



Republic of the Philippines
PAMANTASAN NG LUNGSOD NG MAYNILA
(University of the City of Manila)
 Intramuros, Manila



PLM - BIDS and AWARDS COMMITTEE (PLM-BAC)

NAME OF PROJECT: **TECHNICAL AND SCIENTIFIC EQUIPMENT**

SUPPLEMENTAL/BID BULLETIN No. 24-G-2021
06 October 2021

This Supplemental/Bid Bulletin is issued to clarify or amend some provisions originally indicated in the Bidding Documents, in compliance with Section 22.5.2 of the Revised Implementing Rules and Regulations of Republic Act 9184, to wit:

Issue/Clarification (ORIGINAL)				Response (AMENDED)			
Section VII. Technical Specifications				Section VII. Technical Specifications			
Lot No.	ITEM DESCRIPTION	Quantity	Unit of Issue	Lot No.	ITEM DESCRIPTION	Quantity	Unit of Issue
1	Current Meter Flowmeter, Digital, Mechanical, w/standard rotor response with the standard rotor threshold approximately 10 cm/sec. (1/5 KNOT). RANGE 10CM/SEC (1/5 KNOT) TO 7.9M/SEC APPROXIMATELY (15 KNOTS) DEMONSTRATION/TESTING/TRAINING	2	sets	1	Current Meter Flowmeter, Digital, Mechanical, w/standard rotor response with the standard rotor threshold approximately 10 cm/sec. (1/5 KNOT). RANGE 10CM/SEC (1/5 KNOT) TO 7.9M/SEC APPROXIMATELY (15 KNOTS) DEMONSTRATION/TESTING/TRAINING	2	sets
2	Automatic Leveling Durable, Dependable, High Value Auto Levels Magnification 32x Rapid, Accurate, and Stable Automatic Compensation Ultra-Short 20cm (7.9 in.) Focusing	3	sets	2	Automatic Leveling Durable, Dependable, High Value Auto Levels Magnification 32x Rapid, Accurate, and Stable Automatic Compensation Ultra-Short 20cm (7.9 in.) Focusing	3	sets

	All-Weather Dependability				All-Weather Dependability		
	Clampless, Endless Fine Horizontal Adjustments				Clampless, Endless Fine Horizontal Adjustments		
	DEMONSTRATION/TESTING/TRAINING				DEMONSTRATION/TESTING/TRAINING		
3	Reynolds Apparatus	1	set	3	a Reynolds Apparatus	1	set
	TECHNICAL DATA:				TECHNICAL DATA:		
	Test Pipe: 15.6 mm (ID) x 700mm (L)				Test Pipe: 15.6 mm (ID) x 700mm (L)		
	Dye reservoir : 500 ml				Dye reservoir : 500 ml		
	Measuring cup : 2 L				Measuring cup : 2 L		
	DEMONSTRATION/TESTING/TRAINING				DEMONSTRATION/TESTING/TRAINING		
4	Venturimeter	1	set	3	b Venturimeter	1	set
	TECHNICAL DATA: .				TECHNICAL DATA: .		
	Diameters : 28 mm inlet.				Diameters : 28 mm inlet.		
	Taper : Upstream 21°				Taper : Upstream 21°		
	Downstream 10° .				Downstream 10° .		
	Water manometer : 8 tubes.				Water manometer : 8 tubes.		
	Total head probe : 1 ea				Total head probe : 1 ea		
	DEMONSTRATION/TESTING/TRAINING				DEMONSTRATION/TESTING/TRAINING		
5	Motorized Pump	1	set	3	c Motorized Pump	1	set
	SPECIFICATIONS				SPECIFICATIONS		
	i) Sump Tank				i) Sump Tank		
	Material: Fiberglass				Material: Fiberglass		
	Capacity: 120-L				Capacity: 120-L		
	ii) Volumetric Tank				ii) Volumetric Tank		
	Material: Fiberglass				Material: Fiberglass		
	Capacity: 85-L				Capacity: 85-L		
	iii) Deliver Pump				iii) Deliver Pump		
	Type: Centrifugal pump				Type: Centrifugal pump		
	Material: Stainless Steel				Material: Stainless Steel		
	Capacity: 0 to 80 LPM				Capacity: 0 to 80 LPM		
	Power: 0.55 kW				Power: 0.55 kW		
	Head: 22 meters				Head: 22 meters		
	DEMONSTRATION/TESTING/TRAINING				DEMONSTRATION/TESTING/TRAINING		

6	1 Bagger Concrete Mixer	1	unit	4	1 Bagger Concrete Mixer	1	unit
	Portable				Portable		
	Electric				Electric		
	DEMONSTRATION/TESTING/TRAINING				DEMONSTRATION/TESTING/TRAINING		
7	Evaporator	1	set	5	Evaporator	1	set
	Heater				Heater		
	power rating: 2kW				power rating: 2kW		
	temperature range: 5...80°C				temperature range: 5...80°C		
	Heating and cooling medium: water pump				Heating and cooling medium: water pump		
	3 stages				3 stages		
	max. flow rate: 1,9m3/h				max. flow rate: 1,9m3/h		
	max. head: 1,5m				max. head: 1,5m		
	power consumption: 58W				power consumption: 58W		
	Tube evaporator				Tube evaporator		
	length: 1050mm				length: 1050mm		
	inner diameter: 16mm				inner diameter: 16mm		
	outer diameter: 24mm				outer diameter: 24mm		
	Condenser: coiled tube made of copper Refrigerant				Condenser: coiled tube made of copper Refrigerant		
	Refrigerant				Refrigerant		
	GWP: 1				GWP: 1		
	filling volume: 1,2kg				filling volume: 1,2kg		
	CO2-equivalent: 0t				CO2-equivalent: 0t		
	Measuring ranges				Measuring ranges		
	pressure: -1...1,5bar rel.				pressure: -1...1,5bar rel.		
	temperature: 0...100°C				temperature: 0...100°C		
	230V, 50Hz, 1 phase				230V, 50Hz, 1 phase		
	230V, 60Hz, 1 phase				230V, 60Hz, 1 phase		
	120V, 60Hz, 1 phase				120V, 60Hz, 1 phase		
	UL/CSA optional				UL/CSA optional		
	LxWxH: 1250x800x1970mm				LxWxH: 1250x800x1970mm		
	Weight: approx. 170kg				Weight: approx. 170kg		
	water connection (min. 320L/h, water temperature max. 16°C),				water connection (min. 320L/h, water temperature max. 16°C),		

	DEMONSTRATION/TESTING/TRAINING				DEMONSTRATION/TESTING/TRAINING			
8	Hot Plate with Magnetic Stirrer Work Plate Size: 184x184mm (7 inch) Work Plate Material : Glass ceramic Max. Stirring Capacity : 20 L Motor Input : 18W Motor Output : 10W Speed Range : 100 -1500 rpm Speed Display : LCD Speed Display Accuracy : +_ 1 rpm Heating Output : 1000W Overheating protection : 580 deg. Celsius Protection Type : IP21 Power Consumption : 1050 W Power supply Ac 220V+ _ 10%, 60 HZ External Size (WxDx H) : 215 x360x112mm Gross Weight : 6.5 kg	1	set		6	Hot Plate with Magnetic Stirrer Work Plate Size: 184x184mm (7 inch) Work Plate Material : Glass ceramic Max. Stirring Capacity : 20 L Motor Input : 18W Motor Output : 10W Speed Range : 100 -1500 rpm Speed Display : LCD Speed Display Accuracy : +_ 1 rpm Heating Output : 1000W Overheating protection : 580 deg. Celsius Protection Type : IP21 Power Consumption : 1050 W Power supply Ac 220V+ _ 10%, 60 HZ External Size (WxDx H) : 215 x360x112mm Gross Weight : 6.5 kg	1	set
9	Oxygen/Acetelene tank with gas & transporter trolley	1	set		7	Oxygen/Acetelene tank with gas & transporter trolley oxygen tank - 1800 psi acetylene tank - 250 psi with trolley	1	set
10	PLC Training Equipment System Multi-technology, Multi-Laboratory, Engineering Design and Simulation Software Single License Dongle Laptop w/ LAN Port	1	set		8	Pneumatic - Electro - Pneumatic PLC Training Equipment System Programmable Logic Controller Trainer Main technical Parameters: - Power supply: Single-phase AC 220V 60 Hz; - Safety Protections: grounded, lead protection, safety in accordance with related GB standards; insulated cables and wires. SIMULATION MODULES: 1. Automatic feeder static module Dimension (mm): 300x285x60	1	set
11	Microcontrollers (Embedded System) SPECIFICATION 1. PIC16F887 chip x 1 (1) 40 pins(35 input/output pins) (2) 368 bytes RAM memory (3) Nano Watt Technology (4) (4) 10-Bit Analog-to-Digital (A/D) Converter (5) Operating Frequency (0~20MHz)	2	sets					

2. UART to USB Interface x 1				9 LED		
3. EEPROM 64Kbits x 1				2 Toggle Switch		
4. 20 x 2 character LCD x 1				11 Terminals; 2 input, 7 output		
5. 4-digit 7-segment display x 1				Enclosure Material: PVC board with 5mm thickness and		
6. Capacitive sensing button x 1				2 carrying handles		
7. LED x 11				2. Water level automatic control static module		
8. 8 x 8 multicolor dot matrix LED display x 1				Dimension (mm): 300x285x60		
9. Buzzer and status LED x 1				6LED		
10. 5K variable resistor x 1				4 Toggle Switch		
11. AD590 temperature sensor x 1				8 Terminal; 4 input, 2 output		
12. Stepping motor and status LED 7.5 degrees x 1				Enclosure Material: PVC board with 5mm thickness and		
13. 10 x 2 extend socket x 2				2 carrying handles		
14. Slide switch x 8				3. Automatic and manual control of traffic lights static module		
15. 4 x 4 matrix keypad x 1				Dimension (mm): 300x285x60		
16. Built-in power supply :				12 LED		
Input : 100~240VAC, 50/60Hz, 0.65A				3 Toggle Switch		
Output : 12V/1.2A, 5V/2.1A, 3.3V/1A				11 Terminal; 3 Input, 6 output		
Laptop				Enclosure Material: PVC board with 5mm thickness and		
DEMONSTRATION/TESTING/TRAINING				2 carrying handles		
				4. Automatic washing machine static module		
				Dimension (mm): 300x285x60		
				8 LED		
				5 Push Buttons		
				13 Terminals; 5 Input 6 Output		
				Enclosure Material: PVC board with 5mm thickness and		
				2 carrying handles		
				5. Motor control static module		
				Dimension (mm): 300x285x60		
				4 LED		
				2 Toggle Switch		
				9 Terminals; 3 Input, 4 Output		

		3 Safety Fuse		
		Enclosure Material: PVC board with 5mm thickness and 2 carrying handles		
		6. Automatic blending of liquids static module		
		Dimension (mm): 300x285x60		
		11 LED		
		3 Toggle Switch		
		6 Terminals		
		Enclosure Material: PVC board with 5mm thickness and 2 carrying handles		
		7. Static Stepper motor control module		
		Dimension (mm): 300x285x60		
		2 Toggle Switch		
		1 Momentary switch		
		4 detent Switch		
		13 Terminals; 7 Input, 4 Output		
		Enclosure Material: PVC board with 5mm thickness and 2 carrying handles		
		8. Automatic forming machine static module		
		Dimension (mm): 300x285x60		
		10 LED		
		6 Toggle Switch		
		12 terminals; 6 Input, 4 output		
		Enclosure Material: PVC board with 5mm thickness and 2 carrying handles		
		9. Automatic steel roller static module		
		Dimension (mm): 300x285x60		
		10 LED		
		2 Toggle Switch		
		11 terminals; 2 inputs, 4 output		
		Enclosure Material: PVC board with 5mm thickness and 2 carrying handles		

		10. Mails allocation static module		
		Dimension (mm): 300x285x60		
		12 LED		
		1 Toggle Switch		
		11 Terminal; 2 input, 7 output		
		Enclosure Material: PVC board with 5mm thickness and 2 carrying handles		
		11. Control of tower lights static module		
		Dimension (mm): 300x285x60		
		9 LED		
		7 Segment		
		18 Terminal; 17 output		
		Enclosure Material: PVC board with 5mm thickness and 2 carrying handles		
		12. Four-layer elevator dynamic module		
		Dimension (mm): 300x285x60		
		14 LED		
		32 Terminal; 14 Input, 16 output		
		Enclosure Material: PVC board with 5mm thickness and 2 carrying handles		
		13. Electric plating production line dynamic module		
		Dimension (mm): 300x285x60		
		18 Terminal; 12 input, 14 output		
		Enclosure Material: PVC board with 5mm thickness and 2 carrying handles		
		OTHER MATERIALS AND COMPONENTS:		
		• Training bench (1 set)		
		• Communication cable		
		• Power supply control panel (1 set)		
		- Timer and alarm recorder indicator		
		- Selector switch, buzzer, and relay unit		
		- Voltage meter: 0 – 30V		

		- Ammeter: 0 – 30 mA		
		- Adjustable output 0 - ±10 V		
		- DC current: Adjustable output: 4 – 20 mA		
		• Inverter module		
		• Module rack		
		• Three-phase asynchronous motor		
		Additional training requirements:		
		* Must provide at least 3 days intensive training.		
		* Must provide at least 5 experiments.		
		*Must provide training of advanced motor control using Programmable Logic Controller with Variable Frequency Drive		
		*Training must include LAD and FBD programming.		
		*Training must include the use of PLC subroutines		
		Other Terms and Conditions:		
		•Equipment must be supplied with training manuals/ curriculum in English.		
		•Bidder must be an Authorized Distributor/ Reseller of the bid item/s & authorize to provide technical support & must attach documents to support such claim.		
		•Supplier shall provide technical personnel - Registered Engineers to perform maintenance check of the equipment if needed. Supplier confirms the availability of manpower to perform such functions.		
		•Supplier should attach the list of manpower requirements.		
		With simulation SOFTWARES		
		Technical Description:		
		This software contains libraries and modules for: Hydraulics, Pneumatics, components sizing-energy, bill of material and report, catalogue manager, Manufacturers’ catalogues, Control panels and 2D-3D HMI, Teach ware-workflow, Didactic support, SFC Compilers, Sequential function chart, Digital electronics, APISs/, Script language, PLC ladder logic, CAN bus, Block		

		<p>diagram-Math, Electrical Controls, Electro technical One-line, Electro technical, Mechanical</p>		
		<p>Specifications:</p> <ul style="list-style-type: none"> • Interactive lab exercise 		
		<p>These exercises include simple schematic that can be simulated and animated in order to be analyzed. Teachers can also modify these exercises and create ones</p>		
		<ul style="list-style-type: none"> • Online remote Access Licensing 		
		<p>You can prepare and simulate your courses and homework from home, school or workplace</p>		
		<ul style="list-style-type: none"> • Teach ware 		
		<p>This software offers guides, lectures, animations and lab notes for all levels of discipline</p>		
		<ul style="list-style-type: none"> • Workflow 		
		<p>Allows teachers to create and sequence content in order to evaluate student's knowledge retention.</p>		
		<ul style="list-style-type: none"> • Configuration tools 		
		<p>Allows you to create and configure valves, cylinders, motors etc. to obtain components which are graphically compliant with your requirements and respectful of real technical performance</p>		
		<ul style="list-style-type: none"> • Create and customize your own symbols, libraries and templates 		
		<ul style="list-style-type: none"> • Component sizing 		
		<p>Provides calculation worksheets specific to each category of pneumatic, hydraulic and electrical components which include calculation tool necessary for component sizing.</p>		
		<ul style="list-style-type: none"> • Adjustable component simulation parameters 		
		<p>This includes parameters such as applied loads, dimensions angles, internal leakages, force, torque, etc.</p>		
		<ul style="list-style-type: none"> • Dynamic, Realistic and Visual Simulation 		

		<p>Accurately reproduce the system's behavior in a dynamic and visual way. During simulation, components are animated and lines and wires are color-coded according to their state</p>		
		<p>• Virtual System</p>		
		<p>Using the electrical, PLC libraries and SFC/GRAFCET module, the student simply links sensors, switches, lights, conveyors, etc., in order to make the virtual systems operate according to teacher's instructions.</p>		
		<p>• 3D Editing and Animations</p>		
		<p>Includes a 3D editor for creating and importing 3D parts in STEP, STL and IGES. It is possible to visualize, simulate and animate them simultaneously with the technologies that drive the system</p>		
		<p>• Mechanical Links</p>		
		<p>Mechanical bodies can be linked to fluid power actuators to simulate and animate their effects.</p>		
		<p>• Cross-section Animation</p>		
		<p>Users can build cross-section animated views and link them to the simulation results in order to produce synchronized animations.</p>		
		<p>• System behavior analysis</p>		
		<p>You can monitor and visualize simulation variables during simulation</p>		
		<p>• Troubleshooting Modules</p>		
		<p>• Circuit Modification during Simulation</p>		
		<p>Provides tools for disconnecting wires and pipes during simulation to isolate parts of a circuits, perform measurements and repair or replace components to fix suspected failures.</p>		
		<p>• Diagnostic Tools</p>		
		<p>Provides extensive diagnostic tools allowing to detect inconsistencies or errors such as non-compliance with ISO standards, free connectors, redundant or overlapping lines, etc.</p>		
		<p>• Interfaces to programmable logic controllers and equipment</p>		

		<ul style="list-style-type: none"> • Manufacturers' Catalogues 		
		Offering teachers and students an extensive library with thousands of preconfigured components that reproduce real world functions		
		<ul style="list-style-type: none"> • CAN Bus Links to Operate Virtual Machines 		
		<ul style="list-style-type: none"> • PLC Export 		
		<ul style="list-style-type: none"> • Block Diagram 		
		It is possible to create a graphical environment for component and system modeling using predefined function blocks. It can also be used to create and test complete control loops.		
		<ul style="list-style-type: none"> • Sequential function charts 		
		<ul style="list-style-type: none"> • HMI and Control Panels 		
		User can easily create animated shapes that reproduce the behavior of the equipment they represent.		
		<ul style="list-style-type: none"> • Electrical Controls 		
		Interacts with all components from other libraries so as to create electrically controlled systems.		
		<ul style="list-style-type: none"> • Electro technical 		
		Offers wide array of components to create AC and DC electrical circuits, from basic to advanced uses. It supports IEC and NEMA standards. Motor soft starters and VFD's are available.		
		<ul style="list-style-type: none"> • Electro technical One-line 		
		Enables the design of diagrams for all voltage levels in a typical one-line representation of networks for power generation, transmission and distribution.		
		<ul style="list-style-type: none"> • Digital Electronics 		
		Includes standard devices such as inverters, logic gates, flip-flop, counters, shift registers, comparators, switches, LEDs, 7-bar display, decoders, multiplexers, etc.		
		<ul style="list-style-type: none"> • Programmable logic controller 		
		Offers PLC logic libraries for different brands of PLC		
		<ul style="list-style-type: none"> • Pneumatics 		

	Includes all the symbols necessary to create pneumatic, electro pneumatic and logic systems.		
	<ul style="list-style-type: none"> • Hydraulics 		
	Offers all component symbols required to create mobile and industrial hydraulic systems and functions.		
	Libraries:		
	<ul style="list-style-type: none"> • Hydraulic • Proportional Hydraulic • Pneumatic • Proportional Pneumatic • Drive & Transmission Elements • Environment & Control • Electrical Control (JIC Standard) • Electrical Control (IEC Standard) • Digital Electronics • Ladder for Allen-Bradley PLC • Ladder (IEC Standard) • Ladder for Siemens PLC • Ladder for LS Electric PLC • Electrotechnical IEC • Electrotechnical NEMA • Electrotechnical One-Line (IEC) • Blocks • HMI & Control Panels 		
9	Microcontrollers (Embedded System)	2	sets
	SPECIFICATION		
	1. PIC16F887 chip x 1		
	(1) 40 pins(35 input/output pins)		
	(2) 368 bytes RAM memory		
	(3) Nano Watt Technology		
	(4) (4) 10-Bit Analog-to-Digital (A/D) Converter		
	(5) Operating Frequency (0~20MHz)		
	2. UART to USB Interface x 1		

	<p>3. EEPROM 64Kbits x 1</p> <p>4. 20 x 2 character LCD x 1</p> <p>5. 4-digit 7-segment display x 1</p> <p>6. Capacitive sensing button x 1</p> <p>7. LED x 11</p> <p>8. 8 x 8 multicolor dot matrix LED display x 1</p> <p>9. Buzzer and status LED x 1</p> <p>10. 5K variable resistor x 1</p> <p>11. AD590 temperature sensor x 1</p> <p>12. Stepping motor and status LED 7.5 degrees x 1</p> <p>13. 10 x 2 extend socket x 2</p> <p>14. Slide switch x 8</p> <p>15. 4 x 4 matrix keypad x 1</p> <p>16. Built-in power supply :</p> <p>Input : 100~240VAC, 50/60Hz, 0.65A</p> <p>Output : 12V/1.2A, 5V/2.1A, 3.3V/1A</p> <p>Laptop</p> <p>DEMONSTRATION/TESTING/TRAINING</p>
<p>1. Scope of Bid</p> <p>The Procuring Entity, Pamantasan ng Lungsod ng Maynila wishes to receive Bids for the Technical and Scientific Equipment with identification number 2021-G-24.</p> <p>The Procurement Project (referred to herein as “Project”) is composed of Eleven (11) Separate Lots, the details of which are described in Section VII (Technical Specifications).</p>	<p>1. Scope of Bid</p> <p>The Procuring Entity, Pamantasan ng Lungsod ng Maynila wishes to receive Bids for the Technical and Scientific Equipment with identification number 2021-G-24.</p> <p>The Procurement Project (referred to herein as “Project”) is composed of <u><i>Nine (9)</i></u> Separate Lots, the details of which are described in Section VII (Technical Specifications).</p>

Section VI. Schedule of Requirements	Section VI. Schedule of Requirements
Ninety (90) Calendar Days from the date of receipt of Notice to Proceed (NTP).	<u>ONE HUNDRED TWENTY (120) CALENDAR DAYS FROM THE DATE OF RECEIPT OF NOTICE TO PROCEED (NTP).</u>

Reminders:

SCHEDULE OF ACTIVITIES

Activities	Schedule	Time
1. <u>SUBMISSION OF BIDS</u>	<u>13 OCTOBER 2021, WEDNESDAY</u>	<u>2:00 P.M.</u>
2. <u>OPENING OF BIDS</u>	<u>13 OCTOBER 2021, WEDNESDAY</u>	<u>2:00 P.M.</u>

This shall form an integral part of the bidding documents. Any provisions in the Bidding Documents inconsistent herewith is hereby cancelled, modified, and superseded accordingly.

For guidance and information of all concerned.

(Original Copy Signed)
ENGR. JUAN C. TALLARA, JR.
Dean-CET, End-user

(Original Copy Signed)
ATTY. CARLO FLORENDO C. CASTRO
PLM-BAC Chairperson

Received by the bidder:

Name of the Bidder & Signature

Company Name

Date