



BLUE STAR



# Refrigeration Systems

## Semi-hermetic Series

(Super Tropicalised)

Packaged for  
power-packed Performance



Blue Star, India's leading refrigeration solutions provider, offers you a wide range of refrigeration units to suit different business needs.

Processed food industry segments like poultry, marine and meat processing require heavy-duty operations, while the ice-cream industry is growing by leaps and bounds and needs large storages at production and distribution points. To tackle these critical temperature requirements, Blue Star brings to you a fully-packaged semi-hermetic refrigeration system.

In all these applications, we understand what you need to succeed: reliability and the assurance of holding temperature maintained within critical limits. These are possible only through well-packaged, well-engineered refrigeration systems with reliable components.

Blue Star's range of condensing units is designed using world-class technology and components. It is created to function efficiently even at high ambient temperatures, assuring you of trouble-free temperature management even during peak summer time. What's more, the range is available in both air cooled and water cooled options to suit different needs.

The new range of air cooled condensing units is robust in construction and uses world-class and highly reliable components. It is designed to enable quick and easy installation.

These units use semi-hermetic reciprocating compressors that offer significantly higher cooling capacity, reliability and flexibility than market standards. They also come with factory-fitted components and are extensively tested for reliability. So you are assured of qualitative system balancing under controlled conditions, which ensures delivery of committed capacities.





## SALIENT FEATURES

- **Air Cooled Condenser**

Tropicalised high ambient air cooled tube and fin condenser, with internally grooved copper tubes, results in increase of heat transfer surface area for better heat transfer. And thus increases the efficiency of the refrigeration system.

- **Condenser Fans**

High quality and reliable axial fans ensure uniform airflow across the heat exchanger, increase COP of the compressor and reduce power consumption. The motor of the condenser fans is equipped with an HP switch to ensure optimum condensing pressure and temperature.

- **Weather-proof Housing**

The condensing unit is mounted on a sturdy base frame and provided with a powder-coated and corrosion-resistant casing.



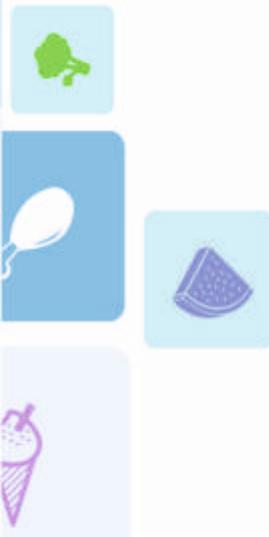
# WATER COOLED CONDENSING UNITS



Blue Star's water cooled condensing units include a semi-hermetic compressor, water cooled condenser with safety valve connection, service valves, a base frame and vibration absorber installed on the discharge line, in some models. They are of high-efficiency design with spacious dimensions. At the same time, they are compact and generally consume less power. Their shell and tube sheet is made of carbon steel, and the tubes are of copper with integrally finned thick walls.

Water cooled units are generally preferred for cold rooms in hotels and the processed food segment, for reasons of availability of treated water. It is convenient to locate water cooled condensing units even in places without adequate ventilation for condensation.

Water cooled units are capable of delivering consistent performance irrespective of variations in ambient conditions. Moreover, the water side connections allow supply of both mains water and cooling tower water.



### • Shell and Tube Condenser

Water cooled condensers come with internally grooved and externally finned tubes which increase heat transfer area, which in turn needs less refrigerant charge. They are also compact and lightweight. What's more, the circular end covers result in higher flow rate of water and refrigerant inside the Shell and Tube condenser. This increases COP of the compressor and lowers power consumption.



### • Base Frame

Sturdy and robust, the base frame is CNC punched, CNC bent and 4 mm thick with hexagon rivet nuts. This ensures no rusting and a longer product life.

## SALIENT FEATURES



# COMMON FEATURES

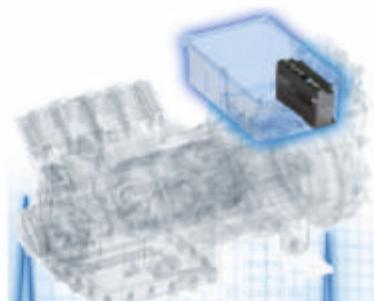
## • Semi-hermetic Compressor

The semi-hermetic compressor is compact, economical, efficient and very easy to maintain. Its removable heads, stator cover, bottom plate and housing cover allow easy access for field repairs. What's more, the compressor is fitted with suction and discharge service valves and is also provided with a crank case heater.



## • Diagnostic Black Box\*

This compressor also comes with a diagnostic black box which ensures constant monitoring and fast diagnosis. It can be connected to a computer, via USB, to identify the cause of malfunction.



## • Oil Separator

The oil separator allows longer piping distances and enhances system reliability and uptime. It comes with GOMAX-make hose assembly (for oil return line).



\*Available with Q-Series, S-Series and V-Series compressor models only.

### • Liquid Receiver

Good quality liquid receiver (with Rotalock valve) ensures constant flow of refrigerant to the thermostatic expansion valve and thus increases system reliability.

### • GOMAX Flexible Tubes

These tubes eliminate any leakage of the refrigerant during operation and transportation. This improves the life of the product and enhances aesthetics.

### • Vibration Eliminators in the Discharge Line

This is a highly beneficial feature, as it reduces vibration during operation, thereby reducing any chance of leakage of the refrigerant.

### • Sturdy HP/LP Mounting Bracket

3 mm thick and galvanised, the robust bracket is ideal for mounting an HP/LP switch. This helps minimise variations of the pointer, ensuring accurate readings.

### • Brazing

The use of 42% silver brazing rods ensures better protection of joints, pipes, components or controls and minimises refrigerant leakage.

### • Refrigeration Controls

The condensing unit is fitted with HP/LP switches with GOMAX-make hose assembly Filter drier, Sight Glass and Liquid Line Solenoidal valve. While its components are from internationally reputed manufacturers.



## Evaporating Units

Blue Star's evaporators are compact and sleek. The evaporator is housed within the cold storage and occupies minimum space. This allows you to utilise the maximum volume of cold storage.

### Features:



Stainless steel body (SS304) for enhanced durability and strength



Improved air throw for uniform air distribution



Excellent corrosion resistance



External rotor driven fans have low noise levels and conform to IP45 standards



Inner grooved copper tubes for superior heat transfer



Removable side panels for easy service and minimum downtime



4 FPI coil for low temperature units



Defrost heaters within the coil to ensure total defrost



# TECHNICAL SPECIFICATIONS



## Air Cooled - High Temperature

### Outdoor Unit\*\*

#### High Temperature Semi-hermetic Air cooled Refrigeration System with R404A Refrigerant

#### Cooling Capacities @ +4°C Room Temperature & 35°C Ambient Temperature

Description	Units	RUAHOSH -01014-A106	RUAHOSH -01514-A157	RUAHOSH -02014-D211	RUAHOSH -03014-D313	RUAHOSH -04014-Q521	RUAHOSH -06014-Q728	RUAHOSH -08014-S1242
Nominal Capacity	Btu/hr	10000	15000	20000	30000	40000	60000	80000
Compressor Type	-	Semi-hermetic Reciprocating						
Power Supply	V / Ph / Hz	400 / 3 / 50	400 / 3 / 50	400 / 3 / 50	400 / 3 / 50	400 / 3 / 50	400 / 3 / 50	400 / 3 / 50
Fan Motors	No.	2	2	2	2	2	2	2
Compressor Qty.	No.	1	1	1	1	1	1	1
No. of Chassis	No.	1	1	1	1	1	1	1
Overall Dimensions (W x D x H)	mm	987 x 700 x 506	987 x 700 x 506	1060 x 760 x 575	1420 x 760 x 689	1420 x 760 x 689	1570 x 830 x 864	1570 x 830 x 864
Weight / Unit (Approx.)	kg	94	94	117	121	164	203	246
Gas Charged	-	Nitrogen Charged						

### Indoor Unit\*\*

Blue Star Indoor Unit		Cooling Capacities @ +4°C Room Temperature & 35°C Ambient Temperature						
Description / Model	Units	RUAHI-1014	RUAHI-1514	RUAHI-2014	RUAHI-3014-N	RUAHI-4014-N	RUAHI-6014-N	RUAHI-8014-N
Nominal Capacity	Btu/hr	10,000	15,000	20,000	30,000	40,000	60,000	80,000
Power Supply	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	415/3/50	415/3/50
Airflow	CFM	1,600	2,400	3,200	4,500	5,200	12,000	11,700
Air Throw	Feet	12	12	12	25	40	45	45
No. of Circuits	Nos.	1	1	1	1	1	1	1
Overall Dimensions (W x D x H)	mm	1245 x 480 x 450	1780 x 480 x 450	2210 x 480 x 450	1710 x 645 x 720	1710 x 645 x 720	2140 x 840 x 925	2140 x 840 x 925
Dry Weight	kgs	25	35	45	72	82	140	150

## Air Cooled - Low Temperature

Outdoor Unit\*\*

### Low Temperature Semi-hermetic Air cooled Refrigeration System with R404A Refrigerant

#### Cooling Capacities @ -23°C Room Temperature & 35°C Ambient Temperature

Description	Units	RUALOSH -00614-B210	RUALOSH -00914-D213	RUALOSH -01214-D318	RUALOSH -01814-Q528	RUALOSH -02414-Q736	RUALOSH -03014-S842	RUALOSH 04014-S1556	RUALOSH 05014-V1571	RUALOSH 05514-V2084
Nominal Capacity	Btu/hr	6000	9000	12000	18000	24000	30000	40000	50000	55000
Compressor Type	-	Semi-hermetic Reciprocating								
Power Supply	V/Ph/Hz	400 / 3 / 50	400 / 3 / 50	400 / 3 / 50	400 / 3 / 50	400 / 3 / 50	400 / 3 / 50	400 / 3 / 50	400 / 3 / 50	400 / 3 / 50
Fan Motors	No.	2	2	2	2	2	2	2	2	4
Compressor Quantity	No.	1	1	1	1	1	1	1	1	1
No. of Chassis	No.	1	1	1	1	1	1	1	1	1
Overall Dimensions (W x D x H)	mm	987 x 700 x 506	1060 x 760 x 575	1060 x 760 x 575	1420 x 760 x 689	1570 x 830 x 864	1570 x 830 x 864	1570 x 830 x 864	1570 x 940 x 890	1420 x 950 x 1315
Weight/Unit <sup>5</sup> (Approx.)	kg	98	117	121	164	203	241	256	290	320
Gas Charged	-	Nitrogen Charged								

<sup>5</sup>Without Housing.

Indoor Unit\*\*

Blue Star Indoor Unit		Cooling Capacities @ -23°C Room Temperature & 35°C Ambient Temperature				
Description / Model	Units	RUAL00614-I-N	RUAL00914-I-N	RUAL01214-I-N	RUAL01814-I-N	RUAL02414-I-N
Nominal Capacity	Btu/Hr	6,000	9,000	12,000	18,000	24,000
Power Supply	V/Ph/Hz	415/3/50	415/3/50	415/3/50	415/3/50	415/3/50
Airflow	CFM	1600	2400	3200	5500	11700
Air Trow	feet	12	12	12	40	45
Overall Dimensions (WxDxH)	mm	1250 x 480 x 440	1780 x 480 x 440	2210 x 480 x 440	1710 x 645 x 720	2140 x 840 x 925
Dry Weight	kgs	37	45	58	89	135

## Water Cooled - Low Temperature

### Outdoor Unit\*\*

#### Low Temperature Semi-hermetic Water cooled Refrigeration System with R404A Refrigerant

#### Cooling Capacities @ -23°C Room Temperature & 40°C Condensing Temperature

Description	Units	RUWLOSH -00614-B159	RUWLOSH -00914-D213	RUWLOSH -01214-D318	RUWLOSH -01814-Q525	RUWLOSH -02414-Q533	RUWLOSH -03014-S842	RUWLOSH -04014-S2056	RUWLOSH -05014-V1571
Nominal Capacity	Btu/hr	6000	9000	12000	18000	24000	30000	40000	50000
Compressor Type	-	Semi-hermetic Reciprocating							
Power Supply	V/Ph/Hz	415/3/50	415/3/50	415/3/50	415/3/50	415/3/50	415/3/50	415/3/50	415/3/50
Compressor Qty.	No.	1	1	1	1	1	1	1	1
No. of Chassis	No.	1	1	1	1	1	1	1	1
Overall Dimensions (W x D x H)	mm	950 x 500 x 650	950 x 500 x 650	950 x 500 x 675	950 x 500 x 700	1200 x 550 x 725	1200 x 550 x 800	1510 x 650 x 825	1510 x 700 x 900
Weight / Unit (Approx.)	kg	105	112	137	170	175	215	285	315
Gas Charged	-	Nitrogen Charged							

### Indoor Unit\*\*

Blue Star Indoor Unit		Cooling Capacities @ -23°C Room Temperature & 35°C Ambient Temperature				
Description / Model	Units	RUAL00614-I-N	RUAL00914-I-N	RUAL01214-I-N	RUAL01814-I-N	RUAL02414-I-N
Nominal Capacity	Btu/Hr	6,000	9,000	12,000	18,000	24,000
Power Supply	V/Ph/Hz	415/3/50	415/3/50	415/3/50	415/3/50	415/3/50
Airflow	CFM	1600	2400	3200	5500	11700
Air Throw	feet	12	12	12	40	45
Overall Dimensions (WxDxH)	mm	1250 x 480 x 440	1780 x 480 x 440	2210 x 480 x 440	1710 x 645 x 720	2140 x 840 x 925
Dry Weight	kgs	37	45	58	89	135

## Water Cooled - High Temperature

### Outdoor Unit\*\*

#### High Temperature Semi-hermetic Water cooled Refrigeration System with R404A Refrigerant

#### Cooling Capacities @ +4 °C Room Temperature & 40°C Condensing Temperature

Description	Units	RUWHOSH -01014-A075	RUWHOSH -01514-A157	RUWHOSH -02014-B159	RUWHOSH -03014-D313	RUWHOSH -04014-D416	RUWHOSH -06014-Q728	RUWHOSH -08014-Q733
Nominal Capacity	Btu/hr	10000	15000	20000	30000	40000	60000	80000
Compressor Type	-	Semi-hermetic Reciprocating						
Power Supply	V / Ph / Hz	400 / 3 / 50	400 / 3 / 50	400 / 3 / 50	400 / 3 / 50	400 / 3 / 50	400 / 3 / 50	400 / 3 / 50
Compressor Qty.	No.	1	1	1	1	1	1	1
No. of Chassis	No.	1	1	1	1	1	1	1
Overall Dimensions (W x D x H)	mm	950 x 450 x 600	950 x 500 x 620	950 x 500 x 650	950 x 500 x 675	950 x 500 x 675	1200 x 550 x 725	1200 x 550 x 750
Weight / Unit (Approx.)	kg	100	105	105	137	142	175	180
Gas Charged	-	Nitrogen Charged						

### Indoor Unit\*\*

Blue Star Indoor Unit		Cooling Capacities @ +4°C Room Temperature & 35°C Ambient Temperature						
Description / Model	Units	RUAHI-1014	RUAHI-1514	RUAHI-2014	RUAHI-3014-N	RUAHI-4014-N	RUAHI-6014-N	RUAHI-8014-N
Nominal Capacity	Btu/hr	10,000	15,000	20,000	30,000	40,000	60,000	80,000
Power Supply	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	415/3/50	415/3/50
Airflow	CFM	1,600	2,400	3,200	4,500	5,200	12,000	11,700
Air Throw	Feet	12	12	12	25	40	45	45
No. of Circuits	Nos.	1	1	1	1	1	1	1
Overall Dimensions (W x D x H)	mm	1245 x 480 x 450	1780 x 480 x 450	2210 x 480 x 450	1710 x 645 x 720	1710 x 645 x 720	2140 x 840 x 925	2140 x 840 x 925
Dry Weight	kgs	25	35	45	72	82	140	150

\*\*NOTE:Capacity rating based on Standard: EN13215.

Capacity tolerance as per standard norms.

\*\*NOTE: Specifications are subject to change without prior notice.  
Refrigeration capacity based on standard rated conditions.



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