

AEM

Automated Electrified Monorail Systems

Fast, Quiet, Clean & Reliable Material Handling



*Bi-directional carriers individually powered
by track mounted electrification*

Jervis B. Webb Company

MATERIAL HANDLING SYSTEM SPECIALISTS



Clean, Quiet and Fast

AEM

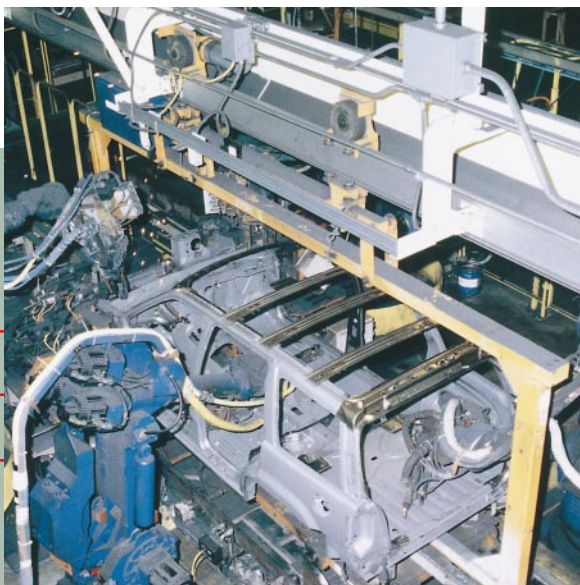
LOAD CAPACITIES UP TO 6000 LBS - 2700 KG

The Automated Electrified Monorail (AEM) is a clean, fast, intelligent material handling system designed to interface easily with today's sophisticated process equipment.

Featuring individually powered carriers, each drawing power from track-mounted electrification, AEMs have replaced slower, less efficient material handling systems in a number of manufacturing and assembly plant operations.

Zoned speed control allows carrier speeds to range from **20 fpm** (6.1 mpm) or less in production areas and up to **300 fpm** (100 mpm) in transportation zones. Since long distances can be spanned at high speeds and carriers are bidirectional, fewer carriers and often less track are required for a conveyor system, making AEMs uniquely cost efficient.

Ultra quiet AEM drive trolleys with urethane wheels combined with Webb's patented track splicing methods help to substantially reduce conveyor noise levels.

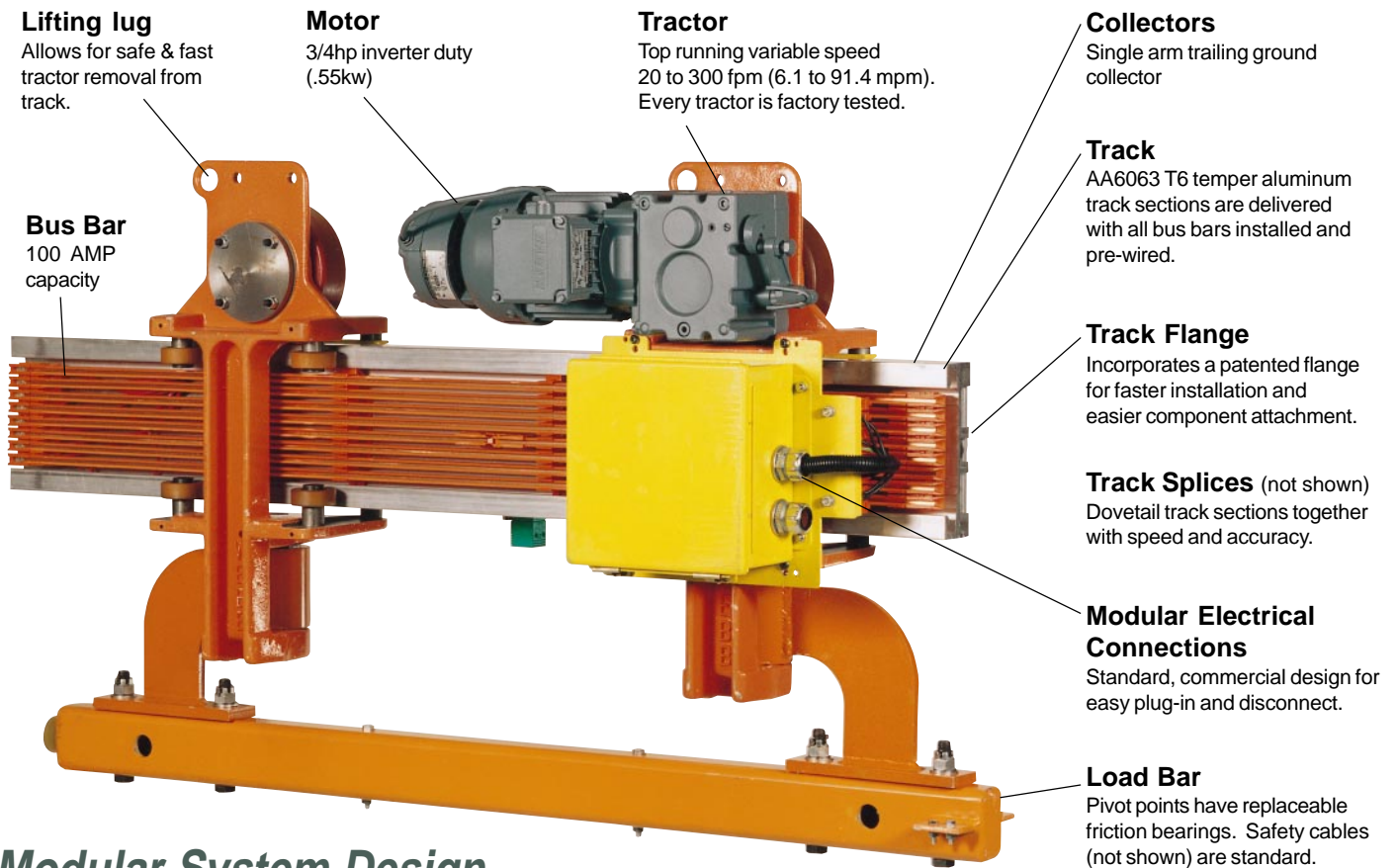


Top right: Automated Electrified Monorails deliver parts to multiple workstations at a high-tech manufacturing facility.

Left: Heavy-duty AEM carries auto body subassemblies through automated welding operations.

Right: Inspectors in this automobile body shop finesse sheet metal for perfect fit and finish.





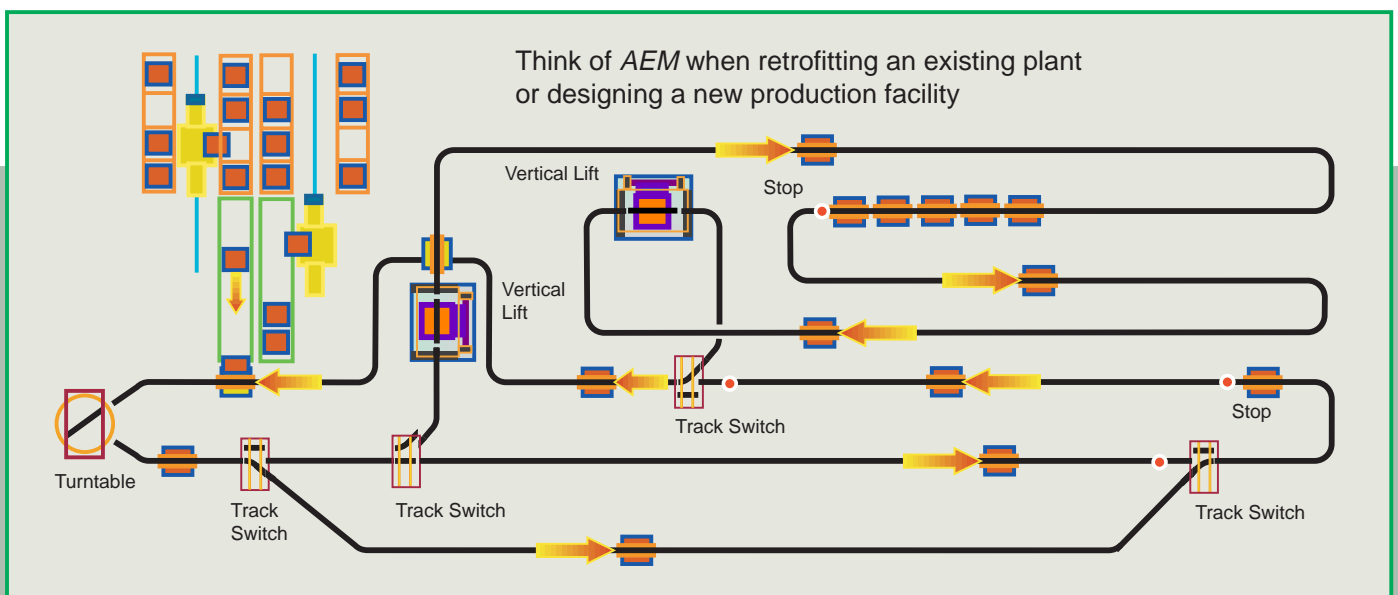
Modular System Design

The modular design of our AEM allows easy integration of turntables, switches, and high performance lifting devices into a system. Carriers can be flexibly routed over complex paths, accumulated on track, into spur lines, and/or recirculating loops, and transferred to track levels of various heights.

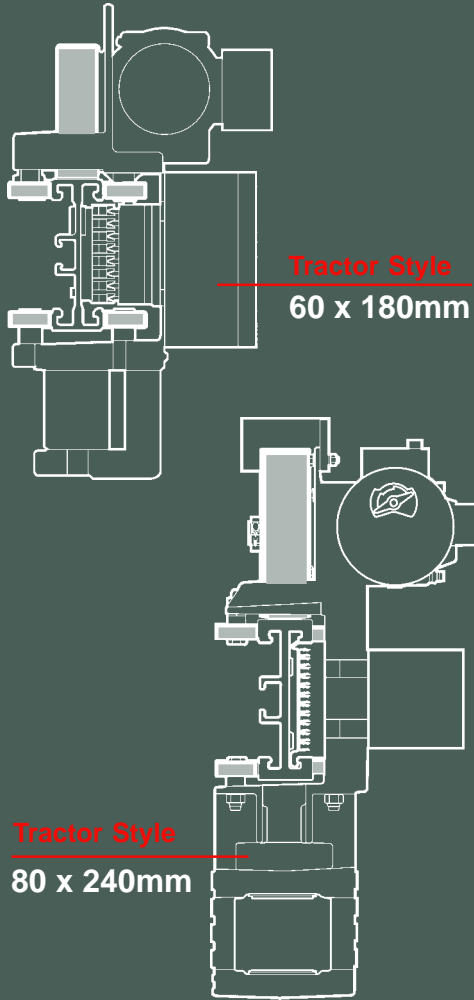
These dynamic systems allow for a wide variety of speed, destination, load weights, and control options,

giving comprehensive control over each carrier for dramatic improvements in production capacities.

Optional features such as diagnostic lights, quick disconnects on the electrical cables, and plug-in receptacle for manual pendant control, help to streamline maintenance procedures and make AEMs easy to operate and maintain.



2 Tractor Styles to Meet Your Needs



Vertical lift devices used in Webb AEM systems feature double mast structural tube steel construction. Additional features include an electric gear motor, variable frequency drive with Eurodrive Reducer, a standby drive motor, and a separate emergency caliper brake as well as an integral motor brake.

The routing of carriers through spurs, loops or alternate paths is accomplished with a variety of slide switch configurations and turntables. These devices may be electrically powered or air operated. The track switches feature positive mechanical carrier blocking at open track switches.

Intelligent as your process requires, Programmable Logic Controllers (PLCs) communicate with carriers over a dedicated bus bar integrated within the track electrification. Constant contact with each carrier allows instant control of route selection, carrier speed, and tracking information to easily accommodate production schedule changes. Controllers can be interfaced directly to a host computer when a more comprehensive system integration is desired.

| AEM LOAD CAPACITIES | | |
|--|------------------------------------|---------------------------------|
| Load | I-Beam | Transport |
| Up To 1,100 lbs (498.9kg) | 60 x 180mm Extruded Aluminum | 1 Trolley Load Bar |
| 1,100 lbs (498.9kg) To 2,200 lbs (997.9kg) | 60 x 180mm Extruded Aluminum | 2 Trolley Double Load Bar |
| 2,200 lbs (997.9kg) To 6,000 lbs (2,721kg) | 80 x 240mm Extruded Aluminum | 2 Trolley Load Bar |



System Simulation

AEM systems are designed using the latest AUTOCAD and simulation technology to confirm the design and functionality of each system.

AEM Simplifies Body Shop and Improves Flexibility

The Jervis B. Webb Company installed three Automated Electrified Monorail Systems at an automotive plant to transport sheet metal components through the Body Shop for assembly and welding operations.

The complete system consists of approximately 4,500 feet (1372m) of 80mm x 240mm aluminum track, with 159 self powered carriers and six 12' (3657mm) at high lift sections. The carriers have a peak speed of 300 FPM (91.4mpm) and can index between operation stations, approximately 22 feet (6705mm), in about eight seconds.

The first of the three systems accepts an automatically-loaded floor pan. It is then transported in a vertical position through stations where the structural members are added and welded to the sheet metal floor pan.

This base assembly is loaded to the second system and transported, in a horizontal position

through stations where the engine compartment is mounted and welded to form the underbody.

The third system transports the finished underbody through stations where the side apertures, roof, and front panels are assembled to the base. Next, the assembled sheet metal body is transported through a variety of welding stations to complete the body assembly operations. This conveyor has a built-in capacity buffer between production areas.

Simplicity in Design

The AEM approach to the body system at this Body Shop is a simplification of the handling processes used in other plants. Since the indexing apparatus is now an integral feature of the AEM, it eliminates the need for special, complex automated indexing machines. Transfer units and automatic loading and unloading devices on-board the AEM conveyor provide more efficient use of floor space.

Standard AEM features include: zone accumulation, standard variable frequency drive control, and off-board control of the carrier.

This system includes several additional carrier features designed to streamline troubleshooting and maintenance. These include diagnostic lights, quick disconnects on the electrical cables, and a plug-in receptacle for manual pendant control of the carrier.



**Expert installation,
comprehensive training,
and full time technical
support staff located
at our 39 offices around
the world, ensures our
commitment to customer
satisfaction.**

Jervis B. Webb Company



MATERIAL HANDLING SYSTEM SPECIALISTS

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