I. SCOPE

The supply of Water Tanker Trucks (Brand New), LHD, Suitable for Use in extreme climatic and physical conditions in Iraq (Workable at a temperature more than 45C and work on local fuel in Iraq).

II. TECHNICAL SPECIFICATIONS

ITEM 1	TECHNICAL SPECIFICATIONS OF 12,000 LITERS VACUUM/SEWAGE TRUCK (for extracting and disposing sewage from in underground tanks)	



Note: Pictures are for reference purpose only and may contain optional accessories.

NO	ITEM	SPECIFICATIONS	QTY
1.	**CHASSIS VEHICLE**		**1 Units**
	Brand	any Brand meet the technical requirements, zero kilometer, Not less than 2019	
	Engine	Not less than 320 hp, diesel, six cylinder , Euro 3 or Euro 4	
	Drive Train	6x4 or 4x4	
	Payload	Minimum chassis payload is 14 ton	
	Steering	LHD	
	Cabin	Single, A/C	
2.	**TANK**		
	General	The tank superstructure will be mounted on an auxiliary chassis manufactured from 8mm St.52 carbon steel, with flexible connections to avoid torsion and in Front and back of the tank.	
	Type	Cylindrical shaped, reinforced tank resistant to vacuum and pressure.(not local made)	
	Capacity	12,000 liters ± 5%	
	Material	Tanker plate 6mm – St.52 Carbon Steel	
	Manhole	Min. 450 mm with aluminum cap on clean water compartment	
	Tank-Chassis Connection	The tank will be connected to the vehicle's chassis with an auxiliary chassis. The auxiliary chassis will be **made** of 8 mm St-52 steel material.	
	Tank Discharge	Tank is placed on chassis at 3% slope. Easy discharge when rear lid is open.	
	Suction Valve for sewage	**Electrical-full automatic**, 4" gate type valve and top mounted telescopic suction boom. Regular time not more than 10 min	
	Discharge Valve for sewage	**Automatic** Pneumatic controlled, 6" gate type valve Regular time not more than 10 min	
	Level Gauges	3 units of dish shaped transparent level gauges on the rear lid for sewage	

	Sludge Chute	A sludge chute at the rear to prevent depositing sludge underneath the vehicle. The chute will have side wings to prevent sludge dispersion sideways.	
3.	**REAR LID**		
	Rear Lid Material	8mm St.52 Carbon Steel	
	Rear Lid Opening	Hinged from the upper side of the tank. Hydraulic controlled vertical opening	
	Rear Lid Lock	4 units of hydraulic controlled locks	
4.	**VACUUM PUMP**		
	Vacuum Capacity	Not less than 500 m3/h	
	Pump Driven	By PTO with belt &pulley system	
	Max. Vacuum Capacity	%95	
	Power Req. at max. Pressure	30 kW	
	Power Req. at max. Vacuum	20 kW	
5.	**SAFETY**		
	1. Safety System	Stainless steel ball located on the top of the tank	
	2. Safety System	Safety ball between the vacuum pump and the first safety system which is mounted on the vacuum installation, volume tank and discharge valve	
	Relief Valves	Will be used where necessary	
	System Safety	Control panel has an emergency stop buttons. Once it is activated, the equipment can be restarted from the driver's cabin only.	
6.	**ACCESSORIES**	• 1 unit 1m steel end pipe for suction arm • 2 units 4" and 6''x 3m suction hose • 1-unit manhole lifting winch mounted on rear lid • 1 unit ½ inch spray gun • 2 units of aluminum lockable storage compartments one on each side of the truck(chamber boxes) • 1-unit steel tool box • Mudguards for rear wheels with mud flaps • Ladder • Small side Polyethylene or steel tank ,30 litter for normal use.	
7.	**PAINTING**	White (compliance with local traffic rules)	
8.	**DOCUMENTS**	1 set of Maintenance and Operation Booklet in English and Arabic	
9.	**WARRANTY**	Minimum a two -years warranty against any	

		kind of laboring mistakes (Provide service every six months (total of 4 services) by the supplying company.	
10.	**SPARE PARTS**	Spare parts guarantee for 10-ten-years operation period.	
11.	**INSPECTION & TRAINING**	Factory Acceptance Tests and Training (not less than 10hr.) to be provided in Dohuk, Iraq	
12.	**Fast Moving Spares for 50,000 kms**	Fast moving spares for 50,000 kms to be included with a separate cost. every set should include. 1. oil Filter 2. fuel filter 3. Air filter. The items should be Origin from the proposed brand. Note: Please indicate the spares in the package.	**1 Sets**
13.	**Spare tire**	one spare tire installed with the truck (Size according to type of Brand)	**1 Units**

ITEM 2	**TECHNICAL SPECIFICATIONS OF 16,000 LITERS JETTING AND VACUUM TRUCKS** (for extracting and disposing sewage from in underground tanks)	



Note: Pictures are for reference purpose only and may contain optional accessories.

NO	ITEM	SPECIFICATIONS	QTY
1	**CHASSIS VEHICLE**		**2 Units**
	Brand	any Brand meet the technical requirements, zero kilometer, , Not less than 2019	
	Engine	Not less than 300 hp, diesel, six cylinder , Euro 3 or Euro 4	
	Drive Train	6x4	
	Payload	Minimum chassis payload is 18 ton	
	Steering	LHD	
	Cabin	Single, A/C	
2	**TANK (for clean and dirty water Tank)**		
	General	The both tanks superstructure will be mounted on an auxiliary chassis manufactured from 8mm St.52 carbon steel, with flexible connections to avoid torsion and	

		in Front and back of the tank.	
	Type	Cylindrical shaped, reinforced tank resistant to vacuum and pressure. .(not local made)	
	Capacity	16,000 liters ± 10% Dirty water tank capacity (10,000 liters) ± 5% Clean water tank capacity (6,000 liters) ± 5%	
	Material	Tanker plate 6mm – St.52 Carbon Steel	
	Manhole	Min. 450 mm with aluminum cap on clean water compartment	
	Tank-Chassis Connection	The tank will be connected to the vehicle's chassis with an auxiliary chassis. The auxiliary chassis will be **made** of 8 mm St-52 steel material.	
	Tank Discharge	Tank is placed on chassis at 3% slope. Easy discharge when rear lid is open.	
	Suction Valve for sewage	**Electrical-full automatic**, 4" gate type valve and top mounted telescopic suction boom. Regular time not more than 15 min	
	Discharge Valve for sewage	**Automatic** Pneumatic controlled, 6" gate type valve Regular time not more than 15 min	
	Level Gauges	3 units of dish shaped transparent level gauges on the rear lid for sewage	
	Sludge Chute	A sludge chute at the rear to prevent depositing sludge underneath the vehicle. The chute will have side wings to prevent sludge dispersion sideways.	
3	**REAR LID**		
	Rear Lid Material	8mm St.52 Carbon Steel	
	Rear Lid Opening	Hinged from the upper side of the tank. Hydraulic controlled vertical opening	
	Rear Lid Lock	4 units of hydraulic controlled locks	
4	**VACUUM AND JETTING PUMP**		
	Vacuum and jetting Capacity	Not less than 1500 m3/h (full automatic) Pump flow rate for clean water between (150 -400 Lt/min) in (150-250 bar) The length of cleaning hose for sewerage (100 m) The length of outside cleaning hose (50 m)	
	Pump Driven	Hydraulically driven by PTO	
	Max. Vacuum Capacity	%95	
	Power Req. at max. Pressure	30 kW	
	Power Req. at max. Vacuum	20 kW	
5	**SAFETY**		
	1. Safety System	Stainless steel ball located on the top of the tank	

	2. Safety System	Safety ball between the vacuum pump and the first safety system which is mounted on the vacuum installation, volume tank and discharge valve	
	Relief Valves	Will be used where necessary	
	System Safety	Control panel has an emergency stop buttons. Once it is activated, the equipment can be restarted from the driver's cabin only.	
6	**ACCESSORIES**	• 1 unit 1m steel end pipe for suction arm • 2 units 4" and 6''x the length are depending on the type of the brand. • 1-unit manhole lifting winch mounted on rear lid • 1 unit ½ inch spray gun • 2 units of aluminum lockable storage compartments one on each side of the truck(chamber boxes) • 1-unit steel tool box • Mudguards for rear wheels with mud flaps • Ladder • Small side Polyethylene or steel tank ,30 litter for normal use.	
7	**PAINTING**	White (compliance with local traffic rules)	
8	**DOCUMENTS**	1 set of Maintenance and Operation Booklet in English and Arabic	
9	**WARRANTY**	Minimum a two-years warranty against any kind of laboring mistakes (Provide service every six months (total of 4 services) by the supplying company.	
10	**SPARE PARTS**	Spare parts guarantee for 10-ten-years operation period.	
11	**INSPECTION & TRAINING**	Factory Acceptance Tests and Training (not less than 10hr.) to be provided in Dohuk, Iraq	
12	**Fast Moving Spares for 50,000 kms**	Fast moving spares for 50,000 kms to be included with a separate cost. every set should include. 1. oil Filter 2. fuel filter 3. Air filter. The items should be Origin from the proposed brand. Note: Please indicate the spares in the package.	**2 Sets**
13	**Spare tire**	one spare tire installed with the truck (Size according to type of Brand)	**2 Units**

Remarks and Conditions

- All Items Should be delivered to directorate warehouse /Iraq/ Duhok **(3 different location).**
- Transport costs and custom cost at the border are included in the product price.
- **Submit Manufacturer certification for all offered items should be provided before delivery.**
- **At least- Two-year warranty against any kind of laboring mistakes for all offered items (Provide service every six months (total of 4 services) by the supplying company.**
- **Factory Acceptance Tests on site and Two days Training not less than 10hr. for at least 20 Technicians and drivers to be provided in Dohuk, Iraq (the training will be with hall rent, lunch with taking into account health instructions)**
- Painting all trucks with GIZ, AFD, and KRG Logo (the logo will be shared by giz later).
- Catalogues and tech. specifications should be provided with offers.
- All standard accessories for all offered items should be provided.