



BLUE STAR



INVERTER
SCROLL
CHILLER

BIG ON ENERGY EFFICIENCY

FIRST-EVER SCROLL CHILLER EXCEEDING 3 STAR RATING



Inverter Scroll Chillers

With over seven decades of experience in the HVAC industry and the largest installation base of scroll chillers across the country, Blue Star is the market leader in scroll chiller systems in India.

Now, Blue Star introduces state-of-the-art Inverter Scroll Chillers packed with innovation and cutting-edge technology to strengthen that leadership position further.

Blue Star's Inverter Scroll Chiller is the first scroll chiller in India that exceeds the 3 Star efficiency norm of the Chiller Labelling Program. It offers phenomenal savings on power consumption and a very high return on investment.

Manufactured at Blue Star's world-class ISO 9001-certified factory, the new range of Inverter Scroll Chillers is available in a wide range of capacities from 10TR to 78TR. These machines can handle varying cooling requirements thanks to the combination of inverter and fixed speed compressor configurations. This makes these machines ideal for air conditioning spaces such as offices, hotels, hospitals, industries, etc., which see large fluctuations in load through the day and/or through different seasons.



Inverter Compressor Technology

The new range of Scroll Chillers has advanced inverter compressors which are equipped with Intermediate Discharge Valve (IDV) and a Variable Frequency Drive. These components exactly regulate the capacity of the system depending on load requirements. This capacity regulation helps in optimizing power consumption by 25% as compared to conventional scroll chillers.



Chiller Labelling Program's Efficiency Norms

Efficiencies of air-cooled chillers for Star Rating:

COOLING CAPACITY (TR)	COP	ISEER COP				
		1 Star	2 Star	3 Star	4 Star	5 Star
< 75	2.4	3.0	3.3	3.6	4.0	4.4
75 & Above	2.6	3.1	3.5	3.9	4.3	4.7

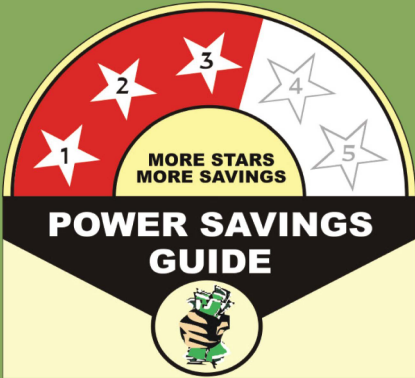
Efficiencies of water-cooled chillers for Star Rating:

COOLING CAPACITY (TR)	COP	ISEER COP				
		1 Star	2 Star	3 Star	4 Star	5 Star
< 75	4.2	4.8	5.2	5.6	6.1	6.6
75 – 149	4.7	5.0	5.6	6.2	6.8	7.4

Blue Star’s Inverter Scroll Chillers Exceed Norms For 3-star Efficiency

HIGHEST EFFICIENCY





Blue Star Inverter Scroll Chillers – An Innovative Design

The Blue Star Inverter Scroll Chiller is a hybrid system designed with a variable capacity inverter scroll compressor combined with multiple fixed speed scroll compressors. The advanced controllers use unique logic which optimizes the workings of the required number of fixed speed compressors and inverter compressor at various load conditions.

PRODUCT RANGE:



AIR-COOLED



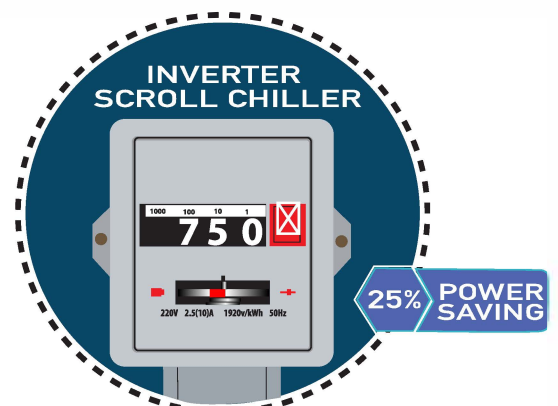
WATER-COOLED



Key Features:

The following components have been carefully designed and selected to deliver optimum cooling, maximum efficiency and high system reliability:

- Inverter & Fixed speed scroll compressors
- Inverter drives
- Intelligent controller
- High efficiency heat exchangers

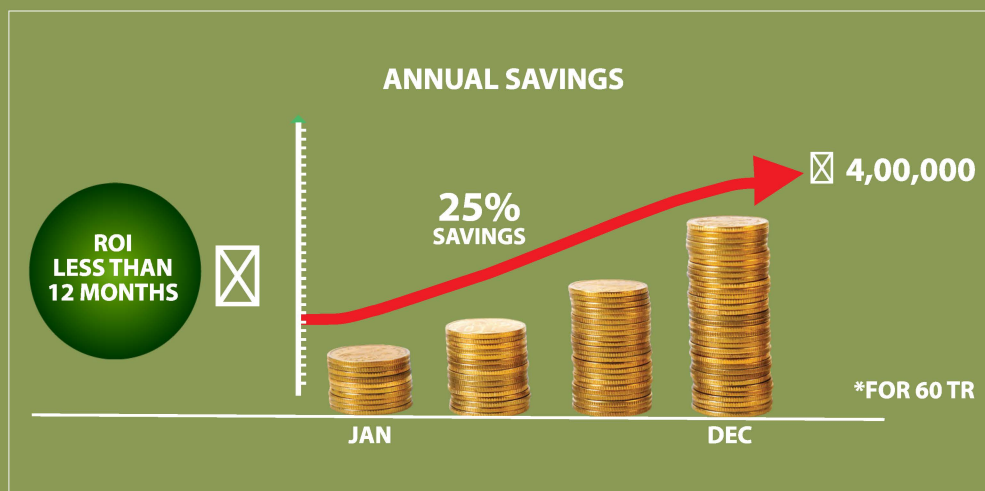




Attractive Return on Investment:

The new generation inverter scroll chillers are designed with highly efficient scroll compressors, enhanced coil face area & advanced controllers making it one of the most energy efficient scroll chillers available in the country. The power savings will be more than 25% as compared to conventional scroll chillers. The return on investment would be less than 1 year.

The ROI is even better for industries, hotels, hospitals where working hours are higher.



Y

World Class Design:

The new Inverter Scroll Chillers have been given a complete make-over from conventional design to give them aesthetically pleasing looks. The new innovative 'Y' design condenser also has a lower footprint, thereby occupying much less floor space.



INVERTER SCROLL CHILLER

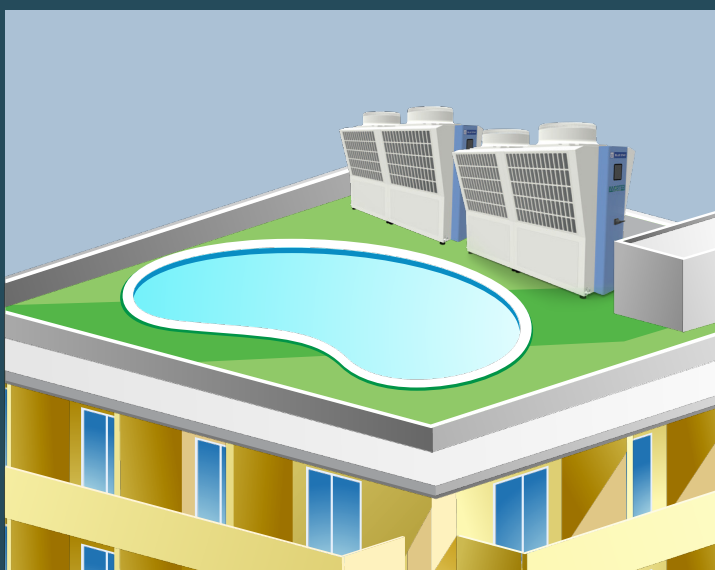


Compact Design:

The Inverter Scroll Chiller range is designed with a new innovative 'Y' design condenser to optimize the foot print of chillers. The savings in floor space would be approximately 25% as compared to conventional scroll chillers.



CONVENTIONAL
SCROLL CHILLER



INVERTER SCROLL
CHILLER



High Reliability:

The advanced control logic will ensure that variation in chiller loads is managed by inverter scroll compressors. This will drastically reduce on-off cycles of fixed speed compressors thereby enhancing the overall life of chillers.

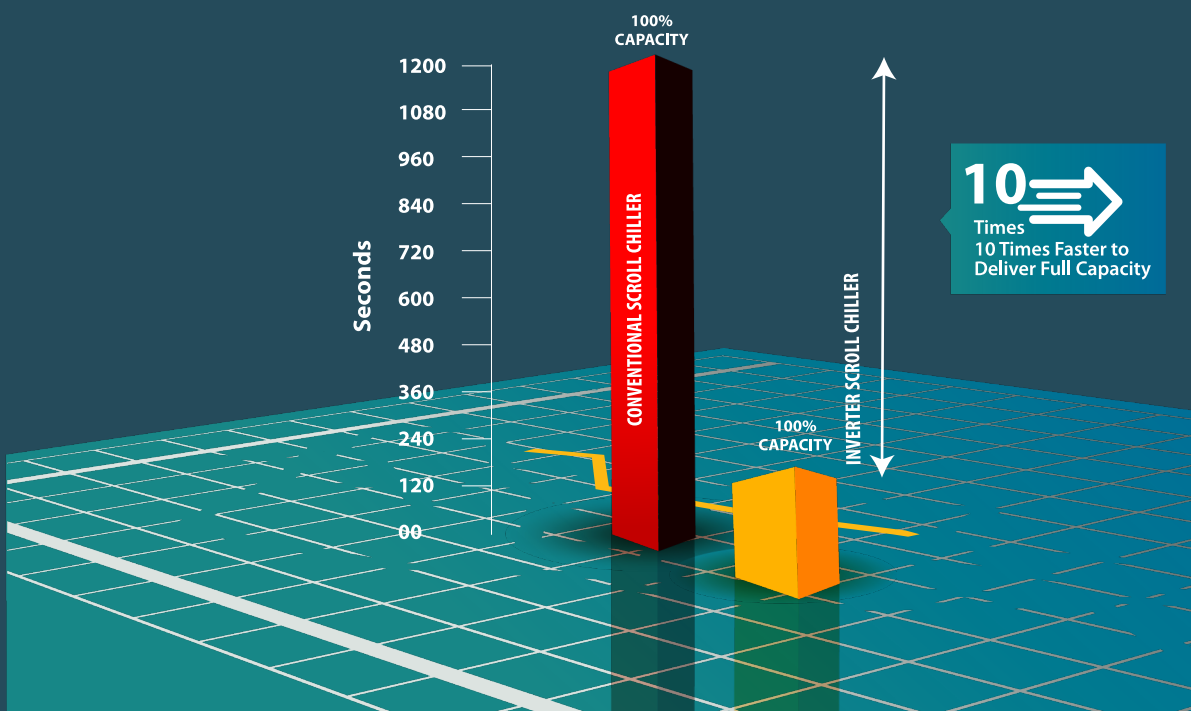


Rapid Cooling Mode:

Scroll chillers are widely used for process cooling, pharmaceutical and critical industrial applications. The load variation in these applications can vary significantly and to achieve 100% capacity conventional chillers would take approximately 20 minutes. This can significantly impact process cooling requirements.

The new inverter scroll chillers are designed with a unique rapid cooling mode. This feature will enable customers to achieve 100% cooling within 2 mins. This will help to maintain the required chilled water temperature in a short span of time.

RAPID COOLING



Intelligent Microprocessor Control

The new range of scroll chillers are offered with a BMS compatible microprocessor control which allows the chiller to be operated through central Building Management Systems.



Touch Screen Option

The new controller has an elegant looking touch screen with a backlight display. It helps in easy operation of the unit and also provides a user-friendly graphical interface to access various parameters.



Precise Temperature Control

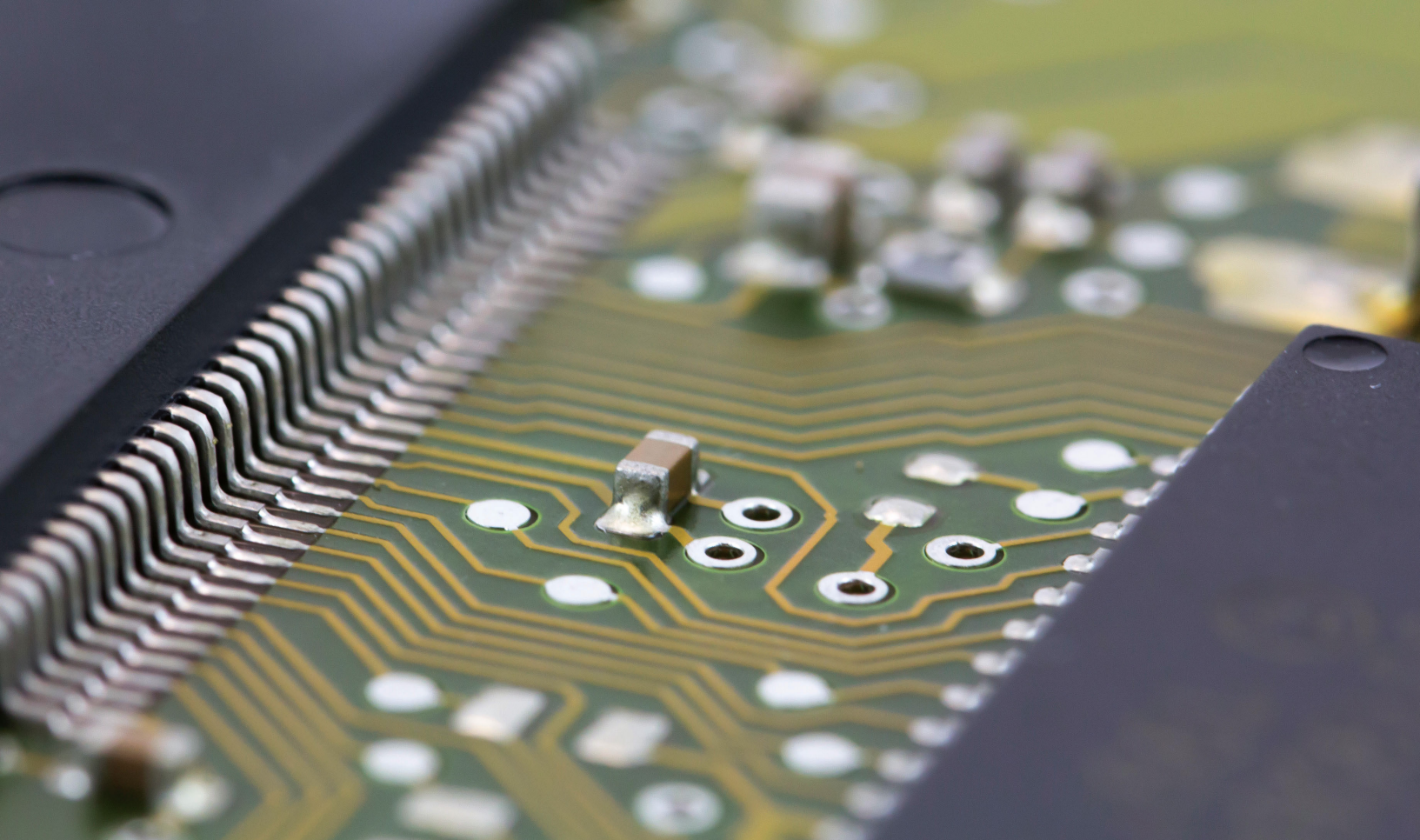
Conventional scroll chillers are provided with manual controllers where the chilled water setting can be to the tune of $\pm 1^{\circ}\text{C}$.

The new microprocessor based controller operates on digital control which allows chilled water temperature settings to the tune of $\pm 0.1^{\circ}\text{C}$. This enables to achieve process cooling temperature precisely and also substantial power savings.



Easy and Quick Installation:

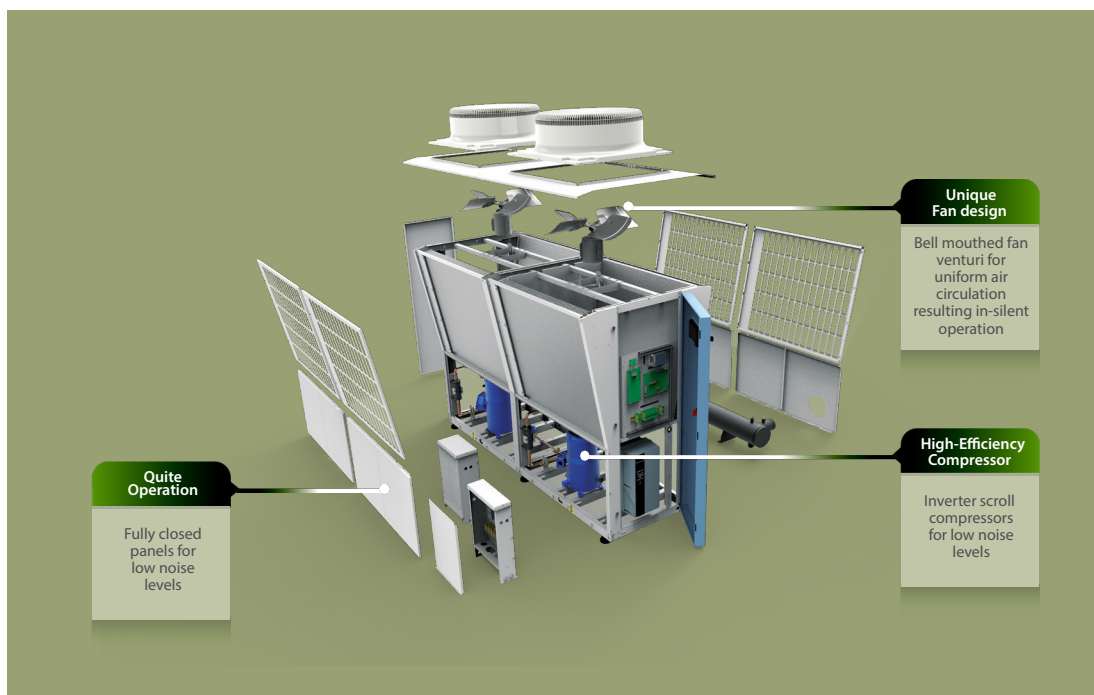
The new Inverter Scroll Chillers are fully charged, pre-wired & tested completely at our factory prior to dispatch. This enables customers to install the chillers immediately and reduce installation time. This also avoids an impact in performance when refrigerant charging is done manually on site like with most conventional chillers.



Silent Operation:

The new range of scroll chillers is designed to minimize noise levels by the following design enhancements

- The entire compressor section is enclosed by panels on all four sides (for air-cooled applications).
- Condensers with special bell-mouth venturi are designed to optimize air cutting noise of fans (for air-cooled applications).
- The inverter compressor optimizes the on-off cycle of fixed speed compressors thereby reducing noise level of chillers.

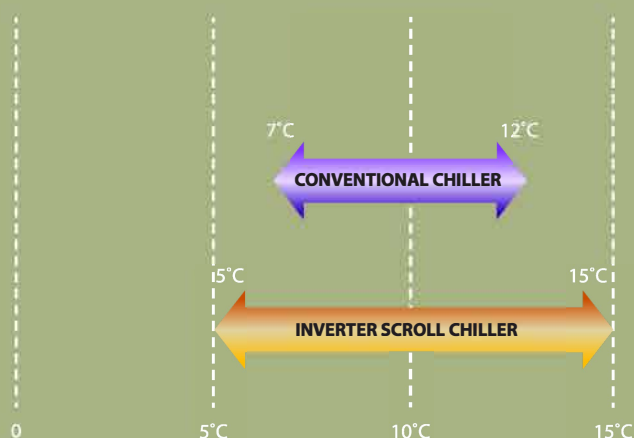




Wide Operating Range:

Conventional scroll chillers will operate at 12°C chilled water inlet and 7°C chilled water outlet offering a temperature differential of only 5°C. However there are many applications where the chilled water temperature differential can be even higher than 5°C.

The new range of inverter scroll chillers operates on a temperature differential upto 10°C, that helps cater to various process cooling requirements. This feature can be used to optimize running costs of chillers.



Safety Protections:

The inverter scroll chillers are equipped with protection against the following:

- Anti-freeze
- HP/LP
- Single phase
- Phase loss
- Overload
- Over current
- Under current
- Reverse rotation protection for inverter compressor
- Oil shortage



Anti-Corrosion Condenser Fin Coating

Specially treated blue fins for air-cooled condensers are available as an option for improving the life of chillers in corrosive environments.



Eco-Friendly

The inverter scroll chillers come with zero ODP R-410A refrigerant.

Technical Specifications

DESCRIPTION	UNITS	XAC2VS-012MR3	XAC2VS-024MR3	XAC2VS-036MR3	XAC2VS-048MR3	XAC2VS-060MR3	XAC2VS-072MR
Nominal Cooling Capacity	TR	12	24	36	48	60	72
Quantity of Compressors	Nos.	2	2	3	4	5	6
Type		Hermetically Sealed Scroll					
Motor Type		Refrigerant Cooled , 3 Ph, 2 Pole Squirrel Cage Induction Motor					
Operating Speed	RPM	2900					
Electrical Power Supply		400V(+/-10%), 3Ph,50Hz					
Condenser							
Tube Material		Copper					
Fin Material		Aluminium					
Quantity of Fan	Nos.	1	2	3	4	5	6
Condenser Fan Motor Details							
Type		Totally Enclosed, Pad Mounted					
Quantity	Nos.	1	2	3	4	5	6
Speed	RPM	910					
Airflow Quantity	CFM	9000	18000	27000	36000	45000	54000
DX Cooler							
Tube Material		Copper					
Water Connection Size In/Out	mm	50	80				
No. of Refrigerant Circuit	Nos.	2	2	3	4	5	6
Overall Dimensions							
Length	mm	1285	2500	3700	5000	6200	7400
Width	mm	1050					
Height	mm	1917					

Note : Pl refer GA drawings for exact dimension

Technical Specifications

DESCRIPTION	UNITS	XWC2VS-013AR3	XWC2VS-026AR3	XWC2VS-039AR3	XWC2YVS-052AR3	XWC2YVS-065AR3	XWC3YVS-078AR3
Nominal Cooling Capacity	TR	13	26	39	52	65	78
Quantity of Compressors	Nos.	2	2	3	3	3	4
Type		Hermetically Sealed Scroll					
Motor Type		Refrigerant Cooled , 3 Ph, 2 Pole Squirrel Cage Induction Motor					
Operating Speed	RPM	2900					
Electrical Power Supply		400V(+/-10%), 3Ph, 50Hz					
Flooded - Condenser							
Tube Material		Copper					
No. of Pass (Water Side)	Nos.	4	4	2	2	2	2
No. of Refrigerant Circuit	Nos.	2	2	2	2	2	3
DX Cooler							
Tube Material		Integral Finned Copper Tubes					
No. of Pass (Ref. Side)	Nos.	4	2	2	2	2	2
No. of Refrigerant Circuit	Nos.	2	2	2	2	2	3
Overall Dimensions (Approx)							
Length	mm	2340	2340	2340	2650	2650	2650
Width	mm	1000	1065	1065	1065	1065	1075
Height	mm	1275	1450	1450	1600	1600	1700

Note : Pl refer GA drawings for exact dimensions



Scan QR Code -
Blue Star Customer
Care Mobile App.



SMS "SERVICE" to 57575



Download Blue Star Customer
Care Mobile App from
App. Store & Google Play



To know more about Blue Star, visit
www.bluestarindia.com, email us at
coolingsolutions@bluestarindia.com
or SMS "COOL" to 57575



24X7 CUSTOMER CARE
(Toll Free) 1800 209 1177
1860 266 6666

For more information, please contact **BLUE STAR LIMITED SALES AND SERVICE OFFICES** • **Ahmadabad:** 301-302, Abhisheer Avenue, Near Nehru Nagar Circle, S M Road, Ambawadi, Ahmedabad - 380 015, India. Phone: (+91) (79) 4022 4000.
• **Bengaluru:** Anjuman Kay Arr Tower, No 28, Ward No 77, Mission Road, Bengaluru - 560 027. Phone: (+91) (80) 4185 4000. Fax: (+91) (80) 4185 4001. • **Bhubaneswar:** 3A, Satsya Nagar, 2nd Floor, Bhubaneswar - 751 007. Phone: (+91) (674) 2572403/2573670/2570024. Fax: (+91) (674) 257 0544. • **Chandigarh:** Sanjeev Tower, 6th Floor, Plot No 55, Industrial Area Phase 1, Chandigarh - 160002. Phone: (+91) (172) 415 5100. • **Chennai:** KRM Plaza, No 2, Harrington Road, Chetpet, Chennai - 600 031. Phone: (+91) (44) 4244 4000. Fax: (+91) (44) 2836 2101. • **Coimbatore:** Krisan Workspaces, Mayflower Valencia, 4th Floor, Nava India Rd, Coimbatore, 641004. Phone: (+91) (0422) 4377125. • **Goa:** 210, 2nd Floor, Gera's Imperium I, Patto, Panjim, Goa - 403 001. Phone: (+91) (832) 2438171/2437287. • **Gurugram:** 6th Floor, Vatika Atr um, Golf Cours Road, Sector 53, Gurugram - 122 002 (Haryana). Phone: (+91) (124) 409 4000. Fax: (+91) (124) 409 4004. • **Guwahati:** Oasis Plaza, 1st Floor, Dr. B. Barooah Road, Ulubari, Kamrup, Guwahati - 781 007. Assam [Opposite Hotel Land Mark]. Phone: (+91) (361) 246 8496. • **Hyderabad:** Ashoka Raghupati Chambers, No 1-10-60 to 64, 4th Floor, S P Road, Begumpet, Hyderabad, Telangana 500 016, India. Phone: (+91) (40) 4400 4000. Fax: (+91) (40) 4400 4001. • **Indore:** Office No 502, Maloo-01 26/C, Scheme No 84/C Ring Road, Indore - 452 010. Phone: (+91) (731) 4001211/4001311. • **Jalpur:** A-19, First Floor, Main Sahakar Path, Near Sahakar Bhavan, Jalpur. Phone: (+91) (141) 331 3000. Fax: (+91) (141) 512 4899. • **Kochi:** Prestige TMS Square, 9th Floor, No. 2, Service Road, Padivattom, Edappally, Kochi, Kerala - 682 024. Phone: (+91) (484) 449 9000. Fax: (+91) (484) 449 9190.
• **Kolkata:** Eco Centre Business Tower, 11th Floor, Unit No: 1 & 2, Plot No 4, EM Block, Sector V, Salt Lake, Bidhannagar, Kolkata - 700 091. Phone: (+91) (33) 4081 5400. • **Lucknow:** 177/4, Faizabad Road, Near IT Metro Station, Lucknow - 226 007. Phone: (+91) (522) 403 4000. Fax: (+91) (522) 403 4004. • **Ludhiana:** Goshawk Rental Space Solutions Pvt Ltd, BXX-3369, Sandhu Tower 2, 2nd Floor, Gurdev Nagar, Ferozepur Road, Ludhiana - 141001. Phone: (+91) (161) 506 4000. • **Mumbai:** Blue Star House, 9A, Ghatkopar, Link Road, Sakinaka, Mumbai - 400 072. Phone: (+91) (22) 6668 4000. Fax: (+91) (22) 6668 4004. • **Nagpur:** 219 Bajaj Nagar, 1st Floor, South Ambazari Road, Nagpur - 440 010. Phone: (+91) (712) 662 4000. Fax: (+91) (712) 662 4002. • **New Delhi:** Elegance Tower, 1st Floor, Jasola District Centre, New Delhi - 110 025. Phone: (+91) (11) 4149 4000. Fax: (+91) (11) 4149 4004/5. • **Patna:** The Hub, 2nd floor, Near Regent cinema, Gandhi Maidan Road, Patna - 800004. • **Pune:** 201/A, Nityanand Complex, 247/A Bund Garden Road, Pune - 411 001. Phone: (+91) (20) 4104 4000/2616 7230. Fax: (+91) (20) 41044001 / 2616 1342. • **Raipur:** MM Silver Plaza, Office No. 103, 1st Floor, Opp Udyog Bhavan, Ring Road No. 1, Raipur - 492 001. Phone: (+91) (771) 428 0900. • **Thane:** Blue Star Limited, Blue Star Innovation Centre, Next to Hotel Vihangs Inn, Kapurbavdi, Ghodbunder Road, Thane West - 400 607. Phone: (+91) (22) 3508 4000. • **Thiruvananthapuram:** TC IV/962, Chandrika, Sree Chitra Nagar, Pipe line Road, Kowdiar, Thiruvananthapuram - 695 003. Phone: (+91) (471) 243 5025. Fax: (+91) (471) 243 4065. • **Vadodara:** INCUSPAZE Office Spaces, 3rd Floor Alembic 1965, Alembic City, Gorwa-Alembic Road, Vadodara - 390003. Phone: (+91) (265) 661 4000 /265 233 2021/22. Fax: (+91) 265 233 7516. • **Vijayawada:** No 40-1-62, Nagas Hafeez Plaza, Opposite to grand modern supermarket, Near BENZ Circle, MG. Road, Vijayawada - 520 010. Phone: (+91) (866) 248 4004. Fax: (+91) (866) 248 4003. • **Visakhapatnam:** Qubexpro Business Centre, V Mall, Lifestyle Building, 4th Floor, Facor Layout, Waltair Uplands, Visakhapatnam - 530003. Phone: (+91) (0891) 6686705.



Blue Star products comply with RoHS regulations as per E-Waste (Management & Handling) Rules, 2016. For disposal of E-Waste, kindly visit our website www.bluestarindia.com or call our customer care 1800 209 1177 (Toll Free) or 1860 266 6666.