

Roller Press Scanner

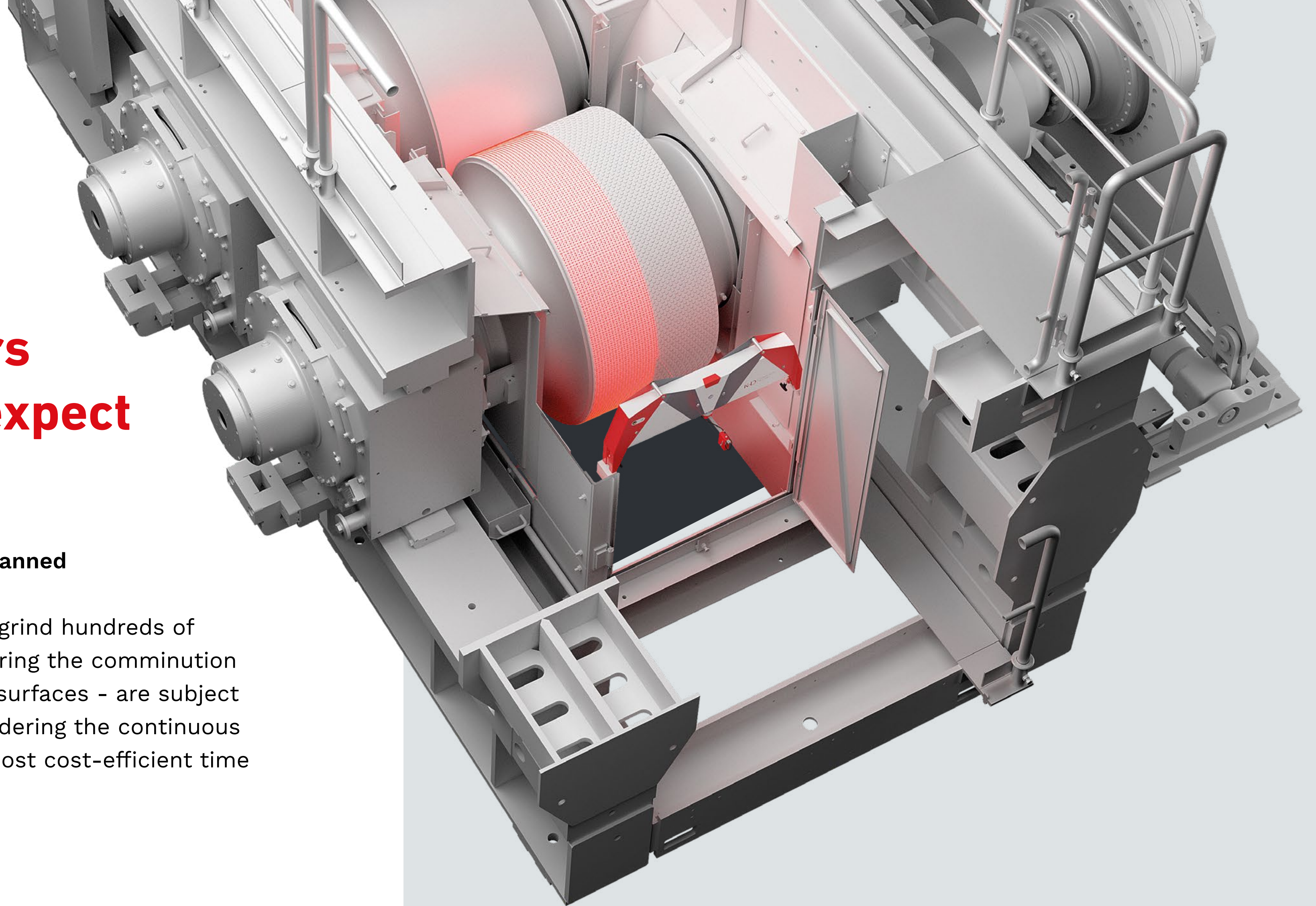
Faster and more precise measurement
for optimized maintenance and best roller
press performance

Your roller press rollers can do more than you expect

It's all about the right moment

Refurbish when it makes sense, not when it is planned

Roller presses perform hard work, literally! They grind hundreds of tons of material, day after day, all year round. During the comminution process, the machine - and especially the roller surfaces - are subject to massive forces and enormous pressure. Considering the continuous production process, it is crucial to identify the most cost-efficient time for a maintenance stop.



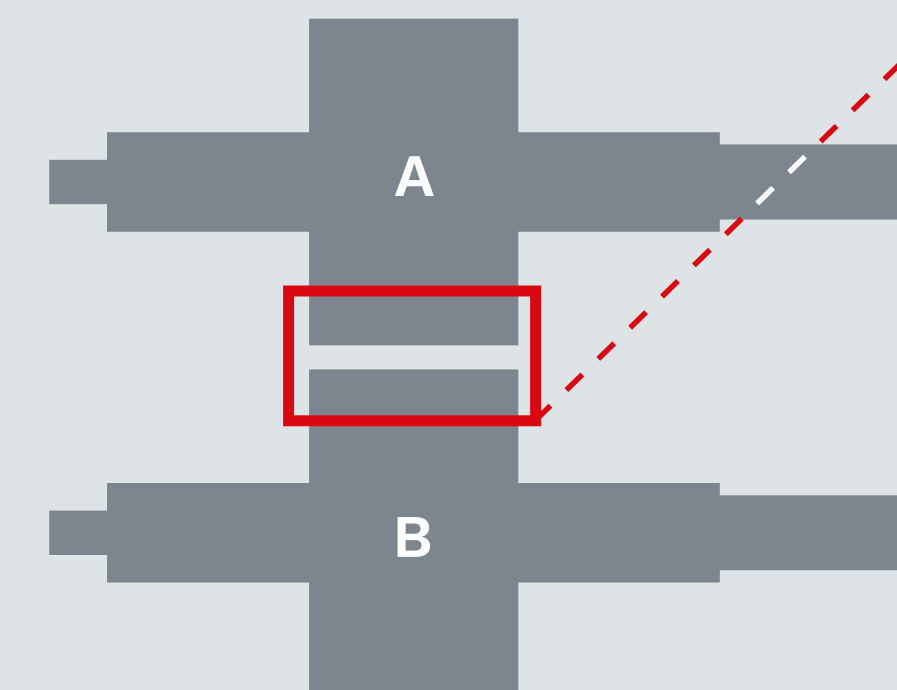
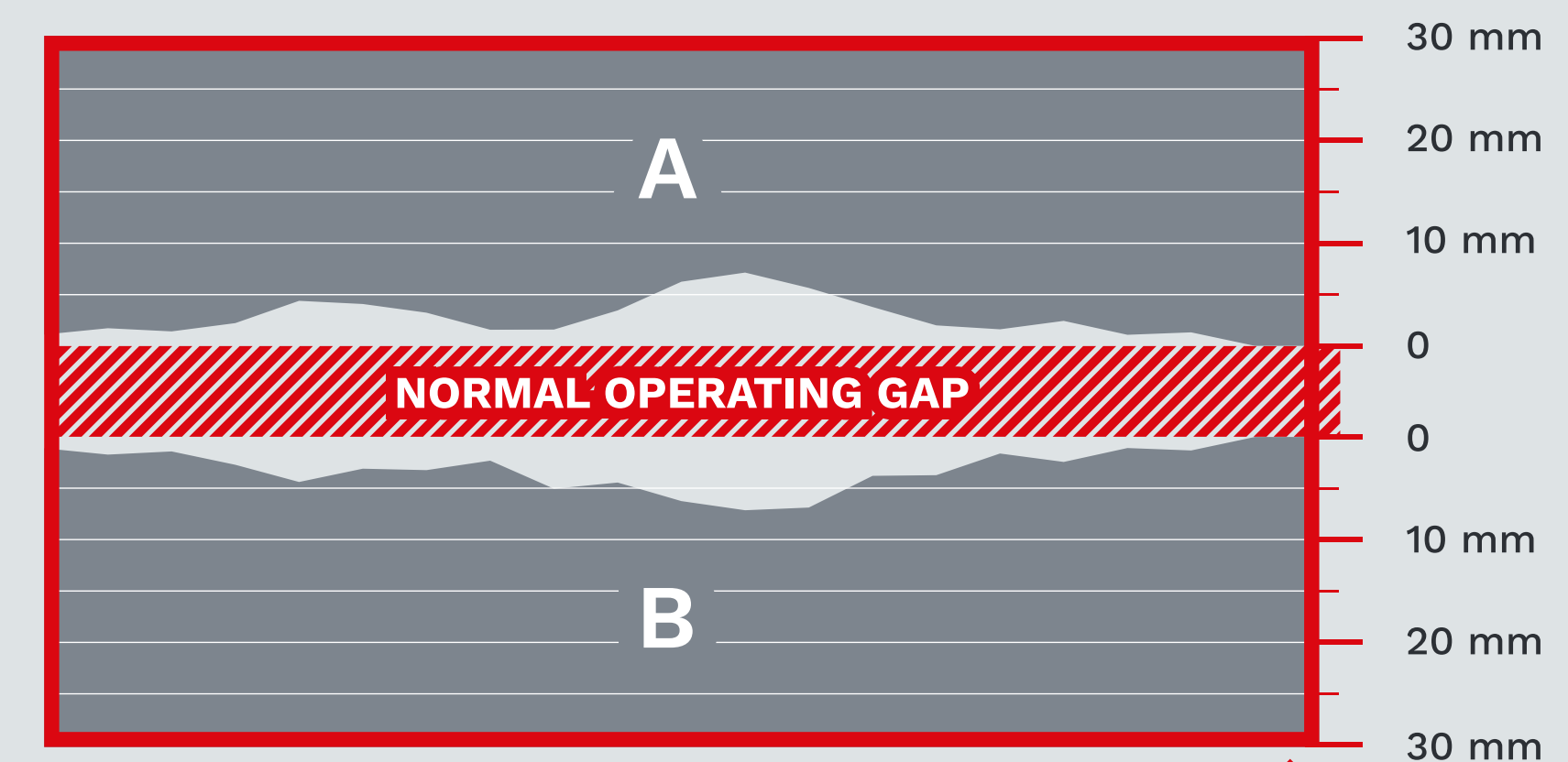
Maintain efficient production

Repair damage early to avoid extended downtime.

Surface damage has a serious effect on the condition and performance of your equipment. Along with the raw material, different contaminants from the quarry can find their way into the roller press. Wear of the roller surfaces is the unavoidable result.

With progressive wear, the risk of an uneven comminution gap between the rollers increases. Consequences range from reduced performance to longer periods of machine downtime and loss of production. The roller press scanner from KHD detects alarming conditions early and helps to prevent negative consequences.

**AN UNEVEN COMMINUATION GAP
CONSIDERABLY INFLUENCES THE
EFFICIENCY OF YOUR PRODUCTION!**



The roller press scanner

Roller monitoring redefined – smart, quick and reliable!

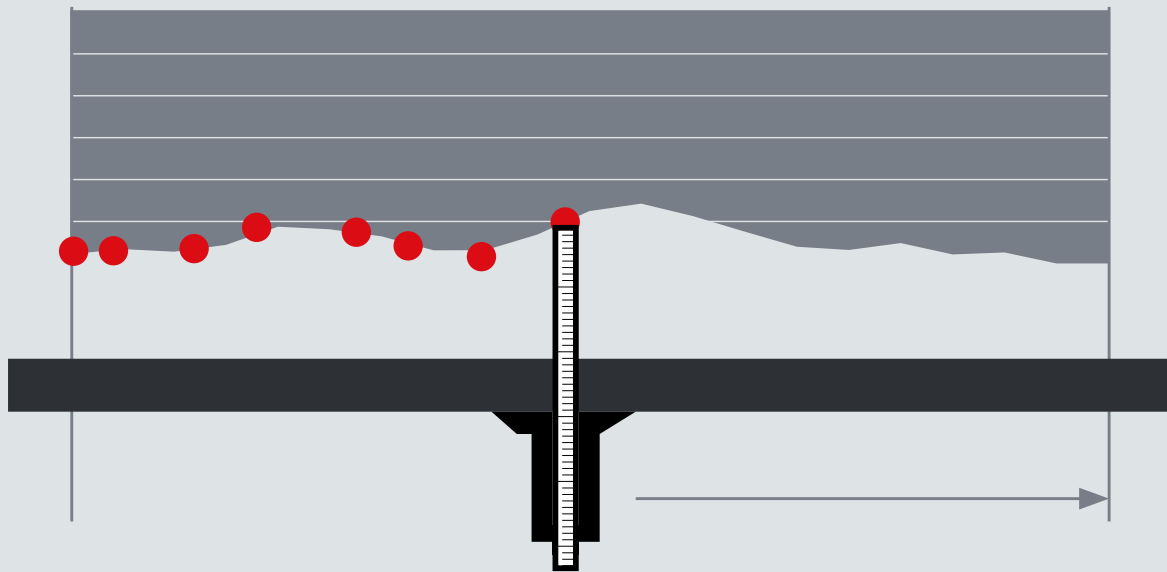
The roller press scanner really is a smart device. It is easy to operate via smartphone or tablet and can be installed quickly and easily by just two employees.



Conventional surface measurement takes many hours and is of limited accuracy. Ordinary manual inspection is always conducted at the same prescribed spots every 90 degrees around the roller. That means only four areas of the entire surface are inspected properly. The chances of missing progressive wear patterns and damage are high.

KHD's roller press scanner does a much more thorough scan! Measurement is conducted inside the machine while the roller is moving. That way, the scanning process is much quicker and produces a surface model that is substantially more accurate.

Conventional measurement by hand

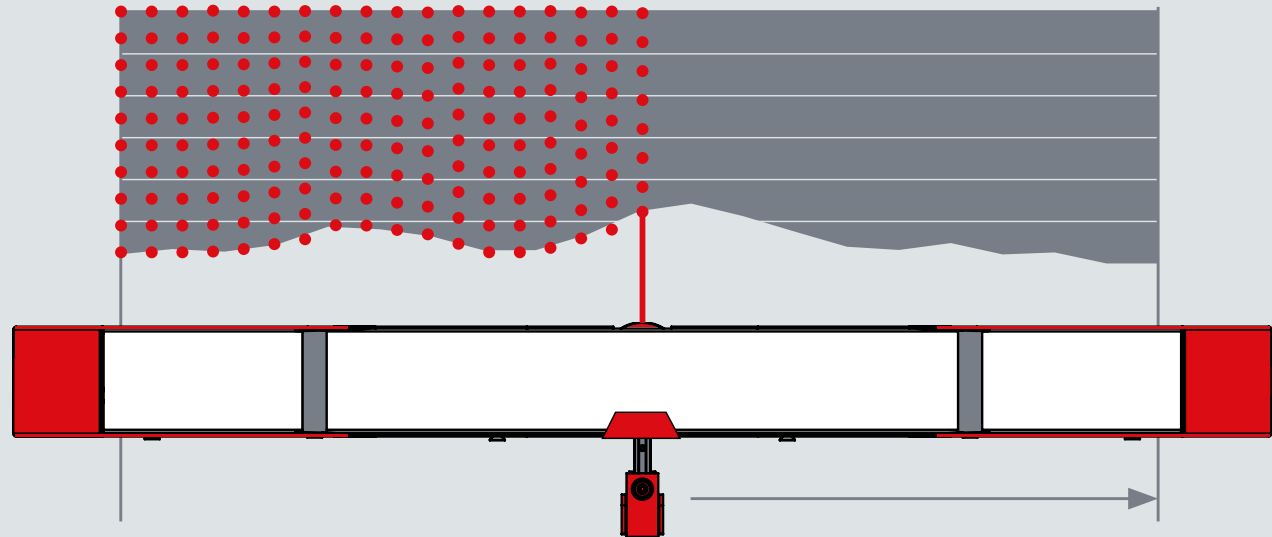


210 min* per roller

280* Individual data points

4 fixed measurement points
every 90° of roller surface

Smart and automatic measurement with the roller press scanner



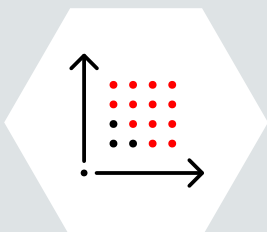
30 min* per roller

3,600,000* Individual data points

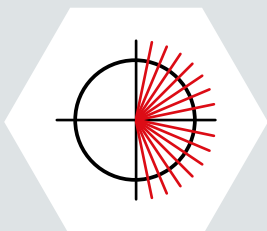
Variable measurement points
around the entire roller circumference



Time



Resolution



Measurement Points

* The comparison is based on the measurement of a roller with a diameter of 170 cm and a width of 180 cm.

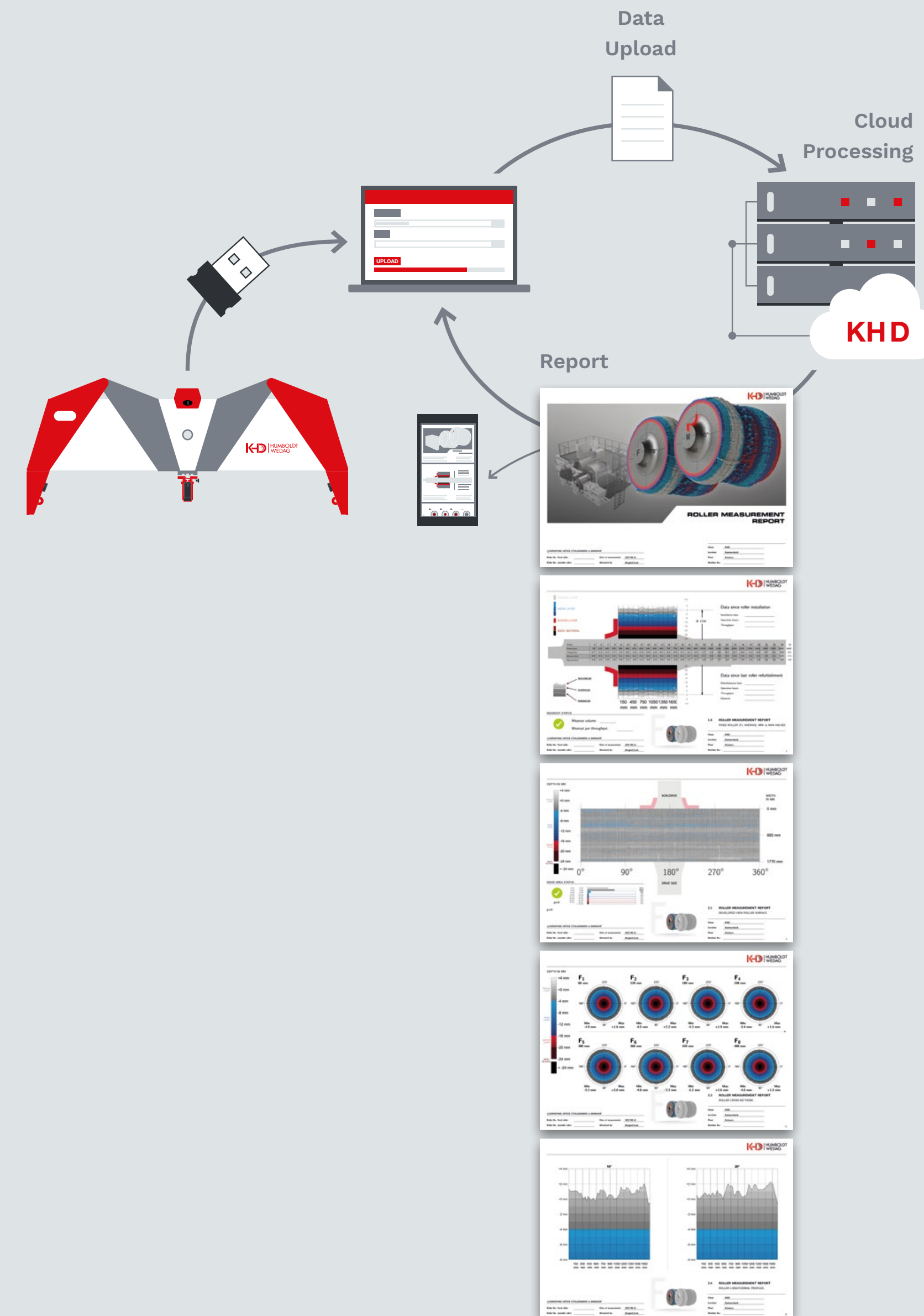
Next level reporting

Comprehensive and reliable data for best decisions

Reduce maintenance costs and effort with the help of detailed reports

Regular maintenance intervals and thorough measurements are the key to maintaining high performance of your equipment. The reports from KHD's roller press scanner facilitate better maintenance planning.

By providing detailed information, including surface condition, existing damage and the overall wear level of your rollers, our reports help you to precisely determine if and when surface refurbishment really makes sense.

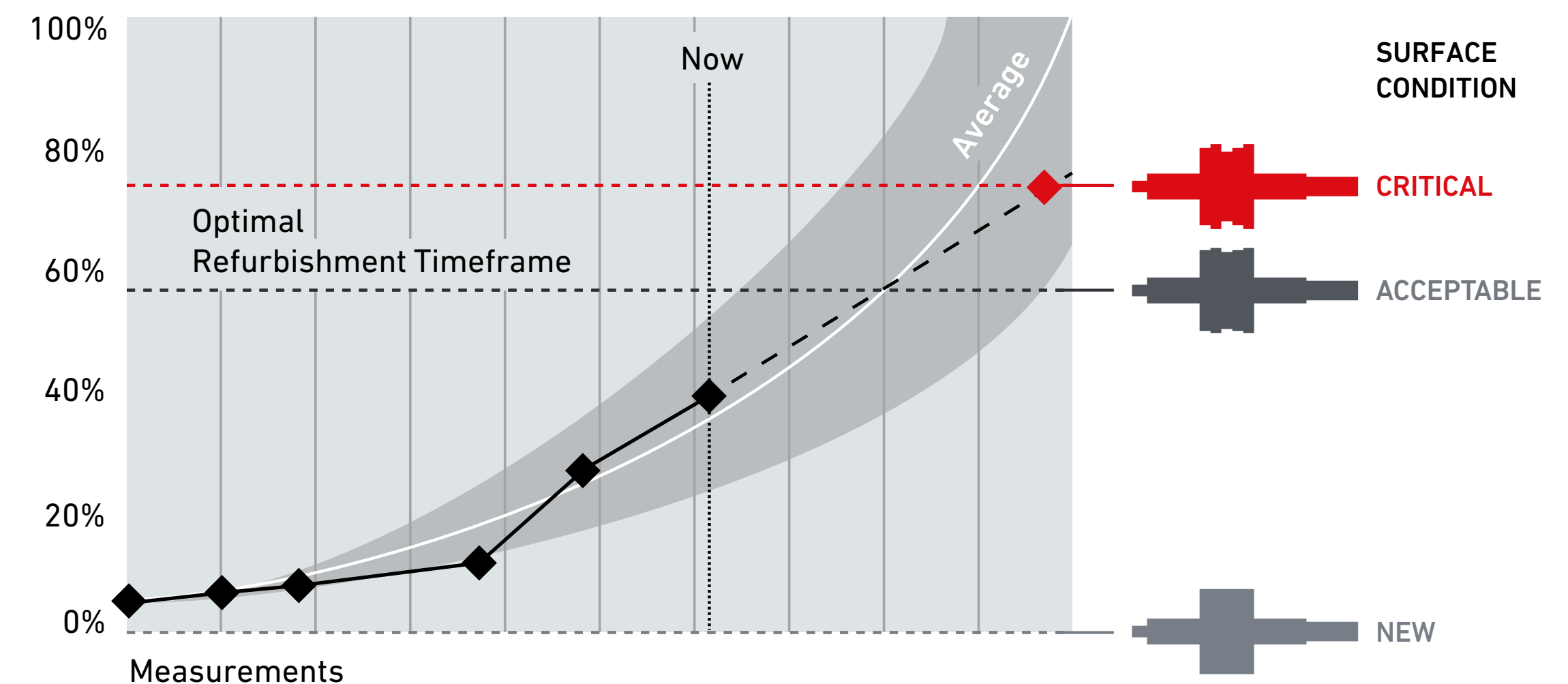


Be proactive, produce predictably

Continuous reporting enables exact planning and smoother production

Our reports reveal even the smallest irregularities and damage to your roller surface. That gives you the option to be proactive with your refurbishment measures. Continuous reporting enables the ideal timing of maintenance work and brings two crucial benefits. First of all, you prevent unplanned stoppages and related production loss.

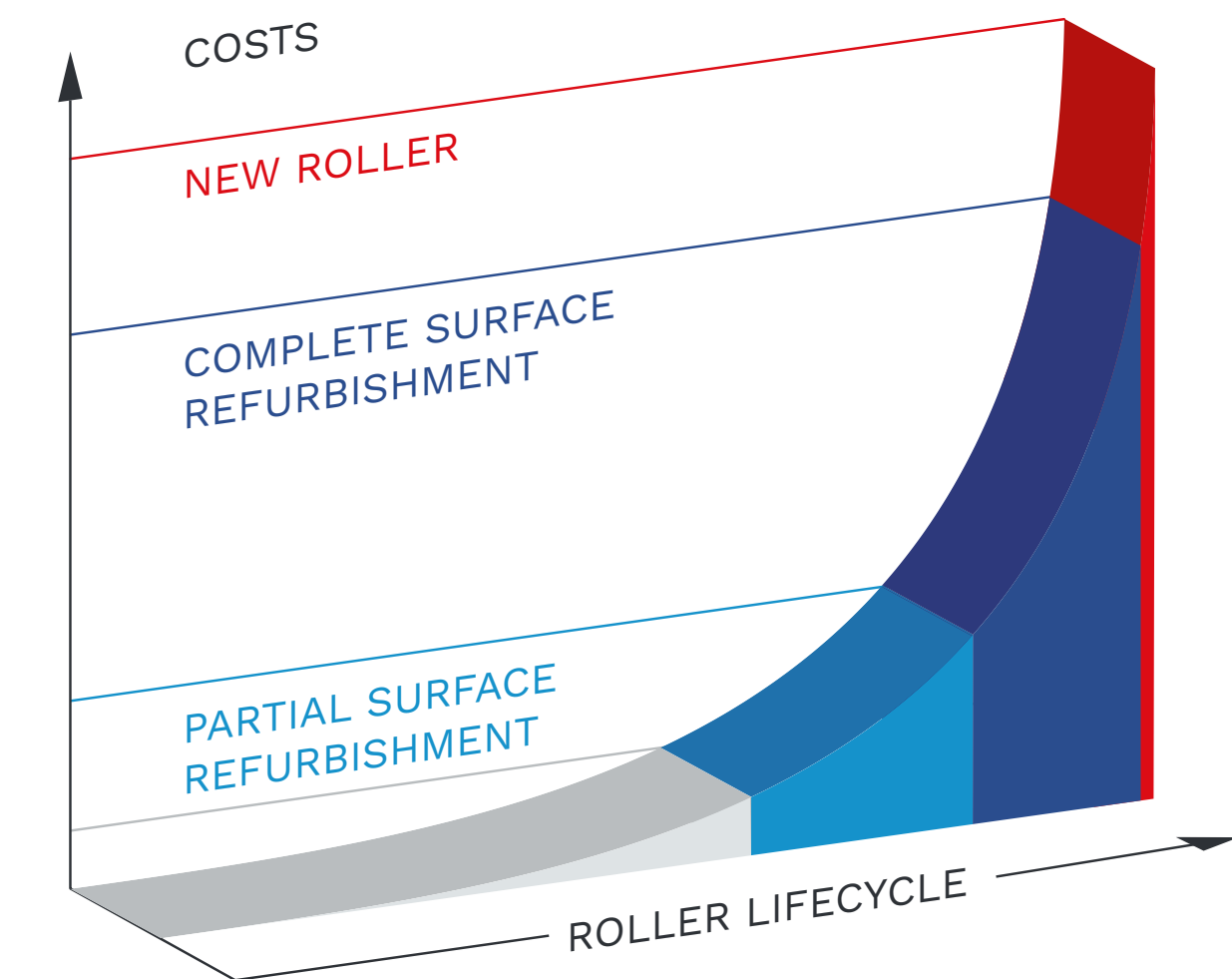
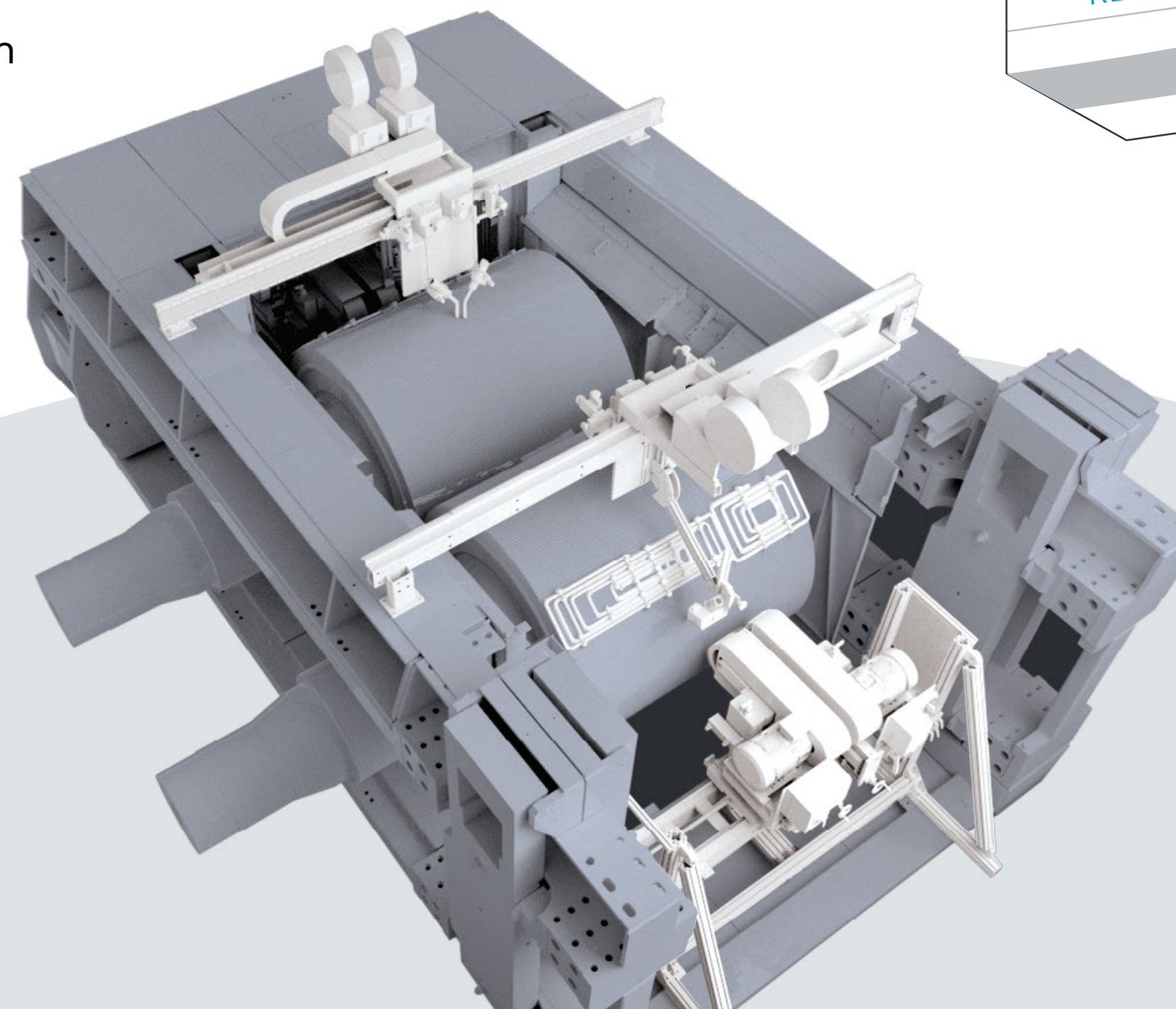
Secondly, with the roller press scanner, you are able to get as much life out of your rollers as possible. That means more efficient production, and in the long run, considerably reduced maintenance costs.

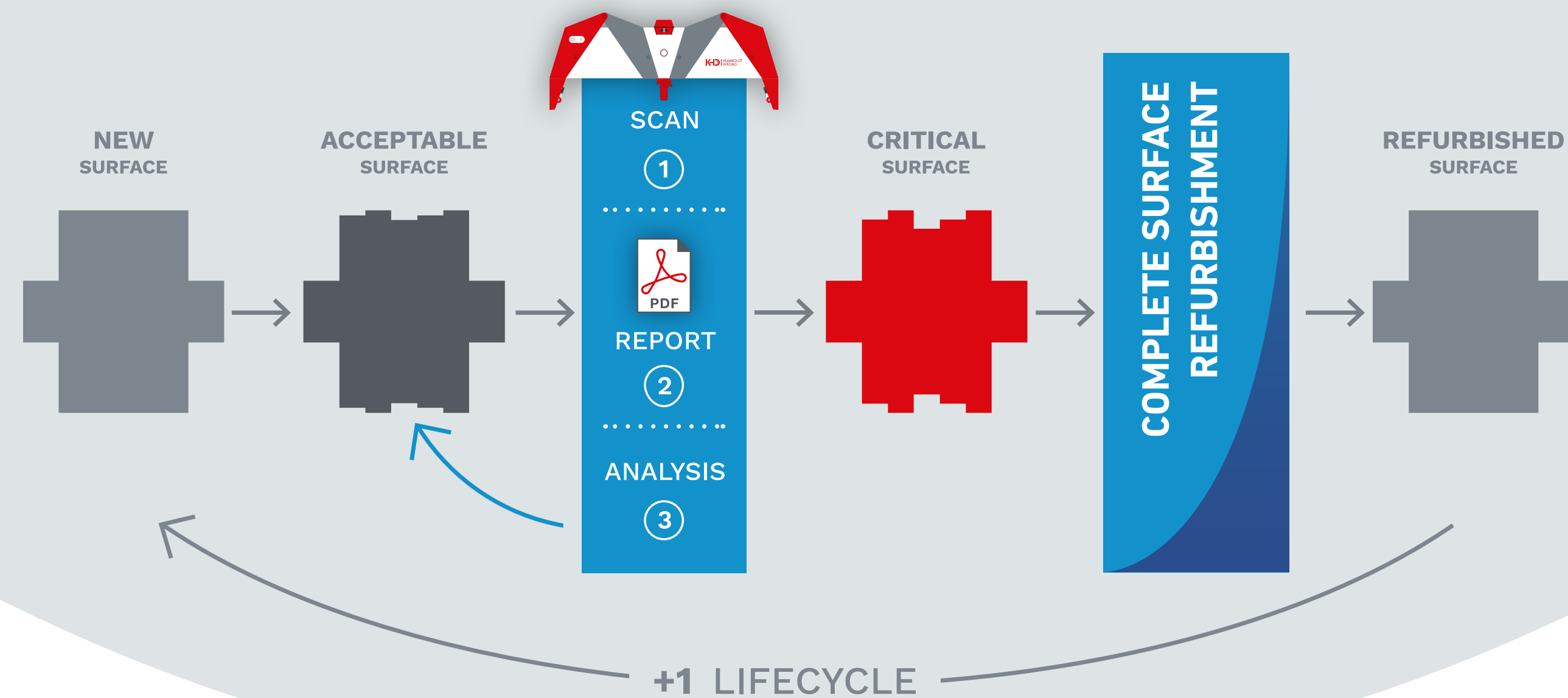


Service

A strong partner for maintenance, repairs and beyond

More than 35 years ago, we introduced roller press technology to the cement industry. Back then, we were pioneers. Today we are experts for any cement-related application of roller presses. We are your partner for repairs and maintenance, as well as optimization projects and troubleshooting. Expect first-class service and the highest-quality workmanship, every time. We can execute partial or complete refurbishment of your equipment. And if you need new rollers, we can procure and supervise the installation of those for you as well.





The refurbishment cycle

When and how to act

We recommend regular surface scans every 1000 operating hours to exactly track the surface condition. Smaller deficiencies in the roller surface can be fixed by your own staff according to our repair instructions. If you see the need for support, we can guide you remotely or provide an expert that oversees the work on site. In cases of more substantial damage or progressive wear, we take over and execute the repair process for you. That can be done in-situ (to reduce disassembly work) or in a local workshop.

Get the most from new rollers

Each roller replacement or complete refurbishment should be followed by a zero-measurement. By analyzing your scan data, we ensure that the lifetime of your equipment is as long as it can be. We recommend what maintenance work to do and when to do it. And by considering your regular maintenance patterns, we make sure that the overall costs remain low.

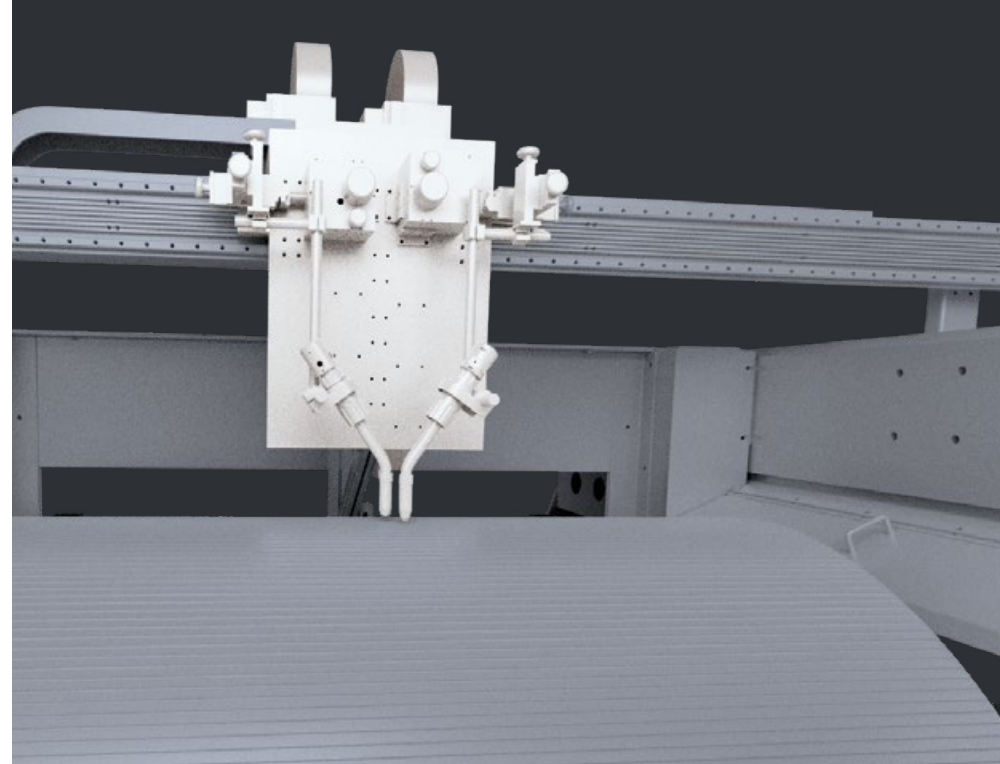
Refurbishment - how it is done

Roller presses come with different roller surfaces.

The first type of surface is hard facing. This is a welded surface of various material layers that all have different chemical compositions. The welding process creates a hardened protective wear layer on the roller surface.

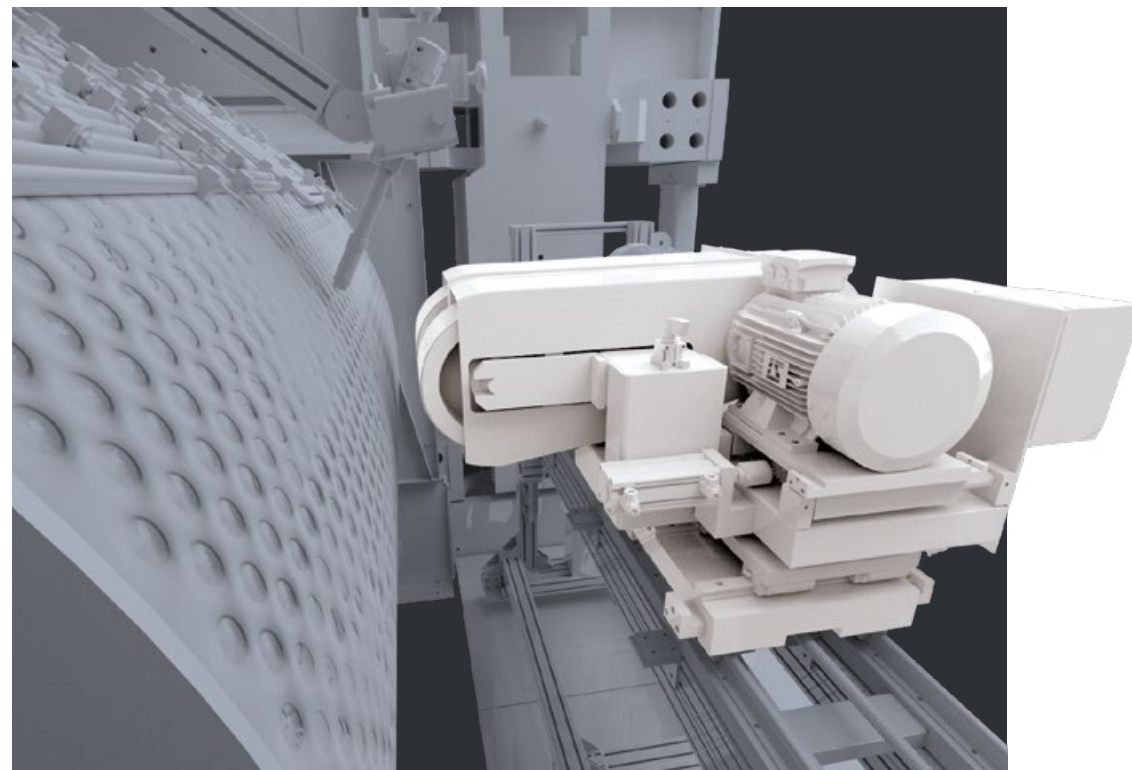
The second surface type from KHD is stud lining - and is far more sophisticated. Extremely dense tungsten carbide material is sintered into studs that are glued into pre-drilled holes in the roller surface. Due to the height difference between the studs and the actual roller surface, an autogenous wear layer is created by the ground material that settles between the studs on top of the roller surface. Although studs are extremely dense and tough, they are also subject to wear. However, considering the same raw material composition and process conditions, the wear rate of studs is considerably lower than hard-faced surfaces.





The three steps for a new hard-facing

The refurbishment of hard-faced surfaces requires a multi-stage process. The remaining wear layer must first be removed with the help of grinders or plasma cutters to reestablish a true and level base. In the subsequent steps, multiple protective layers are rewelded to form the new hard-faced surface.



Stud grinding

When the stud lining surface shows progressive concave wear, it can be refurbished with the help of a special grinding application that was developed and perfected by KHD. This grinding process is conducted in-situ (inside the machine). This allows us to execute the required work as quickly and efficiently as possible to reduce machine downtime to a minimum.

Consult our experts

For more information on roller press refurbishment, audits and related questions, please contact your local KHD representative or our experts at the KHD headquarters in Germany.

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