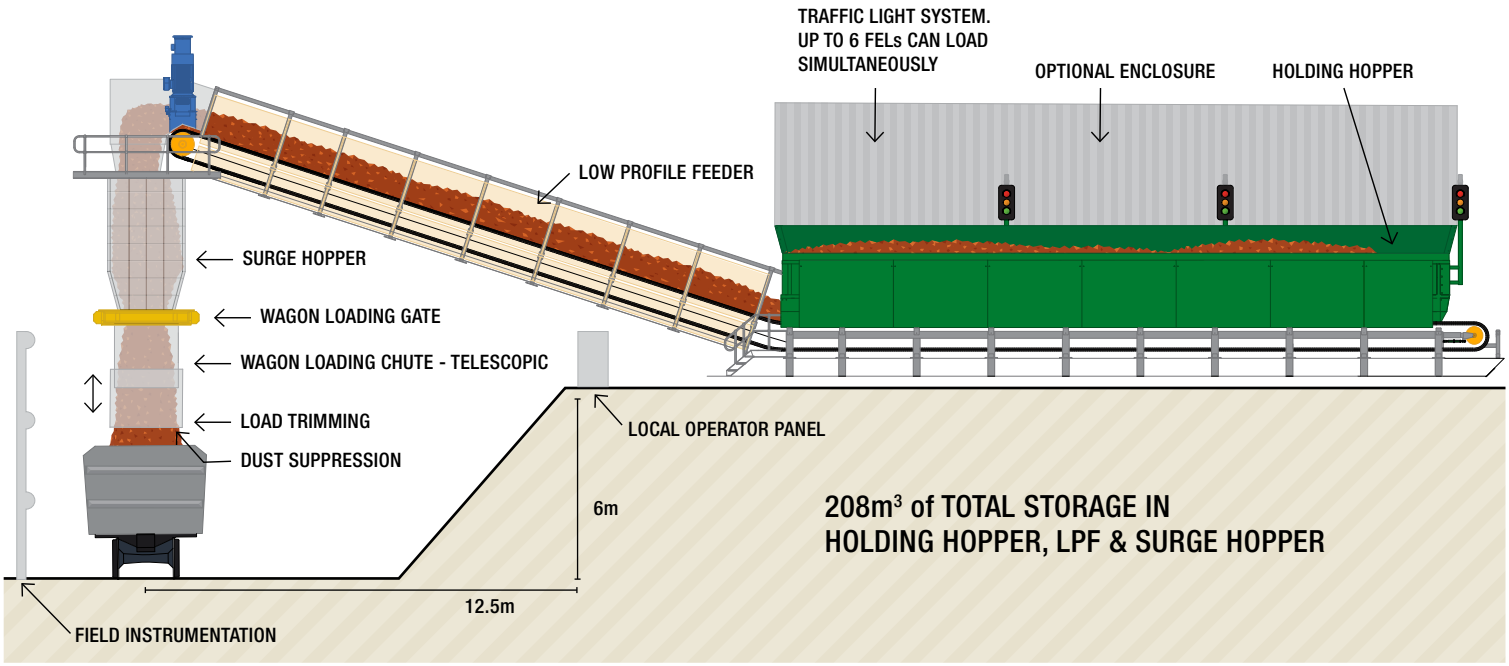

LOW PROFILE TRAIN LOADING FEEDER

EQUIPMENT SUMMARY

The Transmin Low Profile Train Loading Feeder (LPTLF) consists of:

- Transmin Low Profile Feeder (LPF)
- Surge hopper
- Wagon loading gate and a
- Telescopic wagon loading chute.

FUNCTIONAL DESCRIPTION

The Transmin LPTLF fully integrates, complies with and utilises the current Train Loading methodology. Material is fed to the LPTLF using multiple Front End Loaders (FEL).

A traffic light control system will be used and up to 6 FELs can load simultaneously. When the traffic light is green the FEL can dump its load into the LPF holding hopper from where the load will be fed by the LPF into the surge hopper.

The wagon loading gate and wagon loading chute direct and control the flow of the material from the surge hopper into the ore wagons and trims the load. This ensures the correct loading of the required amount of material.

The wagon loading gate and wagon loading chute are hydraulically telescopic operated and able to retract above the rail clearance line to avoid objects that exceed the wagon loading height (ie locomotives, wagons already full of material).

The telescopic wagon loading chute will also retract in the case of an emergency stop or loss of power situation.

Train entry

The train will be given permission to enter the LPTLF loading zone once all permissives have been attained.

When the train reaches a position determined by the system the FEL traffic light will be turned green and the FELs will start loading material into the holding hopper.

The surge hopper must be primed with sufficient material to commence loading by the time the first wagon is in position.

At fill start

- Wagon loading chute will be in the parked position
- Isolation gate will be closed
- LPF running at 0.35m/s

The train, assumed to comprise 270 ore wagons, with locomotives positioned at start and mid-point, will maintain a speed of 0.4km/h for the loading cycle however, any train configuration can be accommodated.

During fill

Photoelectric cells will detect the end of the lead locomotive. Telescopic chute will lower and the isolation gate will open as the telescopic chute is being lowered into the loading position.

The material from the surge hopper will be discharged into the ore wagon. This initial discharge will be a flood feed, ie the material will quickly fill the ore wagon up to the level of the wagon loading chute at which point the material flow will be choked and will

then feed at the volumetric rate based on the train speed.

Lower edge of wagon loading chute liners will trim material height. As rear end of ore wagon approaches, it is detected by photoelectric cells, the wagon loading gate will close and remaining material in the wagon loading chute will fill the remainder of ore wagon. The LPTLF will continue to run to refill the surge hopper.

Photoelectric cells will detect the start of the next ore wagon and the loading cycle will repeat.

Approach of mid-point locomotive (if used)

Photoelectric cells will detect the approach of the mid-point locomotive.

The wagon loading chute will raise, and the wagon loading gate remains closed (from previous ore wagon loading sequence). Photoelectric cells will detect the end of the mid-point locomotive.

The wagon loading gate will open as the wagon loading chute is lowered and the loading cycle will continue.

Whilst the mid-train locomotives are passing through the loading zone, the LPTLF will stop feeding.

Emergency stop or loss of power

The wagon loading gate will close and the wagon loading chute will be raised to its parked position (above rail clearance line). The LPF will be stopped and the FEL traffic light will change to red.

Benefits of the LPF™

- **Elimination of belt tracking issues**
- **Elevated discharge can be achieved by the introduction of a bend transition**
- **Space saving**
- **Elimination of belt slippage**
- **Minimal product spillage**
- **Conventional belt cleaners for ease of cleaning**
- **Proven industry standard components**

HEAD OFFICE

Western Australia

Local Call: 1300 127 091
International Call: +61 (0) 8 9270 8555
International Fax: +61 (0) 8 9249 6116

Email: wasales@transmin.com.au

Address: 33-37 Denninup Way Malaga
Perth, Western Australia, 6090

Queensland & Northern Territory

Local Call: 1300 800 609
International Call: +61 (0) 8 9270 8555
International Fax: +61 (0) 7 3636 7355

Email: qldsales@transmin.com.au

Address: 76 Dulacca Street
Acacia Ridge, Brisbane
Queensland, 4110

INTERNATIONAL OFFICES

South America

Email: sales.sa@transmin.com.au

North America

Email: sales.ca@transmin.com.au

India

Email: sales.in@transmin.in

www.transmin.com.au