

F/No-27/1357(DFV)/2013/TPT/BSF/MHA/Prov-I / 021
Bharat Sarkar/Government of India
GrihaMantralaya/Ministry of Home Affairs
PM Division/Prov.I Desk

26, Man Singh Road, Jaisalmer House
New Delhi, Dated 28 May, 2015

To,

DsG: AR (through LOAR), BSF, CISF, CRPF, ITBP, SSB, NSG & BPR&D.

Subject: QRs and Trial Directive for Deep Fridge Vehicle.

Sir,

The QRs and Trial Directives in respect of Deep Fridge Vehicle as per Annexure have been accepted by the Competent Authority in MHA.

2. The CAPFs concerned will be accountable for correctness of the QRs/Trial Directives
3. Henceforth, all the CAPFs should procure the above item required by them strictly as per the laid down Technical Specifications/QRs.

Yours faithfully,


Encl: as above


20/5/15
(M. K. Chahar)

Under Secretary to the Govt. of India
Tel: 23381278

Copy forwarded for necessary action to :-

SO (IT), MHA : It is requested to host the QRs and Trial Directives (soft copy attached) on the MHA website (under the page of Organizational Set up- Police Modernization Division- Qualitative Requirement under Vehicle Equipments.


(R.K. Soni)
Section Officer (Prov-I)

Copy to: DDG (Procurement), MHA.

TECHNICAL SPECIFICATIONS/ QRS FOR FREEZER VEHICLE

S/No	Specification	Recommended QRS
A	Performance specifications of the carrier	
1	Performance/ application	The vehicle shall be specifically designed to transport vegetables, fruits, milk and milk products, poultry, meat and even pharmaceutical products and preserve them throughout the journey in the hot climatic areas of Rajasthan and Gujarat or any other hot and humid areas of the country.
2	Pay load	The vehicle should be capable of carrying a pay load of 3 Tonne including the weight of crew of 3 members and the container.
3	Terrain conditions	Beside the normal terrain, the vehicle shall be capable of operating in cross country irregular terrains of Rajasthan as well as marshy lands of Gujarat.
B	Technical Requirements	
4	Gradient	Not less than 25%
5	Turning circle diameter	Not more than 16 Mtr
6	Pay load	Not less than 2000 Kgs.
7	Fuel tank capacity	Fuel tank should contain adequate fuel to cover minimum a distance of 22250 in cross country terrain and 300 KMs in plain areas.
8	Engine:	Water cooled, turbo charged diesel engine of any reputed make conforming to ARAAPHS /BS/SAE standards Power :- Not less than 90 HP
9	Transmission:	Manual gear box incorporating latest technology having minimum 4 forward and one reverse gear with provision of 4 W/D.
11	Suspension:	The vehicle should be fitted with latest state of the art suspension system being used by vehicles in class. The suspension must ensure smooth ride in all types of terrain even on improved tracks.
12	Brakes	Service-Dual circuit hydraulic/pneumatic/ vacuum assisted with ABS and EBD parking break should be compatible with service break.
13	Tyres	Vehicle should be fitted with modern sand cum highway tyres of 16 PIR of reputed make. Spring

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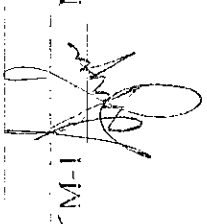
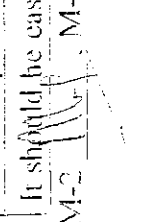

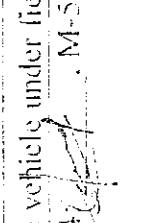

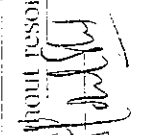
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		wheel be provided with the vehicle.
14	Minimum ground clearance	250 mm
15	Electrical system	12/24 Volts, with proper wiring and junction boxes for further electrification.
16	Battery	The battery should be maintenance free, of reputed make like Exide, Furukawa, Amron etc of 12/24 Volts (minimum 130AH), maintenance free
17	Side slope capability	- Not Less than 15°
18	Steering system	- Right hand Power steering.
	Cabin	Full forwarded fitted. Provision of cabin light should be available
19	Additional fittings/equipments	(a) Recovery hooks in front and rear of the vehicle. (b) Spare Wheel (c) The vehicle should be provided with hydraulic jack. (d) Fire extinguisher (e) The vehicle should be provided with standards tool kit with a provision of tool box. The vehicle should be fitted with necessary lights as per traffic norms. Vehicle should be provided with all gauges for various lights, oils, temperature etc.
20	Lights	
21	Instrument panel	
	Operation and Maintenance	
22	Operation	The operation and control of the vehicle must be safe and simple enough for any trained person to operate and conform to current CMVR norms. The system must be robust enough to withstand rough handling and travelling shocks in cross country operation.
23	Maintenance support	The system design should be modular to the extent possible with easy accessibility to ensure quick replacement of assemblies and sub-assemblies in the field. Product support including spares and management of obsolescence for complete equipment life of the product should be provided. The following should be facilitated:- (a) Light repairs in situ and field repair as forward as possible. (b) Replacement of defective assemblies and sub-assemblies and their repairs in field.
26		It should be easy to maintain the vehicle under field conditions, without resorting to any special

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Publication.	<p>means.</p> <p>The following publications need to be provided both as hard copies and e-copies (Bilingual Hindi and English)</p> <ul style="list-style-type: none"> (a) User Hand Book Technical service manual. (b) Spare Parts List. (c) List of spares tools and accessories. (d) Technical manual for repair freezing unit. (e) Details instructions for operation and maintenance of freezing Unit.
26	Warranty



PO: *[Signature]*
 Sh. RPS Mahajan,
 DUG BSF GRC

M-1 *[Signature]*
 Sh. Sandeep Singh,
 DC

M-2 *[Signature]*
 Inspr P
 Tivkey,
 CIAP

M-3: *[Signature]*
 Inspr M
 Girind Singh,
 ZTB

M-4: *[Signature]*
 Sh. Arvind Kumar,
 ASB

M-5: NR
 M-6: *[Signature]*

Sh. M Sabid
 SSO/T, BRSSD

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 Approved/Inspected

[Signature]
 (Signature)
 Sh. RPS Mahajan

SPECIFICATIONS OF BLEP FREEZER CONTAINER

1) Application

The freeze container will be specifically designed to transport vegetables, fruits, milk and milk products, poultry and meat products and to preserve them throughout the journey in the hot climatic areas of Rajasthan, Gujarat or any other hot or humid area of the country. The items mentioned above should be transported frozen or chilled in the temp range of -30 deg to +25 deg with external temp ranging from -15 to + 55 deg.

2) Dimensions:

The freezer container shall be made as per following dimensions:

Outer: Height: 2200 to 2400 mm, length: 3600 to 4200 mm, width: 2100 to 2250 mm.

Inner: Height: 1900 to 2100 mm, length: 3300 to 3900 mm, width: 1800 to 1950 mm.

3) Subframe:

The freezer container shall be provided with integral sub-frame, which will be directly welded/ bolted on the bottom structure of the body. The sub frame of the freezer container shall be made of rigid and robust construction with not less than 25kg/5cm square minimum thickness of 4 mm mild steel sheet. The integral frame will be completed with U bolts, fasteners, pallet packing, wooden runners etc and it is part of our scope of supply.

4) Corner Posts(Front and Rear) :-

Front and rear corner posts shall be made of 4mm thick pressed mild steel sheet box type section.

5) Out Side and Roof Panelling:

Outside and roof panelling shall be made with minimum 1.5 mm corrugated panel. Joints of the sheet should be overlapped and welded together properly.

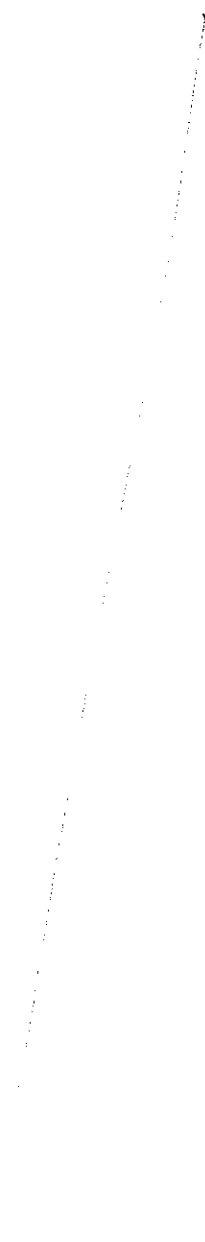
6) Inner Finishing/Inside Walls:

All inner sides and roof will be fitted /pasted with 6mm water proof ply along with 0.5 mm or thicker stainless steel sheet of grade 304.

7) Flouring:

The material of body shall be made of mild steel sheet with minimum 1.5 mm thickness. The material shall be painted with anti-rust paint. The material shall be painted with anti-rust paint. The material shall be painted with anti-rust paint.

13) Miscellaneous This container shall be made to last up to more than 10 years. The manufacturer shall be responsible for any temperature leakages, water leakages before the time of satisfactory delivery. In order to protect the container from not losing the temperature, air curtain should be provided.



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 Approved [Signature] Approved [Signature]

TRIAL DIRECTIVE FOR DEEP FREEZER VEHICLE

Date of Trial
 Time of Trial
 Place of Trial
 (IR of Trial Area (Clear/cloudy/Partially cloudy/Hot and Humid/rainy/foggy and Humid/Soft Snow or Hard Ice)
 Temperature.....
 Altitude.....
 Weather Condition.....

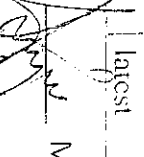
(B) Technical Parameters of The Vehicle

Sr No	Specification	Parameter	Procedure Suggested For Trial	Result expected/desired
1	Performance	The freezer vehicle shall be employed for transportation of fresh vegetables, meat, poultry, milk and all other perishable items in the far flung border areas	The equipment will be employed for the work of carrying the specified items to the border areas having humid and hot climate and in the recommended temperature.	It should be able to carry the specified items duly preserved.
2	Engine	Water cooled, turbo charged diesel engine of any reputed make confirming to ARI/BIS/BS/SAE standards.	Based on the certificates provided by the manufacturer	It should meet the desired Parameters as per the QRS.
3	Engine power	Not Less than 90 HP	Based on the certificates provided by the manufacturer.	It should meet the desired Parameters.
4	Fuel	Diesel	The fuel at any port will be checked	It should be diesel. The vehicle should be able to operate on Indian fuel.
5	Transmission	Manual gear box incorporating latest technology	The vehicle will be driven in all the gears including change over	The gear change should be smooth. (MPD should be engaged properly and effectively.

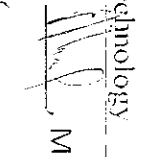
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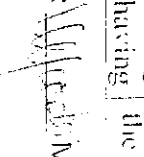
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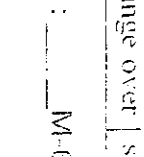
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		minimum 4 forward and one reverse gear with 4 WD	to 4WD.	
12	Steering System	Right hand Power Steering	The equipment will be driven and timed right /left.	The driver should be able to manoeuvre the vehicle with ease.
13	Brake System	Service-Dual circuit hydraulic pneumatic / vacuum assisted with ABS and EBD. Parking break shall be compatible with service break	The brakes shall be applied on the moving vehicle. Parking brake shall be applied on the vehicle on a slope between 5 degree to 10 degree.	It should be able to stop the vehicle properly and effectively as and when required. The parking brake should be able to maintain its performance characteristics on slope.
14	Turning Diameter	Not more than 16 mtrs.	The turning diameter shall be calculated from the outer wheels of the vehicle.	The diameter of the circle made by the outer wheels should not be more than 16 meters
15	Ground Clearance	The under carriage ground clearance of the vehicle should not be less than 250 mm	Ground clearance shall be measured from the lowest part of the vehicle.	It should not be less than 250mm
16	Electrical System	12 volt/ 24 volt	As per the certificates provided by the manufacturer.	It should be as per desired parameters
17	Instrument Panel	All devices, meters fitted on instrument panel should be in excellent working condition, readable and understandable.	The devices will be checked physically	All devices, meters fitted on instrument panel should be in excellent working condition, readable and understandable.
18	Lights	All the lights fitted on the equipment should be functional	All the lights will be switched on.	All the lights will be in excellent functional condition.
19	Payload	3 Tonne.	The vehicle should be capable of carrying a payload of 3 tonne including the weight of crew of 3 members and the container.	Vehicle should be able to carry the pay load with ease.

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18	Battery	12/ 24 volt 130 AH. maintenance free of reputed brands like Exide, Amrom, Furukawa	On the basis of certificate provided by the manufacturer.	It should be as per parameters mentioned in QRs.
19	Gradient	Not less than 25 degree	The vehicle shall be plicd on a gradient with a gradient of 25 degree.	The vehicle should be able to negotiate the gradient of 25 degree.

(ii) Freezer Container Parameters:-

Sr/No	Specification	Parameter	Procedure Suggested for Trial	Result expected/desired
1	Application	The freezer container will be specifically designed to transport all perishable products like milk, vegetables, meat and poultry in extreme climatic conditions.	The specification of the container will be measured physically	It should be as per desired parameters.
2	<u>Dimensions</u> OUTTER: INNER:	Height: 2200 to 2400 mm, length: 3600 to 4200 mm, width: 2100 to 2250 mm. Height: 1900 to 2100 mm, Length: 3300 to 3900 mm, width: 1800 to 1950 mm	The dimensions of the container will be checked physically.	It should be as per the desired parameters.
3.	Subframe	The subframe will be directly welded/bolted on the bottom structure of the body. It shall be rigid and robust construction with 125x65mm	All the dimensions and parameters will be checked as per the certificates provided by the manufacturer.	It should be as per parameters mentioned in QRs.

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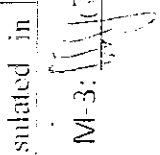
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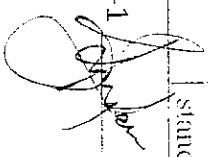

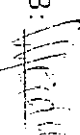


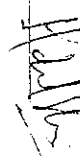
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		channel and minimum thickness of 4 mm of mild steel sheet. The integral frame will be completed with U Bolts, fasteners, balata packing, wooden runners etc and it is part of our scope of supply.		
4.	Corner posts	Front and rear corner posts shall be made of 4m.m. Thick pressed mild steel sheet box type section.	All the dimensions and parameters will be checked as per the certificates provided by the manufacturer.	It should be as per parameters mentioned in QRs.
5.	Outside and roof paneling.	Outside and roof paneling shall be made with minimum 1.5 mm corrugated panel. Joints of the sheet should be overlapped and welded together properly.	Self certification shall be provided by the manufacturer.	It should be as per parameters mentioned in QRs.
6.	Inner finishing /inside walls	All inner sides and roof will be fitted / pasted with 6mm water proof ply along with 0.5 mm or thicker stainless steel sheet of grade 304.	Self certification shall be provided by the manufacturer.	It should be as per parameters mentioned in QRs.
7.	Flooring	The Container Body floor will have 16mm plywood laid over the insulation on top of which thick SS Sheet.	All the dimensions and parameters will be checked as per the certificates provided by the manufacturer.	It should be as per parameters mentioned in QRs.
8.	Insulation	All six sides of the Body are homogeneously insulated in	Self certification shall be provided by the manufacturer.	It should be as per parameters mentioned in QRs.

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9.	Doors	<p>polyurethane Cast-in-situ The PU/F material will have average density of 40 - 42 kg/m³ and thermal conductivity value of 0.017 W/m deg. K. The average insulation thickness on all sides will be 125 mm. The Polyurethane mixing and dispensing shall be done in an automatic PU Dispensing machine to obtain uniformity and homogeneity.</p>	<p>The doors insulation of doors window and lock system will be physically checked for its functioning and smooth operations.</p>	<p>It should be as per parameters mentioned in QRS.</p>
10.	Freezing Units	<p>The freezing unit should conform to the international standards and should be able door and service window.</p>	<p>Vegetables, meat, butter etc. Shall be put in the freezer container at appropriate places.</p>	<p>It should be able to maintained the required temperature inside and preserve all the eatable various</p>

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	<p>The freezing unit should be turned on for 10 hours.</p>	<p>to maintain the specified temperature ranges inside the different location of the deep freezing unit for minimum 10 hours of continuous operations at full load. The components of the freezing unit should incorporate state of the art technology.</p>
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