**FIVE STEP PROCESS FOR SUCCESS**

1. **PROJECT DEFINITION**
   - Your assembly objectives are defined, and we provide you with a professional proposal.
   - **SPIROL** partners with you to conduct a comprehensive evaluation of your application and assembly requirements including:
     - Fastener specifications and performance requirements
     - Special control / safety requirements
     - Critical component and assembly specifications
     - Quality objectives
     - Production objectives
     - Poka yoke / error-proofing
   - Based on your requirements, SPIROL will outline the assembly concept best suited to meet your objectives and provide optimal return on investment. A detailed professional proposal is provided to you with a price and performance guarantee.

2. **DESIGN**
   - We design an installation system based on your defined objectives.
   - Upon receipt of your order, the assembly concept is reviewed and assigned to a SPIROL Project Engineer. A detailed layout is developed, components are specified and engineering drawings are prepared. Control packages are carefully developed to ensure the system is interactive and fail-safe.
   - The design concept is then presented to you for review and approval.

3. **BUILD**
   - Upon design approval, we build your installation system based on our standardized platform - customized to meet your specific needs.
   - SPIROL fabricates and assembles your installation system – including the custom part-holding fixtures which align and hold your components accurately and firmly during installation. While the machine will be customized to meet the needs of your assembly, the basis of the machine will come from a proven and robust platform.
   - Our time-tested, modular designs are sturdy, reliable and easily adaptable – allowing for customization to meet the specific needs of your application. This translates into faster delivery, greater reliability, low risk, and the best value for equipment of comparable quality.

4. **CERTIFY & DELIVER**
   - We test, runoff, and certify the installation system – as well as train your team.
   - Your machine will go through a comprehensive testing & certification process managed by your assigned Project Engineer. This includes verification of the installation system using your parts, thereby allowing SPIROL to certify the machine’s functionality in direct relation to your application. After you receive the machine, SPIROL will provide detailed training for your team.

5. **TOTAL SATISFACTION**
   - SPIROL will be your trusted partner every step of the way.
   - Starting at the design stage, to the successful launch of your product and throughout the useful life of the installation system, we are committed to your on-going satisfaction.
   - We have a long history of providing installation equipment of the highest quality and reliability. We are so confident in our equipment that **SPIROL offers the only performance warranty in the industry**.

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**Our objective is to enhance your competitiveness through increased productivity, product quality and reduced manufacturing costs.**
High Performance
with extensive error-proofing capabilities

Model CM
Manual Driver
Extremely versatile and easily adjustable to accommodate a myriad of applications.

Model CL
Semi-Automatic Multi-Tip
Highly flexible platen-style machine with 228mm x 279mm (9” x 11”) working area. Rotary indexer shortens assembly time. Full insertion sensing ensures quality. Interchangeable tooling facilitates changeover in minutes.

Model CLX
Semi-Automatic Multi-Tip
For larger assemblies and components outside the standard footprint of the Model CL. Equipped with a powered fixture slide. Working area is customized to specific application requirements.

OPTIONAL ENHANCEMENTS
Options such as vision sensing for part presence, automatic fixture identification, customized rotary or linear fixture motion, password protection of HMI screens, keyed reset, status/indicator lights, audible fault alarm, and part marking can be added for enhanced productivity, heightened process control and error-proofing.
Exceptionally Versatile
for all levels of production

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**Model HA**
Automatic Heat Insert Driver

Designed to install Heat/Ultrasonic Inserts, the Model HA is equipped with a feeder bowl and a heated staging area to preheat the Insert prior to installation.

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**Model HP†**
Pneumatic Heat Insert Driver

Flexible Heat Insert Driver designed to install one or more Heat/Ultrasonic Style Inserts.

* This model has been adapted to install (4) Inserts simultaneously

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**Model HM†**
Manual Heat Insert Driver

Extremely versatile and easily adjustable to accommodate a myriad of applications.

All machines may be upgraded to install multiple Inserts to suit your assembly objectives.

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**OPTIONAL ENHANCEMENTS**

Options such as vision sensing for part presence, automatic fixture identification, customized rotary or linear fixture motion, password protection of HMI screens, keyed reset, status/indicator lights, audible fault alarm, and part marking can be added for enhanced productivity, heightened process control and error-proofing.

† Can be adapted to install Press-In Inserts.
SPIROL® MULTI-TIP THREADED INSERT INSTALLATION TECHNOLOGY

Accurate & Consistent
installation of Threaded Inserts for Plastics

Insert performance is a direct result of installation quality

Model PH†
Platen-Style Multi-tip Heat Insert Driver
Highly flexible platen-style machine with 228mm x 279mm (9" x 11") working area. Installs up to (12) Inserts simultaneously on different elevations. Rotary indexer significantly shortens assembly time. Production changeover in minutes with interchangeable tooling.

Model PHX†
Large Parts Platen-Style Multi-tip Heat Insert Driver
For larger parts outside the footprint of the Model PH, the Model PHX can accommodate virtually any part size and quantity of heaters and installation tips. Powered fixture slide eliminates ergonomic considerations of working with larger parts.

SPIROL Insert Installation Equipment installs all types of Heat / Ultrasonic, Press-In and Self-Tapping Threaded Inserts

† Can be adapted to install Press-In Inserts.
All machines may be upgraded to install multiple Pins to suit your assembly objectives.

**Innovative Technology**

installation simplified

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**Model DP**

Drilling & Pinning

This self-contained three station assembly cell fits into a footprint of 1,220mm x 812mm (48" x 32"). Drilling and pinning pre-assembled components reduces cost and ensures proper alignment. A 3-station rotary table enables simultaneous operations to maximize efficiency.

**Model PR**

Semi-Automatic Vertical

Remarkably versatile for applications requiring up to 1.3 kN (300 lbs.) of installation force.

**Model CR†**

Semi-Automatic Vertical

Suited for moderate to high production for applications requiring up to 8.0 kN (1,800 lbs.) of installation force.

* This model has been adapted to install (2) Pins simultaneously

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**OPTIONAL ENHANCEMENTS**

Options such as rotary index tables, pin sensing, force monitoring, drilling and pinning combinations, laser part presence and pin level monitoring in the feed tube and bowl can be added for enhanced productivity, heightened process control and error-proofing.

† Can be adapted to install Alignment Dowels / Bushings
SPIROL Pin Installation Equipment installs most common types of pins including Coiled Spring Pins, Slotted Spring Pins and Solid Pins.

**Model PM**
0.9 kN (200 lbs.) maximum insertion force

**Model PMH†**
6.7 kN (1,500 lbs.) maximum insertion force

**Model PMX†**
26.6 kN (6,000 lbs.) maximum insertion force

† Can be adapted to install Alignment Dowels / Bushings
PIN INSTALLATION

Model HC
Semi-Automatic Horizontal
Lightweight, portable, horizontal Pin Inserter designed to install SPIROL Series 550 Coiled Pins into plastic hinges.

A STANDARDIZED APPROACH TO CUSTOMIZED FASTENER INSTALLATION SYSTEMS

Example of customized horizontal Pin Installation Machine designed to install (4) pins simultaneously.

SPIROL Application Engineers will review your fastening and assembly requirements and work with your design team to recommend the best solution. For complimentary engineering assistance, please contact SPIROL directly at any one of our global locations or visit www.SPIROL.com.

View SPIROL’s Pin, Threaded Insert, and Compression Limiter Installation Equipment in action on our YouTube Channel.

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