



IN-MOTION SYSTEMS



SETTING THE
INDUSTRY STANDARD
SINCE 1830



- **MANAGEMENT**
- **COST CONTROL**
- **SAFETY**
- **PEACE OF MIND**

Fairbanks® Scales and International Road Dynamics Inc. are working together to produce America's #1 weigh-in-motion products. Fairbanks-IRD's innovative, customer-focused team is comprised of multi-discipline experts in advanced technologies, advanced weighing solutions and custom-designed systems.

BENDING PLATE™

Low Profile, Low Cost WIM Scale

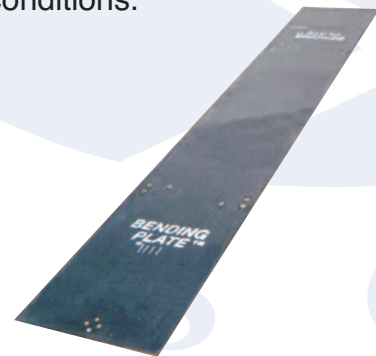
The Bending Plate™ low-cost scale is practical for data collection and vehicle screening. It features:

- Low initial investment
- Low construction costs
- Operation at all speeds
- Easy installation in all road pavements

The Bending Plate™ scale contains load weighing elements installed within a robust CNS machined steel pad. Six load measuring transducers mounted within the steel pad are designed to allow the scale to be linearized across the entire weighing width. Each lane will typically contain two 6 ft. (1.8m) scales, allowing each wheel to be weighed individually. Each scale is mounted flush with the road surface with a depth of no more than 4 inches (100 mm). The Bending Plate™ scale is completely waterproof and produces accurate measurements in all weather conditions.

APPLICATIONS

- Mainline screening
- Ramp screening
- Data collection
- Automated Toll Systems



BENDING PLATE™ SCALE *Low Profile, Low Cost WIM Scale*



Installation depth of no more than four inches



Bending Plate frame



Installing the Bending Plate



Bending Plate scale in operation

ACCURACY

The Bending Plate scale system will typically exceed the ASTM 1318 Type 1 standards. It goes beyond the requirements of the Type 1 standard and typically provides accuracies as follows:

Speed mph (km/h)	Function	Accuracy (% of applied)		ASTM @ 95% Confidence level <small>Type III Tolerance for 95% probability of conformity</small>
		1 σ	2 σ	
10-25 (16-40)	Wheel load	6	12	N/A
	Axle load	4	8	N/A
	Axle Group load	4	8	N/A
	GVW	3	6	N/A
26-45 (41-73)	Wheel load	9	18	N/A
	Axle load	6	12	N/A
	Axle Group load	6	12	N/A
	GVW	4	8	N/A
46+ (74+)	Wheel load	10	20	±25
	Axle load	8	16	±20
	Axle Group load	7	14	±15
	GVW	5	10	±10

SERVICING

When removing a scale for servicing or replacement, the scale is easily unbolted from the frame and only the scale pad is removed. A replacement weigh scale pad is then conveniently inserted. All Bending Plate™ scales are identical for modular scale maintenance.

LIFE CYCLE COST

The Bending Plate™ scale has a low initial investment cost. It is an economically viable choice for data collection and enforcement screening. For reference, see the current USDOT FHWA "States Successful Practices, Weigh-In-Motion Handbook."