

# Refrigerated Vaccine Transport Vehicle

B Medical Systems
& Toyota Tsusho Corporation

The Refrigerated Vaccine Transport Vehicle (RVTV) is a 4WD (Four Wheel Drive) and includes a refrigerator fixed into the vehicle.

In compliance with WHO Guidelines | PQS Certified E002/001 | ECE R80 74/408/EWG (crash test)













Vaccine Cold Chain



# Refrigerated Vaccine Transport Vehicle

## B Medical Systems & Toyota Tsusho Corporation | RVTV Range

Vaccine storage capacity 396 L • Set temperature +2°C > +8°C • Climate class SN/T • PQS Certified E002/001 | Compliant to ECE R80 74/408/EWG (crash test)

The Refrigerated Vaccine Transport Vehicle (RVTV) is a 4WD (Four Wheel Drive) and includes a refrigerator fixed into the vehicle. The RVTV is used for the safe transport of vaccines, pharmaceuticals or any other specimens at temperatures between 2-8°C.

The refrigerator has two integrated rechargeable batteries (offering 16 hours of autonomy) and can work using the DC power of the vehicle as well as via an external AC mains supply. The RVTV is also designed with shelves to provide for the safe storage of vaccines. The refrigerator maintains a temperature in the range of 2°C – 8°C during transport and can act as a moving cold room.

The RVTV can also transport non-vaccine items (like syringes) and dry supplies. The dry supplies of high value can be placed inside the vehicle behind the driver and passenger seats to avoid theft. The supplies can also be placed on the rooftop of the vehicle.

With its ability to travel through hostile and narrow road networks, the RVTV will be able to maintain the cold chain until the last point of the national cold chain – the Health Post. The shelving in the RVTV will also provide a safe, vial breakage free transportation option for the vaccines.



### **Key Features**

- Rotomoulded cabinet and adjustable shelves
- 230VAC & 12VDC connection providing flexible operation alternatives
- Integrated 2 x 12V DC battery & charger
- Battery guard- Preserves refrigerator battery from complete discharge
- Digital temperature control for accurate temperature setting
- Forced air ventilation
- Door contacts (to cut off evaporator fan), to limit the cold exchange when door is
- Automatic defrosting

- Visual and audible alarms
- Contact for remote alarm
- Removable and magnetic gaskets
- Crash tested according to ECE R80 74/408/EWG
- Integrated heating function, for operations during winter conditions and cold countries





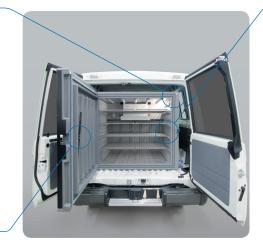
### Integrated control panel

- Electronics controller with integrated digital temperature display
- Independant control and display sensor
- Visual and acoustical temperature alarm
- Operates on 12 V vehicle battery or 220-240 V mains supply
  - Independent operation for up to 16h using the 2 internal 12V batteries
  - Simultaneous cargo cooling and battery charging
  - Low energy consumption thanks to superior insulation



### • Highest insulation value

- Rotomoulded body construction: rust free and extremely robust
- PU foam insulation guarantees highest possible hold over time
- Double magnetic gasket system and transport-proof closing system ensures tight sealing



### High storage capacity

High storage per square meter in terms of net volume, with a very versatile inner volume utility due to multiple user friendly rails allowing modularity.



### Special features

- Fast and secure fastening with lashing strap set supplied as standard
- Fitting and dismounting in a very short time without any tool
- Drain water condensation container located behind passenger seat for easy removal and maintenance
- Excellent temperature distribution with air circulation system
- High-performance multi-LED interior light





### **Vehicle Details**

- The vehicle is especially designed for rough terrain often seen in Africa including steep slopes, water-covered terrain, or unpaved roads
- · Simple structure of the vehicle ensures its robustness

### **Customization Details**

- Battery of vehicle is connected to the refrigerator's batteries and supplies power while the vehicle's engine is turned on
- Outlet for external power supply is equipped to charge the refrigerator's batteries while the vehicle is stationed
- Roof rack enables to load non-vaccine items and dry supplies as well as the spare tire





## Refrigerated Vaccine Transport Vehicle



### Vehicle

Model	Land Cruiser 78	
Fuel Type	Diesel	Gasoline
Displacement (cc)	4164	3956
Transmission	Manual, 5 Speed	
Gross weight (kg)	3200	
Max. Output (kW/rpm)	96 / 3800	170 / 5200
Max. Torque (Nm/rpm)	285 / 2200	360 / 3800
Tank capacity (I)	180	
Tyre	7.50R16-8 Sahara 5.50F	
Spare Wheel	1 on the roof	
External dimensions H x W x D (mm)	2115 x 1770 x 4990	2125 x 1770 x 4990
Wheelbase (mm)	2980	
Ground clearance (mm)	235	
Suspension Front / Rear	Coil, Rigid / Leaf, Rigid	
Brake Front / Rear	Ventilated Disc / Leading trailing Drum	



### Refrigerator CF850

Cooling system	Active (Compre	essor)
Net vaccine storage capacity (I)	396	
Set point (fixed)	+5°C	
Climate class (ambient temperature range)	SN / T (0°C to +	50°C)
Defrosting technique	Automatic	
Refrigerant type	R134a	
External dimensions H x W x D (mm)	1000 x 1100 x 1	1400
Internal dimensions H x W x D (mm)	830 x 888 x 122	28/880
Net weight with standard equipment (kg)	169	
Operating voltage range	DC I 12 V	AC I 220-240 V - 50/60 Hz
Power (W)	150	220 / 360 (during battery charging)
Energy consumption (kWh/24h)	6.5	

### Accessories

Stainless Steel Wire Shelf	Large	• 4	
	Small (at top)	●1	
Lashing strap se	t	•	
12 V gel battery		<b>●</b> 1   ○≤2	
Universal 12 V connection set		0	







State-of-the-art technology for the exacting needs of the medical world



Safe global blood management: from collection to transfusion. transportation, processing and storage

Reliable solutions for safe vaccination around the world

### Our Global Expertise

Toyota Tsusho Corporation was established in 1948. As the sole general trading company in the Toyota Group, we strengthened our overseas operations in the 1980s and 1990s and expanded around our core automotive business. Thereafter, we began to expand non-automotive businesses. We merged with the trading companies Kasho in 2000 and Tomen in 2006 to accelerate our growth into such new business fields as infrastructure, chemicals, and food. Since 2010, we have expanded the scope and honed the capabilities of existing businesses while accelerating investments in new business fields, such as bluefin tuna aquaculture and overseas hospital management. In 2012, we made the largest investment in our history in CFAO, a French trading company with a strong presence in Africa. In this way, we are achieving sustainable growth by widening our business field.









### After Sales support and service

We strive to provide you with the highest standards of service; not only through our selected distributors and partners for all your maintenance and service but also through our second line trouble shooting and after sales service. This factory-based group of engineers is there to help our partners and yourself to get the best solution for your cold storage needs.



### SAVING LIVES THROUGH RELIABLE AND INNOVATIVE TECHNOLOGY

B Medical Systems (formerly Dometic Medical Systems) has more than 40 years' experience in the medical refrigeration sector.

The company, formerly known as Electrolux Medical Systems, was founded in 1979 when the World Health Organization approached Electrolux in Vianden, Luxembourg, to create a solution for the safe storage and transport of vaccines around the world. In 2001, Electrolux Medical Systems became part of the Dometic Group, and was renamed Dometic Medical Systems. Having established a legitimate reputation in the medical equipment industry, the company has also become a global leader in vaccine cold chain.

### B Medical Systems S.à r.l.

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Since 2019 B Medical Systems has been committed to the UN Global Compact corporate responsibility initiative and its principles in the areas of human rights, labour, the environment and anti-corruption.

### Luxembourg, in the heart of Europe

