

MHC Twin shaft breaker



Design features

Main features

- **The ideal crusher for very sticky materials**
- **Keeps specific energy consumption low**
- **Minimised generation of fines reduces wear**
- **Floor-mounted slide rail system facilitates maintenance and inspection**
- **Swift and easy replacement of wear parts**
- **Built-in automatic lubrication systems**
- **Very compact design saves installation costs**

Soft and sticky materials

The MHC Twin shaft breaker crushes soft and sticky materials such as marl, clay, shale and coal. The breaker comes in two teeth configurations: one for ball mills and one for vertical mills. Each ensures a product size that is optimised for the particular mill.

The type designation of the breaker, for example MHC 630 x 1.45, indicates the spacing of the rotor shafts (in mm) and their length (in m).

Reduces power consumption and wear

Basically, the breaker consists of a frame and two rotors, which are shafts with toothed discs. On entering the breaker, the raw materials fall down on the rotors, are gripped by the teeth and crushed. Specific power consumption remains relatively low due to the cutting action of the teeth.

The rotors run at a low speed. This helps to minimise the amount of fines generated and reduces wear on the replaceable parts.

Stable operation

Replaceable 'cleaning teeth' fitted on the inside of the breaker frame prevent any clogging of the rotors.

The MHC drive station consists of an electric motor, which transmits power to the reducer via a pulley drive and a fluid coupling. The drive station is designed so that it will start even if large amounts of material are lying on top of the breaker rotors.

Maximum protection

If a non-breakable piece of material gets trapped between the rotors, the fluid coupling will start to slip. A speed monitor on the rotor shafts will stop the main motor and send a signal to the central control room. Should this fail for some reason, the oil in the fluid coupling will heat up and activate a mechanical switch. In case this procedure also fails, a melting plug in the fluid coupling will melt (at a higher temperature) and the oil will leave the coupling. The coupling will then no longer transmit torque.

Facilitate installation

Installation of the breaker is simple. It is transported from the manufacturing-plant to the construction site as one unit and is delivered together with the drive station, the grease lubricating unit and the barrel pump. The breaker is then placed in the chute and the drive station is fitted. The grease lubricating unit is connected to the barrel pump and to the breaker. Finally, power and control systems are connected.



Adjustments and maintenance

Changing operating conditions require adjustments

When the crusher has been running for some months or some years, the raw materials may become harder to crush or a higher output may be needed. The MHC Twin shaft breaker can then be adjusted in several ways.

The size of the drive pulleys may be altered to achieve a higher throughput or a higher torque.

Minor adjustments of the output size can be made by altering the synchronisation of the two rotors.

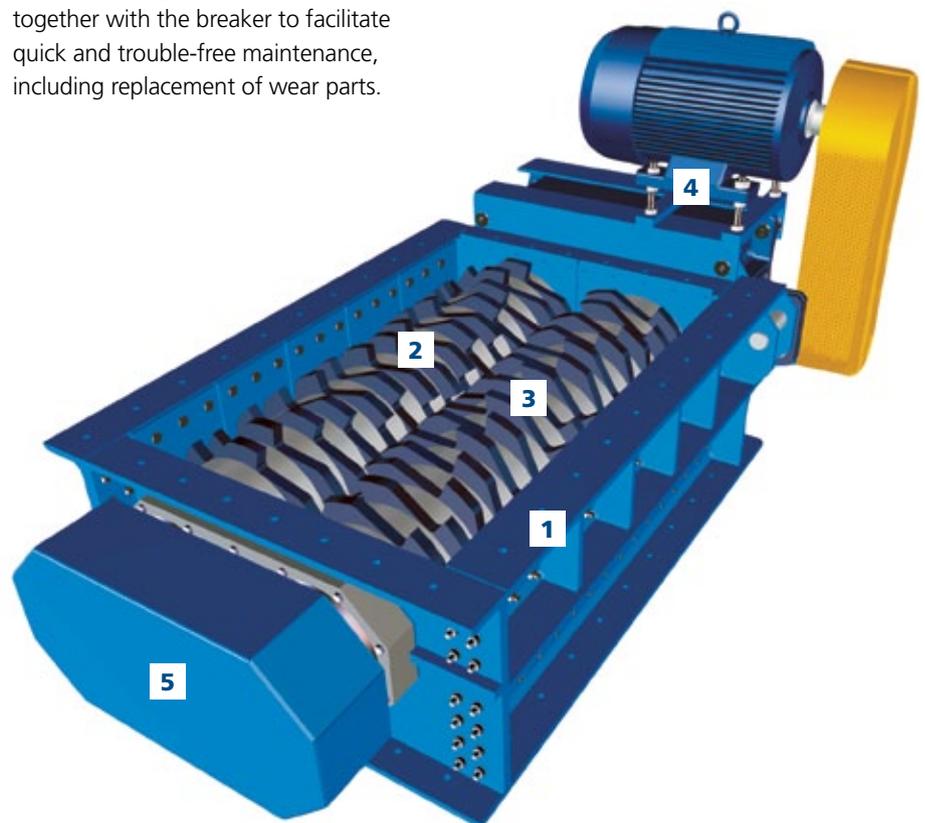
Easy maintenance

The Twin shaft breaker has four bearings that are continuously lubricated by a grease pump placed in a cabinet. The excess grease in the bearings is discharged inside the machine and ends up in the crushed product. The barrel contains grease for several months and the system is monitored by sensors that trigger an alarm if a malfunction occurs or the grease barrel is empty.

The condition of the wear parts (toothed discs in rotors and cleaning-teeth) is easily monitored by taking a glance inside the breaker. The breaker is moved into maintenance position by lowering the wheels at the corners.

Tools and lifting yoke are supplied together with the breaker to facilitate quick and trouble-free maintenance, including replacement of wear parts.

- 1 **Frame**
- 2 **Crusher rotor, driving shaft**
- 3 **Crusher rotor, driven shaft**
- 4 **Main gear unit**
- 5 **Intermediate gear**



Cleaning teeth



Grease lubricating unit

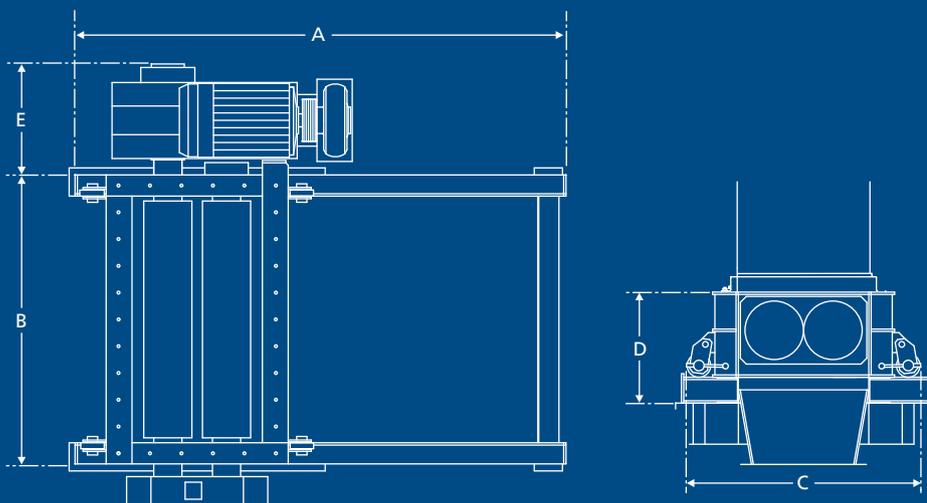


Characteristics

Type	Max. feed size mm	Max. output size mm		Machine weight ton
		For vertical mills	For ball mills	
MHC 500x1.45	430	80	40	9.8
MHC 500x2.1	430	80	40	13.1
MHC 630x1.45	500	80	40	13.7
MHC 630x2.1	500	80	40	19.8

Dimensions

In mm	A	B	C	D	E
MHC 500x1.45	4,180	1,810	2,000	945	1,100
MHC 500x2.1	4,180	2,460	2,000	945	1,100
MHC 630x1.45	4,700	1,810	2,260	1,075	1,100
MHC 630x2.1	4,700	2,460	2,260	1,075	1,100



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