REQUEST FOR QUOTATION (RFQ)

RFQ NUMBER	**SO/588/06/2022**
DATE ISSUED	**14 June 2022**
PROJECT NAME	**Supply Deliver and Installation of Aircons-The Quote must include delivery, installation, and commissioning.**
CLOSING DATE AND TIME	**23 June 2022 @12H00**
NAME OF PROPOSER/TENDERER	
CSD SUPPLIER NUMBER (MA NUMBER)	
TELEPHONE NUMBER	
FAX NUMBER	
EMAIL ADDRESS	
PHYSICAL ADRESS	
B-BBEE STATUS LEVEL OF CONTRIBUTION	
FULL NAME OF BIDDER OR HIS OR HER REPRESENTATIVE	
IDENTITY NUMBER	
POSITION OCCUPIED IN THE COMPANY (DIRECTOR, TRUSTEE, SHAREHOLDER)	
COMPANY REGISTRATION NUMBER	
TAX REFERENCE NUMBER	
VAT REGISTRATION NUMBER	
QUOTE PRICE (INCL VAT)	
SIGNATURE	

Full details of directors / trustees / members / shareholders

Full Name	Identity Number	Personal Tax Reference Number	State Employee Number Persal Number

A. BIDDER'S DISCLOSURE (SBD 4)

1. PURPOSE OF THE FORM

Any person (natural or juristic) may make an offer or offers in terms of this invitation to bid. In line with the principles of transparency, accountability, impartiality, and ethics as enshrined in the Constitution of the Republic of South Africa and further expressed in various pieces of legislation, it is required for the bidder to make this declaration in respect of the details required hereunder.

Where a person/s are listed in the Register for Tender Defaulters and / or the List of Restricted Suppliers, that person will automatically be disqualified from the bid process.

2. Bidder's declaration

2.1 Is the bidder, or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest1 in the enterprise, employed by the state? **YES/NO**

2.1.1 If so, furnish particulars of the names, individual identity numbers, and, if applicable, state employee numbers of sole proprietor/ directors / trustees / shareholders / members/ partners or any person having a controlling interest in the enterprise, in table below.

Full Name	Identity Number	Name of State institution

1 the power, by one person or a group of persons holding the majority of the equity of an enterprise, alternatively, the person/s having the deciding vote or power to influence or to direct the course and decisions of the enterprise.

2.2 Do you, or any person connected with the bidder, have a relationship with any person who is employed by the procuring institution? **YES/NO**

2.2.1 If so, furnish particulars:

……
……

2.3 Does the bidder or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest in the enterprise have any interest in any other related enterprise whether or not they are bidding for this contract? **YES/NO**

2.3.1 If so, furnish particulars:

……
……

3 DECLARATION

I, the undersigned, (name)…… in submitting the accompanying bid, do hereby make the following statements that I certify to be true and complete in every respect:

3.1 I have read and I understand the contents of this disclosure;

3.2 I understand that the accompanying bid will be disqualified if this disclosure is found not to be true and complete in every respect;

3.3 The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium2 will not be construed as collusive bidding.

3.4 In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications, prices, including methods, factors or formulas used to calculate prices, market allocation, the intention or decision to submit or not to submit the bid, bidding with the intention not to win the bid and conditions or delivery particulars of the products or services to which this bid invitation relates.

3.4 The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.

3.5 There have been no consultations, communications, agreements or arrangements made by the bidder with any official of the procuring institution in relation to this procurement process prior to and during the bidding process except to provide clarification on the bid submitted where so required by the institution; and the bidder was not involved in the drafting of the specifications or terms of reference for this bid.

3.6 I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting

2 Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.

business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

I CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 1, 2 and 3 ABOVE IS CORRECT.
I ACCEPT THAT THE STATE MAY REJECT THE BID OR ACT AGAINST ME IN TERMS OF PARAGRAPH 6 OF PFMA SCM INSTRUCTION 03 OF 2021/22 ON PREVENTING AND COMBATING ABUSE IN THE SUPPLY CHAIN MANAGEMENT SYSTEM SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....	.....
Signature	Date
.....	.....
Position	Name of bidder

B. REQUEST FOR QUOTATION FOR PLACEMENT OF ADVERTS ON SUNDAY TIMES FOR A PERIOD OF 18 MONTHS

1. BACKGROUND TO SANSA

The South African National Space Agency (SANSA) has a mandate, as outlined in the South African National Space Agency Act, 2008 (Act No 36 of 2008), to co-ordinate and integrate national space science and technology programmes and conduct long-term planning and implementation of space-related activities in South Africa, for the benefit of the citizens of South Africa

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2. SCOPE OF WORK (TERMS OF REFERENCE)

Scope of work

The installation of the environmental control system factory assembled unit.

It shall be floor mounted, optimized for maximum cooling capacity in a minimum footprint.

It shall be specifically designed for service from the front of the unit. The system shall be designed for draw-through air arrangement to insure even air distribution to the entire face area of the coil. The unit shall modulate cooling capacity and airflow based on requirements.

The unit shall be ready to allow the installation of shackles for top handling. Forklift handling should be possible as well.

Quotation requirements

The Quote must include delivery, installation, and commissioning. SANSA require a breakdown quotation that clearly states all costs. VAT should be included in the quote.

Quality Assurance

The specified system shall be factory end of line tested (functionality test) before shipment and designed to meet CE requirements. The system shall be designed and manufactured according to world-class quality standards. The manufacturer shall be ISO 9001 certified.

CABINET

DIGIT 1-5

The cabinet is manufactured from galvanized steel sheet, externally painted with Black RAL 7021 colour epoxy-polyester powder paint and assembled using stainless steel screws and high tensile rivets.

The rear and the fans section panels are double-skinned, with 20mm (frontal fan section panel with 40 mm) Class 'O' (A1 EU) fireproof insulation sandwiched between the skins to reduce noise emission and heat loss. The side panels, which are isolated from the inside of the unit to form a complete double-skinned cabinet, the small service panel for electrical heaters, are also lined with 10mm Class 'O' (A1 EU) fireproof insulation .

The frontal panel(s) are assembled on hinges to make the access easier; this can be opened by the fast closing lock.

The rear and side panels are screwed to the supports. The rear panel(s) are screwed directly to the frame.

AIRFLOW PATTERN

DIGIT 6 = D

The unit takes the air from the top and deliver from the bottom. The unit is suited for raised floor air delivery.

DIGIT 6 = U

The unit takes the air from the front and deliver from the top. The unit is suited for ducted application. The unit can be installed with and without a raised floor. The bottom of the unit is closed.

DIGIT 6 = H

The unit takes the air from the top and deliver from the front through a grill on the front panel(s). The unit shall be installed directly on the floor.

DIGIT 6 = E

The unit shall be installed with fans running in the raised floor to optimize unit efficiency. The unit takes the air from the top and deliver in the raised on all directions. The unit is suited for raised floor air delivery.

COOLING CIRCUITS

One (Two) refrigeration circuit(s), (each) incorporating one or (two) high efficiency, fully hermetic [scroll/Copeland Digital ScrollTM] compressor/s with crankcase heater, [stainless steel brazed plate heat condenser (Digit 7 = W/F/H)], liquid receiver with outlet service valve, safety valve, filter drier, moisture indicating sight glass, liquid line solenoid valve and an [externally equalised thermostatic expansion valve (digit 10 = 6,7,4,T) / electronic expansion valve directly controlled by the unit microprocessor to allow the highest energy saving (digit 10 = S,U,W,X)].

Each circuit is equipped with pre-set high pressure switch and low pressure transducer for protection against high condensing and low evaporating temperatures. The low pressure transducer is managed by microprocessor controller, whilst to avoid compressor cycling at high discharge pressures, the high pressure switch is equipped with a manual reset.

The inclined evaporator coil is manufactured from copper tubes, mechanically bonded to hydrophilic painted aluminium fins, with a stainless steel condensate drain pan. The large face area/low velocity coil allows precise control of temperature and humidity* during cooling and dehumidification*, and is designed to optimise fluid velocity and minimise pressure drop.

The evaporator shall be staged coil to allow a maximum efficiency on partial loads.

The moisture indicating sight glass and liquid line solenoid valve for each circuit are mounted visible from a service window, immediately accessible once open the frontal door/s, to allow checking and adjustment while the unit is in operation.

Chilled Water Circuits

DIGIT 7=D/H

Additionally to the Direct Expansion circuit(s), unit is equipped with one chilled water circuit incorporating a copper pipes; a modulating, 3-port, motorised valve; air relief valves.

The inclined coil is manufactured from copper tubes, mechanically bonded to acrylic painted aluminium fins, with a stainless steel condensate drain pan. A chilled water-glycol coil is installed within the finned pack of the evaporator coil. The two coils have separated rows pipes.

Freecooling Circuit

DIGIT 7=F

Additionally to the Direct Expansion circuit(s), unit is equipped with one freecooling water circuit incorporating a copper pipes; a modulating, 3-port, motorised valve; air relief valves.

The inclined coil is manufactured from copper tubes, mechanically bonded to acrylic painted aluminium fins, with a stainless steel condensate drain pan. A chilled water-glycol coil is installed within the finned pack of the evaporator coil. The two coils have separated rows pipes.

EconoPhase

DIGIT 7=P

EconoPhase is an add-on pump refrigerant module for use with an air-cooled system. EconoPhase will allow the system to switch to EconoPhase operation when the outdoor temperature is low enough to provide the required temperature difference between the inside air and the outside air, providing significant energy savings because there is no need to operate the compressor. At lower temperatures, the system switches one or both circuits from Compressor Mode to Pump Mode.

FAN SECTION

DIGIT 8 = 1/L

The unit is fitted with one (two or three) direct-driven, high efficiency, single inlet, backward curved, centrifugal ‘plug’ type innovating EC fan(s). The fan(s) have an impeller with curved blades corrosion resistant made of fibreglass plastic. This new technology allows keeping the current high strength of aluminium alloy adding the benefits of light weight and full flexibility on blade design of the new material. The good dampening behaviour of the plastic also helps to reduce noise emissions.

The fan motors are Electronically Commutated, IP54, with internal protections, continuous speed regulation via controller signal. The motor is three-phase with IP54 protection; provided with internal thermal protection.

The fan wheel is statically and dynamically balanced; the bearings are self-lubricating.

Between the fans shall be installed an “S” shape separator design to eliminate turbulence effects of one fan to the others; it shall be also designed to increase efficiency compared to simple plate separator.

Fan(s) removal(s) shall be made faster thanks to the use of buttonhole specifically designed and tested to allow 10 cm increasing height during the operation.

ELECTRICAL PANEL

DIGIT 9 = 3/T/A

The electrical panel, located at the front of the unit in a compartment isolated from the airflow, contains the MCB’s, contactors, transformers, controller PCB, overload relays etc. Each high voltage system component is provided with an MCB over-current protective device. All high voltage components are touch protected by means of a plastic cover. The electrical panel complies with the IEC norm en60204-1.

COIL SECTION DIGIT 9 = 3

Electrical power supply is 400V (±10%) / 3Ph / 50Hz (±2Hz) +N +E and are fitted with a mains isolator, mechanically interlocked with the electrical panel cover.

COIL SECTION DIGIT 9 = T

Electrical power supply is 380-400V (±10%) / 3Ph / 60Hz (±2Hz) +N +E and are fitted with a mains isolator, mechanically interlocked with the electrical panel cover.

COIL SECTION DIGIT 9 = A

Electrical power supply is 460V (±10%) / 3Ph / 60Hz (±2Hz) +E and are fitted with a mains isolator, mechanically interlocked with the electrical panel cover.

HUMIDIFIER

DIGIT 11 = S,H,U

The humidification system is provided by an electronic control humidifier. The dehumidification function, which is supplied as standard when the humidifier option is installed, acts by reducing the fan speed with consequent reduction of the air flow and at the same time completely opening the chilled water three-way valve.

Humidification control may be of the proportional or of the on-off type, according to the requirements of the installation: on/off is set as standard.

Refer to the Technical Data Tables for humidifier capacities

DIGIT 11 = S

The unit is fitted with an electrode boiler humidifier suitable for use with water of varying degrees of hardness, provided that the water is not treated or demineralised (Conductivity range 125-1250 □S/cm). The humidifier is complete with a water inlet valve, water outlet pump and a maximum water level sensor.

Steam from the cylinder is mixed with the discharge air from the evaporating coil by means of a copper steam distributor.

The unit controller monitors the condition of the steam cylinder, and generates an alarm when the cylinder needs to be changed. Cylinder replacement is easy and quick.

The humidifier is complete with a self-adapting flow control system, which monitors and controls the electrical current passing through the cylinder. Output adjustment is from 30-100% via the unit controller.

DIGIT 11 = H

The unit is fitted with an infrared humidifier suitable for use with water of varying degrees of hardness. The humidifier is complete with a water inlet valve, and a maximum water level sensor; the humidifier includes 3 high-intensity quartz lamps shine on water creating instantaneous moisture using almost any water quality. The cleanable stainless steel humidifier pan is removable from front of the unit.

DIGIT 11 = U

The unit is fitted with an ultrasonic humidifier. The humidifier include water tank linked together and used for the atomization and control of the supply water. The built-in tank comes complete with solenoid valve and float switch for the control of the feed water that ensure preventive protection against dry-running. The ultrasonic humidifier is controlled by a specific control ultrasonic humidifier that includes a board and a display which allows displaying and modifying all the parameters of the humidifier.

MICROPROCESSOR CONTROLLER

DIGIT 12 = 2/3/U/B/C/D

The VertivTM ICOMTM Control System is microprocessor based, 32 bit RISC. It can be programmed to control the function of every device within the unit via I/O.

The controller allows setting and monitoring of the following room parameters via a 3 button keypad:

- • Air Temperature
- • Temperature set-point
- • Temperature band
- • Humidity
- • Humidity set-point
- • Humidity band

The parameters are indicated using symbols and text on a back-lit, 3 digits Liquid Crystal Display. Cooling and heating modes are also indicated on the LCD screen. Alarm conditions activate a visual indicator. Three LED's indicate the unit status – 'Power on' (Yellow), 'Unit on' (Green) and 'Warning/Alarm activated' (Red)

The ICOM control provides with the following functions: unit to unit Ethernet connection to operate with multiple units, run/stand-by rotation, automatic changeover and parameter sharing functions, external communications through BMS or Vertiv monitoring solution, sequential auto restart timer, with adjustable time delays to be applied to unit restart after a power loss.

The following warnings / alarms are included:

• High temperature

• Low temperature

• High relative humidity

• Low relative humidity

• Humidifier failure

• Fan failure

• Electrical heater high temperature (When applicable)

• Sensor failure

• Controller errors

Terminals are provided for remote start/stop control plus Volt-free 'Common Alarm' and 'Unit Run' indication

[Colfire Display Small = U/B] is the graphic screen display, including symbolic representation of unit functions, diagnostics feature, help screens in 10 languages, spare parts list. It provides with track recorded of temperature and humidity with graphically display on the screen.

A buzzer provides audible indication of a 'Warning' or 'Alarm' condition

[Colfire Display Large = C/D] is the large graphic screen display, including 320x240 pixel screen, symbolic representation of unit functions, diagnostics feature, help screens in 10 languages, spare parts list. It provides with track recorded of temperature and humidity with graphically display on the screen.

A buzzer provides audible indication of a 'Warning' or 'Alarm' condition.

HEATING / REHEATING

DIGIT 13 = 1/2/8/A

Electrical reheating/heating

The heating resistors are of a rigid design for extended operational life and are normally utilised to maintain room dry-bulb conditions during a system call for dehumidification. Each stage of heaters is made of finned armoured stainless steel AISI 304 to maintain a low surfaces power density. Ionization effects are eliminated owing to the low heater surface temperature.

Heating control is of the ON-OFF type. The heaters are phase balanced and are provided with a manual reset safety thermostat to disable them in the event of a high temperature.

The heating system also incorporates Miniature Circuit Breaker(s) which protect the heater(s) from short circuits, should the harness be damaged accidentally.

Refer to the Technical Data Tables for heating capacities and control steps.

DIGIT 13 = 4/8

Hot Water reheating/heating

The inclined hot water heating coil is installed downstream of the cooling coil, with a 3-port on/off control valve, suitable for a maximum working pressure of 8.5 bar.

The coil is manufactured from copper tubes, mechanically bonded to aluminium fins, and is pressure tested to 30 bar.

Hot Gas Reheating

DIGIT 13 = 6/A

The inclined hot gas re-heating coil is installed downstream of the cooling coil and controlled by a 3-port on/off valve. This system utilises some of the heat that is normally rejected via the condenser to provide re-heating, when required, during the dehumidification phase.

The coil is manufactured from copper tubes, mechanically bonded to aluminium fins, and is pressure tested to 30 bar.

AIR FILTRATION

DIGIT 14=1/3

The standard filtration grade is F5 (CEN EN779 – respectively corresponding to EU5 according to Eurovent EU4/5). The F5 standard filters made by paper material and are completely recyclable.

The filter pleated structure gives high filtration efficiency, low pressure drop and permit to use the filter without metallic or cardboard frame. The filter media is composed by fibre and latex.

They are easily accessed/replaced by opening the front panel(s).

[The unit is fitted with a filter differential pressure switch, connected to the microprocessor controller to provide 'Filter Clogged' warning indication=3]

CONDENSING CONTROL (only for Water Cooled units; Digit 8 = W/H)

DIGIT 15 = 1/7

The unit shall be provided with three [digit 15 = 7] / two [digit 15 = 1] way water condensing control valve. The valve shall be controlled directly by the unit microprocessor in order to optimize the water flow on the plate exchanger condenser based upon condensing temperature.

This shall allow unit accepting condensing water down to 5°C.

COLOUR

DIGIT 16 = 1

All frames have the exteriors surfaces painted with Black Emerson 7021 colour epoxy-polyester powder.

HIGH VOLTAGE OPTIONS

DIGIT 17 = 5/7/R

Condensate Pump

Unit is fitted with two condensate pumps to allow condensate removal even in case of missing of raised floor. Each pump shall have a capacity of 50.0 l/h at 3.7 m head. Pump is complete with integral float switch, pump - motor assembly and reservoir.

DIGIT 17 = F/T

Dual power supply parallel

Unit is fitted with Dual Power Supply Parallel: 2 separate power supplies: during normal working mode both are present, during emergency situation only one the main one. This means that during emergency mode ventilation redundancy is granted disabling heating, humidifying and compressor power input. This last option allows during emergency mode to reduce unit power absorption and therefore Genset or UPS sizes

o possibility to have together Automatic or Manual change over

o transfer switching time : between power A and power B 1,2-1,5sec.

DIGIT 17 = G/U

Dual power supply alternate

Unit is fitted with Dual Power Supply Alternate Version: 2 separate power supplies: each power supply is able to completely feed the unit. ATS makes the switch in case of main line failure. In case of failure of the main supply the unit automatically switches to the second power supply. This allows to have a complete power supply redundancy or in case needed to have during emergency mode full cooling redundancy disabling heating and humidifying. This last option allows during emergency mode to reduce unit power absorption and therefore Genset or UPS sizes.

The solution allows having the following benefits:

DIGIT 17 = S/V

Dual Power Supply Alternate Version with UPS for ICOM board:

Unit is fitted with Dual Power Supply Alternate Version: 2 separate power supplies: each power supply is able to completely feed the unit. ATS makes the switch in case of main line failure. In case of failure of the main supply the unit automatically switches to the second power supply. This allows to have a complete power supply redundancy or in case needed to have during emergency mode full cooling redundancy disabling heating and humidifying.

The switch between one power supply and the other makes the units restarting as it pass through the off position. The solution with Control board kept alive under UPS allows the control of the unit to stay powered.

This means that the unit is not rebooting and so immediately ready again to cool the room. The solution with integrated UPS for the Control board keeps it alive for 4 minutes, so even if both power supplies are missing this allow a unit to be ready to continue working once one of the two will come back.

DIGIT 17 = 2/7/F/G/S

Magnetic Circuit Breaker Single Phase

The unit supplies electrical power to remote units, such as condensers and dry-coolers. The power line is protected by one (two on double circuit units) automatic switch(es) sized 10A single phase.

DIGIT 17 = Q/R/T/U/V

Magnetic Circuit Breaker Three Phases

The unit supplies electrical power to remote units, such as condensers and dry-coolers. The power line is protected by one (two on double circuit units) automatic switch(es) sized 10A three phases

SMART AISLE

DIGIT 18 = S/G

The unit shall be ready for containment Smart control. The unit should have the capability to modulate airflow according to the airflow taken by the servers. The control shall be done in order to have minimum differential pressure between inlet and outlet of the containment. The compressor capacity shall be modulated according to the supply temperature in order to optimize server inlet temperature. The system done by multiple units shall work with efficient cascade way, trying to maximise energy efficiency always working where EC Fans are more effective.

ECONOMIZER

DIGIT 18 = F/G

The Air Economizer comprises an extension hood 850 mm height with a dampers system installable on top of the unit. This system allows the free-cooling taking advantage of cool outdoor air to condition indoor space.

The control checks the external air condition (temperature/humidity) and depending on environment conditions controls the dampers system mixing the indoor unit air with cool outdoor air; it is possible to have 100% outdoor air, mixed outdoor air and compressor cooling or 100% compressor cooling.

The unit shall use only air only if the psychometric conditions allow this. Thus reducing wasting of energy humidifying or dehumidifying once they should be not required. Furthermore the deep control of external air conditions on both temperature and humidity grantees to keep the data center environment within the limits specified to allow server life.

The Air Economizer system delivers a high energy savings reducing or eliminating the cost for pumping and chilling water.

To use the Air Economizer the building has to be equipped with suitable air ducts and the dampers system modulating permits to use different channel configurations.

MONITORING

COIL SECTION DIGIT 19 = 0/P/C

The unit shall also include IntelliSlot housing for up to two IS (Intelligent slot) Monitoring cards. [COIL SECTION DIGIT 19=0]

The monitoring card delivers enhanced communication and control of Thermal Management products.

The card communicates with Vertiv software tools and services, including VertivTM TrellisTM, LIFETM Services, SiteScan® Web and NformTM.

The card employs an Ethernet network to monitor and manage a wide range of operating parameters, alarms and notifications about the power, distribution and cooling equipment.

Supported protocols are the Emerson Protocol, Remote Service Delivery Protocol and HTTP Web by default.

The card also communicates with Building Management Systems and Network Management Systems supporting third party protocols: Modbus IP/RTU, BACnet IP/MSTP, SNMP v1, v2, v3

The unit must support selecting two third-party protocols simultaneously with the below exceptions:

• Only one version of BACnet may be selected, either BACnet IP or BACnet MSTP

• Only one version of Modbus may be selected, either Modbus TCP or Modbus RTU

• Only one of the protocols can use the 485 port

The SiteScan Web 4.0 Protocol Card [COIL SECTION DIGIT 19=C] provides a ground fault-isolated EIA-485 connection to a SiteLink-E™ allowing the unit to SiteScan Web 4.0 monitoring and control of your equipment.

The unit shall also include input for remote on-off and volt-free contacts for simple remote monitoring of low and high priority alarms: high/low temperature, fan/control failure, and others are available.

PACKING

DIGIT 21 = P/C/S

Units are packed before shipping. They stand on a fumigated wooden pallet. The top and the corners are protected by polystyrene foam elements. The whole packages are wrapped with polyester transparent film. [The package is enclosed within a wooden crate / The package is enclosed within a seaworthy wooden box = C / S]

SPECIAL FEATURE AUTHORIZATIONS

DIGIT 22 = X

All units can be manufactured with special features as per customer specification. Any deviation from the standard design are tracked by the serial numbers of the units and established in the following design documents:

- • Bill of Material
- • Price List
- • Manufacturing process
- • Spare parts list
- • Test Reports
- • Electrical schematics
- • Drawings

Product manuals, Service Manual and marketing documents are not subject to amendments by SFA.

OPTIONAL FEATURES (SUPPLIED WITHIN THE UNIT)

OVERPRESSURE DAMPER

Overpressure damper fitted on the top of the unit, which closes in case of no airflow exploiting gravity effect.

MOTORIZED DAMPER

Motorized Damper with servomotor fitted on the top directly controlled by the unit. The unit controls the damper in the most safe way managing fans depending on damper position.

SPRING RETURN DAMPER

Motorized Damper with spring return servomotor fitted on the top directly controlled by the unit. The unit controls the damper in the most safe way managing fans depending on damper

position. In case of power failure the spring return allows the damper to close, therefore avoiding air passing through a not working unit.

ALARM CARD

The unit shall be fitted with alarm card to allow remote monitoring through electrical signals of most important alarms. The outputs (all together) can be set to N.O. (normally open) or N.C. (normally closed).

Alarm card is automatically included in all units with Electronic Expansion Valve.

ACCESSORIES FEATURES (SUPPLIED LOOSE)

SMOKE DETECTOR

The smoke detector senses the room air, shuts down the unit upon detection, and sends visual and audible alarm. Dry contacts are available for a remote customer alarm. This smoke detector is not intended to function as or replace any room smoke detection system that may be required by local or national codes.

LIQUID DETECTOR

The flooding alarm detects the presence of water or of any other conductive liquid and, opening a circuit, activates an alarm. There are no moving parts and it is not subject to dirt or vibration. Up to 5 sensors can be connected to the same flooding alarm device to control many points in the room. The alarm device is supplied with a sensor. Additional sensors can be ordered separately.

LEGS KITS

Legs kit can be supplied on request when installed with a raised floor. The legs are fixed with the unit frame and allow supporting the unit at different height, three kits are available with different height: adjustable in the range:

H1- 30-370 mm;

H2 370-570 mm;

H3 570-800 mm.

The legs shall be design to allow a continuous adjustment of the height without the need of cutting or brazing any part

VERTICAL FLOW EXTENSION HOOD

An extension hood can be supplied on request and can be installed on top of the unit. It is available with different height: 500mm; 600mm; 700mm; 800mm; 900mm. It shall be the same design as the unit and consist of sandwich panels lined with non-flammable insulation material of class 0 (ISO 1182.2), density 30 kg/m3.

BASE MODULES

A 200 mm high base module can be supplied on request and at the same time allow pipe work to enter the base of the unit when a raised floor is not installed. It shall be the same design as the unit.

HORIZONTAL HOOD WITH GRILL

A supply plenum with horizontal air flow can be installed on top of the unit. The 600 mm high plenum shall be the same design as the unit; it should consist of sandwich panels lined with non-flammable insulation material of class 0 (ISO 1182.2), density 30 kg/m3. It should be equipped with a double deflection grill.

Equipment description

The Quote must include delivery, installation, and commissioning. SANSA require a breakdown quotation that clearly states all costs. VAT should be included in the quote.

Unit specifications

PX082DA + 2 x HCR51

Unit inlet air temperature **24.0** °C

Unit inlet air relative humidity **45.0** %

Unit airflow **24113** m³/h

ESP **100** Pa

Air flow configuration **Downflow Up**

Sea level **1650** m

Refrigerant **R410A**

Unit power supply **400 V/3 ph/50 Hz**

Compressor type **Scroll**

Expansion valve **EEV**

Unit performances

Net total cooling capacity **71.8** kW

Net sensible cooling capacity **71.6** kW

nSHR **1.00** Unit

Gross total cooling capacity **77.9** kW

Gross sensible cooling capacity **77.7** kW

Off coil air temperature **12.2** °C

Off coil air relative humidity **94.2** %

Room SPL (@ 2m, f.f) **70.4** dB(A)

Supply air temperature **13.1** °C

Supply air relative humidity **88.6** %

Condensing temperature circuit. 1 **49.8** °C

Condensing temperature circuit. 2 **51.8** °C

Unit power input **25.10** kW

Unit Net Sens EER **2.85**

Net Total EER **2.86**

System power input **27.30** kW

Internal filter class (EN16890 std) **ePM10 50%**

Internal filter air pressure drop **131** Pa

Coil air pressure drop **125** Pa

Unit air pressure drop **441** Pa

Width **2550** mm

Depth **890** mm

Height **1970** mm

Weight **931** kg

Fans

Quantity **3** n°

Fan modules **Premium**

Power supply **400 V/3 ph/50 Hz**

Operating Ampere **3 x 3.36** A

Full load Ampere **3 x 5.0** A

Locked rotor Amp. **3 x 0.1** A

Power input **6.15** kW

Room fan modulation (%) **89** %

Compressors circuit 1

Type **Scroll**

Compressors COP **3.94**

Power supply **400 V/3 ph/50 Hz**

Operating Ampere **1 x 16.55** A

Power input **1 x 9.24** kW

Full load Ampere **1 x 25.0** A

Locked rotor Amp. **1 x 118.0** A

Compressors circuit 2

Type **Scroll** n°

Compressors COP **4.38**

Power supply **400 V/3 ph/50 Hz**

Operating Ampere **1 x 17.20** A

Power input **1 x 9.68** kW

Full load Ampere **1 x 25.0** A

Locked rotor Amp. **1 x 118.0** A

Relevant data for each CONDENSER circuit 1

Condenser model **HCR51**

Max outdoor SPL (@ 5m,f.f.) **53.0** dB(A)

Version **Standard**

Actual outdoor SPL (@ 5m,f.f.) **53.0** dB(A)

Air discharge **Vertical**

Power input **1.10** kW

Power supply **230 V/1 ph/50 Hz**

Full load Ampere **5.00** A

Variex **Yes**

Locked rotor Amp. **9.60** A

Heat load **45.2** kW

Width **2340** mm

Outdoor air temperature **35.0** °C

Depth **1112** mm

Condenser airflow (@ max speed) **17000** m³/h

Height **910** mm

Condenser actual airflow **17000** m³/h

Weight **93** kg

Relevant data for each CONDENSER circuit 2

Condenser model **HCR51**

Max outdoor SPL (@ 5m,f.f.) **53.0** dB(A)

Version **Standard**

Actual outdoor SPL (@ 5m,f.f.) **53.0** dB(A)

Air discharge **Vertical**

Power input **1.10** kW

Power supply **230 V/1 ph/50 Hz**

Full load Ampere **5.00** A

Variex **Yes**

Locked rotor Amp. **9.60** A

Heat load **51.6** kW

Width **2340** mm

Outdoor air temperature **35.0** °C

Depth **1112** mm

Condenser airflow (@ max speed) **17000** m³/h

Height **910** mm

Condenser actual airflow **17000** m³/h

Weight **93** kg

C. EVALUATION CRITERIA

SANSA promotes the concept of "best value" in the award of contracts, as opposed to merely looking for the cheapest price, which does not necessarily provide the best value. Best value incorporates the expertise, experience and technical proposal of the organisation and individuals who will be providing the service and the organisational capacity supporting the project team.

SANSA is committed to achieving Government's transformation objectives in terms of the Preferential Procurement Policy Framework Act.

The value of this bid is estimated not to exceed R1 million (all applicable taxes included) and therefore the **80/20** system shall be applicable.

The procedure for the evaluation of responsive tenders is **Price** and **Preference** method.

Bids will be evaluated in terms of the 80/20 preference points systems, where the 80 points will be used for price only and the 20 points will be awarded to a bidder for attaining the B-BBEE status level of contributor in accordance with the Table below

1. Preference

(ORIGINAL/CERTIFIED B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE/SWORN AFFIDAVIT MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE)

Calculation of points for B-BBEE status level contributor
Points will be awarded to a bidder for attaining the B-BBEE status level of contributor in accordance with the Table1 below

Table1: B-BBEE level and points

B-BBEE Status Level of Contributor	Number of points (80/20 system)
1	20
2	18
3	14
4	12
5	8
6	6
7	4
8	2
Non-compliant contributor	0

2. Eligibility Criteria

To be eligible for the price and preferencing evaluation, the bidder must submit the following as per table 2 below.

If there is **"No"** on the Table 2 below, the bidder who didn't submit the required document (s) with their bid will be requested in writing to submit them within three (3) working days for inclusion in the Bid Evaluation Committee item, if a bidder fails to submit on the 3rd working day, the relevant bid will be rejected.

Table 2: Eligibility Criteria

Criteria	Attached (Yes/No)	Comments
CSD Registration Summary Report with a compliant tax status		

D. PRICING SCHEDULE

Pricing Instructions

1. The Bidder must price all items;
2. Rates are to include all costs with no unspecified cost to allow for a fair evaluation.
3. Payment will be made based on the deliverables (proven progress) for the services rendered/goods received.
4. Payment will only be made on the basis of invoices provided.
5. Offer to be valid for 30 days from the bid closing date.

DESCRIPTION	AMOUNT (EXCL VAT)
TOTAL CONTRACT AMOUNT (EXCLUDING VAT)	
VAT (15%)	
TOTAL CONTRACT AMOUNT (INCLUDING VAT)	

E. SPECIAL CONDITIONS

a) Quotations to be returned to: Palesa Mogale on pmogale@sansa.org.za and please copy SCM email spaceops-scm@sansa.org.za
b) The service provider shall commit to post support where and when required by SANSA.
c) Contract will not be awarded unless supplier is registered on the Central Supplier Database. A supplier registration summary with a compliance tax status must be submitted with the proposal. Potential suppliers should contact SANSA should they require assistance in registering on the CSD)
d) This RFP is part of the Supplier Development Programme (SDP). The recommended bidder will be required to sign a SDP agreement for shorter payment periods for EMEs.
e)

The offices of SANSA are situated at the following address:
XFarm No 502JQ
Hartebeeshoek
District Krugersdorp (GPS 25° 53' 15.5" S 27° 42' 31.0"E)
PO Box 484, Silverton, 0127

F. SUPPORTING DOCUMENTATION AND MINIMUM CRITERIA

In order to demonstrate their capacity and score points with respect to the criteria, tenderers should provide the following supporting documentation.

a. B-BBEE status level verification certificate/Sworn affidavit must be submitted in order to qualify for preference points for B-BBEE);
b. Quotation must reflect a cost breakdown, where applicable, prices quoted must be inclusive of VAT
c. All pages of quotation must be signed by the authorised person
d. SANSA has the right to withdraw any quotation at any time within the validity of the quotation.
e. SANSA reserves the right to invite suppliers/companies to present their bid proposals for final decision

G. DECLARATION

The undersigned, who warrants that he / she is duly authorized to do so on behalf of the enterprise:

i) confirms that neither the name of the enterprise or the name of any partner, manager, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears on the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004.
ii) confirms that no partner, member, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears, has within the last five years been convicted of fraud or corruption.
iii) confirms that I / we are not associated, linked or involved with any other tendering entities submitting tender offers and have no other relationship with any of the tenderers or those responsible for compiling the scope of work that could cause or be interpreted as a conflict of interest.
iv) confirms that the contents of this questionnaire/forms (SBD 49) are within my personal knowledge and are to the best of my belief both true and correct
v) accept that, in addition to cancellation of a contract, action may be taken against me should the Declaration prove to be false.
vi) confirms that the bidder has read the General Conditions of Contract (GCC) and agree with the conditions. The GCC can be found on SANSA website (http://www.treasury.gov.za/divisions/ocpo/sc/generalconditions/)

Signed	----------	Date	----------
Name	----------	Position	----------
Enterprise name	_____		

BID CONDITIONS

1. Disqualification
Please note that if a bid document is not filled in correctly or completely, or complied with the specification, or is delivered/send after the bid closing date and time, or the supplier is not registered on the CSD or supplier has a non-compliant tax status, then unfortunately that bidder will be disqualified. Please return this document with the supporting documents.

2. Bid Document Submission
Emailed tender documents will be accepted. However, the onus is on the tenderer to ensure that complete email documents have been received by the SANSA by the due date and time.
Please note that any alterations to the tender document other than filling in the tenderer's details and tender price will automatically disqualify the tenderer.

COMPLIANCE WITH PROTECTION OF PERSONAL INFORMATION ACT, 2013 (ACT NO. 4 OF 2013) ("POPIA")

1. The Constitution guarantees citizens the right to privacy, including the right not to have the privacy of their communications infringed.

2. POPIA aims to promote the protection of privacy through the application of its guiding principles for the processing of personal information in a context-sensitive manner.

Committed to your Privacy

3. SANSA fully comprehends that your personal and company information is valuable to you; your privacy is just important to SANSA. SANSA commits to safeguarding and lawfully processing your personal information.

Purpose for Processing your Personal Information

4. SANSA collects, holds, uses and discloses your personal information mainly to provide you with access to its services. SANSA will only process your personal information for a purpose you would reasonably expect, including:

- Complying with any legal and regulatory requirements such as contract agreements, etc.
- Confirming, verifying and updating your details.
- Invoicing or paying you to ensure payment and tax compliance.

5. SANSA may collect your personal information which may include your first name and last name, company name and its registration number, identity numbers, email address, physical or postal address, other contact information, banking details, etc.

Consent to Disclose and Share your Personal Information

6. SANSA may need to share your personal information, with third parties, to provide advice, and/or services. Where SANSA shares your personal information, it will take all reasonable precautions to ensure that the third party will treat your personal information with the same level of protection as required by SANSA.

Request and Access to your Personal Information

7. Should you require further information on this or have any concerns about how your personal information is processed or used, you can contact SANSA's Information Officer: Ms Andiswa Mlisa on 012 844 0358 and amlisa@sansa.org.za

8. You can request access to the personal information SANSA has on you at any time. If you think that SANSA has outdated information, you may request to update or correct it. You can also opt-out and request the removal of your personal information at any time. If there are any lawful reasons for requiring SANSA to retain any information, SANSA will advise so.

9. PLEASE TAKE NOTE that your personal information is securely hosted on infrastructure / system managed by SANSA. SANSA assures you that your information will not be shared for any marketing or promotional purposes without your consent.

10. SANSA will continue to manage, monitor, refine and develop policies, processes and systems. This will ensure that SANSA takes every practical and reasonable step(s) to ensure data protection, is in line with POPIA.

END