



RoHS

**BOYARD**

BOYARD SYSTEMS CO., LTD.

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## MONOBLOCK & PACKAGED REFRIGERATION UNITS

[www.boyard.com](http://www.boyard.com)

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# Introduction



Boyard's monoblock packaged condensing systems are designed for commercial walk-in cooler and freezer cold rooms. Boyard offers both fixed and variable frequency units, with horsepower ranging from 1 to 3HP, catering to various cooling needs. The monoblock systems feature easy installation with a plug-and-play design, eliminating the need for welding or refrigerant charging. Throttling control is managed by an electronic expansion valve, and defrosting is handled by a four-way valve, with the defrosting scheme either scheduled or done as required. Boyard's monoblock packaged condensing systems provide efficient, reliable, and flexible cooling solutions for commercial applications. For specific requirements, Boyard customizes the systems quickly to meet unique needs.



## Features

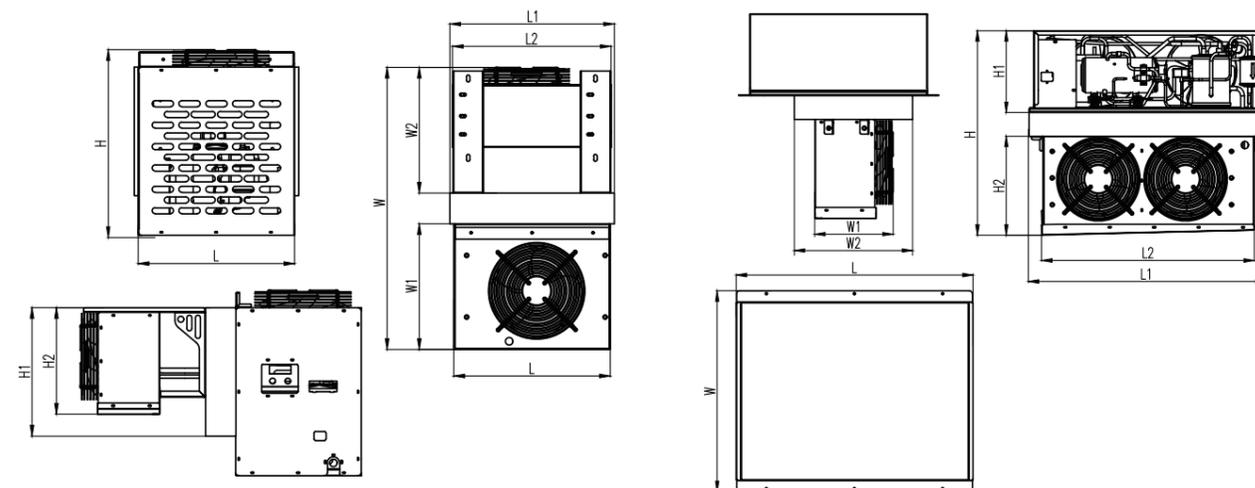
- The product line includes fixed-speed units and inverter-driven monoblock units, with horsepower ranging from 1 to 3 HP.
- The inverter monoblock units enable rapid cooling and precise temperature control of the cold storage within  $\pm 0.5^{\circ}\text{C}$ .
- Compatible with refrigerants including R290, R404A, R448A, R449A, and R454C.
- Operational within an evaporating temperature range of  $-40^{\circ}\text{C}$  to  $+5^{\circ}\text{C}$ .
- Simple installation with plug-and-play functionality; no on-site welding or refrigerant charging required.
- Utilizes electronic expansion valves for throttling control.
- Employs a four-way valve for hot gas defrosting, with defrost modes selectable between timed defrost or on-demand defrost.
- Supports self-evaporation of condensate water.





## Unit Appearance

The default thickness of cold storage panels is 80mm, which can be adjusted according to customer requirements.



## Standard Configuration

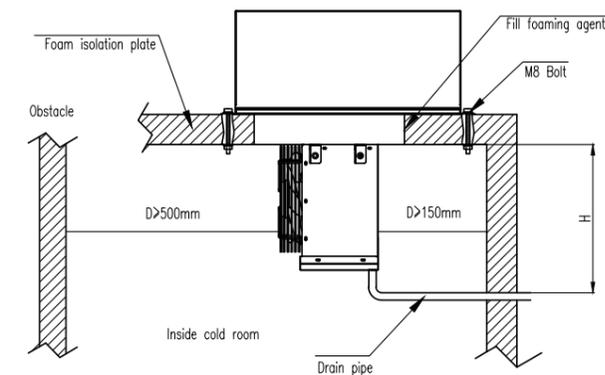
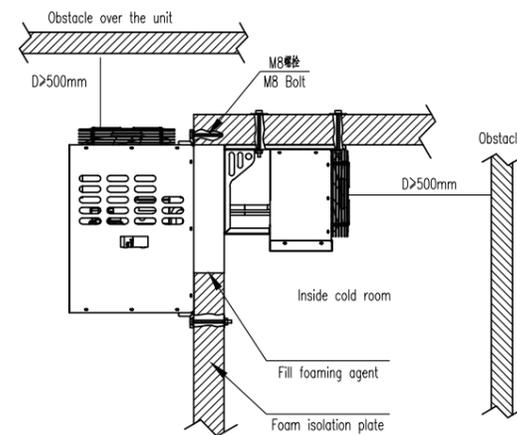
- Hermetic high-efficiency compressor
- Power supply specifications: 220–230V/1PH/50Hz/60Hz or 380–400V/3PH /50Hz
- Air-cooled condenser with axial fans
- Electronic control panel
- Electronic expansion valve or thermostatic expansion valve
- Liquid line filter
- Pressure-controlled condenser fan speed regulator
- 5-meter standard pre-wired harness

## Personalization Options

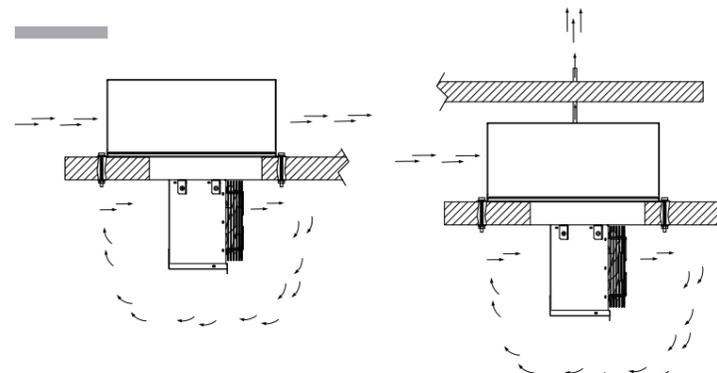
- Inverter compressor or fixed-speed compressor
- Oil separator
- Condensation method: Water-cooled (optional)
- Door microswitch connection cable
- Cold storage light and bulb assembly
- Heater cable for door switch (for low-temperature models)
- Condensate evaporation tray
- Visual and audible alarm
- Remote control panel (for single unit)
- Crankshaft heating belt

## Installation

1. The thickness of the cold storage panels must not be less than 75mm.
2. The gap between the unit and the cold storage panels must be filled with foam agent.



## Air Flow

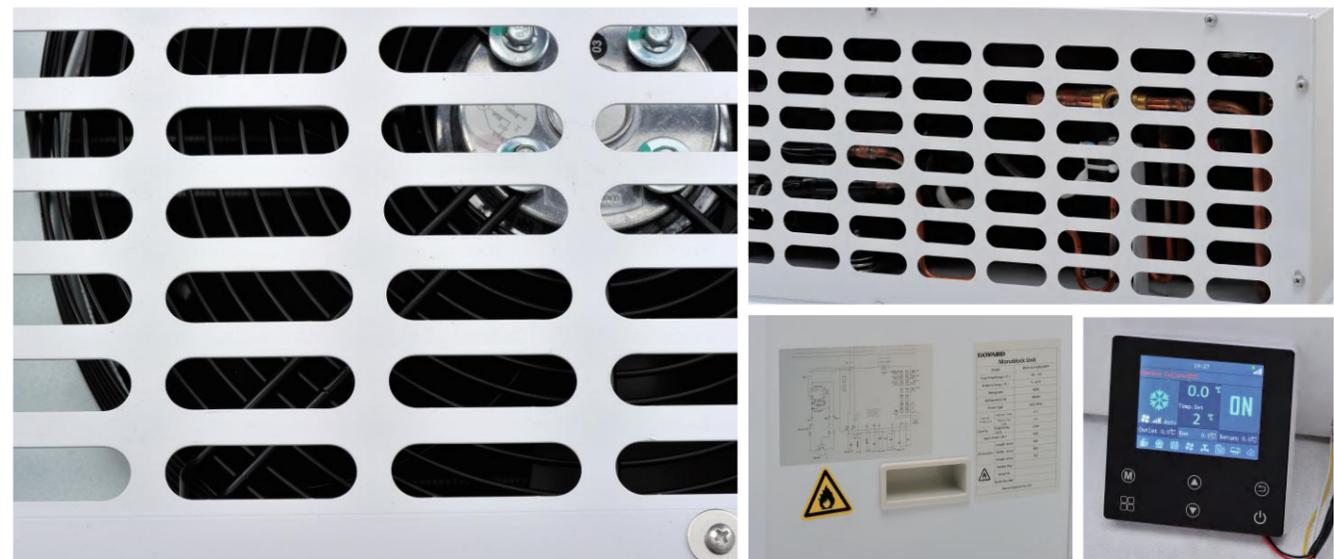


The airflow of the Monoblock unit is composed of the flow from the condensing section and the evaporating section. If equipped with a centrifugal fan, the condensing part—thanks to the differently configured blades compared to the axial fan version—can direct the airflow through a duct toward a specific direction to prevent excessive heating of the surrounding environment.

# Applications



# Unit Details



# Technical Data



## Wall-Mounted Units

| Model                            | BYGY-010-QXD-RZDP  | BYGY-015-QXD-RZDP | BYGY-020-QXD-RZDP | BYGY-030-QXD-RZDP | BYGY-040-QXD-RZDP | BYGY-010-QXD-RZPP | BYGY-015-QXD-RZPP | BYGY-020-QXD-RZPP |              |  |
|----------------------------------|--|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|--------------|--|
| Refrigerant                      | R404A / R448A / R449A / R454C / R455A                                    |                   |                   |                   |                   | R290              |                   |                   |              |  |
| HP Compressor                    | 1 HP   | 1.5 HP            | 2 HP              | 3 HP              | 4 HP              | 1 HP              | 1.5 HP            | 2 HP              |              |  |
| Power Supply                     | 1PH 220V 50/60 Hz (3PH 380V 50/60Hz, 3PH 200V 50/60Hz, 3PH 220V 50/60Hz) |                   |                   |                   |                   |                   |                   |                   |              |  |
| Evap.Temp [°C]                   | -40~-5   |                   |                   |                   |                   |                   |                   |                   |              |  |
| Ambient Temp [°C]                | -20~43   |                   |                   |                   |                   |                   |                   |                   |              |  |
| Input Power [W]                  | 1120   | 1465              | 2020              | 2610              | 3200              | 750               | 1175              | 1410              |              |  |
| Maximum Current [A]              | 6.2  | 10.5              | 13.5              | 16.5              | 20                | 5.5               | 7.5               | 9.5               |              |  |
| Defrost                          | Hot gas defrost (compressor) with electric heating assist                |                   |                   |                   |                   |                   |                   |                   |              |  |
| R449A Cooling Capacity [W]       | Te=-7°C, Tsuc=18°C, Ta=32°C  | 2065              | 2675              | 3435              | 4740              | 6090              | 1840              | 2300              | 2685         |  |
|                                  | Te=-25°C, Tsuc=5°C, Ta=32°C  | 950               | 1245              | 1645              | 2060              | 2655              | 900               | 1175              | 1350         |  |
| Applicable storage capacity [m³] | Working Temp +2°C  | 12                | 18                | 25                | 40                | 50                | 12                | 18                | 25           |  |
|                                  | Working Temp -18°C   | 5                 | 8                 | 12                | 20                | 25                | 5                 | 8                 | 12           |  |
| Overall Dimensions               | L*W*H (mm)   |                   | 525*825*705       |                   | 685*885*705       |                   | 855*925*730       |                   | 875*945*760  |  |
| Packaging Dimensions             | L*W*H (mm)   |                   | 640*880*855       |                   | 800*940*855       |                   | 970*980*885       |                   | 990*1000*910 |  |



## Top-Mounted Units

| Model                            | BYGD-010-QHD-SZDP  | BYGD-015-QHD-SZDP | BYGD-020-QHD-SZDP | BYGD-030-QHD-SZDP | BYGD-010-QHD-SZPP | BYGD-015-QHD-SZPP | BYGD-020-QHD-SZPP |      |             |  |
|----------------------------------|--|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|------|-------------|--|
| Refrigerant                      | R449A / R448A / R454C / R455A / R404A                                    |                   |                   |                   | R290              |                   |                   |      |             |  |
| HP Compressor                    | 1 HP   | 1.5 HP            | 2 HP              | 3 HP              | 1 HP              | 1.5 HP            | 2 HP              |      |             |  |
| Power Supply                     | 1PH 220V 50/60 Hz (3PH 380V 50/60Hz, 3PH 200V 50/60Hz, 3PH 220V 50/60Hz) |                   |                   |                   |                   |                   |                   |      |             |  |
| Evap.Temp [°C]                   | -40~-5   |                   |                   |                   |                   |                   |                   |      |             |  |
| Ambient Temp [°C]                | 5~43   |                   |                   |                   |                   |                   |                   |      |             |  |
| Input Power [W]                  | 1100   | 1425              | 1920              | 2530              | 740               | 1145              | 1310              |      |             |  |
| Maximum Current [A]              | 6.2  | 10.5              | 13.5              | 16.5              | 5.5               | 7.5               | 9.5               |      |             |  |
| Defrost                          | Hot gas defrost (compressor) with electric heating assist                |                   |                   |                   |                   |                   |                   |      |             |  |
| R449A Cooling Capacity [W]       | Te=-7°C, Tsuc=18°C, Ta=32°C  | 2060              | 2690              | 3445              | 4745              | 1840              | 2300              | 2685 |             |  |
|                                  | Te=-25°C, Tsuc=5°C, Ta=32°C  | 950               | 1245              | 1450              | 2060              | 900               | 1175              | 1350 |             |  |
| Applicable storage capacity [m³] | Working Temp +2°C  | 12                | 18                | 25                | 40                | 12                | 18                | 25   |             |  |
|                                  | Working Temp -18°C   | 5                 | 8                 | 12                | 20                | 5                 | 8                 | 12   |             |  |
| Overall Dimensions               | L*W*H (mm)   |                   | 840*676*695       |                   | 940*676*820       |                   | 1350*676*820      |      | 840*676*695 |  |
| Packaging Dimensions             | L*W*H (mm)   |                   | 890*730*895       |                   | 990*730*1020      |                   | 1400*730*1020     |      | 890*830*855 |  |

# Specifications and Configurations

## R448A/R449A/R454C MBP/LBP Variable Frequency Wall-Mounted Monoblock

| Model                      |                               | BYGY-010-QXD-RZDP  | BYGY-015-QXD-RZDP   | BYGY-020-QXD-RZDP                | BYGY-030-QXD-RZDP          | BYGY-040-QXD-RZDP |             |           |
|----------------------------|-------------------------------|--|---|----------------------------------|----------------------------|-------------------|-------------|-----------|
| Nominal Input (W)          |                               | 1120   | 1465  | 2020                             | 2610                       | 3200              |             |           |
| Power Supply               |                               | 1PH 220V 50/60 Hz (3PH 380V 50/60Hz, 3PH 200V 50/60Hz, 3PH 220V 50/60Hz)   |   |                                  |                            |                   |             |           |
| Refrigerant                |                               | R449A / R448A / R454C / R455A / R404A  |   |                                  |                            |                   |             |           |
| Max Running Current (A)    |                               | 6.2  | 10.5  | 13.5                             | 16.5                       | 20.0              |             |           |
| Evap.Temp (°C)             |                               | -40~-5   |   |                                  |                            |                   |             |           |
| Ambient Temp (°C)          |                               | -20~43   |   |                                  |                            |                   |             |           |
| Standard Configuration     | Compressor (Model)            |  | JXSD150Z312   | KXSD203Z312                      | KXSD300Z312                | KXSD300Z312       | TXSD456Z312 |           |
|                            | Style                         |  | Copper tube fin condenser or microchannel condenser       |                                  |                            |                   |             |           |
|                            | Condenser                     | Fan Motor  | Diameter*Quantity(mm)                                     | φ300*1                           | φ300*1                     | φ300*1            | φ300*2      | φ300*2    |
|                            |                               |  | Air Flow (m <sup>3</sup> /hr)                             | 1800/2000                        | 1800/2000                  | 1800/2000         | 3600/4000   | 3600/4000 |
|                            | Evaporator                    | Fan Motor  | Style   |                                  | Copper tube fin evaporator |                   |             |           |
|                            |                               |  | Diameter*Quantity(mm)                                     | φ250*1                           | φ300*1                     | φ300*1            | φ300*2      | φ300*2    |
|                            | Air Flow (m <sup>3</sup> /hr) |  | 1100/1250   | 1800/2000                        | 1800/2000                  | 3600/4000         | 3600/4000   |           |
|                            | Pressure Controller (Mpa)     |  | Diaphragm type high pressure switch                       |                                  | Low pressure sensor        |                   |             |           |
|                            | Accumulator                   |  | /   | 650cc                            | 1L                         |                   |             |           |
|                            | Reservoir                     |  | 2L (Bidirectional)  |                                  |                            |                   |             |           |
|                            | Sight Glass                   |  | 3/8" (φ9.52)  |                                  |                            |                   |             |           |
|                            | Oil Extractor                 |  | TDW-4808S   |                                  | BLR/A-W 55833              |                   |             |           |
|                            | Filter Drier                  |  | 083S (Bidirectional)                                      |                                  |                            |                   |             |           |
|                            | Check Valve                   |  | 3/8" (φ9.52)  |                                  |                            |                   |             |           |
|                            | Expansion Valve               |  | Electronic Expansion Valve / Thermostatic Expansion Valve |                                  |                            |                   |             |           |
|                            | Liquid Injection Valve        |  | 1/4" (φ6.35)  |                                  |                            |                   |             |           |
|                            | Four-way Valve                |  | SHF7  |                                  | SHF9                       |                   |             |           |
|                            | Defrosting Heating Element    |  | 500W  |                                  |                            |                   |             |           |
|                            | Defrosting Heating Belt       |  | 25W/m, 3m   |                                  |                            |                   |             |           |
|                            | Electric Control              | Temperature Controller   |   | Available in Wi-Fi or 4G version |                            |                   |             |           |
| AC Contactor               |                               | 18/01  |   |                                  |                            |                   |             |           |
| Air Switch                 |                               | 2P NXB-63 D32  |   |                                  |                            |                   |             |           |
| Configurable Functions     |                               | Cold storage light, door switch, and other functions   |   |                                  |                            |                   |             |           |
| Variable Frequency Control |                               | Compressor frequency control, Electronic expansion valve control, Condensing fan control, Evaporating fan control, Defrosting control, High and low pressure protection, Spray protection, Exhaust temperature protection, Current protection and Fault code output. |   |                                  |                            |                   |             |           |
| Dimension (mm)             | Length(mm)                    |  | 525   | 685                              | 855                        | 875               |             |           |
|                            | Width(mm)                     |  | 825   | 885                              | 925                        | 945               |             |           |
|                            | Height(mm)                    |  | 705   |                                  | 730                        | 760               |             |           |
| R449A Cooling Capacity (W) | Evap Temp(°C)                 |  | Ambient Temp:32°C Subcooling Temp:0°C                     |                                  |                            |                   |             |           |
|                            | -40                           |  | 485   | 695                              | 820                        | 1130              | 1440        |           |
|                            | -35                           |  | 595   | 860                              | 1045                       | 1345              | 1780        |           |
|                            | -30                           |  | 755   | 1035                             | 1225                       | 1705              | 2185        |           |
|                            | -25                           |  | 950   | 1245                             | 1450                       | 2060              | 2655        |           |
|                            | -20                           |  | 1325  | 1775                             | 2115                       | 2910              | 3715        |           |
|                            | -15                           |  | 1595  | 2105                             | 2585                       | 3335              | 4505        |           |
|                            | -10                           |  | 1880  | 2490                             | 3100                       | 4250              | 5465        |           |
|                            | -5                            |  | 2180  | 2770                             | 3690                       | 5110              | 6585        |           |

## R290 MBP/LBP Variable Frequency Wall-Mounted Monoblock

| Model                      |                               | BYGY-010-QXD-RZPP  | BYGY-015-QXD-RZPP   | BYGY-020-QXD-RZPP                |                            |           |
|----------------------------|-------------------------------|--|---|----------------------------------|----------------------------|-----------|
| Nominal Input (W)          |                               | 750  | 1175  | 1410                             |                            |           |
| Power Supply               |                               | 1PH 220V 50/60 Hz (3PH 380V 50/60Hz, 3PH 200V 50/60Hz, 3PH 220V 50/60Hz)   |   |                                  |                            |           |
| Refrigerant                |                               | R290   |   |                                  |                            |           |
| Max Running Current (A)    |                               | 5.5  | 7.5   | 9.5                              |                            |           |
| Evap.Temp (°C)             |                               | -40~-5   |   |                                  |                            |           |
| Ambient Temp (°C)          |                               | -20~43   |   |                                  |                            |           |
| Standard Configuration     | Compressor (Model)            |  | JXSP150Z312   | KXSP203Z312                      | KXSP300Z312                |           |
|                            | Style                         |  | Copper tube fin condenser or microchannel condenser       |                                  |                            |           |
|                            | Condenser                     | Fan Motor  | Diameter*Quantity(mm)                                     | φ300*1                           | φ300*1                     | φ350*1    |
|                            |                               |  | Air Flow (m <sup>3</sup> /hr)                             | 1800/2000                        | 1800/2000                  | 2500/2800 |
|                            | Evaporator                    | Fan Motor  | Style   |                                  | Copper tube fin evaporator |           |
|                            |                               |  | Diameter*Quantity(mm)                                     | φ250*1                           | φ300*1                     | φ300*1    |
|                            | Air Flow (m <sup>3</sup> /hr) |  | 1100/1250   | 1800/2000                        | 1800/2000                  |           |
|                            | Pressure Controller (Mpa)     |  | Diaphragm type high pressure switch                       |                                  | Low pressure sensor        |           |
|                            | Accumulator                   |  | /   | 650cc                            |                            |           |
|                            | Sight Glass                   |  | 3/8" (φ9.52)  |                                  |                            |           |
|                            | Oil Extractor                 |  | TDW-4808S   |                                  | BLR/A-W 55833              |           |
|                            | Filter Drier                  |  | 083S (Bidirectional)                                      |                                  |                            |           |
|                            | Check Valve                   |  | 3/8" (φ9.52)  |                                  |                            |           |
|                            | Expansion Valve               |  | Electronic Expansion Valve / Thermostatic Expansion Valve |                                  |                            |           |
|                            | Liquid Injection Valve        |  | 1/4" (φ6.35)  |                                  |                            |           |
|                            | Four-way Valve                |  | SHF7  |                                  |                            |           |
|                            | Defrosting Heating Element    |  | 500W  |                                  |                            |           |
|                            | Defrosting Heating Belt       |  | 25W/m, 3m   |                                  |                            |           |
|                            | Electric Control              | Temperature Controller   |   | Available in Wi-Fi or 4G version |                            |           |
|                            |                               | AC Contactor   |   | 18/01                            |                            |           |
| Air Switch                 |                               | 2P NXB-63 D32  |   |                                  |                            |           |
| Configurable Functions     |                               | Cold storage light, door switch, and other functions   |   |                                  |                            |           |
| Variable Frequency Control |                               | Compressor frequency control, Electronic expansion valve control, Condensing fan control, Evaporating fan control, Defrosting control, High and low pressure protection, Spray protection, Exhaust temperature protection, Current protection and Fault code output. |   |                                  |                            |           |
| Dimension (mm)             | Length(mm)                    |  | 525   | 685                              |                            |           |
|                            | Width(mm)                     |  | 825   | 885                              |                            |           |
|                            | Height(mm)                    |  | 705   |                                  |                            |           |
| R290 Cooling Capacity (W)  | Evap Temp(°C)                 |  | Ambient Temp:32°C Subcooling Temp:0°C                     |                                  |                            |           |
|                            | -40                           |  | 500   | 710                              | 865                        |           |
|                            | -35                           |  | 630   | 855                              | 990                        |           |
|                            | -30                           |  | 755   | 980                              | 1190                       |           |
|                            | -25                           |  | 900   | 1175                             | 1350                       |           |
|                            | -20                           |  | 1045  | 1510                             | 1755                       |           |
|                            | -15                           |  | 1400  | 1850                             | 2160                       |           |
|                            | -10                           |  | 1750  | 2150                             | 2520                       |           |
|                            | -5                            |  | 1900  | 2400                             | 2790                       |           |

## R448A/R449A/R454C MBP/LBP Variable Frequency Top-Mounted Monoblock

| Model                      |                            | BYGD-010-QHD-SZDP  | BYGD-015-QHD-SZDP   | BYGD-020-QHD-SZDP                | BYGD-030-QHD-SZDP   |             |             |
|----------------------------|----------------------------|--|---|----------------------------------|---------------------|-------------|-------------|
| Nominal Input (W)          |                            | 1100   | 1425  | 1920                             | 2530                |             |             |
| Power Supply               |                            | 1PH 220V 50/60 Hz (3PH 380V 50/60Hz, 3PH 200V 50/60Hz, 3PH 220V 50/60Hz)   |   |                                  |                     |             |             |
| Refrigerant                |                            | R449A / R448A / R454C / R455A / R404A  |   |                                  |                     |             |             |
| Max Running Current (A)    |                            | 6.2  | 10.5  | 13.5                             | 16.5                |             |             |
| Evap.Temp (°C)             |                            | -40~-5   |   |                                  |                     |             |             |
| Ambient Temp (°C)          |                            | 5~43   |   |                                  |                     |             |             |
| Standard Configuration     | Compressor (Model)         |  | JHSD150Z312   | KHSD203Z312                      | KHSD300Z312         | KHSD300Z312 |             |
|                            | Style                      |  | Copper tube fin condenser or microchannel condenser       |                                  |                     |             |             |
|                            | Condenser                  | Fan Motor  | Diameter*Quantity(mm)                                     | φ230*2(EC)                       | φ230*2(EC)          | φ230*3(EC)  | φ230*4(EC)  |
|                            |                            |  | Air Flow (m³/hr)  | 730*2/750*2                      | 730*2/750*2         | 730*3/750*3 | 730*4/750*4 |
|                            | Evaporator                 | Fan Motor  | Style   | Copper tube fin evaporator       |                     |             |             |
|                            |                            |  | Diameter*Quantity(mm)                                     | φ250*1                           | φ250*1              | φ300*1      | φ300*2      |
|                            | Air Flow (m³/hr)           |  | 1100/1250   | 1100/2000                        | 1800/2000           | 3600/4000   |             |
|                            | Pressure Controller (Mpa)  |  | Diaphragm type high pressure switch                       |                                  | Low pressure sensor |             |             |
|                            | Oil Extractor              |  | TDW-4808S   | BLR/A-W 55833                    |                     |             |             |
|                            | Accumulator                |  | 650cc   |                                  | 1L                  |             |             |
|                            | Reservoir                  |  | 1.1L (Bidirectional)                                      |                                  | 2L (Bidirectional)  |             |             |
|                            | Sight Glass                |  | 3/8" (φ9.52)  |                                  |                     |             |             |
|                            | Filter Drier               |  | 083S (Bidirectional)                                      |                                  |                     |             |             |
|                            | Check Valve                |  | 3/8" (φ9.52)  |                                  |                     |             |             |
|                            | Expansion Valve            |  | Electronic Expansion Valve / Thermostatic Expansion Valve |                                  |                     |             |             |
|                            | Liquid Injection Valve     |  | 1/4" (φ6.35)  |                                  |                     |             |             |
|                            | Four-way Valve             |  | SHF7  | SHF9                             |                     |             |             |
|                            | Defrosting Heating Element |  | 500W  |                                  |                     |             |             |
|                            | Defrosting Heating Belt    |  | 25W/m, 3m   |                                  |                     |             |             |
|                            | Electric Control           | Temperature Controller   |   | Available in Wi-Fi or 4G version |                     |             |             |
| AC Contactor               |                            | 18/01  |   |                                  |                     |             |             |
| Air Switch                 |                            | 2P NXB-63 D32  |   |                                  |                     |             |             |
| Configurable Functions     |                            | Cold storage light, door switch, and other functions   |   |                                  |                     |             |             |
| Variable Frequency Control |                            | Compressor frequency control, Electronic expansion valve control, Condensing fan control, Evaporating fan control, Defrosting control, High and low pressure protection, Spray protection, Exhaust temperature protection, Current protection and Fault code output. |   |                                  |                     |             |             |
| Dimension (mm)             | Length(mm)                 |  | 840   | 940                              | 1350                |             |             |
|                            | Width(mm)                  |  | 676   |                                  |                     |             |             |
|                            | Height(mm)                 |  | 695   | 820                              |                     |             |             |
| R449A Cooling Capacity (W) | Evap Temp(°C)              |  | Ambient Temp:32°C Subcooling Temp:0°C                     |                                  |                     |             |             |
|                            | -40                        |  | 485   | 695                              | 820                 | 1130        |             |
|                            | -35                        |  | 595   | 860                              | 1045                | 1345        |             |
|                            | -30                        |  | 755   | 1035                             | 1225                | 1705        |             |
|                            | -25                        |  | 950   | 1245                             | 1450                | 2060        |             |
|                            | -20                        |  | 1325  | 1775                             | 2115                | 2910        |             |
|                            | -15                        |  | 1595  | 2105                             | 2585                | 3335        |             |
|                            | -10                        |  | 1880  | 2490                             | 3100                | 4250        |             |
|                            | -5                         |  | 2180  | 2770                             | 3690                | 5110        |             |

## R290 MBP/LBP Variable Frequency Top-Mounted Monoblock

| Model                      |                            | BYGD-010-QHD-SZPP  | BYGD-015-QHD-SZPP   | BYGD-020-QHD-SZPP                |                     |             |
|----------------------------|----------------------------|--|---|----------------------------------|---------------------|-------------|
| Nominal Input (W)          |                            | 740  | 1145  | 1310                             |                     |             |
| Power Supply               |                            | 1PH 220V 50/60 Hz (3PH 380V 50/60Hz, 3PH 200V 50/60Hz, 3PH 220V 50/60Hz)   |   |                                  |                     |             |
| Refrigerant                |                            | R290   |   |                                  |                     |             |
| Max Running Current (A)    |                            | 5.5  | 7.5   | 9.5                              |                     |             |
| Evap.Temp (°C)             |                            | -40~-5   |   |                                  |                     |             |
| Ambient Temp (°C)          |                            | 5~43   |   |                                  |                     |             |
| Standard Configuration     | Compressor (Model)         |  | JHSP150Z312   | KHSP203Z312                      | KHSP300Z312         |             |
|                            | Style                      |  | Copper tube fin condenser or microchannel condenser       |                                  |                     |             |
|                            | Condenser                  | Fan Motor  | Diameter*Quantity(mm)                                     | φ230*2(EC)                       | φ230*2(EC)          | φ230*3(EC)  |
|                            |                            |  | Air Flow (m³/hr)  | 730*3/750*2                      | 730*3/750*2         | 730*3/750*3 |
|                            | Evaporator                 | Fan Motor  | Style   | Copper tube fin evaporator       |                     |             |
|                            |                            |  | Diameter*Quantity(mm)                                     | φ250*1                           | φ250*1              | φ300*1      |
|                            | Air Flow (m³/hr)           |  | 1100/1250   | 1100/1250                        | 1800/2000           |             |
|                            | Pressure Controller (Mpa)  |  | Diaphragm type high pressure switch                       |                                  | Low pressure sensor |             |
|                            | Oil Extractor              |  | TDW-4808S   | BLR/A-W 55833                    |                     |             |
|                            | Accumulator                |  | 650cc   |                                  | 1L                  |             |
|                            | Sight Glass                |  | 3/8" (φ9.52)  |                                  |                     |             |
|                            | Filter Drier               |  | 083S (Bidirectional)                                      |                                  |                     |             |
|                            | Check Valve                |  | 3/8" (φ9.52)  |                                  |                     |             |
|                            | Expansion Valve            |  | Electronic Expansion Valve / Thermostatic Expansion Valve |                                  |                     |             |
|                            | Liquid Injection Valve     |  | 1/4" (φ6.35)  |                                  |                     |             |
|                            | Four-way Valve             |  | SHF7  |                                  |                     |             |
|                            | Defrosting Heating Element |  | 500W  |                                  |                     |             |
|                            | Defrosting Heating Belt    |  | 25W/m, 3m   |                                  |                     |             |
|                            | Electric Control           | Temperature Controller   |   | Available in Wi-Fi or 4G version |                     |             |
|                            |                            | AC Contactor   |   | 18/01                            |                     |             |
| Air Switch                 |                            | 2P NXB-63 D32  |   |                                  |                     |             |
| Configurable Functions     |                            | Cold storage light, door switch, and other functions   |   |                                  |                     |             |
| Variable Frequency Control |                            | Compressor frequency control, Electronic expansion valve control, Condensing fan control, Evaporating fan control, Defrosting control, High and low pressure protection, Spray protection, Exhaust temperature protection, Current protection and Fault code output. |   |                                  |                     |             |
| Dimension (mm)             | Length(mm)                 |  | 840   | 940                              |                     |             |
|                            | Width(mm)                  |  | 676   |                                  |                     |             |
|                            | Height(mm)                 |  | 695   | 705                              | 820                 |             |
| R290 Cooling Capacity (W)  | Evap Temp(°C)              |  | Ambient Temp:32°C Subcooling Temp:0°C                     |                                  |                     |             |
|                            | -40                        |  | 500   | 710                              | 865                 |             |
|                            | -35                        |  | 630   | 855                              | 990                 |             |
|                            | -30                        |  | 755   | 980                              | 1190                |             |
|                            | -25                        |  | 900   | 1175                             | 1350                |             |
|                            | -20                        |  | 1045  | 1510                             | 1755                |             |
|                            | -15                        |  | 1400  | 1850                             | 2160                |             |
|                            | -10                        |  | 1750  | 2150                             | 2520                |             |
|                            | -5                         |  | 1900  | 2400                             | 2790                |             |