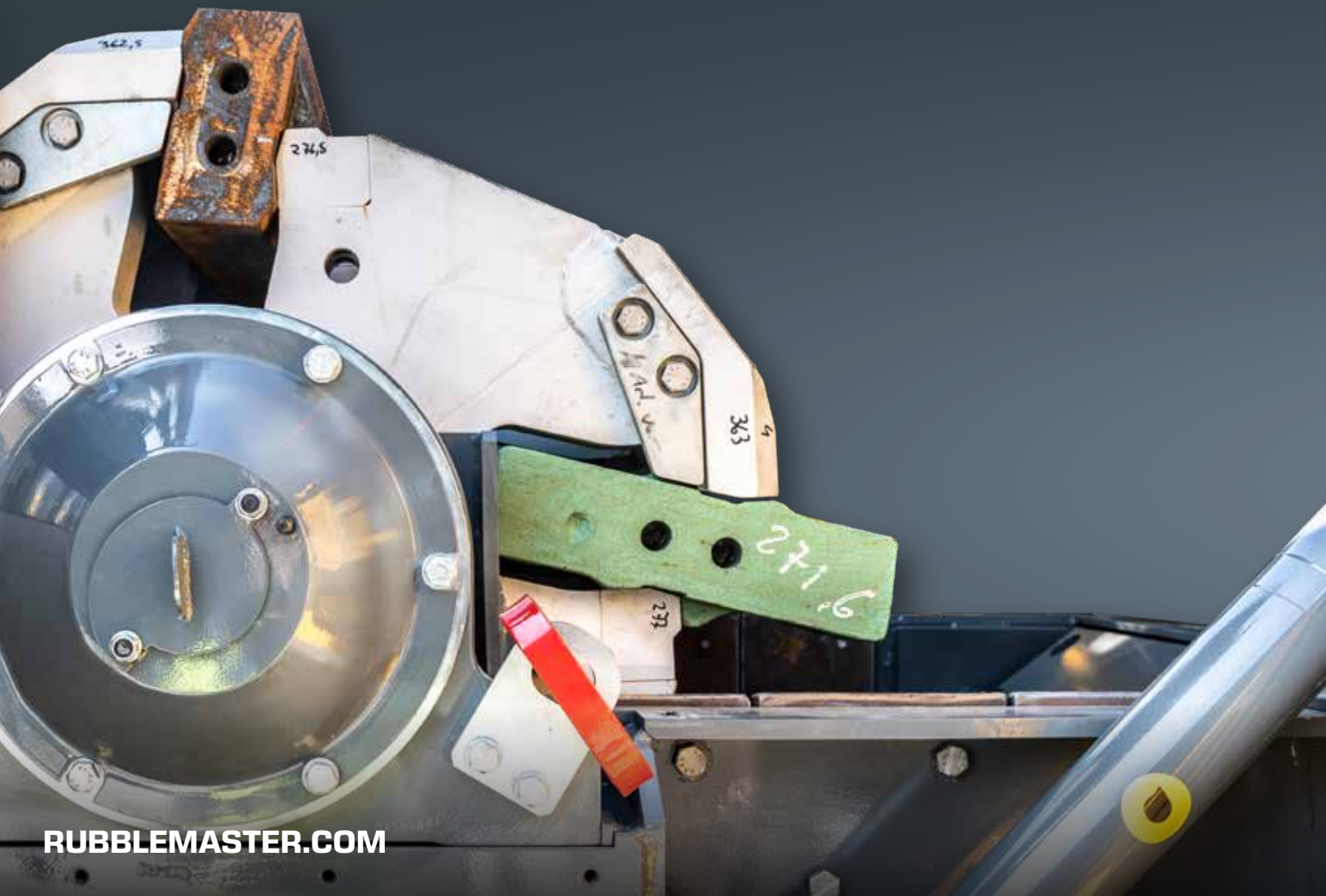
EN-US

Welcome! to our world

MAXIMIZE WEAR LIFE
MINIMIZE OPERATING COSTS

HAMMER SELECTION GUIDE



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WHAT MATERIAL DO YOU CRUSH?

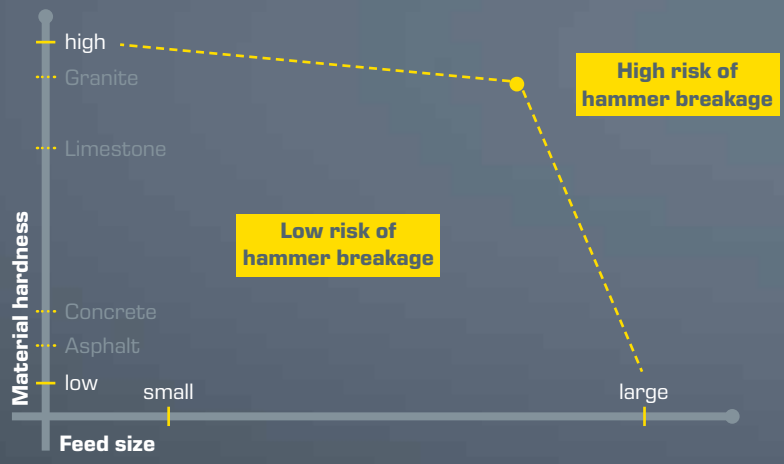
Every material has unique characteristics in terms of hardness, abrasion, and breaking characteristics. The harder the material, the more you need to watch your feed size.

MATERIAL	HOW MUCH DOES IT WEAR? ABRASIVENESS	HOW EASY DOES IT BREAK? CRUSHABILITY
CONCRETE	low	easy
ASPHALT	high	easy
LIMESTONE	low	easy
GRANITE	high	medium
BASALT	medium	medium
GRAVEL	medium	easy

WHAT IS YOUR MAXIMUM FEED SIZE?

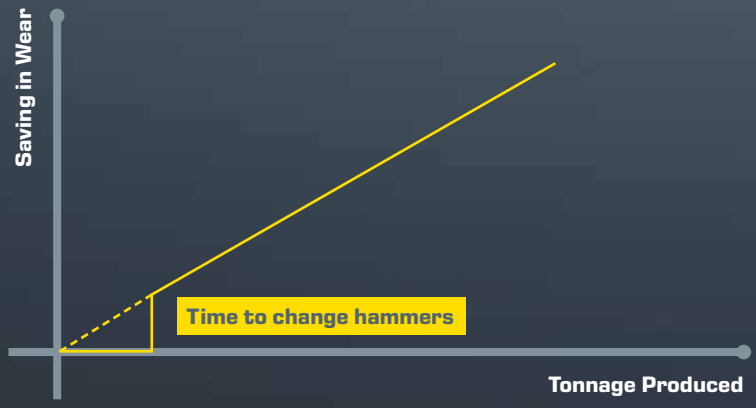
Feed size is important in selecting blow bars because it defines what force is required to crush the material. The bigger your feed size the more you risk breaking your hammers.

MAX FEED SIZE ≠ IDEAL FEED SIZE
The ideal feed size depends on material characteristics, and your hammer selection, and should not exceed 80% of the crusher inlet width so that you achieve a steady material flow and low wear costs.



HOW MUCH MATERIAL DO YOU PROCESS?

Consider the trade-off between changing hammers and excessive wear. Switching from reinforced concrete to asphalt you can either accept high wear costs and save time changing hammers or you take the time to change hammers and save on wear.



KNOW WHEN TO CHANGE HAMMERS.

If you are down waiting for parts, you are losing money. Keep an eye on the wear progress by opening up your crusher box once a day and keeping spare hammers on the shelf to reduce downtime and maximize profits.

NEW HAMMER

HALF WORN HAMMER
needs to be flipped

FULLY WORN HAMMER
needs to be changed
(or kept as short hammers)

KNOW YOUR ROTOR TYPE.

The right hammer configuration can change your reduction ratio and wear. Each set of hammers are matched pairs pertaining to weight so that the rotor stays in balance.

If you operate a 4-bar rotor the right hammer configuration can change your reduction ratio and wear. Some impact crushers operate a 3-bar rotor where you use 3 same-size hammers.

2 LOW, 2 HIGH

- Better penetration
- Reduced blow bar wear
- Less fines produced
- Suitable for more applications
- Time between blow bars is doubled improving penetration on material

4 HIGH

- Reduce oversize
- Increased fines produced
- Good for secondary applications where shape and size outweigh throughput
- High reduction on softer feed material

CONCRETE

ABRASIVENESS low | **CRUSHABILITY** easy

PRIMARY CRUSHING

Concrete from demolition and pre-processed by a hammer or concrete pulverizer. Tramp iron is encapsulated in concrete.

HAMMER SELECTION

Martensitic blow bars with ceramic inlays.
2 low, 2 high configuration.

OPERATIONAL TIPS

- Prep material with a concrete pulverizer or a hammer to size material to 80% of your crusher inlet width.
- Set oversize pieces aside.
- Feed with an excavator so that you can spot and set aside tramp iron.
- RUBBLE MASTER recommend that rebar is encapsulated in concrete and not thicker than ½" (12 mm)
- Keep your crusher pre-screen open to bypass fines effectively and keep wear to a minimum.
- Use a mobile jaw crusher as a primary crusher feeding into your impactor to avoid hammer breakage

MAX FEED SIZE

MODEL	DIAGONAL SIZE
RM60	17" | 450 mm
RM 70GO! 2.0	21" | 550 mm
RM 90GO!	24" | 625 mm
RM 100GO!	30" | 750 mm
RM 120X	31" | 800 mm

SECONDARY CRUSHING

Preprocessed concrete by a mobile jaw crusher.
Tramp iron is liberated and segregated.
Feed size up to 7".

HAMMER SELECTION

Martensitic blow bars with ceramic inlays.
2 low, 2 high configuration.

OPERATIONAL TIPS

- Run a tighter closed side setting
- Use a screening plant in between the jaw and impactor to segregate finished products from the feed and increase production

MAX FEED SIZE

MODEL	DIAGONAL SIZE
RM60	< 170 mm | 7"
RM 70GO! 2.0	< 200 mm | 8"
RM 90GO!	< 250 mm | 10"
RM 100GO!	< 350 mm | 13"
RM 120X	< 400 mm | 15"

ASPHALT

ABRASIVENESS high | **CRUSHABILITY** easy

PRIMARY CRUSHING

Chunk asphalt peeled from roads and parking lots.

HAMMER SELECTION

High chrome hammers.
2 low, 2 high.

High chrome hammers with ceramic inlays for extended wear life.
2 low, 2 high.

OPERATIONAL TIPS

- Feed with an excavator so that you can spot potential tramp iron or milling bits.
- Break oversize pieces with your bucket teeth.
- Use as little water for dust suppression as possible and as much as necessary to keep wear to a minimum.
- Segregate recirculating petromat via the cross conveyor of the crusher screen attachment if needed to maximize production.

MAX FEED SIZE

MODEL	DIAGONAL SIZE
RM60	19" | 500 mm
RM 70GO! 2.0	23" | 600 mm
RM 90GO!	25" | 650 mm
RM 100GO!	31" | 800 mm
RM 120X	33" | 850 mm

SECONDARY CRUSHING

Asphalt millings and asphalt material generated by a full-depth reclaimer.

HAMMER SELECTION

High chrome hammers.
4 high.

High chrome hammers with ceramic inlays for extended wear life.
4 high.

OPERATIONAL TIPS

- Use a mobile screening plant to reduce fines to minimize wear and maximize production.
- Use as little water for dust suppression as possible and as much as necessary to keep wear to a minimum.
- Feed with an excavator to spot potential milling bits or milling bit holders in the pile that can break your hammers.

MAX FEED SIZE

MODEL	DIAGONAL SIZE
RM60	< 170 mm | 7"
RM 70GO! 2.0	< 200 mm | 8"
RM 90GO!	< 250 mm | 10"
RM 100GO!	< 350 mm | 13"
RM 120X	< 400 mm | 15"

LIMESTONE

ABRASIVENESS low | **CRUSHABILITY** easy

PRIMARY CRUSHING

Blast or excavated limestone.

HAMMER SELECTION

Martensitic blow bars with ceramic inlays.
2 low, 2 high configuration.

OPERATIONAL TIPS

- Feed with an excavator so that you can set oversize boulders aside and reduce the risk of hammer breakage.
- Keep your crusher pre-screen open to bypass fines and extend the wear life of your hammers.
- If the feed average size exceeds your recommended impact crusher feed size the use of a primary jaw crusher is recommended.

MAX FEED SIZE

MODEL	DIAGONAL SIZE
RM60	11" | 300 mm
RM 70GO! 2.0	14" | 350 mm – 19" | 500 mm
RM 90GO!	15" | 400 mm – 21" | 550 mm
RM 100GO!	15" | 400 mm – 25" | 650 mm
RM 120X	17" | 450 mm – 29" | 750 mm

SECONDARY CRUSHING

Preprocessed limestone by a mobile jaw crusher.
Rerun of an aggregate stockpile.

HAMMER SELECTION

High chrome hammers.
4 high.

High chrome hammers with ceramic inlays for extended wear life.
4 high.

OPERATIONAL TIPS

- Use a mobile screening plant to segregate fines and finished aggregates to minimize wear and maximize production.

MAX FEED SIZE

MODEL	DIAGONAL SIZE
RM60	< 170 mm | 7"
RM 70GO! 2.0	< 200 mm | 8"
RM 90GO!	< 250 mm | 10"
RM 100GO!	< 350 mm | 13"
RM 120X	< 400 mm | 15"

BASALT

ABRASIVENESS medium | **CRUSHABILITY** medium

PRIMARY CRUSHING

Blast or excavated basalt.

HAMMER SELECTION

Martensitic blow bars with ceramic inlays. 2 low, 2 high configuration.

OPERATIONAL TIPS

- Feed with an excavator so that you can set oversize boulders aside and reduce the risk of hammer breakage.
- Keep your crusher pre-screen open to bypass fines and extend the wear life of your hammers.
- If the feed average size exceeds your recommended impact crusher feed size the use of a primary jaw crusher is recommended.
- Optional 20% thicker wear liners extend the wear life and improve your operating costs.

MAX FEED SIZE

MODEL	DIAGONAL SIZE
RM60	7" | 200 mm
RM 70GO! 2.0	4" | 100 mm – 11" | 300 mm
RM 90GO!	6" | 150 mm – 13" | 350 mm
RM 100GO!	6" | 150 mm – 13" | 350 mm
RM 120X	7" | 200 mm – 15" | 400 mm

SECONDARY CRUSHING

Preprocessed basalt by a mobile jaw crusher.
Rerun of an aggregate stockpile.

HAMMER SELECTION

High chrome hammers.
4 high.

High chrome hammers with ceramic inlays for extended wear life.
4 high.

OPERATIONAL TIPS

- Use a mobile screening plant to segregate fines and finished aggregates to minimize wear and maximize production.

MAX FEED SIZE

MODEL	DIAGONAL SIZE
RM60	< 170 mm | 7"
RM 70GO! 2.0	< 200 mm | 8"
RM 90GO!	< 250 mm | 10"
RM 100GO!	< 350 mm | 13"
RM 120X	< 400 mm | 15"

GRANITE

ABRASIVENESS high | **CRUSHABILITY** medium

PRIMARY CRUSHING

Blast granite rock.

HAMMER SELECTION

Martensitic blow bars with ceramic inlays. 2 low, 2 high configuration.

OPERATIONAL TIPS

- Feed with an excavator so that you can set oversize boulders aside and reduce the risk of hammer breakage.
- Keep your crusher pre-screen open to bypass fines and extend the wear life of your hammers.
- If the feed average size exceeds your recommended impact crusher feed size the use of a primary jaw crusher is recommended.
- Optional 20% thicker wear liners extend the wear life and improve your operating costs.

MAX FEED SIZE

MODEL	DIAGONAL SIZE
RM60	8" | 220 mm
RM 70GO! 2.0	11" | 300 mm – 14" | 400 mm
RM 90GO!	13" | 350 mm – 17" | 450 mm
RM 100GO!	13" | 350 mm – 17" | 450 mm
RM 120X	15" | 400 mm – 19" | 500 mm

SECONDARY CRUSHING

Preprocessed granite by a mobile jaw crusher.
Rerun of an aggregate stockpile.

HAMMER SELECTION

High chrome hammers.
4 high.

High chrome hammers with ceramic inlays for extended wear life.
4 high.

OPERATIONAL TIPS

- Use a mobile screening plant to segregate fines and finished aggregates to minimize wear and maximize production.

MAX FEED SIZE

MODEL	DIAGONAL SIZE
RM60	< 170 mm | 7"
RM 70GO! 2.0	< 200 mm | 8"
RM 90GO!	< 250 mm | 10"
RM 100GO!	< 350 mm | 13"
RM 120X	< 400 mm | 15"

SAND & GRAVEL

ABRASIVENESS medium | **CRUSHABILITY** medium

PRIMARY CRUSHING

Bony gravel from a bank or river gravel.

HAMMER SELECTION

Martensitic blow bars with ceramic inlays. 2 low, 2 high configuration.

OPERATIONAL TIPS

- Feed with an excavator so that you can set oversize boulders aside and reduce the risk of hammer breakage.
- Keep your crusher pre-screen open to bypass fines and extend the wear life of your hammers.
- Optional active pre-screens improve the bypassing and segregating of fines prior to the crushing process.
- Optional 20% thicker wear liners extend the wear life and improve your operating costs.
- If the feed average size exceeds your recommended impact crusher feed size the use of a primary jaw crusher is recommended.

MAX FEED SIZE

MODEL	DIAGONAL SIZE
RM60	18" | 475 mm
RM 70GO! 2.0	11" | 300 mm – 15" | 400 mm
RM 90GO!	13" | 350 mm – 17" | 450 mm
RM 100GO!	13" | 350 mm – 21" | 550 mm
RM 120X	15" | 400 mm – 23" | 600 mm

SECONDARY CRUSHING

Sand and gravel or conglomerate with a high percentage of fines.

HAMMER SELECTION

High chrome hammers.
4 high.

High chrome hammers with ceramic inlays for extended wear life.
4 high.

OPERATIONAL TIPS

- Use a mobile screening plant to segregate fines and finished aggregates to minimize wear and maximize production.
- Upgrade on-board pre-screening capacity through an active pre-screen or the patented RM Active Grid to reduce fines and extend the wear life of your hammers.

MAX FEED SIZE

MODEL	DIAGONAL SIZE
RM60	< 170 mm | 7"
RM 70GO! 2.0	< 200 mm | 8"
RM 90GO!	< 250 mm | 10"
RM 100GO!	< 350 mm | 13"
RM 120X	< 400 mm | 15"

MAXIMIZE PROFIT
BY KEEPING SPARE BLOW BARS ON THE SHELF

Saving operating costs and maximizing profits is the aim of the game. In the event of a hammer breakage without spare hammers on the shelf, this means not just a machine down but crew and job down.

Keep essential crusher spares on the shelf to keep crushing and become less dependent on store hours and shipping schedules.

HAVING NO SPARE HAMMERS AVAILABLE IS COSTLY

- Producing 150 TPH of ¾"- base material at an estimated value of $8 per ton
- Downtime of 4 hours results in the loss of 600 tons of material at a total value of $4,800
- Your excavator is not running at $150 per hour = $600
- Your loader is down, your ground man is down, and you find yourself on the phone all morning to get back up and running.

MONITOR WEAR PROGRESS DAILY AND CHANGE HAMMERS IN TIME

Hammers needs flipped and changed whenever the wear limit is reached. RUBBLE MASTER impact crushers come standard with an onboard hammer-changing device that helps you get the job done easily and safely in the field.

CHECK OUT HOW THIS IS DONE!

THE RIGHT CLOSED-SIDE SETTING IMPROVES YOUR RESULTS

The closed side setting needs to be adjusted regularly to accommodate wear or after changing your hammers.

CHECK OUT HOW THIS IS DONE!

SPOT ISSUES EARLY
TO MINIMIZE DOWNTIME AND
MAXIMIZE WEAR LIFE

NORMAL EVEN HAMMER WEAR

Hammers are worn evenly across the entire rotor width.

FAILING TO CHECK WEAR

Failing to change hammers within the minimum wear zone results in expensive rotor damage.

> SOLUTION

Open crusher box to inspect wear progress daily.
Get replacement hammers installed in time.

EXCESSIVE WEAR ON THE SIDE

Material build-up on the side plates cause premature wear of hammers and rotor body. Watch material moisture and dirt in your feed.

> SOLUTION

Reduce fines material that can cake up on the sides. Reduce moisture by adjust the dust suppression and mixing wet material with dry material. Make sure you feed your material evenly.

UNEVEN WEAR

Premature wear on one side indicates that the crusher is not level from side to side causing the feed material to slide to one side.

> SOLUTION

Make sure the machine is leveled from side to side.

BROKEN HAMMER

An uncrushable or hard oversize rock caused a crack or material chipped away.

> SOLUTION

The broken hammer and the hammer on the opposite side need to be replaced. Control feed size. Remove tramp iron from the feed.

THE PART THAT MATTERS

RUBBLE MASTER understands that when your equipment goes down, it doesn't just cost you time, it costs you money. That's why, when you choose RUBBLE MASTER, you get more than great equipment, you get the industry's best service and parts support.

Welcome! to our world

RM GROUP

ASK US ALSO FOR OUR OTHER PRODUCTS


SCALPING SCREENS


INCLINE SCREENS


TRACKED CONVEYORS

⚠ **The information provided is based on experience and represents approximate values. Consult your local material processing specialist.**

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