

SPIROL[®]

INSTALLATION TECHNOLOGY



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 standardised platform - customised 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 customised 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 customisation 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

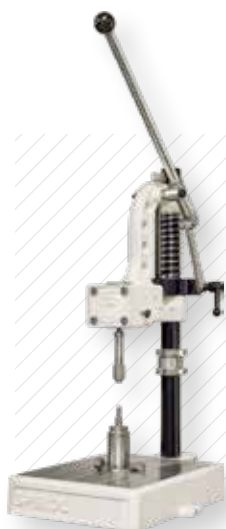
Starting at the design stage, to the successful launch of your product and throughout the useful life of the installation system, we are committed to your on-going satisfaction.

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.**

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 CP Pneumatic Driver

Accurate and consistent method to install one or more Compression Limiters.



Model CL Semi-Automatic Multi-Tip

Highly flexible platen-style machine with a 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. The working area is customised to specific application requirements.



Install one or multiple Compression Limiters simultaneously into various polymers, thermoplastics and/or thermosets.

OPTIONAL ENHANCEMENTS

Options such as vision sensing for part presence, automatic fixture identification, customised 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



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

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.



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



Model HM* Manual Heat Insert Driver

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

OPTIONAL ENHANCEMENTS

Options such as vision sensing for part presence, automatic fixture identification, customised 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.

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 a 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.

Innovative Technology

installation simplified



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 maximise efficiency.

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



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

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.

Quality Installation

with enhanced performance

**Accommodates
all SPIROL Pin
Driving Chucks:
SPD-101, CXA,
CXD and CXE**



Control insertion depth to flush, above-flush or below the surface of the component.



Model PM

0.9 kN (200 lbs.)
maximum insertion force

Model PMH*

6.7 kN (1,500 lbs.)
maximum insertion force

Model PMX*

22.4 kN (5,000 lbs.)
maximum insertion force



SPIROL Pin Installation Equipment installs most common types of pins including Coiled Spring Pins, Slotted Spring Pins and Solid Pins.

* Can be adapted to install Alignment Dowels / Bushings

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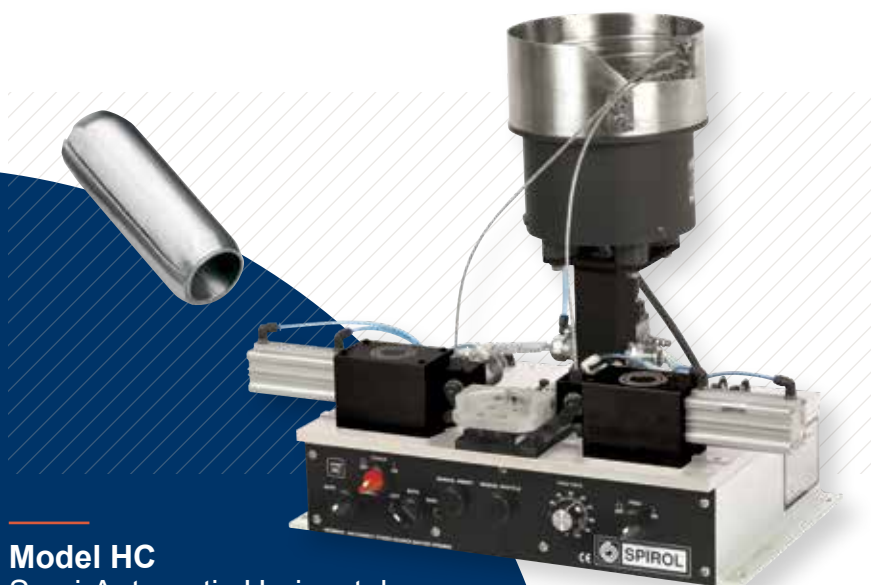
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Model HC

Semi-Automatic Horizontal

Lightweight, portable, horizontal Pin Inserter designed to install SPIROL Series 550 Coiled Pins into plastic hinges.

A STANDARDISED APPROACH TO CUSTOMISED FASTENER INSTALLATION SYSTEMS

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



Custom Quad Pin Inserter

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.co.uk.



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