

# ABON<sup>®</sup> Low Speed Sizers

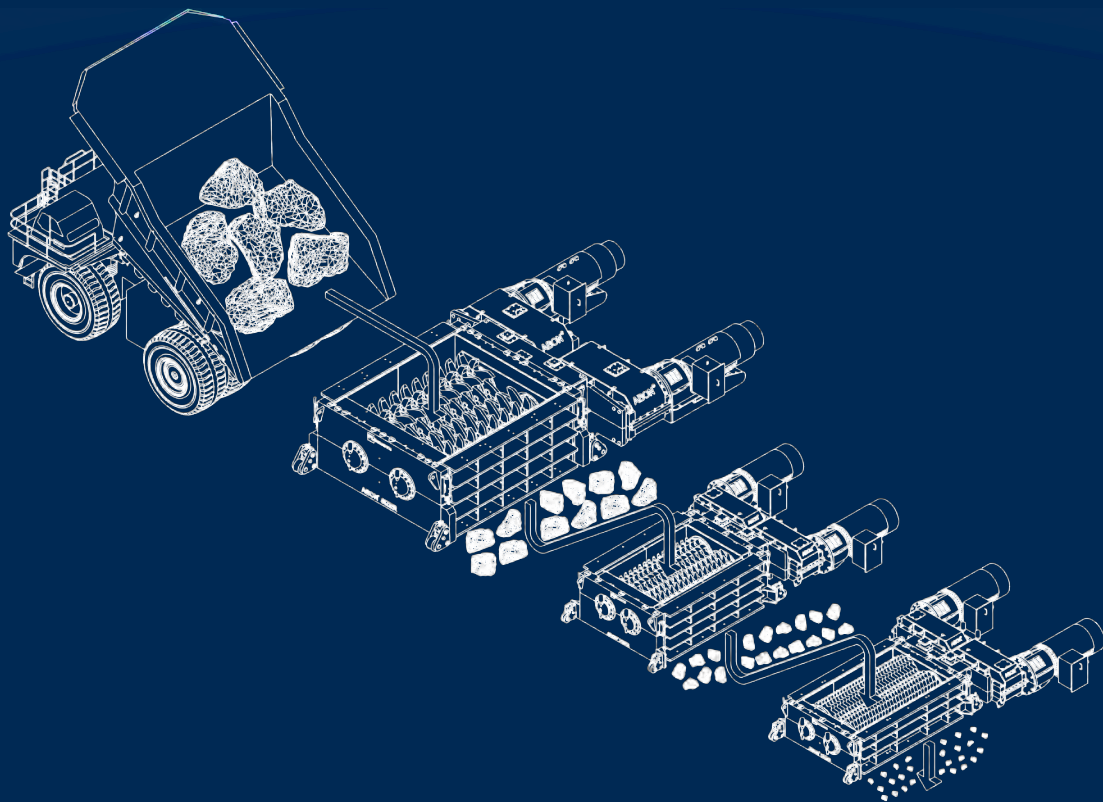
High capacity, low profile,  
ease of maintenance



**FLS**

# ABON® Sizers serve your production needs

ABON® Sizers are utilised in a wide variety of configurations to meet your production demands. Primary, secondary, tertiary and quaternary models can be combined for single or multiple stage crushing formats.



## Key benefits

- Low emissions, noise and dust
- Low operating costs
- Minimal environmental footprint and water requirements
- Standard or customised to your needs
- Simple infrastructure requirements



ABON manufacturing facility

## ABON® – Low Speed Sizers Designed for the life of your mine

The cost of parts, labour and low productivity can place a strain on operations unless you have the right comminution solution.

We designed our ABON® Low Speed Sizers to combat these challenges. That's why major resource and mining companies around the globe trust us with their sizing needs.

### Widest Range of Applications

ABON Sizers operate in the widest range of applications in industry. From standard traditional builds, to our largest model capable of processing in excess of 10,000tph at feed sizes of 1600mm and up to 500MPa.

500MPa has never been considered the realm of Twin Roll Sizers, however when our customer presented the challenge the new Extreme Duty ABON(R) 16/400CHDTD-RA Sizer was developed, and has certainly met all expectations.

### Tailored to your plant needs

Installing the right equipment to suit your project needs is a major challenge when it comes to efficient sizing and crushing. We are not just another sizer supplier. For over 50 years, we have been engineering and manufacturing crushing solutions in-house using our ABON modular designs.

We have the knowledge, experience and capability to provide a targeted solution, fully backed by our competent team. Whether you need equipment that is completely customised, or carefully selected from our extensive standard range, ABON® Low Speed Sizers will revolutionize your operations.

## Low speed sizing resolves typical crushing challenges

Resource and mining companies around the world choose ABON® because of the unique combination of benefits we provide. Low roll speed, high torque and unique tooth profiles work together to produce your required product, with minimal fines creation and extended consumable wear life. Low roll speed also allows for a simpler infrastructure design, which reduces plant footprints and the associated civil and construction costs.

## Low speed. High productivity

Low speed doesn't mean less tonnage. ABON Sizers apply high torque that produces exceptional crushing force. Results are reliable and consistent, which translates to high productivity across all mineral types.

Our machines are built to last – with precision-machined frames, purpose-built drive trains, heavy duty components and dependable consumable wear life. Enduring performance means minimal downtime, which is key to high productivity and reliability.

ABON shaft speeds range from 15–76 rpm. Tooth tip speed is selected to suit individual project requirements.

## Material applications

### ABON® Sizers process:

- Full ROM or screened feeds
- Wide range of feed and product size applications
- Ore ranging from soft to hard
- Wet and sticky feeds

### Benefits of ABON® sizing technology

- Low emissions
- Low noise
- Low dust
- Low dynamic forces
- Product size control
- Ease of maintenance
- Suitable for underground, surface, fixed plant and mobile crushing





**Underground, surface,  
fixed, semi-mobile  
and fully mobile IPCC  
installations or retrofit  
installations**



## Simple infrastructure

Our low profile design requires minimal headroom. Low speed generates low vibration and low dynamic loads, which allows for a simpler infrastructure. They are ideal for underground, surface, fixed, semi-mobile and fully mobile IPCC installations, and retrofits.

## Availability

ABON Sizers set the standard for the highest quality and durability, ensuring trouble free operation and maximum availability.

## Sizing segments

Our tooth segments optimise durability and life. Unlimited tooth configurations with various tooth and spacer designs and profiles let you custom select your sizing segments to meet your feed and duty requirements. We prioritise ongoing developments in tooth design and material properties to improve tooth wear life and reduce your costs.

## Scrapers (optional)

Our optional integrated scraper system enhances the natural self-cleaning action of the sizing segments. This system is especially beneficial when processing wet or sticky material.



Integrated scraper system

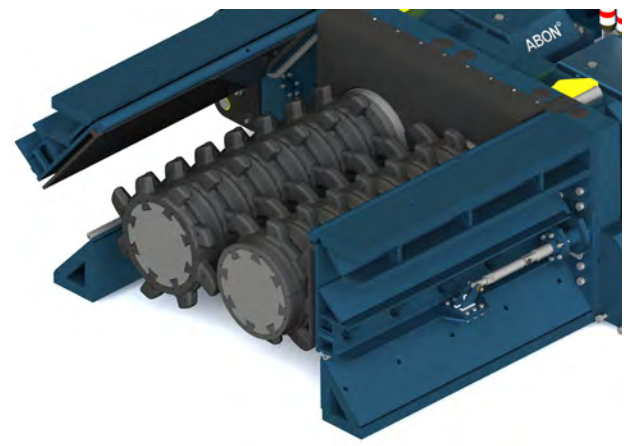
## Tramp protection

High levels of intrusions (flight bars, roof bolts, ripper teeth and more) are common in many applications. ABON Sizers are suitably protected from tramp materials and will not suffer catastrophic damage. The design features that mitigate the potential for damage include:

- Inherent low roll speeds
- Heavy-duty construction
- Underspeed detection
- Fluid coupling
- Thermal protection

## Gate to reject system (optional)

ABON Sizers can be built with integrated reject gates. These hydraulically operated gates allow tramp and uncrushable material to be removed without manual intervention.



Gate to reject system



## Aftermarket support

As the original equipment manufacturer, we provide a fast turnaround on spare parts. Sizer consumable and rotatable spares are strategically stocked globally.

Sizer product experts are based around the world to provide prompt site service and inspections when needed.

## Suitable for:

- Aluminium industry
- Brickworks
- Copper
- Fertilizer
- Lithium
- Niobium
- Rare earth
- Bauxite
- Cement industry
- Coal
- Iron ore
- Nickel
- Overburden
- Many more

## Ease of maintenance

Over 50 years of product development has resulted in features that allow you to easily perform maintenance with minimal disruption and downtime. A direct drive through the electric motor, fluid coupling and heavy duty gearbox comes standard. All sizers include a self-contained oil bath so you do not need an external lubricant system.

Sizing teeth slide into machined slots in the shaft without removing the shafts from the main frame. The modular design accommodates rotatable shaft exchange and other rotatable spares. No special tools are required. No special alignment is needed for assembly or maintenance.

## Optimised wear life

We focus our time and attention on optimising your tooth wear life. Our durable materials and innovative tooth designs combine with low roll speed and high torque, resulting in a better bite and minimal feed-slip to increase wear life and improve productivity.

## Lower operating costs

Power is one of the biggest costs for any materials handling operation. We help you select motor power to suit your specific application to get the most out of each watt of power.

## Exceptional safety

Safety is the ultimate priority in any workplace, especially in the high-risk materials handling environment. ABON Sizers exceed all safety standards and ensure the best protection for your workforce.

Safety features include the ability to start under a full load, preventing the need for hazardous digging out. Blockages can be cleared with bi-directional rotation or via the optional gate to reject system.

## Minimised environmental impact

Mining and materials sectors are under enormous pressure to reduce their environmental impact. ABON Sizers consume less power and generate less dust to reduce your capital and operating costs and eliminate your water use.

The self-contained oil bath lubrication system eliminates the environmental risk of messy and unreliable auxiliary lubrication systems.

All consumable components from the ABON sizers are recyclable.

Decades of continued research and development have enabled ABON Sizers to evolve in terms of operational suitability, reliability, productivity, and efficiency, making FLS a leading choice for environmentally sustainable operations.







### **Respect for space limitations**

Low speeds mean lower dynamics and vibration. This allows for a simpler, more compact design. As well as having a smaller footprint, ABON Sizers require very low headroom. With a low mass and centre of gravity, they are ideal for underground, surface and IPCC systems, and are a suitable option for retrofitting.

### **Flexibility of application**

ABON Sizers easily adapt to all operating conditions. They process anything from iron ore to difficult clay or sticky materials such as bauxite and nickel. They are up to the challenge of full run-of-mine envelopes because they accept larger feeds without hang-ups.

### **Digitalisation**

We supply base machines with simple and reliable digital technology. Digitalisation allows you to customise your condition monitoring, including vibration monitoring, thermal detection, oil level sensing and oil analysis, power consumption and motor speed.

Our optional machine control software is perfect for any operations advancing into the digital era.

# Condition monitoring

Sizers can be fitted with a range of condition monitoring systems to suit your needs.

## Motor:

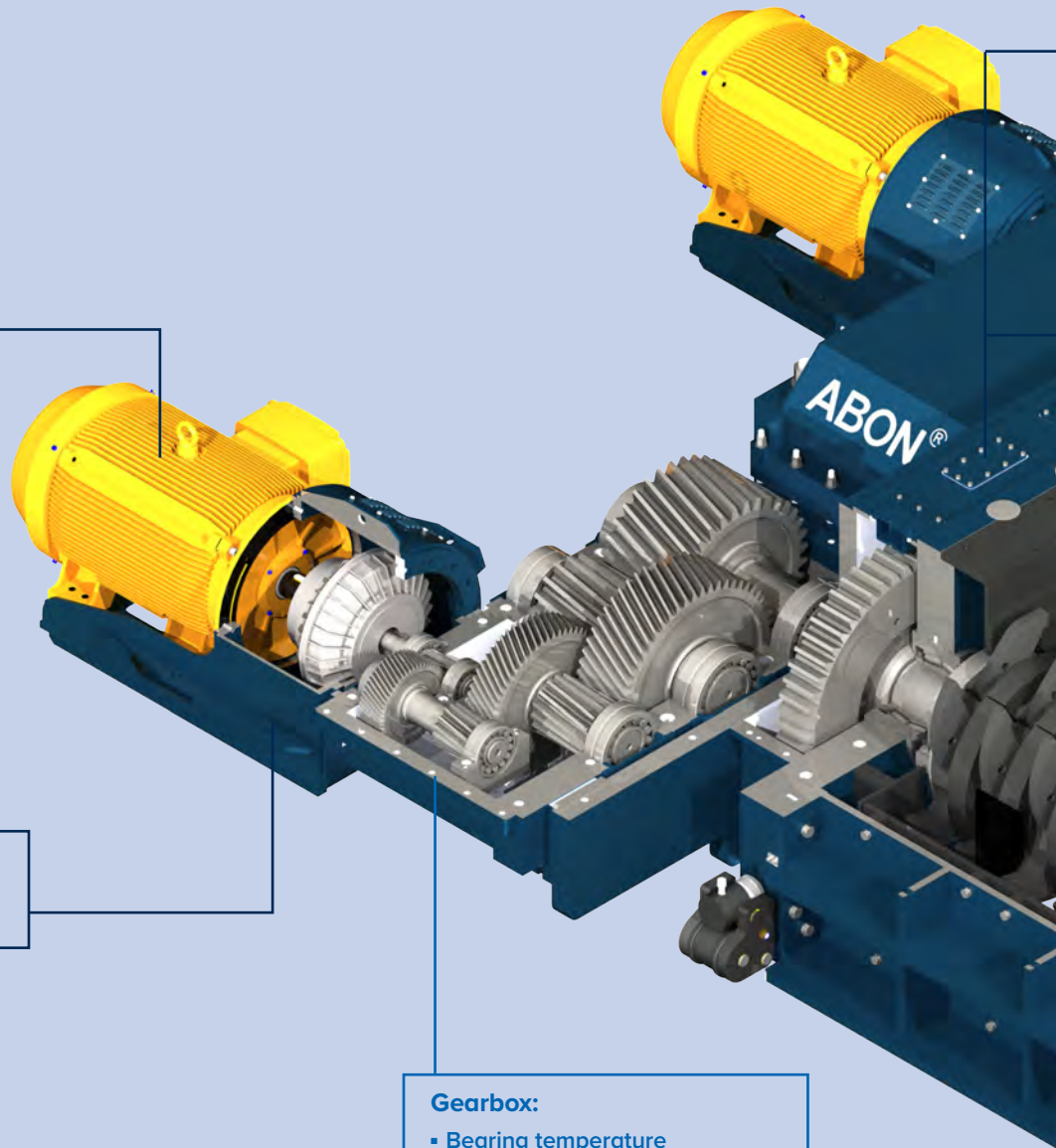
- Current draw
- Winding temperature

Fluid coupling temperature  
(MTS or BTS)

- Standard supply
- **Optional extras** suitable for online condition monitoring

## Gearbox:

- Bearing temperature
- Oil temperature
- Bearing vibration
- Oil heaters (for cold climates)
- Oil level (prestart only)





**Shaft underspeed sensors:**

- Slip detection
- Stall detection
- Roll speed detection

**Drive end**

- Bearing temperature
- Bearing vibration
- Oil temperature
- Oil heaters (for cold climates)
- Oil level (prestart only)

**Non-drive end:**

- Bearing temperature
- Bearing vibration
- Oil temperature
- Oil heaters (for cold climates)
- Oil levels (prestart only)

**Follow us here**



[flsmidth.com/linkedin](https://flsmidth.com/linkedin)



[flsmidth.com/twitter](https://flsmidth.com/twitter)



[flsmidth.com/facebook](https://flsmidth.com/facebook)



[flsmidth.com/instagram](https://flsmidth.com/instagram)



[flsmidth.com/youtube](https://flsmidth.com/youtube)

**Contact us**

**FLSmidth A/S**

2500 Valby  
Denmark  
Tel. +45 3618 1000  
[info@flsmidth.com](mailto:info@flsmidth.com)

**FLSmidth Pty Ltd**

**ABON® Sizers and Rollerscreens**

Airport West · Victoria 3042  
Australia  
Tel +61 3 9338 7011  
[aboninfo@flsmidth.com](mailto:aboninfo@flsmidth.com)



[flsmidth.eco/contact](https://flsmidth.eco/contact)

Copyright © 2023 FLSmidth A/S.  
All Rights Reserved. FLSmidth and FLS are (registered) trademarks of FLSmidth A/S. This brochure makes no offers, representations or warranties of any kind (express or implied), and information and data contained in this brochure are for general reference only and may change at any time. FLSmidth does not guarantee or make any representation regarding the use or the results of the information or the data provided in the brochure in terms of its correctness, accuracy, reliability or otherwise, and shall not be liable for any loss or damage of any kind incurred as a result of the use of the information or data provided in the brochure.