



कलकत्ता पत्तन न्यास
KOLKATA PORT TRUST
हल्दिया गोदी परिसर
HALDIA DOCK COMPLEX
AN ISO-9001:2015 ORGANISATION



Plant & Equipment (P&E) Division
Township Electrical Maintenance Office
Cluster-V, P.O.: Haldia Township, Pin – 721 607,
Dist.: Purba Medinipur, State: West Bengal, India

Tel. No.: + 91 3224-263401
E-Mail: dmullick.hdc@nic.in
Mob No.: +91 9434031335

No.: DM (P&E)/TSEM/1006/BUDGET_ENQ/ 03

December 05, 2018

Subject:

Enquiry for obtaining budgetary quotations for the work
**“SUPPLY, INSTALLATION, TESTING AND COMMISSIONING
OF AIR-CONDITIONING SYSTEM, AT B B GHOSH
AUDITORIUM , HDC, KOPT, AT HALDIA TOWNSHIP.”.**

Haldia Dock Complex (HDC), Kolkata Port Trust (KoPT) intends to install new air conditioning system at **B B Ghosh Auditorium , at Haldia Township.**

A technical estimate and terms & conditions, in this regard, is enclosed herewith for ready reference please.

Budgetary offers, alongwith comments / suggestions (if felt necessary), are invited from the following manufacturers of Air Conditioners or their authorised sales & service dealer / authorised distributor :

Daikin / Hitachi / Blue Star / Carrier / Voltas.

The budgetary offer should reach by December 13, 2018.

Thank you,
Yours faithfully,

डी.मल्लिक / D. Mallik

उप प्रबंधक (पी एंड ई) / Dy. Manager (P&E)

कृते महाप्रबंधक (अभियांत्रिकी) / for General Manager (Engg.)

हल्दिया गोदी परिसर / Haldia Dock Complex

कलकत्ता पत्तन न्यास / Kolkata Port Trust

December 5, 2018

TECHNICAL SPECIFICATION

Name of the work : Supply, installation, testing and commissioning of Air-conditioning System, at B B GHOSH AUDITORIUM , HDC, KoPT, at Haldia Township.

1. Scope of Work:

- 1.1. In connection with the aforesaid work, all materials, including air-conditioner units, will be under the custody of the Contractor, till completion of work and commissioning of the same.
- 1.2. In connection with aforesaid work, transportation and handling of all materials, welding, Nitrogen Flashing, refrigerant charging, control wiring, etc. should be done by the Contractor at their own risk, cost and arrangement.
- 1.3. The Contractor must make their own arrangements for delivery of all materials, as well as for careful and proper unloading at H.D.C.'s site. The responsibility for preventing damage / deterioration to the materials during transit, delivery, unloading at the designated point shall rest with the Contractor. All transit risk will be to Contractor's account.
- 1.4. The Contractor should arrange, at their own cost, all necessary tools, tackles, lifting machineries, scaffolding, temporary lighting, different vehicular transport etc., required for the execution of total work.
- 1.5. In connection with the aforesaid work, necessary masonry work, necessary false ceiling removal work, necessary mending good work, dressing of pipe & cabling work, etc., including supply of necessary hardware materials, insulating materials for copper pipes, lapping tape, etc. shall have to be done by the contractor without any extra cost.
- 1.6. Power supply up to the outdoor units will be provided by HDC.
- 1.7. Electricity and water, if required, will be provided free of cost for the purpose of execution of the work at site.
- 1.8. The installation work includes earthing of the Air Conditioners, as per relevant Indian Standard Specification, with the nearest earthing point (to be provided by HDC).
- 1.9. Free preventive / breakdown service shall be provided against each Air Conditioner unit, during the Guarantee Period of 12 months from the date of complete execution of the work (i.e. commissioning of the ductable air-conditioning system). Preventive / breakdown service shall also be provided against each Air Conditioner unit, during the Comprehensive Maintenance Contract (CMC) period of 5 years, after expiry of 12 months' Guarantee Period.

Even in case of no complaint, at least 04 (four) preventive services are required to be provided every year, during the aforesaid Guarantee Period (12 months), as well as during CMC period (5 years), for routine servicing. Each air-conditioner unit is also to be cleaned thoroughly twice in a year, during the aforesaid Guarantee Period and CMC period. Moreover, the outdoor units should also be painted once in a year during the aforesaid CMC period.

- 1.10. No project surplus material will be taken over by HDC, KoPT after completion of the work.

2. Detailed Technical Specification :

2.1. a) Ductable split type Air-conditioner units [capacity 16 TR-17 TR]:

The Air-conditioner units shall be air cooled type, with Scroll Compressors, compatible with eco-friendly refrigerant R410A and provided with air-cooled condenser with blower fan, copper refrigerant coil, anti corrosion condenser fins, conformal coated PCBs , remote controller, etc.. The indoor Air-conditioner units shall be floor mounted type.

The air-conditioning units should be compatible with operation at rated power supply of 3 phase, 415 V \pm 10 %, 50 Hz.

b) Ductable split type Air-conditioner units [capacity 3TR- 4TR]:

The Air-conditioner units shall be air cooled type, with Scroll Compressors, compatible with eco-friendly refrigerant R410A and provided with air-cooled condenser with blower fan, copper refrigerant coil, anti corrosion condenser fins, conformal coated PCBs , remote controller, etc.. The indoor Air-conditioner units shall be ceiling suspended type.

The air-conditioning units should be compatible with operation at rated power supply of 3 phase, 415 V \pm 10 %, 50 Hz.

c) Split Air-conditioner units [capacity 1.5 TR]:

The Air-conditioner units shall be High Wall Split Type with Rotary Compressor, compatible with eco-friendly refrigerant R410A, having minimum 3 Star BEE Rating (with remote control).

The cooling coils of indoor units and condenser coils of the outdoor units should be of copper only.

The Air-conditioner units shall be supplied with copper refrigerant pipe (standard length of 3.0 running metre) & electric wire (standard length of 3.0 running metre), between outdoor unit & indoor unit, and standard length of drainage pipe.

The air-conditioning units should be compatible with operation at rated power supply of 1 phase, 230 V \pm 10 %, 50 Hz.

- 2.2. Approved make / brand for the Air-conditioner units: Daikin / Hitachi / Blue Star / Carrier / Voltas.
- 2.3. Suitable refrigerant copper piping (with 13 mm thick nitrile insulation) should be provided between outdoor units and the indoor units.
- 2.4. Acoustic insulation, with 12 mm thick fibreglass rigid board of density 48 kg / m³, finished with perforated aluminium sheet (28 gauge), should be provided inside ducting.
- 2.5. Thermal insulation with 9 mm thick close cell Nitrile Rubber (class 1), should be provided on ducting.
- 2.6. Decoration & painting , for the Air Ducting system of ductable split type Air-conditioner units [capacity 16 TR- 17 TR] , should match the existing decoration of the auditorium.
- 2.7. All materials required for the entire work should be as per latest Indian Standard (IS) issued by **Bureau of Indian Standard**, as applicable, if not specified otherwise in this Bidding Document.

3. 3.1. The entire job should be executed in accordance with the requirements of following Acts and rules, including latest amendments:
- a) Indian Electricity Rules – 1956
 - b) Electricity Laws (Amendment) Ordinance, 1997
 - c) Central Electricity Authority Rules, 1977
 - d) Central Electricity Authority Regulations, 1979
 - e) Indian Electricity Act, 2003
- 3.2. The supply, installation and commissioning of all items required for this work should be complied with the above Acts & Rules and relevant Code of Practice of the **Bureau of Indian Standard**, including National Electrical Code, if not specified otherwise.

Terms and Conditions

Name of the work : **Supply, installation, testing and commissioning of Air-conditioning System, at B B GHOSH AUDITORIUM , HDC, KoPT, at Haldia Township.**

1.1. Price:

1.1.1. The quoted rates should include, all taxes & duties of Central/ State/ Local bodies [excluding Goods and Services Tax (GST)], as applicable, and charges for packing, forwarding, loading, handling, carrying to any lead, stacking, transportation, permits, overheads & profit, etc. necessary for the complete services as described in this Bidding Document.

GST, as applicable, shall be paid extra against proper invoice submitted by the Contractor.

The contractor will be required to submit GST compliant invoice with all required details and also be required to file timely and proper return so as to enable KoPT to get due credit against GST paid.

In case of any failure on the above account, GST amount, even if paid by KoPT, shall be recoverable from the Contractor.

1.1.2. The quoted price(s) should remain firm till all the jobs are completed. No Price escalation is admissible other than statutory increase in Taxes & Duties (within the scheduled completion period).

1.1.3. Except where otherwise expressly provided, the contractor shall provide all materials, labour and plant and things necessary in connection with the contract work although everything may not be fully specified and although there may be errors and omissions in the specifications.

1.1.4. Tools, Tackles, lifting machineries, scaffolding, temporary lighting, different vehicular transport etc. required for execution of the whole work will have to be arranged by the Contractor, at their own risk, cost & arrangement.

1.2. Completion Period:

All the jobs are to be completed within **90 (Ninety) days** from the date of site clearance, after placement of the order on the successful bidder.

1.3. Inspection & Testing:

1.3.1. During execution of the work as well as after completion of the jobs, the same will be inspected and tested jointly by the authorized representative of HDC, KoPT and the Contractor at site, based on the “Technical Specification”. The Contractor will have to provide all facilities for inspection of the materials and executed work, at their own risk, cost and arrangement.

1.3.2. The materials supplied by the supplier should strictly conform to the laid down specification of the order. Samples from the supplies may be drawn for testing by KoPT’s own arrangement or by Government Test House and if found to be inferior to the laid down specification of order, the materials will be rejected in whole or in part and the Contractor shall be debited with the cost of test and rejected materials shall have to be replaced by the Contractor at their own cost.

1.3.3. After completion of the work, on satisfactory testing & commissioning, the Completion Certificate will be issued and the installation will be taken over by HDC thereafter.

1.3.4. Inspection & testing of the work by the authorized representative of HDC, KoPT shall not relieve the Contractor from his obligation for conforming to the quality, workmanship, guaranteeing the performance, etc. as per the contract.

1.4. Payment terms:

1.4.1. Payment to the Successful Bidder will be made stage-wise as indicated below :-

a) Against supply of air-conditioner units:

- i) Payment for 70% amount of each item will be made against supply of respective item at site and submission of bills along with Custodian Certificate and other relevant documents like Inspection Reports, Challans, etc.
- ii) Payment for 20% amount of each item will be made against installation of the respective item and submission of bills along with Installation Certificate.
- iii) Payment for 10 % amount will be made against testing, successful commissioning, taking over the commissioned job by KoPT and submission of bills, along with Job Completion Certificate.

b) Against installation , testing and commissioning of air-conditioner units:

- i) Payment for 90% amount of each item will be made against installation of the respective item and submission of bills along with Installation Certificate.
- ii) Payment for 10 % amount will be made against testing, successful commissioning, taking over the commissioned job by KoPT and submission of bills, along with Job Completion Certificate.

c) Against supply, installation , etc. of balance items:

100% payment (including payment towards supply of optional items / additional items) will be made against testing, successful commissioning of the air-conditioner units, taking over the commissioned job by KoPT and submission of bills, along with Job Completion Certificate.

1.4.2. Bills should be submitted, **in triplicate**, to **Township Electrical Maintenance Office, Plant & Equipment Division, Haldia Dock Complex** along with required certification / inspection report.

1.4.3. Payment will be made in Indian Rupees through the banker of the Contractor (i.e. through **ECS**). During submission of bill(s), the following information must be submitted by the Contractor regarding their banker:

- a) Bank Account number.
- b) Name of the bank.
- c) Name of the branch.
- d) Address of the branch.
- e) MICR code of the branch.

1.5. Guarantee:

1.5.1. The materials supplied and work executed by the Contractor will be guaranteed for a period of 12 (twelve) months from the date of complete execution of the work.

1.5.2. The Contractor shall be responsible for making good, with all possible speed, at their expense, any defect, which may occur before expiry of 12 (twelve) months from the date of complete execution of the work.

1.5.3. Inspection & testing of the work by the authorized representative of HDC, KoPT shall not relieve the Contractor from his liability of guaranteeing against defective materials, workmanship, etc. and full satisfactory performance within the aforesaid Guarantee Period.

PRICE SCHEDULE

Financial estimate for the work of "Supply, installation, testing and commissioning of Air-conditioning System, at B B GHOSH AUDITORIUM , HDC, KoPT, at Haldia Township".

Sl. No.	Description of item	Qty.	Unit	Rate per unit, without GST [in ₹]	Amount, without GST [in ₹]	Applicable GST %		
						SGST	SGST	SGST

PART-A

1	Supply, installation, testing & commissioning of floor mounted air cooled , ductable split type Air-conditioner units [capacity 16 TR- 17 TR] with Scroll Compressors (compatible with eco-friendly refrigerant), as per "Technical specification".							
	a)	Supply	6	no.				
	b)	Installation, testing & commissioning (including lifting, shifting & handling and first charge of refrigerant).	6	no.				
2	Supply, installation, testing & commissioning of ceiling suspended air cooled ductable split type Air-conditioner units [capacity 3TR-4TR] with Scroll Compressors (compatible with eco-friendly refrigerant), as per "Technical specification."							
	a)	Supply	6	no.				
	b)	Installation, testing & commissioning (including lifting, shifting & handling, providing bracket for outdoor unit and first charge of refrigerant).	6	no.				

Sl. No.	Description of item	Qty.	Unit	Rate per unit, without GST [in ₹]	Amount, without GST [in ₹]	Applicable GST %		
						SGST	SGST	SGST
3	Supply, installation, testing & commissioning of 1.5 TR split type Air Conditioner with Rotary Compressor (compatible with eco-friendly refrigerant), having 3 Star BEE rating, as per "Technical specification."							
	a) Supply	6	no.					
	b) Installation, testing & commissioning (including lifting, shifting & handling, providing bracket for outdoor unit and first charge of refrigerant).	6	no.					
4	Providing refrigerant copper piping (with nitrile insulation) between outdoor units & indoor units .							
	i) for ductable split type Air-conditioner units [capacity 16 TR- 17 TR]	270	RM					
	ii) for ductable split type Air-conditioner units [capacity 3TR-4TR]	300	RM					
	iii) for split type Air Conditioner units [capacity 1.5 TR] (additional requirement, if any)	20	RM					
5	Providing PVC drain piping (for drainage of water from indoor units) for ductable split type Air-conditioner units [capacity 16 TR- 17 TR & 3TR-4TR] and split type [1.5 TR] Air-conditioner units (additional requirement, if any).	210	RM					

Sl. No.	Description of item	Qty.	Unit	Rate per unit, without GST [in ₹]	Amount, without GST [in ₹]	Applicable GST %		
						SGST	SGST	SGST
6	Providing electrical power cabling (minimum 2.5 mm ² , copper) between outdoor units & indoor units							
	i) for ductable split type Air-conditioner units [capacity 16 TR- 17 TR]	330	RM					
	ii) for ductable split type Air-conditioner units [capacity 3TR-4TR]	360	RM					
	iii) for split type Air Conditioner units [capacity 1.5 TR] (additional requirement, if any)	20	RM					
7	Providing Air Ducting system for ductable split type Air-conditioner units, made out of GI sheet of following thickness, including necessary supports, adjustable dampers, vanes, etc. complete with neoprene rubber gasket.							
	i) Made of 22 Gauge GI sheet	800	sq. m					
	ii) Made of 24 Gauge GI sheet	600	sq. m					
8	Providing insulation for Air Ducting system, as given below							
	i) Acoustic insulation inside ducting, with fibreglass rigid board , finished with perforated aluminium sheet , as per "Technical Specification", including all materials for fixing.	300	sq. m					

Sl. No.	Description of item		Qty.	Unit	Rate per unit, without GST [in ₹]	Amount, without GST [in ₹]	Applicable GST %		
							SGST	SGST	SGST
	ii)	Thermal insulation on ducting with Nitrile Rubber, as per "Technical Specification", including all materials for fixing.	1500	sq. m					
9		Providing canvas connection between indoor units & ducting.	12	no.					
10		Providing powder coated aluminium section supply / return air diffusers (with aluminium volume control dampers) .	40	sq. m					
11		Providing volume control dampers for collar.	10	sq. m					
12		Providing iron support for Air Ducting system of ductable split type Air-conditioner units [capacity 16 TR- 17 TR].	4	Set					
13		Providing boxing , with decoration & painting , for the Air Ducting system of ductable split type Air-conditioner units [capacity 16 TR- 17 TR].	1600	sq. m					
14		Providing wooden boxing with wooden structure , for the Air Ducting system of ductable split type Air-conditioner units [capacity 3 TR- 4 TR].	6	Set					

Sl. No.	Description of item	Qty.	Unit	Rate per unit, without GST [in ₹]	Amount, without GST [in ₹]	Applicable GST %		
						SGST	SGST	SGST

PART-B

15	Comprehensive Maintenance Contract (CMC) with full responsibility of carrying out repair and supply of required spare parts to keep the Air-conditioner units [6 nos. 16TR-17 TR ductable split type , 6 nos. 3 TR-4 TR ductable split type & 6 nos. 1.5 TR split type] in fully operational condition for a period of 5 years, after expiry of 12 months' Guarantee period .							
	a) 1st year CMC	1	LS					
	b) 2nd year CMC	1	LS					
	c) 3rd year CMC	1	LS					
	d) 4th year CMC	1	LS					
	e) 5th year CMC	1	LS					