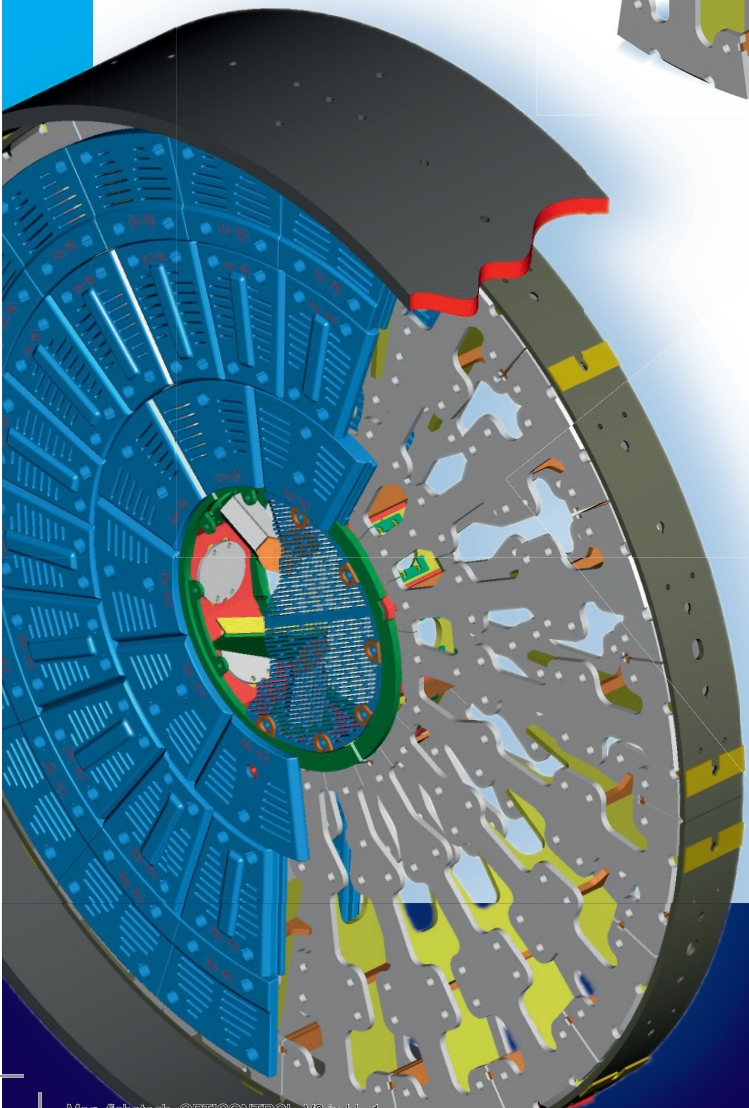


OPTICONTROL® :

THE ORIGINAL INTERMEDIATE FLOWCONTROL DIAPHRAGM

THE MAGOTTEAUX/ SLEGTEN CONCEPT

To adapt the level of material in the mill's first chamber by regulating the level of material contained in the diaphragm itself using a unique integrated adjustable scoops controlling mechanism.



MAGOTTEAUX
SHAPING A WORLD OF PERFORMANCE

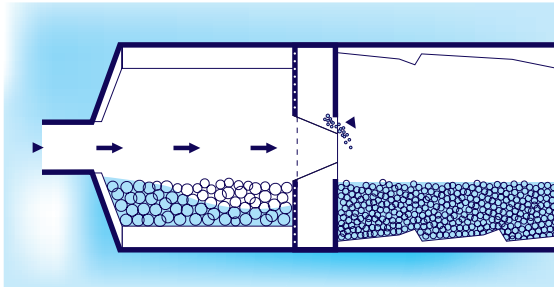
www.magotteaux.com

OPTICONTROL® :

A UNIQUE, RELIABLE & PERFORMING EQUIPMENT...

THE CHALLENGE

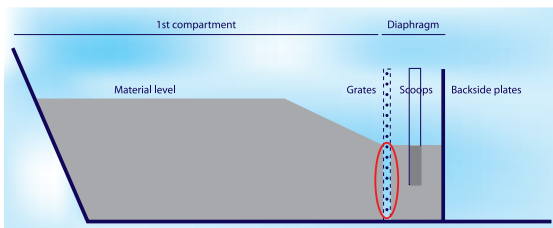
Insure the right amount of material in the mill first chamber to maximize grind and throughput. It is difficult to achieve it adequately without regulating the amount of material in the diaphragm.



Without regulation
The diaphragm is getting empty:
insufficient material load in 1st cpt

REGULATION OF MATERIAL AMOUNT IN THE DIAPHRAGM

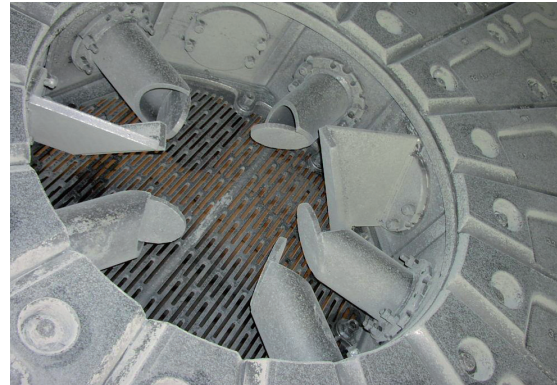
Our design is based on the following principle:



Material level in 1st cpt next to diaphragm = material level in the diaphragm as opening slots in red are choked by the material in the diaphragm → in order to better fill 1st cpt, the level is to be raised IN the diaphragm.

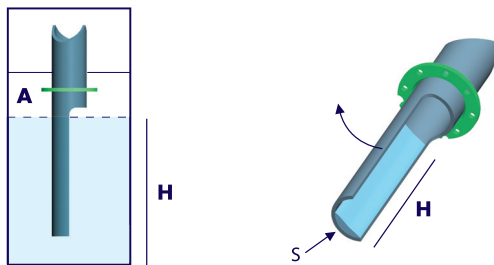
OUR ADJUSTABLE & INTEGRATED SCOOP DESIGN

Modifying the level of material in the diaphragm is attained with the use of our adjustable scoops that are integrated in our Opticontrol®.

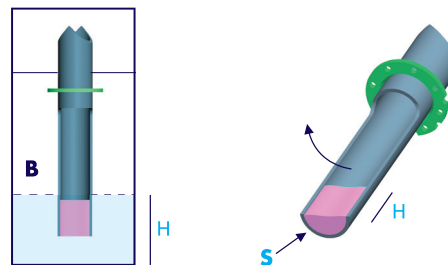


OPTICONTROL® :

FOR EXCELLENCE IN PROCESS



In position A, the scoop “rakes” a small surface **S** but on a major height **H**.



In position B, the scoop faces a wide surface **S** but on a short height **H**.

By revolving the scoop by 90° (**from position B to position A**), material level rises in the diaphragm as well as in the 1st cpt. In both cases, the flow of material going to 2nd cpt remains unchanged i.e. $O = S \times H = S \times H$. Each scoop discharges its own output in the second chamber.

The result is a “loaded” diaphragm with, as a consequence, a higher material filling degree in the 1st cpt whatever the permeability or density of the 1st cpt grinding charge is and independent of the size of the diaphragm grates slots.

THE OPTICONTROL® FRAME

The reliability of our Opticontrol® is guaranteed by a top design and robust frame.

- ST 52.3 steel (in some cases, we recommend one of our cast stainless steel);
- Independent sectors (welded to the frame during installation) → allows for several millimeters deformation on the mill shell during rotation;
- Strong structure of sectors (I-shaped);

- Frame bolted to the shell.
- Sectors are pre-assembled in our workshops. Welding on-site (to frame) is reduced to a minimum;
- Independant sole easy installation even in a deformed mill shell.

THE OPTICONTROL® WEAR PARTS

1. Grates

- Cast steel
- Hardness (core) = 52HRc
- Thickness = 50mm + lifter
- “Anti-leakage” overlapping system

2. Backside plates*

- Cast iron
- 13% hard carbides
- Thickness = 40mm + lifter
- “Anti-leakage” overlapping system

* in the case of highly ventilated mills, we suggest to also equip backside of diaphragm with grates

3. Air screen

- Special wear-resistant alloy



MAGOTTEAUX
SHAPING A WORLD OF PERFORMANCE

www.magotteaux.com

OPTICONTROL® :

FOR YOUR BENEFIT

YOUR ADVANTAGE

From a process viewpoint

- Maximized performance in terms of t/h and kWh/t
- Material regulation independent from wear mechanism → remains constant in time hence keeping mill performance at optimum level
- Design ensures that no unground material passes to 2nd cpt thanks to closed meshed control screen and overlapping grates
- Design guarantees minimum air pressure drop thanks to broad air screen and optimum size grate slots
- Position of diaphragm determined by prior Magotteaux circuit audit to ensure optimum 1st & 2nd cpt lengths

From a mechanical viewpoint

- Robust, reliable & flexible frame the design of which allows composing elements to move and absorb stresses
- Long lasting wear parts thanks to Magotteaux alloys and castings design
- More than 2000 Opticontrol® installed so far

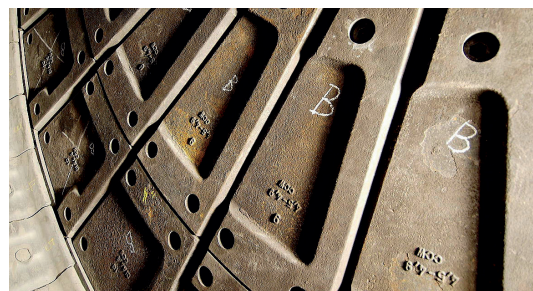
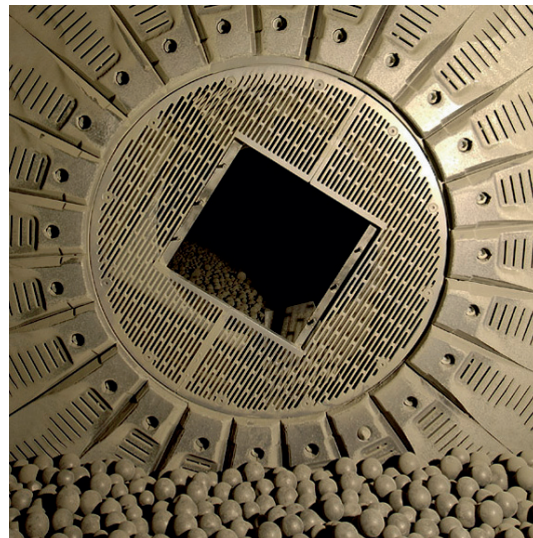
From an installation viewpoint

- Simple, quick & safe to install
- Reduced manpower during installation due to preassembly in our workshops

In 3 words:
Performance, Reliability & Reduced Overall Operating Cost per ton produced

YOUR AVAILABLE OPTIONS

1. Stainless steel cast frame
2. Reinforced bolt protection tubes in case of high abrasion material
3. Air screen with inspection door
4. Backside grates in case of high air flow
5. Grate slot sizes from 5 to 16mm



The information and data in this data sheet are accurate to the best of our knowledge. They are intended for general information only. Applications as suggested are described only to help readers make their own assessment. They are neither guarantees nor to be construed as express or implied warranties of suitability for these or other applications.



MAGOTTEAUX
 SHAPING A WORLD OF PERFORMANCE

www.magotteaux.com