

AEROSPACE PRODUCTS

Workholding Solutions for Wing
and Fuselage Applications



Precision in Productivity

End Effectors	Grippers	Indexers
Manual Clamps	Power Clamps	Remote Handling

destaco.com

www.mfcp.com

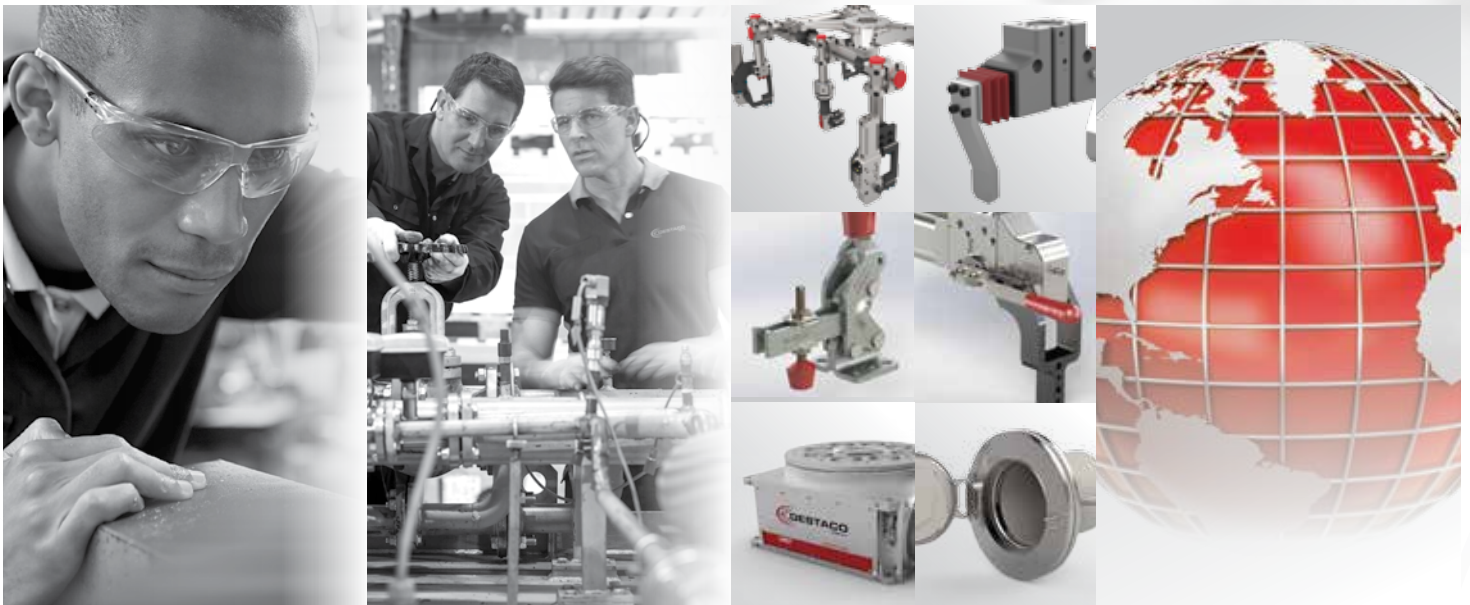


Precision in Productivity

DESTACO Mission Statement

Enable optimal manufacturing productivity through a comprehensive suite of easy to integrate high-performance, precision automation, workholding and containment solutions.

- **Focused** - Dedicated talent and resources to help manufacturers improve precision and productivity
- **Insightful** - Full line of products improves production flexibility and meets any manufacturing requirement
- **Comprehensive** - Through perspective gained on plant floors around the world, we deliver unique, creative solutions nobody else can
- **Global** - Production, customer and technical support worldwide, wherever you need us



FOCUSED



INSIGHTFUL



COMPREHENSIVE



GLOBAL

Focusing all of our Resources

New Product Development

DESTACO has dedicated resources to design and build the next generation of aerospace products and solutions

Customer and Technical Service

DESTACO has industry leading global support to address any product and application concerns you may have

Design Tools

DESTACO provides an extensive CAD library, sizing software, and online tools to support our global customers



Our Insight Working for You

Application Engineering

We utilize our expertise and complete portfolio of products to create solutions that fit our customers' needs and applications

Custom Solutions

If our off-the-shelf solutions don't fit, we will partner with our customers to develop products that will



DESTACO offers special value added engineering services for aerostructure applications.

By working closely with your designers and engineers, we can provide custom workholding solutions for your applications, whether it requires building a system with standard products or modifying an existing product. We can also design a completely unique component to perform specialized workholding functions.

- Autoclave and Non-Autoclave Workholding Devices for Composite Aerostructures
- Workholding for Wing & Fuselage Tooling
- Expanding Mandrels & Chucks for Turbo Fan Engine Machining and Assembly
- Customized Automatic Tool Changers for Robotic Drilling

991-1091 Series Mandrel Power Clamp

- Unique arm motion rotates into position and then creates a drawing motion
- Pull-action clamping forces 13.3 to 33.4 kN [3,000 to 7,500 lbs.]
- Working temperature to 180°C [356°F] for demanding autoclave cycles
- Fully enclosed and sealed for wash down applications
- Toggle-lock feature maintains clamp force when separated from air supply
- Optional end of cylinder stroke pneumatic sensor available for the 1091 series
- Detent mechanism maintains arms in the retracted position when disconnected from air supply



PFC Series Pneumatic Fabric Clamp

- Fabric friendly design, no sharp contact points
- 133-222N [30-50 lbs.] clamping force
- Rod lock feature maintains clamping force when disconnected from air supply
- Compliant arm design allows for height and angular variation
- Autoclave ready



LPC Series Locking Pullback Clamp

- Maintains pull force when used to hold composite tooling together
- Extends through locating holes, expands pin and pulls back when air is released
- Large internal spring maintains clamping force when disconnected from air supply of 2.2 to 3.1 kN [500 to 700 lbs.]
- Allows for misalignment
- Working temperature to 180°C [356°F] for demanding autoclave cycles



CFC Series Controlled Force Cartridge

- Prevents over clamping of thin, lightweight structures
- Visually indicates safe clamping load condition - green/yellow/red
- Available sizes: 44, 89 and 133 N [10, 20, and 30 lb.] nominal clamping load cartridges are color coded for easy identification
- Indicates nominal load with +/-5% accuracy or +/- 10%.
- Easily adapts to existing DESTACO squeeze action plier clamps that use M10 adjustment spindles
- Additional loads available upon request



MCC Series Manual Clip Clamp

- Excellent product for positioning /clamping wing and fuselage clips before and during drilling operations.
- Exerts clamping force in two directions
- Horizontal clamping force 55N [12 lbs] nominal; vertical clamping force 13N [3 lbs.] nominal (additional loads available upon request)
- Over-center toggle lock maintains clamped and locked position
- Detent holds handle open to 180°
- Spring loaded to accommodate variation in part size



MSC-101 Series Manual Stringer Clamp

- Customize workholding solution for wing and fuselage drilling and assembly
- Cost effective stringer clamping solution
- Unique arm movement swings 63°, then pulls in a straight line with 19mm [0.75in.] of travel
- Over-center toggle locking design for secure and repeatable clamping
- Compliant arm design accommodates small variations in stringer thickness
- Customized clamping arms available to suit application requirements
- Optional DESTACO Toggle Lock Plus® version available for added safety



MSC-200 Series Manual Stringer Clamp

- Innovative clamping solution accommodates wide variations in stringer dimensions
- Self-centering clamping point provides clamping force in two directions which secures the stringer into location
- Over-center toggle locking action in both open and closed position for secure and repeatable operation
- Nominal clamping force: 240N [54 lbs.] horizontally, 470N [106 lbs.] vertically @ 5.5 bar [80psi] inlet pressure
- Customized clamping arms available to suit application requirements



PSC Series Pneumatic Stringer Clamp

- Automated stringer clamping solution
- Innovative clamping solution accommodates wide variations in stringer dimensions (thickness & leg lengths)
- Nominal clamping force: 240N [54 lbs.] horizontally, 470N [106 lbs.] vertically @ 5.5bar [80 psi] inlet pressure
- Pneumatic cylinder is sensor ready (Ø4mm)
- Customized clamping arms available to suit application requirements



PSC Series Pneumatic Stringer Clamp w/Index

- Automated stringer clamping solution with integrated precision stringer index
- Innovative clamping solution accommodates wide variations in stringer dimensions (thickness & leg lengths)
- Nominal clamping force: 240N [54 lbs.] horizontally, 470N [106 lbs.] vertically @ 5.5 bar [80 psi] inlet pressure
- Pneumatic cylinder is sensor ready (Ø4mm)
- Customized clamping arms available to suit application requirements



PEG Series Pneumatic End Gate Clamp

- Arm pivots 90° then clamps 12°
- Sensor ready design (Ø4mm) to determine position
- 90 lbs (400N) clamp force @ 5.5 bar [80 psi]
- Low profile design



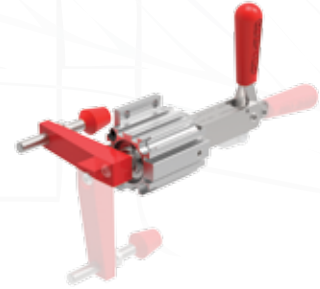
PRC Series Pneumatic Edge Clamp

- Low profile pneumatic retracting clamp for clamping the edges of thin, lightweight structures such as composites
- Clamping arm travels 25mm [1.00in.] Horizontal then pivots 13° down
- Clamping force range: 220 to 490N [50 to 110 lb.] @ 5.5 bar [80 psi] inlet pressure
- Pneumatic cylinder is sensor ready
- Clamping arm is custom made to suit application requirements



MSW Series Manual Swing Clamp

- Innovative manual version of our popular pneumatic swing clamps
- Clamping arm swivels 90° for easy loading and unloading
- 5mm [0.19in.] of vertical clamping stroke
- Unique aluminum housing allows for a variety of clamping positions and orientations



400 Series Squeeze Action Plier Clamps

- The industry standard for performance and reliability
- Forged alloy steel construction for unmatched durability
- Wide selection of sizes for a variety of applications
- Urethane coated jaws to protect work surfaces are available upon request



Manual Toggle Clamps

- The original industry standard Red Handle toggle clamps
- Unmatched selection of styles and sizes to meet virtually any clamping application

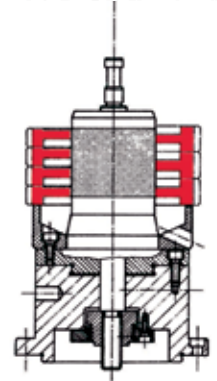


Widely used for Turbine Engine machining, Inspection and Assembly

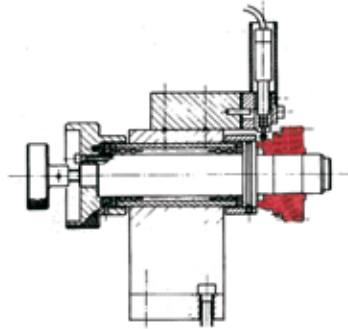
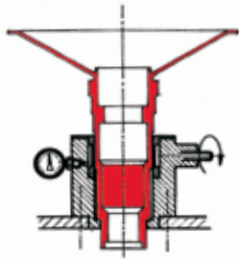
- Diameters available from 6mm to 700mm – Repeatability from 0.002mm to 0.005mm
- Custom engineered for individual component

Machining

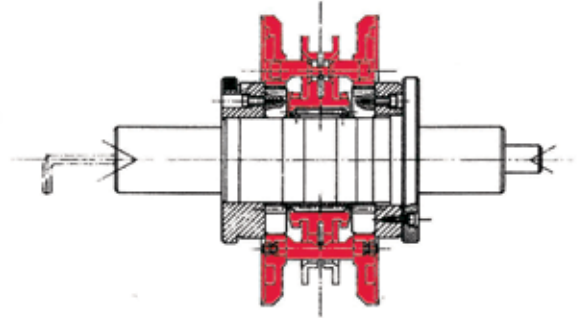
Turning - Milling - Shaving - Grinding



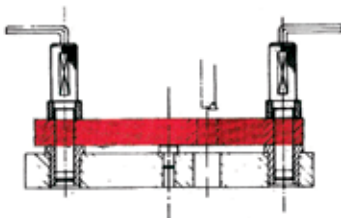
Inspection



Balancing



Locating



Parts Alignment





GLOBAL LOCATIONS

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