

## A highly innovative solution custom-tailored to fulfill your needs...

The use of automatic tool handling systems has been increasingly spreading in those sectors where the need for raising production processes efficiency convinced to adopt the most recent flexible automation solutions, keeping versatility and adaptability.

For this purpose, our AGVs are a highly innovative and technologic solution, custom-tailored considering the specific needs of the final customer, to whom we offer a wide scenario of possibilities to choose according to applications, sector and budget.

Our starting point is to study carefully the project aiming to provide a turn-key solution which has to be shared, functional and efficient.

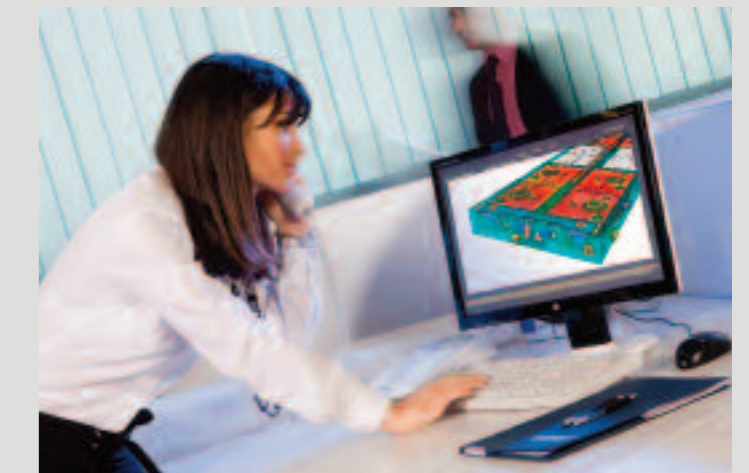
Generally, this goal is accomplished by adopting the concurrence engineering approach which consists of working closely with customer's technicians at the very first step of the project.

Our long time experience has resulted in the configuration of different AGV solutions, which can be seen as base for designing and creating custom-tailored systems.



Model	120 T	30 T	1,5 T
Dimensions	11.700x3.700x800 (h)	7.500x2.250x500 (h)	5.000x2.500x1.250(h)
Max capacity	120.000 kg	30.000 kg	1500 kg
Number of vehicles	3	2	1
Max speed	15 m/min	19 m/min	35 m/min
Cells reached	53	32	22
Control system	AGV Manager	Touch-screen cell terminal	AGV Manager
Tools axis handling	Lifting	Lifting	Lifting, dislocation, inclination

From the chart we realise that the solutions provided so far have covered a vaste range of capacities, number of vehicles used in the same system, of cells reached, of movimentation axis of load and, generally, of all the requirements and the charateristics; this stands for the extreme adaptability of our solutions and for our design skills.



**Our mission: Translating your problems into solutions**

## The problem...

In order to carry out all the activities involved in the production of **Boeing 787 fuselage**, **Alenia Aeronautica** needed to procure an handling system which could move different tools with **high weights and masses** covering the whole area of Grottaglie plant.

During the working activity process it was necessary to move the tools through **56 separate unit cells** located on an area equal to **65.000 m<sup>2</sup>**; due to the complexity of the activities and the value of parts to move, it is required maximum **precision, safety and reliability**.

## Our solution...

After carrying out an **accurate preliminary study** based on customer needs, the **AGV project** comes to life: a system composed by **3 automatic guided vehicles** capable of moving tools which reach **12 m** in length and **120 T** in weight. The system ensure the handling of the tools in **every part of the plant** covering the total number of cells (**56**) engaged in the production cycle of Boeing aircraft.

**MECFOND solution** focuses on the elevated **precision** and **reliability** of the system which can handle, among the other tools, enormous dolly mandrels through different cell units being sure of the **absolute integrity** of the objects carried.

As they are prearranged by the plant central management system of production, the activities required for putting the tools on the machineries and plat-

forms are carried out with the **maximum accuracy avoiding risks and costs** normally generated by manual handling, by the mean of transferring all the information to the AGV's control system.

Procedures automation impacts as well on **cost-efficiency**, reducing the use of human resources who are engaged only in supervision and control activities.

Finally, the AGV system projected has **different assets in terms of safety**: an advanced laser scan check device succeed in detecting obstacles in area up to **7 meters** in every direction; laser scanners can adapt automatically the security area covered depending on shaper and dimensions; the acustic and visual signalation device meets the most updated safety standards.



**Automatic Guided Vehicle during a preliminary test**

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