



July 30, 2019

Bid Bulletin No. 1

Subject: Supply, Delivery and Installation of Various Laboratory Equipment for Crop Biotechnology Center (Group II) under PB 19-03-18

This bid bulletin is being issued to clarify and/or amend the technical specifications for **Project 1 & 2** of the Supply, Delivery and Installation of Various Laboratory Equipment for CBC Group II follows:

Revised Technical Specifications:

Attached is the revised technical specifications for the complete details.

Please be guided accordingly.

(Original signed)
AURORA M. CORALES
BAC Vice-Chairperson

Revised Technical Specifications for Project 1 (PB 19-03-18)

| Item | Specification | Statement of Compliance |
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| 1. | <p>4 units of Glass Bead Sterilizer</p> <p>Technical specifications: Temperature range: 100~300°C Material: Stainless steel Temperature accuracy: ≤±5 Heating time to reach maximum temperature: ≤25min to reach 300°C Ambient temperature: 5°C~40°C Other features:</p> <ul style="list-style-type: none"> • Sterilization is quick, easy and accurate • Can reduce the presence of bacteria, spores, and micro-organisms • The unit's chamber temperature is viewed on a large LED panel and heat can be controlled using the control knob; • Certifications: CE marked; <p>With 2-years warranty on parts and service and 1-time preventive maintenance within warranty period</p> | |
| 2. | <p>2 Units of 96- Side Skirted Magnet</p> <p>Technical specifications: Magnet bar: 6 Working volume: 5-200 µL Other features:</p> <ul style="list-style-type: none"> • compatible with 96-well skirted PCR-plates, culture plates, 96-well round bottom plates, 96-well flat bottom plates, 24-well plates, 12-well plates, and 6-well plates; | |

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| | <p>With 2-years warranty on parts and service and 1-time preventive maintenance within warranty period</p> | |
| 3. | <p>1 Unit of 96-Well Type ELISA Microplate Washer Technical specifications: Plate type: 96-Well Plates Bottles: 2L wash bottle, 2L waste bottle Wash/Waste bottle capacity: 1 Wash heads: 1x8 Wash volume: 10 to 3000µL Residual volume: <2µL Dispense volume: 50 to 400µL Display type: LCD Certifications/Compliance: CE Marked Electrical requirements: 230-240V 50/60Hz Inclusions:</p> <ul style="list-style-type: none"> • 1 x 2L wash bottle • 1 x 2L waste bottle • 1 x 8L wash head • aerosol cover • Above inclusions or all other accessories necessary for the equipment to be operational. <p>With 2-years warranty on parts and service and 1-time preventive maintenance within warranty period</p> | |
| 4. | <p>6 Units of 2-L Benchtop Liquid Nitrogen Container (w/ Dipper) Technical specifications: Type: Benchtop LN2 Container Capacity: 2L Features:</p> <ul style="list-style-type: none"> • Durable, corrosion-resistant stainless-steel exterior • With carrying handle and vented secure lid <p>Inclusions:</p> <ul style="list-style-type: none"> • 12 pcs of 12 mL dipper (2 units dipper for each container) <p>With 2-years warranty on parts and service</p> | |
| 5. | <p>One (1) Unit DNA Vacuum Concentrator Technical specifications: Vacuum: 20 hPa (20 mbar) Sample capacity: max. 144 vessels/2 microplates Fixed speed: 1,400 rpm Tube volume: 0.2-50 mL Volume: 72 mL Power requirements: 230V, 50-60 Hz; Max. power consumption: 350 W Other features:</p> <ul style="list-style-type: none"> • Complete System with an integrated solvent-resistant, maintenance and oil-free PTFE pump, and condensation trap | |

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| | <ul style="list-style-type: none"> • Choice of 3 operation modes: vacufuge, centrifuge, and desiccator for a variety of application needs • Choice of three application modes: aqueous, alcohol or high vapor pressure, to correspond with sample solvent-reduction of processing time up to 20% • Choice of 4 heating levels (ambient, 30°C, 45°C, 60°C) allows safe and efficient concentration of various samples • Brake function can optionally be turned off for use with delicate samples • Extremely quiet operation <50 dB(A); Chemical-resistant, maintenance-free PTFE diaphragm pump eliminates the need for changing pump oil • Small footprint saves valuable bench space • Wide variety of 15 different rotor options to accommodate tubes from 0.2 mL to 50 mL, microplates and PCR plates • Motorless induction drive and chemical-resistant, stainless steel chamber for trouble-free operation; • Can be connected with most commercially available cold traps for use with vapors • Coated lid with superior chemical resistance <p>Inclusions:</p> <ul style="list-style-type: none"> • 1 rotor for 48 placer 1.5/2.0 mL tubes and 48 pcs adapters for 0.5ml tubes • 1 rotor for use with MTP, PCR and Deep well Plates up to 27 mm high (incl. 2 buckets) • Additional 1 rotor for 15 and 50 ml tubes • 1 unit of 3kVA or compatible UPS with built-in AVR • Training on-site for the end-user <p>With 2-years warranty on parts and service and 1-time preventive maintenance within warranty period</p> | |
| 6. | <p>1 Lot of 35-L (1 Piece) and 20-25-L (2 Pieces) of Liquid Nitrogen Container (Dewar)</p> <p>A. 1 Piece of 34 to 35L Liquid Nitrogen Container (Dewar)</p> <p>Technical specifications: Static evaporation rate: 0.22-0.23 L/day Static hold: 145-152 days</p> <p>Inclusion:</p> <ul style="list-style-type: none"> • 1 pc of wheeled cart for easy transport and withdrawal system (tipping trolley) <p>B. 2 Pieces of 20-25-L Liquid Nitrogen Container</p> | |

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| | <p>Technical specifications: Static evaporation rate: 0.095-0.23 (L/day) Static hold: 109-135 days Inclusion:</p> <ul style="list-style-type: none"> • 2 pcs of wheeled cart for easy transport and withdrawal system (tipping trolley) <p>Other features:</p> <ul style="list-style-type: none"> • Durable and tamper proof lid design • With adjustable “low-level alarm” indicator • High strength neck tube reduces liquid nitrogen loss • Strong, lightweight ALUMINUM construction • Compatible with MMR Elan2 LN2 generator • <p>Additional inclusions:</p> <ul style="list-style-type: none"> • 3 pairs of medium size cryo-safety gloves • 2 sets of 1L liquid nitrogen flask with dipper <p>With 2-years warranty on parts and service and 1-time preventive maintenance within warranty period</p> | |
| 7. | <p>1 Unit of Trinocular Stereo Microscope</p> <p>Technical specifications: Microscope body: 0.67-4.5X zoom optics Zoom ratio: 6.7 Zoom magnification: 0.67x, 1x,2x,3x, 4.5x) Maximum resolution: 424 Lines/mm Degree angle inclination: 60° tube, ESD Focusing stroke: 120 mm Mounting diameter 120 mm Working distance: at least 110 mm Interpupillary distance: 52- 76 mm Video camera adaptability: C-mount (0.5x built in) Transmitted illumination: LED Reflected illumination: LED and 45° inclination trinocular tube (C-mount) Light source: Transmitted and reflected light LED illuminator stand UYCP Power cord Eyepiece: 10X with ESD capability Focus lens: F.N 22, focusable (2 pcs.) Dust cover CAMERA C-mount HDMI or USB Connection +WIFI CMOS</p> <p>Features:</p> <ul style="list-style-type: none"> • C-mount camera with high sensitivity CMOS sensor • Simultaneous HDMI/USB & WIFI output • Built-in mouse control | |

- Built-in image capture & video record to SD card
- Built-in camera control panel for mouse control
- Built-in toolbar including zoom, mirror, comparison, freeze, cross, browser functions
- Built-in image & video browsing, display & play
- Ultra-fine color engine with perfect color reproduction capability(USB)
- With advanced video & image processing application Top View
- Support standard SDK for Windows/Linux/Mac(USB)
- CNC shell molding design

Specifications:

Sensor size (mm): 1080P

1/1.8"(6.22x4.67)

Pixel (um): 2.4x2.4G Sensitivity: 425 mv with 1/30s Dark Signal 0.15 mv with 1/30s

FPS/Resolution: 60@1920x1080 (HDMI)

30@1920x1080 (WIFI)

Image Capture: JPEG Format with 5M Resolution (2592*1944)

Binning: 1x1

Exposure: 0.03ms~918m

Interface & button functions: USB: USB Camera or USB Mouse HDMI: HDMI

Output

DC12V: 12V Power in SD: SD Card Slot

On/Off: Power on/off Switch LED:

Power on indicator

Other Specification for HDMI Output: UI Operation: with USB

Video record: ASF Format 1080P 30ps in SD Card

Camera control panel: Including exposure, gain, white balance, color adjustment, sharpness, and denoising control

Toolbar: Including zoom, mirror, comparison, freezer, cover, browser function

Other Specification for WIFI Output:

UI Operation: With USB mouse to operate on the embedded software

WIFI performance: 802.11n 150Mbps;

RF Power 20dBm(Maximum) Maximum

connected devices: 3~6(According to the Environment and Connection

Distance

White balance: Auto white balance

Color technique: Ultra-fine color engine (WIFI)

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| | <p>Capture/Control API: Standard SDK for Windows/Linux/Mac(WIFI) Recording System: StillPicture or movie (WIFI) C-MOUNT ADAPTOR SD Card 8GB Stage micrometer, 1mm/100 for biological microscopes.</p> <p>Inclusions:</p> <ul style="list-style-type: none"> • 1 unit of all-in-1 compatible desktop computer (at least 22", at least i7, 500 GB, with licensed OS) • 1 unit of Toluidine blue O, technical grade (5g) • 3 boxes of glass slides and cover slips • 3 units of couplin jars for 10 slides • 1 unit of staining rack for 20 slides • Training on-site for the end-user <p>With 2-years warranty on parts and service and 1-time preventive maintenance within warranty period</p> | |
| 8. | <p>1 Unit of 294-L Tissue Culture/Plant Growth Chamber</p> <p>Technical specifications: Effective capacity: minimum of 294 L (10.4 cu.ft.) Shelves: 4 pcs PE coated steel wire Maximum load: 25kg/shelf; (bottom) 1 pc. PE coated steel wire with stainless steel cover or equivalent Access port: 40mm diameter x 1 (chamber top position) Casters: 4 Air circulation: Forced air circulation Compressor: Hermetic type, 250 W Heater: 381 W Defrost: Automatic defrost (3 patterns), Manual defrost Net weight (approx.): 235kg (518 lbs.) Control related specifications: Temperature control range (AT 20°C, no load): +5°C to +50°C (light off) +10°C to +50°C (light on) Temperature distribution: ±3.5°C (light on), ±1.5°C (light off) (AT 20°C, no load); ±2.5°C (light on), ±1.0°C (light off); (Set temperature 25°C, AT 20°C, no load) Temperature fluctuation: ±0.3°C (Set temperature 25°C, AT 20°C, no load) Temperature control: Microcomputer PID Refrigeration capacity control lighting range: 0 lx to 20,000 lx Fluorescent lamp: 40 W x 15, 6 increments (0, 1, 2, 3, 4, 5) Humidity: Ultrasonic humidifier PID control Humidity control range: 60% RH to 90%RH (+15°C to +45°C and light off); 55%RH to 85%RH (+15°C to +45°C and light on)</p> | |

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| | <p>Other features:</p> <ul style="list-style-type: none"> • Microprocessor PID and Refrigeration Capacity Control eliminate temperature fluctuations and thereby improve temperature control • Programmable temperature function for temperature cycle and vernalization treatment research • 12-step programs x 10 patterns can be memorized • Selectable clock mode or timer mode • Multiple programs can be linked (Join mode). • Starting day and time of operation can be programmed • Operation data of approximately last 2 weeks (6-minute intervals) can be automatically recorded • Data can be retrieved on the control panel • Data can be transmitted to a PC (CSV data via Ethernet (LAN)) • Easy calibration: temperature and humidity can be calibrated easily from the control panel. • Small and lightweight, high-molecular membrane-type humidity sensor which has a high degree of accuracy and reproducibility <p>Inclusion:</p> <ul style="list-style-type: none"> • 1 pc of 10kVA or compatible UPS with built-in AVR • Training on-site for the end-user <p>With 2-years warranty on parts and service and 1-time preventive maintenance within warranty period</p> | |
| 9. | <p>3 Units of Thermomixer</p> <p>Technical specifications</p> <p>Maximum speed: 3,000 rpm</p> <p>Maximum temperature control range: 100 °C</p> <p>Minimum temperature control range: 15 °C</p> <p>Mixing and vortexing radius: 1.5 mm</p> <p>Mixing frequency: 300-3,000 rpm</p> <p>Mixing orbit: 3 mm</p> <p>Temperature accuracy: Max. ±0.5 °C at 20-45°C</p> <p>Temperature settings: 1 °C / 100 °C</p> <p>Timer: 15 sec to 99:30 h, continuous</p> <p>Heating rate: Max. 7 °C/min (when using thermoblock plates)</p> <p>Cooling rate: Max. 2.5 °C/min between 100 °C and RT</p> <p>Interfaces: USB interface</p> <p>Power supply: 220-240 V, 50-60 Hz;</p> <p>Max. power consumption: 200 W</p> <p>Temperature range: Min: 15 °C below RT max: 100 °C</p> <p>Other features:</p> | |

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| | <ul style="list-style-type: none"> • Mixing, heating, and cooling in one instrument for high flexibility • All common vessels and plate formats from 5 µL to 50 mL by different thermoblocks for standard applications • Excellent 2DMix-Control technology results in excellent sample mixing • Anti-spill technology prevents lid wetting and cross-contamination • Increased mixing frequency of up to 3,000 rpm for effective sample mixing • Excellent temperature management for maximum temperature accuracy, resulting in safe handling • Condensation-free sample handling • Predefined program keys and clearly arranged menu guides enable simple and intuitive operations • Freely programmable program keys for individual optimization • Provides ergonomic design and operation <p>Inclusions for each of the 3 thermomixers</p> <ul style="list-style-type: none"> • 2 pcs of thermoblock for PCR plates 96 with lid • 2 pcs of thermoblock for 24 reaction vessels 2.0 mL, including transfer rack 1.5/2.0 m • 2 pcs of thermoblock for 24 reaction vessels 0.5 mL, including transfer rack 0.5 mL • Training on-site for the end-user <p>With 2-years warranty on parts and service and 1-time preventive maintenance within warranty period</p> | |
| | <p>EVIDENCE for Item 1 to 9</p> <ul style="list-style-type: none"> • Brochure and complete technical specifications [SEPARATE DOCUMENT (use your company letterhead) indicating ALL the technical specifications you are offering but not limited to Brand, Model, Place of Origin, Features, Inclusions, Warranty, and Installation (if applicable)] of the item being offered. • Certificate as authorized distributor or exclusive dealer coming from the principal. • Certificate of training of service engineers/technicians authorized to conduct after sales service issued by the principal supplier/brand being offered | |

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| | <ul style="list-style-type: none">• The supplier shall declare through a written statement that the product being offered is/are repairable and that replacement parts are available for a minimum of five (5) years after end of production | |
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Revised Technical Specifications for Project 2 (PB 19-03-18)

| Item | Specification | Statement of Compliance |
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| 1. | <p>1 Lot of Protein Purification System</p> <p>A. Western Blotting System Semi-dry blotter Accommodates gels up to 14 x 16 cm Output: 30V, 0.5A Input: 100-240V, 0.7A, 47-63hz Temperature: 4-40 °C Humidity: Up to 80% Altitude: Up to 2000m Other features:</p> <ul style="list-style-type: none"> • Certifications: EN61010-1, UL61010-1, CSA C22.2 1010.1, EN 61326, CE • Electro transfer proteins from PAGE gels in less than 1hr in newly designed, state-of-the-art unit • Use minimal buffer, only enough to saturate blotting papers and membranes • Long-lasting perforated platinum-titanium and stainless-steel electrodes give uniform, contamination-free transfers • Transfer two PAGE gels in a stack • Use low current and voltage for transfers • Comes with a built-in power supply and offer an automatic stopping feature. When the buffer becomes depleted, the transfer is stopped | <p>Statement of Compliance</p> <p>Bidders must state here either “Comply” or “Not Comply” against each of the individual parameters of each Specification stating the corresponding performance parameter of the equipment offered. Statements of “Comply” or “Not Comply” must be supported by evidence in a Bidders Bid and cross-referenced to that evidence. Evidence shall be in the form of manufacturer’s un-amended sales literature, unconditional statements of specification and compliance issued by the manufacturer, samples, independent test data etc., as appropriate. A statement that is not supported by evidence or is subsequently found to be contradicted by the evidence presented will render the Bid under evaluation liable for rejection. A statement either in the Bidders statement of compliance or the supporting evidence that is found to be false either during Bid evaluation, post-qualification or the execution of the Contract may be regarded as fraudulent and render the Bidder or supplier liable for prosecution subject to the provisions of ITB Clause 3.1(a)(ii) and /or GCC Clause 2.1(a)(ii)</p> |

automatically, saving the transfer before overheating. This safety feature resets automatically when the power is turned off.

- Unit is limited to 30 V, safety is assured

Inclusions:

- 25 sheets of blotting paper
- 50 sheets of cellophane
- 2 solid masks, masks for 7 x 8 cm and 14 x 16 cm gels

B. Vertical Gel Electrophoresis

Technical specifications:

Application: Protein separations, nucleic acid fractionation, and two-dimensional (2-D) electrophoresis

Current: < 500 mA

Gel capacity: 1-2 gels or 4 gels using divider plates

Maximum no. of gels: 4

Minimum no. of gels: 1

Operating humidity: <0.8 RH

Operating temperature: <45°C

Power: <50W

Total separation time: 3-5h

Voltage: 1000 VDC

Maximum current: 500 mA

Maximum buffer temperature: 45°C

Environmental operating conditions

Indoor use: 4°C to 40°C

Altitude up to 2000 m

Buffer volume: 4.5L (low voltage run) and 4.0L (high voltage run)

DIGE approved: Yes

Inclusions:

- 3 sets of glass plates
- 4 pcs of 16-cm clamp assemblies
- 6 cams, dual gel casting stand with levelling base and level
- Buffer dam
- Spacer-mate alignment template
- Wonder Wedge plate separation tool
- 2 sets of 15-well combs
- 2 sets of 1.5-mm thick spacers

C. Power Supply

Technical specifications:

Power: 80 W

Programming range: Voltage: 5-300 V DC

Current: 10-400 mA

Time: 00.01-23.59 h or off

Output Resolution: Voltage: 1 V Current: 1 mA

Programming resolution: Voltage: 1 V

Current: 1 mA Time: 1 min

Accuracy: Voltage: 4%, ± 2 V Current:

4%, ± 4 mA

Timer: 0.1% ± 1 min;

Output Protection: Fully protected against any overload conditions;
Recovery After Power Failure: The program continues automatically;
Operating temp. min.: 4°C
Operating temp. max.: 40°C
Operating Humidity: 0-0.95
Operating pressure max.: 106 kPa, maximum altitude of 2000 m
Electronic requirement: 220 to 240 V, 50/60 Hz
Power consumption: 120 W
Timer operation: 1 min to 24 h - continuous
Current: 10-400 mA; Voltage: 5-300 V

D. Gel Documentation

Technical specifications:
Peltier cooled Super CCD
2048 x 1536, 3.2-megapixel CCD
Two-stage thermoelectric module with air circulation cooling
Cooling down time: < 5 min
16-bit, 4.8 orders of magnitude dynamic range
Emission filters: Cy3/EtBr: 605BP40;
Exposure time: 1/100s to 10h
Humidity: 20-70% (no dew condensation)
Image output: Gray scale 16 bit tif, color image jpg, gray scale jpg
Maximum image resolution: 2816 x 2048, 5.8-megapixel or better
USB 2.0 and Ethernet port interface;
f/0.85 43 mm lens
Light source: Epi-white light: 470 – 635 nm
UV transilluminator: 312 nm or better

Operating temperature: 18°C to 28°C
Operation: Fully automated (auto exposure, no focus or other adjustment or calibration needed)
Pixel correction: Dark frame correction, flat frame correction, and distortion correction
Pixel size: 15.6 x 23.4 mm
Power: 250W
Sample size: 16 x 22 cm
Voltage variation: ±10%
Electrical requirement: 100 to 240 V, 50/60 Hz

E. Image Analysis Software

Technical specifications:

- with four separate functional areas within one product: 1-D electrophoresis gel analysis, array & microplate analysis, colony counting and 2-D spot analysis, and toolbox to analyze with user-defined objects
- Intuitive user interface with step-by-step interactive guide

- Flexible for all types of users- High levels of automation (lane & band creation, background subtraction, molecular weight calibration, etc.) with single click analysis as well as full manual control for detection and quantitation
- Comprehensive editing functions like crop, rotate, and filter images at each stage of the analysis
- Automatic report builder with full user control for laboratory notebooks and publication

F. Protein Purification

Technical specifications:

Flow rate: 0.001 to 25 mL/min (normal range), 0.01 to 50 mL/min (column packing flow)

Operating pressure max.: 20 MPa (2900 psi)

Tubing internal diameter. (flow path): 0.5 mm;

Fixed wavelength

UV wavelength: 280 nm

Flow cell path length: 2 mm (optional 5mm)

pH monitoring: 0 – 14

Multiple sample injection: Upgradable to 5 samples.

Buffer selection: upgradeable to 14 inlets

pH stability, cleaning-in-place (CIP): 0 – 14

Multistep purification: Yes, (optional);

Relative humidity: 20% to 95% (noncondensing)

Viscosity: 0.35 to 10.0 cP (system pump)

Electrical requirement: 100 to 120/220 to 240V

Power Consumption: 300 VA

Protection class: IP 21

Pump type: Piston pump, metering type

Column valve: Wetted,

Polyetheretherketone

(PEEK)/Polytetrafluoroethylene (PTFE)

Outlet Valve Kit: Wetted,

Polyetheretherketone

(PEEK)/Ethylentetrafluoroethylene (ETFE)

Other features:

- Application: Flexible and intuitive chromatography system for fast purification of proteins, peptides, and nucleic acids from microgram to gram levels of target product
- Application Supported: Affinity chromatography, size exclusion chromatography (SEC, also known as gel filtration), ion exchange chromatography, hydrophobic interaction chromatography, and

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| | <p>reversed phase chromatography (RPC)</p> <ul style="list-style-type: none"> • Safety certifications: 2006/42/EC (MD), 2004/108/EC (EMC), 1999/5/EC (R&TTE) <p>Inclusions:</p> <ul style="list-style-type: none"> • Control software for the fast protein purification system • 1 unit of compatible UPS with built in AVR • Horizontal Gel Electrophoresis enhanced passive cooling system, leak-proof casting trays, UV-transparent gel tray, Combs allow up to 32 samples per run; Includes Gel running tray, gel casting tray and bubble level, 4 pcs. 8-well comb and comb back, and compatible power supply • Starter kit with 3 different prepacked columns or equivalent (MBPTrap 5 x 5ml, HITRAP PROTEIN G HP 5 x 5 ml, and HITRAP DEAE FF 5 x 5 ml) • 1 unit of high end A-I-0 desktop computer with licensed Operating System & Office tools compatible with the unit being offered. • Training on-site for the end-user <p>With 2-years warranty on parts and service and 1-time preventive maintenance within warranty period</p> | |
| | <p>EVIDENCE</p> <ul style="list-style-type: none"> • Brochure and complete technical specifications [SEPARATE DOCUMENT (use your company letterhead) indicating ALL the technical specifications you are offering but not limited to Brand, Model, Place of Origin, Features, Inclusions, Warranty, and Installation (if applicable)] of the item being offered. • Certificate as authorized distributor or exclusive dealer coming from the principal. • Certificate of training of service engineers/technicians authorized to conduct after sales service issued by the principal supplier/brand being offered • The supplier shall declare through a written statement that the product being offered is/are repairable and that replacement parts are available for a minimum of ten (10) years after end of production | |