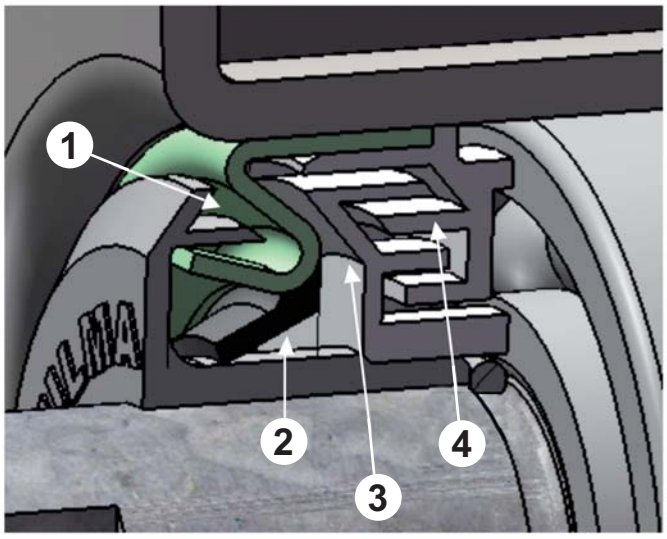
MDA Model

1. First baffle in labyrinth design. Designed to prevent the ingress of liquid and solid contaminants.
Patented geometry.

2. Contact seal. Designed to prevent the ingress of liquid contaminants and minute solids with minimal friction due to its special geometry and seal material. Its geometry allows air to escape due to increases in air pressure from within the roller, while at the same time stopping contaminated or humid air from entering.

3.Labyrinth antechamber. This chamber is filled with grease in order to trap particles pollutants before reaching the other interior chambers.

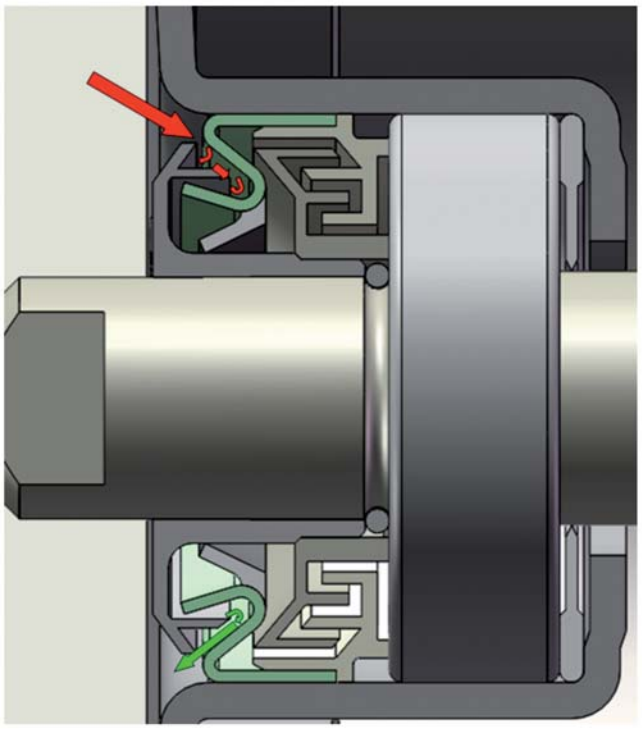
4.Multiple labyrinth design. Designed for the effective release of liquids and solids and to deposit them in the antechamber.



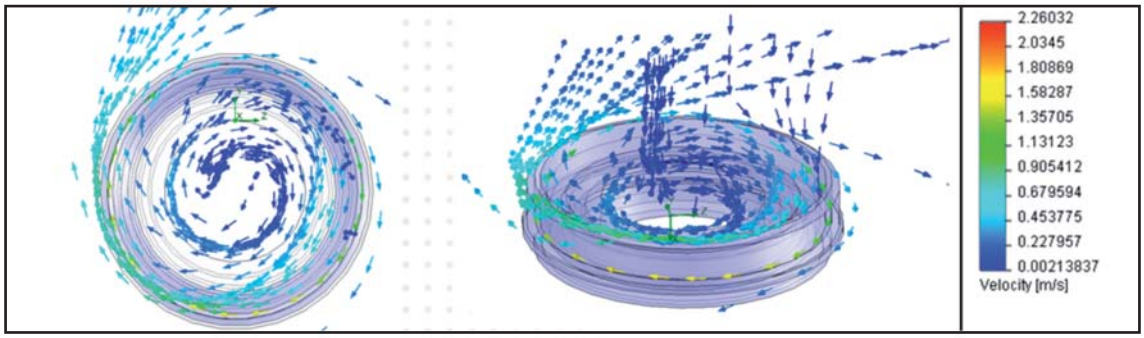
Detail on the MDA model

Entry of contaminants

Exit of contaminants


Operation of the multiple labyrinth design

The system's first protective labyrinth, patented by ULMA Conveyor, ejects unwanted particles due to the precise design of the components of the seal. With the help of centrifugal force, this effect is multiplied.



Internal labyrinth performance

The expulsion effect of the second set of labyrinths is scientifically proven.

The combined work between the two sets of labyrinths and the low friction baffle ensures the efficient operation of the seal system.

Modelo HDA

Roller model HDA is designed to perform in the most severe applications: high loads, high speeds and vibrations. The design of this roller allows for controlled vibrations at high speeds, which in turn, reduces noise.

The HDA model minimises environmental impact. Due to its effortless start up and smooth operation, the HDA model consumes less operational energy on the conveyor, lowering the emission of C02 into the environment.

All of this is achieved by taking into account the following parameters:

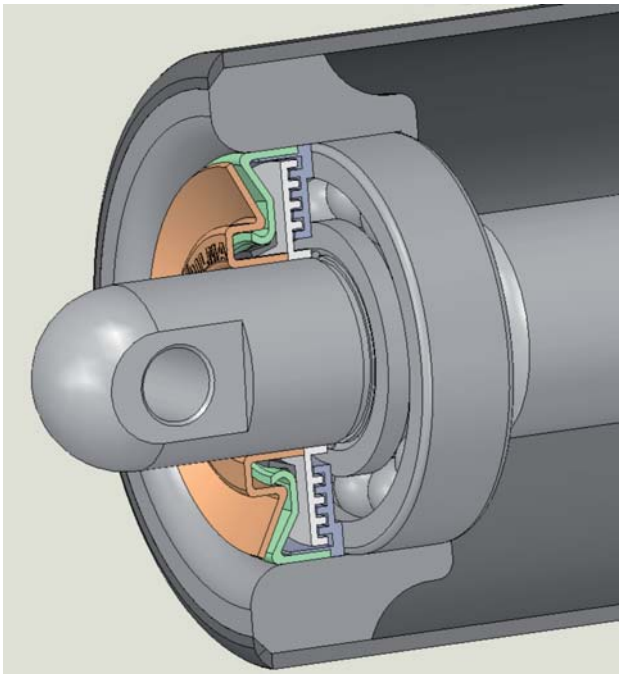
•Efficient bearings with high load capacity and low friction.

•Special lubricant with anti-rust and low friction properties.

•Tight tolerances, controlled within the bearing, and its housing.

•High precision assembly of the roller using state of the art machinery. This allows the bearing to be mounted inside the roller with minimal misalignment, which allows it to maintain its high load capacity and performance. A roller with concentricity defects, extreme tightness between its various metal parts or containing low quality raw materials greatly reduces the life of the roller. Because of this, ULMA Conveyor emphasises the use of high quality raw materials in the manufacturing process of its rollers.

•Roller design is optimised.



View of the HDA

The HDA model seal system has all the advantages of the MDA model. The outer cap is made of a special metallic material which minimises abrasion. An example can be found in environments where work is done with wet iron ore, which causes the front rollers to suffer abrasion. The HDA model minimises this problem.