

**SERVICES**

## Kitting Solutions



If assemblies represent an important part of your business FDI's Avi-Kits® will cut your labor costs and improve production. Because our kits have the exact hardware that you need for the job, precisely when you need it, assembly time will be cut and waste will be reduced. We offer sequence kitting to further improve efficiency.



## Custom Manufacturing



FDI's expertise is the modification of Fasteners and Custom Bolts and Screws designed to fit your specific applications. We routinely manufacture these fasteners in any size, with any material, and have wire EDM services to make any head style, standard or custom. FDI specializes in altered item drawing parts and custom blue printed fasteners.



## Blank Bolts Program



Our Blank Bolts Program is designed to improve delivery times while providing you with added savings. FDI premanufactures lots that can be tested, and certified to spec at any point of the manufacturing process. We'll hold the excess partially finished pieces at our location so that when it is time for your next order they will be finished to your spec, as needed, in smaller amounts.



## Short Run Manufacturing



While many companies will only accept minimums when an order is placed, we specialize in short run manufacturing on a regular basis. Fastener Dimensions has more than 30 years of experience as a manufacturer within the Aerospace supply chain and we are experts working with all high-strength Aerospace alloys.

## Prototyping



Our experienced engineers are available to support your product design and development teams. FDI can provide prototyping of parts to assist OEMs in their ability to perfect new products allowing them to flush out problems and enhance functionality. Call FDI to inquire about how you can benefit from the services that we offer.

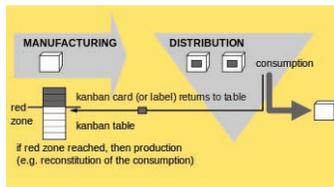


## VMI Systems



FDI offers a VMI system that is designed to help your operation perform at peak efficiency. The fully modular TwinBin® system makes it simple to monitor your inventory and replenish stock while providing complete traceability of parts. The first-in-first-out system is quick for us to install and just as easy for you to manage and can be adapted as your needs change.

## KANBAN



Controlled inventory levels are essential to maintaining “just-in-time” production. KANBAN systems are an effective way to regulate the flow of inventory and to maintain control of the supply chain. Fastener Dimensions successfully employs the most efficient management systems to streamline costs and optimize efficiency.

## Technical Support



Fastener Dimensions always has experts on hand to provide technical support for any and all of the products that we sell. Talk to one of our representatives on a live chat, by e-mail, or speak with us person-to-person on the telephone. We are always available to assist you and answer any technical questions or concerns that you may have about our products.

## Government Packaging



FDI’s onsite crating operations comply with government and military shipping standards and meet the Packing Requirement Codes within MIL-STD-2073-1D and conform to the latest revisions. Each package shipped is labelled for land, water, commercial air, or military air transport where applicable and carefully sealed to protect cargo from potentially damaging outside factors.

## Expedited Deliveries



Fastener Dimensions is prepared to handle your rush orders. Not only can you take advantage of our arsenal of headed and heat-treated blank bolts in stock, designed to slash fulfillment time and reduce your costs but, we can also expedite your deliveries to help you to meet pressing deadlines.

## Kitting Solutions

Short run manufacturing and *VERY* short expedited deliveries are only the beginning of what sets us apart from all of the others. We offer a full range of customized services designed to give you the extra edge that is needed to help you operate in the most cost effective way possible. These services include, but are not limited to, **LTA, JIT, KANBAN, Barcoding, VMI Programs, and Fastener Kitting** for customer's assemblies.

***If assemblies represent an important part of your business ...***

***FDI's Avi-Kits® will cut your labor costs and improve production.***

*Our kits have the exact hardware that you need for the job precisely when you need it.*



*Modules can be arranged in the order of assembly.*

### **Improve Production Rates and Reduce Waste**

- Sequence kitting available for Avi-Kits. The items you need, in the order of assembly.
- Building stage kitting available. If your job is built in multiple stages we can build a kit for each stage of your assembly.
- Shop floor applications done prior to delivery. We can apply dry lube, Loctite®, paint, or primer to specific parts inside the kit. Eliminates the need of buying, storing and applying these items on the shop floor.
- Customer-managed inventory services available.
  - Your components can be added to kits ie brackets, small machines parts, assemblies and more.
- Kit materials, cardboard, plastic, foam, styrofoam, metal, wood etc. Custom built crates, boxes, pallets built on site.
- Reduce ordering time and consolidate the fulfilment process. Ordering kits is easier with one line item blanket PO's with releases to fulfil your entire contract.
- Streamline your production and guarantee delivery to your customer.



*Parts are securely held in place in slots designed specifically for that part only.*

## Kitting Solutions

*FDI's Avi-Kits® will reduce your costs and improve production.*

Avi-Kits provide you with everything you need for your assembly, and can be set up in the order of operation.



### Reduce

- waste
- the amount of rfqs, paperwork, invoices, and time required to process a job
- one line item (per kit) consolidates the fulfillment process/trims paperwork
- blanket order with releases
- store room areas and use that space for production
- inventory cost
- inventory taxes
- man hours and labor cost
- production time

### Improve

- production rates
- productivity
- shop space for production
- operating time
- savings
- profit



Packaging, bags, no dunnage, thread protection, barcodes, air filled bags with heat seal, and much, much, more.

Standard and special tools can be added to your kit IE wrenches, sockets, driver bits, Loctite®, Vibra-Tite®, anti-seize compound, grease, oil, etc.

*Fastener Dimensions Inc. is an independent distributor of the many brand name products that we sell and that appear in our literature.*

\*Vibra-Tite® is a registered trademark of ND Industries.

†Loctite® is a registered trademark of the Henkel Corporation.

## Custom Manufactured Fasteners and Components

PARTS SPECIALLY MADE TO ORDER BY FDI



Fastener Dimensions, Inc. specializes in the modification of fasteners and the design of Custom Bolts and Screws to fit your specific applications. We have the ability to manufacture these fasteners in any size and with any material. FDI has wire EDM services to make any head style, standard or custom. We are well known for our ability to custom modify AN, MS, NAS, NASM and AS fasteners to your blueprint and routinely make parts like this for Boeing, Sikorsky, ITT, PCX, and Magellan, to name a just few.

**Custom bolts are available for manufacturer in any size, any material and any head style. We specialize in altered item drawing parts and custom blue printed fasteners.**



**If you can imagine it, we can make it for you.**

FDI combines strong engineering capabilities with expert technical support to help OEMs develop new products and designs. Fastener Dimensions is at the forefront of current technology – our goal is to surpass customer expectations. Our engineers are on call and always ready to assist with your designs.

With our decades of knowledge and experience, combined with our full complement of onsite operations, FDI has produced some of the most intricate fasteners on the market. Call us or visit our web site to see how we can assist you with any of your applications.



## Blank Bolts Program

BOLTS DELIVERED IN ONLY THE QUANTITIES THAT YOU NEED

### What is a Blank?

A blank is an unfinished bolt, held in reserve, to be completed for future orders.

Fastener Dimensions maintains a supply of semi-finished bolts in inventory manufactured in standard diameters, head styles, lengths and materials. This is an investment that we make to give us the ability to get a head-start on your orders. This time-saving practice allows us to rapidly fulfill short runs and expedited orders with quicker turn-around times, smaller quantities, and minimal lead time requirements.

### How the Process Works



Raw material is hand selected and procured.



Bars are cut to length on our fully-automated bar saw.



The trimmed slugs are induction heated.



### Forging Bars into Headed Blanks



The red hot slug is brought to the press



slugs are hot forged



Headed blanks are heat-treated,



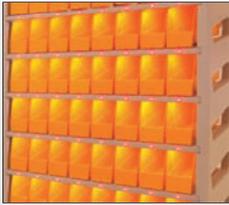
media blasted and descaled

Our Hot Forging Equipment with Adjustable Slide Tables and Custom Base Plates can produce bolts in any diameter from #8 to 2 inches and any length up to 30 inches under the head.

Headed blanks are set aside and stored in bins for future finishing. The stored blanks can be pulled for further refinements at any time to be completed.

## Blank Bolts Program

BOLTS DELIVERED IN ONLY THE QUANTITIES THAT YOU NEED



blanks pulled from bin once order is received



then are sent to the grinding department,



CNC machined



ground pieces are then thread rolled



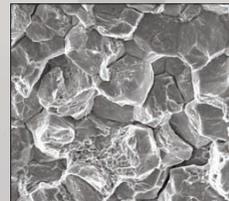
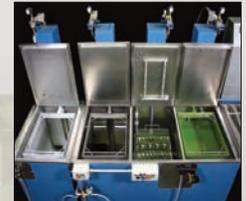
secondary operations performed if needed



electroplated, passivated or coated



parts undergo full dimensional inspection



### Everyday advantages... How do our customers benefit?

- You do not need to have placed an order to benefit from our Blank Bolts program.
- Order only the quantities that you need.
- No need to store leftover inventory.
- You aren't required to place a minimum order that exceeds your immediate assembly needs.
- Reduce the need for rushed orders.
- Improve delivery times.
- Depending on the complexity, delivery can sometimes be as soon as in under two weeks time.

### With a Long Term Agreement there's even greater ways that you benefit:

With a commitment for future orders of a specific part or parts, FDI will prepare lots that can be premanufactured, tested, and certified at any point of the process. When your shipment is needed, the semi-finished blanks are pulled from inventory to be completed.

- Customer owns inventory.
- Lock in prices and save with LTOs.
- FDI holds excess partially finished pieces at our location until you are ready to reorder.
- Efficiency improves fulfillment time.
- Tighter control of regulating the influx of new replenished inventory.

## Highly Adaptable VMI System

**With the TwinBin® system, Fastener Dimensions makes it simple to efficiently replenish your stock.**

Our system tells you when to refill items *BEFORE* you run out meaning you can refill stocks Just In Time. It also allows you to monitor how fast a part is needing replenishing. We provide and install a variety of unique and innovative storage and dispensing solutions.

FDI will perform an assesment of the areas where Assembly Operations are performed. We will evaluate your existing method of storage and your levels of existing inventory to determine your actual VMI needs.

These are just some of the benefits:

- **Reduces stock outs**
- **First-In-First-Out (FIFO) stock rotation**
- **Provides traceability of parts**
- **Reduces stock held**
- **Fully modular – Easy to change  
Adapt to changes in workflow**
- **Quick and easy to install**



*TwinBin rack systems are available in two sizes.*



*Bins come in three different sizes.*



*TwinBin and FlagBin units with TiltBin dispensers.*

The **Locking Bar** prohibits access to the top bin on the shop floor, meaning pulling the slider is the most user friendly action to obtain the product, ensuring the system works efficiently.

Benefits:

- **Enforces First-In-First-Out**
- **Reduces cross contamination**
- **Available in different colors**

The **TwinBin system** stores reserve stock above active stock. Once the active stock has been depleted, pulling the slider releases the reserve batch. The upper chamber is now ready for new stock. Bins are configurable to your specific storage and retrieval needs.

In many cases you may need to store much higher volume, fragile or heavy parts. The **TripFlag system** was designed to easily manage your stock visually.

The **Flag device** allows you to easily see which TwinBins need refilling. Pull the slider and the Flag will pop up red making it easy to see which parts need to be re-ordered. Set the flag to yellow after scanning the bin to indicate that the 3rd batch is on the way.

Benefits:

- **Enables RFID capability (optional)**
- **Visual KanBan system**
- **Available with your logo**

*BinFlags and SpinFlags can be fixed onto any type of bin.*



## How the VMI System Works

### The Bin System



**Step 1**  
Both chambers are full of product. Only the first batch is accessible from the lower bin.



**Step 2**  
The red flag indicates the contents of the top chamber have been transferred to the bottom chamber ready for use.



**Step 3**  
The Yellow strip on top of the flag indicates that the bin has been scanned for replenishment.

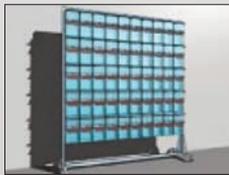


**Step 4**  
The 3rd batch of stock is loaded into the upper chamber.



**Step 5**  
The Top bin has now been replenished and the flag has been reset.

### How the RFID System Works



**1.** The panel of RFID TwinBins is installed.



**2.** The bottom bin contains working stock, while reserve stock is held in the top bin.



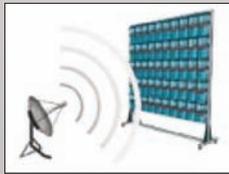
**3.** The last item of stock is removed from the bottom chamber.



**4.** Pull the slider to drop stock from the top into the bottom bin. Flag raises to indicate the top bin requires restocking.



**5.** Work can continue. At no point is there a shortage of stock on the shop floor.



**6.** The system scans the panel of bins at regular intervals.



**7.** The system shows which bins require restocking and which parts need ordering.



**8.** The manager regularly scans the panel of bins.



**9.** Use the handheld device to verify which bins require restocking.



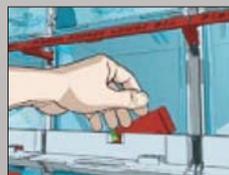
**10.** The barcode on the bin is scanned.



**11.** The barcode on the bag of parts is scanned.



**12.** The handheld device indicates if this is the correct type of part for this bin.



**13.** The flag is reset to its original position.



**14.** The top chamber is restocked.



**15.** Steps 9 to 14 are repeated until the restocking process is complete.