




BLUE STAR

VRF VI PLUS


A new age cooling solution

*Setting new benchmark for
sustainability at high ambient
and energy efficiency with
smart technology*





Blue Star is India's leading HVAC solutions provider. Our expertise in providing air conditioning solutions to diverse industrial domains comes from our experience of over 7 decades in the industry. Today, the Company is a leader in commercial AC technology trends and is held in high esteem in almost every aspect of the cooling business - VRFs, Chillers, AHUs, FCUs, Packaged & Ducted Splits. Apart from its wide range of products and solutions for which the Company country it operates in, Blue Star is also known for its manufacturing prowess. Over the decades, Blue Star



has been the pioneer in introducing latest technologies in the industry. We brought in the first Scroll and then the Tandem Scroll packaged units to give our customers a heads up on power savings. We developed the first high-performance packaged units that cool high sensible loads even at high ambients. We switched to eco-friendly refrigerants well ahead of others. We introduced Inverter technology in various product ranges, and developed unique VRF solutions that suited the Indian tropical climatic conditions and high ambient conditions of regions like the Middle East.

Global Presence

Blue Star has an international presence in the Middle East, Africa, SAARC and ASEAN regions. In addition, the Company also participates in international projects managed by their joint ventures in Qatar, Oman and Malaysia.

Blue Star's R&D is equipped with advanced engineering design software such as Creo, Unilab, PV Lite Solid Edge, PRO-Mechanic, Rhino, Alias and ANSYS Fluent. There are also advanced software tools employed for system design, product performance rating, selection and heat exchanger optimisation.

Cutting-Edge R&D

Blue Star's innovations are born out of the high-end R&D establishment that has been painstakingly put together over decades, with the brightest brains and the latest equipment in place. Recognised by the Department of Science and Industrial Research (DSIR) – Ministry of Science and Technology, Government of India, Blue Star's R&D has enabled the Company to file more than 25 patents and win many prestigious innovation awards.

World-class testing facilities

Blue Star's infrastructure for conducting various performance tests on new products is one of the largest in India, ensuring that every product & technology is tested vigorously before being productionised. Blue Star has 6 Psychrometric, 2 Condensing and 2 Environmental test labs. Blue Star's R&D labs at Thane & Dadra have been certified by Intertek, Sweden to carry out safety tests for HVAC products, as per International Electrotechnical Commission Standards. Intertek is a global leader in safety testing & certification for regulatory approval. Also, the National Accreditation Board for Testing and Calibration Laboratories (NABL) has conferred a Certificate of Accreditation to Blue Star Laboratories located at Thane and Wada, India in accordance with the Standard ISO 17025: 2005. NABL is a Signatory member of APLAC and International Laboratory Accreditation Co-operation (ILAC). Blue Star VRF Systems are tested by internationally recognized third party laboratory, "Intertek Testing Services (Thailand) Ltd, Bangkok, Thailand".



The R&D also has psychrometric test facilities to conduct performance tests on the DX systems range in line with international testing standards.



Psychrometric Test Lab

Products designed are also subject to various reliability tests before they are cleared for manufacturing. These include endurance, vibration and shock tests along with life-cycle and ageing tests to rigorously examine design reliability. All Blue Star products are designed to perform under tropical conditions such as high ambients, high humidity, under extreme voltage conditions and fluctuations. All designs are tested for performance under high ambient conditions and extreme power conditions as prevalent in India.

Advanced psychrometric test lab at Dadra

Blue Star's Dadra factory has a modern Psychrometric test lab that can simulate and test VRFs under various conditions. All machines manufactured at the factory are rigorously tested for various parameters at this facility before despatch. Customers too can witness actual performance tests conducted on the new VRF VI Plus before despatch of their machines, making Blue Star one of the few companies in the air conditioning industry to offer this facility.



World-Class Manufacturing

Blue Star's manufacturing strength is spread across five state-of-the-art manufacturing facilities in the country. The new Blue Star VRF VI Plus units are manufactured at the contemporary and modern factory at Dadra. Set up to international standards, the products manufactured at this ISO 9001 - 2015 certified factory are sold not only across India but also exported to various countries across the globe.



Panel Punching Machine



Dadra Factory







Ensuring an excellent finish

Blue Star's production facilities use raw materials that are of the highest quality, including corrosion-resistant galvanised steel for enhanced life and rust protection. The equipment used to process the steel include CNC machines such as the Amada punch press, hydraulic press and specialised microprocessor-based protection and resistance welders. All these machines ensuresuperior quality in cabinet fabrication with tight tolerance. All products are powder-coated by specialised process equipment from Nordson of the USA on fully conveyorised lines. This equipment is fitted with electro-mechanical oscillators that ensure an even powder coating. A 'smart spray' mechanism senses movement of the conveyor and geometry of the component to adjust powder flow.



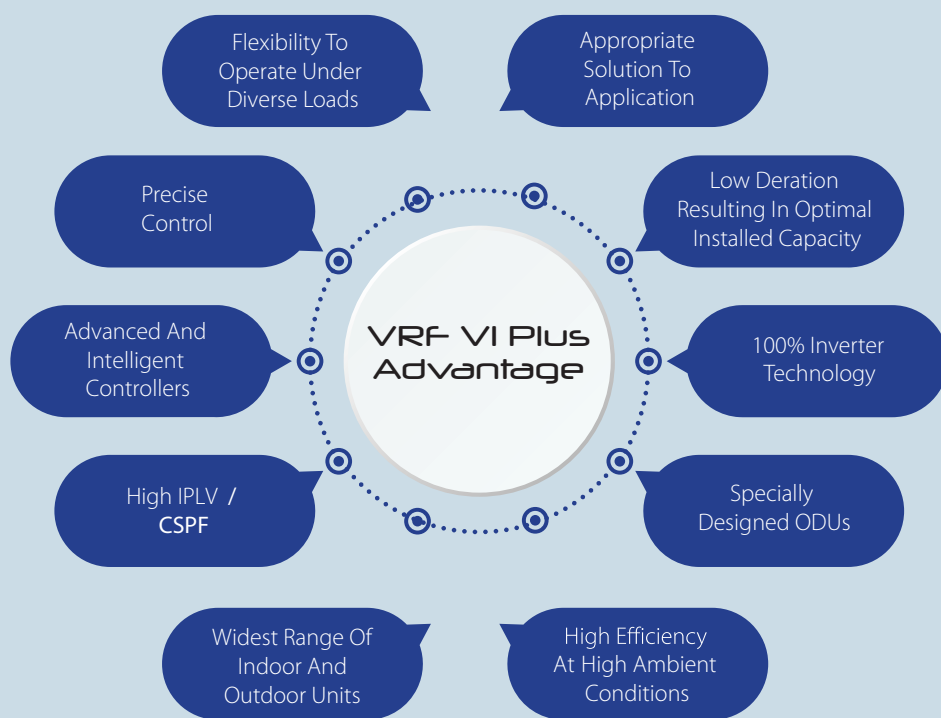
Paint Shop



Panel Blending Machine

Blue Star is equipped with a high-tech coil manufacturing setup using imported Burr Oak machines that can manufacture high efficiency plain coils as well as enhanced split fins for superior heat transfer.






The copper tubes are then processed by a bank of PLC-controlled Burr Oak machines that ensure perfect bonding between the copper tubes and fins for superior performance. The coils are then tested for fine leaks with ultra-sensitive electronic leak detectors to enhance reliability.



SCHEMATIC OF THE BLUE STAR VRF VI PLUS SYSTEM












Outdoor Unit			
Hi-Wall Units			
Four-way Cassettes			
Compact Cassettes			
One-way Cassettes			
Two-way Cassettes			
Verticools			
Concealed Splits			
Ductable IDUs			
Floor-Mounted Packaged Units			
Air Handling Units		Treated Fresh Air Unit	
			

VRF VI PLUS ODU COMBINATION

Appearance	System Capacity (HP)	8 HP	10 HP	12 HP	14 HP	16 HP	18 HP	20 HP	22 HP	24 HP	26 HP	28 HP	No. of IDUs
	8	1											8
	10		1										10
	12			1									12
	14				1								14
	16					1							16
	18						1						18
	20							1					20
	22								1				22
	24									1			24
	26										1		26
	28											1	28
	30				1	1							30
	32					2							32
	34			1					1				34
	36					1		1					36
	38		1									1	38
	40			1								1	40
	42				1							1	42
	44					1						1	44
	46						1					1	46
	48							1				1	48
	50								1			1	50
	52									1		1	52
	54										1	1	54
	56											2	56
	58				1	1						1	58
	60					2						1	60
	62			1					1			1	62
	64					1		1				1	62
	66		1									2	62
	68			1								2	62
	70				1							2	62
	72					1						2	62
	74						1					2	62
	76							1				2	62
	78								1			2	62
	80									1		2	62
	82										1	2	62
	84											3	62
	86				1	1						2	62
	88					2						2	62
	90			1					1			2	62
	92					1		1				2	62
	94		1									3	62
	96			1								3	62
	98				1							3	62
	100					1						3	62
	102						1					3	62
	104							1				3	62
	106								1			3	62
	108									1		3	62
	110										1	3	62
	112											4	62










Note : Images are for representation purpose only for number of modules required for desired capacity.

SCHEMATIC OF THE BLUE STAR VRF VI PLUS SYSTEM

Type		Cooling Capacity in TR																											
		0.6	0.8	1	1.3	1.4	1.5	1.6	1.7	2	2.25	2.3	2.4	2.5	2.8	3	3.2	3.5	4	5	5.5	6	6.8	8	10	11	18	20	22
	Hi-Wall Units		•	•	•		•		•	•				•	•														
	Four-way Cassettes			•	•		•		•	•		•			•		•		•	•									
	Compact Cassettes	•	•	•	•		•																						
	One-way Cassettes	•	•	•	•		•		•																				
	Two-way Cassettes	•	•	•	•		•		•	•																			
	Verticools								•		•			•		•		•											
	Concealed Splits		•	•	•		•		•																				
	Ductable IDUs				•	•	•		•	•	•		•	•		•		•	•	•		•		•		•	•	•	
	Low Static Ducted		•	•	•		•		•	•		•		•			•		•										
	Floor Mounted Packaged Units																		•					•	•		•		•
	Treated fresh air unit																	•			•		•						



WIDE RANGE CONTROLLERS

Appearance	Type
	Cordless Remote Controller
	Wired Controller
	Group Controller
	Wi-Fi Based Central Controller
	PC Monitoring System
	Keycard Controller
	Tenant Billing System
	BMS Compatibility
	Mobile App
	Data Concentrator

UNIQUE FEATURES OF THE VRF VI PLUS

Highly efficient inverter compressors

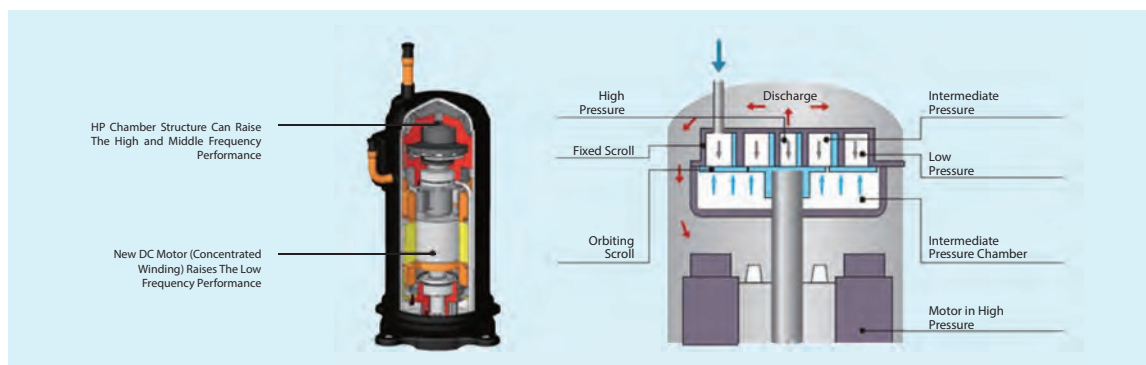
The unique design of the inverter compressor ensures that the refrigerant is directly injected into the compressor chamber. Since the suction gas enters directly into the scroll, there is no superheat gain due to the compressor motor assembly. This results in efficiency enhancement of up to 3%.



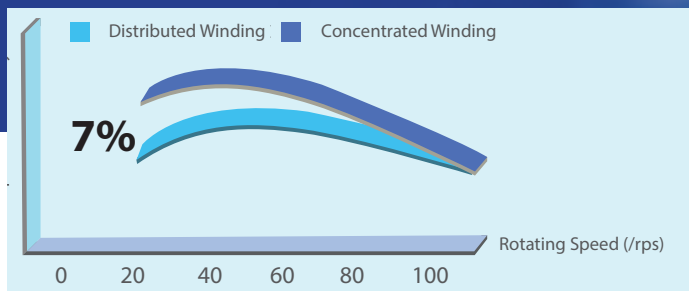
High pressure discharge chamber compressors

The speed of the conventional inverter compressors is, in general, restricted to 30%, as a lower speed may affect the flow of the lubricating oil in the compressor. However, the unique inverter compressor used in Blue Star's VRF VI Plus uses a high pressure discharge chamber design which ensures uniform oilflow irrespective of the speed of the compressor. This gives the system the flexibility to operate under extremely low loads (even below 30%) which is not possible with other compressors.

When the hot gas from the scroll is discharged into the high pressure chamber, the velocity is reduced. Hence, the whole design acts like a muffler and reduces noise levels to a great extent. The compressors are also fitted with concentrated windings which reduce slip loss of motors when operating at low speeds. This results in enhanced efficiency compared to other windings by up to 7% on part loads.

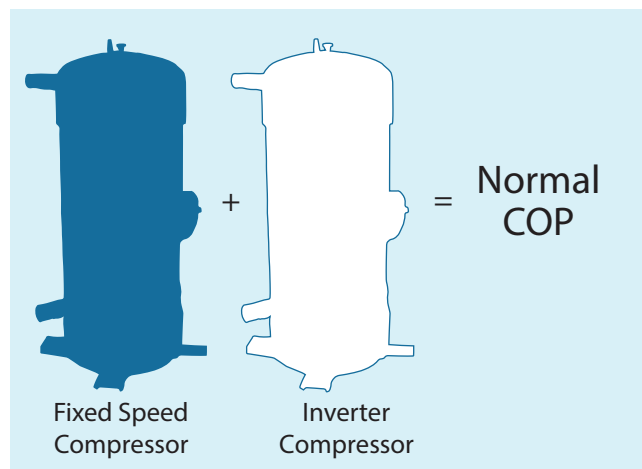


Not just that, powerful, permanent rare-earth magnets are used in the rotors of DC inverter compressors. This allows the stators to be designed smaller which ultimately results in low power consumption.

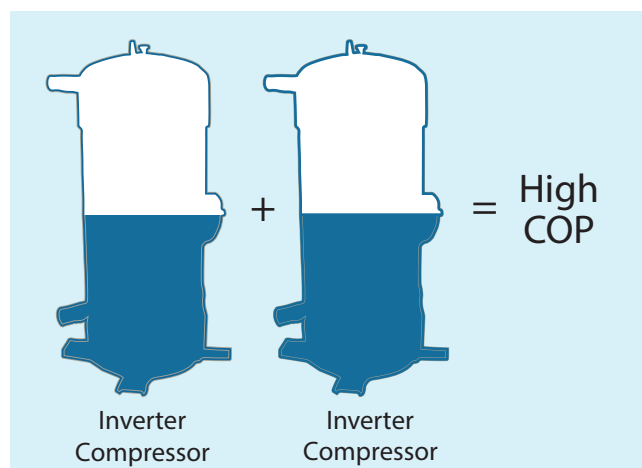


100% INVERTER ADVANTAGE

Blue Star's VRF VI Plus units are fitted with 100% inverter compressors. The unique logic of the system is that it optimally loads compressors in such a way that maximum efficiency is achieved under any load condition.

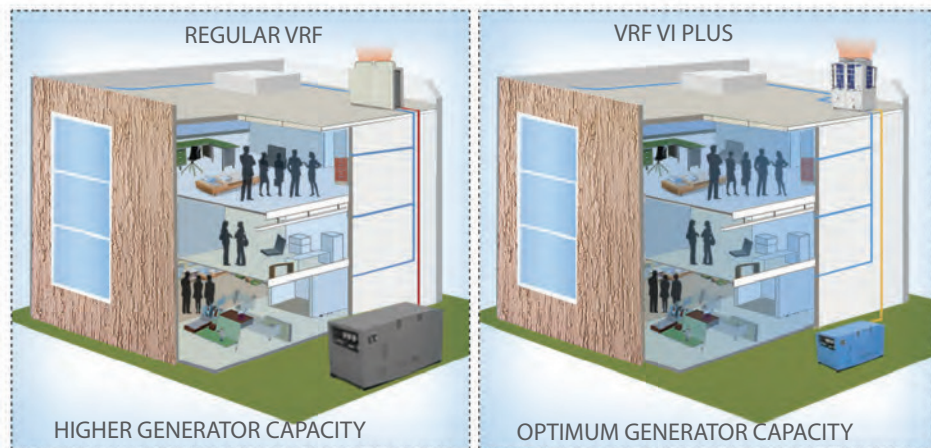


Normal VRF at 50% load

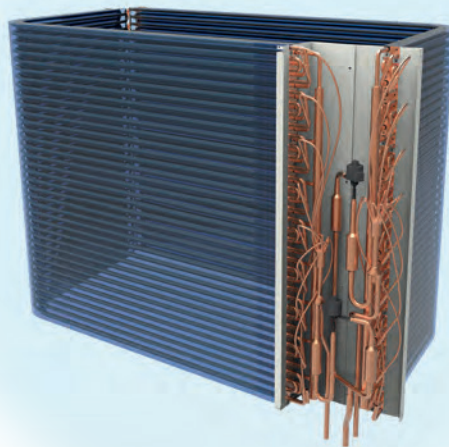


VRF VI Plus at 50% load

The other advantage of 100% inverter systems is the low starting current compared to VRF systems fitted with fixed and variable capacity compressors. This helps optimise electrical requirements like generator capacity and cable sizes.

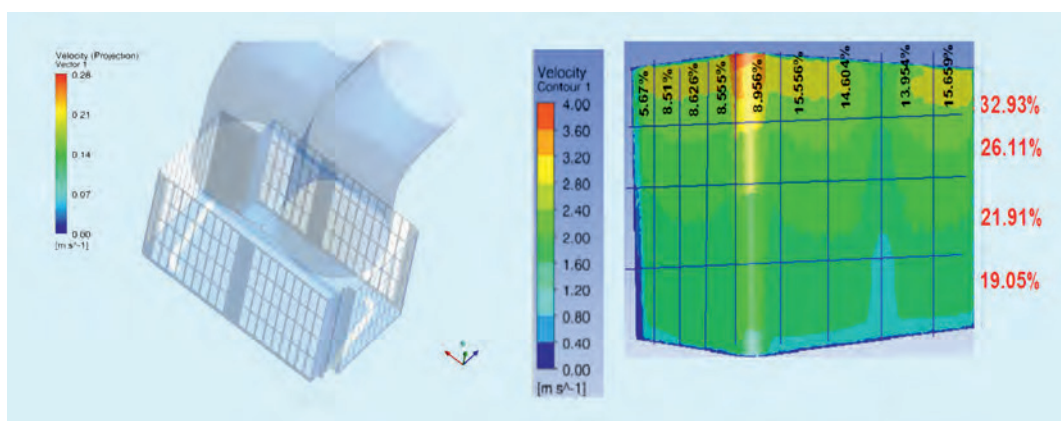


The condensers in these ODUs are precisely designed to ensure maximum efficiency of the VRF system. The specially designed condenser coil face area is at least 30% higher than in other systems.



SPECIALLY DESIGNED ODU_s

The VRF VI Plus ODU_s are specially designed using CFD analysis to ensure maximum airflow and minimum pressure drop. This robust design makes the system function efficiently even when operating under extremely high or low ambient conditions.



The heat exchanger compartments are designed to ensure uniform airflow without any obstruction. This ensures efficient heat exchange and results in high efficiency. Specially designed louvre fins enhance system efficiency by up to 7%.

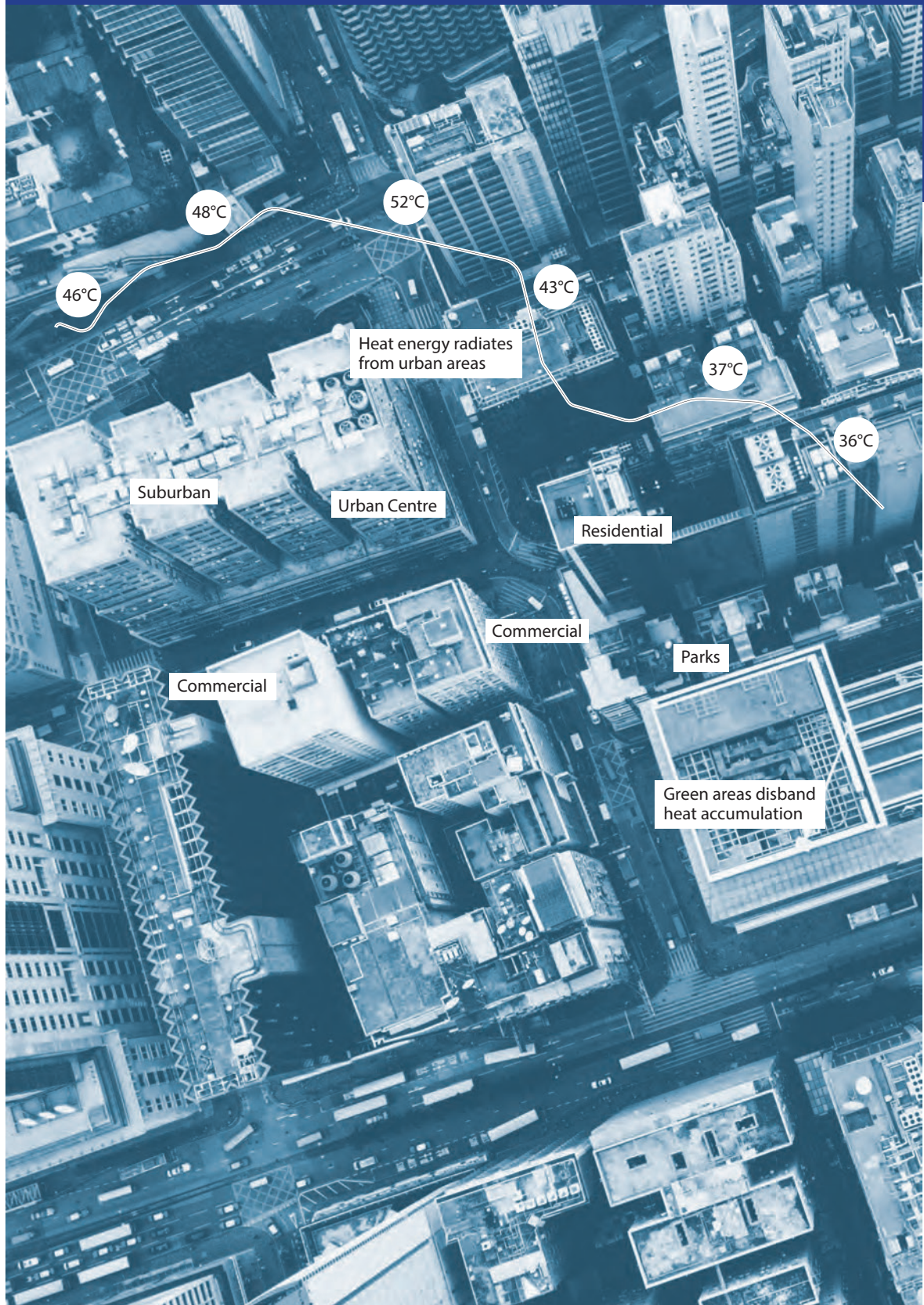
The copper tubes are inner-grooved for high heat transfer. The condenser fans are fitted with high efficiency DC motors that regulate airflow depending on demand, resulting in power savings. The special design features incorporated in the VRF VI Plus ODU result in:

- High COP and IPLV / CSPF
- 100% capacity upto 43°C
- Non-stop operation even at 56°C

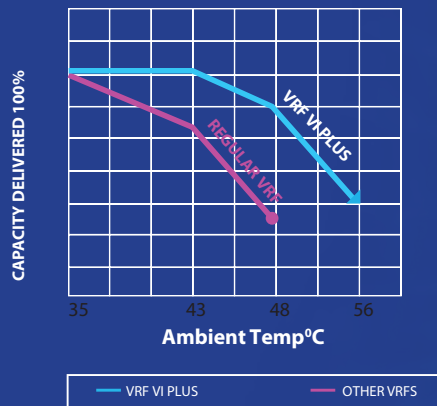
Optional Blygold coating on condenser coil enhances the durability of the coil.

The coating sustains 4000+ hours of salt spray test as per ASTM B117 standard.

DESIGNED FOR HIGH AMBIENT CONDITIONS



VRF VI PLUS HIGH AMBIENT (56°C) PERFORMANCE



Most air conditioning systems are designed to deliver nominal capacity at 35°C. However, in hot climatic conditions like the Middle East, ambient temperatures are much higher most of the time. The urban heat effect, whereby ambients are a couple of degrees higher than normal, makes the situation even more difficult.

Higher ambients result in system deration and higher power consumption as well. Blue Star's VRF VI Plus is specially designed to deliver 100% capacity at a higher ambient of 43°C.

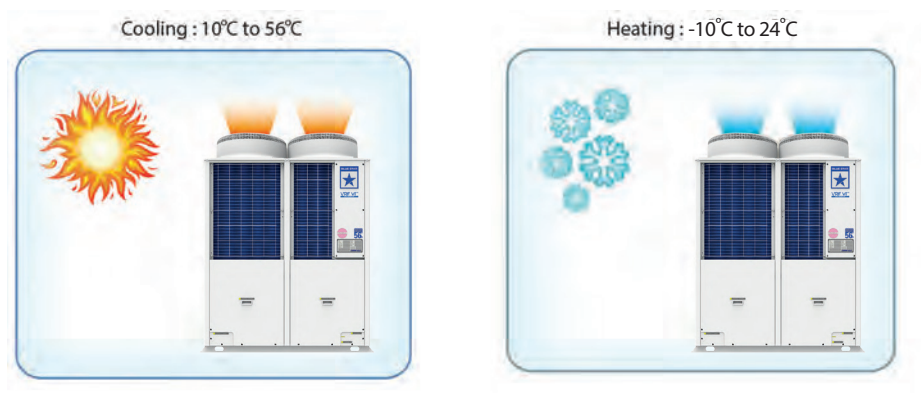
There are several reasons why the Blue Star VRF VI Plus operates more efficiently even under high ambient conditions:

- Enhanced coil surface area up to 30% more than other VRF systems ensures that 100% capacity is delivered at 43°C
- This also ensures that the system is more efficient above 43°C
- Optimally selected compressors which do not unload till 48°C. When the ambient temperature goes higher than the ambient temperature the system is designed for, inverter compressors in conventional systems ramp up speed to meet with load demands. However, there are limitations to this ramp-up beyond which the compressors unload. Hence, the deration of such systems is a summation of high ambient conditions as well as the drop in capacity due to compressor unloading.
- Advanced heat sink design and oil management systems ensure that the systems function non-stop till 56°C



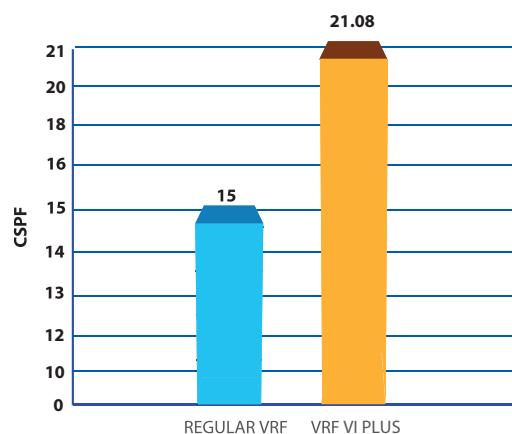
WIDE OPERATING RANGE

The VRF VI Plus is designed with high pressure and low pressure protective systems, enabling the machine to perform across a wide operating temperature bandwidth. The system can operate from 10°C to 56°C in the cooling mode and -10°C to 24°C in the heating mode.



HIGH SYSTEM EFFICIENCY

Enhanced coil surface area, 100% inverter compressor advantage, and system logic for compressor efficiency optimisation together result in superior performance of the entire system.



WIDE OPERATING RANGE

The Blue Star VRF VI Plus system is designed with the largest twin accumulator in its class. This new design allows the system to perform seamlessly in low load conditions, even below 30% without tripping.



VRF systems are generally suggested for applications where there could be extreme variations in internal loads. However, the system design of the VRF system will decide the minimum operable load conditions. Conventional VRF systems are not designed to operate below 30% of the load, the primary reason being the inability to manage the liquid refrigerant and oil in low load conditions. The VRF VI Plus is designed to handle loads as low as 5%.

LONG PIPING LENGTHS

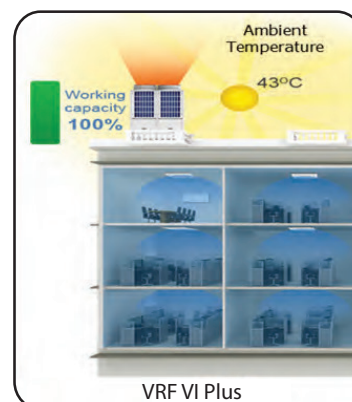
VRF systems generally need long refrigerant piping. And when pipe lengths are higher, refrigerant charge is proportionately higher. This calls for a better system design with proper accumulator sizing to handle the excess refrigerant during the functioning of the system. The Blue Star VRF VI Plus is designed to operate efficiently even with very long piping lengths of up to 1km.



If the excess liquid refrigerant is not handled effectively, it can enter the compressor and result in failure. Since the VRF VI Plus uses the best accumulator design in the industry, it ensures that no liquid enters the compressor, thus increasing reliability.

100% CAPACITY EVEN AT 43°C

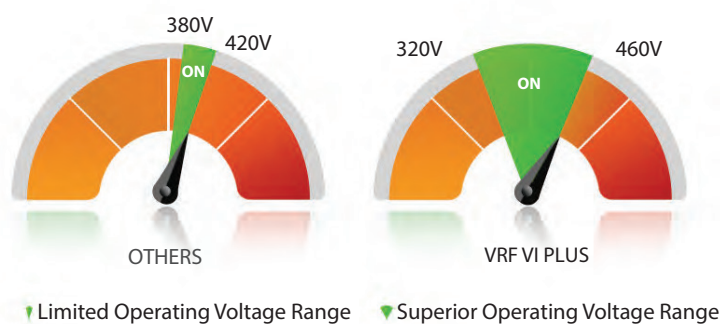
The Blue Star VRF VI Plus delivers 100% capacity even when the ambient temperature is as high as 43°C. This enables reliable operation even under extremely high temperature conditions.





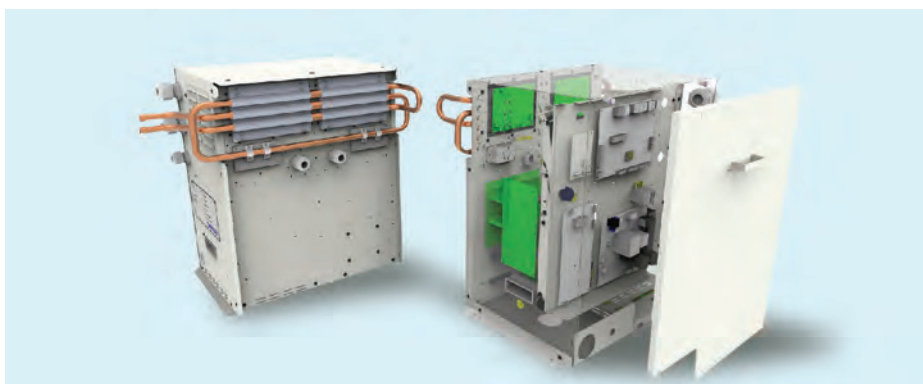


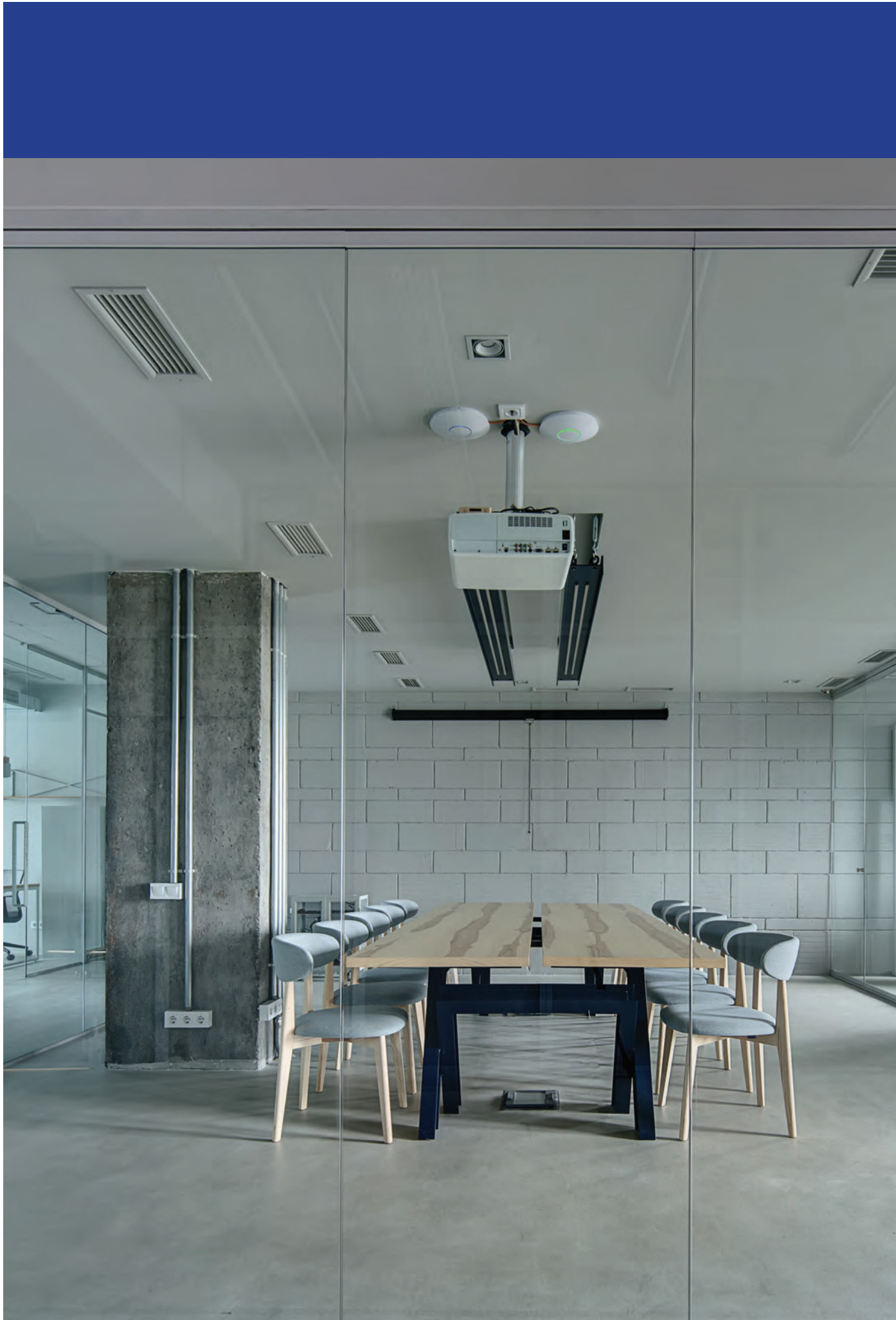
In situations where voltage fluctuations are alarming, most AC systems operate inefficiently or shut down. The Blue Star VRF VI Plus is designed to operate across a wide voltage range from 320V to 460V, resulting in high uptime even in erratic power conditions.



Innovative Refrigerant-Cooled Heat Sink

Inverter drives play a very important role in regulating the capacity of the system based on load requirements. Keeping the inverter drive in a controlled temperature is very important for enhanced life, improved performance and reliability. The VRF VI Plus is designed with an innovative refrigerant-cooled heat sink which helps maintain the drive within the allowable temperature range. This enhances the reliability of the system when it is working under very high ambient conditions.





SUPERIOR OIL MANAGEMENT SYSTEM

PATENTED OIL RECOVERY

Considering the very long piping lengths that the VRF VI Plus must handle, it is crucial to have a superior oil management system to ensure reliability. The VRF VI Plus is manufactured with a specially designed and patented oil separator to ensure efficient oil recovery in the VRF System.

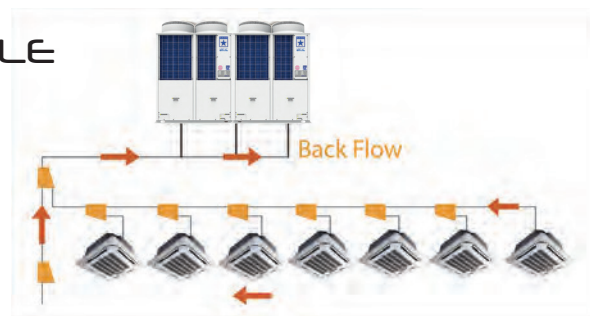


OIL SWAP

Oil is also swapped with the next ODU on a regular basis to maintain the oil balance in the system.

IDU OIL RETURN CYCLE

The cyclic oil recovery from the IDU is done by widely opening the electronic expansion valve and completely recovering the oil back to the ODU. Oil is recovered even from switched-off indoor units.



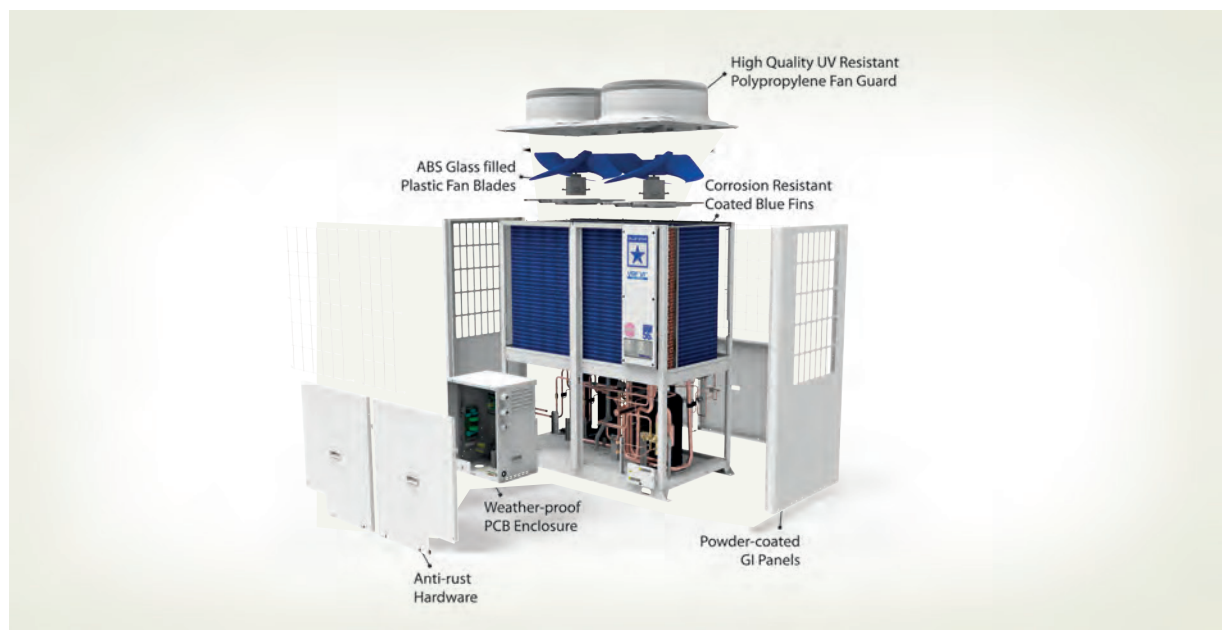
SERVICE-FRIENDLY

All components of the outdoor unit are mounted in a separate compartment at the bottom and are accessible from all four sides. This makes these ODUs very easy to service.

WEATHER-PROOF ODU DESIGN

The Blue Star VRF VI Plus is specifically designed to handle extreme climatic conditions, corrosive and polluted atmospheres.

- Powder-coated GI sheet metal cabinets
- All hardware of anti-rust quality
- Conformal coating on PCBs to protect from dust and humidity
- Hydrophilic blue fin for better corrosion resistance
- Weather-proof enclosures for critical components



CONFORMAL COATING FOR PCBs

- All the PCBs in the VRF VI Plus are coated with a special acrylic-based polymer film
- This special conformal coat adheres to the norms of circuit board topology
- This special coating is used in various industries like automobile, defence, warehousing, space and marine applications.

This protects PCBs from the harmful effects of the following:

MOISTURE | HEAT | FUNGUS | CHEMICALS | DUST

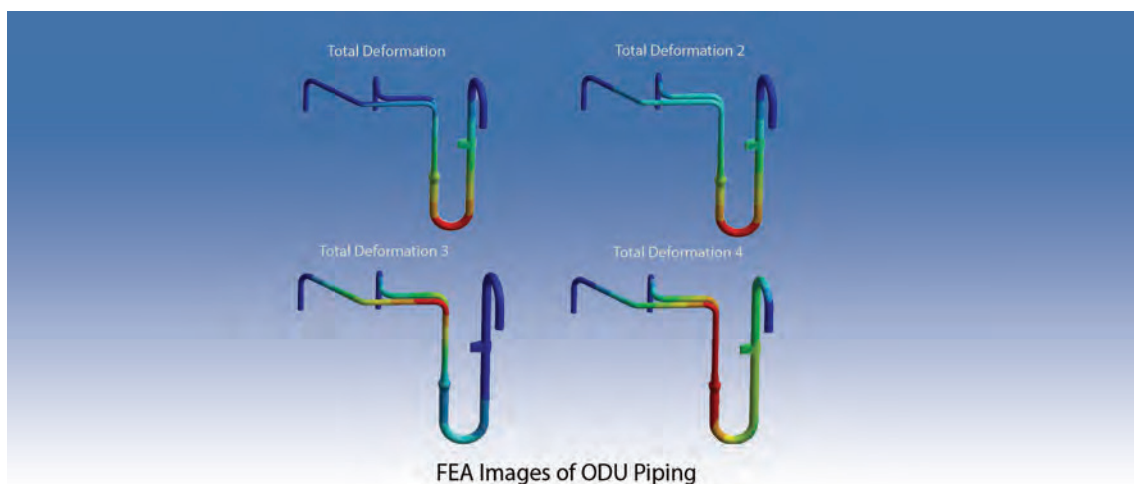


Conformal Coat

This cover not only protects but also maintains the breathable layer of the PCB with good electrical properties and is also eco-friendly.

COMPUTERISED DESIGN FOR RELIABILITY

VRF systems fitted with inverter compressors run at various compressor speeds to regulate capacities to suit actual load requirements. These variations in speed result in vibrations of the copper pipe fittings. Hence, it is important to have a reliable and tested piping load design in the ODU. In the VRF VI Plus, piping layers are created using Finite Element Analysis (FEA). This ensures reliability and trouble-free performance under various load conditions.



LARGE CAPACITY AND WIDE RANGE OF ODUs

The Blue Star VRF VI Plus has a wide range of ODUs with capacities from 8HP to 28HP.



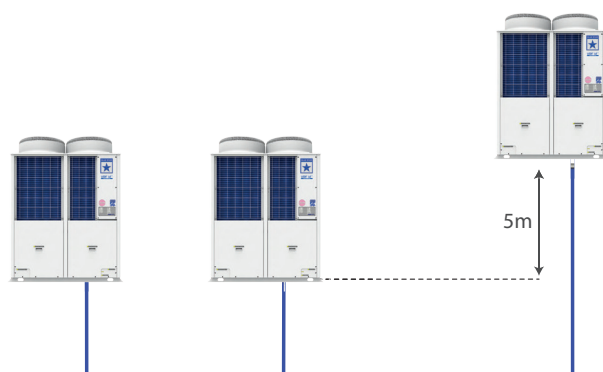
Up to 4 ODUs can be combined in one design to increase capacity up to a maximum of 112HP.



LONG AND FLEXIBLE PIPING DESIGN

The Blue Star VRF VI Plus is designed with a large accumulator and an efficient oil recovery management system, hence allowing the system to be set up with long and flexible piping. Total piping length 1km

Elevation between ODU and IDU	90m
Elevation between IDUs	40m
Elevation between ODUs	5m



QUIET MODE

When the ambient noise levels are low, like at night time, noise levels of an operating AC can be disturbing especially in residential applications. To overcome this noise issue, the Blue Star VRF VI Plus has a unique 'Quiet Mode' feature which operates at two levels:

- Quiet mode: Outdoor fan speed is reduced.
- Super Quiet mode: Along with fan speed, compressor speed is also lowered. The start and end time of this feature can be set to suit each installation's requirements.





DEMAND CONTROL MODE OR ECONOMY MODE

Under the Demand Control mode, the capacity of the ODUs of the VRF VI Plus can be set at 25%, 50% or 75% depending on the need. This mode is very useful when sufficient DG power is not available to run the entire air conditioning system. This feature can also be effectively used to optimise the usage of the VRF system during low demand periods.



Utilise AC for Critical Spaces



Uniform Reduction of Operating Conditions

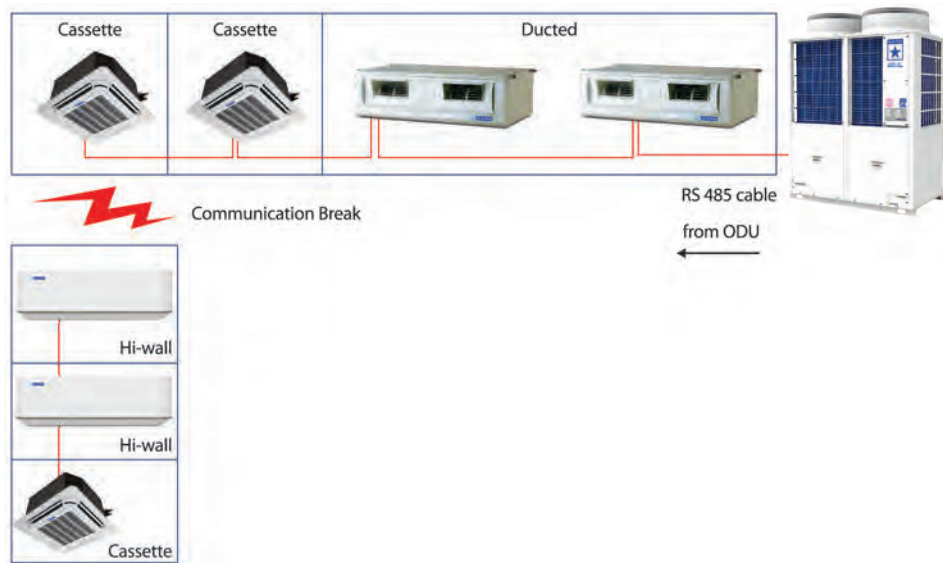


Optimised Running Cost

IDU EMERGENCY OPERATION

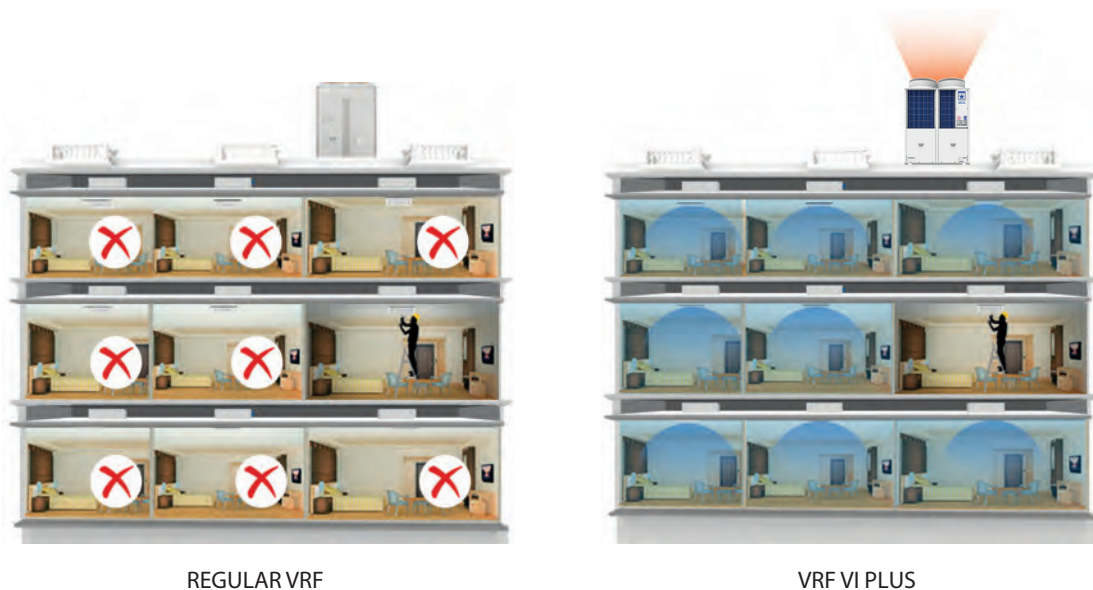
All the IDUs in any VRF system are interconnected by the communication cables.

In general, if there is a break in any communication wire, subsequent IDUs are affected and do not function. By activating the IDU emergency operation on the VRF VI Plus, the other IDUs can function despite such a break.



IDU ISOLATION FUNCTION

In the VRF VI Plus, up to five IDUs can be switched to service backup mode even while the other indoor units in the same system run uninterrupted. This feature is very useful to service a particular unit or units while leaving the overall system undisturbed.



EMERGENCY BACKUP OPERATION

COMPRESSOR BACKUP

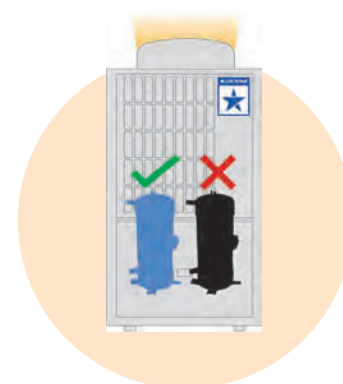
In ODUs that have two compressors, the VRF VI Plus system can function even if there is a failure or maintenance downtime of one compressor.

ODU BACKUP

In a modular VRF VI Plus design, where multiple units have been combined to run as one larger unit, the system can operate even in case of a failure or a shutdown of one ODU. This feature helps ensure that cooling remains largely unaffected even during servicing or breakdown.

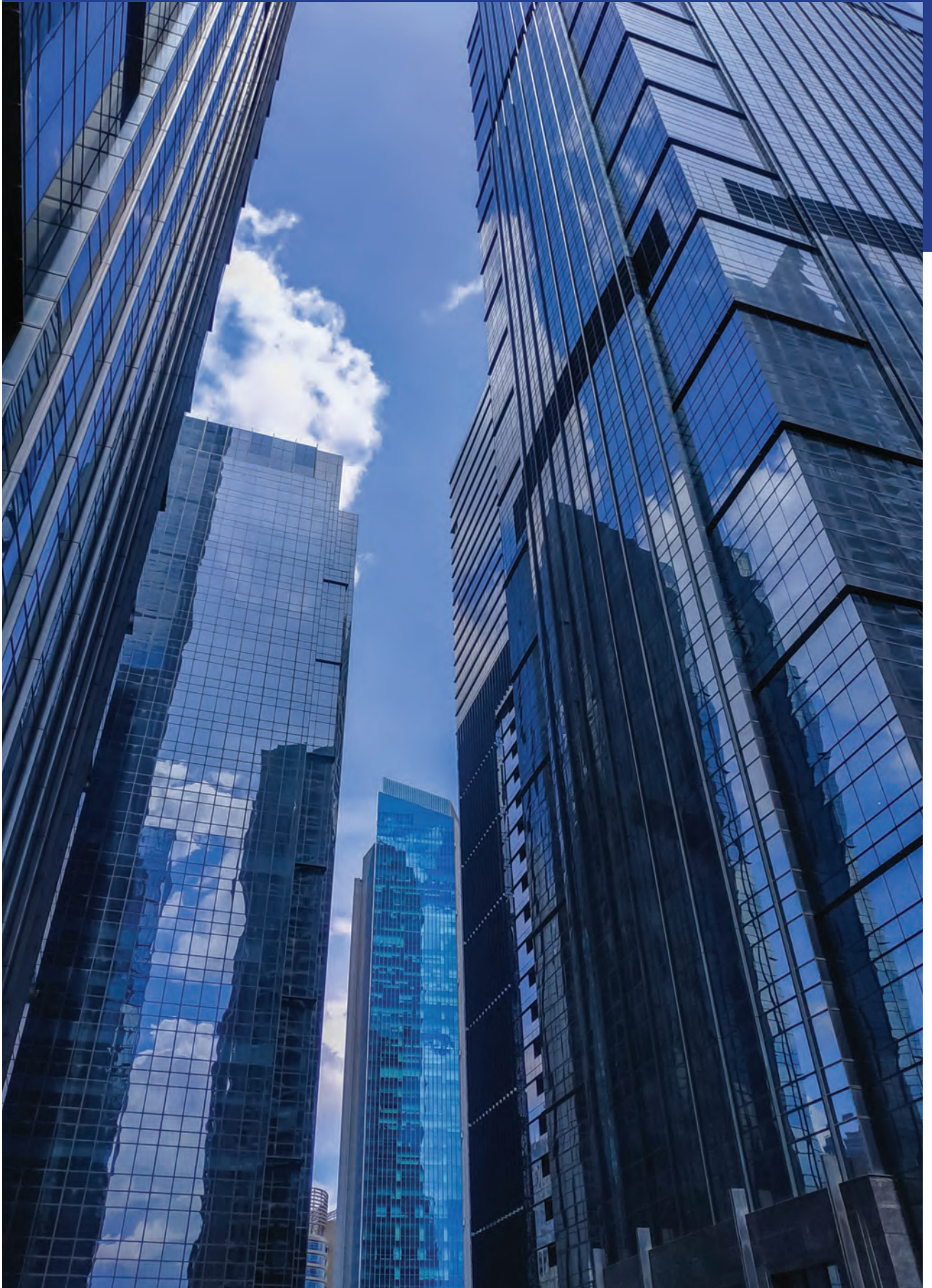
FILTER CLEAN FUNCTION

A 'Filter Clean' reminder function indicates the need to clean the filters.. This can be reset after the filters are cleaned.



Standard and optional features' summary:

Features	Standard	Optional
Condenser coil blue fin coating	•	
Condenser coil blygold coating		•
Stopper valves for indoor units		•
BLDC Motors in ODUs	•	
Leak detection kit		•
PFI kit		•
Wireless controllers for non-ducted IDUs	•	
Wired controllers for ducted IDUs	•	
BMS connectivity with MODBUS protocol		•
BMS connectivity with BACnet protocol		•
Data concentrator		•
External drain pump (Field installed)		•
Refnets		•



TECHNICAL SPECIFICATIONS -
OUTDOOR UNITS

Model	Cool Only		IVBN-08TC	IVBN-10TC	IVBN-12TC	IVBN-14TC	IVBN-16TC	IVBN-18TC	IVBN-20TC	IVBN-22TC	IVBN-24TC	IVBN-26TC	IVBN-28TC
	Heart Pump		IVBN-08TH	IVBN-10TH	IVBN-12TH	IVBN-14TH	IVBN-16TH	IVBN-18TH	IVBN-20TH	IVBN-22TH	IVBN-24TH	IVBN-26TH	IVBN-28TH
Cooling Capacity ¹	HP	kW	8	10	12	14	16	18	20	22	24	26	28
			22.4	28.0	33.6	40.0	45.0	50.4	56.0	61.6	67.2	72.8	78.0
Heating Capacity ²	Btu/hr	kW	76400	95500	114600	136500	153500	172000	191100	210200	229300	248400	266100
			22.8	28.6	34.3	40.8	45.9	51.4	57.1	62.8	68.5	74.3	79.6
Power Input ¹	kW	W/W	5.58	6.36	8.25	9.38	10.90	12.27	13.50	15.00	15.70	17.80	20.70
			4.01	4.40	4.07	4.26	4.13	4.11	4.15	4.11	4.28	4.09	3.77
Cooling Capacity ³	kW	Btu/hr	20.7	25.9	31.3	36.6	41.3	45.4	48.8	53.5	62.8	67.3	69.0
			70600	88400	106700	124900	140200	154900	166500	182500	214300	229600	235400
Power Input ³	kW	COP	6.77	8.20	9.86	11.32	12.80	14.80	15.20	17.20	19.70	21.20	23.50
			3.06	3.16	3.17	3.23	3.21	3.07	3.21	3.11	3.19	3.17	2.94
CSPF - T3	Btu/hr:W	A	16.10	18.07	18.93	21.08	18.53	17.15	17.74	18.40	18.61	16.71	15.81
			8.8	10.4	13.2	14.8	16.9	18.8	21.1	23.5	25.3	27.8	32.6
Current ³	A	°C	10.6	12.7	15.3	17.6	19.8	22.8	23.4	26.7	31.2	33.4	37.5
			10 to 56										
Operating Ambient Range	°C	°C	-10 to 24										
			380-415 /50 /3N~										
Electrical Power supply	V/Hz/Ph	Type	R410A										
			Inverter Scroll										
Refrigerant	Pre Charged Qty	kg	9.0	10.5	10.5	12.5	13.0	13.5	14.0	15.0	16.0	17.0	17.0
Compressor	Type	Quantity	No.	1	1	1	1	2	2	2	2	2	2
Condenser	Type	Face Area	Sq Mts	2.10	2.10	2.67	2.67	3.20	3.20	3.00	3.00	3.00	3.00
Sound Level	Airflow	CFM	7000	7000	7000	9000	10200	12300	12300	13800	13800	13800	13800
Outdoor Motor	Type	dBA	57.9	59.2	60.9	62.1	62.8	63.7	65.9	70.0	70.0	70.0	70.0
Outdoor Fan	Type	No.	1	1	1	2	2	2	2	2	2	2	2
Connection Ratio	Material	Quantity	No.	1	1	2	2	2	2	2	2	2	2
pipe Connections	Diameter	mm (inch)	9.52 (3/8)	19.05 (3/4)	22.22 (7/8)	28.6 (1 1/8)	28.6 (1 1/8)	28.6 (1 1/8)	28.6 (1 1/8)	28.6 (1 1/8)	28.6 (1 1/8)	28.6 (1 1/8)	28.6 (1 1/8)
Net Dimensions	Width	mm	976	976	976	1250	1250	1250	1450	1450	1450	1450	1450
Weight Details	Depth	mm	800	800	800	800	800	800	800	800	800	800	800
	Height	mm	1965	1965	1965	1950	1950	1950	1950	1950	1950	1950	1950
	Net	kg	266	284	284	327	327	327	404	412	429	442	444
	Gross	kg	281	299	299	349	349	349	427	435	452	465	467

Notes:

1. Cooling Performances are based on the following conditions:
¹ Indoor temperature: 27°CDB, 19°CWB; Outdoor temp.: 35°CDB; Piping length: 7.5m, height difference: 0m.
² Indoor temperature: 20°CDB Outdoor temp.: 7°CDB, 6°CWB Piping length: 7.5m, height difference: 0m.
³ Indoor temperature: 29°CDB, 19°CWB; Outdoor temp.: 46°CDB; Piping length: 7.5m, height difference: 0m.
2. Tested in accordance with conditions specified in ISO 15042 standard.
3. CSPF values are in accordance with conditions specified in ISO 16358: Amd - 1
4. Sound pressure levels at a average distance of 1 mtr at free field condition. Sound level can vary in field depending upon ambient and operating conditions.
5. All the products are qualified for power factor ≥ 0.9 with optional feature of PFI kit.
6. Performance is tested and evaluated independently by Internationally recognised 3rd party Laboratory; Intertek Testing Services (Thailand) Ltd, Bangkok, Thailand.
- Blue Star has a policy of continuous product data improvement and reserves the right to change design & specification without notice.

Next Gen VRF VI S












There is only one VRF
that can handle such heat

Non Stop cooling even up to 56°C








PRODUCT LINE-UP: INDOOR UNITS

Type		Cooling Capacity in TR																											
		0.6	0.8	1	1.3	1.4	1.5	1.6	1.7	2	2.25	2.3	2.4	2.5	2.8	3	3.2	3.5	4	5	5.5	6	6.8	8	10	11	18	20	22
	Hi-Wall Units		•	•	•		•		•	•			•	•															
	Four-way Cassettes			•	•		•		•	•		•		•		•		•	•										
	Compact Cassettes	•	•	•	•		•																						
	One-way Cassettes	•	•	•	•		•		•																				
	Two-way Cassettes	•	•	•	•		•		•	•																			
	Verticools								•		•			•		•		•											
	Concealed Splits		•	•	•		•		•																				
	Ductable IDUs				•	•	•		•	•	•		•	•		•		•	•	•		•		•		•	•	•	
	Low Static Ducted		•	•	•		•		•	•		•		•			•		•										
	Floor Mounted Packaged Units																		•					•	•		•		•
	Treated fresh air unit																	•			•		•						



PRODUCT LINE-UP: OUTDOOR UNITS

N-Series

Appearance	System Capacity (HP)	Power Supply (V/Hz/Ph)	Maximum No. of IDUs
	4	220-240/50/1P~	7
	5	380-415/50/3N~	9
	6	380-415/50/3N~	10
	8	380-415/50/3N~	14
	10	380-415/50/3N~	17
	12	380-415/50/3N~	21
	14	380-415/50/3N~	24
	16	380-415/50/3N~	28

PRODUCT LINE-UP: OUTDOOR UNITS

S-Series

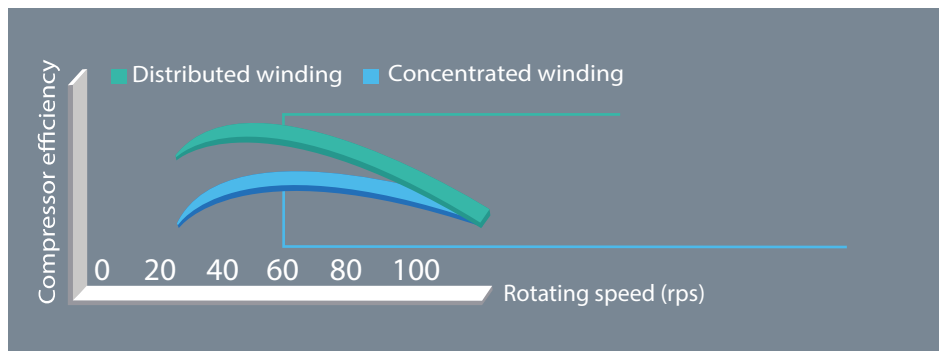
Appearance	System Capacity (HP)	Power Supply (V/Hz/Ph)	Maximum No. of IDUs
	4	220-240/50/1P~	7
	5	220-240/50/1P~	9
	6	380-415/50/3N~	10
	8	380-415/50/3N~	14
	10	380-415/50/3N~	17



UNIQUE FEATURES

High-Efficiency DC Inverter Compressor

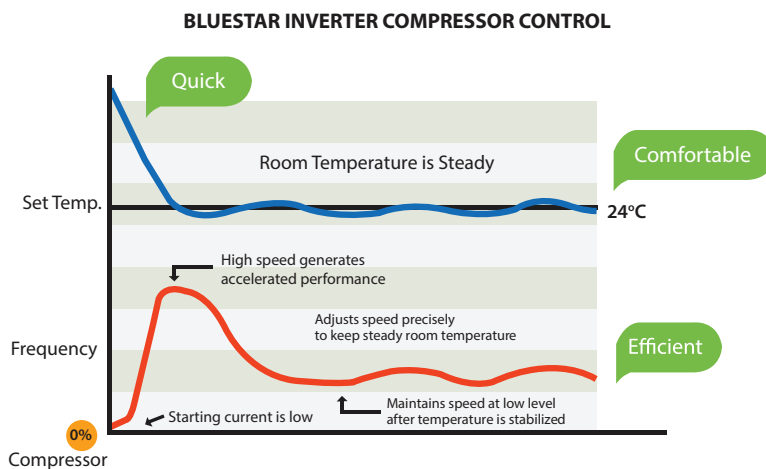
- In the DC inverter compressor* a high pressure compressor chamber is used for higher efficiency. Compression efficiency of the high pressure chamber is more as compared to a low pressure chamber
- High-efficiency permanent magnet motor gives enhanced performance
- Concentrated motor winding further increases the efficiency of the compressor



*In models above 8HP

Low Starting Current

- Starting current of inverter compressor is very low as compared to that of a non-inverter compressor. This helps reduce capacity of the power backup.



UNIQUE FEATURES

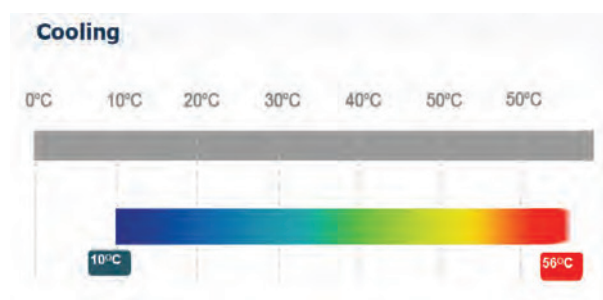
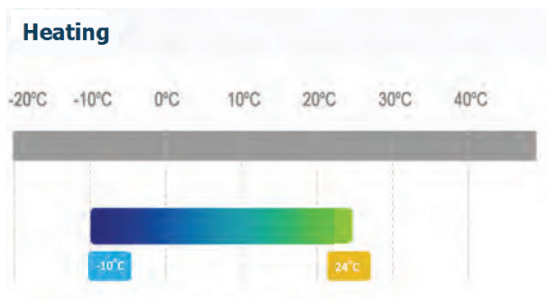
Stepless Capacity Control with DC Motors

- Outdoor Units
- DC Inverter fan motor, used in the outdoor unit, has stepless control.
- Indoor Units

Compared to conventional motors, a brushless DC motor is 30% more efficient. The motor speed is varied to suit refrigerant flow, using a computerised control logic. This not only results in power saving, but also in greater cooling comfort.

Wide Operating Temperature Range

- This system can operate at wide ambient temperature range of -10°C to 56°C.



UNIQUE FEATURES

HIGHLY EFFICIENT INVERTER SCROLL COMPRESSORS

The unique design of the inverter scroll compressor ensures that the refrigerant is directly injected into the compressor chamber. Since the suction gas enters directly into the scroll, there is no superheat gain due to the compressor motor assembly. This results in efficiency enhancement.



HIGHLY EFFICIENT ROTARY INVERTER COMPRESSORS

Twin rotary compressors are furnished with two compression chambers. Because of that, they have improved compression torques and rotational balancing which results in higher efficiency, lower vibration throughout the RPM range along with lower noise levels.

WIDE OPERATING RANGE

The VRF VI Plus is designed with high pressure and low pressure protective systems, enabling the machine to perform across a wide operating temperature bandwidth. The system can operate from 10°C to 56°C in the cooling mode and -10°C to 24°C in the heating mode.

HIGH SYSTEM EFFICIENCY

Enhanced coil surface area, 100% inverter compressor advantage and system logic for compressor efficiency optimisation together result in superior performance of the entire system.

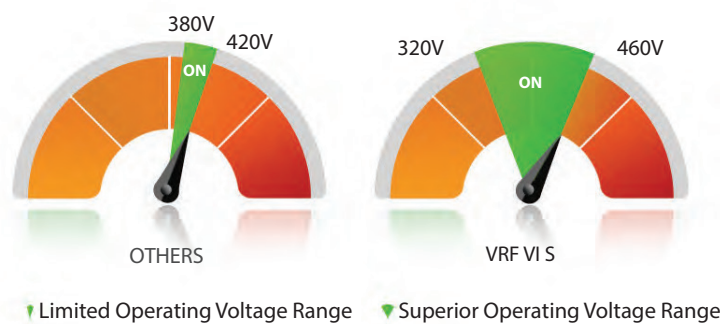
INCREASED RELIABILITY

If the excess liquid refrigerant is not handled effectively, it can enter the compressor and result in failure. Since the VRF VI Plus uses the best accumulator design in the industry, it ensures that no liquid enters the compressor, thus increasing reliability.

UNIQUE FEATURES

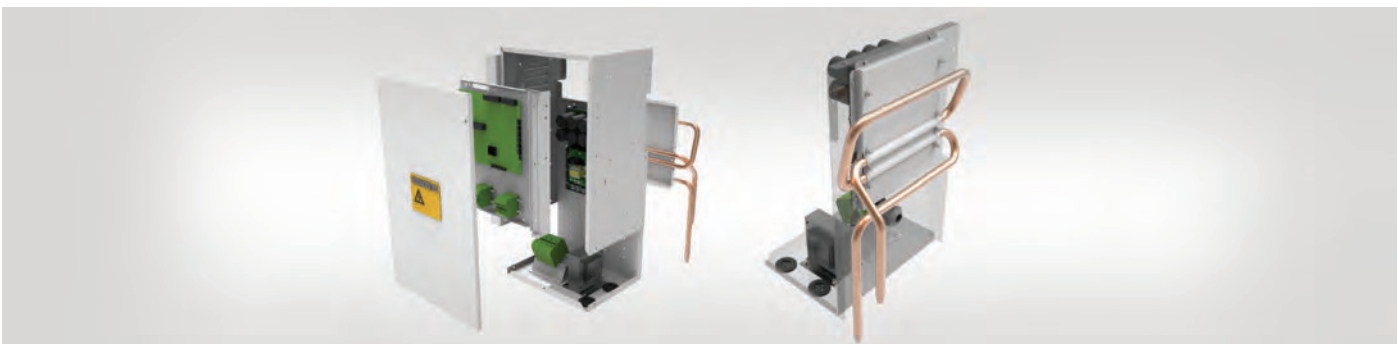
WIDE VOLTAGE RANGE

In situations where voltage fluctuations are alarming, most AC systems operate inefficiently or shut down. The Blue Star VRF VI S is designed to operate across a wide voltage range from 320V to 460V, resulting in high uptime even in erratic power conditions.



INNOVATIVE REFRIGERANT-COOLED HEAT SINK

Inverter drives play a very important role in regulating the capacity of the system based on load requirements. Keeping the inverter drive in a controlled temperature is very important for enhanced life, improved performance and reliability. The VRF VI S is designed with an innovative refrigerant-cooled heat sink which helps maintain the drive within the allowable temperature range. This enhances the reliability of the system when it is working under very high ambient conditions.



SUPERIOR OIL MANAGEMENT SYSTEM

PATENTED OIL RECOVERY

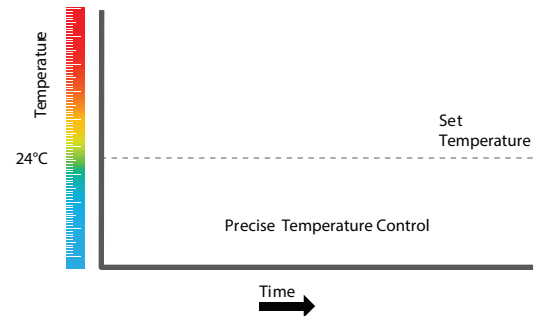
Considering the very long piping lengths that the VRF VI S must handle, it is crucial to have a superior oil management system to ensure reliability. The VRF VI S is manufactured with a specially designed and patented oil separator to ensure efficient oil recovery in the VRF System.

IDU OIL RETURN CYCLE

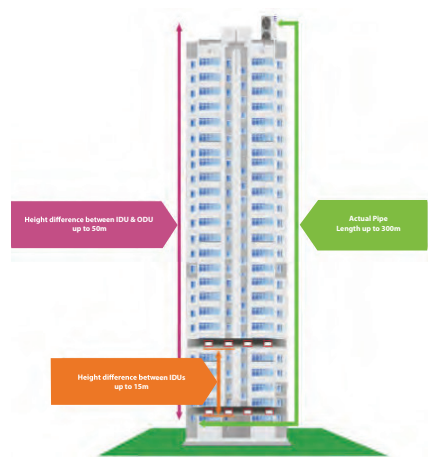
The cyclic oil recovery from the IDU is done by widely opening the electronic expansion valve and completely recovering the oil back to the ODU. Oil is recovered even from switched-off indoor units.

Intelligent Temperature Control

- Intelligent temperature controller design provides faster cooling or heating. PID type controller helps to maintain comfort temperature conditions at all times.



Longer Refrigerant Piping



Dim	Length		Cool Only 4/5/6 HP	Cool Only 8/10/12/ 14/16 HP	Heat Pump 4/5/6/12 HP	Heat Pump 8/10/14/ 16 HP
H1	Elevation between ODU and IDU	ODU above IDU	50 m			
		ODU below IDU	40 m			
H2	Elevation between IDU		15 m			
L1	Farthest length between ODU and IDU (Real length)		100 m	120 m	100 m	120 m
L2 Max	Equivalent Length of Farthest Piping from 1st branching		40 m			
L2 Min	Minimum Length from Refnet to IDU		2 < L2 Min			
Total piping length (Sum of liquid piping)			300 m			

Longer refrigerant pipe length gives flexibility to locate outdoor units in remote locations, away from the indoor units.

Compact Outdoor Units

- Foot print of outdoor unit is low and weight is relatively lower
- Compactness of units results in convenient handling and installation



TECHNICAL SPECIFICATIONS - OUTDOORS UNITS

VRF VI S: S-Series

Model	Cool Only Heat Pump	IVBS-04SC IVBS-04SH	IVBS-05SC IVBS-05SH	IVBS-06SC IVBS-06SH	IVBS-08SC IVBS-08SH	IVBS-10SC IVBS-10SH
Cooling Capacity ¹	HP	4	5	6	8	10
	kW	11.2	14.0	16.0	22.4	28.0
Heating Capacity ²	kW	11.4	14.3	16.3	22.8	28.6
Power Input ¹	kW	2.95	3.65	4.30	5.85	7.30
COP ³	W/W	3.80	3.84	3.72	3.83	3.84
Cooling Capacity ¹	kW	9.9	11.7	13.2	20.5	25.2
Power Input ¹	kW	3.50	3.80	4.85	7.75	8.90
COP ³	W/W	2.83	3.08	2.72	2.65	2.83
CSFP - T3	Btu/h.W	15.55	16.03	14.91	15.99	16.45
Current ¹	A	12.4	15.4	6.7	9.2	11.4
Current ¹	A	14.9	16.2	7.5	11.9	13.7
Operating Ambient Range	°C	10 to 56				
Heat Mode Range	°C	-10 to 24				
Electrical Power supply	Volts/Hz/Ph	220-240V / 50 Hz / 1P~				
		380-415 V / 50 Hz / 3N~				
Refrigerant	Type - Quantity	R410A				
	kg	3.3	3.7	4.2	5.7	7.9
Compressor	Type - Quantity	Inverter Rotary				
	No.	1	1	1	1	1
Condenser	Type - Face Area	Fin & Tube with Anti Corrosive Blue Fins				
	Sq.m	1.00	1.00	1.00	1.40	1.40
Airflow	CFM	3960	3740	3740	5430	6430
Outdoor Motor	Type - Quantity	BLDC				
	Nos	1	1	1	2	2
Outdoor Fan	Type - Material	Axial-flow Glass filled ABS plastic				
	Quantity	1	1	1	2	2
Sound Level	Nos dB(A)	57	57	58	59	60
Maximum nos. of IDUs	Nos	7	9	10	14	17
VRF IDUs Only		50% to 130%				
Connection Ratio		50% to 100%				
AHU + Other IDUs		50% to 100%				
Refrigerant Pipe Connections	Liquid Gas	9.52 / 3/8"	9.52 / 3/8"	9.52 / 3/8"	9.52 / 3/8"	9.52 / 3/8"
	mm / inch.	15.9 / 5/8"	15.9 / 5/8"	19.01 / 3/4"	22.2 / 7/8"	22.2 / 7/8"
Net Dimensions	Width	900	900	900	1020	1020
	mm	350	350	350	416	416
	Depth	1214	1214	1214	1462	1462
	mm	1060	1060	1060	1130	1130
Packing Dimensions	Width	520	520	520	520	520
	mm	1345	1345	1345	1577	1577
	Height	95	101	111	153	163
Weight Details	Net	102	107	117	162	172
	Gross					

Notes:

- Cooling Performances are based on the following conditions:
¹ Indoor temperature: 27°CDB; Outdoor temp: 35°CDB; Piping length: 7.5m, height difference: 0m.
² Indoor temperature: 20°CDB Outdoor temp.: 7°CDB, 6°CWB Piping length: 7.5m, height difference: 0m.
³ Indoor temperature: 29°CDB, 19°CWB; Outdoor temp.: 46°CDB; Piping length: 7.5m, height difference: 0m.
 - Tested in accordance with conditions specified in ISO 15042 standard.
 - CSFP values are in accordance with conditions specified in ISO 16358: Amd - 1
 - Sound pressure levels at a average distance of 1 mtr at free field condition. Sound level can vary in field depending upon ambient and operating conditions.
 - All the products are qualified for power factor ≥ 0.9 with optional feature of PFI kit.
 - Performance is tested and evaluated independently by Internationally recognised 3rd party Laboratory, Intertek Testing Services (Thailand) Ltd, Bangkok, Thailand.
- Blue Star has a policy of continuous product data improvement and reserves the right to change design & specification without notice.

TECHNICAL SPECIFICATIONS - OUTDOORS UNITS

VRF VI S: N-Series

Model	Cool Only	IVBN-045C	IVBN-055C	IVBN-065C	IVBN-085C	IVBN-105C	IVBN-125C	IVBN-145C	IVBN-165C
	Heat Pump	IVBN-045H	IVBN-055H	IVBN-065H	IVBN-085H	IVBN-105H	IVBN-125H	IVBN-145H	IVBN-165H
Cooling Capacity ¹	HP	4	5	6	8	10	12	14	16
Heating Capacity ²	kW	11.2	14.0	16.0	22.4	28.0	33.6	40.0	45.9
Power Input ³	kW	11.4	14.3	16.3	22.8	28.6	34.3	40.8	45.9
COP ³	kW	2.65	3.22	3.72	5.40	6.45	8.40	9.10	10.60
Cooling Capacity ³	W/W	4.23	4.35	4.30	4.15	4.34	4.00	4.40	4.25
Power Input ³	kW	9.9	11.7	13.2	20.5	25.2	31.5	36.8	41.3
COP ³	kW	3.10	3.55	4.30	6.70	7.90	10.10	11.00	12.60
CSPF - T3	W/W	3.19	3.30	3.07	3.06	3.19	3.12	3.35	3.28
Current ³	Br/h.W	17.53	17.25	15.10	16.19	17.58	17.35	18.32	18.41
Current ³	A	11.2	4.9	5.9	8.3	9.9	13.0	14.2	15.6
Operating Ambient Range	° C	13.3	5.5	6.7	10.3	12.3	15.7	17.3	19.6
Electrical Power supply	V/Hz/Ph	220-240V / 50 Hz / 3P~							
Refrigerant	Type	R410A							
Compressor	Pre Charged Qty	3.7	4.2	5.7	7.9	8.2	8.2	9.5	9.8
	Type	Inverter Rotary							
	Quantity	1	1	1	1	1	1	1	1
Condenser	Type	Fin & Tube with Anti Corrosive Blue Fins							
	Face Area	1.00	1.00	1.40	1.40	1.36	1.36	2.22	2.22
	Airflow	3740	3740	5430	6430	6050	6050	7700	7700
Outdoor Motor	Type	BLDC							
	Quantity	1	1	2	2	2	2	2	2
Outdoor Fan	Type	Axial-Flow							
	Material	Glass filled ABS plastic							
	Quantity	1	1	2	2	2	2	2	2
Sound Level	dB(A)	57	58	59	60	60	60	61	61
Maximum nos. of IDUs	Nos	7	9	10	14	17	21	24	28
Connection Ratio	VRF IDUs Only	50% to 130%							
	AHU + Other IDUs	50% to 100%							
Refrigerant Pipe Connections	Liquid	9.52 / 3/8"	9.52 / 3/8"	9.52 / 3/8"	9.52 / 3/8"	12.7 / 1/2"	12.7 / 1/2"	12.7 / 1/2"	12.7 / 1/2"
	Gas	15.9 / 5/8"	19.01 / 3/4"	22.2 / 7/8"	22.2 / 7/8"	28.6 / 1 1/8"	28.6 / 1 1/8"	28.6 / 1 1/8"	28.6 / 1 1/8"
Net Dimensions	Width	mm	900	1020	1020	1020	1020	1320	1320
	Depth	mm	350	415	415	415	415	415	415
	Height	mm	1214	1214	1462	1462	1462	1636	1636
Packing Dimensions	Width	mm	1060	1060	1130	1130	1130	1420	1420
	Depth	mm	520	520	520	520	520	520	520
	Height	mm	1345	1345	1577	1577	1577	1750	1750
Weight Details	Net	kg	101	111	153	163	176	232	232
	Gross	kg	107	117	162	185	185	243	243

Notes:

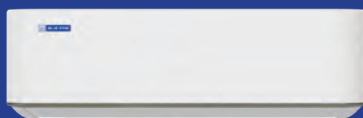
1. Cooling Performances are based on the following conditions:
¹ Indoor temperature: 27°CDB, 19°CWB; Outdoor temp: 35°CDB; Piping length: 7.5m, height difference: 0m.
² Indoor temperature: 20°CDB Outdoor temp.: 7°CDB, 6°CWB Piping length: 7.5m, height difference: 0m.
³ Indoor temperature: 29°CDB, 19°CWB; Outdoor temp.: 46°CDB; Piping length: 7.5m, height difference: 0m.
2. Tested in accordance with conditions specified in ISO 15042 standard.
3. CSPF values are in accordance with conditions specified in ISO 16358: Amd - 1
4. Sound pressure levels at a average distance of 1 mtr at free field condition. Sound level can vary in field depending upon ambient and operating conditions.
5. All the products are qualified for power factor ≥ 0.9 with optional feature of PFI kit.
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INDOOR UNITS



HI-WALL UNITS



0.8TR~2.0TR



2.5TR & 2.8TR



Capacities

0.8 TR, 1.0 TR, 1.3 TR, 1.5 TR, 1.7 TR, 2.0 TR, 2.5 TR and 2.8 TR.

- Aesthetically superior with stylish design
- Very low noise, quiet operation
- Wide angle airflow to ensure even air distribution throughout the conditioned space



Multi-level Filtration*

- Active Carbon Filter: Eliminates odour and deactivates harmful chemical gases*
- Dust Filter: Picks dust particles from the air and maintains dust-free conditioned air
- Silver Ion Filter: Efficient in sterilising indoor air and reducing bacteria levels*



Multi-fan Speeds

Various levels of fan speed control are available to suit user comfort and convenience



Auto Restart

Automatic restart after power cut with all previously set parameters after power is restored



Filter Cleaning Reminder

Indicates when the filters need cleaning



Multi-mode Functions

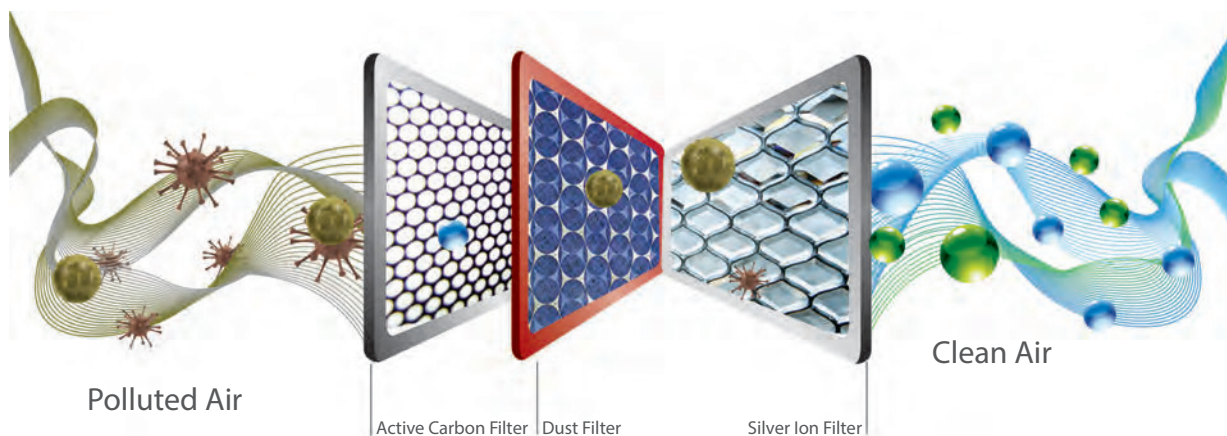
Various modes can be selected depending on the usage pattern and the comfort levels required:

- Auto ● Cool ● Heat ● Dry ● Sleep



Flexible Airflow Patterns

Advanced louvres where the swing can be adjusted to meet the needs of airflow, ventilation and direction required.



* Optional features in limited models

FOUR-WAY CASSETTES



Capacities

1.0 TR, 1.3 TR, 1.5 TR, 1.7 TR, 2.0 TR, 2.3 TR, 2.8 TR, 3.2 TR, 4.0 TR and 5.0 TR.



Wide Angle Airflow

Wide angle airflow to ensure even air distribution throughout the conditioned space



Multi-mode Functions

Various modes can be selected depending on the usage pattern and the comfort levels required:

●Auto ●Cool ●Heat ●Dry ●Sleep



In-built Drain Pump

Powerful drain pump to remove condensate drain water with a lift up to 1 Meter



Fresh Air Provision

Provision to add fresh air helps maintain better indoor air quality



Filter Clean Reminder

Indicates when the filters need cleaning

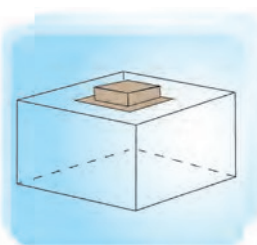


Service-friendly Design

User-friendly detachable grilles



Four-way Airflow



Saves Wall and Floor Space

COMPACT CASSETTES



Capacities
0.6 TR, 0.8 TR, 1.0 TR, 1.3 TR and 1.5 TR.



Compact Design
670mm panel makes it very convenient to install in any grid type false ceiling; ideally suited for small cabins and conference rooms.



Multi-mode Functions
Various modes can be selected depending on the usage pattern and the comfort levels required:
● Auto ● Cool ● Heat ● Dry ● Sleep



Filter Clean Reminder
Indicates when the filters need cleaning



Multi-fan Speeds
Various levels of fan speed available to suit user comfort and convenience



Fresh Air Provision
Provision to add fresh air helps maintain better indoor air quality



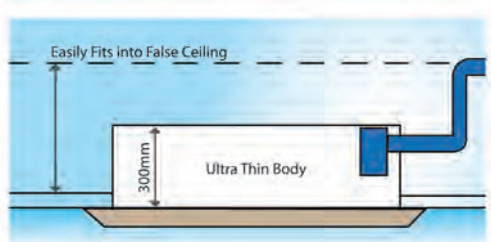
In-built Drain Pump
Powerful drain pump to remove condensate drain water with a lift up to 1 Meter



Ideal for Small Spaces
Ideally suited for small cabins, passage areas, corners of conditioned areas, applications with narrow ceiling, lobbies and interior roofs.



Service-friendly Design
User-friendly detachable grilles



DUCATABLE INDOOR UNITS



Capacities
Wide range from 0.8 TR to 20 TR**.



Long Ducting
Ideal for applications where long lengths of ducting are possible and for better air distribution in the conditioned space



Higher Air Quantity
Wide range of IDU's offering required CFM per TR



Fresh Air*
Designed with higher static to take care of fresh air requirements and long ducting lengths. Fresh air can be added as per quantities required by application.



Long Life
Powder-coated for long life



Filter Clean Reminder
Indicates when the filters need cleaning

*Applicable for limited models.

**Ducted IDUs over 8 TR capacity to be connected using AHU Kit (AHU Kit to be ordered separately).

HIGH SENSIBLE DUCTED



Capacities
Wide range from 0.8 TR to 4.0 TR.



Long Ducting
Ideal for applications where long lengths of ducting are possible and for better air distribution in the conditioned space



Higher Air Quantity
Wide range of IDU's offering required CFM per TR



High Sensible
Designed to meet high sensible heat & CFM requirements



Long Life
Powder-coated for long life



Filter Clean Reminder
Indicates when the filters need cleaning

LOW STATIC DUCTED



Capacities

0.8 TR, 1.0 TR, 1.3 TR, 1.5 TR, 1.7 TR, 2.0 TR, 2.3 TR, 2.5 TR, 3.2 TR & 4.0 TR.



Moderate Slim Construction

A height of 200mm from 0.8 TR to 2.3 TR and 260 mm from 2.5 TR to 4.0 TR makes it very convenient to mount above a false ceiling



Reduced Noise & Power

The use of BLDC motor results in less power consumption and low noise



In-built Drain Pump

Powerful drain pump removes condensate drain water with a lift of up to 1 Meter



Fresh Air Provision

Provision to add fresh air helps maintain better indoor air quality



Variable Fan Speed

Various levels of fan speed available to suit user comfort and convenience



Long Life

Hot galvanized sheet material helps in corrosion protection, durability & longevity of the product.



Filter Clean Reminder

Indicates when the filters need cleaning

ONE-WAY CASSETTES



Capacities
0.6 TR, 0.8 TR, 1.0 TR, 1.3 TR, 1.5 TR and 1.7 TR



Ideal for Small Spaces
Ideally suited for small cabins, passage areas, corners of conditioned areas, applications with narrow ceiling, lobbies and interior roofs.



Compact Design
Compact and slim design with ultra slim body measuring a total height of only 178 mm



In-built Drain Pump
Powerful drain pump removes condensate drain water with a lift up to 1 Meter



Filter Clean Reminder
Indicates when the filters need cleaning



Multi-mode Functions
Various modes can be selected depending on the usage pattern and comfort levels required:
● Auto ● Cool ● Heat ● Dry ● Sleep



Service-friendly Design
User-friendly detachable grilles



Wide Angle Airflow
Wide angle airflow to ensure even air distribution throughout the conditioned space

TWO-WAY CASSETTES



Capacities
0.6 TR, 0.8 TR, 1.0 TR, 1.3 TR, 1.5 TR, 1.7 TR and 2.0 TR.



Ideal for Narrow Spaces
Ideally suited for long narrow passage areas, open offices, cabins, meeting rooms, etc.



Stylish and Slim Design
Suits decor and interiors of any space, and convenient for installation as well.



Quiet Operation
Optimised for airflow to minimise noise levels, as low as 24 decibels making it one of the quietest units in the industry.



Filter Clean Reminder
Indicates when the filters need cleaning



Multi-mode Functions
Various modes can be selected depending on the usage pattern and comfort levels required:
● Auto ● Cool ● Heat ● Dry ● Sleep



Wide Angle Airflow
Wide angle airflow to ensure even air distribution throughout the conditioned space



Multi-fan Speeds
Various levels of fan speed available to suit the user's comfort and convenience



Auto Restart
Automatic restart after power cut with all previously set parameters after power is restored



In-built Drain Pump
Powerful drain pump removes condensate drain water with a lift up to 1 Meter



VERTICOOLS



Capacities

2.0 TR, 2.3 TR, 2.8 TR, 3.2 TR and 4.0 TR.



Ideal Where There Is Ceiling Space Constraint

Ideally suited for large open halls and places where there is a limitation to use the ceiling space for mounting the indoor unit



Filter Clean Reminder

Indicates when the filters need cleaning



Powerful Air Throw

Powerful blowers ensure better air throw to cover maximum area



Flexible Airflow Patterns

Advanced louvres where the swing can be adjusted to meet the needs of airflow, ventilation and direction required.



Auto Restart

Automatic restart after power cut with all previously set parameters after power is restored



CONCEALED SPLITS



Capacities
0.8 TR, 1.0 TR, 1.3 TR, 1.5 TR and 2.0 TR.



Ideal for Small Areas
Ideally suited for rooms in hotels, hospitals and any small area applications.



Ultra Slim Construction
222mm height makes it very convenient to mount above a false ceiling



Long Life
Powder-coated for long life



Service-friendly Design
Detachable panel makes servicing easy



Multi-fan Speeds
Various levels of fan speed available to suit the user's comfort and convenience



Quiet Operation
Mounting above false ceiling reduces noise levels considerably



Filter Clean Reminder
Indicates when the filters need cleaning



FLOOR MOUNTED PACKAGED UNITS



Capacities
5.0 TR, 8.0 TR, 10.0 TR, 18TR and 22TR.



Ideal for Large Spaces
Ideal for banquet halls and office areas where rooms are well defined



Higher Air Quantity
Floor mounted units have an advantage of higher air quantity



Fresh Air
Designed with higher static to take care of fresh air requirements. Required fresh air quantities can be added depending on application.



Service-friendly Design
Since these units are mounted inside the room on the floor, they are easy to maintain.



Long Life
The units are powder-coated for long life



Filter Clean Reminder
Indicates when the filters need cleaning



TREATED FRESH AIR UNIT



Capacities
3.5 TR, 5.5 TR and 6.8 TR.



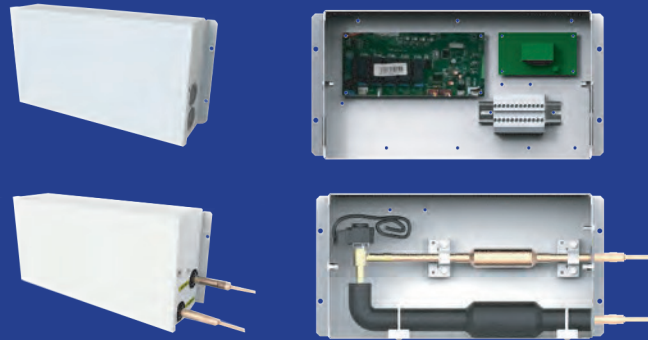
Ideal for High Latent Load Applications
Ideal for requirements with large fresh air in high latent load applications like hotels, hospitals, auditoriums, etc.




Higher Air Quantity
TFAs have an advantage of higher air quantity



AHU KIT



Type		Cooling Capacity in TR							
	AHU kit	3	5	6.5	8	10	15	20	32

AHU kits are specially designed to integrate AHUs with the ODUs of the Blue Star VRF VI Plus system. There are many applications like banquet halls in hotels, operation theatres in hospitals and many other special applications where there is a need to customise and provide AHUs. For these applications, it will not be viable to use standard IDUs available in the VRF system.

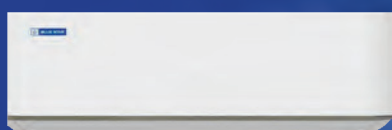
Till the advent of the AHU Kit, VRFs were unable to cater to a complete facility due to the above limitations. With the introduction of the specially designed Blue Star AHU Kit, we can now connect customised AHUs to the VRF VI Plus to suit various special needs and requirements.

100% FAHU or recirculating AHUs with various combinations of static & CFM requirements can be connected to the VRF VI Plus ODUs by using AHU Kits. Maximum AHU Kits can be used with multiple circuit coils for larger capacity AHUs



TECHNICAL SPECIFICATIONS - INDOOR UNITS

HI - WALL UNITS



VHW 10A/B-24A/B



VHW 30-34

Model		VHW-10B	VHW-12B	VHW-16B	VHW-18B	VHW-20B	VHW-24B	VHW-30	VHW-34
Power Supply		220-240V, 50Hz, 1P~							
Cooling Capacity	TR	0.8	1.0	1.3	1.5	1.7	2	2.5	2.8
	KW	2.9	3.5	4.7	5.3	6.0	7.0	8.8	10
Heating Capacity	TR	0.9	1.1	1.5	1.7	1.9	2.2	2.8	3.1
	KW	3.2	3.9	5.2	5.8	6.6	7.7	9.7	10.8
Motor & Fan	Type	BLDC						DC	
	Motor Power Input	W	30	30	30	30	50	50	70
	Current	A	0.19	0.19	0.24	0.24	0.36	0.36	0.5
Airflow rate (H/M/L)	CMH	552/467/340	640/545/470	765/690/520	850/700/545	995/900/825	1090/925/835	1486/1223/944	1600/1223/944
	CFM	325/275/200	375/320/275	450/405/305	500/410/320	585/530/485	640/545/490	875/720/556	942/720/556
Piping Connection	Liquid Pipe	mm (inch)	6.35 (1/4)	6.35 (1/4)	6.35 (1/4)	6.35 (1/4)	6.35 (1/4)	9.52(3/8)	9.52(3/8)
	Suction Pipe	mm (inch)	9.52 (3/8)	9.52 (3/8)	12.7 (1/2)	12.7 (1/2)	12.7 (1/2)	15.87(5/8)	15.87(5/8)
	Type	Flared							
	Drain Pipe	mm (inch)	25.4 (1)	25.4 (1)	25.4(1)	25.4(1)	25.4(1)	25.4(1)	25.4(1)
IDU Noise Level (Hi/Med/Lo)	dB(A)	38/33/30	40/34/31	43/37/33	45/41/37	46/43/41	49/46/43	52/49/42	55/49/42
Refrigerant Control	Type	Electronic Expansion Valve							
Dimension & Weight	Net Dim (WxDxH)	MM	845 x 193 x 300	845 X 193 X 300	960 x 215 x 320	960 x 215 x 320	1110 x 215 x 335	1110 x 215 x 335	1350 x 258 x 326
	Packing Dim (WxDxH)	MM	930 x 280 x 365	930 X 280 X 365	1040 x 300 x 400	1040 x 300 x 400	1190 x 310 x 415	1190 x 310 x 415	1493 x 343 x 418
	Net / Gross Wt	KG	10 / 12	10/12	12/15	12/15	15/18	15/18	18.5/23.5

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DUCTABLE INDOOR UNITS - DSD SERIES



Model		DSD-18	DSD-24	DSD-30	DSD-36	DSD-48	DSD-60	DSD-72	DSD-96
Power Supply		220-240V/50Hz/1-ph							
Cooling Capacity	TR	1.5	2.0	2.5	3.0	4	5	6	8
	kW	5.3	7.0	8.8	10.5	14.1	17.6	21.1	28.1
Heating capacity	TR	1.6	2.2	2.7	3.2	4.3	5.4	6.5	8.6
	kW	5.6	7.7	9.5	11.3	15.1	19.0	22.9	30.2
Motor	Motor Quantity	No.	1	1	1	1	2	2	2
	Motor Power	W	75	75	187	187	375	375	375
	Current	A	0.70	0.70	1.00	1.80	1.80	4.10	4.10
Air Volume (H/M/L)	CFM	740/715/690	745/725/705	935/910/890	1120/1015/910	1500/1350/1200	2200/2175/2155	2200/2175/2155	3380/3245/3080
	CMH	1258/1215/1172	1265/1232/1198	1588/1546/1512	1903/1725/1546	2548/2293/2039	3737/3695/3661	3737/3695/3661	5742/5513/5233
External Static Pressure (Pa)	Nominal	25	25	25	25	40	50	50	50
	High	50	50	80	80	80	100	100	100
Piping Connection	Liquid Pipe	mm(inch)	6.35 (1/4)	9.5(3/8)	9.5(3/8)	9.5(3/8)	9.5(3/8)	9.5(3/8)	9.5(3/8)
	Suction Pipe	mm(inch)	12.7(1/2)	15.9(5/8)	15.9(5/8)	15.9(5/8)	19.1(3/4)	19.1(3/4)	22.2(7/8)
	Type	Braze							
	Drain Pipe	mm (inch)	19.1(3/4)	19.1(3/4)	19.1(3/4)	19.1(3/4)	19.1(3/4)	19.1(3/4)	19.1(3/4)
IDU Noise Level (H/M/L)	dB(A)	43/42/41	44/43/42	47/45/43	47/45/43	49/45/43	54/53/52	54/53/52	56/55/54
Refrigerant Control	Type	Electronic Expansion Valve							
Dimension & Weight	Net Dim (WxDxH)	mm	934×600×265	934×600×265	932×700×318	932×700×318	1260×800×310	1260×900×387	1475×647×538
	Packing Dim (WxDxH)	mm	1050×615×275	1050×615×275	1050×615×330	1050×615×330	1375×815×325	1375×917×430	1620×710×545
	Net/Gross Weight	kg	28/32	32/35	45/49	45/49	56/62	86/92	86/92

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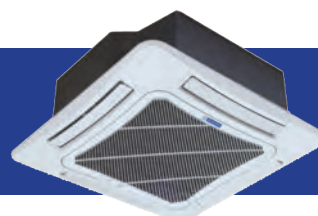
COMPACT CASSETTES



Model		VCC-08	VCC-10	VCC-12	VCC-16	VCC-18
Power Supply		V/Hz/ph	220-240V/50Hz/1-ph			
Cooling Capacity	TR	0.6	0.8	1.0	1.3	1.5
	kW	2.1	2.9	3.5	4.7	5.3
Heating capacity	TR	0.7	0.9	1.1	1.4	1.7
	kW	2.3	3.2	3.9	5.0	5.8
Fan & Fan Motor	Motor Type	DC				
	Motor Power	W	35	35	35	35
	Blower Type	Centrifugal				
Airflow rate(H/M/L)	CMH	651/550/451	651/550/451	651/550/451	700/651/600	700/651/600
	CFM	383/323/265	383/323/265	383/323/265	412/383/353	412/383/353
Piping Connection	Liquid Pipe	mm(inch)	6.35(1/4)	6.35(1/4)	6.35(1/4)	6.35(1/4)
	Suction Pipe	mm(inch)	12.7(1/2)	12.7(1/2)	12.7(1/2)	12.7(1/2)
	Type	Flared				
	Drain Pipe	mm	25	25	25	25
IDU Noise Level(H/M/L)		dB(A)	41/39/35	41/39/35	41/39/35	45/43/38
Refrigerant Control		Type	Electronic Expansion Valve			
Dimension & Weight	Net Dim: WxDxH (mm)	Indoor Unit	596×596×240	596×596×240	596×596×240	596×596×240
		Grille	670×670×50	670×670×50	670×670×50	670×670×50
	Packing Dim: WxDxH (mm)	Indoor Unit	773×733×300	773×733×300	773×733×300	773×733×300
		Grille	763×763×105	763×763×105	763×763×105	763×763×105
	Net Weight (kg)	Indoor Unit	20.5	20.5	20.5	20.5
		Grille	3.5	3.5	3.5	3.5
	Gross Weight (kg)	Indoor Unit	25.5	25.5	25.5	25.5
		Grille	5	5	5	5

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FOUR - WAY CASSETTES



Model		VLC-12	VLC-16	VLC-18	VLC-20	VLC-24	VLC-27	VLC-34	VLC-38	VLC-48	VLC-60A
Power Supply		V/Hz/ph	220-240V/50Hz/1-ph								
Cooling capacity	TR	1	1.3	1.5	1.7	2	2.3	2.8	3.2	4	5
	kW	3.5	4.6	5.3	6	7	8.1	9.8	11.3	14.1	17.6
Heating capacity	TR	1.1	1.4	1.7	1.9	2.2	2.5	3.1	3.5	4.4	5.5
	kW	3.9	5.0	5.8	6.6	7.7	8.9	10.8	12.4	15.5	19.3
Fan & Fan Motor	Motor	Type	BLDC								
	Motor Power	W	48	48	48	59	59	59	98	98	120
	Blower	Type	Centrifugal								
Airflow rate (H/M/L)	CMH	800/700/600	800/700/600	831/751/651	1100/952/801	1182/1000/901	1182/1000/901	1600/1402/1200	1862/1452/1302	1862/1452/1302	2202/1900/1550
	CFM	471/412/353	471/412/353	489/442/383	647/560/471	695/588/530	695/589/530	942/824/706	1095/854/766	1095/854/766	1295/1118/912
Piping Connection	Liquid Pipe	mm(inch)	6.35(1/4)	6.35(1/4)	6.35(1/4)	9.52(3/8)	9.52(3/8)	9.52(3/8)	9.52(3/8)	9.52(3/8)	9.52(3/8)
	Suction Pipe	mm(inch)	12.7(1/2)	12.7(1/2)	12.7(1/2)	15.87(5/8)	15.87(5/8)	15.87(5/8)	15.87(5/8)	15.87(5/8)	19.1(3/4)
	Drain Pipe	mm	25	25	25	25	25	25	25	25	25
IDU Noise Level (H/M/L)		dB(A)	36/34/31	36/34/31	36/34/31	37/35/32	38/36/35	38/36/35	40/37/35	43/41/38	47/44/42
Refrigerant Control		Type	Electronic Expansion Valve								
Dimension & Weight	Net Dim: WxDxH (mm)	Indoor Unit	840×840×190	840×840×190	840×840×190	840×840×240	840×840×240	840×840×320	840×840×320	840×840×320	910×910×293
		Grille	950×950×65	950×950×65	950×950×65	950×950×65	950×950×65	950×950×65	950×950×65	950×950×65	1040×1040×65
	Packing Dim: WxDxH (mm)	Indoor Unit	963×963×272	963×963×272	963×963×272	963×963×325	963×963×325	963×963×325	963×963×409	963×963×409	1023×993×375
		Grille	1033×1038×130	1033×1038×130	1033×1038×130	1033×1038×130	1033×1038×130	1033×1038×130	1033×1038×130	1033×1038×130	1137×1137×140
	Net Weight (kg)	Indoor Unit	22.5	22.5	22.5	26.5	26.5	26.5	32.5	32.5	44.5
		Grille	7	7	7	7	7	7	7	7	8
	Gross weight (kg)	Indoor Unit	29.5	29.5	29.5	34.5	34.5	34.5	40	40	54.5
		Grille	11	11	11	11	11	11	11	11	11.5

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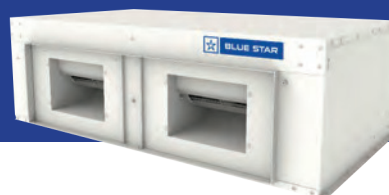
LOW STATIC DUCTED



Model			VLSD-10	VLSD-12	VLSD-16	VLSD-18	VLSD-20	VLSD-24	VLSD-27	VLSD-30	VLSD-38	VLSD-48
Power Supply		V/Hz/ph	220-240V/50Hz/1-ph									
Cooling Capacity		TR	0.8	1.0	1.3	1.5	1.7	2.0	2.3	2.5	3.2	4.0
		kW	2.8	3.5	4.6	5.3	6.0	7.0	8.1	8.8	11.3	14.1
Heating capacity		TR	0.9	1.1	1.4	1.7	1.9	2.2	2.5	2.8	3.5	4.4
		KW	3.1	3.9	5.0	5.8	6.6	7.7	8.9	9.7	12.4	15.5
Motor	Motor Power	W	60	60	60	60	60	60	60	150	150	150
	Current	A	0.32	0.32	0.32	0.32	0.32	0.34	0.34	0.5	0.5	0.5
Air Volume (H/M/L)		CFM	382/345/271	386/347/298	551/482/440	556/491/456	614/551/482	665/567/510	665/567/410	856/668/451	1035/732/539	1113/876/668
		CMH	649/587/460	656/590/506	937/819/748	944/834/775	1044/937/819	1130/963/866	1130/963/866	1454/1136/767	1759/1243/916	1890/1488/1136
External Static Pressure		Pa	30	30	30	30	30	30	30	50	50	50
Piping Connection	Liquid Pipe	mm(inch)	6.35(1/4")	6.35(1/4")	6.35(1/4")	9.52(3/8")	9.52(3/8")	9.52(3/8")	9.52(3/8")	9.52(3/8")	9.52(3/8")	9.52(3/8")
	Suction Pipe	mm(inch)	9.52(3/8")	12.5(1/2")	12.5(1/2")	15.87(5/8")	15.87(5/8")	15.87(5/8")	15.87(5/8")	15.87(5/8")	15.87(5/8")	15.87(5/8")
	Type		Flare Connection									
	Drain Pipe	mm	25									
IDU Noise Level (H/M/L)		dB(A)	38/36/30	38/36/30	37/35/33	37/35/31	39/37/33	39/37/35	39/37/35	40/36/32	40/36/32	42/40/37
Refrigerant Control		Type	Electronic Expansion Valve									
Dimension & Weight	Net Dim. (WxDxH)	mm	710x450x200	710x450x200	1010x450x200	1010x450x200	1010x450x200	1310x450x200	1310x450x200	1340x655x260	1340x655x260	1340x655x260
	Packing Dim. (WxDxH)	mm	1003x551x285	1003x551x285	1303x551x285	1303x551x285	1303x551x285	1603x551x285	1603x551x285	1591x861x330	1591x861x330	1591x861x330
	Net Weight	kg	19	20	24	25	25	30.5	30.5	46.0	46.0	47.0
	Gross Weight	kg	23	23.5	29	30.5	30.5	37	37	55.0	55.0	56.0

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DUCTED INDOOR UNIT - EBI VRF SERIES



Model			EBIVRFA-18DSI	EBIVRFA-24DSI	EBIVRFA-27DSI	EBIVRFA-30DSI	EBIVRFA-36DSI	EBIVRFA-42DSI	EBIVRFA-48DSI	EBIVRFA-60DSI
Power Supply		V/Hz/ph	220-240V/50Hz/1-ph							
Cooling Capacity		TR	1.5	2	2.25	2.4	3	3.5	4	5
		kW	5.3	7.0	7.9	8.4	10.6	12.3	14.1	17.6
Heating Capacity		TR	1.6	2.2	2.5	2.7	3.2	3.8	4.3	5.4
		kW	5.6	7.7	8.6	9.5	11.3	13.3	15.1	19.0
Motor	Quantity	No.	1	1	1	1	1	1	1	1
	Motor Power	W	37	75	187	187	187	187	187	373
Airflow rate(H/M/L)		CMH	1333/1146/985	1665/1580/1512	2778/2650/2523	2778/2650/2523	2778/2650/2523	3228/2633/2379	3228/2633/2379	4000/3635/3280
		CFM	785/675/580	980/930/890	1635/1560/1485	1635/1560/1485	1635/1560/1485	1900/1550/1400	1900/1550/1400	2350/2140/1930
External Static Pressure (Pa)		Nominal	25	25	25	25	25	37.5	50	50
		High	50	75	75	75	75	100	100	100
Piping Connection	Liquid Pipe	mm(inch)	9.52(3/8)	9.52(3/8)	9.52(3/8)	9.52(3/8)	9.52(3/8)	9.52(3/8)	9.52(3/8)	9.52(3/8)
	Suction Pipe	mm(inch)	19.1(3/4)	19.1(3/4)	19.1(3/4)	19.1(3/4)	19.1(3/4)	22.22(7/8)	22.22(7/8)	22.22(7/8)
	Type		Braze							
IDU Noise Level (H/M/L)		dB(A)	43/41/40	51/49/47	51/49/47	51/49/47	51/49/47	50/48/47	55/52/50	57/55/53
Refrigerant Control		Type	Electronic Expansion Valve							
Dimension & Weight	Net Dim (WxDxH)	mm	977x 600x310	1252x600x310	1252x700x400	1252x700x400	1252x700x400	1652x700x400	1652x700x400	1652x900x400
	Packing Dim (WxDxH)	mm	1170 x 650 x 325	1415 x 650 x 325	1415 x 750 x 415	1415 x 750 x 415	1415 x 750 x 415	1815 x 750 x 415	1815 x 750 x 415	1815 x 950 x 415
	Net Weight	kg	36	42	52	52	52	68	68	76
	Gross Weight	kg	40	46	58	58	58	75	75	84

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HIGH CAPACITY DUCTABLE - VSD SERIES



Model			VSD-132A	VSD-216A	VSD-240A
Power Supply		V/Hz/P	230/50/3 ±10%		
Cooling Capacity		TR	11	18	20
		KW	38.7	63.3	70.3
Heating capacity		TR	11.7	19.6	21.7
		KW	41.8	68.4	75.9
Motor & Fan	Motor Power Input	W	370	370	750
	Blower Size	mm	270 x 270	270 x 270	305 x 229
	Quantity	nos	2	3	3
Airflow rate		CFM	4400	6800	8800
Piping Connection	Liquid Pipe	mm (inch)	15.8 (5/8)	15.8 (5/8)	19.05 (3/4)
	Suction Pipe	mm (inch)	28.57 (11/8)	28.57 (11/8)	34.92 (13/8)
External Static Pressure		Pa	60	80	80
Refrigerant Control		Type	Electronic Expansion Valve will be in AHU kit*		
Dimension & Weight	Net Dim (WxHxD)	mm	1858 x 463 x 632	2035 x 552 x 1085	2135 x 690 x 1215
	Net/Gross Weight	kg	98 / 108	147 / 167	207 / 232

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*Compatible AHU Kit to be installed along with the IDU

HIGH SENSIBLE DUCTABLE - VHSD SERIES



Model			VHSD-10	VHSD-12	VHSD-15	VHSD-17	VHSD-20	VHSD-24	VHSD-36	VHSD-48
Power Supply		V/HzP	220-240V, 50Hz, 1P~							
Cooling Capacity		TR	0.8	1	1.25	1.40	1.65	2	3.0	4
		KW	2.8	3.5	4.4	4.9	5.8	7.0	10.6	14.1
Motor	Quantity	nos	1	1	1	1	1	1	1	1
	Power	W	37	37	187	187	187	187	187	373
Airflow rate (H/M/L)		CMH	1104/970/825	1104/970/825	2315/2260/2175	2315/2260/2175	2315/2260/2175	2315/2260/2175	3365/3230/3110	3520/3315/3110
		CFM	650/570/485	650/570/485	1362/1330/1280	1362/1330/1280	1362/1330/1280	1362/1330/1280	1980/1900/1830	2070/1950/1830
External Static Pressure(Nominal)		Pa	25	25	25	25	25	25	37	50
Piping Connection	Liquid Pipe	mm (inch)	9.52(3/8)	9.52(3/8)	9.52(3/8)	9.52(3/8)	9.52(3/8)	9.52(3/8)	9.52(3/8)	9.52(3/8)
	Suction Pipe	mm (inch)	19.05(3/4)	19.05(3/4)	19.05(3/4)	19.05(3/4)	19.05(3/4)	19.05(3/4)	22.22(7/8)	22.22(7/8)
	Type		Flared							
IDU Noise Level (H/M/L)		dB(A)	43/41/40	43/41/40	49/48/47	49/48/47	49/48/47	50/48/47	50/48/47	57/55/53
Refrigerant Control		Type	Electronic Expansive Valve							
Dimension & Weight	Net Dim (WxDxH)	MM	977 x 600 x 310	977 x 600 x 310	1252 x 700 x 400	1252 x 700 x 400	1252 x 700 x 400	1252 x 700 x 400	1652 x 700 x 400	1652 x 900 x 400
	Packing Dim (WxDxH)	MM	1170 x 650 x 325	1170 x 650 x 325	1415 x 750 x 415	1415 x 750 x 415	1415 x 750 x 415	1415 x 750 x 415	1815 x 750 x 415	1815 x 950 x 415
	Net/Gross Wt	KG	36 / 40	36 / 40	52 / 58	52 / 58	52 / 58	52 / 58	68 / 75	76 / 84

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ONE-WAY CASSETTES



Model			VOC-08A	VOC-10A	VOC-12A	VOC-16A	VOC-18A	VOC-20A
Power Supply		V/Hz/ph	230 Volts, Single Phase, AC					
Cooling Capacity		TR	0.6	0.8	1.0	1.3	1.5	1.7
		kW	2.1	2.9	3.5	4.7	5.3	6
Heating capacity		TR	0.7	0.9	1.1	1.4	1.8	2.3
		kW	2.6	3.2	3.9	5.0	6.3	8
Motor	Motor Power	W	30	30	30	45	45	45
	Current	A	0.24	0.25	0.25	0.27	0.32	0.36
Airflow rate(H/M/L)		CMH	600/500/450	600/500/450	600/500/450	830/600/500	890/667/564	900/680/570
		CFM	353/294/265	353/294/265	353/294/265	488/353/294	524/393/332	530/400/336
Piping Connection	Liquid Pipe	mm(inch)	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
	Suction Pipe	mm(inch)	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"
	Type		Flared					
	Drain Pipe	mm	25	25	25	25	25	25
IDU Noise Level (H/M/L)		dB(A)	30	34	34	35	36	37
Refrigerant Control		Type	Electronic Expansion Valve					
Dimension & Weight	Net Dim: WxDxH (mm)	Indoor Unit	987X385X178	987X385X178	987X385X178	987X385X178	987X385X178	987X385X178
		Grille	1200X460X55	1200X460X55	1200X460X55	1200X460X55	1200X460X55	1200X460X55
	Packing Dim: WxDxH (mm)	Indoor Unit	1307X501X310	1307X501X310	1307X501X310	1307X501X310	1307X501X310	1307X501X310
		Grille	1265X536X121	1265X536X121	1265X536X121	1265X536X121	1265X536X121	1265X536X121
	Net Weight (kg)	Indoor Unit	20	20	20	21	21	21
		Grille	4.2	4.2	4.2	4.2	4.2	4.2
	Gross weight (kg)	Indoor Unit	27	27	27	28.5	28.5	28.5
		Grille	6	6	6	6	6	6

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TWO-WAY CASSETTES



Model			VTC-08	VTC-10	VTC-12	VTC-16	VTC-18	VTC-20	VTC-24
Power Supply		V/Hz/ph	220-240V/50Hz/1-ph						
Cooling Capacity		TR	0.6	0.8	1.0	1.3	1.5	1.7	2
		kW	2.2	2.8	3.6	4.5	5.3	6.0	7.0
Heating capacity		TR	0.7	0.9	1.1	1.4	1.7	1.9	2.2
		kW	2.4	3.1	4.0	5.0	5.8	6.6	7.7
Motor	Motor Power	W	67	67	67	128	128	128	162
	Current	A	0.41	0.41	0.41	0.58	0.58	0.58	0.74
Airflow rate (H/M/L)		CMH	725/591/458	725/591/458	725/591/458	980/800/670	980/800/670	980/800/670	1200/1000/770
		CFM	430/350/270	430/350/270	430/350/270	580/471/395	580/471/395	580/471/395	710/590/455
Piping Connection	Liquid Pipe	mm(inch)	6.35(1/4)	6.35(1/4)	6.35(1/4)	9.52(3/8)	9.52(3/8)	9.52(3/8)	9.52(3/8)
	Suction Pipe	mm(inch)	12.7(1/2)	12.7(1/2)	12.7(1/2)	15.8(5/8)	15.8(5/8)	15.8(5/8)	15.8(5/8)
	Type		Flared						
	Drain Pipe	mm(inch)	32(1-1/4)	32(1-1/4)	32(1-1/4)	32(1-1/4)	32(1-1/4)	32(1-1/4)	32(1-1/4)
IDU Noise Level (H/M/L)		dB(A)	33/29/24	36/32/29	36/32/29	39/35/30	39/35/30	39/35/30	44/40/34
Refrigerant Control		Type	Electronic Expansion Valve						
Dimension & Weight	Net Dim: WxDxH (mm)	Indoor Unit	1172x591x299	1172x591x299	1172x591x299	1172x591x299	1172x591x299	1172x591x299	1172x591x299
		Grille	1430x680x53	1430x680x53	1430x680x53	1430x680x53	1430x680x53	1430x680x53	1430x680x53
	Packing Dim: WxDxH (mm)	Indoor Unit	1355x675x400	1355x675x400	1355x675x400	1355x675x400	1355x675x400	1355x675x400	1355x675x400
		Grille	1525x765x130	1525x765x130	1525x765x130	1525x765x130	1525x765x130	1525x765x130	1525x765x130
	Net Weight (kg)	Indoor Unit	34	34	34	35.8	35.8	35.8	35.8
		Grille	10.5	10.5	10.5	10.5	10.5	10.5	10.5
	Gross weight (kg)	Indoor Unit	42.5	42.5	42.5	43	43	43	43
		Grille	15	15	15	15	15	15	15

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VERTICOOLS



Model			VVC-24	VVC-27	VVC-34	VVC-38	VVC-48
Power Supply		V/Hz/ph	220-240V/50Hz/1-ph				
Cooling Capacity		TR	2.0	2.3	2.8	3.2	4.0
		kW	7.0	8.1	9.8	11.3	14.1
Heating capacity		TR	2.2	2.5	2.9	3.5	4.4
		kW	7.7	8.8	10.2	12.4	15.5
Motor	Motor Power	W	152	152	300	300	300
	Curent	A	0.75	0.75	1.5	1.5	1.5
Airflow rate (H/L)		CMH	1110/920	1110/920	1800/1490	1800/1490	1800/1490
		CFM	655/543	655/543	1060/880	1060/880	1060/880
Piping Connection	Liquid Pipe	mm(inch)	9.52(3/8)	9.52(3/8)	9.52(3/8)	9.52(3/8)	9.52(3/8)
	Suction Pipe	mm(inch)	15.8(5/8)	15.8(5/8)	19.05(3/4)	19.05(3/4)	19.05(3/4)
	Type		Flared				
	Drain Pipe	mm(inch)	17.8 (11/16)	17.8 (11/16)	17.8 (11/16)	17.8 (11/16)	17.8 (11/16)
IDU Noise Level (L)		dB(A)	44	44	51	51	51
Refrigerant Control		Type	Electronic Expansion Valve				
Dimension & Weight	Net Dim (WxDxH)	mm	500x260x1680	500x260x1680	540x379x1775	540x379x1775	540x379x1775
	Packing Dim (WxDxH)	mm	585x380x1805	585x380x1805	660x475x1915	660x475x1915	660x475x1915
	Net/Gross Wt	kg	32/44	32/44	49 / 59	49 / 59	49 / 59

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Treated Fresh Air Units



Model			DTFA42	DTFA66	DTFA82
NOMINAL COOLING CAPACITY		TR	3.5	5.5	6.8
Capacity	Cooling	KW	12.3	19.3	24.0
	Heating	KW	13.3	20.9	26.0
ELECTRICAL POWER SUPPLY			230 Volts, 1-Ph, 50 Hz ac supply		
Air Volume		KW	500	800	1000
Fan Motor	Input Power	W	245	245	366
	Rated Current	mm	4.8	6	6.6
Drain Connection	OD	Inch	3/4	3/4	3/4
		mm	19.1	19.1	19.1
Pipe Connection	Gas	mm (inch)	15.9	19.1	22.2
		mm (inch)	5/8	3/4	7/8
	Liquid	mm	9.5	9.5	9.5
		Inch	3/8	3/8	3/8
	Type		Flare connection		
Exrenal Static Pressure		Pa	80	80	80
Overall Dimensions (W x D x H)		mm (inch)	823x1056x390	963x1056x390	1163x1205x390

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CONCEALED SPLITS



Model			DCS-10A	DCS-12A	DCS-16A	DCS-18A	DCS-24A
Power Supply		V/Hz/ph	230 V, 50Hz , Single Phase				
Cooling Capacity		TR	0.8	1.0	1.3	1.5	2.0
		kW	2.9	3.5	4.7	5.3	7.0
Heating capacity		TR	0.9	1.1	1.4	1.7	2.2
		kW	3.2	3.8	5.1	5.7	7.6
Motor	Motor Power	W	37	37	62	62	74
	Curent	A	0.4	0.4	0.6	0.6	0.8
Air Volume (H/M/L)		CFM	430-240	430-240	460-265	460-265	695-590
		CMH	730-407	730-407	781-450	781-450	1180-1002
External Static Pressure (Pa)		Pa	0-30	0-30	0-30	0-30	0-30
Piping Connection	Liquid Pipe	mm(inch)	6.35(1/4)	6.35(1/4)	6.35(1/4)	6.35(1/4)	9.52(3/8)
	Suction Pipe	mm(inch)	12.7(1/2)	12.7(1/2)	12.7(1/2)	12.7(1/2)	15.87(5/8)
	Type		Flared				
	Drain Pipe	mm(inch)	19	19	19	19	19
IDU Noise Level (H/M/L)		dB(A)	32	32	34	34	36
Refrigerant Control		Type	R-410A				
Dimension & Weight	Net Dim (WxDxH)	mm	1060X515X220	1060X515X220	1060X515X220	1060X515X220	1060X515X220
	Packing Dim (WxDxH)	mm	1135x540x280	1135x540x280	1135x540x280	1135x540x280	1135x540x280
	Net/Gross Weight	kg	26	26	27	27	29

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Notes:

- Sound levels are measured in anechoic chamber at 1.5 m below from the centre of the unit
- Actual sound levels experienced in field conditions can be more due to operating conditions as well as due to background noise
- Bottom suction sound levels will be around 4 dB(A) more than the back suction values given above.

FLOOR MOUNTED PACKAGED UNITS



Model			DFM-60	DFM-96	DFM-120	VFM-216A	VFM-264A
Power Supply		V/HzP	380-420V,50 HZ, 3P~				
Cooling Capacity		TR	5.0	8.0	10.0	18.0	22.0
		KW	17.6	28.1	35.2	63.3	77.4
Heating Capacity		TR	5.5	8.7	10.9	19.4	23.7
		KW	19.0	30.4	38.0	68.3	83.5
Motor & Fan	Motor Power Input	W	560	1500	1700	2238	3000
	Blower Size	mm	12 x 9	12 x 12	12 x 12	18 x 18	18 x 18
Airflow rate		CMH	3400	5440	6800	12233	14960
		CFM	2000	3200	4000	7200	8800
Piping Connection	Liquid Pipe	mm (inch)	9.52 (3/8)	12.7 (1/2)	12.7 (1/2)	15.8 (5/8)	19.05 (3/4)
	Suction Pipe	mm (inch)	19.1 (3/4)	28.5 (11/8)	28.5 (11/8)	28.5 (11/8)	34.9 (13/8)
	Type		Braze				
	Drain Pipe	mm (inch)	31.75 (11/4)	31.75 (11/4)	31.75 (11/4)	31.75 (11/4)	31.75 (11/4)
External Static Pressure		Pa	40	60	80	120	120
Refrigerant Control		Type	Electronic Expansion Valve			Expansion Valve will be in AHU Kit	
Dimension & Weight	Net Dim (WxDxH)	mm	900 x 660 x 1700	1160 x 660 x 1700	1160 x 660 x 1700	1500 x 835 x 1829	1500 x 932 x 1950
	Net / Gross weight	kg	136 / 146	205 / 215	210 / 220	265 / 285	330 / 350

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SOPHISTICATED CONTROL

Blue Star's VRF VI Plus offers you a wide choice of sophisticated and advanced controllers to suit various needs – from a simple cordless remote controller to highly advanced web-based controllers. These controllers are also available to calculate user-wise power consumption.

CORDLESS REMOTE



Large LCD screen for clear display



Backlight for better clarity



Keys with symbols and description for user convenience



Real-time clock display



Room temperature indication



Display of various modes available - Cool Mode, Heat Mode, Fan Mode and Dry Mode.



Fan speed adjustable to suit convenience of user



Inside room temperature adjustable from 16°C to 30°C.



Auto swing option for the louvres



5 options for positioning the louvres to suit one's convenience in preference mode:
2 settings to suit usage pattern
Settings include various parameters like temperature, fan speed and louver display.
When the preference mode key is pressed, the unit functions according to the preset conditions.





FILTER CLEAN FUNCTION

A 'filter clean' reminder function indicates the need to clean the filters. This can be reset after the filters are cleaned.



TIMER FUNCTION

The cordless remote controller enables the user to set on / off timings to switch the systems on or off at pre-determined times.



FLEXIBLE OPERATION

The cordless remote controller has a unique feature that can communicate with the wired remote controllers. This is very useful when controlling units such as concealed splits and ductable split units which are mounted above the false ceiling.

WIRED CONTROLLER

Large-sized, advanced touch-screen LCD for clear display. Blue colour backlight for user convenience.



FILTER CLEAN REMINDER

A 'filter clean' reminder function indicates the need to clean the filters. This can be reset after the filters are cleaned.



TIMER FUNCTION

The cordless remote controller enables the user to set on / off timings to switch the systems on or off at pre-determined times.



FLEXIBLE LOCATION

The wiring of this controller can be led either from the top or from the back, allowing the flexibility to position the controller as required at different sites.



SELF-DIAGNOSIS

These controllers are sophisticated and designed to display error codes to precisely identify the nature of problems



COMPATIBILITY

These controllers are compatible with any type of IDU selected

All the IDUs of the Blue Star VRF VI Plus units are connected to cord or cordless remote controllers. For small offices / retail units where the number of indoor units are not more than 16, complete control can be taken from Group Controllers. These controllers have the following advantages:



Touch-screen based user-friendly controller



Up to 16 indoor units and 3 systems can be controlled



Parameters for individual indoor units can be set

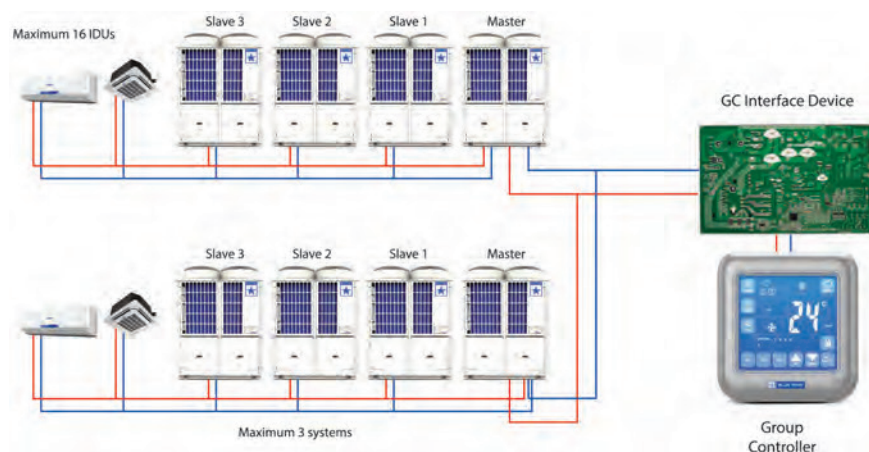


Remote shielding of machines can be performed



Parameters like on / off status, mode of operation, temperature setting and fan speed can be viewed and set.

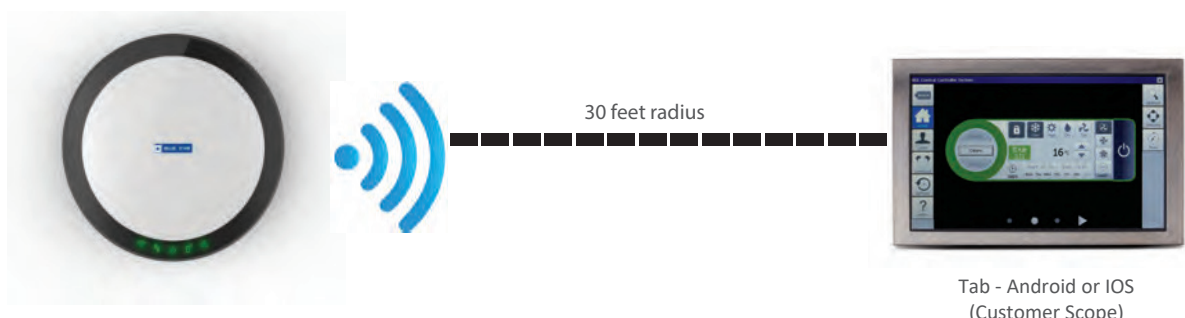
When the number of IDUs is very high, it is useful to group the controllers into different categories and then segregate and control. For example, in hotels, all the rooms can be grouped under one category, all the banquet halls can be grouped under another category while the lobby could be a third category.



WI-FI BASED CENTRAL CONTROLLER

In applications such as large commercial buildings, hotels, hospitals and educational institutions, the number of IDUs used will be high. In such cases, it may be convenient to integrate the control of all the IDUs into one controller for the entire system. The Wi-Fi Based Central Controller of the VRF VI Plus allows users to control multiple IDUs and ODUs as follows:

- 16 systems of 64 ODUs can be controlled
- Up to 992 IDUs can be individually mounted and controlled



Tab - Android or IOS
(Customer Scope)



SCHEDULING

In large office applications, it is convenient to program the entire operational schedule either weekly, monthly or annually depending on the usage pattern and group-wise usage. The entire system can be programmed group-wise / IDU-wise for the whole year and controlled through the central controller.



REMOTE SHIELD FUNCTIONING

Allows the locking of adjustments of key parameters like On / Off mode, temperature and fan speed in each remote controller.



FLEXIBILITY

The same central controller can be used as a debugger which helps diagnose and identify any problem in the system.



DYNAMIC DISPLAY

The entire display is dynamic and is available in different colours to identify the status: Red - Faulty | Green - Functioning well | Grey - Off | Orange - Non-critical error



USER CONVENIENCE

The Central Controller can be directly connected to the VRF VI Plus system. The Wifi based central controller is very convenient to connect through Wifi Connectivity. Wifi central controller is complete with IOS and Android based tab of any internationally reputed brands.



AUTO POWER SAVING MODE

The display automatically switches off if the controller is not used continuously for over a minute. Other feature like Auto connectivity: Wifi Central controller memorizes the previous settings and connects automatically after regain of power in power failure conditions.

PC Monitoring System

The Blue Star VRF VI Plus has an advanced PC monitoring system with the following features:



Up to 60 systems of 240 ODUs can be controlled and monitored. Up to 3720 IDUs can be controlled.



Multiple groupings can be created for user convenience



Percentage of loading on each IDU can be displayed



Scheduling daily, weekly, monthly or annually is possible.



Very user-friendly navigation



SYSTEM PROTECTION

The PC-monitoring software offers the option of providing multiple usernames and multi-level passwords.

KEYCARD CONTROLLER / MOTION SENSOR INTEGRATION

This feature is very useful for applications like hospitals, hotels and hostels. The on and off control of the IDUs can be connected with a keycard controller/motion sensor. The unit automatically functions based on previously set parameters when the keycard is inserted and switches off when it is removed. This facility is available with most of the IDUs.





FIRE ALARM SYSTEM

All the IDUs and ODUs of the VRF VI Plus have the provision to receive fire alarm signals. These signals can be given to any one of the IDUs or ODUs. Once the fire alarm signal is received, the entire system shuts down as a safety measure.

LEAK DETECTION KIT

Leak detection kit can be provided as a optional accessory from factory to detect the refrigerant leakages in case of any miss happening. In case any refrigerant is detected in the air conditioned space, the leak detection kit provides the signal to controller to cut off the refrigerant circuit and prevent the concentration of refrigerant gas in the air conditioned space.

STOPPER VALVES

Stopper valves can be provided as a optional accessory from factory to isolate the indoor units. This stopper valves provide convenience to service personnel for service and maintenance of Indoor units.



TENANT BILLING SYSTEM

VRF systems are offered as solutions to various segments including commercial complexes where there are multiple users. When the builder / developer provides a common air conditioning facility, a tabulation of individual power consumption becomes difficult.

The Blue Star VRF VI Plus comes with an advanced Tenant Billing Software which can capture the exact power consumption by each user, generate various reports, usage patterns and userwise monthly bills.



Month-wise, indoor unit-wise power consumption.



Month-wise power charges for each indoor unit



Generation of reports on various parameters for each tenant



Maintenance of database of each tenant



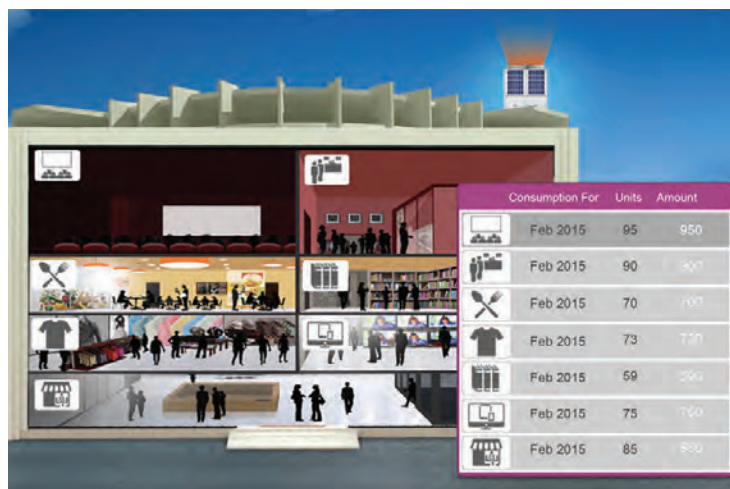
Facility of extracting particular period data



Option of grouping tenants



Provision of incorporating charges per unit of electricity



MOBILE APP

Blue Star's VRF VI Plus systems are designed to operate using an advanced mobile app to enable the customer to view system status even from a remote location. The application, designed for VRFs, works with internet-enabled smartphones and tablets. It is Android and iOS compatible. The entire system can be viewed on one screen. The unique features of the VRF app are:

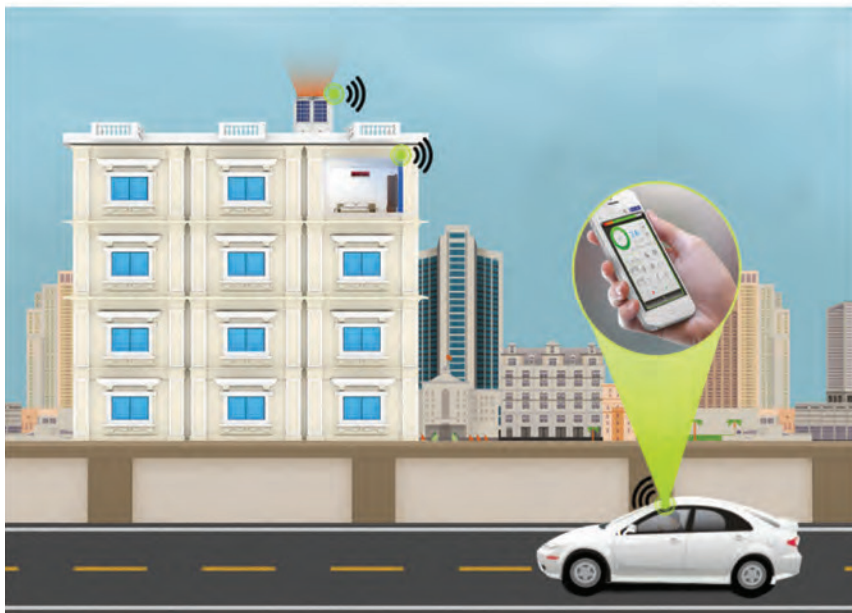


Individual temperature setting for each IDU



Through the mobile app, group or individual IDU control is possible on the following parameters:

- ◆ Turning the IDU On / Off
- ◆ Set temperature
- ◆ Mode of operation
- ◆ Fan speed selection
- ◆ Locking of the system





DES



IGNED TO TAKE ON EXTREMES

BMS COMPATIBILITY

Blue Star's VRF VI Plus systems are highly compatible with advanced BMS systems. Each ODU has a RS-485 communication port through which it can be connected to BMS through a Modbus converter. Besides, the VRF VI Plus system is specially designed to enable the Modbus gateway to be directly connected through the RS-485 port of the Master ODU.

Some of the key features of the BMS modules of the VRF VI Plus units are:



Up to 15 systems can be connected



A maximum of 62 ODUs in each system and 930 IDUs can be connected



Slave IDs for each IDU / ODU can be set



Debugger port is available for authorized service personnel



Options of converting to other protocols like BACnet, Lonworks, etc., are available through an additional converter.





DATA CONCENTRATOR

As we have seen so far, the Blue Star VRF VI Plus is designed to operate with various advanced controllers. A data concentrator enables the customer to use more than one control system at a time. Using the data concentrator, up to a maximum of three interfaces can be connected simultaneously from the following controllers:

PC Monitoring

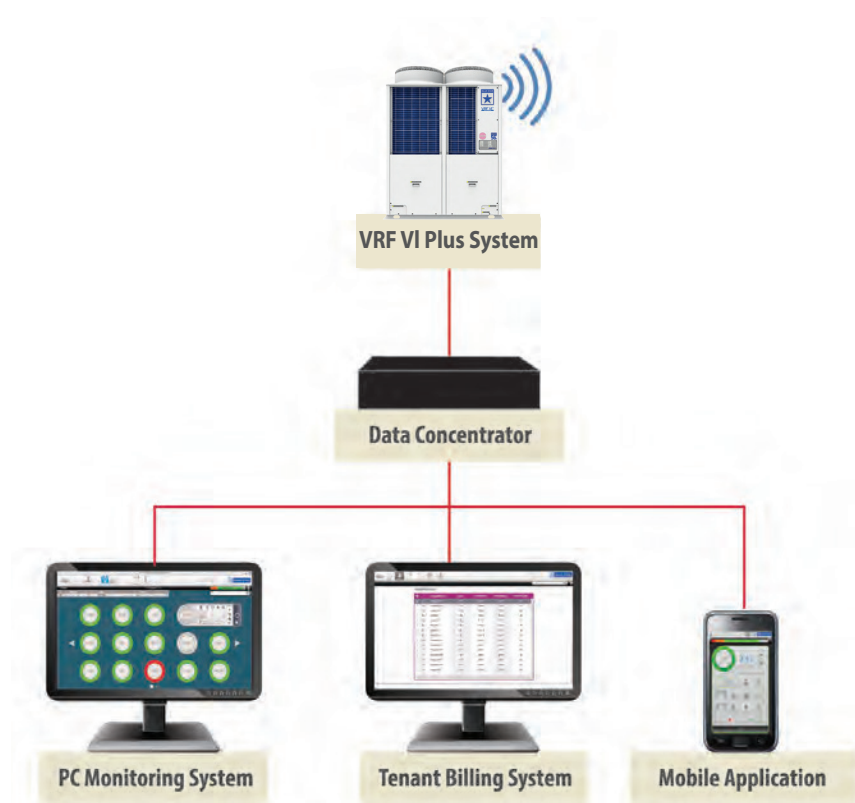
Central Controller

Group Controller

BMS

Tenant Billing System


Mobile App





A blue header with a background image of a complex circuit board with glowing blue lines.

VRF SELECTION SOFTWARE

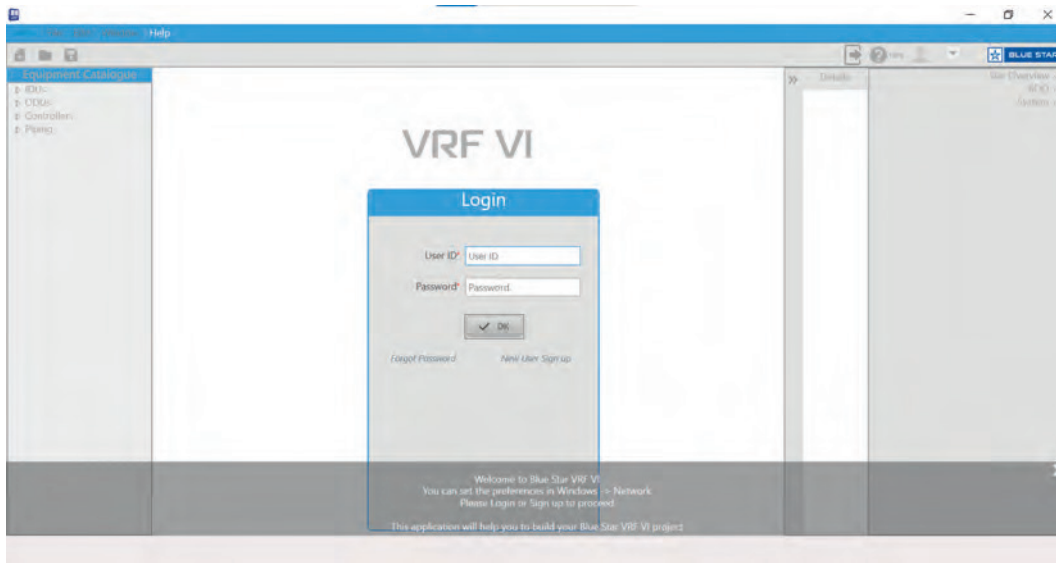
A background image of a modern glass skyscraper with a curved facade, reflecting the sky and clouds.

With advances in technology and the need for faster response time, Blue Star has developed a selection software which can be used for faster selection of Indoor and Outdoor Units as per the requirement. The user-friendly interface enables the user to choose complex selections and pipings very easily and smoothly. It also has the function for recommending IDUs based on the capacity and airflow required. All the selections at a given ambient temperature can be done, as the software automatically selects the ODU based on the selected ambient temperature and capacity of the IDUs connected to it.

Three different reports can be generated based on the selection and requirements:

- BOQ of entire project taking into consideration IDUs, ODUs, Controllers, Refnets.
- The project report giving details about each and every system, their actual diversity and all the details of the selected IDUs and ODUs.
- Piping Schematic Layout and Wiring Diagram can also be generated with details like liquid and suction pipe diameter, the length of copper pipe required, extra refrigerant charge required for all the systems and other electrical details.

Login Page:

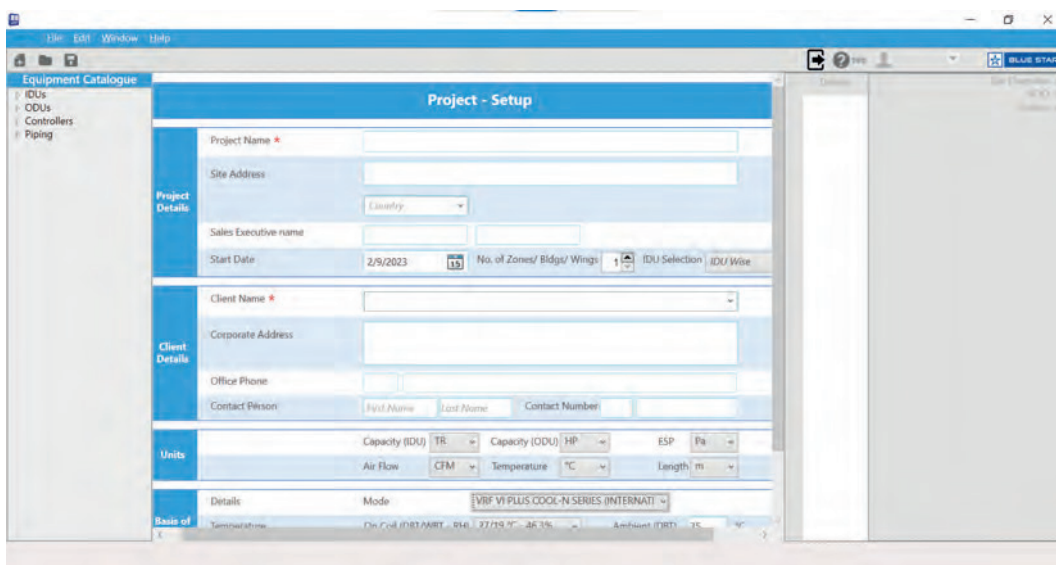


Project Setup Page:

Here the user can enter all the required details and units of the project.

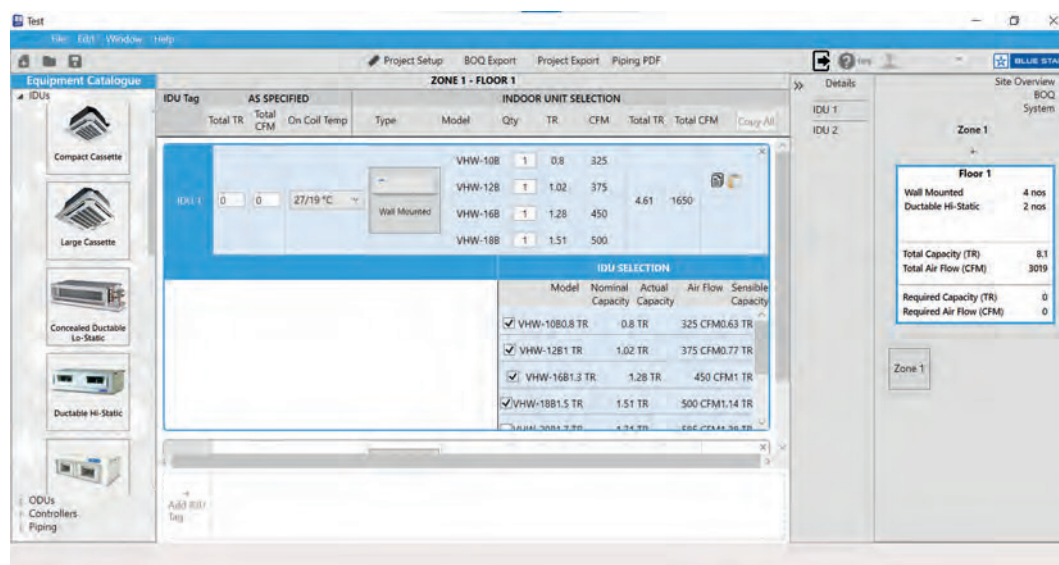
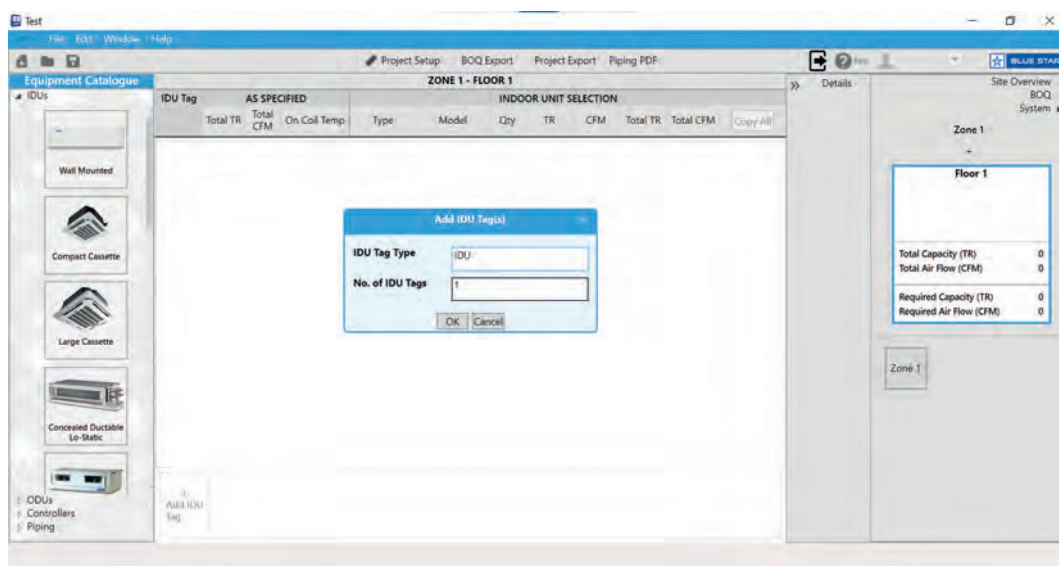
- Project name, project address and other project details.
- Client details
- Units of IDU Capacity, ODU Capacity, ESP, Airflow, Length & Temperature.
- Basics of design like Ambient Temp., Room Wet Bulb, Mode.

Here the user is also allowed to change the details at any point.



Indoor Selection Page:

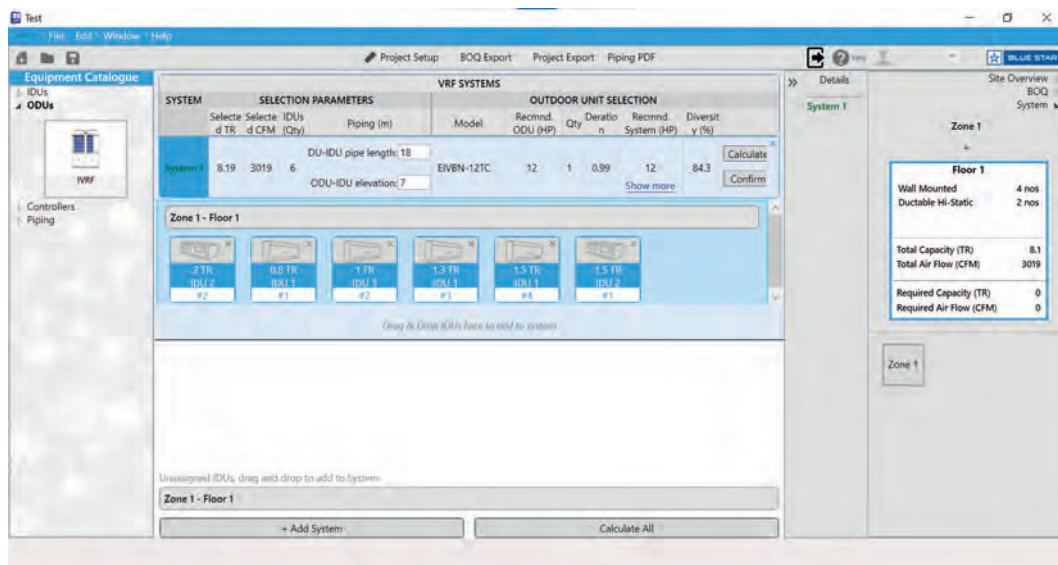
- The user can add rooms and floors according to the requirements
- The user can select the IDUs from the range provided in the software



Outdoor Selection Page:

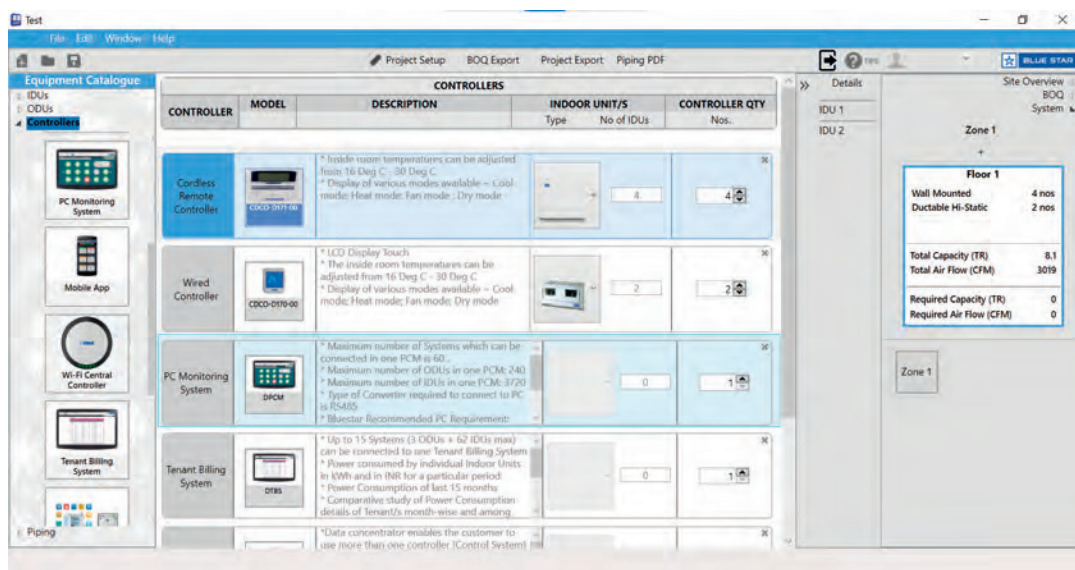
The user can add systems as per the requirements and allot their respective IDUs. The diversity can be adjusted as per the requirements and also the piping length is taken into consideration for selection of ODU.

The software will automatically select the ODU on the basis of the IDU assigned to the system, diversity and pipe length entered by simply clicking on the calculate option.



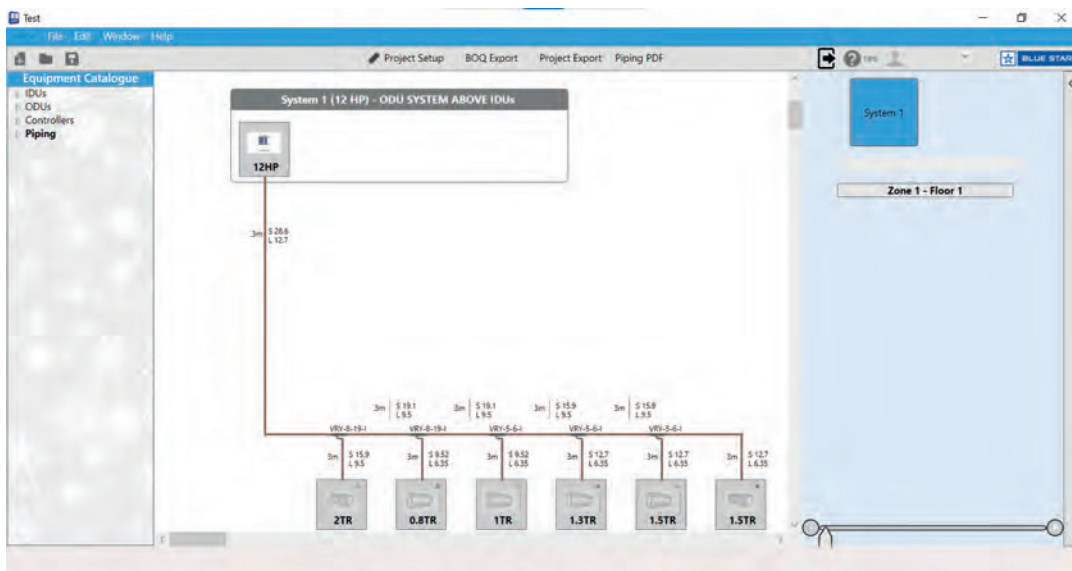
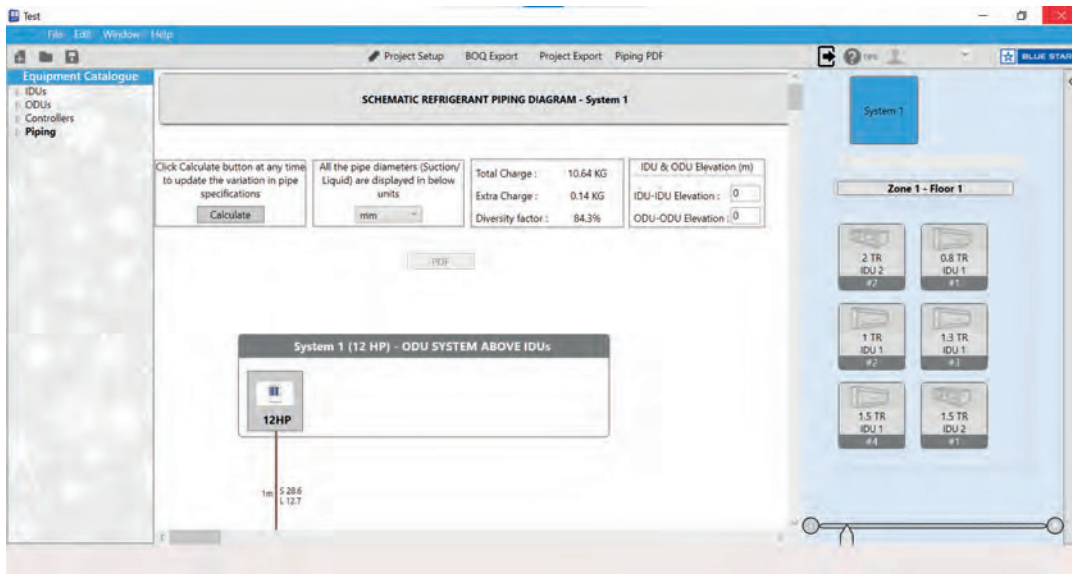
Controller Page:

Based on the type of IDUs selected, the software automatically selects the required controller. Other controllers like group controller or mobile controller can be selected manually as per the requirement.



Piping Page:

Here, the user can manually prepare the Piping Schematic Diagram and the software will automatically calculate the pipe sizes, refnet number and extra gas charging required system-wise.



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For more information, please contact:



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