

A WIRTGEN GROUP Company

With more than 200

Over 100 years of

W KLEEMANN

A LONG HERITAGE OF EXPERTISE THE KLEEMANN PRODUCT RANGE 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 MOBICAT Mobile jaw crushers **MOBIXREX** MOBICONE Mobile cone crushers **MOBISCREEN MOBIBELT**

MOBIREX MR 130(i) PRO | **PERFORMANCE FEATURES**

MOBIREX MR 130(i) PRO

Sustainability meets power play.

The MOBIREX MR 130(i) PRO is powerful, sustainable and can be used very flexibly: Both in natural stone as well as in recycling, it guarantees first-class product quality and achieves impressive throughputs.

this is what the MR 130(i) PRO delivers together with a high production capacity. This is guaranteed not only by the triedand-tested robust crushing unit with its two impact toggles and versatile rotor ledge options, but also by the 8.4 m² large, optional double-deck post screening unit. This enables users to produce two classified final grain sizes – with a single

machine and without an additional screening plant. With its heavy rotor and powerful electric 250 kW drive together with efficient prescreening, the crushing unit guarantees a very stable and high throughput. Thanks to the CFS Continuous Feed System, continuous crusher utilisation is ensured.

Simple and intuitive operation

The efficient all-electric E-DRIVE concept stands out with its low power consumption per ton of final product and offers an option for an external power supply. The MR 130(i) PRO can therefore be operated locally free of emissions. Operation is carried out conveniently via the elements of the SPECTIVE intuitive operating concept.



MOBIREX MR 130(i) PRO | **HIGHLIGHTS**

THE HIGHLIGHTS

Perfectly equipped.

01 Feeding unit

> Hydraulically foldable and lockable - for quicker set-up from the ground

02 Prescreening

> Independently vibrating prescreen for effective screening of fines

03 CFS (Continuous Feed System)

> Continuous crusher utilisation thanks to CFS

04 Crusher unit

> Powerful electrically driven crusher with fully hydraulic gap adjustment and overload system

05 Control concept

- > Easiest possible operation with the SPECTIVE operating concept
- > With SPECTIVE CONNECT: all important information is displayed directly on the smartphone

06 Drive

- > E-DRIVE diesel-electric drive
- > Local emission-free operation possible

07 Magnetic separator

> Efficient permanent or electromagnetic - for increased final product quality

08 Post screening unit

- > Large double-deck post screening unit for producing two classes of final grain
- > Two wind sifters for effective cleaning of the oversize grain and medium grain, resulting in better final product quality

> Safety and ergonomics

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

> Environmentally friendly solutions

- > Reduced dust and noise
- > Hydraulic oil is only required for setting and set-up functions, which reduces the environmental risk and maintenance costs



MOBIREX MR 130(i) PRO | **FEEDING UNIT** 08 | 09

WELL THOUGHT-OUT FEEDING UNIT

Generously dimensioned and extremely robust.

The feeding unit of the MOBIREX MR 130(i) PRO is generously dimensioned 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 additional work from the ground. The design of the vibrating feeder has been revised and

ensures an even better material flow and increased feed

capacity. As an option, an additional hopper extension or a filling aid are available that enables a rear-side loading width of 3.30 m.

up to 600 t/h Feed capacity approx. approx. 5 m³

approx. 9 m³

Hopper volume with hopper extension









Optimised 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.

Tips on optimal loading

- > Take note of the size and edge length of the material
- > Select feed size depending on the final grain size and the max. permissible crushing ratio
- > Sort out any uncrushable material, e.g. steel beams, cables, wood, films/foils
- > Guarantee 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

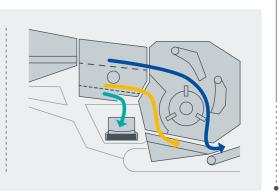
= quantity produced by the crusher ____

Feed capacity

= crushing capacity — + prescreening capacity — + bypass capacity —

Plant performance

= crushing capacity — + bypass capacity —



10 | 11 MOBIREX MR 130(i) PRO | PRESCREENING + SIDE DISCHARGE CONVEYOR

EFFECTIVE PRESCREENING

Better results and less wear.

For effective prescreening of the feed material, the MOBIREX MR 130(i) PRO is equipped with an independently vibrating double-deck prescreen.

The feed material is screened 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 while reducing plant wear. The prescreen works independently of the vibrating feeder and is therefore extremely productive.

High product quality through prescreening





Fast changeover of the material flow

The co-vibrating bypass flap (optional) can be used to guide the material flows of the prescreening. It is installed directly on the prescreen in order to achieve a self-cleaning effect through the screen vibrations.

- > 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

The fast reaction to different material qualities increases flexibility and reduces downtimes.

Side discharge conveyor is very flexible to use

The side discharge conveyor is available in two versions and can be installed on both sides. Discharge heights of up to 3,550 mm are possible. The belts are equipped with a spray system to reduce the dust load. The foldable side discharge conveyor can remain on the machine for transport.

KLEEMANN > PROCESS KNOWLEDGE

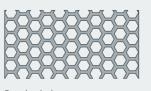
Optimum set-up of prescreening

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 media is also important. Slotted grates or hexagonal punched plates are therefore available for the upper deck.

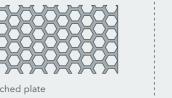
The hexagonal design of the punched plates creates a significantly raised open screening surface and, thanks to a conical hole progression, reduces material clogging. The newly design slotted grate also guarantees a raised screening surface to prevent clogged material.

The lower deck can be operated with wire cloth of different mesh sizes.

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



Punched plate





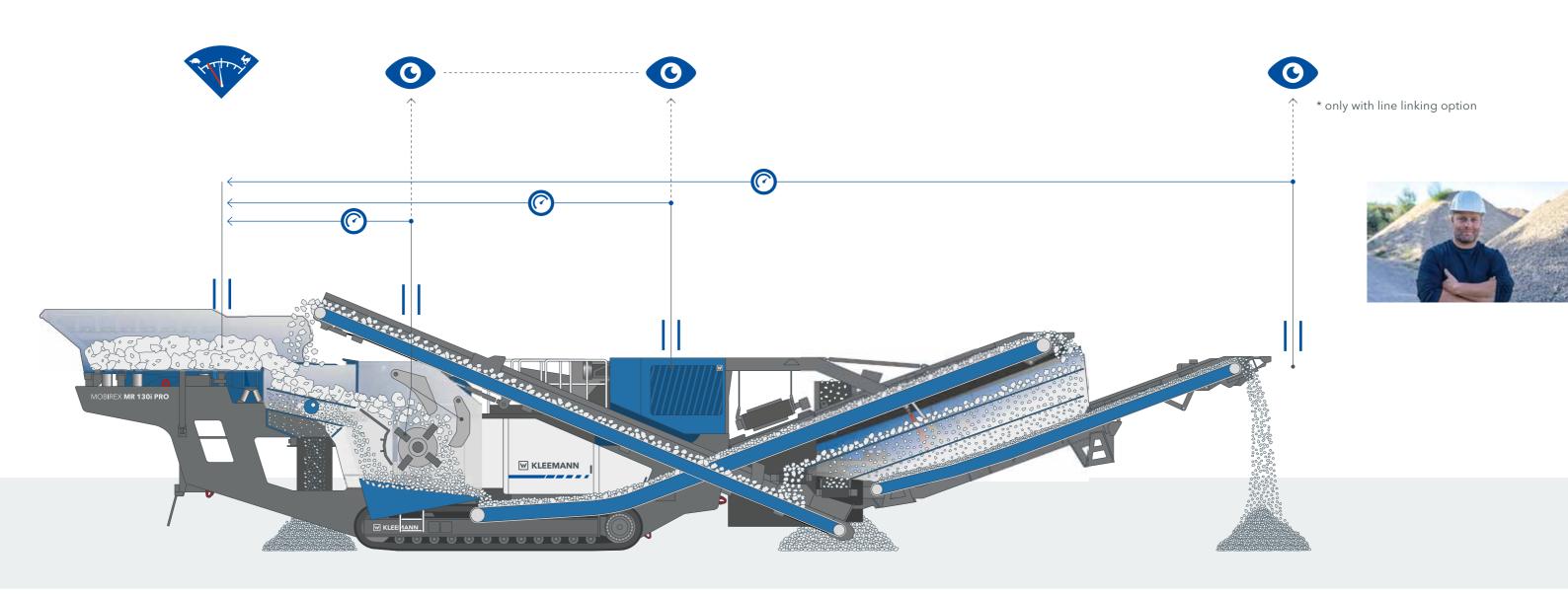
Slotted grate



MOBIREX MR 130(i) PRO | CFS

CONTINUOUS FEED SYSTEM (CFS)

For a continuous crusher feed.



Uniform loading is indispensable for a good final product, optimum throughput and low wear.

To ensure that the crushing chamber is always filled evenly, the Continuous Feed System (CFS) monitors the load on the rocker and rotor as well as utilisation.

The CFS independently regulates the frequency of the vibrating feeder and prescreen. A backlog on the prescreen can therefore be avoided and crusher utilisation is optimised.

When the crushing chamber is free again after overloading, material transport is continued without delay.

The CFS facilitates the work of the operator 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 prescreen does not pile up too high. Fine content can therefore be well screened out before it runs through the crushers.

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

Optimal tuning to the application = high throughput + low wear

MOBIREX MR 130(i) PRO | CRUSHER UNIT

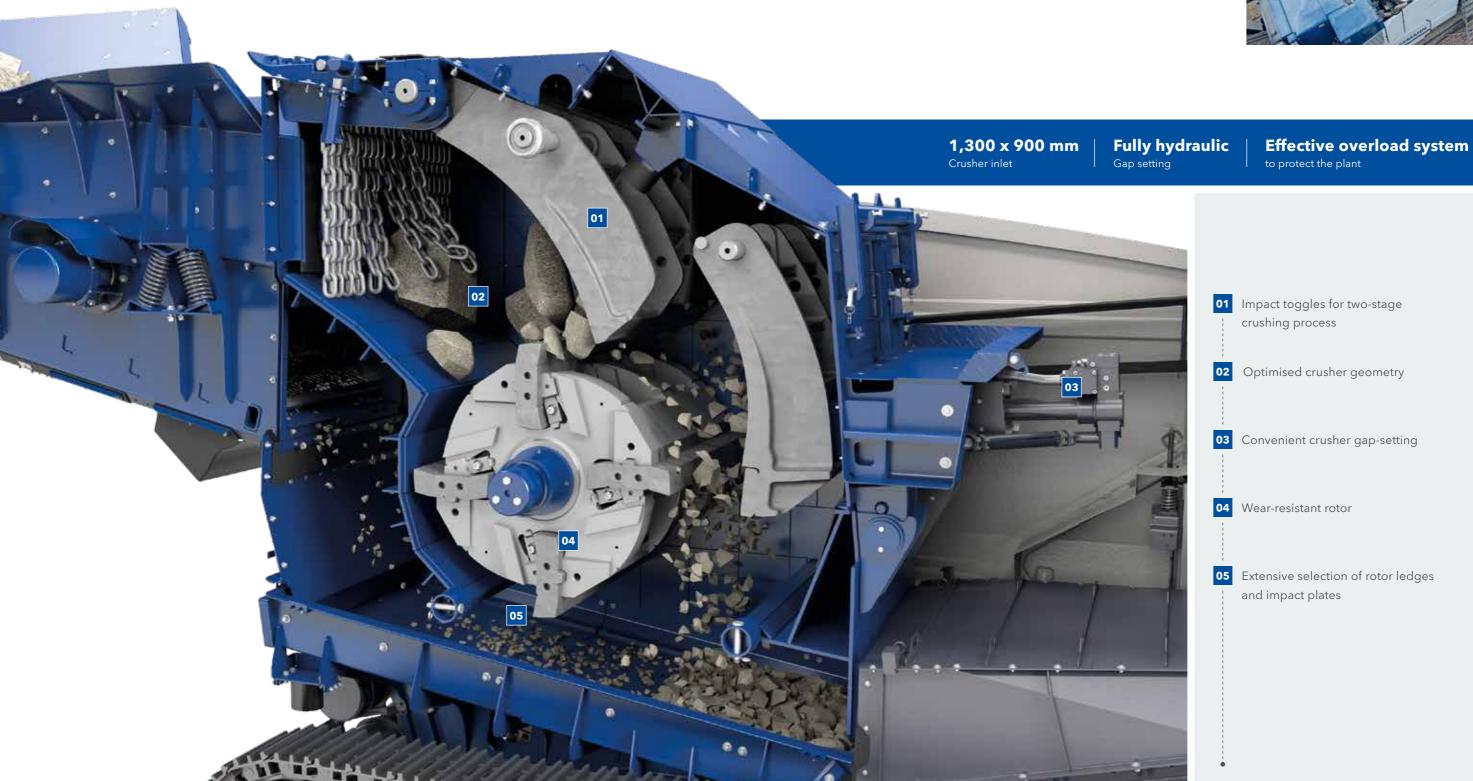
POWERFUL CRUSHER UNIT

The heart of the machine.

Powerful crusher unit for high crushing capacity and throughput.

With its heavy rotor and powerful electric 250 kW drive, the impact crusher's crushing unit is the heart of the machine and guarantees a very high and stable throughput. The inlet geometry guarantees optimum feed behaviour of the material and enables high throughput.





MOBIREX MR 130(i) PRO | CRUSHER UNIT

01 Crusher geometry

03 Gap setting

desired final grain size.

Thanks to its special inlet geometry, the MR 130(i) PRO's crusher unit can draw in the material perfectly and therefore guarantee high throughput. The crusher inlet cover and the upper impact toggle in the inlet area can be lifted hydraulically by radio remote control - effectively reducing material bridging.

Result: high throughput combined with outstanding reliability.

To make adaptations to the material or the desired final grain

The crushing gap adjustment can be made fully hydraulically

via the touch panel from the ground - even with the rotor

Rule of thumb: The upper crushing gap should be approx. 30% of the feed size and the lower one approx. 80% of the

size, simple crushing gap adjustment is indispensable.

running! A real bonus for efficiency and productivity.

02 Rotor ledge

04 Overload

Thanks to the cleverly devised rotor ledge clamping system and the innovative Lock & Turn safety system, rotor ledges can be conveniently removed by simply lifting out. A rotor ledge replacement is therefore extremely easy and safe.

Overload situations at selected points arise due to hard material

or uncrushable foreign content in the feed material. Thanks to

the effective overload system, in the event of uncrushable

Result: Effective protection of the crusher against damage,

significantly lower maintenance and repair costs.

The C-shape rotor ledges ensure excellent impact over extended time frames - for even better product quality.









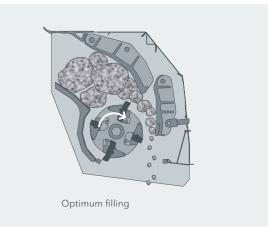


elements, the lower impact toggle opens and then moves back automatically to the preset value. As a final safety factor, a bursting disc is installed to protect the crusher. O1 Crusher geometry O2 Rotor ledges



Optimised results through correct loading:

- > The optimal fill level of the impact crusher should be guaranteed.
- > Continuous overfilling results in increased wear and can cause frequent activation of the overload protection, leading to material congestion.
- > The maximum feed size of 80% of the feed opening must be observed.
- > The gap-setting ratio of the impact toggles should be set correctly.



MOBIREX MR 130(i) PRO | **OPERATING CONCEPT**

SPECTIVE INTUITIVE OPERATING CONCEPT

For a better result.

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

The MOBIREX MR 130(i) PRO can be operated simply and intuitively with the different SPECTIVE components. Apart from the touch panel, the holistic operating concept includes a large

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









01 Touch panel and operating buttons

From the start-up process through initial settings, and from troubleshooting to maintenance - SPECTIVE provides users with all important system information in a clearly structured manner on a 12" touch panel and enables all system settings to be made in one place. The optimised arrangement of the button below the display is self-explanatory in combination with the display and guarantees high operating comfort. The lockable operating mode selector switch also protects against misoperation. Troubleshooting aids contribute to minimising downtimes.

03 Small radio remote control

The small radio remote control is suitable for carrying in the loading device thanks to its compact size. All relevant functions can therefore be operated in automatic mode conveniently from the excavator or wheel loader. The small radio remote control is the ideal complement to SPECTIVE CONNECT.

02 Radio remote control

The new radio remote control allows operation of all plant functions, including the complete set-up and driving operation, from a safe distance. When it has been set once 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 wherever they are working - for example, in the excavator or wheel loader. Apart from 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 summarised in a report and conveniently transmitted.

KLEEMANN > GOOD TO KNOW

Always in operation with "Quick Track"

In some applications - for example in road construction - relocation of the crushing plant several times a day is necessary. When this is done, the plant should remain in operating mode so that it is quickly ready for operation again once it has been moved. The "Quick Track" option allows this to be controlled conveniently via remote control - without leaving the operating mode.

Due to the time saved - the operator does not have to look at the display, change the operating mode, machine operation is not interrupted and does not have to start up again afterwards - the machine can continue working quickly and productively.

MOBIREX MR 130(i) PRO | **DRIVE**

SUSTAINABLE E-DRIVE CONCEPT

Top performance - efficient and environmentally-friendly.



The MR 130(i) PRO is equipped with the efficient, powerful E-DRIVE diesel-electric drive. It guarantees environmentally-friendly and low-consumption operation.

Diesel-electricE-DRIVE concept

up to 478 kW



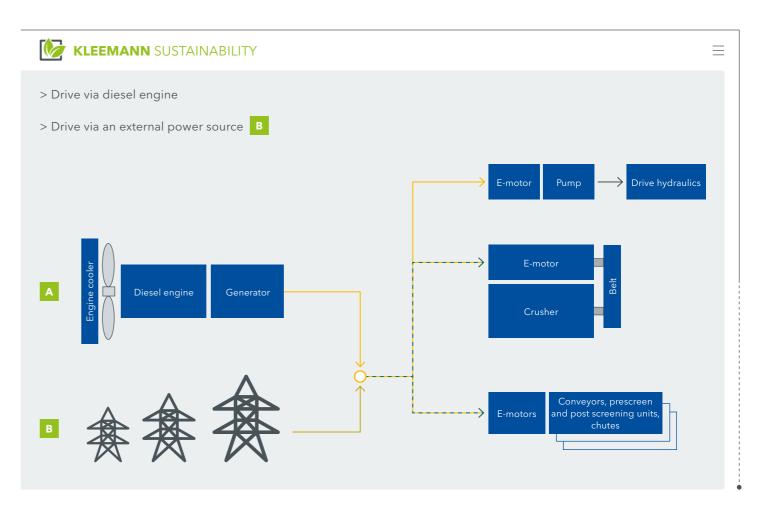


A positive feature of the MR 130(i) PRO is its all-electric E-DRIVE concept. with the option of an external power supply. All drives are electric with the exception of the transmission and auxiliary functions

Hybrid solution for flexibility on site

If an external power supply is available, the machine can be operated emission-free. If the plant is operated via the diesel generator, the power- and load-dependent fan ensures noise reduction and more economy.





MOBIREX MR 130(i) PRO | MAGNETIC SEPARATOR

MAGNETIC SEPARATOR

Effective for the final product.

A magnetic separator can be installed to increase final product quality.

To prevent contamination of the final product with ferrous elements, an optional electromagnet or permanent magnet can be installed. They can be flexibly attached on chains and individually adjusted in transverse and longitudinal inclination. Fast reactions in the event of material congestion under the

magnet are possible: They can be raised and lowered hydraulically by remote control. Material bridging can therefore be broken up very easily and the magnet can always be set to its optimum value.





Preventing belt damage

Sliding bars 01 in the area below the magnet prevent the crusher discharge conveyor from being pierced by jammed armouring iron. Belt damage can therefore be avoided and the service life of the crusher discharge conveyor extended.



KLEEMANN > GOOD TO KNOW

Handling materials that contain armouring iron

- > Select the setting of the magnetic separator so that the passage height is high enough to guarantee trouble-free discharge of the armouring iron.
- > At the same time, however, the magnetic separator must be near enough to the crusher discharge conveyor to allow the armouring iron to be discharged completely.
- > Always guarantee a trouble-free discharge of the armouring iron. Clear away any accumulations of armouring iron.
- > Remove entangled armouring iron from the area of the material discharge at the magnetic separator.

Flexible attachment on chains

Adjustable inclination
Wired and radio remote control

Can be raised and lowered per radio remote control

MOBIREX MR 130(i) PRO | **POST SCREENING UNIT**

POST SCREENING UNIT

For top product quality.

Classification 2 optional wind sifters Belt scale from 2 belt conveyors Optional for increased final product quality

The MR 130(i) PRO features an optional large double-deck post screening unit for the production of two classes of final grain.

The large double-deck post screening unit (8.4 m² upper deck screening surface, 7.2 m² lower deck screening surface) can be used as a single-deck or double-deck screen.

This enables the production of two classified final grain sizes - with a single machine and without an additional screening plant.

Discharge of oversize and medium grain

Via the wide oversize grain returning system, the material can be supplied in a closed loop to the crusher. Via the reversible medium grain conveyor, the medium grain is discharged onto a stockpile or supplied to the oversize grain conveyor. This enables outstanding plant performance even with fine feed material.

Plant performance is measurable and transparent

Option belt scales are available for the MR 130(i) PRO for all discharge conveyors. They can be conveniently displayed in SPECTIVE CONNECT. The current production output can therefore be viewed at any time on the system's dashboard. Data is recorded in Reporting which allows conclusions to be drawn about output and plant utilisation.

KLEEMANN > PROCESS KNOWLEDGE

Wind sifters guarantee increased material quality particularly in recycling because contamination through foreign bodies (e.g. wood and plastic) is removed from the material. The air flow can be controlled depending on the material. Two wind sifters for effective cleaning of the oversize grain and medium grain are available as options.

01 Wind sifter

MOBIREX MR 130(i) PRO | **SAFETY + ERGONOMICS** 26 | 27

SAFETY & ERGONOMICS

For superior operating comfort.

Of course a machine has 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. This is guaranteed by comfortable platforms,

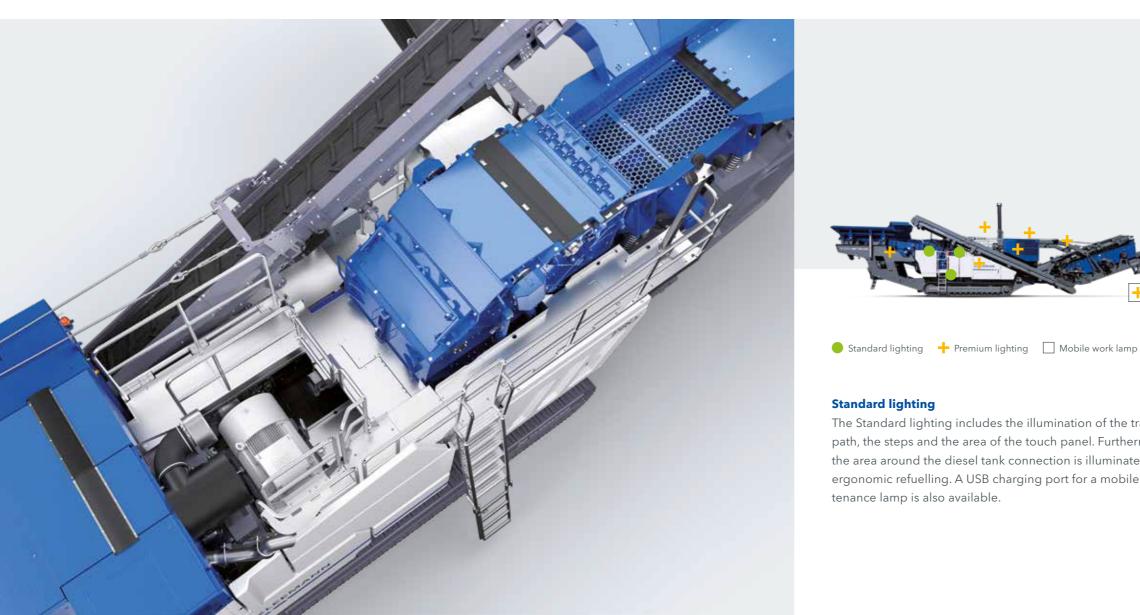
for example, on the prescreen, in the engine area, for air filter change and belt tensioning, and safe climbing aids.

Excellent accessibility and safety during maintenance work

Central drain point for fluids ensures ergonomic maintenance. Increased air intake (optional) results in higher filter service lifetimes where applications involve an extreme amount of dust.

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. Premium lighting is available as an option.







Standard lighting

The Standard lighting includes the illumination of the travel path, the steps and the area of the touch panel. Furthermore, the area around the diesel tank connection is illuminated for ergonomic refuelling. A USB charging port for a mobile maintenance lamp is also available.

Premium lighting

The Premium lighting includes more extensive control cabinet lighting and additional lamps for extended illumination of the machine environment, as well as a mobile maintenance lamp.

MOBIREX MR 130(i) PRO | **SAFETY + ERGONOMICS**

Lock & Turn - for safe rotor ledge changes and elimination of blockages

The "Lock & Turn" system provides the highest level of safety during rotor ledge changes and bridging release. Special keys for service flaps and components guarantee that uncontrolled movements of dangerous components are not possible and the plant or crusher cannot be started when maintenance is being carried out.

A standard-series rotating device also allows the rotor of the crusher to be turned and blocked manually in any position from the outside. This enables the simple and safe replacement of rotor ledges and removal of material bridging.

Safety in the foreground

All MR 130(i) PRO 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 via the radio remote control and therefore from a safe distance, safety on the work site is also considerably increased.

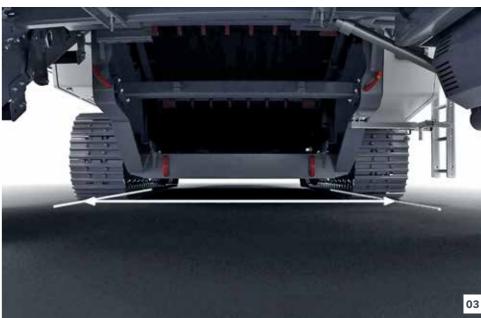
Firmly on the ground

The MOBIREX MR 130(i) PRO features a robust design and crawler carrier chains with a plate width of 500 mm. In spite of its size and weight, it still has a low ground pressure. Sinking in soft or poorly prepared ground can therefore be avoided.

01 Lock & Turn 02 Operation of the plant via radio remote control 03 Crawler carrier chains







MOBIREX MR 130(i) PRO | ENVIRONMENT

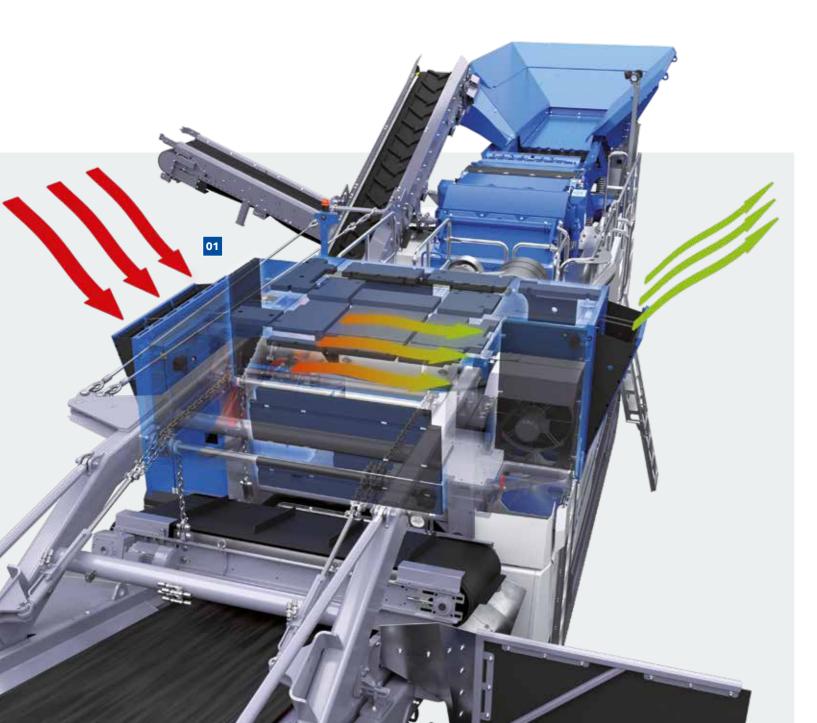
ENVIRONMENT-FRIENDLY SOLUTIONS

For more sustainability.

The MR 130(i) PRO is equipped with solutions to protect the environment as well as the operator.

Thanks to its all-electric E-DRIVE concept with the option of an external power supply 02 the MR 130(i) PRO can be operated on site free of emissions.

A further advantage of the electric drive: Hydraulic oil is only required for setting and set-up functions, which reduces the environmental risk and minimises maintenance costs.





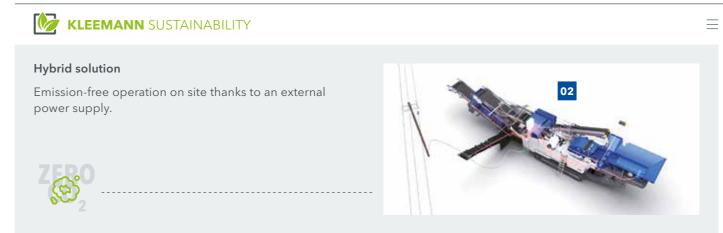
Solutions for noise reduction

If the plant is operated via the diesel generator, the powerand load-dependent fan reduces not only noise emission but also fuel consumption. The optional acoustic enclosure 01 incl. sealing of the power pack base guarantees further significant noise reduction.

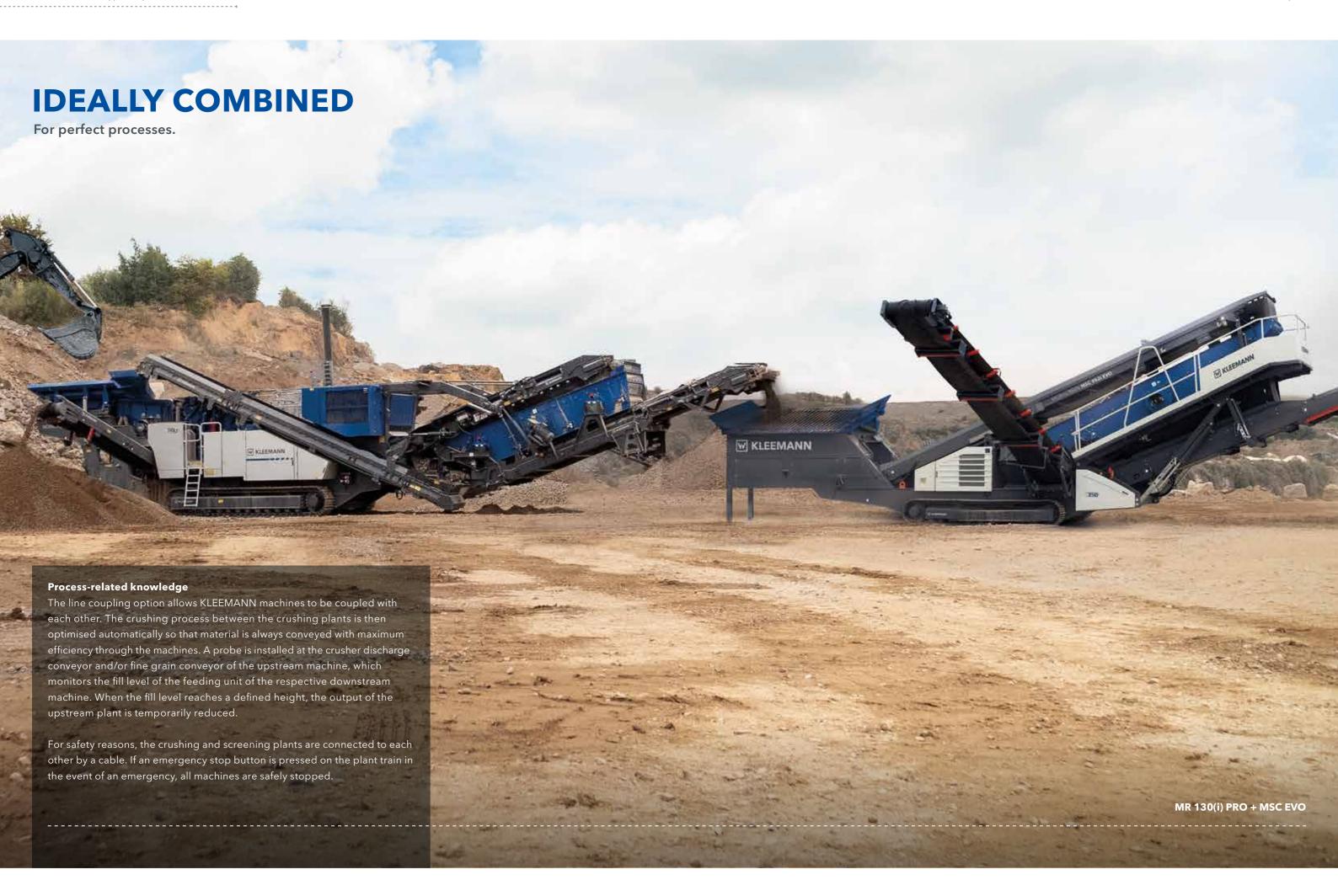
Solutions for dust reduction

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 to minimise dust.





MOBIREX MR 130(i) PRO | LINE COUPLING



FORMULA FOR SUCCESS

For perfect crushing results.

An optimum crushing result can only be achieved with plant components that are perfectly tuned to each other - and with the right settings that the operator can choose himself.

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 80% of the specified crusher opening
- > Compressive strength: Mineral materials can be used with a maximum compressive strength of 100 MPa in the first crushing stage, 150 MPa in the second crushing stage
- > Mineral type: Type of mineral: impact crushers in the SHB series process soft to medium-hard natural stone, such as limestone, dolomite or sandstone, and are used for recycling mineral raw materials such as mixed rubble, bricks, asphalt and concrete.

Rotor speed and crushing gap

> With an increase in the rotor speed, the crushing curve moves upwards which results in an increase in the content of fines in the final product.

An increase in speed usually results in a higher throughput. A throughput reduction only results if the feed behaviour is impaired by increased impact frequency.

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:

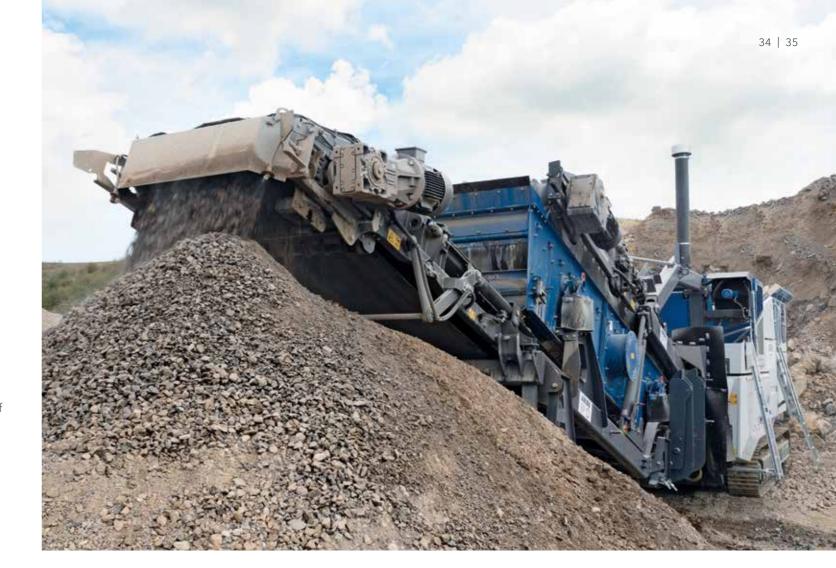
CRUSHING RATIO STANDARD VALUES							
Feed material	Compressive strength [MPa]	Circuit	Reduction ratio				
Limestone, soft to medium-hard	<150	open	up to 10:1				
natural stone		closed					
Recycling	<100	open	up to 15:1				
(mixed rubble, asphalt, concrete)		closed					
Reinforced concrete	< 100	open	up to 15.1				
(depending on concrete quality and iron content)	< 100	closed	up to 15:1				

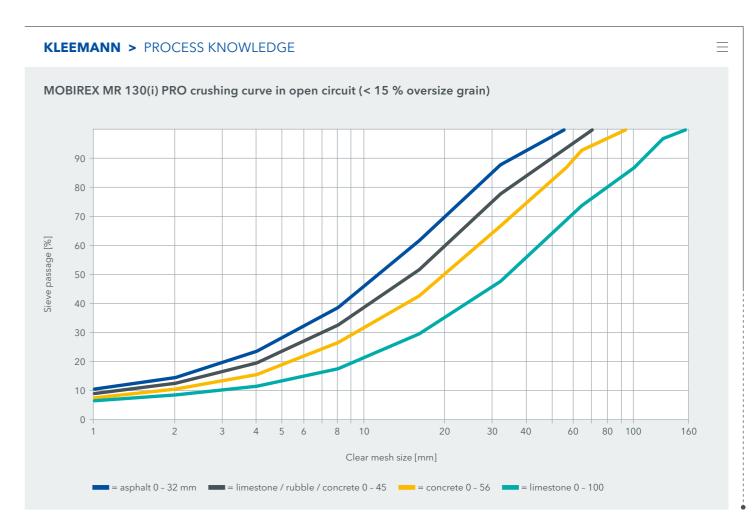
Impact crushing plant areas of application

NATURAL STONE

Coal / clay / marble / limestone	Sandstone, gritstone / greywacke	Gravel / granite	Basalt	Iron ore / gneiss / quartzite / diabase, gabbro
Asphalt / reinforced demolished concrete	Demolished concrete / mixed rubble		Blast furnace slag	Steel slag

RECYCLING -----







MOBIREX MR 130(i) PRO | CUSTOMER SUPPORT

CRUSHING TECHNOLOGY

The right wear parts for the best results.

The versatile application areas of a KLEEMANN impact crusher range from classic natural stone processing through the recycling of residual construction material and mining.

The focus here is mainly on two tasks: To increase the service life of the wear parts and to lower operating costs.

01 Rubber curtain

Chain curtain

Wear plate

Impact toggle

lmpact plate

Notor

nte

8 Impact bar

Rotor ledge

C-shape rotor ledges

The C-shape rotor ledges are secured conveniently on the rotor via a lug on the rotor ledges. Depending on the application, they are available in different qualities.

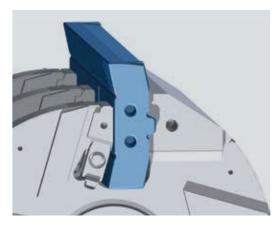
Monolithic rotor ledges

> Manganese: C-TRON.Mn > Martensite: C-TRON.M > Chrome: C-TRON.C

Composite rotor ledges with ceramic inlays

> Martensite-ceramic: C-TRON.MC, C-TRON.MC+

> Chrome-ceramic: C-TRON.CC



C-shape rotor ledge

Composite wear plates

To protect the high-quality crusher housing against damage, it is entirely panelled with high wear-resistant plates.

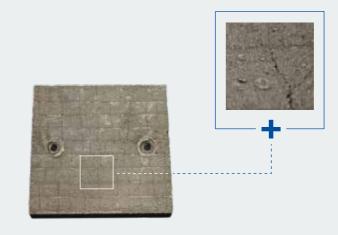
Depending on the feed material, material stress can vary considerably. In order to reduce replacement and wear costs, KLEEMANN offers not only standard plates (hardness: 400 HV or 500 HV) but also special build-up welded plates which enable even longer service lives.

Build-up welding

- > Chromium carbide special alloy
- > Hardness: approx. 740 HV 10, approx. 62 HR
- > Wear layer 10 mm

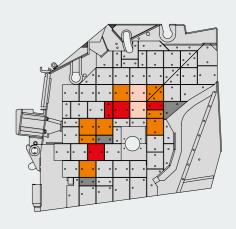
Recommended use

> For high abrasive wear



Surface of plates for inside of crusher.

Cracks are a prerequisite for optimal hardness.



Plates in the main wear zone

MOBIREX MR 130(i) PRO | CUSTOMER SUPPORT

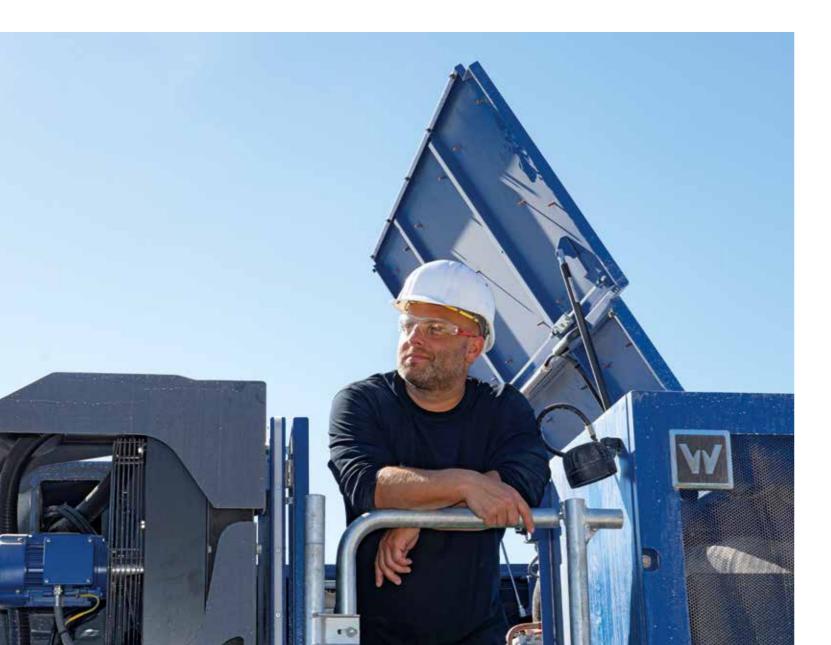
ROTOR LEDGES

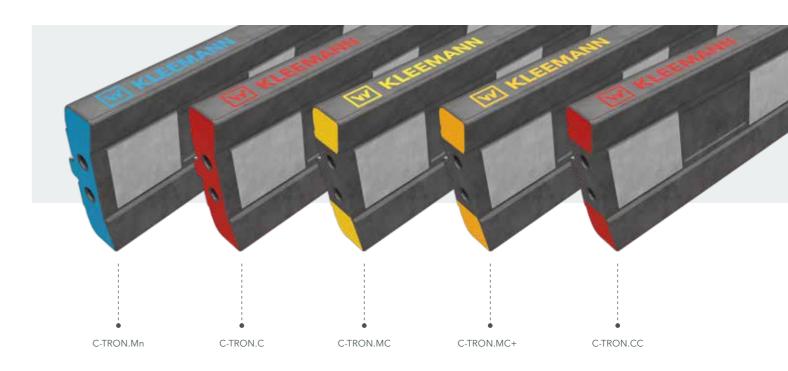
The originals.

The cost-effective use of rotor ledges is influenced by factors such as feed material, rotor speed, material moisture content, feed size and reduction ratio. Depending on the application field and material properties, different rotor ledges are available to achieve optimum results.

Important questions relating to the selection of rotor ledges suitable for the application

- > What type of material is being crushed?
- > Where can the feed size be classified?
- > What is the range of the abrasiveness?
- > Does the material contain uncrushable elements?





Application	Low abrasiveness		Medium abrasiveness		High abrasiveness	
	Limestone processing	Small share of uncrushable elements	Reinforced concrete	Natural stone	Asphalt	Natural stone
Good	C-TRON.Mn (Max. feed size: 600 mm)	C-TRON.C (Max. feed size: 400 mm)	-	C-TRON.C (Max. feed size: 400 mm)		
Better	-	C-TRON.MC (Max. feed size: 600 mm)			C-TRON.MC+ (Max. feed size: 600 mm)	
Best	-	C-TRON.MC+ (Max. feed size: 600 mm)			C-TRON.CC (Max. feed size: 300 mm)	

MOBIREX MR 130(i) PRO | **TECHNICAL DATA**







KLEEMANN GmbH

Manfred-Wörner-Str. 160 73037 Göppingen Germany

T: +49 7161 206-0 M: info@kleemann.info

> www.kleemann.info