
icengineworks™
precision exhaust header modeling systems
2014/2015

icengineworks™

To our friends and customers,

Before we embarked on this incredible journey – a journey that has taken us around the world and earned us many friends – we were building exhaust headers just like everyone else. Or at least attempting to do so, if the piles of scrap metal we generated were any indication. Just like you, we knew in our minds what we wanted to build but trying to produce those designs easily and economically was a constant battle.

As a result of that struggle, our mission today at **icengineworks™** is to help our customers design and fabricate complex exhaust headers and other tubular assemblies efficiently, quickly and in a fun and predictable way. We relentlessly focus on understanding the process of designing, planning and building exhaust headers while identifying and eliminating the sources of errors and mistakes. We created a simple system that helps you solve a complex problem. Our hands-on, visual, real-time system removes uncertainties, provides immediate feedback and eliminates the difficulties of fabricating an amazing set of tubular exhaust headers. A system that dramatically reduces development times, the icengineworksTM production method can be utilized by anyone with basic metal handling and welding skills.

The vision that grew out of our own needs and frustrations now takes on a life of its own. As block and tack-welding clamp systems in new sizes are being developed and added to our offerings, we continue to refine our system to create complex exhaust headers and tubular assemblies more economically and in less time for you: our customers.

Enjoy the ride – we certainly are.

Victor M. Franco
President/Director of Engineering
icengineworks™

Who is icengineworks™ and how does our remarkable system work?

icengineworks™ stands for *internal combustion engine works*. Our patented technology helps engine builders rapidly model, design and fabricate tubular assemblies, such as exhaust header systems, by hand with incredible precision, utilizing nothing more than basic shop skills and welding equipment.
The icengineworks™ system for modeling exhaust headers and tubular assemblies is simple and easy to implement. It does not require any calculations, computer software, complex equipment or even measurements to achieve expert results quickly. Within minutes, anyone can start creating a new tubular design.

How do we achieve this? Using inch-long cylindrical plastic blocks of specific outside diameter and various curved forms, builders manually snap our blocks together to model the desired tubular assemblies. Inch by inch, users create the most efficient pathway of known length to connect two given points.
Information read directly from the plastic model serves as a blueprint to produce the metal version. Builders use commercially available J-bends and U-bends that are cut according to the generated cutting and cost guides for the project. Waste is minimized and, often, completely eliminated. Costs are always known. Projects that used to take days or weeks now can be completed in hours. Your creativity and imagination open a limitless world of design possibilities.

The icengineworks™ system consists of 3 stages: Stage I: Design & Modeling, Stage II: Tube Cutting and Stage III: Assembly & Welding. Proudly made in the USA.

icengineworks™ Stage I: Design & Modeling

The most important step in our system, Stage I allows builders to quickly generate, using our patented plastic blocks, the tubular shapes and geometry required to test fitment, ease of fabrication and even set budgets for any project. The only requirements are that the engine is fitted in place with flanges and starter tubes and that exhaust collectors, or Collector Dummies, are firmly secured in their final position in the engine bay. Sold in sets per Series or tube OD specific. Please see full details on page 4.

icengineworks™ Stage II: Tube Cutting

With the information from Stage I, Stage II provides a fast and accurate way to cut the required metal sections out of standard U-bends and J-bends. Stage II tools work with most vertical band saws. They include a universal cutting board and a set of OD or Series-specific machined HDPE cutting spacers to hold the U-bends or J-bends. Sold individually or in packages. Please see full details on page 6.

icengineworks™ Stage III: Assembly & Welding

When the individual metal sections for the tubular exhaust header project are cut, builders move to Stage III: Assembly & Welding. Stage III utilizes one of the most innovative products to hit the tubing industry in decades: the icengineworks™ stainless steel tack-welding clamps.

These clever clamps provide an amazingly quick and exact way to firmly hold multi-section tubular assemblies together. Proper relative rotation at each joint is easily and minutely adjusted until the entire assembly becomes a solid and faithful recreation of the original plastic block model. They provide safe and endless opportunities to verify fitment for clearance, accuracy and exact alignment with the receiving tube ends at the head flange or the exhaust collector or Collector Dummy prior to tack-welding the assembly. Sold in sets of 4. Please see full details on page 7.

icengineworks™ SYSTEMS and PACKAGES

Designing and fabricating tubular exhaust headers has traditionally been a very challenging and time consuming task. Yet the benefits of a well-designed system, in terms of maximized performance and outstanding appearance, are easy to spot at the track, at a car show or even at the stop light.

icengineworks™ patented 3 stage system for modeling and fabricating tubular exhaust headers successfully eliminates errors and reduces uncertainty in the design and fabrication process. Our systems allow the user to control all aspects of the process ahead of time: design, modeling, budgeting, assembly and welding. Endless possibilities can be explored before committing costly time and metal. Now, for the first time, you have an unparalleled ability to quickly create complex systems that are not impossible or too expensive to build.

icengineworks™ FULL SYSTEMS

include all 3 stages: Stage I: Design & Modeling, Stage II: Tube Cutting, and Stage III: Assembly & Welding. They are Series or tube OD specific.

1625SYSTEM	1-5/8"OD Full System includes 1625PRO, PIV1000, 1625CSS and 1625TTWCS	$ 1,399.99
1750SYSTEM	1-3/4"OD Full System includes 1750PRO, PIV1000, 1750CSS and 1750TTWCS	$ 1,499.99
2000SYSTEM	2"OD Full System includes 2000PRO, PIV1000, 2000CSS and 2000TTWCS)	$ 1,499.99

icengineworks™ PRO PLUS Packages

include Stage I: Design & Modeling and Stage III: Assembly & Welding. They are Series or tube OD specific.

1625PROPLUS	1-5/8"OD Set includes 1625PRO and 1625TTWCS	$ 874.99
1750PROPLUS	1-3/4"OD Set includes 1750PRO and 1750TTWCS	$ 874.99
2000PROPLUS	2"OD Set includes 2000PRO and 2000TTWCS	$ 899.99

icengineworks™ BASIC PLUS Packages

include 2 stages: Stage I: Design & Modeling and Stage III: Assembly & Welding. They are Series or tube OD specific.

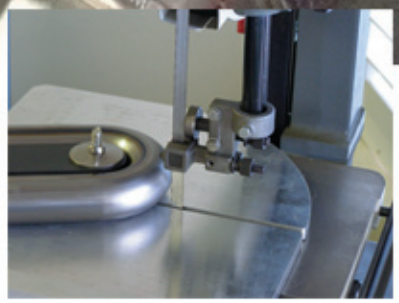
1625BASICPLUS	1-5/8"OD Set includes 1625BASIC and 1625TTWCS	$ 499.99
1750BASICPLUS	1-3/4"OD Set includes 1750BASIC and 1750TTWCS	$ 499.99
2000BASICPLUS	2"OD Set includes 2000BASIC and 2000TTWCS	$ 509.99

www.icengineworks.com (512) 858 2232 info@icengineworks.com

icengineworks™ SYSTEMS and PACKAGES (continued)

The icengineworks™ CUT Systems include all of the components in Stage II: Tube Cutting. They are Series or tube OD specific.

1625CUT	1-5/8"OD Set includes PIV1000 and 1625CSS	$ 599.99
1750CUT	1-3/4"OD Set includes PIV1000 and 1750CSS	$ 699.99
1875CUT	1-7/8"OD Set includes PIV1000 and 1875CSS	$ 699.99
2000CUT	2"OD Set includes PIV1000 and 2000CSS	$ 649.99



"… P4 by Norwood would like to thank icengineworks™ for their help in building the headers for our Ferrari 288GTO Bonneville Salt Flats car. Victor and his crew did a great job building the headers on-site, and they worked great in this very harsh environment. The building block system was a great way to quickly prototype and fab the custom headers for the limited space in the engine compartment. Thanks for helping us reach our new world record of 274mph for the world's fastest Ferrari!" *Tim Taylor – P4 by Norwood, Rockwall, TX.*

"After years of struggle I've found a product that cuts my TIME down to a tenth, with clean hands and a perfect 3D manifold the first time!! We won't use any other product or method, icengineworks™ is the SOLUTION for KPA turbos."
Burton Viers – President KPAturbos.com

icengineworks™ PRODUCTS per STAGE

Our exhaust header modeling systems are also available individually per stage or component to create systems based on your needs.

icengineworks™ STAGE I: Design and Modeling

The versatility of the icengineworks™ systems starts here in Stage I. From shorties to long tube headers, for show, equal-length or tuned race systems, design and fabrication are dramatically simplified when modeled with icengineworks™ blocks. Our rigid plastic blocks allow builders to create and test full scale, tubular assemblies in real time and with immediate feedback. Every block measures 1 inch in length, or arc length, at the imaginary centerline.

Changes and revisions are easily made to the design until it evolves into the ultimate, most efficient and easiest to build version with minimal effort and no waste. The markings and indexes molded around the blocks supply the data necessary to control the design and to plan and budget the fabrication of the exhaust header in metal. icengineworks™ allows you to put a price tag to the project right from the start. Key information, from the exact length of tubing, the total types of bends, and the number of cuts and welds required to produce it are all calculated in Stage I. Once the design is finalized, this information can be recorded and preserved in the included Control Sheets and then actual fabrication in metal can be initiated.

1625Series (1-5/8"OD)

These Block Series are molded in blue ABS plastic and are available in 4 different shapes: straight block (1625-00), 2"CLR (centerline radius) block (1625-20), 3"CLR block (1625-30) and 4"CLR block (1625-40). Also includes 1625Series block adapters (1625BA) that anchor any block to the open end of a 1-5/8"OD tube, off the head flange or the exhaust collector, to start the tubular assembly design going downstream or upstream.

1625BASIC	Universal Modeling Block Set for 1-5/8"OD, 124 pieces total including 30x 1625-00 block, 30x 1625-20 block, 30x 1625-30 block, 30x 1625-40 block, 4x 1625BA, User Manual, Control Sheet pad and plastic case.	$ 419.99
1625PRO	Universal Modeling Block Set for 1-5/8"OD, 248 pieces total including 60x 1625-00 block, 60x 1625-20 block, 60x 1625-30 block, 60x 1625-40 block, 8x 1625BA, User Manual, Control Sheet pad and plastic case.	$ 774.99

1750Series (1-3/4"OD)

These Blocks Series are molded in orange ABS plastic and are available in 5 different shapes: straight block (1750-00), 2"CLR (centerline radius) block (1750-20), 3"CLR block (1750-30), 4"CLR block (1750-40) and 6"CLR block (1750-60). Also includes 1750Series block adapters (1750BA) that anchor any block to the open end of a 1-3/4"OD tube, off the head flange or the exhaust collector, to start the tubular assembly design going downstream or upstream.

1750BASIC	Universal Modeling Block Set for 1-3/4"OD, 154 pieces total including 30x 1750-00 block, 30x 1750-20 block, 30x 1750-30 block, 30x 1750-40 block, 30x 1750-60 block and 4x 1750BA, User Manual, Control Sheet pad and plastic case.	$ 419.99
1750PRO	Universal Modeling Block Set for 1-3/4"OD, 308 pieces total including 60x 1750-00 block, 60x 1750-20 block, 60x 1750-30 block, 60x 1750-40 block, 60x 1750-60 block and 8x 1750BA, User Manual, Control Sheet pad and plastic case.	$ 774.99

icengineworks™ STAGE I – Design and Modeling (continued)

2000Series (2"OD)

These Block Series are molded in yellow ABS plastic and are available in 4 different shapes: straight block (2000-00), 3"CLR (centerline radius) block (2000-30), 4"CLR block (2000-40) and 6"CLR block (2000-60). Also includes 2000Series block adapters (2000BA) that anchor any block to the open end of a 2"OD tube, off the head flange or the exhaust collector, to start the tubular assembly design going downstream or upstream.


#2000PRO

2000BASIC	Universal Modeling Block Set for 2"OD, 124 pieces total including 30x 2000-00 block, 30x 2000-30 block, 30x 2000-40 block, 30x 200-60 block, 4x 2000BA, User Manual, Control Sheet pad and plastic case.	$ 419.99
2000PRO	Universal Modeling Block Set for 2"OD, 248 pieces total including 60x 2000-00 block, 60x 2000-30 block, 60x 2000-40 block, 60x 2000-60 block, 8x 2000BA, User Manual, Control Sheet pad and plastic case.	$ 799.99

Add-On Block Sets

Prefer more of a certain CLR bend? Planning to model stepped exhaust headers more accurately? Expand your existing system with Add On sets. Just specify your CLR need. Sold in 20 or 40 piece bags.


#1625AO2-20

1625Series (1-5/8"OD)

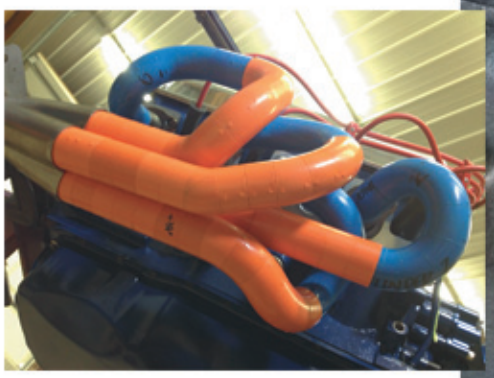
1625AO1-XX	20 piece Modeling Block Set for 1-5/8"OD. Please specify the CLR ending of blocks of choice, i.e. 1625AO1-30.	$ 149.99
1625AO2-XX	40 piece Modeling Block Set for 1-5/8"OD. Please specify the CLR ending of blocks of choice, i.e. 1625AO2-20.	$ 199.99

1750Series (1-3/4"OD)

1750AO1-XX	20 piece Modeling Block Set for 1-3/4"OD. Please specify the CLR ending of blocks of choice, i.e. 1750AO1-00.	$ 149.99
1750AO2-XX	40 piece Modeling Block Set for 1-3.4"OD. Please specify the CLR ending of blocks of choice, i.e. 175A0O2-30.	$ 199.99

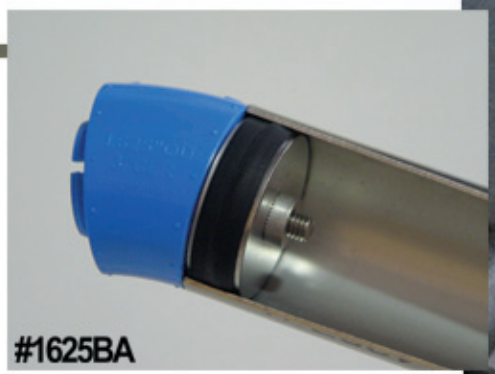
2000Series (2"OD)

2000AO1-XX	20 piece Modeling Block Set for 2"OD. Please specify the CLR ending of blocks of choice, i.e. 2000AO1-30.	$ 149.99
2000AO2-XX	40 piece Modeling Block Set for 2"OD. Please specify the CLR ending of blocks of choice, i.e. 2000AO2-40.	$ 199.99



Block Adapters

These devices allow you to start building and designing your tubular assembly from a tube's open end (of matching OD). Block adapters are available individually per Series or tube OD specific.


#1625BA

1625BA	Block/Starter Tube Adapter, 1-5/8"OD, each.	$ 15.99
1750BA	Block/Starter Tube Adapter, 1-3/4"OD, each.	$ 15.99
2000BA	Block/Starter Tube Adapter, 2"OD, each.	$ 15.99

icengineworks™ STAGE II: Tube Cutting Tools

Once Stage I: Design & Modeling is complete, the required metal sections must be cut as precisely as the block sections in the plastic model. Our Stage II: Tube Cutting tools solve this problem by creating accurate square cuts that are perpendicular to the bend tangent every time. They work on most equipment found in small shops. Using a standard vertical band saw, an aluminum radial cut plate uses machined HDPE spacers to align the U- or J-bends centers to the blade path after a quick setup.

Universal Aluminum Radial Cut Plate with Stud

PIV1000	Universal Aluminum Radial Cut Board for cutting U- and J-bends	$ 359.99

HDPE Cutting Spacers

1625Series (1-5/8"OD)

1625CS20	2"CLR HDPE Cutting Spacer	$ 79.99
1625CS30	3"CLR HDPE Cutting Spacer	$ 89.99
1625CS40	4"CLR HDPE Cutting Spacer	$ 129.99
1625CSS	HDPE Cutting Spacer Set, 3 pieces (includes 1625CS20, 1625CS30 and 1625CS40)	$ 299.99

1750Series (1-3/4"OD)

1750CS20	2"CLR HDPE Cutting Spacer	$ 79.99
1750CS30	3"CLR HDPE Cutting Spacer	$ 89.99
1750CS40	4"CLR HDPE Cutting Spacer	$ 129.99
1750CS60	6" CLR HDPE Cutting Spacer	$ 149.99
1750CSS	HDPE Cutting Spacer Set, 4 pieces (includes 1750CS20, 1750CS30, 1750CS40 and 1750CS60)	$ 449.99

1875Series (1-7/8"OD)

1875CS20	2"CLR HDPE Cutting Spacer	$ 79.99
1875CS30	3"CLR HDPE Cutting Spacer	$ 89.99
1875CS40	4"CLR HDPE Cutting Spacer	$ 129.99
1875CS60	6"CLR HDPE Cutting Spacer	$ 149.99
1875CSS	HDPE Cutting Spacer Set, 4 pieces (includes 1875CS20, 1875CS30, 1875CS40 and 1875CS60)	$ 449.99

2000Series (2"OD)

2000CS30	3"CLR HDPE Cutting Spacer	$ 89.99
2000CS40	4"CLR HDPE Cutting Spacer	$ 129.99
2000CS60	6"CLR HDPE Cutting Spacer	$ 149.99
2000CSS	HDPE Cutting Spacer Set, 3 pieces (includes 2000CS30, 2000CS40 and 2000CS60)	$ 349.99

icengineworks™ STAGE III: Assembly and Welding

Our engineers managed to solve an old problem: how to accurately tack-weld tubular multi-section assemblies the first time around, every time. No more burned fingers, misaligned joints, or endlessly marking witness lines.

Now it is possible to build your exhaust header runners using icengineworks™ Tack Welding Clamps to create smooth, concentric joints (straight-to-straight, straight-to-bend and even bend-to-bend) that are easily adjusted for best fitment. Once the metal assembly matches your plastic model, tighten the clamps and tack-weld all the joints at once. Then, simply slide them off the assembly and proceed to weld normally each joint with total peace of mind. The Tack Welding clamps feature 100% Polished Stainless Steel construction, they come in Sets of 4, and new for 2015 in Sets of 8. Per Series or tube OD specific.

Tack Welding Tube Clamps

1625Series (1-5/8"OD)

1625TTWCS	1-5/8"OD Tack-Welding Clamp 4-pc Set		$ 104.99
1625TTWCSPRO	1-5/8"OD Tack-Welding Clamp 8-pc Set	***NEW***	$ 189.99

1750Series (1-3/4"OD)

1750TTWCS	1-3/4"OD Tack-Welding Clamp 4-pc Set		$ 104.99
1750TTWCSPRO	1-3/4"OD Tack-Welding Clamp 8-pc Set$	***NEW***	$ 189.99

1875Series (1-7/8"OD)

1875TTWCS	1-7/8"OD Tack-Welding Clamp 4-pc Set		$ 104.99
1875TTWCSPRO	1-7/8"OD Tack-Welding Clamp 8-pc Set	***NEW***	$ 189.99

2000Series (2"OD)

2000TTWCS	2"OD Tack-Welding Clamp 4-pc Set		$ 109.99
2000TTWCSPRO	2"OD Tack-Welding Clamp 8-pc Set	***NEW***	$ 199.99

2500Series (2-1/2"OD)

2500TTWCS	2-1/2"OD Tack-Welding Clamp 4-pc Set		$ 149.99

#1875TTWCS

"…the icengineworks™ clamps always incite the 'wow factor' with fabricators. They are simple and yet precise, the perfect combination."
Alan Geetings – VanSant Enterprises, Inc. (Tricktools.com)

"… the icengineworks™ tack-welding clamps are the most useful new tool in header fabrication I've seen in years." *Chris Hill – Owner SPD (spdexhaust.com)*

#2000TTWCS

Accessories and Other Tools

icengineworks™ Collector Dummies ***NEW***

Our team always looks for new ways to design and fabricate advanced exhaust header systems while minimizing waste and errors. With this in mind, icengineworks™ is proud to introduce our new Collector Dummy (CD) line. Our CDs allow builders to precisely locate the exhaust collector in the engine bay.

By clamping, spot welding or bolting down the CD in the space reserved for the exhaust collector, builders can confidently design the exhaust header runners with precisely defined end points. During fabrication, the CDs will guide the proper alignment and trimming of the metal sections prior to actual welding. They create exhaust header runner assemblies that feature flow efficient parallel end tubes that are simple and quick to weld to the exhaust collector. CDs are usable and feature 100% stainless steel construction. Sold individually or in pairs, per Series or tube OD specific. Designed for formed or rolled exhaust collectors (incoming runner tubes touching each other).

1625Series Collector Dummies (1-5/8"OD)		
1625CD31	1625Series 3-into-1 Collector Dummy, 1-5/8"OD	$ 119.99
1625CD31S	1625Series 3-into-1 Collector Dummy 2-pc Set, 1-5/8"OD	$ 189.99
1625CD41	1625Series 4-into-1 Collector Dummy, 1-5/8"OD	$ 124.99
1625CD41S	1625Series 4-into-1 Collector Dummy 2-pc Set, 1-5/8"OD	$ 199.99
1750Series Collector Dummies (1-3/4"OD)		
1750CD31	1750Series 3-into-1 Collector Dummy, 1-3/4"OD	$ 119.99
1750CD31S	1750Series 3-into-1 Collector Dummy 2-pc Set, 1-3/4"OD	$ 189.99
1750CD41	1750Series 4-into-1 Collector Dummy, 1-3/4"OD	$ 124.99
1750CD41S	1750Series 4-into-1 Collector Dummy 2-pc Set, 1-3/4"OD	$ 199.99
1875Series Collector Dummies (1-7/8"OD)		
1875CD41	1875Series 4-into-1 Collector Dummy, 1-7/8"OD	$ 124.99
1875CD41S	1875Series 4-into-1 Collector Dummy 2-pc Set, 1-7/8"OD	$ 199.99
2000Series Collector Dummies (2"OD)		
2000CD41	2000Series 4-into-1 Collector Dummy, 2"OD	$ 124.99
2000CD41S	2000Series 4-into-1 Collector Dummy 2-pc Set, 2"OD	$ 199.99

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General Policies

icengineworks™ is committed to offering the highest quality components and designs so that our customers receive immediate benefits from and enjoy their investment for a long time. All of our products are designed and made in the USA by an extensive network of suppliers who are, in many cases, also car and motorcycle enthusiasts. We strive to maintain a full inventory at all times and we do our best to minimize shipping delays.

Pricing and product specifications are subject to change without notice.

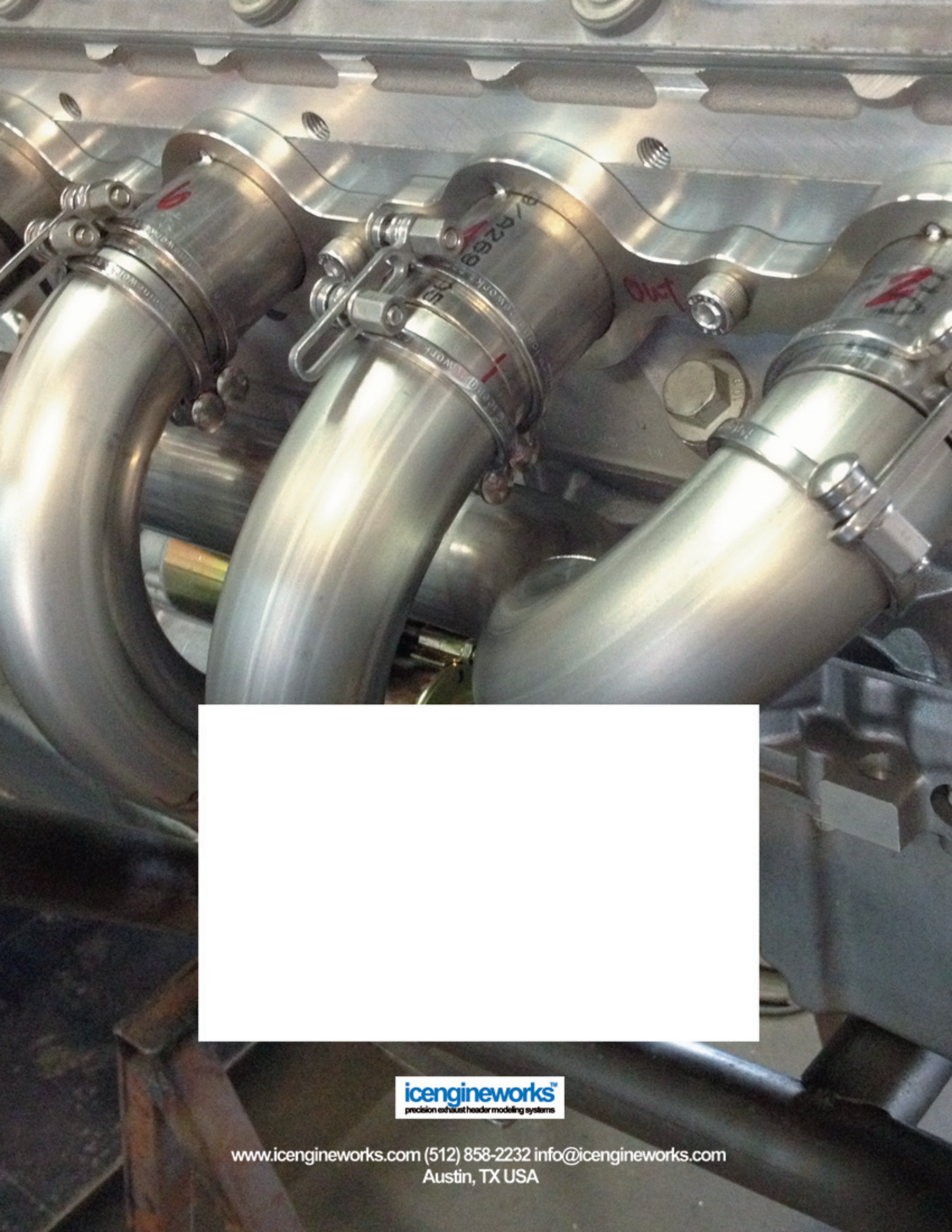
Domestic orders within the continental US are normally shipped via UPS. For international orders, we highly recommend that you first contact us by phone at (512) 858-2232 or email at info@icengineworks.com with your order for accurate quoting and shipping options. International orders are shipped via US Mail International Priority, typically more economical than other services. Upon request, we will accommodate other carriers if you so desire.

Payment can be made by credit card (by phone, or online – US customers at this time only), Paypal, direct deposit or wire transfer. Please contact us for further instructions.

Please inspect your shipment as soon as possible and report any problem or damage to the carrier first. Any issue directly related to the contents of the order should be reported to icengineworks™ immediately or within 5 days after receipt.

All returned merchandise is subject to a 25% restocking fee. Due to the nature of these products, we reserve the right to refuse any return or refund based on our own inspection of the returned goods. Returns should be in the original packaging and exhibit no signs of use or wear whatsoever.

Custom orders and special sets are considered final and are not eligible for returns.



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