

GOVERNMENT OF INDIA :: DEPARTMENT OF SPACE
SATISH DHAWAN SPACE CENTER SHAR :: SRIHARIKOTA – 524 124
SRI POTTI SREERAMULU.NELLORE DISTRICT (A.P)

TENDER NOTICE NO. SDSC SHAR/SR.HPS/PT/25/2016-17

On behalf of President of India, Sr. Head Purchase and Stores, SDSC SHAR, SRIHARIKOTA invites **on line quotations** for the following.

Sl No	Ref. No.	Description	Qty.
01	SHAR VAST 2016 00 5149 e-procurement [Two Part basis] (RETENDERING)	Fabrication, supply, Erection & Commissioning of Shelter for MLP Bogie of Second Launch Pad	1 LS
02	SHAR RO 2016 00 5202 e-procurement [Single Part basis] (RETENDERING)	SONY PXW-Z450 Model 4K CMOS Professional Camcorder with Accessories.	2 Nos.
03	SHAR CMD 2017 00 5601 e-procurement [Single Part basis]	SMF Lead Acid Batteries	1 LS
04	SHAR CMD 2017 00 5605 e-procurement [Single Part basis]	Supply, Installation, Testing and Commissioning of 22 TR Scroll Chiller Packages for 127 Building, Solid Propellant Space Booster Plant.	1 Lot
05	SHAR VAST 2017 00 5652 e-procurement [Two Part basis]	Procurement, Manufacture, Supply of Pins & Links Stiffening of Tackle for Second Vehicle Assembly Building	1 Lot
06	SHAR CMD 2017 00 5718 e-procurement [Single Part basis]	Supply, Installation, Testing and Commissioning of Split type A/C Units	1 Lot

Last Date for downloading of tender documents: 10.04.2017 at 16:00 hrs.

Due Date for submission of bids online : 10.04.2017 at 16:00 hrs.

Due Date for Bid Sealing on : 10.04.2017 at 16:01 hrs. to 10.04.2017 at 17.30 hrs.

Due Date for Open Authorization : 10.04.2017 at 17.31 hrs. to 12.04.2017 at 17:00 hrs.

Due Date for opening of tenders : 13.04.2017 at 14:30 hrs.

Instructions to Tenderers:

No tender fee shall be applicable for tenders submitted through EGPS

01. For full details/scope of work and terms and conditions etc., please see the enclosed annexures.

02. Interested tenderers can download the e-tender from ISRO e-procurement website <https://eprocure.isro.gov.in> and submit the offer on line in the e-procurement portal. Offers sent physically by post/courier/in person will not be considered.

03. Tender documents are also available on ISRO website www.isro.org; ISRO e-procurement website <https://eprocure.isro.gov.in> and SDSC SHAR, Sriharikota website www.shar.gov.in. The same can be down loaded and offer submitted on line in the e-procurement portal.

04. Quotations received after the due date/time will not be considered.

05. The tender documents are available for download upto **10.04.2017 at 1600 hrs.** and **last date for submission of tenders on line 10.04.2017 at 1600 hrs. and Tender Opening on 13.04.2017 at 14:30 hrs.**

06. Head, Purchase and Stores, SDSC-SHAR, Sriharikota reserves the right to accept or reject any/or all the quotations.

Item: SCROLL CHILLER PACKAGES FOR 127 BLDG , SPROB, SDSC SHAR

FILE NO : SHAR / CMD / 2017 00 5605

ANNEXTURE - A - DETAILED SPECIFICATIONS AND SCOPE OF WORK

Sl. No	Qty	Description of Item	Unit
1.0		Supply, installation, commissioning and testing of factory assembled, microprocessor controlled Air-cooled, scroll chiller package of minimum capacity of 22 TR (66000 K.cal / hr). The chiller package shall have multiple refrigerant circuits. The leaving water temperature from the chiller shall not exceed 7 Deg.C , when entering water temperature is 12 Deg.C. Each package chiller will comprise of the following:	
a)		Hermetic compressor(s) operating on eco-friendly refrigerants such as R134a/407c/410a complete with controls and accessories, crankcase heaters, suction and discharge ports, acoustic enclosure etc.	
b)		Air-cooled condenser(s) made of with copper tubes mechanically expanded into aluminium fins, statically and dynamically balanced low noise condenser fans and motors, operating & safety controls as per the manufacturer recommendation.	
c)		Shell and tube DX type chiller with steel shell and copper tube and complete with drain points. Chiller shall be insulated with 30 mm thick nitrile rubber/cross linked polyethelene or equivalent finished with 24G aluminium cladding.	
		Chiller shall be with suitable baffles and adequate tube surface area and complete with cooling and antifreeze thermostats. Antifreeze thermostat shall be factory set and sealed at 37 deg .F.	
d)		Microprocessor based control centre unit in fully enclosed steel cabinet (IP 55 Protection) with power and safety operating controls and complete with monitoring facilities etc.	
e)		Power supply panel (IP 55 protection) housing all main power connection(s), starters for compressor(s) and condensor(s), factory wiring for compressor(s), condensor(s). For compressors, soft starters shall be provided.	
f)		Chiller shall be suitable for continuous operation in ambient conditions of Sriharikota .	
g)		MS Supporting framework for items (a) to (d) above along with suitable spring type vibration isolators to be provided. .	

Item: SCROLL CHILLER PACKAGES FOR 127 BLDG , SPROB, SDSC SHAR

FILE NO : SHAR / CMD / 2017 00 5605

ANNEXTURE - A - DETAILED SPECIFICATIONS AND SCOPE OF WORK

Sl. No	Qty	Description of Item	Unit
h)		Refrigerant piping of hard drawn copper pipe with necessary controls, strainers, valves liquid cum moisture indicators to interconnect compressor(s), condenser(s) and chiller.	
i)		The entire package is proposed to be located near the building as instructed by Engineer Incharge / Indentor with suitable vibration isolators for the chiller packages.	
j)		Initial charge of refrigerant R134a/407c/410a and compressor oil for scroll chillers.	
k)		Quoted rate is inclusive of one set of condenser fan motor with fan blade assembly & Hub to keep as stand by.	
		Note: Detailed specification enclosed as Annexure -I (Specification for Aircooled scroll chillers) and (special notes for scroll chiller packages)	
		Make : Bluestar/ ETA/Voltas/ Carrier/ Climaventa	
1A	2.00	Supply charges for scroll chiller package as per S/No. 1.0	Each
1B	2.00	Erection charges for scroll chiller package as per S/No:1.0	Each
2)		Supply, installation, commissioning & testing of suitable model chilled water pumpset of monoblock type with suitable motor complete with base, DOL starter as specified elsewhere. The pump shall handle minimum 200 lpm of water against a head of minimum 25 M. The Pump shall be insulated with 30 mm thick Nitrile rubber/cross linked polyethelene or equivalent insulation faced with aluminium cladding minimum 24 SWG thick. (Two working and one stand by).	
		Tenderer should take into account of the flow rate and pressure drop in his equipment and pipes, for which minimum specifications are indicated above.	
		Make: Beacon Weir/ Kirloskar/ Crompton/ KSB/ Mather & Platt/Grundfos/Bell & Gossett/ Armstrong	
2A	3.00	Supply charges for chilled water pump as per S/No. 2.0	Each
2B	3.00	Erection charges for chilled water pump as per S/No. 2.0	Each

Item: SCROLL CHILLER PACKAGES FOR 127 BLDG , SPROB, SDSC SHAR

FILE NO : SHAR / CMD / 2017 00 5605

ANNEXTURE - A - DETAILED SPECIFICATIONS AND SCOPE OF WORK

Sl. No	Qty	Description of Item	Unit
3)	1.00	Painting of equipment and accessories and pedestals etc indicated above with two coats of synthetic enamel paint of approved colour and as specified by Engineer-in-charge	Lot
		Make : Asian Paint , Berger	
4)		Supply & installation of suitable GRP panel expansion tank as per attached specification of size 1.0 m x 1.0 m x 1.0m (1.0 cubic metre capacity) insulated with 40 mm thick polyurethane foam. All the joints shall be sealed by using sealant based on Virgin butyl rubber with polyester fibreglass lining on the `V' grooves inside the tank for 100% sealing. The tank shall be with float valve, drain, overflow and make up connection with suitable valves. All hardware used should be hot dip galvanised. The tank should be suitable for chilled water application.The tank shall be located as instructed by the Engineer In charge / Indentor.	
		Note: Detailed specification is enclosed as Annexure II (SPECIFICATION FOR EXPANSION TANK – GRP PANEL TANKS)	
		Make: Flosto, Devi Polimers	
4A	1.00	Supply charges for GRP panel expansion tank as per S/No. 4.0	Each
4B	1.00	Erection charges for GRP panel expansion tank as per S/No. 4.0	Each
5)		Chilled water and drain piping of CS seamless schedule-40 pipes complete with all accessories and specials suitable to schedule - 40 piping. The pipes shall be insulated with aluminium foil faced 40 mm thick Rigid phenolic foam or equivalent insulation pipe sections, covered with chicken wire mesh and cement plastered with 15 mm thick plaster. Plastic emulsion paint of approved color shall be applied. Direction of flow shall be marked on the pipes. The piping shall include valves strainers, measuring instruments etc as indicated below. The piping shall be complete with suitable supports, high density PUF supports and U clamps etc., wherever required for satisfactory completion of work. Piping shall be painted with two coats of zinc cromate primer after completion of welding works. Insulation Material make: Bakelite Hylam or approved equivalent make	
		Note: 1 .Flanges shall be used minimum as per Table E. 2. Welding rod of 7018 shall be used for both root welding and final welding. 3.Piping shall be hydro tested after completion of welding works with 100PSI / 1.5 times of working pressure.	

Item: SCROLL CHILLER PACKAGES FOR 127 BLDG , SPROB, SDSC SHAR

FILE NO : SHAR / CMD / 2017 00 5605

ANNEXTURE - A - DETAILED SPECIFICATIONS AND SCOPE OF WORK

Sl. No	Qty	Description of Item	Unit
		Note : 4. Adhesive shall be Fevicol AC duct king / M/S Birla 3M make 3M-FB42NF plus NV or Lloyds make MAS 17 adhesive or equivalent. 5. For pipes running outside the building, cement plastering shall be carried out over insulation and for pipes running inside the building, Aluminium cladding of 24 SWG thickness shall be fixed over the insulation, in lieu of cement plaster. 6. Insulated balancing pipe to the expansion tank shall be taken from the main chilled water return line running at the highest level	
5A	70.00	Supply charges for 80 mm NB CS seamless schedule -40 pipe Make : Jindal/ Prakash/ Tata & shall be (IS marked)	Rmt
5B	70.00	Fabrication & Erection charges for 80 mm NB CS seamless schedule -40 pipe	Rmt
5C	20.00	Supply charges for 65 mm NB CS seamless schedule -40 pipe Make : Jindal/ Prakash/ Tata & shall be (IS marked)	Rmt
5D	20.00	Fabrication & Erection charges for 65 mm NB CS seamless schedule -40 pipe	Rmt
5E	6.00	Supply charges for 40 mm NB CS seamless schedule -40 pipe Make : Jindal/ Prakash/ Tata & shall be (IS marked)	Rmt
5F	6.00	Fabrication & Erection charges for 40 mm NB CS seamless schedule -40 pipe	Rmt
5G	10.00	Supply charges for 65 mm NB butterfly valve Make : Audco/ Saunders/C & R/Lehry	Each
5H	10.00	Erection charges for 65 mm NB butter fly valve with suitable flanges and bolts, nuts and gasket etc.	Each
5I	3.00	Supply charges for 65 mm NB Non return valves Make : Advance/Leader/Trishul/Divine/ Kirloskar /C& R/Lehry	Each
5J	3.00	Erection charges for 65 mm NB Non return valves with suitable flanges, bolts, nuts and gaskets.	Each
5 K	3.00	Supply charges for 65 mm NB, Y- strainer Make: Emerald , sant/Leader/Honeywell	Each
5L	3.00	Erection charges for 65 mm NB Y- Strainer with suitable flanges, bolts, nuts and gaskets.	Each

Item: SCROLL CHILLER PACKAGES FOR 127 BLDG , SPROB, SDSC SHAR

FILE NO : SHAR / CMD / 2017 00 5605

ANNEXTURE - A - DETAILED SPECIFICATIONS AND SCOPE OF WORK

Sl. No	Qty	Description of Item	Unit
5M	2.00	Supply charges for 65 NB Balancing cum flow measurement valve. Make: Advance/TA Digital/Lehry	Each
5N	2.00	Erection charges for 65 NB Balancing cum flow measurement valve with suitable flanges, bolts, nuts and gaskets etc.	Each
5O	2.00	Supply charges for differential water pressure switch. Make: Danfoss/ Rapid control / Approved equivalent	Each
5P	2.00	Erection charges for differential water pressure switch with suitable valves, piping and control wiring.	Each
5Q	8.00	Supply charges for 100mm dia dial type thermometer, Minimum Range: 0 to 50 Deg. C Make: H.Guru/Fiebig/Taylor/Penn/ Waree	Each
5R	8.00	Erection charges for 100mm dia dial type thermometer with suitable thermowells, nipples etc	Each
5S	10.00	Supply charges for 100mm dia pressure gauges with psyphone and valve. Minimum Range: 0 to 150PSI Make: H.Guru/Wika/Dwyer/ Waree	Each
5T	10.00	Erection charges for 100mm dia pressure gauges with psyphone and valve including nipples and couplings etc.,	Each
5U	2.00	Supply charges for automatic Air vent with ball valve. Make: Anergy Instruments/Rapid control	Each
5V	2.00	Erection charges for automatic airvents with suitable nipples, couplings etc.	Each
5W	4.00	Supply charges for drain plugs with dummy nuts.	Each
5X	4.00	Erection charges for drain plugs with dummy nuts including suitable nipples and couplings etc.,	Each
5Y	1.00	Supply charges for 40mm NB ball valve Make: Audco/Rapid control/ Emerald/ Honeywell/Lehry	Each
5Z	1.00	Erection charges for 40mm NB ball valve.	Each

Item: SCROLL CHILLER PACKAGES FOR 127 BLDG , SPROB, SDSC SHAR

FILE NO : SHAR / CMD / 2017 00 5605

ANNEXTURE - A - DETAILED SPECIFICATIONS AND SCOPE OF WORK

Sl. No	Qty	Description of Item	Unit
6.0		Electrical works comprising of supply, installation, testing and commissioning of complete power system supply and control system for the satisfactory operation of the A/C plant and AHUs. The plant shall be completely automatic in operation and suitable for DDC operation.	
		The Electrical panel for AC equipment catering to 2 Nos. Air cooled scroll chiller packages, 3 Nos.(2W+1 S By) of chilled water pumpsets and 2 No of AHUs , Duct heaters & one spare etc.	
(a)		Front operated cubicle type Indoor floor standing MV panel suitable for operation on 415V, 3 phase, 4 wire, 50 Hz AC supply to withstand a short circuit level of 36kA rms symmetrical, for feeding the whole AC system	
		The panels shall be fabricated out of 14 SWG CRCA steel sheet with necessary anti-corrosive treatment and shall be dust and vermin proof construction and suitable for installation on pedestals.	
		The MV panel complete with all interconnections and shall consist of the following:	
		(i) Incoming MCCB with symmetrical breaking capacity of 36kA, with earth leakage protection auxiliary contacts, Microprocessor controlled releases, SCADA compatible and having door interlocking facility complete as required. The MCCB shall have a leakage current tripping sensitivity of 300 milliamp.	
		(ii) Digital Multi-function Meter (0-500V & 200A) with CTs : 1 Set. Along with LED indication lamps with fuse and control.	
		(iii) TPN aluminium bus bar of suitable capacity to meet the above equipment requirement.	
		(iv) Outgoing MCCBs of suitable capacity along with starters (DOL/Star delta as applicable) comprising of O/L relay, single phase preventers for motors as required and satisfactory operation of chiller packages, Chilled water pumps, AHUs and duct heaters etc. Digital Ammeter shall be provided to Chillers, Pumps, AHUs and Duct heaters.	
		(v) Two numbers of earthing strips on each side of panel.	

Item: SCROLL CHILLER PACKAGES FOR 127 BLDG , SPROB, SDSC SHAR

FILE NO : SHAR / CMD / 2017 00 5605

ANNEXTURE - A - DETAILED SPECIFICATIONS AND SCOPE OF WORK

Sl. No	Qty	Description of Item	Unit
		(vi) Cable entry provision shall be given both top & Bottom for incoming & outgoing cables.	
		(vii) All the live terminal and bus bars shall be properly covered with insulating hylem plate of suitable thickness.	
		(viii) Suitable rating heavy duty connectors shall be provided for termination of cables.	
		(ix) Individual cubical shall be provided in MV panel for each bank of Duct heaters.	
(b)		Necessary cabling/wiring for all power and control circuits in between all equipments and panels, from main MV panel to chiller packages, condensers, pumps and Airhandling units etc, and Control wiring for interlocking as required for satisfactory operation of AC system. (2) All power and control cables shall be Multi strand copper armored . Suitable double compression glands shall be used for flame proof environment.	
		Note:(1) All power and control cables shall be armoured copper cable only. Power cable shall be copper armoured minimum 2.5 Sq.mm and control cable shall be 1.5 Sq.mm. (2) All indoor power and control cables shall be laid neatly routed in 14G GSS ladder type cable tray.	
		All power cabling / control wiring shall be supplied and including supply of cable trays, laid in cable trays of required size, as 3, 4, 5 detailed below:	
		3) Minimum length of power and control cables shall be considered from Main MV Panel which is located inside the building to 2 Nos. of AHUs located in separate rooms of the same Building , which is Approximately 45 Mtrs.	
		(4) Minimum length of power and control cables shall be considered from Main MV Panel which is located inside the building to chiller packages and chilled water pumps which are located outside the Building , which is Approximately 40 Mtrs.	

Item: SCROLL CHILLER PACKAGES FOR 127 BLDG , SPROB, SDSC SHAR

FILE NO : SHAR / CMD / 2017 00 5605

ANNEXTURE - A - DETAILED SPECIFICATIONS AND SCOPE OF WORK

Sl. No	Qty	Description of Item	Unit
		(5) Power cables shall be Supplied and laid to the flame proof duct heaters from MV panel which is located inside the building to the duct heaters located in 2 Nos. separate AHU rooms. Approximate distance between electrical panel room to the AHU rooms is 50 Mtrs. 5.a) Suitable number of auxiliary contact blocks shall be supplied and provided for interlocking of duct heaters with blower motor of AHUs.	
		The panel shall have necessary interface like 24 V DC/230 V AC relays, air break contactors etc to trip the MCCB controlling the incoming supply on receiving signal from smoke detection and fire alarm control panel which operates on 24 V DC supply. Required no. of NO/NC contacts with the LED shall be provided for visual (Actuation / off) indication of this trip signal along with a by-pass key type actuator (lockable in two positions). Required DC Power supply will be provided by the department.	
(c)		Necessary earthing work comprising of providing earthing to panels and electrical equipment/ motors including interconnection with suitable size of GI strips/wires as per IS-3043 with latest amendments. The size of the strips/ wires shall be decided in consultation with Engineer-in-charge which shall be based on CED- Electrical works General specifications indicated under page - 65. Earthing strip will be connected to the MV panel of AC system by department and all equipment earthing shall be in the scope of the AC contractor.	
(d)		Suitable interlocking shall be provided between chillers, pumps and AHUs & Duct heaters etc.	
		Flame proof isolator switch shall be supplied and provided to each AHU in the respective AHU rooms for isolation of AHU motor during maintenance of AHU.	
(e)		Spare 32 Amps MCB shall be provided in MV panel.	
(f)		vii) Remote control panel for operation and monitoring, including control wiring for operation of chiller packages, pumps ,AHUs, duct heaters from common control room, ON/OFF switches indication for manual heaters with power and control cable, Auto manual/ OFF switches in MV panel for Auto / manual operation	

Item: SCROLL CHILLER PACKAGES FOR 127 BLDG , SPROB, SDSC SHAR

FILE NO : SHAR / CMD / 2017 00 5605

ANNEXTURE - A - DETAILED SPECIFICATIONS AND SCOPE OF WORK

Sl. No	Qty	Description of Item	Unit
		Note : f) All power cabling / control wiring shall be supplied and including supply of cable trays, laid in cable trays of required size. Minimum length of power and control cables shall be considered from Main MV Panel room to Common control room located in same Building , which is Approximately 45 Mtrs.	
		Make: The electrical panel shall be got fabricated from ACCREDITED manufacturers of Electrical MV Panels only. The list of Accredited panel manufacturers is as per Annexure-IV and APPROVED Makes for other electrical items as per annexure-III	
		Notes for electrical panel works:	
		1.Fire and corrosion resistant coating similar to VIPER FR-1101 applied in two coats with necessary primer.	
		2.Cleaning and surface treatment of panel frame and all steel parts of the panel shall be carried out through seven-tank process.	
		3. After rigorous surface treatment, panel shall be treated with powder coating process with two coats of Zinc chromate primer and two coats of powder painting.	
		4. Fire retardant paint shall be applied inside switch chambers and bus bar chambers.	
		5. The panel shall have silicon based fire/heat resistant coating, fire retarding DMC/SMC filling for the opening around the bus bar near to the sectional barriers, and door interlocking facility for all compartments.	
		6. All terminations shall be made with proper lugs in the approved manner.	
		7. All exposed cables laid in trench /wall/ceiling/floor/trusses shall be provided with silicon based fire resistant coating compatible for PVC cables.	
		8. The panels shall have fire barriers and shall be suitable for horizontal expansion in future.	
		9. The panel shall have high mechanical dielectric strength and shall be suitable for horizontal expansion.	

Item: SCROLL CHILLER PACKAGES FOR 127 BLDG , SPROB, SDSC SHAR

FILE NO : SHAR / CMD / 2017 00 5605

ANNEXTURE - A - DETAILED SPECIFICATIONS AND SCOPE OF WORK

Sl. No	Qty	Description of Item	Unit
		10. All components, panels, cables, panel fabrication etc., shall conform to relevant IS Specifications and shall also be got approved by Engineer in charge.	
		11. Erection, testing and commissioning of the system and various components shall be done as per the relevant IS Specifications.	
6A	1.00	Supply charges for electrical panel, power , control cables & accessories as per S/No: 6	Lot
6B	1.00	Erection charges for electrical items as per S/No: 6	Lot
7.0	1.00	Minor civil works like foundations / pedestals for Chiller packages, pumpsets , Expansion tank etc., and cutting away and making good of openings in walls / ceiling etc: for passage of pipes,cables, etc. complete as required. Wall brackets, angles, clamps etc as required for pipes, cables etc shall also be included in AC vendor's scope of work. Steel structural members like Channels, Beams etc required to mount the Chiller packages on the ground shall also be included in AC vendor's scope of work. Note: Suitable edge angles shall be provided to pumps pedestals.	Lot

ENCLOSURES:

1. SCOPE OF WORK

2. ANNEXURE-1

SPECIFICATION FOR AIRCOOLED SCROLL CHILLERS

3. ANNEXURE –II

SPECIFICATION FOR EXPANSION TANK – GRP PANEL TANKS

4. ANNEXURE-III

LIST OF APPROVED MAKES FOR ELECTRICAL ITEMS

5. ANNEXURE-IV

ACCREDITED MANUFACTURERS OF ELECTRICAL MV PANELS

SHEET 01 /04

FILE NO : SHAR / CMD / 2017 00 5605

SCOPE OF WORK

ITEM : SCROLL CHILLER PACKAGES FOR 127 BLDG , SPROB, SDSC SHAR

Description of existing & proposed system

Presently, the chilled water is supplied from Central chilled water system located at Bldg. 127 AC Plant to various AHUs, located in Bldg 127, 126. For Bldg 127, SPROB , Air conditioning is provided by using 02 No. Air Handling Units , which are located in separate AHU rooms of same Building.

It is proposed to arrange a separate chilled water system exclusively for Bldg.,127 with New Air cooled scroll chiller packages of 2 Nos. x 22 TR (1 W + 1 Stand by), 3 Nos. of chilled water pumps (2W + 1 Stand by), chilled water piping, expansion tank etc., to supply chilled water. The system can be located, in open area, outside the Bldg.127.

The new chilled water system will be interconnected with existing 2 Nos. AHUs and total system will be used for meeting AC requirement of Bldg.127 Facility.

The proposal further includes providing New Electrical panel proposed to locate in existing AC Plant room of Bldg 127 , power cable , control cables etc., from electrical panel to New chiller packages and Existing 2 Nos. AHUs , duct heaters located at 127 Bldg.

1.0 SCOPE OF WORK:

A. SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF AC SYSTEM AS BELOW:

- 1) New Air cooled scroll chiller packages of 2 Nos. x 22 TR (1 W + 1 Stand by)
- 2) 3 Nos. of chilled water pumps (2W + 1 Stand by).
- 3) Chilled water piping, expansion tank
- 4) Interconnection of New scroll chiller packages with Existing 2 Nos. AHUs and duct heaters in all respects i.e., chilled water side, Electrical side including remote operation of chilled water system and AHU systems.

SHEET 02 / 04

FILE NO : SHAR / CMD / 2017 00 5605

SCOPE OF WORK

5) Associated electrical Work New Electrical panel, proposed to locate in Existing AC Plant Room of Bldg 127 , with power cables, control cables etc.,

6) Remote control panel for operation and monitoring, including control wiring for operation of chiller packages, pumps, AHUs , duct heaters from common control room, located at Bldg 127.

7) Minor civil works.

B. The GA drawing for the proposed system shall be submitted for the job and approval of department shall be obtained prior to commencement of work.

C . TESTING:

1. Each chiller package will be inspected at factory prior to shipment. Manufacturer Test certificate for each chiller package shall be furnished.

2. On completion of installation and commissioning of chiller package, and inter connecting the existing AHUs with the AC plant at Sriharikota , the performance test shall be carried out.

4. THREE Sets manuals for chiller packages ,pumps, ASBUILT drawings for plant layout, chilled water piping , ducting ,electrical power and control systems shall be submitted to the department.

D. GUARANTEE: The entire system in total i.e. all the items like chiller packages, pumps, motors etc., shall be guaranteed for a period of minimum one year from the date of commissioning and acceptance by the department. In case any defects are noticed during the guarantee period the same shall be repaired / replaced on free of cost.

E. PERFORMANCE BANK GUARANTEE: An amount of 5% of purchase order value is to be deposited by the successful tender towards performance Bank Guarantee. This amount will be released to the supplier within 30 days , on satisfactory handing over of entire system to the department

SHEET 03 / 04

FILE NO : SHAR / CMD / 2017 00 5605

SCOPE OF WORK

F. SECURITY DEPOSIT:

An amount of 5% of PO. Value is to be deposited by the successful tenderes towards security deposit. The amount will be recovered from the bill at the Rate of 5% of the bill. The Security deposit will be released after defect liability period of one year, From the date of acceptance of entire system , by the department.

I. Completion period:

Supply portion of the purchase order shall be supplied within 4 months from the date of purchase order. and erection, commissioning and testing shall be completed 8 months from the date of purchase order.

2.0 General Conditions:

1. Well experienced supervisory staff shall be deputed to instruct the contractor staff and for effective supervision of work , execution & Co-ordination of the work.
2. Quantity variation up to 25% on each item shall be accepted.
3. The material brought by contractor for this work shall be entered in CISF register at gate-I and Gate-II through the central stores as per purchase procedure.
4. All safety permits shall be taken prior to proceed with the work.
5. Power supply will be provided on free of cost and contractor shall bring his own electrical board with safety devices and cables for above work.
6. Water will be provided on free of cost for testing and commissioning.

SHEET 04 / 04

FILE NO : SHAR / CMD / 2017 00 5605

SCOPE OF WORK

7. Contract agency is responsible for damages if any, during execution of work and same shall be rectified at the cost and risk of contract agency.
8. Contactor shall make own arrangement for lodging & Boarding and transportation to the work force.
9. The work will be stopped for two to three days when certain important and critical activities are in progress like mixing, casting etc., in SPROB area.
10. contractor and their work team shall follow all safety and security related rules of SDSC SHAR.
11. Contractor shall ensure minimum wages to the workers engaged for this work and also shall follow Labor rules of Govt. of AP .
12. Contractor shall make arrangement all required tools for execution of above work.
13. Proper care must be taken during welding, gas cutting and excavation work.
14. The tenderer shall submit a signed copy of Annexure-A, Scope of work, Annexure-I, Annexure-II, Annexure-III, Annexure-IV, as token of acceptance . If any deviations , same may be submitted along with quotations.
15. Entire schedule of items of Tender, put together, will be treated as one whole system and the rank of offer will be computed based on over all value of the offer .
16. Contractor shall co-ordinate with Engineer-SE / Engineer-SD of CMD-AC for planning, obtaining site clearances , execution of work.

SHEET 01 / 03

FILE NO : SHAR / CMD / 2017 00 5605

Annexure- I

Specification for Air cooled scroll chillers

The scroll chillers specified in the Schedule shall be air-cooled type consisting of Hermetic scroll compressors. The chiller package shall be factory assembled mainly consisting of multiple scroll Compressor(s), condenser (s), chiller, control panel, piping, lubrication system etc all assembled into a single Unit and shall be located outdoor. The unit cabinet shall be constructed of Galvanized steel of suitable thickness to withstand the harsh outdoor weather conditions. The unit shall be mounted over welded steel base frame structural steel profiles of suitable size made out of MS and duly galvanized as specified above for corrosion resistance. Neoprene rubber vibration isolators shall be provided to reduce vibrations and noise. The evaporators of chiller package shall be selected for water side fouling factor of $0.000018 \text{ M}^2 \text{ } ^\circ\text{K/W}$.

The noise level of the Air cooled chillers shall not exceed 75 DBA at 1m away from the unit. Brief description of the various components of the chiller is given below.

Compressor.

Compressors shall be scroll type suitable for eco-friendly refrigerants such as R-134A/410A/407C complete with controls, accessories and shall be highly energy efficient & designed for quiet operation. Unit shall be designed for ambient conditions prevailing at **Sriharikota**. During the part load operation of the unit, microprocessor ensures that minimum number of compressors shall operate to handle the load thus saving power.

Condensers

The condenser coils shall be louvered rippled edge fins and inner grooved seamless **copper tubes** to enhance condensation and to reduce power consumption. Copper tubes are mechanically bonded to aluminum fins to maximize heat transfer efficiency. Each coil is pressure tested in the factory at not less than 400 psi dry air pressure.

Condenser fans are constructed of die cast aluminum hubs to withstand extreme weather condition with direct driven types. All fans are statically and dynamically balanced to operate at minimum noise and vibration. Fan blades are designed with appropriate pitch angle which results in minimum noise level.

Evaporator

Chiller shall be DX type. Removable heads shall be supplied for cleaning and servicing of cooler tubes. Vent and drain plugs shall be provided in each

SHEET 02 / 03

head. The flooded – cooler shall have a built-in distributor for feeding refrigerant evenly under the tube bundle to produce uniform boiling action, and baffle plates shall be provided to ensure vapor separation. The cooling shall be fitted with an oil recovery system. High performance chillers with finning may be offered.

Refrigerant circuit.

Refrigerant shall be eco-friendly such as R-134A/ 410A/ 407C and Refrigerant piping shall be of Copper with necessary controls such as TEV, to interconnect compressor, condenser and evaporator. Liquid cum moisture indicators, filter drier, valve shall be provided and also strainers.

Control Panel

Microprocessor based unit control center in a fully enclosed steel cabinet is required. All power and safety/operating controls shall be provided in the panel. The control center shall protect the unit against overload, over /under voltage etc. The panel shall have a microprocessor-based controller primarily to perform the following operations.

1. Auto stop & restart of chiller based on chilled water outlet set temperature.
2. Auto restart upon restoration of power after a power failure.
3. Auto recycle timer to avoid compressor on/off cycling.
4. Tripping of Compressor on HP/LP/OP/AFT/low chilled water & condenser water flow/phase unbalance-phase reversal-overload/under-over voltage
5. Crank case heater operation
6. Auto/Manual mode operation

The following LCD displays shall be made available as minimum in the display panel of the control center.

1. Suction pressure
2. Discharge pressure
3. Current drawn by the unit
4. Operating hours
5. Fault and trip indication
6. Alarm history for last 5 trips with date, time and cause of failure
7. Changing/viewing the set point of all parameters

Other Features:

- Battery backed RAM and real time clock shall be provided for controller to safeguard all input parameters in case of power failure.
- Programming facility to enable programmable chiller operation up to one year period.
- Software lock to prevent misuse of programming facility
- Provision to store previous faults in the memory

SPECIAL NOTES FOR SCROLL CHILLER PACKAGES

- I. The packaged scroll chiller shall be Air cooled type and will be complete with Hermetic type scroll compressor direct driven with matching chiller, condenser, Thermostatic expansion valve, motor starter and microprocessor control package. The package chiller shall be suitable for operation on 50 Hz, 415 Volts \pm 10% - 3 phase power supply. Chiller packages shall be completely factory fabricated and ready for installation.
- II. The chiller package shall house multiple independent refrigerant circuits and will be factory load tested prior to shipment. Test certificates for individual components shall be furnished. Load testing of package chillers shall be witnessed by purchaser at manufacturers' works for contract conditions to verify unit performance.
- III. Tenderers for scroll chiller packages shall furnish in detail the complete capability of the control centre.
- IV. The vendors shall examine the space identified for the package chillers and confirm the same for installing the equipment taking into account the maintenance aspects.
- V. The capacity control will be microprocessor based and the starting of the Compressor shall be on unloaded condition.
- VI. The motor starters for the Compressors, condensers shall be mounted within the package chiller itself. Field power supply wiring connections shall be to a single power center on the chiller package.
- VII. The Vendors shall indicate the pressure drop through chillers and accordingly decide the head for which pumps will be selected. Minimum specifications for pumps including head are indicated elsewhere.
- VIII. The Factory assembled, roof-top, air-cooled packaged scroll chillers shall be suitable for operation in the prevailing climatic conditions at **Sriharikota**.
- IX. A stopper for the control panel door may be provided to prevent it from opening fully. This is required to prevent the communication ribbon cable in the microprocessor control panel from becoming loose and breaking connectivity.
- X. The RESET option of microprocessor shall be provided.
- XI. Any exclusion in the offers should be clearly brought out.

ANNEXURE –II

SPECIFICATION FOR EXPANSION TANK – GRP PANEL TANKS:

The expansion tank shall be of sectional construction of size indicated as per the specifications under Part A and shall be made by the assembly of modular hot compression moulded GRP panels bearing IS 14399 (Part I) marking.

The panels shall be of minimum 9mm thickness at the flanges and 3mm minimum at the central portion of the shell. Where necessary, flat panels shall be used to accommodate the inlet, outlet overflow and drain connections. The flat panels shall have 11.5 mm thickness at the flanges and minimum 3mm at the flat portion.

All panels shall be insulated with 40 mm thick polyurethane foam with 2mm thick FRP/GRP protective skin on the outer side. The panels should have sufficient strength and rigidity to withstand hydrostatic pressure. The joints between the panels shall be sealed by using gaskets made of closed cell PVC foam to ensure water tightness.

The hardware used for fastening the panels shall be hot dip galvanized high tensile steel. All fasteners, flange support 'C' channels and metal stiffeners and tie rods (used for tanks deeper than 1.5m) shall be hot dipped galvanized and shall be used externally to avoid contact with the water stored.

Inlet & outlet drain and overflow nipples shall be provided either in PVC or MS as per the instruction of the Engineer in charge. However the material, sizes and specifications of the nozzles shall be pre-determined before the supply of the tank. The expansion tank shall have float valve assembly and manhole with lockable cover.

LIST OF APPROVED MAKES WITH EFFECT FROM 01.04.2010

Sl.No	Item	Name of brand / make
1	PVC wires	Finolex, Rallison, L & T, Mysocables, Q Flex, Anchor, RR Kabel, Rajnigandha cable, standard AVOCAB, Darshan Plus, LAPP kabel
2	Flush type switches and 5A/15A sockets	Cona, Anchor, Leader, Lisha, Record, CPL, Vega, M.K., Toyama, Legrand (MDS), Sonata, Western, LK, Finoswitch(Finolex)
3	Modular (plate type) switches and 5A/15A sockets	Anchor(Roma), Lisha, MK, Legrand(MDS), LK, Toyama, Vega, Litaski, Schneider, Crabtree, GELCO, ABB, North-West, Clipsal (Schneider), Kolors, Finoswitch(Finolex)
4	Sockets, Plugs(with Poly carbonate, FRP or metal clad body)	Best & Crompton, Cyclo, BCH-Electric, Legrand(MDS), Crompton Greaves, Havells, ABB, North-West, Clipsal(Schneider)
5	Electronic Fan Regulators	CPL, Anchor, MK, Gelco, Crompton Greaves, Electric, Decon, Rider, Legrand(MDS), Litaski, ABB, North-West, Finoswitch(Finolex)
6	Light fittings	Philips, GE lighting, WIPRO, Cropton Greaves, Thorn lighting, BAJAJ.
7	Lighting Management System	Lutron, Schneider, Philips
8	Light fittings: Out door applications only	Same makes under item 6
9	Energy efficient fittings with T5 Lamps	In addition to makes under item 6, ASIAN E+ also
10	Emergency light fittings	Philips / BPL / IMCO
11	Electronic time switch	L & T, Siemens, Duke, Arnics, BCH-Electric, Legrand(MDS)
12	Ceiling fans & Pedestal / wall mounted fans	GEC, Usha, Khaitan, Crompton Greaves, Orient, Rallis, Havells
13	Exhaust fans	GEC, Khaitan, Bajaj, Polar, EPC, Crompton Greaves
14	Air circulators	GEC, EPC, Bajaj, Khaitan, Crompton Greaves
15	Flame proof light fittings	Baliga, FLEXPOR, STAHL, Crompton Greaves FCG-Flame Proof Control Gears, Bajaj
16	Flame proof switch gear and accessories	Baliga FCG-Flame Proof Control Gears Pvt. Ltd., Felxpro, Sterling Switchgears, STAHL, Flame pack.
17	Geysers	Racold, Bajaj, Johnson, Venus, Remson, Voltas, Spherehot, USHA, Crompton, Jaquar
18	Miniature circuit breakers	Legrand(MDS), Havells, Versatrip, GE, Siemens, Indo

	(MCBs)	Kopp safeline, Indo-Asian, S&S, Datar, HPL, Standard, HH Elcon, Schneider, Hager, AREVA T&D, ABB, North-West.
19	Earth Leakage Circuit breakers/RCCBs	Legrand(MDS), GUTS, Prok-DVS, Siemens, HPL, Havells, GE, Indo-kopp, Datar, HH Elcon, Schneider, ABB, Standard, North-West.
20	Moduled case circuit breakers up to 400A for general applications	L & T, HH Elecon, Siemens, ABB Legrand(MDS), Schneider, C & S, Standard, Havells
21	Moulded case circuit breakers of all ratings for substation panels	L & T, Siemens, ABB, Schneider
22	HRC fuse base and carriers	L & T, Havells, Siemens, standard, Indo-kopp, GE Power controls
23	MV switch fuse units and Isolators up to 250A for general applications	L & T, Siemens, Standard, HPL, C & S, Havells, Versatrip, HH Elecon, Schneider, Indo-Asian, GE Power Controls, ABB
24	MV switch fuse units and Isolators of all ratings for substation panels	L & T, Siemens, Schneider, GE Power Controls, ABB
25	Change over switches	L & T, Siemens, Standard, HPL, C & S, Havells, Versatrip, HH Elecon, Schneider, Indo-Asian, GE Power controls
26	HRC fuses	L & T, Havells, Siemens, GE power Controls, Bharth, Linder, S & S, Indo-Kopp, HH Elecon, C&S, Versatrip, Crompton Greaves, Standard
27	Transformer-(oil filled)	Kirloskar, KEL, Kavika, Crompton Greaves, ETE, Bharat Bijlee, ECE, ITL, Voltamps, Indo tech, AREVA T & D, PETE
28	Transformer (Resin Cast, Dry type)	Kirloskar, BHEL, Voltas, P.S.Electricals, Voltamp
29	LT Current/Voltage Transformer	Kappa Electricals, AE, NIPPEN, Neutronics, C&S, INTRANS, PARAS
30	HT Current/Voltage Transformer	Kappa Electricals, AE, Neutronics, AREVA T & D, MEL, INTRANS, PARAS
31	Automatic voltage regulators / servo controlled voltage stabilisers, Isolation transformers	AE
32	Diesel Engine for DG sets	Cummins, Greaves, PERKING, Caterpillar
33	Alternators for DG sets	Stamford, Crompton Greaves, AVK, TDPS
34	Armoured HT power cable	Hindustan Vidyut Products Ltd (HVPL), INCAB,

	(both PVC and XLPE)	Universal, Finolex, CCI, RPG, Torrent, Nicco, Polycab, KEI Industries
35	Armoured LT power cable (both PVC and XLPE)	Hindustan Vidyut Products Ltd (HVPL), Gloster, INCAB, Polycab, Universal, Finolex, CCI, RPG, Torrent, Nicco, Havells, KEI Industries, Rallison
36	Armoured and Unarmoured control cable (both PVC and XLPE) and special purpose cables	Hindustan Vidyut Products Ltd (HVPL), Gloster, INCAB, Polycab, Universal, Finolex, CCI, RPG, Torrent, Nicco, Havells, Lapp Kabel, Rallison
37	LT Capacitors	Unistar, Mehar, Asian, Sprague, Crompton Greaves, Khatau Junker, Siemens, L&T, ABB
38	Automatic Power factor Correction Relay	Beluke, Power Monitor, Conzerv, L&T, AREVA T&D
39	LT Air circuit breaker	L&T, Siemens, GE, Jyothi, ABB, C&S, Schneider(Merlin-Gerin)
40	Overload relays with built-in single phase preventors	L&T, Siemens, GE power controls, ABB, Schneider
41	11KV Vacuum circuit breakers	Siemens, Andrew Yule, MEI, Jyothi, Balmer Lawrie, Alind, AREVA T&D, Crompton Greaves, ABB, Easun Reyrolle
42	Analog instruments: Ammeter, Voltmeter, Frequency meter PF meter	Nippen, MECO, AE, Havells, Neutronics, L&T, Rishab, Riken.
43	Digital type instruments: Ammeter, Voltmeter, Frequency meter, PF meter	Clectro systems, AE, L&T, Conzerv, GE Digital, CG Schlumberger, MECO, Rishab
44	Load Manager Meters	AE, Conzerv, L&T
45	Static Power Meter and logger	Conzerv, CG Schlumberger
46	Single and three phase Energy meters	Remco(BHEL), Havells, Siemens, MET, Alind, Jyothi, ECE, UE, Capital, L&T, Conzerv
47	Air break power/control contractors	L&T, Siemens, GE, BCH-Electric, Crompton Greaves, ABB, Telemechanic, C&S
48	Push button stations and key actuators	L&T, Siemens, Vaishnav, BCH-Electric, Tecnic, GE power control, crompton greaves, ABB, Schneider, C&S
49	Motors	Kirloskar, Bharat Bijlee, Crompton Greaves Jyothi, Siemens, GE, ABB
50	Starters	L&T, Siemen, Schneider, GE Power controls, Tecnic, ABB, Crompton
51	Soft starters	Allen Bradley, Crompton
52	Variable speed drives	Emerson (Control Techniques), ABB, Nelco, hitachi, Danfoss, Siemens, Landis & Staefa

53	Protective Relays (EM and Numeric)	ASEA, ALIND, Brown Boveri, Easun, Siemens, AREVA T&D, Jyoti, L&T, CSPC
54	Smoke detection sensor, control panels	NOTIFIER, Hochki, Thron, Honey well, Appollo, Simplex, Siemens, Ziton, Secutron, Edward, Telefire, Morley
55	Cable management system	MK, LK, Centaur, MDS, RR eubiq
56	UPS(of all ratings)	Libert(Emerson), Mitsubishi, PCI(Pillar), Power-one (epi), MGE (APC)
57	UPS(of rating up to 30KVA) and invertors	In addition to makes specified under item 56, APLAB, POWERWARE, GE, KELTRON, APC
58	Batteries	Exide, Amco, Pace setter, Standard
59	Heat/Cold Shrinkable joint kits(HT & LT)	RAYCHEM, M-SEAL, 3M
60	Electric perimeter security fencing	IBEX, ECIL
61	Electrical grade FRP Laminates (substitute for Bakelite hylum)	Electro fibres
62	Rotary Switch	L&T, GE power controls, Siemens, Jainson
63	Time delay relay	L&T, GE power controls, Siemens, BCH-Electic, ABB
64	Timer	L&T, GE power controls, Siemens, Schneider, ABB
65	Selector switch/toggle switch	L&T, Kaycee, Jay
66	Electrical bus ducts	In addition to approved MV panel manufacturers, STARDRIVE also
67	Thermoplastic (Poly carbonate) Switch box/Junction box and distribution boards	Hensel, Devi polymer, Sintex, ABB
68	Cable trays (PVC, FRP & GI)	Profab, Sintex, Indiana, Patny Systems, L&T, Cablofil(Legrand)
69	Sandwiched Busbar Trunking System	C&S, L&T, Legrand
70	Double walled corrugated (DWC) HDPE pipes (for UG cables)	Manufactured by M/s REX Polyextrusions
71	Advanced Lightning Protection System(Early Warning Lightning Protection System)	ERICO, INDELEC
72	Unitized/Pack age Substation	ABB, Kirloskar, Schneider, Areva T&D, PETE, Crompton Greaves, Siemens

ANNEXURE –I V

ACCREDITED MANUFACTURERS OF ELECTRICAL MV PANELS

1. M/S Havels India Limited,
319, 320, Chenoy Trade Centre,
Parklane,
Secunderabad – 500 003
2. M/S Control Infotech Ltd.,
426, IV Phase,
Peenya Industrial Area,
Bangalore – 560 058
3. M/S Elembica Services,
Polt No. 340, GIDC,
Near Deverson's, Odhav,
Ahmedabad – 382 415
4. M/S Lotus Powergear Private Limited,
12/13 KM, Kanakapura Road,
Doddakallasandra,
Bangalore – 560 062
5. M/S Vee Vee Controls Private Limited,
Plot No. L-3 & 4, 9th Cross,
1st Stage, Peenya Industrial Estate,
Bangalore – 560 058
6. M/S Anand Power Limited
A-99, Sector 58,
Noida – 201 307
7. M/S Swati Switchgears (India) Pvt. Ltd.,
36, Sublaxmi Industrial Estate,
VIII, Moraiya Sarkkhej,
Bavaia High way,
Tal. Sanad,
Ahmedabad – 382210
8. M/S Power Control Equipments,
No. 37/2, Gowdanapalya,
Subramanyapura Main Road,
Banagalore – 560 061

Cont...2

9. M/S Sandya Electrolines,
Kallampalhy,
Sreekaryam P.O
Trivandurm – 69 5017
10. M/S Karaavali Switchgears,
C-42, Industrial Estate,
Baikampady,
Mangalore – 575011
11. M/S Emco Switchgears Pvt. Ltd.,
210, Industrial Area Phase –I,
Chandigarh – 160 002
12. M/S Power and Instrumentation Pvt.Ltd.,
12, Sunshine Industrial Estate,
Behind Maniar Trailors, Rakhial,
Ahmedabad – 23
13. M/S Spaceage Switchgears Limited
68, Industrial Development colony,
Mehrauli Road,
Gurgaon – 122001
Haryana
14. M/S Advance Panels & Switch gears (P) Ltd.,
A- 257, DSIC, Narela Industrial Pack,
Narela, Delhi – 110040
15. M/S Maktel Systems,
642, GIDC, Makarpura Estate,
Vadodara – 390 010
16. M/S Power Tech (Hyd) Pvt. Ltd.,
Polt No. 9, MIE, Miyapur,
Hyderabad – 500 050
17. M/S Bhopal switchgears Pvt. Ltd.,
No.29 & 30E, Industrial Area,
Govindpura,
Bhopal – 462 023

18. M/S Babuchand Controls,
55/873, 2nd Floor,
Geetha Mandir,
Kochi, Kerala – 68 2016
19. M/S Laxmi Engineering Works,
Polt No. 119/5, Phase –II, 1-D.A
Cherlapally
Hyderabad – 500 051
20. M/S ESSAAR Universal (P) Ltd.,
C-10, Panki Industrial Area,
Site –III, Kanpur – 208 002
21. M/S Vijaya Jothi Engineering Services,
1, Rizwan Road,
Madavaram, Chennai – 600 060
22. M/S Assam Electricals,
Laipuli (Near Tinsukie)
P.O Panitola – 786183
Assam
23. M/S Megatech Control Ltd.,
Block I, Unit 14 & 15 SIDCO
Electronic Complex, Guindy
Chennai – 600 032
24. M/S K.Dhandapani & Co.Ltd.,
No.26, IV Cross, N.R. Road,
Bangalore – 560 002
25. M/S Hari & Gopal (for panels up to and included 800 Amps only)
23/786, Valiachalai,
Thiruvananthpuram – 695036
26. M/S Electro Allied Products,
260, Mahatma Gandhi Road,
Ramachandrapur (Joka),
Kolkatta – 700 10



Satish Dhawan Space Center SHAR

Page Destination: Tender Header Format Type : Normal

. :

GOVERNMENT OF INDIA

DEPARTMENT OF SPACE

SATISH DHAWAN SPACE CENTRE

PURCHASE DIVISION

Tele No.08623-225023/225174/225127

Fax No.08623-225170/22-5028

e-Mail ID : hps@shar.gov.in, hasan@shar.gov.in, sselvan@shar.gov.in

STANDARD TERMS & CONDITIONS

1.OFFERS SHALL BE SENT ONLINE ONLY USING STANDARD DIGITAL SIGNATURE CERTIFICATE OF CLASS III WITH ENCRYPTION / DECRYPTION. THE TENDERS AUTHORISED ONLINE ON OR BEFORE THE OPEN AUTHORISATION DATE AND TIME ONLY WILL BE CONSIDERED AS VALID TENDERS EVEN THOUGH THE BIDS ARE SUBMITTED ONLINE.

2.THE TENDERER MUST AUTHORISE BID OPENING WITHIN THE TIME STIPULATED IN THE SCHEDULE BY SDSC SHAR. OTHERWISE THE ONLINE BID SUBMITTED WILL NOT BE CONSIDERED FOR EVALUATION. PHYSICAL COPY WILL NOT BE CONSIDERED EVEN THOUGH IT IS RECEIVED BEFORE THE BID SUBMISSION DATE.

In case of two-part tenders, parties shall submit their offers as follows:-

1) Part-I – Techno-commercial Bid

(No price details shall be mentioned in this bid and shall not upload the details of price along with the techno-commercial bid)

2) Part-II – Price Bid

In view of Two Part Tender, the Offers submitted contrary to above instructions will be summarily rejected.

3.In case, the tenderer is not interested to participate in the tender, the tenderer shall submit regret letter giving reasons, failing which future enquiries will not be sent.

4.**Offer Validity:** The validity of the offers / tenders should be 90 days (in case of single part tender) and 120 days (in case two part tender) from the date of opening of the tenders. Tenders with offer validity less than the period mentioned above, will not be considered for evaluation.

5.**Excise Duty** - SDSC-SHAR is eligible for Excise Duty Exemption under Notification No. 64/95 dated 16.03.1995 as amended by Notification No. 15/2007 dated 01.03.2007 and as amended by Notification No. 07/2008 dated 01.03.2008 and necessary Exemption Certificate will be provided. No claim, whatsoever, for payment of Excise Duty or Cenvat reversal will be allowed later. The suppliers have to take this into account while submitting quotations.

Excise Duty Exemption Certificate will be issued only to finished product as per the PO/Contract. EDEC shall not be issued in favour of third parties for raw materials, other components that go in to the manufacture of the end product.

Excise Duty Exemption Certificate will be issued in favour of original equipment manufacturer provided (i) the tender has been received from the sole selling agent of OEM concerned (for which documentary proof shall be produced) and (ii) a request for issue of Excise Duty Exemption Certificate was made in the original offer itself.

6.**CST** - With effect from 01.04.2007, Form-D has been withdrawn for Inter-State purchases by Government Departments. Now the percentage of CST on the Inter-State sales to Government Departments shall be the percentage of VAT/State Sales Tax as applicable in the State of the Seller/Dealer. Accordingly, the suppliers have to indicate clearly the % (full rate of tax) of CST applicable against each item in their offers.

7.**Customs Duty** - SDSC-SHAR is eligible for 100% Customs Duty exemption as per Notification No. 12/2012 dated 17.03.2012. This may be taken into account while quoting for import items, if any.

In case tenderers offering items considering customs duty exemption, they should also indicate the bill of materials and price, separately, with Customs Duty component and terms and conditions thereto.

8.**Advance Payment** - Wherever advance payment is requested, Bank Guarantee from any Nationalized Bank/Scheduled Bank should be furnished. In case of advance payments, if the party is not supplying the material within the delivery schedule, interest will be levied as per the Prime Lending Rate of RBI plus 2% penal interest.

Interest will be loaded for advance payments/stage payments as per the prime lending rate of RBI and will be added to the landed cost for comparison purpose. In case of different milestone payments submitted by the parties, a standard and transparent methodology like NPV will be adopted for evaluating the offers.

9.**Liquidated Damages** - In all cases, delivery schedule indicated in the Purchase Order/Contract is the essence of the contract and if the party fails to deliver the material within the delivery schedule, Liquidated Damages will be levied @ 0.5% per week or part thereof subject to a maximum of 10% of total order value.

10.**Performance Bank Guarantee** - Performance Bank Guarantee for 10% of the order value should be furnished in the form of Bank Guarantee from nationalized/scheduled bank or by Demand Draft valid till warranty period plus sixty days as claim period.

11.**Security Deposit** – Security Deposit for 10% of the order value is mandatory, if the ordered value is Rs.5.00 lakhs and above. Party

shall furnish the Security Deposit in the form of Bank Guarantee from nationalized/scheduled bank or by Demand Draft valid till completion of the contract period plus sixty days towards claim period for faithful execution of the contract.

12. BANK GUARANTEE FOR FIM: Supplier has to submit Bank guarantee for equal value of Free Issue of Materials (FIM) issued by the Department from Nationalised / Scheduled Bank valid till receipt and acceptance of supply and satisfactory accounting of FIM plus sixty days as claim period.

13. The delivery period mentioned in the tender enquiry, IF ANY, is with the stipulation that no credit will be given for earlier deliveries and offers with delivery beyond the period will be treated as unresponsive.

14. The Department will have the option to consider more than one source of supply and final orders will be given accordingly.

15. The bidders should note that conditional discounts would not have edge in the evaluation process of tenders.

16. Non-acceptance of any conditions wherever called for related to Guarantee/ Warranty, Performance Bank Guarantee, Security Deposit, Liquidated damages are liable for disqualification.

17. Wherever installation/ commissioning involved, the guarantee/warranty period shall reckon only from the date of installation and commissioning.

18. Purchase/Price Preference will be extended to the MSMEs under the Public Procurement Policy for MSMEs formulated under the Micro, Small and Medium Enterprises Development Act, 2006 and instructions issued by Government of India from time to time. Vendors who would like to avail the benefit of MSME should clearly mention the same and submit all the documentary evidences to substantiate their claim along with tender itself.

19. The drawings, specifications, end use etc., given by the Centre/Unit along with the tender enquiry are confidential and shall not be disclosed to any third party.

20. SPECIAL CONDITIONS FOR SUBMITTING QUOTATIONS IN FOREIGN CURRENCY BY THE INDIAN AGENTS

The Tenderer should submit the following documents/information while quoting:-

a) Foreign Principal's proforma invoice/quote indicating the commission payable to the Indian Agent and nature of after sales service to be rendered by the Indian Agent.

b) Copy of Agency agreement with the Foreign Principal and the Indian Agent, precise relationship between them and their mutual interest in the business.

c) Registration and item empanelment of the Indian Agent.

d) Agency Commission will be paid only Indian Currency.

e) Compliance of the tax laws by the Indian Agent.

21. High Sea Sales- Against High Sea Sale transactions:

a. Offers shall be on all inclusive basis including delivery upto Sriharikota at the risk and cost of the supplier. Customs Clearance is the responsibility of the supplier and at his cost and risk.

b. 100% payment will be made within 30 days after receipt and acceptance of the items at our site.

c. Sales Tax is not applicable

d. Customs Duty Exemption Certificate and other relevant documents required for Customs clearance will be provided.

e. High Sea Sales Agreement furnished by the supplier in accordance with the terms and conditions of our purchase order will be signed and issued by SDSC-SHAR.

22. The following information/ documents are to be submitted wherever applicable.

1. Product Literature

2. Core banking account number of SBI, RTGS Details

3. PAN No. in quotation and invoices

4. Excise Duty, VAT, Service Tax Registration details.

5. In case of MSME, registration details / documents from Competent Authority.

23. EXCLUSION OF TENDERS

The following tenders shall be summarily rejected from the procurement process

a. Tenders received from vendors who have not qualified in terms of their registration.

b. Tenders received against publishing of a limited tender in the CPP portal.

c. Tenders of vendors who have been removed from the vendor list or banned/debarred from having business dealings.

d. Unsolicited tenders from vendors.

e. The tenders which materially depart from the requirements specified in the tender document or which contain false information.

f. The tenders which are not accompanied by the prescribed Earnest Money Deposit.

g. The tenders of vendors who have not agreed to furnish Security Deposit, Performance Bank Guarantee and Liquidated Damages.

h. The validity of the tenders is shorter than the period specified in the tender enquiry.

i. The tenders received from vendors or their agents or anyone acting on their behalf, who have promised or given to any official of the Centre/Unit/Department, a gratification in any form, or anything of value, so as to unduly influence the procurement process.

j. The tenders received from vendors, who, in the opinion of the Centre/Unit, have a conflict of interest materially affecting fair competition.

k. The tenders received from Indian agents on behalf of their foreign Principals/OEMs (in cases where the Principals/OEMs also submit their tenders simultaneously for the same item/product in the same tender).

l. In case two or more tenders are received from an Indian agent on behalf of more than one foreign Principal/OEM, in the same tender for the same item/product.

m. If a firm quotes 'NIL' charges / consideration, the bid shall be treated as un-responsive and will not be considered.