



BLUE STAR



NEXT GENERATION
INVERTER
DUCTED SYSTEM

Next Generation Inverter Ducted & Packaged System

**LOWER ENERGY CONSUMPTION.
HIGHER COMFORT.**





NEXT GENERATION INVERTER DUCTED & PACKAGED SYSTEM

Blue Star is India's leading HVAC&R company, renowned for its excellence in the commercial air conditioning sector. With a vast presence across the country, including numerous offices, modern manufacturing facilities, and a robust network of dedicated employees and channel partners, Blue Star stands at the forefront of technological innovation and customer satisfaction.

With more than eight decades of experience in air conditioning, Blue Star Ltd. has firmly established itself as an industry leader in India. The company boasts the widest range of products in this category, including HiPer, HiSen, Water Cooled, and Air Cooled ducted systems. The first generation of Inverter Ducted systems gained wide acceptance across various segments such as retail, light commercial, offices, and educational institutes.

Blue Star is proud to introduce the next generation of QCO-compliant Inverter Ducted & Packaged Systems, which set a new benchmark for energy efficiency. These systems are designed with high-efficiency variable capacity inverter compressors, super precise electronic expansion valves, and advanced electronics, bringing their efficiency levels closer to VRF systems. This is a Variable Refrigerant Flow (VRF) system with a ductable type indoor unit.

Blue Star places a strong emphasis on research and development, consistently focusing on energy-efficient, eco-friendly, and sustainable products. This commitment ensures that Blue Star's commercial air conditioning systems are of the highest quality and reliability.

Blue Star's leadership in the commercial air conditioning market is underscored by its end-to-end solutions, encompassing design, manufacturing, installation, commissioning, and maintenance. The company's expertise extends to specialised contracting activities, including electrification, plumbing, and fire-fighting services, ensuring a comprehensive and seamless experience for its clients.

As a company committed to excellence, Blue Star Ltd. continues to lead the market with its innovative solutions and unwavering dedication to quality and customer satisfaction. Blue Star's extensive product range and turnkey solutions, supported by an extensive network of stores and service associates, cater to the diverse needs of residential and commercial customers across India.

BLUE STAR'S QCO-COMPLIANT INVERTER DUCTED & PACKAGED AIR CONDITIONERS

Blue Star brings you the first BIS-certified next generation Inverter Ducted & Packaged Systems under the new Quality Control Order (QCO). Implemented by the Government of India, the QCO ensures the highest quality standards for air conditioners and their components. With Blue Star, you can trust that your inverter ducted & packaged unit meets rigorous safety, performance, and energy efficiency regulations.

QCO Compliance:

Blue Star Inverter Ducted & Packaged Systems units are fully certified and meet the latest QCO regulations, even before the government regulations which became effective from October 1st, 2023.

ISI Mark of Excellence:

Our Inverter Ducted & Packaged Systems feature the ISI mark, a testament to quality and safety, endorsed by the Bureau of Indian Standards (BIS).

IS 8148 Standards:

Designed in accordance with IS 8148 standards, our units guarantee exceptional performance, durability, and energy efficiency.



Blue Star Inverter Ducted & Packaged Systems set a new standard in the commercial air conditioning sector, offering unmatched quality, cutting-edge innovation, and guaranteed customer satisfaction. Our commitment to excellence and adherence to the highest standards make Blue Star the preferred choice for HVAC&R solutions in India.



RANGE 6.25HP-28HP

BLUE STAR NEXT GEN INVERTER DUCTED & PACKAGED SYSTEM

The Blue Star Inverter Ducted & Packaged System is engineered with advanced energy-efficient inverter compressor technology and unique logic control, which modulate the system's capacity precisely to meet the actual load requirement inside the conditioned space. These systems are available in both ceiling-mounted ductable and floor-mounted packaged type indoor units, featuring sophisticated controls that enhance efficiency and user-friendliness.

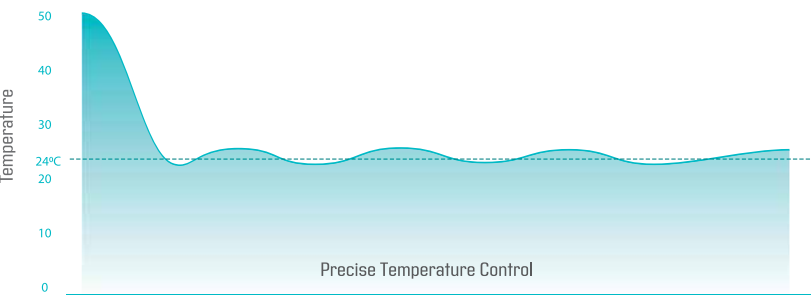
KEY FEATURES

ADVANCED INVERTER COMPRESSORS

These units feature the latest inverter compressors, which can efficiently handle varying compression ratios and adapt to different load requirements. This ensures that your system operates smoothly and uses energy effectively, providing you with reliable comfort.

PRECISE TEMPERATURE CONTROL

The systems also come with special electronic expansion valves with 3000 steps, allowing for precise temperature control in increments of 0.1°C. This means you can enjoy a stable and comfortable indoor environment, perfectly tailored to your preferences.



Set Temperature



LOWER STARTING CURRENT

In traditional ducted systems, the starting current can be as high as four times the running current. This necessitates over-sizing electrical components and backup generators, leading to increased costs. The total power sanctions must account for this starting current surge, resulting in additional investments.

In contrast, inverter compressors start in an unloaded condition, requiring very low starting current. This optimisation reduces the power requirements of the premises, minimising the need for larger electrical components and generators by at least 30%.

With inverter compressors, you can significantly cut down on initial electrical infrastructure costs while ensuring efficient and reliable system performance.

Conventional System
High Capacity Generator

17.5 KVA



Inverter Ducted System
Optimised Size Generator

12 KVA

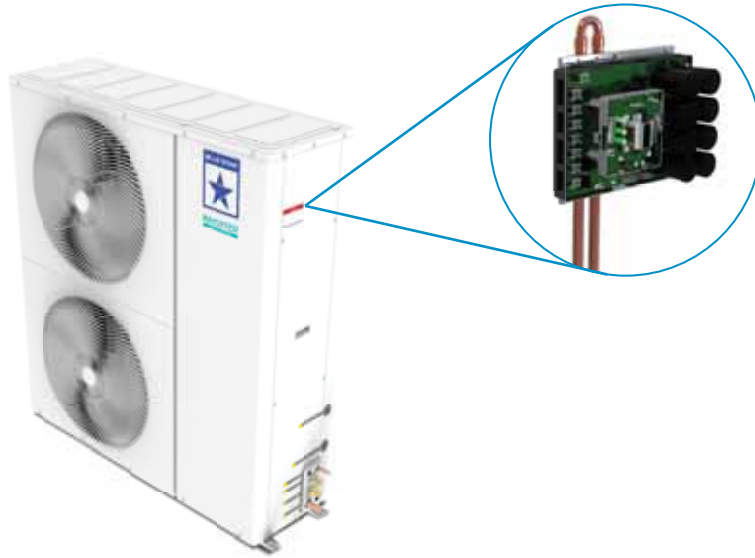


HIGH-EFFICIENCY DESIGN FOR OUTSTANDING PERFORMANCE

With Blue Star's expertise in ducted system design, the next generation inverter ducted & packaged units feature specially oversized indoor and outdoor coils. These specially designed heat exchangers ensure efficient performance of the system during various part-load and full-load conditions.

REFRIGERANT COOLED HEAT SINK

The inverter PCBs feature a unique refrigerant-cooled heat sink. This innovative design enhances reliability, ensuring optimal performance even in higher ambient temperature conditions.



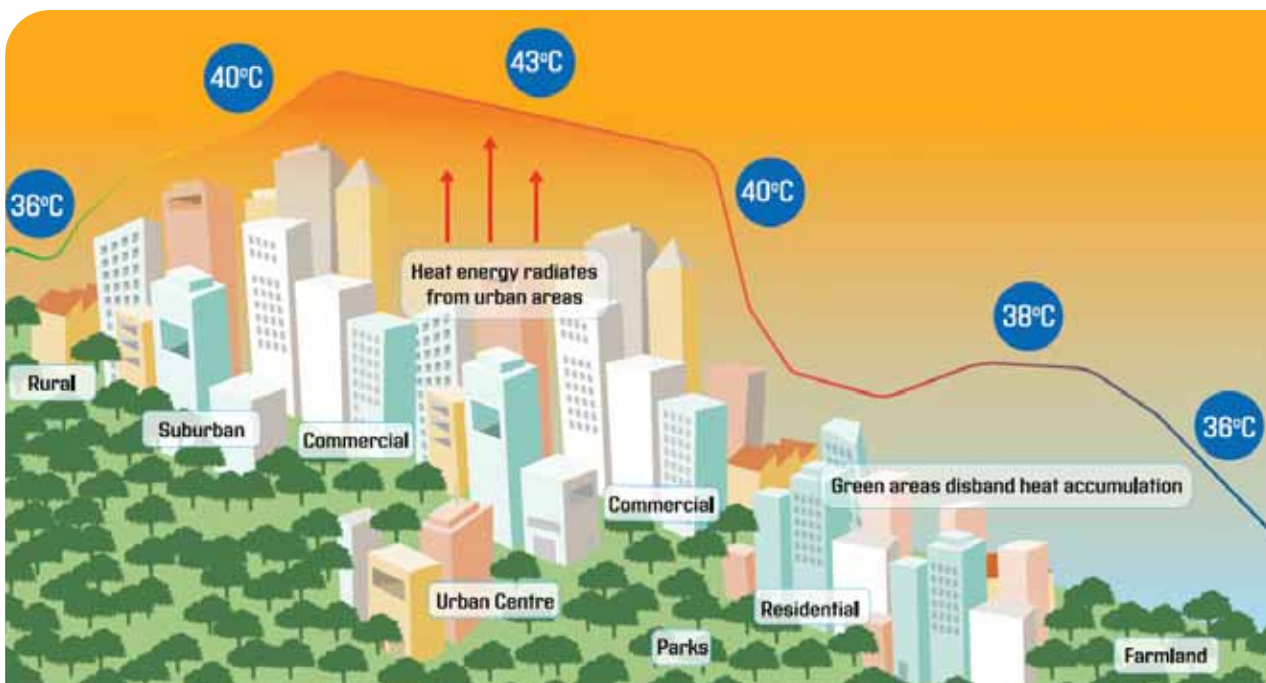
HIGHER AMBIENT OPERATION

Most air conditioners are designed to operate only up to 45°C, beyond which they tend to trip. In India, a tropical country, temperatures can soar beyond 42°C during the summer, with the urban heat effect adding 3 to 4°C to the working conditions.

Our next generation inverter ducted & packaged units are specially designed to operate under these typical higher ambient conditions found in India.

The inverter PCBs are refrigerant-cooled, and the enhanced heat exchanger design, along with the refrigerant-cooled PCBs, ensures reliable operation even at extremely high ambient temperatures, up to 52°C.

URBAN HEAT EFFECT



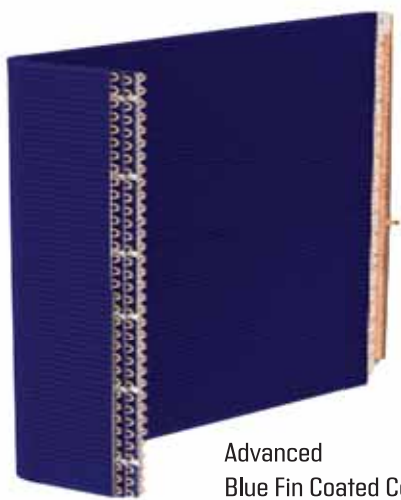
POWER SAVINGS

The high-efficiency inverter compressors, specially designed outdoor and indoor units, super precise electronic expansion valves, and sophisticated electronics make Blue Star's next generation inverter ducted & packaged units highly energy efficient. These systems can precisely regulate capacity based on internal loads and external ambient conditions, offering phenomenal 25% annualised power savings compared to conventional ducted systems.

With such significant energy savings, the return on investment is typically less than 12 months.



Return on investment



Advanced
Blue Fin Coated Coil

SUITED FOR COASTAL AREAS

Specially-treated and coated blue fins are used in the heat exchangers, which not only improve heat transfer rates but are also resistant to corrosion, ensuring a longer lifespan. Moreover, sheet metal enclosures are made with polyester powder coated GSS panels. This makes the Blue Star's next generation inverter ducted & packaged units ideally suited for coastal areas, where high humidity and salty air can cause significant wear and tear on conventional systems.



ENHANCED AESTHETICS

The next generation inverter ducted & packaged units are designed to handle refrigerant piping lengths of up to 60 meters, allowing outdoor units to be positioned on terraces or in remote locations. By doing so, the external aesthetics of the building are maintained, ensuring a clean and visually appealing exterior.



MULTI OUTDOOR ADVANTAGE

The multi outdoor system offers a significant advantage by ensuring uninterrupted operation. In the rare event of a failure in one outdoor unit (ODU), the system can continue running with the other ODU without any manual intervention required. This automatic failover feature ensures consistent performance and reliability.

AHU INTEGRATION

Special applications like hospitals, clean rooms, and banquet halls often require non-standard AHUs with different static pressures and CFM. Our specially designed AHU kits facilitate seamless integration with these unique requirements.

The next generation inverter ducted & packaged units's outdoor units can be coupled with non-standard AHUs using these specially designed AHU kits. A single AHU kit allows integration of AHUs with capacities up to 33TR.

AHU KIT RANGE: 5TR TO 33TR



This feature is ideal for retrofit projects, enabling the replacement of old, energy-consuming systems with efficient next-generation inverter systems. AHU integration enables inverter outdoor units to be used in many other applications like banquet halls, industrial air conditioning, hospital operation theatre air conditioning, etc.

TOUCH SCREEN CONTROLLER FOR DUCTED & PACKAGED UNITS

The Blue Star Inverter Ducted & Packaged Units feature a sophisticated touch screen based. This elegant controller offers many user-friendly features, enhancing the overall user experience.

Salient features of the controller:



Compressor
Status Indication



On/Off Timer



Wireless Control Option



Room Temperature
Display



Error Reset



Error Indication

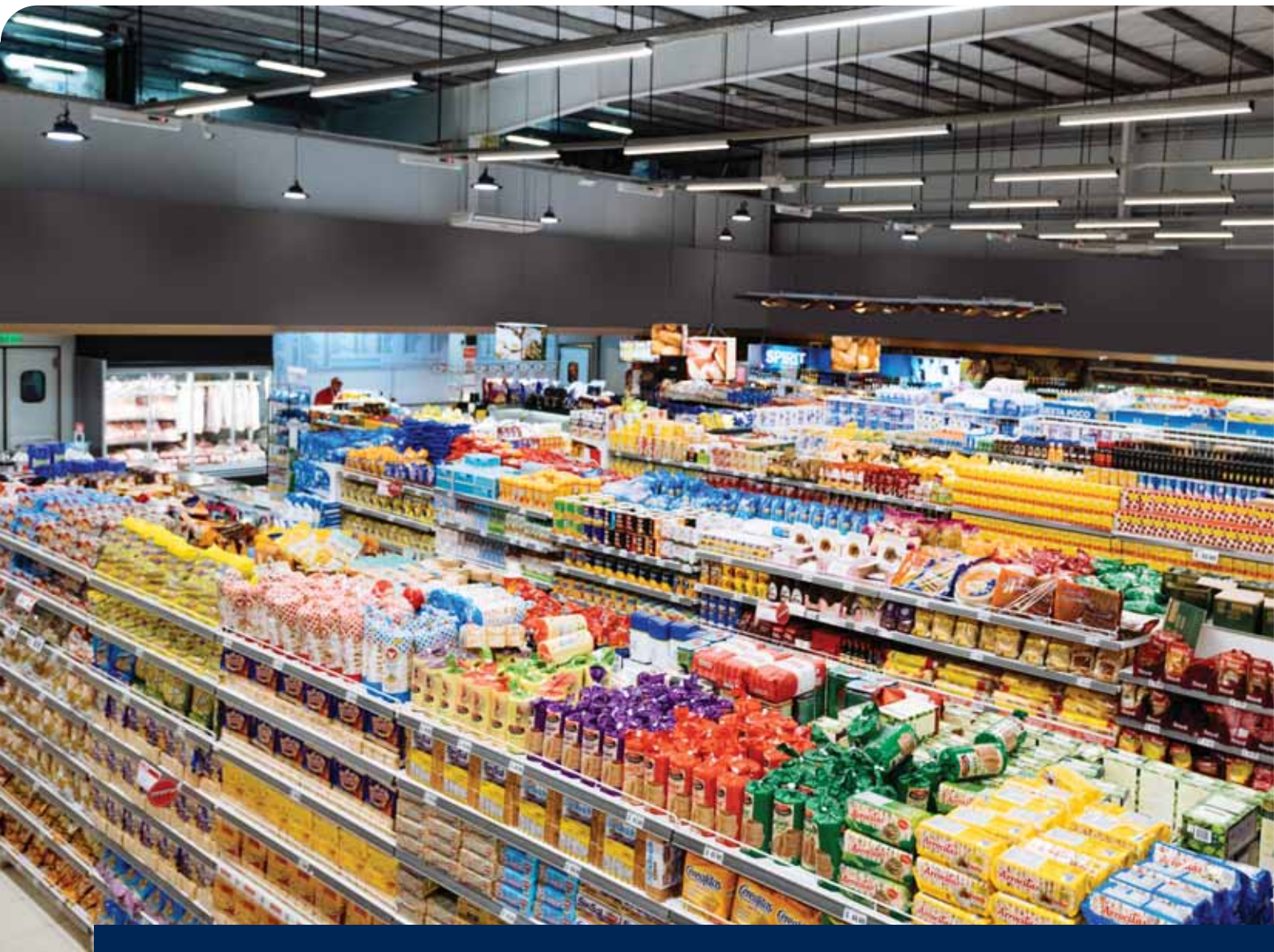


Wide Temperature
Range (16–32°C)



Touch Screen
Controller Device

This intuitive controller adds a layer of convenience and efficiency to the Blue Star Inverter ducted & packaged units, making it an ideal choice for modern users.



SPECIAL CONTROLLERS

The Next Generation Inverter Ducted & Packaged Systems offers a variety of advanced control options to enhance user convenience and system efficiency.



GROUP CONTROL

Up to 16 units can be integrated and controlled through a group controller. This feature allows you to manage the entire air conditioning system from a single source, simplifying operations and ensuring unified control.

BMS INTEGRATION

Next Generation Inverter Ducted & Packaged System can be seamlessly integrated with third-party BMS networks through the Modbus RTU Communication Protocol using add-on cards. Up to 60 units can be connected to the MODBUS Master through optional converters, enabling comprehensive building management system integration and centralised control.

There are more optional proto-converters available to convert to other protocols like Bacnet, Lonworks, etc.



WEB BASED SMART CONTROLLER

Next Generation inverter ducted units can be controlled from any remote location through internet with web based smart controller.

- Mobile based or PC based control option
- Upto 16 units can be controlled through one device
- All parameters like temperature, mode etc. can be monitored/controlled
- Scheduler and timer function
- Display of Room Temperature for each unit
- Grouping of units
- User Management with level and specific control



These special control features make the Next Generation Inverter Ducted & Packaged System an ideal choice for both individual and large-scale applications, providing flexibility and ease of use.

NEXT GEN INVERTER DUCTED SPLIT AIR CONDITIONERS

Technical Specifications:



Description	Units	DSAI661R3QA	DSAI1021R3QA	DSAI1321R3QA	DSAI1982R3QA		DSAI2642R3QA	
Nominal Cooling Capacity	HP	7	11	14	21		28	
	TR	5.5	8.5	11	16.5		22	
	Btu/Hr.	66000	102000	132000	198000		264000	
Refrigerant		R410A						
Power Supply(AC)		415 V, Three Phase, 50 Hz						
External Finish		Pure Polyester Power Coated GI Steel						
Capacity Control		Stepless with inverter compressor						
Indoor Unit								
Dimensions (W x D x H)	mm	1140 x 628 x 480	1481 x 630 x 482	1835 x 628 x 480	1985 x 1054 x 550		2112 x 983 x 864	
Weight	kg	48	67	83	138		205	
Power Supply (AC) to motor		230 V, Single Phase, 50 Hz						
Type of Blower		Centrifugal Forward Curved, Double Inlet, Double Width						
Nominal Airflow	CFM	2200	3400	4400	6600		8800	
	CMH	3740	5776	7475	11213		14951	
Air Filter		Non woven polyester media enclosed in HDPE mesh						
Controller		Innovative Intelligent Inverter Controller						
Outdoor Unit								
Quantity	Nos.	1	1	1	2 (11TR + 5.5TR)		2 (11TR+11TR)	
Dimensions (W x D x H)	mm	1020 x 416 x 1042	1320 x 416 x 1040	1320 x 416 x 1495	1320 x 416 x 1551	1020 x 416 x 928	1320 x 416 x 1551	1437 x 622 x 919
Compressor/ per ODU	Nos.	1	1	1	1	1	1	1
Weight	kg	95	135	190	195	90	195	180
Power Supply (AC)		415V/ Three Phase / 50Hz AC						
Condenser Fan Type		Propeller						

Specifications are subject to change without any prior notification due to continuous product improvement

NEXT GEN INVERTER PACKAGED AIR CONDITIONERS

Technical Specifications:



Description	Units	DPAI601R3QB	DPAI961R3QB	DPAI1321R3QB	DPAI1982R3QB		DPAI2642R3QB	
Nominal Coolong Capacity	HP	6.25	10	14	21		28	
	TR	5	8	11	16.5		22	
	Btu/Hr.	60000	96000	132000	198000		264000	
Refrigerant		R410A						
Power Supply (AC)		415 V, Three phase, 50Hz						
External Finish		Pure Polyester Power Coated GI Stee						
Capacity Control		Stepless with inverter compressor						
Indoor Unit								
Dimensions (W x D x H)	mm	900 x 662 x 1543	1160 x 662 x 1450	1160 x 662 x 1662	1500 x 750 x 1470		1500 x 934 x 1553	
Weight	kg.	172	190	206	330		391	
Power Supply (AC)		415 V, Three Phase, 50 Hz						
Type of Blower		Centrifugal forward curved, double inlet , double width						
Nominal Air flow	CFM	2275	3740	4400	6600		9600	
	CMH	3865	6354	7475	11215		16310	
Compressor Quantity	No.	1	1	1	2 (11TR + 5.5TR)		2 (11TR + 11TR)	
Air Filter		Non woven polyester media enclosed in HDPE mesh						
Controller		Innovative intelligent inverter controller with touch screen display						
Outdoor Unit								
Quantity	No.	1	1	1	2 (11TR + 5.5TR)		2 (11TR + 11TR)	
Dimensions (W x D x H)	mm	1020 x 416 x 925	1320 x 416 x 1040	1320 x 416 x 1551	1320 x 416 x 1551	1020 x 416 x 925	1320 x 416 x 1551	1435 x 622 x 920
Weight	kg	50	85	125	125	50	125	130
Power Supply(AC) to motor		230V, 1 ph, 50Hz	415 V, 3 ph, 50Hz	415 V, 3 ph, 50Hz	415 V, 3 ph, 50Hz + 230V, 1 ph, 50Hz		415 V, 3 ph, 50Hz + 230V, 1 ph, 50Hz	
Condenser Fan type		Propeller						

Specifications are subject to change without any prior notification due to continuous product improvement



To know more about Blue Star, visit
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Available on App Store & Google Play.

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