Stacking columns for automotive logistics

Standard and special solutions for all type of car parts transportation

www.towersautomotive.com
Towers Automotive is engineering, manufacturing and sales company leader for the production of logistics equipment (storage columns, holders and pillars) for automotive metal racks and containers which are used for transportation of automotive parts between chain network production factories, automotive components suppliers and dealers. We also develop and make first prototypes for metal racks for possible future serial production by our customers.

Our company works with the leading producers and suppliers in the automotive industry for standard and special individual solutions, like transportation equipment for fragile parts, such as glasses or sunroofs. Thanks to the partnership with other companies for robotics and industrial automation we are ready to provide turnkey solutions for assembly lines with the storage, handling and supply equipment.

**Our experience and quality**

We have more than 20 years of experience in transportation, logistics and storage equipment with a lot of unique solutions based on our patented units. We make our products with high class sheet metal fabrication machinery for punching, cutting and bending, 3D bending of wires and much more.

Our products are 100% made in Italy with the use of all EU standards and certification for finished products and raw materials. We are looking for the best customer care in order to offer competitive, high quality and reliable products, which are among the best on the market. Offered solutions help to get the great save the electric consumption and the reduction of effects for the environment.

Every day we increase our skills and can offer most reliable solutions that are available on the market to obtain the best logistics process with minimal cost and maximum effectiveness. Our flexibility helps us build the convenient link with our customers for long-term collaboration.
Our experienced and skilled engineering department assists and follows all the projects in our company. We have the possibility to prepare any solution in CAD software as virtual design development for the future manufacture and use: from simple rack with columns based on your part to complicated lines and individual racks, fixtures and solutions for the complete automatic processes.

We design and manufacture special solutions for mechanical handling of automotive components for implementing low cost automation. Our products include individual stations, feeding transfer stations, rotating systems, moving blocks, transfer modules etc.

Visualization and production

We are at your disposal to make your project completely prepared for production including the view, technical drawings and design capabilities and functionality. Before construction you can view all parts of the individual plan including all equipment and necessary units. We are able to develop special transport racks and containers for the customer needs with implementing our columns.

First pieces (prototyping) or small quantities could be fully produced by us. Serial production and big quantities of transport racks could be done by our partners with our full assistance for engineering and supervision for production preparation plan.

Our advantages

- Ability to work with all CAD systems and software which is used for the automotive industry (CATIA, DASSAULT SYSTEMS, PRO-ENGINEER, SOLIDWORKS etc.)
- Projects for manual handling and 100% automation
- From a single rack to automation lines for loading-unloading and assembly operations
- Experience and quick preparation of projects for customer approval
- Projecting of individual construction columns, including horizontal and diagonal elements
We are the leading manufacturer of columns and towers, which are usually used for the separation, holding and blocking automobile parts inside the transport containers and racks for automotive industry. We are ready to offer various solutions to different geometries of columns and moving fingers, pitches, supports and other parts of the construction according to your special parts. Based on our long experience and our optimized construction of columns we can offer the most reliable product on the market to optimize logistic costs. Any special designs on order are acceptable.

Advantages of use of our columns

- Effective replacement of polyurethane or plastic holders of standard racks and containers with the reduction of 50% of the support elements
- Save of space and possibility to increase the storage volume to 20-50% on the same rack for optimization of logistic and transportation
- Anti-corrosion execution and special plating under request
- Many patents for the execution of units and the construction guarantee the maximum effectiveness of our products
- Each part is blocked and the column completely locked for maximum safety
- Mechanical elements without any pneumatic or electric units
- Long life use and possibility to replace easily just separate finger support
- Support plastic or polyurethane fingers for storage of fragile parts and components
- All columns are adapted for automation and robotics use for automatic loading and unloading of parts

Patented hole design

Special hole design allows mechanical rigid fixation without any additional components

- Stop in working position
- Stop in idle position
- Self-cleaning without any necessary maintenance
- Special and patented hole design for reliable use of column
**Vertical columns**

Vertical columns are the most popular solution for standard vertical support of car parts. Columns could be made depends on the size and weight of the part start from very small pitch of 6-8 mm. The construction is executed for the geometry of a part and could be produced with different materials of main parts, including aluminum or galvanized steel.

**Horizontal columns**

Horizontal columns are used if the position of parts is horizontal with the necessity to block them from the sides or bottom. The construction could be made from smallest pitch of 5 mm. The construction is executed for the geometry of a part and could be produced with different materials of main parts, including aluminum or galvanized steel.

**Diagonal columns**

Diagonal columns could be used in some storage solutions where special diagonal stack of parts could be more effective to save space, such as deep stampings and other volumetric parts. The construction is executed for the geometry of a part and could be produced with different materials of main parts, including aluminum or galvanized steel.

**Robotic use guaranteed**

All our columns are used for robotic automation handling with gripper parts manipulations. Special construction allows the proper use with the maximum efficiency in handling automation and robotics lines and cells.
Fragile parts

Special solutions for such parts like panoramic or glass roof to prevent any collision of the part with metal units or elements. Special clamping and fixation and remaining with fingerblocks.

Amortized fingers

Wire fingers with the flexibility to be pushed over the nominal point. This solution doesn't affect the blocking security to hold the part but has the big advantage in automated process – robot and gripper can touch the part with the pushing of finger without the main collision or damage. It is effective for teach-in robotic process and moreover, the handling unit (gripper, clamp or holder) can more closer travel to the part and column.

Height adjustment

Height adjustment to use the columns with trolleys, conveyors and other movable units. This solution helps to make necessary positioning with the column use without necessity to setup all the production automation units.

Articulated columns

Special columns to pull down inside the rack for easy and cost savings transportation for returnable operations. Such construction together with the folding sides of rack allows the best possible logistic optimization for handling of blank containers and racks.
All our products are 100% available for the automation process which allows to use them in automation and robotic lines for the processes of loading and unloading. We are ready to offer standard rack and columns to robotic use and also to develop individual projects for each type of automation, including the ability to implement all the peripheral units.

We can work with any type of robot, including ABB, Kuka, Fanuc, Motoman, Comau etc. Our products can be easily implemented in automatic stamping cells with the robotic handling operations to load the parts into shipping racks in full automatic mode. The same racks could be used with the unloading of parts during the assembly operations.

**Low Cost Automation**

We develop special individual solutions for LCA (Low Cost Automation) including unique components, rotation units, transfer systems, pallets changing systems, fixation and holding stations etc. for handling and assembling processes at automotive factories. We are able to design from single unit to complete system.

**Special fixtures**

Design, development and production special fixtures based on the holding columns for handling special components in 24 hours automation process. We are able also to develop and provide the full transport system for the application.
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