



Single Load Cell Weigh-In-Motion (WIM) Scale

Single Load Cell (SLC) scales are highly accurate, durable and reliable WIM scales for medium and high-speed enforcement and data collection.

Premium High Performance WIM Scale

The Quarterhill's Single Load Cell (SLC) Scale is a highly accurate and durable Weigh-In-Motion (WIM) scale. Its reputation for reliability and performance results from over 30 years of operational history with medium and high-speed enforcement screening and data collection.

The SLC Scale can be used at all speeds, from slow speeds on ramp sorter systems to highway speeds on the mainline. Its low maintenance, long service life, and unequaled accuracy make it the top choice for long-term vehicle weighing.

The weighing element in this scale is a single load cell mounted centrally in each scale mechanism. The scale mechanism incorporates patented load transfer torque tubes, effectively transferring all loading on the weighing surface to the load cell.

Each lane will typically contain two 6 ft. (1.8 m) scales allowing each wheel set to be weighed individually, axle by axle. Each scale is mounted in a frame installed in a vault flush with the road surface.

The SLC Scale is completely waterproof, functions in all weather and operating conditions, and includes all cable and drain access.

Applications

- Mainline Screening
- Ramp Screening
- High Speed Data Collection
- Automated Toll Systems



Class-Leading Durability for High-Speed Weighing



Top View - Single Load Cell (SLC) WIM Scale

Single Load Cell Weigh-In-Motion (WIM) Scale

System operation

The SLC Scale is the most accurate scale available today. It has the highest documented accuracy of all WIM technologies. It meets or exceeds the ASTM E1318-09 Type III specification up to highway speeds. The SLC Scale will typically provide the following accuracies:

Specifications		ACCURACY (% OF APPLIED)		PERFORMANCE (% DIFFERENCE)
SPEED mph (km/h)	FUNCTION			ASTM E1318-09 Type III Tolerance for 95% Compliance
		1s	2s	
2-10 (3-16)	Wheel Load	±4	±8	N/A
	Axle Load	±2	±4	N/A
	Axle Group Load	±1.5	±3	N/A
	GVW	±1	±2	N/A
11-25 (17-40)	Wheel Load	±6	±12	±20
	Axle Load	±4	±8	±15
	Axle Group Load	±3	±6	±10
	GVW	±2	±4	±6
26-45 (41-73)	Wheel Load	±8	±16	±20
	Axle Load	±5	±10	±15
	Axle Group Load	±4	±8	±10
	GVW	±3	±6	±6
46-81 (74-130)	Wheel Load	±8	±16	±20
	Axle Load	±6	±12	±15
	Axle Group Load	±5	±10	±10
	GVW	±3	±6	±6

NOTE: The site conditions must, as a minimum, meet the roads specification as identified in ASTM E1318-09.

Servicing

Closing a lane of traffic on a busy Interstate is costly and dangerous, therefore selecting the best and most easily maintainable WIM System possible is a critical decision. Servicing of the Single Load Cell Scale is fast and easy. The load cell can be removed or serviced from the road surface with hand tools, eliminating the need to remove the entire scale from the road.

Life Cycle Cost

The IRD Single Load Cell Scale has a long service life requiring little maintenance. For instance, an IRD Single Load Cell Scale, installed in 1981, weighed more than 5.3 million 5-axle trucks and more than 10.5 million trucks of other types during a service life that exceeded 25 years. The Single Load Cell Scale has a proven track record of providing long term reliable service to the CVO industry. For reference see USDOT FHWA "States Successful Practices, Weigh In Motion Handbook" December 1997.

