

Mobile crushing plants

# MOBICAT MC 120(i) PRO

# MOBICONE MCO 110(i) PRO





# 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

**KLEEMANN**



# MOBICAT MC 120(i) PRO AND MOBICONE MCO 110(i) PRO

The combination for high performance.

## Crushing large piece of rocks, production of precise grain sizes and shapes, efficient use of energy.

The technology and design of the MOBICAT MC 120(i) PRO jaw crusher and the MCO 110(i) PRO cone crusher are uncompromisingly robust and therefore suitable for continuous operation in a quarry. The plants are characterised by low-maintenance operation and high availability. They impress both in individual operation as well as in linked mode. The possibility of operating both machines in a group per line coupling and therefore

automating the crushing process makes the plants perfect team players.

Applications in hard stone are typical for cone crushers such as the MCO 110(i) PRO. Jaw crushers such as the MC 120(i) PRO, on the other hand, can be used as primary crushers in almost all types of stone.



Focus on  
high power



Efficiency in the  
foreground



Operability  
at a glance



**PRO**



# THE HIGHLIGHTS

Perfectly equipped.

## MOBICAT MC 120(i) PRO

### 01 Feeding unit

- > Large feeding unit, hydraulically foldable and self-locking

### 02 Prescreening

- > Effective prescreening through independent double-deck prescreen with extra large screening surface

### 03 Crusher unit

- > Powerful jaw crusher
- > With optional vibrating extractor to protect the crusher discharge conveyor

## MOBICONE MCO 110(i) PRO

### 01 Feeding unit

- > Sturdy feeding unit made of wear-resistant steel or with replaceable wear lining

### 03 Crusher unit

- > Cone crusher with large stroke for maximum crushing capacity
- > Convenient automatic gap setting via touch panel

## MOBICAT MC 120(i) PRO + MOBICONE MCO 110(i) PRO

### 04 CFS (Continuous Feed System)

- > Innovative feed control by CFS guarantees optimum material flow

### Drive

- > Powerful and efficient E-DRIVE diesel-electric drive
- > External power supply possible

### 05 Operating concept

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

### 06 Crusher discharge conveyor

- > Wide and robust crusher discharge conveyor for optimum material discharge

### Safety & ergonomics

- > Best possible accessibility to all operation-related components and high safety standards

### Transport

- > Can be transported simply and quickly



MOBICAT MC 120(i) PRO

MOBICONE MCO 110(i) PRO



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

# EFFICIENT E-DRIVE CONCEPT

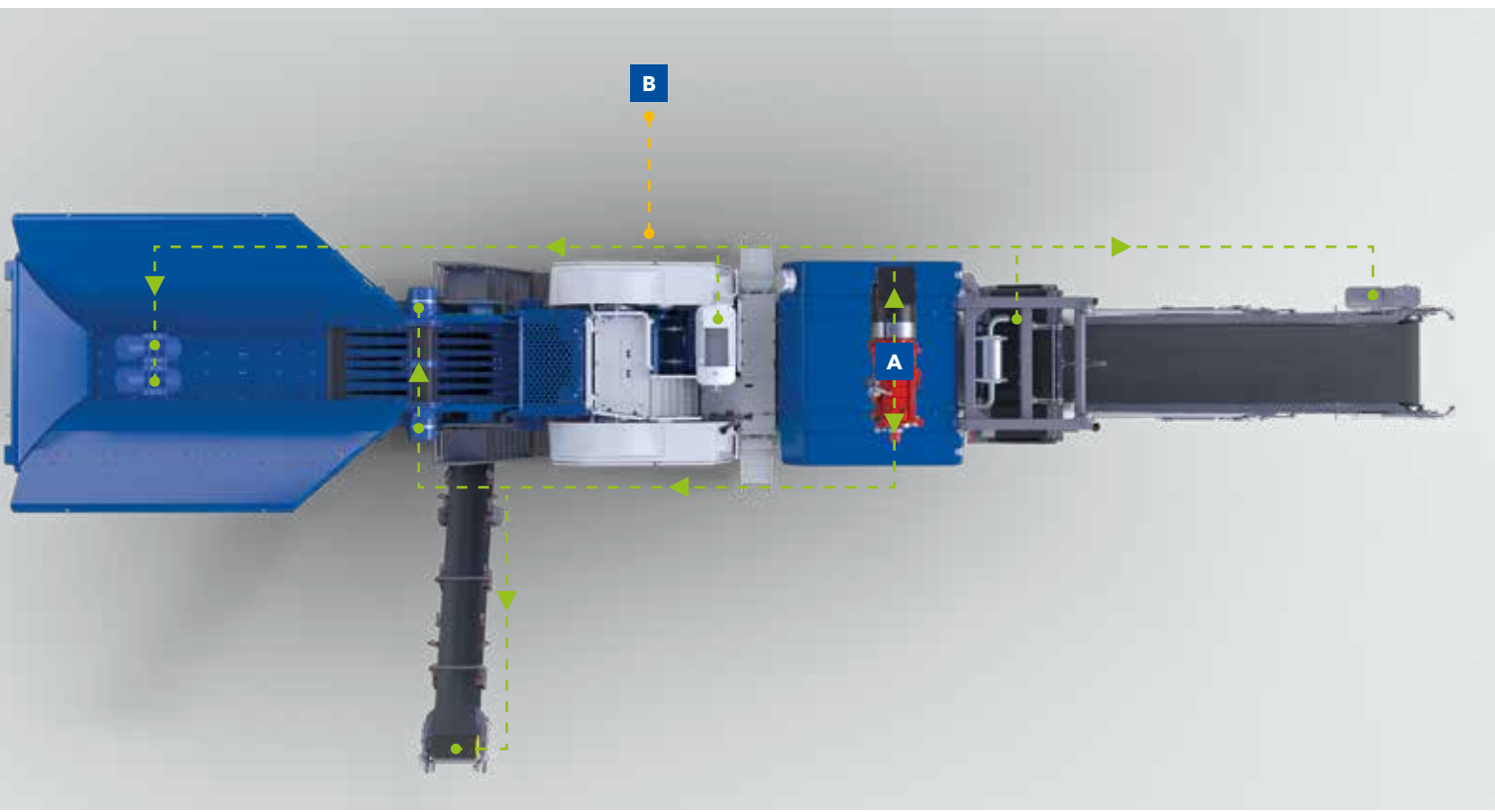
For more power.

The crushing plants in the PRO line are equipped with the efficient, powerful E-DRIVE diesel-electric drives. They guarantee environmentally-friendly and low-consumption operation.

They are optimally equipped for the tough demands day after day in the quarry. They can also be fitted with another electrical connection to supply power to downstream machines such as a stacker or screening plant (only MC 120(i) PRO).

The external power supply option is an even more economical and environmentally-friendly solution. It enables the plants to be operated electrically without the use of diesel - which lowers energy costs and exhaust emissions.

- > Efficient and powerful E-DRIVE diesel-electric drive **A** for low fuel consumption (crusher and all conveyor belts are driven electrically)
- > External power supply **B** for even more economical use in quarries



**diesel-electric** Drive | **Lower consumption** compared to hydraulic drives | **CO<sub>2</sub> savings** through an external power supply

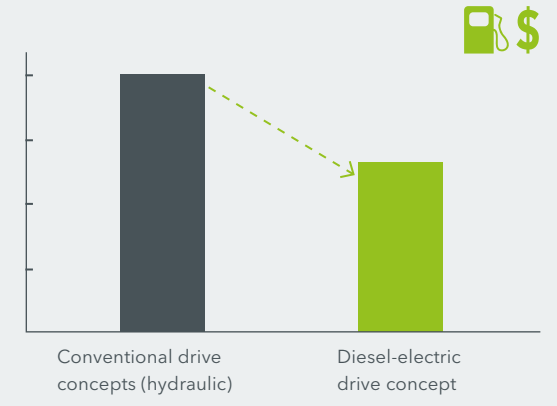


## KLEEMANN > TECHNOLOGY

### Protects the environment and easy on your bottom line

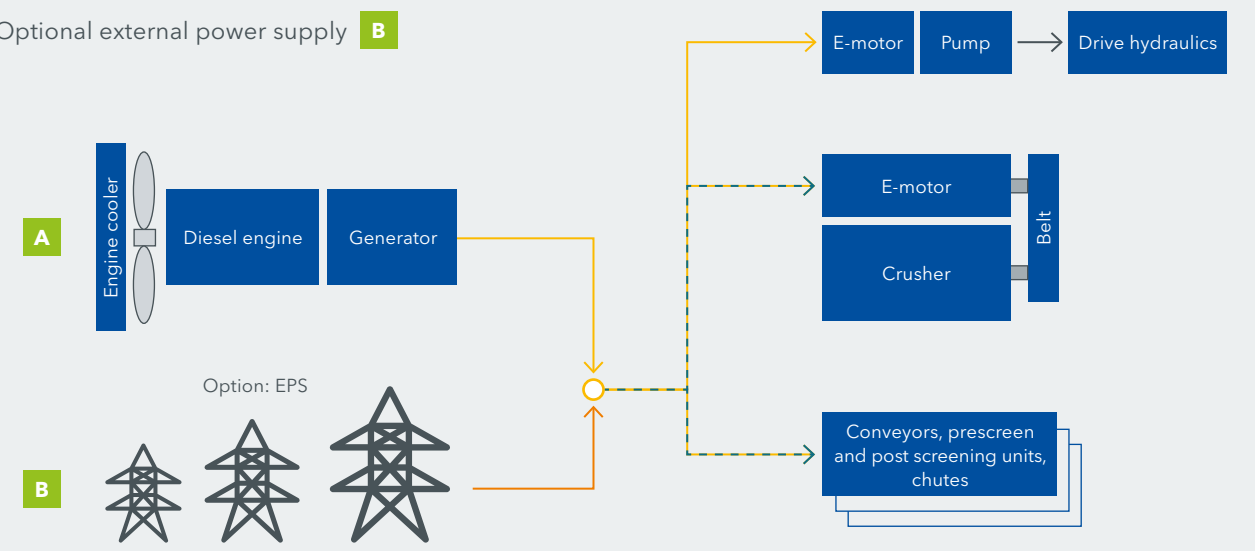
With the diesel-electric drive concept, the crusher and all conveyor belts are driven electrically. This means that with leak-prone hoses that are common with hydraulic drives can be avoided. Lower oil quantities and longer change intervals reduce costs and time, while protecting the environment.

Energy costs, exhaust emissions and noise emissions are also lowered with the option of fully electric operation.



> Drive via E-Drive **A** - saves fuel and is highly efficient

> Optional external power supply **B**





# SPECTIVE INTUITIVE CONTROL CONCEPT

For simple operation.

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 crushing plants MC 120(i) PRO and MCO 110(i) PRO can be operated easily and intuitively - at the machine itself via

the touch panel and remotely using the digital solution SPECTIVE CONNECT.



**SPECTIVE CONNECT**



## 01 SPECTIVE touch panel

From the starting procedure to making the initial settings and the elimination of malfunctions and on to maintenance - on its 12" touch panel, SPECTIVE provides users with all important plant information in a clearly arranged manner and makes all plant settings from a single location possible.

- > The operator is guided step by step through the starting procedure.
- > The start screen provides a graphical view of the entire plant with all adjustable functions at a glance.
- > When the desired function is selected, clear instructions guide users through all operating steps.

## 02 SPECTIVE CONNECT

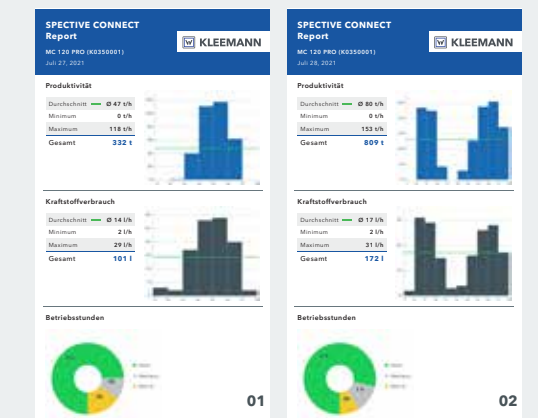
SPECTIVE CONNECT can be used to display all relevant operating data such as engine speed, consumption, throughput (in conjunction with belt scale) and filling levels of the MC 120(i) PRO and MCO 110(i) PRO, as well as fault messages, warnings and other messages. Work, therefore, does not need to be interrupted to view the status. The option for preparing and sending a clearly arranged report creates additional transparency for the operator.

## KLEEMANN > GOOD TO KNOW

### SPECTIVE CONNECT REPORTS - meaningful and informative

In SPECTIVE CONNECT, daily, weekly and monthly reports can be prepared and sent. They provide information, for example, on productivity and fuel consumption.

- A detailed analysis allows further interesting conclusions to be drawn:
- > Why is the output in the morning clearly below average?
  - > Are the output fluctuations the result of non-optimised processes?
  - > Which conclusions can be drawn based on fuel consumption for further orders?



# EVERYTHING AT A GLANCE WITH WITOS®

Efficient fleet and service management with the WITOS® FleetView telematics system.

**The telematics solution from WIRTGEN GROUP helps you keep the technology in an ideal condition over time. After all, WITOS FleetView provides customers and users with a cross-location overview of all plants almost in real-time.**

Processing, transfer, visualisation and evaluation of machine and location data with system support makes fleet and service management even more efficient in daily use. Even users with

only one plant benefit from WITOS FleetView. From support in maintenance and diagnostics processes to the targeted control of plants - the range of services is very diversified.



## The advantages of WITOS® Fleet View

- > Location and time-dependent information indicating the whereabouts and operating status of the KLEEMANN plants and other WIRTGEN GROUP machines
- > Dispatching and planning processes are simplified and unnecessary machine transport is avoided
- > Intuitive user interface for efficient dispatching
- > Simplification of overall maintenance processes and less burden on day-to-day operations
- > Efficient and timely handling of service schedules minimises downtimes
- > Faster response in the event of malfunctions
- > Detailed and targeted analyses of the operational and utilisation behaviour of machines facilitate maintenance and service and guarantee long-term value retention of the machines

To enable even more efficient and faster service via the WIRTGEN GROUP, the machine data can be released by agreement. By knowing about pending error messages, conclusions can easily be drawn about possible causes of faults - even before the service technician is on site. This means: even better service for longer machine uptimes.

**WITOS**  **FleetView**



# 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.**

To guarantee trouble-free production, simple operation and fast service, all machine components are especially easy to access.

The useful additional options for the plants increase user comfort even more - spray systems are included at different

transfer points and LED lighting of the plant is available even in the basic plant. Optionally available premium lighting provides even better illumination of all important work positions. Simple refuelling of the machine is possible from the ground - on the MC 120(i) PRO with the help of a refuelling pump.

The plants in the PRO line are also equipped with the best possible safety equipment. 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 the machine in the event of deactivation or failure.



> MC 120(i) PRO - easiest possible access to the engine compartment



> MCO 110(i) PRO - convenient access to the engine compartment, refuelling possible from the ground



> MCO 110(i) PRO/MC 120(i) PRO - improved illumination with premium lighting



> MC 120(i) PRO - convenient screen surface changes thanks to ease of access



# MOBICAT MC 120(i) PRO

High performance in the primary crushing stage.

**Designed for high output in quarry operation: the MOBICAT MC 120(i) PRO excels with powerful performance and robustness, combined with intuitive operation and low-maintenance operation.**

The MC 120(i) PRO has a generously dimensioned feeding unit. Large volumes of material can therefore be loaded with an excavator or wheel loader with no problems. The jaw crushing plants' outstanding performance is also a result of

the dimensions of the crusher inlet of 1,200 x 800 mm and the extra long design of the articulated crusher jaw. Even large stones can be loaded without any problems.

Despite its impressive size and power, the machine can still be transported in one piece. Components such as the foldable side discharge conveyor, feeding unit and rock chisel are provided with hydraulic functions and can remain on the machine for transport.



**up to 650 t/h**  
Feed capacity

**1,080 x 680 mm**  
Feed size

**1,200 x 800 mm**  
Crusher inlet



# PRESCREENING INCREASES PRODUCTIVITY

Generously dimensioned and extremely robust.

**High product quality**  
through prescreening

**Fines discharge**  
via side discharge conveyor

**Large selection**  
of prescreen coverings



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

The MC 120(i) PRO is equipped with an independent double-deck prescreen with an extra large screening surface of 3.5 m<sup>2</sup>. The medium grain can also be routed via the crusher bypass past the jaw crusher, which additionally reduces the wear on the crusher. Fines can be discharged via the foldable or rigid

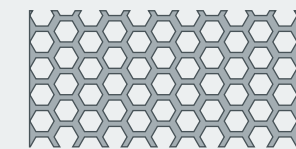
side discharge conveyor. For maximum flexibility on the construction site, this can be installed on the right or left. A further positive side effect of prescreening is that the material flow is levelled uniformly, which also reduces the burden on the crusher and therefore reduces wear.

## KLEEMANN > PROCESS KNOWLEDGE

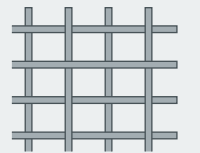
### Optimum set-up of prescreening

In order to tune the prescreening ideally to the material or application, the frequency of the prescreen can be adjusted steplessly. 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.



Hexagon screen surfaces



Wire cloth

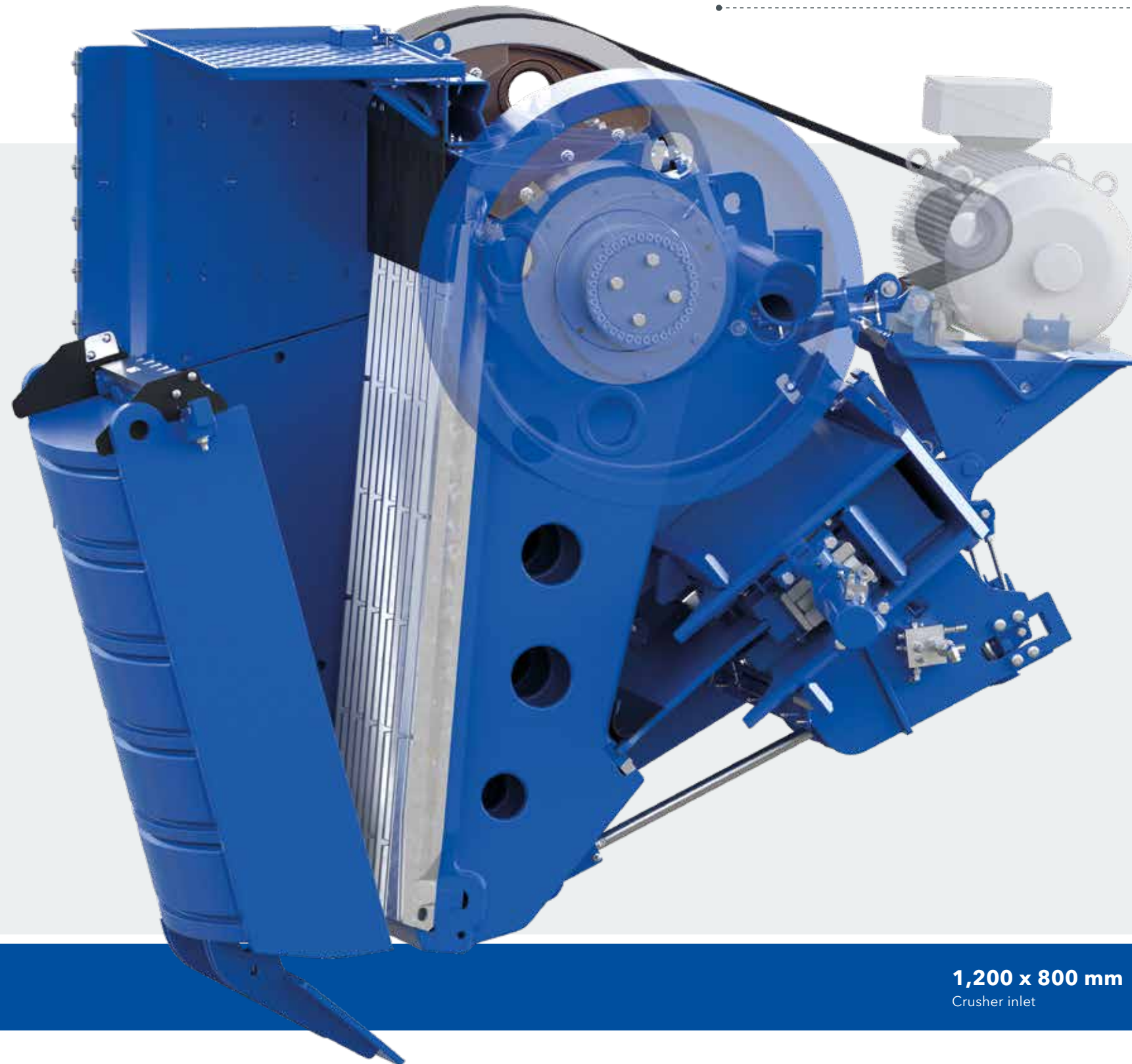


Slotted grate



# POWERFUL JAW CRUSHER

The heart of the machine.



## Top crushing capacity and high throughput thanks to a powerful crushing unit.

With its long crusher jaw, the MC 120(i) PRO is designed perfectly for high throughputs combined with top reliability. This is also ensured by the powerful 200 kW crusher drive. To adjust the crusher to the material and the desired grain size, the gap setting can be made conveniently at the touch panel.

## Well utilised - for maximum plant performance

The plant is equipped with the continuous feed system (CFS), which adapts the conveying speed to the fill level of the crusher. Plant performance is therefore automatically optimised for a high throughput. If material blockages occur in spite of this, the optional crusher unblocking system can remedy this. The electric crusher drive is then reversed and the blockage breaks up within a short time.

Furthermore, the frequency converter enables this system to run at different speeds and thereby to optimally match the crusher speed to the material and application.

After the material has passed through the crushing unit, it is transferred onto the crusher discharge conveyor with a deflector plate that protects the conveyor. In the case of very coarse-grained or sharp-edged material, a machine version with a vibrating extractor is available as an option.

**1,200 x 800 mm**  
Crusher inlet

**per touch panel**  
Gap setting

**200 kW**  
Crusher drive



# FOR TOP PRODUCT QUALITY

MOBICAT MC 120(i) PRO in operation.

## Recommended use

- > Processing of natural stone (e.g. limestone, granite, basalt)
- > In mining applications
- > Use in recycling (e.g. rubble, concrete, reinforced concrete)
- > Feed capacity of up to 650 tons per hour
- > For a consistent process: in combination with the MOBICONE MCO 110(i) PRO cone crusher and a MOBISCREEN screening plant

## Features

- > Independent double-deck prescreen (3.5 m<sup>2</sup>)
- > Automatic crushing gap adjustment
- > Continuous crusher loading thanks to CFS
- > Vibrating extractor (option)
- > Crusher unblocking system (option)



Diesel-electric drive concept  
Option for external power supply



**KLEEMANN**  
SUSTAINABILITY



# MOBICONE MCO 110(i) PRO

Efficiency and top final product quality in the secondary crushing stage.

**Thanks to its robust design and low-maintenance operation, the MOBICONE MCO 110(i) PRO is ideal for efficient application in natural stone and is ideally tuned to the performance of the MC 120(i) PRO mobile jaw crusher.**

The MOBICONE MCO 110(i) PRO cone crusher is the perfect partner for linked operation with the MOBICAT MC 120(i) PRO jaw crusher. The machine was specially designed for the secondary crushing stage to meet the

high requirements of natural stone processing in the quarry and therefore to meet to equally high quality and volume demands. The machine can be transported as a single unit (except for the return conveyor) on a low loader.

The simple sliding mechanism of the feeding unit moves the machine into a compact transport position - and allows quick set-up. It also has another advantage: the material discharge pattern into the crusher can be easily adapted. Optimum loading is therefore possible.



**up to 470 t/h**  
Feed capacity

**7.5 m<sup>3</sup>**  
Hopper volume

**1,120 mm**  
Crusher system size (d)



# CONE CRUSHER WITH A LARGE STROKE

The heart of the machine.

## Loading of the crusher unit needs to be optimised to ensure high final product quality.

The MOBICONE MCO 110(i) PRO has a cone crusher with a large stroke for maximum crushing capacity. This is guaranteed by the powerful crusher drive with 250 kW and the robust

crusher design. A high throughput is generated thanks to the 3-armed structure and the large passage area.

The hydraulically shiftable feeding unit allows the best possible discharge pattern to be set. The tried-and-tested Continuous Feed System (CFS) guarantees an optimum crusher fill level. The gap setting and zero-point determination can be carried out safely and conveniently from the ground using the touch panel.

Since cone crushers can react sensitively to uncrushable material, the reliable "Tramp Release" overload protection system provides a remedy. The plant detects the overload and raises the bowl of the crusher unit automatically so that foreign bodies such as wood or metal can fall out of the crusher unit without damaging the crusher.



**d = 1,120 mm**  
Crusher system size

**Effective overload systems**  
to protect the plant

**250 kW**  
Crusher drive

Additional overload detection is provided by the intelligent "Ring Bounce Detection". Here, the crusher's hydraulic pressure and other parameters are monitored continuously. If necessary, the system responds and prevents latent overloads that could cause serious damage.

Two modes can be set in the software:

1



### PRECISE MODE for the production of grit

- > The machine stops feeding as soon as ring bounce is detected; the operator receives a fault message and can adapt the process.
- > In this mode, no additional impermissible oversize grain is produced and the machine is protected against crusher damage.

2



### MIXTURE MODE for the production of mixtures

- > In this mode, the machine adapts the crushing gap automatically - without intervention of the operator - to avoid ring bounce.
- > After a predefined time without ring bounce, the gap is closed again.
- > Virtually uninterrupted work, the plant adjusts the gap automatically, oversize grain is accepted or, with operation with a post screening unit, is fed back to the circuit.



# FOR PERFECT RESULTS

MOBICONE MCO 110(i) PRO at work.

## Recommended use

- > Secondary and tertiary crushing
- > From medium hard to hard, abrasive natural stone
- > In mining applications
- > Feed capacity up to 470 tons per hour
- > For a complete process: can be combined with the MOBICAT MC 120(i) PRO jaw crusher and a MOBISCREEN screening plant

## Features

- > Generously dimensioned feeding unit with simple sliding mechanism
- > Continuous crusher loading thanks to CFS
- > Reliable overload systems (tramp release and ring bounce detection)
- > Automatic crushing gap adjustment



Diesel-electric drive concept  
Option for an external power supply



**KLEEMANN**  
SUSTAINABILITY



# WELL COMBINED

For perfect processes.

**The machines in the PRO line are perfectly tuned to each other in terms of their output, dimensions and material flow concept.**

The line coupling option allows the PRO plants to be coupled with each other. The crushing process between the crushing plants is then optimised automatically so that material is always conveyed with maximum efficiency through the machines.

A probe is installed at the crusher discharge conveyor of the upstream machine, which monitors the filling level of the feeding unit of the downstream machine. When the filling level reaches a defined height, the output of the upstream plant is temporarily lowered, therefore effectively reducing the overfilling of individual machines and ensuring that machine utilisation is always ideal. The Continuous Feed System (CFS) feed control also guarantees optimum utilisation of the crusher.

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 120(i) PRO + MCO 110(i) PRO + MSC EVO



# 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 uncomplicated assistance both on the building site and 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 in the long term. Our experts will be glad to advise you on application-optimised 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. Intelligent monitoring systems such as WITOS or JD Link\* not only facilitate the maintenance planning of your machines but also increase productivity and economy.

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



# TECHNICAL DATA AT A GLANCE

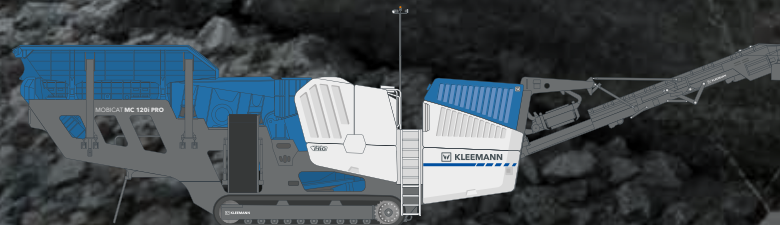
MOBICAT MC 120(i) PRO AND MOBICONE MCO 110(i) PRO



## TECHNICAL DATA

### MC 120(i) PRO

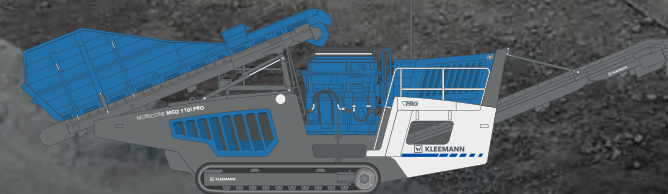
- > Crusher inlet (W X D): 1,200 x 800 mm
- > Feed capacity: 650 t/h
- > Weight: 72,500 - 85,500 kg



## TECHNICAL DATA

### MCO 110(i) PRO

- > Crusher system size:  $d = 1,120$  mm
- > Feed capacity: 470 t/h
- > Weight: 49,500 - 58,000 kg





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