Trimble Compaction Control Systems
CCS900 for Soil Compactors

Trimble offers the heavy and highway contractor the most flexible range of Compaction Control Systems in the industry. From simple 2D pass count systems using Satellite-Based Augmentation Systems to 3D GNSS or Total Station based, Trimble systems are rugged, easy to use, fully upgradeable, portable, and flexible to meet a wide range of application and jobsite requirements.

The Trimble® CCS900 Compaction Control System maximizes soil compactor performance. Installed as an aftermarket system on any single smooth drum vibratory soil compactor with open or enclosed cab, the system helps achieve target material compaction faster, more accurately, and with less rework. CCS900 can detect sub-surface material anomalies, soft spots and hidden obstructions. Problem areas can be excavated, re-graded and compacted, prior to the start of more costly phases of the construction process, such as paving.

Trimble CCS900 3D Compaction Control System for Soil Compactors

Configuration	Applications
Single GNSS Cab-mounted (sub-meter level horizontal guidance using SBAS)	Site-wide compaction applications, where monitoring pass count, machine coverage, and level of material compaction is necessary, but vertical guidance to design or lift and layer compaction control is not required Commercial sites, subdivisions, parking lots, playing fields
Single GNSS Cab-mounted (3D – RTK centimeter level guidance)	Soil compaction for earthworks operations. Monitor pass count and machine coverage as well as compaction of material layers to a design surface Commercial/residential site construction, pads, simple designs and slopes
Single GNSS Drum Mounted (3D – RTK centimeter level guidance)	Where continuous compaction control is required for lifts and layers for more balanced compaction results and design grade must be maintained during compaction Where a record of all compaction and machine productivity is required Roads, highways, runways, golf courses, complex designs
Dual GNSS Drum Mounted (3D – RTK centimeter level guidance)	Compaction applications on large earthworks projects where steep slope work is required on sub-base construction Highways, embankments, reservoir and retention pond construction, compaction on steep slopes and undulating complex designs
Universal Total Station Drum Mounted (3D – millimeter level guidance)	For use in applications where increased vertical accuracies are required or where compaction of expensive imported materials must take place and be monitored Projects where a clear view to the sky is not achievable with traditional GNSS antennas Dam projects, compaction in urban areas, tunnels, areas with dense foliage

Trimble®
The Construction Technology Standard

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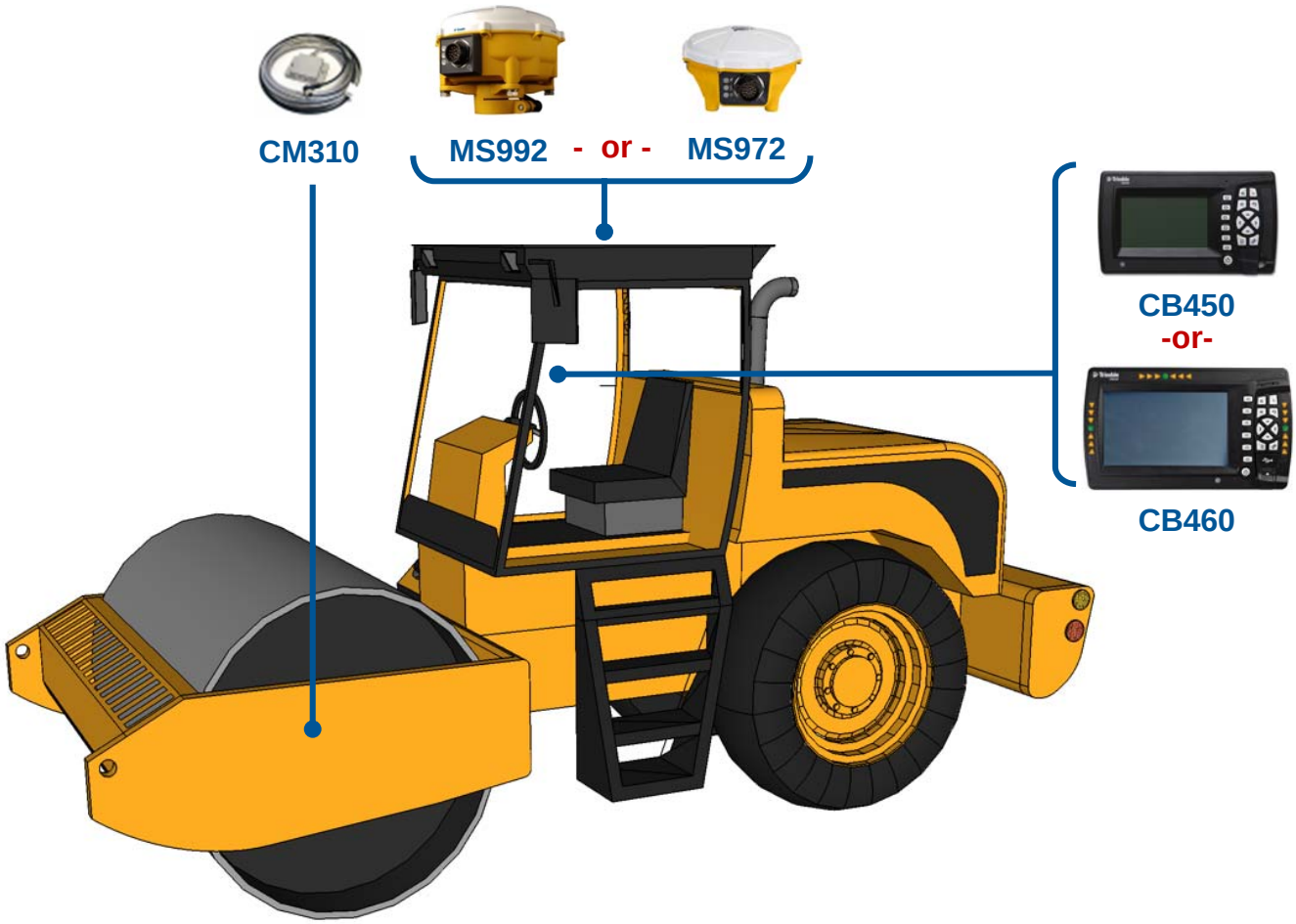
Pass Count and Compaction System Configuration – Key System Features:

- Cost effective, simple configuration, capable of sub-meter level horizontal guidance
- Operation using base station-free Satellite-Based Augmentation Systems (WAAS, EGNOS, MSAS)
- Displays compaction measurements, pass counts, total machine coverage, provides guidance to the operator
- Indicates areas of over / under compaction, anomalies in the material surface in real time
- Maps and records compaction data to control box data card
- In-field compaction reports, viewed on the control box, optionally printed out in the cab with portable printer
- Utilizes same system components from GCS900 Grade Control Systems
- Upgradeable to full-featured 3D high accuracy compaction control capability



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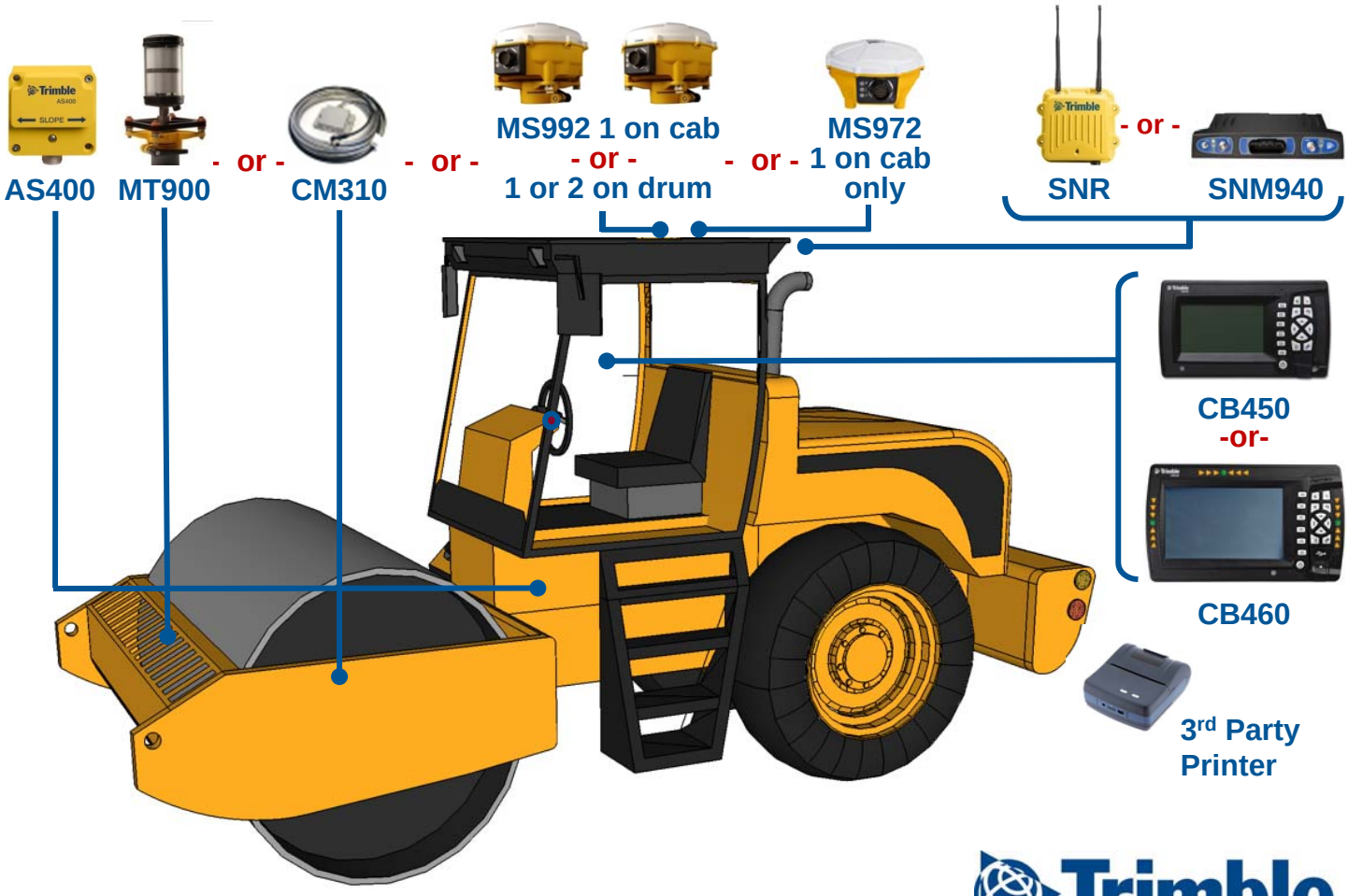
High Accuracy 3D Guidance System Configuration – Key System Features:

- High accuracy compaction control, providing centimeter-level RTK positioning and guidance to a 3D design
- Ideal for compaction of lifts and layer control of expensive material, on complex 3D design surfaces
- Collected as-built surface data as compaction is taking place to validate design grade is being maintained
- Displays compaction measurements, pass counts, machine coverage, cut / fill information to a 3D design
- Real-time indication of areas of over/under compaction, soft spots, sub-base material anomalies, buried objects
- Machine productivity and compaction data collected in real-time and recorded to the control box data card
- Two-way data transfer or synchronization of machine productivity and compaction data and statistics to/from the machine and the site office
- Trimble CCS900 offers extensive in-field reporting options, including in-cab report generation and printing. This functionality allows compaction production analysis to be carried out in the field instead of waiting until data is transferred back to the office



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CCS900 for Soil Compactors

For CCS900 with the MT900	For the CCS900 with the MS992 or MS972
	
Universal Total Station	**GNSS Base Station**

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