

# JOYGLOBAL



## Feeder-Breakers Product Overview





## Underground Feeder-Breaker

JOY Feeder-Breakers, designed for low-to-high seam applications, provide high productivity and reliability in the most rigorous of conditions. Each feeder-breaker is designed to work as

**Designed to work as an integral part of your mining operation.**

an integral part of your total mining operation. It allows mining, haulage and conveying systems to work at their most efficient rates to maximize mine production.

The basic elements of each feeder-breaker are similar in design, following field-proven philosophies perfected over the years. Each machine begins with robust, all welded frame construction. The conveyor deck is hard surfaced with chromium carbide overlay adding long deck life to the unit. All flights and shafting are made from alloy steel, allowing for smaller sized components at a high tensile strength. All standard controls are located for easier troubleshooting and maintenance. External component control and monitoring can be mounted to the feeder-breaker in addition to the standard controls. This provides a central location for control and monitoring of belts, air conditions, belt scales and remote access from the surface. All of these elements enhance component life, lower operating costs and provide for a safer mining environment.

### Increase Your Mining Efficiency

- Surge capacity allows the feeder-breaker to discharge mined material at the maximum capacity of the haulage equipment
- Material throughput is fully variable up to 2,000 TPH (1814 tonne)
- Powerful rotary pick breaker reduces mined material to a consistent, easily handled size
- Mined material is discharged at a steady rate, virtually eliminating spillage and reducing belt wear

### Reversed Crawler Design

*Built for extreme duty...*



Due to application requirements and heavier designed machines, BF14 & BF17 feeder-breakers are available with reversed crawler designs. The crawler assemblies are more robust and include higher rated planetary drives and idler take-ups. Crawler pads are now available in 18 in (457 mm) pad widths to reduce ground pressures in varying bottom conditions. Draw bar pull has been increased up to 142,000 lbs (64,410 kg) by reversed design. Optional tram speeds 30, 42 & 50 fpm (9.14, 12.8 & 15.2 mpm) are available per customer requirements.



### Designed For Maximum Performance

JOY Feeder-Breakers have the same basic configuration—hopper, breaker, and conveyor. By varying these three aspects of the configuration, we can match the equipment with the application ... perfectly.

Intake ends are designed to meet customer preferred haulage means. Ram car, swing gate and three-way dump intake ends can be custom designed to accept discharge from specific haulage equipment such as ram cars, scoops, shuttle cars and battery powered haulers. Staked or hinged sideboards are also available at various heights for additional capacity.

Unmatched in the strength of the breakers at pick point, the breaker shaft, components and drives are designed and capable of fracturing material up to 30,000 PSI (2,068 bar) unconfined compressive strength. A direct drive breaker system is standard on most units, which reduces maintenance time and spare parts stock by eliminating chain, sprockets and take-up on the breaker drive assembly.

Both hydraulic and mechanical conveyors are available. Most models offer the customer a choice. Hydraulic drives are recommended in applications where extremely hard material or a variety of materials are encountered. Mechanical drives are used in operations where softer materials are being handled.

### Total Control

*The latest in VFD technology...*

Various types of material, hardness and belt conveyor capacity require flexibility in the feeder-breaker discharge rate. The JOY OPTIDRIVE AC variable frequency drive system provides this feature. The OPTIDRIVE VFD system offers variable speed control of the conveyor equivalent to 25% to 100% of the rated throughput capacity. Water cooled and air cooled drives are available to meet customer machine and application preferences.



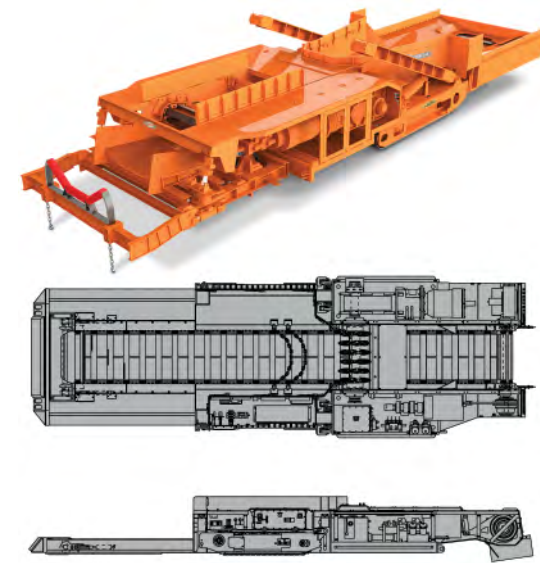
## Leading Innovation

*With Quality & Pride...*

JOY leads the mining industry with innovations that increase productivity and improve operator safety. Custom configured to maximize production, such feeder-breaker safety features include fire suppression actuators, hydraulic gauges, centered control valves, panic strip and tram enable switches.



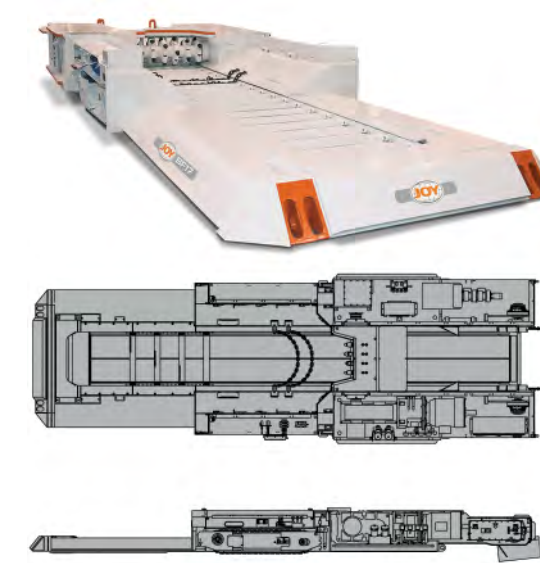
# JOY BF-14 Feeder-Breaker



**BF-14**

Overall Width (at intake end)	112 - 148 in	2844 - 3759 mm
Conveyor Width	44, 50, 56 & 62 in	1117, 1270, 1422 & 1574 mm
Overall Length	396 - 460 in	10058 - 11684 mm
Weight	80,000 - 100,000 lbs	36,287 - 45,359 kg
Seam Height	73 in	1854 mm
Processed Material	Run-of-mine coal with high percentage of rock content	
Throughput Standard (Variable)	Up to 1,500 TPH	Up to 1360 MTPH
Special Applications	Up to 2,000 TPH	Up to 1800 MTPH
Breaker Diameter	21 - 34 in	533 mm - 864 mm
Breaker Pick Force (Variable)	Up to 130,000 lbs	Up to 60,000 kgs
Material Compressive Strength	Up to 30,000 PSI	Up to 200 Mpa
Ground Clearance Intake End	2 - 17 in	50 - 432 mm
Discharge End	12 - 27 in	305 - 686 mm
Frame Height	36 - 51 in	914 mm - 1295 mm
Total Horsepower (Variable)	Up to 300 hp	225 kW
Intake End Design	Ram car 3-way dump Hoppered w/sideboards	
Mobility	High torque Free wheeling extreme duty crawlers	
Flexibility of Configuration	High	

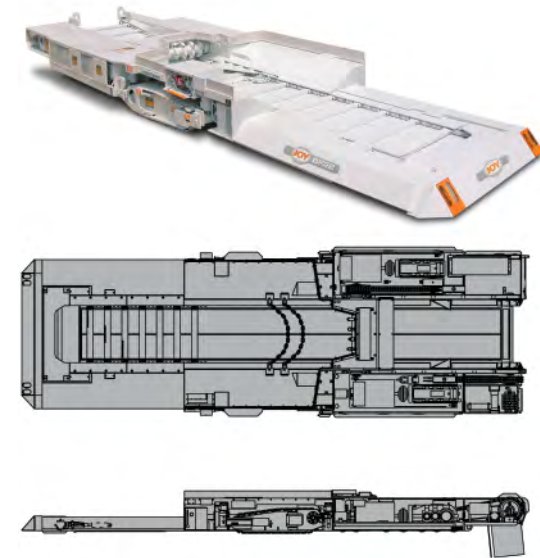
# JOY BF-17 Feeder-Breaker



**BF-17**

Overall Width (at intake end)	108 - 142 in	2743 - 3606 mm
Conveyor Width	44, 50 & 56 in	1117, 1270 & 1422 mm
Overall Length	396 - 460 in	10058 - 11684 mm
Weight	75,000 - 90,000 lbs	34,000 - 40,823 kg
Seam Height	32 - 72 in	813 - 1829 mm
Processed Material	Run-of-mine coal with high percentage of rock content	
Throughput Standard (Variable)	Up to 1,000 TPH	Up to 900 MTPH
Special Applications	Up to 1,500 TPH	Up to 1360 MTPH
Breaker Diameter	15 - 21 in	381 - 533 mm
Breaker Pick Force (Variable)	Up to 110,000 lbs	50,000 kgs
Material Compressive Strength	Up to 25,000 PSI	172 Mpa
Ground Clearance Intake End	0 - 8 in	0 - 203 mm
Discharge End	6 - 21 in	152 - 533 mm
Frame Height	28 - 37 in	711 - 940 mm
Total Horsepower (Variable)	Up to 250 hp	190 kW
Intake End Design	Ram car 3-way dump Hoppered w/sideboards	
Mobility	High torque Free wheeling extreme duty crawlers	
Flexibility of Configuration	Moderate	

# JOY BF-22 Feeder-Breaker



BF-22

Overall Width (at intake end)	108 - 142 in	2743 - 3606 mm
Conveyor Width	44, 50 & 56 in	1117, 1270 & 1422 mm
Overall Length	396 - 460 in	10058 - 11684 mm
Weight	58,000 - 65,000 lbs	26,308 - 29,483 kg
Seam Height	28 - 42 in	711 - 1067 mm
Processed Material	Run-of-mine coal with high percentage of rock content	
Throughput Standard (Variable)	700 TPH	636 MTPH
Breaker Diameter	15 - 17 in	381- 432 mm
Breaker Pick Force (Variable)	60,000 lbs	27,200 kgs
Material Compressive Strength (Variable)	7,000 PSI	48 Mpa
Ground Clearance Intake End	0 - 8 in	0 - 203 mm
Discharge End	2 - 10 in	50 - 254 mm
Frame Height (Fixed)	26 in	660 mm
Total Horsepower	175 hp	130 kW
Intake End Design	Ram car 3-way dump Hoppered w/sideboards	
Mobility	High torque Free wheeling extreme duty crawlers	
Flexibility of Configuration	Minimal	

## Smart Services

JOY Smart Services combines all of Joy's value-added offerings into one package, under one roof as an integrated solution to our customers. The facilities and services feature technological advancements in

processes/system optimization with 24-hour support.\*

Our service strategies are delivering responsive and competitive service solutions,

Smart Services vision is our Performance Life Cycle Management (PLCM) strategy, which brings together all of the innovative people, services and products that Joy has to offer.\*

Joy Global service facilities have given world class service a new home.

prognostics, remote health monitoring, reliability and asset management, advanced training and integration of mining

meeting the needs of our customers and driving unprecedented value in our customers' operations. At the core of Joy's

Performance Life Cycle Management focuses these services, to align with our customers' needs, cultivating a zero harm mentality and delivering the highest productivity at the lowest cost per ton, from the time you receive your new equipment for the entire life cycle of the equipment.



Health Management - State of the art predictive software analyzes the data streamed from your machines. The software predicts malfunctions, failures or process gaps at the earliest instance.

- Application Optimization
- 24/7 Product Support
- Health Management
- Performance Life Cycle Management
- Advanced Technical Training
- Technology Products
- Genuine Service Products
- Reliability
- Asset Revitalization & Rebuilds
- 24/7 Parts & Logistics
- Interactive Information Delivery

\*All services are not yet available in all regions of the world.



**JOYGLOBAL**



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