**Section II: Schedule of requirements**

E-Sourcing reference no: RFQ/2024/52024

***Provision of Water pumps to Mykolaiiv region.***

1. **Summary of Requirements for the provision of the water pumps to Mykolaiiv region:**

**Lot 2 Pumps with supplies**

**Lot 2.1 - Two-way inlet pump on a common frame with productivity at the working point (Q) not less than 380 m3/h and pressure at the working point (H) not less than 82 m of water complete with control cabinet with frequency regulation - 1 item**

**Lot 2.2 - Sewage pump with productivity at the working point (Q) not less than 180 m3/h and pressure at the working point (H) not less than 30,5 complete with control cabinet with frequency regulation and accessories for installation - 1 item**

**Lot 2.3 - The box with a 250 A tripping breaker - 1 item**

**Lot 2.4 - Control cabinet with frequency control of at least 75 kW - 1 item**

**Lot 2.5 - Control cabinet with frequency control of at least 45 kW- 1 item**

**Lot 2.6 - Well pumps with various productivities with the following details below:**

**B. Technical specifications for Goods – Comparative Data Tables**

**Lot 2 Pumps with supplies**

**2.1 Two-way inlet pump on a common frame with productivity at the working point (Q) not less than 380 m3/h and pressure at the working point (H) not less than 82 m of water complete with control cabinet with frequency regulation - 1 Unit**

| N | UNOPS minimum technical requirements | Is Bid Compliant? Bidder to complete | Details of the offered goods. Bidder to complete |
| --- | --- | --- | --- |
| **Lot 2** | **Pumps with supplies** |  |  |
| **2.1** | **Two-way inlet pump on a common frame with productivity at the working point (Q) not less than 380 m3/h and pressure at the working point (H) not less than 82 m of water complete with control cabinet with frequency regulation - 1 Unit** |  |  |
| **1.1** | **Minimum technical requirements to the pump:** |  |  |
| 1.1.1 | productivity at the working point (Q) – not less than 380 m3/h; | ☐ Yes ☐ No |  |
| 1.1.2 | pressure at the working point (H) – not less than 82 m of water. | ☐ Yes ☐ No |  |
| 1.1.3 | The hydraulic efficiency of the pump at the operating point is not lower than 80%. | ☐ Yes ☐ No |  |
| 1.1.4 | anti-cavitation reserve at the working point (NPSH) - no more than 3,0 m. | ☐ Yes ☐ No |  |
| 1.1.5 | Stainless steel impeller (AISI 304 EN 1.4308) or better | ☐ Yes ☐ No |  |
| 1.1.6 | Pump housing – cast iron EN 1561 EN-GJL-250 ASTM A48 or better | ☐ Yes ☐ No |  |
| 1.1.7 | Shaft – stainless steel EN 1.4021 AISI 420 or better | ☐ Yes ☐ No |  |
| 1.1.8 | Wear ring: Brass ASTM B584, C90500 or better | ☐ Yes ☐ No |  |
| 1.1.9 | mechanical shaft seal - Carbon)/Silicon carbide (SiC), rubber seal (EPDM). | ☐ Yes ☐ No |  |
| 1.1.10 | The pump unit must have an external anti-corrosion coating. | ☐ Yes ☐ No |  |
| 1.1.11 | Pump rotation direction – CCW (counter-clock wise) | ☐ Yes ☐ No |  |
| 1.1.12 | Pump and motor are mounted as pump units on a common baseframe and connected via a flexible coupling with coupling guard. | ☐ Yes ☐ No |  |
| 1.1.13 | The protective cover of the clutch must be installed | ☐ Yes ☐ No |  |
| 1.1.14 | Pumps must be equipped with a dynamically balanced impeller with double-suction design | ☐ Yes ☐ No |  |
| 1.1.15 | Balanced mechanical shaft seal, the shaft seal shall be suitable for a liquid temperature range of 0⁰ C to +100⁰ C. | ☐ Yes ☐ No |  |
| 1.1.16 | The housing of the pump unit must have air vent plugs at the upper points of the housing | ☐ Yes ☐ No |  |
| 1.1.17 | The housing of the bearing must be removable, so it is possible to inspect the end seals and bearings without removing the upper part of the housing. | ☐ Yes ☐ No |  |
| 1.1.18 | Bearings must have a maximum service life (L10h) of at least 100,000 hours | ☐ Yes ☐ No |  |
| 1.1.19 | The electric motor of the pump unit must be asynchronous type, three-phase, horizontal, on legs, with a fully enclosed cooling fan with a short-circuited rotor (cooling type - IC 411). | ☐ Yes ☐ No |  |
| 1.1.20 | Specify inlet and outlet flanges to meet international standards for global system compatibility. | ☐ Yes ☐ No |  |
| 1.1.21 | Maximum vibration and noise levels meet environmental and safety standards. | ☐ Yes ☐ No |  |
|  | Dimensions: |  |  |
| 1.1.22 | the diameter of the inlet of the pump : DN200 | ☐ Yes ☐ No |  |
| 1.1.23 | the diameter of the outlet of the pump : DN150 | ☐ Yes ☐ No |  |
| 1.1.24 | maximum operating pressure – PN10 | ☐ Yes ☐ No |  |
| 1.1.25 | connecting coupling without spacer | ☐ Yes ☐ No |  |
| 1.1.26 | the pump must be equipped with an isolated bearing | ☐ Yes ☐ No |  |
| **1.2** | **Minimum technical requirements to the the electric motor:** |  |  |
| 1.2.1 | The electric motor must be adapted to work with a frequency converter | ☐ Yes ☐ No |  |
| 1.2.2 | nominal power on the shaft (P2) – not more 132 kW | ☐ Yes ☐ No |  |
| 1.2.3 | power on the shaft at the working point (P2 work) - no more than 106 kW | ☐ Yes ☐ No |  |
| 1.2.4 | nominal supply voltage - 3 x 380…400 V; nominal frequency 50 Hz | ☐ Yes ☐ No |  |
| 1.2.5 | energy efficiency class of the electric motor – IE3 or better | ☐ Yes ☐ No |  |
| 1.2.6 | motor efficiency (at full loading) - no less 95.6 % | ☐ Yes ☐ No |  |
| 1.2.7 | insulation class – F | ☐ Yes ☐ No |  |
| 1.2.8 | the number of poles of the electric motor - 4 | ☐ Yes ☐ No |  |
| 1.2.9 | the electric motor must have built-in thermal protection in the form of thermistors (PTC) one for each phase | ☐ Yes ☐ No |  |
| 1.2.10 | protection class – IP55 | ☐ Yes ☐ No |  |
| 1.2.11 | maximum current consumption: not more 240 A | ☐ Yes ☐ No |  |
| 1.2.12 | power factor Cos Phi – no less 0,89 | ☐ Yes ☐ No |  |
| 1.2.13 | the range of frequency regulation should be in the range from 25 to 50 Hz | ☐ Yes ☐ No |  |
| **1.3** | **Minimum technical requirements to the control cabinet:** |  |  |
| 1.3.1 | The control cabinet is designed to control the pump in order to automatically maintain the set pressure, power supply and comprehensive protection of the water pump. | ☐ Yes ☐ No |  |
| 1.3.2 | The control cabinet must provide: |  |  |
| 1.3.2.1 | – power supply and comprehensive protection of the three-phase asynchronous electric drive of the pump; | ☐ Yes ☐ No |  |
| 1.3.2.2 | – manual regulation of pump revolutions (performance) from 10% to 100% of the nominal value from the panel; | ☐ Yes ☐ No |  |
| 1.3.2.3 | – smooth acceleration and stopping of the pump; | ☐ Yes ☐ No |  |
| 1.3.2.4 | - collection of information about the condition of the pump (nominal current, power consumption, working hours, electricity consumption accounting); | ☐ Yes ☐ No |  |
| 1.3.2.5 | – display of pump parameters and operating modes; | ☐ Yes ☐ No |  |
| 1.3.2.6 | – detection and indication of pre-emergency and emergency conditions; | ☐ Yes ☐ No |  |
| 1.3.2.7 | - two modes of operation:  • automatic - from the frequency converter (automatic adjustment of pump revolutions/performance according to the signal from the pressure sensor 4..20mA) ;  • manual - regulation of pump revolutions (performance) from 10% to 100% of the nominal value from the panel ; | ☐ Yes ☐ No |  |
| 1.3.3 | Main technical characteristics: |  |  |
| 1.3.3.1 | - nominal supply voltage - 380V; | ☐ Yes ☐ No |  |
| 1.3.3.2 | – power supply frequency - 50 Hz; | ☐ Yes ☐ No |  |
| 1.3.3.3 | – nominal electric power - not less than 132 kW; | ☐ Yes ☐ No |  |
| 1.3.3.4 | – nominal current - not less than 260 A; | ☐ Yes ☐ No |  |
| 1.3.3.5 | – output frequency - 10 ... 60 Hz; | ☐ Yes ☐ No |  |
| 1.3.3.6 | – overload capacity - 110%; | ☐ Yes ☐ No |  |
| 1.3.3.7 | – ambient temperature without reducing operating characteristics - from -15 to +50 C; | ☐ Yes ☐ No |  |
| 1.3.3.8 | – the number of discrete inputs, at least 2 pcs.; | ☐ Yes ☐ No |  |
| 1.3.3.9 | – the number of analog inputs, at least 2 pcs.; | ☐ Yes ☐ No |  |
| 1.3.3.10 | – presence of a built-in RS-485 interface with the Modbus RTU / TCP/Ethernet protocol (for communication with the controller); | ☐ Yes ☐ No |  |
| 1.3.3.11 | – the ability to display measured values in user units (power, current, revolutions of the electric drive, converter frequency, pressure value); | ☐ Yes ☐ No |  |
| 1.3.3.12 | - the possibility of controlling and monitoring the parameters of the frequency converter. | ☐ Yes ☐ No |  |
| 1.3.4 | The control cabinet is a metal structure with a lockable door. The control cabinet is designed to be installed on the floor, cable channel, etc. and meet the following requirements: |  |  |
| 1.3.4.1 | – material - sheet steel with a thickness of at least 1,2 mm; | ☐ Yes ☐ No |  |
| 1.3.4.2 | – coating - powder paint; | ☐ Yes ☐ No |  |
| 1.3.4.3 | - degree of protection when the door is closed - at least IP21. | ☐ Yes ☐ No |  |
| 1.3.4.4 | - cable entry from below. | ☐ Yes ☐ No |  |
| 1.3.4.5 | – overall dimensions no more than: height 2000 mm, width 1000 mm, depth 600 mm; | ☐ Yes ☐ No |  |
| 1.3.5 | The following must be installed in the control cabinet: | ☐ Yes ☐ No |  |
| 1.3.5.1 | - frequency converter of the AQUADRIVE FC202 type, power not less than 132 kW, | ☐ Yes ☐ No |  |
| 1.3.5.2 | - an automatic switch with a rating of at least 260A and a breaking capacity of at least 15 kA. | ☐ Yes ☐ No |  |
| 1.3.5.3 | - fast-acting fuses with gS or gR /aR characteristics. | ☐ Yes ☐ No |  |
| 1.3.5.6 | - system of forced automatic ventilation, equipped with air filters; | ☐ Yes ☐ No |  |
| 1.3.6 | On the door of the control cabinet are located: |  |  |
| 1.3.6.1 | - control elements for starting and stopping the pumping unit; | ☐ Yes ☐ No |  |
| 1.3.6.2 | - control elements ("more" and "less" buttons) for manual regulation of electric motor revolutions. | ☐ Yes ☐ No |  |
| 1.3.6.3 | - LED indicators of pump operation: network, operation, emergency. | ☐ Yes ☐ No |  |
| **2** | **Other requirements** |  |  |
| 2.1 | Bid includes brand/model of the goods and manufacturer's technical literature/catalogue, all confirming that the offered items comply with required specifications. | ☐ Yes ☐ No |  |
| 2.2 | The period of validity of the Warranty. The warranty shall remain valid for 24 months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination. The Warranty should include preventive maintenance, replacement of defective parts/equipment, repair of equipment, labour for equipment repair and/or parts replacement. | ☐ Yes ☐ No |  |
| 2.3 | Warranty service. Within the warranty period, the Supplier or its authorised service centre shall provide maintenance and/or repair services to the equipment operation site not later than 10 (ten) workdays from the date of receipt of written or E-mail notification from an authorised party. The name of the company, address, telephone- and fax numbers, e-mail address must be mentioned in the bid. The service centre shall have at least one certified engineer in its staff. | ☐ Yes ☐ No |  |
| 2.4 | Technical documentation for maintenance and repair of the supplied goods. The minimum set of technical documents to be provided with each piece of equipment delivered is the following: • User Manual and Operating Instructions (in Englihs and/or Ukrainian) • Maintenance guidelines (in Ukrainian or English). All tags/labels on the equipment shall be in English or Ukrainian language. | ☐ Yes ☐ No |  |
| 2.5 | Bid includes the total volume of the Goods in M3 and gross weight of the goods in KG. | ☐ Yes ☐ No |  |
| 2.6 | Bid includes the Country of origin of the goods and FCA point of delivery. | ☐ Yes ☐ No |  |
| 2.7 | Product compatibility within this Lot is confirmed with all its subsets (from 2.1 to 2.5). This includes but is not limited to mechanical and operational compatibility and material compatibility where applicable. Outline any integration issues (such as flange sizes, pipe threads, and fitting types) in the details box and the proposed solutions for seamless functionality. | ☐ Yes ☐ No |  |
| **3** | **To confirm the requirements for technical and quality characteristics of the pumps and control cabinet, the Bidder shall provide:** |  |  |
| 3.1 | A document confirming the status of the Bidder as a manufacturer or an official representative (dealer, distributor, etc.) of the manufacturing plant or a subsidiary of the manufacturing plant or its official representative in Ukraine (attach an official letter from the manufacturing plant, its subsidiary or official representative in Ukraine confirming the status of the Bidder and its responsibility for the goods supplied). | ☐ Yes ☐ No |  |
| 3.2 | An official letter from the manufacturer, its subsidiary or official representative in Ukraine stating that the pumps are delivered in their original factory packaging assembled and are completely ready for operation. | ☐ Yes ☐ No |  |
| 3.3 | An official letter from the manufacturer, its subsidiary or official representative in Ukraine, that the pumps will undergo factory tests in accordance with the ISO9906:2012 and guaranteeing that the test protocol on the factory test bench, according to ISO 9906 will be included in the delivery package for each pump | ☐ Yes ☐ No |  |
| 3.4 | An official letter from the manufacturer, its subsidiary or official representative in Ukraine stating that the pumps and electric motor are CE marked in accordance with the current European directives. | ☐ Yes ☐ No |  |
| 3.5 | A valid the conclusion of the sanitary and epidemiological examination on the pumps and control cabinet. | ☐ Yes ☐ No |  |
| 3.6 | Valid international certificates ISO 9001 and ISO 14001 for the production facilities where the pumps and control cabinet are manufactured. | ☐ Yes ☐ No |  |
| 3.7 | Electronic copies of technical documentation for the pumps and control cabinet: | ☐ Yes ☐ No |  |
| 3.8.1 | - technical passport and excerpts from the manufacturer's technical catalogs (with technical specifications, description of construction and materials, drawings of overall dimensions, functionality, etc.); | ☐ Yes ☐ No |  |
| 3.8.2 | - installation and operating manuals; | ☐ Yes ☐ No |  |
| 3.8.3 | - warranty card with a list of official service center(s) in Ukraine. | ☐ Yes ☐ No |  |
| 3.9 | An official letter from the manufacturing plant, its subsidiary company or an official representative in Ukraine, about the presence of a certified service center (in the status of a legal entity), authorized by the manufacturing plant to provide prompt warranty and post-warranty service for the complete set of pumps, which is the subject of this purchase. The address and phone number of the certified service center must be specified in the official letter. To the official letter, add a valid certificate/certificate and an official letter from the manufacturer's factory / its subsidiary company / official representative in Ukraine confirming the status of the specified service center. | ☐ Yes ☐ No |  |
| 3.10 | The total price of the offer for all lots includes the cost of commissioning the equipment (pumps and control cabinets with frequency converters) by service specialists authorized by the manufacturer. This is essential to ensure that the installation is carried out correctly and to uphold the manufacturer's warranty obligations. | ☐ Yes ☐ No |  |

**C.1. Delivery requirements for Lot 2.1**

| **UNOPS Requirements** | | **Is the bid compliant?** Bidder to complete | **Details**  Bidder to complete |
| --- | --- | --- | --- |
| **Delivery time** | The Bidder shall deliver the goods as soon as possible but not later than 90 calendar days after the PO is issued. Partial delivery of the goods within this period is acceptable. Bidders must provide a delivery schedule.  The offered goods are to be (DAP customs cleared) **delivered and unloaded only, Mykolaiv region: Bashtanka city.** | ☐Yes ☐ No |  |
| **Delivery place and Incoterms rules** | DAP (customs cleared) Incoterms 2020 (**delivered at place and unloaded**) customs cleared **Mykolaiv region: Bashtanka city,** net of any direct taxes, customs duties, or indirect taxes. | ☐Yes ☐ No |  |
| **Consignee details** | Delivery address and consignee details will be provided to the successful Bidder(s) | ☐Yes ☐ No |  |

**Lot 2 Pumps with supplies**

**2.2 Sewage pump with productivity at the working point (Q) not less than 180 m3/h and pressure at the working point (H) not less than 30,5 complete with control cabinet with frequency regulation and accessories for installation - 1 unit**

| N | UNOPS minimum technical requirements | Is Bid Compliant? Bidder to complete | Details of the offered goods. Bidder to complete |
| --- | --- | --- | --- |
| **Lot 2** | **Pumps with supplies** |  |  |
| **2.2** | **Sewage pump with productivity at the working point (Q) not less than 180 m3/h and pressure at the working point (H) not less than 30,5 complete with control cabinet with frequency regulation and accessories for installation - 1 unit** |  |  |
| **1.1** | **Minimum technical requirements to the pump:** |  |  |
| 1.1.1 | The type of pump must be a non-self-priming, single-stage, monobloc type centrifugal console pump designed for pumping raw sewage with a solids content of up to 5%. | ☐ Yes ☐ No |  |
| 1.1.2 | The pump is designed for periodic and continuous operation in a submerged or dry position, with a motor cooling jacket. | ☐ Yes ☐ No |  |
| 1.1.3 | The pump must have a self-cleaning semi-open impeller | ☐ Yes ☐ No |  |
| 1.1.4 | The pump must have build system allowing easy adjustment of the  impeller clearance without disassembly of the pump, maintaining maximum performance throughout the life of the pump | ☐ Yes ☐ No |  |
| 1.1.5 | The pump must be supplied complete with an electric motor with energy efficiency class IE3 or better. | ☐ Yes ☐ No |  |
| 1.1.6 | The pump must have built-in motor protection - three thermal switches to protect against overheating, one in each stator winding; | ☐ Yes ☐ No |  |
| 1.1.7 | The pump must have a double mechanical end seal of the cartridge type shaft | ☐ Yes ☐ No |  |
| 1.1.8 | productivity at the working point (Q) – not less than 180 m3/h; | ☐ Yes ☐ No |  |
| 1.1.9 | pressure at the working point (H) – not less than 30,5 m of water. | ☐ Yes ☐ No |  |
| 1.1.10 | anti-cavitation reserve at the working point (NPSH) - no more than 7,6 m. | ☐ Yes ☐ No |  |
| 1.1.11 | the maximum performance of the pump (Q max) – not less than 300 m3/h; | ☐ Yes ☐ No |  |
| 1.1.12 | the maximum pressure of the pump (H max) – not less than 52 m of water. | ☐ Yes ☐ No |  |
| 1.1.13 | The efficiency of the pump at the operating point is not less than 72,5%; | ☐ Yes ☐ No |  |
| 1.1.14 | Total efficiency at the operating point – not less than 62,5 %; | ☐ Yes ☐ No |  |
| 1.1.15 | the temperature of the pumped liquid is not less than 40 degrees Celsius | ☐ Yes ☐ No |  |
| 1.1.16 | the diameter of the inlet of the pump : DN100 | ☐ Yes ☐ No |  |
| 1.1.17 | the diameter of the outlet of the pump : DN100 | ☐ Yes ☐ No |  |
| 1.1.18 | Pump and motor housing, impeller and suction cone - cast iron EN 1561 EN-GJL-250 or better | ☐ Yes ☐ No |  |
| 1.1.19 | The pump housing and impeller must have a cataphoretic coating. | ☐ Yes ☐ No |  |
| 1.1.20 | Electric motor cooling jacket - stainless steel 1.4301 / AISI 304 or better; | ☐ Yes ☐ No |  |
| 1.1.21 | Pump shaft with rotor - duplex stainless steel 1.4462 or better; | ☐ Yes ☐ No |  |
| 1.1.22 | O-ring seals - NBR or better. | ☐ Yes ☐ No |  |
| 1.1.23 | Abrasion-resistant coatings for components exposed to solids in sewage. | ☐ Yes ☐ No |  |
| **1.2** | **Minimum technical requirements to the the electric motor:** |  |  |
| 1.2.1 | nominal power on the shaft (P2) – not more 22 kW; | ☐ Yes ☐ No |  |
| 1.2.2 | nominal electric power consumed (P1) – not more 25 kW; |  |  |
| 1.2.3 | power on the shaft at the working point (P2 work) - no more than 20,6 kW; | ☐ Yes ☐ No |  |
| 1.2.4 | electric power consumed at the working point (P1 work) – no more than 23,5 kW; | ☐ Yes ☐ No |  |
| 1.2.5 | nominal supply voltage - 3 x 380…415 V; | ☐ Yes ☐ No |  |
| 1.2.6 | voltage deviation tolerance: +10 /- 10%; | ☐ Yes ☐ No |  |
| 1.2.7 | power factor Cos Phi (at 100% load) - not less 0,89 | ☐ Yes ☐ No |  |
| 1.2.8 | nominal rotation speed – 2900...3000 rpm | ☐ Yes ☐ No |  |
| 1.2.9 | start type (cable connection) – star-delta" (Y/D) | ☐ Yes ☐ No |  |
| 1.2.10 | protection class – IP68; | ☐ Yes ☐ No |  |
| 1.2.11 | insulation class – H or better | ☐ Yes ☐ No |  |
| 1.2.12 | The maximum number of launches per hour – at least 20 | ☐ Yes ☐ No |  |
| 1.2.13 | The electric motor must be equipped with a power cable with length of at least 10 m. | ☐ Yes ☐ No |  |
| 1.2.14 | The pump must be supplied with a DN100 PN10 horizontal mounting base frame, which includes a supporting steel frame for the pump, a rubber seal for the flanges, screws with a hexagonal head for attaching the frame to the pump and a washer. | ☐ Yes ☐ No |  |
| **1.3** | **Minimum technical requirements to the control cabinet:** |  |  |
| 1.3.1 | Control cabinet for one three-phase sewage pump, with controler for waste water and its complex protection against emergency modes, with star/delta start | ☐ Yes ☐ No |  |
| 1.3.3 | Cabinet equipment and functionality: |  |  |
|  | Control cabinet for one three-phase sewage pump, with controler for waste water and its complex protection against emergency modes, with star/delta start |  |  |
| 1.3.3.1 | • metal case, dust protection class - IP54. | ☐ Yes ☐ No |  |
| 1.3.3.2 | • hermetic inputs for connecting cables | ☐ Yes ☐ No |  |
| 1.3.3.3 | • controller for waste water systems with indication | ☐ Yes ☐ No |  |
| 1.3.3.4 | • the possibility of connecting to the controller: up to 4 level switches with a "dry contact" output or one level sensor with analog output 4-20mA | ☐ Yes ☐ No |  |
|  | • The control cabinet must have inputs/outputs:  - at least 2 relay outputs (programmable);  - at least 2 digital inputs;  - at least 2 additional programmable digital inputs/outputs.  - at least 2 additional programmable digital or analog inputs/outputs. The control cabinet should be able to install an additional data transmission module, which will provide wired and wireless communication using a number of standard communication protocols (ModBus, Ethernet, Profibus, etc.), as well as full integration with SCADA and other systems upper level |  |  |
| 1.3.3.5 | • the possibility of connecting the thermal protection of the pump (thermal contacts or PTC). | ☐ Yes ☐ No |  |
| 1.3.3.6 | • a log of pump emergency shutdowns with real-time error codes | ☐ Yes ☐ No |  |
| 1.3.3.7 | • counter of engine hours for the pump | ☐ Yes ☐ No |  |
| 1.3.3.8 | • general emergency signal relay (potential-free contact) | ☐ Yes ☐ No |  |
| 1.3.3.9 | • pump control switch in manual mode | ☐ Yes ☐ No |  |
| 1.3.4 | The control cabinet must have the following functions of protection and management of operating modes: |  |  |
| 1.3.4.1 | - motor protection against motor overload or phase interruption. | ☐ Yes ☐ No |  |
| 1.3.4.2 | - protection against overheating. | ☐ Yes ☐ No |  |
| 1.3.4.3 | - protection against engine rotor blocking (jamming). | ☐ Yes ☐ No |  |
| 1.3.4.4 | - protection against working without water (dry running). | ☐ Yes ☐ No |  |
| 1.3.4.5 | - protection of access to the controller using a PIN code. | ☐ Yes ☐ No |  |
| 1.3.4.6 | - limiting the number of automatic restarts of pumps. | ☐ Yes ☐ No |  |
| 1.3.4.7 | - built-in buzzer for sound indication of warnings and/or accidents. | ☐ Yes ☐ No |  |
| 1.3.5 | The control cabinet must have the following display functions using the digital display of the controller: |  |  |
| 1.3.5.1 | - pump operation mode | ☐ Yes ☐ No |  |
| 1.3.5.2 | - emergency signals and warning signals by type of accident:  1) high water level (flooding) or "dry run", which is monitored by float-type sensors  2) motor overload (power and current);  3) incorrect sequence of alternating phases or absence of a phase;  4) engine overheating or detection of moisture in the electric motor;  5) too many restarts (a large number of starts);  6) inconsistency or malfunction of the sensor(s); | ☐ Yes ☐ No |  |
| 1.3.5.3 | - a log of emergency signals and warnings (at least 20 recent events). | ☐ Yes ☐ No |  |
| 1.3.5.4 | - log of functional data (total pump operating time). | ☐ Yes ☐ No |  |
| 1.3.6 | Main technical characteristics: |  |  |
| 1.3.6.1 | - nominal supply voltage - 3х220-240/380-415 V | ☐ Yes ☐ No |  |
| 1.3.6.2 | The working current of the pumps is 16....44 A | ☐ Yes ☐ No |  |
| 1.3.6.3 | Start of engines according to the "star/delta" scheme and soft start | ☐ Yes ☐ No |  |
| 1.3.6.4 | – power supply frequency - 50 Hz; | ☐ Yes ☐ No |  |
| 1.3.6.5 | – ambient temperature without reducing operating characteristics - from -20 to +45 C; | ☐ Yes ☐ No |  |
| 1.3.7 | The delivery set of the control cabinet must include float switches with a cable (4 pieces), intended for sewage drains, and have the following characteristics: |  |  |
| 1.3.7.1 | - The length of the cable is 10 m | ☐ Yes ☐ No |  |
| 1.3.7.2 | - The maximum liquid temperature is up to 60 degrees. WITH | ☐ Yes ☐ No |  |
| 1.3.7.3 | - Maximum current load – up to 10 A (250 V) | ☐ Yes ☐ No |  |
| 1.3.7.4 | - Protection class – IP68 | ☐ Yes ☐ No |  |
| 1.3.7.5 | - The angle of inclination for activation is 20 degrees. | ☐ Yes ☐ No |  |
| 1.3.7.6 | - Float body material – Polypropylene (PP) | ☐ Yes ☐ No |  |
| 1.3.7.7 | - Cable material is neoprene. | ☐ Yes ☐ No |  |
| **2** | **Other requirements** |  |  |
| 2.1 | Bid includes brand/model of the goods and manufacturer's technical literature/catalogue, all confirming that the offered items comply with required specifications. | ☐ Yes ☐ No |  |
| 2.2 | The period of validity of the Warranty. The warranty shall remain valid for 24 months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination. The Warranty should include preventive maintenance, replacement of defective parts/equipment, repair of equipment, labour for equipment repair and/or parts replacement. | ☐ Yes ☐ No |  |
| 2.3 | Warranty service. Within the warranty period, the Supplier or its authorised service centre shall provide maintenance and/or repair services to the equipment operation site not later than 10 (ten) workdays from the date of receipt of written or E-mail notification from an authorised party. The name of the company, address, telephone- and fax numbers, e-mail address must be mentioned in the bid. The service centre shall have at least one certified engineer in its staff. | ☐ Yes ☐ No |  |
| 2.4 | Technical documentation for maintenance and repair of the supplied goods. The minimum set of technical documents to be provided with each piece of equipment delivered is the following: • User Manual and Operating Instructions (in Englihs and/or Ukrainian) • Maintenance guidelines (in Ukrainian or English). All tags/labels on the equipment shall be in English or Ukrainian language. | ☐ Yes ☐ No |  |
| 2.5 | Bid includes the total volume of the Goods in M3 and gross weight of the goods in KG. | ☐ Yes ☐ No |  |
| 2.6 | Bid includes the Country of origin of the goods and FCA point of delivery. | ☐ Yes ☐ No |  |
| 2.7 | Product compatibility within this Lot is confirmed with all its subsets (from 2.1 to 2.5). This includes but is not limited to mechanical and operational compatibility and material compatibility where applicable. Outline any integration issues (such as flange sizes, pipe threads, and fitting types) in the details box and the proposed solutions for seamless functionality. | ☐ Yes ☐ No |  |
| **3** | **To confirm the requirements for technical and quality characteristics of the pumps and control cabinet, the Bidder shall provide:** |  |  |
| 3.1 | A document confirming the status of the Bidder as a manufacturer or an official representative (dealer, distributor, etc.) of the manufacturing plant or a subsidiary of the manufacturing plant or its official representative in Ukraine (attach an official letter from the manufacturing plant, its subsidiary or official representative in Ukraine confirming the status of the Bidder and its responsibility for the goods supplied). | ☐ Yes ☐ No |  |
| 3.2 | An official letter from the manufacturer, its subsidiary or official representative in Ukraine, that the pumps will undergo factory tests in accordance with the ISO9906:2012 and guaranteeing that the test protocol on the factory test bench, according to ISO 9906 will be included in the delivery package for each pump | ☐ Yes ☐ No |  |
| 3.3 | A valid the conclusion of the sanitary and epidemiological examination on the pumps and control cabinet. | ☐ Yes ☐ No |  |
| 3.4 | Valid international certificates ISO 9001 and ISO 14001 for the production facilities where the pumps and control cabinet are manufactured. | ☐ Yes ☐ No |  |
| 3.5 | Electronic copies of technical documentation for the pumps and control cabinet: | ☐ Yes ☐ No |  |
| 3.6.1 | - technical passport and excerpts from the manufacturer's technical catalogs (with technical specifications, description of construction and materials, drawings of overall dimensions, functionality, etc.); | ☐ Yes ☐ No |  |
| 3.6.2 | - installation and operating manuals; | ☐ Yes ☐ No |  |
| 3.6.3 | - warranty card with a list of official service center(s) in Ukraine. | ☐ Yes ☐ No |  |
| 3.7 | An official letter from the manufacturing plant, its subsidiary company or an official representative in Ukraine, about the presence of a certified service center (in the status of a legal entity), authorized by the manufacturing plant to provide prompt warranty and post-warranty service for the complete set of pumps, which is the subject of this purchase. The address and phone number of the certified service center must be specified in the official letter. To the official letter, add a valid certificate/certificate and an official letter from the manufacturer's factory / its subsidiary company / official representative in Ukraine confirming the status of the specified service center. | ☐ Yes ☐ No |  |
| 3.8 | The total price of the offer for all lots includes the cost of commissioning the equipment (pumps and control cabinets with frequency converters) by service specialists authorized by the manufacturer. This is essential to ensure that the installation is carried out correctly and to uphold the manufacturer's warranty obligations. | ☐ Yes ☐ No |  |

**C.1. Delivery requirements for Lot 2.2**

| **UNOPS Requirements** | | **Is the bid compliant?** Bidder to complete | **Details**  Bidder to complete |
| --- | --- | --- | --- |
| **Delivery time** | The Bidder shall deliver the goods as soon as possible but not later than 90 calendar days after the PO is issued. Partial delivery of the goods within this period is acceptable. Bidders must provide a delivery schedule.  The offered goods are to be (DAP customs cleared) **delivered and unloaded only, Mykolaiv region: Bashtanka city.** | ☐Yes ☐ No |  |
| **Delivery place and Incoterms rules** | DAP (customs cleared) Incoterms 2020 (**delivered at place and unloaded**) customs cleared **Mykolaiv region: Bashtanka city,** net of any direct taxes, customs duties, or indirect taxes. | ☐Yes ☐ No |  |
| **Consignee details** | Delivery address and consignee details will be provided to the successful Bidder(s) | ☐Yes ☐ No |  |

**Lot 2 Pumps with supplies**

**2.3 The box with a tripping breaker of the type-250 A.**

| **N** | **UNOPS minimum technical requirements** | **Is Bid Compliant? Bidder to complete** | **Details of the offered goods. Bidder to complete** |
| --- | --- | --- | --- |
| **Lot 2** | **Pumps with supplies** |  |  |
| **2.3** | **The box with a tripping breaker of the type-250 A.** |  |  |
| **1.1** | **Minimum technical requirements to the box with a tipping breaker:** |  |  |
| 1.1.1 | - nominal supply voltage - 380V; | ☐ Yes ☐ No |  |
| 1.1.2 | power supply frequency - 50 Hz; | ☐ Yes ☐ No |  |
| 1.1.3 | – nominal current - not less than 250 A; | ☐ Yes ☐ No |  |
| **1.2** | **The box with a tipping breaker is a metal structure with a lockable door. The box with a tipping breaker is designed to be installed on a wall, column, etc. and meet the following requirements:** |  |  |
| 1.2.1 | – overall dimensions no more than: height 600 mm, width 400 mm, depth 300 mm; | ☐ Yes ☐ No |  |
| 1.2.2 | – material - sheet steel with a thickness of at least 1,2 mm; | ☐ Yes ☐ No |  |
| 1.2.3 | – coating - powder paint; | ☐ Yes ☐ No |  |
| 1.2.4 | - degree of protection when the door is closed - at least IP21. | ☐ Yes ☐ No |  |
| 1.2.5 | - a toggle switch must be installed inside the box. | ☐ Yes ☐ No |  |
| 1.2.6 | - on the right side of the box there should be a handle for controlling the toggle switch. | ☐ Yes ☐ No |  |
| 1.2.7 | - сables should be fed from below through cable entries. | ☐ Yes ☐ No |  |
| 1.2.8 | - сables must be connected to the tipping breaker by means of bolted connections through cable lugs | ☐ Yes ☐ No |  |
| 1.2.9 | Include an interlocking mechanism to prevent opening during operation. | ☐ Yes ☐ No |  |
| 1.2.10 | IP rating is at least IP45 for enhanced environmental protection. | ☐ Yes ☐ No |  |
| 1.2.11 | Minimum clearance and creepage distances for electrical safety. | ☐ Yes ☐ No |  |
| **2** | **Other requirements** |  |  |
| 2.1 | Bid includes brand/model of the goods and manufacturer's technical literature/catalogue, all confirming that the offered items comply with required specifications. | ☐ Yes ☐ No |  |
| 2.2 | The period of validity of the Warranty. The warranty shall remain valid for 24 months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination. The Warranty should include preventive maintenance, replacement of defective parts/equipment, repair of equipment, labour for equipment repair and/or parts replacement. | ☐ Yes ☐ No |  |
| 2.3 | Warranty service. Within the warranty period, the Supplier or its authorised service centre shall provide maintenance and/or repair services to the equipment operation site not later than 10 (ten) workdays from the date of receipt of written or E-mail notification from an authorised party. The name of the company, address, telephone- and fax numbers, e-mail address must be mentioned in the bid. The service centre shall have at least one certified engineer in its staff. | ☐ Yes ☐ No |  |
| 2.4 | Technical documentation for maintenance and repair of the supplied goods. The minimum set of technical documents to be provided with each piece of equipment delivered is the following: • User Manual and Operating Instructions (in Englihs and/or Ukrainian) • Technical Certificate / maintenance guidelines (in Ukrainian or English). All tags/labels on the equipment shall be in English or Ukrainian language. | ☐ Yes ☐ No |  |
| 2.5 | Bid includes the total volume of the Goods in M3 and gross weight of the goods in KG. | ☐ Yes ☐ No |  |
| 2.6 | Bid includes the Country of origin of the goods and FCA point of delivery. | ☐ Yes ☐ No |  |
| 2.7 | Product compatibility within this Lot is confirmed with all its subsets (Lots 2.1 to 2.5). This includes but is not limited to mechanical and operational compatibility and material compatibility where applicable. Outline any integration issues (such as flange sizes, pipe threads, and fitting types) in the details box and the proposed solutions for seamless functionality. | ☐ Yes ☐ No |  |
| **3** | **To confirm the requirements for technical and quality characteristics of the equipment, the Bidder shall provide:** |  |  |
| 3.1 | A document confirming the status of the Bidder as a manufacturer or an official representative (dealer, distributor, etc.) of the manufacturing plant or a subsidiary of the manufacturing plant or its official representative in Ukraine (attach an official letter from the manufacturing plant, its subsidiary or official representative in Ukraine confirming the status of the Bidder and its responsibility for the goods supplied). | ☐ Yes ☐ No |  |
| 3.2 | A valid the conclusion of the sanitary and epidemiological examination on the equipment. | ☐ Yes ☐ No |  |
| 3.3 | Electronic copies of technical documentation for the equipment: | ☐ Yes ☐ No |  |
| 3.4.1 | - technical passport and excerpts from the manufacturer's technical catalogs (with technical specifications, description of construction and materials, drawings of overall dimensions, functionality, etc.); | ☐ Yes ☐ No |  |
| 3.4.2 | - installation and operating manuals; | ☐ Yes ☐ No |  |
| 3.4.3 | - warranty card with a list of official service center(s) in Ukraine. | ☐ Yes ☐ No |  |
| 3.5 | An official letter from the manufacturing plant, its subsidiary company or an official representative in Ukraine, about the presence of a certified service center (in the status of a legal entity), authorized by the manufacturing plant to provide prompt warranty and post-warranty service. The address and phone number of the certified service center must be specified in the official letter. To the official letter, add a valid certificate/certificate and an official letter from the manufacturer's factory / its subsidiary company / official representative in Ukraine confirming the status of the specified service center. | ☐ Yes ☐ No |  |
| 3.6 | The total price of the offer for all lots includes the cost of commissioning the equipment (pumps and control cabinets with frequency converters) by service specialists authorized by the manufacturer. This is essential to ensure that the installation is carried out correctly and to uphold the manufacturer's warranty obligations. | ☐ Yes ☐ No |  |

**C.1. Delivery requirements for 2.3**

| **UNOPS Requirements** | | **Is the bid compliant?** Bidder to complete | **Details**  Bidder to complete |
| --- | --- | --- | --- |
| **Delivery time** | The Bidder shall deliver the goods as soon as possible but not later than 90 calendar days after the PO is issued. Partial delivery of the goods within this period is acceptable. Bidders must provide a delivery schedule.  The offered goods are to be (DAP customs cleared) **delivered and unloaded only, Mykolaiv region: Bashtanka city.** | ☐Yes ☐ No |  |
| **Delivery place and Incoterms rules** | DAP (customs cleared) Incoterms 2020 (**delivered at place and unloaded**) customs cleared **Mykolaiv region: Bashtankacity,** net of any direct taxes, customs duties, or indirect taxes. | ☐Yes ☐ No |  |
| **Consignee details** | Delivery address and consignee details will be provided to the successful Bidder(s) | ☐Yes ☐ No |  |

**Lot 2 Pumps with supplies**

**2.4 Control cabinet with frequency control of at least 75 kW**

| **N** | **UNOPS minimum technical requirements** | **Is Bid Compliant? Bidder to complete** | **Details of the offered goods. Bidder to complete** |
| --- | --- | --- | --- |
| **Lot 2** | **Pumps with supplies** |  |  |
| **2.4** | **Control cabinet with frequency control of at least 75 kW** |  |  |
| **1.1** | **Technical requirements for the control cabinet** |  |  |
| 1.1.1 | The control cabinet is designed to control one of the two pumps in order to automatically maintain the set regime, power supply and comprehensive protection of the pumping units. | ☐ Yes ☐ No |  |
| 1.1.2 | The control cabinet must provide: | ☐ Yes ☐ No |  |
| 1.1.2.1 | – power supply and comprehensive protection of the three-phase asynchronous electric drive of two pump units; | ☐ Yes ☐ No |  |
| 1.1.2.2 | - selection of a pumping unit for work (1 or 2 pump) | ☐ Yes ☐ No |  |
| 1.1.2.3 | - automatic adjustment for 1 pump revolutions/performance according to the signal from the pressure sensor 4..20mA) (frequency converter operation); | ☐ Yes ☐ No |  |
| 1.1.2.4 | – manual regulation of pump revolutions (performance) from 10% to 100% of the nominal value from the panel; | ☐ Yes ☐ No |  |
| 1.1.2.5 | – smooth acceleration and stopping of the pump; | ☐ Yes ☐ No |  |
| 1.1.2.6 | - collection of information about the condition of the pump (nominal current, power consumption, working hours, electricity consumption accounting); | ☐ Yes ☐ No |  |
| 1.1.2.7 | – display of pump parameters and operating modes; | ☐ Yes ☐ No |  |
| 1.1.2.8 | – detection and indication of pre-emergency and emergency conditions; | ☐ Yes ☐ No |  |
| 1.1.2.9 | - two modes of operation: | ☐ Yes ☐ No |  |
| 1.1.2.10 | • the main mode - from the frequency converter (automatic adjustment of pump revolutions/performance according to the signal from the pressure sensor 4..20mA); | ☐ Yes ☐ No |  |
| 1.1.2.11 | • reserve mode - provides direct start of the pump through a microprocessor protection and control device; | ☐ Yes ☐ No |  |
| **1.1.3** | **Main technical characteristics:** |  |  |
| 1.1.3.1 | - nominal supply voltage - 380V; | ☐ Yes ☐ No |  |
| 1.1.3.2 | – power supply frequency - 50 Hz; | ☐ Yes ☐ No |  |
| 1.1.3.3 | – nominal electric power - not less than 75 kW; | ☐ Yes ☐ No |  |
| 1.1.3.4 | – nominal current - not less than 160 A; | ☐ Yes ☐ No |  |
| 1.1.3.5 | – output frequency - 10 ... 60 Hz; | ☐ Yes ☐ No |  |
| 1.1.3.6 | – overload capacity - 110%; | ☐ Yes ☐ No |  |
| 1.1.3.7 | – ambient temperature without reducing operating characteristics - from -15 to +50 C; | ☐ Yes ☐ No |  |
| 1.1.3.8 | – the number of discrete inputs, at least 2 pcs.; | ☐ Yes ☐ No |  |
| 1.1.3.9 | – the number of analog inputs, at least 2 pcs.; | ☐ Yes ☐ No |  |
|  | - built-in RS-485 interface with the Modbus RTU / TCP/Ethernet protocol (for remote controlling and monitoring the parameters of the frequency converter) | ☐ Yes ☐ No |  |
| **1.1.4** | **The following must be installed in the control cabinet:** |  |  |
| 1.1.4.1 | - one frequency converter , power not less than 75 kW, | ☐ Yes ☐ No |  |
| 1.1.4.2 | - an automatic switch with a rating of at least 160A and a breaking capacity of at least 15 kA. | ☐ Yes ☐ No |  |
| 1.1.4.3 | - non-contact connection of ammeters in the electric motor circuit due to current transformers built into the device. | ☐ Yes ☐ No |  |
| 1.1.4.4 | – the ability to display measured values in user units (power, current, revolutions of the electric drive, converter frequency, pressure value); | ☐ Yes ☐ No |  |
| 1.1.4.5 | microprocessor protection device for the electric motor for 1 pump (with direct start) | ☐ Yes ☐ No |  |
| 1.1.4.6 | fast-acting fuses with performance gS or gR /aR to relible protectection of frequency converter | ☐ Yes ☐ No |  |
| 1.1.4.7 | - 4 contactors for switching the operation of 2 pumps from the frequency converter or in direct start; | ☐ Yes ☐ No |  |
| 1.1.4.8 | - system of forced automatic ventilation, equipped with air filters; | ☐ Yes ☐ No |  |
| 1.1.4.9 | Incorporate integrated surge protection. | ☐ Yes ☐ No |  |
| 1.1.4.10 | Cabinets are equipped with remote monitoring and control capabilities. | ☐ Yes ☐ No |  |
| **1.1.5** | **The control cabinet is a metal structure with a lockable door. The control cabinet is designed to be installed on the floor, cable channel, etc. and meet the following requirements:** | ☐ Yes ☐ No |  |
| 1.1.5.1 | – material - sheet steel with a thickness of at least 1,2 mm; | ☐ Yes ☐ No |  |
| 1.1.5.2 | – coating - powder paint; | ☐ Yes ☐ No |  |
| 1.1.5.3 | - degree of protection when the door is closed - at least IP21. | ☐ Yes ☐ No |  |
| 1.1.5.4 | - cable entry from below. | ☐ Yes ☐ No |  |
| 1.1.5.5 | – overall dimensions no more than: height 2000 mm, width 800 mm, depth 600 mm; | ☐ Yes ☐ No |  |
| 1.1.5.6 | The IP rating is of at least IP54 for harsh environments. | ☐ Yes ☐ No |  |
| **1.1.6** | **On the door of the control cabinet are located:** |  |  |
| 1.1.6.1 | - frequency converter control panel | ☐ Yes ☐ No |  |
| 1.1.6.2 | - control elements for starting and stopping the pumping unit; | ☐ Yes ☐ No |  |
| 1.1.6.3 | - control elements ("more" and "less" buttons) for manual regulation of electric motor revolutions. | ☐ Yes ☐ No |  |
| 1.1.6.4 | - LED indicators of pump operation: network, operation, emergency. | ☐ Yes ☐ No |  |
| 1.1.6.5 | - a digital LED indicator, for the possibility of monitoring the parameters of work in insufficient lighting | ☐ Yes ☐ No |  |
| 1.1.6.6 | - the emergency stop button of the pumping unit | ☐ Yes ☐ No |  |
| **1.2** | **Other requirements** |  |  |
| 1.2.1 | Bid includes brand/model of the goods and manufacturer's technical literature/catalogue, all confirming that the offered items comply with required specifications. | ☐ Yes ☐ No |  |
| 1.2.2 | The period of validity of the Warranty. The warranty shall remain valid for 24 months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination. The Warranty should include preventive maintenance, replacement of defective parts/equipment, repair of equipment, labour for equipment repair and/or parts replacement. | ☐ Yes ☐ No |  |
| 1.2.3 | Warranty service. Within the warranty period, the Supplier or its authorised service centre shall provide maintenance and/or repair services to the equipment operation site not later than 10 (ten) workdays from the date of receipt of written or E-mail notification from an authorised party. The name of the company, address, telephone- and fax numbers, e-mail address must be mentioned in the bid. The service centre shall have at least one certified engineer in its staff. | ☐ Yes ☐ No |  |
| 1.2.4 | Technical documentation for maintenance and repair of the supplied goods. The minimum set of technical documents to be provided with each piece of equipment delivered is the following: • User Manual and Operating Instructions (in Englihs and/or Ukrainian) • Maintenance guidelines (in Ukrainian or English). All tags/labels on the equipment shall be in English or Ukrainian language. | ☐ Yes ☐ No |  |
| 1.2.6 | Bid includes the total volume of the Goods in M3 and gross weight of the goods in KG. | ☐ Yes ☐ No |  |
| 1.2.7 | Bid includes the Country of origin of the goods and FCA point of delivery. | ☐ Yes ☐ No |  |
| 1.2.8 | Product compatibility within this Lot is confirmed with all its subsets (Lots 2.1 to 2.5). This includes but is not limited to mechanical and operational compatibility and material compatibility where applicable. Outline any integration issues (such as flange sizes, pipe threads, and fitting types) in the details box and the proposed solutions for seamless functionality. | ☐ Yes ☐ No |  |
| **1.3** | **To confirm the requirements for technical and quality characteristics of the equipment, the Bidder shall provide:** |  |  |
| 1.3.1 | A document confirming the status of the Bidder as a manufacturer or an official representative (dealer, distributor, etc.) of the manufacturing plant or a subsidiary of the manufacturing plant or its official representative in Ukraine (attach an official letter from the manufacturing plant, its subsidiary or official representative in Ukraine confirming the status of the Bidder and its responsibility for the goods supplied). | ☐ Yes ☐ No |  |
| 1.3.2 | A valid the conclusion of the sanitary and epidemiological examination on the equipment. | ☐ Yes ☐ No |  |
| 1.3.3 | The period of validity of the Warranty. The warranty shall remain valid for 24 months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination. The Warranty should include preventive maintenance, replacement of defective parts/equipment, repair of equipment, labour for equipment repair and/or parts replacement. | ☐ Yes ☐ No |  |
| 1.3.4 | Valid international certificates ISO 9001 and ISO 14001 for the production facilities where the pumps and control cabinet are manufactured. | ☐ Yes ☐ No |  |
| 1.3.5 | Electronic copies of technical documentation for the equipment: | ☐ Yes ☐ No |  |
| 1.3.5.1 | - technical passport and excerpts from the manufacturer's technical catalogs (with technical specifications, description of construction and materials, drawings of overall dimensions, functionality, etc.); | ☐ Yes ☐ No |  |
| 1.3.5.2 | - installation and operating manuals; | ☐ Yes ☐ No |  |
| 1.3.5.3 | - warranty card with a list of official service center(s) in Ukraine. | ☐ Yes ☐ No |  |
| 1.3.6 | An official letter from the manufacturing plant, its subsidiary company or an official representative in Ukraine, about the presence of a certified service center (in the status of a legal entity), authorized by the manufacturing plant to provide prompt warranty and post-warranty service. The address and phone number of the certified service center must be specified in the official letter. To the official letter, add a valid certificate/certificate and an official letter from the manufacturer's factory / its subsidiary company / official representative in Ukraine confirming the status of the specified service center. | ☐ Yes ☐ No |  |
| 1.3.7 | The total price of the offer for all lots includes the cost of commissioning the equipment (pumps and control cabinets with frequency converters) by service specialists authorized by the manufacturer. This is essential to ensure that the installation is carried out correctly and to uphold the manufacturer's warranty obligations. | ☐ Yes ☐ No |  |

**C.1. Delivery requirements for 2.4**

| **UNOPS Requirements** | | **Is the bid compliant?** Bidder to complete | **Details**  Bidder to complete |
| --- | --- | --- | --- |
| **Delivery time** | The Bidder shall deliver the goods as soon as possible but not later than 90 calendar days after the PO is issued. Partial delivery of the goods within this period is acceptable. Bidders must provide a delivery schedule.  The offered goods are to be (DAP customs cleared) **delivered and unloaded only, Mykolaiv region: Bashtanka city.** | ☐Yes ☐ No |  |
| **Delivery place and Incoterms rules** | DAP (customs cleared) Incoterms 2020 (**delivered at place and unloaded**) customs cleared **Mykolaiv region: Bashtanka city,** net of any direct taxes, customs duties, or indirect taxes. | ☐Yes ☐ No |  |
| **Consignee details** | Delivery address and consignee details will be provided to the successful Bidder(s) | ☐Yes ☐ No |  |

**Lot 2 Pumps with supplies**

**2.5 Control cabinet with frequency control of at least 45 kW**

| **N** | **UNOPS minimum technical requirements** | **Is Bid Compliant? Bidder to complete** | **Details of the offered goods. Bidder to complete** |
| --- | --- | --- | --- |
| **Lot 2** | **Pumps with supplies** |  |  |
| **2.5** | **Control cabinet with frequency control of at least 45 kW** |  |  |
| **1.1** | **Technical requirements for the control cabinet** |  |  |
| 1.1.1 | The control cabinet is designed to control two pumps in order to automatically maintain the set regime, power supply and comprehensive protection of the pumping units. | ☐ Yes ☐ No |  |
| 1.1.2 | The control cabinet must provide: | ☐ Yes ☐ No |  |
| 1.1.3 | – power supply and comprehensive protection of the three-phase asynchronous electric drive of two pump units; | ☐ Yes ☐ No |  |
| 1.1.4 | - selection of a pumping unit for work (1 or 2 pump) | ☐ Yes ☐ No |  |
| 1.1.5 | -automatic adjustment of pumps revolutions/performance according to the signal from the pressure sensor 4..20mA) |  |  |
| 1.1.6 | – manual regulation of pump revolutions (performance) from 10% to 100% of the nominal value from the panel; | ☐ Yes ☐ No |  |
| 1.1.7 | – smooth acceleration and stopping of the pump; | ☐ Yes ☐ No |  |
| 1.1.8 | - collection of information about the condition of the pump (nominal current, power consumption, working hours, electricity consumption accounting); | ☐ Yes ☐ No |  |
| 1.1.9 | – display of pump parameters and operating modes; | ☐ Yes ☐ No |  |
| 1.1.10 | – detection and indication of pre-emergency and emergency conditions; | ☐ Yes ☐ No |  |
| 1.1.11 | - operation from the frequency converter (automatic adjustment of pump revolutions/performance according to the signal from the pressure sensor 4..20mA) or manual regulation of pumps revolutions (performance) from 10% to 100% of the nominal value from the panel | ☐ Yes ☐ No |  |
| **1.1.3** | **Main technical characteristics:** |  |  |
| 1.1.3.1 | - nominal supply voltage - 380V; | ☐ Yes ☐ No |  |
| 1.1.3.2 | – power supply frequency - 50 Hz; | ☐ Yes ☐ No |  |
| 1.1.3.3 | – nominal electric power - not less than 2х45 kW; | ☐ Yes ☐ No |  |
| 1.1.3.4 | – nominal current - not less than 200 A; | ☐ Yes ☐ No |  |
| 1.1.3.5 | – output frequency - 10 ... 60 Hz; | ☐ Yes ☐ No |  |
| 1.1.3.6 | – overload capacity - 110%; | ☐ Yes ☐ No |  |
| 1.1.3.7 | – ambient temperature without reducing operating characteristics - from -15 to +50 C; | ☐ Yes ☐ No |  |
| 1.1.3.8 | – the number of discrete inputs, at least 2 pcs.; | ☐ Yes ☐ No |  |
| 1.1.3.9 | – the number of analog inputs, at least 2 pcs.; | ☐ Yes ☐ No |  |
|  | built-in RS-485 interface with the Modbus RTU / TCP/Ethernet protocol (for remote controlling and monitoring the parameters of the frequency converter) |  |  |
| **1.1.4** | **The following must be installed in the control cabinet:** |  |  |
| 1.1.4.1 | - two frequency converter , power not less than 45 kW, | ☐ Yes ☐ No |  |
| 1.1.4.2 | - an automatic switch with a rating of at least 200A and a breaking capacity of at least 15 kA. | ☐ Yes ☐ No |  |
| 1.1.4.3 | - non-contact connection of ammeters in the electric motor circuit due to current transformers built into the device. |  |  |
| 1.1.4.4 | – the ability to display measured values in user units (power, current, revolutions of the electric drive, converter frequency, pressure value); | ☐ Yes ☐ No |  |
| 1.1.4.5 | - system of forced automatic ventilation, equipped with air filters; | ☐ Yes ☐ No |  |
| 1.1.4.6 | - fast-acting fuses with performance gS or gR /aR to relible protectection of frequency converter | ☐ Yes ☐ No |  |
| 1.1.4.7 | Include integrated power factor correction to optimize electrical consumption. | ☐ Yes ☐ No |  |
| 1.1.4.8 | Equipped with advanced diagnostic systems for predictive maintenance. | ☐ Yes ☐ No |  |
| 1.1.4.9 | Implement cybersecurity protocols to protect network-connected components. | ☐ Yes ☐ No |  |
| **1.1.5** | **The control cabinet is a metal structure with a lockable door. The control cabinet is designed to be installed on the floor, cable channel, etc. and meet the following requirements:** | ☐ Yes ☐ No |  |
| 1.1.5.1 | – material - sheet steel with a thickness of at least 1,2 mm; | ☐ Yes ☐ No |  |
| 1.1.5.2 | – coating - powder paint; | ☐ Yes ☐ No |  |
| 1.1.5.3 | - degree of protection when the door is closed - at least IP21. | ☐ Yes ☐ No |  |
| 1.1.5.4 | - cable entry from below. | ☐ Yes ☐ No |  |
| 1.1.5.5 | – overall dimensions no more than: height 2000 mm, width 800 mm, depth 600 mm; | ☐ Yes ☐ No |  |
| 1.1.5.6 | IP rating higher than IP45 for outdoor installation. | ☐ Yes ☐ No |  |
| **1.1.6** | **On the door of the control cabinet are located:** | **☐ Yes ☐ No** |  |
| 1.1.6.1 | - frequency converter control panel (2pcs) | ☐ Yes ☐ No |  |
| 1.1.6.2 | - control elements for starting and stopping the pumping unit; | ☐ Yes ☐ No |  |
| 1.1.6.3 | - control elements ("more" and "less" buttons) for manual regulation of electric motor revolutions. | ☐ Yes ☐ No |  |
| 1.1.6.4 | - LED indicators for 2 pump operation: network, operation, emergency. | ☐ Yes ☐ No |  |
| 1.1.6.5 | - a digital LED indicator, for the possibility of monitoring the parameters of work in insufficient lighting | ☐ Yes ☐ No |  |
| 1.1.6.6 | - the emergency stop button of the pumping unit | ☐ Yes ☐ No |  |
| **1.2** | **Other requirements** |  |  |
| 1.2.1 | Bid includes brand/model of the goods and manufacturer's technical literature/catalogue, all confirming that the offered items comply with required specifications. | ☐ Yes ☐ No |  |
| 1.2.2 | The period of validity of the Warranty. The warranty shall remain valid for 24 months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination. The Warranty should include preventive maintenance, replacement of defective parts/equipment, repair of equipment, labour for equipment repair and/or parts replacement. | ☐ Yes ☐ No |  |
| 1.2.3 | Warranty service. Within the warranty period, the Supplier or its authorised service centre shall provide maintenance and/or repair services to the equipment operation site not later than 10 (ten) workdays from the date of receipt of written or E-mail notification from an authorised party. The name of the company, address, telephone- and fax numbers, e-mail address must be mentioned in the bid. The service centre shall have at least one certified engineer in its staff. | ☐ Yes ☐ No |  |
| 1.2.4 | Technical documentation for maintenance and repair of the supplied goods. The minimum set of technical documents to be provided with each piece of equipment delivered is the following: • User Manual and Operating Instructions (in Englihs and/or Ukrainian) • Maintenance guidelines (in Ukrainian or English). All tags/labels on the equipment shall be in English or Ukrainian language. | ☐ Yes ☐ No |  |
| 1.2.5 | Bid includes the total volume of the Goods in M3 and gross weight of the goods in KG. | ☐ Yes ☐ No |  |
| 1.2.6 | Bid includes the Country of origin of the goods and FCA point of delivery. | ☐ Yes ☐ No |  |
| 1.2.7 | Product compatibility within this Lot is confirmed with all its subsets (Lots 2.1 to 2.5). This includes but is not limited to mechanical and operational compatibility and material compatibility where applicable. Outline any integration issues (such as flange sizes, pipe threads, and fitting types) in the details box and the proposed solutions for seamless functionality. | ☐ Yes ☐ No |  |
| **1.3** | **To confirm the requirements for technical and quality characteristics of the equipment, the Bidder shall provide:** |  |  |
| 1.3.1 | A document confirming the status of the Bidder as a manufacturer or an official representative (dealer, distributor, etc.) of the manufacturing plant or a subsidiary of the manufacturing plant or its official representative in Ukraine (attach an official letter from the manufacturing plant, its subsidiary or official representative in Ukraine confirming the status of the Bidder and its responsibility for the goods supplied). | ☐ Yes ☐ No |  |
| 1.3.2 | A valid the conclusion of the sanitary and epidemiological examination on the equipment. | ☐ Yes ☐ No |  |
| 1.3.3 | The period of validity of the Warranty. The warranty shall remain valid for 24 months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination. The Warranty should include preventive maintenance, replacement of defective parts/equipment, repair of equipment, labour for equipment repair and/or parts replacement. | ☐ Yes ☐ No |  |
| 1.3.4 | Valid international certificates ISO 9001 and ISO 14001 for the production facilities where the pumps and control cabinet are manufactured. | ☐ Yes ☐ No |  |
| 1.3.5 | Electronic copies of technical documentation for the equipment: | ☐ Yes ☐ No |  |
| 1.3.5.1 | - technical passport and excerpts from the manufacturer's technical catalogs (with technical specifications, description of construction and materials, drawings of overall dimensions, functionality, etc.); | ☐ Yes ☐ No |  |
| 1.3.5.2 | - installation and operating manuals; | ☐ Yes ☐ No |  |
| 1.3.5.3 | - warranty card with a list of official service center(s) in Ukraine. | ☐ Yes ☐ No |  |
| 1.3.6 | An official letter from the manufacturing plant, its subsidiary company or an official representative in Ukraine, about the presence of a certified service center (in the status of a legal entity), authorized by the manufacturing plant to provide prompt warranty and post-warranty service. The address and phone number of the certified service center must be specified in the official letter. To the official letter, add a valid certificate/certificate and an official letter from the manufacturer's factory / its subsidiary company / official representative in Ukraine confirming the status of the specified service center. | ☐ Yes ☐ No |  |
| 1.3.7 | The total price of the offer for all lots includes the cost of commissioning the equipment (pumps and control cabinets with frequency converters) by service specialists authorized by the manufacturer. This is essential to ensure that the installation is carried out correctly and to uphold the manufacturer's warranty obligations. | ☐ Yes ☐ No |  |

**C.1. Delivery requirements for 2.5**

| **UNOPS Requirements** | | **Is the bid compliant?** Bidder to complete | **Details**  Bidder to complete |
| --- | --- | --- | --- |
| **Delivery time** | The Bidder shall deliver the goods as soon as possible but not later than 90 calendar days after the PO is issued. Partial delivery of the goods within this period is acceptable. Bidders must provide a delivery schedule.  The offered goods are to be (DAP customs cleared) **delivered and unloaded only, Mykolaiv region: Bashtanka city.** | ☐Yes ☐ No |  |
| **Delivery place and Incoterms rules** | DAP (customs cleared) Incoterms 2020 (**delivered at place and unloaded**) customs cleared **Mykolaiv region: Bashtanka city,** net of any direct taxes, customs duties, or indirect taxes. | ☐Yes ☐ No |  |
| **Consignee details** | Delivery address and consignee details will be provided to the successful Bidder(s) | ☐Yes ☐ No |  |