TECHNICAL SPECIFICATIONS

Goods			
portion number by invitation	the intermediate code in the procurement plan for the EZC classification (CPV)	trademark, brand and full name of the manufacturer **	technical specifications
1	34121100/501	Zhongtong bus LCK6860HGN Zhongtong Bus Co.,Ltd	presented below

- **Vehicle Stock Standard:** imported buses shall comply with the requirements established by the Technical Regulations of the Customs Union "On the Safety of Wheeled Vehicles" (TR CU 018/2011), adopted by the decision of the Customs Union Commission No.877 dated December 9, 2011, effective in the Republic of Armenia since January 2, 2020, which appendix defines vehicles subject to certain requirements and envisages provisions concerning emissions (particularly, seizure by year and environmental classes). At the time of delivery of the buses, the supplier shall provide the customer with the certificates required by the above-mentioned Decision No.877 dated December 9, 2011, for import into the territory of the Customs Union. Buses shall be produced no earlier than 2022, not previously used, with mileage at the time of purchase within the permissible standard for in-house and test mileage; when driving a vehicle under its powers, no more than the average estimated distance along the ideal route of import from the country of the manufacturer or in accordance with mileage justified by the documents presented.
- **Class**: with an average capacity, according to the Euro 5 environmental standard, 4x2 wheel arrangement, rear axle, urban configuration.
- **Capacity**: availability of at least 22+1 seats (including 1 driver's seat), the possibility of transporting at least 38 standing passengers.
- **Body:** frame-type bearing structure, wagon configuration, all-metal with anti-corrosion protection and electrophoretic coating, shall be low-slung, without a stepped height, the maximum entrance height shall be 380 mm, the color is agreed upon in advance with the customer according to the RAL catalog.
- **Passenger boarding doors:** the availability of two fully glazed pneumatic remote control doors with an electric drive provided for passenger boarding, one of which is an internally opening double-leaf door, wide enough for wheelchair access. All door opening and closing units shall be of high quality, well-controlled, and failure-free.
- **Maximum speed:** 80km/h.

** *If the selected bidder's application includes the goods produced by more than one manufacturer as well as having different trademarks, trade names and brands, those that have been satisfactorily assessed shall be included in this Appendix. If the invitation does not provide information on the trademark, trade name, brand and manufacturer of the goods, the box "trademark, brand and manufacturer's name" is deleted.*

Where provided for in the agreement, the Seller shall also provide the Buyer with a letter of guarantee or certificate of conformity from the manufacturer of the Goods or its representative.

- **Windshield (windscreen) and windows:** with movable opening sashes on the side windows (including on the driver's side); the windshield is three-layered, consisting of three parts; the rear glass is tempered. The availability of a barrier that ensures the safety of the windshield.
- **Rear-view mirrors:** the availability of electrically heated rear-view mirrors. The view of the rear-view mirrors shall be complete, providing maximum visibility from the side and rear of the bus.
- **Wheelchair ramp:** for the arrangement of wheelchairs, one opening mechanical ramp shall be provided, which can be adjusted by the driver, taking into account the dimensions established by the current standard. The ramp shall be installed at the entrance of the rear door, have a smooth travel, guarantee safe operation, and ensure load capacity of up to 300 kg.

- **Passenger compartment:** robust seats with rigid fastening, seats for passengers with disabilities, signs, the availability of a stop button next to seats for persons with disabilities and a wheelchair, adjustable handles (for standing passengers), first aid kits, at least two fire extinguishers with a capacity of at least 4 kg, at least one hatch with ventilation, gas leak alarm systems, passenger compartment upholstery (including seats) of washable material, adjustable driver's seat, a partition between the driver's seat and passenger compartment, passenger compartment viewing mirror in the driver's cabin, two 12V sockets in the places specified by the customer.
- **Heating and cooling:** the availability of heating, cooling, ventilation, and air conditioning systems in the passenger compartment; these systems shall be designed for the -40 to +45 degree temperature regime, at least 23,000 kcal/hour. There shall be a separate heating system in the driver's cabin.
- the floor of the passenger compartment shall be of quartz sand, durable, water-resistant, easy to clean, and shall withstand any weather conditions.
- **The engine** shall run on compressed natural gas (methane), which conforms to at least Euro 5 environmental standard, with a power of at least 200 hp (147 kW), located in the rear of the bus, fuel tanks for no lower than type 2 CNG, on the roof, with a capacity of at least 720 liters, a liquid-based cooling system; the bus shall travel at least 320 km with one full charge. Engine and gas system maintenance hatches shall be large and accessible for maintenance.
- **Transmission -** fully automatic, Allsion, ZF, or equivalent, with a built-in retarder.
- **Suspension system:** on the front and rear axles, 2/4 pneumatic, independent front suspension, low axle with 2/4 double-acting shock absorbers, Knorr mechanical lifting system or equivalent.
- **Brake system:** two-way pneumatic WABCO system or equivalent, ABS, WABCO, or equivalent; manual brake system- ASR spring system with a power battery or equivalent disc brake system on all wheels. The brake system shall be protected from dirt and other objects. The air tanks shall be equipped with automatic valves for releasing water. Install a WABCO dehumidifier or equivalent. The height adjustment valves shall be protected from snow and dust.
- **Tires:** pneumatic, anti-slip; rear wheels shall be paired (double-row); the dimensions shall be 255/70R22.5.
- **Steering system:** with left-hand steering, power steering, and adjustable steering column.
- **Other structural and technical standards** - low entrance foot-board; overall dimensions - length 8,500 mm ±200 mm, width no more than 2,600 mm; bus height of no more than 3,600, passenger compartment height of no less than 1,950 mm, the weight of the bus equipped and equipped with the necessary accessories of no more than 9,350kg, the maximum permissible weight (maximum load) of no more than 14,150 kg.
- **Miscellaneous:** the Supplier shall provide the possibility of connecting a cable and a barrier arm for travel tickets (validator, at least 2 pieces), GPS devices (at least 1 piece), an on-board unit (at least 1 peice) (the customer will provide the necessary technical descriptions and drawings for laying cables and connectors), passenger flow meters (at the top of each door openings), which shall be integrated into a common on-board system, an electronic information board for passengers, and at least three route signs (including one in the cabin), 3-door video surveillance, one end-to-end video surveillance, and a roadside surveillance camera, a rear-view camera, a video camera storage with a built-in hard disk, and an RJ45 interface (port) for remote connection, a remote control device for the internal equipment of the bus, which shall be connected to the internal devices (RJ45 interface) and capable of remote connection, as well as 3G and 4G network control, a loudspeaker, an automatic fire extinguishing system in the engine compartment, and a bus toolbox with its own tools (the types and number of tools shall be clearly indicated). The bus shall have an accessible interface to connect to the CAN port and receive information about the bus. To inform passengers, information boards shall also be displayed in Armenian, Russian, and English, as well as have a specified accessible interface for changing messages.

- **USB charging socket:** at least 10 USB charging sockets shall be installed in the compartment.
- **Lighting:** lighting devices (including interior lighting) with LED-type lamps, built-in luminaires in the driver's cabin and in the front of the bus, the light signal of the door opening and closing buttons, and highly located high-quality LED-type built-in rear lamps.
- **Electrical system:** battery - 2 pieces, 24 volts in total.
- **Windshield wiper blades:** the bus shall be equipped with electric wiper blades with multiple adjustment modes and a windshield wiper tank.
- **Passability**: the bus shall have a passability of a road with a slope of 18%.
- **Clearance:** at least 125 mm.
- **Operating conditions**: the delivered buses will be operated in weather conditions of -40 to +45 degrees; parking will be provided in an open area, without a canopy; the operation will be organized on medium and poor roads.
- **Training:** the supplier shall provide training to the Customer's personnel or authorized representatives on issues related to the operation, maintenance, and repair of buses. Training shall be carried out in the territory of the Republic of Armenia for technical personnel and drivers using both technical regulations, specifications, and video recordings.
- **Delivery:** the specified number of buses shall be delivered to the customer within 6 months.
- **The warranty period of the bus** shall be at least 2 years or 150,000 km run, which shall be carried out in the administrative territory of Yerevan, RA, or at a maximum distance of 1 km from the specified area. Warranty service shall be provided by an authorized representative or a subsidiary of the supplier. Before importing the bus, a list of spare parts for each bus for the purpose of warranty service shall be provided. (1 sentence has been removed)
- **Bus price: the participant shall offer the price of the bus for DAP Yerevan, RA (INCOTERMS 2020).**

- **All payments (expenses) to be made by the seller, including taxes, duties, transportation costs, insurance costs, premiums, and expected profits, shall be included in the quotation in accordance with the condition of DAP Yerjan, RA (INCOTERMS 2020).**
- **The purchase shall be performed in the territory of the Republic of Armenia.**
- **The purchased product shall comply with the legislation of the Republic of Armenia.**
- **The participant shall provide such service conditions and spare parts that the service center will provide from the day of commissioning(1), i.e. permanent replacement and repair of all running wear parts.**

Number	Name of the spare part	Quantity
1	Cylinder cover casing pad	15
2	O-ring/gasket	30
3	Oil cooler cover gasket	15
4	Water pump gasket	75
5	Water pump	15
6	Turbo gasket	30
7	Air compressor assembly	8
8	Hydraulic pump	8

9	Idle gear	8
10	Automatic tension pulley	15
11	Poly-V-shaped belt	45
12	Starting engine (Starter)	8
13	Generator assembly	8
14	Front oxygen sensor	10
15	Pedal connector	10
16	Humidity sensor	5
17	Decompressor	8
18	Turbocharger	8
19	Cylinder cover gasket	15
20	Pressure and temperature sensor	10
21	Rotation speed sensor	10
22	AC compressor ASSY	4
23	Rear view mirror left assembly	15
24	Rear view mirror right assembly	15
25	Small circular mirror	30
26	Main optical lens	10
27	Main optical lens cradle	10
28	Right lens	15
29	Left lens	15
30	Engine compartment lamp	4
31	Left front combination lamp	15
32	Right front combination lamp	15
33	Rear fog lamp/with reflector	15
34	Rear left combination lamp	15

35	Rear right combination lamp	15
36	CB1/24V relay	10
37	Starting protection relay	15
38	Switch 1322	10
39	Panasonic 24V relay	15
40	Sound control relay	15
41	12V relay	15
42	Fuse	150
43	Wiper relay	30
44	Flashing beacon relay	30
45	ABS sensor crown	10
46	Outer ring - hub gland	20
47	Brake disc	4
48	Internal hub bearing assembly	30
49	Hub	2
50	External hub bearing assembly	10
51	Gland housing	10
52	Inner gland of the rear wheel	150
53	Engine rear suspension cushion assembly	20
54	Retarder damping unit	20
55	Piston nozzle unit	16
56	Main bearing upper liner	20
57	Main bearing bottom liner	20
58	Rear gland	10
59	Main bearing bolt	20
60	Convex shaft sleeve 1	4

61	Convex shaft sleeve 2	16
62	Cylinder sleeve O-ring	48
63	Cylinder sleeve	16
64	Cylinder sleeve O-ring	16
65	Gasket	10
66	Flooring	10
67	Riveting	8
68	Oil pump tooth gear	2
69	Tooth rim of the category two balancing mechanism	2
70	Crankshaft	2
71	Crankshaft timing gear	2
72	Deep groove sall searing	6
73	Flywheel tooth gear	8
74	Flywheel	4
75	Cylindrical pin	8
76	Piston ring assembly	24
77	Locking ring of the piston pin	32
78	Piston pin	16
79	Coupling rod front bearing	16
80	Bottom connecting rod liner	16
81	Connecting rod assembly	8
82	Piston	24
83	Connecting rod bushing	8
84	Cup plug	24
85	Cylinder cover	2
86	Exhaust valve seat ring	32

87	Intake valve seat ring	32
88	Cup plug	12
89	Oil splasher bushing O-ring	16
90	Spark plug sleeve	16
91	Valve guide bushing	64
92	Rubber O-ring	24
93	Cylinder cover casing assembly	4
94	Oil deflector	4
95	Fuel filling neck cover	6
96	O-ring	
97	Oil filling neck cover assembly	6
98	Integral rocker arm shaft assembly	2
99	Valve jumper	16
100	Valve collet	64
101	Valve spring seat	32
102	Valve spring	32
103	Exhaust valve	16
104	Camshaft assembly	2
105	Synchronizing gear of the convex shaft	2
106	Gasket	2
107	Intermediate gear-driven shaft	2
108	Intermediate gear assembly	2
109	Intermediate gear-driven shaft	2
110	Pusher	16
111	Pusher	16
112	Intake valve	16

113	Intake lever assembly	12
114	Yoke spring	12
115	Exhaust lever assembly	12
116	Adjustment bolt unit	6
117	Hexagonal lock nut	6
118	Intake rocker arm	12
119	Exhaust rocker arm	12
120	Cam shaft	2
121	Crankcase tray assembly	3
122	Flange	6
123	Washer	6
124	Magnetic plug assembly	6
125	Oil cooler	4
126	Intake pipe gasket	20
127	Air intake piping assembly	4
128	Gasket	10
129	Exhaust pipe gasket	20
130	High voltage line assembly	10
131	Incendiary coil	60
132	Spark plug	400
133	Support bushing assembly	30
134	Electromagnetic coupling	5
135	Oil filter	750
136	Low pressure filter element	300
137	Air filter element	300
138	Friction block assembly	1500

139	Cylinder cover gasket	15
140	Front window of the middle door/tea color (520/1830 multiple glazed unit)	8
141	Rear window of the middle door/tea color (520/1830 multiple glazed unit)	8
142	Front door window/without color (755/1830 multiple glazed unit)	8
143	Driver's window, colorless built-in sliding windows with multiple glazed units (1124.0/1475.0)	8
144	Left sliding window, brown built-in sliding windows with multiple glazed units (1012/1475)	8
145	Left sliding window, brown built-in sliding windows with multiple glazed units (1057.0/1475.0)	8
146	Left sliding window, brown built-in sliding windows with multiple glazed units (1461.0/1475.0)	8
147	Left sliding window, brown built-in sliding windows with multiple glazed units (1422.0/1475.0)	8
148	Left rear sliding window, brown built-in sliding windows with multiple glazed units (1705.0/1475.0)	8
149	Passenger door upper window, brown closed glass (824.0/184.0)	8
150	Right sliding window, brown built-in sliding windows with multiple glazed units (1224.0/1475.0)	8
151	Right sliding window, brown built-in sliding windows with multiple glazed units (1121.0/1475.0)	8
152	Upper glass of the middle door F, brown closed glass (1234.0/184.0)	8
153	Right sliding window, brown built-in sliding windows with multiple glazed units (1585.0/1475.0)	8
154	Right rear sliding window, brown built-in sliding windows with multiple glazed units (1705.0/1475.0)	8
155	Front windscreen (right)	15
156	Front windscreen (left)	15
157	Upper front windscreen (1070.0/180.0)	8

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