

The EMSYS Conveyor Belt Protection System

EMSYS provides a series of Rip Detection and Monitoring products and solutions. Conveyor belts are subject to damage (longitudinal belt rips) through the foreign objects or in heavy use areas like loading, unloading. The EMSYS solutions are designed to work together to detect and notify or correct for issues such as rips or holes in the belt, edge damage and misalignment.



The EMSYS WSR uses RFID Technology to provide a reference point and the belt is then operated for several revolutions. Measurements are taken every few centimeters and the WSR system learns the width of the conveyor for its entire belt length as a baseline. If the belt is ripped, the width of the belt will change and trigger a signal and/or stop the belt.

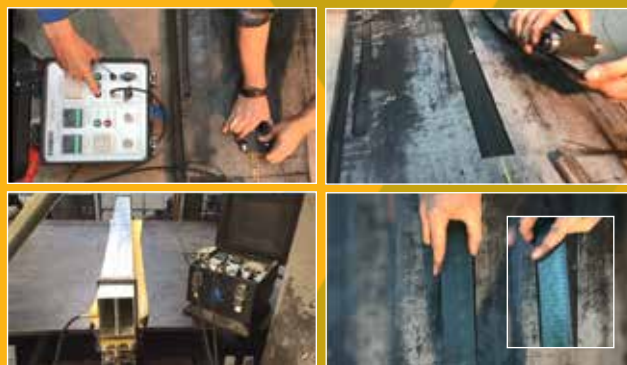


The EMSYS LSRS monitors the belt via embedded wires that can detect rips and damage to the belt through SmartWire technology. The LSRS will read most major belt manufacturers rip detection loops and antennae. SmartWire can be embedded in a newly manufactured belt or retrofit into an existing belt in under an hour.



EMSYS offers the Belt Steering Gear (BSG) system to provide precise belt alignment control and monitoring of the belt tracking, onsite or remotely via an application on your phone or tablet. A combination of an actuator and sensors and idlers before and after this sensor can detect and correct any belt misalignment, even remotely.

EMSYS BELT STEERING GEAR BSG



The LSRS Retrofit Kit

The EMSYS SmartWire system is a cost-effective retrofit wire solution for a belt with broken loops. A SmartWire can be installed within 30-40 minutes versus 4-6 hours for most other loop system installs. The LSRS Retrofit comes with everything you need for retrofitting SmartWire system into your belt:

- Rubber grooving/skiving tool and drill-mounted winch – to remove the strip of rubber required for the SmartWire
- Press and control box

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BELT STEERING GEAR - BSG

Misalignment or tracking of conveyor belts can lead to material spillage, edge damage, and structural component damages. EMSYS Belt Steering Gear (BSG) utilizes actuators on each side of the conveyor to determine the belts' position and then uses a hydraulic unit to turn two idlers to steer the belt back to its correct position.

The system is fully self-sufficient with one idler containing a generator creating power and the other idler having internal battery storage and provisioning the power. The control of the steering system is automatically set. For wide, heavy overland conveyors, the steering mechanism can be used to move the idler sets in front and behind of the system to apply even greater steering force.

The unit can be installed at any point in the conveyor belt layout and can be used on either the carry or return sides.

With the PLC capabilities, the alignment data and actuator control can be viewed remotely by via an application and/or integrated into existing site communication infrastructure. The position of the belt and data around the tracking are displayed graphically and viewable remotely on a tablet or smart phone.

The BSG has an IP-65 rating, is ATEX certified and UL and CE approved.



REMOTE OPERATION

The belt position can be viewed graphically and in real time video with the CCTV option. Alarms are sent to phones or tablets and then the system can be adjusted remotely & Historical data is available.



CENTRALLY MONITORED

The BSG units can be connected to a central control room and provide alerts or stop the belt if excessive tracking is detected.



CARRY OR RETURN INSTALLATION

The BSG unit can be installed on either the carry side or return side of the belt. The unit does not rely on geometry or wearable components that lose their performance.



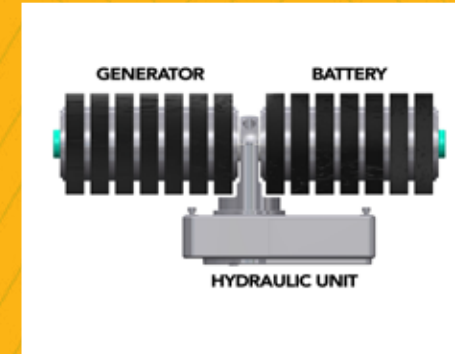
HEAVY DUTY CONSTRUCTION

The hydraulic unit can generate tons of force to move the belt back into position. No other unit can generate this amount of steering force to bring the belt back to its centerline.



SELF CONTAINED

The BSG unit is self-contained as does not require a connection for any utilities. One of the idlers has an internal generator and the other contains a battery allowing it to be placed anywhere.



EXPANDABLE

Some conveyors, due to the width or construction, will not respond to only the twin idlers. The hydraulic system can be connected to an idler set before or after the BSG which will turn in tandem with the unit to provide the maximum steering capability.

