

■ AMTS[®], a new revolutionary vehicle for your port operations

AMTS[®] - Automotive Terminal Trailer System[®] - is the answer to the growing need for a multipurpose, upgradeable, powerful, reliable, high performance vehicle to - quickly - handle port operations.

The AMTS[®] concept combines the ATT's assets with those of the train. Developed according to tested disruptive technologies, the AMTS[®] combines a new style of vehicle with a hybrid motorization system to produce exceptional performance, with unparalleled added value and service life.

The invisible, but far from negligible asset of the AMTS[®] is the lower operating cost over the whole period of service of the vehicle: minimal fuel consumption, low maintenance, easy to use and maintain. A related feature: the AMTS[®] helps lower operating costs but also lower greenhouse gas effects.

Add to that an extraordinary manoeuvrability and an optimum comfort during the specific and tricky operations, such as positioning under the cranes.

The AMTS[®] is the only vehicle of this kind on the market to offer a reverse mode.

A real driving pleasure !



Automotive Multi Trailer System[®]
By GAUSSIN



GAUSSIN MANUGISTIQUE[®] is specialized in the auditing of handling procedures and the production of wheeled Non Road Mobile Machinery (NRMM) systems for the delivery and transportation of heavy, large or delicate loads. Founded over a hundred years ago, GAUSSIN, with more than 50,000 handling vehicles across the world, enjoys a strong reputation in the four booming markets of Energy, Transport, the Environment and Raw Materials. GAUSSIN MANUGISTIQUE[®] has been listed on the Paris Euronext Marché Libre since July 2006.

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Be Faster... Safer & Cleaner



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■ AMTS®, in 25 unique differentiating points from the market

-  **Extraordinary handiness:** the cabin can pivot even when the vehicle is not moving yet, thanks to the Agility Drive plus technology and the single element "all in one" technology.
-  **Driving from outside of the cabin** using the Remote Drivetronic remote control.
-  **Delta Design chassis,** which regulates counter-balance of the chassis, in order to resist flexing and twist and to guarantee flatness during Twin Lift operations.
-  **Removable chassis modules and guides,** easy to repair, to interchange or upgrade.
-  **Automatic alignment with Link Mode** for precise alignment of several vehicles during operations under cranes.
-  **Automatic regulating of accelerations with Steertronic** to program speeds, thus lowering fuel consumption while extending service life.
-  **Lower speed in curves with Agility Drive Plus** to program the speed during steering and improve safety.
-  **Power Pack concept:** concentrating all the power supply in a removable container. Choice of power and type of motorization, with the use of the Power Pack. Only one Power Pack is needed for a trailer train.
-  **Quick Move:** the Power Pack extraction system. Service availability ratio close to 99%.
-  **Reduction of 30 to 50% in fuel costs,** with the Hero Stop and Start technology, which programs the engine stops and start-ups without using keys and batteries.
-  **Better engine performance** with Enginetronic linear governing of the engine.
-  **Increase of 30 to 50% in the service life** of the equipment.

In conclusion, the AMTS® is the easiest vehicle to handle on the market, and the most reliable vehicle ever designed with such low operating costs, in compliance with safety and environmental standards.



■ AMTS®, an innovative concept with many assets

A combination of the ATT's assets with those of the train.

Large ports are faced with a continuous increase in the number of containers unloaded each day. Ever bigger volumes need to be managed and requirements in terms of reliability are more and more demanding.

The AMTS® concept combines the ATT's assets with those of the train.

4 containers can be handled simultaneously with one single AMTS®, offering safe and reliable operations in reverse mode.

The turning radius is shortened and the single-channel tracking is accurate.

The architecture of the AMTS® is unique in the port world. The concept created a new one-element design: the "all in one".

Seen from the outside, the cabin appears to be suspended, with a mobile front part. The effect is reinforced when the cabin moves to the left or to the right while the vehicle has still not moved.

The shape of the cabin and of the windowed area provides high visibility and interior comfort for the driver, providing real driving pleasure. A glimpse at the top part of the cabin shows that the spotlights provide a lot of light, whereas the thickness of the roof and the exterior overhang provide protection against the heat.

In the middle of the chassis, the cantilever gives an indication of the sturdiness of the vehicle. The Power Pack located in the centre naturally

balances the structure; the transported loads and all the effort are ideally distributed on the axles. The sturdiness and the shape of the guides with their anti-embedment ramps enable efficient orientation and support of containers.

Safety on all levels

■ With AMTS® Technology, the driver has no more vibrations, noise, noise annoyance, heat from the engine, hot oil odours, exhaust odours and gas emissions and risk of inflamed fuel in case of accident (the tank being located at about 10m from the driver's cabin).

■ Operator safety is enhanced thanks to the Twist Lock Less mode which warns the driver when the Twist Lock removal is complete

■ The size of the steps, with intermediate landing and access ramp to the cabin has been specially designed to facilitate and reinforce safe access to the driver's cabin.

■ The cabin is protected by external safety bows in tubular steel.

■ There is a camera to show the back of the AMTS®, and then display it on the screen in the driver's cabin.

■ In addition to the service brake pedal, a dead-man control button is located on the driving console.

■ High technology patents

The completely new functions and technologies used to develop the AMTS® concept are the object of worldwide patents and trademarks.

- ALL-IN-ONE for a one-element architecture.
- DELTA DESIGN for adjustment of chassis cantilever.
- SAFE BOX for bumpers with box protection.
- POWER PACK for power concentration in a removable container.
- HERO Stop and Start to program stops and start-ups of the engine without keys or batteries.
- AGILITY DRIVE PLUS to program speed in steer angle of wheels.
- REMOTE DRIVETRONIC to drive while outside of the cabin.
- QUICK MOVE to remove the Power Pack in just a few minutes.
- STEERTRONIC to program speed during accelerations.
- ENGINETRONIC to govern the engine in order to obtain a linear number of revolutions.
- LINK MODE to align several vehicles.
- AUTOMATIC TEST VEHICLE for test and maintenance without stopping operations.
- AMOVIBLE TEST DESK removable test and maintenance bed for the Power Pack.



Power concentrated in a removable container

The Power Pack is a module containing all the necessary components for supplying power for transmission and steering.

Principle components of the module:

- Combustion engine
- Hydraulic pump
- Distribution system
- Hero Stop and Start technology
- Calculator
- Induction system
- Exhaust system
- Intercooler
- Hydraulic oil tank

A concept designed to:

- Carry out the maintenance of the Power Pack without immobilizing the vehicle.
- Reach a service availability ratio of 99%.
- Directly access all the mechanical components defined as repairable.
- Facilitate repairs.
- Considerably increase the service life of the vehicle.
- Exchange the Power Pack for another or change it to a different power.
- Switch to a new technology, with gas for example.
- Limit the space required to perform maintenance to 4 m².