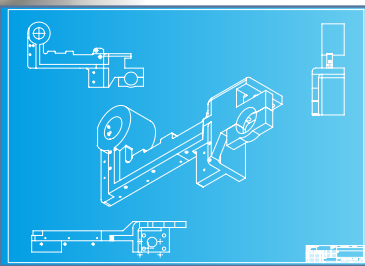
Share your CAD files

You may choose to upload your CAD model and a brief description of your application to our convenient online portal. Our fixturing experts will take it from there. All submissions are encrypted, secure, and will not be shared with anyone other than our fixturing specialists.

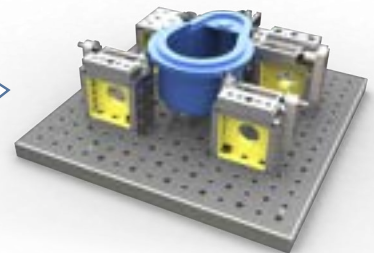


Upload your CAD files at bluco.com/get-a-quote

Your part is where the design of every fixture begins. Our fixturing specialists can achieve unparalleled levels of accuracy and efficiency by combining Bluco's 350+ modular components in new ways to fit your part. Within 48 hours, we'll call to set up a time to discuss your solution.



The fixture for this gearbox housing began with a CAD model of the part (left-hand page), and finished with a modular solution that included console blocks and adjustable clamp bars to handle the curved shape.



Design starts immediately



Two ways to share your part



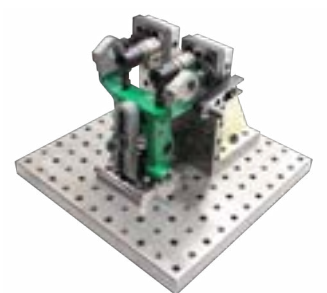
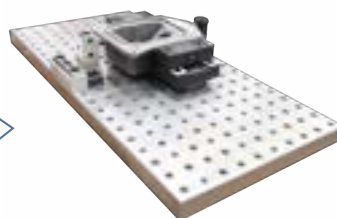
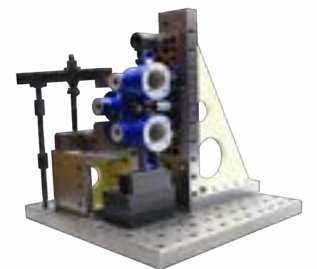
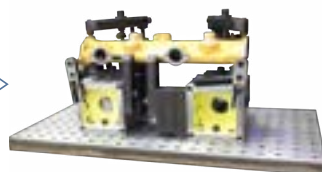
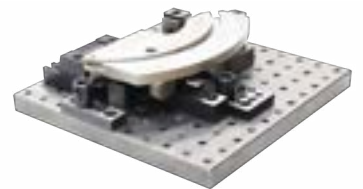
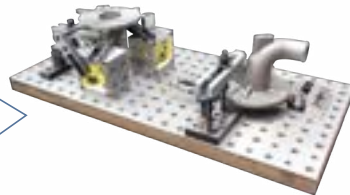
Send or bring the part

Some customers opt to send or bring their part into our Validation Center early in the process for a hands-on look at how modular fixturing works with the particular curves, angles and surfaces of their part. Our fixturing specialists can work alongside you to develop a solution, or can fixture your part ahead of a virtual design consultation.



Full service facility accommodates deliveries of all sizes

We're able to accommodate even the largest deliveries at our full-service facility, which includes drive up ramps and docks for any delivery vehicle. We'll help you unload with our HD forklifts and overhead cranes. Then it's time to design your fixture based on your part and your needs.



Work side-by-side with our fixturing specialists

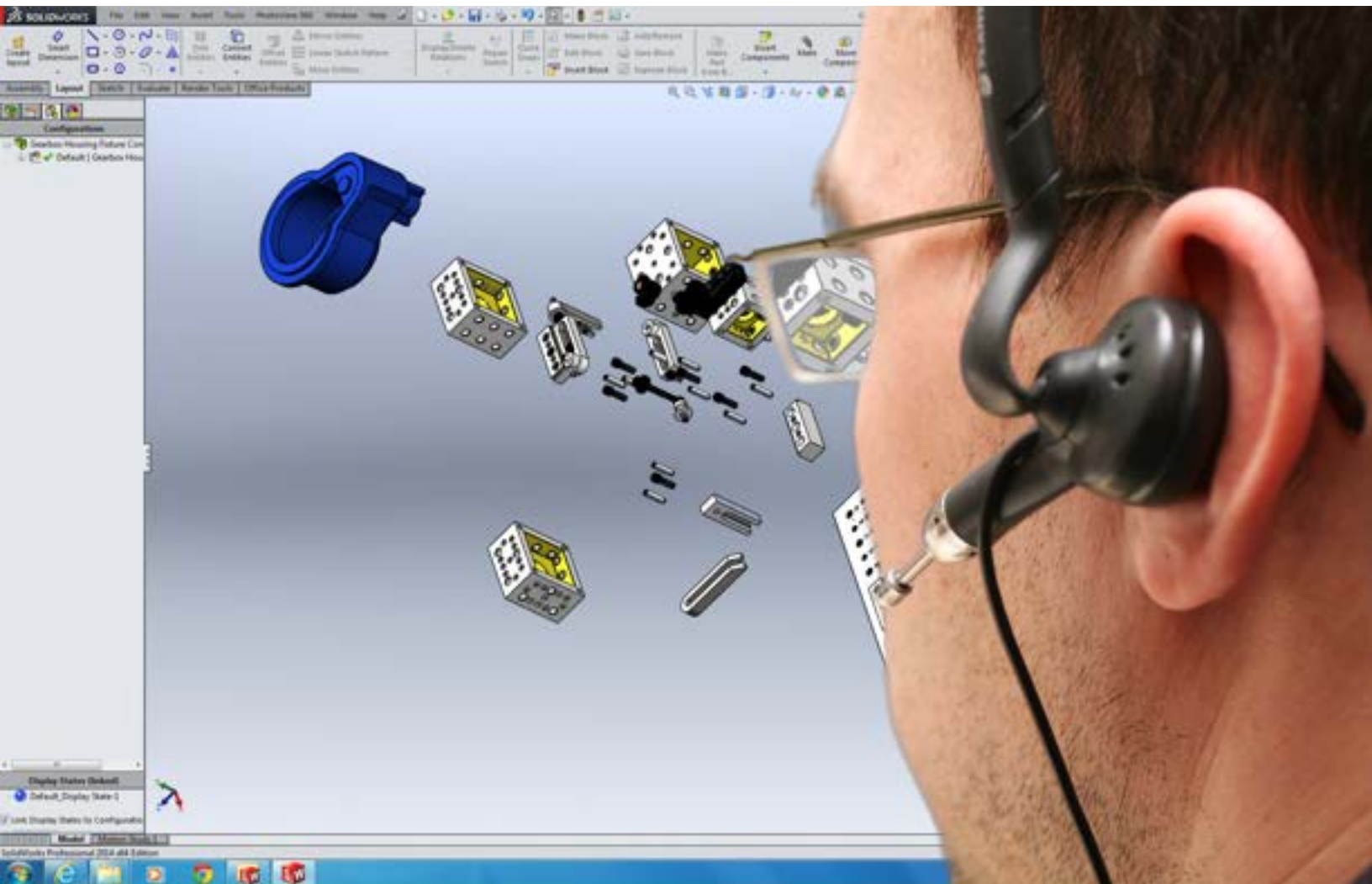


Schedule Design Consultation



Talk to our fixturing experts

Once we've solved your challenge on paper, one of our fixturing experts will set up virtual meeting to discuss your solution. You'll get a chance to provide initial feedback, and we'll do the fine-tuning in real time as well as after the call.



Our fixturing specialists provide free fixture designs

Visit Us



Experience our Showroom



The Bluco Showroom is 4,500 sq. ft. of modular problem-solving at your fingertips. This isn't a museum — it's more like a working playground, where you can get a feel for how modular fixturing works. Once you're placing pins into blocks and bars, you'll start to understand why we're so passionate about modular fixturing.



Explore modular machining components and baseplates



Prove Out Your Part



Work in our Validation Center

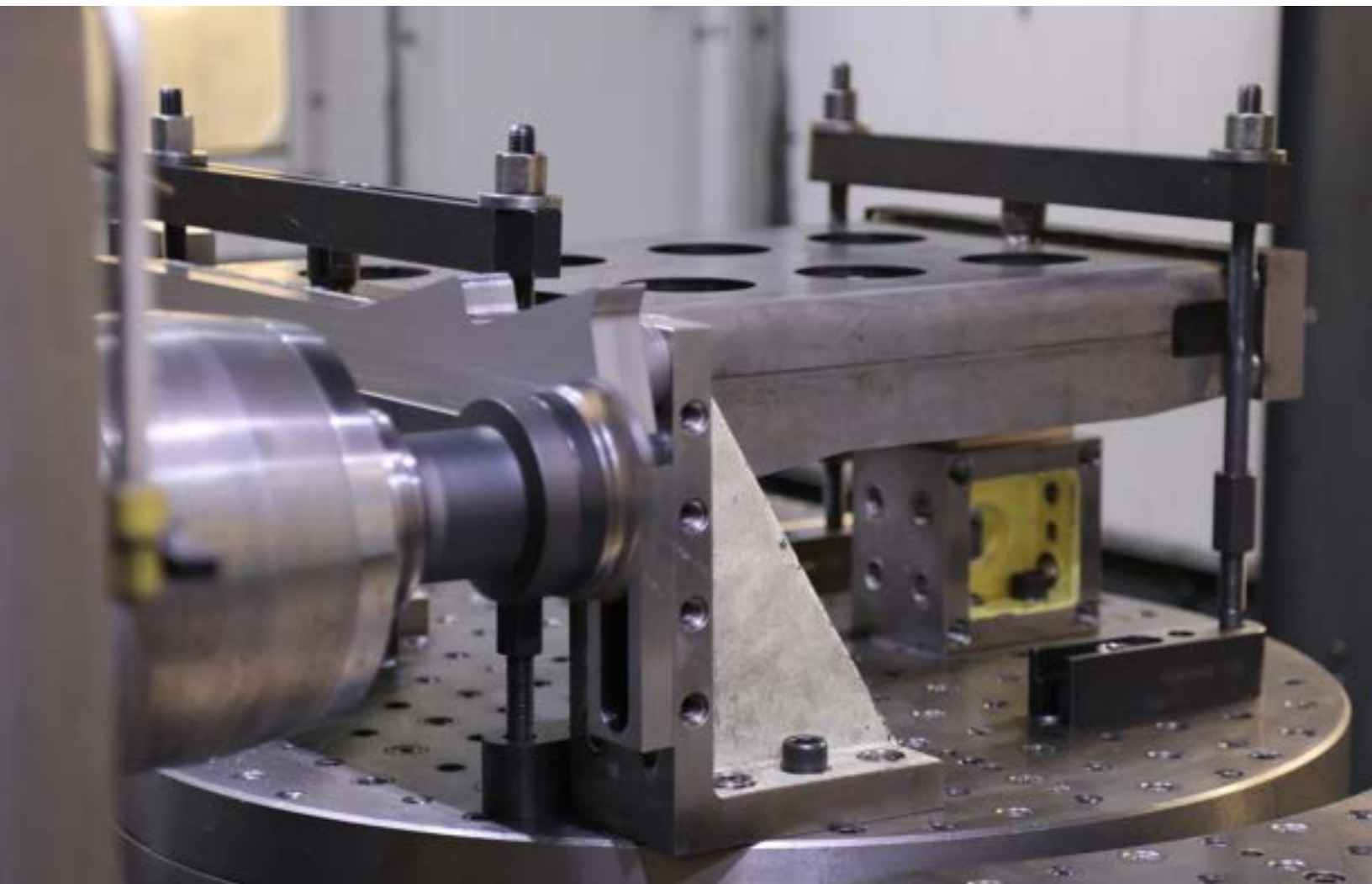
You don't have to take our word for it that your fixture design will work the way you want it to. In fact, we'd prefer if you came to try it out first. We'll fixture your part in our Validation Center and set it up in a CNC machine. You're invited to bring your machinists with you so everyone that has a stake in making it work understands how it works.



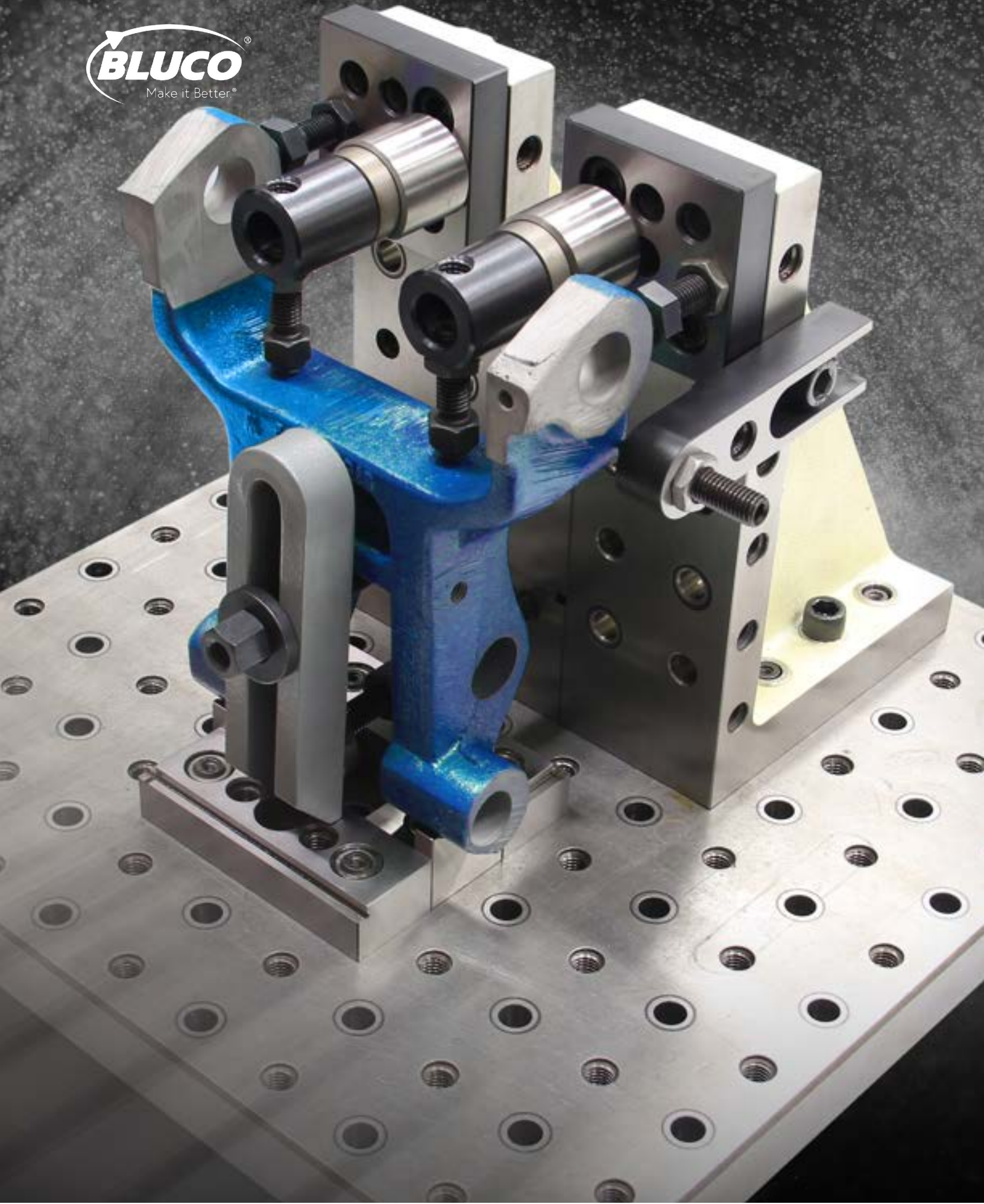
Fixturing specialists set up your solution, you prove it out



We have state-of-the-art vertical and horizontal milling machines that will allow you to replicate conditions in your facility. By the time you leave, you'll have a fixture design that's fully proven, and the peace of mind you need in order to move your manufacturing capability to the next level.



Vertical and horizontal CNC's are available for testing fixtures



What's Next

Once you're completely comfortable that you've got a modular solution that will work exactly as you need it to, we'll work with you to make sure it fits your purchasing needs. We'll explore your buying options and provide ongoing full-service support from installation to training and beyond.



REVIEW YOUR FORMAL PROPOSAL



EXPLORE RENTAL OR PURCHASE OPTIONS



RECEIVE YOUR SOLUTION QUICKLY



RELY ON OUR COMMITMENT TO YOUR SUCCESS



Review Your Proposal



Get all the details in one document

Your detailed custom proposal includes everything you need to know about your modular machining solution, in a format that can easily be passed to purchase stake holders for review. From the benefits of modular fixturing, to available options and the specifics of your system, you'll find everything you need to get your team on board.



Recommendations, pricing and next steps in detail

Purchase or Rent-to-Own



Explore your options

Your solution is a custom fit for your parts — and for your books. With easy purchase terms and flexible short- and long-term rent-to-own options, you can choose what works best for you. Whether you're ready for ownership, or simply preparing for a temporary surge in production work, you can maximize your purchase potential.



Choose ownership or a flexible rent-to-own program

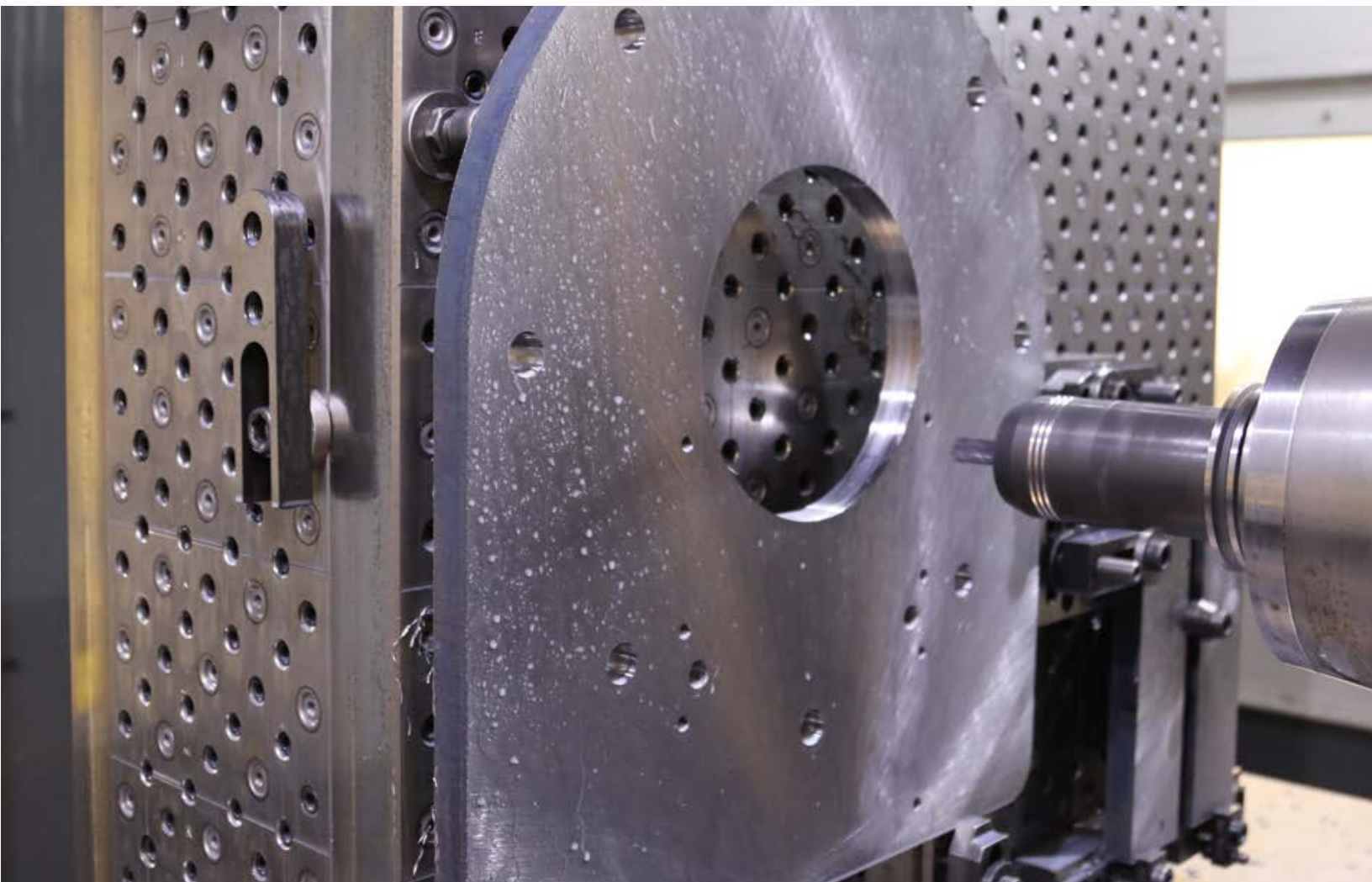


Get Your Solution Quickly



Expect the best, faster than the rest

Our large inventory allows us to ship most orders within 24 hours. Your order is packed securely and insured for delivery. If your solution requires custom-made components, our in-house manufacturing capability makes turnaround time quick and the quality of your finished parts world-class.



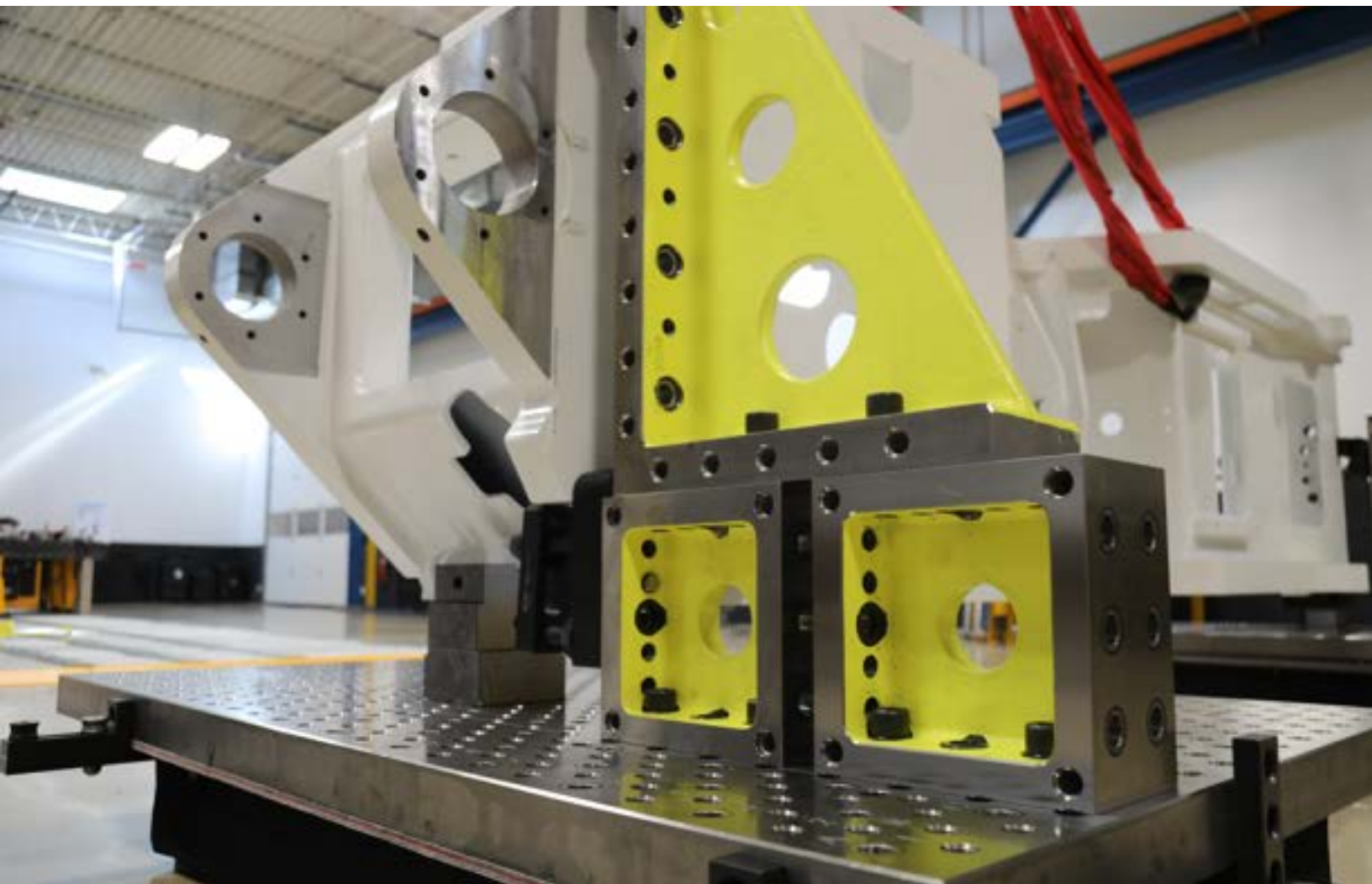
Full-service facility includes on-site engineering, manufacturing and shipping

Committed to Your Success



Enjoy world-class customer support

Your success is what we strive for. In order to get you there, we back our products with a Limited Lifetime Manufacturing Warranty that covers repair or replacement. We offer an Exchange Program that allows you to trade in new or used equipment for items of equal value for two years. And we provide free, on-site training to help optimize the use of your fixturing system from day one through the lifetime of your purchase.



From a Lifetime Warranty to on-site training, we're here for you



SEE FOR YOURSELF

HOW WE PUT 30 YEARS OF EXPERIENCE TO WORK FOR YOU

Call 1.800.535.0135

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