



BLUE STAR

Scroll Chillers

R22, R407C and R410A

Reliable and energy efficient chillers from the Experts





Blue Star, India's largest central airconditioning company, has been providing expert cooling solutions for over seven decades. It is with this expertise that Blue Star introduces a wide range of air cooled and water cooled scroll chillers with R-22, R-407C and R-410A refrigerant options.

Manufactured using world-class capabilities at Blue Star's ISO-9001 certified factory, these scroll chillers are available in a wide range of capacities from 10 TR to 120 TR and are very easy to install and commission. What's more, these machines can handle varying cooling requirements, thanks to their multiple compressor configurations. Thus, making them ideal for airconditioning office spaces, hotels, hospitals, shopping malls, multiplexes and for process cooling requirements.

Air Cooled and Water Cooled Scroll Chillers

Air Cooled Scroll Chillers

Blue Star is a pioneer in manufacturing air cooled scroll chillers. These systems are popular in many commercial applications such as offices, hotels, hospitals, industries, etc. due to their distinct advantage of multiple refrigeration circuits with hermetic scroll compressors, compactness and service-friendliness. These chillers comprise of DX cooler, air cooled condenser with fan and multiple hermetic scroll compressors.

Water Cooled Scroll Chillers

Wherever water can be provided, Blue Star's water cooled scroll chillers offer higher efficiency than air cooled systems as water is a superior cooling medium compared to air. These chillers comprise of cooler, multiple hermetic scroll compressors and Shell & Tube water cooled condenser. Because of their higher efficiency, water cooled chillers consume lower power compared to air cooled systems.





Some of the common key features are elaborated below:

Wide range of models

Available in refrigerant options: R22, R407C and R410A

Air cooled: 10, 24, 36, 48, 60, 80, 100 and 120 TR

Water cooled: 11, 26, 39, 52 and 85 TR



Easy and quick installation

These chillers are pre-wired, fully charged and run-tested at the factory thereby making it easy and less time-consuming for installation and start up.



Energy efficient

The compressors used are reliable, time-tested and highly energy efficient.



Capacity modulation in steps

Multiple compressors are used in each of the models. In 'part load' conditions, the microprocessor ensures that only the required number of compressors operate to handle the load, thus saving power.



Lower electrical infrastructure cost

Multiple compressor configurations ensure lower starting current. Hence, switchgear, transformers and generators need not be up-sized, saving initial capital costs.



Quiet operation

The compressors and condenser fans (in case of air cooled chillers) are designed for quiet operation, ensuring low noise.



Total reliability

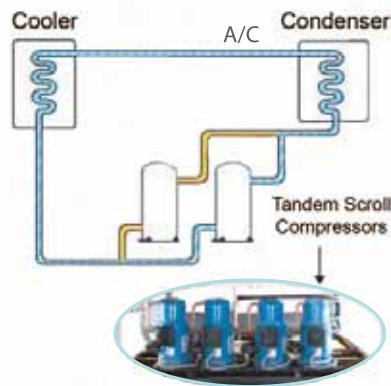
Factory-wired, factory-charged and factory-tested prior to despatch, these chillers are highly reliable.





Mega power saving for tandem models (Only in air cooled models)

Air cooled chillers from 48 TR to 120 TR incorporate tandem circuits. This feature increases operating efficiency whenever the chiller operates under 'part load' conditions. The power saving is achieved by utilising the entire condenser area for heat rejection even when only one compressor in the circuit is in operation.

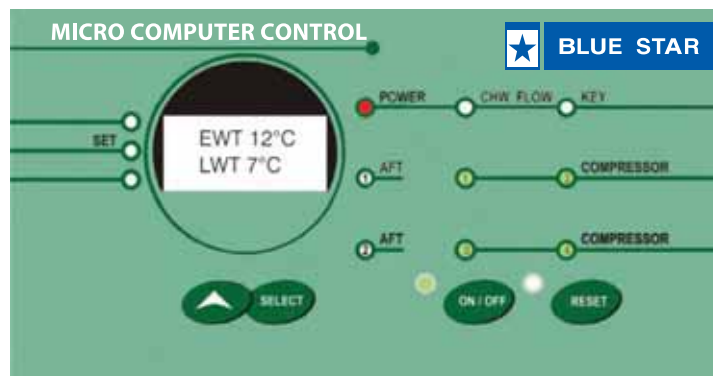


Tandem Scroll System



Intelligent microprocessor control

The entire range of air cooled and water cooled scroll chillers incorporate intelligent microprocessor controls that offer a host of new operating features. These features not only offer convenience and ease of operation, but also ensure significant power savings, reduced maintenance costs and lower instances of breakdown.



Some of the features of the controller are elaborated below:



Digital setting of temperature levels

Unlike in a manual control where tolerances are much higher, the digital control enables setting of the desired temperature levels accurately (to 0.1 C levels), thereby ensuring optimal cooling and significant power savings.



Built-in time delays

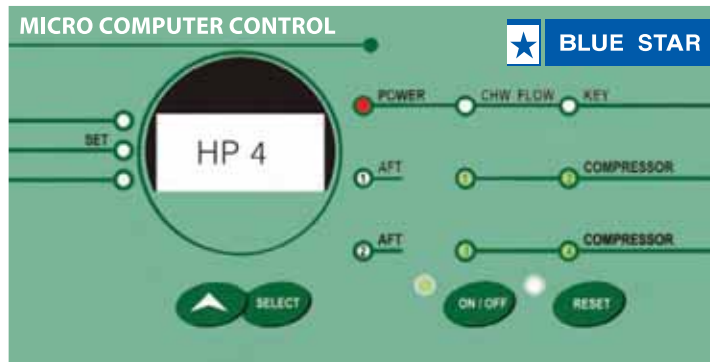
Compressors need a few minutes before they are switched on, after they get switched off, or after a power failure. The built-in time delay feature of the controller ensures that these time delays are automatically adhered to, thereby promising longer compressor life.





Auto distribution of load

When the airconditioning load is less than the full capacity of the chiller, the microprocessor automatically keeps only the required compressors on and switches off the rest. Moreover, the controller ensures that all compressors are evenly switched on or off at regular intervals. This results in efficient running of the chiller and ensures equal load on all the compressors.



Fault indication makes trouble shooting simple



BMS compatibility

Advanced Microprocessor controller option with BMS compatibility, PC monitoring and remote connectivity features.





Protection mechanisms

The controller protects the compressors from accidental phase reversal or single phasing errors. The in-built, anti-freeze protection ensures cut-off before the freezing point. This ensures lower instances of breakdown.



Non-volatile memory

All the settings on the controller are stored in the non-volatile memory and stay through power failures, thereby avoiding the need to reset the parameters after every power failure.



Self diagnostics

This powerful tool helps in identifying faults very quickly. Up to 31 technical faults can be detected and displayed on the controller, thereby making troubleshooting simple.



Auto-restart

The controller restarts automatically with its original settings after the restoration of power, after a power failure. Hence there is no user intervention required after a power failure.

Technical Specifications

Air cooled R-22

| Description | Unit | Model | | | | | | |
|---------------------------------------|-----------|---|--------------|--------------|---------------|--------------|--------------|--------------|
| | | XAC2S-010 | XAC2S-024MA | XAC3S-036MA | XAC2YS-048A | XAC2YS-060 | XAC2YS-080A | |
| Nominal Cooling Capacity | TR | 10 | 24 | 36 | 48 | 60 | 80 | |
| Refrigerant | | R-22 | R-22 | R-22 | R-22 | R-22 | R-22 | |
| Capacity Control | % | 100,50 | 100,50 | 100,67,33 | 100,75,50,25 | 100,67,33 | 100,75,50,25 | |
| Nominal Dimension | Length | mm | 1762 | 2234 | 3355 | 2900 | 2900 | 2900 |
| | Width | mm | 930 | 1147 | 1147 | 2040 | 2040 | 2040 |
| | Height | mm | 1513 | 1696 | 1696 | 2460 | 2460 | 2460 |
| Net Weight/Unit (approx) | Kg | 625 | 925 | 1375 | 2090 | 2200 | 2400 | |
| Power Supply | | 380-420V/3Ph, 50Hz AC | | | | | | |
| No. of Compressors | No | 2 | 2 | 3 | 4 | 3 | 4 | |
| No. of Refrigerant Circuits | No | 2 | 2 | 3 | 2 (Tandem) | 2 (Tandem) | 2 (Tandem) | |
| Fan | Quantity | No | 2 | 2 | 3 | 2 | 3 | 4 |
| | Dia | mm | 610 | 660 | 660 | 915 | 915 | 915 |
| Condenser Coils | Face Area | Sq. mtr (Sq. Ft) | 2.23 (24) | 3.75 (40) | 5.57 (60) | 8.24 (88.7) | 8.24 (88.7) | 8.24 (88.7) |
| | Rows | No | 2 | 3 | 3 | 2 | 2+4 | 3 |
| | Type | 3/8" OD Inner Grooved and Super Slit Fins | | | | | | |
| Cooler (Shell & Tube Type) | Qty | | Twin Circuit | Twin Circuit | Three Circuit | Twin Circuit | Twin Circuit | Twin Circuit |
| Water Flow Rate | Min | USGPM | 17 | 39 | 59 | 78 | 90 | 120 |
| | Max | USGPM | 33 | 78 | 117 | 144 | 180 | 240 |
| Water Connection/Cooler | In/Out | No | 1 | 1 | 1 | 1 | 1 | 1 |
| | Size | Inches | 1-1/2" NB | 3" NB | 3" NB | 4" NB | 4" NB | 4" NB |

Rating Conditions:

1. Cooler Leaving Temp 6.7°C (44°F) and Cooler Entering Temp 12.2°C (54°F)
2. Cooler Fouling Factor 0.0001°F.ft².hr/Btu
3. 35 °C (95°F) Ambient Temperature

*Specifications are subject to change due to continuous product development

Air cooled R-407C & R-410A

| Description | Unit | Model | | | | | | | | |
|---------------------------------------|-----------|---|---------------|---------------|---------------|--------------|---------------|--------------|----------------|----------------|
| | | XAC2S-010R2 | XAC2S-024MAR2 | XAC3S-036MAR2 | XAC2YS-048AR2 | XAC2YS-060R2 | XAC2YS-080AR2 | XAC2YS-100R3 | XAC2YS-120R3 | |
| Nominal Cooling Capacity | TR | 9.5 | 23 | 34 | 46 | 56 | 74 | 97 | 117 | |
| Refrigerant | | R-407C | R-407C | R-407C | R-407C | R-407C | R-407C | R-410A | R-410A | |
| Capacity Control | % | 100,50 | 100,50 | 100,67,33 | 100,75,50,25 | 100,67,33 | 100,75,50,25 | 100,75,50,25 | 100,75,50,25 | |
| Nominal Dimension | Length | mm | 1762 | 2234 | 3355 | 2900 | 2900 | 2900 | 3867 | 3867 |
| | Width | mm | 930 | 1147 | 1147 | 2040 | 2040 | 2040 | 2029 | 2029 |
| | Height | mm | 1513 | 1696 | 1696 | 2460 | 2460 | 2460 | 2234 | 2234 |
| Net Weight/Unit (approx) | Kg | 625 | 925 | 1375 | 2090 | 2200 | 2400 | 2780 | 2860 | |
| Power Supply | | 380-420V/3Ph, 50Hz AC | | | | | | | | |
| No. of Compressors | No | 2 | 2 | 3 | 4 | 3 | 4 | 4 | 4 | |
| No. of Refrigerant Circuits | No | 2 | 2 | 3 | 2 | 2 (Tandem) | 2 (Tandem) | 2 (Tandem) | 2 (Tandem) | |
| Fan | Quantity | No | 2 | 2 | 3 | 2 | 3 | 4 | 6 | 6 |
| | Dia | mm | 610 | 660 | 660 | 915 | 915 | 915 | 915 | 915 |
| Condenser Coils | Face Area | Sq. mtr (Sq. Ft) | 2.23 (24) | 3.75 (40) | 5.57 (60) | 8.24 (88.7) | 8.24 (88.7) | 8.24 (88.7) | 12.35 (132.96) | 12.35 (132.96) |
| | Rows | | 2 | 3 | 3 | 3 | 2+4 | 4 | 4 | 4 |
| | Type | 3/8" OD Inner Grooved and Super Slit Fins | | | | | | | | |
| Cooler (Shell & Tube Type) | Qty | | Twin Circuit | Twin Circuit | Three Circuit | Twin Circuit | Twin Circuit | Twin Circuit | Twin Circuit | |
| Water Flow Rate | Min | USGPM | 17 | 39 | 59 | 78 | 90 | 120 | 150 | 150 |
| | Max | USGPM | 33 | 78 | 117 | 144 | 180 | 240 | 300 | 300 |
| Water Connection/Cooler | In/Out | No | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | Size | Inches | 1-1/2" NB | 3" NB | 3" NB | 4" NB | 4" NB | 4" NB | 4" NB | |

Rating Conditions:

1. Cooler Leaving Temp 6.7°C (44°F) and Cooler Entering Temp 12.2°C (54°F)
2. Cooler Fouling Factor 0.0001°F.ft².hr/Btu
3. 35 °C (95°F) Ambient Temperature

*Specifications are subject to change due to continuous product development

Water cooled R-22

| Description | | Unit | Model | | | | |
|---------------------------------------|--------|--------|-----------------------|--------------|---------------|----------------|----------------|
| | | | XWC25-011 | XWC25-026A | XWC35-039A | XWC45-052A | XWC45-085A |
| Nominal Cooling Capacity | | TR | 11.5 | 27 | 40 | 53 | 87 |
| Refrigerant | | | R-22 | R-22 | R-22 | R-22 | R-22 |
| Capacity Control | | % | 100,50 | 100,50 | 100,67,33 | 100,75,50,25 | 100,75,50,25 |
| Nominal Dimension | Length | mm | 1700 | 2250 | 2250 | 2250 | 2496 |
| | Width | mm | 550 | 1234 | 1234 | 1333 | 1375 |
| | Height | mm | 1455 | 1607 | 1956 | 1956 | 2087 |
| Net Weight/Unit (approx) | | Kg | 650 | 960 | 1350 | 1780 | 2510 |
| Power Supply | | | 380-420V/3Ph, 50Hz AC | | | | |
| No. of Compressors | | No | 2 | 2 | 3 | 4 | 4 |
| No. of Refrigerant Circuits | | No | 2 | 2 | 3 | 4 | 4 |
| Condenser Water Flow Rate | Min | USGPM | 28.6 | 67.6 | 101.4 | 135.2 | 221 |
| | Max | USGPM | 38.5 | 91 | 136.5 | 182 | 297.5 |
| Water Connection/Condenser | In/Out | No | 1 | 1 | 1 | 1 | 1 |
| | SIZE | Inches | 1-1/4" BSP | 1-1/4" BSP | 1-1/4" BSP | 1-1/4" BSP | 1-1/4" BSP |
| Cooler (Shell & Tube Type) | Qty | | Twin Circuit | Twin Circuit | Three Circuit | 2#Twin Circuit | 2#Twin Circuit |
| Water Flow Rate | Min | USGPM | 17 | 39 | 59 | 78 | 128 |
| | Max | USGPM | 33 | 78 | 117 | 156 | 255 |
| Water Connection/Cooler | In/Out | No | 1 | 1 | 1 | 1 | 1 |
| | SIZE | Inches | 1-1/2" NB | 3" NB | 3" NB | 3" NB | 4" NB |

Rating Conditions:

1. Cooler Leaving Temp 6.7°C (44°F) and Cooler Entering Temp 12.2°C (54°F)
 2. Cooler Fouling Factor 0.0001°F.ft².hr/Btu
 3. Condenser Leaving Water Temp. 35°C (95°F) and Condenser Entering Water Temp 29.44 °C (85°F)
 4. Condenser Fouling Factor 0.00025°F.ft².hr/Btu
- *Specifications are subject to change due to continuous product development

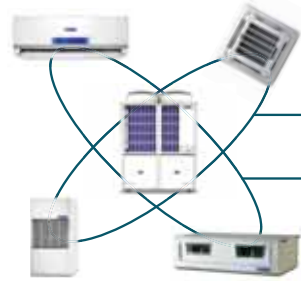
Water cooled R-407C

| Description | | Unit | Model | | | | |
|---------------------------------------|--------|--------|----------------------|--------------|---------------|----------------|----------------|
| | | | XWC25-011R2 | XWC25-026AR2 | XWC35-039AR2 | XWC45-052AR2 | XWC45-085AR2 |
| Nominal Cooling Capacity | | TR | 11 | 26 | 38 | 51 | 85 |
| Refrigerant | | | R-407C | R-407C | R-407C | R-407C | R-407C |
| Capacity Control | | % | 100,50 | 100,50 | 100,67,33 | 100,75,50,25 | 100,75,50,25 |
| Nominal Dimension | Length | mm | 1700 | 2250 | 2250 | 2250 | 2496 |
| | Width | mm | 550 | 1234 | 1234 | 1333 | 1375 |
| | Height | mm | 1455 | 1607 | 1956 | 1956 | 2087 |
| Net Weight/Unit (approx) | | Kg | 650 | 960 | 1350 | 1780 | 2510 |
| Power Supply | | | 380-420V/3Ph,50Hz AC | | | | |
| No. of Compressors | | No | 2 | 2 | 3 | 4 | 4 |
| No. of Refrigerant Circuits | | No | 2 | 2 | 3 | 4 | 4 |
| Condenser Water Flow Rate | Min | USGPM | 28.6 | 67.6 | 101.4 | 135.2 | 221 |
| | Max | USGPM | 38.5 | 91 | 136.5 | 182 | 297.5 |
| Water Connection/Condenser | In/Out | No | 1 | 1 | 1 | 1 | 1 |
| | Size | Inches | 1-1/4" BSP | 1-1/4" BSP | 1-1/4" BSP | 1-1/4" BSP | 1-1/4" BSP |
| Cooler (Shell & Tube Type) | Qty | | Twin Circuit | Twin Circuit | Three Circuit | 2#Twin Circuit | 2#Twin Circuit |
| Water Flow Rate | Min | USGPM | 17 | 39 | 59 | 78 | 128 |
| | Max | USGPM | 33 | 78 | 117 | 156 | 255 |
| Water Connection/Cooler | In/Out | No | 1 | 1 | 1 | 1 | 1 |
| | Size | Inches | 1-1/2" NB | 3" NB | 3" NB | 3" NB | 4" NB |

Rating Conditions:

1. Cooler Leaving Temp 6.7°C (44°F) and Cooler Entering Temp 12.2°C (54°F)
 2. Cooler Fouling Factor 0.0001°F.ft².hr/Btu
 3. Condenser Leaving Water Temp. 35°C (95°F) and Condenser Entering Water Temp 29.44 °C (85°F)
 4. Condenser Fouling Factor 0.00025°F.ft².hr/Btu
- *Specifications are subject to change due to continuous product development

Widest Range Of Products



VRF IV Plus

Free Match Inverter VRF Airconditioning Systems



Packaged ACs & Ducted Splits



Water Cooled Centrifugal Chillers



Turbocor Chillers



Water Cooled Screw Chillers



Water Cooled Screw Chillers with VFD



Air Cooled Screw Chillers



Air Cooled & Water Cooled Condensing Units



Process Chillers



For more information, please contact **BLUE STAR LIMITED** • **Ahmedabad:** 301 & 302, (3rd Floor), Abhishree Avenue, (Near Nehru Circle, SM Road, Ambawadi, Ahmedabad - 380 015. Tel: (079) 40224000 • **Bengaluru:** Anjuman KAY A R R Tower No-28, Ward No 77, Mission Road, Bangalore -560027. Tel: (080) 41854000 • **Bhubaneswar:** 3A, Satya Nagar, 2nd Floor, Bhubaneswar - 751 007. Tel: (0674) 2572403 / 2573670 • **Chandigarh:** Adarsh Mall, 4th Floor, Plot No. 50, Industrial & Business Park, Phase - II, Chandigarh - 160 002. Tel: (0172) 5024000 • **Chennai:** KRM Plaza, No 2, Harrington Road, Chetpet, Chennai - 600 031. Tel: (91) (44) 42444000 • **Ghaziabad:** C 53A, Third Floor, Rajnagar District Center (RDC), Raj Nagar, Ghaziabad - 201001, Uttar Pradesh. Tel No: (0120) 2821400 • **Goa:** 210, 2nd Floor, Gera's Imperium I. Patta, Panjim, Goa - 403 001. Tel: (0832) 2438171/2437287 • **Gurgaon:** Block 2-A, DLF Corporate Park, DLF Corporate Park, DLF Qutab Enclave, Phase III, Mehrauli-Gurgaon Road, Gurgaon - 122 002. Tel: (0124) 4094100 • **Guwahati:** Oasis Plaza, Dr. B. Baruah Road, Ulubari, Kamrup, Guwahati - 781007. Tel: (0361) 2468496 • **Indore:** Shri Krishna Classic, First Floor, 139, Phadnis Colony, AB Road, Indore - 542 010. Tel: (0731) 4001211/4001311 • **Jaipur:** A-19, 1st Floor, Main Sahakar Path, Near Sahakar Bhavan, Jaipur - 302 001. Tel: (0141) 2744033-35 • **Kochi:** 2nd Floor, Millennium Plaza, MKK Nair Road, Alinchuvadu Junction, Kochi - 682 024. Tel: (0484) 4499000 • **Kolkata:** 7, Hare Street, Kolkata - 700 001. Tel: (033) 22134100 • **Ludhiana:** SCO 16-17, Feroze Gandhi Market, Fortune Chambers, 3rd Floor, Ludhiana - 141001 (Punjab), Tel: 0161 5001404 • **Lucknow:** 177/4, Faizabad Road, Lucknow - 226 007. Tel: (0522) 4034000 • **Mumbai:** Blue Star House, 9-A, Ghatkopar Link Road, Saki Naka, Mumbai - 400 072. Tel: (022) 66684100 • **Nagpur:** 219, Bajaj Nagar, 1st Floor, South Ambazari Road, Nagpur - 440 010. Tel: (0712) 2249000 / 6624000 • **Pune:** 201/A, Nityanand Complex, 1st Floor, 247/A, Bund Garden Road, Pune - 411 001. Tel: (020) 41044000 / 26169332 • **Raipur:** Alaska Corporates, 3rd Floor, Opp. VIP Road, Jivan Vihar Colony, G E Road, Raipur, Chhattisgarh - 492 006. Tel: (0771) 6544000 • **Secunderabad:** 207, Sikh Road, Bantia Estate, Secunderabad - 500 003. Tel: (040) 44004100 • **Thiruvananthapuram:** TC IV/962, 'Chandrika', Sree Chitra Nagar, PipeLine Road, Kawdiar, Thiruvananthapuram - 695 003. Tel: (0471) 2720025 / 65 • **Vadodara:** Ramakrishna Chambers, 7th Floor, Productivity Road, Alkapuri, Vadodara - 390 007. Tel: (0265) 2330334 / 6614100 • **Visakhapatnam:** D. No. 49-24-65/1, Near Sankarmatam Road, Madhura Nagar, Visakhapatnam - 530 016. Tel: (0891) 2748405 / 2748433 • **Vijaywada:** No. 40-1-62, Nagas Hafeez Plaza, Opposite to grand modern supermarket, Near BENZ Circle, MG. Road, Vijaywada 10. Tel No. : 0866 2484004. • email: coolingsolutions@bluestarindia.com • Visit us at: www.bluestarindia.com or SMS 'COOL' to 57575