**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 3 Pumps with various productivities and supplies with the following details below:**

| **Lot 3** | **Description** | **Q-ty** |
| --- | --- | --- |
| **3.1** | **Well pumps with various productivities** |  |
| **Item 1** | Well pump unit with productivity at the working point (Q) not less than 45 m3/h complete with control cabinet with frequency regulation and accessories for installation - 1 Unit | **1** |
| **Item 2** | Well pump unit with productivity at the working point (Q) not less than 17 m3/h and pressure at the working point (H) not less than 102,5 m of water complete with control cabinet with frequency regulation and accessories for installation - 1 Unit | **1** |
| **Item 3** | Well pump unit with productivity at the working point (Q) not less than 17 m3/h and pressure at the working point (H) not less than 39,0 m of water complete with control cabinet with frequency regulation and accessories for installation - 1 Unit | **1** |

| **Lot 3** | **Description** | **Q-ty** |
| --- | --- | --- |
| **3.2** | **Vertical pumps with various productivities** |  |
| **Item 1** | The vertical pump with productivity at the working point (Q) not less than 125 m3/h and pressure at the working point (H) not less than 103,5 m of water complete with control cabinet with frequency regulation | **1** |
| **Item 2** | The vertical pump with productivity at the working point (Q) not less than 125 m3/h and pressure at the working point (H) not less than 85,5 m of water complete with control cabinet with frequency regulation | **2** |

| **Lot 3** | **Description** | **Q-ty** |
| --- | --- | --- |
| **3.3** | **Latches and valves** |  |
| **Item 1** | Latch with a rubberized wedge DN 200 | **3** |
| **Item 2** | Latch with a rubberized wedge DN 150 | **3** |
| **Item 3** | Check valve DN 150 | **3** |

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

**Lot 3 Pumps with various productivities and supplies**

**3.1 Well pump unit**

| **N** | **UNOPS minimum technical requirements** | **Is Bid Compliant? Bidder to complete** | **Details of the offered goods. Bidder to complete** |
| --- | --- | --- | --- |
| **Lot 3** | **Well pumps with various productivities and supplies** |  |  |
| **3.1** | **Well pump unit** |  |  |
| **Item 1** | **Well pump unit with productivity at the working point (Q) not less than 45 m3/h complete with control cabinet with frequency regulation and accessories for installation - 1 Unit** |  |  |
| **1.1** | **Minimum technical requirements to the pump:** |  |  |
| 1.1.1 | productivity at the working point (Q) – not less than 45 m3/h; | ☐ Yes ☐ No |  |
| 1.1.2 | pressure at the working point (H) – not less than 51,5 m of water. | ☐ Yes ☐ No |  |
| 1.1.3 | the maximum performance of the pump (Q max) – not less than 55 m3/h; | ☐ Yes ☐ No |  |
| 1.1.4 | the maximum pressure of the pump (H max) – not less than 80 m of water. | ☐ Yes ☐ No |  |
| 1.1.5 | The efficiency of the pump at the operating point is not less than 73,5%; | ☐ Yes ☐ No |  |
| 1.1.6 | total efficiency at the operating point – not less than 59,5 %; | ☐ Yes ☐ No |  |
| 1.1.7 | pressure pipe with internal thread Rp 4”; | ☐ Yes ☐ No |  |
| 1.1.8 | minimum efficiency index mei ≥: 0.40; | ☐ Yes ☐ No |  |
| 1.1.9 | the pump must be suitable for pumping water with a sand content of up to 100 g/m3; | ☐ Yes ☐ No |  |
| 1.1.10 | the standard size of the pump is no more than 6 inches. | ☐ Yes ☐ No |  |
| 1.1.11 | Noise levels from the well pump - not exceed 75 dB(A) at a distance of one meter, in accordance with ISO 3744, ensuring compliance with European Union environmental noise directives. | ☐ Yes ☐ No |  |
| 1.1.12 | The well pump conform to ISO 10816-7 standards for vibration levels, ensuring that vibration velocity does not exceed 4.5 mm/s RMS for normal continuous operation. | ☐ Yes ☐ No |  |
| 1.1.13 | Include anti-corrosion features for components exposed to harsh environments. | ☐ Yes ☐ No |  |
| **1.2** | **Minimum technical requirements to the the electric motor:** |  |  |
| 1.2.1 | nominal power on the shaft (P2) – not more 9,5 kW; | ☐ Yes ☐ No |  |
| 1.2.2 | power on the shaft at the working point (P2 work) - no more than 9,0 kW; | ☐ Yes ☐ No |  |
| 1.2.3 | electric power consumed at the working point (P1 work) – no more than 11,0 kW; | ☐ Yes ☐ No |  |
| 1.2.4 | nominal supply voltage - 3 x 380…415 V; | ☐ Yes ☐ No |  |
| 1.2.5 | voltage deviation tolerance: +6% /- 10%; | ☐ Yes ☐ No |  |
| 1.2.6 | maximum current consumption: not more 22 A; | ☐ Yes ☐ No |  |
| 1.2.7 | starting current no more than: 500% at 380V | ☐ Yes ☐ No |  |
| 1.2.8 | power factor Cos Phi - not less than 0,84 (at 380V); | ☐ Yes ☐ No |  |
| 1.2.9 | power supply frequency - 50 Hz; | ☐ Yes ☐ No |  |
| 1.2.10 | nominal rotation speed – not more 2900 rpm; | ☐ Yes ☐ No |  |
| 1.2.11 | start type – direct (DOL); | ☐ Yes ☐ No |  |
| 1.2.12 | protection class – IP68; | ☐ Yes ☐ No |  |
| 1.2.13 | insulation class – F; | ☐ Yes ☐ No |  |
| 1.2.14 | The maximum number of launches per hour – at least 30, and at least 300 launches per day. | ☐ Yes ☐ No |  |
| 1.2.15 | The electric motor is submerged, "wet type", asynchronous, hermetically sealed, with stator windings filled with polymer compound: | ☐ Yes ☐ No |  |
| 1.2.16 | The electric motor must be filled with coolant. The use of any oil as a coolant is not allowed. | ☐ Yes ☐ No |  |
| 1.2.17 | The electric motor must be equipped with a 4-wire cable with a cross-section of at least 6 mm2 and a length of at least 5 m. | ☐ Yes ☐ No |  |
| 1.2.18 | The pump must be supplied complete with an additional submersible power cable, multi-core, with a cross-section of 4x4 mm2 and a length of at least 30 m; | ☐ Yes ☐ No |  |
| 1.2.19 | The pump must be supplied with a cable made of stainless steel AISI 316( EN 1.4401) or better, at least 5 mm thick and at least 30 m long, and AISI 316 stainless steel wire rope clamps | EN 1.4401 or better, in the amount of at least 2 pcs. | ☐ Yes ☐ No |  |
| 1.2.20 | The pump must be delivered complete with a pressure sensor, 1pc, which must have the following characteristics: | ☐ Yes ☐ No |  |
| 1.2.20.1 | - output analog signal 4-20 mA, | ☐ Yes ☐ No |  |
| 1.2.20.2 | - measurement range: 0 – 6 bar, | ☐ Yes ☐ No |  |
| 1.2.20.3 | - connection - thread G ½″ | ☐ Yes ☐ No |  |
| 1.2.20.4 | - permissible liquid temperature: -40 to +85 °C. | ☐ Yes ☐ No |  |
| **1.3** | **Requirements to the dimensions:** |  |  |
| 1.3.1 | the outer diameter of the engine is no more than 140 mm; | ☐ Yes ☐ No |  |
| 1.3.2 | the outer diameter of the pump part is no more than 150 mm | ☐ Yes ☐ No |  |
| 1.3.3 | weight of the pump unit - no more than 70 kg; | ☐ Yes ☐ No |  |
| **1.4** | **Minimum technical requirements to the control cabinet:** |  |  |
| 1.4.1 | – nominal electric power - not less than 11 kW; | ☐ Yes ☐ No |  |
| 1.4.2 | – nominal current - not less than 25 A; | ☐ Yes ☐ No |  |
| 1.4.3 | – overall dimensions no more than: height 800 mm, width 600 mm, depth 400 mm; | ☐ Yes ☐ No |  |
| 1.4.4 | - frequency converter of the AQUADRIVE FC202 type, power not less than 11kW, | ☐ Yes ☐ No |  |
| 1.4.5 | - an automatic switch with a rating of at least 25A and a breaking capacity of at least 10 kA. | ☐ Yes ☐ No |  |
| **Item 2** | **Well pump unit with productivity at the working point (Q) not less than 17 m3/h and pressure at the working point (H) not less than 102,5 m of water complete with control cabinet with frequency regulation and accessories for installation - 1 Unit** |  |  |
| **2.1** | **Minimum technical requirements to the pump:** |  |  |
| 2.1.1 | productivity at the working point (Q) – not less than 17 m3/h; | ☐ Yes ☐ No |  |
| 2.1.2 | pressure at the working point (H) – not less than 102,5 m of water. | ☐ Yes ☐ No |  |
| 2.1.3 | the maximum performance of the pump (Q max) – not less than 22 m3/h; | ☐ Yes ☐ No |  |
| 2.1.4 | the maximum pressure of the pump (H max) – not less than 140 m of water. | ☐ Yes ☐ No |  |
| 2.1.5 | The efficiency of the pump at the operating point is not less than 77%; | ☐ Yes ☐ No |  |
| 2.1.6 | total efficiency at the operating point – not less than 60 %; | ☐ Yes ☐ No |  |
| 2.1.7 | pressure pipe with internal thread Rp 2 1/2”; | ☐ Yes ☐ No |  |
| 2.1.8 | minimum efficiency index mei ≥: 0.70; | ☐ Yes ☐ No |  |
| 2.1.9 | the pump must be suitable for pumping water with a sand content of up to 100 g/m3; | ☐ Yes ☐ No |  |
| 2.1.10 | the standard size of the pump is no more than 4 inches. | ☐ Yes ☐ No |  |
| **2.2** | **Minimum technical requirements to the the electric motor:** |  |  |
| 2.2.1 | nominal power on the shaft (P2) – not more 7.5 kW; | ☐ Yes ☐ No |  |
| 2.2.2 | power on the shaft at the working point (P2 work) - no more than 6,3 kW; | ☐ Yes ☐ No |  |
| 2.2.3 | electric power consumed at the working point (P1 work) – no more than 7,8 kW; | ☐ Yes ☐ No |  |
| 2.2.4 | nominal supply voltage - 3 x 380…415 V; | ☐ Yes ☐ No |  |
| 2.2.5 | voltage deviation tolerance: +6% /- 10%; | ☐ Yes ☐ No |  |
| 2.2.6 | maximum current consumption: not more 20 A; | ☐ Yes ☐ No |  |
| 2.2.7 | starting current no more than: 500% at 380V | ☐ Yes ☐ No |  |
| 2.2.8 | power factor Cos Phi - not less than 0,83 (at 380V); | ☐ Yes ☐ No |  |
| 2.2.9 | power supply frequency - 50 Hz; | ☐ Yes ☐ No |  |
| 2.2.10 | nominal rotation speed – not more 2900 rpm; | ☐ Yes ☐ No |  |
| 2.2.11 | start type – direct (DOL); | ☐ Yes ☐ No |  |
| 2.2.12 | protection class – IP68; | ☐ Yes ☐ No |  |
| 2.2.13 | insulation class – F; | ☐ Yes ☐ No |  |
| 2.2.14 | The maximum number of launches per hour – at least 30, and at least 300 launches per day. | ☐ Yes ☐ No |  |
| 2.2.15 | The electric motor is submerged, "wet type", asynchronous, hermetically sealed, with stator windings filled with polymer compound: | ☐ Yes ☐ No |  |
| 2.2.16 | The electric motor must be filled with coolant. The use of any oil a coolant is not allowed. | ☐ Yes ☐ No |  |
| 2.2.17 | The electric motor must be equipped with a 4-wire cable with a cross-section of at least 1,5 mm2 and a length of at least 2,5 m. | ☐ Yes ☐ No |  |
| 2.2.18 | The pump must be supplied complete with an additional submersible power cable, multi-core, with a cross-section of 4x4 mm2 and a length of at least 60 m; | ☐ Yes ☐ No |  |
| 2.2.19 | The pump must be supplied with a cable made of stainless steel AISI 316( EN 1.4401) or better, at least 5 mm thick and at least 60 m long, and AISI 316 stainless steel wire rope clamps | EN 1.4401 or better, in the amount of at least 2 pcs. | ☐ Yes ☐ No |  |
| 2.2.20 | The pump must be delivered complete with a pressure sensor, 1pc, which must have the following characteristics: | ☐ Yes ☐ No |  |
| 2.2.20.1 | - output analog signal 4-20 mA, | ☐ Yes ☐ No |  |
| 2.2.20.2 | - measurement range: 0 – 10 bar, | ☐ Yes ☐ No |  |
| 2.2.20.3 | - connection - thread G ½″ | ☐ Yes ☐ No |  |
| 2.2.20.4 | - permissible liquid temperature: -40 to +85 °C. | ☐ Yes ☐ No |  |
| **2.3** | **Requirements to the dimensions:** |  |  |
| 2.3.1 | the outer diameter of the engine is no more than 100 mm; | ☐ Yes ☐ No |  |
| 2.3.2 | the outer diameter of the pump part is no more than 140 mm | ☐ Yes ☐ No |  |
| 2.3.3 | weight of the pump unit - no more than 55 kg; | ☐ Yes ☐ No |  |
| **2.4** | **Minimum technical requirements to the control cabinet:** |  |  |
| 2.4.1 | – nominal electric power - not less than 11 kW; | ☐ Yes ☐ No |  |
| 2.4.2 | – nominal current - not less than 25 A; | ☐ Yes ☐ No |  |
| 2.4.3 | – overall dimensions no more than: height 800 mm, width 600 mm, depth 400 mm; | ☐ Yes ☐ No |  |
| 2.4.4 | - frequency converter of the AQUADRIVE FC202 type, power not less than 11kW, | ☐ Yes ☐ No |  |
| 2.4.5 | - an automatic switch with a rating of at least 25A and a breaking capacity of at least 10 kA. | ☐ Yes ☐ No |  |
| **Item 3** | **Well pump unit with productivity at the working point (Q) not less than 17 m3/h and pressure at the working point (H) not less than 39,0 m of water complete with control cabinet with frequency regulation and accessories for installation - 1 Unit** |  |  |
| **3.1** | **Minimum technical requirements to the pump:** |  |  |
| 3.1.1 | productivity at the working point (Q) – not less than 17 m3/h; | ☐ Yes ☐ No |  |
| 3.1.2 | pressure at the working point (H) – not less than 39,0 m of water. | ☐ Yes ☐ No |  |
| 3.1.3 | the maximum performance of the pump (Q max) – not less than 22 m3/h; | ☐ Yes ☐ No |  |
| 3.1.4 | the maximum pressure of the pump (H max) – not less than 55 m of water. | ☐ Yes ☐ No |  |
| 3.1.5 | the efficiency of the pump at the operating point is not less than 77%; | ☐ Yes ☐ No |  |
| 3.1.6 | total efficiency at the operating point – not less than 57 %; | ☐ Yes ☐ No |  |
| 3.1.7 | pressure pipe with internal thread Rp 2 1/2”; | ☐ Yes ☐ No |  |
| 3.1.8 | minimum efficiency index mei ≥: 0.70; | ☐ Yes ☐ No |  |
| 3.1.9 | The pump must be suitable for pumping water with a sand content of up to 100 g/m3; | ☐ Yes ☐ No |  |
| 3.1.10 | The standard size of the pump is no more than 4 inches. | ☐ Yes ☐ No |  |
| **3.2** | **Minimum technical requirements to the the electric motor:** |  |  |
| 3.2.1 | nominal power on the shaft (P2) – not more 3,0 kW; | ☐ Yes ☐ No |  |
| 3.2.2 | power on the shaft at the working point (P2 work) - no more than 2,4 kW; | ☐ Yes ☐ No |  |
| 3.2.3 | electric power consumed at the working point (P1 work) – no more than 3,3 kW; | ☐ Yes ☐ No |  |
| 3.2.4 | nominal supply voltage - 3 x 380…415 V; | ☐ Yes ☐ No |  |
| 3.2.5 | voltage deviation tolerance: +6% /- 10%; | ☐ Yes ☐ No |  |
| 3.2.6 | maximum current consumption: not more 9,0 A; | ☐ Yes ☐ No |  |
| 3.2.7 | starting current no more than: 500% at 380V | ☐ Yes ☐ No |  |
| 3.2.8 | power factor Cos Phi - not less than 0,82 (at 380V); | ☐ Yes ☐ No |  |
| 3.2.9 | power supply frequency - 50 Hz; | ☐ Yes ☐ No |  |
| 3.2.10 | nominal rotation speed – not more 2900 rpm; | ☐ Yes ☐ No |  |
| 3.2.11 | start type – direct (DOL); | ☐ Yes ☐ No |  |
| 3.2.12 | protection class – IP68; | ☐ Yes ☐ No |  |
| 3.2.13 | insulation class – F; | ☐ Yes ☐ No |  |
| 3.2.14 | The maximum number of launches per hour – at least 100, and at least 300 launches per day. | ☐ Yes ☐ No |  |
| 3.2.15 | The electric motor is submerged, "wet type", asynchronous, hermetically sealed, with stator windings filled with polymer compound: | ☐ Yes ☐ No |  |
| 3.2.16 | The electric motor must be filled with coolant. The use of any oil as a coolant is not allowed. | ☐ Yes ☐ No |  |
| 3.2.17 | The electric motor must be equipped with a 4-wire cable with a cross-section of at least 1,5 mm2 and a length of at least 2,5 m. | ☐ Yes ☐ No |  |
| 3.2.18 | The pump must be supplied complete with an additional submersible power cable, multi-core, with a cross-section of 4x1,5 mm2 and a length of at least 30 m; | ☐ Yes ☐ No |  |
| 3.2.19 | The pump must be supplied with a cable made of stainless steel AISI 316( EN 1.4401) or better, at least 5 mm thick and at least 30 m long, and AISI 316 stainless steel wire rope clamps | EN 1.4401 or better, in the amount of at least 2 pcs. | ☐ Yes ☐ No |  |
| 3.2.20 | The pump must be delivered complete with a pressure sensor, 1pc, which must have the following characteristics: | ☐ Yes ☐ No |  |
| 3.2.20.1 | - output analog signal 4-20 mA, | ☐ Yes ☐ No |  |
| 3.2.20.2 | - measurement range: 0 – 6 bar, | ☐ Yes ☐ No |  |
| 3.2.20.3 | - connection - thread G ½″ | ☐ Yes ☐ No |  |
| 3.2.20.4 | - permissible liquid temperature: -40 to +85 °C. | ☐ Yes ☐ No |  |
| **3.3** | **Requirements to the dimensions:** |  |  |
| 3.3.1 | the outer diameter of the engine is no more than 100 mm; | ☐ Yes ☐ No |  |
| 3.3.2 | the outer diameter of the pump part is no more than 140 mm | ☐ Yes ☐ No |  |
| 3.3.3 | weight of the pump unit - no more than 30 kg; | ☐ Yes ☐ No |  |
| **3.4** | **Minimum technical requirements to the control cabinet:** |  |  |
| 3.4.1 | – nominal electric power - not less than 4 kW; | ☐ Yes ☐ No |  |
| 3.4.2 | – nominal current - not less than 16 A; | ☐ Yes ☐ No |  |
| 3.4.3 | – overall dimensions no more than: height 600 mm, width 400 mm, depth 300 mm; | ☐ Yes ☐ No |  |
| 3.4.4 | - frequency converter of the AQUADRIVE FC202 type, power not less than 4 kW, | ☐ Yes ☐ No |  |
| 3.4.5 | - an automatic switch with a rating of at least 16A and a breaking capacity of at least 10 kA. | ☐ Yes ☐ No |  |
| **4** | **General requirements (applicable to items 1, 2 and 3 above)** |  |  |
| 4.1 | **Materials and construction** |  |  |
| 4.1.1 | All metal parts of the pump and motor that come into contact with the pumped liquid must be made of stainless steel. | ☐ Yes ☐ No |  |
| **4.1.2** | **Pump materials:** |  |  |
| 4.1.2.1 | impellers, intermediate chambers (diffusers), non-return valve - stainless steel EN 1.4301 (AISI 304) or better; | ☐ Yes ☐ No |  |
| 4.1.2.2 | shaft – stainless steel EN 1.4057 (AISI 431) or better; | ☐ Yes ☐ No |  |
| 4.1.2.3 | rubber seals - NBR or better. | ☐ Yes ☐ No |  |
| 4.1.2.4 | bearings - liquid silicone (LSR) or better. | ☐ Yes ☐ No |  |
| **4.1.3** | **Electric motor materials:** |  |  |
| 4.1.3.1 | electric motor body and end cover – stainless steel EN 1.4301 (AISI 304) or better; | ☐ Yes ☐ No |  |
| 4.1.3.2 | shaft – stainless steel EN 1.4057 (AISI 431) or better; | ☐ Yes ☐ No |  |
| 4.1.3.3 | end mechanical sealing of the shaft - ceramics / tungsten carbide; | ☐ Yes ☐ No |  |
| 4.1.3.4 | radial bearing - ceramics / tungsten carbide; | ☐ Yes ☐ No |  |
| 4.1.3.5 | rubber seals and compensation membrane - NBR or better; | ☐ Yes ☐ No |  |
| 4.1.3.6 | thrust bearing - ceramic/graphite. | ☐ Yes ☐ No |  |
| **4.2** | **General requirements for the design of the pump and engine** |  |  |
| 4.2.1 | The electric motor must have a spring-loaded mechanical end seal of the shaft with a protective anti-sand sleeve and an additional rubber cuff seal of the shaft; | ☐ Yes ☐ No |  |
| 4.2.2 | All bearings must be lubricated with water; | ☐ Yes ☐ No |  |
| 4.2.3 | The pump must have a mesh filter made of stainless steel EN 1.4301 (AISI 304) or better at the inlet; | ☐ Yes ☐ No |  |
| 4.2.4 | The pump must have an octagonal design of the pressure nozzle. | ☐ Yes ☐ No |  |
| 4.2.5 | The pump must have a built-in non-return valve. | ☐ Yes ☐ No |  |
| 4.2.6 | The pump must have a locking ring to prevent damage to the pump during transportation and from axial loads (axial displacement of the shaft) when starting the pump; | ☐ Yes ☐ No |  |
| 4.2.7 | The electric motor must be equipped with a compensating membrane to balance the internal and external pressure, as well as to compensate for temperature changes in the volume of water; | ☐ Yes ☐ No |  |
| 4.2.8 | To protect the electric cable from mechanical damage, the pump must have a protective cover plate made of stainless steel EN 1.4301 (AISI 304) or better; | ☐ Yes ☐ No |  |
| 4.2.9 | The pump must be supplied complete with a motor cooling jacket made of stainless steel EN 1.4301(AISI) or better; | ☐ Yes ☐ No |  |
| 4.2.10 | The pump must be delivered complete with a set of heat-shrinkable cable coupling; | ☐ Yes ☐ No |  |
| **4.3** | **Technical characteristics of the control cabinet** |  |  |
| 4.3.1 | The control cabinet is designed to control the pump in order to automatically maintain the set pressure, power supply and comprehensive protection of the well pump. | ☐ Yes ☐ No |  |
| 4.3.2 | The control cabinet must provide: | ☐ Yes ☐ No |  |
| 4.3.2.1 | – power supply and comprehensive protection of the three-phase asynchronous electric drive of the pump; | ☐ Yes ☐ No |  |
| 4.3.2.2 | – manual regulation of pump revolutions (performance) from 10% to 100% of the nominal value from the panel; | ☐ Yes ☐ No |  |
| 4.3.2.3 | – smooth acceleration and stopping of the pump; | ☐ Yes ☐ No |  |
| 4.3.2.4 | - collection of information about the condition of the pump (nominal current, power consumption, working hours, electricity consumption accounting); | ☐ Yes ☐ No |  |
| 4.3.2.5 | – display of pump parameters and operating modes; | ☐ Yes ☐ No |  |
| 4.3.2.6 | – detection and indication of pre-emergency and emergency conditions; | ☐ Yes ☐ No |  |
| 4.3.2.7 | - two modes of operation: | ☐ Yes ☐ No |  |
| 4.3.2.7.1 | • 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 |  |
| 4.3.2.7.2 | • reserve mode - provides direct start of the pump through a microprocessor protection and control device; | ☐ Yes ☐ No |  |
| 4.3.3 | **Main technical characteristics:** |  |  |
| 4.3.3.1 | - nominal supply voltage - 380V; | ☐ Yes ☐ No |  |
| 4.3.3.2 | – power supply frequency - 50 Hz; | ☐ Yes ☐ No |  |
| 4.3.3.3 | – output frequency - 10 ... 60 Hz; | ☐ Yes ☐ No |  |
| 4.3.3.4 | – overload capacity - 110%; | ☐ Yes ☐ No |  |
| 4.3.3.5 | – ambient temperature without reducing operating characteristics - from -15 to +50 C; | ☐ Yes ☐ No |  |
| 4.3.3.6 | – the number of discrete inputs, at least 2 pcs.; | ☐ Yes ☐ No |  |
| 4.3.3.7 | – the number of analog inputs, at least 2 pcs.; | ☐ Yes ☐ No |  |
| 4.3.3.8 | – presence of a built-in RS-485 interface with the Modbus RTU / TCP/Ethernet protocol (for communication with the external controller); | ☐ Yes ☐ No |  |
| 4.3.3.9 | – the ability to display measured values in user units (power, current, revolutions of the electric drive, converter frequency, pressure value); | ☐ Yes ☐ No |  |
| 4.3.3.10 | - the possibility of controlling and monitoring the parameters of the frequency converter. | ☐ Yes ☐ No |  |
| **4.3.4** | **The control cabinet is a metal structure with a lockable door. The control cabinet is designed to be installed on a wall, column, etc. and meet the following requirements:** | ☐ Yes ☐ No |  |
| 4.3.4.1 | – material - sheet steel with a thickness of at least 1,2 mm; | ☐ Yes ☐ No |  |
| 4.3.4.2 | – coating - powder paint; | ☐ Yes ☐ No |  |
| 4.3.4.3 | - degree of protection when the door is closed - at least IP21. | ☐ Yes ☐ No |  |
| 4.3.4.4 | - cable entry from below. | ☐ Yes ☐ No |  |
| **4.3.5** | **The following must be installed in the control cabinet:** |  |  |
| 4.3.5.1 | - motor protective filter type DU/DT; | ☐ Yes ☐ No |  |
| 4.3.5.2 | - microprocessor protection device for the electric motor; | ☐ Yes ☐ No |  |
| 4.3.5.3 | - contactors for switching the operation of the pump from the frequency converter or in direct start; | ☐ Yes ☐ No |  |
| 4.3.5.4 | - system of forced automatic ventilation, equipped with air filters; | ☐ Yes ☐ No |  |
| 4.3.5.5 | - electromagnetic relays and other necessary electrical components. | ☐ Yes ☐ No |  |
| **4.3.6** | **On the door of the control cabinet are located:** |  |  |
| 4.3.6.1 | - frequency converter control panel, | ☐ Yes ☐ No |  |
| 4.3.6.2 | - control elements for starting and stopping the pumping unit; | ☐ Yes ☐ No |  |
| 4.3.6.3 | - control elements ("more" and "less" buttons) for manual regulation of electric motor revolutions. | ☐ Yes ☐ No |  |
| 4.3.6.4 | - LED indicators of pump operation: network, operation, emergency, | ☐ Yes ☐ No |  |
| **4.3.7** | **The microprocessor device for protection and control of the electric motor must have:** |  |  |
| 4.3.7.1 | – built-in transformer power supply unit for galvanic isolation of the device and sensors from the power supply network; | ☐ Yes ☐ No |  |
| 4.3.7.2 | – a digital LED indicator, for monitoring the parameters of work in case of insufficient lighting and preserving the performance of the indication at low temperatures of the surrounding environment; | ☐ Yes ☐ No |  |
| 4.3.7.3 | - non-contact connection to the electric motor circuit due to current transformers built into the device. | ☐ Yes ☐ No |  |
| **4.4** | **Other requirements** |  |  |
| 4.4.1 | 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 |  |
| 4.4.2 | 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 |  |
| 4.4.3 | 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 |  |
| 4.4.4 | 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 |  |
| 4.4.5 | Bid includes the total volume of the Goods in M3 and gross weight of the goods in KG. | ☐ Yes ☐ No |  |
| 4.4.6 | Bid includes the Country of origin of the goods and FCA point of delivery. | ☐ Yes ☐ No |  |
| 4.4.7 | Product compatibility within this Lot is confirmed with all its subsets (Lots 3.1 to 3.3). 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 |  |
| **4.5** | **To confirm the requirements for technical and quality characteristics of the pumps and control cabinet, the Bidder shall provide:** |  |  |
| 4.5.1 | 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 |  |
| 4.5.2 | 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 |  |
| 4.5.3 | A valid the conclusion of the sanitary and epidemiological examination on the pumps and control cabinet. | ☐ Yes ☐ No |  |
| 4.5.4 | 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 |  |
| 4.5.5 | Valid international certificates ISO 9001 and ISO 14001 for the production facilities where the pumps and control cabinet are manufactured. | ☐ Yes ☐ No |  |
| 4.5.6 | Electronic copies of technical documentation for the pumps and control cabinet: | ☐ Yes ☐ No |  |
| 4.5.6.1 | - 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 |  |
| 4.5.6.2 | - installation and operating manuals; | ☐ Yes ☐ No |  |
| 4.5.6.3 | - warranty card with a list of official service center(s) in Ukraine. | ☐ Yes ☐ No |  |
| 4.5.7 | 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 |  |
| 4.5.8 | 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 3.1**

| **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: Voznesenk city.** | ☐Yes ☐ No |  |
| **Delivery place and Incoterms rules** | DAP (customs cleared) Incoterms 2020 (**delivered at place and unloaded**) customs cleared **Mykolaiv region: Voznesenk 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 3 Pumps with various productivities and supplies**

**3.2 Vertical pumps with various productivities**

| N | UNOPS minimum technical requirements | Is Bid Compliant? Bidder to complete | Details of the offered goods. Bidder to complete |
| --- | --- | --- | --- |
| **Lot 3** | **Well pumps with various productivities and supplies** |  |  |
| **3.2** | **Vertical pumps with various productivities** |  |  |
| **Item 1** | **The vertical pump with productivity at the working point (Q) not less than 125 m3/h and pressure at the working point (H) not less than 103,5 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 125 m3/h; | ☐ Yes ☐ No |  |
| 1.1.2 | pressure at the working point (H) – not less than 103,5 m of water. | ☐ Yes ☐ No |  |
| 1.1.3 | the maximum performance of the pump (Q max) – not less than 160 m3/h; | ☐ Yes ☐ No |  |
| 1.1.4 | the maximum pressure of the pump (H max) – not less than 130 m of water. | ☐ Yes ☐ No |  |
| 1.1.5 | The value of NPSH (at the working point) is no more than 3,5 m; | ☐ Yes ☐ No |  |
| 1.1.6 | The efficiency of the pump at the operating point is not less than 83 %; | ☐ Yes ☐ No |  |
| 1.1.7 | total efficiency at the operating point – not less than 78 %; | ☐ Yes ☐ No |  |
| 1.1.8 | minimum efficiency index mei ≥: 0.70; | ☐ Yes ☐ No |  |
| 1.1.9 | max. ambient temperature environment: not less than 55 ° C. | ☐ Yes ☐ No |  |
| 1.1.10 | liquid temperature range: - 20 ... 120 ° C | ☐ Yes ☐ No |  |
| 1.1.11 | permissible pressure: not less than PN16. |  |  |
| 1.1.12 | standard flange: DIN, pipe connection: DN150 | ☐ Yes ☐ No |  |
| 1.1.13 | the inlet and outlet nozzles must be on the same axis (inline execution of the pump). | ☐ Yes ☐ No |  |
| 1.1.14 | Incorporate cavitation detection technology. | ☐ Yes ☐ No |  |
| **1.2** | **Technical requirements for the electric motor:** |  |  |
| 1.2.1 | nominal power on the shaft (P2) – not more 45 kW; | ☐ Yes ☐ No |  |
| 1.2.2 | power on the shaft at the working point (P2 work) - no more than 43 kW; | ☐ Yes ☐ No |  |
| 1.2.3 | electric power consumed at the working point (P1 work) – no more than 46 kW; | ☐ Yes ☐ No |  |
| 1.2.4 | maximum current consumption: not more 80 A; | ☐ Yes ☐ No |  |
| 1.2.5 | starting current no more than: 700% | ☐ Yes ☐ No |  |
| 1.2.6 | power factor Cos Phi - not less than 0,89; | ☐ Yes ☐ No |  |
| 1.2.7 | the efficiency of the electric motor at full load (efficiency) is at least 94%; | ☐ Yes ☐ No |  |
| 1.2.8 | the noise level (sound pressure) of the electric motor should not be higher than 75 dB(A). | ☐ Yes ☐ No |  |
| 1.2.9 | Include advanced thermal protection for motors. | ☐ Yes ☐ No |  |
| **1.3** | **General requirements for the design of the pump and engine:** |  |  |
| 1.3.1 | The net mass of the pump assembly as a whole should not exceed 550 kg. | ☐ Yes ☐ No |  |
| 1.3.2 | Modular design for easy maintenance. | ☐ Yes ☐ No |  |
| 1.4 | Technical requirements for the control cabinet |  |  |
| **1.4.1** | **Main technical characteristics:** |  |  |
| 1.4.1.1 | – nominal electric power - not less than 45 kW; | ☐ Yes ☐ No |  |
| 1.4.1.2 | – nominal current - not less than 125 A; | ☐ Yes ☐ No |  |
| 1.4.1.3 | – overall dimensions no more than: height 2000 mm, width 800 mm, depth 600 mm; | ☐ Yes ☐ No |  |
| 1.4.2 | The following must be installed in the control cabinet: | ☐ Yes ☐ No |  |
| 1.4.2.1 | - frequency converter of the AQUADRIVE FC202 type, power not less than 45 kW, | ☐ Yes ☐ No |  |
| 1.4.2.2 | - an automatic switch with a rating of at least 125A and a breaking capacity of at least 15 kA. | ☐ Yes ☐ No |  |
| **Item 2** | **The vertical pump with productivity at the working point (Q) not less than 125 m3/h and pressure at the working point (H) not less than 85,5 m of water complete with control cabinet with frequency regulation - 2 Units** |  |  |
| **2.1** | **Technical requirements for the pump:** |  |  |
| 2.1.1 | - productivity at the working point (Q) – not less than 125 m3/h; | ☐ Yes ☐ No |  |
| 2.1.2 | - pressure at the working point (H) – not less than 85,5 m of water. | ☐ Yes ☐ No |  |
| 2.1.3 | - the maximum performance of the pump (Q max) – not less than 160 m3/h; | ☐ Yes ☐ No |  |
| 2.1.4 | - the maximum pressure of the pump (H max) – not less than 115 m of water. | ☐ Yes ☐ No |  |
| 2.1.5 | The value of NPSH (at the working point) is no more than 3,5 m; | ☐ Yes ☐ No |  |
| 2.1.6 | - The efficiency of the pump at the operating point is not less than 81 %; | ☐ Yes ☐ No |  |
| 2.1.7 | - total efficiency at the operating point – not less than 76 %; | ☐ Yes ☐ No |  |
| 2.1.8 | - minimum efficiency index mei ≥: 0.70; | ☐ Yes ☐ No |  |
| 2.1.9 | - max. ambient temperature environment: not less than 55 ° C. | ☐ Yes ☐ No |  |
| 2.1.10 | - liquid temperature range: - 20 ... 120 ° C | ☐ Yes ☐ No |  |
| 2.1.11 | - permissible pressure: not less than PN16. | ☐ Yes ☐ No |  |
| 2.1.12 | -standard flange: DIN, pipe connection: DN150 | ☐ Yes ☐ No |  |
| 2.1.13 | -the inlet and outlet nozzles must be on the same axis (inline execution of the pump). | ☐ Yes ☐ No |  |
| **2.2** | **Technical requirements for the electric motor:** |  |  |
| 2.2.1 | - nominal power on the shaft (P2) – not more 37 kW; | ☐ Yes ☐ No |  |
| 2.2.2 | - power on the shaft at the working point (P2 work) - no more than 36 kW; | ☐ Yes ☐ No |  |
| 2.2.3 | - electric power consumed at the working point (P1 work) – no more than 38,5 kW; | ☐ Yes ☐ No |  |
| 2.2.4 | - maximum current consumption: not more 65 A; | ☐ Yes ☐ No |  |
| 2.2.5 | - starting current no more than: 750 % | ☐ Yes ☐ No |  |
| 2.2.6 | - power factor Cos Phi - not less than 0,88; | ☐ Yes ☐ No |  |
| 2.2.7 | - the efficiency of the electric motor at full load (efficiency) is at least 93%; | ☐ Yes ☐ No |  |
| 2.2.8 | - the noise level (sound pressure) of the electric motor should not be higher than 75 dB(A). | ☐ Yes ☐ No |  |
| **2.3** | **General requirements for the design of the pump and engine:** |  |  |
| 2.3.1 | The net mass of the pump assembly as a whole should not exceed 440 kg. | ☐ Yes ☐ No |  |
| **2.4** | **Technical requirements for the control cabinet** |  |  |
| **2.4.1** | **Main technical characteristics:** |  |  |
| 2.4.1.1 | – nominal electric power - not less than 37 kW; | ☐ Yes ☐ No |  |
| 2.4.1.2 | – nominal current - not less than 100 A; | ☐ Yes ☐ No |  |
| 2.4.1.3 | – overall dimensions no more than: height 1000 mm, width 600 mm, depth 600 mm; | ☐ Yes ☐ No |  |
| 2.4.2 | The following must be installed in the control cabinet: |  |  |
| 2.4.2.1 | - frequency converter of the AQUADRIVE FC202 type, power not less than 37 kW, | ☐ Yes ☐ No |  |
| 2.4.2.2 | - an automatic switch with a rating of at least 100A and a breaking capacity of at least 15 kA. | ☐ Yes ☐ No |  |
| **3** | **General requirements (applicable to items 1 and 2 above)** |  |  |
| **3.1** | **Requirements to the materials and construction of the pump** |  |  |
| 3.1.1 | the main and lower support part of the pump is made of high-strength ductile iron EN-GJS-500-7 ASTM A536-84 70-50-05 with a protective cataphoretic coating or better. | ☐ Yes ☐ No |  |
| 3.1.2 | impeller, chambers of the hydraulic part - stainless steel DIN 1.4301 AISI 304 or better; | ☐ Yes ☐ No |  |
| 3.1.3 | cylindrical casing of the hydraulic part - stainless steel DIN 1.4404 or better; | ☐ Yes ☐ No |  |
| 3.1.4 | pump shaft – stainless steel DIN 1.4462 or better; | ☐ Yes ☐ No |  |
| 3.1.5 | ring seals - EPDM or better; | ☐ Yes ☐ No |  |
| 3.1.6 | gap seals - PEEK (Polyether ether ketone) or better; | ☐ Yes ☐ No |  |
| 3.1.7 | The end seal of the shaft is balanced, cartridge type, which allows you to easily replace it without disassembling the hydraulic part of the pump unit, and without the need to dismantle the electric motor; | ☐ Yes ☐ No |  |
| 3.1.8 | Friction pairs of end seals - silicon carbide (SiC/SiC). | ☐ Yes ☐ No |  |
| 3.1.9 | The support bearing of the sleeve is carbon graphite with a shell made of PTFE (Teflon). | ☐ Yes ☐ No |  |
| 3.1.10 | Bearing ring tungsten carbide/tungsten carbide. | ☐ Yes ☐ No |  |
| 3.1.11 | The main part of the pump must be equipped with a combined 1/2" filler plug and vent screw. | ☐ Yes ☐ No |  |
| **3.2** | **Technical requirements for the electric motor:** |  |  |
| 3.2.1 | nominal supply voltage - 3 x 380…420 V; | ☐ Yes ☐ No |  |
| 3.2.2 | power supply frequency - 50 Hz; | ☐ Yes ☐ No |  |
| 3.2.3 | nominal rotation speed – not more 3000 rpm; | ☐ Yes ☐ No |  |
| 3.2.4 | energy efficiency class - at least IE3 | ☐ Yes ☐ No |  |
| 3.2.5 | protection class – IP55; | ☐ Yes ☐ No |  |
| 3.2.6 | insulation class – F; |  |  |
| 3.2.7 | - the maximum number of launches per hour – at least 75. | ☐ Yes ☐ No |  |
| 3.2.8 | The electric motor must be able to operate at a variable speed from the frequency converter; | ☐ Yes ☐ No |  |
| 3.2.9 | The insulation of the winding of the electric motor and the cable to it must withstand the current and voltage of the power supplied from the frequency converter; | ☐ Yes ☐ No |  |
| 3.2.10 | The electric motor must have built-in thermistors in each winding to protect the motor. | ☐ Yes ☐ No |  |
| **3.3** | **Technical requirements for the control cabinet** |  |  |
| 3.3.1 | The control cabinet is designed to control the pump in order to automatically maintain the set pressure, power supply and comprehensive protection of the well pump. | ☐ Yes ☐ No |  |
| 3.3.2 | The control cabinet must provide: | ☐ Yes ☐ No |  |
| 3.3.2.1 | – power supply and comprehensive protection of the three-phase asynchronous electric drive of the pump; |  |  |
| 3.3.2.2 | - automatic adjustment of pumps revolutions/performance according to the signal from the pressure sensor 4..20mA) |  |  |
| 3.3.2.3 | – manual regulation of pump revolutions (performance) from 10% to 100% of the nominal value from the panel; | ☐ Yes ☐ No |  |
| 3.3.2.4 | – smooth acceleration and stopping of the pump; | ☐ Yes ☐ No |  |
| 3.3.2.5 | - collection of information about the condition of the pump (nominal current, power consumption, working hours, electricity consumption accounting); | ☐ Yes ☐ No |  |
| 3.3.2.6 | – display of pump parameters and operating modes; | ☐ Yes ☐ No |  |
| 3.3.2.7 | – detection and indication of pre-emergency and emergency conditions; | ☐ Yes ☐ No |  |
| 3.3.3 | Main technical characteristics: |  |  |
| 3.3.3.1 | - nominal supply voltage - 380V; | ☐ Yes ☐ No |  |
| 3.3.3.2 | – power supply frequency - 50 Hz; | ☐ Yes ☐ No |  |
| 3.3.3.3 | – output frequency - 10 ... 60 Hz; | ☐ Yes ☐ No |  |
| 3.3.3.4 | – overload capacity - 110%; | ☐ Yes ☐ No |  |
| 3.3.3.5 | – ambient temperature without reducing operating characteristics - from -15 to +50 C; | ☐ Yes ☐ No |  |
| 3.3.3.6 | – the number of discrete inputs, at least 2 pcs.; | ☐ Yes ☐ No |  |
| 3.3.3.7 | – the number of analog inputs, at least 2 pcs.; | ☐ Yes ☐ No |  |
| 3.3.3.8 | – presence of a built-in RS-485 interface with the Modbus RTU / TCP/Ethernet protocol (for communication with the external controller); | ☐ Yes ☐ No |  |
| 3.3.3.9 | – the ability to display measured values in user units (power, current, revolutions of the electric drive, converter frequency, pressure value); | ☐ Yes ☐ No |  |
| 3.3.3.10 | - the possibility of controlling and monitoring the parameters of the frequency converter. | ☐ Yes ☐ No |  |
| 3.3.3.11 | - fast-acting fuses with gS or gR /aR characteristics. | ☐ Yes ☐ No |  |
| 3.3.3.12 | - microprocessor protection device for the electric motor; | ☐ Yes ☐ No |  |
| 3.3.3.13 | - contactors for switching the operation of the pump from the frequency converter or in direct start; | ☐ Yes ☐ No |  |
| 3.3.3.14 | - system of forced automatic ventilation, equipped with air filters; | ☐ Yes ☐ No |  |
| 3.3.3.15 | On the door of the control cabinet are located: | ☐ Yes ☐ No |  |
| 3.3.3.16 | - control elements for starting and stopping the pumping unit; | ☐ Yes ☐ No |  |
| 3.3.3.17 | - control elements ("more" and "less" buttons) for manual regulation of electric motor revolutions. |  |  |
| 3.3.3.18 | - LED indicators of pump operation: network, operation, emergency. | ☐ Yes ☐ No |  |
| 3.3.4 | The pump must be delivered complete with a pressure sensor, 1pc, which must have the following characteristics: | ☐ Yes ☐ No |  |
| 3.3.4.1 | - output analog signal 4-20 mA, | ☐ Yes ☐ No |  |
| 3.3.4.2 | - measurement range: 0 – 16 bar, | ☐ Yes ☐ No |  |
| 3.3.4.3 | - connection - thread G ½″ | ☐ Yes ☐ No |  |
| 3.3.4.4 | - permissible liquid temperature: -40 to +85 °C. | ☐ Yes ☐ No |  |
| 3.3.5 | The control cabinet is a metal structure with a lockable door. The control cabinet is designed to be installed on a wall, column, etc. and meet the following requirements: |  |  |
| 3.3.5.1 | – material - sheet steel with a thickness of at least 1,2 mm; | ☐ Yes ☐ No |  |
| 3.3.5.2 | – coating - powder paint; | ☐ Yes ☐ No |  |
| 3.3.5.3 | - degree of protection when the door is closed - at least IP21. | ☐ Yes ☐ No |  |
| 3.3.5.4 | - cable entry from below. | ☐ Yes ☐ No |  |
| **3.4** | **Other requirements** |  |  |
| 3.4.1 | 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 |  |
| 3.4.2 | 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 |  |
| 3.4.3 | 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 |  |
| 3.4.4 | 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 |  |
| 3.4.5 | Bid includes the total volume of the Goods in M3 and gross weight of the goods in KG. | ☐ Yes ☐ No |  |
| 3.4.6 | Bid includes the Country of origin of the goods and FCA point of delivery. | ☐ Yes ☐ No |  |
| 3.4.7 | Product compatibility within this Lot is confirmed with all its subsets (Lots 3.1 to 3.3). 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 |  |
| 3.5 | To confirm the requirements for technical and quality characteristics of the pumps and control cabinet, the Bidder shall provide: |  |  |
| 3.5.1 | 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 |  |
| 3.5.2 | 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 |  |
| 3.5.3 | A valid the conclusion of the sanitary and epidemiological examination on the pumps and control cabinet. | ☐ Yes ☐ No |  |
| 3.5.4 | 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 |  |
| 3.5.5 | Valid international certificates ISO 9001 and ISO 14001 for the production facilities where the pumps and control cabinet are manufactured. | ☐ Yes ☐ No |  |
| 3.5.6 | Electronic copies of technical documentation for the pumps and control cabinet: | ☐ Yes ☐ No |  |
| 3.5.7.1 | - 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 |  |
| 3.5.7.2 | - installation and operating manuals; | ☐ Yes ☐ No |  |
| 3.5.7.3 | - warranty card with a list of official service center(s) in Ukraine. | ☐ Yes ☐ No |  |
| 3.5.8 | 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 |  |
| 3.5.9 | A letter of guarantee that the supervision and commissioning (first start-up) of the pump and control cabinet is included in their cost and will be carried out by specialists of a certified service center authorized by a representative of the manufacturer. | ☐ Yes ☐ No |  |
| 3.5.10 | 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 3.2**

| **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: Voznesenk city.** | ☐Yes ☐ No |  |
| **Delivery place and Incoterms rules** | DAP (customs cleared) Incoterms 2020 (**delivered at place and unloaded**) customs cleared **Mykolaiv region: Voznesenk 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 3 Pumps with various productivities and supplies**

**3.3 Latches and valves**

| **N** | **UNOPS minimum technical requirements** | **Is Bid Compliant? Bidder to complete** | **Details of the offered goods. Bidder to complete** |
| --- | --- | --- | --- |
| **Lot 3** | **Well pumps with various productivities and supplies** |  |  |
| **3.3** | **Latches and valves** |  |  |
| **Item 1** | **Latch with a rubberized wedge DN 200 - 3 PCS** | ☐ Yes ☐ No |  |
| 1.1 | Working environment is water. | ☐ Yes ☐ No |  |
| 1.2 | Nominal diameter DN 200; | ☐ Yes ☐ No |  |
| 1.3 | Maximum conditional pressure 16 bar. | ☐ Yes ☐ No |  |
| 1.4 | Maximum working temperature - not less than 70 C | ☐ Yes ☐ No |  |
| 1.5 | Hermeticity class is A (0% leakage). | ☐ Yes ☐ No |  |
| 1.6 | Materials and construction (must be confirmed in the datasheet): | ☐ Yes ☐ No |  |
| 1.6.1 | - The type of connection is flange according to EN 1092. | ☐ Yes ☐ No |  |
| 1.6.2 | - The case is collapsible. | ☐ Yes ☐ No |  |
| 1.6.3 | - The latch must be equipped with a flywheel. | ☐ Yes ☐ No |  |
| 1.6.4 | - Epoxy powder coating of the body with a layer of at least 250 μm | ☐ Yes ☐ No |  |
| 1.6.5 | - Body, cover: ductile iron EN-GJS-500-7 or better. | ☐ Yes ☐ No |  |
| 1.6.6 | - Wedge: ductile iron EN-GJS-500-7 with rubberized EPDM, or better. | ☐ Yes ☐ No |  |
| 1.6.7 | - Knurled spindle: X20Cr13 stainless steel or better. | ☐ Yes ☐ No |  |
| 1.6.8 | Spindle nut: brass. | ☐ Yes ☐ No |  |
| 1.6.9 | Spindle sealing – EPDM O-rings, or better. | ☐ Yes ☐ No |  |
| 1.6.10 | The bearing is elastomer. | ☐ Yes ☐ No |  |
| 1.6.11 | Cover sealing – EPDM or better. | ☐ Yes ☐ No |  |
| 1.6.12 | Cover fastening bolts – galvanized steel or better. | ☐ Yes ☐ No |  |
| 1.6.13 | Bolt cap: silicone. | ☐ Yes ☐ No |  |
| 1.6.14 | Anti-corrosion treatment for all external surfaces. | ☐ Yes ☐ No |  |
| 1.6.15 | Latches are designed for future automation upgrades. | ☐ Yes ☐ No |  |
| 1.6.16 | Modular design for easy component replacement. | ☐ Yes ☐ No |  |
| **Item 2** | **Latch with a rubberized wedge DN 150 - 3 PCS** | ☐ Yes ☐ No |  |
| 2.1 | Working environment is water. | ☐ Yes ☐ No |  |
| 2.2 | Nominal diameter DN 150; | ☐ Yes ☐ No |  |
| 2.3 | Maximum conditional pressure 16 bar. | ☐ Yes ☐ No |  |
| 2.4 | Maximum working temperature - not less than 70 C | ☐ Yes ☐ No |  |
| 2.5 | Hermeticity class is A (0% leakage). | ☐ Yes ☐ No |  |
| 2.6 | Materials and construction (must be confirmed in the datasheet): | ☐ Yes ☐ No |  |
| 2.6.1 | - The type of connection is flange according to EN 1092. | ☐ Yes ☐ No |  |
| 2.6.2 | - The case is collapsible. | ☐ Yes ☐ No |  |
| 2.6.3 | - The latch must be equipped with a flywheel. | ☐ Yes ☐ No |  |
| 2.6.4 | - Epoxy powder coating of the body with a layer of at least 250 μm | ☐ Yes ☐ No |  |
| 2.6.5 | - Body, cover: ductile iron EN-GJS-500-7 or better. | ☐ Yes ☐ No |  |
| 2.6.6 | - Wedge: ductile iron EN-GJS-500-7 with rubberized EPDM, or better. | ☐ Yes ☐ No |  |
| 2.6.7 | - Knurled spindle: X20Cr13 stainless steel or better. | ☐ Yes ☐ No |  |
| 2.6.8 | Spindle nut: brass. | ☐ Yes ☐ No |  |
| 2.6.9 | Spindle sealing – EPDM O-rings, or better. | ☐ Yes ☐ No |  |
| 2.6.10 | The bearing is elastomer. | ☐ Yes ☐ No |  |
| 2.6.11 | Cover sealing – EPDM or better. | ☐ Yes ☐ No |  |
| 2.6.12 | Cover fastening bolts – galvanized steel or better. | ☐ Yes ☐ No |  |
| 2.6.13 | Bolt cap: silicone. | ☐ Yes ☐ No |  |
| **Item 3** | **Check valve DN 150 - 3 PCS** | ☐ Yes ☐ No |  |
| 3.1 | Working environment is water. | ☐ Yes ☐ No |  |
| 3.2 | Nominal diameter DN 150; | ☐ Yes ☐ No |  |
| 3.3 | Maximum conditional pressure 16 bar. | ☐ Yes ☐ No |  |
| 3.4 | Maximum working temperature - not less than 100 C | ☐ Yes ☐ No |  |
| 3.5 | Materials and construction (must be confirmed in the datasheet): | ☐ Yes ☐ No |  |
| 3.5.1 | - Execution type: rotary. | ☐ Yes ☐ No |  |
| 3.5.2 | - The working position is vertical and horizontal. | ☐ Yes ☐ No |  |
| 3.5.3 | - Body, cover - cast iron EN-GJL-250 or better. | ☐ Yes ☐ No |  |
| 3.5.4 | - Disc lever - malleable cast iron EN-GJS-500 or better. | ☐ Yes ☐ No |  |
| 3.5.5 | - Disc - stainless steel LH14 (GX20Cr14) or better. | ☐ Yes ☐ No |  |
| 3.5.6 | - The gasket is carbo copper rubber or a better. | ☐ Yes ☐ No |  |
| 3.5.7 | - Cover gasket – graphite or better. | ☐ Yes ☐ No |  |
| **4** | **General requiremnts (applicable to items 1, 2 and 3 above)** |  |  |
| 4.1 | The below documents should be provided by the bidder: | ☐ Yes ☐ No |  |
| 4.1.1 | Certificate (manufacturer) of type examination in accordance with the requirements of the Technical Regulation of equipment operating under pressure, approved by the Resolution of the Cabinet of Ministers of Ukraine dated January 16, 2019. No. 27 with attachments and declaration of conformity. | ☐ Yes ☐ No |  |
| 4.1.2 | Passport from the manufacturer with a detailed technical description of the equipment and instructions for operation and installation of the equipment offered for participation in the tender. | ☐ Yes ☐ No |  |
| 4.1.3 | ISO 9001, 14001 certificates of the manufacturer of the product offered by the participant. | ☐ Yes ☐ No |  |
| 4.1.4 | The conclusion of the sanitary and hygienic examination. | ☐ Yes ☐ No |  |
| 4.1.5 | If the participant is not a manufacturer - a certificate of an official representative/dealer or another document confirming the relationship between the manufacturer and the participant; | ☐ Yes ☐ No |  |
| 4.1.6 | A letter from the manufacturer of the goods or its representative, with a mandatory reference to the tender number, confirming the official guarantee for the goods offered. | ☐ Yes ☐ No |  |
| 4.2 | 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 |  |
| 4.3 | 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 |  |
| 4.4 | 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 |  |
| 4.5 | Bid includes the total volume of the Goods in M3 and gross weight of the goods in KG. | ☐ Yes ☐ No |  |
| 4.6 | Bid includes the Country of origin of the goods and FCA point of delivery. | ☐ Yes ☐ No |  |
| 4.7 | Product compatibility within this Lot is confirmed with all its subsets (Lots 3.1 to 3.3). 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 |  |
| 4.8 | 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 3.3**

| **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: Voznesenk city.** | ☐Yes ☐ No |  |
| **Delivery place and Incoterms rules** | DAP (customs cleared) Incoterms 2020 (**delivered at place and unloaded**) customs cleared **Mykolaiv region: Voznesenk 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 |  |