ROD FEEDER SYSTEMS

Designed to maximize the benefits of using AMG Aluminum grain refining rod

AMG Aluminum Rod Feeder Systems are specially designed for the continuous grain refinement and alloying of aluminum casthouse melts using grain refiners and master alloys in rod form. AMG Aluminum is a world leader in manufacturing of grain refining rod and the AMG Aluminum Rod Feeder Systems are designed to maximize the benefits of using AMG Aluminum grain refining rod.

AMG Aluminum Rod Feeder Systems all comprise a controller and a rod feeding machine. Three basic decisions need to be made when deciding which system to install:

1. WHICH CONTROLLER?
2. WHICH ROD FEEDING MACHINE?
3. WHAT RANGE OF ROD SPEEDS IS REQUIRED?

WHICH CONTROLLER?

Three levels of controllers are now available:

- ERF Controller
- MRF Controller
- XRF Controller (fully programmable, touch screen display)

ERF CONTROLLER
- Speed setting AC inverter and potentiometer
- Analogue speed display
- Start, stop and reverse push buttons
- Isolating switch
- Built in alarm system with a proximity switch operated from the free running rod machine roller
- Dimensions: width 30cm, height 40cm, depth 18cm

MRF CONTROLLER
- Speed setting AC inverter and potentiometer
- Digital speed display
- Start, stop and reverse push buttons
- Isolating switch
- Built in alarm system with channel selector switches
- Shaft encoder for more accurate speed monitoring
- External control to provide start and stop alarm conditions using volt free contacts and external speed control using 4-20mA and actual speed by 4-20mA output
- Plug and socket connections
- Dimensions: width 40cm, height 40cm, depth 24cm

XRF CONTROLLER
- Touch screen control incorporating speed control and speed display alarm conditions for rod monitoring
- Start, stop and reverse push buttons
- External volt free control or ethernet controls with built in hub
- Isolating switch
- Industry standard Allen Bradley PLC, HMI and control gear
- Shaft encoder speed monitoring
- Real time alarm history
- Dimensions: width 40cm, height 60cm, depth 24cm

Internal circuit breakers are provided for both the inverter and the fan and an isolator is fitted for the incoming power. Mains input is from 200 – 240 volts AC, and transformers are available for other voltage requirements.
Two Rod Feeding Machines are available:

- **Single Rod Feeding Machine**
- **Dual Rod Feeding Machine**

**SINGLE ROD FEEDING MACHINE**
The Single Rod Feeding Machine feeds a single rod with a nominal diameter of 9.5mm-9.7mm, at a wide range of speeds into molten aluminum for continuous grain refinement. The compact design (length 20cm, width 23cm, height 47cm) incorporates many components which have been specified in units supplied to the aluminum industry over four decades.

The unit’s helical worm reduction gear box with splined shaft is flange mounted to the feed box. Drive is supplied from an enclosed, force – cooled motor. Hardened rolls can be tensioned against the rod with a pre-tensioned spring. The feeder’s needle bearings are sealed for life. Guide roll bearings on the feed-box inlet ensure smooth operation. Low friction guides direct the rod.

**DUAL ROD FEEDING MACHINE**
The Dual Rod Feeding Machine is capable of feeding one or two rods, with a nominal diameter of 9.5mm-9.7mm, into the molten aluminum stream for continuous grain refinement. The design (length 52cm, width 21cm and height 55cm) incorporates many components which have seen worldwide service in units supplied to the aluminum industry over almost four decades.

The Dual Rod Feeding Machine reliable single motor design reduces cost and simplifies maintenance. Precision self-aligning bearings are sealed and lubricated for life. The motor and gearbox are fitted at right angles to the output shaft to reduce the footprint of the machine. The unit’s helical worm reduction gear box with splined shaft is flange mounted to the feed box. Drive is supplied from an enclosed, force – cooled motor. Rod is guided in and out of the unit by antifriction guides for positive non-slip feed. Hardened rolls can be tensioned against the rod with a pre-tensioned spring. The body and base plate are made from durable machined aluminum plate.

**WHAT RANGE OF ROD SPEED IS REQUIRED?**
Rod Feeding Machines can be supplied with the following rod speed ranges:

- 5-100cm/min
- 15-300cm/min
- 30-600cm/min

**DECOILING SPOOLS**
Dual-axis decoilers are available for use with either Single Rod Feeding Machines or Dual Rod Feeding Machines. They can be used for rod pay off in either the horizontal or vertical axis. They can stand on the floor or be lifted to position on a fixed frame. Dual-axis coilers can accommodate up to 450kg coils.

**QUALITY**
The AMG Aluminum Rod Feeder Systems are all CE, UL, and cUL approved.

Thompson and Hudson has manufactured wire and rod handling equipment since 1911 and has produced rod feeding equipment in a supplier partnership with AMG Aluminum for four decades.

**PARTS AND SERVICE**
Parts and service for AMG Aluminum Rod Feeding Machines are available directly from Thompson and Hudson Wire Machinery, Atlas Mill Road, Brighouse, West Yorkshire, England HD6 1ES. Tel: +44 (0)1484 715129 sales@thompsonandhudson.co.uk | www.thompsonandhudson.co.uk