



BLUE STAR



Packaged ACs & Ducted Splits



Technology that's brought to you from the future.

With over a million tons installed and over 200 trained and dedicated dealers across the country, Blue Star has been the undisputed market leader in ducted systems, in India, for over a decade now.

Blue Star's leadership has not been limited to sales, service, reach and range alone. The company has driven major technological innovations in the field, resulting in unique products being introduced into the market over the past decades.

Blue Star was the first to introduce scroll technology into ducted systems over a decade ago. Then came the HiSen and HiPer Packaged ACs which were designed to cater specifically to high sensible heat and high ambient applications such as IT Parks and server banks. Blue Star also pioneered the HiPer Green Packaged unit for use in green building applications.

Now, Blue Star further augments its wide range of ducted systems by introducing next-generation ducted systems with latest technology MCHX coils.



Salient features



Highly efficient units using MCHX coils



Robust and reliable



Designed to work effectively even in ambient temperatures, as high as 50°C



Aesthetically superior



Compatible with R410A eco-friendly refrigerant



Service-friendly design

MCHX Coils vs Conventional Tube Fin Coils

Conventional coils in ducted systems, made of standard copper-aluminium material, are tubular in nature and allow a single pass of the refrigerant through the coil.

Blue Star's latest ducted systems use advanced MCHX (micro channel heat exchanger) coils, which boast of an all-aluminium brazed construction, are flat in shape and consist of multiple micro channels within the flat tubes.

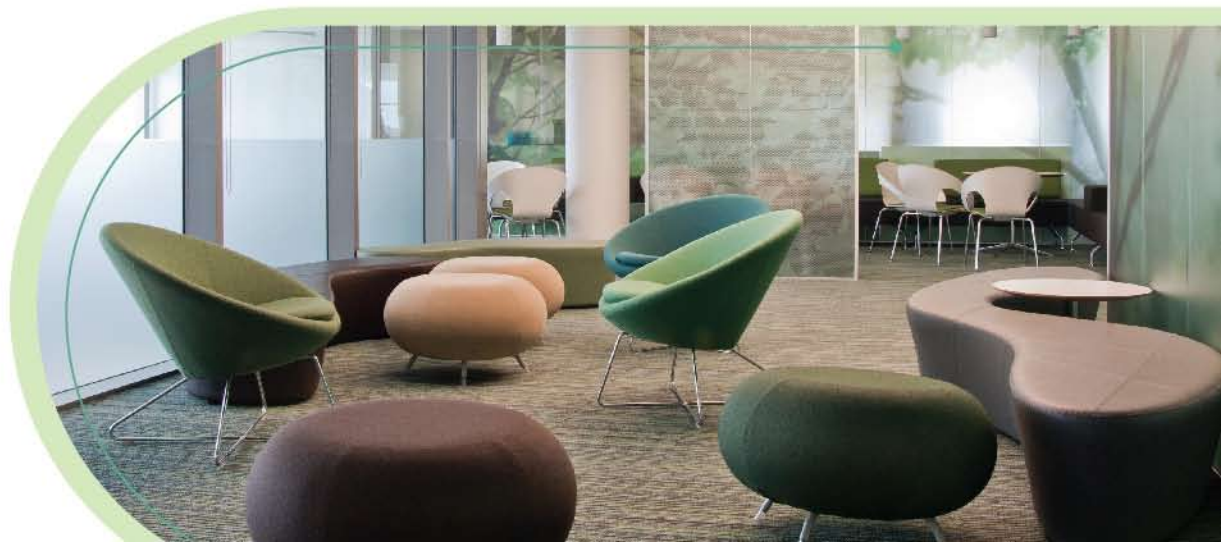
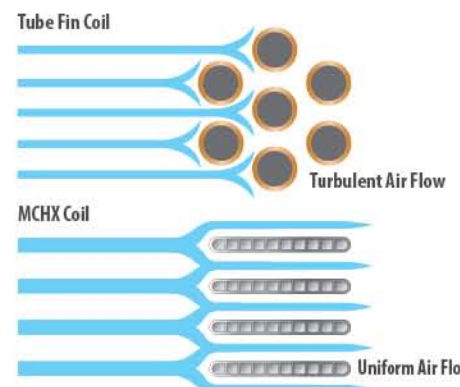
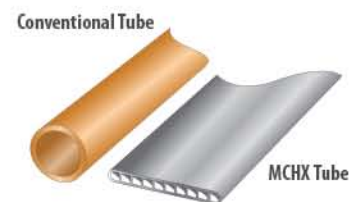
Further, the MCHX coils are so designed as to ensure a double pass of the refrigerant gas. The first pass de-superheats the refrigerant and condenses the discharge gas, while the second pass completes the condensing process and also sub-cools.

This unique construction helps increase heat-transfer efficiency owing to:

- Better heat transfer due to micro channel construction and
- Overall system effectiveness as the coil area is increased

What's more, the nature of construction of the MCHX coil offers further key benefits to the overall system:

- Reduced coil size, making the outdoor unit more compact
- Structurally robust in construction
- Lower rate of corrosion resulting in better reliability and longer life





The MCHX Ducted Systems Range

Air-cooled Packaged ACs

Blue Star is a pioneer in the manufacturing of floor-mounted Packaged ACs for over three decades now. These systems are popular in commercial applications due to their distinct advantages of service-friendliness and extended ducting capabilities.

In the MCHX range, the floor-mounted indoor unit houses the DIDW blower, coil, filters and compressor, while the outdoor unit houses the high-efficiency MCHX condenser and new-design propeller fan. The strategic design, which places the compressors in the proximity of the evaporator in the indoor unit, further enhances the efficiency of this system.

Water-cooled Packaged ACs

Where water is available in plenty, Blue Star's water-cooled Packaged ACs offer higher efficiency than air-cooled systems since water is a superior cooling medium compared to air. These systems come pre-charged and the IDU comprises of the filter, blower, evaporator, compressor and water-cooled condenser. These water-cooled systems offer both higher efficiency as well as lower power consumption compared to air-cooled systems.

Ductable Splits

Where floor space is scarce but the AC unit can be housed above the false ceiling, ducted splits are the best choice. The indoor unit houses the evaporator, DIDW blower and filter in a compact powder-coated sheet metal unit, while the outdoor unit houses the compressor, the MCHX condenser and the new-design propeller fan.



Product Line-Up

Appearance	Tonnage (TR)	3	5.5	8.5	8.75	11	16.5	17	22
	Air-cooled Ducted Split Airconditioners	●	●	●	●	●		●	●
	Air-cooled Packaged Airconditioners		●		●	●	●		●
	Water-cooled Ducted Split Airconditioners	●	●		●	●			
	Water-cooled Packaged Airconditioners		●			●	●		

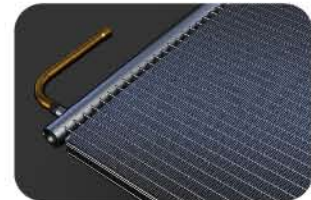
Exceptional User Benefits



MCHX Coils

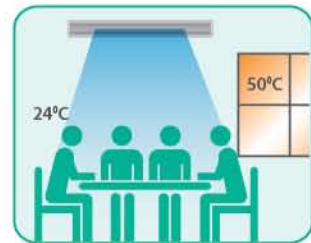
This new range of Blue Star ducted systems come with advanced micro channel heat exchangers (MCHX) with flat tubing and multiple channels, allowing dual pass refrigerant flow, resulting in:

- Better heat-transfer for higher efficiency
- Higher coil area for better system effectiveness
- Smaller coils for compact housing
- Robust structure for higher reliability
- Lower corrosion rates for longer life



Operation at Higher Ambients

The condenser in this new series of ducted systems is designed to operate effectively at higher ambient temperatures, up to 50°C, ensuring efficient cooling even in the harsh summer months, without tripping.



Smaller Footprint

The new generation Blue Star MCHX ducted system has a very compact build, both due to the MCHX coil as well as other design innovations. This helps save space, both for the indoor and the outdoor units.

Additionally, the straight coils in the condensers allow ODUs to be placed next to each other without any short cycling of hot air. Thus further saving on the need for space.





Lower Noise Levels

Since the MCHX coils offer lower resistance to air flow, the outdoor units of these ducted systems are fitted with 24" diameter, bird-wing design, high-efficiency fans. This lowers noise levels significantly.



Lower Running Cost

The high-efficiency fan used in these systems are specially designed blades that offer better air flow. This, along with the MCHX condenser, helps in reducing the condensing temperature, and thereby lowering power consumption and running cost.



Robust Design

The outdoor units of the MCHX series ducted systems come with tooled up ribs on all the panels. Besides, the front corners are made with special angular bends. These provide better mechanical strength overall to the units, ensuring less damage and longer life.



Service-friendly Design

The design of the outdoor unit in the MCHX ducted systems range is such that it offers easy access to the compressors and the control panel on the side. And the fan motor assembly on the front panel is easily removable for repair. The condenser coil is much easier to clean as it accumulates less dust due to the new MCHX design.





Other Features



Scroll Compressor-driven

Due to their inherent design characteristics, scroll compressors have very high volumetric efficiency. They are ideal for airconditioning applications where the compression ratio is not very high. All Blue Star Packaged ACs and Ducted Splits use scroll compressors.



Intelligent Microprocessor Controller

All units are controlled by microprocessor-based controllers with the following features:

- Seven-segment LCD display
- Auto restart after compressor failure
- Fault display
- Run-time equalisation
- Touch-key on/off switch
- Single-phasing and phase reversal protection
- Time delay for compressor operation



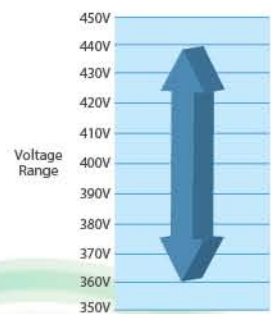
Corrosion-resistant Body

All units are made of galvanised sheets, which are powder-coated after fabrication, making them corrosion-resistant while looking elegant.



Wide Voltage Range of Operation

The MCHX ducted systems can function across a wide voltage range of 360-440V, making them a rare breed.



Wide voltage range



Multi-compressor Advantage

Most of these ducted systems use more than one compressor. This gives them the advantage of high part-load efficiencies, since the entire evaporator surface is available to the system even during part-load conditions.



Run-time Equalisation

The intelligent controller ensures that all compressors (in multi-compressor units) run for equal number of hours, thus ensuring equal wear.



Hydrophilic Coating

The aluminium fins used on the evaporator coil have a hydrophilic coating. This coating helps retain the moisture on the fins from where they drain to the bottom by gravity. This helps reduce the moisture carry-over with the supply air.



EPE Insulation

The evaporator section of the indoor unit is insulated using fire-retardant EPE insulation. This reduces loss of cooling.



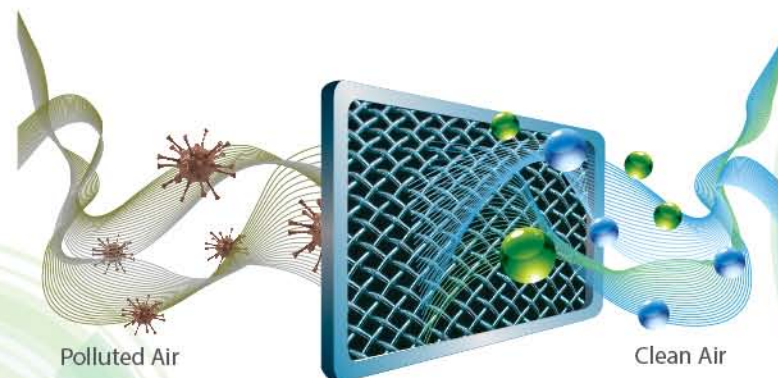
DIDW Blower Design

These systems use advanced DIDW type centrifugal blowers with forward curved blades, which offer higher air throw.



Efficient Air Filters

Air filters made of non-woven polyester media enclosed in HDPE mesh are provided. These are efficient and can be cleaned easily.



Air-cooled Ducted Split Airconditioners

DESCRIPTION	UNITS	DSA361R1A	DSA661R1A	DSA1021R1A	DSA1052R1A	DSA1322R1A	DSA1321R1A	DSA2042R1A	DSA2642R1A
Nominal Cooling Capacity	kcal/Hr	9,072	16,632	25,704	26,460	33,264	33,264	51,408	66,528
	Btu/Hr	36,000	66,000	1,02,000	1,05,000	1,32,000	1,32,000	2,04,000	2,64,000
	TR	3	5.5	8.5	8.75	11	11	17	22
Refrigerant		R22	R22	R22	R22	R22	R22	R22	R22
Indoor Unit									
Dimensions	WxDxH (mm)	950x575x380	1200x650x460	1475x650x460	1475x650x460	1850x875x460	1850x875x460	2035x1085x550	2040x1210x690
Type of Blower		Centrifugal Forward Curved, Double Inlet, Double Width							
Nominal Air Flow	CMH	2040	3740	5780	5950	7480	7480	11560	14960
	CFM	1200	2200	3400	3500	4400	4400	6800	8800
Power Supply		230V, 1Ph, 50Hz, ac supply	415V, Three Phase 50 Hz, ac supply						
External Finish		Pure Polyester Powder coated GI steel housing							
Capacity Control		0, 100%	0, 100%	0, 100%	0, 50%,100%	0, 50%,100%	0, 100%	0, 50%,100%	0, 50%,100%
Air Filter		Non-woven polyester midea enclosed by HDPE mesh							
Controller		Microprocessor based with LCD display							
Outdoor Unit									
No. of ODU's	Per Unit	1	1	1	2	2	1	2	2
Compressor Type		Recip	Hermetically sealed Scroll						
No. of Compressors/ODU		1	1	1	1	1	1	1	1
Dimensions	WxDxH (mm)	910x380x665	1020x395x960	1220x475x960	1020x395x960	1020x395x960	1680x555x960	1220x475x960	1680x555x960
Power Supply		415V, Three Phase 50 Hz, ac supply							
Heat Exchanger Type		MCHX	MCHX	MCHX	MCHX	MCHX	MCHX	MCHX	MCHX
Condenser Fan	Type	Propeller type							
	Qty/ODU	1	1	1	1	1	2	1	2
Indoor Unit Weight	kg	50	55	85	85	110	110	150	210
Outdoor Unit Weight	kg/ODU	75	85	140	85	85	165	140	165

* R2 series with R407C refrigerant also available.

Air-cooled Packaged Airconditioners

DESCRIPTION	UNITS	DPA661R1A	DPA1052R1A	DPA1322R1A	DPA1321R1A	DPA1983R1A	DPA2642R1A
Nominal Cooling Capacity	kcal/Hr	16,632	26,460	33,264	33,264	49,896	66,528
	Btu/Hr	66,000	105,000	132,000	132,000	198,000	264,000
	TR	5.5	8.75	11	11	16.5	22.0
Refrigerant		R22	R22	R22	R22	R22	R22
Indoor Unit							
Dimensions	WxDxH (mm)	900x660x1700	1160x660x1700	1160x660x1700	1160x660x1700	1500x750x1750	1500x930x1950
Type of Blower		Centrifugal Forward Curved, Double Inlet, Double Width					
Nominal Air Flow	CMH	3740	5950	7475	7475	11210	14950
	CFM	2200	3500	4400	4400	6600	8800
Power Supply		415V, Three Phase, 50 Hz, ac supply					
External Finish		Pure Polyester Powder coated GI steel housing					
Compressor type		Hermetically sealed Scroll					
No. of Compressors	Unit	1	2	2	1	3	2
Capacity Control		0, 100%	0, 50%,100%	0, 50%,100%	0, 100%	0, 33%,66%,100%	0, 50%,100%
Air Filter		Non woven polyester midea enclosed by HDPE mesh					
Controller		Microprocessor based with LCD display					
Outdoor Unit							
No. of ODU's	Per Unit	1	2	2	1	3	2
Dimensions	WxDxH (mm)	940x325x960	940x325x960	940x325x960	1590x325x960	940x325x960	1590x325x960
Power Supply		230V, Single Phase, 50 Hz, ac supply					
Heat Exchanger Type		MCHX	MCHX	MCHX	MCHX	MCHX	MCHX
Condenser Fan	Type	Propeller type					
	Qty/ODU	1	1	1	2	1	2
Indoor Unit Weight	kg	195	250	270	260	430	500
Outdoor Unit Weight	kg/ODU	35	35	35	60	35	60

* R2 series with R407C refrigerant also available.

Air-cooled Packaged Airconditioners (Refrigerant R410A)

DESCRIPTION	UNITS	DPA721 R3	DPA1081 R3	DPA1442 R3	DPA1441 R3	DPA2163 R3	DPA2882 R3
Nominal Cooling Capacity	kcal/Hr	18,144	27,216	36,288	36,288	54,432	72,576
	Btu/Hr	72,000	1,08,000	1,44,000	1,44,000	2,16,000	2,88,000
	TR	6	9	12	12	18	24
Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A
Indoor Unit							
Dimensions	WxDxH (mm)	930x660x1700	930x660x1700	1260x760x1700	1260x760x1700	1500x835x1830	1500x930x1950
Type of Blower		Centrifugal Forward Curved, Double Inlet, Double Width					
Nominal Air Flow	CMH	4080	6120	8155	8155	12230	16310
	CFM	2400	3600	4800	4800	7200	9600
Power Supply		415V, Three Phase, 50 Hz, ac supply					
External Finish		Pure Polyester Powder coated GI steel housing					
Compressor type		Hermetically sealed Scroll					
No. of Compressors	Unit	1	1	2	1	3	2
Compressor Configuration		Solo	Solo	Tandem	Solo	Tandem+Solo	Tandem
No. of Circuits		1	1	1	1	2	1
Capacity Control		0, 100%	0, 100%	0, 50%,100%	0, 100%	0, 33%, 66%,100%	0, 50%,100%
Air Filter		Non-woven polyester midea enclosed by HDPE mesh					
Controller		Microprocessor based with LCD display					
Outdoor Unit							
No. of ODUs	Per Unit	1	1	1	1	1x12TR + 1x6TR	2
Dimensions	WxDxH (mm)	995x325x1050	1245x400x1050	1590x325x1050	1590x325x1050	1590x325x1050 995x325x1050	1590x325x1050
Power Supply		230V, Single Phase, 50 Hz, ac supply					
Heat Exchanger Type		MCHX	MCHX	MCHX	MCHX	MCHX	MCHX
Condenser Fan	Type	Propeller Type					
	Qty/ODU	1	1	2	2	2 + 1	2
Indoor Unit Weight	kg	200	250	300	300	500	580
Outdoor Unit Weight	kg/ODU	40	50	65	65	65+ 40	65



Water-cooled Ducted Split Airconditioners

DESCRIPTION	UNITS	DSW361R1	DSW661R1	DSW1052R1	DSW1322R1
Nominal Cooling Capacity	kcal/Hr	9,072	16,632	26,460	33,264
	Btu/Hr	36	66	1,05	1,32
	TR	3	5.5	8.75	11
Refrigerant		R22	R22	R22	R22
Indoor Unit					
Dimensions	WxDxH (mm)	950x575x380	1200x650x460	1475x650x460	1850x650x460
Type of Blower		Centrifugal Forward Curved, Double Inlet, Double Width			
Nominal Air Flow	CMH	2040	3740	5950	7480
	CFM	1200	2200	3500	4400
Power Supply		230V, 1Ph, 50Hz, ac supply	415V, Three Phase 50 Hz, ac supply		
External Finish		Pure Polyester Powder coated GI steel housing			
Capacity Control		0, 100%	0, 100%	0, 50%,100%	0, 50%,100%
Air Filter		Non-woven polyster midea enclosed by HDPE mesh			
Controller		Microprocessor based with LCD display			
Outdoor Unit					
No. of ODUs	Per Unit	1	1	1	1
Compressor Type		Recip	Hermetically sealed Scroll		
No. of Compressors/ODU		1	1	2	2
Dimensions	WxDxH (mm)	800x655x545	800x655x545	1170x640x630	1170x640x630
Power Supply		415V, Three Phase, 50 Hz, ac supply			
Condenser Type		Shell & Tube Type			
Cooling Water Required	USGPM	11	20	31	40
	CMH	2.5	4.5	7	9.1
Indoor Unit Weight	kg	50	55	85	110
Outdoor Unit Weight	kg/ODU	120	130	225	225

* R2 series with R407C refrigerant also available.

Water-cooled Packaged Airconditioners

DESCRIPTION	UNITS	DPW661R1	DPW1322R1	DPW1983R1
Nominal Cooling Capacity	kcal/Hr	16,632	33,264	49,896
	Btu/Hr	66,000	1,32,000	1,98,000
	TR	5.5	11	16.5
Refrigerant		R22	R22	R22
Indoor Unit				
Dimensions	WxDxH (mm)	900x660x1700	1160x660x1700	1500x750x1800
Type of Blower		Centrifugal Forward Curved, Double Inlet, Double Width		
Nominal Air Flow	CMH	3740	7475	11210
	CFM	2200	4400	6600
Cooling Coil		Inner grooved copper tubes with Al slit fins		
Power Supply		415V, Three Phase, 50 Hz, ac supply		
External Finish		Pure Polyester Powder coated GI steel housing		
Capacity Control		0, 100%	0, 50%,100%	0, 33%,66%,100%
Air Filter		Non-woven polyster media enclosed by HDPE mesh		
Controller		Microprocessor based with LCD display		
Compressor Type		Hermetically sealed Scroll		
No. of Compressors/Unit		1	2	3
Condenser	Type	Shell & Tube Type		
Cooling Water Required	USGPM	20	40	60
	CMH	4.5	9.1	13.6
Unit Weight	kg	240	405	605

* R2 series with R407C refrigerant also available.



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