



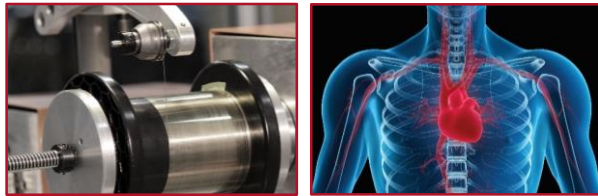
Below are just a few examples of industries served by FENN Wire Flattening & Shaping lines.



Photovoltaic Wire Line – Three Wire Flattening Mills in tandem were used, running up to 2600 FPM (800 MPM). The line featured SPC & AGC technology, along with precision speed and tension control to ensure high accuracy.



Orthodontic Wire – A Turks Head paired with SPC & AGC ensured precise production of wire.



Medical Wire Lines – Processes ultra fine medical wire used in applications such as catheter reinforcement and in stents.



Automotive Wire – An arrangement of both wire flattening and shaping equipment used to produce wire for collet sections.



Wellscreen Wire – A Rolling Mill and Turks Head arrangement can be used to produce wedge shaped wire used in oil and water wellscreen production.



Retaining Ring Wire – Features four Rolling Mills, with an edger, a Turks Head, and speed & tension control dancers.

“Ulbrich has trusted FENN Wire Flattening and Shaping lines for several decades to produce the highest quality shaped and flat wire available. FENN’s experienced staff has provided the process knowledge required to select, design and build machines to suit specific applications. FENN machinery has always proven very reliable, consistently satisfying our critical tolerances and specifications. At Ulbrich, we pride ourselves on offering superior products for over 90 years, and trust FENN machinery to get the job done.”

Chris Ulbrich, CEO
Ulbrich Stainless Steels & Specialty Metals

Wire Flattening & Shaping

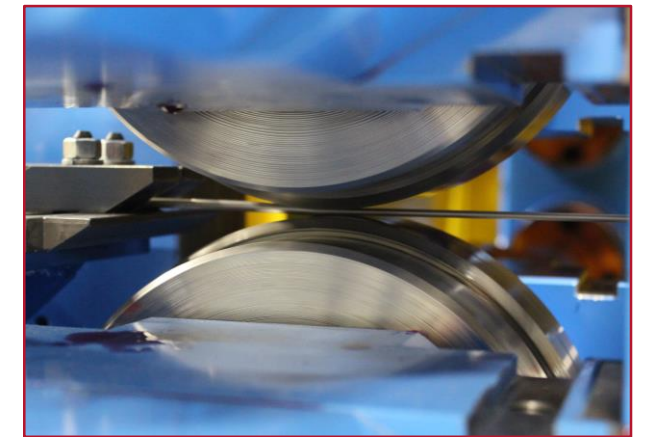
For any application from .002” to 2.00” (.05mm to 50mm) inlet diameter.

Trust the Leading Provider of Customized Wire Shaping Solutions

Need to make specialty shaped wire? Join the growing list of clients across the globe who trust FENN equipment to make their shaped wire production goals a reality. For over 100 years, FENN has been the leader in producing precise yet durable metal forming equipment for a wide variety of applications.

Providing the best solution for your application is our specialty- our experts take the time to design and build a wire shaping line with the right components to guarantee the results you are looking for.

At FENN, we keep our 118+ year legacy alive by proudly continuing to design and build every machine at our Connecticut, USA headquarters. Contact us today to see how FENN can help meet your wire shaping needs.



Precision Engineered Wire Flattening & Shaping for over 100 years.

FERROUS • NON-FERROUS • ALLOY • EXOTIC METALS • ENGINEERED METALS

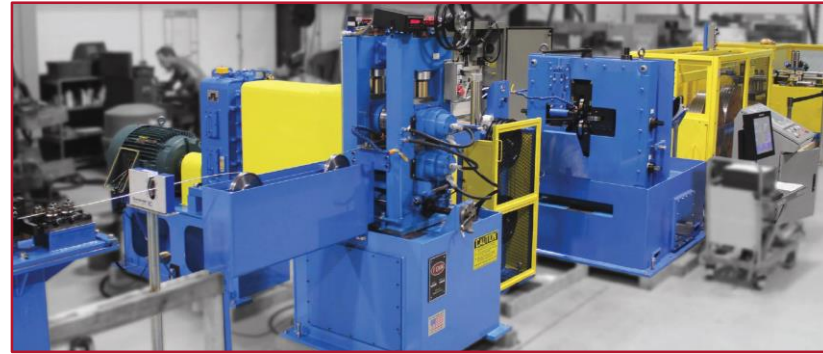


Available Features

FENN Wire Flattening & Shaping Lines can be customized to suit your specifications.

Typical features include:

- Inline pre-draw
- Speeds up to 3,000 FPM (915 MPM)
- Accurate tension & speed control
- Touch Screen HMI
- Servo traversing wind
- Lateral adjustment
- 2HI/4HI design dependent upon application



Materials

- Steel
- Copper
- Titanium
- Brass
- Zirconium
- Clad Wire
- Stainless Steel
- Lead
- Aluminum
- Brazing Alloys
- Ni Ti
- Precious Metals
- Solder

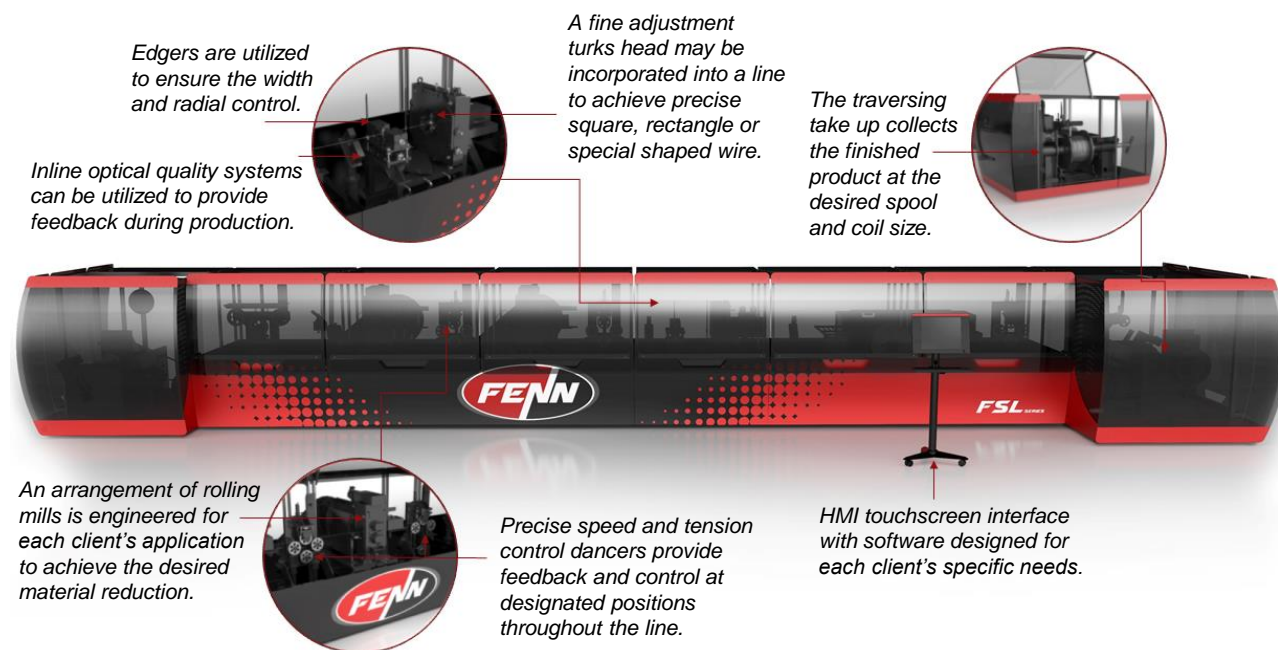
Applications

- Medical Wire
- Orthodontic Wire
- Photovoltaic Wire
- Automotive Wire
- Wellscreen Wire
- Retaining Ring Wire

Types of Mills

- Single Stand
- Multi-Stand
- 2HI / 4HI
- Combination Rolling Mill / Turks Head Line

Anatomy of a FENN Wire Flattening & Shaping Line



Customized Software

A software package will be developed by our expert staff for your FENN Wire Flattening & Shaping Mill.

Typical features include:

- Setting the line speed
- Tension control of the dancers
- Programmable pass scheduling
- Width & thickness gauging with Automatic Gauge Control (AGC)
- Statistical Process Control (SPC)
- Individual forward/reverse jog control of payoff, take-up, & wire flattening mills for set-up
- Diagnostic screen
- Remote access



Ancillary Options

Take-Ups

- *Traversing Pintle Spool Type* – Supports both sides of spools
 - For spools having small through bores and large capacity
- *Traversing Cantilever Type* – For spools and collapsible drums
 - Can accommodate multiple different spools and collapsible drums on interchangeable mandrels connected to the spool shaft
 - Provides easy access for spool removal
- *Traversing Wire Guides Type* – Most economical option
 - Used for irregular shapes that do not require precision winding
 - Suitable for spools or collapsible drums



Take-Up

Dancers/Tensiometers – Can be used separately or in combination in the same line to cover a full range of material

- Synchronizes the speed between different units in the line and controls constant tension in the material
- Dancers are air loaded using a linear potentiometer for speed control
- Tensiometers use a roller connected to a solid state transducer



Dancers

Edgers – Used to control the width and edge profile of the material

- Consists of two vertical axis rolls which are grooved to the edge profile required for the material
- Two types available: Friction or Driven



Friction Edger