



BENDING PLATE

We make highways talk™

- MANAGEMENT
- SAFETY
- PRESERVATION

International Road Dynamics Inc. develops and maintains traffic management products and systems technology that make highways talk. What are they saying? They are providing information that roadway administrators need to manage traffic, preserve infrastructure and provide safety warnings to drivers.

IRD's multi-discipline, innovative and customer-focused team is expert in advanced technologies, advanced traffic solutions and custom-designed systems.



The "**Bending Plate**" from IRD-PAT Traffic is used for Weigh-In-Motion (WIM). The importance of measuring the loads of driving road vehicles has increased enormously. Traffic safety, the protection of the infrastructure road and statistical data are the main purpose of Weigh-In-Motion equipment.

The stationary weighpads are delivered in two sizes for different width of lanes: **WP 1250 and WP 1750**

FEATURES

- Excellent long term stability
- Speed range: 5 to 200 km/h
- Robust
- Long life time (> 10 years)

APPLICATION EXAMPLES

- Traffic monitoring
- Road maintenance planning
- Overload detection
- Toll applications
- Statistical purpose



DESCRIPTION

The foundation is made of high-strength steel plates. On the bottom side two slots are milled for the incorporation of wire strain gauges. The wire strain gauges are bridged to a Wheatstone-Bridge with supplementary fixed resistors for temperature compensation. The supply voltage and the output signal are carried in a shielded 4 conductor cable inserted through a hole with waterproof fitting.

The whole weighpad is covered with a neoprene rubber film hot vulcanised on. Along the longitudinal borders two rubber tapes, used as bearings, are vulcanised on the bottom side.

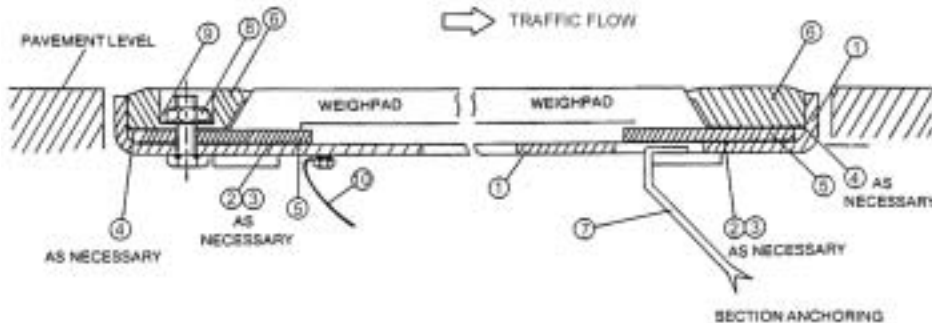
For fixing the weighpad, it is bevelled on both sides at the longitudinal borders and supported by two bevelled strips in a foundation frame.

The foundation frames are tied firmly in the road surface by a special installation procedure. Details are described in a separate installation manual.

BENDING PLATE

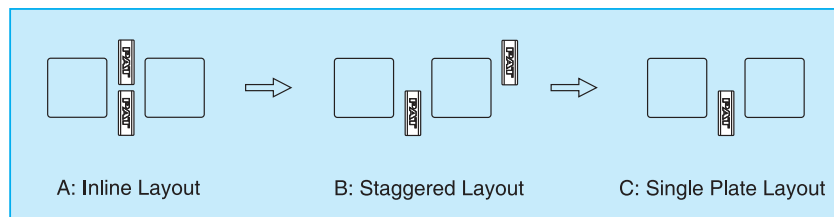
Technical Data

Weight:	81 kg for 1250 mm version 114 kg for 1750 mm version	Temperature drift sensitivity:	$\pm 0.01\% / ^\circ\text{C}$
Sensor Dimensions:	508 x 1250 x 23 mm (WP1250 mm) 508 x 1750 x 23 mm (WP1750 mm)	Temperature drift zero point:	$\pm 0.2\% / ^\circ\text{C}$
Nominal Load:	10.000 kg	Linearity (increasing load):	$\pm 0.7\%$ from measuring range
Carrying capacity:	15.000 kg	Traverse sensitivity:	$\pm 1.5\%$ from measuring range
Temperature range:	-40°C +80°C (stock and operation without damage)	Sensitivity (10t):	± 0.8 (0.6) mV/V typ.
Temperature range:	-10°C +50°C (compensated)	Length of connecting cable:	40 m (standard)
Continual stock temperature:	+15°C +30°C (more then 3 months)	Number of conductors:	4 + shield
Air humidity:	10%99%	Input resistance:	675 ohms (975 ohms) typ.
Uninterrupted water influence:	< 300 hours	Output resistance:	600 ohms (840 ohms) typ.
		Insulation resistance:	> 100 MOhms
		Supply voltage:	24V DC (30V DC max.)
		Max.voltage measuring circuit shield:	100 V
		Natural frequency:	215 Hz



- 1) Foundation Frame
- 2) Shim 1/32"
- 3) Shim 1/16"
- 4) Shim 1/16"
- 5) Support rail, 1/4"
- 6) Securing rails, 7/8" galvanised
- 7) 10x anchors, painted
- 8) 12x self-locking nuts, galvanised
- 9) 12x spring washers, galvanised
- 10) 1x ground wire, #8 bare copper, 18"

TYPICAL INSTALLATION SCHEMES AS EXAMPLE



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