

## Section II: Schedule of requirements

E-Sourcing reference no: RFQ/2024/52024

*Provision of Water pumps to Mykolaiv region.*

### A. Summary of Requirements for the provision of the water pumps to Mykolaiv region:

UNOPS requirements are comprised of the following 3 (three) lots:

#### Lot 1. Pumps with supplies with the following details below:

Lot 1	Description	Q-ty
<b>1.1</b>	<b>Pumps with frequency converter various productivities</b>	
<b>Item 1</b>	Pump unit with productivity at the working point (Q) not less than 1000 m <sup>3</sup> /h and pressure at the working point (H) not less than 55 m of water complete with frequency converter	<b>2</b>
<b>Item 2</b>	Pump unit with productivity at the working point (Q) not less than 700 m <sup>3</sup> /h and pressure at the working point (H) not less than 75 m of water complete with frequency converter	<b>2</b>
<b>Item 3</b>	Pump unit with productivity at the working point (Q) not less than 620 m <sup>3</sup> /h and pressure at the working point (H) not less than 75 m of water complete with frequency converter	<b>2</b>
<b>Item 4</b>	Pump unit with productivity at the working point (Q) not less than 235 m <sup>3</sup> /h and pressure at the working point (H) not less than 35 m of water complete with frequency converter	<b>2</b>
<b>Item 5</b>	Pump unit with productivity at the working point (Q) not less than 180 m <sup>3</sup> /h and pressure at the working point (H) not less than 45 m of water complete with frequency converter	<b>2</b>
<b>Item 6</b>	Pump unit with productivity at the working point (Q) not less than 240 m <sup>3</sup> /h and pressure at the working point (H) not less than 45 m of water complete with frequency converter	<b>2</b>
<b>Item 7</b>	Pump unit with productivity at the working point (Q) not less than 150 m <sup>3</sup> /h and pressure at the working point (H) not less than 45 m of water complete with frequency converter	<b>2</b>
<b>Item 8</b>	Pump unit with productivity at the working point (Q) not less than 65 m <sup>3</sup> /h and pressure at the working point (H) not less than 45 m of water complete with frequency converter	<b>2</b>
<b>Item 9</b>	Pump unit with productivity at the working point (Q) not less than 250 m <sup>3</sup> /h and pressure at the working point (H) not less than 40 m of water complete with frequency converter	<b>2</b>
<b>Item 10</b>	Pump unit with productivity at the working point (Q) not less than 120 m <sup>3</sup> /h and pressure at the working point (H) not less than 40 m of water complete with frequency converter	<b>2</b>

<b>Item 11</b>	Pump unit with productivity at the working point (Q) not less than 200 m3/h and pressure at the working point (H) not less than 35 m of water complete with frequency converter	<b>2</b>
<b>Item 12</b>	Pump unit with productivity at the working point (Q) not less than 130 m3/h and pressure at the working point (H) not less than 40 m of water complete with frequency converter	<b>2</b>
<b>Item 13</b>	Pump unit with productivity at the working point (Q) not less than 190 m3/h and pressure at the working point (H) not less than 25 m of water complete with frequency converter	<b>2</b>
<b>Item 14</b>	Pump unit with productivity at the working point (Q) not less than 80 m3/h and pressure at the working point (H) not less than 40 m of water complete with frequency converter	<b>2</b>
<b>Item 15</b>	Pump unit with productivity at the working point (Q) not less than 190 m3/h and pressure at the working point (H) not less than 45 m of water complete with frequency converter	<b>2</b>
<b>Item 16</b>	Pump unit with productivity at the working point (Q) not less than 180 m3/h and pressure at the working point (H) not less than 50 m of water complete with frequency converter	<b>2</b>
<b>Item 17</b>	Pump unit with productivity at the working point (Q) not less than 70 m3/h and pressure at the working point (H) not less than 50 m of water complete with frequency converter	<b>2</b>
<b>Item 18</b>	Pump unit with productivity at the working point (Q) not less than 90 m3/h and pressure at the working point (H) not less than 40 m of water complete with frequency converter	<b>2</b>

<b>Lot 1</b>	<b>Description</b>	<b>Q-ty</b>
<b>1.2</b>	<b>Valves</b>	
<b>Item 1</b>	Ball flange full-pass valve with a reducer (with manual drive) DN 400/PN16	<b>2</b>
<b>Item 2</b>	Ball valve full-pass flange with reducer (with manual drive) DN 350/PN16	<b>6</b>
<b>Item 3</b>	Ball valve full-pass flange with reducer (with manual drive) DN 300/PN16	<b>4</b>
<b>Item 4</b>	Ball valve full-pass flange with gearbox (with manual drive) DN 200/PN16	<b>12</b>
<b>Item 5</b>	Ball valve full-pass flange with a gearbox (with manual drive) DN 150/PN16	<b>6</b>
<b>Item 6</b>	Ball valve full-pass flange DN 100/PN16	<b>16</b>
<b>Item 7</b>	Ball valve full-pass flange DN 125/PN16	<b>10</b>
<b>Item 8</b>	Ball valve full-pass flange DN 80/PN16	<b>10</b>
<b>Item 9</b>	Ball valve full-pass flange DN 65/PN16	<b>6</b>
<b>Item 10</b>	Check valve two-leaf spring-loaded inter-flange DN350/PN16	<b>2</b>
<b>Item 11</b>	Check valve two-leaf spring-loaded inter-flange DN300/PN16	<b>4</b>
<b>Item 12</b>	Check valve two-leaf spring-loaded inter-flange DN200/PN16	<b>6</b>
<b>Item 13</b>	Check valve two-leaf spring-loaded inter-flange DN150/PN16	<b>2</b>
<b>Item 14</b>	Check valve two-leaf spring-loaded inter-flange DN100/PN16	<b>10</b>
<b>Item 15</b>	Check valve two-leaf spring-loaded inter-flange DN125/PN16	<b>2</b>
<b>Item 16</b>	Check valve two-leaf spring-loaded inter-flange DN80/PN16	<b>4</b>
<b>Item 17</b>	Check valve two-leaf spring-loaded inter-flange DN65/PN16	<b>6</b>

Lot 1	Description	Q-ty
<b>1.3</b>	<b>Pipeline details ( Flanges and reducers)</b>	
<b>Item 1</b>	Flat welded steel flange DN400/PN16	<b>4</b>
<b>Item 2</b>	Flat welded steel flange DN350/PN16	<b>18</b>
<b>Item 3</b>	Flat welded steel flange DN250/PN16	<b>2</b>
<b>Item 4</b>	Flat welded steel flange DN300/PN16	<b>20</b>
<b>Item 5</b>	Flat welded steel flange DN200/PN16	<b>30</b>
<b>Item 6</b>	Flat welded steel flange DN125/PN16	<b>38</b>
<b>Item 7</b>	Flat welded steel flange DN80/PN16	<b>36</b>
<b>Item 8</b>	Flat welded steel flange DN100/PN16	<b>80</b>
<b>Item 9</b>	Flat welded steel flange DN150/PN16	<b>20</b>
<b>Item 10</b>	Flat welded steel flange DN50/PN16	<b>8</b>
<b>Item 11</b>	Flat welded steel flange DN65/PN16	<b>24</b>
<b>Item 12</b>	Eccentric reducers 426*377	<b>2</b>
<b>Item 13</b>	Concentric reducers 377*273	<b>2</b>
<b>Item 14</b>	Eccentric reducers 377*325	<b>4</b>
<b>Item 15</b>	Concentric reducers 325*219	<b>4</b>
<b>Item 16</b>	Eccentric reducers 133*219	<b>4</b>
<b>Item 17</b>	Concentric reducers 108*219	<b>6</b>
<b>Item 18</b>	Concentric reducers 89*219	<b>2</b>
<b>Item 19</b>	Eccentric reducers 108*159	<b>2</b>
<b>Item 20</b>	Concentric reducers 89*159	<b>2</b>
<b>Item 21</b>	Eccentric reducers is 108*76	<b>2</b>
<b>Item 22</b>	Concentric reducers 108*57	<b>2</b>
<b>Item 23</b>	Eccentric reducers 133*108	<b>10</b>
<b>Item 24</b>	Concentric reducers 159*133	<b>2</b>
<b>Item 25</b>	Eccentric reducers 108*89	<b>12</b>
<b>Item 26</b>	Concentric reducers 89*76	<b>10</b>
<b>Item 27</b>	Eccentric reducers 76*89	<b>6</b>

**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 m<sup>3</sup>/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 m<sup>3</sup>/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:

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

Lot 3	Description	Q-ty
<b>3.1</b>	<b>Well pumps with various productivities</b>	
<b>Item 1</b>	Well pump unit with productivity at the working point (Q) not less than 45 m <sup>3</sup> /h complete with control cabinet with frequency regulation and accessories for installation - 1 Unit	<b>1</b>
<b>Item 2</b>	Well pump unit with productivity at the working point (Q) not less than 17 m <sup>3</sup> /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	<b>1</b>
<b>Item 3</b>	Well pump unit with productivity at the working point (Q) not less than 17 m <sup>3</sup> /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	<b>1</b>

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

Lot 3	Description	Q-ty
<b>3.3</b>	<b>Latches and valves</b>	
<b>Item 1</b>	Latch with a rubberized wedge DN 200	<b>3</b>
<b>Item 2</b>	Latch with a rubberized wedge DN 150	<b>3</b>
<b>Item 3</b>	Check valve DN 150	<b>3</b>

**B. Technical specifications for Goods – Comparative Data Tables****Lot 1. Pumps with supplies with the following details below:****Lot 1.1 - Pumps with frequency converter various productivities**

N	UNOPS minimum technical requirements	Is Bid Compliant? Bidder to complete	Details of the offered goods. Bidder to complete
<b>Lot 1</b>	<b>Pumps with supplies</b>		
<b>1.1</b>	<b>Pumps with frequency converter various productivities</b>		
<b>Item 1</b>	<b>Pump unit with productivity at the working point (Q) not less than 1000 m<sup>3</sup>/h and pressure at the working point (H) not less than 55 m of water complete with frequency converter</b>		
<b>1.1</b>	<b>Technical specifications of the pump</b>		
1.1.1	Flow rate (performance) at the operating point, Q, is no less than 1000 m <sup>3</sup> /hour	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.2	Head at the working point, H, no less 55 m H <sub>2</sub> O	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.3	Hydraulic efficiency of the pump at the operating point, no less than 85 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.4	Total pump efficiency at the operating point, no less than 82 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.5	Required cavitation head (NPSH) at the operating point, no more than 6 m	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.6	Diameter of the suction nozzle DN350	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.7	Pressure connection diameter DN250	<input type="checkbox"/> Yes <input type="checkbox"/> No	

1.1.8	Support frame size, length x width, no more than 2100 - 2300 x 650 - 750 mm	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.9	Power on the shaft at the operating point, P2, no more than 177 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.10	Electric motor power at the operating point, P1rt, no more than 183 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.11	The maximum power of the electric motor is set 200 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.12	Pumps include vibration isolators and noise-damping materials to ensure stability and meet environmental noise regulations.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.13	Smart sensors are included to monitor operational parameters for predictive maintenance and enhanced reliability.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 2	<b>Pump unit with productivity at the working point (Q) not less than 700 m<sup>3</sup>/h and pressure at the working point (H) not less than 75 m of water complete with frequency converter</b>		
1.2	<b>Technical specifications of the pump</b>		
1.2.1	Flow rate (performance) at the operating point, Q, is no less than 700 m <sup>3</sup> /hour	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.2	Head at the working point, H, no less 75 m H <sub>2</sub> O	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.3	Hydraulic efficiency of the pump at the operating point, no less than 81 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.4	Total pump efficiency at the operating point, no less than 79 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.5	Required cavitation head (NPSH) at the operating point, no more than 4 m	<input type="checkbox"/> Yes <input type="checkbox"/> No	

1.2.6	Diameter of the suction nozzle DN300	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.7	Pressure connection diameter DN200	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.8	Support frame size, length x width, no more than 2100 - 2300 x 650 - 750 mm	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.9	Power on the shaft at the operating point, P2, no more than 176 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.10	Electric motor power at the operating point, P1rt, no more than 181 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.11	The maximum power of the electric motor is set 200 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Item 3</b>	<b>Pump unit with productivity at the working point (Q) not less than 620 m3/h and pressure at the working point (H) not less than 75 m of water complete with frequency converter</b>		
<b>1.3</b>	<b>Technical specifications of the pump</b>		
1.3.1	Flow rate (performance) at the operating point, Q, is no less than 620 m <sup>3</sup> /hour	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.2	Head at the working point, H, no less 75 m H2O	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.3	Hydraulic efficiency of the pump at the operating point, no less than 78 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.4	Total pump efficiency at the operating point, no less than 76 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.5	Required cavitation head (NPSH) at the operating point, no more than 3,5 m	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.6	Diameter of the suction nozzle DN300	<input type="checkbox"/> Yes <input type="checkbox"/> No	

1.3.7	Pressure connection diameter DN200	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.8	Support frame size, length x width, no more than 2100 - 2300 x 650 - 750 mm	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.9	Power on the shaft at the operating point, P2, no more than 161 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.10	Electric motor power at the operating point, P1rt, no more than 166 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.11	The maximum power of the electric motor is set 200 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 4	<b>Pump unit with productivity at the working point (Q) not less than 235 m<sup>3</sup>/h and pressure at the working point (H) not less than 35 m of water complete with frequency converter</b>		
1.4	<b>Technical specifications of the pump</b>		
1.4.1	Flow rate (performance) at the operating point, Q, is no less than 235 m <sup>3</sup> /hour	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.4.2	Head at the working point, H, no less 35 m H <sub>2</sub> O	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.4.3	Hydraulic efficiency of the pump at the operating point, no less than 76 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.4.4	Total pump efficiency at the operating point, no less than 72 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.4.5	Required cavitation head (NPSH) at the operating point, no more than 8,5 m	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.4.6	Diameter of the suction nozzle DN125	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.4.7	Pressure connection diameter DN100	<input type="checkbox"/> Yes <input type="checkbox"/> No	



1.4.8	Support frame size, length x width, no more than 1100 - 1300 x 450 - 550 mm	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.4.9	Power on the shaft at the operating point, P2, no more than 33 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.4.10	Electric motor power at the operating point, P1rt, no more than 35 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.4.11	The maximum power of the electric motor is set 37 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.4.12	Electric motor power characteristic (Cos phi) - no less than 0,87	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.4.13	Motor efficiency at full load, not less 92 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.4.14	Motor efficiency at 1/2 load, not less 93 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.4.15	The sound pressure level of the pump together with the electric motor must not exceed 72 dB(A)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Item 5</b>	<b>Pump unit with productivity at the working point (Q) not less than 180 m3/h and pressure at the working point (H) not less than 45 m of water complete with frequency converter</b>		
<b>1.5</b>	<b>Technical specifications of the pump</b>		
1.5.1	Flow rate (performance) at the operating point, Q, is no less than 180 m³/hour	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.5.2	Head at the working point, H, no less 45 m H2O	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.5.3	Hydraulic efficiency of the pump at the operating point, no less than 78 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.5.4	Total pump efficiency at the operating point, no less than 74 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	

1.5.5	Required cavitation head (NPSH) at the operating point, no more than 5,5 m	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.5.6	Diameter of the suction nozzle DN100	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.5.7	Pressure connection diameter DN80	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.5.8	Support frame size, length x width, no more than 1100 - 1300 x 400 - 500 mm	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.5.9	Power on the shaft at the operating point, P2, no more than 33 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.5.10	Electric motor power at the operating point, P1rt, no more than 35 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.5.11	The maximum power of the electric motor is set 37 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.5.12	Electric motor power characteristic (Cos phi) - no less than 0,87	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.5.13	Motor efficiency at full load, not less 92 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.5.14	Motor efficiency at 1/2 load, not less 93 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.5.15	The sound pressure level of the pump together with the electric motor must not exceed 72 dB(A)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 6	<b>Pump unit with productivity at the working point (Q) not less than 240 m3/h and pressure at the working point (H) not less than 45 m of water complete with frequency converter</b>		
1.6	<b>Technical specifications of the pump</b>		
1.6.1	Flow rate (performance) at the operating point, Q, is no less than 240m³/hour	<input type="checkbox"/> Yes <input type="checkbox"/> No	

1.6.2	Head at the working point, H, no less 45 m H2O	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.6.3	Hydraulic efficiency of the pump at the operating point, no less than 80 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.6.4	Total pump efficiency at the operating point, no less than 76 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.6.5	Required cavitation head (NPSH) at the operating point, no more than 7,5 m	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.6.6	Diameter of the suction nozzle DN125	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.6.7	Pressure connection diameter DN100	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.6.8	Support frame size, length x width, no more than 1100 - 1300 x 450 - 550 mm	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.6.9	Power on the shaft at the operating point, P2, no more than 37 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.6.10	Electric motor power at the operating point, P1rt, no more than 40 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.6.11	The maximum power of the electric motor is set 45 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.6.12	Electric motor power characteristic (Cos phi) - no less than 0,89	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.6.13	Motor efficiency at full load, not less 93 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.6.14	Motor efficiency at 1/2 load, not less 93 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.6.15	The sound pressure level of the pump together with the electric motor must not exceed 72 dB(A)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Item 7</b>	<b>Pump unit with productivity at the working point (Q) not less than 150 m3/h and pressure at the working point (H)</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	

	<b>not less than 45 m of water complete with frequency converter</b>		
<b>1.7</b>	<b>Technical specifications of the pump</b>		
1.7.1	Flow rate (performance) at the operating point, Q, is no less than 150 m³/hour	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.7.2	Head at the working point, H, no less 45 m H2O	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.7.3	Hydraulic efficiency of the pump at the operating point, no less than 75 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.7.4	Total pump efficiency at the operating point, no less than 70 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.7.5	Required cavitation head (NPSH) at the operating point, no more than 4,2 m	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.7.6	Diameter of the suction nozzle DN100	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.7.7	Pressure connection diameter DN80	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.7.8	Support frame size, length x width, no more than 1100 - 1300 x 400 - 500 mm	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.7.9	Power on the shaft at the operating point, P2, no more than 25 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.7.10	Electric motor power at the operating point, P1rt, no more than 27 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.7.11	The maximum power of the electric motor is set 30 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.7.12	Electric motor power characteristic (Cos phi) - no less than 0,87	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.7.13	Motor efficiency at full load, not less 93 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	

1.7.14	Motor efficiency at 1/2 load, not less 93 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.7.15	The sound pressure level of the pump together with the electric motor must not exceed 72 dB(A)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Item 8</b>	<b>Pump unit with productivity at the working point (Q) not less than 65 m3/h and pressure at the working point (H) not less than 45 m of water complete with frequency converter</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>1.8</b>	<b>Technical specifications of the pump</b>		
1.8.1	Flow rate (performance) at the operating point, Q, is no less than 65m³/hour	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.8.2	Head at the working point, H, no less 45 m H2O	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.8.3	Hydraulic efficiency of the pump at the operating point, no less than 75 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.8.4	Total pump efficiency at the operating point, no less than 70 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.8.5	Required cavitation head (NPSH) at the operating point, no more than 2,8 m	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.8.6	Diameter of the suction nozzle DN65	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.8.7	Pressure connection diameter DN50	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.8.8	Support frame size, length x width, no more than 900 - 1100 x 350 - 450 mm	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.8.9	Power on the shaft at the operating point, P2, no more than 11 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.8.10	Electric motor power at the operating point, P1rt, no more than 12 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	

1.8.11	The maximum power of the electric motor is set 15 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.8.12	Electric motor power characteristic (Cos phi) - no less than 0,87	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.8.13	Motor efficiency at full load, not less 91 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.8.14	Motor efficiency at 1/2 load, not less 92 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.8.15	The sound pressure level of the pump together with the electric motor must not exceed 60 dB(A)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 9	<b>Pump unit with productivity at the working point (Q) not less than 250 m3/h and pressure at the working point (H) not less than 40 m of water complete with frequency converter</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.9	<b>Technical specifications of the pump</b>		
1.9.1	Flow rate (performance) at the operating point, Q, is no less than 250 m <sup>3</sup> /hour	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.9.2	Head at the working point, H, no less 40 m H <sub>2</sub> O	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.9.3	Hydraulic efficiency of the pump at the operating point, no less than 81 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.9.4	Total pump efficiency at the operating point, no less than 77 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.9.5	Required cavitation head (NPSH) at the operating point, no more than 8,0 m	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.9.6	Diameter of the suction nozzle DN125	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.9.7	Pressure connection diameter DN100	<input type="checkbox"/> Yes <input type="checkbox"/> No	

1.9.8	Support frame size, length x width, no more than 1100 - 1300 x 450 - 550 mm	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.9.9	Power on the shaft at the operating point, P2, no more than 38 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.9.10	Electric motor power at the operating point, P1rt, no more than 41 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.9.11	The maximum power of the electric motor is set 45 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.9.12	Electric motor power characteristic (Cos phi) - no less than 0,89	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.9.13	Motor efficiency at full load, not less 94 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.9.14	Motor efficiency at 1/2 load, not less 94 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.9.15	The sound pressure level of the pump together with the electric motor must not exceed 71 dB(A)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 10	<b>Pump unit with productivity at the working point (Q) not less than 120 m3/h and pressure at the working point (H) not less than 40 m of water complete with frequency converter</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.10.	<b>Technical specifications of the pump</b>		
1.10.1	Flow rate (performance) at the operating point, Q, is no less than 120 m³/hour	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.10.2	Head at the working point, H, no less 40 m H2O	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.10.3	Hydraulic efficiency of the pump at the operating point, no less than 75 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.10.4	Total pump efficiency at the operating point, no less than 71 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	

1.10.5	Required cavitation head (NPSH) at the operating point, no more than 5,4 m	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.10.6	Diameter of the suction nozzle DN80	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.10.7	Pressure connection diameter DN65	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.10.8	Support frame size, length x width, no more than 1100 - 1300 x 400 - 500 mm	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.10.9	Power on the shaft at the operating point, P2, no more than 16,75 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.10.10	Electric motor power at the operating point, P1rt, no more than 18,5 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.10.11	The maximum power of the electric motor is set 18,5 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.10.12	Electric motor power characteristic (Cos phi) - no less than 0,85	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.10.13	Motor efficiency at full load, not less 92 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.10.14	Motor efficiency at 1/2 load, not less 92 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.10.15	The sound pressure level of the pump together with the electric motor must not exceed 60 dB(A)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Item 11</b>	<b>Pump unit with productivity at the working point (Q) not less than 200 m<sup>3</sup>/h and pressure at the working point (H) not less than 35 m of water complete with frequency converter</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>1.11</b>	<b>Technical specifications of the pump</b>		
1.11.1	Flow rate (performance) at the operating point, Q, is no less than 200 m <sup>3</sup> /hour	<input type="checkbox"/> Yes <input type="checkbox"/> No	



1.11.2	Head at the working point, H, no less 35 m H <sub>2</sub> O	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.11.3	Hydraulic efficiency of the pump at the operating point, no less than 73 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.11.4	Total pump efficiency at the operating point, no less than 68 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.11.5	Required cavitation head (NPSH) at the operating point, no more than 5,8 m	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.11.6	Diameter of the suction nozzle DN100	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.11.7	Pressure connection diameter DN80	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.11.8	Support frame size, length x width, no more than 1100 - 1300 x 400 - 500 mm	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.11.9	Power on the shaft at the operating point, P <sub>2</sub> , no more than 28 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.11.10	Electric motor power at the operating point, P <sub>1rt</sub> , no more than 30 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.11.11	The maximum power of the electric motor is set 30 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.11.12	Electric motor power characteristic (Cos phi) - no less than 0,87	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.11.13	Motor efficiency at full load, not less 92 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.11.14	Motor efficiency at 1/2 load, not less 92 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.11.15	The sound pressure level of the pump together with the electric motor must not exceed 71 dB(A)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Item 12</b>	<b>Pump unit with productivity at the working point (Q) not less than 130 m<sup>3</sup>/h and pressure at the working point (H)</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	

	<b>not less than 40 m of water complete with frequency converter</b>		
<b>1.12</b>	<b>Technical specifications of the pump</b>		
1.12.1	Flow rate (performance) at the operating point, Q, is no less than 130 m³/hour	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.12.2	Head at the working point, H, no less 40 m H2O	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.12.3	Hydraulic efficiency of the pump at the operating point, no less than 77 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.12.4	Total pump efficiency at the operating point, no less than 70 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.12.5	Required cavitation head (NPSH) at the operating point, no more than 6,2 m	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.12.6	Diameter of the suction nozzle DN80	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.12.7	Pressure connection diameter DN65	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.12.8	Support frame size, length x width, no more than 1100 -1300 x 400 - 500 mm	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.12.9	Power on the shaft at the operating point, P2, no more than 18,5 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.12.10	Electric motor power at the operating point, P1rt, no more than 20,5 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.12.11	The maximum power of the electric motor is set 22 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.12.12	Electric motor power characteristic (Cos phi) - no less than 0,9	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.12.13	Motor efficiency at full load, not less 92,5 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	

1.12.14	Motor efficiency at 1/2 load, not less 94 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.12.15	The sound pressure level of the pump together with the electric motor must not exceed 66 dB(A)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Item 13</b>	<b>Pump unit with productivity at the working point (Q) not less than 190 m<sup>3</sup>/h and pressure at the working point (H) not less than 25 m of water complete with frequency converter</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>1.13.</b>	<b>Technical specifications of the pump</b>		
1.13.1	Flow rate (performance) at the operating point, Q, is no less than 190m <sup>3</sup> /hour	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.13.2	Head at the working point, H, no less 25 m H <sub>2</sub> O	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.13.3	Hydraulic efficiency of the pump at the operating point, no less than 79 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.13.4	Total pump efficiency at the operating point, no less than 74 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.13.5	Required cavitation head (NPSH) at the operating point, no more than 8,5 m	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.13.6	Diameter of the suction nozzle DN100	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.13.7	Pressure connection diameter DN80	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.13.8	Support frame size, length x width, no more than 1100 - 1300 x 400 - 500 mm	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.13.9	Power on the shaft at the operating point, P <sub>2</sub> , no more than 17 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.13.10	Electric motor power at the operating point, P <sub>1rt</sub> , no more than 18 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	

1.13.11	The maximum power of the electric motor is set 18,5 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.13.12	Electric motor power characteristic (Cos phi) - no less than 0,85	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.13.13	Motor efficiency at full load, not less 92 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.13.14	Motor efficiency at 1/2 load, not less 92 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.13.15	The sound pressure level of the pump together with the electric motor must not exceed 60 dB(A)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Item 14</b>	<b>Pump unit with productivity at the working point (Q) not less than 80 m3/h and pressure at the working point (H) not less than 40 m of water complete with frequency converter</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>1.14</b>	<b>Technical specifications of the pump</b>		
1.14.1	Flow rate (performance) at the operating point, Q, is no less than 80 m <sup>3</sup> /hour	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.14.2	Head at the working point, H, no less 40 m H <sub>2</sub> O	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.14.3	Hydraulic efficiency of the pump at the operating point, no less than 82 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.14.4	Total pump efficiency at the operating point, no less than 76 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.14.5	Required cavitation head (NPSH) at the operating point, no more than 3,0 m	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.14.6	Diameter of the suction nozzle DN65	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.14.7	Pressure connection diameter DN50	<input type="checkbox"/> Yes <input type="checkbox"/> No	

1.14.8	Support frame size, length x width, no more than 800 -900 x 200 - 300 mm	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.14.9	Power on the shaft at the operating point, P2, no more than 11 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.14.10	Electric motor power at the operating point, P1rt, no more than 12 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.14.11	The maximum power of the electric motor is set 15 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.14.12	Electric motor power characteristic (Cos phi) - no less than 0,89	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.14.13	Motor efficiency at full load, not less 91 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.14.14	Motor efficiency at 1/2 load, not less 92 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.14.15	The sound pressure level of the pump together with the electric motor must not exceed 70 dB(A)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 15	<b>Pump unit with productivity at the working point (Q) not less than 190 m3/h and pressure at the working point (H) not less than 45 m of water complete with frequency converter</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.15	<b>Technical specifications of the pump</b>		
1.15.1	Flow rate (performance) at the operating point, Q, is no less than 190 m³/hour	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.15.2	Head at the working point, H, no less 45 m H2O	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.15.3	Hydraulic efficiency of the pump at the operating point, no less than 78 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.15.4	Total pump efficiency at the operating point, no less than 74 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	

1.15.5	Required cavitation head (NPSH) at the operating point, no more than 5,5 m	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.15.6	Diameter of the suction nozzle DN100	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.15.7	Pressure connection diameter DN80	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.15.8	Support frame size, length x width, no more than 1100 -1300 x 350 - 450 mm	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.15.9	Power on the shaft at the operating point, P2, no more than 33 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.15.10	Electric motor power at the operating point, P1rt, no more than 35 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.15.11	The maximum power of the electric motor is set 37 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.15.12	Electric motor power characteristic (Cos phi) - no less than 0,88	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.15.13	Motor efficiency at full load, not less 92 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.15.14	Motor efficiency at 1/2 load, not less 93 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.15.15	The sound pressure level of the pump together with the electric motor must not exceed 71 dB(A)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 16	<b>Pump unit with productivity at the working point (Q) not less than 180 m<sup>3</sup>/h and pressure at the working point (H) not less than 50 m of water complete with frequency converter</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.16	<b>Technical specifications of the pump</b>		
1.16.1	Flow rate (performance) at the operating point, Q, is no less than 180 m <sup>3</sup> /hour	<input type="checkbox"/> Yes <input type="checkbox"/> No	

1.16.2	Head at the working point, H, no less 50 m H <sub>2</sub> O	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.16.3	Hydraulic efficiency of the pump at the operating point, no less than 74 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.16.4	Total pump efficiency at the operating point, no less than 78 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.16.5	Required cavitation head (NPSH) at the operating point, no more than 5 m	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.16.6	Diameter of the suction nozzle DN100	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.16.7	Pressure connection diameter DN80	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.16.8	Support frame size, length x width, no more than 1000 -1100 x 300 - 400 mm	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.16.9	Power on the shaft at the operating point, P <sub>2</sub> , no more than 32 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.16.10	Electric motor power at the operating point, P <sub>1rt</sub> , no more than 34 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.16.11	The maximum power of the electric motor is set 37 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.16.12	Electric motor power characteristic (Cos phi) - no less than 0,88	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.16.13	Motor efficiency at full load, not less 93 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.16.14	Motor efficiency at 1/2 load, not less 93 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.16.15	The sound pressure level of the pump together with the electric motor must not exceed 67 dB(A)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Item 17</b>	<b>Pump unit with productivity at the working point (Q) not less than 70 m<sup>3</sup>/h and pressure at the working point (H)</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	

	<b>not less than 50 m of water complete with frequency converter</b>		
<b>1.17</b>	<b>Technical specifications of the pump</b>		
1.17.1	Flow rate (performance) at the operating point, Q, is no less than 70 m³/hour	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.17.2	Head at the working point, H, no less 50 m H2O	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.17.3	Hydraulic efficiency of the pump at the operating point, no less than 76 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.17.4	Total pump efficiency at the operating point, no less than 71 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.17.5	Required cavitation head (NPSH) at the operating point, no more than 3 m	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.17.6	Diameter of the suction nozzle DN65	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.17.7	Pressure connection diameter DN50	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.17.8	Support frame size, length x width, no more than 800 -900 x 250 - 350 mm	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.17.9	Power on the shaft at the operating point, P2, no more than 13 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.17.10	Electric motor power at the operating point, P1rt, no more than 14 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.17.11	The maximum power of the electric motor is set 15 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.17.12	Electric motor power characteristic (Cos phi) - no less than 0,89	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.17.13	Motor efficiency at full load, not less 91 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	



1.17.14	Motor efficiency at 1/2 load, not less 92 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.17.15	The sound pressure level of the pump together with the electric motor must not exceed 70 dB(A)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Item 18</b>	<b>Pump unit with productivity at the working point (Q) not less than 90 m<sup>3</sup>/h and pressure at the working point (H) not less than 40 m of water complete with frequency converter</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>1.18</b>	<b>Technical specifications of the pump</b>		
1.18.1	Flow rate (performance) at the operating point, Q, is no less than 90 m <sup>3</sup> /hour	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.18.2	Head at the working point, H, no less 40 m H <sub>2</sub> O	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.18.3	Hydraulic efficiency of the pump at the operating point, no less than 83 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.18.4	Total pump efficiency at the operating point, no less than 77 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.18.5	Required cavitation head (NPSH) at the operating point, no more than 4 m	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.18.6	Diameter of the suction nozzle DN65	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.18.7	Pressure connection diameter DN50	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.18.8	Support frame size, length x width, no more than 800 -900 x 250 - 350 mm	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.18.9	Power on the shaft at the operating point, P <sub>2</sub> , no more than 12 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.18.10	Electric motor power at the operating point, P <sub>1rt</sub> , no more than 13 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	

1.18.11	The maximum power of the electric motor is set 15 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.18.12	Electric motor power characteristic (Cos phi) - no less than 0,89	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.18.13	Motor efficiency at full load, not less 91 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.18.14	Motor efficiency at 1/2 load, not less 92 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.18.15	The sound pressure level of the pump together with the electric motor must not exceed 70 dB(A)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>2</b>	<b>General minimum technical requirements to the pumps (applicable to items 1 to 3 above)</b>		
2.1	Non-self-priming horizontal single-stage centrifugal pump with double-suction, radial suction and discharge passages and horizontal shaft. Suction and discharge flanges comply with EN1092-2 (DIN2501)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.2	Pump connections are flanged, designed for nominal pressure PN16.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.3	The pump and motor shafts are connected by an elastic coupling. A coupling guard must be installed. The coupling guard must be easily removable or equipped with a hatch for access to the coupling.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.4	The pump unit must be mounted on a single frame base made in the form of a welded steel bearing profile with a standard fan-cooled closed-type electric motor.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.5	The pumps must be equipped with a dynamically balanced impeller with two-way inlet;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.6	The casing of the pump unit must have air vent plugs at the upper points of the casing.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.7	The casing of the pump unit must have holes for mounting pressure sensors on the suction and discharge connections.	<input type="checkbox"/> Yes <input type="checkbox"/> No	

2.8	The pump must have mechanical shaft seals	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.9	The direction of rotation is counterclockwise (from the motor side).	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.10.	The pump unit must have an external anti-corrosion coating.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.11	Permissible temperature range of the pumped liquid: + 2°C до +120°C.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.12	Pump casing - cast iron EN-GJL-250 or better;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.13	Impeller - stainless steel EN 1.4308 or better;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.14	Shaft - stainless steel EN 1.4021 / AISI 420 or better;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.15	Type of mechanical shaft end seal - rubber bellows seal, unbalanced. Material - graphite (Carbon) + silicon carbide (SiC), material of the secondary rubber seal - EPDM	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.16	The electric motor of the pumping unit must be a three-phase, asynchronous, squirrel-cage AC motor. Electrical tolerances must be in accordance with IEC 60034.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.17	- The energy efficiency class of the electric motor is not lower than IE4	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.18	- The motor must have insulation class F.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.19	- Bearings must be lubricated with high temperature grease. Bearings must be lubricated at the factory before delivery.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.20.	- Electric motor supply voltage 380-415V (±5%), rated frequency 50 Hz.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.21	- The motor must have built-in thermal protection in the form of thermistors (PTC), one for each phase	<input type="checkbox"/> Yes <input type="checkbox"/> No	

2.22	- The protection class of the electric motor is at least IP55	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.23	- The power characteristic of the electric motor (Cos phi) is not less than 0.85.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.24	- Number of poles - not less than 4	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.25	- The sound pressure level of the pump together with the electric motor should not exceed 75 dB.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.26	The electric motor must be ready for operation in conjunction with the frequency converter. The motor bearing must be electrically isolated for operation with the frequency converter. The frequency control range must be at least: 25 Hz to 50 Hz	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.27	All pump materials must comply with international environmental standards such as REACH and RoHS	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>3</b>	<b>General minimum technical requirements to the pumps (applicable to items 4 to 18 above)</b>		
3.1	Horizontal cantilever monoblock non-self-priming single-stage centrifugal pump with axial suction nozzle and radial discharge nozzle	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.2	The pump must be designed in such a way that the impeller and electric motor can be dismantled as a single unit without dismantling the casing or piping	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.3	The MEI(minimum efficiency index) must be at least 0.67.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.4	Pump flanges must comply with EN 1092-2 (PN16)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.5	The pump casing should be equipped with a gap seal.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.6	The pump casing must have two holes (inlet and outlet) closed with plugs.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.7	The air vent should be located at the top of the pump.	<input type="checkbox"/> Yes <input type="checkbox"/> No	

3.8	The pump shall be equipped with a closed impeller	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.9	The impeller must be fixed to the shaft with a key and secured with a lock nut.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.1	The direction of rotation of the impeller must be clockwise when viewed from the motor side.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.11	All cast iron parts of the pump must be coated with a protective coating by cathodic electro-deposition. The coupling and the pump shaft are not covered with a protective coating.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.12	The pump shaft must be made of steel 1.4034 (AISI 420) or better	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.13	The pump must be equipped with a shaft mechanical seal, made of graphite / silicon carbide materials	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.14	Permissible temperature range of the pumped liquid: up to +120°C	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.15	The maximum ambient temperature is at least 55 °C.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.16	Pump casing - cast iron EN-GJL-250 or better;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.17	Impeller - cast iron EN-GJL-200 or better;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.18	Shaft - stainless steel EN 1.4301 / AISI 304 or better;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.19	Type of mechanical shaft end seal - rubber bellows seal, unbalanced. Material - graphite (Carbon) + silicon carbide (SiC), material of the secondary rubber seal - EPDM	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.20.	The electric motor of the pumping unit must be a three-phase, asynchronous, squirrel-cage AC motor. Electrical tolerances must be in accordance with IEC 60034.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.21	- The energy efficiency class of the electric motor is not lower than IE3	<input type="checkbox"/> Yes <input type="checkbox"/> No	

3.22	- The motor must have insulation class F.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.23	- Bearings must be lubricated at the factory before delivery.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.24	- Electric motor supply voltage 380-415V ( $\pm 5\%$ ), rated frequency 50 Hz.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.25	- The motor must have built-in thermal protection in the form of thermistors (PTC), one for each phase	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.26	- The protection class of the electric motor is at least IP55	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.27	The electric motor must be ready for operation in conjunction with the frequency converter.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>4</b>	<b>General minimum technical requirements to the frequency converter (applicable to items 1 to 18 above)</b>		
4.1	The frequency converter is designed exclusively for the control of pumping units and must be equipped with an integrated PI controller	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.2	The frequency converter has the following functions:	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.2.1	- Maintaining a constant pressure;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.2.2	- Maintaining a constant level;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.2.3	- Maintaining a constant temperature;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.2.4	- Maintaining a constant differential pressure;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.2.5	- Maintaining consistent performance;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.2.6	- Control without feedback	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.2.7	- Automatically checks and sets the correct direction of rotation.	<input type="checkbox"/> Yes <input type="checkbox"/> No	

4.2.8	- Run/Reserve function to increase system reliability and ensure uniform pump operation.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.2.9	- Integrated dry-running protection function	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.2.10	- Calculating and displaying the specific electricity on the screen in the menu (when connected to a frequency converter flow meter)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.2.11	- Alarm log (displays the five most recent alarms) and a warning log (displays the five most recent warning signals) in the menu	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.2.12	- Frequency converters support network integration for real-time data analysis and remote monitoring.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.3	The frequency converter has the following electrical inputs and outputs:	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.3.1	- RS-485 communication port	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.3.2	- Analog input 0-10 V for external setpoint.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.3.3	- Analog input 0 / 4-20 mA for external setpoint.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.3.4	- Analog input 0 / 4-20 mA for sensor.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.3.5	- Four digital inputs for various functions, e.g. external start/stop, etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.3.6	- Two alarm relay outputs (C/NO/NC).	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.4	Technical characteristics of the frequency converter:	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.4.1	- rated power - P2: according to the rated power of the pump;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.4.2	- voltage range: 3x380-500V (380- 440V / 441 - 500V);	<input type="checkbox"/> Yes <input type="checkbox"/> No	

4.4.3	- protection class - IP54 or better	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.4.4	- rated current: according to the pump current	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.4.5	- Efficiency at maximum load: 98 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.4.6	- ambient temperature range 0 .. 40 °C	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.4.7	- Relative humidity: 5...95 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.5	The frequency converter has the following functions to protect the pump motor:	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.5.1	- from poor grounding.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.5.2	- short circuit protection	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.5.3	- overload and blockage.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.5.4	- from overheating	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>5</b>	<b>Other requirements</b>		
5.1	Bid includes brand/model of the goods and manufacturer's technical literature/catalogue, all confirming that the offered items comply with required specifications.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
5.2	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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	



5.3	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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
5.4	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 English and/or Ukrainian) • Maintenance guidelines (in Ukrainian or English). All tags/labels on the equipment shall be in English or Ukrainian language.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
5.5	Bid includes the total volume of the Goods in M3 and gross weight of the goods in KG.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
5.6	Bid includes the Country of origin of the goods and FCA point of delivery.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
5.7	Product compatibility within this Lot is confirmed with all its subsets (Lots 1.1, 1.2, and 1.3). 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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
6	<b>To confirm the requirements for technical and quality characteristics of the equipment , the Bidder shall provide:</b>		
6.1	An official letter from the manufacturer, its subsidiary or official representative in Ukraine stating that the equipment is delivered in its original packaging and is fully ready for use	<input type="checkbox"/> Yes <input type="checkbox"/> No	
6.2	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	<input type="checkbox"/> Yes <input type="checkbox"/> No	

6.3	An official letter from the manufacturer, its subsidiary or official representative in Ukraine stating that the frequency converter are CE marked in accordance with the current European directives.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
6.4	ISO 9001, 14001 certificates of the manufacturer of the product offered by the participant.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
6.5	Electronic copies of technical documentation for the equipment:	<input type="checkbox"/> Yes <input type="checkbox"/> No	
6.6.1	- technical passport and excerpts from the manufacturer's technical catalogs (with technical specifications, description of construction and materials, drawings of overall dimensions, functionality, etc.);	<input type="checkbox"/> Yes <input type="checkbox"/> No	
6.6.2	- installation and operating manuals;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
6.6.3	- warranty card with a list of official service center(s) in Ukraine.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
6.7	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)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
6.8	An official letter from the manufacturer, its subsidiary or official representative in Ukraine, stating that the company has a certified service center authorized by the manufacturer to provide prompt warranty and post-warranty service. The official letter must include the address of the certified service center	<input type="checkbox"/> Yes <input type="checkbox"/> No	

**C.1. Delivery requirements for Lot 1.1**

UNOPS Requirements		Is the bid compliant? Bidder to complete	Details Bidder to complete
<b>Delivery time</b>	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) <b>delivered and unloaded only, Mykolaiv region: Mykolaiv city.</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	

<b>Delivery place and Incoterms rules</b>	DAP (customs cleared) Incoterms 2020 ( <b>delivered at place and unloaded</b> ) customs cleared <b>Mykolaiv region: Mykolaiv city</b> , net of any direct taxes, customs duties, or indirect taxes.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Consignee details</b>	Delivery address and consignee details will be provided to the successful Bidder(s)	<input type="checkbox"/> Yes <input type="checkbox"/> No	

**Lot 1.2 Valves**

N	UNOPS minimum technical requirements	Is Bid Compliant? Bidder to complete	Details of the offered goods. Bidder to complete
<b>Lot 1</b>	<b>Pumps with supplies</b>		
<b>1.2</b>	<b>Valves</b>		
Item 1	Ball flange full-pass valve with a reducer (with manual drive) DN 400/PN16 ( Kvs not less 37000 m3/h ) 2 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 2	Ball valve full-pass flange with reducer (with manual drive) DN 350/PN16 ( Kvs not less 30000 m3/h ) 6 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 3	Ball valve full-pass flange with reducer (with manual drive) DN 300/PN16 ( Kvs not less 24000 m3/h ) 4 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 4	Ball valve full-pass flange with gearbox (with manual drive) DN 200/PN16 ( Kvs not less 11000 m3/h ) 12 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 5	Ball valve full-pass flange with a gearbox (with manual drive) DN 150/PN16 ( Kvs not less 6100 m3/h ) 6 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 6	Ball valve full-pass flange DN 100/PN16 ( Kvs not less 2300 m3/h ) 16 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 7	Ball valve full-pass flange DN 125/PN16 ( Kvs not less 3700 m3/h ) 10 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 8	Ball valve full-pass flange DN 80/PN16 ( Kvs not less 1100 m3/h ) 10 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 9	Ball valve full-pass flange DN 65/PN16 ( Kvs not less 800 m3/h ) 6 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	

Item 10	Check valve two-leaf spring-loaded inter-flange DN350/PN16 2 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 11	Check valve two-leaf spring-loaded inter-flange DN300/PN16 4 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 12	Check valve two-leaf spring-loaded inter-flange DN200/PN16 6 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 13	Check valve two-leaf spring-loaded inter-flange DN150/PN16 2 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 14	Check valve two-leaf spring-loaded inter-flange DN100/PN16 10 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 15	Check valve two-leaf spring-loaded inter-flange DN125/PN16 2 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 16	Check valve two-leaf spring-loaded inter-flange DN80/PN16 4 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 17	Check valve two-leaf spring-loaded inter-flange DN65/PN16 6 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>2</b>	<b>General minimum technical requirements (applicable to items 1 to 9 above)</b>		
2.1	Maximum working environment temperature - not less 150°C,	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.2	Maximum conditional pressure – 16 МПа	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.3	The body of the ball valve must be all-welded steel.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.4	The main parts of ball valves shall be made of the materials specified below or of better quality (with mandatory justification). - body - carbon steel - the ball - stainless steel; - ball seal is PTFE reinforced with carbon fiber; - stem - stainless steel; - stem seal - PTFE-Graphite; - flanges EN1092 (ГОСТ12815) - carbon steel;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.5	Valves have additional corrosion-resistant coatings suitable for intended environmental conditions.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.5	Valves are compatible with both manual operations and future actuator integrations.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>3</b>	<b>General minimum technical requirements (applicable to items 10 to 17 above)</b>		
3.1	Working environment is water.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.2	Maximum conditional pressure – 16 MPa	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.3	Maximum working temperature - not less than 100 C	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.4	Materials and construction (must be confirmed in the datasheet):	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.4.1	- Execution type: two-leaf spring-loaded.	<input type="checkbox"/> Yes <input type="checkbox"/> No	

3.4.2	- The working position is vertical and horizontal.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.4.3	- Body - cast iron EN-GJL-250 or better.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.4.4	- Plates (leaf) - stainless steel (AISI 304) or better.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.4.5	Valves specific leakage classification of Class IV as defined by ANSI/FCI 70-2 (or European Equivalent standard IEC 60534-4) to ensure minimal leakage.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.4.6	Materials for valves meet impact resistance standards to handle sudden pressure changes.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>4</b>	<b>Other requirements</b>		
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.	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> 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 English and/or Ukrainian) • Maintenance guidelines (in Ukrainian or English). All tags/labels on the equipment shall be in English or Ukrainian language.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.5	Bid includes the total volume of the Goods in M3 and gross weight of the goods in KG.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.6	Bid includes the Country of origin of the goods and FCA point of delivery.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.7	Product compatibility within this Lot is confirmed with all its subsets (Lots 1.1, 1.2, and 1.3). 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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>5</b>	<b>To confirm the requirements for technical and quality characteristics of the equipment , the Bidder shall provide:</b>		

5.1	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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
5.2	ISO 9001, 14001, 45001, PED 2014/68/EU certificates of the manufacturer of the product offered by the participant.	<input type="checkbox"/> Yes <input type="checkbox"/> No	

**C.1. Delivery requirements for Lot 1.2**

UNOPS Requirements		Is the bid compliant? Bidder to complete	Details Bidder to complete
<b>Delivery time</b>	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) <b>delivered and unloaded only, Mykolaiv region: Mykolaiv city.</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Delivery place and Incoterms rules</b>	DAP (customs cleared) Incoterms 2020 ( <b>delivered at place and unloaded</b> ) customs cleared <b>Mykolaiv region: Mykolaiv city</b> , net of any direct taxes, customs duties, or indirect taxes.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Consignee details</b>	Delivery address and consignee details will be provided to the successful Bidder(s)	<input type="checkbox"/> Yes <input type="checkbox"/> No	

**Lot 1.3 Pipeline details ( Flanges and reducers)**

N	UNOPS minimum technical requirements	Is Bid Compliant? Bidder to complete	Details of the offered goods. Bidder to complete
<b>Lot 1</b>	<b>Pumps with supplies</b>		
<b>1.3</b>	<b>Pipeline details ( Flanges and reducers)</b>		
Item 1	Flat welded steel flange DN400/PN16 - 4 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 2	Flat welded steel flange DN350/PN16 - 18 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 3	Flat welded steel flange DN250/PN16 - 2 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 4	Flat welded steel flange DN300/PN16 - 20 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 5	Flat welded steel flange DN200/PN16 - 30 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 6	Flat welded steel flange DN125/PN16 - 38 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 7	Flat welded steel flange DN80/PN16 - 36 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 8	Flat welded steel flange DN100/PN16 - 80 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 9	Flat welded steel flange DN150/PN16 - 20 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 10	Flat welded steel flange DN50/PN16 - 8 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 11	Flat welded steel flange DN65/PN16 - 24 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 12	Eccentric reducers 426*377 - 2 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 13	Concentric reducers 377*273 - 2 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	

Item 14	Eccentric reducers 377*325 - 4 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 15	Concentric reducers 325*219 - 4 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 16	Eccentric reducers 133*219 - 4 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 17	Concentric reducers 108*219 - 6 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 18	Concentric reducers 89*219 - 2 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 19	Eccentric reducers 108*159 - 2 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 20	Concentric reducers 89*159 - 2 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 21	Eccentric reducers is 108*76 - 2 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 22	Concentric reducers 108*57 - 2 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 23	Eccentric reducers 133*108 - 10 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 24	Concentric reducers 159*133 - 2 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 25	Eccentric reducers 108*89 - 12 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 26	Concentric reducers 89*76 - 10 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Item 27	Eccentric reducers 76*89 - 6 pcs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>1</b>	<b>General minimum technical requirements (applicable to items 1 to 11 above)</b>		
1.1	Material - carbon steel,	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2	Maximum conditional pressure – 16 МПа	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3	Standard - EN1092 (ДСТУ 12820)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.4	Protective coatings for steel flanges to prevent corrosion.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.5	Surface finish is of stock finish for flange faces to ensure proper sealing.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>2</b>	<b>General minimum technical requirements (applicable to items 12 to 27 above)</b>		
2.1	Material - carbon steel	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.2	Standard - ISO 3419 (ДСТУ 17378)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.3	All components come with a mill test certificate confirming material properties.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>3</b>	<b>Other requirements</b>		
3.1	Bid includes brand/model of the goods and manufacturer's technical literature/catalogue, all confirming that the offered items comply with required specifications.	<input type="checkbox"/> Yes <input type="checkbox"/> No	

3.2	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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.3	Bid includes the total volume of the Goods in M3 and gross weight of the goods in KG.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.4	Bid includes the Country of origin of the goods and FCA point of delivery.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.5	Materials and processes to comply with environmental regulations like REACH and RoHS.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.6	Product compatibility within this Lot is confirmed with all its subsets (Lots 1.1, 1.2, and 1.3). 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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4	<b>To confirm the requirements for technical and quality characteristics of the equipment , the Bidder shall provide:</b>		
4.1	An official letter from the bidders , that the components meet the standards of EN1092 (ДСТУ 12820) and ISO 3419 (ДСТУ 17378) and will be marked in accordance with EN1092 (ДСТУ 12820) and ISO 3419 (ДСТУ 17378) upon delivery	<input type="checkbox"/> Yes <input type="checkbox"/> No	

**C.1. Delivery requirements for Lot 1.3**

UNOPS Requirements		Is the bid compliant? Bidder to complete	Details Bidder to complete
<b>Delivery time</b>	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) <b>delivered and unloaded only, Mykolaiv region: Mykolaiv city.</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Delivery place and Incoterms rules</b>	DAP (customs cleared) Incoterms 2020 ( <b>delivered at place and unloaded</b> ) customs cleared <b>Mykolaiv region: Mykolaiv city</b> , net of any direct taxes, customs duties, or indirect taxes.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Consignee details</b>	Delivery address and consignee details will be provided to the successful Bidder(s)	<input type="checkbox"/> Yes <input type="checkbox"/> No	



**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 m<sup>3</sup>/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
<b>Lot 2</b>	<b>Pumps with supplies</b>		
<b>2.1</b>	<b>Two-way inlet pump on a common frame with productivity at the working point (Q) not less than 380 m<sup>3</sup>/h and pressure at the working point (H) not less than 82 m of water complete with control cabinet with frequency regulation - 1 Unit</b>		
<b>1.1</b>	<b>Minimum technical requirements to the pump:</b>		
1.1.1	productivity at the working point (Q) – not less than 380 m <sup>3</sup> /h;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.2	pressure at the working point (H) – not less than 82 m of water.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.3	The hydraulic efficiency of the pump at the operating point is not lower than 80%.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.4	anti-cavitation reserve at the working point (NPSH) - no more than 3,0 m.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.5	Stainless steel impeller (AISI 304 EN 1.4308) or better	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.6	Pump housing – cast iron EN 1561 EN-GJL-250 ASTM A48 or better	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.7	Shaft – stainless steel EN 1.4021 AISI 420 or better	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.8	Wear ring: Brass ASTM B584, C90500 or better	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.9	mechanical shaft seal - Carbon)/Silicon carbide (SiC), rubber seal (EPDM).	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.10	The pump unit must have an external anti-corrosion coating.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.11	Pump rotation direction – CCW (counter-clock wise)	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.13	The protective cover of the clutch must be installed	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.14	Pumps must be equipped with a dynamically balanced impeller with double-suction design	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.15	Balanced mechanical shaft seal, the shaft seal shall be suitable for a liquid temperature range of 0° C to +100° C.	<input type="checkbox"/> Yes <input type="checkbox"/> No	

1.1.16	The housing of the pump unit must have air vent plugs at the upper points of the housing	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.18	Bearings must have a maximum service life (L10h) of at least 100,000 hours	<input type="checkbox"/> Yes <input type="checkbox"/> 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).	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.20	Specify inlet and outlet flanges to meet international standards for global system compatibility.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.21	Maximum vibration and noise levels meet environmental and safety standards.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	Dimensions:		
1.1.22	the diameter of the inlet of the pump : DN200	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.23	the diameter of the outlet of the pump : DN150	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.24	maximum operating pressure – PN10	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.25	connecting coupling without spacer	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.26	the pump must be equipped with an isolated bearing	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>1.2</b>	<b>Minimum technical requirements to the the electric motor:</b>		
1.2.1	The electric motor must be adapted to work with a frequency converter	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.2	nominal power on the shaft (P2) – not more 132 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.3	power on the shaft at the working point (P2 work) - no more than 106 kW	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.4	nominal supply voltage - 3 x 380...400 V; nominal frequency 50 Hz	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.5	energy efficiency class of the electric motor – IE3 or better	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.6	motor efficiency (at full loading) - no less 95.6 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.7	insulation class – F	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.8	the number of poles of the electric motor - 4	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.9	the electric motor must have built-in thermal protection in the form of thermistors (PTC) one for each phase	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.10	protection class – IP55	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.11	maximum current consumption: not more 240 A	<input type="checkbox"/> Yes <input type="checkbox"/> No	

1.2.12	power factor Cos Phi – no less 0,89	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.13	the range of frequency regulation should be in the range from 25 to 50 Hz	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>1.3</b>	<b>Minimum technical requirements to the control cabinet:</b>		
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.	<input type="checkbox"/> Yes <input type="checkbox"/> 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;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.2.2	– manual regulation of pump revolutions (performance) from 10% to 100% of the nominal value from the panel;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.2.3	– smooth acceleration and stopping of the pump;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.2.4	- collection of information about the condition of the pump (nominal current, power consumption, working hours, electricity consumption accounting);	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.2.5	– display of pump parameters and operating modes;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.2.6	– detection and indication of pre-emergency and emergency conditions;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.2.7	- two modes of operation: <ul style="list-style-type: none"> <li>• automatic - from the frequency converter (automatic adjustment of pump revolutions/performance according to the signal from the pressure sensor 4..20mA) ;</li> <li>• manual - regulation of pump revolutions (performance) from 10% to 100% of the nominal value from the panel ;</li> </ul>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.3	Main technical characteristics:		
1.3.3.1	- nominal supply voltage - 380V;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.3.2	– power supply frequency - 50 Hz;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.3.3	– nominal electric power - not less than 132 kW;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.3.4	– nominal current - not less than 260 A;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.3.5	– output frequency - 10 ... 60 Hz;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.3.6	– overload capacity - 110%;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.3.7	– ambient temperature without reducing operating characteristics - from -15 to +50 C;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.3.8	– the number of discrete inputs, at least 2 pcs.;	<input type="checkbox"/> Yes <input type="checkbox"/> No	

1.3.3.9	– the number of analog inputs, at least 2 pcs.;	<input type="checkbox"/> Yes <input type="checkbox"/> 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);	<input type="checkbox"/> Yes <input type="checkbox"/> 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);	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.3.12	- the possibility of controlling and monitoring the parameters of the frequency converter.	<input type="checkbox"/> Yes <input type="checkbox"/> 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;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.4.2	– coating - powder paint;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.4.3	- degree of protection when the door is closed - at least IP21.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.4.4	- cable entry from below.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.4.5	– overall dimensions no more than: height 2000 mm, width 1000 mm, depth 600 mm;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.5	The following must be installed in the control cabinet:	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.5.1	- frequency converter of the AQUADRIIVE FC202 type, power not less than 132 kW,	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.5.2	- an automatic switch with a rating of at least 260A and a breaking capacity of at least 15 kA.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.5.3	- fast-acting fuses with gS or gR /aR characteristics.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.5.6	- system of forced automatic ventilation, equipped with air filters;	<input type="checkbox"/> Yes <input type="checkbox"/> 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;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.6.2	- control elements ("more" and "less" buttons) for manual regulation of electric motor revolutions.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.6.3	- LED indicators of pump operation: network, operation, emergency.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>2</b>	<b>Other requirements</b>		
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.	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> 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 English and/or Ukrainian) • Maintenance guidelines (in Ukrainian or English). All tags/labels on the equipment shall be in English or Ukrainian language.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.5	Bid includes the total volume of the Goods in M3 and gross weight of the goods in KG.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.6	Bid includes the Country of origin of the goods and FCA point of delivery.	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3	<b>To confirm the requirements for technical and quality characteristics of the pumps and control cabinet, the Bidder shall provide:</b>		
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).	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.5	A valid the conclusion of the sanitary and epidemiological examination on the pumps and control cabinet.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.6	Valid international certificates ISO 9001 and ISO 14001 for the production facilities where the pumps and control cabinet are manufactured.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.7	Electronic copies of technical documentation for the pumps and control cabinet:	<input type="checkbox"/> Yes <input type="checkbox"/> 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.);	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.8.2	- installation and operating manuals;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.8.3	- warranty card with a list of official service center(s) in Ukraine.	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	

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

UNOPS Requirements		Is the bid compliant? Bidder to complete	Details Bidder to complete
<b>Delivery time</b>	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) <b>delivered and unloaded only, Mykolaiv region: Bashtanka city.</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Delivery place and Incoterms rules</b>	DAP (customs cleared) Incoterms 2020 ( <b>delivered at place and unloaded</b> ) customs cleared <b>Mykolaiv region: Bashtanka city</b> , net of any direct taxes, customs duties, or indirect taxes.	<input type="checkbox"/> Yes <input type="checkbox"/> No	

<b>Consignee details</b>	Delivery address and consignee details will be provided to the successful Bidder(s)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
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**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
<b>Lot 2</b>	<b>Pumps with supplies</b>		
<b>2.2</b>	<b>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</b>		
<b>1.1</b>	<b>Minimum technical requirements to the pump:</b>		
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%.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.2	The pump is designed for periodic and continuous operation in a submerged or dry position, with a motor cooling jacket.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.3	The pump must have a self-cleaning semi-open impeller	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.5	The pump must be supplied complete with an electric motor with energy efficiency class IE3 or better.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.6	The pump must have built-in motor protection - three thermal switches to protect against overheating, one in each stator winding;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.7	The pump must have a double mechanical end seal of the cartridge type shaft	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.8	productivity at the working point (Q) – not less than 180 m3/h;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.9	pressure at the working point (H) – not less than 30,5 m of water.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.10	anti-cavitation reserve at the working point (NPSH) - no more than 7,6 m.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.11	the maximum performance of the pump (Q max) – not less than 300 m3/h;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.12	the maximum pressure of the pump (H max) – not less than 52 m of water.	<input type="checkbox"/> Yes <input type="checkbox"/> No	

1.1.13	The efficiency of the pump at the operating point is not less than 72,5%;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.14	Total efficiency at the operating point – not less than 62,5 %;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.15	the temperature of the pumped liquid is not less than 40 degrees Celsius	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.16	the diameter of the inlet of the pump : DN100	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.17	the diameter of the outlet of the pump : DN100	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.18	Pump and motor housing, impeller and suction cone - cast iron EN 1561 EN-GJL-250 or better	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.19	The pump housing and impeller must have a cataphoretic coating.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.20	Electric motor cooling jacket - stainless steel 1.4301 / AISI 304 or better;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.21	Pump shaft with rotor - duplex stainless steel 1.4462 or better;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.22	O-ring seals - NBR or better.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.23	Abrasion-resistant coatings for components exposed to solids in sewage.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>1.2</b>	<b>Minimum technical requirements to the the electric motor:</b>		
1.2.1	nominal power on the shaft (P2) – not more 22 kW;	<input type="checkbox"/> Yes <input type="checkbox"/> 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;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.4	electric power consumed at the working point (P1 work) – no more than 23,5 kW;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.5	nominal supply voltage - 3 x 380...415 V;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.6	voltage deviation tolerance: +10 /- 10%;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.7	power factor Cos Phi (at 100% load) - not less 0,89	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.8	nominal rotation speed – 2900...3000 rpm	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.9	start type (cable connection) – star-delta" (Y/D)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.10	protection class – IP68;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.11	insulation class – H or better	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.12	The maximum number of launches per hour – at least 20	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.13	The electric motor must be equipped with a power cable with length of at least 10 m.	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>1.3</b>	<b>Minimum technical requirements to the control cabinet:</b>		
1.3.1	Control cabinet for one three-phase sewage pump, with controller for waste water and its complex protection against emergency modes, with star/delta start	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.3	Cabinet equipment and functionality:		
	Control cabinet for one three-phase sewage pump, with controller for waste water and its complex protection against emergency modes, with star/delta start		
1.3.3.1	• metal case, dust protection class - IP54.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.3.2	• hermetic inputs for connecting cables	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.3.3	• controller for waste water systems with indication	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	<ul style="list-style-type: none"> <li>• The control cabinet must have inputs/outputs: <ul style="list-style-type: none"> <li>- at least 2 relay outputs (programmable);</li> <li>- at least 2 digital inputs;</li> <li>- at least 2 additional programmable digital inputs/outputs.</li> <li>- 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</li> </ul> </li> </ul>		
1.3.3.5	• the possibility of connecting the thermal protection of the pump (thermal contacts or PTC).	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.3.6	• a log of pump emergency shutdowns with real-time error codes	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.3.7	• counter of engine hours for the pump	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.3.8	• general emergency signal relay (potential-free contact)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.3.9	• pump control switch in manual mode	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	

1.3.4.2	- protection against overheating.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.4.3	- protection against engine rotor blocking (jamming).	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.4.4	- protection against working without water (dry running).	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.4.5	- protection of access to the controller using a PIN code.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.4.6	- limiting the number of automatic restarts of pumps.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.4.7	- built-in buzzer for sound indication of warnings and/or accidents.	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> 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);	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.5.3	- a log of emergency signals and warnings (at least 20 recent events).	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.5.4	- log of functional data (total pump operating time).	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.6	Main technical characteristics:		
1.3.6.1	- nominal supply voltage - 3x220-240/380-415 V	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.6.2	The working current of the pumps is 16....44 A	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.6.3	Start of engines according to the "star/delta" scheme and soft start	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.6.4	- power supply frequency - 50 Hz;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.6.5	- ambient temperature without reducing operating characteristics - from -20 to +45 C;	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.7.2	- The maximum liquid temperature is up to 60 degrees. WITH	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.7.3	- Maximum current load – up to 10 A (250 V)	<input type="checkbox"/> Yes <input type="checkbox"/> No	

1.3.7.4	- Protection class – IP68	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.7.5	- The angle of inclination for activation is 20 degrees.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.7.6	- Float body material – Polypropylene (PP)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.7.7	- Cable material is neoprene.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>2</b>	<b>Other requirements</b>		
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.	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> 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 English and/or Ukrainian) • Maintenance guidelines (in Ukrainian or English). All tags/labels on the equipment shall be in English or Ukrainian language.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.5	Bid includes the total volume of the Goods in M3 and gross weight of the goods in KG.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.6	Bid includes the Country of origin of the goods and FCA point of delivery.	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>3</b>	<b>To confirm the requirements for technical and quality characteristics of the pumps and control cabinet, the Bidder shall provide:</b>		

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).	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.3	A valid the conclusion of the sanitary and epidemiological examination on the pumps and control cabinet.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.4	Valid international certificates ISO 9001 and ISO 14001 for the production facilities where the pumps and control cabinet are manufactured.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.5	Electronic copies of technical documentation for the pumps and control cabinet:	<input type="checkbox"/> Yes <input type="checkbox"/> 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.);	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.6.2	- installation and operating manuals;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.6.3	- warranty card with a list of official service center(s) in Ukraine.	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	

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

UNOPS Requirements		Is the bid compliant? Bidder to complete	Details Bidder to complete
<b>Delivery time</b>	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) <b>delivered and unloaded only, Mykolaiv region: Bashtanka city.</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Delivery place and Incoterms rules</b>	DAP (customs cleared) Incoterms 2020 ( <b>delivered at place and unloaded</b> ) customs cleared <b>Mykolaiv region:</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	

	<b>Bashtanka city</b> , net of any direct taxes, customs duties, or indirect taxes.		
<b>Consignee details</b>	Delivery address and consignee details will be provided to the successful Bidder(s)	<input type="checkbox"/> Yes <input type="checkbox"/> 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
<b>Lot 2</b>	<b>Pumps with supplies</b>		
<b>2.3</b>	<b>The box with a tripping breaker of the type-250 A.</b>		
<b>1.1</b>	<b>Minimum technical requirements to the box with a tipping breaker:</b>		
1.1.1	- nominal supply voltage - 380V;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.2	power supply frequency - 50 Hz;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.3	- nominal current - not less than 250 A;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>1.2</b>	<b>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:</b>		
1.2.1	- overall dimensions no more than: height 600 mm, width 400 mm, depth 300 mm;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.2	- material - sheet steel with a thickness of at least 1,2 mm;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.3	- coating - powder paint;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.4	- degree of protection when the door is closed - at least IP21.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.5	- a toggle switch must be installed inside the box.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.6	- on the right side of the box there should be a handle for controlling the toggle switch.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.7	- cables should be fed from below through cable entries.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.8	- cables must be connected to the tipping breaker by means of bolted connections through cable lugs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.9	Include an interlocking mechanism to prevent opening during operation.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.10	IP rating is at least IP45 for enhanced environmental protection.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.11	Minimum clearance and creepage distances for electrical safety.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>2</b>	<b>Other requirements</b>		
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.	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> 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 English and/or Ukrainian) • Technical Certificate / maintenance guidelines (in Ukrainian or English). All tags/labels on the equipment shall be in English or Ukrainian language.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.5	Bid includes the total volume of the Goods in M3 and gross weight of the goods in KG.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.6	Bid includes the Country of origin of the goods and FCA point of delivery.	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>3</b>	<b>To confirm the requirements for technical and quality characteristics of the equipment, the Bidder shall provide:</b>		
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).	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.2	A valid the conclusion of the sanitary and epidemiological examination on the equipment.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.3	Electronic copies of technical documentation for the equipment:	<input type="checkbox"/> Yes <input type="checkbox"/> 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.);	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.4.2	- installation and operating manuals;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.4.3	- warranty card with a list of official service center(s) in Ukraine.	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
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**C.1. Delivery requirements for 2.3**

UNOPS Requirements		Is the bid compliant? Bidder to complete	Details Bidder to complete
<b>Delivery time</b>	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) <b>delivered and unloaded only, Mykolaiv region: Bashtanka city.</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Delivery place and Incoterms rules</b>	DAP (customs cleared) Incoterms 2020 ( <b>delivered at place and unloaded</b> ) customs cleared <b>Mykolaiv region: Bashtankacity</b> , net of any direct taxes, customs duties, or indirect taxes.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Consignee details</b>	Delivery address and consignee details will be provided to the successful Bidder(s)	<input type="checkbox"/> Yes <input type="checkbox"/> 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
<b>Lot 2</b>	<b>Pumps with supplies</b>		
<b>2.4</b>	<b>Control cabinet with frequency control of at least 75 kW</b>		
<b>1.1</b>	<b>Technical requirements for the control cabinet</b>		
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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.2	The control cabinet must provide:	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.2.1	– power supply and comprehensive protection of the three-phase asynchronous electric drive of two pump units;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.2.2	- selection of a pumping unit for work (1 or 2 pump)	<input type="checkbox"/> Yes <input type="checkbox"/> 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);	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.2.4	– manual regulation of pump revolutions (performance) from 10% to 100% of the nominal value from the panel;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.2.5	– smooth acceleration and stopping of the pump;	<input type="checkbox"/> Yes <input type="checkbox"/> No	

1.1.2.6	- collection of information about the condition of the pump (nominal current, power consumption, working hours, electricity consumption accounting);	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.2.7	– display of pump parameters and operating modes;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.2.8	– detection and indication of pre-emergency and emergency conditions;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.2.9	- two modes of operation:	<input type="checkbox"/> Yes <input type="checkbox"/> 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);	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.2.11	• reserve mode - provides direct start of the pump through a microprocessor protection and control device;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>1.1.3</b>	<b>Main technical characteristics:</b>		
1.1.3.1	- nominal supply voltage - 380V;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.3.2	– power supply frequency - 50 Hz;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.3.3	– nominal electric power - not less than 75 kW;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.3.4	– nominal current - not less than 160 A;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.3.5	– output frequency - 10 ... 60 Hz;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.3.6	– overload capacity - 110%;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.3.7	– ambient temperature without reducing operating characteristics - from -15 to +50 C;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.3.8	– the number of discrete inputs, at least 2 pcs.;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.3.9	– the number of analog inputs, at least 2 pcs.;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	- built-in RS-485 interface with the Modbus RTU / TCP/Ethernet protocol (for remote controlling and monitoring the parameters of the frequency converter)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>1.1.4</b>	<b>The following must be installed in the control cabinet:</b>		
1.1.4.1	- one frequency converter , power not less than 75 kW,	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.4.2	- an automatic switch with a rating of at least 160A and a breaking capacity of at least 15 kA.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.4.3	- non-contact connection of ammeters in the electric motor circuit due to current transformers built into the device.	<input type="checkbox"/> Yes <input type="checkbox"/> 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);	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.4.5	microprocessor protection device for the electric motor for 1 pump (with direct start)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.4.6	fast-acting fuses with performance gS or gR /aR to reliable protection of frequency converter	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.4.7	- 4 contactors for switching the operation of 2 pumps from the frequency converter or in direct start;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.4.8	- system of forced automatic ventilation, equipped with air filters;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.4.9	Incorporate integrated surge protection.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.4.10	Cabinets are equipped with remote monitoring and control capabilities.	<input type="checkbox"/> Yes <input type="checkbox"/> No	



<b>1.1.5</b>	<b>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:</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.5.1	– material - sheet steel with a thickness of at least 1,2 mm;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.5.2	– coating - powder paint;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.5.3	- degree of protection when the door is closed - at least IP21.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.5.4	- cable entry from below.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.5.5	– overall dimensions no more than: height 2000 mm, width 800 mm, depth 600 mm;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.5.6	The IP rating is of at least IP54 for harsh environments.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>1.1.6</b>	<b>On the door of the control cabinet are located:</b>		
1.1.6.1	- frequency converter control panel	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.6.2	- control elements for starting and stopping the pumping unit;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.6.3	- control elements ("more" and "less" buttons) for manual regulation of electric motor revolutions.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.6.4	- LED indicators of pump operation: network, operation, emergency.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.6.5	- a digital LED indicator, for the possibility of monitoring the parameters of work in insufficient lighting	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.6.6	- the emergency stop button of the pumping unit	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>1.2</b>	<b>Other requirements</b>		
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.	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> 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 English and/or Ukrainian) • Maintenance guidelines (in Ukrainian or English). All tags/labels on the equipment shall be in English or Ukrainian language.	<input type="checkbox"/> Yes <input type="checkbox"/> No	

1.2.6	Bid includes the total volume of the Goods in M3 and gross weight of the goods in KG.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.7	Bid includes the Country of origin of the goods and FCA point of delivery.	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>1.3</b>	<b>To confirm the requirements for technical and quality characteristics of the equipment, the Bidder shall provide:</b>		
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).	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.2	A valid the conclusion of the sanitary and epidemiological examination on the equipment.	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.4	Valid international certificates ISO 9001 and ISO 14001 for the production facilities where the pumps and control cabinet are manufactured.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.5	Electronic copies of technical documentation for the equipment:	<input type="checkbox"/> Yes <input type="checkbox"/> 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.);	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.5.2	- installation and operating manuals;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.5.3	- warranty card with a list of official service center(s) in Ukraine.	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	

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

UNOPS Requirements		Is the bid compliant? Bidder to complete	Details Bidder to complete
<b>Delivery time</b>	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) <b>delivered and unloaded only, Mykolaiv region: Bashtanka city.</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Delivery place and Incoterms rules</b>	DAP (customs cleared) Incoterms 2020 ( <b>delivered at place and unloaded</b> ) customs cleared <b>Mykolaiv region: Bashtanka city</b> , net of any direct taxes, customs duties, or indirect taxes.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Consignee details</b>	Delivery address and consignee details will be provided to the successful Bidder(s)	<input type="checkbox"/> Yes <input type="checkbox"/> 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
<b>Lot 2</b>	<b>Pumps with supplies</b>		
<b>2.5</b>	<b>Control cabinet with frequency control of at least 45 kW</b>		
<b>1.1</b>	<b>Technical requirements for the control cabinet</b>		
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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.2	The control cabinet must provide:	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.3	– power supply and comprehensive protection of the three-phase asynchronous electric drive of two pump units;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.4	- selection of a pumping unit for work (1 or 2 pump)	<input type="checkbox"/> Yes <input type="checkbox"/> 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;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.7	– smooth acceleration and stopping of the pump;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.8	- collection of information about the condition of the pump (nominal current, power consumption, working hours, electricity consumption accounting);	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.9	– display of pump parameters and operating modes;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.10	– detection and indication of pre-emergency and emergency conditions;	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No	

<b>1.1.3</b>	<b>Main technical characteristics:</b>		
1.1.3.1	- nominal supply voltage - 380V;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.3.2	- power supply frequency - 50 Hz;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.3.3	- nominal electric power - not less than 2x45 kW;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.3.4	- nominal current - not less than 200 A;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.3.5	- output frequency - 10 ... 60 Hz;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.3.6	- overload capacity - 110%;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.3.7	- ambient temperature without reducing operating characteristics - from -15 to +50 C;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.3.8	- the number of discrete inputs, at least 2 pcs.;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.3.9	- the number of analog inputs, at least 2 pcs.;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	built-in RS-485 interface with the Modbus RTU / TCP/Ethernet protocol (for remote controlling and monitoring the parameters of the frequency converter)		
<b>1.1.4</b>	<b>The following must be installed in the control cabinet:</b>		
1.1.4.1	- two frequency converter , power not less than 45 kW,	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.4.2	- an automatic switch with a rating of at least 200A and a breaking capacity of at least 15 kA.	<input type="checkbox"/> Yes <input type="checkbox"/> 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);	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.4.5	- system of forced automatic ventilation, equipped with air filters;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.4.6	- fast-acting fuses with performance gS or gR /aR to reliable protection of frequency converter	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.4.7	Include integrated power factor correction to optimize electrical consumption.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.4.8	Equipped with advanced diagnostic systems for predictive maintenance.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.4.9	Implement cybersecurity protocols to protect network-connected components.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>1.1.5</b>	<b>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:</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.5.1	- material - sheet steel with a thickness of at least 1,2 mm;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.5.2	- coating - powder paint;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.5.3	- degree of protection when the door is closed - at least IP21.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.5.4	- cable entry from below.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.5.5	- overall dimensions no more than: height 2000 mm, width 800 mm, depth 600 mm;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.5.6	IP rating higher than IP45 for outdoor installation.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>1.1.6</b>	<b>On the door of the control cabinet are located:</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.6.1	- frequency converter control panel (2pcs)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.6.2	- control elements for starting and stopping the pumping unit;	<input type="checkbox"/> Yes <input type="checkbox"/> No	

1.1.6.3	- control elements ("more" and "less" buttons) for manual regulation of electric motor revolutions.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.6.4	- LED indicators for 2 pump operation: network, operation, emergency.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.6.5	- a digital LED indicator, for the possibility of monitoring the parameters of work in insufficient lighting	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.6.6	- the emergency stop button of the pumping unit	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>1.2</b>	<b>Other requirements</b>		
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.	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> 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 English and/or Ukrainian) • Maintenance guidelines (in Ukrainian or English). All tags/labels on the equipment shall be in English or Ukrainian language.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.5	Bid includes the total volume of the Goods in M3 and gross weight of the goods in KG.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.6	Bid includes the Country of origin of the goods and FCA point of delivery.	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>1.3</b>	<b>To confirm the requirements for technical and quality characteristics of the equipment, the Bidder shall provide:</b>		

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).	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.2	A valid the conclusion of the sanitary and epidemiological examination on the equipment.	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.4	Valid international certificates ISO 9001 and ISO 14001 for the production facilities where the pumps and control cabinet are manufactured.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.5	Electronic copies of technical documentation for the equipment:	<input type="checkbox"/> Yes <input type="checkbox"/> 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.);	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.5.2	- installation and operating manuals;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.5.3	- warranty card with a list of official service center(s) in Ukraine.	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	

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

UNOPS Requirements		Is the bid compliant? Bidder to complete	Details Bidder to complete
<b>Delivery time</b>	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) <b>delivered and unloaded only, Mykolaiv region: Bashtanka city.</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Delivery place and Incoterms rules</b>	DAP (customs cleared) Incoterms 2020 ( <b>delivered at place and unloaded</b> ) customs cleared <b>Mykolaiv region: Bashtanka city</b> , net of any direct taxes, customs duties, or indirect taxes.	<input type="checkbox"/> Yes <input type="checkbox"/> No	

<b>Consignee details</b>	Delivery address and consignee details will be provided to the successful Bidder(s)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
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### 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
<b>Lot 3</b>	<b>Well pumps with various productivities and supplies</b>		
<b>3.1</b>	<b>Well pump unit</b>		
<b>Item 1</b>	<b>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</b>		
<b>1.1</b>	<b>Minimum technical requirements to the pump:</b>		
1.1.1	productivity at the working point (Q) – not less than 45 m3/h;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.2	pressure at the working point (H) – not less than 51,5 m of water.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.3	the maximum performance of the pump (Q max) – not less than 55 m3/h;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.4	the maximum pressure of the pump (H max) – not less than 80 m of water.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.5	The efficiency of the pump at the operating point is not less than 73,5%;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.6	total efficiency at the operating point – not less than 59,5 %;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.7	pressure pipe with internal thread Rp 4”;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.8	minimum efficiency index mei $\geq$ 0.40;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.9	the pump must be suitable for pumping water with a sand content of up to 100 g/m3;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.10	the standard size of the pump is no more than 6 inches.	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.13	Include anti-corrosion features for components exposed to harsh environments.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>1.2</b>	<b>Minimum technical requirements to the the electric motor:</b>		
1.2.1	nominal power on the shaft (P2) – not more 9,5 kW;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.2	power on the shaft at the working point (P2 work) - no more than 9,0 kW;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.3	electric power consumed at the working point (P1 work) – no more than 11,0 kW;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.4	nominal supply voltage - 3 x 380...415 V;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.5	voltage deviation tolerance: +6% /- 10%;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.6	maximum current consumption: not more 22 A;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.7	starting current no more than: 500% at 380V	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.8	power factor Cos Phi - not less than 0,84 (at 380V);	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.9	power supply frequency - 50 Hz;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.10	nominal rotation speed – not more 2900 rpm;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.11	start type – direct (DOL);	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.12	protection class – IP68;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.13	insulation class – F;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.14	The maximum number of launches per hour – at least 30, and at least 300 launches per day.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.15	The electric motor is submerged, "wet type", asynchronous, hermetically sealed, with stator windings filled with polymer compound:	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.16	The electric motor must be filled with coolant. The use of any oil as a coolant is not allowed.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.17	The electric motor must be equipped with a 4-wire cable with a cross-section of at least 6 mm <sup>2</sup> and a length of at least 5 m.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.18	The pump must be supplied complete with an additional submersible power cable, multi-core, with a cross-section of 4x4 mm <sup>2</sup> and a length of at least 30 m;	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.20	The pump must be delivered complete with a pressure sensor, 1pc, which must have the following characteristics:	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.20.1	- output analog signal 4-20 mA,	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.20.2	- measurement range: 0 – 6 bar,	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.20.3	- connection - thread G ½"	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.20.4	- permissible liquid temperature: -40 to +85 °C.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>1.3</b>	<b>Requirements to the dimensions:</b>		
1.3.1	the outer diameter of the engine is no more than 140 mm;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.2	the outer diameter of the pump part is no more than 150 mm	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.3	weight of the pump unit - no more than 70 kg;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>1.4</b>	<b>Minimum technical requirements to the control cabinet:</b>		
1.4.1	– nominal electric power - not less than 11 kW;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.4.2	– nominal current - not less than 25 A;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.4.3	– overall dimensions no more than: height 800 mm, width 600 mm, depth 400 mm;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.4.4	- frequency converter of the AQUADRIIVE FC202 type, power not less than 11kW,	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.4.5	- an automatic switch with a rating of at least 25A and a breaking capacity of at least 10 kA.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Item 2</b>	<b>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</b>		
<b>2.1</b>	<b>Minimum technical requirements to the pump:</b>		
2.1.1	productivity at the working point (Q) – not less than 17 m3/h;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.1.2	pressure at the working point (H) – not less than 102,5 m of water.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.1.3	the maximum performance of the pump (Q max) – not less than 22 m3/h;	<input type="checkbox"/> Yes <input type="checkbox"/> No	

2.1.4	the maximum pressure of the pump (H max) – not less than 140 m of water.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.1.5	The efficiency of the pump at the operating point is not less than 77%;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.1.6	total efficiency at the operating point – not less than 60 %;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.1.7	pressure pipe with internal thread Rp 2 1/2”;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.1.8	minimum efficiency index mei $\geq$ 0.70;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.1.9	the pump must be suitable for pumping water with a sand content of up to 100 g/m3;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.1.10	the standard size of the pump is no more than 4 inches.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>2.2</b>	<b>Minimum technical requirements to the the electric motor:</b>		
2.2.1	nominal power on the shaft (P2) – not more 7.5 kW;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.2.2	power on the shaft at the working point (P2 work) - no more than 6,3 kW;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.2.3	electric power consumed at the working point (P1 work) – no more than 7,8 kW;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.2.4	nominal supply voltage - 3 x 380...415 V;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.2.5	voltage deviation tolerance: +6% /- 10%;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.2.6	maximum current consumption: not more 20 A;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.2.7	starting current no more than: 500% at 380V	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.2.8	power factor Cos Phi - not less than 0,83 (at 380V);	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.2.9	power supply frequency - 50 Hz;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.2.10	nominal rotation speed – not more 2900 rpm;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.2.11	start type – direct (DOL);	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.2.12	protection class – IP68;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.2.13	insulation class – F;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.2.14	The maximum number of launches per hour – at least 30, and at least 300 launches per day.	<input type="checkbox"/> Yes <input type="checkbox"/> No	

2.2.15	The electric motor is submerged, "wet type", asynchronous, hermetically sealed, with stator windings filled with polymer compound:	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.2.16	The electric motor must be filled with coolant. The use of any oil a coolant is not allowed.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.2.17	The electric motor must be equipped with a 4-wire cable with a cross-section of at least 1,5 mm <sup>2</sup> and a length of at least 2,5 m.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.2.18	The pump must be supplied complete with an additional submersible power cable, multi-core, with a cross-section of 4x4 mm <sup>2</sup> and a length of at least 60 m;	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.2.20	The pump must be delivered complete with a pressure sensor, 1pc, which must have the following characteristics:	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.2.20.1	- output analog signal 4-20 mA,	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.2.20.2	- measurement range: 0 – 10 bar,	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.2.20.3	- connection - thread G ½"	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.2.20.4	- permissible liquid temperature: -40 to +85 °C.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>2.3</b>	<b>Requirements to the dimensions:</b>		
2.3.1	the outer diameter of the engine is no more than 100 mm;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.3.2	the outer diameter of the pump part is no more than 140 mm	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.3.3	weight of the pump unit - no more than 55 kg;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>2.4</b>	<b>Minimum technical requirements to the control cabinet:</b>		
2.4.1	– nominal electric power - not less than 11 kW;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.4.2	– nominal current - not less than 25 A;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.4.3	– overall dimensions no more than: height 800 mm, width 600 mm, depth 400 mm;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.4.4	- frequency converter of the AQUADRIIVE FC202 type, power not less than 11kW,	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.4.5	- an automatic switch with a rating of at least 25A and a breaking capacity of at least 10 kA.	<input type="checkbox"/> Yes <input type="checkbox"/> No	

<b>Item 3</b>	<b>Well pump unit with productivity at the working point (Q) not less than 17 m<sup>3</sup>/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</b>		
<b>3.1</b>	<b>Minimum technical requirements to the pump:</b>		
3.1.1	productivity at the working point (Q) – not less than 17 m <sup>3</sup> /h;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.1.2	pressure at the working point (H) – not less than 39,0 m of water.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.1.3	the maximum performance of the pump (Q max) – not less than 22 m <sup>3</sup> /h;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.1.4	the maximum pressure of the pump (H max) – not less than 55 m of water.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.1.5	the efficiency of the pump at the operating point is not less than 77%;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.1.6	total efficiency at the operating point – not less than 57 %;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.1.7	pressure pipe with internal thread Rp 2 1/2”;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.1.8	minimum efficiency index mei ≥: 0.70;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.1.9	The pump must be suitable for pumping water with a sand content of up to 100 g/m <sup>3</sup> ;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.1.10	The standard size of the pump is no more than 4 inches.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>3.2</b>	<b>Minimum technical requirements to the the electric motor:</b>		
3.2.1	nominal power on the shaft (P2) – not more 3,0 kW;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.2.2	power on the shaft at the working point (P2 work) - no more than 2,4 kW;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.2.3	electric power consumed at the working point (P1 work) – no more than 3,3 kW;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.2.4	nominal supply voltage - 3 x 380...415 V;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.2.5	voltage deviation tolerance: +6% /- 10%;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.2.6	maximum current consumption: not more 9,0 A;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.2.7	starting current no more than: 500% at 380V	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.2.8	power factor Cos Phi - not less than 0,82 (at 380V);	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.2.9	power supply frequency - 50 Hz;	<input type="checkbox"/> Yes <input type="checkbox"/> No	

3.2.10	nominal rotation speed – not more 2900 rpm;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.2.11	start type – direct (DOL);	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.2.12	protection class – IP68;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.2.13	insulation class – F;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.2.14	The maximum number of launches per hour – at least 100, and at least 300 launches per day.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.2.15	The electric motor is submerged, "wet type", asynchronous, hermetically sealed, with stator windings filled with polymer compound:	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.2.16	The electric motor must be filled with coolant. The use of any oil as a coolant is not allowed.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.2.17	The electric motor must be equipped with a 4-wire cable with a cross-section of at least 1,5 mm <sup>2</sup> and a length of at least 2,5 m.	<input type="checkbox"/> Yes <input type="checkbox"/> 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 mm <sup>2</sup> and a length of at least 30 m;	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.2.20	The pump must be delivered complete with a pressure sensor, 1pc, which must have the following characteristics:	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.2.20.1	- output analog signal 4-20 mA,	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.2.20.2	- measurement range: 0 – 6 bar,	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.2.20.3	- connection - thread G ½"	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.2.20.4	- permissible liquid temperature: -40 to +85 °C.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>3.3</b>	<b>Requirements to the dimensions:</b>		
3.3.1	the outer diameter of the engine is no more than 100 mm;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.3.2	the outer diameter of the pump part is no more than 140 mm	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.3.3	weight of the pump unit - no more than 30 kg;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>3.4</b>	<b>Minimum technical requirements to the control cabinet:</b>		
3.4.1	– nominal electric power - not less than 4 kW;	<input type="checkbox"/> Yes <input type="checkbox"/> No	

3.4.2	– nominal current - not less than 16 A;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.4.3	– overall dimensions no more than: height 600 mm, width 400 mm, depth 300 mm;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.4.4	- frequency converter of the AQUADRIVE FC202 type, power not less than 4 kW,	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.4.5	- an automatic switch with a rating of at least 16A and a breaking capacity of at least 10 kA.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>4</b>	<b>General requirements (applicable to items 1, 2 and 3 above)</b>		
<b>4.1</b>	<b>Materials and construction</b>		
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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>4.1.2</b>	<b>Pump materials:</b>		
4.1.2.1	impellers, intermediate chambers (diffusers), non-return valve - stainless steel EN 1.4301 (AISI 304) or better;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.1.2.2	shaft – stainless steel EN 1.4057 (AISI 431) or better;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.1.2.3	rubber seals - NBR or better.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.1.2.4	bearings - liquid silicone (LSR) or better.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>4.1.3</b>	<b>Electric motor materials:</b>		
4.1.3.1	electric motor body and end cover – stainless steel EN 1.4301 (AISI 304) or better;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.1.3.2	shaft – stainless steel EN 1.4057 (AISI 431) or better;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.1.3.3	end mechanical sealing of the shaft - ceramics / tungsten carbide;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.1.3.4	radial bearing - ceramics / tungsten carbide;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.1.3.5	rubber seals and compensation membrane - NBR or better;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.1.3.6	thrust bearing - ceramic/graphite.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>4.2</b>	<b>General requirements for the design of the pump and engine</b>		
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;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.2.2	All bearings must be lubricated with water;	<input type="checkbox"/> Yes <input type="checkbox"/> 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;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.2.4	The pump must have an octagonal design of the pressure nozzle.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.2.5	The pump must have a built-in non-return valve.	<input type="checkbox"/> Yes <input type="checkbox"/> 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;	<input type="checkbox"/> Yes <input type="checkbox"/> 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;	<input type="checkbox"/> Yes <input type="checkbox"/> 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;	<input type="checkbox"/> Yes <input type="checkbox"/> 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;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.2.10	The pump must be delivered complete with a set of heat-shrinkable cable coupling;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>4.3</b>	<b>Technical characteristics of the control cabinet</b>		
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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.3.2	The control cabinet must provide:	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.3.2.1	– power supply and comprehensive protection of the three-phase asynchronous electric drive of the pump;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.3.2.2	– manual regulation of pump revolutions (performance) from 10% to 100% of the nominal value from the panel;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.3.2.3	– smooth acceleration and stopping of the pump;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.3.2.4	- collection of information about the condition of the pump (nominal current, power consumption, working hours, electricity consumption accounting);	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.3.2.5	– display of pump parameters and operating modes;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.3.2.6	– detection and indication of pre-emergency and emergency conditions;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.3.2.7	- two modes of operation:	<input type="checkbox"/> Yes <input type="checkbox"/> No	

4.3.2.7.1	<ul style="list-style-type: none"> <li>the main mode - from the frequency converter (automatic adjustment of pump revolutions/performance according to the signal from the pressure sensor 4..20mA);</li> </ul>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.3.2.7.2	<ul style="list-style-type: none"> <li>reserve mode - provides direct start of the pump through a microprocessor protection and control device;</li> </ul>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.3.3	<b>Main technical characteristics:</b>		
4.3.3.1	- nominal supply voltage - 380V;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.3.3.2	- power supply frequency - 50 Hz;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.3.3.3	- output frequency - 10 ... 60 Hz;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.3.3.4	- overload capacity - 110%;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.3.3.5	- ambient temperature without reducing operating characteristics - from -15 to +50 C;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.3.3.6	- the number of discrete inputs, at least 2 pcs.;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.3.3.7	- the number of analog inputs, at least 2 pcs.;	<input type="checkbox"/> Yes <input type="checkbox"/> 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);	<input type="checkbox"/> Yes <input type="checkbox"/> 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);	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.3.3.10	- the possibility of controlling and monitoring the parameters of the frequency converter.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.3.4	<b>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:</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.3.4.1	- material - sheet steel with a thickness of at least 1,2 mm;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.3.4.2	- coating - powder paint;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.3.4.3	- degree of protection when the door is closed - at least IP21.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.3.4.4	- cable entry from below.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.3.5	<b>The following must be installed in the control cabinet:</b>		
4.3.5.1	- motor protective filter type DU/DT;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.3.5.2	- microprocessor protection device for the electric motor;	<input type="checkbox"/> Yes <input type="checkbox"/> No	



4.3.5.3	- contactors for switching the operation of the pump from the frequency converter or in direct start;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.3.5.4	- system of forced automatic ventilation, equipped with air filters;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.3.5.5	- electromagnetic relays and other necessary electrical components.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>4.3.6</b>	<b>On the door of the control cabinet are located:</b>		
4.3.6.1	- frequency converter control panel,	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.3.6.2	- control elements for starting and stopping the pumping unit;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.3.6.3	- control elements ("more" and "less" buttons) for manual regulation of electric motor revolutions.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.3.6.4	- LED indicators of pump operation: network, operation, emergency,	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>4.3.7</b>	<b>The microprocessor device for protection and control of the electric motor must have:</b>		
4.3.7.1	- built-in transformer power supply unit for galvanic isolation of the device and sensors from the power supply network;	<input type="checkbox"/> Yes <input type="checkbox"/> 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;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.3.7.3	- non-contact connection to the electric motor circuit due to current transformers built into the device.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>4.4</b>	<b>Other requirements</b>		
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.	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No	

	the bid. The service centre shall have at least one certified engineer in its staff.		
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 English and/or Ukrainian) • Maintenance guidelines (in Ukrainian or English). All tags/labels on the equipment shall be in English or Ukrainian language.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.4.5	Bid includes the total volume of the Goods in M3 and gross weight of the goods in KG.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.4.6	Bid includes the Country of origin of the goods and FCA point of delivery.	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>4.5</b>	<b>To confirm the requirements for technical and quality characteristics of the pumps and control cabinet, the Bidder shall provide:</b>		
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).	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.5.3	A valid the conclusion of the sanitary and epidemiological examination on the pumps and control cabinet.	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	

4.5.5	Valid international certificates ISO 9001 and ISO 14001 for the production facilities where the pumps and control cabinet are manufactured.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.5.6	Electronic copies of technical documentation for the pumps and control cabinet:	<input type="checkbox"/> Yes <input type="checkbox"/> 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.);	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.5.6.2	- installation and operating manuals;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.5.6.3	- warranty card with a list of official service center(s) in Ukraine.	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	

**C.1. Delivery requirements for 3.1**

UNOPS Requirements		Is the bid compliant? Bidder to complete	Details Bidder to complete
<b>Delivery time</b>	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) <b>delivered and unloaded only, Mykolaiv region: Voznesenk city.</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Delivery place and Incoterms rules</b>	DAP (customs cleared) Incoterms 2020 ( <b>delivered at place and unloaded</b> ) customs cleared <b>Mykolaiv region: Voznesenk city</b> , net of any direct taxes, customs duties, or indirect taxes.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Consignee details</b>	Delivery address and consignee details will be provided to the successful Bidder(s)	<input type="checkbox"/> Yes <input type="checkbox"/> 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
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<b>Lot 3</b>	<b>Well pumps with various productivities and supplies</b>		
<b>3.2</b>	<b>Vertical pumps with various productivities</b>		
<b>Item 1</b>	<b>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</b>		
<b>1.1</b>	<b>Minimum technical requirements to the pump:</b>		
1.1.1	productivity at the working point (Q) – not less than 125 m3/h;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.2	pressure at the working point (H) – not less than 103,5 m of water.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.3	the maximum performance of the pump (Q max) – not less than 160 m3/h;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.4	the maximum pressure of the pump (H max) – not less than 130 m of water.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.5	The value of NPSH (at the working point) is no more than 3,5 m;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.6	The efficiency of the pump at the operating point is not less than 83 %;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.7	total efficiency at the operating point – not less than 78 %;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.8	minimum efficiency index mei $\geq$ 0.70;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.9	max. ambient temperature environment: not less than 55 ° C.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.10	liquid temperature range: - 20 ... 120 ° C	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.11	permissible pressure: not less than PN16.		
1.1.12	standard flange: DIN, pipe connection: DN150	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.13	the inlet and outlet nozzles must be on the same axis (inline execution of the pump).	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1.14	Incorporate cavitation detection technology.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>1.2</b>	<b>Technical requirements for the electric motor:</b>		
1.2.1	nominal power on the shaft (P2) – not more 45 kW;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.2	power on the shaft at the working point (P2 work) - no more than 43 kW;	<input type="checkbox"/> Yes <input type="checkbox"/> No	

1.2.3	electric power consumed at the working point (P1 work) – no more than 46 kW;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.4	maximum current consumption: not more 80 A;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.5	starting current no more than: 700%	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.6	power factor Cos Phi - not less than 0,89;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.7	the efficiency of the electric motor at full load (efficiency) is at least 94%;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.8	the noise level (sound pressure) of the electric motor should not be higher than 75 dB(A).	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2.9	Include advanced thermal protection for motors.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>1.3</b>	<b>General requirements for the design of the pump and engine:</b>		
1.3.1	The net mass of the pump assembly as a whole should not exceed 550 kg.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.2	Modular design for easy maintenance.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.4	Technical requirements for the control cabinet		
<b>1.4.1</b>	<b>Main technical characteristics:</b>		
1.4.1.1	– nominal electric power - not less than 45 kW;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.4.1.2	– nominal current - not less than 125 A;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.4.1.3	– overall dimensions no more than: height 2000 mm, width 800 mm, depth 600 mm;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.4.2	The following must be installed in the control cabinet:	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.4.2.1	- frequency converter of the AQUADRIIVE FC202 type, power not less than 45 kW,	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.4.2.2	- an automatic switch with a rating of at least 125A and a breaking capacity of at least 15 kA.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Item 2</b>	<b>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</b>		
<b>2.1</b>	<b>Technical requirements for the pump:</b>		
2.1.1	- productivity at the working point (Q) – not less than 125 m3/h;	<input type="checkbox"/> Yes <input type="checkbox"/> No	

2.1.2	- pressure at the working point (H) – not less than 85,5 m of water.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.1.3	- the maximum performance of the pump (Q max) – not less than 160 m <sup>3</sup> /h;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.1.4	- the maximum pressure of the pump (H max) – not less than 115 m of water.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.1.5	The value of NPSH (at the working point) is no more than 3,5 m;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.1.6	- The efficiency of the pump at the operating point is not less than 81 %;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.1.7	- total efficiency at the operating point – not less than 76 %;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.1.8	- minimum efficiency index mei $\geq$ 0.70;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.1.9	- max. ambient temperature environment: not less than 55 ° C.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.1.10	- liquid temperature range: - 20 ... 120 ° C	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.1.11	- permissible pressure: not less than PN16.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.1.12	-standard flange: DIN, pipe connection: DN150	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.1.13	-the inlet and outlet nozzles must be on the same axis (inline execution of the pump).	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>2.2</b>	<b>Technical requirements for the electric motor:</b>		
2.2.1	- nominal power on the shaft (P2) – not more 37 kW;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.2.2	- power on the shaft at the working point (P2 work) - no more than 36 kW;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.2.3	- electric power consumed at the working point (P1 work) – no more than 38,5 kW;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.2.4	- maximum current consumption: not more 65 A;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.2.5	- starting current no more than: 750 %	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.2.6	- power factor Cos Phi - not less than 0,88;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.2.7	- the efficiency of the electric motor at full load (efficiency) is at least 93%;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.2.8	- the noise level (sound pressure) of the electric motor should not be higher than 75 dB(A).	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>2.3</b>	<b>General requirements for the design of the pump and engine:</b>		

2.3.1	The net mass of the pump assembly as a whole should not exceed 440 kg.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>2.4</b>	<b>Technical requirements for the control cabinet</b>		
<b>2.4.1</b>	<b>Main technical characteristics:</b>		
2.4.1.1	– nominal electric power - not less than 37 kW;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.4.1.2	– nominal current - not less than 100 A;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.4.1.3	– overall dimensions no more than: height 1000 mm, width 600 mm, depth 600 mm;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.4.2	The following must be installed in the control cabinet:		
2.4.2.1	- frequency converter of the AQUADRIIVE FC202 type, power not less than 37 kW,	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.4.2.2	- an automatic switch with a rating of at least 100A and a breaking capacity of at least 15 kA.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>3</b>	<b>General requirements (applicable to items 1 and 2 above)</b>		
<b>3.1</b>	<b>Requirements to the materials and construction of the pump</b>		
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 cathaphoretic coating or better.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.1.2	impeller, chambers of the hydraulic part - stainless steel DIN 1.4301 AISI 304 or better;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.1.3	cylindrical casing of the hydraulic part - stainless steel DIN 1.4404 or better;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.1.4	pump shaft – stainless steel DIN 1.4462 or better;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.1.5	ring seals - EPDM or better;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.1.6	gap seals - PEEK (Polyether ether ketone) or better;	<input type="checkbox"/> Yes <input type="checkbox"/> 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;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.1.8	Friction pairs of end seals - silicon carbide (SiC/SiC).	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.1.9	The support bearing of the sleeve is carbon graphite with a shell made of PTFE (Teflon).	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.1.10	Bearing ring tungsten carbide/tungsten carbide.	<input type="checkbox"/> Yes <input type="checkbox"/> No	

3.1.11	The main part of the pump must be equipped with a combined 1/2" filler plug and vent screw.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>3.2</b>	<b>Technical requirements for the electric motor:</b>		
3.2.1	nominal supply voltage - 3 x 380...420 V;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.2.2	power supply frequency - 50 Hz;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.2.3	nominal rotation speed – not more 3000 rpm;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.2.4	energy efficiency class - at least IE3	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.2.5	protection class – IP55;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.2.6	insulation class – F;		
3.2.7	- the maximum number of launches per hour – at least 75.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.2.8	The electric motor must be able to operate at a variable speed from the frequency converter;	<input type="checkbox"/> Yes <input type="checkbox"/> 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;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.2.10	The electric motor must have built-in thermistors in each winding to protect the motor.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>3.3</b>	<b>Technical requirements for the control cabinet</b>		
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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.3.2	The control cabinet must provide:	<input type="checkbox"/> Yes <input type="checkbox"/> 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;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.3.2.4	– smooth acceleration and stopping of the pump;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.3.2.5	- collection of information about the condition of the pump (nominal current, power consumption, working hours, electricity consumption accounting);	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.3.2.6	– display of pump parameters and operating modes;	<input type="checkbox"/> Yes <input type="checkbox"/> No	



3.3.2.7	– detection and indication of pre-emergency and emergency conditions;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.3.3	Main technical characteristics:		
3.3.3.1	- nominal supply voltage - 380V;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.3.3.2	– power supply frequency - 50 Hz;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.3.3.3	– output frequency - 10 ... 60 Hz;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.3.3.4	– overload capacity - 110%;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.3.3.5	– ambient temperature without reducing operating characteristics - from -15 to +50 C;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.3.3.6	– the number of discrete inputs, at least 2 pcs.;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.3.3.7	– the number of analog inputs, at least 2 pcs.;	<input type="checkbox"/> Yes <input type="checkbox"/> 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);	<input type="checkbox"/> Yes <input type="checkbox"/> 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);	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.3.3.10	- the possibility of controlling and monitoring the parameters of the frequency converter.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.3.3.11	- fast-acting fuses with gS or gR /aR characteristics.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.3.3.12	- microprocessor protection device for the electric motor;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.3.3.13	- contactors for switching the operation of the pump from the frequency converter or in direct start;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.3.3.14	- system of forced automatic ventilation, equipped with air filters;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.3.3.15	On the door of the control cabinet are located:	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.3.3.16	- control elements for starting and stopping the pumping unit;	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.3.4	The pump must be delivered complete with a pressure sensor, 1pc, which must have the following characteristics:	<input type="checkbox"/> Yes <input type="checkbox"/> No	

3.3.4.1	- output analog signal 4-20 mA,	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.3.4.2	- measurement range: 0 – 16 bar,	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.3.4.3	- connection - thread G ½"	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.3.4.4	- permissible liquid temperature: -40 to +85 °C.	<input type="checkbox"/> Yes <input type="checkbox"/> 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;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.3.5.2	– coating - powder paint;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.3.5.3	- degree of protection when the door is closed - at least IP21.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.3.5.4	- cable entry from below.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>3.4</b>	<b>Other requirements</b>		
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.	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> 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 English and/or Ukrainian) • Maintenance guidelines (in Ukrainian or English). All tags/labels on the equipment shall be in English or Ukrainian language.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.4.5	Bid includes the total volume of the Goods in M3 and gross weight of the goods in KG.	<input type="checkbox"/> Yes <input type="checkbox"/> No	

3.4.6	Bid includes the Country of origin of the goods and FCA point of delivery.	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> 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).	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.5.3	A valid the conclusion of the sanitary and epidemiological examination on the pumps and control cabinet.	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.5.5	Valid international certificates ISO 9001 and ISO 14001 for the production facilities where the pumps and control cabinet are manufactured.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.5.6	Electronic copies of technical documentation for the pumps and control cabinet:	<input type="checkbox"/> Yes <input type="checkbox"/> 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.);	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.5.7.2	- installation and operating manuals;	<input type="checkbox"/> Yes <input type="checkbox"/> No	

3.5.7.3	- warranty card with a list of official service center(s) in Ukraine.	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	

**C.1. Delivery requirements for 3.2**

UNOPS Requirements		Is the bid compliant? Bidder to complete	Details Bidder to complete
<b>Delivery time</b>	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) <b>delivered and unloaded only, Mykolaiv region: Voznesenk city.</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Delivery place and Incoterms rules</b>	DAP (customs cleared) Incoterms 2020 ( <b>delivered at place and unloaded</b> ) customs cleared <b>Mykolaiv region: Voznesenk city</b> , net of any direct taxes, customs duties, or indirect taxes.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Consignee details</b>	Delivery address and consignee details will be provided to the successful Bidder(s)	<input type="checkbox"/> Yes <input type="checkbox"/> 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
<b>Lot 3</b>	<b>Well pumps with various productivities and supplies</b>		
<b>3.3</b>	<b>Latches and valves</b>		
<b>Item 1</b>	<b>Latch with a rubberized wedge DN 200 - 3 PCS</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.1	Working environment is water.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.2	Nominal diameter DN 200;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3	Maximum conditional pressure 16 bar.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.4	Maximum working temperature - not less than 70 C	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.5	Hermeticity class is A (0% leakage).	<input type="checkbox"/> Yes <input type="checkbox"/> No	

1.6	Materials and construction (must be confirmed in the datasheet):	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.6.1	- The type of connection is flange according to EN 1092.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.6.2	- The case is collapsible.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.6.3	- The latch must be equipped with a flywheel.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.6.4	- Epoxy powder coating of the body with a layer of at least 250 µm	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.6.5	- Body, cover: ductile iron EN-GJS-500-7 or better.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.6.6	- Wedge: ductile iron EN-GJS-500-7 with rubberized EPDM, or better.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.6.7	- Knurled spindle: X20Cr13 stainless steel or better.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.6.8	Spindle nut: brass.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.6.9	Spindle sealing – EPDM O-rings, or better.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.6.10	The bearing is elastomer.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.6.11	Cover sealing – EPDM or better.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.6.12	Cover fastening bolts – galvanized steel or better.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.6.13	Bolt cap: silicone.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.6.14	Anti-corrosion treatment for all external surfaces.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.6.15	Latches are designed for future automation upgrades.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.6.16	Modular design for easy component replacement.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Item 2</b>	<b>Latch with a rubberized wedge DN 150 - 3 PCS</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.1	Working environment is water.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.2	Nominal diameter DN 150;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.3	Maximum conditional pressure 16 bar.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.4	Maximum working temperature - not less than 70 C	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.5	Hermeticity class is A (0% leakage).	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.6	Materials and construction (must be confirmed in the datasheet):	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.6.1	- The type of connection is flange according to EN 1092.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.6.2	- The case is collapsible.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.6.3	- The latch must be equipped with a flywheel.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.6.4	- Epoxy powder coating of the body with a layer of at least 250 µm	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.6.5	- Body, cover: ductile iron EN-GJS-500-7 or better.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.6.6	- Wedge: ductile iron EN-GJS-500-7 with rubberized EPDM, or better.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.6.7	- Knurled spindle: X20Cr13 stainless steel or better.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.6.8	Spindle nut: brass.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.6.9	Spindle sealing – EPDM O-rings, or better.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.6.10	The bearing is elastomer.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.6.11	Cover sealing – EPDM or better.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.6.12	Cover fastening bolts – galvanized steel or better.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.6.13	Bolt cap: silicone.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Item 3</b>	<b>Check valve DN 150 - 3 PCS</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.1	Working environment is water.	<input type="checkbox"/> Yes <input type="checkbox"/> No	

3.2	Nominal diameter DN 150;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.3	Maximum conditional pressure 16 bar.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.4	Maximum working temperature - not less than 100 C	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.5	Materials and construction (must be confirmed in the datasheet):	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.5.1	- Execution type: rotary.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.5.2	- The working position is vertical and horizontal.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.5.3	- Body, cover - cast iron EN-GJL-250 or better.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.5.4	- Disc lever - malleable cast iron EN-GJS-500 or better.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.5.5	- Disc - stainless steel LH14 (GX20Cr14) or better.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.5.6	- The gasket is carbo copper rubber or a better.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.5.7	- Cover gasket – graphite or better.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>4</b>	<b>General requiremnts (applicable to items 1, 2 and 3 above)</b>		
4.1	The below documents should be provided by the bidder:	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.1.3	ISO 9001, 14001 certificates of the manufacturer of the product offered by the participant.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.1.4	The conclusion of the sanitary and hygienic examination.	<input type="checkbox"/> Yes <input type="checkbox"/> 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;	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> 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 English and/or Ukrainian) • Maintenance guidelines (in Ukrainian or English). All tags/labels on the equipment shall be in English or Ukrainian language.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.5	Bid includes the total volume of the Goods in M3 and gross weight of the goods in KG.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.6	Bid includes the Country of origin of the goods and FCA point of delivery.	<input type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	

**C.1. Delivery requirements for 3.3**

UNOPS Requirements		Is the bid compliant? Bidder to complete	Details Bidder to complete
<b>Delivery time</b>	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) <b>delivered and unloaded only, Mykolaiv region: Voznesenk city.</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Delivery place and Incoterms rules</b>	DAP (customs cleared) Incoterms 2020 ( <b>delivered at place and unloaded</b> ) customs cleared <b>Mykolaiv region: Voznesenk city.</b> , net of any direct taxes, customs duties, or indirect taxes.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Consignee details</b>	Delivery address and consignee details will be provided to the successful Bidder(s)	<input type="checkbox"/> Yes <input type="checkbox"/> No	