

TERMS OF REFERENCE
FOR Technical Specifications for Quotation ENI/2018/398-054_001

Technical specifications for 8 m3 and 13 m3 Compactor truck:

Item	Compactor truck 13 m3	Compactor truck 8 m3
1 1.1 1.2 1.3	<p>Engine: Four stroke, 6 cylinder turbocharged water-cooled diesel engine with intercooler Max power of 250 hp, 950 Nm -7700 LIT Gas Emission complying with the last regulation in Lebanon (as from EURO VI) Gas Emission complying with the last regulation in Lebanon (as from EURO VI)</p>	<p>Engine: Four stroke, 6 cylinder turbocharged water-cooled diesel engine with intercooler Max power of 250 hp, 950 Nm -7700 LIT Gas Emission complying with the last regulation in Lebanon (as from EURO VI) Gas Emission complying with the last regulation in Lebanon (as from EURO VI)</p>
2 2.1 2.2 2.3	<p>Gearbox: Eight (8) forward full synchronized gears plus one low speed high torque crawler plus one (1) reverse. 4 x 2 drive 5.67 rear axle ration for driving in mountain area</p>	<p>Gearbox: Eight (8) forward full synchronized gears plus one low speed high torque crawler plus one (1) reverse. 4 x 2 drive 5.67 rear axle ration for driving in mountain area</p>
3 3.1 3.2	<p>Brakes: ABS anti – lock system (ABS & EBS) Engine brake</p>	<p>Brakes: ABS anti – lock system (ABS & EBS) Engine brake</p>
4 4.1 4.2 4.3 4.4	<p>Steering: Front axle power steering Left hand side drive. Steering lock. Steering column adjustable in height and rake.</p>	<p>Steering: Front axle power steering Left hand side drive. Steering lock. Steering column adjustable in height and rake.</p>
5 5.1	<p>Axles and Weights: Gross Vehicle Weight: propose by the bidder to the maximum load</p>	<p>Axles and Weights: Gross Vehicle Weight: propose by the company to the maximum load</p>

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<p>6 6.1 6.2 6.3 6.4 6.5 6.6 6.7 6.8 6.9 6.10 6.11</p>	<p>Cabin: Single cab tilting forward hydraulically- driver+ 2 passengers Driver and co- driver fully adjustable seats with inertia reel seat belts Air conditioning and heating system. Mirror control, manual. Wind up-windows electrical type on both right and left. Fire extinguisher. Tachograph. Warning triangle. Reverse Warner Standard tool kit with jack. Immobilizer</p>	<p>Cabin: Single cab tilting forward hydraulically- driver+ 2 passengers Driver and co- driver fully adjustable seats with inertia reel seat belts Air conditioning and heating system. Mirror control, manual. Wind up-windows electrical type on both right and left. Fire extinguisher. Tachograph. Warning triangle. Reverse Warner Standard tool kit with jack. Immobilizer</p>
<p>7 7.1 7.2 7.3 7.4 7.5 7.6 7.7 7.8 7.9 7.10 7.11</p>	<p>Super Structure: Minimum Garbage capacity: 13m³ Rear loading type 5:1 compaction ration or more Discharging by horizontal ejection Body materials: DIN St52 or equivalent (JIS SS490, ASTM A573GR70 ... etc), 5 mm thickness of body base, 4 mm thickness of body side walls, body ceiling, hopper curtain and hopper side walls and 8 mm thickness of hopper base. Material of hopper sides, bottom and the tip of the shovel plate: HARDOX 400 Manual and automatic (full cycle and Half Cycle) Electrically controlled hydraulic mechanism for operation Suitable bin lifting system for standards bins from 120, 1100 L plastic or metal containers Tailgate hopper capacity: 1.5m³ - 2m3 Sewage tank 200 lit Sufficient capacity for leachate collection tank (2 rotating beacons) 2 rotating beacon lamps (front and rear)</p>	<p>Super Structure: Minimum Garbage capacity: 8m³ Rear loading type 5:1 compaction ration or more Discharging by horizontal ejection Body materials: DIN St52 or equivalent (JIS SS490, ASTM A573GR70 ... etc), 5 mm thickness of body base, 4 mm thickness of body side walls, body ceiling, hopper curtain and hopper side walls and 8 mm thickness of hopper base. Material of hopper sides, bottom and the tip of the shovel plate: HARDOX 400 Manual and automatic (full cycle and Half Cycle) Electrically controlled hydraulic mechanism for operation Suitable bin lifting system for standards bins from 120, 1100 L plastic or metal containers Tailgate hopper capacity: 1.5m³ - 2m3 Sewage tank 200 lit Sufficient capacity for leachate collection tank (2 rotating beacons) 2 rotating beacon lamps (front and rear)</p>
<p>8 8.1 8.2 8.3 8.4</p>	<p>Washing System/Lifting System: Cleaning water tank at least 500 litre placed behind the cabin, made of stainless steel, thickness at least 3 mm High pressure piston pump providing at least 30 – 40 1/min (at 150 bars) water to high pressure gun. High pressure hose reel and high - pressure gun (1/2" dia, 15 m long) Washing system control at rear side of hopper.</p>	<p>Washing System/Lifting System: Cleaning water tank at least 500 litre placed behind the cabin, made of stainless steel, thickness at least 3 mm High pressure piston pump providing at least 30 – 40 1/min (at 150 bars) water to high pressure gun. High pressure hose reel and high - pressure gun (1/2" dia, 15 m long) Washing system control at rear side of hopper.</p>

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9. 1.	Tool Kit: Complete tool kit to be carried on the vehicle or equipment for the purpose of charging wheels / tires and emergency road side repairs.	Tool Kit: Complete tool kit to be carried on the vehicle or equipment for the purpose of charging wheels / tires and emergency road side repairs.
10 10.1 10.2	Other: The stickers defined by the specifications must be prepared by contractor and be attached on the machine and major spare parts Full set of instructions, O&M and spare parts manuals in English should be supplied with each vehicle	Other: The stickers defined by the specifications must be prepared by contractor and be attached on the machine and major spare parts Full set of instructions, O&M and spare parts manuals in English should be supplied with each vehicle
11 11.1 11.2	Warranty: 1 year or 100000 km which occurred first factory warranty 1 year or 100000 km which occurred first additional warranty on the drive line	Warranty: 1 year or 100000 km which occurred first factory warranty 1 year or 100000 km which occurred first additional warranty on the drive line

Companies can propose their specifications, mandatory specifications are the capacity of the superstructure 13 and 8 m3, and the possibility to lift standards bins from 120 to 1100 L.
 Lebanese manufactured superstructure a welcome.

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Technical Specifications for standard bins 120 -240 and 360 L plastic
And standard bins 800/900 or 1100/1500 L plastic or metal

Item	120 L	240 L	360 L	800/900 L	1100/1500
1	Material Plastic as per DIN 840 standards			Material Plastic or metal as per DIN 840 standards	
2	<p>The containers must be marked visibly and legibly on the body in accordance with DIN EN 840:</p> <ul style="list-style-type: none"> - Manufacturer - Standard 2-wheel containers for waste and recyclables: EN 840-1 - Nominal volume - Maximum permissible total weight (sum of maximum payload plus container weight) <p>Year and month of manufacturing</p>			<p>The containers must be marked visibly and legibly on the body in accordance with DIN EN 840:</p> <ul style="list-style-type: none"> - Manufacturer <p>4-wheel containers for waste and recyclables with flat cover according to EN 840-2: EN 840-2</p> <p>4-wheel containers for waste and recyclables with sliding cover according to EN 840-3: EN 840-3</p> <p>4-wheel containers for waste and recyclables with flat cover according to EN 840-4: EN 840-4</p> <ul style="list-style-type: none"> • - Nominal volume • - Maximum permissible total weight (sum of maximum payload plus container weight) <p>Year and month of manufacturing</p>	
3	<p>Front entry</p> <p>The front entry must be compatible with filling devices with a comb attachment in accordance with DIN 30731 and the DIN EN 1501 series of standards.</p> <p>The circumferential, U-shaped edge of the containers for waste and recyclables must be formed on the front side (front entry) as a continuous graded edge. The front entry is reinforced at the bottom by grid-like ridges. Equivalent constructions are accepted.</p> <p>The front entry must comply with Form A according to DIN EN 840-1, -2, -3, -4.</p>				
4	<p>Handles</p> <p>The handle design on the container must allow for safe and injury-free gripping of the containers for waste and recyclables (in accordance with point 4 of DIN EN 840-6, sub-section 840-2 and DIN EN 840-3).</p>				

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5	<p>Lid - flat lid</p> <p>The lid must be connected to the body by at least two hinge points</p> <p>Lid - round/sliding lid</p> <p>Due to the safety-relevant importance, it should be noted that the container with a round/sliding lid must be equipped with a safety lid in accordance with DIN EN 840.</p> <p>The constructive design of the safety lid must be designed in such a way that the proper emptying of the containers for waste and recyclables is not hindered.</p> <p>In the interests of user safety, only tenders that demonstrate a certified solution of the safety lid will be accepted.</p> <p>The sliding lids must have a triple lid lock in the closed, semi-open and open position</p>
6	<p>Proof that the containers for waste and recyclables offered meet the technical requirements of DIN EN 840 or equivalent in all parts shall be provided by the bidder by means of offering, in particular, test reports or certifications from an accredited conformity assessment body in the sense of section 33 (3) VgV (see section 31 (1) VgV). <i>Note:</i> A conformity assessment body within the meaning of section 33 (3) VgV is a body that is accredited in accordance with Regulation (EC) No. 765/2008 of the European Parliament and of the Council of 9.7.2008, on the rules for accreditation and market surveillance in connection with marketing products and repealing Council Regulation (EEC) No 339/93 (OJ L 218, 13.8.2008, p. 30) and which conducts conformity assessments, or similar standards.</p> <p>The proof is the responsibility of the bidder, the recognition of such proof is the responsibility of the contracting authority.</p>
7	<p>Production and material</p> <p>For reasons of dimensional stability, the containers for waste and recyclables are seamless in the compact injection moulding process.</p> <p>The dyed plastic mass must be weather-resistant and UV-stabilised for the scope of application.</p>
8	<p>Wheels and castors</p> <p>The mobile 2-wheel containers for waste and recyclables must be equipped with maintenance- free, solid rubber tyre wheels, the axles must be recyclable and protected against corrosion (stability test according to DIN EN 840-5 point 4.8).</p> <p>The rollers have maintenance-free plastic hubs and rims and must be easy to mount by sliding and locking.</p> <p>The 4-wheel containers for waste and recyclables must have a suitable braking system:</p> <ul style="list-style-type: none">• - 2 x wheel stop (incl. turning ring lock) or• - central stop
9	<p>Colour</p> <p>The bidder should show and price the different available colour, colours should comply with the Lebanese recycling system standard as per Circular 7/1 2017</p>