

One Source

FLSmidth Feeders, Feeder Breakers & Sizers



Company profile

About FLSmidth

FLSmidth is your One Source, One Partner for mining and minerals processing equipment and services. Utilizing the latest in technology, resources, and materials, our engineered solutions provide you with the ideal design, equipment, and process support for your systems.

Behind our organization is Denmark-based FLSmidth, an international group of companies delivering equipment, systems, and high technology engineering services for the cement and minerals industries. This dedicated focus and international scope provide FLSmidth a solid foundation. When you select FLSmidth as your partner, you bring this solid foundation and support to your business.

FLSmidth Buffalo is one of the three affiliated brands in South Africa. The FLSmidth group traces back to the 1880's and is based in Denmark and has offices strategically placed worldwide.

FLSmidth Buffalo has extensive experience in the design, development, manufacture and servicing of feeders, feeder breakers and sizers.

The Buffalo brand started out as McCarthy Mine Machinery in 1975 as a service to the South African Mining Industry. The name changed to FLSmidth Buffalo and became part of the FLSmidth group in 1999. FLSmidth is a world class supplier of feeding and crushing equipment for mining and general industries is situated in Witbank, South Africa.

All FLSmidth Buffalo equipment is manufactured here utilizing the latest equipment technology, resources and materials.



Feeder breakers

FLSmidth has extensive experience in the design, development, manufacture and servicing of feeder-breakers.

Feeder-breakers are used mainly in underground mining of products such as coal and potash. The original Buffalo Feeder Breaker was developed and successfully introduced into coal mines in 1975.

Constant product development and innovation has ensured that the Buffalo Feeder Breaker has become an industry standard.

The Feeder Breaker is traditionally used between the mobile mining machinery and the fixed conveyor systems. The main function of the Feeder Breaker is to reduce the product down to a manageable size and smooth the flow on to the mine's conveyor belts.

Although a standard range of Buffalo Feeder Breakers is available, FLSmidth Buffalo custom designs and builds feeder breakers according to the specific mine's requirements in terms of through flow, product size, ancillary machinery and mining conditions.

FLSmidth's Buffalo Feeder Breakers are robust, modular and highly reliable. Machines are built around a standard pool of sub systems and components to ensure a high degree of inter changeability, modular replacement, low spares and stock holding, thus offering a very high availability to its users.

The low maintenance required and cost effectiveness of the Buffalo Feeder Breaker has made the Buffalo Feeder Breaker legendary.

The feeder section offers the unique Buffalo dual flightless conveyor chain arrangement with major advantages over the more traditional flight conveyor system as used in most other Feeder Breaker designs.

The advantages are longer chain life, better size control and the capacity to run either or both the dual conveyor systems. Unlike other feeder breakers, the Buffalo Feeder Breaker need not be manually offloaded in the unusual case of a chain failure.



Coarse Coal Breaker assembly



Coarse Coal Breaker assembly

Low Seam Feeder Breaker



Plant Feeders & Feeder Breakers



High Capacity Straight Deck Feeder



High Capacity Straight Deck Feeder



Flight Bar Chain assembly

Plant Feeders

FLSmidth designs and manufactures a range of plant flight-bar Feeders used primarily in open pit coal mining applications.

In open pit mining a Feeder is often needed at the tip point under the reception hopper prior to the primary crushing stage. Buffalo Feeders are highly robust and use low head room. The Feeders are suitable for feeding product and waste from a tip hopper facility.

The Feeders are also of a simple maintenance friendly construction that can be serviced on site or in our repair facility.

Features of the Feeders

- Sealed operation with no spillage
- Feed rates from 100tph to 3000tph per machine
- Quiet operation
- Electromechanical or hydraulic drive options
- Long service life
- Resistant to tramp feed

Plant Feeder Breakers

FLSmidth designs and manufactures a range of plant flight-bar chain Feeder Breakers used primarily in open pit coal mining applications.

In open pit mining a Feeder Breaker is often needed at the tip point under the reception hopper. Buffalo Feeder Breakers are highly robust and suitable for feeding product and waste from a tip hopper facility.

The Feeder Breakers are also of a simple maintenance friendly construction that can be serviced on site or in our repair facility.

Features of the Feeder Breakers

- Sealed operation with no spillage
- Feed rates from 100tph to 2500tph per machine
- Quiet operation
- Electromechanical or hydraulic drive options
- Long service life

Primary Feeder Breaker



Reclaim Feeders & Feeder Breakers

FLSmidth designs and manufactures a range of reclaim flight-bar chain feeders used primarily in stock pile reclaim facilities at coal mines or in the coal yard at power stations. The Feeders and Feeder Breakers are also used for the clearing of tip hoppers into which loads from side-tip coal trucks are received.

In coal stock yard high capacities of coal must be fed onto a conveyor belt. Buffalo Feeders and Feeder Breakers are designed to be fed by either truck, front end loader or dozer without the investment in high concrete walls for such a tip facility.

The Feeders are also of simple maintenance friendly construction that can be serviced on site or in our repair facility.

Features of the Feeders

- Sealed operation with no spillage
- Feed rates from 100tph to 3 000tph per machine
- Quiet operation
- Electromechanical or Hydraulic drive options
- Long service life
- Resistant to tramp feed
- Robust construction for stockpile environment
- Machines can be rear trip truck or side tip truck fed
- Machines can be dozer or front end loader fed
- Highly wear resistant conveyor chains



High Capacity Straight Deck Feeder



Reclaim Feeder for use with side tip trucks



Stockpile Reclaim Feeder on site

Sizers



Primary Tip Sizer in Maintenance Position



FLSmidth Sizer



Tooth Layout



Primary Sizer

FLSmidth manufactures a range of low speed Sizers at the FLSmidth Buffalo and FLSmidth ABON facilities.

The FLSmidth low speed sizing principle involves the combination of high torque and low roll speeds with varying tooth profiles to arrive at specified end product sizes with a minimum of fines creation.

The roll speeds on FLSmidth Sizers are as low as 15rpm. General features of the Sizers are as follows :

- Top size control
- Size distribution envelope improvement
- Fines minimisation
- Dust minimisation
- Noise minimisation
- Dynamic load reduction

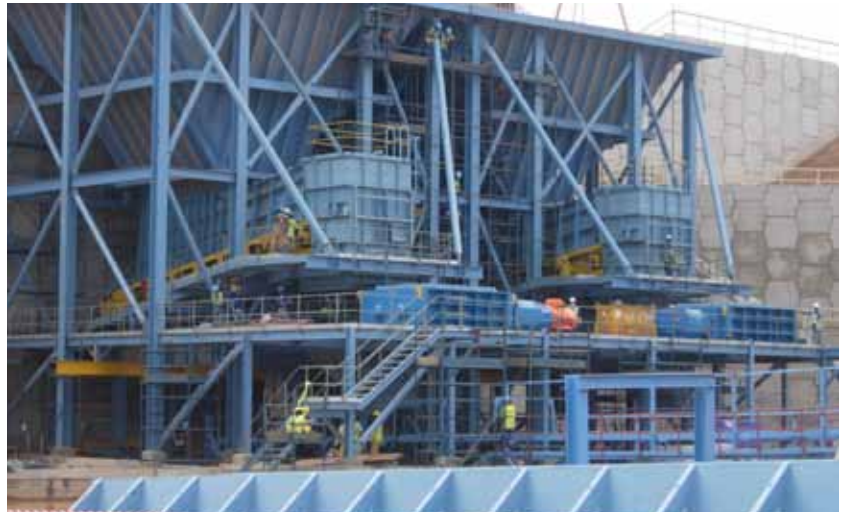
The FLSmidth Sizers have the ability to start up under a full head of feed thus avoiding manual dig and clean outs if the machine is crash stopped under full production operation.

FLSmidth Sizers are suitably protected against high levels of intrusion in mining applications and will not suffer catastrophic damage because they have :

- Inherent low roll speeds
- Heavy duty teeth and roll construction
- Under speed sensors
- Fluid coupling/trip switches

These protection features are well proven on commissioned FLSmidth Sizers operating in high intrusion colliery, mine, quarry and industrial applications.

Feeders & Sizers Tip Arrangement



Customer service & spare parts

FLSmidth offers full support for the range of machines that it supplies. Site repairs and supervision of installation work are also provided.

Our customers are our most important assets. Once we have designed and installed your processing systems, we do everything possible to provide the tools to ensure that those systems continue to operate at optimum levels, all the time. It is by no means a radical concept.

Spare parts are available 24 hours per day, 7 days per week and repairs and rebuilds are undertaken at our facilities.

Technical Services

- Erection and commissioning
- Operations and maintenance
- Expert services
- Technical assistance
- Training

Products & Parts

- Original OEM spares
- Product review and improvement
- Life cycle analysis
- Repair
- Retrofits

Engineering Services

- Equipment audits
- Process audits
- Testing
- Erection supervision
- Training

Operations and Maintenance

- Mill management
- Plant maintenance
- Asset management
- Plant operations



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