

APLUS UP Industrial provider solutions

COMPANY PROFILE

COMPANY





PLUS UP

Always wanting to be in step with the times, A.G.I. PLUS S.r.l. has defined a new corporate organization and formed a Group. In fact, in 2018 PLUS UP was founded, a company into which all the activities of AG.I. PLUS were merged, with the aim of making the latter a holding that controls three companies: PLUS UP, FA LUCE and A.TEC.. The aim is to make the most of the opportunities offered by the market and, in order to best satisfy its customers, it offers them a complete service, starting from engineering to prototyping and construction of transport lines and special machines for various types of fluids, from the different types of feeding systems for measuring machines to industrial lighting activities, using IOT communication systems that allow the management of all control-related aspects of a factory.





OUR MISSION

During 2020, PLUS UP's aim will be to increase the turnover of the last year of A.G.I. Plus , starting from from 4 million euro, reaching 6 million euro.



HUMAN RESOURCES OF THE GROUP

Agiplus Group is composed by 55 employees. PLUS UP has a workforce of 20 employees.

WORKERS







ICP-CPA AREA



LIGHTS PERGOLA



CTVV AREA



METROLOGY ROOM



GOODS LABORATORY





ICP-CPA AREA



Innovative, functional, transparent in style and content, precise and alert to even the smallest details, as required by those who have to check defects on sheet metal, paint, gap and flush: all this is the ICP-CPA Area, created as an environment dedicated to the rigorous control and measurement of the quality of products and services with a view to the customer, looking at the supplied products and services from the buyer's perspective, in order to achieve top-quality final results.



LIGHTS PERGOLA

The Pergola was developed as a functional and innovative solution that meets the needs of those who have to analyse cars on a daily basis and require variable lighting conditions. All the offered models combine sophisticated, high quality high-tech materials for the best performance with a geometric style that places the car as if it were in a laboratory, in a light clinic.

The particular lighting conditions make it possible to find any imperfections in the products present inside the structure or to highlight their quality and design features along with the gap and flush. By acting on a manual potentiometer, with no need for additional controls, the system uses a light intensity that ranges from zero to about 4000 lux, thus facilitating a detailed visual analysis.









If you need to perform the objectification of static functional tests, verify the conformity of certain characteristics on vehicle systems and perform diagnostics on vehicles with anomalies, even difficult to solve, at the process, design and supply level, the TCVE (Technical Centre for Vehicle Evaluation) is your solution. In fact, its purpose is to monitor the progress of Process Compliance and suggest solutions to all kinds of anomalies, involving the technical diagnostic bodies.

For this reason, it was studied and designed with internal control and diagnostic areas, in addition to a technical sector and personnel office. Vehicles passing through the TCVE Area to be subjected to statistical checks are taken after the roller test, before the green sticker, so that process deviations can be verified.

CTVV AREA



METROLOGY ROOM

The Metrology Room is the answer to the need to perform accurate calibrations, measurements and mechanical processing in controlled environments at precise temperatures as close as possible to 20°C, through the use of cutting-edge technology and with maximum attention to achieving the objectives required by the customer, including from an aesthetic standpoint.

The metrology rooms can be of different sizes and different classes: I, II and III.

According to standard ISO 1, for dimensional measurements in the metrology sector, temperature is the crucial element in terms of results of the measurements: in fact, 20°C is the reference temperature for the geometric specifications of the parts.

The air-conditioning system must also comply with accuracy requirements, especially for three-dimensional measuring machines (cmm).









GOODS LABORATORY

A laboratory containing technical rooms and equipment suited to control the quality level of metallic and non-metallic components of a car: this is the Goods Laboratory, an environment consisting of several rooms and functional areas for the qualitative analysis of all car components. There are many specific technical areas inside the laboratory: from the Sample Instruments Room for certifications and calibrations of measuring instruments, to the Qualistic Room with reference samples for colour and aesthetics, from the Salt Mist Room for corrosion tests, to the Chemical Products and Suction Hoods Room, without forgetting the Metallographic Testing Room. A well-equipped laboratory where to carry out all the necessary checks on materials in all of their phases, starting, in the case of metallic materials, from the preparation of the samples, to the micrographic analysis and hardness determination, and the tensile tests.





PORTALS



AERO-STRUCTURES



HANDLING





COMPONENTS



CARTS





HOOKS

We design and manufacture specific equipment for the lifting of components of different nature, weight, shape and overall dimensions, such as in the case of car parts. The pictures show some examples of hooks for handling the chassis, bodywork and air-conditioning unit. The structures are made of tubular profiles normally welded or alternatively, according to the specific application, of aluminium profiles and/or composite materials. The gripping elements, instead, consist of plastic materials made by CNC machines or 3D printers. Rubberized or flocked protection elements. All sized and certified to optimize weight, ergonomics, safety and resistance of the equipment.





CARTS

We design and manufacture carts for the storage, handling and/or assembly of components of different nature, weight, shape and overall dimensions, such as vehicle slab elements, underbody guards, mechanical units. The pictures show some examples of semi-corner group transport cart, cart used for the handling, lifting and assembly of a tank frame to be mounted in the underbody.





GRIPPER

We design and manufacture specific grippers for the lifting and handling of components of different nature, weight, shape and dimensions. We create them using pneumatic, magnetic, vacuum and/or mixed gripping devices.











HANDLING

We design and supply special equipment dedicated to manual or semi-automatic handling in accordance with the ergonomics specifications of the most varied products. On our manipulators (starting from standard components and products distributed by us) we realize different types of devices, part grip and handling of the same.









PORTALS

We design and manufacture Cantilever Column Portal Structures for the assembly of cranes, manipulators, reaction arms, electric hoists and airbalancers.





AERO-STRUCTURES

We design and manufacture overhead structures for crane cranes, manipulators, reaction arms, electric hoists and airbalancers.





COMPONENTS

We design and manufacture mechanical components of different types and applications, such as grease dispensing nozzles, head assemblies for greasing small components, e.g. ABS sensors. Depending on their complexity and function, they can be made of different materials, from steel to aluminium, or plastics, or composite materials, which in turn can derive from different technologies, such as CNC machining or 3D printing.









GREASE DISPENSING SYSTEM

SEMI-ANECHOIC CABIN

SYSTEM



WATER TEST SYSTEM

The water test system is an automatic system that simulates the weather conditions of rain and fog in order to visually check the possible infiltration of water inside the vehicle cab, thus testing the proper tightness of the seals of the various dividing elements of the vehicle.

The test room, which the operator accesses on board the vehicle to be tested, is equipped with doors that can be operated by the operator by remote control.

There are two types of water test system: the simple type, inline, and the dynamic, 9-position water test system









ADBLUE[®] DISPENSING SYSTEM

The AdBlue[®] dispensing system was developed to meet the need to fill the in-line tanks of Euro 6 diesel vehicles manually and automatically. The AdBlue[®] is taken from the centralised tanks and, thanks to the pumping units located on the sides of the assembly line, it is conveyed inside an intermediate tank, kept at a constant temperature and in continuous movement. From this intermediate tank, the AdBlue[®] is then taken and conveyed into a hose that ends with a dispenser to be inserted into the vehicle tank.

In addition to production data management, specific dispensing programs can be created to set the quantity to be dispensed, which can range from 1 to 15 litres.



SYSTEM

GREASE DISPENSING SYSTEM

The grease dispensing system was developed to meet the need to dose specific quantities of grease when high precision and repeatability is required.

The system is able to calculate CM and CMK statistics, producing a precise estimate of the average and of the standard deviation from the average values. In addition, the assembly on a structure made of high-strength aluminium profiles makes the systems sturdy and able to satisfy the needs of the most demanding production contexts.



SYSTEM



LPG EMPTYING SYSTEM

The LPG emptying system was developed to meet the need to safely and cleanly remove LPG from the vehicle tank after road tests.

The system consists of a piece of equipment that can take the liquid phase of the gas contained in the vehicle tank and put it into disposable cylinders, thus avoiding the need to dismantle the tank.

The resulting gaseous residue is then burned afterwards. Industrial LPG recovery system meet the manufacturers' requirements to dispose of residual gas from tanks. The highly innovative process is achieved by separating the elements that make up the gas and greatly reduces the risks and costs associated with this activity.









SEMI-ANECHOIC CABIN

The Semi-anechoic Cabin is an acoustically insulated chamber with sound insulation from the outside and sound absorption from the inside, used to analyse vehicle noise and study the reasons for it. It consists of walls made of various layers of materials with different densities, depending on the sound insulation to be achieved. The cabin is equipped with a ventilation system for room air exchange and air conditioning, complete with silencers and adjustable shutters, treated with exposed soundproofing materials inside the room and with a light signalling panel inside the room. There is a Control Room next to the Cabin, the function of which is soundproofing the cabin against the noise emitted inside the department.

AUTOMATION E LOGISTICS





Customized solutions for manual and automatic industrial assembly, through electrical, pneumatic and battery means.



We provide solutions and equipment placing innovation at the center digitized processes and human-machine interaction to ensure passage to logistics 4.0

AUTOMATION



We develop customized solutions for manual and automatic industrial assembly. The systems in question are developed and integrated with turn-key methods on new plants, retooling and stand-alone equipment connected to MES systems (objectification and traceability). Speaking of handling, we can also supply special equipment dedicated to manual or semi-automatic handling in compliance with the ergonomic specifications of the most disparate products. We design and build on our manipulators different types of workpiece gripping devices (pneumatic grippers, with magnets, with vacuum, mechanical, mixed, etc.).







AUTOMATION



AUTOMATIC FIXED STATIONS

Customized solutions for manual and automatic industrial assembly by means of electric, battery and pneumatic servomezzi. The systems in question are realized and integrated with "turnkey" mode on new plants, retooling and stand alone equipment. On request of the customer are present in the company the skills to interconnect them to systems MES (objectification and traceability







Our mission is also reflected in the attention to place digitized processes and human-machine interaction at the centre of innovation by making the transition from Logistics to Logistics 4.0. In fact, PLUS UP is distributor and integrator of LCA, Lean, Pick-put-to-light systems for warehouse management and production lines. In this way, we innovate companies and guarantee them greater efficiency and productivity.



LOGISTICS





MEASURING MACHINE FEEDING SYSTEM

This is a track-based movement system with high-precision prismatic section for the feeding of measuring machines inside the Quality Control Areas where precision measurements are automatically taken on complex parts (e.g., car bodies). Carts equipped with supports for elements are moved at reduced speed from the preparation stations to the measuring stations. The degree of mechanical and dynamic precision is extremely high. The transport system is flexible, and its path can be designed and adapted to the needs of the customer and the available space. The carts are idle, and their movement is carried out by means of motor units fitted rubber thrust wheel, positioned along the path at regular intervals.



LEAN MANUFACTURING

We design and manufacture ergonomic workstations according to Lean logic and customer needs for the rational and orderly flow of materials, gravity warehouses, picking racks and Lean Production trolleys. All our solutions are made with different types of materials (iron tubular coated, aluminum profile, tubular or structural, or mixed).









LCA

We design and manufacture Low Cost Automation systems, a technology that generates a certain degree of automation around the machines, equipment, methods and personnel employed, using mainly the standard components available on the market and using information and microelectronics technology to increase the potential of the system.

The investment required is low, so the risk involved is minimal. The automation is adapted around the current machines considering also the operating personnel, therefore the changes are gradual and economically very profitable.







REFERENCES



ABARTH	AGUDIO	ASTRA	ATLAS COPCO
BOSCH	CHN INDUSTRIAL	COMAU	FSCA GROUP
HEXAGON	IVECO	JOFA	LAMBORGHINI
LANDI RENZO	MAGNETI MARELL	I MASERATI	PSA
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Thanks for your attention