A selection of optional features are available to meet the diverse requirements of the spring making industry. Optional features include:

- **Springs Vision**—Utilizing advanced image processing, Springs Vision has the capability to measure and adjust the springs, free length, pitch and diameter in real-time without additional interaction from the operator beyond entering tolerance values at set up. This allows for the implementation of closed loop control, for any changes that may have occurred with the material, the tooling, or the environment. All measurements as well as the captured spring image are saved on the HMI along with Springs Vision (Process Control/CNC) data pertaining to Pain Fail and measurement distributions. The system records all of the captured measurements to log files, easily extractable for remote data scrutinizing or as supporting documentation for the customer.

- **Ring Production Attachment**—This optional attachment is designed to produce large diameter rings on your existing Torin spring coiler. For example, an RD 115 zee ring attachment can produce rings at 7%, depending on springload of the material and shape of the ring.

- **Forming Attachments**—Such as end formers and spinners.

- **Quill Style Tooling**—To enable more complex wire forming.

- **Length Gauge Interface**—For customer supplied length gauge such as a Larson or Moyer for the fly, automatic adjustment of the wire length.

- **Torsion (5th) Axis**—Servo controlled torsion axis provides the capability to feed straight lengths of wire for the operation of torsion legs or magazine springs, or other wire forms. Includes torsion tool holder and a complete set of torsion tooling.

- **Lateral Coiling Point (5th Axis)**—Servo-controlled coiling point motion (in & out of machine face) for on-the-fly control of initial tension and the production of complex wire forms.

- **Retractable Bending Arbor**—Provides a bending anvil for use with lateral coiling point when performing more complex bends such as extension spring ends.

- **Laser Torsion Probe**—The laser probe provides precise feedback of spring geometry to the FZ control system, enabling the spring maker to control critical dimensions such as the angular clocking of torsion legs and extension housings.

- **Part Handling Devices**—Such as dump troughs, conveyor belts, ejection devices.

- **Wire Straighteners**—High quality 2 plane wire straightener that eliminates cast in the wire resulting in higher quality springs.

- **Customer Configurable Programmable Inputs/Outputs**—Enables the connection of secondary non-machinery equipment.

- **End of Wire Sensor**—This sensor signals the operator when the wire has run out, or will shut the machine down for light out production.

In the unlikely event that a tool breaks, or something malfunctions in the set up, this sensor will stop the machine, preventing further damage.

FENN's Electrical Retrofit program provides unmatched value: our highly knowledgeable, experienced engineers and factory technicians enable FENN to deliver retrofitted equipment at a fraction of the cost of a new machine. Let us help you maximize the potential and output of your mechanical coiling operation with this offer.

**Torin Spring Coilers**

**Retrofit Program for W Series Mechanical Controls**

Retrofit benefits include:

- Precise, variable speed servo control of feed and cam shaft independently, allows for cam shaft reversals and eliminates need to change gears or adjust feed crank gears, clutches and brakes.

- Variable speed and position control of the cam shaft enables greater flexibility when making complex springs such as multiple diameter changes. This also enables you to expedite set up by adjusting the timing of the cam shaft via offsets in the spring program rather than re-clocking the cam mechanically.

- Unlimited accurate feed length provided by precise servo control, without changing gears.

- Integrated probe interface enables precise clocking of springs.

- Retrofitted machines become simplified with fewer mechanical parts that need future replacement. Clutches, brakes and feed crank gears are all eliminated.

- Valuable mechanical parts that become obsolete in the retrofit process are created and shipped back to you for use on other machines, or disposed of at your discretion.

- High quality OEM parts keep your Torin machine running at optimum performance.

- Small form factor, high torque, full cycle, servomotors feature precise positioning control.

- Many Springs, One Machine

Is your aged machine at risk for a breakdown?

Control upgrades are available for older Torin servo controlled coilers. Give your machine a complete control upgrade with Torin software and the latest FZ Series features. With this package, eliminates the risk of relying on obsolete components, and other issues including:

- Low production rates
- Poor quality springs
- Down time resulting in reduced productivity & profits
- Wire & mechanics

Visit FENN today at:

Torin Spring Coilers | Connecticut, USA | 860.259.6600 | sales@fenn-torin.com | www.fenn-torin.com

FENN’s advanced technology adds all the high tech features that add efficiency to your operation, paired with classic Torin CNC spring programming.

Before

Z11

After

Torin FZ-125

Wire diameter range: .003” – .750”

Minimum Index: 3

PM: Up to 20,000

Torin FZ-1225

Wire diameter range: .030” – .250”

Minimum Index: 3

PM: Up to 20,000

Visit FENN today at: www.fenn-torin.com

Z Series & CNC Control Upgrades

Our Most Accurate, Fastest Spring Coiler Ever is Here: The Torin FZ Series

Adaptability is key in today’s competitive market. Each Torin FZ Series Spring Coiler is developed for fast set-up and changeover of springs using the powerful 19 inch touch screen interface. Torin Spring Coilers can quickly produce a wide variety of springs and wire forms on a single machine, all with uncompromised accuracy, reliability and flexibility. Torin allows you to meet a variety of production requirements and helps keep your business competitive.

Before

W24S

After

W425

Multiple languages available

- Torin FZ Series features user-friendly operator interface with a modern graphical design and intuitive touch screen.
- Fast & simple spring program creation.
- Multiple language support.
- FENN's advanced technology adds all the high tech features that add efficiency to your operation, paired with classic Torin CNC spring programming.

Dependable Service and Training

- Telephone support paired with new remote support capabilities, we're included with every machine to help minimize downtime.
- Ensure full utilization of all Torin’s features and efficiencies with our operator training at your facility or ours in Connecticut, USA.
- PD program available—ask for details.
Tarin is pleased to offer a long list of standard features available on every FZ Series spring coiler, including:

• Spring Portal allows for direct connection to your machine by FENN technicians. Technicians are able to remotely access your machine to provide software updates, diagnostic support and access machine set-up conditions. Our real time video feature allows our technicians to see exactly what’s happening with your machine and help you resolve issues quickly.

• Spring Shortcut spring program generator (see below)

• User-friendly operator interface: Spring Portal and help you resolve issues quickly.

• User-friendly operator interface:

• Spring Shortcut and help you resolve issues quickly.

• Complete system diagnostics

• Integrated diagnostic of wire shaping equipment prior to the coiler allows you to go from round wire to shaped wire springs

• Contact us today to learn more about how FENN can develop a solution to meet your requirements.

FENN is in the business of creating customized solutions for a wide variety of applications. Past examples include:

• Constant force machines customized for each client for the production of constant force springs

• Torsion/Winders for the production of flat torsion or brush springs

• Left hand configurations for batting springs and other special applications

• Integration of wire shaping equipment prior to the coiler allows you to go from round wire to shaped wire springs

Discover the Right Size Machine For Your Application!

FENN is the leader in providing customer specific solutions to all types of wire forming businesses. Whether you are looking to produce extension springs, torsion, wire forms and hooked applications or you require greater versatility, the functions or axes can be added.

Coilers Available in Four, Five or Six Axes!

Every Tarin spring coiler comes standard with 4 axes, which fulfill the feed, diameter, pitch and cut functions. For those customers who require greater versatility, the torsion and lateral coiling point functions or axes can be added. These additional axes enable the production of springs such as torsion, wire, helical and housed extension springs.

The FZ 11 machine recently purchased has completely fulfilled our needs for recent production increases. We are pleased to see the run speeds have increased, and special kudos from operator Dana Deschaine on holding tight dimensions. In addition, we have found the servo motor improvements are very significant and have allowed us to improve magazines and other parts produced. Your installation and service teams have listened and worked with us in regard to setup and screen parameters. As always, we appreciate your immediate reaction to our service needs. We look forward to more machine purchases in the very near future.

Sincere thanks from the Economy team!

Gary Albers, Plant Manager, MW Industries-Economy Division

The efficiencies gained by reduced setup time, increased throughput, and significantly reduced scrap rate while holding extremely tight tolerances was immediately realized through a complete statistical analysis. The machine paid for itself within months. Success with your first Torin “Z” CNC led Springfield Spring to purchase another “Z” CNC coiler, followed by three more of the latest model, the Torin FZ Series. Our five newest Torin spring coilers replaced all (40) of our mercury, freeing up substantial space for future business endeavors. Fenn not only produces a top-notch machine but then sales, service, applications, and technical professionals are second to none. FENN acts and responds like a business partner, not your traditional machine “dealer”. Springfield Spring continues to look forward to building our business with the help of Torin Spring Coilers for years to come.

Ryan Nadeau, Operations Manager, Springfield Spring Corp.

Tarin’s NEW Spring Shortcut spring program generator:

• Accelerates the spring program development process by allowing the operator to enter a few key characteristics to generate a spring program

• Allows less experienced spring operators the opportunity to learn through making minor adjustments to generated programs rather than developing the entire program

• Shortened setup enables more time for profitable production runs

The efficiencies gained by reduced setup time, increased throughput, and significantly reduced scrap rate while holding extremely tight tolerances was immediately realized through a complete statistical analysis. The machine paid for itself within months. Success with your first Torin “Z” CNC led Springfield Spring to purchase another “Z” CNC coiler, followed by three more of the latest model, the Torin FZ Series. Our five newest Torin spring coilers replaced all (40) of our mercury, freeing up substantial space for future business endeavors. Fenn not only produces a top-notch machine but then sales, service, applications, and technical professionals are second to none. FENN acts and responds like a business partner, not your traditional machine “dealer”. Springfield Spring continues to look forward to building our business with the help of Torin Spring Coilers for years to come.

Ryan Nadeau, Operations Manager, Springfield Spring Corp.

Great machines make happy customers!

FENN was founded in Hartford, Connecticut in 1932. Over the years, FENN has produced a wide variety of metal forming equipment, and among them was one of the first companies in the country to research, develop, and manufacture high speed wire forming machines. From its very beginning, FENN has been known for its devotion to the continuous advancement and improvement of its equipment, and today FENN is the premier manufacturer of wire forming machines. These machines are designed and built utilizing the most advanced computer technology and the highest quality materials. FENN has over 80 sales and service locations throughout the world and is proud to say that FENN equipment is made in America!