Laboratory Rolling Mills

Engineered to meet the critical requirements of metallurgical research.

Precision Strip Rolling Mills from FENN

FENN has been the leader in providing quality metal forming machinery for over 118 years. Trusted to serve a wide variety of industries and organizations across the globe, FENN’s machines are reliable and rugged. Laboratory Rolling Mills are widely used by research facilities and universities for metallurgical development and primary metal producers for pilot run process enhancement.

With unmatched service and support, FENN is with you every step of the way to ensure your project’s success. Our experts take the time to design and build the right metal forming equipment for your specific production requirements.

Contact us today to learn how FENN can help you design and build a machine to fit your unique specifications!

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

Standard Models Available

Model: 4-229 4HI Cold Rolling Mill
Electro-Mechanical Screwdown
- Mill Capacity: 1,175,000 lbs. (533 MT) at 100 FPM (30 MPM)
- Material: Variety of materials
- Work Rolls: 6.75” (171.45 mm) diameter x 30” (762 mm) face width
- Notable Feature: Hydraulic actuated roll changing rig

Model: Special 2 Stand 2HI Cold Rolling Mill
Single Direction Coil to Coil Design
- Coil ID: 15” (380 mm)
- Coil Weight: 66 lbs. (30 KG)
- Mill Capacity: 22,000 lbs. (10 MT) at 100 FPM (30 MPM)
- Material: Various steels up to 1.182” wide (30 mm) for testing lubricants
- Rolls: 4” (100 mm) diameter x 3” (75 mm) face width

Model: 4-046 2HI/4HI Combination Mill
Mechanical Screwdown
- Mill Capacity: 30,000 lbs. (13.6 MT) at 33 FPM (10 MPM)
- Material: Hot & cold rolling of various materials
- Max Material Thickness: 1.6” (40 mm)
- Max Material Width: 4” (100 mm)

Model: 103 Reversing Hot & Cold Rolling Mill
Electro-Mechanical Screwdown
- Mill Capacity: 190,000 lbs. (86 MT) at 50 FPM (15 MPM)
- Material: Aluminum Alloy
- Rolls: 10” (254 mm) diameter x 12” (304.8 mm) face width

Model: 4-169 Special 2HI/4HI Hot Rolling Mill
Electro-Mechanical Screwdown
- Mill Capacity: 300,000 lbs. (136 MT) at 50 FPM (15 MPM)
- Max Material Temperature: 1,652°F (900°C)
- Work Rolls: 5.75” (146.05 mm) diameter x 12” (304.8 mm) face width
- Back-up Rolls: 16” (406.4 mm) diameter x 12” (304.8 mm) face width
At FENN we pride ourselves on being:

Innovative — We are solutions providers who work directly with our customers to provide precision machinery to meet specific requirements.

Rugged — We’ve built our reputation on results, manufacturing industrious machines engineered to provide years of profitable productivity.

Trusted — FENN has been a trusted name for over 100 years – with this comes an invaluable knowledge base and decades of experience.

FENN has a full range of Rolling Mill models with separating force capabilities from 30,000 lbs. (13.6 MT) to 1,175,000 lbs. (533 MT).

Additional features include:
- Infinitely variable speed range
- 2HI or 4HI configurations
- Hot & Cold Rolling
- Asymmetric Rolling
- Powder Rolling
- Lubricant Evaluation
- Full instrumentation including temperature, torque and separating force
- Servo-Hydraulic, Electro-Mechanical and Hydraulic Screwdowns
- Internal roll heaters where applicable

**Typical Software Capabilities**

- Internal closed loop feedback
- Roll temperature measurement
- Material temperature measurement
- Screwdown position control
- Separating force measurement
- Torque measurement
- Automatic roll pass programming
- Data acquisition system
- Remote diagnosis capability

**Model: 082 2HI Reversing Hot Rolling Mill**
**Servo-Hydraulic Screwdown**
- Application: Rolling sandwich material of aluminum plates for energy research
- Mill Capacity: 150,000 lbs. (68 MT) at 50 FPM (15 MPM)
- Starting Width: 5" (127 mm)
- Starting Thickness: 0.5" (1.27 mm)
- Minimum Final Thickness: 0.05" (1.27 mm)
- Material Temperature: 842°F to 932°F (450°C to 500°C)
- Rolls: 8" (200 mm) diameter x 10" (250 mm) face width

**Model: 061 2HI Reversing Hot Rolling Mill**
**Electro-Mechanical Screwdown**
- Mill Capacity: 165,000 lbs. (74.8 MT) at 25 FPM (7.6 MPM)
- Material: Various alloys & composites
- Max Material Temperature: 1,112°F (600°C)
- Max Material Thickness: 2.4" (60 mm)
- Max Material Width: 6" (150 mm)
- Rolls: 6.5" (165 mm) diameter x 10" (250 mm) face width

**Model: 082 2HI Reversing Hot & Cold Rolling Mill**
**Electro-Mechanical Screwdown with Position Control**
- Mill Capacity: 150,000 lbs. (68 MT) at 51.5 FPM (15.7 MPM)
- Material: Aluminum
- Max Material Temperature: 932°F (500°C)
- Rolls: 7.87" (200 mm) diameter x 9.34" (237 mm) face width

**Model: 4-098 2HI/4HI Laboratory Rolling Mill**
**Electro-Mechanical Screwdown**
- Mill Capacity: 150,000 lbs. (68 MT) at 25 FPM (7.6 MPM)
- Material: Aluminum
- Max Material Temperature: 932°F (500°C)
- Rolls: 7.87" (200 mm) diameter x 9.34" (237 mm) face width