



Mobile jaw crusher

# MOBICAT MC 110i EVO2



# A LONG HERITAGE OF EXPERTISE

Efficient crushing and screening plants.

For the past 100 years, KLEEMANN GmbH has been developing and manufacturing machines and plants for the natural stone and recycling industries.

High levels of performance and innovative details, simple handling and maximum safety for the operator - this is what KLEEMANN crushing and screening plants stand for.

## THE KLEEMANN PRODUCT RANGE

**MOBICAT**  
Mobile jaw crushers

**MOBIREX**  
Mobile impact crushers

**MOBICONE**  
Mobile cone crushers

**MOBISCREEN**  
Mobile screening plants

**MOBIBELT**  
Mobile stackers

Over 100 years of  
tradition

A WIRTGEN GROUP Company  
An internationally active group of companies



With more than 200  
subsidiaries and dealers in Germany and abroad



# MOBICAT MC 110i EVO2

The efficient key player.

**The MOBICAT MC 110i EVO2 jaw crusher is a compact primary crusher with a wide range of applications and maximum flexibility - both during transport and in use. The plant is easy and intuitive to operate, excels with its various control and overload systems and is extremely powerful and efficient in operation.**

The MOBICAT MC 110i EVO2 is designed for a very wide range of application conditions and feed materials. Thanks to its compact design and, for example, a transport height of 11' 2", the machine is easy to transport. Its fast set-up, which can also be carried out by radio, makes even short-term applications

possible without any problems. The powerful drive concept easily masters changing application conditions. Today in natural stone, tomorrow in recycling - the MOBICAT MC 110i EVO2 is compact, efficient and intelligent.



A focus on cost-effectiveness



Operability in the foreground



An eye on sustainability



MOBICAT  
**EVO<sub>2</sub>**

# THE HIGHLIGHTS

Perfectly equipped.

## 01 Feeding unit

- > Feeding unit with foldable hopper walls for fast and safe set-up

## 02 Prescreening

- > Effective prescreening through independent double-deck prescreen

## 03 CFS (Continuous Feed System)

- > Innovative feed control with CFS (Continuous Feed System) guarantees optimum material flow

## 04 Crusher unit

- > Crusher unit with extra-long articulated crusher jaw for barrier-free material intake

## 05 Overload systems

- > Effective overload systems guarantee maximum machine availability

## 06 Drive

- > Efficient and powerful D-DRIVE diesel-direct drive

## 07 Operating concept

- > Easiest possible operation with the SPECTIVE operating concept
- > With SPECTIVE CONNECT, important information is available directly on your smartphone

## > Accessibility & safety

- > Fast and ergonomic servicing thanks to excellent accessibility to all components

## > Transport

- > Easy transport thanks to hydraulic functions

## > Environmentally friendly solutions

- > Reduced dust and noise
- > Low fuel consumption



KLEEMANN SUSTAINABILITY describes innovative technologies and solutions which are consistent with the sustainability objectives of the WIRTGEN GROUP.

# WELL THOUGHT-OUT FEEDING UNIT

For short set-up times.

**up to 441 US t/h**  
Feed capacity

**approx. 5.8 yd<sup>3</sup>**  
Hopper volume

**approx. 10 yd<sup>3</sup>**  
Hopper volume with hopper extension



**The MOBICAT MC 110i EVO2's feeding unit is generously sized and the design of the chute ensures an optimum material flow.**

The feeding unit can be folded hydraulically, conveniently and safely via the radio remote control. Locking also takes place by radio control without requiring additional work from the ground.

As an option, an additional hopper extension or a filling aid is available that enables a rear-side loading width of 11' 6".

The design of the vibrating feeder has been updated from the predecessor model (based on the chute of the MOBIREX MR 110i/130i EVO2) and ensures an even better material flow and increased feed capacity.

### Optimized output capacity - thanks to well prepared feed material

The composition of the feed material and the feed size have a significant influence on the output capacity. To guarantee trouble-free and low-wear operation, the feed material should therefore be prepared as well as possible.

- > Take note of the size and edge length of the material
- > Select the feed size to match the final grain size and max. permissible reduction ratio
- > Sort out any uncrushable material, e.g. steel beams, cable, wood, films/foils
- > Ensure uniform loading of the plant - an overfilled feed hopper and a continuously empty feed hopper can lead to increased wear

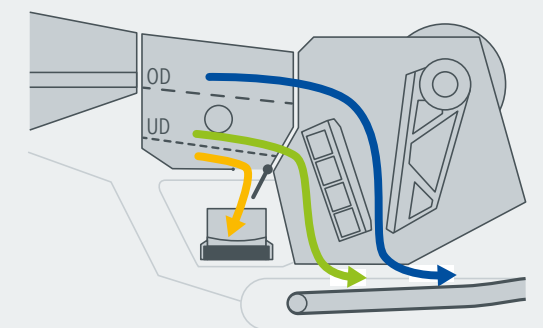
## KLEEMANN > PROCESS KNOWLEDGE

In many cases, feed capacity, crushing capacity and plant performance are treated synonymously or are mixed up. What's what?

**Crushing capacity**  
= quantity produced by the crusher

**Feed capacity**  
= crushing capacity + prescreening capacity + bypass capacity

**Plant performance**  
= crushing capacity + bypass capacity



# EFFECTIVE PRESCREENING

Better results and less wear.

**The less fine material is introduced to the crushing process, the better the productivity, final product quality and wear behaviour.**

The MOBICAT MC 110i EVO2 has an independently vibrating double-deck prescreen: The feed material is screened out effectively so that the fines content and the material that already corresponds to the desired final grain size is directed

past the crushing chamber. A higher throughput can therefore be achieved and, at the same time, plant wear is reduced. The prescreen works independently of the vibrating feeder and is therefore especially productive.

**High product quality**  
through prescreening

**Fines discharge**  
via side discharge conveyor

**Large selection**  
of prescreen coverings



The bypass flap can be used to guide the material flows of the prescreening. It is installed directly on the prescreen. The screen vibrations can therefore achieve a self-cleaning effect.

- > Higher quality of the final product through discharge of fine particles via the side discharge conveyor
- > Bypass flap for simple redirecting of the material stream (sub-floor no longer required!)
- > Reduction in wear and increase in output by redirecting medium grain through the large crusher bypass device

### Side discharge conveyor very flexible to use

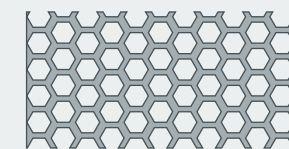
The side discharge conveyor is available in two versions, can be installed on both sides and can remain on the machine for transport. This enables discharge heights of up to 9' 8" (optional long belt; short belt: 6' 9"). The belts are provided with a spray system to reduce the dust load.

## KLEEMANN > PROCESS KNOWLEDGE

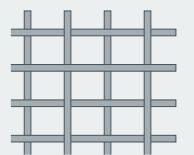
### Optimum prescreening set-up

In order to ideally tune the prescreening to the material or application, the frequency of the prescreen can be steplessly adjusted. The correct selection of the screen surface is also important. Slotted grates or hexagonal screen surfaces are therefore available for the upper deck. The hexagonal design creates a significantly raised open screening surface and, thanks to a conical hole progression, reduces clogged material. The lower deck can be operated with wire cloth of different mesh sizes.

**The result:** Higher product quality, maximum plant performance and less wear.



Hexagonal screen surfaces



Wire cloth

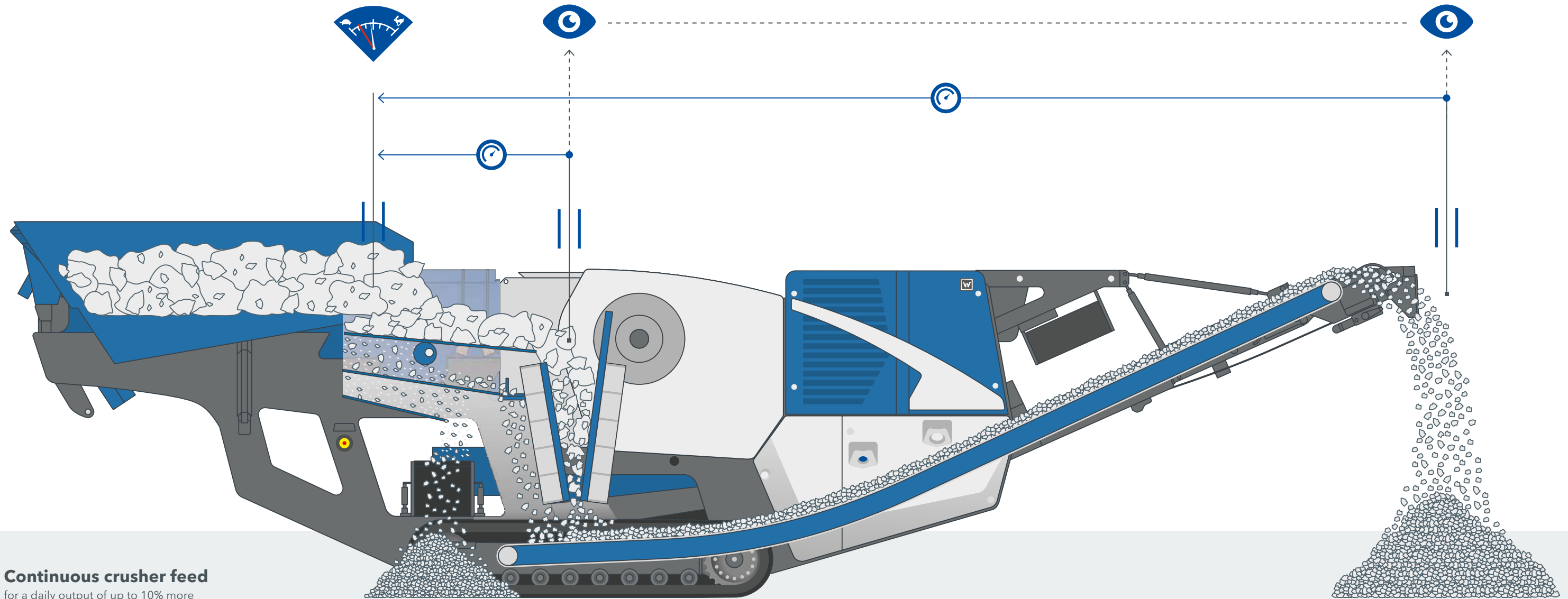


Slotted grate

The screen surfaces are compatible with the MC 110 EVO1.

# CONTINUOUS FEED SYSTEM (CFS)

Higher efficiency thanks to uniform loading.



## Continuous crusher feed

for a daily output of up to 10% more

### Uniform loading is indispensable to ensuring a good product, optimum throughput and low wear.

To ensure that the crushing chamber is always uniformly filled, the Continuous Feed System (CFS) monitors the crusher level and, with the line coupling option, the height of the stockpile with an ultrasonic probe. Independently of this, the CFS regulates the frequency of the vibrating feeder and prescreen.

A backlog can therefore be avoided and crusher utilization is optimized. The MC 110i EVO2 is equipped as standard with CFS as a control system. The CFS facilitates the operator's work because the machine automatically regulates a homogeneous material flow, ensuring optimum loading of the crusher.

### KLEEMANN > PROCESS KNOWLEDGE

The CFS controls the vibrating chute speed so that the material on the chute does not pile up too high. This enables fine content to be screened out before it runs through the crusher.

**Result:** The crusher now only has to deal with the material that really needs to be crushed!

# POWERFUL CRUSHER UNIT

The heart of the machine.

**Powerful crusher unit for high crushing capacity and throughput.**

The MCO 110i EVO2's crusher unit is the core element of the machine. Its extra-long articulated crusher jaw guarantees optimal material intake. Innovative functions such as the

simple gap setting or the crusher unblocking system offer genuine added value.



**44" x 28"**  
Crusher inlet

**Fully hydraulic**  
Gap setting

**215 hp**  
Crusher direct drive

- 01** Optimized crusher geometry with long crusher jaw
- 02** Extensive selection of crusher jaws: Regular Teeth, Sharp Teeth, Flat Teeth, Multitype Teeth, Wavy Teeth
- 03** Gentle material transfer thanks to the adjustable deflector plate
- 04** Mechanical overload protection thanks to the pressure plate
- 05** Crusher unblocking system (optional)
- 06** Convenient gap setting via push button



**Crusher geometry**

The crusher's geometry has an optimum design. Flattened transfer from the prescreen or vibrating feeder to the crushing chamber means the material can tilt into the crushing chamber without any restrictions. When the articulated crusher jaw is pulled up, the material cannot pile up and fewer blockages are created.

The deflector plate at the crusher outlet guarantees gentle material transfer onto the crusher discharge conveyor. The large material tunnel prevents blockades and is easily accessible from

the side. The deflector plate can be moved into two positions to protect the crusher discharge conveyor against damage - replaceable wear plates are available as options.

**Result:** High throughput combined with high reliability.

**Gap setting**

The gap setting is done conveniently and safely via radio remote control. Adjustment over the complete gap setting range of 1.2" - 7" is made fully hydraulically by means of a wedge system. This means higher application flexibility and stable process reliability in the event of overload.

**Rule of thumb:** The closed side setting is calculated from final grain size = 1.6 x CSS. With a desired final grain size of 0 - 4.7, the optimum CSS would therefore be 2.9 inch.

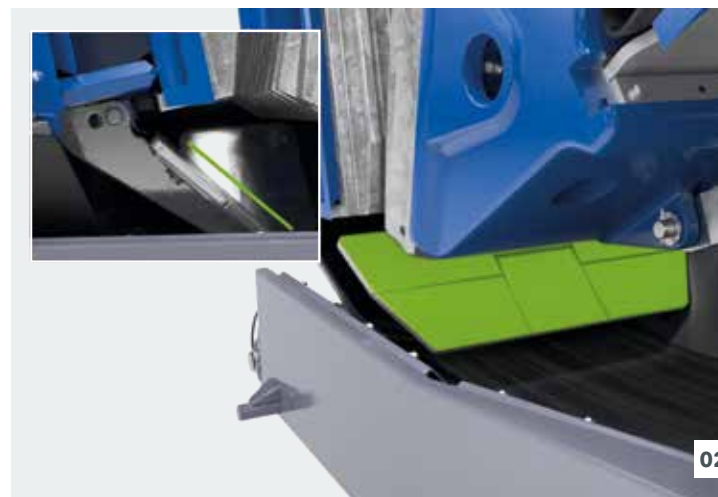
**Crusher unblocking system**

If material bridging or a standstill with full crusher should occur, the optional crusher unblocking system provides support. Start-up in normal and opposite direction is also possible with a full crushing chamber. Blockages can be quickly broken up and do not have to be cleared manually.

**Result:** Short downtimes in the event of obstructions in the crushing chamber without having to clear stones from the crushing chamber.



01



02



03

01 Crusher geometry 02 Deflector plate 03 Crusher unblocking system

**KLEEMANN > GOOD TO KNOW**

Thanks to optimized access to the side wedges, the crusher jaw can be replaced quickly and easily. Advantage: short machine downtimes when changing the fixed crusher jaw.



# EFFECTIVE OVERLOAD SYSTEMS

Protect the plant.

During the crushing process, various short-term or prolonged overload situations can arise. With the MOBICAT MC 110i EVO2 jaw crusher, intelligent automation systems protect against damage and failures.

A distinction is made in this regard between control and overload systems:

- > Control systems are used for intelligent process optimization for a continuous and efficient crushing process.
- > Overload systems are integrated for self-protection of the plant to detect and counteract short-term overloads at selected points (e.g. metal in the feed material).

the overload and intervenes to control it: the loaded volume is reduced, the filling level of the crushing chamber is adjusted and the forces acting on the housing and rocker are therefore reduced. If, on the other hand, an underload is detected, the crusher filling level is increased step by step to guarantee an optimum plant performance.

**Result:** the plant can be operated safely

## CFS and LRS control systems

The CFS control system described serves to optimize the crushing process and guarantees the best possible crusher loading (see page 14). Crushers being operated beyond their permissible load range can result in serious damage. The LRS Load Reduction System, which works closely together with the CFS, has the task of preventing this. The „load monitor“ in the software detects

### CONTROL SYSTEM



CFS

Optimization of crushing process

### OVERLOAD SYSTEMS



LRS

Long-term crusher protection



Overload stage 1



Overload stage 2



Overload stage 3

Fast reaction to overloads



**Overload systems - fast reaction to overloads**

Overload situations at selected points arise due to hard material or uncrushable foreign materials in the feed material - frequently in recycling applications. To avoid expensive crusher damage, a pressure plate is installed at a predetermined breaking point as a last mechanical safety measure.

Breaking of the pressure plate leads to machine standstill. With overload systems of different types, this does not arise with the MC 110i EVO2:



**Stage 1 - Gap opening over adjusting range:**  
 > Open the cylinders over the entire crushing gap  
 > Automatic repositioning of the crushing gap to the previously set value

**STAGE 1**

complete gap area opens in

**40**  
seconds

**Recommended use**  
 > with feed material where hardly any foreign material is expected  
 > use in natural stone and recycling (small amount of foreign material)



**Stage 2 - Preparation of overload system (option):**  
 > Faster opening of the cylinders over the entire crushing gap  
 > Automatic repositioning of the crushing gap to the previously set value

**STAGE 2**

complete gap area opens in

**20**  
seconds

**Recommended use**  
 > for applications in which a high volume of foreign material is expected, oversize grain in the final product is not problematic  
 > use in recycling



**Stage 3 - Active overload system with pump (option):**  
 > With activated overload system, very fast opening of the cylinders via crusher gap adjustment  
 > Automatic repositioning of the crushing gap to the previously set value

**STAGE 3**

complete gap area opens in

**2**  
seconds

**Recommended use**  
 > for applications in which a lot of foreign material is expected, high quality requirements of the final product  
 > use in recycling

**KLEEMANN > GOOD TO KNOW**

In difficult applications with a high share of foreign material such as metal (e.g. in recycling), frequent overloading of the crusher can occur. If the machine is not equipped with a capable overload system, the mechanical pressure plate is the last resort to prevent serious damage to the crusher. Pressure plates are expensive and complex to install.

**Cost savings through prevention of crushing through the pressure plate:**



> Machine produces 200 t material an hour

**4,5 \$/ton**

> Final product is sold for 4,5 \$



> Production stop due to broken pressure plate: approx. 4 hours

**3,600 \$**

>> pure downtime costs + costs for pressure plate + personnel costs for fitter

**= the use of an overload system is worth it!**

# INNOVATIVE AND POWERFUL DRIVE CONCEPT

Impressive performance - with the best possible consumption values.

**The MOBICAT MC 110i EVO2 features the innovative D-DRIVE "diesel-direct-electric" drive concept and excels with its dynamic performance combined with low fuel consumption.**

The MC 110i EVO2 stands out with its holistic drive concept with an efficient diesel-direct drive whereby the crusher is driven directly via a fluid coupling from the diesel engine. The power and load-dependent fan ensures a low-noise and even more economical operation. Via a power splitter gearbox, the generator is driven by a generously sized cardan shaft, which means that

the more maintenance-intensive timing belts of the predecessor model are not required. The drive system pumps are activated via a clutch coupling and can therefore draw on the full power of the diesel engine. All other hydraulic pumps for auxiliary and set-up functions and for the cooler drive are also driven via the gearbox.



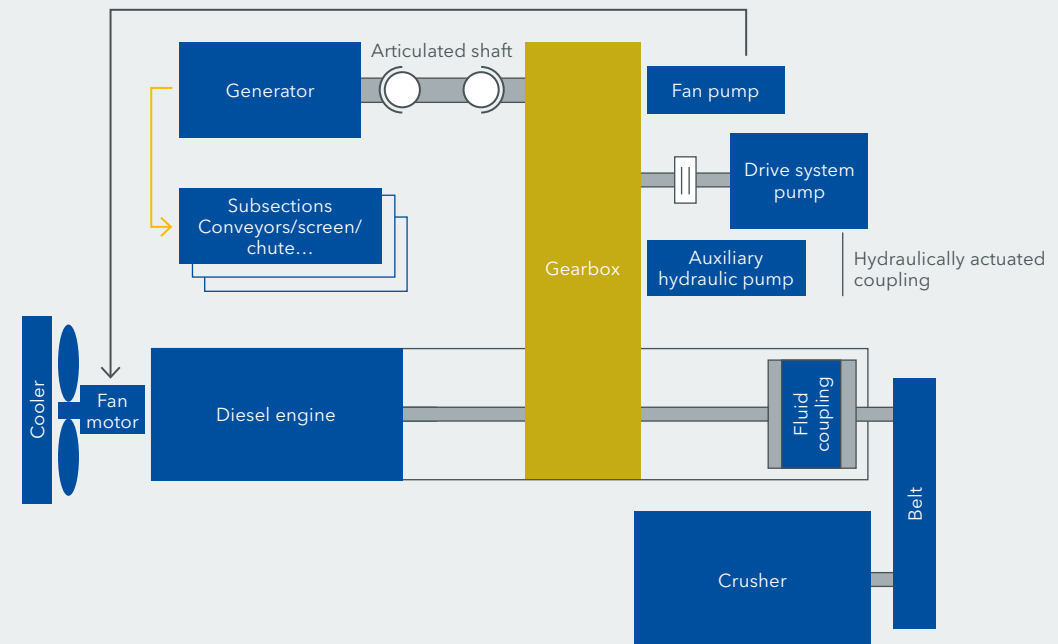
The plant can be optionally equipped with a heat package (5 to 122 °F) or cold package (-13 to 104 °F).

The "Quick Track" option can be used to move the plant with the crusher running and the conveyor unit switched off.



## KLEEMANN SUSTAINABILITY

D-DRIVE crusher direct drive: The fluid coupling guarantees high operational safety - for both operator and machine. All secondary drives, such as prescreen, chutes or conveyor belts, are driven electrically.



**Diesel-direct-electric**  
D-DRIVE drive concept

**326 hp**  
drive output

**up to 30% less consumption**  
compared to hydraulic drives

# SPECTIVE INTUITIVE OPERATING CONCEPT

For a better result - guaranteed.

**With the increasing demands that are placed on modern crushing plants, their complexity also increases. At the same time, the technology must be safe and as simple as possible to master - and without long training sessions. This is precisely the strength of the SPECTIVE operating concept.**

The MOBICAT MC 110i EVO2 can be operated simply and intuitively with the various SPECTIVE components. Along with the touch panel, the holistic operating concept includes a large

and small radio remote control, and the SPECTIVE CONNECT digital solution.



 SPECTIVE



## 01 Touch panel and operating buttons

From the start-up process to carrying out initial settings, and from troubleshooting to maintenance - SPECTIVE provides users with all important system information clearly presented on a 12" touch panel and allows all system settings to be made in one place. The optimized key arrangement below the display is self-explanatory in combination with the display and ensures a high level of operating comfort. The lockable operating mode selector switch also protects against operating errors. The user guidance and the visualization of the operating process are displayed even more clearly. The troubleshooting help contributes to minimizing downtimes.

## 03 Small radio remote control

Due to its compact size, the small radio remote control is suitable for taking along in the loader. This means that all relevant functions can be conveniently operated in automatic mode in the excavator or wheel loader. The small radio remote control is the ideal complement to SPECTIVE CONNECT.

## Smart Job Configurator

Different machines, different settings - the Smart Job Configurator is available in SPECTIVE to help users find solutions quickly and easily. It allows the optimal machine settings to be easily determined.


- > Data of the planned application is entered in SPECTIVE CONNECT and the optimum machine settings are calculated automatically
- > Via the SPECTIVE touch panel, the calculated settings can be easily transferred to the machine by means of an input mask.

## 02 Radio remote control

The new radio remote control enables operation of all plant functions, including the complete set-up and driving operation, from a safe distance. Once it has been set and put into operation in automatic mode, the operator no longer has to go to the plant for most procedures. Furthermore, advantages in the field include the high battery runtime (> 10h) with LED for battery charge indication, fill level indicator and charge status display and a battery change without an emergency stop.

## 04 SPECTIVE CONNECT

With SPECTIVE CONNECT, users receive a display of the user interface via smartphone anywhere they may be working - for example, in the excavator or wheel loader. Along with relevant data such as speed, consumption values and fill levels, fault messages or warnings are also displayed. In addition, important process and machine data can be summarized in a report and conveniently transmitted.

 The Smart Job Configurator can also be used without SPECTIVE CONNECT as a "QuickStart" on the touch panel.



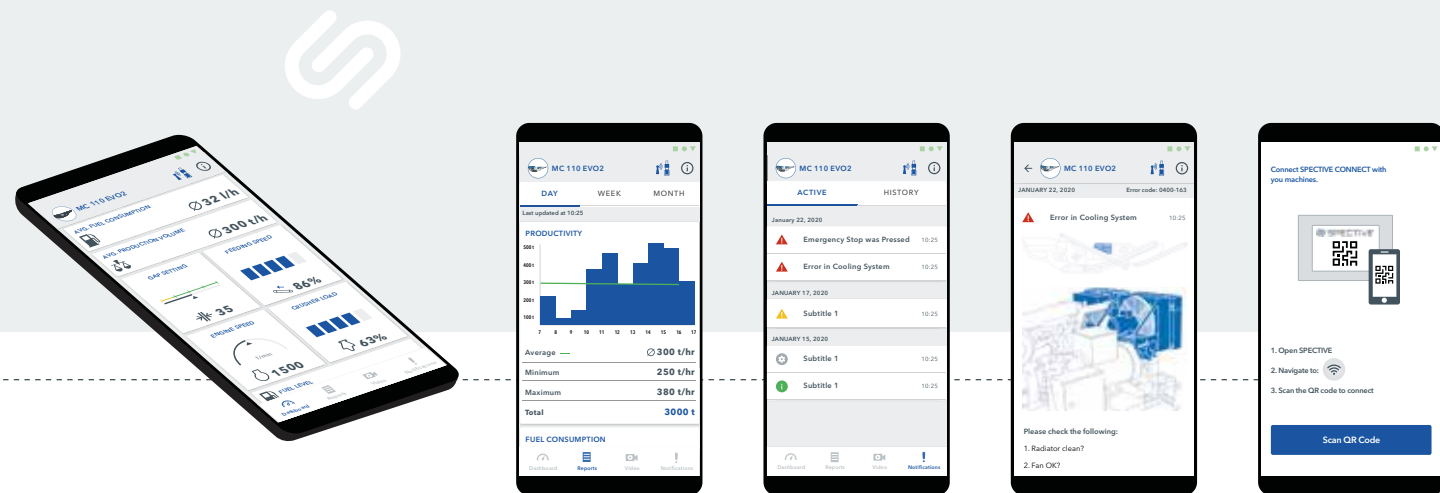
# SPECTIVE CONNECT

Your plant data on the smartphone.

**SPECTIVE CONNECT is the logical extension of SPECTIVE, because it brings the crusher's human machine interface into the excavator or wheel loader and therefore directly to the operator.**

SPECTIVE CONNECT can be used to display all relevant operating data such as engine speed, consumption, throughput (in conjunction with belt scale) and fill levels of the MC 110i EVO2, as well as fault messages, warnings and other

messages. Work, therefore, does not need to be interrupted to view the status. The option for preparing and sending a clearly arranged report creates additional transparency for the operator.



## 01 Dashboard

A language-neutral display clearly shows all crushing plant information of relevance to the operator:

- > Average fuel consumption
- > Average production output
- > The current gap setting
- > Speed and utilization
- > Feed speed
- > Fill levels

## 02 Fault elimination aids

All active faults incl. fault history, warnings and messages can be displayed analogue to the SPECTIVE touch panel. The operator knows what to do and is also specifically supported in troubleshooting via troubleshooting aids.



## 03 Reporting

A clearly arranged report on operation and output of the crushing plant allows the operator and operating company to draw conclusions on current plant utilization.

The following can be displayed:

- > Average fuel consumption
- > Average production output (belt scale for crusher discharge conveyor)
- > Plant utilization (when is the plant stationary, when is it fully utilized, ...)

The reports can be sent conveniently as a PDF.

## KLEEMANN > GOOD TO KNOW

### Is your plant ready for SPECTIVE CONNECT?

If your plant is equipped with the SPECTIVE CONNECT option, then simply download the app for your smartphone and get started!

1. Select the WiFi symbol on the SPECTIVE start screen.
2. Scan the QR code and you will be connected with the plant immediately.

**Following this, the connection is always established when you are close to the machine.**



Scan the code for further information on SPECTIVE CONNECT



The availability of SPECTIVE CONNECT depends on country-specific conditions. Further information can be obtained from your local contact person or at [www.wirtgen-group.com/spective-connect-kleemann](http://www.wirtgen-group.com/spective-connect-kleemann)

# ACCESSIBILITY AND SAFETY

For high operating comfort.

## A machine needs to be easy to operate and safe, but convenient maintenance is also very important to the operator.

All machine components are especially easy to access to guarantee trouble-free production, simple operation and fast service. A central drain point for fluids, for example, makes

ergonomic maintenance possible. Spray systems at different transfer points, as well as LED lighting for illuminating the work area, are included in the basic configuration of the plant.

Central drain point



## Additional options increase operating comfort

Optionally available Premium lighting provides even better illumination of the machine environment. Simple refuelling of the machine is possible from the ground or with the help of a refuelling pump for filling from tanks.

## Safety is always in the foreground

The MOBICAT MC 110i EVO2 is also ideally equipped when it comes to safety. All function- and safety-related cylinders are equipped with safety valves (lowering/brake holding valves). Each cylinder stays in its current position – to protect the machine operator and machine in the event of deactivation or failure. Thanks to plant operation from a safe distance via the radio remote control, safety on the work site is increased.



● Standard lighting + Premium lighting □ Mobile work lamp

### Standard lighting

The standard lighting includes the illumination of the travel path, the steps and the area of the touch panel. A USB charging port for a mobile maintenance lamp is also available.

### Premium lighting

The Premium lighting includes the lighting pole and other lamps for extended illumination of the machine environment as well as a mobile maintenance lamp.

# SIMPLE TRANSPORT

Quickly on site. Immediately ready for work.

**In spite of their impressive output values, jaw crushers from the MOBICAT EVO line belong to the compact class of primary crushers: Low weight and compact dimensions enable frequently changing work locations.**

The MC 110i EVO2 jaw crushers are extremely versatile and, thanks to their compact dimensions, can be deployed almost everywhere directly on site. Even narrow or difficult-to-access building sites in town centers are usually not a problem. And even if the work location changes frequently, the machine is quickly transportable and also quickly loaded thanks to its relatively light weight.

The transport height of 11' 2" enables the use of semi low loaders, which, in many cases, has a positive impact on transport costs. The side discharge conveyor remains on the machine during transport and is moved into position in next to no time - just as the extended crusher discharge conveyor that is simply folded in for transport. The machine is ready to start after only a few work steps.



 **High flexibility**  
for changing work locations

 **Short set-up times**  
thanks to uncomplicated set-up

**11' 2"**  
Transport height

**46' 4"**  
Transport length

**9' 10"**  
Transport width



# ENVIRONMENTALLY FRIENDLY SOLUTIONS

For more sustainability.

**The MC 110i EVO2 is equipped with several environmentally friendly innovations.**

The MC 110i EVO2 is equipped as standard with an output- and load-dependent fan. This guarantees a low fuel consumption and reduces noise emissions. Thanks to ECO mode, fuel consumption can be reduced even further. If the machine is not being loaded

and is paused for a short time, all components - with the exception of the diesel engine and crusher - can be switched off by pressing a button. Power supply to all consumers is therefore not required.



### Solutions for noise reduction

Along with the output- and load-dependent fan, the optional noise insulation package incl. noise-insulation housing and sealing of the power pack base also ensure further significant noise reduction.

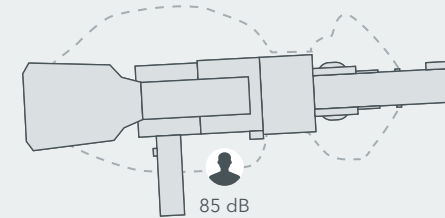
### For dust reduction

Thanks to the water spray nozzles at all relevant positions such as the crusher inlet and the discharge conveyors, most of the dust is bound together in the process, preventing it from spreading. Various optional belt covers for the discharge conveyors can also be used for dust minimization.

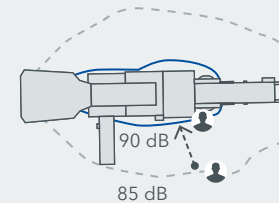


If the machine is additionally equipped with the noise protection package, the plant can be operated without noise-absorbing headphones - depending on the environmental conditions and local regulations.

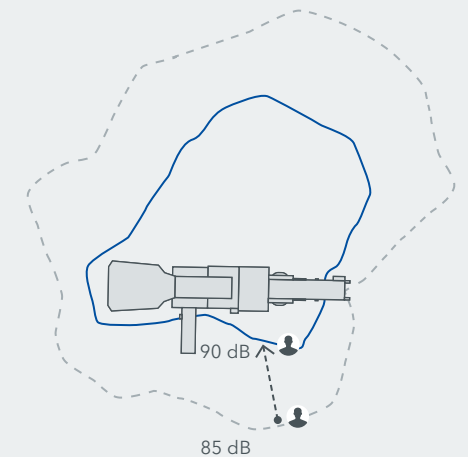
The noise protection package includes power pack sealing and a power pack housing made of noise-insulating material with a sound conduction system upwards.



**MC 110i EVO2 with noise-protection package**



**MC 110i EVO2 without noise-protection package**



**MC 110 EVO**

Comparison of different noise sources with the MOBICAT MC 110i EVO2 jaw crusher

- > Plane take-off: 140 dB
- > Pneumatic hammer: 120 dB
- > MC 110i EVO2 with noise-protection package: 85 dB
- > Vacuum cleaner: 70 dB

**ECO mode**  
for reduced fuel consumption and wear in idle phases

**Noise-protection package**  
for significant noise reduction

**Water spray nozzles**  
in all relevant positions

# BROUGHT INTO LINE

For perfect combination versatility.

## Process-related knowledge

The line coupling option allows KLEEMANN machines to be coupled with each other. The crushing process between the crushing plants is then optimized automatically so that material is always conveyed through the machines with maximum efficiency. A probe is installed at the crusher discharge conveyor and/or fine grain conveyor of the upstream machine, which monitors the fill level of the feeding unit of the respective downstream machine. When the fill level reaches a defined height, the output of the upstream plant is temporarily reduced.

For safety reasons, the crushing and screening plants are connected to each other by a cable. If an emergency stop button is pressed on the plant train in the event of an emergency, all machines are safely stopped.

MC EVO2 + MCO EVO2 + MSC EVO

# TARGETED TO SUCCESS

For perfect crushing results.

An optimum crushing result is always achieved by means of the ideally matched components of the overall plant and the settings made by the operator.

With these tips, it is possible to find the ideal settings for any task.

### Feed material

- > Feed size: where possible, the maximum feed size should not exceed 90% of the specified crusher opening
- > Compressive strength: mineral materials can be used with a maximum compressive strength of 300 MPa \*
- > Mineral type: all soft to hard natural stones, e.g. dolomite, granite, basalt, diabase, quartzite or gneiss as well as residual construction materials such as rubble, bricks and reinforced concrete

\* Depending on the material and machine type, higher values are also possible

### Crushing ratio

The maximum crushing ratio (ratio of feed grain size / grain output) largely depends on the physical properties of the feed material. The following standard values result:

- > 7:1 at < 100 MPa (recycling)
- > 5:1 at < 150 MPa (limestone)
- > 3-4:1 at < 300 MPa (hard stone)

Exceeding the crushing ratio leads to an undesirable decrease of the crushing capacity and to an increase in wear.



## Areas of application of jaw crushing plants

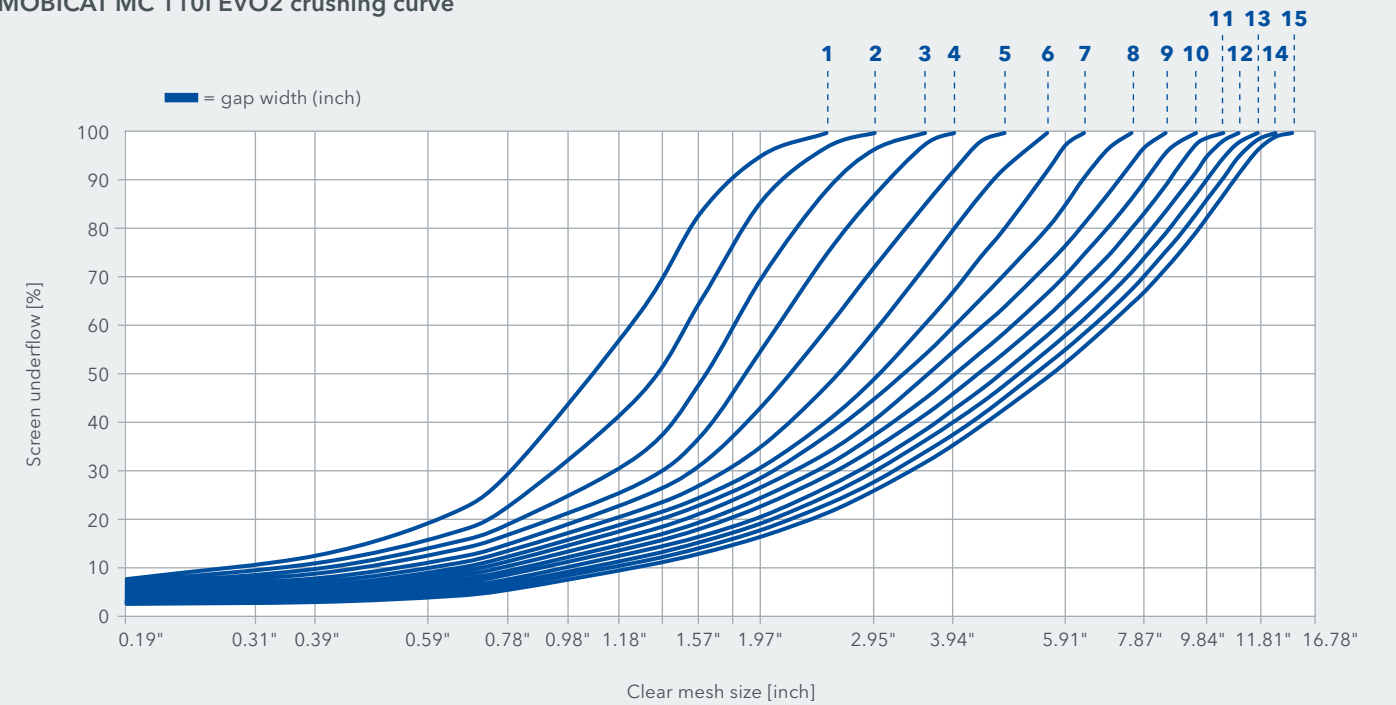
### NATURAL STONE

Limestone / sandstone, gritstone / greywacke / gravel / granite	Gneiss / marble / quartzite / diabase / gabbro / basalt	Iron ore	Coal	Clay
Demolished concrete / reinforced concrete / rubble	Asphalt	Blast furnace slag		Steal slag

### RECYCLING

## KLEEMANN > PROCESS KNOWLEDGE

MOBICAT MC 110i EVO2 crushing curve



### CSS (CLOSED SIDE SETTING)

01 1.6"	02 1.97"	03 2.36"	04 2.76"	05 3.15"	06 3.54"	07 3.94"	08 4.33"	09 4.72"	10 5.12"
11 5.51"	12 5.91"	13 6.3"	14 6.7"	15 7.09"					

# YOUR WIRTGEN GROUP CUSTOMER SUPPORT

Service you can always rely on.

Place your trust in our reliable and fast support during the complete life cycle of your machine. Our wide service offer includes suitable solutions to meet all of your challenges.



## Service

We keep our service promises – with fast and simple assistance both on the building site as well as in our professional workshops. Our Service team has received expert training. Thanks to special tools, repair, care and maintenance work is completed quickly. Upon request, we can support you with tailored service agreements.

> [www.wirtgen-group.com/service](http://www.wirtgen-group.com/service)



## Spare parts

Original parts and accessories from WIRTGEN GROUP can ensure the high reliability and availability of your machines long term. Our experts will be glad to advise you on application-focused wear part solutions. Our parts are available worldwide, at any time and are easy to order.

> [parts.wirtgen-group.com](http://parts.wirtgen-group.com)



## Training

Staff responsible for the WIRTGEN GROUP's product brands are specialists in their areas and have decades of application experience. Our customers also greatly benefit from these experts. In our WIRTGEN GROUP training courses, we gladly pass on our knowledge to operators and service personnel.

> [www.wirtgen-group.com/training](http://www.wirtgen-group.com/training)



## Telematics solutions

Construction machines with leading technology and perfected telematics solutions work hand-in-hand in the WIRTGEN GROUP. The Operations Center\* – the platform for digital solutions for process, machine and service optimization – allows you not only to simplify maintenance planning for your machines but also to increase your productivity and cost-effectiveness.

> [www.wirtgen-group.com/telematics](http://www.wirtgen-group.com/telematics)

\* John Deere Operations Center™ (formerly WITOS) is currently not available in all countries. Please consult your responsible branch or dealer if you have any questions in this area.

# PROFESSIONAL CRUSHING TOOLS

For less wear and optimum results.

**KLEEMANN offers a very wide range of parts and accessories. The selection of the correct crusher jaws, in particular, has a strong influence on the result: for example, different crusher jaws have to be used for abrasive rock than for coarse rock.**

### The crushing principle

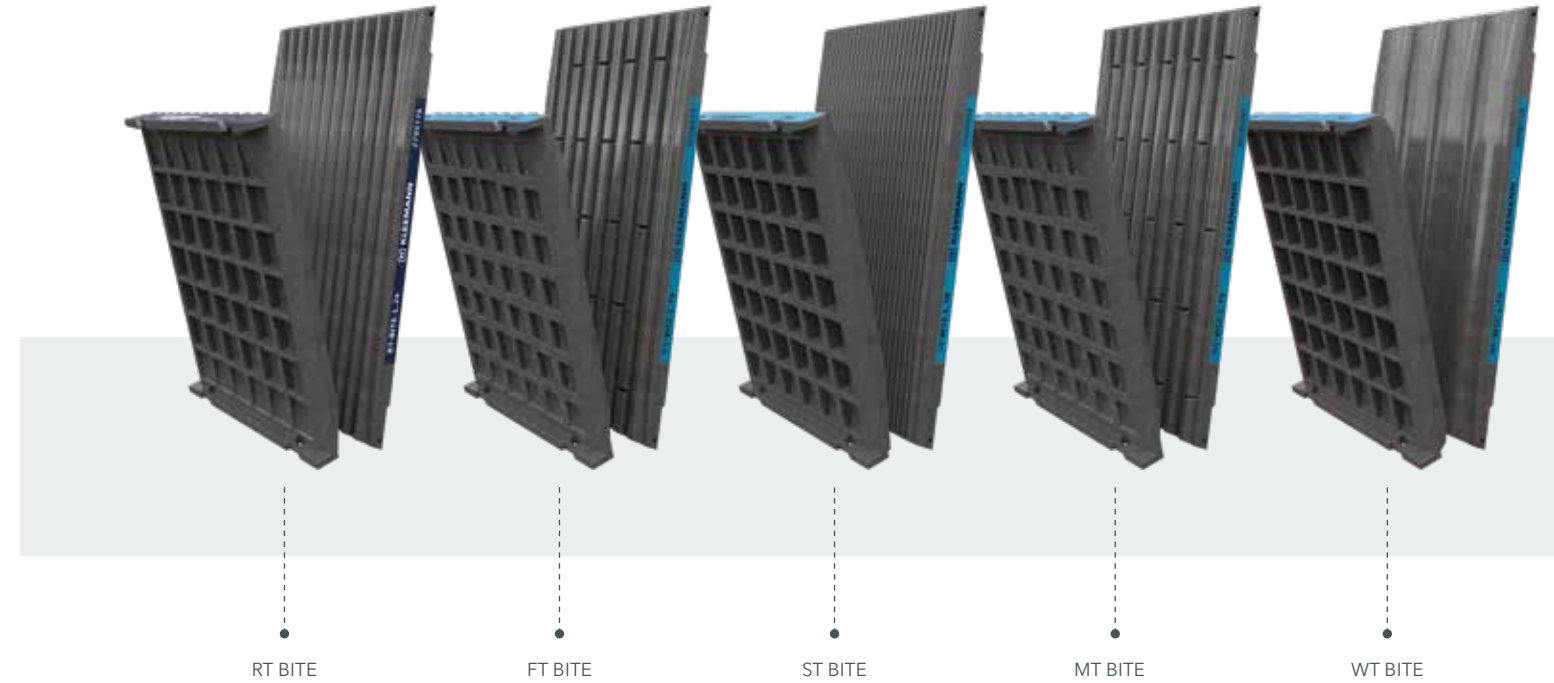
The crushing material is crushed by the jaw crushers in the wedge-shaped pit between the fixed crusher jaw and the crusher jaw articulated on an eccentric shaft. The material is crushed by the elliptic course of movement and transported downwards by gravity. This occurs until the material is smaller than the set crushing gap.

### Low-wear material

The crusher jaws installed in jaw crushers from KLEEMANN are made from a special manganese casting characterized by excellent durability of the basic body. Through the compressive load, during operation the manganese casting forms a highly wear-resistant surface for long service lives.

In ideal operation, the main wear occurs in the lower half of the crusher jaw. If the teeth are completely worn (smooth crusher jaw), the crusher jaw should be turned over or replaced. The crushing capacity (US t/h) is reduced considerably when the crusher jaws are smooth because the material is mainly crushed and no longer broken. The machine requires more power to break, which results in unnecessarily increased operating costs, higher wear and poorer crushing results.

Timely replacement of worn crusher jaws improves the crushing results and also reduces operating costs considerably.



### RECOMMENDED USE OF CRUSHER JAWS

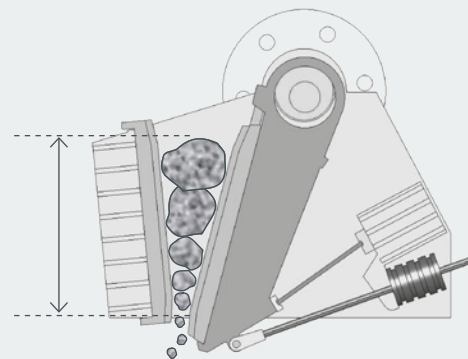
Tooth shape	Final product grain size	Feed material					
		Hard stone	Soft and medium-hard rock	Gravel	Rubble/ Recycling	Laminated medium-hard rock	Recycling cohesive material
RT-BITE (regular-teeth)	> 2.36"	●	●●	●●	●●	●●	●
FT-BITE (flat-teeth)	> 2.36"	●●	●	●	●	●	●
ST-BITE (sharp-teeth)	< 2.36"	●	●	●●	●	●●	●
MT-BITE (multitype-teeth)	> 2.36"	●●	●	●	●	●	●
WT-BITE (wavy-teeth)		●	●	●	●	●	●●

●● Highly recommended   ● Recommended   ● Not recommended

### KLEEMANN > PROCESS KNOWLEDGE

#### Optimized results through correct loading:

- > The optimum fill height of the jaw crusher up to the bevelling of the crusher jaws should not be exceeded
- > Continuous overfilling leads to premature wear, reduced service life of bearings and damage to the prescreen
- > Continuous underfilling leads to uneven wear, a poor grain shape and reduced plant performance
- > The maximum feed size of 90% of the feed opening should be observed
- > The CSS should always be correctly set



> Optimum fill height

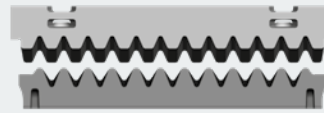
### Original crusher jaws

Depending on the application field and material properties, various crusher jaws are available to achieve optimum results.



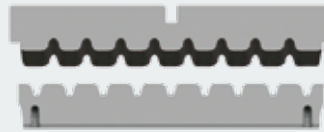
### TOOTH SHAPE RT-BITE - REGULAR TEETH

- > Suitable for recycling, natural stone and gravel
- > Large spaces between teeth to facilitate the discharge of fine or already crushed material
- > Ideally balanced properties with regard to service life, energy requirements and crushing pressure
- > Reduces flaky shares in the crushed material
- > RT-BITE.20 & RT-BITE.24 for abrasive natural stone



### TOOTH SHAPE FT-BITE - FLAT TEETH

- > Suitable for natural stone
- > Flat teeth work efficiently in abrasive material (higher wear dimensions)
- > Particularly efficient in abrasive material thanks to higher wear dimensions
- > Small clearance for fines (screening required)
- > Higher share of flaky crushed material



### TOOTH SHAPE ST-BITE - SHARP TEETH

- > Suitable for producing grit
- > Good grip on material thanks to sharp tooth profile
- > Recommended with small gap widths (< 60 mm)



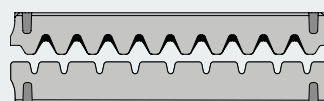
### TOOTH SHAPE WT-BITE - WAVY TEETH (RECYCLING)

- > Caking and clogging reduce the output of the jaw crusher
- > Special corrugated tooth profile for recycling
- > Optimized geometry of the rear walls for improved draw-in angle inside the crushing chamber
- > Reduces or prevents sticking of cohesive material



### TOOTH SHAPE MT-BITE - MULTITYPE TEETH

- > Specially designed for hard stone applications
- > Tooth profile positioned between RT-BITE & FT-BITE
- > Sharp toothings with larger spaces between teeth
- > Reduced crushing forces due to reduced load on the crusher
- > Lower fuel requirements
- > Improved discharge of fine/crushed material



# TECHNICAL DATA AT A GLANCE

## MOBICAT MC 110i EVO2



### TECHNICAL DATA



### MC 110i EVO2

- > Crusher inlet (W x D): 44" x 28"
- > Feed capacity: 441 US t/h
- > Weight: 99,300 - 106,350 lbs



# KLEEMANN



## WIRTGEN AMERICA

6030 Dana Way  
Antioch, TN 37013  
USA

T: +1 615 501 0600

M: [info.america@wirtgen-group.com](mailto:info.america@wirtgen-group.com)

 [www.wirtgen-group.com/america](http://www.wirtgen-group.com/america)