

### Portable Modular Conveyor-Material Placer

The Portable Modular Conveyor-Material Placer (PMC) was originally developed as a quick, easy, dependable and cost effective way to place concrete in front of a slip form paving machine. The typical method of placing concrete in front of concrete road paving machines requires a self-propelled belt placer that is very expensive to purchase and mobilize to the jobsite. The set-up costs for these machines are very expensive for each move and assembly. There is a significant savings in labor cost with the PMC.

The PMC was conceived in the summer of 2007 to minimize this mobilization expense, increase portability, and enhance productivity. This innovation is a unique solution to material placement, and has a patent pending with the United States Patent Office. It was first used on the reconstruction of Carpenter Road in Ann Arbor, Michigan, in the fall of 2007. In August of 2008 the second Prototype was used on an I-75 reconstruction project near Saginaw, Michigan, on a concrete overlay project at the Cobb County Airport in Kennesaw, Georgia, at Detroit Metropolitan Airport North Terminal Project and various other paving projects in Michigan in 2007, 2008, and 2009. The J.B. James Construction, LLC, in Baton Rouge, Louisiana, currently has a unit on a rental purchase agreement. The PMC is currently being marketed nationally by its inventor through E2 Systems, LLC, and the Guntert & Zimmerman Company in California.

The Portable Modular Conveyor is designed to attach to any front-end wheel loader of a 3 cubic yard capacity or larger that is equipped to accept attachments. Examples of such machines would be a Volvo L90 or L120, Caterpillar IT 38 or IT 62, and comparable John Deere, Komatsu, or other brand loaders. It may also be adapted to other types of equipment such as an excavator or Skylift. The conveyor is operated from inside the cab of the machine using the hydraulic controls and power of the of the wheel loader to propel the hydraulic motor on the PMC. A third value option must be part of the loader hydraulic system since the conveyor is propelled in the same manner as a sweeper broom attachment on these types of loaders. The low torque hydraulic motor on the belt conveyor requires a pump feed of a minimum 40 gals per minute and 3000 psi. The speed and power of the belt is related to the size of the loader. The unit is compact and lightweight at just 10,000 pounds.

The PMC has a proven record of placing over 300 cubic yards of concrete per hour to the road grade using dump trucks hauling 11 cubic yards per load. It has outperformed the conventional material transfer placer systems by two to one and the initial cost is roughly one fourth of the traditional machines used in this application. The operation and maintenance expense are also much more cost effective than the conventional placers. It is simple to operate and requires very little training time. It replaces a very expensive dedicated piece of equipment that would be parked on the sideline when there is no concrete to place. When there is no work for the Portable Modular Conveyor, the loader can perform other productive tasks and there is a minimal investment parked.

Besides being extremely productive, the PMC is very dynamic and portable. When loaded on a standard lowboy trailer for transportation, it is no wider than 8.5' wide and 21' long, making it a non-permit load for moving. When attached to the loader, the belt can be folded to a 10' length to travel in a given lane of traffic while attached to the loader. The conveyor frame can also be shifted two feet left or right from center to adapt to dumping needs or conditions.

As a wheel loader attachment versus a stand-alone dedicated unit, the Portable Modular Conveyor-Material Placer is a most cost effective tool which will enhance productivity and profitability. The PMC has a broad application across the construction industry. Other applications include spreading topsoil, placing soil cement, sand, gravel, or aggregates in road beds, backfilling sewer trenches, dams, retaining walls, agricultural goods or refuse, or anything that can be conveyed or transferred. By varying the style of the conveyor the unit could serve as a shoulder spreader. The applications are endless. Construction Equipment Magazine has recognized the Portable Modular Conveyor as one of their "Top 100 New Products of 2009".

The goal for the Portable Modular Conveyor-Material Placer is to have contractors in every state across the country and throughout the construction industry using PMC Material Placer in their operation.

E2 SYSTEMS, LLC

[www.materialplacer.com](http://www.materialplacer.com)

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Application under traffic on I-69 on Okemos, MI



Attahces to frontend loader

# E2 SYSTEMS, LLC.

Portable Modular Conveyor - Material Placer



Quick easy attachment and control



Quick easy attachment and control



Conveyor receiving dump trucks at Cobb County Airport, Georgia



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