

PURCHASE ORDER
PHILIPPINE TEXTILE RESEARCH INSTITUTE
Agency / Procuring Entity

Supplier:	ALVTECHNOLOGIES PHILIPPINES INC.	PO No:	2112-1078
Address:	Unit 2308 Medical Plaza Ortigas, San Miguel Ave., Ortigas Center, Pasig City	Date:	12/21/21
e-mail Address:	philippines@alvtechnologies.com.ph	Mode of Procurement:	Public Bidding
Tel. No.:	8638-2317 / 8638-2319	PR No.:	2110-1286
			10/29/21

Gentlemen: Please furnish this office the following articles subject to the terms and conditions contained herein:

Place of Delivery: PTRI Bldg. Bicutan Taguig City Delivery Term: 210 calendar days

Date of Delivery: Payment Term:

Stock No	Unit	Description	Qty	Unit Cost	Amount
1	lot	<p>Bannor 400mm Inclined Wire Pilot Paper Making Line 2500:1 (water:fiber) Minimum speed of wire: 5 - 18 m/min Width of wet laid produced: 400mm Basis weight of wet laid produced: 20 - 200 gm² Capacity (for 60 gsm at 16 meters/min): 0.5 tons per day, 22.5 hours/day Inclined headbox angle: 25° Maximum height for machine and parts: 1 520 m 4 38 m x 10.95m (1st stage)</p> <p>A. Stock Preparation and Approach System Auto control of stock preparation system The whole stock preparation system is equipped with precise instrument for consistency and level and flow 2.5m (2501 mm) x 10 m (10000 mm) max consist of:</p> <ol style="list-style-type: none"> 1. Pulper <ul style="list-style-type: none"> - capacity: 0.3 m³ - material: SS 304 - The pulper rotor are designed for fiber length from 2 to 16 mm. 2. Refiner <ul style="list-style-type: none"> - conical or double disc - able for long fiber beating such as Abaca, Mulberry, EFB, Banana, etc. - parts in contact with pulp are made of SS 304 - has a rotor made of alloy steel 3. Pulp chest <ul style="list-style-type: none"> - capacity: 0.5 m³ damping chest - made of high density polyethylene (HDPE) - The stock preparation is planned for two different materials: man-made fiber and natural fiber, the composition of web can be adjusted accordingly. It can be 100% natural fiber, or 100% man-made fiber or mixed 4. Agitator <ul style="list-style-type: none"> - parts in contact with pulp are made of SS 304 5. Pumps <ul style="list-style-type: none"> - one (1) pump per chest - minimum flow rate: 5L/min at pump 3 - maximum flow rate: 300L/min at pump 4 - meters of water column: 10 mWS - parts in contact with pulp are made of SS 304 - has a rotor made of alloy steel 6. Connection parts such as sealants, pipe lines and valves <p>B. Headbox and Wire Section - The headbox can distribute the pulp into the headbox to form the wetlaid nonwoven - and can randomly distribute fibers on the wire formers - 2.5m (2500 mm) x 4.5 m (4500 mm) - consist of:</p>	1	21,992,000.00	21,992,000.00

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FAD-PPUSS Form No. 14
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Tel. No 8638-2317 / 8638-2319	PR No. 2110-1286	
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		<p>1. Center distributor</p> <ul style="list-style-type: none"> - The pulp will go inside the center distributor from bottom and come out from the top part in round direction, and then connected to the headbox by pipes <p>2. Inclined headbox</p> <ul style="list-style-type: none"> - The design of step manifold will contain round and square tubes with different diameter, and mix rooms with different width. - inclined headbox angle: 20° - sidewall of the headbox is made of transparent PMMA material - other parts of the headbox are made of SS304 <p>3. Wire section with suction boxes</p> <ul style="list-style-type: none"> - Suction dewatered boxes are with individual control - Forming wire speed is adjusted. - made of SS304 <p>4. Guide rolls, tensioner, wire guider, OSC shower system, etc.</p> <p>5. White water tray</p> <ul style="list-style-type: none"> - volume capacity 1.2m³ - made of SS304 <p>6. Cleaning doctor</p> <ul style="list-style-type: none"> - doctor holder is SS304 - doctor blade is EP <p>7. Water jet nozzle</p> <ul style="list-style-type: none"> - made of SS316 <p>C. Press Section</p> <p>can distribute pulp into the headbox to form the wet laid nonwoven can randomly distribute fibers on the wire former with the press of two roll, the water will be removed from the wetlaid nonwoven consist of:</p> <ol style="list-style-type: none"> 1. Top press roll <ul style="list-style-type: none"> - roll body is made of a seamless steel pipe - shaft is 45# steel - surface is with rubber coated 2. Bottom press roll <ul style="list-style-type: none"> - roll body is made of a seamless steel pipe - shaft is 45# steel - surface is with rubber coated 3. Pressure loading and unloading system 4. Frame <ul style="list-style-type: none"> - made of SS 304 5. Guide rolls <p>D. Dryer section</p> <p>There are infrared heating and induction heating system for the dryer section consist of:</p> <ol style="list-style-type: none"> 1. Drum dryer <ul style="list-style-type: none"> - Three (3) pcs rollers - minimum diameter: Ø800 mm each 2. Infrared heating system 			

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Stock No	Unit	Description	Qty	Unit Cost	Amount
		3 Induction heating system 4 Guide rolls 5. Frame - made of SS304 E. Winder made of SS304 F. Electric and Driving System All motors, reducers, coupling, etc for the pulper, agitator, deflaker, pumps, paper machine and rewriter, etc. All control cabinets, cables, etc. G. Instrument and Control System Including: - Flow meter (ultrasonic or optical) - Consistency sensor (ultrasonic or optical) - Level sensor - Auto valves, etc. H. Vacuum System and Compressed Air System Vacuum pump and pipe lines to suction box and suction roll. Air compressor, filter, tanks, air tubes, and other auxiliaries. Pneumatic control system, pneumatic cylinder, valves, tubes I. Koppel KV24WM-ARF21C2 2.5 HP Split Type Airconditioner Wall Mounted Split Type Inverter Air Conditioner. Dimensions: 22.6 x 108 x 33.5 cm 2.5 HP Inverter technology Cooling capacity: 26,408 KJ/h Voltage, Freq. Ph. 230V, 60HZ, 1phase Other requirements: - Pre-assembly before delivery - Zibo Banner New Material Technology Co., Ltd has more than five (5) years experience for making wetlaid systems. - Saxobran GmbH Switzerland is the owner of know-how and design of wetlaid systems, with more than forty (40) years of experience on specialty paper and nonwoven textile production Inclusions 1. Provided one (1) detailed schematic design and one (1) 3D model of entire line showing rough estimate of the scale and dimension of parts and sections. 2. Provision of spare parts: refiner disc (1 set), forming wire (1 set), guide roll (4 sets), one stator pump per type, cleaning blade (4 sets), additional pipe and valves and belt for motor 3. The machine will be ergonomically and modularization designed. The manufacturer will do the assembly and installation as much as possible in China, and fix it on an overall foundation. The machine will be tested according to customer material composition in China and customer will inspect it with live video meeting 4. Hauling of equipment and accessories by supplier/manufacturer to worksite (DOST-PTRI) including but not limited to unloading and			

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		forklifting			
		5. Installation, testing, and commissioning of the equipment and accessories by the supplier with a live video meeting and consultation with the manufacturer.			
		6. Provision and installation of powerlines, electrical components, and transformer to existing power supply load "source"			
		7. Provision of operating manual, troubleshooting manuals for common problems, machines layout, electric circuit drawing, pneumatic circuit drawing, logic control flowchart, and other necessary manuals (in English)			
		8. Provision of product brochure and product line (in English) for commercially available items.			
		9. Provision of video of the machine with different scale, but same brand and system, with additional info on the difference of the machine to be supplied and video of the machine.			
		10. Provision of a certification of an experts pool from Zibo Banner that is available for an online consultation for advice on product and application, troubleshooting, and product service.			
		11. Provision of a list of client in the last two (2) years.			
		12. One (1) year warranty of machine and parts, excluding consumable parts that are replaced periodically due to natural wear out.			
		13. On-site training and issuance of training certificates.			
		14. On-call sales technician and on-site technical assistance from supplier, and/or online technical assistance via live video meeting with manufacturer for service support.			

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Stock No	Unit	Description	Qty	Unit Cost	Amount
		Delivery of 210 calendar days upon receipt of Purchase Order includes duties and taxes and 12% VAT			

[Signature]
EMILLA F. PAYAG
 Project Leader

Fund Source: DOST-GIA Development of Non-woven Finishing Technologies Towards Alternative Leather - Project 2

Total Amount in Words: **Twenty one million nine hundred ninety two thousand pesos only** Php21,992,000.00

In case of failure to make full delivery within the time specified above, a penalty of one-tenth (1/10) of 1% for every day of delay shall be imposed.

Conforms Signature over printed name of Supplier Annaliza Amo Technical Sales Engineer ALVTECHNOLOGIES PHILIPPINES INCORPORATED RECEIVED 11 JAN 2022 Date	<i>[Signature]</i> CELIA B. ELUMBA Director IV Date
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Funds Available MILLET M. CRUZ OIC, Accounting Section CORAZON I. TAPUGO CHIEF, FAD	Oblig No. <u>03-EI-12-127</u> Amount <u>21,992,000.00</u> MDS - TRUST - WIVEN WIVEN P2
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