BULK
MATERIALS
HANDLING

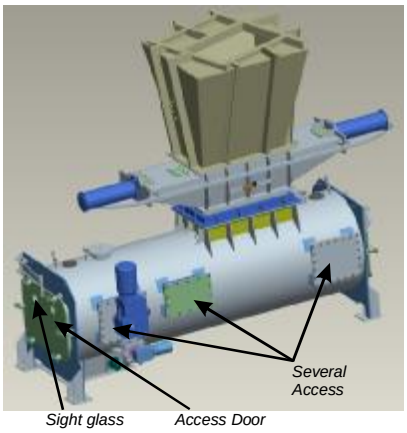
# Coal Feeder

Local design

Rula's coal mill feeders accurately supply a specified coal capacity. Ours are the only locally developed, designed and manufactured feeders, meaning that we can easily customize them to your specific application, while ensuring the cost and lead-time benefits of local supply.

Operating principle and accuracy

A column of coal is delivered to the feeder via the inlet spout and rests on the feeder belt. The head-end pulley turns the belt, thereby dragging the coal at the bottom of the column out. This coal passes over the belt scale (also locally designed and built), which measures the coal mass. A controller then calculates the coal capacity by integrating the measured mass and the measured pulley speed. On-site truck tests have shown our feeders to have an accuracy of at least 2.5%.



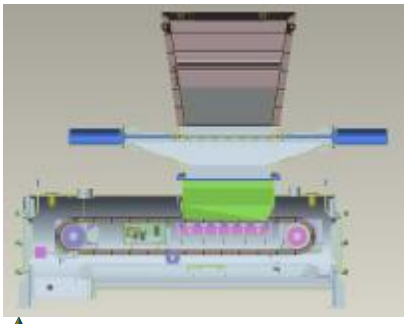

Codes and standards

If required our coal feeders can comply with the Boiler & Combustion System Hazards (NFPA85) Code. Specifically the code requires feeders to withstand explosions of 344kPa. Our in-depth Finite Element Designs ensure we can optimize material strength and costs within the limits imposed by the code.

Each system is unique. We therefore design our coal mill feeders to integrate elegantly into the plant, while satisfying the capacity and other technical requirements.

Design Features

- The ***belt***, with reinforced side walls, has a centrally-located v-wedge on its underside to assist with alignment.
- The ***head pulley***, with rubber lagging and v-groove ensures that the belt does not slip.
- The ***take up pulley*** is self-cleaning, causing any material caught in the pulley to spiral outwards.
- Two ***belt misalignment switches***, a ***blocked chute detector***, ***a material on belt switch*** and ***a temperature transmitter*** are standard safety interlock devices fitted to our feeders.
- A tail pulley ***speed sensor*** is used to obtain the belt speed for use in the controller.
- Capacity readings are easily obtainable from the ***control panel*** display.
- A ***seal air*** deflector plate ensures that the seal air does not impinge on the belt.
- A ***chain scraper***, at the bottom of the feeder, rotates in the opposite direction of the belt, pushing any spilled material out through the discharge.



*Coal Feeder and belt scale locally designed and manufactured*

Operating and Maintenance

- Multiple ***access hatches*** simplify maintenance on the coal feeder.
- The head and tail ends each have an ***access door*** which can be opened and closed without the use of tools.
- ***Sight glasses*** are installed on the head and tail access doors.
- Each sight glass can be cleaned from the inside by means of a air nozzle and ball valve arrangement.
- Internal ***light fittings*** are provided at the head and tail end of the feeder.

System Integration

- Optimisation of the upstream coal supply is a critical part of feeder design. Rula' engineers have the knowledge and experience to make effective use of radial stress fields in reducing feeder loads, and in avoiding or designing for high start-up loads due to vertical stress fields.

- Speak to us about your upstream and downstream chute requirements. Our specialized bulk solids flow personnel have the solution for you.

*Coal Feeder Installed in plant*

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