

# Stock® HPG

## High Pressure Gravimetric Feeder

- Improves heat rate
- Lowers CO<sub>2</sub>, SO<sub>2</sub>, Hg, NO<sub>x</sub> emissions
- Improved pulverizer / cyclone / combustor performance
- Fuel savings through improved boiler efficiency
- Reduced O&M costs
- Stability and improved response of combustion controls



The Stock® HPG (High Pressure Gravimetric) 50 psi / 3.5 barg pressurized feeder is the heart of the Stock® feeder line. This feeder model was developed, designed, tested and manufactured by Stock Equipment Company, specifically for the electric utility and industrial boiler customers.

The Stock® HPG series is the best choice for pulverized coal fired boilers that require feeders to withstand high pressures and provide maximum safety and accurate fuel feeding. Our Stock® feeder product line is designed and tested to maintain feeding accuracy within  $\pm 1/4$  of 1 percent of the total coal flow. Verification testing for Stock® feeder models can be performed at any one of our three full scale material test facilities located in USA, India and China.

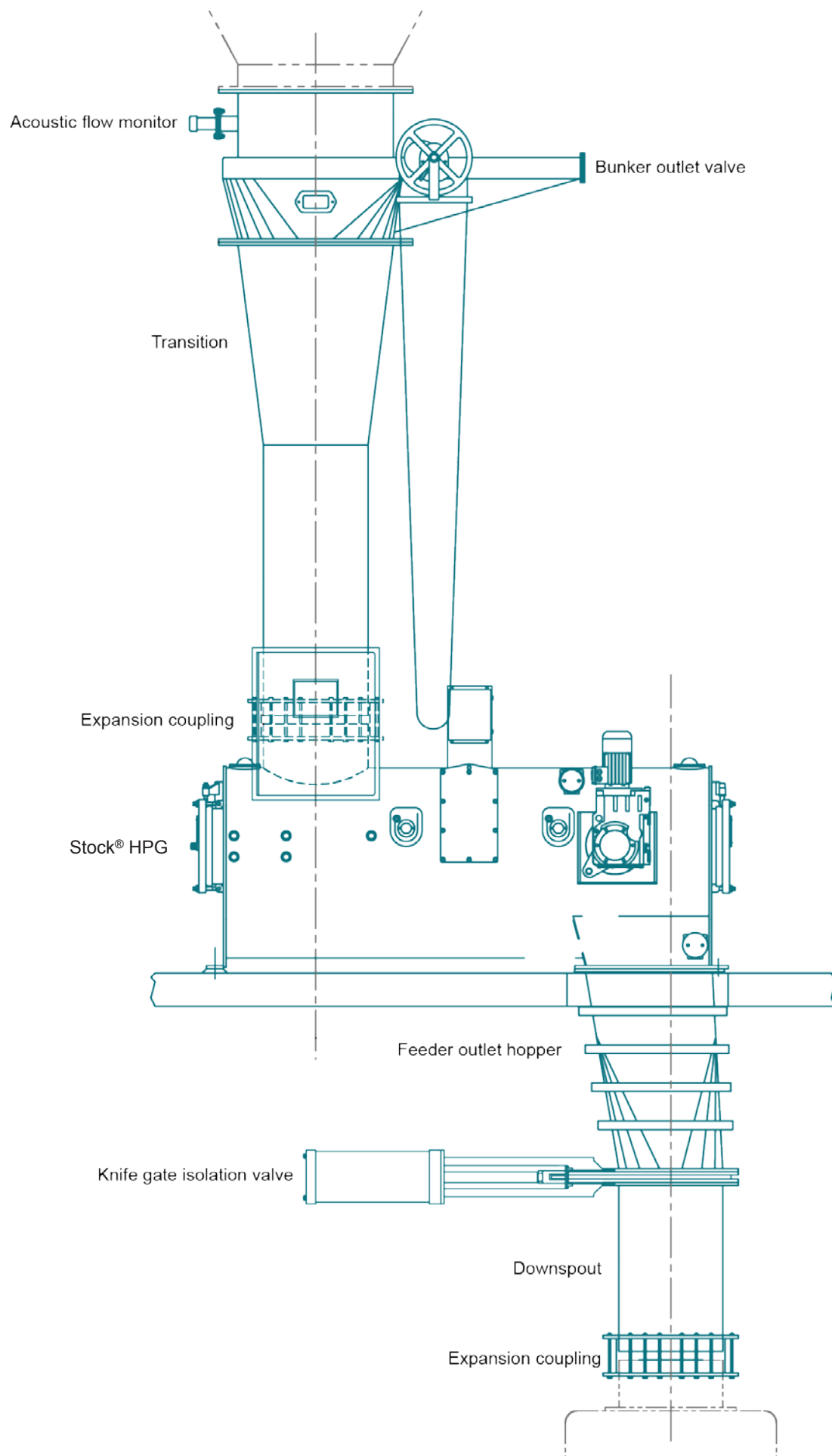
The Stock® HPG offers reliable coal flow to the pulverizer under a wide range of coal conditions. Savings in coal can be realized due to more accurate control of excess air. This will help minimize NO<sub>x</sub> formation in the boiler. In addition to savings from reduced fuel consumption, a decrease in post combustion pollutants such as NO<sub>x</sub>, SO<sub>2</sub>, CO<sub>2</sub>, and Hg will be realized.

The Stock® HPG is built according to NFPA, CE and ATEX requirements.

Because of its non-homogenous nature, coal properties constantly vary with respect to sizing differences, the adverse impact of moisture on heating value, flow characteristics and density. The effect of moisture on coal has been studied for many years by Stock Equipment Company, research institutes and other experts who have published data illustrating how coal bulk density changes with different total moisture levels. Since there is currently no effective way to measure thermal heat rate, this value must be inferred from either volume or weight flow.

Stock®'s HPG gravimetric feeder compensates for the variation in bulk density by feeding a fixed weight of coal in response to boiler demand. This ability to accurately weigh the coal on an "as-fired" basis provides significant improvement over volumetric feeders in terms of matching the energy delivered by the feeder to the actual process energy required on coal fired units. The Stock® feeder product line is the industry standard for solid fuel feeding as a direct result of our proven track record in optimizing boiler performance, achieving lower emissions and maximizing associated cost savings.

## Stock® Feed System: Bunker to Pulverizer



**Stock® HPG Standard Features:**

- 610 mm / 24 in or 914 mm / 36 in round inlet
- Feeder accuracy  $\pm 0.25$  %
- Cast iron cleanout conveyor chain
- Dual load cells for weigh signal and error checking with mechanical overload protection, rated for service up to 150 °C / 302 °F
- Belt reversing for performing an emergency bunker discharge operation
- Tracking Station provides belt tension and automatic belt tracking
- Inlet support rollers provided on 914 mm / 36 in feeder and belt support pan on 610 mm / 24 in version.
- Inlet support rollers are powder coated or zinc plated
- SS belt scraper with replaceable rubber blade
- Flanged seal air connection
- Two tempered glass view ports on feeder end doors to assist in belt tracking and maintenance
- Internal feeder work lights at both ends
- Permanently lubricated inlet and weigh rollers
- Standard feeder mounted cabinet:
  - o VFD speed control
  - o DT-9 HMI color, touchscreen display
  - o Fused disconnect
  - o R45 communications connector with cover on cabinet door

**Optional Features:**

- Aspirated poke holes
- Belt motion monitor or zero speed switch – independent of DT-9 controller
- Belt tracking switches
- Cleanout conveyor motion monitor
- High temperature belts
- Inlet access covers for 914 mm / 36 in feeder
- Sampling port
- Temperature switch / sensor
- Water spray system and connections
- Special paint
- Two bolt end doors
- Replaceable feeder inlet skirts and leveling bar

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