

TECHNICAL SPECIFICATION OF THE PROCUREMENT SUBJECT

1. INFORMATION ABOUT THE SUPPORT APPLICANT-CUSTOMER

Name: **Sabiedriba ar ierobežotu atbildību “Baltic Dairy Board”**
Registration number: **43603036823**
Legal address: **Stacijas street 1, Bauska, Bauska County, LV-3901**
Contact person: Imants Bozovičs
Phone: + 371 24601404
E-mail: imants@bdb.lv

2. INFORMATION ON THE SUBJECT OF THE PURCHASE

- 2.1. Name of procurement item: Complex of equipment for raw milk processing and preparation of milk mixture for cheese production. The procurement is open to applicants for Lot A only, or for both Lot A and Lot B, or for Lot B. Only Lot A will be evaluated in accordance with the requirements of the Cabinet Regulation No 104 and the Rural Support Service (hereinafter - RSS) Support Programme. In the situation where one tenderer wins Lot A and is also successful in Lot B, a single procurement contract will be signed, separating Lot A and Lot B. The procurement will be considered to be completed also if only applicants apply for Lot A.**
- 2.2. Delivery address: Stacijas street 1, Bauska, Bauska County, LV-3901.**
- 2.3. Expected contract performance period: 31.12.2025.**
- 2.4. Applicants' offers will be evaluated according to the technical specification. The winner will be the bidder with the lowest price.**
- 2.5. The deadline for submission of offers is 30.06.2024. (including).**
- 2.6. Only equipment certified in EU should be delivered.**
- 2.7. Warranty period – not less than 2 (two) years.**
- 2.8. The advance is intended to be no more than 30% of the amount of the delivery contract.**
- 2.9. An applicant has no national or international sanctions in accordance with the Law on International and National Sanctions of the Republic of Latvia.**
- 2.10. An applicant must have at least 3 (three) years of experience in the sale of similar equipment.**
- 2.11. Mandatory object, delivery address survey. The survey can be carried out no later than 1 (one) working day before the end of the offer submission deadline.**
- 2.12. Applicants must submit the following documents:**
 - 2.12.1. Application on the company form according to Appendix 1;**
 - 2.12.2. If an applicant is not registered in Latvia – a certificate from the State Revenue Service (SRS) or other equivalent state institutions about the absence of tax debts;**
 - 2.12.3. If an applicant is not registered in Latvia – a statement from the Register of Enterprises or other equivalent state institutions that an applicant's insolvency process has not been declared, an applicant's economic activity has not been suspended or terminated, legal proceedings have not been initiated for an applicant's bankruptcy or an applicant is not liquidated;**

- 2.12.4.** Confirmation of an independently developed offer according to the form <https://www.lad.gov.lv/lv/iepirkuma-proceduras>.
- 2.12.5.** Documents must be submitted electronically or in paper format in 2 stitched copies: 1 original and 1 copy with the inscriptions ORIGINAL and COPY. Documents must be submitted to the legal or e-mail address specified in Paragraph 1.
- 2.12.6.** Offer validity period: until 31.12.2025.
- 2.13.** If the Customer's Technical Specification specifies a specific product or standard name or any other reference to the origin, special process, brand or type of specific products, the Applicant may offer equivalent products or compliance with equivalent standards that meet the requirements and parameters of the Technical Specification and ensure the operation required by the Technical Specification and functionality.
- 2.14.** If the consumer price index provided by the Central Statistical Office in relation to the date of entry into force of the contract exceeds 10%, the Parties have the right to agree on an increase in the contract price in accordance with the consumer price indices provided by the Central Statistical Office.
- 2.15.** Description of the procurement item, technical requirements:

No.	Service, requirements, level of requirements	Applicant's offer (will/will not be provided or specific parameters)
Procurement Lot A (Lot A equipment included in the eligible costs of the RSS project)		
Components of the equipment complex:		
	• Milk pasteurizer; • Milk separator; • Bacteria removal separator; • Milk standardization equipment; • Whey separator; • Vegetable oil reception and dosing unit with a heated product pipe system; • Category 3 food by-product storage system; • Whey cream processing / sterilization equipment; • CIP Unit for pasteurized product equipment cleaning.	
Equipment technical specifications:		

1.	<u>Milk pasteurizer</u> Production at least 35 000 liters of milk/hour; Product inlet temperature +6 ... +8⁰ C; Pasteurization temperature +65 ... +75⁰ C; Hold time at least 20 seconds; Product outlet temperature +6 ... +8⁰ C; Fully automatic operation depending on the set recipe; Equipment: – 4-section plate heat exchanger for milk with a capacity of at least 35 000 l/h, material 1,4404; – 2-section plate heat exchanger for cream, production according to the amount of cream separated in the separation. Inlet temperature MAX +550 C, outlet temperature MAX +80 C, material 1.4404; – Buffer tank at least 500 liters, equipped with hatch, washing head, level switch and level sensor, material 1.4304; – Heat exchanger for heating pasteurization water with steam; – Product line, material 1.4304; – Holding circuit: product holding time MIN 20 seconds, at a flow rate of 35000 liters / hour; – Milk supply line from the existing tank valve block; – Pasteurized product and CIP (Clean in place) – line at least 100 meters; – CIP supply and return line; – Connections to engineering communications – 10 meters (+/- 8 m); – Cream line connection to an existing cream tank; Pumps: – For the product, a set of centrifugal pumps in a hygienic design (speed control with frequency converters); – Hot water centrifugal pump (speed control with frequency converters); Valves: – Equipped with a non-return valve; – Equipped with constant pressure valve; – All valves in a hygienic design, equipped with a position sensor for feedback; Control devices: – A set of control and measuring devices for ensuring automatic operation, as well as temperature and pressure control in pre-pasteurization and post-pasteurization circuits; – Product flow control; Plant oil dosing equipment: – Automatic oil supply butterfly valve; – Homogenization pump. Control cabinets: – Stainless steel hygienic control cabinet for milk pasteurizer; – Stainless steel hygienic control cabinet for cream cooler; – All necessary equipment for signal processing and automatic control of the equipment; – All necessary equipment for power control of pumps and other equipment; – HMI control panel (at least 15"); – The PLC system must be able to provide the following	
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2.	<u>Milk separator</u> – The maximum yield for milk normalization is at least 40 000 liters of milk/hour; – Product temperature +52 ... +58⁰C; – Fat content of cream 28% ... 45%; – Electric motor power MAX 48 kW; – Equipped with a frequency converter; – Equipped with vibration monitoring; – Set of tools for coil removal, disassembly and assembly; – Equipped with an exhaust pumping system consisting of a tank, a pump, a level control for overflow protection and a pump control sensor.	
3.	<u>Bacteria removal separator</u> – Production of at least 40 000 liters of milk/hour; – Product temperature +52 ... +58⁰ C; – Purification efficiency for anaerobic spores at least 98%; – Purification efficiency for aerobic spores at least 90%; – Electric motor power MAX 56 kW; – Equipped with a frequency converter; – Equipped with vibration monitoring; – A set of tools for removing, disassembling and assembling the coil; – Equipped with an exhaust pumping system consisting of a tank, a pump, a level control for overflow protection and a pump control sensor; – Equipped with an inductive flow meter; – Equipped with a flow indicator and an adjustment device for adjusting the recirculate flow; – Back pressure control at the outlet; – No less than 7” color touch-sensitive control display.	

4.	<u>Milk standardization equipment</u> – Maximum output at least 40 000 liters of milk/hour; – The fat content of standardized milk is not less than 0,2% below the fat content of raw milk; – Cream fat content, at least within the limits of 28% - 45%; – The principle of measuring the fat content of cream – using the density measured with a mass flow meter; – Control precision (average values at continuous and smooth operation): for milk, no more than +/- 0,025%; for cream, no more than +/- 0,25; – Must include communication with the separator (control): ○ flow meter for controlling feed flow and separator ejections; ○ back pressure control at the skimmed milk outlet; – No less than 9” coloured touch-sensitive control display; – The standardization equipment must provide the following operating modes: ○ Standardization of the mixture with skimmed milk and cream; ○ Standardization of the mixture with skimmed milk - vegetable oil mixture and cream; ○ Standardization of the mixture with skimmed milk - vegetable oil mixture, whey cream and cream.	
5.	<u>Cheese whey separator</u> – Production of at least 20 000 liters of milk/hour; – Product temperature +30 ... +50⁰ C; – Fat content of cream 10% - 30%; – Electric motor power MAX 32 kW; – Equipped with a frequency converter; – Equipped with vibration monitoring; – A set of tools for removing, disassembling and assembling the coil; – Equipped with an exhaust pumping system consisting of a tank, a pump, a level control for overflow protection and a pump control sensor; – Equipped with inductive flow meter for supply control; – Equipped with a constant pressure valve and a gauge to control the back pressure at the outlet; – Equipped with cream flow indicator and regulation valve; – No less than 7” coloured touch-sensitive control display.	

6.	<u>Vegetable oil reception and dosing unit with a heated product pipe system</u> The vegetable oil reception station must consist of: – Centrifugal pump with a capacity of at least 30 m³/h, equipped with a frequency converter; – Level switch; – Mass flow sensor; – Filter; – Valve set; – The product lines from the receiving to the storage tank must be equipped with a casing with water heating; – Pneumatic product extrusion systems from the receiving pipeline; – Flexible hose with a DIN standard (or equivalent) connection and a length of at least 3 meters. The vegetable oil feeding and dosing system must consist of: – Valve set; – Twin-screw oil pump with a capacity of at least 10 m³/h with pump housing heating, equipped with a frequency converter; – CIP returned self-bleeding pump; – Mass flow sensor; – Product lines from storage to the dosing point in the pasteurizer must be equipped with a jacket with water heating; – Product pressure sensor; – CIP + and – line; for product lines and tanks (2 pcs.).	
7.	<u>Water heating system for heating vegetable oil pipe casings:</u> – It is necessary to ensure water heating up to +55 ... +60⁰ C; – Circulation must be ensured on three loops: ○ to the vegetable oil receiving line; ○ to the vegetable oil dosing line; ○ on vegetable oil storage tanks (2 pcs.). – The system should consist of: ○ hot water buffer tanks with a volume of at least 1000 liters, equipped with a personnel hatch; ○ hatch position switch; ○ high and low level switch; ○ heat exchanger for heating water with steam; ○ hot water circulation pump; ○ a set of valves and fittings for automatic operation of the system.	

8.	<u>Category 3 food by-product storage system</u> – Tank with a volume of at least 5m³, equipped with a temperature sensor, high and low level switch; personnel hatch and personnel hatch position switch; – Set of valves for diverting category 3 by-products to the storage tank; – Delivery line – from tank to tank truck; – Incoming and outgoing lines: ○ Incoming line from separators (4 pcs.); ○ Issue line to tank truck.	
9.	<u>Whey cream processing / sterilization equipment</u> – Whey cream storage tank with a volume of at least 7m³, equipped with a temperature sensor, high and low level switch, personnel hatch and personnel hatch position switch; – Set of valves for diverting the whey cream and to the storage tank; – Incoming line from whey separators 2 pcs. and from the bacteria removal separator; – Sterilization equipment with regenerative heat exchange process: ○ The buffer tank is equipped with a personnel hatch, hatch position switch and level control; ○ The device must withstand at least 30 seconds at a temperature not less than 90⁰ C; ○ The device must ensure that the product withstands at least 60 seconds at a temperature of no less than 125⁰ C; ○ Further cooling of the product to 10⁰ C; ○ Set of valves and fittings for automatic operation of the system; ○ Must be equipped with electronic temperature, pressure and flow sensors to ensure automatic process control. – Sterilized whey cream storage tank with a volume of at least 7m³, equipped with a temperature sensor, high and low level switch, personnel hatch and personnel hatch position switch; – The incoming line from the sterilizer and the outgoing line to the milk standardization equipment are equipped with valves and a pump (equipped with a frequency converter).	

10.	<u>CIP Unit for pasteurized product equipment cleaning.</u> - Tanks: - o Alkaline tank (1 pcs), insulated, capacity 8000 litres, Stainless steel grade 316L. Equipped with Level transmitter, temperature transmitter, MAX level sensor, Manhole with position switch, CIP nozzle for tank, CIP nozzle for overflow pipe, automatic draining valve, manual butterfly On/Off valve at tank outlet; - o Acid tank (1 pcs), insulated, capacity 8000 litres, Stainless steel grade 316L. Equipped with Level transmitter, temperature transmitter, MAX level sensor, Manhole with position switch, CIP nozzle for tank, CIP nozzle for overflow pipe, automatic draining valve, manual butterfly On/Off valve at tank outlet; - o Fresh water tank (1 pcs), insulated, capacity 8000 litres, Stainless steel grade 304L. Equipped with Level transmitter, temperature transmitter, MAX level sensor, Manhole with position switch, CIP nozzle for tank, CIP nozzle for overflow pipe, automatic draining valve, manual butterfly On/Off valve at tank outlet, Fresh water supply equipped with manual butterfly valve, Regulative automatic valve, pressure transmitter; - o Recovered water tank (1 pcs), insulated, capacity 8000 litres, Stainless steel grade 304L. Equipped with Level transmitter, temperature transmitter, MAX level sensor, Manhole with position switch, CIP nozzle for tank, CIP nozzle for overflow pipe, automatic draining valve, manual butterfly On/Off valve at tank outlet. - Cleaning agent issuing and returning consist of 3 independent pipe lines with MIN capacity 40 m³/h. Cleaning agent supply track equipped with a separate heating system with a tubular exchanger, a filter and a set of measuring devices on the supply line (pressure, flow, temperature) and return line (temperature, conductivity). Seat valves must be used for flow diversion. Each line consist of: - o Seat valves for flow diversion; - o Butterfly vales for discharge; - o Feeding pump, capacity MIN 40 m³/h, equipped with frequency converter; - o Flow transmitter; - o Temperature transmitter; - o Conductivity transmitter; - o Flow sensor; - o Safety filter with cover switch; - o Tubular heat exchanger; - o Automatic On/Off valve for steam; - o Regulative automatic valve for steam; - o Manual drain valve for condensate; - o Steam trap;	
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	Common for all lines ○ Cut Off manual valve for steam; ○ Steam filter. – Dosing section of concentrated agents consist of 3 systems. Pipe lines made of Stainless steel grade 316L; ○ Alkaline dosing include dosing pump MIN capacity 750 l/min, Dosing line to alkaline tank, suction lance with level sensor, dosing valve; ○ Acid dosing include dosing pump MIN capacity 750 l/min, Dosing line to acid tank, suction lance with level sensor, dosing valve; ○ Disinfection dosing include dosing pump MIN capacity 150 l/min, Dosing line to each CIP feed line, suction lance with level sensor, seat dosing valve for each CIP feed line – MCC made of Stainless steel, equipped with buttons of emergency stop and RESET; – CIP unit equipped with PLC and HMI and must have fully automated operation; – CIP system must have automated self cleaning possibility.	
11.	<u>General requirements for all equipment</u> • All valves, pumps, etc. equipment that is in contact with food must be hygienically designed; • All automatic valves must have position sensors; • All product lines must be DIN-standard (or equivalent); • Connections to engineering communications – 10 meters (+/- 8 m); • The material of the control cabinets is stainless steel, it must be hygienic; • Signal exchange with existing production facilities should be ensured; • Includes transport, installation integration, programming, personnel training, equipment use instructions, spare parts catalogs, technological schemes, electrical schemes, pneumatic schemes, etc..	
Procurement Lot B (Lot B equipment is not included in the eligible costs of the project and is financed without State aid. Accordingly, the Regulation of the Cabinet of Ministers No 104 does not apply to Part B). The tenderer must indicate the costs separately for Part B.		

1.	<u>Equipment to be upgraded:</u> • <u>Upgrade of existing filtration equipment;</u> • <u>Adaptation existing milk storage manifold for new assumption;</u> • <u>Adaptation existing milk pasteuriser PS01 for sweet whey pasteurisation with capacity up 20.000l/h;</u> • <u>Adaptation existing whey pasteuriser PS03 to capacity of 20.000l/h;</u> • <u>Adaptation existing cream pasteuriser PS02;</u> • <u>Adaptation existing whey storage manifold;</u>	
2.	<u>Upgrade of existing filtration equipment:</u> <u>Necessary components and parts for the extension of the existing UF and NF/ROP unit allowing the processing of 26.500 l/h sweet whey 6% TS and 28.500 kg/h 7,4% TS (Mix of 6% TS sweet whey and RO concentrated 25% TS sweet whey) into a WPC83 (28% Total Solids - TS) UF retentate and a NF concentration of the UF permeate to a dry matter of around 25% TS</u>	
3.	<u>Scope resume</u> • <u>A complete set of new membrane elements for the existing UF unit</u> • <u>A complete set of new membrane elements for the existing NF/ROP unit</u> • <u>1 additional loop for the NF part of the NF/ROP unit with 3 membrane housings including a Fristam 7,5 kW loop pump.</u> • <u>1 additional membrane housing for the ROP including membrane elements and permeate connector, a new loop pump (11 kW)</u> • <u>1 new Grundfos feed pump (22 kW) to allow a higher NF system pressure and a higher CIP flow</u> • <u>2 new Grundfos feed pumps for the ROP section (22+30 kW) replacing the existing ones to increase system pressure and flow.</u> • <u>Additional MCC cabinet for the NF/ROP unit</u> • <u>Parts and components for the extension of the existing I/O cabinet of the NF/ROP loops.</u> • <u>Additional internal stainless steel valves for the modification.</u> • <u>Update of the NF/ROP unit PLC software to include new loop and feed pump.</u>	
4.	<u>Adaptation existing milk storage manifold for new assumption</u> <u>Pumps:</u> • <u>1 new product centrifugal pump set 35m3/h 5,5kW (frequency converter controlled)</u> • <u>1 mechanical, electrical assembly</u> • <u>Automation from existing plant system</u>	

5.	<u>Adaptation existing milk pasteuriser PS01 for sweet whey pasteurisation with capacity up 20.000l/h</u> <u>Temperature profile whey:</u> • <u>Inlet temperature 6 ÷ 8°C</u> • <u>Pasteurisation temperature 72÷ 74°C</u> • <u>Holding time – existing holder</u> • <u>Outlet temperature 6 ÷ 8°C When cooling with ice water at max. 2.°C</u>	
6.	<u>Equipment</u> <u>1 6-section plate heat exchanger -existing</u> • <u>Capacity: up to 20,000l/hour for whey</u> <u>1 whey buffer tank -existing</u> • <u>1 New conductance transmitter</u> • <u>1 New opening sensor for manhole</u> • <u>1 New sight glass</u> • <u>New automatic butterfly valve – drain</u> <u>1 Hot water circulation unit:</u> • <u>1 heat exchanger for hot water preparation by saturated steam 4 bar</u> • <u>1 set of valves and connections</u> • <u>1 hot water centrifugal pump</u> <u>1 slurry line from separator</u> • <u>1 low level transmitter</u> • <u>1 non return valve</u> • <u>1 slurry centrifugal pump 5m3/h</u> <u>Related lines - AISI 304 design</u> • <u>1 supply sweet whey line from existing manifold</u> • <u>1 return line whey pasteurised to whey manifold</u> • <u>1 CIP line</u> • <u>1 utility lines</u> • <u>1 whey cream line to NEW whey cream tank</u> • <u>1 slurry line to NEW 3Cat.Tank (Client del.),</u>	

7.	<u>Adaptation existing whey pasteuriser PS03 to capacity of 20.000l/h</u> <u>Extra equipment to be added on top of inlet buffer tank and separator</u> <u>1 whey buffer tank -existing</u> • <u>1 New conductance transmitter</u> • <u>1 New sight glass</u> • <u>1 New automatic butterfly valve – drain</u> <u>1 slurry line from separator (existing)</u> • <u>1 low level transmitter</u> • <u>1 non return valve</u> • <u>1 slurry centrifugal pump 5m3/h</u> <u>Whey cream line</u> • <u>1 Y type mixproof valve</u> • <u>1 Automatic butterfly valve</u> <u>Related lines - AISI 304 design</u> • <u>1 whey cream line to existing cream tank</u> • <u>1 CIP line</u> • <u>1 slurry line to NEW 3Cat.Tank</u> • <u>Automation software + hardware will be used from existing plant system</u>	
8.	<u>Adaptation existing cream pasteuriser PS02</u> <u>Existing pasteuriser for cream to be upgraded by new pumps</u> <u>Pumps</u> • <u>1 new product centrifugal pump set 10m3/h 5,5kW (frequency converter controlled)</u> • <u>1 new product centrifugal pump set 10m3/h 11,0kW (frequency converter controlled)</u> • <u>1 mechanical, electrical assembly</u> • <u>Automation software + hardware will be used from existing plant system</u>	

9.	<u>Adaptation existing whey storage manifold</u> <u>Existing whey storage manifold to be upgraded for new function of existing tanks 100m3</u> • <u>1st and 2nd tank dedicated for raw whey</u> • <u>3rd tank dedicated for raw and pasto whey</u> • <u>4th dedicated for pasto whey</u> <u>Ways IN/OUT</u> • <u>IN from TP line</u> • <u>IN raw milk</u> • <u>IN Pasteuriser PS01</u> • <u>IN Pasteuriser PS03</u> • <u>OUT Pasteuriser PS01</u> • <u>OUT Pasteuriser PS03</u> • <u>OUT UF01</u> <u>Manifold matrix</u> • <u>3 New REC type mixproof valve</u> • <u>2 New D type mixproof valve</u> • <u>4 Existing ,reassembled REC type mixproof valve</u> • <u>5 W changeover valves</u> • <u>6 Automatic butterfly valve</u> • <u>1 mechanical, electrical assembly</u> • <u>Automation software + hardware will be used from existing plant system</u>	
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APPLICATION FOR PARTICIPATION IN PROCUREMENT

Applicant	
Registered (<i>where, when, registration no.</i>)	
Taxpayer registration no.	
Legal address	
Office address (correspondence address)	
Phone number	
E-mail address	
Bank details	
Contact person (<i>name, surname, position, phone number, e-mail address</i>)	
Average annual financial turnover of the last 3 (three) completed years of the Applicant	
Certificate of sales of similar equipment (must indicate to whom delivered, address, contact person)	

1. We undertake to comply with all the requirements of the procurement documents and their annexes and agree to all the requirements and regulations set forth in the procurement documents and their annexes.
2. We certify that we have the resources available to ensure the necessary performance of the contract within the specified time period.
3. We are not interested in any other offer submitted in this procurement.
4. All copies of submitted documents correspond to the original, the information and data provided are true.
5. The Applicant has at least 3 (three) years of experience in the sale of similar equipment.

Name, Surname:	
Position:	
Signature:	
Date:	

Technical offer according to clause 2.15:

Financial offer (without VAT):

Lot A

Lot B

OBJECT SURVEY PAGE

About surveying the object _____ in nature

Applicant's name	Applicant's registration number	Date of object survey	Name, Surname of the Applicant's representative	Signature of the Applicant's representative

I confirm the survey of the object in nature:

Customer representative:

Name, Surname _____

Date _____

Signature _____