# Megaroller

## Failed Bearing Indicator

FBI is your answer!

Mega Roller AFRICA

*That's how we Roll*

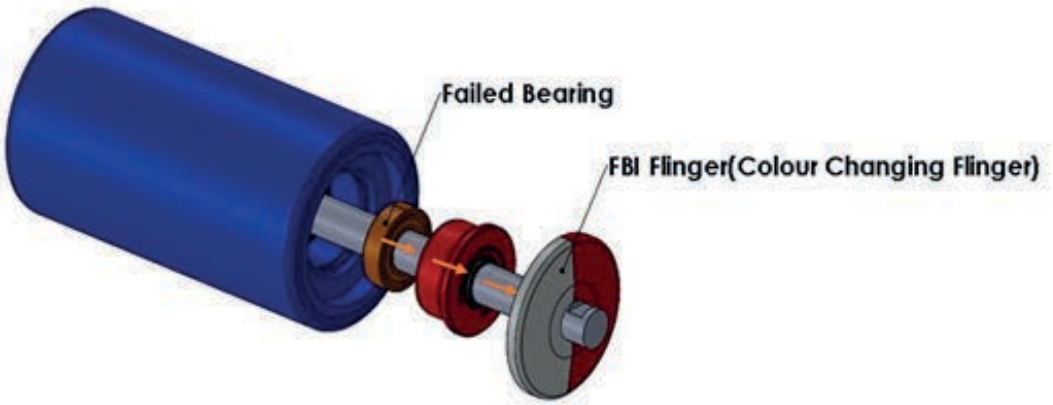

Standard Operation | Failure In Progress | Final Failure

Megaroller Africa has developed a flinger for our idlers that will visually and easily show you when an idler needs replacement before it becomes a risk to your conveyor belt.

**The new technology on our FBI Flinger is a must for any conveyor belt application!**

### Proven, Patented Technologies

Through intensive technical and innovative tests, we have established what the heat signature progression looks like in the event of idler bearing failure and have Patented the concept of using the colour changing technology to assist conveyor maintenance personnel to identify and timeously replace idlers before it creates expensive and life-threatening situations.




: Heat Transformation from Failed Bearing to the FBI Flinger.

**CONTACT US**

Please refer to our website, www.megarollerafrica.com, for all contact information. We would love to hear from you.

# Megaroller Failed Bearing Indicator

## FBI Flinger – Technical Data

### DEVELOPMENT

Megaroller conducted trials on our HDPE Idlers as well as the improved Gen2 Steel Idlers. The initial setup parameters were drawn from field trials and actual operational conditions at customer plants, situated in the most inhospitable environments.

Intensive and accelerated bearing failure tests been part of our quality control system over the past ten years and we have an extensive database of the comparative heat signature patterns in various bearing failure conditions, bearing types and bearing brands for any conveyor belt application.

These tests have been conducted using one of the top brands as the benchmark of the evaluation, expressing the comparative results of any new brand tested as a percentage of the original.

### METHODOLOGY

Once a deep groove ball bearing starts to fail due to ingress of abrasive materials, corrosion, rust or overloaded components, the temperature will elevate quickly, especially belts running at a higher speed, or heavily loaded conveyors. We've considered the heat conductivity from the bearing to the flinger of each of our idlers and decided to manufacture the flinger from aluminium, which has one of the highest suitable material conductivity values.

We decided to paint the flinger with two different temperature-sensitive-thermochromic paints:
1 - A permanent colour change in the range of 60 to 70 degree Celsius
2 - A temporally colour change in the range of 70 to 80 degrees Celsius.
The reason for the two colours is to improve the ease of monitoring, no longer needing expensive thermal cameras. Once the thermochromic coating reaches the designed temperature, it starts to turn opaque. A white base coat is painted underneath the thermochromic layer which means the flinger will turn white from our standard Royal Blue, Red or Black. The black coating is used for the non-permanent layer which activates at seventy degrees and indicates that idler change has become critical.

The logic behind the design was to first establish which idlers were in the process of failing and afterwards making it easy to identify those idlers when the conveyor is shut down for maintenance. Easy to install, no maintenance needed! We recommend using the Megaroller Belt Friendly Idlers Frames which makes it very easy to see all trough and return idlers.

Megaroller will keep an eye on your conveyor belt – 24/7!

**Cause that's how we roll!**

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