

# TECHNICAL DATA SHEET



## PRODUCT NAME

Leverbox

## COMPONENT

Tumbler System

## CATEGORY

Underground Rails

## COMPANY NAME

Zak Mining Support

## PRODUCT OVERVIEW

A leverbox / tumbler system is a mechanical lever-operated control unit used in railway turnout (switch) and signalling systems to safely control rail infrastructure. These systems are commonly installed trackside or within rail control environments to operate turnouts, locks, or signalling devices. ZAK Mining Support leverbox systems are engineered for heavy-duty underground mining applications, ensuring reliable operation, positive locking, and repeatable positioning in harsh mining environments.

## KEY FEATURES

- Heavy-duty industrial-grade construction
- Positive locking mechanism for safe operation
- Tumbler safety system prevents unintended movement
- Smooth and repeatable lever positioning
- Designed for underground abrasive and wet conditions
- Compatible with turnout and interlocking systems
- Corrosion-resistant finish for extended service life

## APPLICATION

- Underground mining turnout (switch) operation
- Manual siding and yard control
- Rail haulage systems in gold, platinum, and chrome mines
- Backup manual control during automation failure
- Track switching and route control systems
- Depot and workshop rail management



# Operation

The operator actuates the lever within the leverbox, transferring movement through rods or linkage systems to the turnout or signaling device. The integrated tumbler mechanism ensures the lever locks securely into the selected position, preventing unsafe or partial movement.

### Packaging & Delivery

- Supplied fully assembled or as specified
- Custom configurations available on request
- Bulk supply available for large rail projects



## TECHINCAL DATA SPECIFICATION

### Performance

|                   |                   |
|-------------------|-------------------|
| Material          | Material          |
| Operation Type    | Operation Type    |
| Application       | Application       |
| Locking Mechanism | Locking Mechanism |
| Installation      | Installation      |
| Finish            | Finish            |
| Compliance        | Compliance        |

## Benefits to Mining Operations

- Enhances rail operational safety
- Prevents accidental or partial turnout movement
- Reduces risk of derailments and unsafe routing
- Reliable manual backup during power or automation failures
- Improves operational control and efficiency underground
- Supports safe and repeatable turnout positioning

## Safety Instructions

- Inspect all moving parts before operation
- Ensure lever locks fully into position before use
- Do not force lever movement under load
- Only trained personnel may operate the system
- Follow all underground rail safety procedures
- Inspect locking mechanisms regularly

## Maintenance

- Lubricate moving and locking components regularly
- Inspect for wear, deformation, or corrosion
- Verify locking functionality during inspections
- Replace damaged or worn parts immediately
- Maintain clean operating conditions where possible