



BLUE STAR

*NONSTOP COOLING
IN THE HOTTEST SUMMER.
NONSTOP SAVING
ALL YEAR ROUND.*



HiPer+
Packaged and Ducted
Split Air Conditioners



Blue Star, the market leader in ducted air conditioning systems, has a wide range of air conditioning solutions to suit the varying needs of different applications.

One of the challenges that modern applications face is that there is an excessive generation of sensible heat in spaces that require high performance systems to keep the temperature under strict control; such as server rooms and data centres. This is also true in places where the ambient temperature is very high, as experienced during peak Indian summers. In such conditions, the ducted systems must function efficiently even in harsh and adverse conditions, and without any compromise in cooling performance.

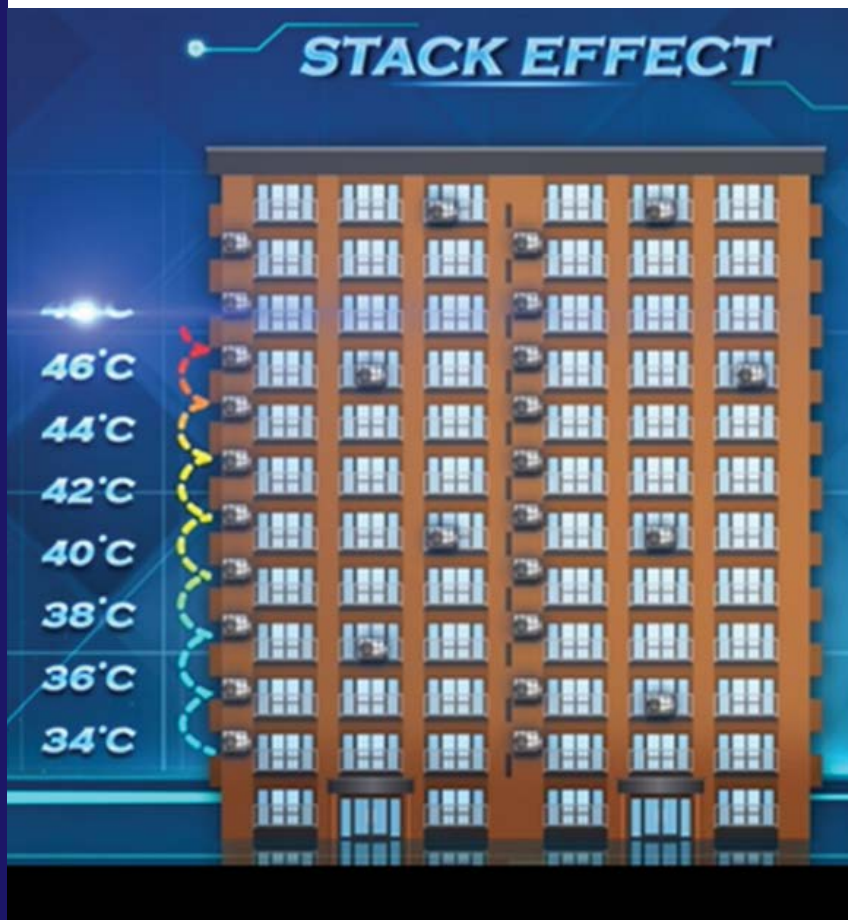
Blue Star's Hiper Plus Packaged and Ducted Split air conditioners are exclusively designed for special applications where conventional ducted systems cannot function effectively.



Conventional air conditioners are designed to cool down to rated temperatures so long as the ambient temperatures outside do not exceed 35°C. When the temperature exceeds 35°C, the capacity of the AC 'derates', and reduces the cooling capacity of the system. The conventional solution to this deration problem has been to invest in higher capacity equipment. However, apart from higher ambient temperatures, there are other aspects that affect the temperature near the outdoor condenser units.

Urban island heat effect

This is caused by concrete structures in urbanised areas and results in a temperature increase of about 2–3°C. It also results in higher surrounding temperatures for a prolonged duration.



Stack effect is the result of multiple outdoor units stacked one above another. Higher temperature air entering the units located at higher levels results in reduced performance of air conditioners.



When the ambient temperature goes up due to one or more of the reasons mentioned earlier, air conditioners end up operating with at lowered efficiencies. In fact, they may even stop working above certain upper operating temperature limits!

For critical applications, it is necessary therefore to design air conditioners that can deliver actual rated capacities even while working in adverse outdoor and indoor conditions.

This is where Blue Star's Hiper+ range of Packaged and Ducted Splits come in. They are specially designed to cater to your applications even in harsh conditions.

HI SENSIBLE LOADS

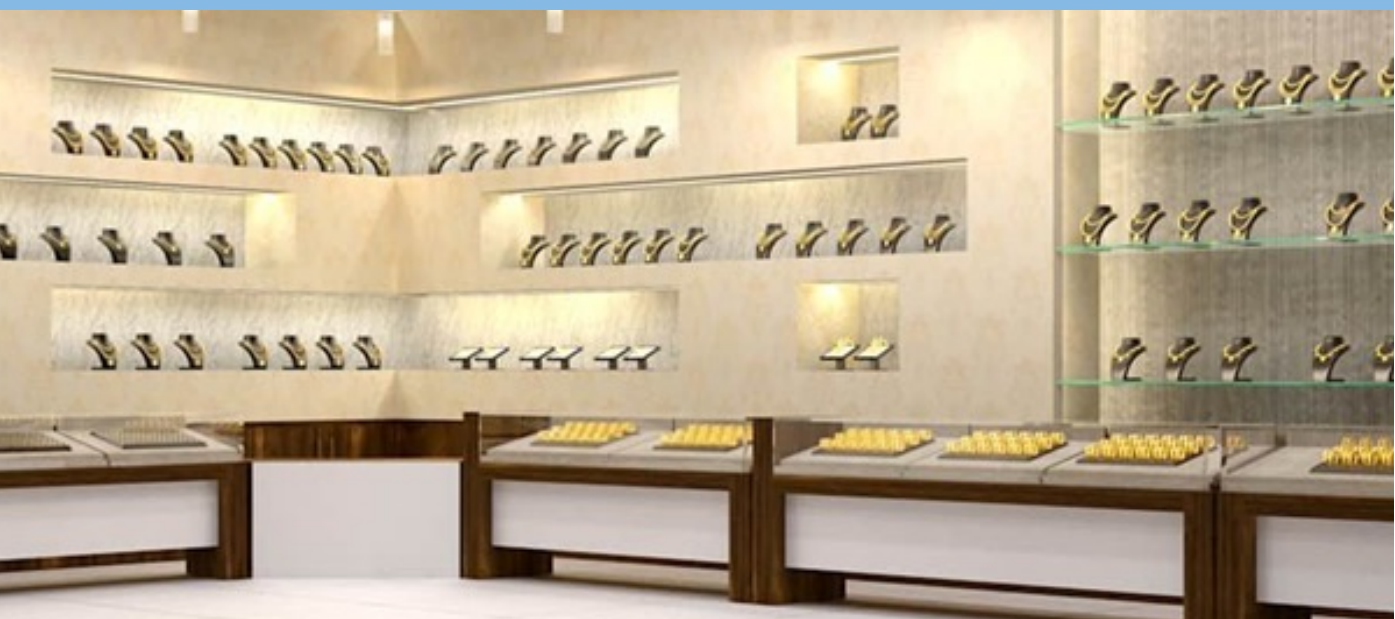
There are many applications wherein excessive sensible heat is generated inside the air- conditioned space. Some examples are rooms with heat generating equipment, offices with many PCs, industrial applications with electrical equipment and showrooms with heavy concentrated lighting.

For removing this excessive sensible heat, a higher rate of air circulation coupled with a special design evaporator is called for. Conventional ducted air conditioners are designed with evaporators that can handle 300 to 400 cubic feet of air per minute. For higher sensible heat applications, the air quantity handled is much higher.

The conventional use of higher capacity ducted air conditioners to match with the requirement of peak ambient temperatures and higher air circulation rates has many disadvantages:

- Higher cost of electrical accessories like switch gears, cables etc.
- Requirement of more space
- Continuous running of compressors, motors, etc., which may reduce the overall life of components / equipment
- Higher maintenance cost
- The definite risk of units ceasing to function if ambient temperatures go very high
- Higher overall power consumption

It is preferable therefore to design the air conditioning from the ground up to suit such high sensible heat applications.





Blue Star's **HiPer+** Air conditioners

Blue Star's HiPer+ units are specially designed for applications where conventional air conditioners cannot cool effectively due to various challenging conditions. These high-performance units come with many advantages due to their unique design and can function effectively for relatively higher sensible heat loads even in very high outdoor temperatures.

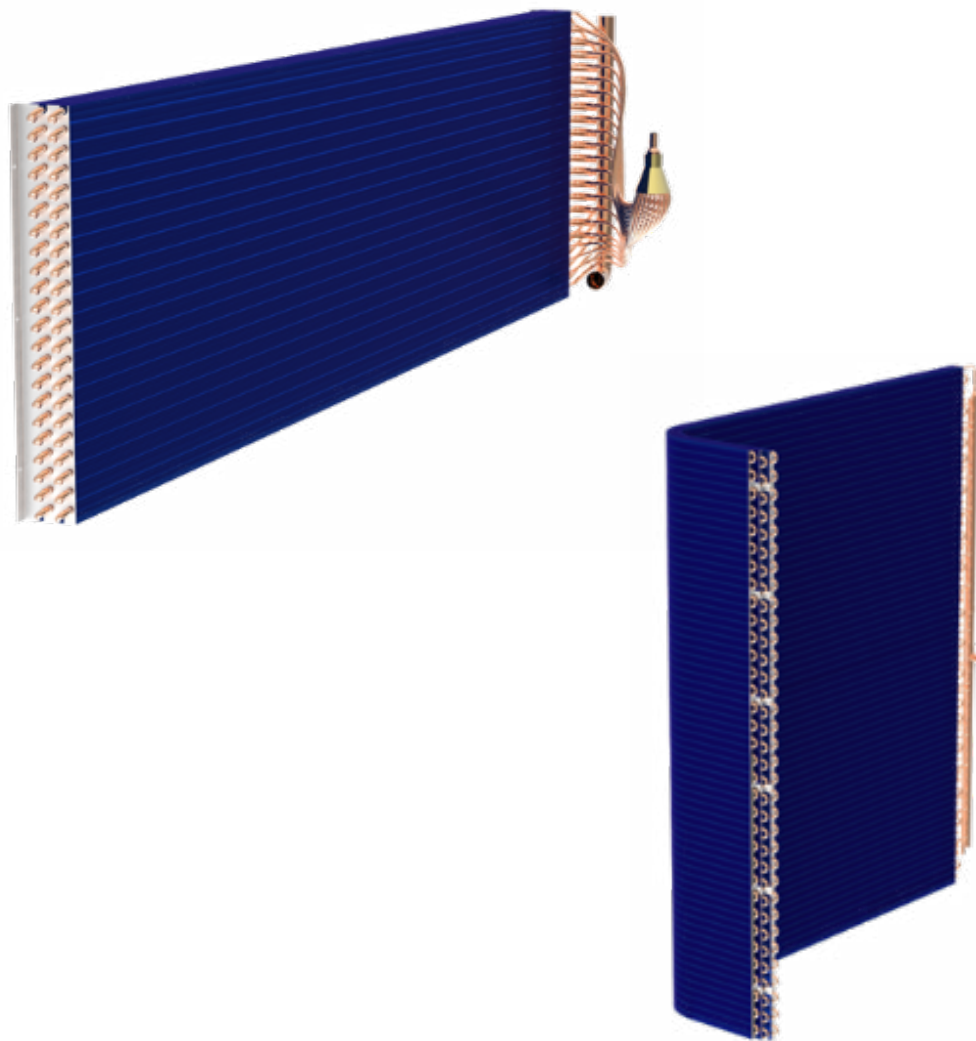
Optimal capacity units and lower overall ownership costs

While Blue Star's HiPer+ units are marginally more expensive when compared to conventional systems, their benefits far outweigh the cost factor. In fact, the power savings they provide pay back for the units in a very short period of time!

- Power savings as high as 20% and payback period as low as 6 months
- 25% lower capacity is sufficient to cool with HiPer units as compared to conventional units
- Enormous savings in initial electrical infrastructure costs of transformer, switchgears, generators, cables, etc.
- Lower real estate requirements due to lower number of units
- Overall savings in the total project cost

Superior Heat Exchanger Design

- Larger condenser with higher heat rejection capacity
- Oversized special evaporator coil with higher air flow rate to effectively handle higher sensible heat
- Actual capacity delivered at 45°C ambient temperature
- Special corrosion-resistant Blue Fin coating for both indoor and outdoor units



■ Optimally Selected Energy-Efficient Scroll Compressors

■ Ceiling and floor mounted options

Flexible indoor units that can be either mounted on the floor inside a dedicated room or suspended from the ceiling if the floor space is limited.



■ Advanced microprocessor control system with many state-of-the-art features

■ ECBC Compliant Design

Blue Star's HiPer+ units comply with the Energy Conservation Building Code norms stipulated by the Bureau of Energy Efficiency, Ministry of Power, Government of India.

■ Suitable for many applications

IT spaces, large supermarkets, industrial requirements, jewellery/textile showrooms, modern buildings with glass facades, medical equipment rooms, etc.



Blue Star HiPer+ Packaged & Ducted Split Air Conditioners can work at full capacity even at 45°C ambient temperature.



HiPer+ Ductable Split Air Conditioners – Technical Data

DESCRIPTION	UNITS	DSAP661R3	DSAP1021R3	DSAP2042R3
Cooling Capacity	HiPer TR*	5.5	8.5	17
Nominal Air flow–Indoor unit	CMH	5780	7470	14960
	CFM	3400	4400	8800
Electrical Power Supply	V/Ph/Hz	415 V, 3 ph, 50Hz, AC Supply		
Refrigerant		R410A		
INDOOR UNIT				
Dimensions – WxDxH	mm	1485 x 630 x 485	1840 x 630 x 485	2115 x 1005 x 865
Net Weight	kg.	75	90	210
Motor Power Supply – AC	V/Ph/Hz	220V, Single Phase, 50Hz		
Blower Fan	Type	Centrifugal, Forward Curve, DIDW		
OUTDOOR UNIT				
Quantity	No.	1	1	2
Dimensions – WxDxH	mm	1320 x 416 x 920	1437 x 622 x 919	1437 x 622 x 919
Net Weight	kg.	130	175	175
Compressor Type		Hermetically Sealed, Scroll		
Motor Power Supply – AC	V/HZ/PH	415 V, 3 ph, 50Hz	230V, 1 ph, 50Hz	
Fan/ Motor Quantity		1	2	2
Fan type		Propeller		

Specifications are subject to change without any prior notice.

*HiPer TR – Capacity at 45°C ambient.



HiPer+ Packaged Air Conditioners – Technical Data

DESCRIPTION	UNITS	DPAP661R3	DPAP1021R3	DPAP2042R3
Cooling Capacity	HiPer TR*	5.5	8.5	17
Nominal Air flow–Indoor unit	CMH	5950	7470	14960
	CFM	3500	4400	8800
Electrical Power Supply	V/Ph/Hz	415 V, 3 ph, 50Hz, AC Supply		
Refrigerant		R410A		
INDOOR UNIT				
Dimensions – WxDxH	mm	1160 x 660 x 1700	1160 x 660 x 1700	1500 x 930 x 1950
Net Weight	kg.	230	255	470
Power Supply – AC		420 V, 3 ph, 50Hz		
Compressor Type		Hermetically sealed scroll		
Blower motor type		Centrifugal forward curved, double inlet, double width		
Compressor Quantity	No.	1	1	2
OUTDOOR UNIT				
Quantity	No.	1	1	2
Dimensions – WxDxH	mm	1320 x 416 x 920	1440 x 622 x 920	1440 x 622 x 920
Net Weight	kg.	65	130	130
Fan Type		Propeller		
Fan/Motor Quantity	No.	1	1	2
Motor Power Supply – AC	V/HZ/PH	415 V, 3 ph, 50Hz	230V, 1 ph, 50Hz	230V, 1 ph, 50Hz

Specifications are subject to change without any notice.

*HiPer TR – Capacity at 45°C ambient.



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

For more information, please contact **BLUE STAR LIMITED - Ahmedabad:** 301-302, Abhishree 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, Satya Nagar, 2nd Floor, Bhubaneswar - 751 007. Phone: (+91) (674) 2572403/2573670/2570024. Fax: (+91) (674) 257 0544. • **Chandigarh:** Adarsh Mall, 4th Floor, Plot No 50, Industrial & Business Park, Phase - II, Chandigarh - 160 002. Phone: (+91) (172) 502 4000. Fax: (+91) (172) 500 4007. • **Chennai:** KRM Plaza, No 2, Harrington Road, Chetpet, Chennai - 600 031. Phone: (+91) (44) 4244 4000. Fax: (+91) (44) 2836 2101. • **Goa:** 210, 2nd Floor, Gera's Imperium I, Patto, Panjim, Goa - 403 001. Phone: (+91) (832) 2438171/2437287. • **Gurugram:** 6th Floor, Vatika Atrium, Golf Course 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 94/C Ring Road, Indore - 452 010. Phone: (+91) (731) 4001211/4001311. • **Jaipur:** A-19, First Floor, Main Sahakar Path, Near Sahakar Bhavan, Jaipur Phone: (+91) (141) 331 3000. Fax: (+91) (141) 512 4899. • **Kochi:** Prestige TMS Square, 9th Floor, No. 2, Service Road, Padivattom, Edappally, Kochi, Kerala - 682024. 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:** 5th Floor, Sandhu Tower - II Gurudev Nagar, Ferozpur Road Ludhiana - 141 001 (Punjab). 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, Jaspola 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) 4104 4001/2616 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. • **Thiruvananthapuram:** TC IV/962, Chandrika, Sree Chitra Nagar, Pipe Line Road, Kawdiar, 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 - 390 003. 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.