



RIOT CONTROL VEHICLE

TECHNICAL SPECIFICATIONS

1. DESCRIPTION :

This list of condition describes the technical specifications of the vehicle to be used for the Riot Control.

2. GENERAL SPECIFICATIONS :

2.1. All the vehicles and its necessary equipments will be manufactured and assembled in accordance with the traffic and the overland route laws.

2.2. The contractor will supply a set of below described documents for each vehicle.

2.2.1. Maintenance and operation manual,

2.2.2. Service chart book,

2.2.3. Warranty certificate,

2.2.4. technical project and the documents (including armor works),

2.2.5. Operating instructions,

2.2.6. Any other documents.

2.2.7. N/A

2.2.8. The ISO Quality assurance certificate will be provided by the manufacturer.

3. VEHICLE :

3.1. The vehicle will run 4x2 (four by two), the fully loaded weight will be min. 17.000 (seventeen thousand) kgs .

3.2. The engine power should be min. 275 (two hundred and seventy five) HP.

3.3. The fuel tank will be min.300 (three hundred) liters.

3.4. The vehicle will have the brake assist system (egzost or retarder) to be used with or without the service brake, also will have the ABS and ALR systems.

3.5. The electrical system of the vehicle will be formed of two independent sets with 24 Volts and min. of 100 Ah. And will be capable of working parallel incase needed.

4. THE EQUIPMENT:

- 4.1. The equipment will have the below described components.
- 4.1.2. cabinets, (for storing the tools pipes and accessories)
- 4.1.3. Gas Tank
- 4.1.4. Dye Tank
- 4.1.5. Foam Tank
- 4.1.6. Water Tank
- 4.1.7. Pump, the pump engine compartment
- 4.2. The equipment body will be made of galvanized metal and will be anti corrosion processed.
- 4.3. The cabinets and all the compartments will have the lock for the doors.
- 4.4. The top of the vehicle will be protected against fire and all the equipment on the top of the vehicle will be protected against stones thrown by rioters.
- 4.5. The body will be designed to eliminate climbing on the vehicle.

4.6. WATER TANK SPECIFICATIONS :

- 4.6.1. The water tank capacity will be at least () liters. The tank will be made of min. 3 (three) mm thickness of stainless steel, and will be demountable.
- 4.6.2. The tank will have a water level gauge.
- 4.6.3. There will be an automatic water drainage system at the bottom of the tank.
- 4.6.4. The tank will have a wave breaker system for blocking the movement of the water during driving.
- 4.6.5. The tank will have an filling inlet of 2,5 inch size at the back of the vehicle.
- 4.6.6. There will be an electrical/electronic analog and/ digital tank water level indicators in the cab.
- 4.6.7. There will be a tank air relief system, sized not less then 3”.
- 4.6.8. There will be a manhole/W cover in 400 mm in diameter.

4.7. PUMP SPECIFICATIONS :

- 4.7.1. The sprayer pump will be centrifugal type, automatic air intake and should be durable for long works, will be resistant to sea water and corrosion and will be made of bronze.
- 4.7.2. The pump will have a capacity of min. 2400 ltrs/min. output, and min. of 8 bar pressure.
- 4.7.3. The pump will have the suction capacity of 6 metres depth and fully automatic. It should have the necessary equipment for supplying water from any source.
- 4.7.4. The pump will have a low level shutdown system, which will stop the engine as reaching the pre adjusted level, as well as high level shutdown system which will stop the engine as reaching the pre adjusted level while automatic filling.
- 4.7.5. The pump will be running through an auxiliary diesel engine.
- 4.7.6. The pump and the piping will be completely drainable. This job will be done by an automated system controlled through the control panel.
- 4.7.7. The pump and the piping assembly will be done via compensators where as needed.
- 4.7.8. The connection fittings of the pump will be made of bronze material and nickel plated for the connection of the hoses and necessary fittings. These hoses will be easily mounted quick disconnect type of fittings and the fittings will have nickel plated covers.

4.8. PUMP ENGINE SPECIFICATIONS :

- 4.8.1. Water or air cooled diesel and min. of 100 HP and should be capable of running between -25°C and +40°C.

4.9. WATER CANNON SYSTEM :

- 4.9.1. Will have two DC electrical motors, equipped with a speed regulating system and capable of having pan tilt movement, will not be effected from serial shootings.
- 4.9.2. Horizontantly min. 360°, vertically min. -15°, min. of +50° movement capability.
- 4.9.3. The effect range at 8 bar will be between 40-50 meters.
- 4.9.4. Short shot, long shot and continues shot types of 3 firing modes.
- 4.9.5. The water cannon will be capable of mixing tear gas with water or dye with water or both, this can be all controlled by the operator.
- 4.9.6. The water cannon will be made of stainless steel or aluminum composite material.

4.9.7. The water cannon will be operable while driving the vehicle.

4.9.8. The water cannon will have a self cleaning system during and after the operation.

4.10. THE WATER CANNON CONTROL UNIT SPECIFICATIONS :

4.10.1. The water cannon will be computerised. This control will have at least the below described specifications.

4.10.2. The sprayed water amount shall be precisely controlled, short and long shooting durations will be adjusted on the control panel by the operator.

4.10.3. The amount of dye or gas will be adjusted by the operator through the control panel.

4.10.4. The amount of the water in the tank will be observed as liters by means of analog or digital gauges.

4.10.5. The water pressure will be observed by means of analog or digital indicator.

4.10.6. The vertical and horizontal movements of the cannon will be done by the help of a joystick on the control panel. These movements will be observed on the control panel easily. This joystick will have a trigger switch and safety catch on the trigger.

4.10.7. Incase needed the cannon will have the system to spray foam.

4.11. CONTROL PANELS :

4.11.1. All the pressure and level gauges will be in coloured analog bars, as well as in numerical, scaled in liter and bar. All the system functions will be monitored and adjusted easily on the power terminal, and if needed the system would be restored to default factory settings immediately.

4.11.2. The vehicle control panel will have the below described controls ;

- The system On-OFF switch, Emergency Stop.
- Pump engine starter,
- Pump engine throttle switch,
- Pump engine temperature gauge.
- Oil pressure gauge,
- The gas tank pressure gauge,
- The gas level gauge,
- The gas mixture select switch,
- The gas pressure discharge switch
- The gas mixture adjustment switch
- The dye tank pressure gauge,
- The dye level gauge,
- The dye mixture selector switch,
- The dye pressure discharge switch,

- The dye mixture adjustment switch
- The deck fire extinguishing system switch,
- The under body fire extinguishing system switch,
- Water cannon foam spray switch
- The foam level gauge,
- Water tank level gauge,
- The digital screen for the vertical and horizontal position monitoring
- Water cannon control lever and trigger.
- Safety catch for the trigger
- Water shoot mode selector switch,
- The front barrier control switch,
- Top projector switch,
- The pump water pressure gauge
- the water cannon auto-park switch
- the water pipings and tank discharge switch,
- the computer and serial connection ports,
- the camera control panel.

4.11.3. The control panel will have a manual control unit incase of emergency use.

4.11.4. the control panel will have at least the below described alarm-warnings,

- The foam system ready/ not ready
- The gas system ready/not ready
- The dye system ready/not ready
- The water system ready/not ready
- the pump engine out of water/over heated/low oil pressure/suction or air intake emergency stop alarm
- suction pump out of order
- Wrong engine start warning
- Low level warnings
- Low pressure warnings
- The alarm and warning report to be printed through the printer port

4.12. GAS/DYE INJECTION SYSTEM :

4.12.1. There will be two separate systems. Gas or dye or both may be injected to the water system. Gas or dye mixture will be done by spraying to the water.

4.12.2. For the gas and dye there will be two stainless steel tanks each have the capacity of min. 60 litres.

4.12.3. The tank working pressure will be 13 (thirteen)+/-1 bar.

4.12.4. There will be control units and pressure control devices for the adjustments.

4.12.5. 13 (thirteen) +/- 1 bar, high pressure air compressor equipped, and the pressure will be observed through the digital gauge on the control panel.

4.12.6. All the joints and couplings for the water piping will be made of stainless steel.

4.12.7. The gas and dye will be mixed to the system as requested and this will be

monitored and controlled through the control panel.

4.13 VEHICLE PROTECTION SYSTEM :

4.13.1. The fire protection foam system of the vehicle top and bottom will have the below described specifications.

4.13.2. Min of 80 liters capacity refillable type foam tank.

4.13.3. The foam proportioner.

4.13.4. 2 (two) foam tank outlet.

4.13.5. All the tires will have fire protection foam sprinklers system and this will be activated simultaneously by the bottom chassis foam system.

4.13.6. The system will be controlled from the control panel in the cab.

4.13.7. To avoid the rioters getting closer to the vehicle, there will be gas nozzles mounted on the sides of the vehicle and these will be controlled by the operator from the control panel.

4.13.8. In order to protect the equipment located on the top of the vehicle there will be protective steel lattice cage mounted around these equipments. These cages will be demountable type and should cover the;all the windows, monitor, camera, projectors, PA system, and the radiator. The cage for the front shield will be controlled by the operator from the inside of the vehicle and may be open incase needed. There will be a steel protection panel on the front and below the bumper to protect the front axle.

4.13.9. There will be foam sprinklers on the top of the vehicle.

4.13.10. All the shields will have a water pressure cleaning system.

4.13.11. To protect the cab from the gas contaminated air, there will be a positive pressure filtered air control system which can be activated on the control panel. This system will be activated automatically as the gas system in activated and will turn off the AC system. After finishing the gas fire the system will continue working as timed period and will stop at the end of the period.

4.14. OTHER SPECIFICATIONS:

4.14.1. The PA system will be mounted on the vehicle.

4.14.2. there will be a projector mounted parallel to the water cannon and this projector will be min of 70 Wat. This projector will have a knock down cage mounted to protect the cover glass of the projector.

4.14.3. The vehicle will be equipped with two CC video system monitored in the cab. One of these cameras will be used to monitor the rear view of the vehicle and the other one will 360 degrees rotating and record the scene. The recording will be done by means of a button for the start and stop function and also have the resume capability.

- 4.14.4. The both cameras will be monitored on the colour LCD screens, the rotating camera screen will be min. of 25 cm (diagonal).
- 4.14.5. The both cameras will be protected by knock down type cages which will not block the view of the cameras.
- 4.14.6. The front camera will have the zoom capability, the zoom will be done by the camera control pannel and the water cannon control lever.
- 4.14.7. The camera will have 10x zoom lens and auto focus high color and quality type.
- 4.14.8. The camera will have min. of 2.5 (two.five) lux Luminous Flux Density, 450 pixel horizontal resolution manual/auto white balance anti vibration functionned.
- 4.14.9. The vehicle will be equipped with a hydraulic and electric operated front barrier to clean the 2000 kgs of junk from the road, this system will be controlled from the inside of the cab. The metal sweepers below the barrier will block the fire and junk to go under the vehicle.
- 4.14.10. The tires of the vehicle will be tubeless type and will have the runflat having the range of at least 10 kilometers with the flat tires.
- 4.14.11. The vehicle cabinet, shields, fuel tank, air tubes and batteries will be armored against the EUROPEAN NORMS B2, 9x19 mm.'lik Parabellum MP5 pistol bullets. The acceptance tests will be done by the samples of the same armor used for the protection of the vehicle and the samples will be supplied by the manufacturer.
- 4.14.12. The vehicle will have a tow hook.

5. EQUIPMENTS AND ACCESORIES :

The below listed equipments having the national/international quality assurance certificate will be provided with the vehicle.

- Jack and lever with the suitable capacity of the vehicle.
- lug wrench
- Set of screw drivers 8 pcs
- Pliers (isolated)1 pcs
- Hammer 1 kgs
- Spare tyre
- Lever rod (small and big)
- Reflektor (2 pcs)
- 12 set of wrench
- One spare bulb used for the exterior lightning of the vehicle
- Fisrt Aid Kit
- Fire extinguisher
- Tyre inflating tool
- Flap valve trap
- 2 ea suction hose wrench
- 4 set rubber suction hose with couplings, 4" in size 1.8 m in lenght.

- 1 set 110 mm discharge fire hose, 20 meter in length complete with couplings.
- 2 ea discharge hose coupling wrench

6. PAINT :

6.1 After finishing all the equipments mounted on the vehicle the body will be checked for the smoothness and painted via synthetic paint as per requested color.

6.2 The equipments which may not be painted after the mount will be painted and protected before the final finish job done.

6.3 The vehicle will have two stripes on both sides and any letter will be printed as requested.

7. WARRANTY:

The vehicle will be under warranty for parts and labor faults for (1) years,

8. PLACE OF DELIVERY

Manufacturers address.

9. TIME OF DELIVERY

After the receipt of the order () working days.

The manufacturer is free to have any technical changes and apply these changes on the vehicle without any notice.