



NEXT GENERATION
INVERTER
DUCTED SYSTEM

Next Generation Inverter Ducted System
**LOWER ENERGY CONSUMPTION
HIGER COMFORT.**



Blue Star is the market leader in the ducted air conditioning space for the last three decades. The widest range of products in this category is available with Blue Star which includes hiper, hisen, water cooled and air cooled. The First generation Inverter Ducted Systems gained wide acceptance across the segments like retail, light commercial, offices and educational Institutes. Blue Star is proud to introduce the new generation Inverter ducted System which shifts the paradigm of energy efficiency to the next level. The new generation inverter ducted systems are designed with high efficient Inverter compressors, super precise electronic expansion valves and advanced electronics which will bring the efficiency levels closer to the VRF systems.



BLUE STAR'S NEW GENERATION INVERTER DUCTED SYSTEM

Blue Star's New Generation Inverter Ducted System is designed with an advanced energy-efficient inverter compressor technology and unique logic control which modulate the capacity of the system precisely to meet the actual load requirement inside the conditioned space.

The New Generation Inverter Ducted System also features many other sophisticated controls that increase efficiency and improve user-friendliness.



Range:
6.25 HP, 10 HP, '14 HP,
21 HP, 28 HP.

DUCTED SPLITS

OUTDOOR UNITS

PACKAGES AC's

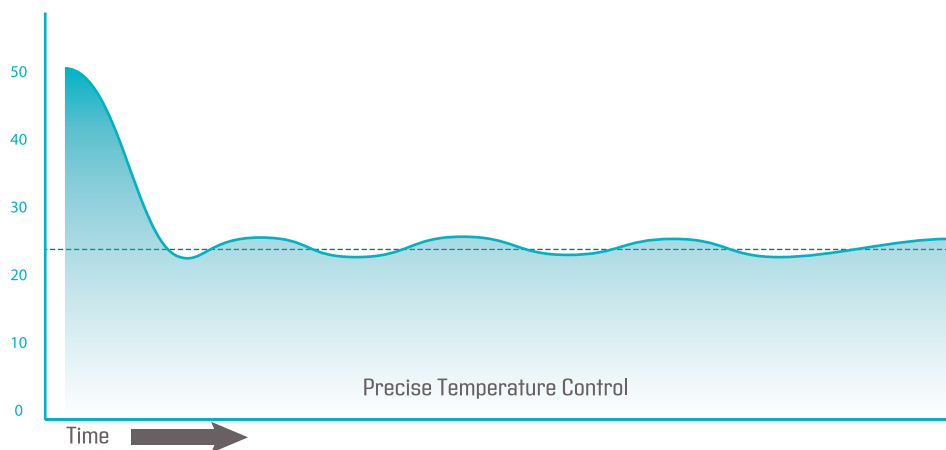
ADVANCED INVERTER COMPRESSORS AND CONTROLS

New generation inverter ducted units are equipped with the latest technology inverter compressors. These compressors can handle variable compression ratios effectively and handle variable load requirements efficiently.

The special electronic expansion valves with 3000 steps used in these systems will take care of the precise control of temperature in steps of 0.1° C.



UNIFORM & PRECISE TEMPERATURE CONTROL



Set Temperature

LOWER STARTING CURRENT

In the conventional ducted system, starting current can be as high as 4 times the running current. This will result in oversizing the electrical components and the backup generators. The total power sanctions must also consider the starting current surge in to account which will be additional investments.

The inverter compressors can start in an unloaded condition which will require very low starting current. This will benefit in optimising the power requirements of the premises, electrical components and the generator sizing minimum by 30%.

Conventional System
High Capacity Generator

17.5 KVA



Inverter Ducted System
Optimised Size Generator

12 KVA



HIGH EFFICIENT DESIGN - OUTSTANDING PERFORMANCE

With Blue Star's expertise in ducted system design, the new generation inverter ducted units have been designed with special oversized indoor and outdoor coils. These special design heat exchangers result in efficient performance of the system during various part-load and full-load conditions.

REFRIGERANT COOLED HEAT SINK

Inverter PCBs are refrigerant cooled with unique heat sink. This design enhances reliability at higher ambient temperature conditions.



HIGHER AMBIENT OPERATION

Most of the air conditioners are designed to operate only up to 45°C beyond which machines shall trip. India is a tropical country where the temperature soars beyond 42°C during summer. The urban heat effect will further add the working conditions by 3` to 4°C. New gen inverter ducted systems are designed to operate the typical Indian higher ambient conditions.

Inverter PCBs are refrigerant-cooled. The enhanced heat exchanger design along with the refrigerant cooled PCBs result in reliable operation even at very high ambient temperatures like 52°C.

URBAN HEAT EFFECT

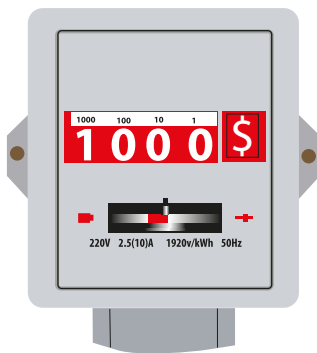


POWER SAVINGS:

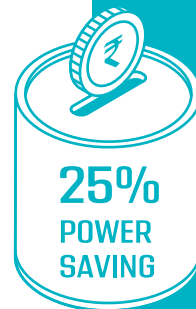
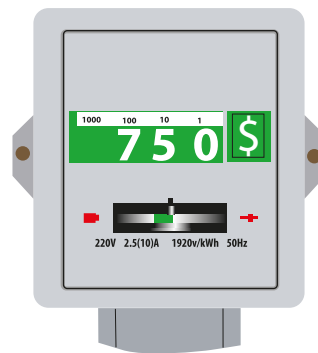
The high efficient inverter compressors, specially designed outdoor and indoor units, super precise electronic expansion valves and sophisticated electronics make the Blue Star's New Gen Inverter Ducted System, highly energy efficient. The machines can also precisely regulate the capacity based on the internal loads and external ambient. These features offer phenomenal 25% annualised power saving compared to any conventional ducted systems.

The return on investment will be less than 12 months.

CONVENTIONAL SYSTEM



INVERTER DUCTED SYSTEM



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, resulting in longer life .



ENHANCED AESTHETICS

The next gen inverter ducted systems are designed with accumulators and intelligent oil control logic at various speeds. This enables to have the piping length up to 60m. The outdoor units can be positioned in a terrace or in remote locations which shall help maintain external building aesthetics.



MULTI OUTDOOR ADVANTAGE

The multi outdoor system can run uninterruptedly with one DOU even in a rare case of any failure of other DOU, this happens automatically and no manual intervention is required.

AHU INTEGRATION

Non-standard AHUs with different static and CFM will be required for special applications like hospitals, clean rooms, banquet halls, etc. Specially designed AHU kits facilitate this AHU integration.

Inverted ducted system's outdoor units can be coupled with non-standard AHUs by the specially designed AHU kits.

A single AHU kit allows integration of AHUs up to a capacity of 22TR.

This feature is ideal for retrofit projects where we can replace the old conventional power gusting systems with energy efficient next generation



AHU Kit Range: 5TR to 22TR.
Inverter systems.



TOUCH SCREEN CONTROLLER FOR DUCTED SPLITS

The Blue Star Inverter Ducted System comes with a touch screen based controller and blue backlight. Controllers are elegant looking with many user friendly features.

Salient features of the Controller



Compressor status indication



ON-OFF timer



Room temperature display



Error reset



Wide temperature range 19 – 32°C



Error indication

Touch Screen Controller Device



SPECIAL CONTROL FEATURES

The New Generation Inverter Ducted System comes with a variety of control options.

Group Control

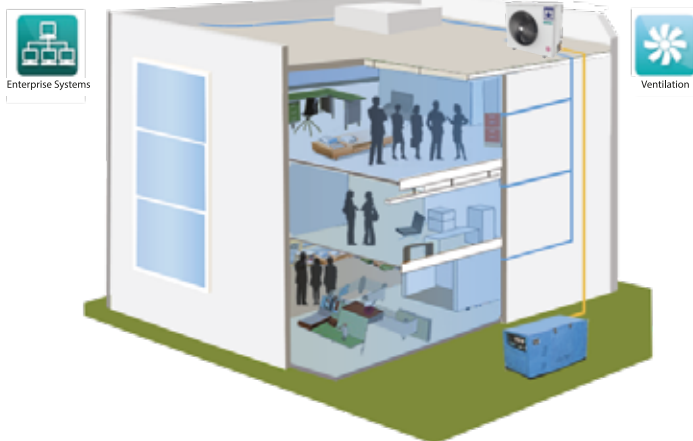
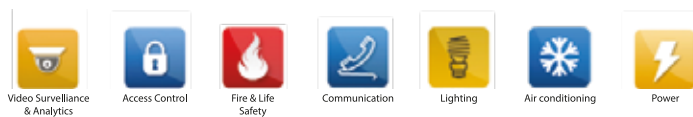
Multiple units can be monitored and controlled with Mobile or PC based application through web even from remote locations.

Web based control through Mobile/PC

Multiple units can be monitored and controlled with Mobile or PC based application through web even from remote locations.

BMS Integration

Inverter ducted units can be integrated with third-party BMS networks through modbus RTU Communication Protocol using add-on cards. Up to 60 units can be connected to the MODBUS Master through Optional converters.



Options are also available to convert to other protocols like Bacnet, Lonworks etc.

Air Cooled Packaged Air Conditioners– Inverter Type

DESCRIPTION	UNITS	DPAI-601R3A	DPAI-961R3A	DPAI-1321R3A	DPAI-1982R3A	DPAI-2642R3A
Nominal Cooling 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)	V/Ph/Hz	415V, 3 phase, 50Hz				
External Finish		Pure Polyester Power Coated GI Steel				
INDOOR UNIT						
Dimensions						
Width	mm	900	1160	1160	1500	1500
Depth	mm	660	660	660	750	930
Height	mm	1700	1700	1700	1750	1950
Weight of indoor unit	kg	185	235	250	410	480
Power Supply (AC)		415V, Three Phase, 50 Hz				
Type of Blower		Centrifugal forward curved, double inlet, double width				
Nominal Air flow	CFM	2200	3750	4400	6600	8800
	CMH	3740	6371	7470	11210	14940
Compressor Quantity	No.	1	1	1	2 (11TR + 5.5TR)	2 (11TR + 11TR)
Compressor type		Hermetically sealed Rotary DC Inverter		Hermetically Sealed Inverter Scroll	Hermetically Sealed Inverter Scroll + Fixed Scroll	
Air Filter		Non woven polyester media enclosed in HDPE mesh				
Controller		Innovative intelligent inverter controller with touch screen display				
Capacity Control		Stepless				
OUTDOOR UNIT						
Quantity	No.	1	1	1	2 (11TR + 5.5TR)	2 (11TR + 11TR)
Dimensions						
Width	mm	1020	1320	1435	1435 +1020	1435 +1435
Height	mm	925	925	947	947+925	947+947
Depth	mm	416	416	635	635+416	635+635
Weight	kg	50	65	130	130+50	130+130
Power Supply (AC) to motor		230V, 1 ph, 50Hz	415V, 3 ph, 50Hz		230V, 1 ph, 50Hz	
Condenser Fan type		Propeller				

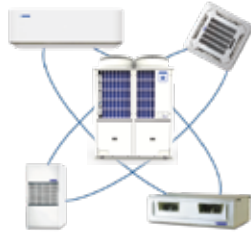
Specifications are subject to change without any prior notification due to continuous product improvement

Air Cooled Ducted Split Air Conditioners– Inverter Type

DESCRIPTION	UNITS	DSAI-601R3A/B	DSAI-961R3A/B	DSAI-1321R3A/B	DSAI-1982R3A/B	DSAI-2642R3A/B
Nominal Cooling 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)	V/Ph/Hz	415V, 3 phase, 50Hz				
External Finish		Pure Polyester Power Coated GI Steel				
Capacity Control		Stepless				
INDOOR UNIT						
Dimensions						
Width	mm	1140	1485	1840	2035	2115
Depth	mm	630	630	630	1085	1005
Height	mm	485	485	485	555	865
Weight of indoor unit	kg.	55	75	90	150	210
Power Supply (AC)		215V, Single Phase, 50 Hz				
Type of Blower		Centrifugal forward curved, double inlet , double width				
Nominal Air flow	CFM	2200	3400	4400	6600	8800
	CMH	3740	5770	7470	11210	14940
Air Filter		Nonwoven 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						
Width	mm	1020	1320	1320	1320+1020	1320+1320
Height	mm	925	925	1495	1495+925	1495+947
Depth	mm	416	416	416	416+416	416+635
Weight	kg	95	125	155	155 + 95	155+155
Compressor Quantity	No.	1	1	1	2 (11TR + 5.5TR)	2 (11TR + 11TR)
Compressor type		Hermetically sealed Rotary DC Inverter		Hermetically Sealed Inverter Scroll	Hermetically Sealed Inverter Scroll + Fixed Scroll	
Power Supply (AC) to motor		230V, 1 ph, 50Hz	415V, 3 ph, 50Hz		230V, 1 ph, 50Hz	
Condenser Fan type		Propeller				

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Widest Range Of Products



VRF Systems



Packaged ACs & Ducted Splits



Condensing Units



Inverter scroll chillers



Process Chillers



Tank Chillers



Air cooled & Water cooled
VFD Screw Chillers



Air-Cooled Configured Screw
Chiller - High Efficiency Series



Air Cooled and
Water Cooled Scroll Chiller



Water-Cooled Screw Chillers
Configured Series



Turbocor Chillers



Water Cooled Falling Film
Screw Chillers

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