

#### WORK ORDER

AU MANESAR/PO/2021-22/00721 PO Number:

PO Date:

19-07-2021

Status: Approved

CARRIER AIRCONDITIONING & REFRIGERATION LTD Vendor Address IFFCO TOWER, 7TH FLOOR, PLOT NO 3

Site Address AMITY UNIVERSITY MANESAR AMITY EDUCATION VALLEY GURGAON (MANESAR)

Gurugram - 122413, HARYANA, INDIA

SECTOR 32 GURGAON

Gurugram - 122001, Haryana, India Email io Mr. Praveen Kr.

Contact Name **Contact Email** 

**GSTIN** 

: 06AAATR7314Q1Z2

Contact Person Contact VAT No.

9891960902

06AAACC8414B1Z8

Contact No **Cost Center** 

Billing Address

: AMITY UNIVERSITY MANESAR

AMITY EDUCATION VALLEY GURGAON (MANESAR),122413

Administration

PAN No.

Sr No.	Service Description	Service Date	Service End Date	Specification	Service Qty	Service Amount	Tax	Charge	Discount	Service Cos
1	SER005388-Annual Maintenance Contract for Carrier Make Screw Model No. 19XR55574U6LGH52 (SI No XR4P1562)	01-04-2020	31-08-2020	Charges for 5 month	1.00	69,624.00	12,532.32	0.00	0.00	82,156.32
	SER001794-Annual Maintenance Contract of Chiller Machine Model 19XR5051436LDH52, Sr. No 1310019697	01-04-2020	31-08-2020	Charges for 5 month	1.00	69,624.00	12,532.32	0.00	0.00	82,156.32
							Discounts			0.00
							Charges			0.00

Discounts	0.00
Charges	0.00
Taxes	0.00

Tax De	tails
IGST-Recoverable 18 %	25064.64

**Grand Total:** 

One Lakh Sixty Four Thousand Three Hundred Twelve Rupee And Sixty Four Paise Only

164,312.64

#### **Purchase Clauses**

- Please attached order copy with all invoices and submit to the user department
- Attached duly signed delievery / installation report alonwith invoice for payment processing 2.
- Purchase order number and date must appear on all related correspondence, shipping papers and invoices
- Confirmation and supply of material under this purchase order shall be deemed to be acceptance of the terms and conditions specified under this purchase order
- Packing should be strong enough to avoid and damage / pilferage during transit. Enough precautions to be taken during packing.
- Proper labelling to be done 6.
- All taxes applicable to respective state of delievery E.g Entry tax, octroi etc to be paid by you
- Upon Duly and satisfactorily Deliver ,Tested and installed in working conditions of Ordered items, It is mandatory for you to immediately inform through mail to us with a copy by default to mmudgal(at)amity.edu , failing to Duly and satisfactorily Deliver ,Tested and installed in working conditions on time mail information, penalty of 0.5% per week or a maximum of 2% of total PO value, will be imposed.
- Upon Delivery of Ordered items, It is mandatory for you to immediately inform us through mail, with a copy by default to Purchase dept. Late delivery will attract penalty of 0.5% per week or part thereof on the basic value, up to a maximum of 2% of total Basic value

#### Additional Information

Email ID

Contact Number 2.

9910344977

3. Recipent Sqn Ldr SK Singh

Approved By

C4 226

PR NO 5. CIF\_CIP\_FOB

PR DATE

6.

2021-07-19 00:00:00

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Printed On: 19-07-2021 17:21:19



PO Number: AU MANESAR/PO/2021-22/00721

Vendor: CARRIER AIRCONDITIONING &

Comments

: GST Included@18%

Payment Term Half Yearly Advance, balance after submission of invoice.

Details as per Contract.

Created By

Sumit Naithani

Acknowledged By

J. Kaushik

Authorised Signature and Date

J. Kaushik



#### **WORK ORDER**

PO Number: AU MANESAR/PO/2021-22/00745 PO Date: 20-07-2021 Status: Approved

Vendor Address : Trane Technologies India Pvt Ltd (Formerly known as Ingersoll 11th Floor Tower A , Building 5, DLF Cyber city Phase 3

Site Address AMITY UNIVERSITY MANESAR AMITY EDUCATION VALLEY GURGAON (MANESAR)

Administration

Gurugram - 122413, HARYANA, INDIA

Gurugram - 122001

VAT No.

Haryana , India Email id Contact Person Contact

8971843092

: 06AACCS9663E1Z7

Contact Name

Contact Email

Contact No. Cost Center GSTIN PAN No. 06AAATR7314Q1Z2

AMITY UNIVERSITY MANESAR Billing Address

AMITY EDUCATION VALLEY GURGAON (MANESAR),122413

Sr No.	Service Description	Service Date	Service End Date	Specification	Service Qty	Service Amount	Tax	Charge	Discount	Service Cost
1	SER004514-AMC of Water cooled centrifugal chiller, G13C00823	01-04-2021	31-03-2022		1.00	204,026.68	36,724.80	0.00	0.00	240,751.48
2	SER004515-AMC of Water cooled centrifugal chiller, G12F01486	01-04-2021	31-03-2022		1.00	204,026.68	36,724.80	0.00	0.00	240,751.48

Discounts Charges 0.00 0.00 Taxes

Tax De	tails
IGST-Recoverable 18 %	73449.60

Grand Total:

Four Lakh Eighty One Thousand Five Hundred Two Rupee And Ninety Six Paise Only

481,502.96

### Purchase Clauses

- Please find attached order copy with all invoices and submit one original set of invoice to the purchase department and another to the user department
- Attached duly signed delievery / installation report alonwith invoice for payment processing 2.
- 3. Purchase order number and date must appear on all related correspondence , shipping papers and invoices
- Confirmation and supply of material under this purchase order shall be deemed to be acceptance of the terms and conditions specified under this purchase order
- Packing should be strong enough to avoid and damage / pilferage during transit. Enough precautions to be taken during packing 5.
- Proper labelling to be done
- All taxes applicable to respective state of delievery E.g Entry tax, octroi etc to be paid by you
- Upon Duly and satisfactorily Deliver ,Tested and installed in working conditions of Ordered items, It is mandatory for you to immediately inform through mail to us with a copy by default to mmudgal(at)amity.edu , failing to Duly and satisfactorily Deliver ,Tested and installed in working conditions on time mail information, penalty of 0.5% per week or a maximum of 2% of total PO value, will be imposed.
- Upon Delivery of Ordered items, It is mandatory for you to immediately inform us through mail, with a copy by default to Purchase dept. Late delivery will attract penalty of 0.5% per week or part thereof on the basic value, up to a maximum of 2% of total Basic value

### **Additional Information**

- Email ID 1.
- 2 Contact Number

9910344977

Recipent

Sqd Ldr SK Singh

Approved By

C4 226

PR NO 5.

CIF\_CIP\_FOB PR DATE

2021-07-19 00:00:00

Comments

: GST Included@18%

Payment Term Half Yearly advance against invoice submission. Remaining 50% after 6 months on submission of 2nd Half Yearly invoice

Details as per Contract

Page 1 of 3

Printed On: 20-07-2021 11:11:00



PO Number : AU MANESAR/PO/2021-22/00745

Created By
Sumit Naithani

J. Kaushik

Vendor : Trane/Technologies India Pvt L

Acknowledged By
Authorised Signature and Date

J. Kaushik

J. Kaushik

Visit <a href="https://www.tcsion.com/vendorportal/">https://www.tcsion.com/vendorportal/</a> to view online the Purchase Order details of all iON Customers serviced by you.

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Printed On: 20-07-2021 11:11:00

# AMITY UNIVERSITY GURGAON

MANESAR -

Established vide Government of Haryana Act No 10 of 2010

#### Purchase Order

PO. No: AUG/Manesar/PO/2020-21/27/182
Date: - 14.01.2021
Indent: - Approval of C-VI Sir.
Approval No: - 371511766
Dated: - 17.07.2020

Billing Address: Amity University Gurugram Manesar-122413
Contact: 1242337015
GSTIN:-06AAATR7314Q1Z2

Sub: - Our Order for Electrical Items

### Kind Attn: Mr. Nilesh.

Dear Sir,

Reference to above subject & your quotation dated 04.03.2020, we are placing this order with brief description of items and other terms and conditions as mentioned below.

SI No	Items	Brand/Make	Qty	UOM	Unit Cost (Rs.)	Amount(Rs.)	
i	CHOKE ELECTRONICS 36 WATT	Philips/Osram	50	Nos	114.00	5700.00	
2	SCREW DRIVER SET	Taparia	01	Nos	192.00	192.00	
3	LED 18 WATT ROUND TYPE	Syska	02	Nos	539.00	1078.00	
4	LED 18 WATT 4 FIT	Syska	50	Nos	184.00	9200.00	
5	FLORESCENT TUBE 36 WATT 4 Ft.	Philips/Osram	480	Nos	36.80	17664.00	
	1	Total Amount				Rs. 33834.00	
	GST (18%) for sl no-1, 2 & 5						
	GST (12%) for sl no-3 & 4						
	Total Amount Inclusive of GST						

Upon Delivery of ordered items, it is mandatory for you to immediately inform through mail to us with a copy by default to sksingh5@amity.edu, failing to deliver on time & mail information, penalty of 0.5% per week or maximum of 2% of total PO value, will be imposed.

#### NOTE:

 Please attach the order copy with all invoices and submit original one set of invoice in Admin Dept. and another to the end user.

Price Basis	At AUG-Manesar Campus.
Taxes	Inclusive of Taxes.
Freight	Extra as per actual.
Payment	After 15 days of receipt of material at site.
Date of Delivery	Immediate
Billing & Delivery	To be billed & delivered to "Amity University Gurgaon, Manesar, Haryana"
Contact Person	Mr. AK Mittra/ Sqn Ldr S K Singh (mob No: 9953813807/9910344977).
Purpose	Above is for Campus use (2nd Quarter Requirement-2020)

Thanking you,

Terms & Conditions:-

For Amity University Haryana

Authorized Signatory Sqn Ldr S K Singh (Dir\Admin)

Chairman Purchase Committee

AKM



#### **WORK ORDER**

PO Number: AU MANESAR/PO/2020-21/01577 Vendor Address : NORTHWIND COOL BLOWER LIMITED B-2/46,S-18,ROHINI, DELHI-85

PO Date:

18-02-2021

Status: Approved

Site Address AMITY UNIVERSITY MANESAR AMITY EDUCATION VALLEY GURGAON (MANESAR)

Gurugram - 122413, HARYANA, INDIA

New Delhi - 110001

Delhi . India

Email id Contact Person Contact VAT No. :

Amit Kumar

: 09AAFCN4790E123

Contact Name Contact Email Contact No

**GSTIN** 

: 06AAATR7314Q1Z2

Billing Address : AMITY UNIVERSITY MANESAR

AMITY EDUCATION VALLEY GURGAON (MANESAR),122413

**Cost Center** 

: Administration

PAN No.

Sr No.	Service Description	Service Date	Service End Date	Specification	Service Qty	Service Amount	Tax	Charge	Discount	Service Cost
3.1	SER000865-Operations of AC Plants	01-03-2021	31-03-2022	CHARGES PER MONTH	1.00	266,549.58	47,978.92			
	SER000866-Maintenance of AC Plants	01-03-2021	31-03-2022	CHARGES PER MONTH	1.00	120,558.00	21,700.44	0.00	0.00	142,258.44
							Discounts			0.00
							Charges			0.00
		- 4					Taxes			0.0

	Tax De	tails
IGST-Rec	overable 18 %	69679.36
Grand Total :	Four Lakh Fifty S	x Thousand Seven Hundred Fighty Six

Four Lakh Fifty Six Thousand Seven Hundred Eighty Six Rupee And Ninety Four Paise Only

456,786.94

Purchase Clauses

- Upon Delivery of Ordered items, It is mandatory for you to immediately inform us through mail, with a copy by default to Purchase dept. Late delivery will attract penalty of 0.5% per week or part thereof on the basic value, up to a maximum of 2% of total Basic value
- Upon Duly and satisfactorily Deliver ,Tested and installed in working conditions of Ordered items, It is mandatory for you to immediately inform through mail to us with a copy by default to mmudgal(at)amity.edu , failing to Duly and satisfactorily Deliver ,Tested and installed in working conditions on time mail information, penalty of 0.5% per week or a maximum of 2% of total PO value, will be imposed.
- All taxes applicable to respective state of delievery E.g Entry tax , octroi etc to be paid by you
- Proper labelling to be done
- Packing should be strong enough to avoid and damage / pilferage during transit. Enough precautions to be taken during packing. 5.
- 6. Confirmation and supply of material under this purchase order shall be deemed to be acceptance of the terms and conditions specified under this purchase order
- 7. Purchase order number and date must appear on all related correspondence , shipping papers and invoices
- 8. Attached duly signed delievery / installation report alonwith invoice for payment processing
- 9. Please find attached order copy with all invoices and submit one original set of invoice to the purchase department and another to the user department

### **Additional Information**

Email ID

2. Contact Number 9910344977

3. Recipent Sqn Ldr SK Singh

4 Approved By C4 586

5 PR NO CIF\_CIP\_FOB 6

PR DATE 7.

2021-02-17 00:00:00

Comments

: GST Included@18%

Terms of Payment: The service charges shall be payable on monthly basis within one week of bill submission. The service charges are payable for twelve month in a year. In case air conditioning is required in any block beyond the specified timings service charge @ Rs 400.00 per hour shall be extra payable. Details as per Annexure 1

Page 1 of 3

Printed On: 18-02-2021 14:57:00



lumber: AU MANESAR/PO/2020-21/01577		Vendor: NORTHWIND COOL BLO
- Q		
Created By	Acknowledged By	Authorized Sim
Sumit Naithani		Authorised Signature and Date
		Dilip Singh

Visit <a href="https://www.tcsion.com/vendorportal/">https://www.tcsion.com/vendorportal/</a> to view online the Purchase Order details of all iON Customers serviced by you.

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Printed On: 18-02-2021 14:57:00

SUB: OPERATION & MAINTENANCE OF LOW SIDE OF CENTRAL AC PLANT AT AMITY UNIVERSITY, MANESAR

# 1. DETAILS OF EQUIPMENT COVERED:

j

The maintenance of Low side shall cover the following items:

ITEM PARTICULAR	INSTALLATION LOGICE	1
	INSTALLATION LOCATION	QTY
Chilled water pumps 75 HP for Block-1	Diame	
	Plant room	2
Condensor water pumps 100 HP for Block-2		
p unips 100 III 101 Block-2	Plant room	2
Chilled water numns mate 100 MP 2		
Chilled water pumps motor 100 HP for Block-3	Plant room	2
0.1		
Condensor water pumps motor 75 HP for Block-1	Plant room	
	Trait 100III	2
Condensor water pumps motor 100 HP for Block-		
2	Plant room	
	1 failt room	1
Condensor water pumps motor 100 HP for Block-		
3	DI	
	Plant room	2
Cooling Towers for Block-1		
S = 0.015 for Diock-1	Block-1 Terrace	1
Cooling Toward C. Dl. 1. c		
Cooling Towers for Block -2	Block-1 Terrace	1
Cooling Towers for Block - 3	Near STP	
	real STF	1
Cooling Towers for Block - 4	27	
	Near STP	1
Ceiling suspended AHUs For Block 1		
Total Block I	Block-1	119
Cailing over 1 1 AVV		
Ceiling suspended AHUs For Block-2	Block-2	121
		121
Ceiling suspended AHUs For Block-3	Block-3	
	DIOCK-3	116
Ceiling suspended AHUs For Block-4	DI I :	
TO DION I	Block-4	156
an Coil Units		
	Hostel	436

Operation of central air conditioning plant shall include operation of central air conditioning plants , pumps and cooling towers with timings as under :

- Block -1 plant operation from 09.00 AM to 06.00 PM
- Block -2 plant operation from 09.00 AM to 06.00 PM
- Block -3 plant operation from 09.00 AM to 06.00 PM
- Block -4 plant operation from 09.00 AM to 06.00 PM
- Hostel plant operation from 06.30 PM to 08.30 AM

To meet the above operation schedule ,man power shift requirement / deployment shall be such that the operation is trouble free . Total no of persons deployed shall be six during day shift .In case of absence of person, we shall provide reliever for the same to ensure trouble free operation. The man power in the Blocks shall be provided during working days only . On Sundays and holidays only Hostel Block shall be in operation and required man power deployment for this operation shall be included in scope . Weekly off and university declared festival holidays shall be available to operating team . During plant shut down in off season only day general shift shall be applicable .Operation covers operation of chillers , pumps and cooling towers . Operation of air handling units shall be done by user as per their requirement.

Descaling of water cooled condensers shall be co ordinated with chiller manufacturer by operation team as and when required / demanded by system . The de scaling work shall be carried out by chiller manufacturer.

To meet the above operation we shall provide shift requirement / deployment for the work to meet the defined operation timings as under during plant operation season :

SN	Location	
	20001011	Timings/ shift
1	Plant for Block 1, 2, 3, 4	09.00 AM to 06.00 PM
2	Acadamic Block - 1	09.00 AM to 06.00 PM
3	Acadamic Block - 2	09.00 AM to 06.00 PM
4	Acadamic Block - 3	09.00 AM to 06.00 PM
5	Acadamic Block - 4	09.00 AM to 06.00 PM
6	Hostel	20.00
0	HOSTEI	06.30 PM to 08.30 AM



### **EXCLUSIONS:**

The following shall not be included in operation and maintenance contract

- The Chillers are under AMC with OEM . Maintenance / defect rectification of Trane / Carrier /York / Daikin chillers including control electrical panel & installed variable frequency drive .
- Main power supply panel installed in Basement/GF/ plant room for power supply to chillers/pumps/CT including supply of quality power as per equipment requirement
- Water softening plants operation and maintenance for water supply to cooling towers
- Modification in ducts / grills / diffusers etc in case of change in requirement of an area
- Replacement of worn water piping which is not repairable due to corrosion , rusting, wear and tear and consequential damage of water leakage
- Trapdoors repairing / replacement , false ceiling repairing / replacement
- Replacement of cooling coil in case worn out beyond repairing level
- Replacement of cooling tower fills damaged due to scale deposition , wear and tear , aging
- Replacement of any equipment as a whole which develops defects which are not possible to repair mainly due to wear and tear, ageing ,atmospheric water/ gas linked corrosion, system water linked corrosion.
- Painting of plant room , piping and fittings , equipment etc
- Required lighting and ventilation of plant room
- Replacement of worn out valves which do not function properly
- In case of water leakage in trench , all civil work involved like digging of trench to make the leakage point assessable and redoing the same as per requirement after leakage repair by us
- Opening of false ceiling for making pipe line / valves assessable for required repairs and re doing the same
- Make up water at all required places in chilled water and condenser water line
- Replacement of stolen part

# SCOPE OF PREVENTIVE AND BREAKDOWN MAINTENANCE

The following Equipment / items shall be covered under the maintenance contract along with briefly mentioned scope of work:

# Chilled water & Condensor water Pumps & Coupled Motors:

The maintenance of the pumps shall include the following:

- Rewinding of electrical motor in case of motor burning
- Replacement of motor terminals in case of heating/burning
- Replacement of cable thimbles
- Replace of cable glands
- Replacement of coupling tyres and flanges
- Replacement of motor bearings
- Replacement of pump bearings
- Replacement of pump seal
- Replacement of flexible below
- Greasing of bearings

### **Cooling Towers:**

The maintenance of cooling tower shall include the following :

- Replacement of worn/broken drive belts
- Replacement of broken nozzels
- Repair of leakage in FRP basin
- Repair of broken/ damaged distribution pipe and fittings
- Replacement of damaged eleminators
- Rewinding of cooling tower motor in case of motor burning
- Replacement of motor terminals in case of heating/burning
- Replacement of cable thimbles
- Replace of cable glands
- Removing and cleaning of fills during off season and refixing

### Air Handling Units:

The maintenance of Air Handling Unit shall include the following :

- Replacement of drive belts for belt driven AHUs
- Rewinding of drive motor in case of motor burning
- Replacement of motor terminals in case of heating/burning
- Replacement of cable thimbles
- Replacement of bearings for blower
- Replacement of bearing / bush for drive motor
- Replacement of broken/damaged fan blower
- Replacement of damaged fan housing
- Chemical for cleaning of cooling coil during off season
- Replacement of worn out filters
- Replacement of speed regulator switch
- Damaged Flexible canvas connection replacement
- Chemical cleaning of clogged drain

## Fan Coil Units in Hostel:

The maintenance of Fan Coil Unit shall include the following:

- Rewinding of drive motor in case of motor burning
- Replacement of bearing / bush for drive motor
- Replacement of broken/damaged fan blower
- Replacement of damaged fan housing
- Chemical for cleaning of cooling coil during off season
- Replacement of worn out filters
- Replacement of speed regulator switch
- Damaged Flexible canvas connection replacement
- Chemical cleaning of clogged drain

# Chilled water and condenser water lines:

The maintenance of chiller & condenser pipe line shall include the following :

- Repairing of leakage in pipe line
- Redo the insulation as applicable

# Valves and Strainers of water line :

The maintenance of valves and strainers shall include the following :

- Greasing of valves as applicable during off season
- Replacement of broken gear
- Replacement of worn out strainer installed at pump suction

## Tools and Tackles:

The following tools and Tackles are provided under the contract

- All ladders required for approaching the equipment
- Tools required for maintenance
- Tool bag for each team
- Pressure pumps for cleaning of coils
- Chemical spray gun
- Safety gears

### Uniform:

The operation and maintenance team members are provided with proper uniform

## Log Book:

Log book shall be provided for maintaining the main operating parameters of the system

# SCOPE OF OPERATION AND ROUTINE MAINTENANCE

Operation and Routine maintenance shall be broadly divided into two main categories:

- 01. Operation and Routine maintenance of plant room Equipment
- 02. Operation and Routine maintenance inside blocks and user area

The scope of work shall be as under:

# Operation and Routine maintenance of plant room Equipment

Operation and routine; maintenance of plant room equipment shall include the following :

### Operation:

- Operation of chiller system as per pre decided schedule for providing required cooling in the connected blocks and user area
- Always maintain proper sequence of operation of cooling towers, pumps and chillers
- Maintain log book of main operating parameters
- Keep check on water pressure for condenser and chiller line
- Keep check on main operating parameters of Chiller
- Keep a check on operating parameters for any deviation from SOP
- Monitor and water filling in cooling towers
- Monitor and water filling in chiller line
- Maintain designed level of chilled water in plant room to optimize power consumption
- Take instructions from Admin Department for plant operation beyond schedule
- Take instructions from APMD in case restriction is required for number of chiller unit operation
- Co ordinate with admin for fulfilment of water requirement
- Alignment of coupling for pumps
- Alignment of drive for cooling tower
- Flushing of cooling tower nozzels

## Co-ordination with Chiller OEM:

Co ordinate with Chiller OEM for de scaling work

Co ordinate with Chiller OEM for required maintenance under AMC

# Routine Maintenance of Plant room Equipments :

Routine and periodic maintenance of plant room equipments covers the following :

- Weekly maintenance of Cooling Towers as per standard maintenance sheet. Cooling towe routine maintenance also includes draining out water from cooiling tower in cyclic manner and cleaning of the cooling tower.
- Weekly maintenance of Pumps as per standard maintenance sheet
- Cleaning of water line strainers

# Operation and Routine maintenance of AHUs/ FCUs inside the blocks

Operation and routine maintenance of equipment in side blocks shall include the following:

### Operation:

- Operation of AHU / FCU shall be done by user in normal case.
- Attend user complaints and resolve the same.
- Co ordinate with electrical team in case of power supply related issue to specific AHU/FCU
- Monitor room temperature in cyclic manner and identify the case of less cooling

# Routine Maintenance of AHU / FCUs:

- Cleaning of filters for air handling unit / fan coil unit in cyclic manner. This is a very important routine maintenance function and this consumes major part of the teams time .
- Preventive maintenance of the AHU/FCU in cyclic manner as per standard schedule.
- Carry our required maintenance in ahu/ fcu identified with less cooling and resolve problem