

400TR Chillers GVI

Procurement/Purchase comparison sheet										
Prepared by:		Md. Anwar								
Date:		17-11-2023								
				Net rate after discount + GST						
				Blue Star Limited (Make: Blue Star)		Carrier Air-Conditioning & Refrigeration Limited (Make: Carrier)		Last purchased/GVDC/Blue Star Limited (Make: Blue Star)		
Sl. No.	SKU	Additional specs	Qty	Units	Rate	Amount	Rate	Amount	Rate	Amount
1	Air cooled screw Chiller	400TR	2	Nos	80,50,000	1,61,00,000	1,02,07,000	2,04,14,000	80,50,000	1,61,00,000
2										
3										
4										
5										
6										
7										
8										
9										
10	Total:					1,61,00,000		2,04,14,000		1,61,00,000
Notes:										
1	Material required for site:		GVI							
2	Details of requisition no., required by, etc.:									
3	Transport charges								PO No: 95666	
4	Delivery period				Included in the above price.		Included in the above price.		Included in the above price.	
5	Advance				9-12 weeks from the date of PO. 50% as Advance payment.		16-18 weeks from the date of PO. 50% as Advance payment.		4-8 weeks from the date of PO. 50% as Advance payment.	
6	Payment terms				50% as advance & 50% payment against PI before dispatch.		50% as advance & 50% payment against PI before dispatch.		50% as advance & 50% payment against material delivery prior to dispatch.	
7	Loading cost				Included in the above price.		Included in the above price.		Included in the above price.	
8	Unloading cost				Extra.		Extra.		Extra.	
9	Warranty				12 months from the date of commissioning.		12 months from the date of commissioning.		12 months from the date of commissioning.	
10	Testing charges				Included in the above price.		Included in the above price.		Included in the above price.	
11	Commissioning charges				Included in the above price.		Included in the above price.		Included in the above price.	
12	Other term 1				Included in the above price.		Included in the above price.		Included in the above price.	

APPROVED BY
18 NOV 2023
SOHAM KRODI
MAHARAJA DIRECTOR

place order
15th Nov 2023
50% - AFD
40% - 30 day order
10% - order

APPROVED BY
18 NOV 2023
SOHAM MOJID
MANAGING DIRECTOR

10% - 15%
40% - 30% day
50% - 15%
AFD

CPA
19/11

RE: Required a quotation for Semi-Hermetic type 400 TR chillers- 2 nos-GV1-Project

From: Mohammed Imran (imran@bluestarindia.com)

To: prabhakar@modiproperties.com

Cc: natiqahmad@bluestarindia.com; waseem@modiproperties.com; procurement@modiproperties.in;
nagabushann@bluestarindia.com; kmalagappan@bluestarindia.com

Date: Saturday, November 18, 2023 at 02:23 PM GMT+5:30

Dear Sir
Greetings for the day !

We confirm you the same price offered for previous GVDC, GVRC project for our same chiller model proposed for this project i.e Rs. 68,22,034/- per chiller.

As discussed over telecom, please acknowledge our best price support by releasing purchase order at the earliest.

Look forward for your confirmation of order via return mail.

Warm Regards,

Mohammed Imran

Assistant Manager- Commercial Air conditioning Division

Blue Star Limited

Ashoka Raghupati Chambers, No 1-10-60 to 64, 4th Floor,

S P Road, Begumpet, Hyderabad, Telangana 500 016

Tel: +91 40 4400 4038

Mob: +91 8143961610

www.bluestarindia.com



From: Mohammed Imran [mailto:imran@bluestarindia.com]

Sent: 06 November 2023 12:22

To: Prabhakar P <prabhakar@modiproperties.com>

Cc: Natiq Ahmad <natiqahmad@bluestarindia.com>; Waseem Akhtar Construction <waseem@modiproperties.com>; Procurement Group <procurement@modiproperties.in>; nagabushann@bluestarindia.com; K M Alagappan <kmalagappan@bluestarindia.com>

Subject: RE: Required a quotation for Semi-Hermetic type 400 TR chillers- 2 nos-GV1-Project

Dear Sir

Greetings from **Blue Star** !

With reference to our discussion, please find the enclosed Best proposal for 400 TR Air Cooled Screw Chiller for Crescentia Labs.

Attached Technical Data sheet of chiller for your kind perusal.

Warm Regards,

Mohammed Imran

Assistant Manager- Commercial Air conditioning Division

Blue Star Limited

Ashoka Raghupati Chambers, No 1-10-60 to 64, 4th Floor,
S P Road, Begumpet, Hyderabad, Telangana 500 016

Tel: +91 40 4400 4038

Mob: +91 8143961610

www.bluestarindia.com



From: Prabhakar P [<mailto:prabhakar@modiproperties.com>]

Sent: 06 November 2023 11:01

To: Mohammed Imran <imran@bluestarindia.com>

Cc: Natiq Ahmad <natiqahmad@bluestarindia.com>; Waseem Akhtar Construction
<waseem@modiproperties.com>; Procurement Group <procurement@modiproperties.in>

Subject: Required a quotation for Semi-Hermetic type 400 TR chillers- 2 nos-GV1-Project

CAUTION: ** This mail has been sent from outside Blue Star. Please open attachments/links after validating credentials.

Dear Mr. Imran,

We have a requirement for chillers requesting you kindly send us the quotation-tech data sheet for 400 TR chillers x 2 nos, Semi-Hermetic screw type for GV 1 project at Thurkapally.

The quote should be in the name of

Crescentia Labs Private Limited

Sy. No. 230 to 243

Thurkapally.

Regards,

P Prabhakar

Sr.Manager Purchase | +91 95022 77299 | prabhakar@modiproperties.com

Modi Properties Pvt. Ltd. | www.modiproperties.com

5-4-187/ 3 & 4, M G Road, Secunderabad – 03 | +91 40 66335551

- Don't just buy a flat or villa! Buy a great lifestyle!
We build affordable flats & villas in gated communities.

**Blue Star Limited**

Door No 1-10-60 To 62, 4th Floor,
Asoka Raghupathi Chambers,
Begumpet, Hyderabad - 50001.
Tel: +91 40 4400 4000.
Fax: +91 40 4400 400.
www.bluestarindia.com

Our Ref: BSL/CAD/Nov/23-24/ MI325

06th Nov 2023

To

Crescentia Labs Private Limited

Sy. No. 230 to 243

Thurkapally.

Dear Sir/Madam,

SUB: Our proposal for 400 TR AC Screw Chiller - Crescentia Labs

At the outset, we would like to thank you very much for inviting us to quote for the above subject job.

We hereby pleased to submit our offer for the supply of Blue Star make chiller.

Profile of Blue Star Limited:

- Blue Star is India's leading air conditioning and commercial refrigeration company, with an annual revenue of over ₹5400 crore
- Over 10,000 projects executed with a market share of over 30%
- Over 2.0 million TR of equipment under maintenance
- Network of 35 offices with over 2700 employees .
- Five modern world class manufacturing facilities

Complete Range of Air-conditioning solutions

- Centrifugal , Screw & Scroll and Oil free Chillers
- Packaged & Ducted Split Air-conditioners
~ Fixed Range & Inverter Range
- Variable Refrigerant Flow (VRF) Systems
~ IV Plus Range , IV (S) & IV (P) Range
- Wall Mounted , Cassettes & Verticool Range of Units

Registered Office : Kasturi Buildings, Mohan T Advani Chowk, Jamshedji Tata Road, Mumbai 400 020.

Core Competencies:

- Superior project management capabilities resulting in on time delivery, high project quality and seamless coordination at all levels
- Expertise of over six decades in system design, contracting, installation and maintenance
- Deliver expert turnkey cooling solutions to a variety of customers in the corporate, commercial and industrial sectors
- Comprehensive range of packaged air conditioning systems
- Preferred vendor status among consultants, corporate and commercial customers
- Market share of over 50% in high growth segments such as IT/ITES, malls, multiplexes and health care

Our offer is presented under the following heads :

Annexure I	Salient Features of Blue Star Chillers.
Annexure II	Price, Terms and conditions.
Annexure III	Excluded Works & scopes.

We trust our offer is inline with your requirement.

Please feel free to call the undersigned in case of any queries.

Thanking you and looking forward to hearing from you at the earliest.

Very truly yours

BLUE STAR LIMITED

Mohammed Imran

Assistant Manager- Commercial Air conditioning Division

Email: imran@bluestarindia.com ,

Mobile : 8143961610

Annexure I

Salient features of Blue Star Air Cooled Screw Chillers

ABOUT COMPRESSOR

Fully equipped

- Step-less Capacity control with unloaded start and hence low starting current
- Discharge shut-off valve
- Suction flange with brazing / welding bushing
- Check valve in discharge gas outlet
- Oil sight glass
- Insertion type oil heater with sleeve

Oil service valve

- Internal pressure relief valve
- Electronic motor protection device SE-E1
- Oil level switch
- Suction gas filter with large surface area and fine mesh

Double-walled, pressure-compensated rotor housing

- Extremely stable, therefore no expansion of the compressor housing even at high pressure levels
- Additional sound attenuation

Long-life bearings with pressure unloading

- Robust axial tandem bearing
- Bearing chamber pressure isolated from compression chamber by sealing element
- Pressure unloading of axial bearing

Motor

- Star-delta starting (for 160, 180, 210, 240 motors)
- Part wind starting (for 140 motor)
- Integrated PTC sensors in each winding coil

Economizer (ECO) with sliding suction position

- Improved sub-cooling by Economizer operation at part load conditions Highest cooling capacity and energy efficiency
- Pulsation muffler for ECO suction line to reduce noise and vibration

Additional Motor Cooling

Liquid injection with integral nozzle for operation at higher pressure ratio

Optimized Oil Management

Three-stage oil separator

Fine filter with 10 microns mesh size

Pressure relieved bearing chamber ensuring minimum refrigerant dilution in the oil and thus higher viscosity

- Liquid to liquid plate heat -exchanger to enhance the capacity & reduce the power consumption
- Liquid injection in the motor winding during the part-load conditions to enhance life of the compressor
- Electronic/thermostatic expansion valve for precise control of refrigerant flow through the cooler to meet the sensitive load variations.
- Imported Magnum controller with BMS compatibility. (only for R134a)



Annexure-II - Price Annexure

The prices for the supply of Blue Star make Air-Cooled Screw Chiller is as mentioned below:

SL No	Description	Air Cooled Screw Chiller Capacity : 400 TR
1	Design Capacity	400 TR
2	Model No	LCA2-400X59X59H
Rate in INR		₹72,65,466
Quantity		2
Amount in INR		₹1,45,30,932

Above price is basic only, GST @18% shall be extra

Notes:

- Lifting, shifting, unloading, loading not included in chiller price, Shall be in client scope.
- Testing and Commissioning charges per chiller included.
- Grooved coupling shall be factory fitted by default.
- Packing, Freight and transit insurance is included in the above price. FOR till site.
- Any change in existing taxes / duties or imposition of any new taxes / duties imposed by Central or State Government or Local Authorities on equipment, components, parts, raw materials, consumables, or installation, commissioning as a whole or part thereof from the date of Offer / Quotation and up to the time of billing shall be paid to BLUESTAR at actuals.
- This proposal is valid for a period of 30 days from date hereof and thereafter subject to our written confirmation.
- Chiller specification is as per OEM Standards unless specified. Kindly refer the enclosed performance rating chart

Exclusions:

- Unloading, Lifting & Shifting, Positioning & Installation not included in our scope
 - Rubber flexible bellow, Valve Packages, Civil & Electrical works are not included in our scope.
 - Junction Box and cabling from junction box to chiller.
 - Water Flow switches and any other accessories not mentioned in our scope of supply.
-
- **Warranty:** 12 months from the date of commissioning or 15 months from the date of dispatch whichever ends earlier
 - **Delivery:** 9-12 weeks ex-works from the date of order with subject to the Pandemic and Govt Guidelines

Order & Payment Terms :

For Machines
Blue Star Limited

Payment Terms:

50% advance along with PO and balance 50% against PI before dispatch

BLUE STAR LIMITED

Mohammed Imran

Assistant Manager- Commercial Air conditioning Division

Email: imran@bluestarindia.com ,

Mobile : 8143961610

Annexure-III

Excluded Works & Services

Unless otherwise specifically mentioned this proposal does not provide for following items:

1. Necessary incoming power supply for main AC / Starter panels.
2. All masonry and builder's work, such as provision of suitable plant room with adequate lighting and ventilation, foundations for various components of the system, breaking and making good of holes in structures for passages of pipes, ducts, etc. We will place and grout equipment on foundations and plaster finish all holes. However, re-water proofing, if any, and repainting to match, will be done by the customer,
3. Provision of adequate soft filtered water for initial charging. The necessary soft water at the inlet of our expansion tank for chilled water circulation.
4. 415 V, 3 Phase, 50 Hz power supply to be provided by you.
5. Valve packages for chiller.
6. Construction of trenches for underground piping (if required)
7. Adaptor box for connecting AI cables.

Conditions of Contract

This contract is subject to the following conditions. No variations / alterations / additions to these conditions will be binding on us, notwithstanding that such variations / alterations / additions are contained in your acceptance of this proposal, except when they are specifically accepted in writing by us.

- **Validity:** - This proposal is valid for a period of 30 days from date hereof and thereafter subject to our written confirmation.
- **Specifications:** - In line with our policy of continual improvement we reserve the right to modify the design and change the specifications of any material, if in our opinion such modification constitutes an improvement or is in accordance with revised standards or manufacturing methods. Therefore, specifications, illustrations, dimensions and weights given or agreed to by us in our proposal, catalogues, drawings, photographs etc. are not binding in detail.
- **Variation in Scope of Work** - If there are any additions or changes to the scope of work outlined in our proposal and its annexure, the value of the contract will be enhanced accordingly and payment will be made in accordance with the terms of payment outlined in this proposal. All the measurements will be carried out as per BIS regulations.
- **Insurance** : - All equipment and materials required for the execution of the contract will be covered against all risks during transit. In case the insurance cover is to be extended, the additional premium will be to customer's account. We will also assume liability for accident(s) to our and our subcontractor's workmen during the erection period. However we assume no third party liability whatsoever.
- **Storage, Safe Custody and Site Facilities** : - The customer will provide at his cost, adequate independent lockable storage facilities acceptable to us for equipment, materials, tools and tackles brought to site from time to time during the execution of the contract. We shall be responsible for the safe custody of materials, tools etc. only if such storage facilities are available. We will progressively bring to site necessary equipment and materials required for the execution of the contract. Necessary facilities including power required for erection, testing and commissioning will be provided by the customer in time, at his cost at points to be nominated by us.
- **Taxes & Duties** - It is a condition of this contract that any increase in taxes, duties, levies or rates imposed by any State or Central Government or local authority or any fresh levies imposed by such authorities on components, raw materials, or the installation as a whole after the date of quotation and upto the time of billing, for any reason whatsoever, will be paid by the customer. Our prices are quoted on the assumption that there is no excise liability on 'In-situ' fabrication and/or assembly. Excise liability, if any, arising out of such 'In-situ' fabrication and/or assembly shall be to the account of the customer. Our offer does not include Octroi. The same shall be payable extra by you, at actuals, if applicable

- **Works Contract:** - The contract in question is in the nature of indivisible works contract. Sales Tax liability as per the prevailing statute will be discharged by us. Any statutory variation on the Sales Tax applicability will be extra to your account.
- **Unit Rates** - The unit rates quoted in our offer are valid for a period of 3-4 months from the date of receipt of the order. Any work done after this period will be charged at the unit rate prevailing at that time. If quantities required exceed the limits mentioned in this offer for any reason whatsoever, the above unit rates will apply to such excess quantity upto a maximum of 10% over the stipulated quantity in this offer. Any extra quantity beyond 10% will be billed at the unit rates prevailing at the time work is carried out and the customer will pay for such extra work, on presentation of our bills.
- **Warranty** :- Subject to the terms of payment agreed upon being punctually complied with and the plant being operated properly, the machinery covered by this contract carries a warranty against defective materials or workmanship for a period of 12 months from the date of commissioning or for a period of 15 months from the date of delivery, whichever ends earlier. If any part of the plant is put to use earlier for any reason whatsoever the warranty period will commence from the date of such use. We agree to repair / replace such parts, which may prove defective and which do not fail from neglect or misuse or faulty operation. Our decision whether to repair or replace such parts shall be final.

This warranty :

- a) does not extend to consequential damages or loss
- b) is null and void if repairs and modifications are carried out without our approval in writing
- c) does not cover scaling or deterioration of the Condenser / Chiller / Cooling Coil water passages and connected piping system due to circulation of hard or contaminated water
- d) does not cover parts subject to normal wear and tear, such as V-belts, air filters etc.
- e) does not cover deterioration or failure of equipment, controls and piping due to corrosive atmosphere.
- f) does not cover supply of consumable items like refrigerant, oil etc.

- The price quoted is based on the present day cost to us of materials, bought out parts / components and labour. Any increase in their cost will be added to the agreed contract price and will be payable by the customer against presentation of our invoices. The price escalation formula is as under:

$$VI = V (0.15 \underset{AO}{+} 0.15 \underset{BO}{AI} + 0.25 \underset{CO}{BI} + 0.10 \underset{DO}{CI} + 0.15 \underset{LO}{DI} + 0.20 LI)$$

Where VI = Escalated value of work done

V = Original value of work done.

AI = Non Ferrous metals)Wholesale price Index
 BI = Iron and Steel)as per RBI Bulletin
 CI = Electrical machinery)applicable for the month
 DI = Non electrical machinery & parts)of delivery / work done
 LI = All India average consumer price) index for industrial workers)
 AO = Non Ferrous metals)Wholesale price Index
 BO = Iron and Steel)as per RBI Bulletin
 CO = Electrical machinery)applicable one month prior to
 DO = Non electrical machinery & parts)date of submission of this
 LO = All India average consumer price)Proposal.
 index for industrial workers.

- Property Rights & General Lien - Property in all materials/suppliers / equipment etc. brought on site in execution of the contract shall at all times lie with Blue Star Limited, notwithstanding the fact that the progress bills have been paid for. The ownership right in the job performed shall get transferred from Blue Star Limited only upon full payment of all the dues of Blue Star and upon formally being handed over to the customer. Blue Star Limited shall at all times be entitled to remove any of such goods, supplies, materials, equipments etc. whether in loose condition or in installed condition without any let or hindrance from the customer from the work site.
- Suspension / Cancellation of work - We shall be entitled to suspend / cancel the work on account of :
 - Customer's instructions/lack of instructions
 - Non payment of our bills

If we are required by the customer to delay bringing the equipment to site, or if, for any reason beyond our control we cannot bring the equipment to site, or commence or continue erection then we may at our option, divert our workmen or materials or equipment to other uses and customer shall in such cases bear the increase in cost of material or equipment as well as other expenses such as transportation, insurance etc. If the work or part of the work is cancelled after customer's acceptance, cancellation charges as levied by our suppliers/manufacturers shall be borne by the customer. In addition, the customer shall pay us compensation for cost, expenses and losses incurred by us up to the date of cancellation.

- **Limitation to Liability** :- In no event shall we be liable for any consequential loss or damage arising out of or connected with this order in any way whatsoever.
- **Force Majeure**: - No penalty / liability shall be attached to us for non-performance or delayed execution of this order as a result of force majeure.
- **Arbitration** :- In case of any dispute or difference arising out of this contract the same shall be referred to Arbitration by a panel of three Arbitrators, one each to be appointed by either party and the third by the two Arbitrators so appointed. The provisions of the Indian Arbitration and Conciliation Act, 1996 shall apply to such Arbitration. The Arbitration proceedings will be held in Chennai.
- **Jurisdiction**: - This agreement shall be subject to the exclusive jurisdiction of the Courts in the City of Hyderabad.

For,

BLUE STAR LIMITED

Mohammed Imran

Assistant Manager- Commercial Air conditioning Division

Email: imran@bluestarindia.com ,

Mobile : 8143961610

**2 COMPRESSOR MODULAR AIR COOLED FLOODED
CHILLER RATING****Project** Crescentia Labs

Date:

Customer**Location****Model Specifications**

Model No. LCA2-400X59X59H
 Actual Capacity 395.5 TR
 Total Input power 430.3 KW
 Refrigerant R134a
 Expansion Valve Electronic Type

Evaporator

Leaving Temperature 7.00 °C
 Entering Temperature 12.00 °C
 Delta T 5.00 °C
 Flow Rate 66.54 L/s
 Fouling Factor 0.0000180 M². K/W
 Max Operating Pressure 150 psig (Water Side)

Condenser

Ambient Temperature 35.0 °C Altitude From Sea Level : 0.000 mtr
 Total Heat Rejection 500.9 TR
 Fan Quantity 24
 Fan Motor Power (each) 2.500 KW
 Fan Motor Power (total) 60.00 KW
 Air Flow Rate 591252 CMH

Electrical Data

Volts/Phase/Hertz 415/3/50.0
 Full Load Current 705.28 A
 Starting Current 1,094.50 A
 Voltage Range 360-440 V

Physical Data

Operating Weight 14089 kg
 Length 14189 mm
 Width 2235 mm
 Height 2457 mm
 Compressor Type Semi Hermetic Screw
 Compressor Quantity 2
 Compressor Motor Speed 2950 rpm

**Part Load Data****"Rated in accordance with AHRI standard 550/590"**

% LOAD	AMBIENT (°C)	In Temp. (°C)	Out Temp. (°C)	Flow Rate (L/s)	Pr. Drop (kpa)	Capacity (TR)	Compr. (KW)	kW/tonR *	UNIT EER ** (Btu/Wh)
100.00	35.0	12.00	7.00	66.54	147	395.5	370.3	0.9400	11.03
90.00	31.7	11.50	7.00	66.54	147	356.0	289.2	0.8100	12.23
80.00	28.3	11.00	7.00	66.54	147	316.4	225.2	0.7100	13.32
75.00	26.7	10.75	7.00	66.54	147	296.7	194.0	0.6500	14.01
70.00	25.0	10.50	7.00	66.54	147	276.9	173.7	0.6300	14.22
60.00	21.7	10.00	7.00	66.54	147	237.3	135.5	0.5700	15.77
50.00	18.3	9.50	7.00	66.54	147	197.8	98.87	0.5000	18.41
40.00	15.0	9.00	7.00	66.54	147	158.2	71.47	0.4500	18.71
30.00	12.8	8.50	7.00	66.54	147	118.7	59.25	0.5000	19.18
25.00	12.8	8.25	7.00	66.54	147	98.88	45.55	0.4600	19.60
20.00	12.8	8.00	7.00	66.54	147	79.10	35.18	0.4400	20.12
15.00	12.8	7.75	7.00	66.54	147	59.33	23.70	0.4000	19.94

(* kW/tonR figures are only with compressor power without condenser fan power)

NPLV.IP : 16.63 Btu/Wh

** EER figures are with total power including condenser fan power

NPLV.IP : 4.87 W/W

Certified in accordance with the AHRI Air-Cooled Water-Chilling Packages Certification Program, which is based on AHRI Standard 550/590 (I-P) and AHRI Standard 551/591 (SI). Certified units may be found in the AHRI Directory at www.ahridirectory.org