



✓ Certified for IRS T-39 & T-45

✓ Especially well suitable for Railway Concrete Sleeper Testing new Policy (IS:516)

The Gold Standard in Railway Sleeper Testing

Introducing the Fully Automatic Rate of Loading (ROL) Machine. Engineered specifically to eliminate manual inconsistencies and meet the rigorous safety demands of modern railway infrastructure.

The Problem: Manual Testing

Traditional manual hydraulic pumps struggle to maintain the mandatory **30-40 kN/min** loading rate. This leads to "shock loads" that cause premature failures, inaccurate data, and non-compliance with rigorous IRS standards.

The Omac Solution: Smart Automation

Algorithmic Precision

Proprietary algorithms control hydraulic flow instantly, locking into the specific loading rate required by standards without human error.

Smooth Loading

Ensures a strictly linear load increase. Prevents dynamic spikes that artificially inflate or deflate strength readings.

Load Retention

Automatically holds peak loads for the mandatory **3 Minutes** to allow for visual inspection of hairline cracks.

Universal Design

One machine handles both Main Line sleepers (T-39) and heavy-duty Turnout sleepers (T-45) up to 600kN.

Why Upgrade?

Safety Assurance: Guarantee sleepers withstand dynamic train loads.

Cost Effective: Reduce false rejections caused by improper manual loading.

Dual-Standard Compliance

The Omac ROL Machine is the only solution calibrated for both primary Indian Railway Standards.

IRS T-39

6TH REV, MAR 2021

For Pre-tensioned Prestressed Concrete Sleepers (Main Line)

✓ Rate: 30-40 kN/min

✓ Test: Moment of Resistance

✓ Hold: 3 Minutes

✓ Test: Moment of Failure

IRS T-45

4TH REV, MAR 2021

For Turnout Sleepers (Broad Gauge & Metre Gauge)

✓ Rate: 30-40 kN/min

✓ Capacity: > 600 kN

✓ Hold: 3 Minutes

✓ Complex Geometries

Technical Specifications

| Parameter | Specification |
|-----------------------|--|
| Loading Rate Range | 20 kN/min - 100 kN/min (Adjustable) |
| Rate Control Accuracy | Algorithmic Feedback Loop (± 1 kN/min) |
| Holding Accuracy | ± 1 kN |
| Max Load Capacity | 600 kN (Suitable for BG Turnout Bottoms) |
| Control Interface | Digital GUI with Real-time Graphing |
| Power Requirement | Standard Industrial 3-Phase / Single Phase options |
| Compliance Standards | IRS T-39, IRS T-45, IS:516 |

Future Proof

Ready for the "New Policy" of testing (IS:516).


Durability

Heavy-duty frame construction for long service life.

OMAC SOLUTION

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