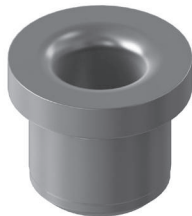


The Absolute Source For Aerospace Tooling Components

High quality stock items from Carr Lane Manufacturing meet today's rigorous military and aerospace industry specifications.



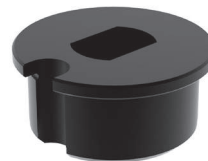
Floating Clamps



ON-SIZE® Bushings



Captive Locating Screws with Hand Knob



Headed Slotted Locator Bushings (Press Fit)



Captive Clamping Pins



Captive Jig Pins



LIFE-EX® Pins



Captive Locating Screws

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Visit carrlane.com/aerospace for additional technical information on these new products that can thrust your tooling to new heights.



Captive Jig Pins

Similar to a standard Jig Pin, except that the pin body is positively retained in a locking bushing. In fully retracted position, the bushing's spring clip snaps into the pin's groove. This holds the pin fully retracted by spring force and positively prevents removal. Spring pressure also holds the pin in intermediate extended positions, an advantage especially if the fixture is turned upside down. Like standard Jig Pins, Captive Jig pins have an integral shoulder to keep the handle raised. Available in pin diameters from 3/16 to 1/2".

Captive Locating Screws with Hand Knob

Two variations of integral hand knobs are available for tightening these Captive Locating Screws by hand. Captive Locating Screws can be used for locating and clamping, or for clamping only, by selecting the appropriate screw length. The locating screw's precision-ground body is positively retained in a locking bushing. In fully retracted position, the bushing's spring clip snaps into the body's radial groove. This holds the screw fully retracted by spring force and positively prevents removal. Spring pressure also holds the screw in intermediate extended positions, an advantage especially if the fixture is turned upside down. Available in a wide variety of inch and metric sizes.



Captive Locating Screws with Socket Head

These Captive Locating Screws have an integrated socket head for tightening with a hex wrench. Captive Locating Screws can be used for locating and clamping, or for clamping only, by selecting the appropriate screw length. The locating screw's precision-ground body is positively retained in a locking bushing. In fully retracted position, the bushing's spring clip snaps into the body's radial groove. This holds the screw fully retracted by spring force and positively prevents removal. Spring pressure also holds the screw in intermediate extended positions, an advantage especially if the fixture is turned upside down. Available in a wide variety of inch and metric sizes.

Captive Clamping Pins

These Captive Clamping Pins have a knurled knob for tightening by hand and a pin body that is positively retained in a locking bushing. In fully retracted position, the bushing's spring clip snaps into the pin's radial groove. This holds the pin fully retracted by spring force. These pins also incorporate a positive thread stop (the .10"-long unthreaded portion with a square shoulder, above the threads) to positively prevent screwing the pin past the spring clip. Spring pressure also holds the pin in intermediate extended positions, an advantage especially if the fixture is turned upside down. Available in fine-thread sizes from #10-32 to 3/8-24.



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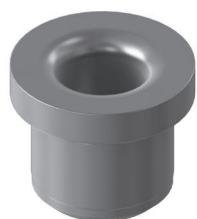


Floating Clamps

Floating Clamps are position-flexible swing clamps with 110° rotation. The top jaw and bottom jaw together provide a floating clamping point that adjusts to the workpiece before locking, to prevent deformation. These combination clamp/supports are often used in conjunction with primary locators and clamps, providing additional support points to reduce machining vibration. Floating Clamps are especially useful for clamping forgings, ribbed or flanged castings, and other large parts.

Headed Slotted Locator Bushings (Press Fit)

Slotted Locator Bushings, available in steel or stainless steel, can be used with many types of alignment pins and locating pins to align two holes without binding. The precision bushing has a tight tolerance in one direction and full relief in the perpendicular direction. This headed version provides more resistance to axial loads. The head can be left exposed, or recessed by counterboring the installation hole. Available for pin diameters from 3/16 to 1/2".



ON-SIZE® Bushings

ON-SIZE® Bushings are made from Invar 36, a 36% nickel-iron alloy that has an extremely low coefficient of thermal expansion. Invar material is particularly useful in applications where minimum thermal expansion and high dimensional stability is required. Useful in high temperature applications up to 750°F (400°C), these products will maintain their size and accuracy even under heat-cool multiple cycles.

These precision bushings are used with Bullet-Nose Dowels to align two pieces of a fixture. The bushing's ID and OD are concentric to within .0003" TIR. Available for pin diameters 1/4, 5/16, 3/8, and 1/2" (6, 8, 10, and 12mm in metric).

LIFE-EX® Pins

Many sizes of Round & Diamond Pins are now available with our proprietary LIFE-EX® coating. This PVD coating is very hard, abrasion resistant, and slippery, resulting in a component that has a longer lifecycle for high-production applications. This extended lifecycle allows these items to remain in production longer with less need for replacement than standard uncoated items. These precision locating pins have a chamfered tip for easy part loading, and a shoulder to resist downward forces – important advantages over standard dowel pins. One Round Pin and one Diamond Pin are often used together to locate from two machined holes in a workpiece, or to align two pieces of a fixture, without binding.



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Carr Lane Manufacturing Co. offers the precision and durability needed for aerospace specifications. Visit carrlane.com/aerospace for more information to get your projects off the ground in a timely manner. See inside for products specifically for aerospace tooling.

Other New Aerospace Items



Bushing Handles, Quick Change or Permanent

Quick-Change Bushing Handles are ready to hold any Slip/Fixed Renewable Drill Bushing in a choice of three OD sizes – 3/16, 5/16, or 1/2". These comfortable, high-quality handles provide convenient handling and extra support when using a portable drill motor. A Un-A-Lok liner bushing permanently installed in the handle provides excellent wear resistance and quick bushing changes. The handle is provided with a hole in the end for cable attachment. Permanent Bushing Handles, also available, are designed for one-time installation of a Slip/Fixed Bushing directly into the steel handle, where it is fastened with a tamper-resistant one-way screw to create a permanent assembly. Permanent Bushing Handles are provided with a hole in the end for cable attachment.



Load-Rated Cable Assemblies

Load-Rated Cable Assemblies are ideal for applications with high pulling forces, where an extra-strong crimp is required. The high-strength stranded wire cable with a green nylon coating used for these assemblies is the same cable used for our standard cable assemblies. The difference is that Duplex Ferrules are used to achieve a stronger, precisely repeatable crimp. Available in two cable diameters, #2 and #3, load rated from 100 to 175 lbs. pulling force.

Aerospace Is In Our DNA

Carr Lane Manufacturing was founded in 1952 to produce tooling components for the aerospace industry. Let us show you what more than six decades of industry knowledge and experience can bring to your next project.

