

INTEGRATED SLEEPER BASED POINTS MACHINE

Designed to meet safety critical signalling requirements for safe passage of a train set over a turnout. Permanent way infrastructure plays a vital role in the reliability and availability over a complete turnout installation. Recent developments have indicated that levelling and tamping a turnout dramatically increases this reliability. To enable unrestricted machine tamping over the full set, a new generation turnout incorporated in a standard hollow sleeper was developed.

Operating Sequence

The points operating sequence is:

- Closed blade unlocks.
- Detection contacts break.
- Points operate to opposite setting.
- Closed blade locks.
- Detection contacts make.
- Drive slide is positively held in position through the linear actuator.

The operation can be interrupted or reversed at any time.

Trailable Operation

During a run through situation, the flange of the first wheel attempts to force the open blade closed as well as wedging the wheel's flange between the stock and switch blade. The combined force is

resisted by a shear pin for each blade, which shears at a pre-determined force, allowing the blades to move freely once this force is exceeded. Detection is broken, providing an indication that the points were trailed.

A technician must inspect the set to ensure no damage was done and replace the shear pins.

Manual Operation

The machine may be manually operated by means of a standard crank handle. The handle couples directly to the electric motor shaft, allowing manual rotation of the motor. The direction of rotation determines the direction of throw of the points.

Major Components

The major components of the Integrated, adjustable opening, Points Machine are:

- Electric motor.
- Linear actuator.
- Integrated lock and detection.
- Motor drive housing.
- Back stretcher(s).

Applications

The Integrated Variable point's machine can be used to operate:

- Single slip points sets (normal and tangential).
- Double slip points sets.
- 1:20 turnouts.

Technical data

Operating Voltage	- 380 V 3Ø AC 50Hz
	- 1 0 V DC
Motor standard	- 380 V 3Ø AC 50Hz
Throwing force	- 8kN
Trailing resistance	- 7kN
Stroke	- Fixed 280mm
Switchblade openings	- Fully adjustable, 90mm to 200mm
Throwing time for 200mm opening	- 2,3 seconds
Running current	- 380 V 3Ø AC – 2.2 Amps



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