



## Say goodbye to clamps and vises



**P**atented Invert-a-Bolt™ (IVB) fasteners are changing manufacturing processes world wide. This flush mounted back bolt system allows manufacturers to eliminate clamps and bolts when machining parts by securing stock and workholding materials from underneath. This “flat plate” system contributes to maximum flexibility of the fixturing, providing more and better workholding solutions which ultimately leads to more parts produced and less waste. Back bolts eliminate the need for costly clamps and vises and dramatically reduced setup times, which allows you to machine more parts faster. Back bolt systems can dramatically affect your pocket book too. More parts means more efficiency, better cycle time and more sales.

### Benefits

- ✓ Eliminate clamps and vises and other obstacles
- ✓ Dramatically reduce setup and cycle times
- ✓ Quicker change outs means more parts produced
- ✓ Inexpensive compared to vises and clamps and other holding methods
- ✓ Allows better usage of stock material, minimizing waste

### Now you see it, now you don't.

Our flush mounted back bolts offer many benefits not found in competing products. Among those is the fact that these back bolts are there when you need them and out of the way when you don't. Simply screw the studs into their housings when not in use and engage them out when you need them using either a pneumatic driver or a standard hex wrench.



## Precision Locators



**T**he Patented Invert-A-Bolt™ (IVB) Precision Locator is used to precisely locate and hold simultaneously. This unique product combines the “upside-down” holding characteristics of IVB fasteners with the locating capabilities of precision locating (shoulder) screws. Easy to use, easy to install, these locators are manufactured to fit the situation where it is preferable to have holding and locating capabilities combined into one product. Unlike competing products, used only for fixture to fixture applications, these locators can be used to hold/locate parts during machining as well. The IVB precision locator is used in part manufacturing (fixture to part) or in quick change applications (fixture to fixture), or in any application where simultaneous holding/locating is desired.

### Benefits

- ✓ Eliminate clamps and vises and other obstacles
- ✓ Dramatically reduce setup and cycle times
- ✓ Quicker change outs means more parts produced
- ✓ Inexpensive compared to other locating products of similar capabilities
- ✓ Creates options in workholding for hard to locate/hold parts

### Now you see it, now you don't.

Simply screw the studs into their housings when not in use and screw them out when you need them using either a pneumatic driver or a standard hex wrench.



PRECISION  
LOCATOR

## Who uses Invert-a-Bolt™ Fasteners and Precision Locators?

*"This tooling concept is nothing short of fantastic."*

- Valent Aerostructures

*"Invert-a-Bolt enables us to machine thin walls and floors without concern of part movement and their low profile allows us to machine most of the workpiece material."*

- Blueswarf

*"100's of our fixtures use Invert-a-bolts for work holding and they do a tremendous job for us."*

- Arnold Engineering

*"An effective way to hold parts in structural machining..."* - Makino Inc.

*"We reduced our cycle time on one part from 8 hours to 12 minutes, using Invert-A-Bolt™ fasteners."*

- Advanced Precision Machining Inc.

*"Our setups used to take 2 hours. With your modular fixtures it only takes 20 minutes or so..."*

- LMI Aero/Precise Machine

*"The minute we started using the Invert-a-bolt™ fasteners we solved our flatness and parallelity problems. We were finally able to make the part to specs."*

- Focus: Hope Manufacturing

*"...the part was unbelievably difficult to program but using this workholding allowed me to use one fixture to machine the lot. This part came out flat to within .0025" which was amazing considering the volume of material removed."*

- Qualtronics/Euro-Precision

*"We cut setup times from hours to minutes."*

- Bombardier

See more at [www.invert-a-bolt.com](http://www.invert-a-bolt.com).

## It's about time



**T**ime is often not a luxury you can afford in manufacturing. Time is money and if you're not efficient with it, the time it takes to manufacture your products can be costly. Slow or in-precise change-outs cause costly machine down time which adversely affects profit margins.

For some manufacturers it can take hours or even days in between running parts. Fortunately, you can significantly decrease this down time by utilizing our ZipFixture™ quick change system which provides for rapid changeovers.

**ZipFixture™ quick change system utilizes Invert-a-Bolt™ fasteners and locators.**

Our IVB fasteners hold the quick change plate (or device) from below and are easily driven in and out of your plate with a common hex wrench or even quicker with a pneumatic driver. This creates the fastest, most inexpensive, versatile, quick change system on the market today.

- ✓ IVB Fasteners or Locators
- ✓ Bushings/Speed Bushings
- ✓ Dowel Pins/Xzert™ Dowel Pins
- ✓ Up to 75% less expensive than competitor products
- ✓ Up to 90% faster change-outs



UP TO  
**90%**  
Faster

WHILE BEING

**75%**  
Less Costly



**Fasteners & Precision Locators**