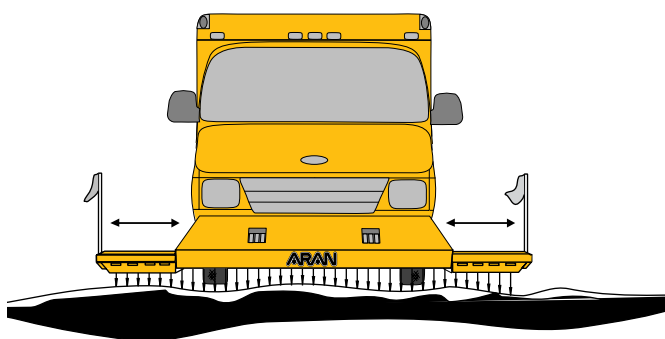


# Smart Rutbar

## Multi-point rut measurement system

The ARAN® Smart Rutbar is a vehicle mounted subsystem that uses ultrasonic transducers to accurately measure the transverse cross section of a roadway. The Smart Rutbar has its own microprocessor that insures measurements are made accurately and collected quickly. This ensures the best possible profiles of the road surface.

All sensors are spaced at 100 mm centers (4") over whatever measurement width is selected. Up to 37 sensors are used to cover a full lane width of 3.6 meters (12 feet); 19 in the main enclosure and 9 sensors in each of two telescoping wings. The Smart Rutbar will capture measurements at a rate of eleven (11) profiles per second - meaning that a profile is captured every two (2) meters (6.5 feet) at 50 mph.

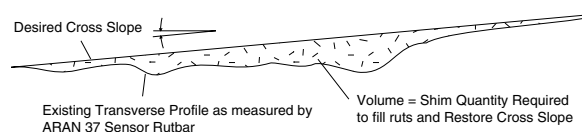


The greater number of sensors provides more accurate measurements of ruts than systems with fewer sensors. Each sensor measures to an accuracy of 1.0 mm. The overall accuracy of the rut depth measurement for the lane is 1.5 mm.

Accurate measurements are recorded regardless of the vehicle's path caused by the driver wandering across the lane.

Special software produces useful graphic displays, plots, and calculations such as mill and shim quantity of asphalt needed to restore crossfall. Rut quantities, water ponding depths and reports are also produced.

Cross Slope can be calculated from geometric and rutbar transverse profile data. When used with the Position and Orientation System for Land Vehicles (POS LV™), measurement accuracy approaches or exceeds Rod and Level surveys in a fraction of the time and in a much safer work environment.



### Features

- 19 ultrasonic sensors in main bar
- Two telescoping extensions with 9 sensors each for a total of 37 sensors
- Individual sensor accuracy of 1.0 mm. Overall rut depth measurement to an accuracy of 1.5 mm
- Measures at variable traffic speeds
- Graphical reporting software
- Compatible with all ARAN subsystems such as: POS LV™, WiseCrax®, and GPS
- When the Smart Rutbar is combined with POS LV™, ARAN software calculates multi-lane mill/shim quantity, water ponding depth, and performs cross section analysis with "rod and level" survey precision