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

PLM – BIDS AND AWARDS COMMITTEE (PLM–BAC)

NAME OF PROJECT : **Various Technical and Scientific Equipment**

SUPPLEMENTAL/BID BULLETIN No. 18-G-17
28 September 2017

This bid bulletin is issued to amend items in the Bidding Documents in compliance with Section 22.5.2 of the Revised Implementing Rules and Regulations of Republic Act 9184 based on the requests for clarification by the prospective bidders. This shall form part of the Bidding Documents:

1. **To change the Submission and Opening of Bids:**

ORIGINAL **From**	**AMENDED** **TO**
Item No. 2 – 1 Set Heat Exchanger Supply Unit A. General Requirements: 1. Pump a. Power consumption: 100-120W b. Max Flow rate: 500-700 L/h c. Max Head: 30-40 m 2. Heater a. Power output: 2-3W b. Thermostat: 0-100°C 3. Hot water tank: 5-10 L 4. Measuring rages a. Temperature: 6 X 0-100°C b. Flow rate: 2 X 0-300 L/h B. Additional Requirements: 1. Inclusive of training of Faculty Members in the use of Heat Exchanger Supply Unit 2. with 1 year warranty (parts and services)	**Item No. 2** – 1 Set Heat Exchanger Supply Unit A. General Requirements: 1. Pump a. Power consumption: 100-120W b. Max Flow rate: 500-700 L/h c. Max Head: 30-40 m 2. Heater a. Power output: 2-3W b. Thermostat: 0-100°C 3. Hot water tank: 5-10 L 4. Measuring rages a. Temperature: 6 X 0-100°C b. Flow rate: 2 X 0-300 L/h Must be compatible on the specification of the Shell and Tube Heat Exchanger • Technical Data Heat Transfer Area: 200 cm square Tube Bundle: Stainless Steel OD: 6mm ID: 1mm Shell Transparent OD: 50mm WT: 3mm B. Additional Requirements: 1. Inclusive of training of Faculty Members in the use of Heat Exchanger Supply Unit 2. with 1 year warranty (parts and services)

Item No. 3 – 1 Set Supply Unit for Chemical Reactors A. General Requirements: 1. Peristaltic pulp for reactants a. Max flow rate: 100-120 mL/min b. Hose: 8.0 X 4.8 mm to 10.0 X 5.0 mm 2. Peristaltic pump for product a. Max flow rate: 200-250 mL/min b. Hose: 8.0 X 4.8 mm to 10.0 X 5.0 mm 3. Water Pump a. Max flow rate: 5-10 L/min b. Max head: 30-40 m c. Power consumption: 100-120 W 4. Heater a. Power consumption: 3000-3500W 5. Tanks a. Reactants: 2X3 L to 3X5 L b. Products 5-10 L c. Heating water: 5-10 L 6. Measuring ranges a. Conducivity: 0-150 mS/cm b. Temperature: 0-100°C c. Speed of peristaltic pump: 0-120/min B. Additional Requirements: 1. Inclusive of training of Faculty Members in the use of Supply Unit for Chemical Reactors 2. With free calibration for 1 year 3. with 1 year warranty (parts and services)	**Item No. 3 –** 1 Set Supply Unit for Chemical Reactors A. General Requirements: 1. Peristaltic pulp for reactants a. Max flow rate: 100-120 mL/min b. Hose: 8.0 X 4.8 mm to 10.0 X 5.0 mm 2. Peristaltic pump for product a. Max flow rate: 200-250 mL/min b. Hose: 8.0 X 4.8 mm to 10.0 X 5.0 mm 3. Water Pump a. Max flow rate: 5-10 L/min b. Max head: 30-40 m c. Power consumption: 100-120 W 4. Heater a. Power consumption: 3000-3500W 5. Tanks a. Reactants: 2X3 L to 3X5 L b. Products 5-10 L c. Heating water: 5-10 L 6. Measuring ranges a. Conducivity: 0-150 mS/cm b. Temperature: 0-100°C c. Speed of peristaltic pump: 0-120/min Must be compatible on the specification of the Shell and Tube Heat Exchanger • Technical Data Gas Tank Stirred Tank Reactor OD: 110mm ID: 100mm Height: 120mm Adjustable Volume: 270 to 750ml Stirred Speed: 330/min aprox. B. Additional Requirements: 1. Inclusive of training of Faculty Members in the use of Supply Unit for Chemical Reactors 2. With free calibration for 1 year 3. with 1 year warranty (parts and services)
Item No. 5 – 1 Set Convection Drying A. General Requirements: 1. Drying channel a. length: 2000-2500 mm (with fan) b. internal dimensions 300x300 mm to 400x400 mm 2. Fan a. Power: 30-33W b. Max output: 600-800 m³/hr c. Max Speed: 900-950/min	**Item No. 5 – 1 Set Convection Drying** A. General Requirements: 1. Drying channel a. length: 2000-2500 mm (with fan) b. internal dimensions 300x300 mm to 400x400 mm 2. Fan a. Power: 30-33W b. Max output: 600-800 m³/hr c. Max Speed: 900-950/min

3. Heater a. power: 6000-7000W 4. Balance a. Measuring range: 1000-10000g 5. Measuring ranges a. Air Humidity: 0-100% b. Temperature: 100-130°C c. Flow velocity: 0-3 m/s B. Additional Requirements: 1. Inclusive of training of Faculty Members in the use of Convection Drying 2. With free calibration for 1 year 3. with 1 year warranty (parts and services)	3. Heater a. power: 6000-7000W 4. Balance a. Measuring range: 1000-10000g 5. Measuring ranges a. Air Humidity: 0-100% b. Temperature: 100-130°C c. Flow velocity: 0-3 m/s Required for Operation: a. 230V, 60Hz/CSA, 3 phase or 400V, 50/60 Hz, 3 phase b. 1 digital balance c. 1 stop watch d. 4 drying plates e. 1 software and USB cable f. 1 set of instructional material g. 1 trainer B. Additional Requirements: 1. Inclusive of training of Faculty Members in the use of Convection Drying 2. With free calibration for 1 year 3. with 1 year warranty (parts and services)
Item No. 6 – 2 Sets Total Station w/ Tripod & Prism Pole (Complete Set) A. General Requirements: 1. Measuring Range Distance : 0.90 to 100m 2. Vertical Range (at 0.90 to 22m distance) : ±25 deg 3. Vertical Range (at 22 to 100m distance) : ±10 deg 4. Horizontal Range : 360 deg 5. Positioning Accuracy H : 1.5mm at 50m; V : 3mm at 50m 6. Measuring Accuracy : ±3mm (distance) / 5" (angle) 7. Automatic levelling range : ±3 deg 8. Tilt correction type 2-axis liquid compensator 9. Tilt correction working range : ±6' 10. Automatic tracking range : 0.90 to 100m 11. Automatic working range : 360 deg (horizontal), ±25 deg (vertical) with reflectorized prism B. Additional Requirements: 1. Inclusive of training of Faculty Members in the use of Total Station 2. With free calibration for 1 year	**Item No. 6** – 2 Sets Total Station w/ Tripod & Prism Pole (Complete Set) A. General Requirements: 1. Measuring Range Distance = • Reflectorless: 0.30m to 800m / 0.3 m – 1000m under good condition • One Prism: 1.3 m to 5000m / 1.3 m – 6000m under good condition 2. Vertical Range (at 0.90 to 22m distance) = ±25 deg 3. Vertical Range (at 22 to 100m distance) = ±10 deg 4. Horizontal Range = 360 deg 5. Positioning Accuracy H = 1.5mm at 50m; V = 3mm at 50m 6. Measuring Accuracy = • Reflectorless: 2.0mm+2ppm (distance) / 5” (angle) • One Prism: 1.5mm+2ppm (distance) / 5” (angle) 7. Automatic leveling range = ±3 deg 8. Tilt correction type: Dual-axis liquid sensor 9. Tilt correction working range = ±6’ 10. Automatic tracking range = • Reflectorless: 0.30m to 800m • One Prism: 1.3 m to 5000m 11. Automatic working range = 360 deg (horizontal), ±25 deg (vertical) with

	reflectorized prism B. Additional Requirements: 1. Inclusive of Training of Faculty Members in the use of Total Station 2. With free calibration for 1 year
Item No. 12 – 3 Sets Analog Rebound Hammer Apparatus A. General Requirements: 1. Range : 10 to 70 MPA 2. Impact Energy : 2.2 N-m minimum 3. Weight: minimum 3.5kg 4. Consists of a barrel housing a hammer mass attached to an impact spring which slides on a guide bar 5. Calibrated and suitable for a specimen of compressive strength ranging from 1 to 700kg/cm 6. Inclusive of a grinding stone for polishing the test surface and carrying case (waterproof case) B. Additional Requirements: 1. Inclusive of Training of Faculty Members in the use of Analog Rebound Hammer Apparatus 2. With Free Calibration for 1 year	**Item No. 12** – 3 Sets Analog Rebound Hammer Apparatus A. General Requirements: 1. Range = 10 to 70 MPA 2. Impact Energy = 2.2 N-m minimum 3. Weight = minimum 1.5 kg 4. Consists of a barrel housing a hammer mass attached to an impact spring which slides on a guide bar. 5. Calibrated and suitable for a specimen of compressive strength ranging from 1—to 700 kg/cm. 6. Inclusive of a grinding stone for polishing the test surface and carrying case (waterproof case) B. Additional Requirements: 1. Inclusive of Training of Faculty Members in the use of Analog Rebound Hammer Apparatus 2. With Free Calibration for 1 year

2. Change of schedule for the Submission and Opening of Bids:

ORIGINAL From	**AMENDED TO**

Activities	***Date***	***Time***
Submission of Bids	06 October 2017	9:00 am
Opening of Bids		10:00 am

Activities	***Date***	***Time***
Submission of Bids	18 October 2017	9:00 am
Opening of Bids		10:00 am

For guidance and information of all concerned.

(Original Copy Signed)
ATTY. RUFINO V. ABUDA
BAC Chairperson

Noted by: *(Original Copy Signed)*
ENGR. CLYDELLE M. RONDARIS
Dean, CET, End-User

Received by the bidder:

_____
Name of the Bidder & Signature

_____
Name of Company
Date: _____