



VEHICLE BODY SOLUTIONS

Bespoke Polypropylene vehicle bodies
ensuring firefighting excellence.





OUR PORTFOLIO

Comprises of reliable vehicles for fire-fighting and various solutions for industrial applications providing:

- High Volume tankers on different chassis
- Customized vehicle bodies
- Special tanks from 20000-25L as per client specifications
- Robust, lightweight construction owing to technically and structurally advanced PP tanks
- Flexible designs
- Impressive maneuverability and mobility
- Ideal Solution for Ultra High Pressure system with PP tank

INTRODUCTION

MERAJ INTERNATIONAL FZC continue to enhance our range of bespoke fire fighting solutions, with the addition of high quality polypropylene fire vehicle bodies. All our vehicle bodies can be tailor-made to suit your needs. Based on many years of experience with the manufacture of special vehicles we are able to develop and produce any type of special polypropylene body. The possibilities vary from the delivery of just the superstructure to the delivery of a complete and fully equipped special vehicle.

We have a modern production facility with the latest technology of numerically controlled production lines for the production of polypropylene vehicle bodies from a highly durable and recyclable polypropylene material.

Why Choose Us

Quality

Being an integral part of the safety infrastructure our firefighting as well as municipal vehicles are subjected to rigorous quality assurance testing. Meraj International ensures all our products and vehicles are compliant to ISO 9001. This provides an in-depth understanding of the QMS in accordance with the ISO 9001 framework. By complying to these frameworks we enable our products to be quality warranted.

Customized Solutions

The indisputable impact of 3D on design has revolutionized the automotive world and therefore our team of designers generates, organizes and customizes vehicle bodies as per client requirements. The result is an easier-to-understand, more information-rich 3D digital model giving product development and manufacturing operations a significant competitive edge.

Functionality & Reliability

The revolutionized designing leads to reliable manufacturing owing to the advanced product design. Use of the latest advanced CNC automotive allows for faster production of precise and highly efficient parts. The precision and complexity of the process leads to optimization and improvement in terms of performance, durability and reliability.

After Sale Service

Being in the safety business our service teams are always there for our clients. A range of service partners ensure that if there is ever an unexpected problem, there is always an after sale service available for you. 3D designing and computing makes it much more practical to provide precise and accurate parts years after delivery of the product.



10 Benefits of Polypropylene Bodies



Lightweight

Body fabricated in co-polymer is much lighter than fiberglass or aluminium body.



Saving fuel costs

Due to lighter body weight the fuel costs are reduced.



High impact resistance

Extremely high shock resistance absorbing impact energy and transmitting it to other parts of body. In case of running into a wall the wall itself will be more damaged than the body.



Chemical and corrosion resistance

Excellent chemical resistance to a wide range of chemicals eliminating corrosion problems. Does not rust, corrode or crack.



Repairability

Easy to repair. The body can be welded in case of damage, a polypropylene section can be cut out and welded in a new section without affecting the overall strength.



Variability

Construction possibilities are virtually limitless varying from integrated water and foam tanks to flexible capacities of locker space for equipment.



Increased visibility

Material is white in appearance which helps reflect light inside the body offering excellent internal visibility and also sound insulation.



Long life cycle

Co-polymer bodies do not crack or corrode like metal constructions. Their operational life of 40 years exceeds the life cycle of chassis and as such can be re-mounted on a new chassis.



Heat resistance

Co-polymer bodies excel by their body strength resulting in high or low temperature resistance. The tyres would burn before the superstructure itself would catch on fire.



%100 Recyclable

Material is %100 recyclable.

How are the Vehicle Bodies made?

Using high quality co-polymer the vehicle bodies are made using the latest innovative technology.

- 1 First we create an accurate and detailed 3D design of the final product in CAD programme selecting from a virtually limitless variety of polypropylene vehicle bodies of any size or shape. The result is a 3D visualization of the expected end product where the customer can see and check all the details that will make the finalized vehicle body.
- 2 The individual components transferred from the 3D model are cut out from Co-polymer sheets using 3 axis CNC machines.
- 3 The individual components are bent into various shapes and subsequently fabricated by a welding process into one final vehicle body.
- 4 Painting of the superstructure comes in two stages. The first phase includes the activate paint. In the second stage the superstructure is painted in the shade and colour according to the customer's specification.



New Generation of Bodywork

polypropylene vehicle bodies are made from Co-polymer sheets and fabricated by a welding process. This highly innovative technology offers multiple unmatched advantages over traditional technologies.

Co-polymer is a unique, cost-effective alternative to fibreglass composite or aluminium constructions. It excels by its body strength, resulting in stronger physical properties in either high or low-temperature applications. Sledgehammer and bullet-tested, it does not dent, absorbs impact energy and does not transfer collision forces to other components for the vehicle body.

The thoroughly computed process utilizes the benefits of cutting the polypropylene sheets on CNC machines and designing accurate 3D SolidWorks drawings. Due to the impervious welding process the construction possibilities are virtually limitless varying from integrated water and foam tanks to flexible capacities of locker space.

Benefits of Polypropylene Tanks

Water, Foam, Diesel and Chemical Tanks

- Lightweight
- Chemical resistant
- Certification for the transport of drinking water
- Long life expectancy
- Variations of size and shape



Sectors

**Fire Fighting Bodies Police & Military Bodies Pickup Truck Bodies
Waste Management Bodies and others**

Raw supersctructures

From the model to the final realization of the raw vehicle body including the transport to the customer. The only thing we need from you is a proposal in any format, then we are able to create a complete 3D design of the polypropylene body and subsequently deliver the end product according to your wishes directly to you.

Completed polypropylene vehicle bodies

We offer a complete solution and implementation of the special vehicle bodies on any chassis. We provide complete bodies including mounted equipment such as: pumps, signal lights, roller shutters, light masts, special bespoke shelves, boxes and holders and other special equipment. of locker space.

Flexible modular system

Construction possibilities of bodies are virtually limitless varying from integrated water and foam tanks to flexible capacities of locker space for equipment. We are able to design any locker space system which will suit your requirements as well as the purpose and function of the vehicle.



Built-in Vehicle Bodies

Bespoke to your needs

Construction possibilities are virtually limitless varying from integrated water and foam tanks to flexible capacities of locker space for equipment.



TELESCOPIC MAST

The pneumatic and electromechanical telescopic masts through our partner is available for daily use at different applications in our life such as lighting towers, telecommunication antennas, with various configurations of headlights with lighting movement systems, with different internal cables for data transmission for cameras, other surveillance tools and much more.

The range of masts and accessories is very wide and is continuously implemented thanks to great flexibility, innovation and customization of different solutions.

Communications

The telescopic masts are ideal for the use in the telecommunication field, as they can carry antennas for mobile phones, transmitters and cameras of different dimensions and weights. By the years, the product range has been increased, in order to offer higher masts and bigger performances. As per the other mast models, there are many available accessories mounting brackets, compressors, guying ropes etc. Furthermore, a large experience in the design and development of customized solutions that fully satisfy the most specific requirements, with detailed and precise calculations of mechanical strength generated by the most modern software available in the industrial field.



Lighting

The telescopic masts have traditionally been created for the fire & rescue sector, and can be equipped with multiple combinations of headlights and different movement systems, such as:

- Tilt & turn unit for 365 ° turning and °335 tilting of the floodlights
- Tilt & turn unit for 365 ° turning and °335 independently tilting of the floodlights
- Heavy Tilt & turn unit for top loads up to 150kg
- Inside Focus lighting system, for the concentration or enlargement of the lighting beam from 4- ° to + 46 °
- Illuminator lighting system for infinite combinations of light beams such as The Lumicone lighting balloon.
- Portable emergency lighting system

The range of the floodlights is very wide, although, however, lately taken over by the LED technology. We offer a wide range of LED headlights, in which the various products stand out for their power and design. Solutions with halogen headlights, Xenon, High-pressure sodium and Metal halide are still available.

Surveillance

The telescopic masts are suitable for the surveillance, as they can mount different types of cameras and systems for the protection of civil, industrial and institutional areas in general. The supply of internal electric cables also allows the control of these systems. The masts are equipped with locking system for long extensions time without the need of compressed air inside the mast.



ULTRA HIGH PRESSURE SYSTEM

Ultra-high pressure suppression systems have been successfully transitioned from years of intense research on hydrocarbon fuel to real world applications, including wildland fires and structural operations.

Ultra-high pressure is the creation of miniscule water droplets delivered at an extremely high velocity. Use of this method to extinguish fire quickly separates the fire from the fuel source and leaves a thin foam blanket in the wake to prevent the fire from reigniting.

Impresses with

- Optimal extinguishing effect
- High throw range and large active radius
- Perfect hot spot extinguishing
- Integrated foam system and foam attachment
- The UHPS system is effective above all if it is deployed during the incipient phase of a fire. Typical applications are therefore vehicle fires.
- An advantage of the UHPS ultra-high pressure systems is their small dimensions and low weight.

The systems are distinguished by the use of diaphragm or piston pumps, petrol or diesel engines. Particularly suitable for this use are Polypropylene tanks, for their strength, lightness and corrosion free properties at the same time. Available in different shapes, sizes as per customer requirement. A foam mixing system is also available with a mixing percentage of 0.1 to %6.

The system can also be housed in compact advance vehicles. Thus the scene of the fire can be reached faster, even on narrow or impassable roads.





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