

Owner

**M/s. TRIMBAKESHWAR DEVSTHAN TRUST ,
TRIMBAK ,NASHIK**

PROJECT

DARSHAN BARI

Tender- Technical Bid & Schedule of Quantities

**HVAC SYSTEM
Two Stage Air Washer (Ventilation) System**



PROJECT MANAGEMENT CONSULTANT

M/s. TARE AND ASSOCIATES

NASHIK. Mb. No. - 9823082027

Email - info.milindtare@gmail.com

SPECIAL TERMS AND CONDITIONS		
All below mentioned special terms and condition and subsequent minutes of meeting are Supersite to all condition if any controversy mentioning elsewhere in tender documents .		
HVAC SYSTEM – TWO STAGE AIR WASHER(VENTILATION) SYSTEM		
Sr. No.	Particular	Remark
1	Owner / Allottee	Trimbakeshwar devsthan trust , Trimbak , Nashik
2	Work type	HVAC SYSTEM Two Stage Air Washer (Ventilation) System
3	Location	East side of Trimbakeshwar temple
4	email ID for correspondence -	trimbakeshwartrust2015@gmail.com
5	Tender fees	No
6	Firm establishment	Minimum 3 years experienced firm is expected
7	Turn over	Average minimum turn over should be 5.00 Cr. For last three financial years . Turn over certificate from CA with UDIN number.
8	Similar type work experience - This type of system and not AC installation .	Similar type one Single work (Minimum one project) - 50.00 lakhs
TENDER AND CONTRCAT DETAILS		
9	Tender type	All work is item rate tender .
10	Work completion period including monsoon	One month including Monsoon (You have to work with coordination of other agencies)
11	Earnest Money deposit	INR 2.0 Lakh in favour of Trimbakeshwar Devsthan trust by Demand draft only. After finalisation of contract these EMD will be refunded to unsuccessful bidder and there is no interest on mentioned EMD . (please note that EMD mentioned is lumsun and not related to any estimated cost / tender amount)
12	Tender submission	Date -18/02/2022 At 11.30AM at Trust office , Trimbakeshwar

13	Tender opening - Technical bid	Date -20/02/2022 At 11.30AM at Trust office , Trimbakeshwar
14	Tender submission - Envelope -1 - Technical bid	Technical bid - First envelope - Should contain EMD Demand draft , all information asked in tender documents , All annexure with prescribed format information with supporting documents .
15	Tender submission - Envelope -2 - Price bid	Price bid with all information of contractor , sign , seal
16	Tender opening - Price bid of eligible contractor (if possible)	Will inform to you
17	Tender bid offer validity	180 days after submission .
18	Tender awarding	The Right to reject any or all tenders without assigning any reasons is reserved with Consultant & Owner / Allottee .
19	Minimum technical manpower require on site	Apart from contractor's regular setup of manpower , it is mandatory to contractor to appoint minimum technical staff on full time basis - 1 project manager ,
20	CAR Insurance	Insurance should cover all manpower appointed by contractor , all visiting consultant about 3 numbers , , Owner / Allottee's committee members about 15 members , floating visitors about 50 numbers. As well as, all executed & proposed work will be cover for insurance purpose up to handover date. - Has to be submit within mobilisation period
21	Electricity supply	Will be supply by owner at one point if unble to supply then contractor will do his own arrangement at his cost.
22	Water supply	Will be supply by owner at one point , if unble to supply then contractor will do his own arrangement at his cost.
23	Mobilisation advance	No mobilization advance . However Trust can think on request by contractor for 20 % advance against unconditional bank guarantee from nationalised bank.
24	labour camp on site	No labour camp allowed on site .
25	Contract value	Contract value should be inclusive of all types of taxes , Royalty , Charges, PF , ESIC and all other statutory charges as on date which are enforce etc . ONLY GST will paid Extra as applicable

26	Liquidity damages	After contract period (as mentioned in contract), contractor has to pay 5,000/- per day as a penalty up to 5 % of contract value. It will be paid by contractor to Owner / Allottee separately time to time or will be deducted from running bill payments or recover from retention amount, In that period, if satisfactory progress is not seen by contractor then contract will be terminated at any time after contract period and contractor's retention will be forfeited, after contract period contractor will be terminated without any notice and Owner / Allottee will appoint new agency to complete the work. PMC and owner / Allottee keeping the rights to terminate the contract without notice if work progress is not satisfactory / quality is not up to the mark / any other project suffering reason etc then at any moment of time in between contract period also.
27	Security Deposit (SD)	2 % of tender contract value (This EMD will be part of SD)
28	Deduction from running bill	3 % from every bill, all Statutory deduction will be done.
29	Retention amount Total 5 %	5 % (2 % SD + 3 % from deduction from every RA bill)
30	Release of retention amount	50 % on virtual completion certificate from PMC, Architect and hand over to Owner / Allottee and remaining 50 % after defect liability period i.e 1 year from handover date. For this contractor can submit unconditional nationalized bank guarantee.
31	Defect liability period	1 year from on handing over date
32	Co-ordination	You have to do healthy coordination with all other agencies, contractor, supplier and all parties related to this project.
33	Safety and accident responsibility	It is sole responsibility of contractor's only, if any accident happened on site due to any reason. Contractor will take all precaution while executing the project. All safety measure will be followed by the contractor. Contractor will do all precautionary name board related to safety, contractor will provide all safety wear like helmet, safety belt, safety goggles, shoes, gloves etc. to his team and to all visitors including PMC, architect etc. Contractor will also maintain Fire fighting equipment, first aid box etc on site.

34	Arbitration	In case of any dispute in between Contractor and Owner / Allottee or in between Consultant and Contractor then PMC or /and Architect will act as coordinator and will try to solve issue . In case, if it is not accepted to Owner / Allottee or to contractor then Owner / Allottee will appoint single bench Arbitrator who is retire court judge and all jurisdiction will be in Aurangabad only. Signing of this contract by contractor means contractor is given the permission for the same and it is accepted to him. Further agreed by contractor that all working related to arbitration will be in English language only.
MANDATORY SUBMISSION FROM CONTRACTOR		
35	Basic rates	No basic rates to any material
36	Infrastructure going to provide on this site	Contractor has to submit minimum technical manpower , machinery , Laboratory set up , Office for contractor and PMC , etc ,
37	Documents to be submit	GSTN certificate , last three year IT return audited copy with IT return acknowledgement , Last three years turnover certificate from CA , major work completion certificate from client. Along with Owner / Allottee's name , contact person , Contact number and email details .
38	Affidavit on 100 stamp paper / or as require stamp paper	Contractor is neither having any liability of any government statutory due and nor blacklisted any where . Also need to declare that , there are no court case , Arbitration cases happened previously and not going on also.
39	Affidavit format on 100/- stamp paper – Not blacklisted affidavit	<p>It should be address to Owner / Allottee .</p> <p>Should contain ,</p> <p>1. Full details of contractor with address .</p> <p>We hereby confirm and declare that we, M/s ----- -----, is not blacklisted/ De-registered/ debarred by any Government department/ Public Sector Undertaking/ Private Sector/ or any other agency for which we have Executed/ Undertaken the works.</p> <p>We also declare that , as on date , we are not having any liability to pay to Government department/ Semi government / Local authority / Public Sector Undertaking/</p> <p>we are neither having any liability of any government / Semi Government statutory due and nor blacklisted any where.</p>

		<p>Also declare that, there are no court case, Arbitration case happened previously and not going on also.</p> <p>Name , Sign and seal</p>
Attention on following points while bidding – need to follow		
40	Site Visit	It is necessary to visit the site and get complete idea regarding location , situation, surrounding , present stage , material enquiry , availability of various sources etc with all respect which require to start the project .
41	Quality responsibility	All consultants , PMC etc are monitoring the project periodically and to help you , however , It is contractor's Sole legal and technical responsibility to deliver the quality as mentioned in various drawings by respective consultant , Quantity as per drawing , Specified material and deliverance . All quality should be as per latest IS code standard . in case of SS grade contractor will submit the test certificate lab as instructed by consultant / PWD labs /MERI .
42	Drawings discrepancy	The specifications of the normal items shall be as per the work specifications in these documents & drawings. (Any ambiguity should be immediately brought to the notice of the Consultant before submission of the filled up tender)If any discrepancy found in drawing then it should be inform on given email ID or to PMC . Do not assume anything at your end. Get it clear all doubt before bidding the tender .
43	Specification	All building work specification are as mentioned in drawing .All execution will be as per latest IS code only, see detail specification and brand along with this . All items is considered as final finish work it included in between all civil work. Wherever brand option are given , in that case first choice of brand will be given by respective consultant, and it has to be followed. If brand option is not mentioned then get it clear prior to bidding ,
44	Extra item calculation	As far as possible , apart from tender item , if extra items is to be execute then it will be paid as per current SSR rates. If that item is not in SSR thaan , that Extra items will be paid as per Material + labour +15 % over head and profit + GST tax only subject to prior approval of work confirmation and rate approval before execution of work in writing only. Any verbal approval at any level will not be accepted.
45	Material testing approved lab	All material test report is to be submit as per PWD routine practice.

46	sample mock-up	Contractor has to do sample mock-up , sample colour , sample design or sample execution for any part of proposed work as per requirement from Architect or respective consultant. No extra charges will be paid for that . Contractor also need to submit preparation of all shop fabrication drawings. . All these work will be part of contract and will not be paid anything separately for this . YOU HAVE TO CONSIDER YOUR WORK ONLY .
47	Approval prior to execution	All finishes and finishing items are to be approve by PMC /Architect / respective consultant by making the sample on site prior to execution .
48	Work checking	Apart from PMC, All consultant will check the work and if , work is not satisfactory or if it is not up to the mark then , you have to rectify or re-work as per instruction from respective consultant or PMC without any extra cost .
49	Record keeping	Contractor has to maintain all record for material, labour , progress report , daily report , etc as per instruction from PMC apart from statutory requirement of record keeping .
50	Execution of all work	Latest IS code is to be use for execution.
51	Conditional offer	Conditional offer will not be acceptable
52	Interim bill value	Minimum 20 % of contract value , and only completed items will be considered for billing . However this will be as recommended by PMC / Trust.
53	Security Guards on site	Contractor will appoint adequate security guards on site for 24 hours . Apart from this , it will be contractor whole responsibility for his material on site or his / other's material inside the premises .
54	Contract termination	In during work contract period at any point of time ,if it is noticed by owner / Allottee that contractor is violating the condition of contract or any other reason due to which project is suffering financially , reputation ,project duration or any other reason etc , then in such condition owner / Allottee is having the rights to terminate the contract at any moment without notice .
55	Mobilisation period	2 days from date of Letter of intend issued to contractor from owner / Allottee
56	Responsibility of contractor	participating in bidding procedure means Contractor is agreed and accepted that all quality work responsibility and its free of cost repair or re-do work (if any)as per instruction from PMC / consultant / owner / Allottee ,and all safety measures / accident responsibility will be contractor's whole responsibility

57	Brand to be use	All make / Brand are mentioned in tender , however it has to be use as per priority of selection as per consultant's choice .
58	Information in to be given in prescribed format	It is mandatory submit all annexure along with Technical bid with all supporting documents (like CA turn over certificate , work completion certificate from Architect , Client , Owner etc , all registration certificate)
59	Security	You have to take care of your material , store , installed fixture , executed work etc up to official hand over to owner in writing .

TENDER SPECIFICATIONS FOR HVAC SYSTEM
Two Stage Air Washer (Ventilation) System

1. CLIENT REQUIREMENTS:

The ventilation system is required to fulfil following objectives:

1. Maintain the premises dust free.
2. Reduce excessive temperature rise in the space to provide workable indoor environment for people and improved life for the machinery.

2. BASIS OF DESIGN:

Outdoor design conditions : 40.0 °C D.B. T. // 24.4 °C W.B. T. (Summer)

3. INDIRECT – DIRECT EVAPORATIVE COOLING UNIT:

The unit shall be a factory fabricated double skin cabinet.

Detailed specifications of components of the ECU shall be as follows:

Unit Chamber:

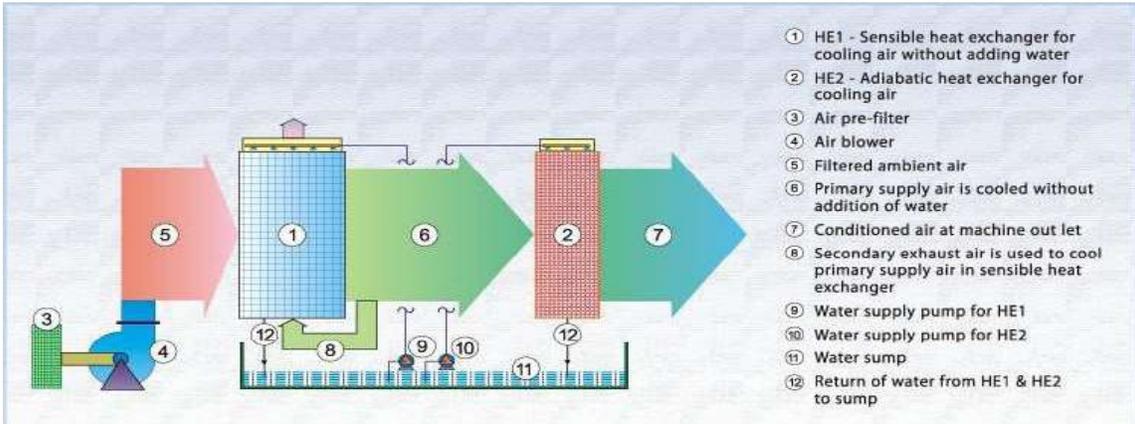
The Chamber for these units shall be built up at site on a platform having PCC floor provided by vendor, using aluminium extruded section framework, double skin sandwich panels made out of 0.6 mm thick galvanized sheet steel and 25 mm thick PUF having density of not less than 40 kg/m³, for walls and roof.

Air Intake Section: Air Intake Section shall be complete with louvers.

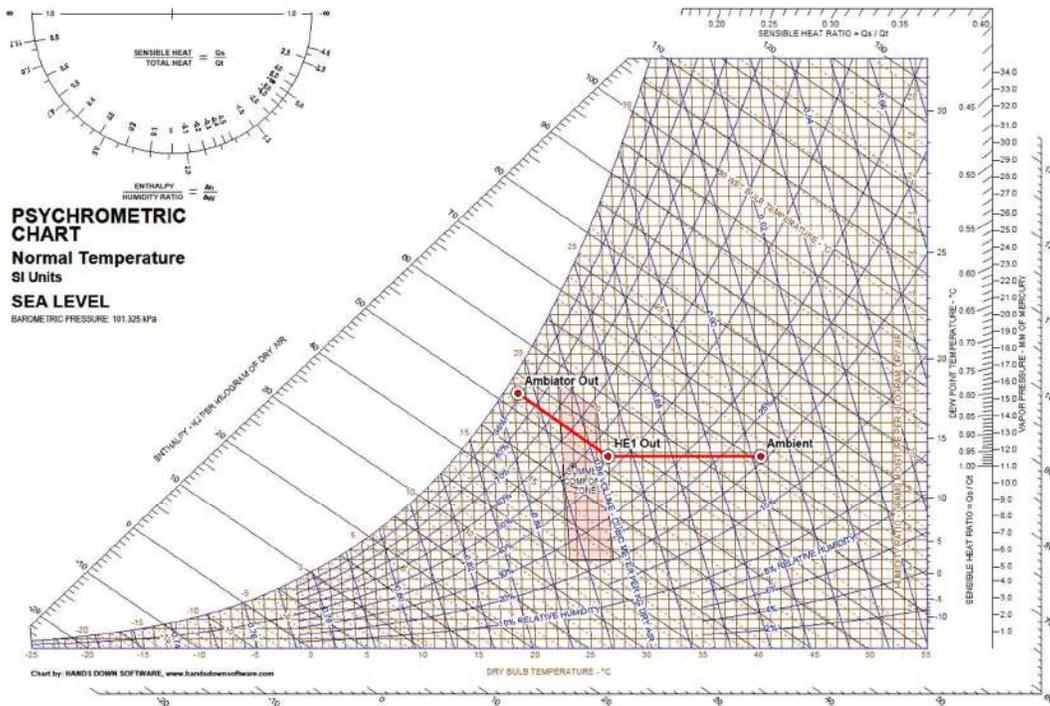
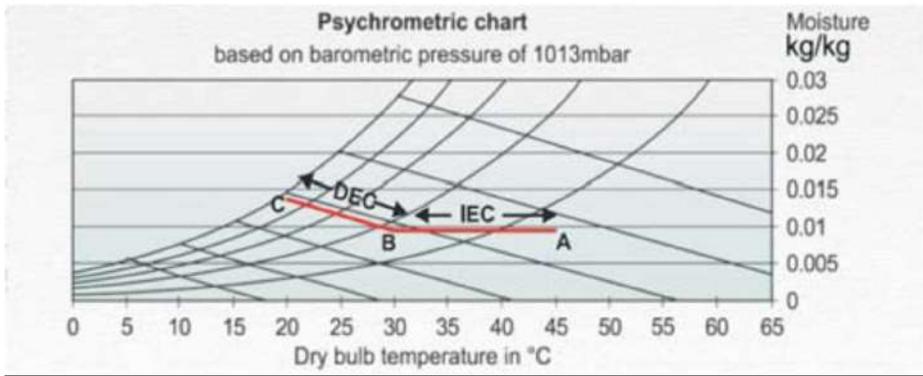
Pre-Filters (10 µ): Pre-Filters shall be panel type, made out of H.D.P.E. 3-ply filter media housed in a flanged galvanized sheet steel case. These filters shall have 90% efficiency down to 10 microns and shall conform to EU-4.

Sensible Heat Exchanger Section (Indirect Cooling):

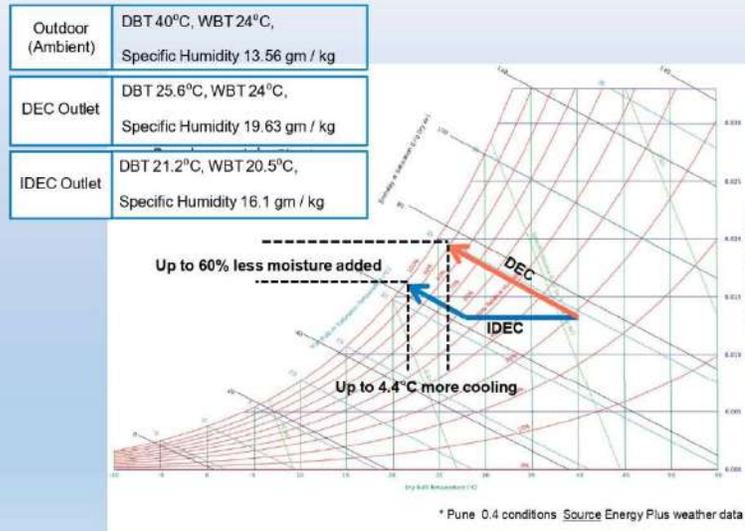
During the indirect cooling stage there is a drop in the dry bulb temperature without adding moisture to the primary air. Then the cooled primary air is passed through the adiabatic heat exchanger i.e. direct cooling stage, and thereby the cooled primary air has a further drop in temperature while picking some moisture / humidity in the process.



The above process is shown below in a psychrometric chart:



PSYCHROMETRIC REPRESENTATION OF IDEC



Evaporative Cooling Section (Direct Cooling): The media shall be of 200mm depth. The water tank shall be made up of stainless steel to house both sensible and adiabatic heat exchangers.

The water tank shall be designed as chassis to hold the heat exchangers support system. The water distribution system shall be designed properly. The piping shall be used of rigid PVC material. Piping connections should be made so as to ensure uniform distribution of water.

The sump shall be fitted with float valve.

Fan: Fan shall be NICTORA / KRUGER / ELTA / MAICO make "DIDW TYPE", statically and dynamically balanced directly mounted on motor shaft, complete with V-belt drive.

Fan Motor: Fan motor shall be T.E.F.C., IP55, and Squirrel Cage induction type suitable for AC 415 +/- 10%, 3 phase, and 50Hz power supply with 'F' class insulation and IE-2 efficiency class. Motor shall be compatible to connect with variable frequency drive with necessary chokes/filters & other accessories.

1. SHEET METAL DUCT WORK

1.1 Material Specifications:

Ducts shall be of TDF-type, made out of galvanized steel sheets of ducting quality. The galvanized sheet shall have thickness as specified below and zinc coating of minimum 120 GSM.

Rectangular ducts shall be suspended using threaded rod-type suspension as per the attached drawing. Fabricated brackets for suspending ducts shall be bolted to steel columns.

Rubber gasket of uniform thickness and width shall be used as gasket between flange joints. The gasket will be fixed with a suitable adhesive to the flange.

Galvanized hexagonal full threaded nut-bolts of minimum 6mm dia. shall be used for fastening the flanges. Spacing between two nut-bolts shall not exceed 125mm.

1.2 Dampers:

Dampers shall be opposed blade louver type. Louvers shall be aerofoil type. The louvers and frame shall be made out of Galvanized steel and complete with suitable locking device having identified for open and close position.

Dampers shall be provided with suitable links, levers and quadrants as required for their proper operation, control or setting in any desired position. Dampers and their operating devices shall be robust, easily operable and accessible through suitable access doors. Every damper shall have indication device clearly showing the damper position, and a locking device to lock the damper in any position.

1.3 Grilles / Diffusers / Jet Nozzles:

All Grilles / Diffusers / Jet Nozzles shall be constructed out of extruded aluminum sections. They shall be in extruded aluminum adjustable vane type with double deflection construction duly powder coated. All grilles / diffusers shall be provided with volume control damper.

1.4 Inspection & Balancing:

After completion of work all joints shall be visually inspected for proper gasketing & nut-bolt tightness.

The entire air distribution system shall be balanced to supply the air quantities as required in various zones and rooms to maintain the specified room conditions. The final balancing of air quantity through each grille or diffuser shall be recorded and submitted to the Client for approval.

2. INSULATION WORK

2.1 Thermal Insulation of Ducting (Open to Atmosphere)

Material Specifications

- Insulation Material : 2 inch (50 mm) thick, thermocol layer finished with 26 gauge aluminium cladding.
- Adhesive : As recommended by manufacturer.

2.2 Application Procedure:

Clean the surface of the duct to be insulated free from dust, grease and other matter.

Prepare the pieces of sheet as per the dimensions of the duct and apply the adhesive on the duct surface, the sheet surface as well as the edges of the sheets & leave it for 2-3 minutes for drying.

Once the adhesive is half dry and tacky, bring both the ends of insulation where the adhesive is applied in contact and stick them well. Ensure that both the surfaces are matched properly.

Apply self-adhesive black cotton tape on all the joints. Before fixing the tapes it must be ensured that all the joints are sealed properly.

WATER QUALITY REQUIREMENT:

Quality of water to be used:

- 1) pH = 6.5 ~ 8.3
- 2) Hardness as CaCo3 = 30 ~ 750 ppm
- 3) Alkalinity as CaCo3 = 500 ppm (maximum)
- 4) Total dissolved solids = 1500 ppm (maximum)
- 5) Conductivity = 2400 micro Ohms
- 6) Chlorides = 250 ppm (maximum as Cl) / 410 ppm (maximum as NaCl)
- 7) Sulphates = 250 ppm (maximum)
- 8) Silica = 150 ppm (maximum)
- 9) Ozone concentration = not to exceed 0.5 ppm

IMAGES (FOR REFERENCE ONLY):

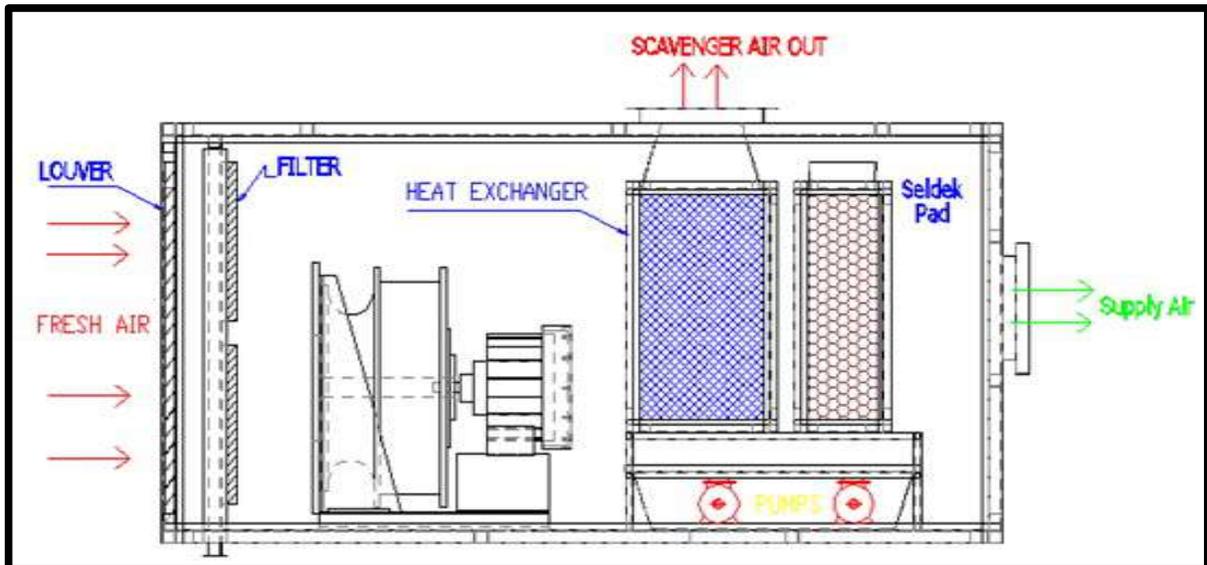


Fig.: Two Stage Air Washer Unit (Working Principle)



Fig.: Single/Two Stage Air Washer Unit (Exterior View – Typical)

Indirect Direct Evaporative Cooling (IDEC)

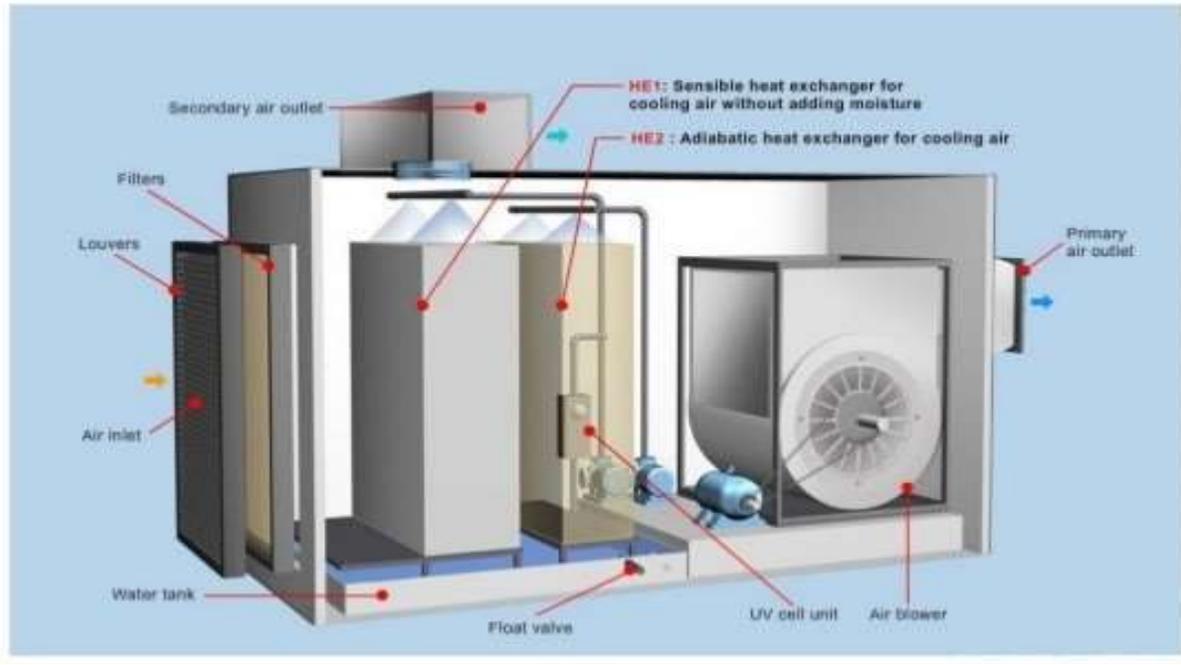


Fig.: Two Stage Air Washer Unit – Draw-through Type (Trans – section View)

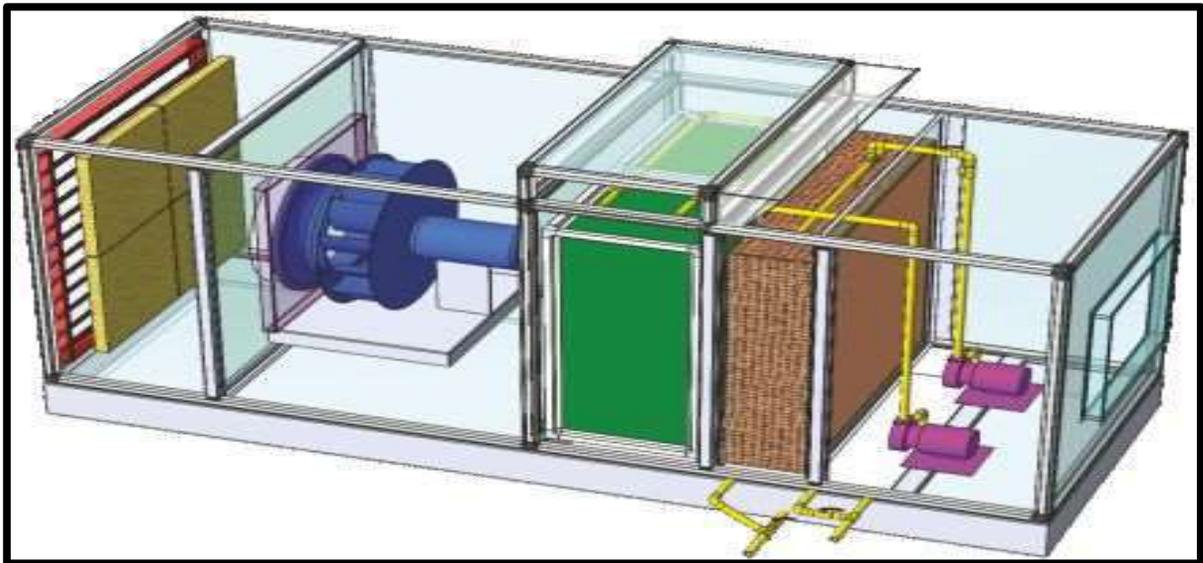


Fig.: Two Stage Air Washer Unit – Blow-through Type (Trans – section View)



Fig.: Jet Nozzles

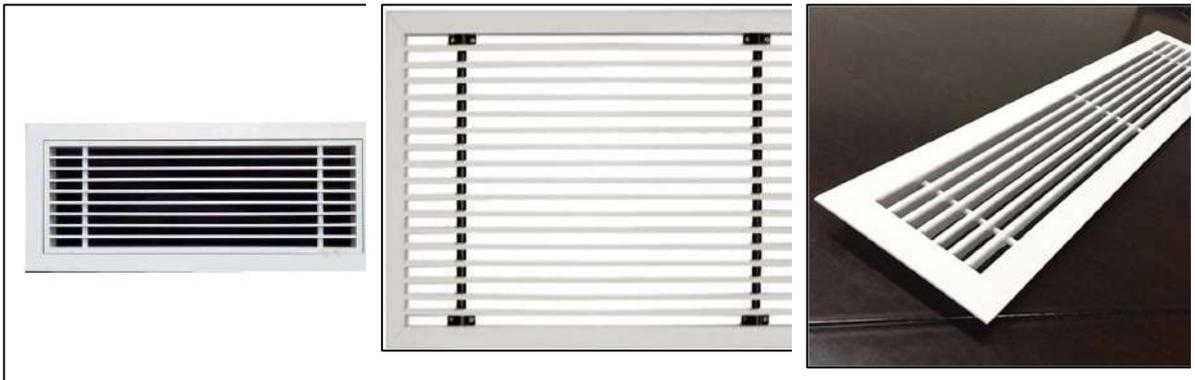


Fig.: Grilles

TECHNICAL DATASHEET

(TO BE FILLED & SUBMITTED BY VENDORS, INDICATING COMPLIANCE TO SPECIFICATIONS)

CLIENT: TRIMBAKESHWAR TRUST, NASHIK.			CONFIDENTIAL
PROJECT: EVAPORATIVE COOLING / AIR WASHER VENTILATION.			
Sl. No.	DETAILS	SPECIFICATIONS	VENDOR REPLY
	<u>AIR WASHERS</u>		
A	General		
1	Make	To be Specified	
2	Type	TWO-STAGE AIR WASHER (IDEC) SYSTEM	
3	Quantity	2 Nos.	
4	Material of casing, inner / outer	Inner skin - 0.6mm / Outer skin - 0.6mm	
5	Inner / Outer skin	Inner skin - plain GI / Outer skin - pre-coated GI	
6	Profile	Extruded Aluminium	
7	Insulation material and density, Kg/m ³	PUF 40 kg/m ³	
8	Panel thickness, mm	25 ± 2 mm	
9	Marine light	Included	
10	Doors limit switches	Included	
11	Viewing windows	Included	
12	Damper	Included	
13	Base	100mm GI channel	
14	Fan type	Centrifugal DIDW Fans	
15	Filters	EU-4 Pre-filter	
16	Motor type	IE-2 Efficiency Class	
17	Motor make	BHARAT BIJLEE / ABB / CG / HINDUSTAN / MARATHON	
20	No. of Stages	We have considered 2-Stage Air Washer Units for subject application. 2-Stage Air Washer Units shall be with 1st stage - Heat Exchanger (for Sensible cooling) and 2nd stage - Cellulose Pad (for Adiabatic cooling).	
21	Saturation Efficiency of rigid media	90%	
22	Air side pressure drop	External pressure drop 2-Stage Air Washer = 30 mmWC	
24	Miscellaneous	Complete inner section shall be 0.6mm thick plain GI sheet. However, water sump-tank shall be of 1.2mm thick plain SS 304 sheet.	
B	Technical parameters		
I	Tag No.	AWU-01	
1	Air flow rate, CFM	40000 CFM	
2	External static pressure, mmWC	70-75 mmWC	
3	Internal static pressure, mmWC	70-75mmWC	
4	Motor rating, kW	As per design and selection	
II	Tag No.	AWU-02	
1	Air flow rate, CFM	40000 CFM	
2	External static pressure, mmWC	70-75 mmWC	
3	Internal static pressure, mmWC	70-75 mmWC	
4	Motor rating, kW	As per design and selection	

IMPORTANT NOTES:

A - FOR LOT ITEMS, VENDOR TO SPECIFY EXACT QUANTITY AND UNIT OF MEASUREMENT

B- Please refer given drawings of Darshanbari shed , trusses etc. Visit the site to get idea of shed , other peripheral structure , other peripheral open space , to get an idea for installation of unit location etc , water supply connection , and other idea to install this system . On site work is in progress and all trusses are already erected on site and sheet fixing will be start shortly . Height of false ceiling from finished floor is about 3.0 mtr . Check truss bottom on site .

1. To & fro travel, local conveyance, lodging, boarding of man-power etc. during erection and commissioning shall be in Vendor scope.
2. Client (Trimbakeshwar Trust, Nashik) shall provide single point of power and water at Site. Further distribution of power and water shall be arranged by Vendor.
3. All tools and tackles, special tools and manpower required by OEM pertaining to HVAC work, as well as for execution of job shall be in Vendor scope.
4. Connection from the Air Washer Units to the make-up water line shall be in Vendor scope.
5. All local Govt. and Central Govt. rules & regulation and required insurance related to labour welfare and safety shall be adhered by Vendor at their own risk, cost and responsibility.
- 6. Details of calculation, measurement and other technical details are to be submitted by Vendor.**
7. Execution Team (Vendor) must take care to prevent entry of insects, rodents, water etc. to any of the HVAC installations at Site.
8. All civil works such as making – breaking of openings/cut-outs for ducting/piping/cabbling, zari work, core-cutting, civil foundations/pedestal blocks, **Platform for machine/ unit** etc. shall be in Vendor scope.
- 9. Supply of 5000 lit 2 water tank of Sintex / or equivalent brand shall be in Vendor scope. Which will be installed above unit with require accessories / supporting structure .**
10. All PEB Sheet cutting, fixing and finishing works, if any, shall be in Vendor scope.
11. All tools tackles, Scaffolding and arrangement for erection shall be in Vendor scope.
12. Vendor has to consider all ancillary items to complete the job with all respect , owner will not give any other agency like civil , carpentry etc . Vendor has to consider all these work while quoting the rates.

TRIMBAKESHWAR DEVSTHAN TRUST					
BILL OF QUANTITIES					
Sr. No.	Description	Unit	Qty.	Rate	Amount
1	TWO-STAGE AIR WASHER SYSTEM				
	Supply, Installation, Testing and commissioning of factory fabricated and site assembled Two Stage Evaporative Cooling units with double-skin air washer construction suitable for outdoor location. The unit shall have Centrifugal DIDW Fan section with IE-2 motor, IP55 protection, indirect evaporative section, Direct Evaporative Section, 2 Nos. of pump assembly to provide recalculated tank water and pressurized flow via a piping system for proper pad and media water distribution. Unit housing shall be constructed of 0.6mm thick galvanized pre-coated sheet on outside and 0.6mm thick plain GI sheet inside. The panels shall be insulated with a 25 mm thick non-combustible foam insulation (PUF) insulation having a density 40 kg/m ³ . The tank shall be of 18SWG (1.2mm) thick SS 304 plain sheet with a float valve arrangement. Unit shall have 10-micron (90% efficiency) filters for pre-filtration. Unit should have Marine light inside for use at the time of maintenance.				
a)	40,000 CFM @ 70-75 MMWC	Nos	2		
2	Electrical Starter Panel for Air Washer Units				
a)	2 x 40,000 CFM	Set	1		
	Supply, Installation & Testing of Ducting :				
3	GI Ducting Rectangular (Open to the atmosphere)				
	Supply, delivery, Installation, testing & commissioning of Galvanised sheet (GI) Ducting class RTV sealant & Rubber gasket strips, GI nut-bolts etc. as per the following quantities.				
	(The ducting shall include support, bends, tees, elbows, Y piece, taper				

	pieces, turning vanes, reducer, expander, blind flanges etc.)				
a)	0.60 mm (24 gauge)	Lot	1		
b)	0.80 mm (22 gauge)				
c)	1.00 mm (20 gauge)				
d)	1.20 mm (18 gauge)				
4	Flexible canvass connection	Lot	1		
5	DUCT THERMAL INSULATION (Open to the atmosphere)				
a)	Exposed Duct Insulation with 2 inch (50 mm) thick thermocol layer finished with 26 gauge aluminium cladding	Lot	1		
b)	Acoustic insulation	Lot	1		
c)	Thermal Insulation - 13 mm thick Nitrile rubber with aluminium foil	Lot	1		
6	GRILLES				
a)	Extruded Aluminium powder coated rectangular Supply air grills with VCD	Lot	1		
b)	Extruded Aluminium powder coated rectangular Return air grills without VCD	Lot	1		
c)	Supply, installation, testing and balancing of Epoxy polyester powder coated extruded Aluminium Exhaust Louvers (Gravity) along with housing for duct connection.	Lot	1		
7	VOLUME CONTROL DAMPER				
a)	Supply, Installation of Extruded Volume Controlled Damper, low leakage damper	Lot	1		
b)	Supply, Installation of Backdraft damper	Lot	1		
c)	Supply, Installation of Fire damper with Fusible link	Lot	1		
8	JET NOZZLE				
a)	Epoxy Polyester powder coated Aluminum Supply air Jet Nozzle with adjustable vanes	Lot	1		
9	Supply & Installation of Structural steel platform/ support for Air Washer Unit and Electric cable tray	Lot	1		
10	Cabling from Electrical panel to the motors / pumps of the Air Washer Units as per specifications.	Lot	1		
11	Cable Trays	Lot	1		
12	Anti-vibration Rubber Pads	Lot	1		
13	Loading, Unloading, Lifting & shifting of All HVAC system	Lot	1		

14	Designing, Testing & Commissioning, Air Balancing of total HVAC system	Lot	1		
				Total	
				GST	
				Grand Total	

Sign –

Name –

Company Name –

Seal –

*** * * * ***